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大会发言

OR-001

Deep Learning for the Determination of Myometrial Invasion Depth and Automatic Lesion Identification in Endometrial Cancer MR Imaging: A Preliminary Study in a Single Institution

He Zhang[1],Yida Wang[2]
1.Department of Radiology， Obstetrics and Gynecology Hospital， Fudan University
2.Shanghai Key Laboratory of Magnetic Resonance， East China Normal University， P.R.China

Objective: To determine the diagnostic performance of a deep learning (DL) model in evaluating myometrial invasion (MI) depth on T2-weighted imaging (T2WI)-based endometrial cancer MR imaging (ECM).
Methods: We retrospectively enrolled 530 patients with pathologically proven EC at our institution between January 1, 2014 and December 31, 2017. All ECM data were reviewed on picture archiving and communication systems (PACS) workstations. Both sagittal and coronal T2WI-based ECM images were used for lesion segmentation with MATLAB software. Patients were divided into two groups: deep MI (more than 50%) and shallow MI (less than 50%) based on their pathological diagnosis. We trained a detection model based on YOLOv3 to locate the lesion area on ECM images. Then, the detected regions on both sagittal and coronal images were simultaneously fed into a classification model based on Resnet to identify MI depth.
Results: In the testing dataset, the detection model detected lesion regions with an average precision of 77.14% and 86.93% in sagittal and coronal images, respectively. The classification model yielded an accuracy (ACC) of 84.78%, a sensitivity (SEN) of 66.67%, a specificity (SPE) of 87.50%, a positive predictive value (PPV) of 44.44% and a negative predictive value (NPV) of 94.59% in determining deep MI. The radiologists and model together yielded an ACC of 86.2%, a SEN of 77.8%, a SPE of 87.5%, a PPV of 48.3% and a NPV of 96.3%.
Conclusion: In this study, the deep learning network model derived from ECM provided a competitive, time-efficient diagnostic performance in MI depth identification.

OR-002

Comparison of laparoscopic and abdominal radical hysterectomy in patients with stage IB1–IIA2 cervical cancer

Yan Huang
Fudan University Shanghai Cancer Center

Objective: To compare survival outcomes between laparoscopic radical hysterectomy (LRH) and abdominal radical hysterectomy (ARH) among patients with early-stage cervical cancer.
Methods: This retrospective study included 125 patients with cervical cancer, 2009 International Federation of Gynecology and Obstetrics (FIGO) stage IB1 to IIA2 who underwent LRH from 2013 to 2017. In comparison with patients treated by LRH, we used Statistic Package for Social Science (SPSS) software for simple random sampling to select 125 patients from 2000 patients treated by ARH.
Results: The LRH group had lower rate of deep stromal invasion (35.2% vs. 54.4%, p= 0.002) than the ARH group and the operating time (p= 0.000) increased while blood loss (p= 0.002) decreased significantly. The LRH group displayed poorer disease-free survival (DFS) (5-year rate, 79.4% vs. 90.0%;p= 0.046) and overall survival (OS) (5-year rate, 74.7% vs. 90.0%; p= 0.026) compared to the ARH group. On multivariate analysis, LRH was an independent risk factor for DFS (hazard ratio, 0.437;

95%confidence interval [CI], 0.211-0.907;p= 0.026) and OS (hazard ratio, 0.445; 95%CI, 0.208-0.952; p= 0.037). The LRH group with adjuvant therapy had poorer DFS and OS than the ARH group with adjuvant therapy (p= 0.026 for DFS andp= 0.036 for OS, respectively). However, LRH did not affect the survival of cervical cancer patients with tumor size < 2 cm (p> 0.05) or invasion depth < 1/2 (p> 0.05).
Conclusions:LRH was independently associated with poorer DFS and OS in patients with early-stage cervical cancer. LRH was an independent predictor of poor prognosis and adjuvant therapy could not compensate the adverse effect caused by laparoscopy. LRH did not affect the survival of cervical cancer patients with tumor size <2 cm or invasion depth < 1/2.

OR-003

Is Radical Hysterectomy Necessary in the Treatment of Endometrial Cancer Patients with Cervical involvement?

Yunjie Tian,Shan Kang
forth hospital of hebei medical university

Objective: Radical hysterectomy is considered to improve prognosis in advanced endometrial cancer (EC) compared with simple hysterectomy. This study aimed to investigate the effect of hysterectomy choice on oncological outcomes in patients with 2009 International Federation of Gynecology and Obstetrics (FIGO) stage II EC.
Methods: Cases of stage II EC with gross cervical involvement who underwent hysterectomy between 2008 and 2013 in the Fourth Hospital of Hebei Medical University were retrospectively analyzed. Endpoints included overall survival (OS), progression-free survival (PFS) and adverse effects.
Results: A total of 133 stage II EC patients administered primary surgery were identified, including 31 and 102 cases who underwent radical hysterectomy (RH) and simple hysterectomy (SH), respectively. Median age was 53 years, and median duration of follow-up was 60 months for all patients. There were no significant differences in age, body mass index, diabetes mellitus, hypertension, menopausal status, CA125 levels, tumor size, histology, grade, myometrial invasion, lymphovascular invasion (LVSI), and adjuvant therapy between the two groups. Multi-regression analysis revealed that age, histology and grade were predictive factors of both OS and PFS. However, there were no differences in OS and PFS based on hysterectomy type. Additionally, patients treated with RH had more intraoperative and postoperative complications.
Conclusion: The type of hysterectomy applied in patients with uterus-confined disease does not change PFS or OS. Meanwhile, intraoperative and postoperative adverse events are more frequent in patients administered RH. Surgical treatment in these patients should be further evaluated in additional, randomized clinical studies.

OR-004
CircEYA1 functions as a sponge of miR-582-3p to suppress cervical adenocarcinoma tumorigenesis via upregulating CXCL14

Junfen Xu,Xing Xie,Weiguo Lu
Department of Gynecologic Oncology， Women's Hospital， Zhejiang University School of Medicine，Hangzhou， China

Background: Circular RNAs function as efficient miRNA sponges that regulate gene expression in the pathogenesis of many human malignancies. However, the roles of circRNAs in cervical adenocarcinoma remain largely unknown.
Methods: RNA sequencing was performed to identify circRNA expression profiles in 4 cervical normal and 4 adenocarcinoma tissue samples, and significantly dysregulated circRNAs were validated by qRT-PCR. Cell proliferation, colony formation and apoptosis assays were performed, respectively. The potential regulatory mechanisms of circEYA1 on miRNA and its target genes were confirmed by luciferase reporter assay and RNA immunoprecipitation. Xenograft model was established to investigate the role of circEYA1 in vivo. Correlation and ROC curve analysis were determined in another 198 clinical cervical tissue samples.
Results: 24 differentially expressed circRNAs were identified. qRT-PCR validation confirmed the reliability of the RNA sequencing data and circEYA1 was found as the most significantly downregulated in cervical adenocarcinoma. circEYA1 overexpression led to suppression of proliferation, colony formation and promotion of apoptosis in cervical adenocarcinoma cells and also decreased the xenograft tumor growth. circEYA1 functioned as a sponge of miR-582-3p and abrogated its suppression of CXCL14 activity. miR-582-3p inhibition phenocopied the biological effects of circEYA1 overexpression in cervical adenocarcinoma cells. Moreover, miR-582-3p overexpression reversed the suppressive behaviours of circEYA1 in vitro and in vivo. In addition, we confirmed the expression, correlation, and clinical diagnositc value of these molecules in 198 clinical cervical tissue samples.
Conclusion: Our findings highlight a novel tumor suppressive role of circEYA1 in cervical adenocarcinoma tumorigenesis and may provide a potential diagnostic marker and therapeutic target for patients with cervical adenocarcinoma.

OR-005
Clinical implications of morular metaplasias during fertility-preserving treatment for atypical endometrial hyperplasia and early endometrial carcinoma patients

Pengfei Wu,Xuezhen Luo,Xiaojun Chen
Obestetrics and Gynecology Hospital of Fudan University

Objective: Morular metaplasias are benign epithelial metaplasias that can appear in atypical endometrial hyperplasia (AEH) and endometrioid endometrial carcinoma (EEC). However, the clinical implications of morular metaplasias during fertility-preserving treatment for AEH and EEC patients is unclear. The aim of this study was to investigate the clinical features and impact of morular metaplasias on the efficacy of fertility-preserving treatment in AEH and EEC patients.
Methods: A single-center retrospective study was conducted in the Obstetrics and Gynecology Hospital of Fudan University between March 2013 and June 2018. In total, 296 AEH and EEC patients

who received fertility-preserving treatment were studied. Clinical features, treatment efficacy, and onco-fertility results were compared between patients with and without morular metaplasias.
Results: Morular metaplasias appeared in 92 patients (92/296, 31.1%), among whom 52 (56.5%) were found with morular metaplasias before progestin treatment. Patients with morular metaplasias were younger than those without morular metaplasias (31.0 vs. 33.0 years, p=0.002). No significant difference was found between patients with and without morular metaplasias regarding the complete response (CR) rate (83.7% vs. 83.8%, p=0.978) or therapeutic duration to achieve CR (8.0±0.7 vs. 7.1±0.3 months, p=0.282). However, patients with morular metaplasias during progestin treatment had a significantly lower CR rate (75.0% vs. 90.4%, p=0.048) than patients with morular metaplasias appeared before treatment and a longer therapeutic duration to achieve CR than patients without morular metaplasias or those with morular metaplasias before progestin treatment (10.0±1.3 vs. 7.1±0.3, 6.4±0.6 months, p=0.019). After adjusting for pathological diagnosis, morular metaplasias, age at diagnosis, body mass index, insulin resistance, hypertension, diabetes mellitus, and metabolic syndrome, the appearance of morular metaplasias during treatment (odds ratio: 0.647, 95% confidence interval: 0.451–0.927, p=0.018) was negatively associated with the treatment duration to achieve CR. No significant difference was found in pregnancy, live-birth, or relapse rates between patients with and without morular metaplasias or between patients with morular metaplasias that appeared before treatment and those with morular metaplasias that appeared during treatment.
Conclusion: Morular metaplasias that appeared during progestin treatment were negatively correlated with the efficacy of fertility-preserving treatment in AEH and EEC patients, as this group showed a lower CR rate and a longer treatment duration to achieve CR.

OR-006

葡萄胎预防性化疗对妊娠滋养细胞肿瘤疗效的影响

刘媛媛
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

目的：评估葡萄胎预防性化疗是否影响葡萄胎后妊娠滋养细胞肿瘤(gestational trophoblastic neoplasia, GTN) 化疗的敏感性；探讨葡萄胎后低危 GTN 一线化疗方案的合理选择。
方法：回顾性收集我院 2008.01.01 至 2017.12.31 期间葡萄胎后 GTN 患者的临床病理资料。根据患者在葡萄胎时是否接受预防性化疗(prophylactic chemotherapy, P-Chem) 分为两组：P-Chem 组和对照组，其中对照组和 P-Chem 组按年龄、高危/低危 GTN 进行匹配，以 3：1 的比例在未接受 P-Chem 的葡萄胎后 GTN 患者中随机选取作为对照组，比较两组患者的临床病理特征及化疗疗效。
结果：2008.01.01 至 2017.12.31 期间，我院共收治了 455 例低危 GTN 和 32 例高危 GTN。其中，P-Chem 组患者共计 27 例，包括 24 例低危 GTN 和 3 例高危 GTN。随机选取对照组患者共计 81 例，包括 72 例低危 GTN 和 9 例高危 GTN。低危 GTN 中，P-Chem 组葡萄胎至 GTN 时间间隔较对照组显著延长(44 vs 69 天, P=0.001), 然而一线化疗前血 hCG 水平显著低于对照组(415.8 vs 4503.5 IU/L, P=0.000)，最终导致两组 WHO 预后评分无显著差异(2 vs 2, P=0.208), 对照组和 P-Chem 组相比，hCG 转阴所需化疗疗程数(4 vs 3, P=0.157)及一线化疗耐药率(40% vs 42%, P=0.904)亦无明显差异。对于高危 GTN，对照组和 P-Chem 组相比，WHO 预后评分、hCG 转阴所需化疗疗程数及耐药率亦均无显著差异。将低危 GTN 按照一线化疗方案是否与 P-Chem 相同，进一步分为方案相同组（A 组）和方案不同组（B 组），结果提示两组之间总的化疗疗程数及耐药率相似。但 A 组血 hCG 转阴所需化疗疗程数显著高于 B 组，无论是在所有 24 例 P-Chem 后低危 GTN 中进行比较（4.4 vs 2.8, P=0.024）还是在 22 例采用甲氨蝶呤 (methotrexate, MTX) 作为 P-Chem 方案的患者中相比（3 vs 2,P=0.004）。
结论：预防性化疗延长了葡萄胎至 GTN 的诊断时间，但并不增加葡萄胎后 GTN 的预后评分或化疗耐药率。葡萄胎后低危 GTN 一线化疗时，换用与预防性化疗不同的药物可能会增加化疗反应性。

OR-007

Primary appendiceal mucinous neoplasm: gynecological manifestations, management, and prognosis

Wei Zhang,Xiaohua Wu
fudan university shanghai cancer center

Objective: The aim of this study was to investigate the clinicopathological characteristics, management, and survival of patients with appendiceal mucinous neoplasm misdiagnosed as ovarian tumor and initially treated by a gynecological oncologists.
Methods: We retrospectively reviewed data for 71 patients identified from January 1, 2006 to September 31, 2018 with a final pathological diagnosis of appendiceal mucinous neoplasm. All patients were diagnosed as having ovarian tumor preoperatively and initially treated at Department of Gynecological Oncology.
Results: The median patients' age was 61 years, and the median peritoneal cancer index (PCI) was 16, with a complete cytoreduction score (CCR0/1) achieved in 46.47% of patients. Two patients received hyperthermic intraperitoneal chemotherapy (HIPEC). Estimated 5-year and 10-year survival was 76.7% and 53.4%, respectively. PCI and lactate dehydrogenase (LDH) levels were identified as independent predictors of poor overall survival.
Conclusions: Because of the high rate of ovarian metastases and the difficulty diagnosing appendiceal mucinous neoplasm preoperatively, this condition should be highlighted in gynecological oncology. Because initial surgical intervention is often performed by gynecological oncologists, updating the management guidelines for appendiceal mucinous tumor is needed because the rates of CCR0/1 resection and HIPEC are much lower in patients who are misdiagnosed.

OR-008

早期子宫平滑肌肉瘤的手术治疗：探索淋巴结清扫术对生存预后的价值

杨洁,曹冬焱,杨佳欣,黄惠芳,吴鸣,潘凌亚,沈铿,向阳
中国医学科学院北京协和医院

目的：分析早期子宫平滑肌肉瘤患者的临床特征及淋巴结清扫术对生存结果的影响。
方法：回顾性分析从 2005 年至 2015 年间于北京协和医院进行手术治疗的 I 期（FIGO 2009）子宫平滑肌肉瘤患者的临床特点和生存结果。
结果：2005-2015 年期间符合本研究纳入标准的患者共 70 例：IA 期 4 例；IB 期 66。患者确诊时的平均年龄为 46.0 岁（SD 9.0），71.4％的患者（50/70）临床表现为平滑肌瘤，其中半数患者无明显症状（35/70）。 27 例患者（38.6％）行淋巴结清扫术，病理均无淋巴结转移。42 例患者行术后辅助化疗（60％）。中位随访时间为 38 个月（范围 10-146）。随访期间 25 例患者复发（35.7％），其中阴道残端复发 10 例，盆腔复发肿瘤 5 例，远处转移 10 例。淋巴结清扫术对患者的生存无明显影响，进行和未行淋巴结清扫术患者的 4 年肿瘤无进展生存期（PFS）分别为 68.1％和 63.3％（HR 1.09，p = 0.49）。 4 年总生存率（OS）分别为 83.7％和 84.0％（HR 0.98，p = 0.55）。在单变量分析中，病理高级别肿瘤患者的预后较差（PFS，p = 0.002；OS，p = 0.05）。术后化疗改善患者的 PFS（p = 0.005），OS 则没有明显改变（p = 0.33）。
结论：接受淋巴结清扫术的 I 期子宫平滑肌肉瘤患者的生存结果与未进行淋巴结清扫术的患者相当。

OR-009

The clinicopathological characteristics of papillary hyperplasia of the endometrium with mucinous metaplasia and its impact on fertility-sparing treatment outcome in patients with endometrial atypical hyperplasia and early-stage endometrioid carcinoma

Zhiying Xu[1],Yali Cheng[1],Bai Mingzhu[1],Guan Jun[1,2,3],Yang Bingyi[1,2],Shan Weiwei[1,2],Shi Yue[1,2],Ning Chengcheng[1,2],Luo Xuezhen[1,2],Zhu Qin[1],Chen Xiaojun[1,2]
1.Obstetrics and Gynecology Hospital of Fudan University
2.Shanghai Key Laboratory of Female Reproductive Endocrine Related Diseases
3.Campus Virchow Clinic， Charite Medical University of Berlin， corporate member of Free University Berlin， Humboldt-University Berlin， Berlin Institute of Health

BACKGROUND: Papillary hyperplasia of the endometrium with mucinous metaplasia (mucinous papillary hyperplasia) is an uncommon lesion with a few reported cases thus far. The clinical significance of mucinous papillary hyperplasia in patients with endometrial hyperplasic diseases has not been well studied.
OBJECTIVE: We sought to investigate the clinical impact of mucinous papillary hyperplasia in early stage endometrioid endometrial cancer and atypical endometrial hyperplasia patients receiving progestin-based fertility preserving treatment.
STUDY DESIGN: This single-institutional study retrospectively investigated 444 patients with atypical endometrial hyperplasia (n=336) or endometrioid endometrial cancer (n=108, Grade 1, FIGO stage IA, without myometrial invasion) in Obstetrics and Gynecology Hospital of Fudan University from January 2014 to June 2017. All patients received progestin-based treatment. The endometrium was biopsied under hysteroscopy about every 3 months during treatment and pathologically evaluated. Associations between clinicopathological characteristics and mucinous papillary hyperplasia were estimated by Mann-Whitney U test or Kruskal Wallis test for continuous covariates and chi-square test or Fisher's exact test for categorical covariates. A multivariable model for mucinous papillary hyperplasia occurrence was developed using logistic regression. Kaplan-Meier survival curve and cox regression were preformed to estimate the association between mucinous papillary hyperplasia and treatment outcome.
RESULTS: According to the presence of mucinous papillary hyperplasia lesion in endometrium during conservative treatment, patients were classified into 3 subgroups: patients without mucinous papillary hyperplasia (n = 420), patients with simple mucinous papillary hyperplasia (n = 14) and patients with complex mucinous papillary hyperplasia (n = 10). Neither simple mucinous papillary hyperplasia or complex mucinous papillary hyperplasia appeared before progestin treatment but only appeared during progestin treatment. Progesterone receptor was unanimously negative in mucinous papillary hyperplasia lesions. Patients with simple mucinous papillary hyperplasia were more likely to have metabolic syndrome (9/14, 64.3%; 155/420, 36.9%, respectively, P = 0.049) and hypertension (5/14, 35.7%; 51/420, 12.1%, respectively, P = 0.024) versus patients without mucinous papillary hyperplasia and patients with complex mucinous papillary hyperplasia were significantly associated with higher body mass index (median, 27.19 kg/m^2; median, 24.06 kg/m^2, respectively, P = 0.019) and higher prevalence of diabetes mellitus (2/10, 20.0%; 11/420, 2.6%, respectively, P = 0.033) compared to patients without mucinous papillary hyperplasia. At multivariate analysis, diabetes mellitus (adjusted Odds Ratio, 5.82; 95% CI, 1.65-20.49, P = 0.006) remained an independent predictor of mucinous papillary hyperplasia occurrence. Patients with simple mucinous papillary hyperplasia and patients with complex mucinous papillary hyperplasia needed longer treatment duration to achieve complete response compared to patients without mucinous papillary hyperplasia (P = 0.018; adjusted Hazard Ratio, 0.56; 95% confidence interval, 0.32-0.97; P = 0.002; adjusted Hazard Ratio, 0.31; 95% confidence interval, 0.14-0.69, respectively).

CONCLUSIONS: Our study indicated that mucinous papillary hyperplasia occurrence might be associated with metabolic anomalies. Mucinous papillary hyperplasia, especially complex mucinous papillary hyperplasia, was associated with less favorable therapeutic results in early stage endometrioid endometrial cancer and atypical endometrial hyperplasia patients receiving fertility-sparing treatment.

OR-010
Plasma exosomal derived miRNAs as biomarkers of early endometrial carcinoma

Lanyun Zhou[2,1],Fenfen Wang[2],Yuanming Shen[2],Changkun Zhu[2],Bingjian Lu[2],Zimin Pan[2],Weiguo Lu[2],Yan Lu[2,1]
1.Institute of Translational Medicine， Zhejiang University
2.Women's Hospital， Zhejiang University

BACKGROUND: Endometrial cancer (EC) is one of the major causes of death among gynecologic malignancies. So far, there is no efficient way to screen asymptomatic women except patients with Lynch syndrome. MicroRNAs (miRNAs) are the most abundant type in the RNA cargo of exosomes and exosomal miRNAs (exomiRs) are usually tumor specific. Compared with conventional methods, plasma exomiRs would be a prime option due to its non-invasiveness, comprehensiveness, and low accessibility. To improve early detection of EC patients, here we carried out one of the largest plasma-derived exosomal miRNA studies for biomarker discovery in EC.
METHODS: Small RNA sequencing with Random Forest algorithm, hierarchical clustering analysis and receiver operating characteristic curve (ROC) analysis was performed to identify candidate exosomal miRNAs as diagnosis biomarkers in 56 plasma samples from healthy volunteers （HC）and EC patients. These miRNA candidates were further validated in 202 independent plasma samples by droplet digital PCR (ddPCR), 32 pairs of endometrial tumors and adjacent normal tissues by quantitative real-time PCR (qRT-PCR), and matched plasma samples of 10 patients before and after surgery by ddPCR. Statistical analyses were performed in R v3.5.1, SPSS and Microsoft Excel.
RESULTS: The permutation test identified 49 miRNAs expressing differently in healthy control (HC) and EC groups ($p < 0.01$) in plasma, 18 of them were also show significant difference in TCGA samples. And through the Random Forest algorithm, we identified six miRNAs (miR-139-3p, miR-15a-5p, miR-106b-5p, miR-107, miR-574-3p, miR-3615) which have the best classification efficacy with prediction rate of 89%, only six of 56 samples were misclassified. Each exomiR's AUC value that measures the efficiency of classifiers (i.e., exomiRs) for distinguishing between normal and cancer groups ranged from 0.693 to 0.819 with a mean of 0.757. The AUC of the combined six exomiRs achieved to as high as 0.948. Four of them (miR-106b-5p, miR-107, miR-15a-5p, and miR-3615) were significantly up-regulated in plasma-derived exome in EC compared with HC. The other two exomiRs (miR-139-3p and miR-574-3p) was significantly down-regulated in plasma-derived exome in EC compared with HC. Consistent trends in expression of these exomiRs were observed in tumor tissues compared to their adjacent normal tissues in UCEC patients from TCGA. With their target genes in microT-CDS, we constructed KEGG pathway enrichment and miRNA-gene network analyses and found that they are related to Wnt signaling pathway, p53 signaling pathway, fatty acid metabolism and so on. And miR-15a-5p, miR-106b-5p and miR-107 regulate 11 genes among 15 targets involved in more than five pathways, jointly. For all EC patients without regard to their stages, the average AUC value of the three verified exomiRs (i.e., miR-106b-5p, miR-107, and miR-15a-5p) is 0.705 ranging 0.611 to 0.823, in the independent plasma samples (n=115 for EC and n=87 for HC). The combination of three exomiRs yielded an AUC value of 0.832, which is much higher than the diagnostic accuracy of tumor biomarkers (CEA and CA125) alone (0.749). Integration of these exomiRs into routine tumor biomarker test models significantly improved the diagnostic performance, yielding an AUC value of 0.885. Particularly, the single miR-15a-5p yielded an AUC values of 0.813 to distinguish EC patients with stage I from healthy subjects. The integration of miR-15a-5p and serum tumor markers (CEA and CA125) could achieve a

higher AUC value of 0.874. There was also a close connection between miR-15a-5p and clinical manifestations in EC patients. Its exosomal expression was not only associated with the depth of muscular infiltration and aggressiveness of EC, but also correlated with the levels of reproductive hormones such as TTE and DHEAS.
CONCLUSIONS: Plasma-derived exosomal miR-15a-5p is a promising and effective diagnostic biomarker for the early detection of endometrial cancer.

OR-011

宫颈癌病灶最小无瘤边界及体积与术后不良病理因素

张晶晶[1,2],曹冬焱[2],杨佳欣[2],沈铿[2],何泳蓝[3],薛华丹[3]
1.中山大学附属第一医院妇科
2.中国医学科学院北京协和医院妇产科
3.中国医学科学院北京协和医院放射科

目的：初步探索宫颈癌病灶的最小无瘤边界（Tumor-free Margin，TFM）和体积与宫颈癌术后不良病理因素的关系。
方法：收集 2017.7.1 至 2019.6.30 于北京协和医院进行宫颈癌根治术初治的患者。患者术前 MRI 上测量病灶最小 TFM，勾勒病灶边缘并计算其体积。分析病灶最小 TFM 和体积对诊断术后不良病理因素的价值。
结果：240 例入组患者年龄 43.8±10.2 岁。根据 2018 年宫颈癌国际妇产科联盟（International Federation of Gynecology and Obstetrics, FIGO）校对后，IB 期 224 例（93.3%），IIA 期 16 例（6.7%）。所有入组患者均接受宫颈癌根治术，术后病理提示宫颈深间质浸润 95 例次（39.6%），淋巴血管间隙浸润阳性 91 例次（37.9%），淋巴结转移 20 例次（8.3%），宫旁浸润阳性 8 例次（3.3%），术后病理测量病灶直径大于 4 厘米 7 例次（2.9%），手术切缘阳性 1 例次（0.4%）。根据术后不良病理因素划分高危、中危患者分别 20 例（8.3%）、50 例（20.8%）。有淋巴结转移者病灶最小 TFM 明显小于无该病理因素者(P＜0.05), 1.6 mm vs. 2.4 mm。有宫旁浸润者病灶体积明显大于无该病理因素者(P＜0.05), 8979 mm^3 vs. 1545 mm^3。有宫颈深间质浸润者病灶体积明显大于无该病理因素者(P＜0.05), 3175 mm^3 vs. 1025 mm^3。有淋巴血管间隙浸润者病灶体积明显大于无该病理因素者(P＜0.05), 2958 mm^3vs. 1282 mm^3。非危险患者、中危患者、高危患者的病灶体积有统计学差异(P＜0.05), 1118 mm^3 vs. 3188 mm^3 vs. 4776 mm^3。病灶体积对宫旁浸润、宫颈深间质浸润、淋巴血管间隙浸润、高危患者均具有诊断价值(P＜0.05)。以 3882mm^3 为截断值，诊断宫旁浸润的敏感性为 100%，特异性为 74.2%。以 2881 mm^3 为截断值，诊断宫颈深间质浸润的敏感性为 52.5%，特异性为 88.9%。以 1072mm^3 为截断值，诊断淋巴血管间隙浸润的敏感性为 81.9%，特异性为 46.8%。以 3505mm^3 为截断值，诊断高危患者的敏感性为 88.9%，特异性为 84.8%。
结论：宫颈癌病灶最小 TFM 和体积与术后不良病理因素相关，病灶体积可用于术前诊断宫旁浸润和高危患者。

OR-012
一种基于单中心回顾性数据的新的宫颈腺癌卵巢转移预测模型

张运强,丁景新,华克勤
复旦大学附属妇产科医院

背景：文献报道年轻、无宫旁浸润、无宫体受累，FIGO（2018）分期＜IB2，无淋巴脉管浸润（LVSI）、无宫颈深肌层浸润、无淋巴转移的患者可考虑保留卵巢。然而，事实上有许多不满足这些条件的患者也没有发生卵巢转移，这意味着很大一部分病人的卵巢被过度切除了，为此，我们拟构建一个新型的预测模型，尽量降低过度切除卵巢的比例。
方法：收集我院 2014-2018 年宫颈腺癌或腺鳞癌患者的临床病理资料，进行回顾性分析，探讨卵巢转移的高危因素，根据相对危险度进行赋值，构建模型。最后将新模型与文献报道的模型（旧模型）进行对比，检验其优劣性及安全性。
结果：宫颈腺癌或腺鳞癌患者共 934 例，672 例进行了附件切除，其他患者根据旧模型保留了卵巢。切除附件者卵巢转移率为 2.827%。无卵巢转移者 5 年生存率为 89.1%,有转移时下降至 28.5%。有转移者术后化疗率为100%，放疗率为81.3%，提示卵巢转移的患者最好能够进行手术切除，因为放化疗并不能明显改善极差的预后。单因素分析提示肿瘤＞4cm（OR=3.42），宫旁浸润（OR=7.14），阴道累及（OR=7.96），肿瘤侵犯宫颈深肌层（OR=6.50）、外侧壁（OR=33.44），淋巴结转移至盆腔（OR=3.83）、髂总（OR=8.90）、腹主（OR=14.24），阴道切缘阳性（OR=11.46），高危病理类型（OR=12.9），宫体受累（OR=16.47），大量癌栓（OR=21.73），输卵管转移（OR=23.09）为卵巢转移高危因素。利用这些因素构建模型，ROC 曲线下面积（AUC）=0.907。多因素分析显示大量癌栓、输卵管转移为其独立危险因素，但其 AUC 仅为 0.811。故采用单因素的模型（12 分为界）为最终预测模型，将其与旧模型进行对比：安全性方面，旧模型保留卵巢者 5 年生存率 92.1%，新模型中低分组 91.7%；预测效能方面，旧模型 AUC=0.633，敏感度 95%，特异度 31.6%，而新模型分别为 0.907，92.5%和 87.2%。
结论：和旧模型相比，我们构建的新模型具有相当的安全性，更高的预测效能。旧模型约有 70%患者的卵巢被过度切除，通过新模型能够将这一比例降低至 12.8%。新模型中包括了更多的参数，不过都能够通过术前影像学、术中冰冻病理等方式解决。这意味着实现这一模型，需要术前影像科、术中病理科等科室的多学科紧密合作。

OR-013
中国奥拉帕利临床应用的真实世界研究

郑虹[1],高雨农[1],郭红燕[2],李莉[3],李庆水[4],崔恒[5],林安[1],孙立新[7],胡元 j 晶[8],康山[9],段微[10],潘玲亚[11],王淑珍[12],杨英捷[13],李云霞[13],孔为民[10],向阳[11],田小飞[15],凌斌[16],哈春芳[14],白文佩[17]
1.北京大学肿瘤医院 2.北京大学第三医院 3.新疆肿瘤医院 4.山东省肿瘤医院 5.北京大学人民医院
6.福建省肿瘤医院 7.山西省肿瘤医院 8.天津市中心妇产科医院 9.河北医科大学第四医院 10.北京妇产医院
11.北京协和医院 12.北京朝阳医院 13.贵州省肿瘤医院 14.宁夏医科大学总医院
15.陕西省肿瘤医院 16.北京中日友好医院 17.北京世纪坛医院

目的：奥拉帕利在全球已获得多个卵巢上皮癌治疗的适应症批准，包括铂敏感复发患者的维持治疗，BRCA 突变患者的一线维持治疗和 BRCA 突变患者复发后进展期治疗。本研究的目的主要是评估奥拉帕利在中国人群中真实世界临床应用的疗效和安全性。
方法：这是一项回顾性研究，我们收集了来自全国 17 个医疗中心，并在 2018 年 1 月至 2020 年 3 月期间接受奥拉帕利治疗的患者信息。收集的信息包括临床病理特征，治疗情况和随访信息。

结果：一共 251 例患者符合条件加入研究，其中 84 例患者应用奥拉帕利作为一线维持治疗(FL-M)，97 应用奥拉帕利作为铂敏感复发维持治疗(PSR-M)，70 例患者应用奥拉帕利治疗复发卵巢癌(AT)。在 FL-M 组有 54.7%患者存在 BRCA 突变患者，PSR-M 组 BRCA 突变患者占 35%，而 AT 组 37%患者存在 BRCA 突变。FL-M 和 PSR-M 组 12 月时无疾病进展率（Progression Free Survival, PFS）分别为 87.6%和 63.8%。多因素 COX 回归分析显示，铂敏感复发维持治疗前经过化疗达到完全缓解（Complete Response，CR) 是影响患者 PFS 的唯一因素 (HR=0.414, p=0.014)。在 AT 组, 40%的患者为铂敏感复发，奥拉帕利单药治疗的客观缓解率（ORR）为 37.1%，其中 CR 7.1%，30%的患者部分缓解，另有 30%的患者治疗期间疾病稳定。铂敏感复发与铂耐药复发患者相比，可以获得更高的 ORR（71.4% vs. 14.3%，p=0.000）。多因素分析显示，铂敏感复发是影响患者 PFS 的唯一因素 (HR=0.317, p=0.009). 3.2%的患者因为奥拉帕利的不良反应终止用药。奥拉帕利最常见的 G3 以上不良反应为贫血。贫血导致了 14.3% 的减量和 1.6%的治疗终止。

结论：在中国卵巢上皮癌人群中，奥拉帕利在真实世界的临床应用疗效是肯定的，不良反应可控，患者耐受性良好。不论是维持治疗还是复发后进展期治疗，奥拉帕利的疗效与铂敏感性相关。

OR-014
光学相干层析成像技术应用于在体宫颈病变评估的多中心临床研究

任琛琛[1],曾宪旭[1],张小安[1],朴浩哲[2],江兆宁[3],马欢[3],胡浩[3],王纯雁[2],王慧芬[4],王秀琴[5],张保萍[6],史中娜[1],王宝金[1]
1.郑州大学第三附属医院（河南省妇幼保健院）
2.辽宁省肿瘤医院 3.郑州光超医疗科技有限公司
4.漯河市中心医院 5.濮阳市油田总医院 6.郑州市金水区总医院

目的:在一个使用光学相干层析成像技术(OCT)进行在体宫颈检查的前瞻性研究中，我们评估了无创、实时的 OCT 检查对宫颈癌前病变和宫颈癌的诊断价值，并确定了 OCT 图像的诊断特征。

方法：来自 5 家中国医院的 733 例患者分别进行了光超 OCT 检查和阴道镜指导活检。OCT 图像与相对应的病理组织学切片进行比较，总结出了宫颈组织不同病变级别的诊断特征。这些 OCT 图像也由 3 名研究者进行 2 分类的判读，并将 OCT 的判读结果与病理结果进行比较。

结论：从 OCT 图像中可以清晰地观察到宫颈组织的各种结构，与组织切片有良好的对应关系。OCT 诊断结果的灵敏度为 87.0%(95%置信区间，CI，82.2%-90.7%)，特异度为 84.1%(95%置信区间，CI，80.3%-87.2%)，总体准确率为 85.1%。

讨论：OCT 可以提供与病理组织切片具有良好一致性的 OCT 图像，并且能够得到满意的诊断结果。由于 OCT 具有无创、实时和高准确性的特点，它对宫颈病变的在体评估具有非常高的价值，并有可能成为宫颈病变的常规诊断方法之一。

OR-015
Oncologic and obstetric outcomes of fertility-sparing surgery for borderline ovarian tumors in women of reproductive age: a retrospective cohort study

Rui Sun,Wenjun Wenjun
The First Affiliated Hospital of Nanjing Medical University

Objective： To retrospectively evaluate the oncologic and obstetric outcomes of fertility-sparing surgery (FSS) for borderline ovarian tumors.

Methods：132 patients with borderline ovarian tumors (BOTs) treated between January 2000 and August 2017 in the First Affiliated Hospital of Nanjing Medical University were divided into the incompletely staging surgery (ISS) group and the completely staging surgery (CSS) group. The overall survival (OS) and disease-free survival (DFS) curves were determined using the Kaplan–Meier method. The Cox proportional hazards method was used to assess the association between the variables and live birth and multivariate analysis to identify the independent associations.
Results：Chi-square and Kaplan-Meier analyses showed no significant differences in OS between the two groups (P=1.000 and P=0.716, respectively). The ISS group had a significantly higher recurrence rate than CSS (51.3% vs. 13.0%, P=0.000). Kaplan-Meier analysis also revealed the CSS group had fewer relapses and longer DFS than ISS (P=0.003). Univariate and multivariate analyses showed no statistical differences in live birth rate (crude odds ratio=0.885, 95%CI 0.411-1.903, P=0.755; adjusted odds ratio=0.848, 95%CI 0.366–1.963, P=0.700). Age was the only independent risk factor for live birth (adjusted odds ratio=0.902, 95%CI 0.823-0.988, p=0.027). 34(48.5%) of the 70 patients who attempted to conceive after FSS gave birth successfully. Among them, 27 (79.4%) conceived naturally, and seven (20.6%) underwent ovulation induction and in vitro fertilization (IVF) treatment. Mean live birth intervals after FSS was 31.86±19.325 months.
Conclusion: FSS with CSS seems safe and feasible for fertility preservation. CSS significantly increases the DFS of BOT and reduces the relapse risk. Surgery staging has a slightly negative and statistically insignificant association with live birth. For young patients, fertility guidelines can be introduced at 31.86±19.325 months postoperatively. For patients of older ages, positive reproductive treatment should be used as early as possible.

OR-016

重组全人抗 PD-L1 单克隆抗体 ZKAB001 在复发或转移性宫颈癌患者中进行的Ⅰ期临床多中心试验

安菊生,吴令英
中国医学科学院肿瘤医院

目的：剂量探索阶段主要目的：评价重组全人抗 PD-L1 单克隆抗体 ZKAB001 在复发或转移性宫颈癌受试者中，每两周给药一次时的安全性和耐受性，决定最大耐受剂量（MTD）和剂量限制性毒性（DLT）；明确 ZKAB001 的推荐剂量。
剂量扩增阶段主要目的：评价重组全人抗 PD-L1 单克隆抗体 ZKAB001 在复发或转移性宫颈癌受试者中，5mg/kg/每两周给药一次时的安全性和 ORR。
方法：剂量探索阶段采用 3+3 设计，在 5、10、15mg/kg/次三个剂量中进行，探索 MTD 和扩增阶段推荐剂量，根据试验结果推荐剂量被确认为 5mg/kg；剂量扩增阶段采用单臂试验设计，一共入组 60 名复发转移性宫颈癌受试者，接受每两周一次 5mg/kg 的 ZKAB001 治疗，持续 24 个周期或一年。主要终点为安全性和客观缓解率（ORR）；次要终点为无进展生存期（PFS）、持续应答时间（DOR）、总生存期（OS）和最佳疗效（BOR）。探索 PD-L1 表达（CPS）对于疗效的影响。
结果：2018 年 10 月 10 日至 2020 年 6 月 30 日期间共入选 60 例受试者，年龄中位数为 53 岁（范围：32-73），中位随访期为 4.9 个月（范围：1-20 个月）。53 名受试者接受过至少一次的肿瘤评估，其中 3 名受试者的最佳疗效为完全缓解（CR），10 名受试者出现部分缓解（PR），ORR 为 24.5%（95%可信区间：13.8-38.3）。12 名受试者疾病稳定（SD），28 名患者疾病进展（PD），疾病控制率（DCR）为 47.2%。中位 PFS 为 5.6 个月。中位 DOR 及中位 OS 均未达到。受试者 PD-L1 阳性（CPS≥1）比率为 50.94%（27/53），受试者 PD-L1 阴性（CPS<1）比率为 33.96%（18/53）；阳性受试者 ORR 为 29.6%；阴性受试者 ORR 为 22.2%。56.7%（34/60）的受试者出现一项或多项治疗相关不良事件（TRAEs），大部分 TRAEs 为 1 或 2 级；其中有 4 例受试者（6.7%）出现 3 级 TRAEs。

最常见的 TRAEs（＞10%）为：甲状腺功能减退症 （8 例，13.3%）， 白细胞计数降低（6 例，10.0%）。

结论：ZKAB001 在治疗复发转移性宫颈癌的中国患者中显示出良好安全性及显著疗效，现有的数据支持 ZKAB001 继续在更多的肿瘤适应症中进行研究与探索。

OR-017

妊娠期宫颈癌治疗效果分析

付玏[1],曹广旭[2],李芳[2]
1.上海市第一妇婴保健院
2.同济大学附属东方医院 妇产科

目的：宫颈癌筛查没有被列入孕前常规筛查项目，妊娠期宫颈癌时有发生。本研究主要分析新辅助化疗在妊娠期宫颈癌中的效果和 MRI 在妊娠期宫颈癌随访中的作用。

材料和方法：分析 12 名妊娠期宫颈癌患者的完整临床资料和影像学数据，评价新辅助化疗的效果和 MRI 在妊娠期宫颈癌随访中的价值。

结果：IA1-IA2 期患者 4 名，诊断宫颈癌的平均孕周为 18 周（10-21 周），在 MRI 检查中未发现异常，未行新辅助化疗，持续妊娠至 40 周行剖宫产，同时进行根治性子宫切除术；IB2-IIA2 期宫颈癌患者 8 例患者，诊断宫颈癌的平均孕周为 19 周（14-27 周），7 人在妊娠期间接受 TP 方案（顺铂 75mg/m^2+紫杉醇 175mg/m^2）新辅助化疗，1 人行 TC 方案新辅助化疗（卡铂 AUC=5+紫杉醇 175mg/m^2）。6 名患者为单疗程化疗，2 名患者接受了 2 个疗程新辅助化疗。8 名患者均于 32-34 周促胎肺成熟后行剖宫产术。对其中 2 例有高危因素的患者，在剖宫产和根治性子宫切除术后对有高危因素的患者进行了放化疗和近距离照射治疗。MRI 结果显示，8 例患者均显示侵袭性病变和可以测量的病灶，与临床分期一致。在接受新辅助化疗前后，患者肿瘤处的弥散加权成像（DWI）变化有显著性差异，病灶显著缩小。12 例患者在随访期内未发现复发病灶，胎儿出生后至随访期内未发现明显异常。

结论：新辅助化疗对妊娠期宫颈癌患者是有效安全的治疗方法。MRI 是妊娠期子宫颈癌随访和治疗效果评估的有效方法，表观弥散系数（ADC）值是评价化疗效果的可测量指标。

OR-018

无生育要求宫颈原位腺癌必须切除子宫?

刘京京,沈源明
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

目的：探讨无生育要求宫颈原位腺癌患者行子宫切除的必要性。

方法：回顾性分析 2007 年 1 月至 2019 年 12 月浙江大学医学院附属妇产科医院收治经锥切确诊的宫颈原位腺癌患者的临床病理资料，分别通过卡方检验和 Logistic 回归对可能影响原位腺癌锥切术后病灶残留和复发的因素进行单多因素分析,并评估宫颈锥切保守治疗的安全性。

结果：共纳入 352 例经锥切确诊的宫颈原位腺癌患者，平均随访 42.06±34.76 月，其中 251 例因无生育要求行子宫全切术，101 例有生育要求者行保守治疗。行子宫全切的患者中仅 41 例发现有病灶残留、其中浸润癌 4 例；单因素分析显示年龄（P=0.008）、治疗前宫颈细胞学结果（P=0.041）、宫颈锥切方式（p=0.035）及切缘状态（P=0.000）是宫颈锥切术后存在病灶残留的危险因素，治疗前 HPV 感染型别（P=0.883）、合并 CIN（P=0.276）、阴道镜转化区分型（P=0.594）、锥切医院（P=0.346）等与病灶残留无关；多因素分析显示切缘状态(p=0.000)是术后残留灶的独立影响因素。保留子宫患者

中 1 例出现病变的复发,单因素分析宫颈锥切方式（P=0.006）及术后 HPV 持续阳性（P=0.000）是复发的影响因素；多因素分析显示术后 HPV 持续阳性（P=0.000）是疾病复发唯一的独立预测因子。
结论：宫颈锥切术是宫颈原位腺癌有效且安全的治疗手段，锥切术后病灶残留及复发率与 CINIII 相当。无论是否有生育要求,锥切切缘阴性的原位腺癌均可保留子宫。

OR-019
高危型妊娠滋养细胞肿瘤初始化疗方案的选择及预后评估

李依桐,张新
辽宁省肿瘤医院

目的：探讨以 5-FU 为基础的化疗方案（5-FU、KSM、VCR 或 5-FU、KSM）和 EMA/CO（依托泊苷、甲氨蝶呤、放线菌素 D、环磷酰胺和长春新碱）方案作为初始化疗方案治疗高危型妊娠滋养细胞肿瘤（HRGTN）的疗效。方法：回顾分析 2002 -2019 年在辽宁省肿瘤医院接受初次化疗且首选方案为 5-FU 为基础的方案和 EMA-CO 方案的 HRGTN 患者的治疗情况，评价其疗效及预后相关因素。结果：1.中位无进展生存期（PFS）为 103 个月（0~220 个月），完全缓解率 80.65%（75/93），部分缓解率 17.20%（16/93），疾病进展率 5.38%（5/93），死亡率 9.68%（9/93）。其中以 5-FU 为基础的方案和 EMA/CO 方案总生存率分别为 90.67%和 88.89%，两组间无统计学差异（P=0.637）。2.以 5-FU 为基础方案的 75 例，其中 I 期 12 例、II 期 4 例、Ⅲ期 53 例，IV 期 6 例。7-11 分 61 例，≥12 分 14 例；EMA-CO 方案 18 例，其中 I 期 0 例、II 期 1 例、Ⅲ期 13 例，IV 期 4 例。7-11 分 12 例，≥12 分 6 例；分期与评分在两组间无统计学差异。3.1 年生存率 92.47%，5 年生存率 90.32%。LogRank 检验这两类化疗方案预后无统计学差异（P=0.793）。4.以 5-FU 为基础的方案和 EMA/CO 方案的耐药发生率分别为 16% 和 16.67%，两组之间差异无统计学意义（P=0.849）。以 5-FU 为基础的方案中 FAV（5-FU、KSM、 VCR）方案和 5-FU+KSM 方案耐药发生率分别为 11.87%和 31.25%，二者间差异有统计学意义（P=0.001）。5.以 5-FU 为基础的方案和 EMA-CO 方案的 III-IV 级骨髓抑制发生率分别为 14.67%和 27.78%，两组之间差异无统计学意义（P=0.202）。以 5-FU 为基础的方案中 FAV 方案和 5-FU+KSM 方案 III-IV 级骨髓抑制发生率分别为 15.25%和 12.5%，二者间差异无统计学意义（P=0.663）。6.Cox 多因素回归分析发现仅分期与生存时间有关（P=0.029）。结论：以 5-FU 为基础的方案和 EMA/CO 方案均可作为 HRGTN 患者的一线治疗方案且二者效果相当。以 5-FU 为基础的方案中 FAV 方案较 5-FU+KSM 方案疗效好且耐药发生率低。分期是影响 HRGTN 预后的独立危险因素。

OR-020
卵巢透明细胞癌与子宫内膜样癌的临床及预后特征

周灵[1],姚丽清[2],戴林[1],叶雪[1],祝洪澜[1],程洪艳[1],马瑞琼[1],崔恒[1],昌晓红[1]
1.北京大学人民医院
2.福建中医药大学附属福鼎医院妇产科

目的 探讨卵巢透明细胞癌与子宫内膜样的临床及预后特征，并评估其与子宫内膜异位症的关系。
方法 收集北京大学人民医院 1998 年 8 月至 2018 年 12 月期间确诊为卵巢透明细胞癌（Clear-cell ovarian carcinoma，CCC）及子宫内膜样癌（Endometrioid carcinoma，EC）的患者，进行回顾性分析并描述统计。生存分析采用 Kaplan-Meier 曲线模型进行单因素分析，两组之间的比较通过 log-rank 模型来实现；采用 Cox 回归模型进行多因素分析。
结果 共纳入 211 例患者，其中单纯 EC 为 73 例，单纯 CCC 为 91 例，其余 47 例为混合癌。从 1998 年到 2018 年，EC 和 CCC 的比例保持稳定。与 CCC 相比，EC 并发子宫内膜癌及同步子宫内膜病变

的几率更高，绝经前妇女的比例较高（p<0.01）。大部分 EC 患者雌激素受体（ER）和孕激素受体（PR）阳性，而 CCC 表现出较低的 ER 和 PR 表达（p = 0.000）。单纯 EC 与 CCC 预后无统计学差异。在单纯癌组的临床病理变量 COX 分析中，FIGO 分期是 PFS 和 OS 独立影响因素，术后 CA-125 水平是 PFS 的独立影响因素（p<0.01）；在晚期卵巢癌（II-IV 期）中，残余病灶是预后独立影响因素（p = 0.011）。在混合癌当中，FIGO 分期（p = 0.023）与混合子宫内膜样组织学（p = 0.001）是患者预后的独立影响因素。

结论 CCC 及 EC 虽然都被认为与子宫内膜异位症关系密切，但两者在临床表现及病理特征上存在一定差异。在混合性上皮卵巢癌中，合并 EC 的患者预后更好。

OR-021
外阴癌治疗中腔镜与开放式腹股沟淋巴结清扫术式的对比分析

邓思思,王应海,秦艳,张红平
云南省肿瘤医院（昆明医科大学第三附属医院）

目的：探讨腔镜腹股沟淋巴结清扫术较之开放腹股沟淋巴结清扫术的可行性、安全性、疗效。

方法：回顾性分析 2013 年 1 月至 2018 年 5 月云南省肿瘤医院行外阴广泛切除并腹股沟淋巴结清扫术（开放组），前瞻性入组 2018 年 5 月至 2020 年 6 月云南省肿瘤医院行外阴广泛切除并腔镜腹股沟淋巴结清扫术（腔镜组）的外阴癌患者，病理类型均为外阴鳞状细胞癌，年龄限定 18-85 岁，且不合并其他恶性肿瘤及免疫功能抑制疾病。收集基本信息（姓名、年龄、教育程度等），临床信息（单侧腹股沟淋巴结清扫手术时间、出血量、清扫淋巴结数目、术中及术后并发症、术后住院时长等），随访信息（实验室及影像学检查、生命质量量表评分等）。利用 MAC 版本 SPSS25.0 统计软件两独立样本 T 检验、χ^2 检验对两组数据进行对比分析。

结果：开放组入组 44 人，共完成 84 例开放腹股沟淋巴结清扫术；腔镜组入组 31 人，共计 57 例腔镜腹股沟淋巴结术，开放组与腔镜组年龄分别（53.69±12.223，54.75±12.676，F=0.069，t=-0.500，P=0.621）岁。临床及随访信息包括开放组与腔镜组的单侧腹股沟淋巴结清扫术平均手术时间（52.17±7.781，63.18±16.312，F=21.753，t=-4.742，P<0.001）分钟；出血量分别（50.23±35.394，11.74±8.589，F=40.334，t=9.560，P<0.001）毫升，清扫淋巴结数目分别（10.45±3.294，8.77±3.449，F=0.412，t=2.9127，P=0.004）枚，术后并发症（淋巴囊肿、淋巴水肿、淋巴渗漏、下肢蜂窝织炎、腹股沟区感染等）发生率分别（40.90%，12.90%，P=0.009），术后住院时长分别（12.05±4.338，9.28±2.691，F=9.658，t=4.670，P<0.001）日，差异具有统计学意义。

结论：外阴癌腹股沟淋巴结清扫术，腔镜术式切除淋巴结数量小于开放术式，腔镜术式的可行性与安全性有待进一步研究，该结果可能受限于不同术者的手术技术差异。腔镜术式手术时间长，但能降低术中出血量，可降低开放术式术后并发症的发生率。远期疗效以及在改善患者生活质量、心理状态方面的潜力，仍需本中心后续对已入组患者进行长期随访。今后研究重点应为建立前瞻性、多中心、随机、质控严格、大样本量及长期随访的临床试验研究。

OR-022
2018FIGO 宫颈癌新分期ⅢC 期对患者预后预测价值再评估

龙行涛
重庆大学附属肿瘤医院

目的 评价 2018 FIGO 宫颈癌新分期系统对ⅢC 期患者预后预测价值。
方法 连续收集 2011 年 01 月至 2014 年 12 月在我院接受规范治疗ⅠA1(脉管阳性）-ⅢB 期宫颈鳞癌、腺癌及腺鳞癌患者的临床病理资料、生存状况，分析影响预后相关因素。
结果 按照 2018FIGO 新分期统计，Ⅲ期患者 418 例，其中ⅢA 期 42 例（10.0%）、Ⅲb 期 120 例（28.7%）、ⅢC1 期 190 例（45.5%）、ⅢC2 期 66 例（15.8%）。ⅢC1 期年龄较其它组更年轻（P=0.003）；四个分期中组织病例类型、组织分化程度、肿瘤大小、放射治疗类型及是否巩固化疗均无明显统计学差异（P>0.05)。单因素生存分析，ⅢC1 期中位生存时间 81 个月（95% CI 64.123-97.877)，显著高于其他组（P=0.000)；ⅢC2 期中位生存时间 29 个月（95% CI 20.043-37.957），明显低于其他组（P=0.000)；肿瘤直径＞4cm 组中位生存时间 46 个月，≤4cm 92 个月，两组差异明显（P=0.000)。多因素生存分析，不同分期是影响患者预后独立危险因素。ⅢC2 期死亡风险为ⅢA 期 1.814 倍（P=0.018），为ⅢB 期 1.686 倍（P=0.006），为ⅢC1 期 2.325 倍（P=0.000）；ⅢC1 期死亡风险为ⅢA 期 0.780 倍（P=0.286），为ⅢB 期 0.725 倍（P=0.048）。肿瘤大小也是影响患者预后独立危险因素，肿瘤直径＞4cm 组死亡风险为≤4cm 组 1.667 倍（P=0.000）。根据 TNM 分期把ⅢC1p 期中 T 分期分为 T1 和 T2 期，结果显示，T1 和 T2 死亡风险为ⅢA 期 0.536 倍（P=0.015），为ⅢB 期 0.498 倍（P=0.000）。
结论 ⅢC2 期患者预后最差，但ⅢC1 期患者肿瘤的累及范围不同，其预后可能相差极大，异质性较大。在临床中，还需要与 T 分期相结合综合判断患者预后。

OR-023
Floxuridine, actinomycin D, etoposide, and vincristine (FAEV) for gestational trophoblastic neoplasia patients with a FIGO score of ≥5: results from a cohort of 208 patients

Yujia Kong,Yuan Li,Junjun Yang ,Yang Xiang
Peking Union Medical College Hospital

Objective: To evaluate the efficacy and toxicity of floxuridine, actinomycin D, etoposide, and vincristine (FAEV) as primary treatment for patients with gestational trophoblastic neoplasia who had a FIGO score of ≥5.
Methods: 208 patients with a FIGO score of ≥5 were treated with FAEV as first-line chemotherapy at Peking Union Medical College Hospital between January 2002 and December 2017. Response, survival, predictors of resistance, toxicity, fertility and pregnancy were analyzed, respectively.
Results: Of the 208 patients treated with FAEV, 10 patients required a change of chemotherapy due to toxicity (4.8%) and 1 (0.5%) died of cerebral hernia 5 weeks after the commencement of treatment. The remaining 197 patients were assessable for response to FAEV, of whom 168 (85.3%) patients achieved CR on FAEV and 29 (14.7%) patients developed resistance to FAEV. Non-molar antecedent pregnancy (OR: 10.093, 95%CI: 1.298-78.479, P=0.027) and stage IV (OR: 3.453, 95%CI: 1.286-9.272, P=0.014) were predictors of FAEV resistance. The 5-year overall survival (OS) rate of the entire cohort was 97.4%. Overall, there were 5 deaths. Three patients died of GTN (1 early death, 1 relapsed and 1refractory disease) and 2 died of other causes. One woman died of sepsis post-hysterectomy. A second women died of acute myeloid leukemia 3 years after she completed treatment. Grade 3-4

neutropenia, thrombocytopenia, and anemia occurred in 28.5%, 7.1% and 6.3% of cycles, respectively. No short-term toxicity-related deaths occurred. Five patients developed acute myeloid leukemia 1-3 years after completion of chemotherapy. Sixty-three patients who preserved fertility wished to become pregnant and 57 of them conceived. A total of 81 pregnancies occurred, including 52 term deliveries, 7 current pregnancies, 16 miscarriages, 4 ectopic pregnancies and 2 intrauterine fetal deaths due to preeclampsia. Of the 52 live births, there were no congenital abnormalities.
Conclusions: FAEV regimen is highly effective and well-tolerated as primary treatment for GTN patients with a FIGO score of ≥5. This regimen might be regarded as an alternative to the current standard of EMA/CO.

OR-024

ZUFANG alleviates ovary injury induced by cyclophosphamide in mice by inhibiting PI3K/AKT signal pathway

柏桦琳,李科珍
华中科技大学同济医学院附属同济医院

This study focused on a novel ovarian protectant ZUFANG, especially its protective efficacy and potential mechanisms.
Methods
Mice were randomly divided into four groups: control, cyclophosphamide (CTX), CTX+ZF and ZF group. CTX+ZF and ZF group: intragastrical administration of ZF daily for 40 days, others received drinking water. On the 11^{th} ,18^{th},25^{th}day, CTX and CTX+ZF group mice received cyclophosphamide (75mg/kg·BW). And normal saline injected into other groups. Ovarian index, estrous cycle, ovarian follicle counts, and serum anti-Mullerian hormone level were recorded. Western blotting to detect PI3K/AKT pathway activation. Fertility was evaluated by pregnancy rate, stillbirth rate, litter size, and birth weight of suckling mice.
Results
CTX group had decreased body weight, lower ovarian index, disturbed estrus cycle. After treatment with ZF, the number of follicles at all levels except atretic follicles was more than those in CTX group, AMH level was increased, litter size and birth weight of suckling mice increased.
Conclusion
ZF showed protective potentials, which was associated with activation of the PI3K/AKT signaling pathway.

OR-025

术前系统免疫炎症指数 与 II 型子宫内膜癌预后的相关性研究

李林,李征宇
四川大学华西第二医院

背景及目的 II 型子宫内膜癌的发病率较 I 型内膜癌相对更低，但因其病理类型的特殊性，II 子宫内膜癌的患者表现出更多的转移征象，其预后相对较差。系统免疫炎症指数（SII）是一类全身炎症反应指标，与多种肿瘤的预后相关，故本研究旨在探讨术前系统免疫炎症指数（SII）、中性粒细胞计数/淋巴细胞计数比值（NLR）和血小板计数/淋巴细胞计数比值（PLR）与 II 型子宫内膜癌临床病理特征及预后的关系。

研究方法 收集并回顾性分析 2010 年 1 月至 2015 年 12 月于四川大学华西第二医院就诊并行手术治疗的 II 型子宫内膜癌患者信息，包括患者的病理资料、治疗前实验室检查结果、影像学资料和基本信息。所有患者均接受同质性电话随访，截止随访至 2019 年 12 月。分析 SII 与该类患者预后的关系。
研究结果 共有 424 例患者纳入研究，其中 366（86.32%）例患者获得有效随访。PLR 和 NLR 截断值分别为 189.3 和 3.1，SII 截断值为 466.7。将患者分别分为高/低 PLR 组、高/低 NLR 组和高/低 SII 组，各组间患者一般情况（患病时年龄、合并症、月经情况）、病理相关情况（病理类型、手术分期、脉管浸润）、手术相关情况（手术时长、出血量、输血率、术后并发症、住院天数）均无明显差异（P＞0.05）。高 PLR 组总体生存率低于低 PLR 组（P=0.034），高 NLR 组和低 NLR 组之间生存率无明显差异（P=0.68）。高 SII 组总体生存率明显低于低 SII 组（P=0.030）。高 SII 是 II 型子宫内膜癌预后的独立危险因素（P=0.022）。
结论 高 PLR 及高 SII 的患者总体生存率更低，高水平 SII 是 II 型子宫内膜癌预后的独立危险因素，可用于术前评估患者预后，有助于对患者术后补充治疗的判断。

OR-026
Down-regulation of YAP1 inhibits growth of cervical adenocarcinoma cells

于兰,刘继红
Sun Yat-sen University Cancer Center

Objective: To investigate function of YAP in cervical cancer cells.
Methods: Expression of YAP1 was compared using western blotting and RT-PCR. We designed and synthesized three siRNAs targeting YAP gene. We performed apoptosis, colony formation assay and Edu assay to illustrate influence of YAP interference in appoptosis and proliferation of cervical adenocarcinoma cells.
Results: We proved that the growth of YAP-knockdown HeLa cells was significantly inhibited compared to control group. Colony formation assay also showed inhibited growth rate of YAP-si3 HeLa cells (P<0.001). The apoptosis rate of YAP-si3 treated HeLa cells increased to 33.60% compared to 5.25% of the blank group. We observed a decrease in EdU positive cells in YAP-knockdown HeLa cells. The results showed that loss of YAP suppressed proliferation and induced apoptosis in HeLa cells but not in C33a cells.
Conclusions: We demonstrated that YAP depletion in HeLa cells promoted apoptosis and inhibited cellular proliferation. This study suggest that YAP may be used as a predictive marker of cervical adenocarcinoma cells, but may function differently in squamous carcinoma cells.

OR-027
The impact of lymph node dissection on survival in patients with clinical early-stage ovarian cancer

Ting Deng[1],Huang Qidan[1,2],Wan Ting[1,2],Luo Xiaoling[1],Cao Junya[1],Feng Yanling[1],Huang He[1],Liu Jihong[1]
1.Department of Gynecologic Oncology， State Key Laboratory of Oncology in South China， Collaborative Innovation Center for Cancer Medicine， Sun Yat-sen University Cancer Center
2.Department of Gynecologic Oncology， Sun Yat-sen University Cancer Center

Objective: To estimate the impact of lymph node dissection on survival in patients with apparent early-stage epithelial ovarian cancer.
Methods: We conducted a retrospective review of patients with clinical stage I-II epithelial ovarian cancer. All patients underwent primary surgery at Sun Yat-sen University Cancer Center between

January 2003 and December 2015. Demographic features and clinicopathological information as well as perioperative adverse events were investigated, and survival analyses were performed. Patient characteristics were compared using χ2 tests for categorical variables and t-tests for continuous variables. Progression-free survival (PFS) and overall survival (OS) were analyzed with Kaplan-Meier estimates, the log-rank test, and Cox proportional-hazards modeling.
Results: A total of 400 ovarian cancer patients were enrolled, and patients were divided into two groups: 81 patients did not undergo lymph node resection (Group A), and 319 patients underwent lymph node dissection (Group B), consisting of systematic lymphadenectomy or lymph node sampling alone. In Group B, the median number of removed nodes per patient was 25 (21 pelvic and 4 para-aortic nodes). In Groups A and B, respectively, the 5-year PFS rates were 83.3% and 82.1% (p=0.305), and the 5-year OS rates were 93.1% and 90.9% (p=0.645). The recurrence rate in the retroperitoneal lymph nodes was not associated with lymph node dissection (p=0.121). The median operating time was markedly longer in Group B than in Group A (220 min vs 155 min, p<0.001), and Group B had a significantly higher incidence of lymph cysts at discharge (32.9% vs. 0.0%, p<0.001). The volume of blood loss, the median length of hospitalization and the proportion of patients undergoing bloodtransfusions were not significantly different between the two groups.
Conclusion: In patients with early-stage ovarian cancer, lymph node dissection was not associated with a gain in OS or PFS and was associated with an increased incidence of perioperative adverse events.

OR-028
腹腔镜肿瘤细胞减灭术对晚期卵巢高级别浆液性癌患者生存影响的多因素回顾性分析

邓黎,陈勇,王延洲,李宇迪,张文希,胡群英,陈功立,周莉,梁志清
陆军军医大学第一附属医院（西南医院）

目的:通过回顾性研究分析 II-IV 期卵巢高级别浆液性癌不同临床特征和腹腔镜手术和策略对患者生存时间的影响。
方法:收集 2000 年 4 月到 2018 年 6 月卵巢高级别浆液性癌 II-IV 期进行肿瘤细胞减灭术病例，包括初次肿瘤细胞减灭术(PDS)或新辅助化疗(NACT)后再行间期肿瘤细胞减灭术(IDS)的患者。患者有定期随访资料，死亡患者终止随访。最后随访时间为 2020 年 8 月。采用 Long-rank 统计进行生存分析;对患者年龄，腹水量，手术减瘤效果(R0, R1 和 R2)，Fagotti 评分，是否行 NACT 等因素对预后的影响进行单因素及多因素分析;并对三级以上手术并发症的相关因素进行比较。
结果:纳入晚期卵巢高级别浆液性癌患者共 629 例，其中腹腔镜手术 393 例，开腹手术 236 例; PDS 201 例，NACT+IDS428 例。患者总中位生存时间(OS) 48 月(40-55 月)，其中 PDS 组 OS 为 46 月(37-54 月)，NACT+IDS 组 OS 为 54 月(29-54 月)，两组比较无统计学差异(P=0.458)。腹腔镜组 OS 为 56 月(42-69)，开腹手术 OS 为 42 月(32-51)，两组比较无统计学意义(P=0.052)。因 P 值接近，进一步分层分析发现，NACT 后行腹腔镜手术的患者的 OS 长于 NACT 后开腹手术患者，分别为 56 月和 35 月(P=0.049)。单因素及多因素分析结果表明:年龄、手术减瘤效果不佳(>RO) ，大量腹水(>1000ml) 和 Fagotti 评分>8 分为影响生存的危险因素。分层分析结果如下:不同手术减瘤效果 OS 分别为 R0 75 月、R1 38 月、R2 28 月，P=0.001; Fagotti 评分<8 分 OS 为 78 月，≥8 分 OS 为 33 月(P=0.001) 。发生三级以上手术并发症的单因素及多因素分析结果显示，Fagotti 评分大于 8 分为危险因素(OR：2.215) ;是否进行 NACT 为保护因素(OR: 0.046) ;腹水大量相比于无腹水而言，为危险因素(OR:2.189)。对 Fagtti 评分进行分层分析发现，不同 Fagotti 评分分组下，三级以上并发症和减瘤效果均存在统计学差异(P=0.001) 。NACT 后三级以上并发症和术中出血量减少，差异均存在统计学差异(P=0.001)
结论:晚期卵巢高级别浆液性癌患者总体预后较差，患者开始治疗时的疾病的临床特征，如年龄、腹水量和 Fogotti 评分等因素与患者的预后明确相关。手术作为晚期卵巢癌治疗的重要手段，其实施的时机

和效果与患者的预后也有一定相关性。我们的结果提示:直接行 PDS 或 NACT 后 1IDS 对患者的中位 os 并没有显著影响，但 NACT 后手术可以减少三级以上手术并发症的发生。腹腔镜和开腹手术相比，患者的中位 OS 也没有显著影响；但有意思的是，对于接受 NACT+IDS 的患者，腹腔镜手术 OS 优于开腹手术。手术减瘤效果达到 RO 是影响生存的重要因素。

壁报交流

PO-001
Mining the TCGA database for genes of prognostic value in the ovarian cancer microenvironment

Xiao Huo,Dongyan Cao,Mei Yu,Peng Peng,Keng Shen
peking union medical college hospital

Background: Ovarian cancer is highly malignant and has a poor prognosis in the advanced stage; thus, prediction of its prognosis is important. Studies in a variety of cancers have shown that the degree of infiltration by tumor microenvironment cells, immune cells and stromal cells has an important impact on the prognosis. Currently, the relationship between tumor microenvironment genes and the prognosis of ovarian cancer has not been studied.
Methods: Gene expression profiles and SNP data of ovarian cancer were downloaded from the TCGA database. We analyzed the relationship between ovarian cancer and immune metagenes. Cluster analysis, WGCNA analysis and univariate survival analysis were used to identify immune microenvironment genes as prognostic signatures for predicting the survival of ovarian cancer patients.
Results: We systematically analyzed the relationship between ovarian cancer and immune metagenes. Immune metagenesexpression were associated with prognosis. Moreover, immune metagenes expression were associated with BRCA1 mutations. In total, we identified 10 genes related to both immunity and prognosis in ovarian cancer according to the expression of immune metagenes.
Conclusion: Our study identified 10 immune microenvironment genes related to the prognosis of ovarian cancer. These genes were also validated in independent ovarian cancer patients by KMplot. The list of tumor microenvironment-related genes provides new insights into the underlying biological mechanisms driving the tumorigenesis of ovarian cancer.

PO-002
Recurrence Patterns and Survival Outcomes In Chinese Patients With Surgically Treated Recurrent Ovarian Clear Cell Carcinoma: A Single Institutional Analysis of 45 cases

Shuang Ye,Shuling Zhou,Wei Chen,Libing Xiang,Xiaohua Wu,Huijuan Yang
Fudan University Shanghai Cancer Center

Purpose: To evaluate the recurrence patterns and survival outcomes of surgically-treated relapsed ovarian clear cell carcinoma (OCCC) patients.
Methods: We performed a comprehensive retrospective analysis of all the OCCC patients who underwent secondary debulking from 2004/10 to 2019/04. The site of recurrence and oncologic outcomes were assessed.
Results: Of the 45 patients included, 75.6% had early-stage disease and platinum-sensitive recurrence accounted for 70.5%. The median progression free survival after primary surgery (PFS 1) was 20 months (range, 2-137). Of all, 64.4% patients had solitary recurrence and 86.7% had no residual disease after secondary surgery. The most common recurrent site was pelvis (47.5%), followed by lymph node metastases (18.0%) and abdominal wall lesions (8.2%). The median disease-free survival after recurrence (PFS 2) and post-relapse survival (PRS) was 15 months (range, 0-96), and 24 months (range, 3-159), respectively. Eight patients (17.8%) had a prolonged disease-free interval after recurrence (PFS 2 > 30 months). Patients with localized relapse had better survival including PFS 2 (P=0.023), PRS (P=0.004), and overall survival (OS) (P=0.029). Patients who achieved complete resection tended to have longer PFS 2 (P=0.017). After multivariate analysis,

complete resection at recurrence remained as an independent positive predictor for PFS 2 (P=0.022). The median OS was 50 months and was significantly associated with platinum response (P=0.003) and number of relapsed lesions (P=0.002).
Conclusions: High rate of pelvic recurrence was noted in this population. Patients with focal recurrence had favorable prognosis. Complete resection at secondary debulking proved to be an independent predictor for disease-free survival.

PO-003
MicroRNA-338-3p suppresses ovarian cancer cells growth and metastasis: implication of Wnt/Catenin beta and MEK/ERK signaling pathways

Ruitao Zhang,Huirong Shi,Fang Ren,Wei Feng,Yuan Cao,Gailing Li,Zheying Liu
The First Affiliated Hospital of Zhengzhou University

Background: Downregulation of microRNA-338-3p (miR-338-3p) was detected in many malignant tumors, which indicated miR-338-3p might serve as a role of antioncogene in those cancers. The present study aimed to explore the roles of miR-338-3p in the growth and metastasis of ovarian cancer cells and elaborate the underlying possible molecular mechanism.
Methods: Multiply biomedical databases query and KEGG pathway enrichment assay were used to infilter possible target genes and downstream pathways regulated by miR-338-3p. Overexpression miR-338-3p lentiviral vectors were transfected into ovarian cancer OVCAR-3 and OVCAR-8 cells, cell proliferation, migration and invasion were analyzed by MTT, colony formation, transwell, Matrigel assay and xenograft mouse model. One 3′-untranslated regions (UTRs) binding target gene of miR-338-3p, MACC1 (MET transcriptional regulator MACC1), and its regulated gene MET and downstream signaling pathway activities were examined by western blot.
Results: Biomedical databases query indicated that miR-338-3p could target MACC1 gene and regulate Met, downstream Wnt/Catenin beta and MEK/ERK pathways. Rescue of miR-338-3p could inhibit the proliferation, migration and invasion of ovarian cancer cells, and suppress the growth and metastasis of xenograft tumor. Restoration of miR-338-3p could attenuate MACC1 and Met overexpression induced growth, epithelial to mesenchymal transition (EMT) and activities of Wnt/Catenin beta and MEK/ERK signaling in vitro and in vivo.
Conclusions: The present data indicated that restoration of miR-338-3p could suppress the growth and metastasis of ovarian cancer cells, which might due to the inhibition of proliferation and EMT induced by MACC1, Met and its downstream Wnt/Catenin beta and MEK/ERK signaling pathways.

PO-004
High postoperative plasma D-dimer levels predicted high risk group of patients with endometrial cancer

Yujia Huang,Bilan Li
Shanghai First Maternity and Infant Hospital

Background: The activation of the clotting-fibrinolytic system is common in cancer patients and results in unfavorable clinical outcomes. This retrospective study aimed to investigate the significance of plasma D-dimer levels in the prediction of high risk group of endometrial cancer patients.

Methods: This study enrolled 176 patients with endometrial cancer. Preoperative and postoperative plasma D-dimer levels were measured. The correlations of plasma D-dimer levels with clinicopathological features of the patients were analyzed.
Results: High pre-operative D-dimer levels (≥0.245 mg/L) were associated with late-stage endometrial cancer. Significant differences occurred in the higher-risk group with higher 1st post-operative D-dimer levels.
Conclusions: Increased postoperative plasma D-dimer levels accurately predicted higher risk factors in patients with endometrial cancer.

PO-005

循环肿瘤 DNA 检测及其在妇科肿瘤中的应用

刘康生
南京市妇幼保健院

循环肿瘤 DNA （Circulating Tumor DNA， ctDNA） 含有肿瘤的遗传信息， 与肿瘤组织具有高度的一致性， 可代替肿瘤组织用于肿瘤的早期诊断，ctDNA 分析结果可以提供肿瘤基因组的综合描述， 克服组织活检的异质性， 补充组织样本中遗漏的突变， 是一种具有良好临床应用前景的液体活检标记物, 可以作为液体活检的靶标， 临床应用前景广阔. 本文就循环肿瘤 DNA 检测在妇科肿瘤中人内容进行综述。

PO-006

The Principle of Digital PCR and Its Applications in Current gynecology and obstetrics

Kangsheng Liu
Department of Clinical Laboratory， Women's Hospital of Nanjing Medical University，Nanjing Maternity and Child Health Care Hospital， Nanjing， Jiangsu 210029， China.

Polymerase chain reaction (PCR) has updated by three generations. Digital PCR (dPCR) is a revolutionary technique to precisely quantify nucleic acids. For its high sensitivity and specificity, this technique has been widely replicated. To verify its applicability, we reviewed all the related articles in PubMed database published before May 10, 2018.Original articles and reviews on the topics were selected.Entered key words included “digital PCR/dPCR”, “advantage”, “combined use”, “microfluidic chip”, “gynecological cancer/tumor”. We found that dPCR has shown great potential in clinical operations, like tumor liquid biopsy, non-invasive prenatal diagnosis, microorganism detection, next-generation sequencing library quality-control and validation of the results.

PO-007

单孔腹腔镜下保留生育功能的卵巢交界性肿瘤手术初探

陈继明,秦真岳
南京医科大学附属常州第二人民医院

目的：探讨单孔腹腔镜下保留生育功能的卵巢交界性肿瘤手术技巧及其安全性与可行性。

方法：回顾分析 2019 年 09 月 25 日于南京医科大学附属常州第二人民医院手术治疗的一例保留生育功能的卵巢交界性黏液性囊腺瘤患者的临床资料，该患者接受单孔腹腔镜下保留生育功能的手术。术中纵行垂直切开脐孔及上下缘约 1.5cm，逐层进入腹腔，采用专用单孔腹腔镜手术 PORT 形成操作通道后利用腹腔镜器械实施手术。

结果：本例手术顺利完成，术中未增加通道转传统腹腔镜亦未中转开腹。术中未意外损伤临近其他脏器如输尿管、膀胱及结直肠等亦未伤及大血管及神经等。本例手术时间 245min，术中出血量约 100ml。术后 1d 体温 37.4℃，术后 1.5d 肛门排气，术后 2d 拔除导尿管后膀胱恢复正常排尿功能，无尿潴留发生。患者术后无需镇痛类药物。患者脐部切口愈合甲级，术后 5d 顺利出院，现门诊随访中，无复发迹象。

结论：在单孔腹腔镜技术成熟的前提下，选择合适的病例，单孔腹腔镜下保留生育功能的卵巢交界性肿瘤手术可能是安全有效的。

PO-008

Significance of HR-HPV E6/E7 mRNA detection in the screening of cervical cancer

Jiming Chen[1],Ahong Zhong[1],Jiming Chen[1],Ahong Zhong

1.Department of Obstetrics and Gynecology， the Affiliated Changzhou No.2 People's Hospital of Nanjing Medical University

2.Department of Obstetrics and Gynecology， the Affiliated Changzhou No.2 People's Hospital of Nanjing Medical University

Abstract: Objective To assess the significance of HR-HPV E6/E7 mRNA detection in cervical cancer screening.

Methods A total of 308 patients admitted to the Department of Obstetrics and Gynecology of from Changzhou Second People's Hospital between July 2017 and July 2018 was collected and were given TCT detection and HR-HPV E6/E7 mRNA detection, and the results were compared with the findings from the gold criteria of histology and pathology.

Results The positive rate of HR-HPV E6/E7 mRNA detection was significantly higher in CIN group than in the inflammatory group, there was no statistically significant difference in TCT detection, but the difference of HR-HPV E6/E7 mRNA detection was statistically significant ($p<0.001$).There were statistically significant differences in the positive rates between the two detections in three groups of cervicitis, CINⅠ and CIN Ⅱ+ ($p<0.05$). For the women younger than 30-years-old，only in cervicitis group the difference between the two detections was statistically significant ($p<0.05$), but the difference between the two detections in the three groups for the women aged 30 years and older was statistically significant, respectively ($p<0.05$).The sensitivity, positive predictive value and negative predictive value of TCT detection were higher than that of HR-HPV E6/E7 mRNA detection, but the specificity of TCT detection was lower than that of HR-HPV E6/E7 mRNA detection, the differences were statistically significant, respectively ($p<0.05$). In the women younger than 30-years-old, the specificity, positive predictive value and negative predictive value of HR-HPV E6/E7 mRNA detection were higher than that of TCT detection, but the sensitivity of HR-HPV E6/E7 mRNA detection was lower than that of TCT detection; for the women aged 30 years and older，the sensitivity, specificity, positive predictive value and negative predictive value of HR-HPV E6/E7 mRNA detection were both lower than that of TCT detection, the differences were statistically significant, respectively ($p<0.05$).

Conclusion With the aggravation of cervical lesions, HR-HPV E6/E7 mRNA detection is better than TCT detection. We prefer to use HR-HPV E6/E7 mRNA detection, especially for the women less than 30-years-old. The finding suggests HR-HPV E6/E7 mRNA detection may serve as a more useful test for predicting the risk of progression and offer a viable tool for triage during cervical cancer screening.

PO-009
Long-term survival of poorly differentiated primary peritoneal papillary serous carcinoma presenting as vaginal discharge: a case report and literature review

Jiming Chen,Ahong Zhong
Department of Obstetrics and Gynecology， the Affiliated Changzhou No.2 People's Hospital of Nanjing Medical University

Primary peritoneal carcinoma refers to a malignant tumor originating from the peritoneal mesothelial, which has a low incidence and is quite rare in clinical practice. It has been reported that the incidence rate is about 9%-15% of ovarian cancer. Due to its slow onset, insidious symptoms, lack of specificity in clinical manifestations and high misdiagnosis rate, primary peritoneal carcinoma is often misdiagnosed as ovarian cancer because most patients are female. Roffers et al. reported that in the USA, the morbidity was 0.3 per million during 1992 and 1997. The prognosis of high-grade primary peritoneal carcinoma is in generally poor, with a median overall survival (OS) ranging from 21 to 23.5 months. The fact that very few cases of long-term survival have been reported has testified the poor prognosis to some extent. We describe an unusual case of a long-term survival of poorly differentiated primary peritoneal papillary serous carcinoma presenting as vaginal discharge.

PO-010
经阴道单孔腹腔镜手术在卵巢良性肿瘤中的应用

陈继明,王慧慧
南京医科大学附属常州第二人民医院

目的 探讨经阴道单孔腹腔镜手术（V-NOTES）治疗卵巢良性肿瘤的可行性与安全性。
方法 回顾性分析南京医科大学附属常州第二人民医院妇科 2017 年 12 月~2019 年 10 月期间的共 30 例卵巢良性肿瘤病例数据，根据手术方式分为经阴道单孔腹腔镜组（V-NOTES）10 例和经脐单孔腹腔镜组（TU-LESS）20 例，使用 SPSS 25.0 对两组患者的手术时间、术中出血量、血红蛋白变化值、术后 48 小时最高体温、术后首次肛门排气时间、术后住院天数、治疗费用、视觉模拟评分（VAS）以及美容评分（CS）进行统计学分析。
结果 V-NOTES 组与 TU-LESS 组手术均顺利完成，两组患者的手术时间、术中出血量、血红蛋白变化值、术后 48 小时最高体温、术后住院天数以及住院治疗费用无明显差异.但 V-NOTES 组的首次肛门排气时间与 VAS 评分显著小于 TU-LESS 组,而 V-NOTES 组的 CS 评分明显高于 TU-LESS 组。
结论 在卵巢良性肿瘤的手术治疗中，与经脐单孔腹腔镜手术相比，经阴道单孔腹腔镜手术可使患者疼痛减轻、恢复更快、美观度更佳。

PO-011
Intravenous leiomyomatosis of the uterus: case report and literature review

Jiming Chen,Junling Liu
Department of Obstetrics and Gynecology， the Affiliated Changzhou No.2 People's Hospital of Nanjing Medical University

Abstract
Background: Intravenous leiomyomatosis are rare in clinical practice. They are tumors that grow from smooth muscle cells to the venous or lymphatic vessels, and even beyond the boundaries of leiomyomas. Their histology is benign, but However, it has a similar growth and metastasis pattern of malignant tumors and is prone to recurrence. In this paper, the clinical manifestations, treatment and pathological data of a case of Intravenous leiomyomatosis were retrospectively analyzed and to explore its clinical features, diagnosis and treatment points and prognosis.
Case presentation: This patient showed premenstrual symptoms as menstrual disorders. The examination suggested that uterine fibroids may be found. The wide ligament fibroids were found to be bead-like changes during operation. The vascular pedicle was worn through the uterus. Considering the intraluminal leiomyomas, rapid pathology during operation Prompt uterine leiomyoma, laparoscopic uterine fibroids. Postoperative routine pathology suggests intravascular leiomyomas. Therefore, laparoscopic hysterectomy + bilateral accessory resection and bilateral ovarian arteriovenous ligation were performed. The patient recovered well after surgery, and no obvious signs of recurrence were found after follow-up.
Conclusions: Intravenous leiomyomatosis lack clinical typical features, high preoperative misdiagnosis rate, poor biological behavior and unique pathological features, mainly for surgical treatment, and should be followed closely after surgery.

PO-012
纳米炭在宫颈癌前哨淋巴结活检术中的初步研究

王亚婷,李斌
中国医学科学院肿瘤医院

目的：初步探索纳米炭在宫颈癌前哨淋巴结活检术（sentinel lymph node biopsy, SLNB）中的可行性。
方法：纳米炭（carbon nanoparticles, CNP）是一种淋巴系统高度趋向性的示踪剂，广泛应用于淋巴造影。本研究分析了 2015 年 12 月至 2018 年 9 月期间接受纳米炭示踪操作的宫颈癌患者。所有患者在全麻条件下于宫颈 3 点和 9 点进行纳米炭浅表注射，通过腹腔镜识别黑染的淋巴结为前哨淋巴结（sentinel lymph node, SLN），详细记录了 SLN 的部位及个数，单独切除 SLN 后行常规双侧盆腔淋巴结切除和根治性子宫切除术。SLN 与其他切除标本分别进行常规病理检查。以总检出率、双侧检出率、灵敏度、阴性预测值、假阴性率等指标评价其示踪效率。
结果：本研究共纳入了 45 例宫颈癌患者，43 例患者为 IB1 期，1 例患者为 IB2 期，1 例患者为 IIA1 期（2009 年 FIGO 分期），所有患者的中位年龄为 43 岁（30-63 岁），中位体重指数（body mass index, BMI）为 23.59 kg/m2(17.5-30.0)。共 42 例患者至少一侧盆腔成功检出 SLN（总检出率 93.3％），27 例患者检出双侧盆腔 SLN（双侧检出率 64.3％）。共检出 225 枚 SLN，中位 SLN 计数为 5.0 枚（0-18）。SLN 中 81.3%分布在常见区域，其中髂外血管区最多（39.1％），而其余 18.7%的 SLN 分布于非常见区域，分别是 10.7％位于髂总血管区，7.6％位于宫旁区域，0.4%位于骶前区域。根据术后病理结果，所有患者有 4 例证实有盆腔淋巴结转移，共 4 枚转移淋巴结均属于 SLN，无假阴性发生，灵敏度和阴性预测值均为 100％。所有病例在术中和术后均未发现副反应发生。经过进一步分析，单因素

和多因素分析结果显示，BMI 升高与 SLN 双侧检出率降低相关（P = 0.015）。而年龄、组织学类型、是否锥切术史、学习曲线、肿瘤分化程度和脉管癌栓对 SLN 双侧检出率没有影响（P≥0.05）。
结论：纳米炭应用于宫颈癌 SLN 活检操作简单易行，可作为一种有效的 SLNB 方法，但仍需更多前瞻性研究证实。

PO-013

SphK2 促进人卵巢癌细胞侵袭转移及其机制探讨

宋柯琦,戴岚,狄文
上海交通大学医学院附属仁济医院妇产科

研究目的:研究鞘氨醇激酶 2(SphK2)对人卵巢癌细胞系 SKOV3 和 HO8910 细胞侵袭和迁移能力的影响，探讨其可能调控机制。
材料与方法:设计并体外合成靶向 SphK2 的 shRNA（short hairpin RNA）序列（shRNA SphK2）及阴性对照序列(shRNA NC)，并与 LV3(H1/GFP&Puro)慢病毒载体重组形成 shRNA 表达载体,包装 shRNA 慢病毒颗粒后分别转染 SKOV3 和 HO8910 细胞系。分别用 Real-time PCR 和 Western blot 法检测 shRNA SphK2 病毒颗粒转染后在 mRNA 及蛋白水平的沉默效率。Transwell 小室实验检测细胞迁移和侵袭能力变化;Western blot 法检测 SphK2 敲降后细胞中 MMP-9 蛋白表达。
结果:用构建的 shRNA 慢病毒颗粒感染 SKOV3 和 HO8910 细胞后,SphK2 mRNA 和蛋白表达水平显著下降。SKOV3 和 HO8910 细胞中，shRNA SphK2 转染组的迁移和侵袭细胞数均显著少于 shRNA NC 组和未转染组，差异均有统计学意义（P＜0.05）。SKOV3 细胞中，shRNA SphK2 组、shRNA 阴性对照组和未转染组穿膜细胞数分别为（115.2±15.1）、（116.5±23.1）和（61.7±19.9）个。HO8910 细胞中，shRNA SphK2 组、shRNA 阴性对照组和未转染组穿膜细胞数分别为（79.3±13.2）、（76±15.7）和（31.3±8.5）个。SKOV3 细胞中，shRNA SphK2 组、shRNA 阴性对照组和未转染组穿膜细胞数分别为（176.7±24.6）、（180.3±11.7）和（114.7±15.6）个。HO8910 细胞中，shRNA SphK2 组、shRNA 阴性对照组和未转染组穿膜细胞数分别为（248.2±18.3）、（256.3±12.8）和（122.3±26.2）个。Western blot 结果显示，转染后 48h,shRNA SphK2 转染组中 MMP-9 蛋白表达明显下降（P＜0.05）。
结论: SphK2 可促进卵巢癌细胞的迁移和侵袭，其分子机制可能与调节 MMP-9 表达有关，提示 SphK2 在卵巢癌的发展转移中起着重要的作用。

PO-014

The potential effects of DUSP7 over-expression through inhibiting the RAS pathway on the biological characteristics of human cervical cancer cell line SIHA

Huimin Bai,Meizhu Xiao,Jun Liu,Ran Cui,Zhenyu Zhang
Beijing Chao-Yang Hospital， Capital Medical University， Beijing China

Objective: The present study was aimed to compare the protein profiles between paired samples of cervical cancer (CC) and paracancerous tissue through quantitative proteomics and try to eveluate the potential role of the differentially expressed proteins (DEPs) in the treatment of CC.
Materials and methods: Proteomic profiles of three paired samples of cervical cancer (CC) and paracancerous tissue were detected and compared through quantitative proteomics. The gene functions of the identified DEPs were analyzed through bioinformatics analysis in combining with

bibliographical information. The expression of the DEPs was detected through IHC examination in the CC tissue arrays. The relationship between the DEPs expression and patients' clinicopathological characteristics and prognosis were evaluated through Spearman rank correlation test and Kaplan-Meier survival analysis respectively.The effect of the candidate DEP on the biological characteristics of human cervical cancer cell line SIHA was eveluated through in vivo and in vitro cell function experiments.

Results: According to the TMT (Tandem Mass Tags) ratios (≥1.5 or ≤0.5), a total of 129 proteins were found to be differentially expressed in all the 3 paries of samples with a p value <0.05. To investigate the gene functions of these DEPs in signal transduction in tumor cells, Kyoto Encyclopedia of Genes and Genomes (KEGG) pathway analysis was performed. Three DEPs, including HRAS, DUSP7, and PLD1, as well as ERK1/2, participating in RAS pathway, were selected for further verification. Western blot and IHC staining analyses consistently confirmed the results of the quantitative proteomic analysis that HRAS, ERK1/2, and PLD1 levels were increased, whereas DUSP7 level was decreased in CC tissue compared with the paried normal paracancerous tissue. Additionally, the decreased expresion of DUSP7 (P=0.045 and 0.044, respectively) and increased expresion of PLD1 (P=0.046 and 0.028, respectively) were significantly associated with a tumor size >2cm and parametrial infiltration.The decreased expresion of DUSP7, and increased expresion of PLD1 and p-ERK1/2 were adversely related to patients' relapse (P=0.003, 0.040, and 0.001, respectively) and survival (P=0.034, 0.001, and 0.006, respectively). The expression of HRAS and p-ERK1/2 was decreased in DUSP7-SIHA cells compared to NC-SIHA cells (P=0.0003 and 0.0026, respectively). The difference of expression level of PLD1 between the two cell groups was not statistically significant (P=0.0947). Biological functions in vitro, including invasion, migration, and proliferation, and tumor formation in vivo were decreased in the DUSP7-SIHA cells (all P < 0.05).

Conclusions The decreased expresion of DUSP7 were significantly associated with a tumor size >2cm, parametrial infiltration, and an adverse clinical outcome of CC patients.Overexpression of DUSP7 had a potential role in inhibiting the anchorage-independent growth viability of SIHA cells. The biological function of DUSP7 was possibly achieved through dephosphorylation of the ERK1/2 and inactivation of the RAS pathway. Up-regulating the expression of DUSP7 may be potential useful in the prevention or treatment of CC.

PO-015
Clinical Analysis of HPV58-Positive Cervical Cancer

He Wang
Department of Gynecology Oncology of Guangxi Medical University Affiliated Cancer Hospital

To study the clinical features of HPV58-positive cervical cancer, a retrospective analysis of 383 patients with HPV58- or HPV16/18-positive cervical cancer from the Department of Gynecology Tumor of Guangxi Medical University Affiliated Cancer Hospital was performed. Molecular hybridization was used to detect HPV genotypes. The clinical features, including age, pathology, and invasion, were compared between the HPV58-positive and HPV16/18-positive cervical cancer groups. A total of 383 patients were eligible for this study, and the proportion of patients who were over 50 years old (P=0.031) and who had poorly differentiated cancer (P=0.015) was significantly higher in the HPV16/18-positive cervical cancer group than in the HPV58-positive group. HPV58 positivity was an independent risk factor for poorly differentiated cancer occurrence [HR 2.078, 95% confidence interval: 1.143-3.776, P=0.016]. There were 214 cases of stage I-IIA disease, and patients with HPV58-positive cervical cancer were more susceptible to uterine corpus invasion than patients with HPV16/18-positive cervical cancer (P=0.044). For patients with squamous cancer or without vaginal invasion, HPV58 positivity was a risk factor for uterine corpus invasion. HPV58 positivity was an independent risk factor for poorly differentiated cancer occurrence [HR 2.078, 95% confidence interval: 1.143-3.776, P=0.016]. The

overall survival of HPV58-positive cervical cancer patients with uterine corpus invasion was significantly lower than that of patients with HPV16/18-positive cervical cancer (P=0.001). There were 169 cases of stage IIB-IVB disease. The age of patients in the HPV58-positive cervical cancer group was significantly older than that of patients in the HPV16/18-positive cervical cancer group (P=0.037), and the incidence of parametrial invasion was significantly higher in the HPV58-positive group than in the HPV16/18-positive group (P=0.015). HPV58 positivity was an independent risk factor for parametrial invasion [HR=2.949, 95% confidence interval: 1.240-7.014, P=0.014]. HPV58-positive cervical cancer patients were likely to have poorly differentiated cancer and adjacent cervical tissue (uterine and parametrial) invasion. Patients with early-stage cervical cancer who are HPV58-positive and have uterine corpus invasion likely have a worse prognosis than HPV58-positive patients with HPV16/18 positivity and no uterine corpus invasion. However, patients with HPV58 positivity that are over 50 years old are more likely to have advanced stage tumors than HPV58-positive patients who are 50 years old or younger.

PO-016
长链非编码 RNA HOTAIR 在卵巢癌细胞增殖和凋亡的机制研究

晁宏图
河南省肿瘤医院

目的： 探讨长链非编码 RNA HOTAIR 对卵巢癌细胞增殖、迁移、侵袭和凋亡的影响机制。
方法： 运用 qRT-PCR 法检测人正常卵巢上皮细胞 IOSE80、人卵巢癌细胞 SKOV3、卵巢癌组织及正常卵巢组织中 HOTAIR、miR-17-5p 的 mRNA 表达；将 si-NC 组（转染 si-NC）、si-HOTAIR 组（转染 si-HOTAIR）、anti-miR-NC 组（转染 anti-miR-NC）、anti-miR-17-5p 组（转染 anti-miR-17-5p）、miR-NC 组（转染 miR-NC）、miR-17-5p 组（转染 miR-17-5p mimics）、si-HOTAIR+anti-miR-NC 组（共转染 si-HOTAIR 和 anti-miR-NC）、si-HOTAIR+anti-miR-17-5p 组（共转染 si-HOTAIR 和 anti-miR-17-5p），用脂质体法转染 SKOV3 细胞；CCK-8 法检测细胞增殖；Transwell 小室检测细胞迁移侵袭；流式细胞术检测细胞凋亡；双荧光素酶报告基因实验检测细胞荧光活性。
结果： 与癌旁正常卵巢组织相比，卵巢癌组织中 HOTAIR 的表达量显著升高 (P＜0.05)。与人正常卵巢上皮细胞 IOSE80 相比，人卵巢癌细胞 SKOV3 中 HOTAIR 的 mRNA 表达显著升高，miR-17-5p 的 mRNA 表达显著降低（P <0.05）。敲减 HOTAIR 后，SKOV3 细胞的增殖、迁移、侵袭均明显受到抑制，凋亡率得到提高；miR-17-5p 能够抑制野生型 HOTAIR 细胞的荧光活性，并受 miR-17-5p 的负向吸附；重要的是，抑制 miR-17-5p 逆转敲减 HOTAIR 对 SKOV3 细胞的增殖、迁移、侵袭抑制和凋亡促进作用。
结论： 敲减 lncRNA HOTAIR 可抑制卵巢癌细胞的增殖、迁移、侵袭，促进凋亡，其机制与吸附 miR-17-5p 有关，将可为卵巢癌的治疗提供新靶标。

PO-017
驱动蛋白家族成员 (kinesin family members，KIFs)与卵巢癌癌发生、发展的生物信息学分析

刘婧婷[1,3],金凤玲[1,2],林碧玉[1]
1.兰州大学 2.兰州大学第一医院 3.甘肃省妇幼保健院

目的：卵巢癌是常见的妇科肿瘤之一，且发病率逐年上升。由于疾病早期缺乏具体的症状，死亡率较高且预后较差。超声检查结合血清肿瘤标志物检测诊断的特异性较低，5 年生存率仅为 30%。因此，本文拟利用生物信息学方法研究卵巢癌的潜在靶向基因、信号传导通路及分子机制。

材料与方法：从公共基因芯片数据库（Gene Expression Omnibus, GEO, https://www.ncbi.nlm.nih.gov/geo/）下载正常卵巢组织和卵巢癌样本的基因芯片；使用 R 软件包 limma 分析正常卵巢组织和卵巢癌样本之间的差异表达基因（differentially expressed genes，DEGs）；在 GEPIA（Gene expression profiling interactive analysis）数据库 (http://gepia.cancer-pku.cn/) 验证所选取的 DEGs 在不同肿瘤中的表达情况；对 KIFs 进行了总体生存分析；对筛选出的差异表达的基因进行 GO（Gene Ontology）和 KEGG（Kyoto Encyclopedia of Genes and genome）信号通路富集分析；。
结果：根据 P＜0.01 和|logFC|≥2 的标准，在基因芯片 GSE14407 、 GSE54388 和 GSE38666 中共有 1915 个 DEGs，其中显著上调的有 1068 个，包括驱动蛋白家族成员 (kinesin family members，KIFs) KIF1A/2C/4A/11/14/15/18A/18B/20A/23/27，显著下调的有 848 个。TCGA 数据库中 KIFs 在不同肿瘤组织的表达有差异，在卵巢癌、乳腺癌、宫颈癌组织中，KIF1A、 KIF2C、KIF4A、KIF11、KIF18B、KIF20A、KIF23 表达量明显高于正常组织。使用 DAVID 在线网站进行 DEGs 的 GO 富集分析，(1)分子功能（MF）主要作用于蛋白质结合、蛋白激酶结合、肌动蛋白结合、微管结合和微管运动活性； (2)细胞成分（CC）作用点主要作用于染色体、中心体、细胞外基质、等离子膜、激酶复合物等； (3)生物过程（BP）中主要作用于姐妹染色体聚集、染色体分离、线粒体核分裂、线粒体细胞周期 G2/M 过渡的调节、微管运动、细胞增殖的正向调节、神经元凋亡过程的负调节、蛋白激酶活性的活化等。

PO-018

HPV 型别与宫颈癌的临床病理特征关系研究

敖梅红,郑涵,邓旭情,李明梅,李隆玉
江西省妇幼保健院

目的 探讨江西地区女性宫颈癌患者的人乳头瘤病毒感染型别与宫颈临床病理之间关系。
方法 回顾性分析 2015 年 1 月至 2015 年 12 月在江西省妇幼保健院因 IB-IIA 宫颈癌行根治性宫颈癌手术 141 例,术前采用导流杂交基因芯片技术对 HPV 感染进行基因诊断和分型,比较 HPV 型别在年龄、脉管见癌栓、肌层浸润、临床分期、病理类型和淋巴结转移上的差异。
结果 宫颈癌中单一 HPV 感染为主。宫颈癌组织中总 HPV 感染率为 89.4%（126/141），单一感染率为 77.3%（109/141），多重感染率为 12.1%（17/141），主要感染型别依次为 HPV l6、18、52 和 58。无论是单一感染还是多重感染,均以含 HPV16 为主要的感染型别。HPV 多重感染与单一感染、无 HPV 感染的比例在病理分级方面存在差异(Ｐ ＜0.05)、在年龄、脉管见癌栓、肌层浸润、临床分期、病理类型和淋巴结转移上无差异；16、18 型感染与其他型别感染、无 HPV 感染的比例在病理分级方面存在差异(Ｐ ＜0.05)、在年龄、脉管见癌栓、肌层浸润、临床分期、病理类型和淋巴结转移上无差异。
结论 HPV 多重感染及 HPV16 和 18 型感染与宫颈癌患者病理分级有关，与年龄、脉管见癌栓、肌层浸润、临床分期、病理类型和淋巴结转移上无差异,可能是独立的致癌因子。

PO-019

HPV16 E7 通过上调 RACGAP1 促进宫颈癌细胞恶性行为

陈婷婷,杨诗舟,许君芬,吕卫国,谢幸
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

研究目的：宫颈癌仍是严重威胁全球女性健康的疾病，死亡率居全球第 4 位。高危人乳头瘤病毒（high-risk human papillomavirus， hrHPV）的持续感染是宫颈癌发生发展的重要条件，其中 HPV16 占大多数。E7 是病毒的主要癌蛋白，在宫颈癌的发生发展中持续高表达并发挥关键作用。我们的前期

研究提示 RACGAP1（Rac GTPase activating protein 1）在宫颈癌组织和细胞中显著高表达，且与 E7 相关。RACGAP1 与细胞分裂密切相关，近年来被发现在食管癌、肝癌、乳腺癌等疾病中发挥重要作用。但 E7 与 RACGAP1 之间的调控关系及 RACGAP1 在宫颈癌中的作用目前尚无研究报道。本研究旨在阐述 E7 与 RACGAP1 的调控关系及 RACGAP1 在宫颈癌细胞中的作用，科学补充 E7 的致癌机制，为宫颈癌等 HPV 相关肿瘤的治疗提供新思路。

材料与方法：我们前期通过对宫颈癌细胞系和宫颈癌组织的转录组测序筛选出差异表达分子 RACGAP1，并将该分子与数据库中信息进行比对。然后在 mRNA 及蛋白水平分别验证 RACGAP1 在宫颈癌组织及细胞中的表达，并证实 16E7（HPV16 E7）对 RACGAP1 的表达调控作用。最后通过免疫荧光、细胞周期、增殖、凋亡等一系列功能实验明确 RACGAP1 在宫颈癌细胞中的作用。

结果：我们前期通过组织及细胞转录组测序的结果发现 RACGAP1 在宫颈癌组织及细胞中显著高表达。这一结果与 oncomine 数据库中结果一致。宫颈癌组织的免疫组化显示宫颈癌细胞中 RACGAP1 的表达量显著高于其周围的正常组织。在宫颈癌细胞系 SiHa 和 CaSki 中，下调 16E7 后 RACGAP1 的表达在 mRNA 和蛋白水平均下降。细胞增殖实验及集落形成实验显示下调 RACGAP1 表达后细胞增殖减少。凋亡实验结果显示下调 RACGAP1 后细胞凋亡增加。周期实验显示下调 RACGAP1 后细胞 G0/G1 期细胞显著减少而 G2/M 期细胞明显增多。同时，细胞免疫荧光证实下调 RACGAP1 后双核细胞明显增多。

结论：16E7 可能通过上调 RACGAP1 促进宫颈癌细胞增殖及分裂，抑制凋亡，促进宫颈癌细胞的恶性生物学行为，导致宫颈癌的发生发展。该研究对 E7 的致病机制进行了科学补充，为宫颈癌等 HPV 相关肿瘤的临床治疗提供了新策略。

PO-020
Efficacy and safety of apatinib treatment in platinum-resistant recurrent epithelial ovarian cancer: a real world study

Haiyan Zhu[1],Hongqin Zhao[2]
1.Shanghai First Maternity and Infant Hospital
2.The 1st affiliated hospital of wenzhou medical university

Objective: To evaluate real-world use and outcomes of apatinib treatment in platinum-resistant recurrent epithelial ovarian cancer.

Methods: This is an observational study. Patients with platinum-resistant recurrent epitheilal ovarian cancer initiating apatinib treatment from January 2016 to December 2018 were included. The primary end point was progression free survival. Others end points included overall survival, objective response rate, disease control rate, and toxicity.

Results. A total of 28 platinum-resistant epitheilal ovarian cancer patients were enrolled into this study. Thirteen cases received apatinib as maintenance therapy following chemotherapy with a medium progression-free survival of 6.0 months and a medium overall survival of 11.0 months. Four patients received apatinib as palliative following chemotherapy with 2 cases in progressive disease and 2 cases in stable disease. Eleven cases received apatinib alone as salvage therapy with a disease control rate of 81.8% and a median progression free survival of 3.0 months. The most common adverse effects were hand-foot syndrome (53.57 %), secondary hypertension (46.43%) and fatigue (14.29%). Five patients discontinued treatment due to grade 3 toxicities and 4 patients required dose reduction because of adverse effects.

Conclusions. Apatinib produced moderate improvements in progression-free survival in patients with platinum-resistant epitheilal ovarian cancer both as maintenance therapy following chemotherapy and as single- agent salvage therapy. Our study suggests that apatinib may be effective for women with platinum-resistant recurrent epithelial ovarian cancer.

PO-021
The efficacy and safety of apatinib treatment for patients with metastatic or recurrent cervical cancer: a retrospective study

Haiyan Zhu[1],Jiangtao Yu[2],Hongqin Zhao[2]
1.Shanghai First Maternity and Infant Hospital
2.The First Affiliated Hospital of Wenzhou Medical University

Background: This study was performed to assess the efficacy and safety of apatinib in patients with metastatic or recurrent cervical cancer.
Methods: Twenty-six patients with metastatic or recurrent cervical cancer and treated with apatinib until progressive disease or unacceptable toxicity were included in this multicenter, retrospective, observational study from January 2016 to April 2018. The primary end point was progression free survival (PFS). Secondary end points included overall survival (OS), objective response rate (ORR), disease control rate (DCR), and toxicity. Toxicities were assessed according to Common Terminology Criteria for Adverse Events.
Results: A total of 26 metastatic or recurrent cervical cancer patients were enrolled into this study. No complete response (CR) occurred, 4 patients (15.4%) showed partial response (PR), 11 patients (42.3%) had stable disease (SD), and 11 patients (42.3%) had progressive disease (PD), with DCR of 57.7% and ORR of 15.4%. Median progression-free survival (PFS) was 3.0 months (95% confidence interval [CI]: 0-6.3 months) and overall survival (OS) was 7.0 months (95% CI: 5.1-8.9 months) respectively. The most common adverse effects were hand-foot syndrome (50.0%), secondary hypertension (26.9%) and fatigue (26.9%). Three patients discontinued treatment due to grade 3 toxicities (one case for hand-foot syndrome, two cases for diarrheas) and 6 patients required dose reduction because of adverse effects.
Conclusions: Apatinib seems active in heavily- pretreated metastatic or recurrent cervical cancer. The adverse effects were moderate but manageable.

PO-022
The clinical value of lipid abnormalities in cervical cancer

Haiyan Zhu[1],Anyang Li[2]
1.Shanghai First Maternity and Infant Hospital
2.The First Affiliated Hospital of Wenzhou Medical University

Background: To describe the characteristic of plasma lipid prolife among cervical cancer and further evaluate the prognostic significance of lipid levels in cervical cancer.
Methods: We retrospectively reviewed 1,713 patients diagnosed with uterine cervical cancer in 2008-2018 at the First Affiliated Hospital of Wenzhou Medical University, China. Plasma lipids, including cholesterol (TC), triglyceride (TG), high-density lipoprotein cholesterol (HDL), and low-density lipoprotein cholesterol (LDL), were evaluated before surgical operation. At first, plasma lipid profile of 1,713 cervical cancer patients were compared with 10,397 healthy women. Then, we evaluated the impact of lipids on overall survival (OS) and recurrence-free survival (RFS) using univariate and multivariate Cox model.
Results: While plasma TC, TG and LDL were significantly higher, HDL was significantly lower in patients with cervical cancer as compared with healthy women. Elevated plasma TG correlated with a significantly unfavorable RFS both in univariate and multivariate Cox model. Increased levels of TG and TC were associated with unfavorable OS in univariate analysis. Further multivariate analysis showed high TG related to a significantly poor OS of cervical cancer.

Conclusion: Cervical cancer was associated with a disordered lipid profile. Hypertriglyceridemia was an independent poor prognostic indicator for cervical cancer, especially for old women. This simple and routinely tested parameters may be a convenient prognostic candidate for cervical cancer in clinic.

PO-023

Is Primary Chemoradiation A Better Treatment? A Retrospective Study of Early Stage Node-positive Cervical Cancer.

Nan Zhang,Hong Zheng
Gynecology Department， Peking University Cancer Hospital and Institute， Key laboratory of Carcinogenesis and Translational Research， Ministry of Education of People's Republic of China， Beijing 100142， China

Objective To evaluate the efficiency and safety of the two treatment modalities for early stage (IB1-IIA2) cervical cancer with surgically confirmed lymphatic metastasis, chemoradiation and radical hysterectomy plus chemoradiation, outcome of each treatment was reviewed.
Materials and Methods 49 stage IB1-IIA2 cervical cancer patients with lymphatic metastasis confirmed by systemic pelvic and para-aortic lymph node dissection from 2007 to 2018 were reviewed. The patients were treated with either primary chemoradiation or radical hysterectomy followed by adjuvant chemoradiation after lymphadenectomy. Survival states and adverse events of the two treatments were compared.
Results Median follow-up time was 45 (range 11-119 months) months. In non-radical surgery group, 1 patient (1/15, 6.7%) relapsed and died, while in radical surgery group, 7 patients (7/27, 25.9%) relapsed and 5 (5/27, 18.5%) died. Significant difference was found in the mean progression-free survival between the two groups, which was 69(95%CI 49.118-88.882) months in non-radical surgery group and 44(95%CI 35.857-52.143) months in radical surgery group ($p<0.01$). There was significant difference in three-year progression-free survival(86%vs.71%, $p<0.01$). Grade 3-4 toxicity was comparable between the two groups (26.7% vs. 25.9%, p=0.958).
Conclusion For stage IB1-IIA2 cervical cancer patients with positive lymph node, primary chemoradiation after pelvic and para-aortic lymphadenectomy seems to have better survival outcomes compared with radical hysterectomy by laparoscopy plus chemoradiation in the retrospective study with limited cases. Evidence from a randomized controlled study is in need to confirm the optimal treatment for early stage node-positive cervical cancer.

PO-024

子宫颈腺上皮内瘤变 66 例临床分析

傅云峰,吕卫国,章懿纳,程蓓,王新宇
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

目的：探讨子宫颈腺上皮内瘤变(CGIN)的临床病理特征。
方法：回顾分析 2008 年 1 月至 2010 年 12 月在我院行子宫颈锥切手术(CKC 或 LEEP)确诊的 66 例 CGIN 患者的临床病理资料。
结果：66 例 CGIN 患者中,术前具有 TCT 资料者 42 例，细胞学异常者达 92.9% (39/42)，其中 16 例为 HSIL，占 38.1%；只有 7 例为腺细胞异常占 16.7%(7/42)。66 例患者中 52 例具有 HC2-HPV 检测结果， 其中 46 例(88.5%)为 HC2-HPV 阳性。66.7%(44/66)的患者术前活检结果为单纯 CIN，活检已诊断为 CGIN 者 22 例，术前诊断率为 33.3%。66 例患者中 28 例行 LEEP 术，38 例行 CKC 术，所有患

者术后均确诊为 CGIN 或 CGIN 合并 CIN，切缘阴性者 45 例，切缘阳性者 14 例，切缘可疑者 7 例。其中 LEEP 组切缘阴性者仅 11 例(39.3%),13 例切缘阳性，4 例切缘可疑， CKC 组切缘阴性者 34 例(89.5%),切缘阳性者 1 例， 切缘可疑者 4 例，两组相比差异有统计学意义。13 例切缘阳性或可疑者行二次手术，包括 1 例 CKC、4 例子宫全切术、8 例改良根治术，二次手术病理确认早期宫颈腺癌 2 例(Ia2 期)，2 例 AIS 残留，其余 9 例未发现病变残留。另外切缘阴性 AIS 有 6 例患者选择行二次手术，包括 1 例 CKC、3 例子宫全切术、2 例改良根治术，二次手术后病理诊断仅发现 1 例 CIN2 残留，83.3%(5/6)无残留病变。

结论：TCT、阴道镜指导下宫颈活检和宫颈管搔刮对 CGIN 的诊断率均不高,宫颈锥切术对诊断 CGIN 有重要价值。

PO-025

胎盘部位滋养细胞肿瘤临床特点分析

李智敏
广东省妇幼保健院

目的：分析胎盘部位滋养细胞肿瘤（PSTT）的临床特征，治疗及预后。
方法：统计分析了广东省妇幼保健院妇科五年间收治的三名 PSTT 患者的临床资料。
结果：一名患者经化疗后痊愈，四年后顺产一健康婴儿；一名患者予全子宫切除及化疗联合治疗后痊愈；一名患者予全子宫切除及化疗联合治疗后失败，以死亡告终。
结论：PSTT 临床表现缺乏特异性，病理免疫诊断是确诊的标准，临床应采取个体化治疗原则。

PO-026

人附睾蛋白 4（HE4）对子宫内膜癌诊断准确性的 meta 分析

刘靖,韩莉莉
新疆维吾尔自治区人民医院

目的：分析和评价血清人附睾蛋白 4（HE4）对子宫内膜癌的诊断价值。
方法：检索 Medline、PubMed、Web of science、中国知网、中国生物医学文献、维普及万方等数据库，收集和评价 HE4 对子宫内膜癌等诊断相关性研究。两名评审员使用 Review Manager 5.3（Cochrane 协作组）独立进行质量评估。并且使用 Review Manager 5.3 软件制作了一个文献质量表。最后利用 Review Manager 5.3 及 meta-Disc1.4 软件，对纳入文献合并总的敏感性、特异性、阳性似然比、阴性似然比、诊断准确性及 SROC 曲线
结果：共纳入 887 篇文献中的 17 篇，由 Meta-disc1.4 森林图显示了 HE4 在诊断子宫内膜癌中的 SEN、SPE 和 DOR。总体合并敏感性（SEN）为 0.65（95%CI:0.63–0.67），特异性（SPE）为 0.913（95%CI:0.92–0.95），阳性似然比(PLR)为 10.06（95%CI:4.75–21.35），阴性似然比（NLR）为 0.41（95%CI:0.33–0.50），诊断准确性（DOR）为 26.7（95%CI:11.7–60.93），我们还进行了 SROC 曲线分析，其曲线下面积（AUC）为 0.75（95%CI:0.81～0.87）
结论：HE4 是子宫内膜癌诊断中具有潜在价值的肿瘤标志物，其诊断子宫内膜癌有较高的特异性，但敏感性较低，且有较高的异质性，我们进行亚组分析均未成功。考虑到高的异质性和潜在的选择性偏倚，今后还需进行严格设计诊断试验及对子宫内膜癌不同病理类型及不同病理分期对应 HE4 进行检测。

PO-027

Myeloid-derived suppressor cells promote the immune escape of cervical cancer via regulating BAFF signaling

Jianyi Ding,Lingfei Han
Tongji Univ， Shanghai Matern & Infant Hosp 1

OBJECTIVE：Recent studies have shown that the accumulation and activation of Myeloid-derived suppressor cells（MDSCs）are associated with cervical cancer progression, metastasis and, recurrence. However, current studies on the immunosuppressive effect mechanism of MDSC mainly focus on T cells, while its regulatory effect on B cells remains unclear. As a member of the tumor necrosis factor(TNF) superfamily, BAFF signaling plays an important role in the activation and development of B cells. And we will elucidate the role of BAFF signaling in promoting the immune escape of cervical cancer by MDSCs, and to provide a new target for the treatment of cervical cancer.
METHODS：Peripheral blood and serum of patients with cervical benign tumor（n=20） and cervical malignant tumor(n=32) were collected. The proportion of MDSC cells in peripheral blood and the expression of BAFF molecules on the surface were detected by flow cytometry, as well as the proportion of Interleukin (IL)-10-producing B cells (B10 cells) in peripheral blood. The serum concentrations of IDO、 INOS of the two groups were detected by ELISA. Furthermore, cervical cancer tumor models of WT mice and BAFF-/ - mice were established to observe the tumor formation differences and compare the proportion of MDSC cells in the two groups of mice by flow cytometry. In vitro, $CD19^+$ B cells from the spleen of naïve WT mice stimulated by LPS are cocultured respectively with MDSCs cells derived from the two groups of mice isolated by magnetic beads for 72 hours. And the proliferation of B cells and their differentiation into B10 cells were detected by flow cytometry, what's more, the concentrations of IDO、INOS and, IL-10 in coculture supernatant were detected by ELISA.
RESULTS：Compared with patients with benign cervical tumor, PMN-MDSC cells accumulate in the peripheral blood of patients with malignant cervical tumor and secreted a large number of inhibitory factors INOS and IDO, and the BAFF signaling expression on their surface was up-regulated, accompanied by an increase in the proportion of B10 cells in peripheral blood. Here, we also found the cervical tumor burden of wild‐type mice was much heavier than that in BAFF-/-mice. More MDSCs and B10 cells were accumulated in WT mice, compared to BAFF-/- mice. Furthermore, BAFF deficiency in MDSCs is not only sufficient to disable their suppressive function but also inhibits the proliferation of B cells and the differentiation of B cells into B10 cells.
CONCLUSION：Our work uncovered that MDSCs accumulating in cervical cancer can promote the proliferation of B cells and induce their differentiation into B10 cells by BAFF signaling, thus promoting the immune escape of cervical cancer.

PO-028

紫杉醇联合顺铂腹腔和静脉双途径治疗晚期卵巢癌的临床效果分析

张亿林
1.苏州明基医院
2.苏州大学附属第一医院 在职研究生

目的：分析紫杉醇联合顺铂腹腔和静脉双途径治疗晚期卵巢癌的临床效果。**方法**：选取苏州大学附属第一医院 2014 年 3 月-2016 年 3 月收治的 70 例晚期卵巢癌患者作为研究对象，分为两组，分别为观察组与对照组，两组患者在一般资料方面无明显差异。入组后先采用卵巢肿瘤减灭术进行治疗，尽量术后达 R0-R1 期,取材明确病理，排除消化道来源的黏液性癌，然后再开始进入化疗步骤。对照组采用

静脉滴注化疗：第 1d：静脉滴注紫杉醇 135-175mg/m^2，持续滴注 3h；第 2d，滴注顺铂 75-85 mg/m^2；第 3d：静脉滴注顺铂 75-100 mg/m^2。观察组采用静脉滴注+腹腔灌注化疗，第 1d：静脉滴注紫杉醇 135-175mg/m^2；第 2d，腹腔灌注顺铂 75-100 mg/m^2，加入 500mL 生理盐水后经腹腔给药；若出现严重并发症时，第 2d 改用卡铂静脉滴注，剂量按卡铂公式计算。两组患者均间隔 3 周后重复化疗一次，共化疗 6-8 个周期。所有患者均随访 3 年，化疗结束后，每 3 个月复查随访 1 次，检查患者体格、腹腔 B 超、肿瘤标志物 CA125（血清糖类癌抗原 125）及盆腔 CT，根据临床指征决定是否进行进一步检查，评估肿瘤控制情况。**结论：**在肿瘤细胞减灭术后，采用紫杉醇联合顺铂腹腔灌注化疗治疗晚期卵巢癌患者，较术后静脉滴注化疗，对于病灶的清除效果更好，CA125 及腹水控制有效率更高，患者无进展生存期及 1 年、2 年、3 年生存率均显著提高，且不良反应无明显提高，证明该方案对于晚期卵巢癌的治疗具有较高的有效性与安全性。

PO-029

Exosome-derived miR-142-5p remodels lymphatic vessels and induces IDO to promote immune privilege in the tumor microenvironment

Chenfei Zhou
Department of Obstetrics and Gynecology， The First Affiliated Hospital of Guangzhou Medical University

Purpose: Lymphatic remodeling is directly involved in immune modulation of the tumor microenvironment (TME). We investigated the role of cancer-secreted exosomal miR-142-5p in mediating anti-tumor immunity to facilitate cancer progression by upregulating lymphatic indoleamine 2,3-dioxygenase (IDO).

Experimental Design: Exosomes isolated from cervical squamous cell carcinoma (CSCC) patients' serum or supernatants from cultured CSCC cells were purified and characterized by ultracentrifugation and electron microscopy. Gene expression levels and activity of signaling pathways were detected by qRT-PCR, immunoblotting, ELISA, luciferase assay, in situ hybridization and immunochemistry. IDO activity was assessed for cultured cells and clinical serum samples using HPLC. $CD8^+$ T cell dysfunction induced by lymphatic IDO was evaluated using flow cytometry.

Results: High levels of miR-142-5p positively correlated with IDO expression in tumor-associated lymphatic vessels in advanced CSCC. miR-142-5p was transferred from CSCC cells into lymphatic endothelial cells (LECs) to exhaust $CD8^+$ T cells via lymphatic IDO upregulation, which was abrogated by an IDO inhibitor. ARID2, an upstream mediator of IFN-γ, was the direct target of miR-142-5p. Re-expression and knockdown of lymphatic ARID2 respectively rescued and simulated $CD8^+$ T cell exhaustion induced by miR-142-5p. Increased serum exosomal miR-142-5p, as well as corresponding IDO activity, positively correlated with CSCC progression.

Conclusion: Exosomes secreted from CSCC cells deliver miR-142-5p to LECs and induce IDO via ARID2-IFN-γ signaling to suppress and exhaust $CD8^+$ T cells. Our study suggests that LECs are an integral component of immune checkpoint(s) in the TME and provide potential new targets for diagnosis and treatment of CSCC.

PO-030

Sema4C mediates EMT inducing chemotherapeutic resistance of miR-31-3p in cervical cancer cells

Bo Wang,Qinqin Zhu,Wu Mingfu
Department Gynecology， Cancer Biology Research Center， Tongji Hospital， Tongji Medical College， Huazhong University of Science and Technology， Wuhan， Hubei， 430030， P.R. China

Background: Cervical cancer (CC) is a common malignancy of the female reproductive tract and the leading cause of cancer-related deaths in women worldwide. Most diagnosed patients are already at an advanced stage with high mortality of cervical cancer. Cisplatin (CDD), a small molecule platinum compound, which was so far still promises to be the most efective drug for treating advanced/recurrent cervical cancer, may lead to chemotherapy failure and poor prognosis. Epithelial to mesenchymal transition (EMT) refers to the complex biological processes involved in the transformation of epithelial cells into cells with mesenchymal features and is closely associated with chemotherapy resistance. Sema4C, the target of many miRNAs, is involved in EMT-mediated chemotherapeutic resistance of many malignant tumors. MiR-31-3p was identifed to directly target Sema4C and mediated the biological functions including drug resistance of Sema4C in cervical cancer cells. However, the underlying upstream regulatory mechanisms of Sema4Cinduced EMT and Sema4C-mediated drug resistance are still unclear.
Subjects: Our research aimed to explore the potential role of miR-31-3p/Sema4C in regulating EMT in cisplatin-resistant (CR) cervical cancer cells and to clarify the functional role and regulatory mechanism of Sema4C in cervical cancer cells.
Methods: Fify-two paired human CC and adjacent nontumor cervical tissues were collected from the Tongji Hospital Afliated with the Tongji Medical College of Huazhong University of Science and Technology (HUST) between January 2018 and December 2018. Human CC cell lines were cultured including HeLa, Caski, Siha, and C33a. Caski cells were cultured in increasing concentrations of cisplatin to establish cisplatin-resistant (CR) cell lines Caski CR cells. And all cell lines were transiently miRNA transfected. Predict targets of MiR-31-3p were analyzed and effect of miR-31-3p mimics on wide type pr mutant Sema4C-3′UTR was describe by dual-luciferase reporter assay. Wound-healing assay and cell invasion assays were used to detect the ability of cell migration and invasion of miR-31-3p mimics. Tissue mRNA levels of miR-31-3p and Sema4C were detected by qRT-PCR, tissue and cell lines protein levels of miR-31-3p and Sema4C were detected by immunohistochemistry and Western blot analysis, respectively. Cells were transfected with Sema4C siRNA and miR-31-3p mimic to downregulate the level of Sema4C, as well as establishment of stable miR-31-3p overexpression together were used to study the relation between miR-31-3p and Sema4C. Cell Counting Kit-8 (CCK-8) assay were used to detect cisplatin resistance. Overall survival (OS) and disease-free survival (DFS) were evaluated by Kaplan-Meier survival curves.
Results: First, we found that Sema4C was upregulated of in CC tissues in mRNA and protein level as well as in CC lines in protein level compared to control groups. High Sema4C expression was associated with poor prognosis in patients with CC, their 1-year and 3-year overall survival (OS) rates of patients were 77 and 65%, respectively, which were higher than low Sema4C expression patients. Among the four CC cell lines, Sema4C expressed the highest in the Caski cell line and the lowest in the HeLa cell line. In Sema4C down-regulated Caski cells of CC, expression of epithelial markers E-cadhein were incresed, while expression of interstitial markers Vimentin and EMT-related transcription factor Snail were decreased. Secondly, Sema4C is directly targeted by miR-31-3p in cervical cancer cells and overexpression of miR-31-3p markedly suppressed the protein levels of Sema4C. MiR-31-3p was found downregulated in cervical cancer tissues and correlated with shorter 1-year and 3-year OS rates (65% and 38%, respectively) and disease-free rate than high miR-31-3p expression levels. Thridly, ovexpression of miR-31-3p affected EMT markers levels, that were E-cadherin expressed high and Vimentin and Snail expressed low, thus reversing EMT in CC Caski cells. Also upregulated miR-31-3p level inhibited cell migration and invasion in CC. On the contrary, uregulation of Sema4C could

suppress the above bio-fuctions of miR-31-3p in CC cells Caski cells. Lastly, The cisplatin resistance rates in CC of cisplatin alone, Sema4C si2 combined with cisplatin and miR-31-3p mimic were 24%, 44% and 51%, respectively. Downregulation of Sema4C was induced or overexpression of miRNA-31-3p to increase the sensitivity of CC cells to cisplatin.
Discussions: Sema4C, the target of many miRNAs including miR-31, is involved in the EMT-mediated chemotherapeutic resistance of many malignant tumors, including CC. Sema4C was directly targeted by miR-31-3p in CC and that overexpression of miR-31-3p could downregulate Sema4C expression at the protein level. These results suggest that miR-31-3p was identified to target Sema4C directly. Sema4C is found more frequently upregulated through decreasing expression of miRNA-31-3p in CC tissue and cell lines, which were correlated with shorter DFS and OS. Overexpression of miR-31-3p inhibited the invasion and migration of CC cells by suppressing Sema4C and Snail expression as well as induced EMT of CC cells by inhibits E-cadherin expression and upregulates Vimentin. So miR-31-3p served as an important regulator of EMT and chemo-resistance in CC. Thus, upregulating miR-31-3p expression or downregulation of Sema4C could be a new method to treat ODD-resistant CC.

PO-031

7 例妊娠合并胃癌的临床病理特点及预后分析

韩瑛,王淑珍
首都医科大学附属北京朝阳医院

目的 总结妊娠合并胃癌的临床病理学特征，探讨疾病早期征象，改善其预后。
方法 回顾性分析我院 2009 年 1 月至 2019 年 8 月诊治的 7 例妊娠合并胃癌患者的临床病理资料，总结其临床特征、病理学特征、肿瘤特征及治疗、产科结局及患者预后等信息。
结果 7 例患者胃癌诊断中位年龄为 32 岁（26-41）岁，35 岁以下 6 例。确诊孕周为 18^{+}～37 周，中孕期确诊 5 例，晚孕期 2 例。2 例患者有胃癌家族史。主要临床表现为恶心呕吐 3 例、胸闷憋气 2 例、腹胀 2 例。病理类型低分化腺癌 2 例，印戒细胞癌 5 例（印戒细胞癌合并低分化腺癌 1 例）。确诊时临床分期：7 例患者分期均为 IV 期，1 例胸腹盆腔转移、肝转移，1 例腹盆腔转移、肝转移，4 例卵巢转移，2 例锁骨上淋巴结转移。产科结局：2 例患者行剖宫产术，5 例行中期引产术。2 例有生机儿均存活。肿瘤治疗：7 例患者 3 例行化疗，4 例姑息治疗，确诊后存活时间 17 天～23 个月。
结论 妊娠合并胃癌预后极差，早期诊断困难。肿瘤组织分化差，分期晚，肿瘤进展迅速，致死率高。

PO-032

The Safety and Efficacy of Enhanced Recovery After Surgery on Clinical and Immune Outcomes for Gynecological Oncology

Guo Xiaoqing,Na Liu,Jie Tao,Weimin Wu,Xiaofeng Li,Wang Jiapo,Li Li,Wang Jiapo
Shanghai First Maternity and Infant Hospital

Objective: Evaluating the impact of enhanced recovery after surgery (ERAS) on postoperative rehabilitation and immune function in patients with gynecologic malignancies after minimally invasive surgery.
Patients and Methods: This prospective randomized controlled trial (RCT) recruited totally 60 patients suffered from gynecologic malignancies between August 2018 to June 2019. ERAS and traditional perioperative management protocols were compared. Major changes of ERAS implementation included shorten the fasting time, avoid mechanical and drug enemas, multimodal

analgesia, goal-directed fluid resuscitation and early ambulation postoperation. The primary outcome was surgical safety, pain, recovery of eat, drink, mobility and bowel function, and recent complications. Secondary outcomes included time for medical care, hospitalization expenses, and long-term complications. In addition, inflammatory and nutritional parameters in peripheral serum were collected and tested preoperatively, 1, 3 and 5 days after surgery (POD).
Results: Patients with ERAS or traditional control groups were successfully completed minimally invasive surgery as planned, and the operation time, intraoperative blood loss, fluid transfusion units and blood transfusion had no significant difference between two groups. While, the intraoperative urine volume was dramatically more in ERAS group ($p<0.05$), and the amount of opioids in the ERAS group was significantly reduced under the premise of satisfactory pain control ($p<0.05$). Additional, gastrointestinal function, diet and mobility recoverd earlier in ERAS cohort ($p<0.05$). ERAS significantly reduced the time required for inpatient care and hospitalization costs, with no significant differences in near-and long-term complications. Furthermore, immune function and nutritional status was confirmed recover faster by the detection of peripheral blood.
Conclusion: Implementation of ERAS significantly promotes postoperative recovery in patients with gynecologic tumors, improvements in clinical outcomes and reduced medical costs. Application of ERAS in the field of gynecologic oncology is highly recommended.
Clinial trial registration: This study was registered at ClinicalTrials.gov, identifier NCT03640299.

PO-033
Patients with early-stage cervical cancer fail to benefit from laparoscopic radical hysterectomy compared with abdominal radical hysterectomy: A multicenter retrospective study in Southwest China.

Tingwenyi Hu,Yue Huang,Zheng yu Li
West China Second University Hospital

Objective: This study designed to compare the survival outcomes of abdominal radical hysterectomy (ARH) and laparoscopic radical hysterectomy (LRH) in patients with early-stage cervical cancer (CC).
Method: A total of 1065 patients with early-stage CC who had received LRH/ARH between 2013 and 2016 in seven hospitals were retrospectively analyzed. The 1:1 propensity score matching were performed in all patients, patients with tumor size <2 cm and patients with tumor size ≥2 cm. Then, disease-free survival (DFS) and overall survival (OS) were compared between matched groups.
Results: After matching, 812 patients were included in the survival analysis. The LRH group had a significantly shorter DFS (HR=1.65, 95% CI 1.00–2.73, p=0.048) but not OS (HR=1.60, 95% CI 0.89–2.88, p=0.131) than ARH group. In the patients with tumor size <2 cm, the LRH and ARH groups had similar DFS (HR=0.71, 95% CI 0.24–2.16, p=0.594) and OS (HR=0.59, 95% CI 0.11–3.13, p=0.535). Additionally, in the patients with tumor size ≥2 cm, the LRH group had a significantly shorter DFS (HR=1.93, 95% CI 1.05–3.55, p=0.032) than ARH group, whereas no significant difference in OS (HR=1.90, 95% CI 0.95–3.83, p=0.067) was found.
Conclusion: LRH led to poorer prognosis compared with ARH in patients with early-stage CC. However, in patients with tumor size <2 cm, LRH and ARH attained similar prognosis.

PO-034
Expressions and clinical significances of chemokine ligand 12 (CXCL12) and its receptor CXCR7 in endometrial carcinoma

Xinhua Yang[1],艾星子 艾里[1]
1.shanghai first maternity and infant hospital 2.Shanghai first maternity and infant hospital

Objectives: To measure the expressions of chemokine (C-X-C motif) ligand 12 (CXCL12) and its receptor CXCR7 in endometrial carcinoma and to investigate the roles of CXCL12/CXCR7 in infiltration, invasion, and metastasis of endometrial carcinoma. Methods: The expression of CXCL12/CXCR7 was determined in normal, atypically hyperplastic, and cancerous endometrium tissues by using immunohistochemistry. Further, the correlations between CXCL12/CXCR7 and clinical staging, muscular infiltration, lymph node metastasis were assayed. Results: The expressions of CXCL12 and CXCR7 were higher in endometrial carcinoma than those in normal and atypically hyperplastic endometrium. And the CXCL12 and CXCR7 expressions were significantly positively correlated with clinical staging, musclar layer infiltration, and lymph node metastasis. Conclusions: CXCL12 and CXCR7 are highly expressed in endometrial carcinoma. And these two factors indeed participate in the progression of endometrial carcinoma.

PO-035
阿帕替尼联合依托泊苷治疗铂耐药复发性卵巢癌的疗效分析

李艳艳[1],朴金霞[1]
1.吉林省肿瘤医院 2.吉林省肿瘤医院

目的 探讨阿帕替尼联合依托泊苷胶囊治疗铂耐药复发性卵巢癌患者的疗效及安全性。
方法 回顾性分析 2017 年 1 月～2018 年 6 月在我院就诊的 63 例铂耐药复发性卵巢癌患者的临床资料及随访资料，根据治疗方式的不同将患者分为单药组（n=28）和联合组（n=35），单药组患者接受依托泊苷胶囊治疗，联合组患者接受阿帕替尼联合依托泊苷胶囊治疗。比较两组患者治疗的近期临床疗效、无进展生存时间（Progression free survival,PFS）及不良反应。
结果 两组患者治疗主要的不良反应为贫血及白细胞降低；两组患者各种不良反应发生情况比较，差异均无统计学意义（P > 0.05）。联合组患者的客观有效率（ORR）为 54.3%，高于单药组的 25.0%，差异有统计学意义（P < 0.05）。联合组患者的无进展生存期（PFS）为 8 个月（95%CI：7.4～8.6 个月），明显长于单药组的 4 个月（95%CI：3.5～4.5 个月），差异有统计学意义（P < 0.01）。
结论 阿帕替尼联合依托泊苷胶囊治疗铂耐药复发性卵巢癌具有良好的疗效，可明显延长患者的 PFS，不额外增加严重毒副反应的发生率。

PO-036
遗传性乳腺癌-卵巢癌家系全基因组测序及发病机制研究

李文静,李默
北京大学第三医院

目的：探索遗传性乳腺癌-卵巢癌家系中潜在的致病位点，并进行详尽的基础实验验证潜在位点的有害性和致病性。

方法：收集家系中已经患癌和未患癌的亲属外周血，获得的 5 例（3 例未患癌，一例乳腺癌，一例卵巢癌）样本，提取基因组 DNA 进行全基因组重测序。对获得的原始数据进行生物信息学分析，通过有害性评分包括 SIFT（Sorting Intolerant From Tolerant, ≤0.05）和 POLYPHEN（Polymorphism Phenotyping v2, e≥0.909）, PROVEAN（score<-2.5）对 SNP 和 indel 进行有害位点预测，通过和肿瘤数据库 CGC（Cancer Gene Census）中相关基因取交集，找到潜在致病基因及相应的位点。根据分析结果，我们通过 DNA 损伤实验，流式细胞周期分析，蛋白亲和性检测，基因组稳定性分析及成瘤实验等一系列实验验证了潜在位点的有害性以及突变之间的协同效应。
结果：全基因组测序后，每份样本共获得原始数据约 90G，约 288 万个 SNPs，50 万个 Indels，6000 个 SVs 和 1300 个 CNVs。保守性分析发现 SNP 潜在有害基因 719 个，位点 792 个；Indel 有 118 个基因及 125 个，和 CGC 交集后发现 BARD1 为家系中可能的发病基因。该家系中 BARD1 外显子区域的非同义突变有四个分别为 rs1048108（C70T, P24S）, rs3738885（C722G, S241C）, rs2229571（G1134C, R378S）和 rs2070094（G1519A, V507M）。通过一系列基础实验对各位点进行深入研究后，发现 rs1048108 和 rs2229571 共同存在时，DNA 损伤修复异常，G2/M 期阻滞缺陷，BARD1-P24S 蛋白和 BRCA1 亲和力受损，基因组稳定性下降及促进肿瘤的发生。
结论：1）DNA 损伤修复蛋白 BARD1 的两种突变 P24S 和 R378S 同时存在时，随着 DNA 损伤的积累对肿瘤的发生有促进作用；2）遗传性乳腺癌-卵巢癌家系遗传咨询时，不应忽略非 BRCA1 的相关致病基因的检测；3）更多临床认为的潜在致病基因或位点均缺乏详实可靠的基础实验验证，因此全面分析致病基因或突变的致病性才能准确理解肿瘤发生的分子机制，为未来的诊疗提供更可靠的理论支持。

PO-037

盆腔转移性鳞癌病例报告及文献复习

朱其舟,李慧娟,舒宽勇,肖仲清
江西省妇幼保健院

原发部位不明的癌症是临床上比较棘手的一类疾病，约占所有新发癌症病例的 2%-5%左右。这类肿瘤是一组经过详细检查仍不能明确原发部位的异质性肿瘤。临床特点是快速进展及播散。病理上 50%以上为腺癌，鳞状细胞癌仅占 7%。治疗方案无规律可循，个体化差异较大。本文报道一例术前拟诊“附件恶性肿瘤”病例，术后确诊为盆腔转移性鳞状细胞癌（原发灶不明），并复习相关文献，谨供临床参考。盆腔不明原发灶转移肿瘤因个体差异呈现出临床症状多样化，其共同特征是早期转移、侵袭性强以及转移模式不可预测。因此，我们应尽量在手术前收集患者各方面信息，在条件允许的情况下行 PET-CT、骨扫描等检查进一步了解诊断。手术治疗后应尽早补充静脉化疗巩固疗效，降低复发概率。相信随着经验累积，我们再应对这一类少见、罕见病时有更多可采取的诊断办法和治疗措施。

PO-038

周围神经浸润在早期宫颈癌中的临床研究

付建,方月兰
南京鼓楼医院集团宿迁市人民医院

目的：研究早期宫颈癌患者周围神经浸润（perineural nerve invasion，PNI）与预后及其他参数的关系。
方法：回顾性分析 2014-2018 年于我院就诊的 146 例早期宫颈癌患者的临床资料，PNI 与其他临床病理参数之间的相关性检验采用卡方检验、t 检验；COX 比例风险回归模型判断预后相关的独立危险因素，95％置信区间(95％confidence intevral，95％CI)确定相对危险度。

结果：PNI 阳性患者平均年龄（50.53±9.14），PNI 阴性患者平均年龄（50.07±9.12），两组患者年龄无统计学差异（t=-2.80 P=0.78）。PNI 与浸润深度、脉管转移明显相关(P<0.05)，而与患者 FIGO 分期、淋巴结转移无相关性(P>0.05)。PNI 阴性组患者生存期为（39.17±17.77）个月，3 年生存率为 95.0%；PNI 阳性组患者生存期为（28.60±15.81）个月，3 年生存率为 84.4%，差异具有统计学意义（t=3.430，P=0.001）。多因素分析显示周围神经浸润不是早期宫颈癌死亡和复发的独立危险因素。**结论：**神经鞘作为肿瘤细胞传播的低阻力管道的假说被证明是错误的，最新研究提示 PNI 的发病机制可能涉及肿瘤细胞、神经细胞和间质细胞之间的相互作用，是肿瘤与微环境相互作用的结果。神经周围浸润尚不能作为判断宫颈癌预后的独立危险因素，虽然保留盆腔自主神经的根治性子宫切除术相较于传统术式可能利于患者膀胱和直肠功能的恢复，但尚无高质量证据证明此观点，且与传统术式相比，实施保留神经的根治术并无充分证据表明可以延长患者的无复发生存期和总生存期，因此术前应严格把握指征。

PO-039

锌指蛋白 klf12 在妇科肿瘤早期诊断和治疗的价值

付建,方月兰
南京鼓楼医院集团宿迁市人民医院

研究目的：探究 KLF12 作为多种妇科肿瘤早期诊断指标及治疗靶点的可行性。材料与方法：对已出版的 KLF12 与妇科肿瘤的相关文献报道归纳总结。结果：妇科肿瘤严重威胁女性健康及生活质量，随着医疗水平的提高，对肿瘤的早期诊断以及有效治疗受到学界广泛重视，寻找有效的早期诊断指标和治疗靶点尤为迫切。Kruppel-like factor 12 (KLF12)是锌指蛋白转录因子家族中的一员，位于 13p22，通过位于 C 末端的三个 Cysteine2/Histidine2 锌指结构与启动子结合调控靶基因转录。研究表明，KLF12 参与诸多疾病的病理生理过程，在非肿瘤性疾病中，KLF12 抑制子宫内膜的蜕膜化过程、影响肾脏发育以及作为特定人群类风湿患病风险的预测指标；在肿瘤性疾病中，KLF12 在呼吸系统及消化系统相关的多种肿瘤中均异常表达，并影响患者预后。在女性生殖系统肿瘤中，KLF12 增强卵巢癌细胞对失巢凋亡的抵抗能力，促进卵巢癌的转移；在子宫内膜癌中 KLF12 激活 AKT 信号通路，增加子宫内膜癌细胞周期蛋白 D1 的表达水平，与子宫内膜癌复发正相关；在宫颈癌研究中发现 HPV 病毒可整合到 KLF12 序列，影响 KLF12 mRNA 的转录表达，但意义尚不明确。作者就目前 KLF12 在妇科肿瘤性疾病中的具体作用以及下游信号通路进行归纳，以期揭示 KLF12 在妇科肿瘤进展中的重要性，并探索其作为治疗靶点的可行性。结论：KLF12 是卵巢癌和子宫内膜癌判断预后的潜在指标，在宫颈癌中研究较少。当前研究对 KLF12 下游的探索相对较少，作为一种转录因子，探索其下游靶基因对阐述其具体机制有重要意义。

PO-040

基于多组学的单细胞分辨率卵巢癌分子分型的研究

张哲,孟元光
中国人民解放军总医院第一医学中心

目前卵巢癌的分型主要依靠病理学分型，对于卵巢癌的治疗和预后意义有限。**研究目的** 利用多组学数据对上皮性卵巢癌进行多维度的分子分型的研究。**方法** 选取卵巢癌单细胞 RNA 转录组学数据和 TCGA（the Cancer Genome Atlas database）数据库中上皮性卵巢癌数据进行生物信息学挖掘分析。我们分析了 10X 平台产出的 2911 个卵巢癌单细胞，和 599 例浆液性卵巢癌的 1203 个样品，从 RNA 测序，DNA 甲基化，miRNA, 蛋白质表达等组学数据进行研究。对于每个组学数据用 Python 编程语言进行数据处理，R 语言进行聚类分析和生存分析。聚类分析使用三种方法 PAM（Partitioning Around

Medoids）,HC（Hierarchical Clustering）和 NMF（Non-Negative matrix Factorization），取差异显著者。**结果** 根据 RNA 测序数据，上皮性卵巢癌被分为 9 种亚型（C1~C9），并且每一类都与如下 4 种生物学过程的激活和/或抑制相关：免疫激活，激素代谢，间叶细胞发展和 MAPK 相关通路。C1 为免疫下调和激素代谢上调型；C2 为激素代谢下调型；C3 为 MAPK 通路抑制型；C4 为免疫下调型；C5 为间叶细胞发展抑制和 MAPK 通路抑制型；C6 为间叶细胞发展抑制型；C7 为间叶细胞发展上调型；C8 为免疫上调型；C9 为 MAPK 通路上调型。我们还分析出了 4 种 DNA 甲基化类型，6 种 miRNA 测序数据类型，2 种蛋白质表达亚型，和 4 种生物学通路过程。通过整合这些不同平台的组学数据亚型，我们发现大多数 RNA 测序数据亚型是和其他数据（DNA 甲基化，miRNA 测序，蛋白质表达和生物学通路分析）亚型有重叠的。**结论** 我们的研究为上皮性卵巢癌的分子机制研究提供了新的结果，并且为更加精确的卵巢癌分子分型提供了新的视角。

PO-041
The role of EZH2 and DNA methylation in CDH13 silencing in epithelial ovarian cancer

Wu Zhou,Junjie Wang
Department of obstetrics and gynecology， Affiliated Renhe Hospital of China Three Gorges University，

Objective To examine the expression and methylation levels of CDH13 and evaluate its correlation with EZH2 and its clinical significance in epithelial ovarian cancer.
Methods (1) The expression of CDH13 and EZH2 protein in ovarian tissues were detected by immunohistochemisty, including in normal ovary tissues, benign ovarian tumor, borderline ovarian tumor and ovarian cancer tissues. and then the association between EZH2 and CDH13 was analyzed by using SPSS. (2) The expression of CDH13 and EZH2 protein in ovarian cancer cells A2780, ES2, OVSAHO and SKOV3 were detected by Western Blot. (3) The DNA methylation level of CDH13 in ovarian cancer cells was measured by pyrosequencing, and then the association between EZH2 and CDH13 was analyzed by using SPSS.
Results (1) The expression of EZH2 protein was significantly increased in epithelial ovarian cancer tissues ($p<0.05$), and the expression of EZH2 was correlated with clinical stages and lymphatic metastasis in epithelial ovarian cancer ($p<0.05$), but had no significant correlation with age, tumor differentiation and menopause of ovarian cancer patients ($p>0.05$). Regarding FIGO stage, higher EZH2 protein expression was found in stage III / IV, (25/31, 80.6%), than in stage I /II, (5/14, 35.7%) (Chi-squared test, $P = 0.009$). For lymph node metastasis status, 13 ovarian tumor specimens from patients with lymph node metastasis had detectable EZH2 protein expression (12/13, 92.3%), which was significantly more frequent than in ovarian cancers without lymph node metastasis (15/26, 57.7%) (Fisher's exact test, $P = 0.034$). (2) The expression of CDH13 protein was significantly decreased in epithelial ovarian cancer tissues ($p<0.05$), and the expression of CDH13 was correlated with clinical stages and lymphatic metastasis in epithelial ovarian cancer ($p<0.05$), but had no significant correlation with age, tumor differentiation and menopause of ovarian cancer patients ($p>0.05$). Regarding FIGO stage, higher CDH13 protein expression was found in stage I /II, (11/14, 78.6%), than in stage III / IV, (9/31, 29.0%) (Chi-squared test, $P = 0.006$). For lymph node metastasis status, 26 ovarian tumor specimens from patients without lymph node metastasis had detectable CDH13 protein expression (14⁄26, 53.8%), which was significantly more frequent than in ovarian cancers with lymph node metastasis (2⁄13, 15.4%) (Fisher's exact test, $P = 0.037$). (3) CDH13 expression was inversely correlated with EZH2 expression in epithelial ovarian cancer ($p<0.05$). (4) The expression of EZH2 protein was significantly decreased in SKOV3 cell lines ($p<0.05$), and there is no significant difference in EZH2 expression among the other three cell groups ($p>0.05$). The expression of CDH13 protein was significantly increased in SKOV3 cells ($p<0.05$), and there is no significant difference in CDH13 expression among the other three cell groups ($p>0.05$). (5) The methylation level of CDH13 was significantly decreased in ES2 cells ($p<0.05$), and there is no

significant difference in CDH13 methylation level among the other three cell groups (p>0.05). (6) The methylation level of CDH13 was irrelevant associated with the protein expression of CDH13 and EZH2 (p>0.05).
Conclusion The expression of CDH13 is negatively associated with EZH2 in epithelial ovarian cancer. But EZH2 may regulate the expression of CDH13 gene via a non-DNA- methylation-dependent pathway.

PO-042
Periostinhigh CAFs Promote Metastasis by Impairing the Lymphatic Endothelial Barriers in Cervical Squamous Cell Carcinoma

Wenfei Wei[1],Xiaojing Chen[1],Luojiao Liang[1],Lan Yu[1],Xiangguang Wu[1],Chenfei Zhou[1],Zici Wang[1],Liangsheng Fan[1],Zheng Hu[2],Li Liang[3],Wei Wang[1]
1.The First Affiliated Hospital of Guangzhou Medical University
2.Department of Gynecological Oncology， the First Affiliated Hospital， Sun Yat-sen University
3.Department of pathology， Nanfang Hospital， Southern Medical University

Background: Lymph node metastasis (LNM) is a critical prognostic determinant for cancer patients. In this study, we investigate whether and how the abundant and heterogeneous cancer-associated fibroblasts (CAFs) in tumour microenvironment (TME) play important role in the process.
Methods: Quadruple immunofluorescent staining of α-SMA, LYVE-1, VE-cadherin, and DAPI were examined in primary tumour samples obtained from 77 cervical squamous cell carcinoma (CSCC) patients. The primary fibroblasts were isolated from 8 normal cervix tissues and 15 CSCC without LNM and 12 CSCC with LNM. Assessment of cytokines secreted by fibroblasts was performed using human cytokine antibody arrays. Gene expression levels and activity of signaling pathways were measured by real-time RT-PCR, ELISA or western blotting. The function of lymphatic endothelial monolayers was examined by permeability assay, transendothelial migration assay in vitro and lymphatic vessel permeability assay in vivo. Lymphatic metastasis was measured using popliteal lymph node metastasis model. Furthermore, association between periostin expression and clinicopathologic features in CSCC was analyzed by immunohistochemistry. The Cancer Genome Atlas (TCGA) databases was used to assess the association of periostin with survival rate in CSCC.
Results: Here, we describe a CAF subpopulation with elevated expression of periostin, which located in the primary tumour sites and metastatic lymph nodes, and positively correlated with LNM and poor survival in CSCC patients. Mechanistically, periostin^{high} CAFs induce the impairment of lymphatic endothelial barriers by activating the integrin-Src-VE-cadherin signalling pathway in lymphatic endothelial cells, and consequently increase metastasis dissemination. Whereas inhibition of the Src signalling pathway alleviates these effects. Notably, periostin^{low} CAF is largely devoid of the capacity to impair endothelial barriers integrity, which might be a reason for some CAF-enriched cases without LNM. Finally, periostin was independent prognostic factors in cervical cancer patients based on TCGA data analysis.
Conclusion: These findings identify a specific periostin^{high} CAF subset that promotes LNM in CSCC, providing the basis for stromal fibroblasts-targeted interventions in hampering CAF-dependent metastasis.

PO-043

低危妊娠滋养细胞肿瘤患者接受单药甲氨蝶呤化疗期间发生严重骨髓抑制的预测因素分析及对后续生育能力的影响

涂晓宇,栗宝华
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

目的: 探讨低危妊娠滋养细胞瘤(GTN)患者接受单药甲氨蝶呤(MTX)化疗时发生严重骨髓抑制的预测因素；比较化疗期间发生严重骨髓抑制和未发生严重骨髓抑制的妇女在获得完全缓解(CR)后的生育结局。

方法: 回顾性分析我院 2008 年 1 月至 2018 年 12 月登记的 319 例低危 GTN 患者。收集患者的病历，并进行回顾性分析。根据世界卫生组织的分类标准对骨髓抑制进行评估和分级。根据骨髓抑制分级将患者分为两组。他们后续的生育情况通过电话或在门诊进行随访。比较分析两组患者的临床资料和生殖结局。

结果: A 组 248 例患者在 MTX 化疗期间未出现或仅有轻度骨髓抑；B 组 71 例患者发生严重的骨髓抑制。B 组接受 MTX 一线化疗的患者比例更高(53 (74.6%)，p=0.000);A 组化疗总疗程数(7[5,9])高于 B 组(5 [4,7])(p=0.001)；而 MTX 化疗疗程数 B 组(5[3,6])多于 A 组(4 [2,5])(p=0.001)。A 组化疗前血清白蛋白(ALB)和肾小球滤过率(GFR)分别高于 B 组(0.001 和 0.000)，而 B 组患者的 BMI 和化疗前血清肌酐(Scr)分别高于 A 组(0.015 和 0.001)。较多的 MTX 化疗疗程数，较高的化疗前血 Scr 水平 (OR 1.067 [95% CI,1.033-1.103];P=0.000)即较低的化疗前 ALB 水平 (OR 0.874 [95% CI,0.815-0.937];P=0.000)是 MTX 化疗发生严重骨髓抑制的独立危险因素。联合预测化疗前 ALB、Scr 和 MTX 化疗疗程数的 ROC 曲线下面积为 0.737 ([95% CI, 0.685-0.785];p = 0.0000)。两组达到 CR 后的累积妊娠率和累积活产率无显著性差异。

结论: 虽然部分患者发生严重的骨髓抑制，但 MTX 仍是低危 GTN 患者的有效一线治疗方案。根据我们的研究结果，临床医生可通过患者化疗前较低的 ALB 水平、较高的 Scr 水平及较多的 MTX 化疗疗程数这些危险因素联合预测低危 GTN 患者 MTX 治疗期间发生严重骨髓抑制的风险并给予积极干预，为临床医生提高 MTX 治疗的疗效、减少副作用提供科学依据，具有重要意义。另外，在治疗期间发生严重的骨髓抑制对患者获得 CR 后的生殖结局没有显著的不良影响。

PO-044

绝经前临床 I 期子宫子宫内膜样癌患者卵巢转移的术前预测因素分析

陈琴[1],冯燕[2],王文文[1],吕卫国[1,2,3],栗宝华[1,2,3]
1.浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）
2.浙江大学医学院附属妇产科医院肿瘤科
3.浙江省子宫恶性肿瘤诊断和治疗中心

研究目的：有研究发现绝经前临床 I 期子宫子宫内膜样癌患者卵巢保留不会对患者预后产生负面影响，因此针对该类患者，卵巢保留的术式可能使患者有更大获益。本研究的主要目的是明确绝经前临床 I 期子宫子宫内膜样癌中卵巢转移的发生率，并进一步明确该类患者卵巢转移的术前预测因素。

材料和方法：选取 2002 年 1 月至 2016 年 12 月于浙江大学医学院附属妇产科医院行全子宫全切术和双侧输卵管卵巢切除术（BSO）伴或不伴盆腔和/或主动脉旁淋巴结清扫术的临床 I 期子宫内膜样癌的绝经前患者（≤50 岁）。根据术前影像学检查和询问病史，排除具有子宫外转移灶和/或消化道恶性上皮性肿瘤家族史患者。明确入组患者人群中卵巢转移的发生率和潜在的术前卵巢转移的临床预测因素。

结果：2002 年 1 月至 2016 年 12 月于浙江大学医学院附属妇产科医院行全子宫全切术和双侧输卵管卵巢切除术（BSO）伴或不伴盆腔和/或主动脉旁淋巴结清扫术的临床 I 期子宫内膜样癌的绝经前患者（≤50 岁）共 511 名。 其中 23 名患者（4.5％）检测到卵巢转移。Kaplan-Meier 分析显示临床 I 期子宫内膜样癌患者发生卵巢转移的预后较未发生卵巢转移者差。单因素和多因素 logistic 回归分析发现术前子宫肌层浸润深度、术中卵巢外观以及术前血清糖类抗原 125（CA125）水平可作为术后卵巢转移的独立风险预测指标。此外，分别针对术前肌层浸润深度、术中卵巢外观、术前血清 CA125 水平以及三因素联合分别生成 ROC 曲线。我们发现三因素联合的 AUC 为 0.858（95％置信区间[CI]为 0.757-0.960）。

结论：绝经前临床 I 期子宫子宫内膜样癌患者卵巢转移的发生率相对较低。术前子宫肌层浸润深度、术中卵巢外观和血清 CA125 水平分别是卵巢转移的独立危险因素。该研究发现有助于对患者进行术前咨询，并就卵巢保存情况做出合适的临床决策。

PO-045
A Novel Lymphatic Metastasis-promoting Pattern of Cervical Cancer in a Hypoxic Tumor-associated Macrophages-Dependent Manner

Xiaojing Chen,Wei Wang
The First Affiliated Hospital of Guangzhou Medical University

Purpose: Lymphatic remodeling in hypoxic tumor microenvironment (TME) is critically involved in metastasis of cervical squamous cell carcinoma (CSCC), but its underlying mechanisms remain unclear.
Experimental Design: Cytokine antibody array was employed to identify differentially expressed cytokines secreted by hypoxic tumor-associated macrophages (TAMs). Tube formation in vivo and mouse popliteal lymphatic metastasis model were performed to determine the role of hypoxic TAMs in lymph node metastasis (LNM). We applied clodronate liposomes (CL) to deplete macrophages in vivo. Luciferase report assay, RT-qPCR, western blot, immunofluorescence, and immunohistochemistry staining were employed to explore the novel regulatory mechanism of LNM.
Results: We found a novel lymphatic pattern in the hypoxic region of CSCC tissue, in which lymphatic vessels were encapsulated by macrophages (LVEM) to form cobweb-like networks. The presence of LVEM predicted lymphatic metastasis and poor prognosis of CSCC patients. Mechanistic investigations revealed that IL-10 derived from hypoxic TAMs was a prerequisite for LVEM formation via inducing Sp1 upregulation by regulating STAT3 signalling in lymphatic endothelial cells. Up-regulated Sp1 expression leads to the transactivation of CCL1, facilitating TAMs and tumor cells recruitments, which forms a positive feedback loop to strengthen LVEM pattern. Knockdown of Sp1 or blocking CCL1 abrogated LVEM formation and consequently attenuated tumor metastasis. Furthermore, IL-10, Sp1 and CCL1 were independent prognostic factors in CSCC patients.
Conclusions: These findings identify a specialized LVEM pattern in the hypoxic TME that is closely related with lymphatic metastasis, which may provide new targets for anti-metastasis therapy and prognosis assessment.

PO-046
HPV16 整合感染的人宫颈上皮细胞分泌外泌体介导 宫颈成纤维细胞转化的体外研究

梁罗娇[1],魏文斐[2],王筱玥[3],周琛斐[2],陈晓静[2],吴湘光[2],杨杨[2],王梓慈[2],吴砂[3],王薇[1,2]
1.南方医科大学南方医院
2.广州医科大学附属第一医院
3.南方医科大学基础医学院免疫学教研室

目的：探讨 HPV16 整合感染的人宫颈上皮细胞通过分泌外泌体对宫颈间质中正常成纤维细胞功能的影响。
方法：提取人宫颈原代成纤维细胞并进行鉴定。选取 HPV16 整合感染的永生化人宫颈上皮细胞 ECT-1 和 S12 以及无 HPV 感染的正常人宫颈上皮细胞 HCerEpiC，差速超速离心法提取细胞分泌的外泌体（Exosome，Exo），透射电镜观察形态特征，Western blot 检测外泌体标志性蛋白。细胞的条件培养基（CM）及其分泌的外泌体分别处理宫颈正常成纤维细胞（normal fibroblasts，NFs），通过细胞骨架染色观察不同上清对细胞形态的影响，CCK8 实验、Transwell 迁移实验和划痕实验观察不同人宫颈上皮细胞来源的 Exo 对 NFs 的增殖和迁移能力的影响，Elisa 实验检测 NFs 上清中人转化生长因子 β1（transforming growth factor betal 1，TGF-β1）的表达量。
结果：成功分离得到正常宫颈组织来源的 NFs。ECT-1/CM 和 S12/CM 分别处理的 NFs，比 HCerEpiC/CM 处理组呈现出更多的肌动蛋白微丝和伪足，形态多变不均一。Exo 为直径 30~100 nm 的盘状囊泡，特异性表达 CD63 和 CD9。与对照组（HCerEpiC/Exo 组）相比，ECT-1/Exo 和 S12/Exo 处理组的 NFs 形态多变，增殖（P＜0.05）、迁移能力（P＜0.001）和分泌 TGF-β1 能力（P≤0.001）显著增强。
结论：HPV16 整合感染的人宫颈上皮细胞分泌外泌体增强 NFs 的体外迁移和增殖能力，上调 NFs 分泌 TGF-β1 的水平，参与 NFs 向“激活型”成纤维细胞的转化。

PO-047
The potential function of circular RNA circHEM6 in human umbilical cord mesenchymal stem cells during promoting endometrial stromal cells repair

Qin Shi,Xiaoqing Yang,Baolan Sun,Yuquan Zhang
Department of Obstetrics and Gynecology， Affiliated Hospital of Nantong University

Background: Human umbilical cord mesenchymal stem cells (UC-MSCs) are a novel and promising strategy for tissue engineering because of their ability to differentiate into many cell types. Our previous studies showed that UC-MSCs are able to ameliorate damaged human endometrial stromal cells (ESCs). The aim of this study was to determine the potential function of circular RNA circHEM6 in UC-MSCs during promoting ESCs repair.
Methods: UC-MSCs were isolated from human umbilical cord Wharton's jelly and characterized by flow cytometry, after which were co-cultured with or without ESCs damaged by mifepristone(cocultured group versus non-cocultured group) to observe the reparative effect upon damaged ESCs by WJ-MSCs. CircRNA microarray was performed between the two groups. Screening of a circRNA database was performed, and the results were confirmed by quantitative polymerase chain reaction (qPCR), after which lentivirus-mediated circular RNA circHEM6 overexpression were performed. Annexin V-FITC/PI apoptosis assay, EdU proliferation assay and western blot were performed to

measure cell apoptosis, proliferation, and analyze expression of VEGFA, VEGFR1, VEGFR2, respectively. Moreover, a microarray screen, bioinformatic prediction, and qPCR of miRNAs interacting with circHEM6 were conducted. Luciferase Reporter Assay and Western blot were carried out to elucidate the relationship among miRNAs, miR-20b-1-5p, and VEGF during the promoting of endometrial stromal cells' proliferation.
Results: UC-MSCs exerted a reparative effect upon damaged ESCs in the cocultured group such as improved cell morphology, higher proliferative ability, and lower apoptosis rate. CircRNA array showed that a large number of circRNAs were differentially expressed in UC-MSCs from the cocultured group. The expression level of circHEM6 in UC-MSCs from the cocultured group was higher than that in the control group measured by qPCR. After cocultured with UC-MSCs with overexpression of circHEM6, damaged ESCs showed much higher proliferative ability, and lower apoptosis rate, while VEGFA, VEGFR1, VEGFR2 proteins were upregulated. MiRNAs bound to circHEM6 were predicted by CircBase and CircNet, and miR-20b-5p was selected by miRbase and miRwalk to predict VEGF signaling pathway target miRNAs. The results of Luciferase Reporter Assay and Western blot demonstrated the interact effects between circHEM6, miR-20b-1-5p, and VEGF.
Conclusions: Our results presented the abundant and upregulated circRNAs profile of UC-MSCsduring repairing the damaged endometrium. We demonstrated that circHEM6, a molecular decoy for miR-3120-5p, regulates VEGF expression, thereby mediating cell proliferation in ESCs. Acting as a potential therapeutic target, the circRNA circHEM6 may play an important role in the regulation of UC-MSCs for endometrial repair.

PO-048
Preoperative nomogram for the predicting of lymph node metastasis in patients with cervical cancer

Yuanrun Deng
Department of Obstetrics and Gynecology， Third Affiliated Hospital， Southern Medical University

Background: The objective of this study was to develop a preoperative nomogram based on clinical and pathological characteristics to provide a more individualized and accurate estimation of lymph node metastasis (LNM) in cervical cancer.
Methods: A total of 15,974 cervical cancer patients with pathologically confirmed between 1988 and 2011 were obtained from the Surveillance, Epidemiology, and End Results (SEER) database. All the patients were divided into training (n=12,788) and validation (n=3196) cohorts randomly. A cohort of 375 patients from multicenter was used for the external validation. A multivariate logistic model was created from preoperative clinicopathologic data, from which a nomogram was developed and validated.
Results: Age at diagnosis, histologic subtype, tumor grade, tumor size and FIGO stage were independent predictors of LNM. The nomogram incorporating these 5 predictors demonstrated good discrimination and calibration (concordance index=0.797; 95% confidence interval (CI), 0.757-0.838) in the training cohort. In the validation cohort, the discrimination accuracy was 0.795 (95% CI, 0.757-0.840) and 0.690 (95% CI, 0.655-0.726), respectively. The nomogram was well calibrated.
Conclusion: We developed a nomogram based on 5 clinical and pathological characteristics to predict LNM with a igh concordance probability. This model may improve clinical trial design and help physicians to decide whether lymphadenectomy should be performed.

PO-049
Mesenchymal Stem Cells Directly Interact with Breast Cancer Cells and Promote Tumor Cell Growth In Vitro and In Vivo

Yuanyuan Yang
Tongji university affiliated Tongji Hospital

Cellular interactions were investigated between human mesenchymal stem cells (MSC) and human breast cancer cells. Co-culture of the two cell populations was associated with an MSC-mediated growth stimulation of MDA- MB-231 breast cancer cells. A continuous expansion of tumor cell colonies was progressively surrounded by MSCGFP displaying elongated cell bodies. Moreover, some MSCGFP and MDA-MB-231cherry cells spontaneously generated hybrid/chimeric cell populations, demonstrating a dual (green fluorescent protein + cherry) fluores- cence. During a co-culture of 5–6 days, MSC also induced expression of the GPI-anchored CD90 molecule in breast cancer cells, which could not be observed in a transwell assay, suggesting the requirement of direct cellular interactions. Indeed, MSC-mediated CD90 induction in the breast cancer cells could be partially blocked by a gap junction inhibitor and by inhibition of the notch signaling pathway, respectively. Similar findings were observed in vivo by which a subcutaneous injection of a co-culture of primary MSC with MDA-MB-231GFP cells into NOD/scid mice exhibited an about 10-fold increased tumor size and enhanced metastatic capacity as compared with the MDA-MB-231GFP mono-culture. Flow cytometric evaluation of the co-culture tumors re- vealed more than 90% of breast cancer cells with about 3% of CD90-positive cells, also suggesting an MSC- mediated in vivo induction of CD90 in MDA-MB-231 cells. Furthermore, immunohistochemical analysis dem- onstrated an elevated neovascularization and viability in the MSC/MDA-MB-231GFP-derived tumors. Together, these data suggested an MSC-mediated growth stimulation of breast cancer cells in vitro and in vivo by which the altered MSC morphology and the appearance of hybrid/chimeric cells and breast cancer-expressing CD90 + cells indicate mutual cellular alterations.

PO-050
Circulating miR-326 Could Serve as a Predictive Biomarker for Response to Neoadjuvant Chemotherapy in Locally Advanced Cervical Cancer

E Yang,Zhengyu Li
West China Second Hospital， Sichuan University

Objective: Clinically, couples of patients with locally advanced cervical cancer (LACC) are insensitive to neoadjuvant chemotherapy(NACT). Identifying the chemo-insensitive ones could improve their prognosis. Recent studies have reported that circulating microRNAs (miRNAs) may be involved in the response to NACT. The aim of this study was to discover the potential miRNAs which can predict the response to NACT in LACC.
Methods: Microarray and qRT-PCR analysis were used to select out the most differentially expressed miRNAs and validated in LACC patients, respectively. Another 39 blood samples of LACC patients were collected and divided into responders group and non-responders group according to the response evaluation criteria for solid tumors (RECST, version 1.1). The predictive performance was evaluated by thesensitivity, specificity, accuracy and the area under the receiveroperating characteristic (ROC).
Results: 12 significantly down-regulated microRNAs were selected out according to microarray analysis in our previous study. Combined with literature review, miR-326 and miR-376a-3p were selected out as candidate biomarkers. miR-326 demonstrated statistical difference of expression in the

responders group, with higher expression level after NACT compared with the baseline. Therefore, miR-326 could be regarded as the candidate biomarker. miR-326 provided an AUC-ROC of 0.75 (p=0.04) in the discrimination between responders and non-responders group. Among newly SCC patients, the relative expression of miR-326 in potential responders was much lower than that in the non-responders.
Conclusion: miR-326 could be a biomarker for predicting the response to NACT in LACC patients. The results could optimize individualized treatments for LACC.

PO-051
Uterine Commensal Peptostreptococcus Species Contribute to IDO1 Expression Induction in Endometrial Adenocarcinoma through Producing Indoleacrylic Acid

Kun Shi,Qiong Wang,Yaqiong Liu,Weiwei Chen,Sha Chen
Guangzhou Women and children's Medical Center

Objectives According to our previous study, indoleacrylic acid **(**IAA) ,which suppressed inflammatory response through promoting IL-10 expression in macrophages, was one of the metabolites high expressed in endometrial adenocarcinoma (EC) patients. Commensal peptostreptococcus species are known for IAA production. Indoleamine-2,3-dioxygenase (IDO) is one of the key enzymes in tumour cells to develop immune tolerance. Here, we investigated whether uterine P. species are involved in the induction of IDO expression in EC.
Methods 32 EC patients, 32 endometrial hyperplasia (HP) patients, and 32 female negative controls (NC) were recruited from January 2016 to December 2019. Tissues were collected for immunohistochemistry staining, blood was collected for peripheral blood monocytes (PBMCs) isolation, and both specimens for flow cytometry analyses, IL-10, INF-γ, IAA and kynurenine examination. Microbe specimens were collected for commensal bacterial species identification and gene cluster fldAIBC expression examination. IAA production by P. species (eg., P. anaerobius, P. russellii, and P. stomatis) was examined in in vitro culture media and in vivo murine uterus.
Results: IAA was high expressed in the sera and the endometrial tissues of type I EC patients, and IAA-stimulating IL-10 production in macrophages, followed by IL-10-eliciting IFN-γ expression in CD8+T cells, contributed to the induction of IDO1 expression in vitro and tumour growing in vivo. Further investigation on IAA source in endometrium showed that IAA was produced by Peptostreptococcus species through expressing gene cluster fldAIBC, and the media of P. anaerobius (main strain of Peptostreptococcus species in female genital tract) showed high IAA concentration, evidently induced IDO1 expression, and promoted tumour growth in vivo. Clinically, fldAIBC expression level in uterine microbiota, correlated to IAA concentration, IDO1 expression in endometrial tissue, as well as CD4+CD25+CD127-T and CD8+T proportions in endometrial lymphocytes of EC patients.
Conclusions: Our results highlight uterine commensal Peptostreptococcus species may potentially contribute to IDO1 expression induction through producing IAA in EC.

PO-052

Resveratrol inhibits the invasion and migration of endometrial cancer by reversing MTA1-ZEB2-induced epithelial-mesenchymal transition

XIANGYI KONG[1],Jiawen Ji[2],Xiaofeng Xu[1],Jun Wu[1],Ling Zhou[3],Mengjing Zhu[3],Shuang Yao[3],Yue Ding[4],Yijin Wang[5],Rong Li[1],Yan Zhang[1],Xiaoqiu Tang[1],Xianghong Zhu[1],Jingxian Ling[1],Huaijun Zhou[1]
1.Nanjing Drum Tower Hospital Affiliated to Nanjing University Medical School.
2.Jiangyin Hospitial Affiliated to Nanjing University of Chinese Medicine
3.Nanjing Drum Tower Hospital Clinical College of Nanjing Medical University
4. Medical College， Nanjing University， Nanjing 5.Medical College， Southeast University， Nanjing

Objective. Resveratrol shows anti-cancer properties in many human cancers, but the specific mechanism is still unknown in endometrial cancer (EC). Metastasis-associated protein 1 (MTA1) has been shown to promote tumorigenesis and progression of cancers, including EC. In the process of cancer development, epithelial-mesenchymal transition (EMT) is crucial to promoting the invasion and migration of tumor cells. However, MTA1-induced EMT and the anti-cancer mechanism of resveratrol on EC are not yet completely understood and need to be elucidated.
Methods. We used EC cells (Ishikawa, HEC-1B, RL-952) and a xenograft-bearing mouse model in the present study. CCK-8, colony-formation assay, flow cytometry, cell scratch and Transwell assay were performed to determine cell proliferation, apoptosis, migration and invasion abilities respectively. Western blotting and Real-time PCR were used to assess the expression of target gene. Immunoprecipitation (IP) was preformed to investigate the relationship between MTA1 and ZEB2.
Results. In vitro, we found resveratrol inhibited EC cells proliferation,migration invasion and induced apoptosis, meanwhile decreased the MTA1 expression. Intriguingly, the inhibition of resveratrol on cells function could be abrogated partly by MTA1 overexpression. Next, it showed that ZEB2 was down-regulated followed by MTA1 through RNA-seq analysis and ZEB2 knockdown led to an inhibition of EC cells migration and invasion, which could be reversed by MTA1 overexpression. MTA1 overexpression led to an increased expression of ZEB2 and Vimentin , and decreased E-cadherin expression, which could be blocked by resveratrol. What's more, there was a physical combination between MTA1 and ZEB2, which implied an interrelation between them. In vivo, resveratrol suppressed the tumor growth as well as the expression of MTA1 and ZEB2, without marked changes in body weight. These results indicated that resveratrol inhibited the tumorigenesis and progression of EC by reversing MTA1-ZEB2 induced EMT.
Conclusion. Our results suggest that resveratrol inhibits the development of EC by reversing MTA1-ZEB2-induced EMT, and provide new insight of resveratrol in future therapeutic approaches.

PO-053

SNHG5 在子宫内膜癌中的表达及其临床意义

赵喜娃
河北省第四医院

目的 检测长链非编码 RNA（lncRNA）SNHG5 在子宫内膜癌组织和正常子宫内膜组织中的表达，并分析其在子宫内膜癌发生发展中的临床意义。
方法 采用实时定量聚合酶链反应（qRT-PCR）法检测 66 例正常子宫内膜组织和 108 例子宫内膜癌组织中 SNHG5 的表达情况，并分析其表达水平与子宫内膜患者临床病理特征之间的关系。

结果 SNHG5 在子宫内膜癌组织中的表达水平明显低于正常子宫内膜组织，差异具有统计学意义（P<0.001）（图 1）。FIGOⅢ-Ⅳ期子宫内膜癌患者 SNHG5 表达水平较 FIGOⅠ-Ⅱ期患者明显降低(P=0.034)；淋巴结阳性的子宫内膜癌患者 SNHG5 表达水平低于淋巴结阴性患者(P=0.029)。SNHG5 表达水平与患者的年龄、病理类型、组织学分级、子宫肌层浸润深度及淋巴脉管浸润无明显相关性（P>0.05）(表 1)。SNHG5 低表达患者术后生存时间明显短于高表达患者 (P<0.05) (图 2)。
结论 SNHG5 在子宫内膜癌的发生发展中起抑制作用，有望成为子宫内膜癌预后监测的一个新指标。

PO-054
APOBEC3B expression may affect cervical cancer progression

Zhi Wei[1],Xuan Feng[1],Yinhua Yu[1,2],Hongbo Zhao[1,2],Yan Du[1,3]
1.Obstetrics and Gynecology Hospital of Fudan University
2.Shanghai Key Laboratory of Female Reproductive Endocrine Related Diseases
s3.Institutes of Integrative Medicine， Fudan University

Background. Cervical cancer is one of the most common gynecologic cancers among women and is the fourth leading cause of female cancer-related deaths worldwide. About 95% of the cervical cancer cases are caused by persistent infection with certain carcinogenic human papillomavirus (HPV) genotypes. The Cancer Genome Atlas (TCGA) project found that among invasive cervical cancer patients, the APOBEC mutation load was strongly correlated with the total number of mutations per sample, indicating that APOBEC mutagenesis is the predominant source of mutations. APOBEC3B, a member of the AID/APOBEC family, is part of the innate immune system which plays a key role in combating exogenous infection especially viral infection. In addition, it was reported that single nucleotide polymorphism (SNP) in the APOBEC3B promoter region is crucial for tumor progression. However, the clinical relevance of APOBEC3B in cervical cancer needs to be further investigated. The current study aimed to evaluate the association of APOBEC3B expression with cervical cancer characteristics, and to explore possible mechanisms contributing to cervical cancer.
Materials and Methods. From November 2013 to February 2016, patients with newly diagnosed primary cervical cancer who underwent surgery at the Obstetrics and Gynecology Hospital of Fudan University in Shanghai were enrolled. Clinical data and histopathologic data were retrieved from patients' medical records. The expression of APOBEC3B in biopsy tissue specimens from 108 cervical cancer patients was examined using immunohistochemistry. The intensity of immunostaining was scored semiquantitatively and based on the percentage of the stained tumor cells. The expression was independently analyzed by two observers who were blinded to patient's clinical information. For patient characteristics, continuous variables were presented as mean ± standard deviation (SD) or median with range, and categorical variables were presented as number and percentage. The differences of clinicopathological variables between higher- and lower-expression groups were compared using chi-square test or Fisher's exact test when appropriate. Survival time was defined as the time from surgery until the patient's death, or the last time that the patient was known to be alive. Kaplan-Meier method was used to estimate the overall survival, and log-rank test was used to compare the curves of different APOBEC3B expression groups. APOBEC3B expression in cervical cell lines was detected with western blotting analysis. CCK8 assay was conducted to explore the role of APOBEC3B in cervical cancer cell viability. Genetic polymorphism rs2267401 at APOBEC3B promoter region was genotyped using quantitative PCR to investigate the role of SNP in the pathogenesis of cervical cancer.
Results. The average age of the patients was 48.31±9.68 years. More than 90% of the patients were diagnosed as squamous cell carcinoma (n=98) and most of the tumors were well differentiated (n=95, 88.0%). All patients had Federation of Gynecologists and Obstetricians (FIGO) stage I and II cervical cancer according to the 2014 criteria at initial diagnosis; however, 34 patients (31.5%) became stage III or IV cervical cancer after re-classification according to the 2018 FIGO criteria. Two patients had

HPV-negative cervical cancer. After a median observation of 2 years (range: 9.67-31.73 months), 5 patients had died, 12 patients were lost to follow-up, and 91 patients remained alive without recurrence. Expression of APOBEC3B was significantly associated with histological type and histological grade (both $p< 0.05$). No association was observed between APOBEC3B expression and FIGO stage (2014 or 2018 criteria), tumor size, or HPV genotype. No association was observed between any variables and overall survival. Furthermore, endogenous expression of APOBEC3B in a series of cervical cancer cell lines has been detected. Cervical cancer cell lines including HeLa, Caski, and C-33A with moderate expression of APOBEC3B have been screened. These cell lines were transfected with APOBEC3B siRNA or pLenti-APOBEC3B construct and subjected to CCK8 assay to explore the exact role of APOBEC3B in the cell viability of cervical cancer. In addition, preliminary data have shown that SNP rs2267401 may affect APOBEC3B promoter activity and facilitate cervical cancer progression.
Conclusion. APOBEC3B expression is associated with cervical cancer histological type and histological grade. SNP rs2267401 at APOBEC3B promoter region may be involved in cervical cancer progression.

PO-055
Window of Vessel Normalization: A New Avenue to Enhancing Cancer Immunotherapy

sai li
Department of gynecology oncology，Women's Hospital，Zhejiang University school of medicine，Hangzhou，China

Abnormal blood vessels create a hostile tumor microenvironment (TME) characterized by hypoxia, low pH value and elevated interstitial fluid pressure, which facilitate tumor progression, metastasis, immunosuppression and anticancer treatment resistance. These abnormalities are consequences of imbalance between pro-angiogenic and anti-angiogenic factors, such as VEGF and angiopoietin 2 (ANG2). Judicious use of drugs targeting the imbalance would normalize these aberrant tumor vessels, resulting in a transient window of vessel normalization. In addition, use of antitumor drugs including immune checkpoint blockers when vessel normalization is achieved brings better outcomes. Here, we summarize the advances in the understanding and applying of concept of tumor vessels normalization window treat cancer. Moreover, we also outline some challenges and opportunities ahead to optimize the combination of anti-angiogenic agents and immunotherapy, leading to improve patients' outcomes.

PO-056
腹腔镜保守性手术联合化学治疗侵蚀性葡萄胎子宫自发性穿孔一例

孟静雯[1],郑琳[1],项达军[2]
1.无锡市妇幼保健院 2.无锡市锡山人民医院

侵蚀性葡萄胎，又称恶性葡萄胎，表现为葡萄胎的水肿性绒毛侵入子宫肌层、血管或子宫以外的部位。一旦子宫病灶穿破浆膜层形成子宫穿孔或破裂则可引起急性腹痛及腹腔内出血，需要急诊手术止血。手术止血方法大多采用全子宫切除术、髂内动脉或子宫动脉栓塞、子宫病灶切除+子宫修补术等，而采用腹腔镜手术比较少见。
现介绍一例侵蚀性葡萄胎在吸宫术后 13 天发生自发性子宫穿孔，导致出血性休克，我们采用腹腔镜手术联合化学治疗成功保留了患者的生育功能，取得满意疗效。

PO-057
保留生育功能的子宫颈广泛性切除术现况及研究进展

夏念
湖南省肿瘤医院

宫颈癌（Cervical cancer）发病呈年轻化趋势，保留生育功能的子宫颈广泛性切除术打破传统治疗方式弊端，近年来，随着宫颈癌保留生育功能的治疗逐渐成熟，其复发率及死亡率大为改观，但其妊娠率与生育率仍较低，对于有生育期望的年轻的早期宫颈癌妇女来说，手术后不影响后续生殖的意义非凡。本研究对早期年轻的宫颈癌患者行子宫颈广泛性切除术的治疗现状和研究进展进行综述，为指导临床治疗提供参考方向。

PO-058
开腹和腹腔镜下子宫广泛性切除术对早期宫颈癌患者的临床分析

夏念
湖南省肿瘤医院

目的 比较开腹和腹腔镜下的子宫广泛性切除术对早期宫颈癌(IA1-IB2 期伴脉管浸润)患者的术中、术后临床疗效，并发症，预后影响因素及结局分析。方法 收集 2008 年 7 月-2018 年 12 月在湖南省肿瘤医院确诊患早期宫颈癌并根据手术方式分组的 217 例患者临床病例资料，比较两组患者临床特点、手术时间、术中出血量、淋巴结切除数目、术后住院时间、并发症发生率，分析影响复发的相关因素，确定影响预后的独立因素，比较两组术后生存情况。结果 开腹组术中出血量（ml）、术后住院时间（d）、淋巴结切除数目（个）分别为 324±206、8±2、17±3 均高于腹腔镜组 202±185、6±2、16±5,（P 值均＜0.05）；腹腔镜组膀胱损伤发生率为（11.21%，13/116）高于开腹组（1.98%，2/101），P=0.008。开腹组患者手术时间（min），肠道损伤发生率、血管损伤发生率、输尿管损伤发生率、淋巴囊肿发生率、静脉血栓发生率分别为 180±49，(0.99%，1/101)、(0%,0/101)、(2.97%，3/101)、(11.88%，12/101)、(1.98%，2/101)，腹腔镜组分别为 184±49，（1.72%，2/116）、（5.17%，6/116）、（3.45%，4/116）、（10.34%，12/116）、（0%，0/116）,比较无统计学差异（P 值均＞0.05）。早期宫颈癌患者复发与肿块大小、临床分期、浸润间质深度有关，与年龄、病理类型、CA125、新辅助治疗无关。肿瘤最大经线是早期宫颈癌患者复发的独立危险因素（P=0.000）。开腹组和腹腔镜组总体生存率无统计学差异（P=0.973）。结论 早期宫颈癌腹腔镜手术治疗在临床疗效、并发症优于开腹手术，两者预后无明显差异，肿瘤最大经线是影响早期宫颈癌患者复发的独立危险因素。

PO-059
负压引流装置在妇科恶性肿瘤术后腹壁切口愈合中的疗效观察

田明,杨淑丽
首都医科大学附属北京妇产医院

目的探讨负压引流装置在妇科恶性肿瘤术后腹壁切口愈合中的临床效果。

方法采用随机数字法选取 2018 年 4 月至 2019 年 4 月间因妇科恶性肿瘤于北京妇产医院妇瘤科行开腹手术的患者，分为负压引流组（试验组，146 例），传统缝合组（对照组，141 例）；观察两组一般资料、住院天数、切口感染、脂肪液化及甲级愈合等相关指标。
结果①两组恶性肿瘤患者构成比（试验组 vs 对照组）：卵巢输卵管癌（61.64% vs 41.84%）、子宫内膜癌（6.85% vs 24.11%）、宫颈癌（27.40% vs 31.91%）、其他（4.11% vs 2.13%）;术后需补充放化疗（78.77% vs 65.25%）。②两组患者的年龄(51.19±9.74 岁 vs 50.37±10.97 岁)、术前血红蛋白（125.55±14.69g/L vs 125.62±13.34g/L）、术后血红蛋白（101.95±15.82g/L vs 104.65±15.45g/L）、体重指数（24.55±3.54kg/m^2 vs 24.76±3.76 kg/m^2）无统计学差异。③试验组引流量 8-793ml（53.50±83.58ml）。④两组切口感染率（0.68% vs 2.13%）无统计学差异（P＞0.05）; 试验组患者手术切口脂肪液化率（0.68% vs 10.64%）、二次缝合率（0.68% vs 7.80%）、住院天数（7.10±2.84 天 vs 9.18±5.97 天）均明显低于对照组，切口甲级愈合率（98.62% vs 87.23%）明显高于对照组，差异均有统计学意义(P＜0.05)。
结论负压引流装置可促进妇科恶性肿瘤患者腹壁切口愈合，减少切口脂肪液化及二次缝合几率，并明显缩短住院时间，改善患者预后。同时此装置简单易操作，价格低廉，值得临床推广应用。

PO-060
融合基因 EWSR1-CREB3L1 促进子宫内膜癌恶性进展的机制研究

胡翔,韩桐,万小平
上海市第一妇婴保健院

研究目的 子宫内膜癌是女性生殖系统常见三大恶性肿瘤之一，呈发病率升高和发病年轻化的趋势。年轻患者对保留生育功能的迫切需求和目前以孕激素为主的保守治疗耐药性之间的矛盾，对现有子宫内膜癌的治疗模式提出极大的挑战。对子宫内膜癌恶性进展机制的研究并据此寻找新的治疗靶点成为妇科肿瘤领域的热点。EWSR1-CREB3L1 是一种恶性肿瘤中常见的融合基因，因其在肿瘤细胞中特异性表达，故为一种新兴抗癌靶点。本研究旨在探讨融合基因 EWSR1-CREB3L1 在子宫内膜癌恶性进展中的作用及其机制。
材料与方法 取 15 例子宫内膜癌样本和 13 例正常内膜样本，通过免疫组织化学的方法研究 EWSR1-CREB3L1 在子宫内膜癌组织中的表达并分析与临床参数的关系；通过 Real-Time PCR 及 Western Blot 的方法检测 EWSR1-CREB3L1 mRNA 及蛋白在子宫内膜癌样本中的表达。体外实验在细胞株中通过 siRNA 干扰敲降 EWSR1-CREB3L1，检测对细胞增殖、转移和侵袭的影响。将敲降的细胞株进行 RNA-seq 寻找差异基因，随后用 GO 和 GSEA 分析找到 EWSR1-CREB3L1 可能调控的基因及信号通路，随后加入下游通路阻断剂研究其致癌机制。最后体内实验研究 EWSR1-CREB3L1 对裸鼠成瘤能力的影响。
结果 EWSR1-CREB3L1 在子宫内膜癌组织中表达较正常内膜组织显著升高；siRNA 干扰降低 EWSR1-CREB3L1 的表达后，抑制子宫内膜癌细胞株的增殖、迁移、侵袭及克隆形成能力。RNA-seq 发现 EWSR1-CREB3L1 调控相关通路，并且找到 PI3K-AKT 通路有显著相关性。干扰 EWSR1-CREB3L1 后，PI3K-AKT 信号通路被抑制，下游与 EMT（上皮间质化）相关靶基因如 SIP1 减少。740 Y-P 阻断 PI3K-AKT 信号通路后，可抑制子宫内膜癌细胞株的增殖、迁移、侵袭及克隆形成能力。最后小鼠荷瘤实验中，降低 EWSR1-CREB3L1 的表达及加入 PI3K-AKT 信号通路抑制剂 740 Y-P 均可抑制裸鼠体内肿瘤生长。
结论 本研究阐明了融合基因 EWSR1-CREB3L1 在子宫内膜癌中表达增高，通过激活 PI3K-AKT 信号通路引起 EMT，促进其恶性进展。为子宫内膜癌的诊断提供新型生物标记物，且针对该融合基因的致瘤机制提示 PI3K-AKT 信号通路可作为子宫内膜癌治疗的分子靶点。

PO-061
ONC206 抑制浆液性乳头状子宫内膜癌增殖和转移的体外研究

黄裕,王冬,顾荣花,邹冬玲,周琦
重庆大学附属肿瘤医院

目的 ONC206 是一种亚吡哌酮小分子，选择性的多巴胺受体 D2/D3（DRD2/3）拮抗剂，是 ONC201 的更有效类似物。已显示 ONC206 对 DRD2/3 的拮抗作用可激活乳腺癌和结肠直肠癌细胞系中的整合应激反应（Integrated stress response，ISR）。在这项研究中，我们旨在研究 ONC206 在体外对子宫乳头状浆液性癌（UPSC）细胞系的抗肿瘤功效，并阐明其作用机理。
方法 用 ONC201 或 ONC206 治疗 UPSC 细胞系 ARK1 和 SPEC2。使用 MTT 和半胱天冬酶-3（caspase-3）、caspase-9 测定法测量细胞增殖和凋亡，并进行粘附试验、伤口愈合试验以量化降低转移和侵袭的潜力。通过 ROS 和 JC-1 分析测定检测其 ISR。使用 1mM 的应激抑制剂 N-乙酰半胱氨酸（N-acetylcysteine，NAC）预处理后，重复进行增殖，侵袭和应激测定，并以蛋白质印迹（Western immunoblotting）检测评估靶蛋白表达水平。
结果 在 UPSC 细胞系 ARK1 和 SPEC2 中，ONC206 以浓度依赖的方式抑制细胞增殖，并且有效性比 ONC201 更强。ONC206 的抗增殖作用与半胱天冬酶介导的细胞凋亡以及内质网应激激活有关。ONC206 使肿瘤细胞的黏附力和伤口愈合力显著降低，另外，使用 NAC 预处理后，ONC206 对细胞黏附，伤口愈合和细胞增殖的抑制功效将降低。
结论 在 UPSC 细胞系中，ONC206 比 ONC201 更有效，并通过几种不同的机制显著影响肿瘤细胞体外生长和侵袭。除了亚吡哌酮家族其他药物采用的 TRAIL 介导的凋亡途径外，ONC206 还利用 ISR 激活作为其下游效应传播的重要途径。因此 ONC206 可能在未来的 UPSC 临床试验中成为有希望的治疗药物。

PO-062
术前联合血清 CEA 和 CA125 在早期宫颈腺癌预后中的预测作用

黄艮平,栗宝华
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

背景：目前对于早期宫颈腺癌术前的相关因素与预后的关系尚缺乏研究。本研究目的是明确术前血清肿瘤标志物水平在早期宫颈腺癌患者的预后预测作用中的价值。
方法：本研究收集了 2005 年 1 月至 2015 年 12 月在浙江大学医学院附属妇产科医院接受治疗的 212 例 FIGO IA1-IIA2 期宫颈腺癌患者的术前临床资料，其中有 188 名患者接受了至少 3 年的准确随访。我们分析了术前血清肿瘤标志物水平与各种临床病理因素的关系。并且利用生存分析确定了术前影响总体生存率和无病生存率的相关危险因素及独立预后预测因子。利用受试者工作特性曲线分析确定了有意义的肿瘤标志物的最佳分界点。
结果：血清癌胚抗原(CEA)升高与体重指数(BMI)及肌层侵犯程度显著相关。癌抗原 125 (CA125)升高与肌层侵犯及淋巴结转移程度显著相关。血清 CEA 和 CA125 升高与 FIGO 分期、BMI 和 LNM 显著相关。Kaplan-Meier 分析明确显示，早期宫颈腺癌患者术前血清中 CEA 和 CA125 升高，预后较差。单因素和多因素分析显示，早期宫颈腺癌患者术前血清 CEA 和 CA125 升高显示预后较差，联合术前血清CEA和CA125升高是早期宫颈腺癌预后的独立预测因子。预测无瘤生存率和总体生存率的最佳CEA截断值分别为 2.85 ng/ml 和 2.05 ng/ml，CA125 截断值均为 32.60 U/ml。
结论:术前血清 CEA 和 CA125 水平可能对早期宫颈腺癌的预后有重要影响。术前联合血清 CEA 和 CA125 水平是早期宫颈腺癌的独立预后预测因子。

PO-063

宫腔镜对子宫内膜癌患者诊断及预后的影响

慕庆玲
青岛市市立医院东部院区

目的 探讨宫腔镜对子宫内膜癌的诊断、癌细胞腹腔内播散及生存预后的影响。
方法 回顾性分析我院 2010 年 6 月至 2014 年 6 月收治子宫内膜癌患者 216 例。根据术前确诊方式分为宫腔镜直视下活检及分段诊刮术组(观察组 110 例)和单纯分段诊刮术组(对照组 106 例)。分析比较两组术前、术后病理诊断符合率、宫颈受累诊断符合率、腹腔细胞学检查阳性率及 5 年生存率。
结果 观察组病理诊断符合率及宫颈受累诊断符合率均显著高于对照组(P＜0.05)，两组腹腔癌细胞阳性率、术后 5 年生存率的差异均无统计学意义(均 P＞0.05)。
结论 宫腔镜可显著提高子宫内膜癌诊断的准确率，并不增加癌细胞腹腔内的播散风险，对生存预后无显著影响。

PO-064

Effect of the number of removed lymph nodes on survival in patients with FIGO stage IB–IIA cervical squamous cell carcinoma following open radical hysterectomy with pelvic lymphadenectomy: A retrospective cohort study

Qinhao Guo[1,2],Jun Zhu[1,2],Yong Wu[1,2],Xingzhu Ju[1,2],Xiaohua Wu[1,2]
1.Department of Gynecologic Oncology， Fudan University Shanghai Cancer Center
2.Department of Oncology， Shanghai Medical College， Fudan University

Background:To determine whether the number of removed lymph nodes (RLN) is associated with survival in patients with FIGO stage IB - IIA cervical squamous cell carcinoma (CSCC).
Materials and Methods: We reviewed the medical records of FIGO stage IB - IIA CSCC patients who underwent standardized radical hysterectomy with pelvic lymphadenectomy in our center between 2006 and 2014. The impact of RLN on progression-free survival (PFS) and overall survival (OS) was analyzed using Cox regression analysis.
Results:Among 3,127 patients, the mean number of RLN was 22, and positive lymph nodes (LN) was found in 21.4% patients. In all patients, the number of RLN was not associated with PFS (P = 0.182) or OS (P = 0.193). Morever, in LN positive and negative patients,the number of RLN was not associated with either PFS (P = 0.540 and P = 0.212, respectively) or OS (P = 0.173 and P = 0.497, respectively). Cox regression analysis showed that the number of RLN was not an independent prognostic factor for PFS or OS in all patients, LN positive patients or LN negative patients, respectively.
Conclusions: If standardized RHPL was performed, the number of RLN was not an independent prognostic factor for survival of patients with FIGO stage IB - IIA CSCC.

PO-065

21 例颈部转移性淋巴结锕-252 中子后装腔内插植治疗疗效观察

刘波[1],刘惠民[1],王奇峰[2],杨文勇[1]
1.山西省长治市肿瘤医院 2.四川省肿瘤医院

目的 探讨颈部转移性淋巴结锕-252 中子后装腔内放疗配合外照射的近期疗效以及毒副作用。

方法 回顾性收集 2015 年 1 月至 2016 年 6 月，在我院治疗的颈部转移性淋巴结肿大的患者共 21 例可供分析，采用专用的中子腔内后装治疗插植施源器（直径 3mm），源外 10mm 为参考点，4Gy/次，共 5 次，内照射总量 20Gy；肿瘤总治疗剂量为 60~70Gy。直线加速器外照射：45~50Gy/23~25 次；1.8~2.0Gy/F，内外照射配合进行。
结果 近期疗效 CR 100%，1 年局部控制率 95.2%(20/21 例)。放射性皮炎：本组全部病例未出现二度及以上急性放射性皮炎，一度放射性皮炎 4 例（19.05%），均未做特殊处理，自愈。骨髓抑制：4 例（19.05%）出现 2 度骨髓抑制，对症处理后未影响治疗。其他毒副作用：6 例（28.57%）患者出现吞咽疼痛症状，对症处理后按计划完成治疗。
结论 锎-252 中子后装治疗配合直线加速器外照射可有效控制颈部转移性淋巴结，疗效好，不良反应可耐受，远期局部控制率在随访中。

PO-066
23 例溃疡型食管癌放疗（锎中子后装治疗+外照射）配合康复新液治疗疗效观察

刘波[1],刘惠民[1],王奇峰[2],杨文勇[1],魏冬艳[1]
1.山西省长治市肿瘤医院 2.四川省肿瘤医院

目的 探讨溃疡型食管癌的治疗经验。
方法 采用常规分割 6M 直线加速器外照射治疗加锎-252 中子后装腔内治疗并配合应用康复新液 10ml，每日 3 次，治疗溃疡型食管癌患者 23 例，观察疗效并行上消化道造影评估。
结果 治疗后临床症状改善情况：1 周内显效 6 例，无效 17 例；2 周内显效 18 例，无效 5 例。所有病例复查上消化道造影达 CR（完全缓解）21 例，部分缓解 1 例，无效 1 例。
结论 直线加速器外照射+锎中子后装治疗配合康复新液治疗溃疡型食管癌疗效满意，且安全性能良好。

PO-067
聚乙二醇重组人粒细胞集落刺激因子预防宫颈癌放化疗期间中性粒细胞减少症的临床观察

程淑霞,马一鸣,武豪,陈慧敏,李秀杰,刘玉灵
河南省肿瘤医院

目的 探讨宫颈癌同步放化疗期间聚乙二醇化重组人粒细胞集落刺激因子（PEG-rhG-CSF）预防中性粒细胞减少症的安全性和有效性。
方法 回顾性分析 29 例宫颈癌放疗同步顺铂周化疗患者应用 PEG-rhG-CSF 预防粒细胞减少症，与同期 28 例宫颈癌同步放化疗患者应用 rhG-CSF 治疗粒细胞减少症相对比，分析两组患者粒细胞减少症的发生率、相关并发症和放化疗延误等，探讨 PEG-rhG-CSF 在宫颈癌同步放化疗期间预防粒细胞减少症的安全有效性。
结果 PEG-rhG-CSF 预防组同步放化疗期间平均每位患者给药 2. 3 次，无 FN，无抗生素使用，无粒细胞减少相关延迟治疗；rhG-CSF 治疗组平均每位患者需注射 rhG-CSF 10.6 次， 2 例 FN，抗生素应用 4 例，10 例患者粒细胞减少相关延迟治疗。PEG-rhG-CSF 预防组 III～IV 度粒细胞减少率 6.9%（2/29），明显低于 rhG-CSF 治疗组 64.3%（18/28），差异有统计学意义(X^2=20.6, P<0.01)。PEG-rhG-CSF 组完成 5 次周化疗率 75.9%（22/29），明显高于 rhG-CSF 组 42.8%（12/28），差异有统计学意义(X^2=6.45, P=0.011)。

结论宫颈癌放疗同步周化疗期间 PEG-rhG-CSF 预防中性粒细胞减少症是安全的，与 rhG-CSF 挽救性治疗相比更为便捷，效果更好。

PO-068

The diagnosis and treatment of endometrioid adenocarcinoma in a young nulliparous woman through hysteroscopy

Feng Qi,Ze-ying Chai,Ling-zhi Zheng
Taizhou Hospital of Zhejiang Province， Affiliated with Wenzhou Medical University， Linhai， Zhejiang Province，China.

A 27-year-old nulligravid woman presented with one-year metrorrhagia. Gynecological examination and transvaginal ultrasound (TVUS) showed 13-mm endometrial thickness (Figure-1). Hysteroscopy with histopathology (H/H) revealed Grade 1 endometrioid adenocarcinoma (Figure-2, Video-1). Considering her decision on fertility preservation following routine genetic counseling to rule out Lynch syndrome, 160-mg megestrol acetate (MA) orally twice daily was started.
Three-month follow-up H/H (Figure-3, Video-2) showed partial response; MA was continued, and 3-month repeat endometrial biopsy showed complete response. After 3-month consolidation therapy, she underwent IVF-ET. Cesarean section was performed at 34 weeks due to preeclampsia with intraoperative abdominal examination. She elected against hysterectomy to achieve complete fertility. TVUS showed 3-mm endometrial thickness 2 months postpartum; H/H was negative for hyperplasia/malignancy (Figure-4). A maintenance levonorgestrel intrauterine system was implanted 6 months postpartum. Since endometrioid adenocarcinoma had unknown etiology, uterus preservation has tumor recurrence and metastasis risks; hysterectomy was recommended after complete fertility.

PO-069

What influences the long-term survival of advanced high grade serous ovarian cancer?

Liqin Jin[1],Yuanming Shen[1],Sangsang Tang[1],Xiaodong Cheng[1],Weiguo Lv[1],Zhongbo Chen[2],Xiaoyun Wan[1],Xing Xie[1]
1.Women's Hospital， School of Medicine， Zhejiang University
2.Zhejiang Cancer Hospital

Objective: To identify clinicopathological factors and tumor biological characteristics that contribute to prolong survival in patients with advanced high-grade serous ovarian carcinoma (HGSOC).
Methods: In this case-control study, we compare short-term (≤2 years) and long-term (≥10 years) survivors of stage IIIC/IV high-grade serous ovarian, fallopian tube or peritoneum cancer from Women's Hospital, School of Medicine, Zhejiang University and Zhejiang Cancer Hospital from January 2004 to December 2016. The possible factors associated with long-term survival were examined by chi-square test and logistic regression analysis.
Results: A total of 698 medical records with newly diagnosed stage IIIC/IV high-grade serous ovarian, fallopian tube or peritoneum carcinoma were reviewed, 19(2.7%) long-term survivors (LTS) and 101(14.5%) short-term survivors (STS) meeting criteria were identified. STS and LTS showed mostly similar clinical factors including age, FIGO stage, preoperative serum CA125, optimal primary debulking surgery, neoadjuvant chemotherapy and surgical complexity scores, etc. However, LTS showed a trend towards platinum sensitivity, while lesion distributions of the tumor such as bladder

serous involvement, colon and small intestine and their mesenteries involvement as well as hepatorenal recess involvement were associated with decreased survival. Multivariate logistic regression analysis showed that only platinum sensitivity was significantly associated with LTS (P=0.001, odds ratio=0.033, 95%CI: 0.004 to 0.265) while small intestine and its mesentery involvement was the independent influence factor for STS (P=0.034, odds ratio=3.494, 95%CI: 1.099 to 11.109).

Conclusion: For advanced HGSOC, STS and LTS showed mostly similar clinicopathological features. Some biological characteristics and lesion distributions of the tumor itself beyond surgery were associated with LTS. Gene signatures can be further studied.

PO-070

Intraperitoneal chemotherapy as first-line treatment of newly diagnosed advanced epithelial ovarian cancer: two centers' data in China

Yuanming Shen[1],Sangsang Tang[2],Xiaodong Cheng[1],Weiguo Lv[1],Xiaoyun Wan[1],Zhongbo Chen[3]
1.Department of Gynecologic Oncology， Women's Hospital， School of Medicine， Zhejiang University，Hangzhou， China
2.Women's Hospital， School of Medicine， Zhejiang University
3.Zhejiang Cancer Hospital

Objective: To evaluate whether the modified intraperitoneal plus intravenous chemotherapy (IP/IV) regimen as first-line treatment of advanced epithelial ovarian cancer (EOC) in China can be well tolerated or confer any potential benefit on survival.

Methods: This was a multi-center retrospective case-control study in women with newly diagnosed stage III~IV EOC underwent optimal cytoreductive surgery (CRS) (<1 cm) followed by IP/IV or intravenous chemotherapy (IV) from January 2007 to December 2017 at Women's Hospital, School of Medicine, Zhejiang University and Zhejiang Cancer Hospital. The toxicities and outcomes of patients who received IP/IV were compared with the patients who received IV. Pearson χ^2 test was adopt to evaluate for variables associated with IP/IV completion and toxicity. Kaplan-Meier survival analysis and Cox regression multivariate analysis model were performed to compare the progression-free survival (PFS) and overall survival (OS).

Results: A total of 463 patients with stage III~IV EOC were eligible for analysis including 85 patients treated with paclitaxel 135mg/m2 intravenously plus cisplatin 75 mg/m2 intraperitoneally repeated every 3 weeks (IP/IV group), and 378 patients treated with conventional 3-weekly TC (paclitaxel 135 mg/m2 over 3h plus carboplatin AUC=5) intravenous chemotherapy (IV group). All of the patients in IP/IV group received an average of 5.8 times of IP/IV. The incidence of Grade 3 or 4 neutropenia and thrombocytopenia did not significantly differ between the IP/IV and IV groups. Cox regression multivariate analysis at the 5% significance level, R0 primary CRS was the only factor related to the progression-free survival (PFS) (P<0.001) and OS (P=0.006). But before and after sub-stratification according to R0 primary CRS status, there was no significant difference in PFS or OS between the IP/IV and IV cohorts.

Conclusion: The efficacy of IP/IV mainly coming from the intraperitoneal drug dose intensity and cumulative dose, we still need to find and validate high-efficiency and low-toxic IP chemotherapy regimens. The intravenous carboplatin plus paclitaxel regimen remained the clinical gold standard for first-line treatment of advanced EOC.

PO-071
E7-Rb mediated higher carcinogenic ability of HPV16 than HPV58 in cervical cancer

Jian Zou,Xing Xie
The Department of Gynecologic Oncology， Women's Hospital， School of Medicine， Zhejiang University

Objective: Human papilomavirus (HPV) 16 displays the strongest carcinogenic capacity in cervical cancer, but the mechanism is still unknown.
Method:we collected 4030 cervical exfoliated cell samples for genotyping HPVs using HybriBio's proprietary flow-through hybridization technique, liquid-based cytology (LBC), colposcopy and biopsies if indicated. Four plasmids containing E6 and E7 of HPV 16 and 58 were constructed and transfected into 293T and U2OS cells, respectively. We detect the proliferation, invasion, cell cycle, and apoptosis by CCK8 detection, Transwell assay, FCM and apoptosis assay, respectively. The expression of RB, pRB and P53 was detected by Western blot and and confocal immunofluorescence. The cell activity was detected in zebrafish model treated with or not Roscovitine.
Result: The percentages of HPV16 and 58 positive were 18.9% and 19.7% in ≤LSIL group, 49.5% and 19.6% (P<0.001) in HSIL group, 65.3% and 9.0% (P<0.001) in cancer group. By over-expressing E6 and E7 in 293T cells, respectively, the percentage of early apoptosis was 5.04% for HPV16 E6 versus 9.7% for HPV58 E6, and 3.99% for HPV16 E7 versus 6.85% for HPV58 E7 (all P<0.05). The percentage of S phase was 52.66% for HPV16 E6 versus 42.68% for HPV58 E6, and 52.7% for HPV16 E7 versus 47.89% for HPV58 E7 (all P<0.05). Moreover, the total RB expression was more decreased in HPV16 E7 over-expression group while phosphate RB was more increased in HPV58 E7 over-expression group. Roscovitine restored RB and P53 expression in E7 over-expression, especially in HPV58 E7 group. The cell activity was decreased with Roscovitine in zebrafish. The similar results were observed in U2OS cells.
Conclusion:HPV 16 possesses stronger carcinogenic ability than HPV 58, and impaired E7-RB pathway may be one of the involved mechanisms.

PO-072
高强度超声聚焦治疗胎盘植入

梁建梅
石家庄市妇幼保健院

随着剖宫产率逐年增加，胎盘植入逐年也在增加。最近报道的国外发生率为 0.4%。胎盘植入的产后治疗是产科医师面临的棘手难题，弱处理不当则导致感染，失血性休克，凝血功能障碍等并发症，严重者需切除子宫，甚至危及生命，这不仅影响生活质量，也是产妇发病率及死亡率增高的主要原因，因此产后胎盘植入的合理治疗，尤其是保留生育功能的无创治疗方法日益受到重视，HIFU 是今年兴起的一种体外肿瘤治疗技术，是利用超声波的组织穿透性。方向可控性和聚焦性，通过特定的超声波换能装置，使超声波束穿过组织而聚焦于靶组织区域，瞬间引起局部高温，使组织发生凝固坏死，达到破坏病变组织的目的，而周围组织仅出现轻度温度升高，避免了出病灶以外的组织损伤，该技术具有无创、无放射性污染，效率高。可实时监控、治疗时间可控，可反复治疗，患者痛苦小及治疗后恢复快等。且对卵巢功能无明显影响，最大限度的保留患者的生育功能。

PO-073

辅助治疗在子宫内膜癌中的应用

刘旭丽,王琳
自治区人民医院

子宫内膜癌(Endometrial cancer EC)是女性生殖系统最常见的三种恶性肿瘤之一,占女性生殖道恶性肿瘤的 20%-30%，占女性全身恶性肿瘤总数的 7%,。在发达国家子宫内膜癌是最常见的妇科恶性肿瘤,这几年其发病率呈逐年上升的趋势。据悉,2017 年美国新增病例 61380 例,死亡 10920 人,其新发病率与死亡率分别占女性恶性肿瘤的 7%和 4%[1-2]。根据国家癌症中心的报告[3],2015 年,中国新增病例 63400 例,死亡 21800 人。因患者最初出现不规则阴道出血,因此约 70%的患者能够早期诊断。有研究报道[4]认为因子宫内膜癌诊断较晚、高危组织学类型较多和多数患者发病年龄较大等因素，导致近年来其死亡率增长快于发病率。子宫内膜癌早期诊断和及时手术干预,5 年生存率一般可达 87%-98%[5-6]。但是,术后早期高危因素患者往往需要辅助治疗以达到手术目的和术后治疗效果,而晚期和手术并发症较多的患者则需要辅助治疗以减少疼痛,延长生命时间。本文查阅相关文献,对子宫内膜癌的辅助治疗进行综述。

PO-074

Systemic Inflammatory Response Markers, Serum D-dimer and Albumin in Ovarian Clear Cell Carcinoma and Their Prognostic Implications

Shuang Ye,Wei Chen,Huijuan Yang
Fudan University Shanghai Cancer Center

Background: The study aims to evaluate whether or not preoperative systemic inflammatory response (SIR) markers or other hematologic variables, such as albumin, D-dimer, carbohydrate antigen 125 play a role in predicting chemotherapy response and survival outcome in patients with ovarian clear cell carcinoma.
Methods: Preoperative leukocyte differential counts, platelet, serum albumin, plasma D-dimer and CA-125 levels were measured in patients with FIGO IC-IV ovarian clear cell cancer. The correlations of these hematologic biomarkers with clinicopathological features, chemotherapy response, and survival outcome were further analyzed. Survival time was estimated using the Kaplan-Meier model, whereas Cox regression was conducted for multivariate analysis.
Results: Among the 84 patients, 28.6% were classified as platinum resistant and 69.0% as platinum sensitive. Preoperative CA125, albumin, D-dimer and neutrophil to lymphocyte ratio (NLR), monocyte to lymphocyte ratio were significantly correlated with FIGO stage, residual tumor and platinum response. Platelet to lymphocyte ratio showed no difference in platinum sensitivity and resistance (P=0.060). The median follow-up period was 28 months (range, 1 to 128 months). Preoperative CA125, albumin and D-dimer were significant prognostic indicators for overall survival (OS) and progression-free survival (PFS). In the univariate analysis, only NLR had prognostic significance for PFS (P=0.007). Multivariate analysis indicated that D-dimer > 3.27 (P = 0.001 for OS and P = 0.040 for PFS) and albumin<39.6 (P = 0.005 for OS and P = 0.041 for PFS) retained significance.
Conclusions: Elevated NLR has some predictive value for platinum resistance in patients with OCCC beyond IC stage, but has little predictive effect on prognosis. High level of preoperative D-dimer and low level of albumin might be potential biomarkers of worse response to first-line platinum-based chemotherapy and poor clinical outcomes.

PO-075
环状 RNA circ ZC3HC1 在子宫内膜癌中抑制癌转移的机制研究

王梦霏,胡翔,万小平
上海市第一妇婴保健院

目的：子宫内膜癌是女性生殖系统常见的恶性肿瘤之一，发病率逐年上升。环状 RNA 是一种非编码 RNA，它的突变或异常表达与多种肿瘤发生发展相关。本研究希望通过在子宫内膜癌转移的组织样本和细胞中检测 circ ZC3HC1 的表达，来探究其在子宫内膜癌转移癌中的作用。
方法：通过 qRT-PCR 实验检测 circ ZC3HC1 在子宫内膜癌转移癌和非转移癌，以及在内膜癌 Ishikawa 细胞株和转移细胞株 AN3CA 中的表达水平。通过 BrdU 实验和 CCK-8 实验检测过表达 circ ZC3HC1 后，AN3CA 细胞的增殖水平。通过 Transwell 小室实验和 Transwell 小室-基质胶实验检测过表达 circ ZC3HC1 后， AN3CA 细胞的迁移和侵袭能力变化。通过 RegRNA 2.0 网站预测 circ ZC3HC1 的 miRNAs 结合位点并通过 RT-qPCR 进行验证。
结果：circ ZC3HC1 在子宫内膜癌转移组织中表达显著低于非转移癌组织，在内膜癌转移细胞株 AN3CA 中的表达水平显著低于子宫内膜上皮细胞和 Ishikawa 细胞。在 AN3CA 中过表达 circ ZC3HC1 后，细胞增殖能力、迁移和侵袭能力明显降低。通过生物信息学分析，发现 circ ZC3HC1 可靶向多个 miRNA。
结论 circ ZC3HC1 在子宫内膜癌转移组织和细胞中表达显著降低。说明其可以作为转移癌的分子标志物，为内膜癌的术前诊断，预后评估提供新的参考，并为内膜癌基因治疗提供一个新的靶点。

PO-076
氩离子束凝固术在 VaIN 中的应用

姚世惠,杨英捷
贵州省医科大学附属肿瘤医院

目的 探讨氩离子束凝固术（氩气刀）对阴道上皮内瘤变（VaIN ）治疗的有效性。
方法 回顾分析从 2015 年 1 月至 2019 年 6 月贵州省肿瘤医院诊治的 68 例 VaIN 患者的临床资料。
结果 发病年龄（31-78 岁），平均年龄 50 岁；原发 7 例、CIN 治疗后 29 例、宫颈癌治疗后 28 例；氩气刀治疗一次 60 例，治疗 2 次以上 8 例，最多 1 例 4 次。随访 4 年间复查时间术后 1 年平均 3 月 1 次，1 年后 6-12 月复查，复发后为癌的 1 人（宫颈癌 III 期治疗后 4 年，VaIN 复发 2 次，末次复发活检找到癌细胞），4 年内出现 2 次复发 VaIN 的人数 6 人(其中 2 人为内膜癌患者，4 人为宫颈癌），超 2 次复发 VaIN 2 人（宫颈癌 III、IV 期治疗后） 。
结论 氩气刀治疗阴道上皮内瘤变（VaIN） 有效，并发症少，是一种可选用的方法。

PO-077
E2F1 基因多态性与宫颈癌风险关联性研究

李勇,鲁亮,张红丽,曹辉,李馨,向阳,杨飞月
贵州省人民医院

摘要 目的 E2F1 是多种肿瘤细胞的分子，其表达水平在肿瘤发生发展过程中发挥重要作用。本研究选取 E2F1 基因中 rs3213172、rs3213173 和 rs3213176 三个多态性位点，研究其与宫颈癌的关联性。**方**

法 选取 2016-2019 年贵州省人民医院肿瘤科确诊为宫颈癌的 149 例患者为病例组，选取同期同院参加正常体检的 206 例健康女性为对照组。采用通用探针法对 E2F1 基因中的多态位点 rs3213172、rs3213173 和 rs3213176 的基因型进行分型，在病例组和对照组中对这些多态位点的等位基因、基因型及单倍型进行分析。
结果 E2F1 基因中的多态性位点 rs3213172 CT 基因型在病例组和对照组间分布频率差异有统计学意义，可能是宫颈癌发生的危险因素 (OR=1.57, 95CI%: 1.00～2.48)；多态位点 rs3213173 和 rs321317 的等位基因和基因型在病例组和对照组中的分布频率差异无统计学意义（P>0.05）,可能与宫颈癌的发生无相关性。另外，单倍型分型结果显示，rs3213172-rs3213173-rs3213176 的单倍型 C-T-G 可能是宫颈癌发生的保护性因素（P=0.02, OR=0.66, 95CI%: 0.47～0.93）；单倍型 T-T-G 可能是宫颈癌发生的风险因素（P=0.02, OR=2.49, 95CI%: 1.35～4.59）。
结论 E2F1 基因中的多态位点 rs3213172 可能与宫颈癌的发病风险有关。

PO-078
抑制 RAD18 影响 DNA 修复提高子宫内膜癌放疗治疗敏感性

胡之易,蔡白莲,胡翔,万小平
上海市第一妇婴保健院

研究目的：探讨阐明 RAD18 表达与子宫内膜癌放疗敏感性的关系及其潜在机制
材料与方法：使用 Crispr/Cas9 的方法构建敲除 RAD18 基因后的内膜癌细胞 ISK 稳系。通过 CCK-8 法和克隆形成实验检测敲除 RAD18 对细胞增殖、存活的影响；通过克隆形成实验检测 RAD18 敲除与放疗（X 线辐射）联用后对细胞增殖、存活的影响；用彗星电泳实验检测敲除 RAD18 细胞系的基因组稳定性，并检测该细胞系与野生型 ISK 细胞的两种 DNA 双链修复途径 HR 和 NHEJ 的效率；采用 Western Blot 实验检测敲除 RAD18 后对双链修复相关蛋白的影响；免疫荧光试验检测敲除 RAD18 后对 DNA 双链修复蛋白招募的影响；裸鼠成瘤试验，在活体中检测敲除 RAD18 的子宫内膜癌细胞与对照组照射放疗后的效果差异。
结果：敲除 RAD18 后的 ISK 细胞增殖明显减慢；敲除 RAD18 后的 ISK 细胞与野生型 ISK 细胞相比，基因组更不稳定，照射 X 线后，存活率更低；敲除 RAD18 后观察到 HR 修复效率相比未敲除的 ISK 细胞明显提高，但 HR 修复的相关蛋白在表达上并无明显差异；免疫荧光试验发现 RAD51 多招募出现明显延迟；注射 RAD18 敲除 ISK 细胞的裸鼠与注射野生型 ISK 细胞的裸鼠相比，照射 X 线后，肿瘤生长缓慢、体积更小，表明其对放疗的敏感性更强。
结论：RAD18 通过影响 RAD51 的招募从而影响 HR 修复。抑制 RAD18 在子宫内膜癌中的表达，有利于提高子宫内膜癌对放疗敏感性，检测 RAD18 在子宫内膜癌中的表达也对临床医生为子宫内膜癌患者制定个体化治疗方案具有一定指导意义。

PO-079

The surgical outcomes and perioperative complications of bowel resection as part of debulking surgery of advanced ovarian cancer patients.

Shuang Ye[1],Wang Yiyong[1],Wu Xiaohua[1],Yang Huijuan[1],Xiang Libing[1,2]
1.Fudan University Shanghai Cancer Center
2.Division of Gynecology Oncology， Department of Obstetrics and Gynecology， Zhongshan Hospital， Fudan University， Shanghai， China.

Background: The study aims to review the utilization of bowel resection during debulking surgery of ovarian cancer patients in our institution. The surgical outcomes and perioperative complications were evaluated.
Methods: All the ovarian cancer patients who received bowel resection including anastomosis and ostomy formation between January 2006 and December 2018 were identified. Clinicopathological information was abstracted from the medical records. Postoperative morbidities were assessed according to Clavien-Dindo classification (CDC).
Results: There were 182 patients in the anastomosis group and 100 patients in the ostomy group, leading to a total of 282 patients. The median age was 57 years and most patients had high-grade serous histology (88.7%). 49 (17.3%) patients received neoadjuvant chemotherapy. During operation, 78.7% patients had ascites and the median volume was 800 mL. Extensive bowel resection (at least two-segment) and upper abdominal operation was performed in 29 (10.2%) and 69 (24.4%) patients, respectively. Rectosigmoid colon was the most commonly resected (83.8%), followed by right hemicolectomy (5.9%) and small bowel resection (2.8%). No macroscopic residual disease was observed in 42.9% of the patients, while 87.9% of had residual disease ≤1 cm. For the entire cohort, 19.9% (56/282) experienced different complications, not including anastomotic leak (AL). Severe complications (CDC 3-5) accounted for 7.8%, mostly pleural effusion requiring drainage (3.5%), and followed by wound dehiscence requiring delayed repair in operation room (1.8%). Nine patients experienced AL: one in the ostomy group with extensive bowel resection and eight in the anastomosis group. The overall AL rate was 4.2% (9/212) per anastomosis. The AL rate per anastomosis was quite comparable in different populations: 4.4% (patients in the anastomosis group), 4.3% (patients with one-segment bowel resection and anastomosis), 4.0% (patients with extensive bowel resection and anastomosis) and 5.0% (patients with isolated rectosigmoid resection and anastomosis).
Conclusions: Execution of bowel resection as part of debulking surgery of patients with newly diagnosed ovarian cancer resulted in an acceptable morbidity rate.

PO-080

宫颈癌放疗中膀胱充盈差异对剂量的影响研究

葛彬彬,王君辉,吴建亭,刘海涛,金建华,储开岳
南通市肿瘤医院/南通大学附属肿瘤医院

目的 研究膀胱充盈差异对宫颈癌放疗中计划靶区、危及器官的剂量学影响
方法 随机选取 50 例术后接受放疗的宫颈癌患者，分别采集其膀胱充盈与空虚状态下的 CT 图像，通过 TPS 勾画出膀胱并计算出体积，同一医生分别在两套图像上勾画靶区、危机器官，相同优化参数设计计划，分别记录靶区、危机器官的相关剂量参数。
结果 A 组 17 例患者膀胱充盈不充分（＜300ml）或排空状态不佳残余尿量较多时，虽然膀胱体积减小具有显著统计学意义（P＜0.05），但是 PTV 及 OAR 变化并无统计学差异；B 组 33 例患者膀胱尿量

充足（＞300ml）、排空尿液充分，结果显示膀胱排空状态下，患者膀胱体积极显著减小（P＜0.01），PTV 体积增大具有显著统计学意义（P＜0.05），在 HI、CI 无统计学差异的前提下，膀胱 V35、V40 以及小肠 V30、V35、V40 都有减小，均具有极显著统计学意义（P＜0.01），其他危及器官受照剂量变化无统计学差异。B 组 33 例患者膀胱体积与其他参数的相关性分析，结果小肠受量与膀胱体积的 Spearman 相关系数绝对值都大于 0.6。

结论 膀胱充盈不充分或尿液排空不佳时，膀胱对 PTV 及 OAR 形状、位置未造成大的改变，对他们的剂量影响有限。而膀胱充分充盈状态下，能够将其周围的软组织向四周挤压，改变了周围组织的位置，直接导致医生勾画的靶区缩小；尤其部分小肠被挤出靶区范围，从而有效降低了小肠受量；当然随着膀胱体积的增加，使其自身在高剂量区域体积占比减小。而对于相关性的分析说明随着膀胱容量的增加，小肠受量是减小的。充盈充分的膀胱能够改变靶区、危及器官的形状、位置，缩小了靶区体积，降低了膀胱、小肠受量。

PO-081

上皮性卵巢癌与血栓的研究进展

周晴晴[1],张天骄[2],赵卫东[2],周颖[1,2]
1.安徽医科大学附属省立医院
2.中国科学技术大学第一附属医院

癌症是静脉血栓栓塞(Venous Thromboembolism，VTE)发生的主要危险因素，其中上皮性卵巢癌（Epithelial Ovarian Cancer，EOC）是风险最高的实体肿瘤类型之一[1]，还是妇科肿瘤中预后最差的恶性肿瘤，治疗上以手术切除结合以铂为基础的化疗为主[2-4]。VTE 包括深静脉血栓（Deep Vein Thrombosis, DVT）和肺栓塞（Pulmonary Embolism，PE），可作为某些癌症患者的初始临床特征或各种癌症治疗后的并发症出现，均提示患者的预后不良[5]。

VTE 是多因素疾病，其风险因恶性肿瘤的类型(如胰腺癌、脑癌、肺癌、卵巢癌等)、肿瘤的特性（如肿瘤部位、组织学分级、临床分期、转移和诊断肿瘤时间）、癌症治疗(如手术、化疗等)和生物标志物的存在(如 CA125、D -二聚体等)和个体因素(如性别、种族、年龄、既往静脉血栓栓塞史、长期卧床、肥胖等)而异[6-8]。 VTE 在导致癌症患者死亡因素中排名第二，而第一位则是癌症本身。除了导致癌症患者的发病率和死亡率急剧增加外，还会干扰患者的护理计划和化疗方案，降低患者的生活质量，增加了卫生资源的浪费[9,10]。总的来说，预防癌症相关的静脉血栓形成非常重要。本文主要就 EOC 及其相关 VTE 的流行病学、病理类型、分期与分级、治疗、生物标志物危险因素等方面研究进展加以综述总结。

PO-082

Clinical Characteristics of Dedifferentiated Endometrioid Carcinoma: a case series study

An Tong,Yanfei Yang,Xiaorong Qi
West China Second Hospital， Sichuan University

Background and Object: Dedifferentiated endometrioid carcinoma (DEC) is an uncommon histological type of uterine endometrial cancers. DEC is defined as the presence of both undifferentiated endometrioid carcinoma (UEC) and low grade endometrioid carcinoma (grades 1 or 2). DEC was first reported in 2006 by Silva et al. The pathological studies of DEC show that the components of high differentiated endometrioid carcinoma are often located in the uterine cavity and

mucosa and the components of UEC are located below them and invade the myometrium. Existing studies found that DEC had more aggressive clinical features and poorer prognosis than UEC. Based on previous studies, the degree of DEC malignancy is often determined by the UEC components, as DEC patients who have more than 20% of the UEC components have a worse prognosis than UEC. This study aims to investigate the clinical characteristics of DEC and provides guidance for clinical workers.

Materials and Method: We conducted a retrospective analysis of DEC cases from January 2016 to December 2018 in West China Second Hospital. Data of clinical characteristics, including age, symptoms, preoperative diagnostic curettage, treatments, FIGO staging and 1-year survival were collected.

Results: A total of 10 cases of DEC were included in this study. The mean age of patients was 53.2 ± 9.378 years old. The most common symptom was vaginal bleeding (irregular vaginal bleeding or postmenopausal vaginal bleeding), found in all of them. Abdominal pain was found in three patients. The medical history of them was unremarkable. All patients had diagnostic curettage before surgery. Among those pathologic results, three were diagnosed as grade 1 endometrioid carcinoma, two were grade 2, four were grade 3 and only one was DEC. Hysterectomy with bilateral adnexectomy was performed in all cases. Lymphadenectomy was performed in nine patients during the surgery; of these, two were of pelvic and seven were of pelvic and para-aortic lymph nodes. Six patients had omentectomy and four had appendectomy. According to the FIGO staging, three patients had stage I, two patients had stage II, four patients had stage III and one patient had stage IV. One patient was lost to follow-up. Of the nine remaining patients, three patients received both chemotherapy and radiotherapy, four received only chemotherapy and two had no adjuvant treatment. Furthermore, seven of the nine had no recurrence or metastasis within a year after surgery and one died in 5 months.

Conclusions: The clinical presentation of DEC was similar to other types of endometroid carcinoma. The most results of preoperative diagnosis of curettage were not consistent with those of paraffin after operation, indicating the difficulty in preoperative diagnosis of DEC. Thus, it's hard for clinical workers to differentiate DEC from UEC before surgery. Advanced cancer stages were higher among DEC patients than those in usual endometrial uterine cancers. Furthermore, DEC patients had shorter progression-free survival and poorer prognosis. Therefore, we recommended the operation plan for DEC should be the same as that for ovarian cancer and the staging surgery was necessary. Adjuvant treatments for DEC patients were often needed. In conclusion, it's necessary to find a better method to differentiate DEC from UEC before surgery and the treatment should be more positive.

PO-083

101 例宫颈神经内分泌癌的治疗及预后相关因素分析

环春梦,王侠,李文亮,朱蕾,杜顺喜,杨宏英
昆明医科大学第三附属医院云南省肿瘤医院

目的 宫颈神经内分泌癌(NECC)是一种罕见且侵袭性高的恶性肿瘤，易发生血行扩散或淋巴结转移，预后不良。本研究旨在探索 NECC 有效治疗方案及影响预后的相关因素。

方法 回顾性分析 2006 年 7 月-2017 年 11 月在云南省肿瘤医院诊治的 101 例 NECC 患者的临床资料，使用 Kaplan-Meier 法、Log-rank 检验和 Cox 回归模型分析影响患者预后的因素。

结果 101 例 NECC 患者的中位无进展生存期（PFS）和中位总生存期（OS)分别为 32.5 月和 55.1 月。随访 5 年以上患者 76 例，中位 PFS 为 16.5 个月，中位 OS 为 40 个月。单因素分析显示年龄＞45 岁、Figo IIb-IV 期患者与不良的总生存期有关。早期（Ia-IIa 期）患者的亚组分析显示，淋巴脉管阴性（LVSI-）患者的 2 年无进展生存率（69.82% vs 33.33%，P<0.01）和 2 年总进展生存率（85.22% vs 64.82%，P=0.0024）明显优于淋巴脉管阳性（LVSI+）患者。相比淋巴结阴性的早期 NECC 患者，淋巴结转移患者的死亡风险明显增加（60% vs 88.34%，HR2.47，95%CI 1.06-8.99，P=0.04）。根治性手术的 2 年 PFS(62.53% vs 16.67%，HR3.45，95%CI 1.88-44.32，P=0.0062）和 OS(81.38% vs

33.33%,HR 4.48，95%CI 3.32-110.4，P=0.001)明显优于根治性放化疗患者；术后联合放化疗与单纯化疗相比，患者的 PFS 和 OS 未见明显改善；新辅助化疗（NACT）对患者的预后无明显改善（P>0.05）。多因素分析结果显示，LVSI+是早期 NECC 患者预后的独立危险因素。

结论 LVSI+和淋巴结转移与早期 NECC 不良预后有关。新辅助化疗和/或辅助放疗似乎不改善早期 NECC 患者的预后，根治性手术联合辅助化疗可能是早期 NECC 最有效的治疗方案。

PO-084

Prognostic value of Prostaglandin I2 synthase and its correlations with tumor-infiltrating immune cells in lung cancer, ovarian cancer, and gastric cancer

Danian Dai[1,2],Bo Chen[3],Yanling Feng[2],Weizhong Wang[4],Yanhui Jiang[1,2],He Huang[2],Jihong Liu[1,2]
1.The Fifth Affiliated Hospital of Sun Yat-Sen University 2.Sun Yat-sen University Cancer Center
3.Guangdong Provincial People's Hospital 4.The First Affiliated Hospital Of university Of South China

Background: Prostaglandin I2 synthase (PTGIS) is a crucial gene for the synthesis of Prostaglandin I2 (PGI2) which has multiple roles in inflammation and immune modulation. However, the literatures on the prognosis value of PTGIS and its correlations between tumor-infiltrating immune cells in multiple cancers are still rare.
Methods: PTGIS expression was investigated in different datasets of the Oncomine database, and its expression levels in various tumors and corresponding normal tissues were analyzed by the Tumor Immune Estimation Resource (TIMER). Then, the clinical prognostic value of PTGIS was assessed with public databases websites. In addition, we initially explored the correlations between PTGIS and tumor-infiltrating immune cells. Furthermore, the associations with PTGIS and markers of tumor-infiltrating immune cells were explored by TIMER and Gene Expression Profiling Interactive Analysis (GEPIA).
Results: Multiple datasets of the Oncomine database displayed that PTGIS was low expression in lung cancer and ovarian cancer compared to normal tissues. Kaplan-Meier plotter showed that high PTGIS was associated with poor overall survival (OS), and progression-free survival (PFS) in lung (OS, p=4.8E-08; PFS, p=3.5E-14), ovarian (OS, p=0.002; PFS, p=3.1E-04), and gastric cancers (OS, p=7.8E-15; PFS, p=2.5E-11) and the TCGA database showed that PTGIS also affected the prognosis of other cancers. Moreover, PTGIS was related to poor PFS and OS in ovarian cancer patients with stage 3, and also in gastric cancer patients with stage N 1-3. In lung squamous cell carcinoma (LUSC), ovarian serous cystadenocarcinoma (OV) and stomach adenocarcinoma (STAD), PTGIS was significantly positively correlated with infiltrating levels of macrophages. PTGIS expression was strongly associated with a variety of immune markers for LUSC, OV and STAD, especially tumor-associated macrophages (TAMs) and Tregs.
Conclusions: These findings suggest that PTGIS expression involves the potential regulation proceeds with TAMs and Tregs and could be taken as a potential biomarker of prognosis and tumor-infiltrating immune cells for LUSC, OV, and STAD.

PO-085

血 HCG 正常子宫上皮样滋养细胞肿瘤 1 例误诊

李理想,白惠娟,杨茹
河南省肿瘤医院

目的 探讨子宫上皮样滋养细胞肿的临床特征、诊断要点、误诊原因及治疗方案，提高临床资料。

方法 回顾性分析 1 例血 HCG 子宫上皮样滋养细胞肿误诊病例资料。
结果 患者 51 岁，以月经淋漓不尽 1 月为主诉。入院后彩超提示子宫内异常回声，边界清晰，周围伴有多普勒信号，CT 评估胸腹部及盆腔状态无子宫外病灶，HCG：0.195mIU/ml。术前宫腔镜刮宫病理诊断倾向 1、滋养细胞来源肿瘤，不排除绒毛膜上皮癌? 2、低分化癌。行全子宫及双侧附件切除术。术中快速病理示：初步考虑 1、滋养叶细胞肿瘤（待分类）2、上皮样平滑肌肉瘤，建议免疫组化协诊。免疫组化染色:CK+，Vim-，HCG-，HPL-，Muc-4 灶+，CD10＋，SMA-，Des-，CK7+，P40+，P63+，CR-,inhibin+，CD34 血管+，Ki-67+约 60%。术后病理确诊:上皮样滋养细胞肿瘤 I 期。术后行 EMA-EP 化疗 3 个疗程，随访至今，未见复发及转移。
结论 子宫上皮样滋养细胞肿十分罕见，在妊娠滋养细胞疾病中占比例 1.39~2%。组织形态学与绒癌、胎盘部位滋养细胞肿瘤有一定相似性，诊断困难。术前、术中易误诊，确诊依赖于病理免疫组织化学染色。首选全子宫切除术，对于病灶较大、浸润深度较深者可推荐行盆腔淋巴结切除术。有不良预后因素者建议化疗，首选 EMA-EP，对于血 HCG 正常者无法作为监测指标的可考虑行 3 周期化疗。

PO-086

Tumor molecular features predict endometrial cancer patients' survival after different surgical approaches

Yibo Dai,Jingyuan Wang,Luyang Zhao,Zhiqi Wang,Jianliu Wang
Peking University People's Hospital

Objectives: The Cancer Genome Atlas (TCGA) project has shed light on the vital role of tumor molecular features in predicting endometrial cancer (EC) patients' survival. This study aims to investigate the survival impact of surgical approaches on EC patients with different molecular features.
Materials and Methods: 473 eligible EC patients from TCGA database were selected. Clinicopathological characteristics and genetic features of open and minimally invasive surgery (MIS) group were compared. To analyze the prognostic impact of surgical approach, survival analyses were conducted in patients with different genetic alterations. Finally, a simplified model based on molecular features was established to help select patients suitable for MIS or open surgery.
Results: In the eligible patients, 291 (61.5%) received open surgery and 182 (38.5%) received MIS. Baseline characteristics were comparable between the two groups except the year of diagnosis ($p<0.001$). Among all patients, 4 genetic features (POLE mutation [$POLE^{mt}$], microsatellite-instability high [MSI-H], homologous recombination defect [HRD], MUC16 mutation [$MUC16^{mt}$]) showed significant overlap. In patients with any one of these alterations, MIS and open surgery brought similar survival outcome. But in the counterpart cohorts (POLE wild type, non MSI-H, non HRD, MUC16 wild type), MIS resulted in shorter recurrence-free survival (RFS). Based on TCGA molecular classification of EC, POLE ultramutated and MSI hypermutated type had similar prognosis after two surgeries, while copy-number low type without CTNNB1 mutation and copy-number high type with TP53 mutation showed more rapid recurrence after MIS ($p=0.048$ and 0.037). Further analyses were done to simplify the model. In patients with ≥1 of the 4 features ($POLE^{mt}$, MSI-H, HRD or $MUC16^{mt}$), MIS and open surgery brought comparable overall survival and RFS ($p=0.339$ and 0.969); while among the remaining, in those with wild type CTNNB1 or TP53 mutation, longer RFS was observed in the open surgery group ($p<0.001$ for both).
Conclusions: The molecular features of EC are related to patients' prognosis after different surgical approaches. MIS should be recommended in patients with $POLE^{mt}$, MSI-H, HRD or $MUC16^{mt}$ for similar survival outcome and less perioperative complications compared to open surgery.

PO-087

Bone metastases of endometrial carcinoma treated by surgery: Report on 13 patients and review of the medical literature

Jingyuan Wang[1],Yibo Dai[1],Tao Ji[1],Wei Guo[1],Zhiqi Wang[1],Jianliu Wang[1],Jingyuan Wang[1],Yibo Dai[1],Tao Ji[1],Wei Guo,Zhiqi Wang[1],Jianliu Wang[1]
1.Peking University People's Hospital
2.Peking University People's Hospital

Objective: The aim was to describe the clinicopathological features and survival of EC patients with bone metastases treated with surgery.
Methods: We performed a retrospective study to include patients with bone metastases of EC at Peking University People's Hospital during 2000 to 2019.
Results: 13 cases treated with surgery were analyzed. 4 had bone metastases when diagnosed; and 9 had bone metastases when first relapsed with the median time to recurrence of 13 months. 12 were endometrioid carcinoma. The majority sites were pelvis, followed by the spine. The median OS was 57 months. We further combined the 13 patients with another 24 cases identified from literature. There was no difference in clinicopathological features between the patients with bone metastases when diagnosed and when first relapsed. The median OS was numerically longer for patients with bone metastases when diagnosed than when first relapsed (57 vs. 36 months, P=0.084). The median OS was longer in patients with endometrioid carcinoma than in those with type II carcinoma (57 vs. 4 months, P=0.003).
Conclusions: Patients may benefit from comprehensive treatment based on surgery.

PO-088

Risk factors for perioperative complications and management with enhanced recovery after primary surgery for women with epithelial ovarian cancer in a single center of China

Ying Zhou[1],Chenchen Zhu[2],Zhen Shen[1],Jing Zhu[1],Yanhu Xie[1],Wei Zhang[1],Tianjiao Zhang[1], Min Li[1],Jiwei Qin[1],Shuai Yin[1],Rongzhu Chen[1],Wei Wei [1],Sinan Sun[1],Guihong Wang[1],Zheng Zhou[1],Lili Qian[1],Hanhui Yao[1],Weidong Zhao[1],Dabao Wu[1],Björn Nashan[1]
1.The First Affiliated Hospital of University of Science & Technology of China， Anhui Provincial Hospital
2.Anhui Medical University， Anhui Provincial Hospital

Objective. This study aimed to evaluate the postoperative complications and their impacts on patients who have undergone primary surgery (including extensive upper abdominal surgery [EUAS]) of ovarian epithelial cancer with the enhanced recovery program.
Methods. We identified all patients with stage Ⅰ～Ⅳ ovarian carcinoma who underwent primary surgery in our center. postoperative complications were evaluated and graded according to the Clavien–Dindo Classification.
Results. Among 161 patients, 46 cases (28.57%) were performed with surgical staging, 27(16.77%) with standard cytoreduction, 12(7.45%) with En-bloc debulking, and 76(47.20%) with Extra-radical debulking. 157 patients (97.52%) achieved optimal tumor reduction (<1 cm). The mean postoperative hospitalization time was 17.33±11.29 days after completion initial postoperative chemotherapy (IPC), and the interval of IPC was 16.22±10.09 days. 13 patients (8.07%) had grade 3

complications (9 wound dehiscence, 3 digestive tract leakage and 1 bladder fistula). 2 patients (1.24 %) had grade 4-5 complications (1 severe pneumonia infection and back to ICU for tracheotomy and respiration rehabilitation; 1 died of septicemia on days 19. As for preoperative factors analysis, multivariate analysis revealed that HE4 ≥717 pM (P = 0.015), FIGO IV stage (P = 0.004, compared with IIIC stage) were associated with grade 3～5 complications. Bootstrap analysis found CA125 ≥1012 U/mL (P = 0.034), HE4 ≥717 pM (P = 0.007), FIGO IV stage (P = 0.002, compared with IIIC stage) had statistical significance. As for postoperative factors analysis, multivariate analysis did not revealed the risk factors associated with grade 3～5 complications; while bootstrap analysis only found transfer to ICU after surgery (P=0.026) had statistical significance.
Conclusions. Application of ERAS protocols in EOC are useful and support the early initiation of chemotherapy and short hospitalization time, and it is safe for the primary extensive radical cytoreduction with low mortality 1/76 (1.31%).

PO-089

子宫内膜癌分子分型研究进展

陶翰
上海市第一妇婴保健院

子宫内膜癌（endometrial carcinoma）是最常见的妇科恶性肿瘤之一，目前发病率保持上升形势，尽管我们对子宫内膜癌的生物学特征有了深入的研究，但是临床上对疾病的诊断和治疗相对滞后，组织病理学诊断是明确肿瘤性质的金标准，在临床中具有相同或相似病理特征的患者将采用同样的治疗方案，但是治疗效果和疾病预后因人而异，其本质是由于肿瘤组织存在异质性，因此基于分子分型的子宫内膜癌的诊断与治疗是病人个体化、精准化治疗的基础，同时，基于分子特征的靶向药物治疗也将会给患者带来更多获益。本文总结了目前研究最多的分子分型模式以及针对性的靶向药物，对临床规范化、精准化、个体化治疗提供启发。
2019 年，美国新发病例数位于女性恶性肿瘤的第 4 位（共 61880 例，7%），我国子宫内膜癌发病率约为 63.4/10 万，死亡率约为 21.8/10 万，发病率呈上升趋势。子宫内膜癌患者多以绝经后阴道流血为主要表现，目前以手术治疗为主包括全子宫、双侧输卵管和卵巢切除术伴或不伴盆腔及腹主动脉旁淋巴结切除、根治性/改良根治子宫切除术加双侧输卵管和卵巢切除。辅助治疗包括放疗、化疗、激素治疗、新型靶向治疗等。临床分型和病理分型是目前广泛采用的指导子宫内膜癌治疗方案选择的依据，但是两种方法都存在一定的局限性，患者的治疗效果和预后差异大，以分子特征对子宫内膜癌进行分型治疗逐渐受到重视，靶向药物的发展也是患者获益增加，临床诊断治疗逐渐走向精准化和个体化。

PO-090

宫颈癌 FIGO2018 新分期体系对 IB 期重新分期的合理性验证及评估

刘洋,吴玉梅,何玥,樊蓓,王雁,赵辉,王明
首都医科大学附属北京妇产医院

目的:本文意在从疾病特征、生存预后等方面，验证及评估子宫颈癌 FIGO2018 年新分期体系对 IB 期重新分期的合理性。
方法：参照 FIGO2018 年分期的修订内容，选取 2010 年 01 月 01 日-2014 年 12 月 31 日于首都医科大学附属北京妇产医院行手术治疗的子宫颈癌患者进行重新分期，共采集到 427 例 IB1~IB3 期的子宫颈

癌患者进行回顾性分析。利用组间比较、多因素分析等统计学方法，对 IB 期各个亚期患者的临床病例信息包括年龄、肿瘤特征（组织学类型、分化程度、间质浸润深度、脉管间隙受侵情况、中危因素），治疗方式（手术范围、术后辅助放化疗情况）以及 5 年生存率进行分析。

结果:鳞癌、高中分化癌以 IB1 期患者居多，而腺癌、腺鳞癌及低分化癌多见于 IB2、IB3 期患者，差异有统计学意义（P 均＜0.001）。IB2、IB3 期患者深间质浸润率显著高于 IB1 期（P＜0.001）。IB2、IB3 期脉管间隙受侵阳性率显著高于 IB1 期（P＜0.05）。随着分期升高中危因素个数也随之增多，差异有统计学意义（P＜0.001）。IB2、IB3 期患者术后补充放化疗的概率显著高于 IB1 期（P 均＜0.001）。IB1、IB2、IB3 期患者的 5 年总生存率依次减低（IB1 97.9% vs IB2 93.4%，P＜0.05；IB3 81.5% vs IB2 93.4% ，P＜0.05）。

结论：新分期体系在 IB 期中新设肿瘤直径≥2cm 这一临界值，能够更精确的对疾病严重程度进行分层和评估预后，具有很好的临床指导意义。

PO-091

miR-6089/MYH9/β-catenin/c-Jun negative feedback loop inhibits ovarian cancer carcinogenesis and progression

Longyang Liu[1],Zhongqiu Lin[2]
1.Integrated Hospital of Traditional Chinese Medicine， Southern Medical University
2.The Memorial Hospital of Sun Yat sen University

The pathogenesis of ovarian cancer remains to be elucidated. Our previous study demonstrated that myosin heavy chain 9 (MYH9) overexpression was associated with poor prognosis of epithelial ovarian cancer. However, the mechanism of MYH9 and its regulation by microRNA (miR) is not clear. The results of the present study demonstrated that miR-6089 was one of the microRNAs targeting MYH9, and miR-6089 overexpression suppressed ovarian cancer cell proliferation, migration, invasion and metastasis in vivo and in vitro. Mechanistic studies confirmed that miR-6089 directly targeted MYH9 to inactivate the Wnt/β-catenin signaling pathway and its downstream epithelial-to-mesenchymal transition (EMT), cell-cycle factors and c-Jun, whereas overexpression of MYH9 reversed the inhibitory effects of miR-6089 overexpression in ovarian cancer cells by upregulating the Wnt/β-catenin and its downstream EMT, cell-cycle factors and c-Jun. Interestingly, miR-6089 was transcriptionally inhibited by c-Jun, a transcription factor which could be induced by MYH9 via the Wnt/β-catenin pathway. Thus miR-6089/MYH9/β-catenin/c-Jun formed a negative feedback loop in ovarian cancer. In clinical samples, miR-6089 negatively correlated with MYH9 expression. Our study is the first to demonstrate that miR-6089 serves as a tumor-suppressive miRNA, and miR-6089/MYH9/β-catenin/c-Jun negative feedback loop inhibits ovarian cancer carcinogenesis and progression.

PO-092

FOXO1 overexpression is correlated with poor prognosis in epithelial ovarian cancer

Longyang Liu[1],Zhongqiu Lin[1,2]
1.Integrated Hospital of Traditional Chinese Medicine， Southern Medical University
2.The Memorial hospital of Sun Yat-sen University

Objective To investigate FOXO1 expression in epithelial ovarian cancer (EOC), and to explore its correlation with clinicopathological parameters and prognosis of EOC.

Methods 216 cases of paraffin-embedded EOC and 41 paratumor tissues from 2009 to 2017 that had been pathologically confirmed at the memorial hospital of Sun Yat-sen University were included in this study, and the expression of FOXO1 was performed by immunohistochemistry using a polyclonal antibody specific for FOXO1.
Results FOXO1 protein expression is associated with Recurrence free and overall survival in EOC patients; In addition, FOXO1 expression is associated with age, FIGO stage, intraperitoneal metastasis, intestinal metastasis, vital status, intraperitoneal recurrence and differentiation grade; Moreover, in a multivariate model FOXO1 overexpression was an independent predictor of poor survival in EOC.
Conclusion FOXO1 may play a candidate oncogenic role in EOC, and FOXO1 is a useful independent prognostic marker in EOC, and it may provide a candidate target therapy in future.

PO-093
Calcium and TRPV4 promote metastasis by mediating cytoskeleton through the Rho pathway in endometrial cancer

Xingchen Li,Jianliu Wang
Peking University People's Hospital

Background Transient Receptor Potential Vanilloid 4 (TRPV4) is a calcium permeable cation channel which has associated with several types of cancer. However, its biological and clinical significance in endometrial cancer (EC) still remains elusive. Here, we investigated the function and mechanism of TRPV4 in endometrial cancer cells and evaluated its clinical significance in both tissues and protein level during metastasis..
Methods First, we analyzed the ionized calcium level in EC patients in different pathologic groups and examined the function of calcium in vitro. Second, we screened and explored the calcium channel TRPV4 in EC by bioinformatics methods. Then we examined the function of TRPV4 in vitro and in vivo. Finally, we investigated the effect of TRPV4 on cytoskeleton combined proteomics analysis and bioinformatics analysis. Moreover, we also explored and validated the downstream pathway of TRPV4 and calcium through western blot.
Results We report here on the finding that a high level of serum ionized calcium is significantly correlated with advanced EC progression, and calcium channel TRPV4 plays an essential role in EC, with high levels of TRPV4 expression associated with cancer progression both in vitro and in vivo. Proteomic analysis and bioinformatics analysis revealed that TRPV4 is involved in cytoskeleton regulation, which mediates EC cell migration. Mechanistic investigation demonstrated that TRPV4 and calcium influx acted on the cytoskeleton via the RhoA/ROCK1 pathway, ending with LIMK1/cofilin activation which impacted F-actin and paxillin (PXN) levels.
Conclusion Overall, our findings indicated that calcium is significantly associated with poor outcomes in EC and TRPV4 should be targeted to improve therapeutic and preventive strategies in endometrial cancer.

PO-094
Development and validation of prognostic factors for lymph node metastasis in endometrial cancer: A SEER analysis

Xingchen Li[2],Jianliu Wang[2]
1.Peking University People's Hospital 2.Peking University People's Hospital

Objective: The purpose of this study was to develop and validate a nomogram that can be used to predict lymph node metastasis (LNM) in patients with endometrial cancer (EC).
Methods: Clinical data of EC patients diagnosed between 2004 and 2015 were retrieved from the Surveillance, Epidemiology, and End Results Program (SEER) registry. The nomogram was constructed using independent risk factors chosen using a multivariate logistic regression analysis. Accuracy was validated for both groups using discrimination analysis and calibration curves. The predictive accuracy and clinical value of the nomogram and Mayo criteria were measured using decision curve analysis (DCA).
Results: The final study group consisted of 63,836 women that met specific inclusion criteria. The factors that were identified in the multivariate analysis to be significant predictors of LNM were age, tumor size, histological type, myometrial invasion, cervical stromal invasion, and tumor grade. These variables were included in the nomogram. Discriminations of the nomogram and Mayo criteria were 0.848 (95% CI: 0.843-0.853) and 0.806 (95%CI: 0.801-0.812), respectively. In the validation group, the AUC values were 0.847 (95%CI: 0.840-0.857) and 0.804 (95%CI: 0.796-0.813) for the nomogram and the Mayo criteria, respectively (P<0.01). Calibration plots showed that training and validation cohorts were well-calibrated. DCA showed that the use of the nomogram always had a positive net benefit compared to using the Mayo criteria.
Conclusions: A nomogram was developed to predict LNM in EC patients based on a large population-based analysis. The nomogram showed good performance for predicting LNM in patients with EC.

PO-095
Development and validation of nomograms predicting the overall and the cancer-specific survival in endometrial cancer patients

Xingchen Li[2],Jianliu Wang[2]
1.Peking University People's Hospital
2.Peking University People's Hospital

Purpose: The present study was aimed at developing nomograms estimating the overall survival (OS) and cancer-specific survival (CSS) of endometrial cancer (EC)-affected patients.
Patients and Methods: We retrospectively collected 145,445 EC patients between 2004 and 2015 from the Surveillance, Epidemiology, and End Results (SEER) database. Independent prognostic factors were identified via univariate and multivariate Cox analyses. These risk factors were used to establish nomograms to predict 3- and 5-year OS and CSS rates. Internal and external data were used for validation. The predictive accuracy and discriminative ability were measured by using concordance index (C-index) and risk group stratification.
Results: A total of 63,510 patients were collected and randomly assigned into the training cohort (n=42,340) and validation cohort (n=21,170). Age at diagnosis, marital status, tumor size, histologic type, lymph node metastasis, tumor grade, and clinical stage were identified as independent prognostic factors for OS and CSS (p<0.05 according to multivariate Cox analysis) and were further used to construct the nomograms. The area under the receiver operating characteristics (ROC) curve was

greater than that of International Federation of Gynecology and Obstetrics (FIGO) staging system for predicting OS (0.83 vs 0.73, p<0.01) and CSS (0.87 vs 0.79, p<0.01) in the training cohort. The stratification into different risk groups ensured a significant distinction between survival curves within different FIGO staging categories.
Conclusion: We constructed and validated nomograms that accurately predict OS and CSS in EC patients. The nomograms can be used for estimating OS and CSS of individual patients and establishing their risk stratification.

PO-096
宫颈癌放射治疗中膀胱充盈差异对剂量的影响研究

葛彬彬,王君辉,吴建亭,刘海涛,翟小刚,储开岳
南通市肿瘤医院/南通大学附属肿瘤医院

目的 研究膀胱充盈差异对宫颈癌放疗中计划靶区、危及器官的剂量学影响。
方法 随机选取 50 例术后接受放疗的宫颈癌患者，分别采集其膀胱充盈与空虚状态下的 CT 图像，通过 TPS 勾画出膀胱并计算出体积，同一医生分别在两套图像上勾画靶区、危机器官，相同优化参数设计计划，分别记录靶区、危机器官的相关剂量参数。
结果 A 组 17 例患者膀胱充盈不充分（＜300ml）或排空状态不佳残余尿量较多时，虽然膀胱体积减小具有显著统计学意义（P＜0.05），但是 PTV 及 OAR 变化并无统计学差异；B 组 33 例患者膀胱尿量充足（＞300ml）、排空尿液充分，结果显示膀胱排空状态下，患者膀胱体积极显著减小（P＜0.01），PTV 体积增大具有显著统计学意义（P＜0.05），在 HI、CI 无统计学差异的前提下，膀胱 V35、V40 以及小肠 V30、V35、V40 都有减小，均具有极显著统计学意义（P＜0.01），其他危及器官受照剂量变化无统计学差异。B 组 33 例患者膀胱体积与其他参数的相关性分析，结果小肠受量与膀胱体积的 Spearman 相关系数绝对值都大于 0.6。
结论 膀胱充盈不充分或尿液排空不佳时，膀胱对 PTV 及 OAR 形状、位置未造成大的改变，对他们的剂量影响有限。而膀胱充分充盈状态下，能够将其周围的软组织向四周挤压，改变了周围组织的位置，直接导致医生勾画的靶区缩小；尤其部分小肠被挤出靶区范围，从而有效降低了小肠受量；当然随着膀胱体积的增加，使其自身在高剂量区域体积占比减小。而对于相关性的分析说明随着膀胱容量的增加，小肠受量是减小的。充盈充分的膀胱能够改变靶区、危及器官的形状、位置，缩小了靶区体积，降低了膀胱、小肠受量。

PO-097
MiniPDX 模型指导卵巢癌个体化化疗方案的疗效研究

苏丹,何文静
四川省医学科学院·四川省人民医院

研究目的：利用 9 例卵巢癌手术后新鲜肿瘤组织块建立 MiniPDX 模型，指导卵巢癌术后化疗，提高化疗有效性，实现卵巢癌个体化药物治疗。
材料和方法：将卵巢癌术中肿瘤新鲜组织标本进行体外培养，建立 MiniPDX 模型。选用临床常用的 9 种化疗药物进行肿瘤药物敏感性试验，根据试验结果选用化疗方案进行术后化疗。对照组 31 例，采用最常使用的紫杉醇+卡铂或紫杉醇+顺铂化疗方案。将化疗效果与常规化疗方案进行对比，并随访患者，比较两者的差异。

结果：MiniPDX 指导化疗组患者较常规化疗组患者化疗有效率高，总有效率为 88.9%，高于对照组。免疫组化结果提示，P16、P53、Ki-67、PAX-8 阳性者，其提示化疗铂敏感（P < 0.05），而 CK7、WT-1 阳性与化疗铂敏感无关（P>0.05）。
结论：根据 MiniPDX 指导选择卵巢癌化疗方案，可提高卵巢癌治疗效果，改善患者预后。

PO-098
A nomogram for predicting overall survival in patients with type II endometrial carcinoma: a SEER database analysis

junyu chen
Peking Union Medical College Hospital

Background: Type II endometrial carcinoma (EC) is a relatively rare tumor with a poor prognosis. The study aimed to contract a nomogram based on various clinical indicators of patients to predict the overall survival of patients with type II EC.
Method: A total 10790 patients with type II endometrial cancer were collected from the Surveillance, Epidemiology, and End Results (SEER) database between 1975 and 2017. Demographic data and clinical features were compared and Kaplan–Meier curves were made for comparison. Patients were randomly divided into a training cohort and a validation cohort. Univariate and multivariate Cox regression analyses were carried out to select meaningful independent prognostic factors. These factors were used to build up a nomogram model, a survival prognostication tool for 3-year and 5-year overall survival among patients with type II EC. The discrimination and calibration of the nomogram were evaluated using concordance index (C-index), area under receiver operating characteristic curve (AUC) and calibration plots.
Result: Patients were randomly divided into the training group (n=7507) and test group (n=3283) at the ratio of 7:3. The median follow-up for survivors was 29 months (4-83 months) and the 3-year and 5-year OS rates for the whole population were 70.68% and 66.22%, respectively. Age, race, stage, grade, pathology, surgery, lymphadenectomy, tumor size, chemotherapy and radiotherapy were selected to establish the nomogram (p<0.001). The C-index was 0.756±0.005 for the training cohort and 0.761±0.007 for the validation cohort. What's more, the AUC was 0.775 (95%CI 0.764-0.786) for the training group and 0.769 (95%CI 0.756-0.786) for the validation group indicating the satisfactory discriminative ability of the nomogram. In addition, the calibration plots showed favorable consistency between the prediction of the nomogram and actual observations in both the training and validation cohorts.
Conclusion: We developed a nomogram based on 10 clinical and pathological characteristics to predict the overall survival of type II EC patients with a high concordance probability.

PO-099
子宫内膜异位症相关性卵巢癌研究现状

刘睿
1.河北工程大学附属医院（原邯郸医学高等专科学校附属医院）
2.河北工程大学临床医学院

目的 总结子宫内膜异位症相关性卵巢癌（endometriosis associated ovarian carcinoma,EAOC）的发生机制、诊断及综合治疗策略等研究现状。
方法 检索 PubMed 及 CNKI 中文期刊数据库，以"子宫内膜异位症相关性卵巢癌、发生机制和预后"等为关键词，检索 2016-01—2019-01 的相关文献，共检索到英文文献 390 条，中文核心期刊文献 29

条。纳入标准：1）关于发生机制的研究。2)关于治疗模式和预后的研究。根据纳入标准分析其中 39 篇。

结果 EAOC 发生来源尚有争议。在 EAOC 的亚型当中，子宫内膜样癌和透明细胞癌发生率最高，确诊要依靠特异性标志物及病理、影像等相关检查。以化疗为基础的综合治疗模式应被提倡。以精准检测为基础的靶向治疗以及免疫治疗，对于 EAOC 患者也是具有独特优势治疗方法。与不伴子宫内膜异位症的卵巢癌患者相比，EAOC 的 PFS、OS 更具有优势，相对预后更好。随着对 EAOC 肿瘤分子标志物以及相关基因研究的逐渐深入，会给改善 EAOC 预后及明确疾病来源带来重要的意义。

结论 病理学检查并结合病史及相关标志物的检查是其确诊的重要方式。对于 EAOC 患者而言，以化疗为基础结合精准检测下的靶向治疗和免疫治疗的综合治疗模式应被提倡。

PO-100

西藏地区经阴道摘除子宫黏膜下肌瘤 21 例的临床分析

邱凯丽
西藏自治区人民医院

目的 回顾性探究西藏地区经阴道顺时针方向旋钮法摘去子宫黏膜下肌瘤的临床研究。

方法 选取西藏自治区人民医院 2016 年-2019 年住院患者 21 例，且确诊为子宫黏膜下肌瘤，经妇检发现阴道内可见黏膜下肌瘤自宫颈口脱出，手术采用经阴顺时针旋钮法摘除子宫黏膜下肌瘤。

结果 经阴顺时针旋钮法成功摘除肌瘤的 21 例患者术后恢复良好，自觉症状消失，妇科检查及相关辅助检查显示未见明显复发。

讨论 经阴顺时针旋钮法对于治疗子宫粘膜下肌瘤手术操作简便、手术创伤小、出血量少、术后效果好、复发率低、既经济又省时。

PO-101

Intensity-modulated radiation therapy with bone marrow sparing for post-operative cervical cancer, a primary outcome of clinical experience

Hanzi Xu[1],Chang Guo[1],Xiuming Zhang[1],Zhen Gong[2]
1.The affiliated Cancer Hospital of Nanjing Medical University
2.Women's Hospital of Nanjing Medical University

Background/Aim: The purpose of the present study was to compare the clinical outcome (hematologic toxicity) of intensity-modulated radiation therapy (IMRT) with or without bone marrow sparing (BMS) in order to minimize treatment-related toxicity for post-operative cervical cancer patients.

Patients and Methods: Data from post-operative cervical cancer patients (FIGO stage: IB2 to IIA2) were retrospectively analyzed from Oct 2019 to Dec 2019 in our department. All of them received IMRT and concurrent chemotherapy after neoadjuvant chemotherapy and surgical treatment. The radiation regimen consists of IMRT (95 %PTV 45.12-46Gy/24-25f, 1.84-1.88Gy/f/d, Monday to Friday) and concurrent chemotherapy (cisplatin,25 mg/m^2, weekly). Technically, the way of delivering IMRT was by VMAT and CTV was created on the individual axial CT slices of each patient. For undertaking BMS-IMRT patients, MR images of pelvis of each patient were fused with the simulating CT and the structure of inner cavity of pelvic bone identified by MR was contoured as an organ at risk (OAR) in the treatment plan. Patients blood tests were processed weekly during treatment and follow-up. Acute hematologic toxicity (HT) defined according to CTCAE v5.0 was recorded and compared using χ^2 test.

Results:A total of 17 patients were enrolled and divided into BMS-IMRT, IMRT group respectively. Based on the success of MR images of pelvis fused with the simulating CT, 6 of these patients underwent IMRT with BMS (BMS-IMRT group) while other 11 patients underwent IMRT only (IMRT group). The incidence of leucopenia and thrombocytopenia were 100%, 100% in IMRT group and 83.3%, 66.7% in BMS-IMRT group respectively and the difference was significant (P<0.05). At the same time, no statistically significant difference of decreased hemoglobin was noted between IMRT and BMS-IMRT group (45.5% vs. 50%, P≧0.05).
Conclusion: For post-operative cervical cancer patients, BMS-IMRT shows less hematologic toxicity compared with IMRT, which may relate to low dose exposure range for bone marrow.

PO-102
Changes of peripheral lymphocyte populations in patients with advanced/recurrent ovarian cancer undergoing splenectomy during cytoreductive surgery

Wei Chen[1,2],Shuang Ye[2,3],Yutuan Wu[2,3],Xuan Pei[2,3],Libing Xiang[2,3],Bo Ping[4,3],Boer Shan[2,3],Huijuan Yang[2,3]
1.Department of Obstetrics and Gynecology， Minhang Hospital， Fudan University; The Central Hospital of Minhang District， Shanghai， China.
2. Department of Gynecologic Oncology， Fudan University Shanghai Cancer Center， Shanghai， China
3.Department of Oncology， Shanghai Medical College， Fudan University， Shanghai， China
4.Department of Pathology， Fudan University Shanghai Cancer Center， Shanghai， China

Background: To investigate the change of peripheral lymphocyte subsets after splenectomy during cytoreductive surgery for advanced or recurrent ovarian cancers
Methods: We enrolled 83 patients with advanced or recurrent ovarian cancer who underwent cytoreductive surgery between 09/2016 and 01/2019. Twenty patients who also underwent splenectomy were assigned to the splenectomy cohort and the rest to the non-splenectomy cohort. Flow cytometry was used to measure the peripheral lymphocyte subsets consisting of T cells, regulatory T cells, natural killer cells, B cells, and activation antigens before and after surgery.
Results: There was not any difference in the number and distribution of peripheral lymphocyte subsets between the two cohorts before surgery. We observed elevated levels of T cells ($CD3^+$, $CD3^+CD8^+$) in the splenectomy cohort compared to those in the non-splenectomy cohort after surgery, which achieved statistical significance. The post-operative CD4/CD8 ratio was lower in the splenectomy cohort than in the non-splenectomy cohort (P=0.048). Regarding the changes of lymphocyte subsets after surgery, $CD8^+CD28^+$ T cells had a significant decreasing tendency (P=0.011) while $CD3^+$/HLA-DR^+ T cells were the opposite (P=0.001) in the splenectomy cohort. In the non-splenectomy cohort, the proportion of Tregs (P=0.005) and B cells (P<0.001) including $CD3^-$/HLA-DR^+ B cells (P=0.007) increased after surgery, and the absolute number of T cells and NK cells decreased to different extents (P<0.001). The post-operative percentage of $CD8^+CD28^+$ T cells was less than the pre-operative one (P=0.022), which was similar to the splenectomy cohort.
Conclusions: The changes of peripheral lymphocyte populations were different between patients with splenectomy and without splenectomy during cytoreductive surgery for advanced or recurrent ovarian cancers. T cells were increased and activated in splenectomy cohort, whereas, B cells were increased and activated in non-splenectomy.

PO-103

Long time progression-free survival of relapsed ovarian cancer according to integrative therapy and mechanism of PARP inhibitor resistance revealed by whole-exon sequencing

Dongling Zou,Lin Zhong,Qi Zhou
chongqing cancer hospital

Purpose of research: Where as the importance of the targeted therapies in ovarian cancer,it is of great importance to get highly individualized and comprehensive therapy including surgery,chemotherapy,as well as targeted therapy achieving best therapeutic outcome.Herein,we reported a ovarian cancer patient who was treated with fluzoparib and R0 cytoreductive surgery following failure of the multi-line chemotherapy.
Materials and methods:A 52 years old female under went cytoreductive surgery at her age of 48.Postoperative pathological diagnosis illustrated HGSOC,FIGOstage,IIIc.This patient received first-line chemotherapy with TP regimen and reached CR.Disease relapsed indicated by newly occurred pelvic mass by CT scan and elevated serum CA125 value(192.55u/ml) after 9 months.As 2nd line therapy,TP regimen was administrated.This patient got CR,while,with grade 3 bone marrow toxicity.
In May 2018,abdominal CT showed multiple pelvic metastases and an increased serum CA125 value (92u/ml).Thus,this patient was informed consentand recruited into a phase Ib trial of fluzoparib.From June 2018 to August 2019,disease was well controlled and therapeutice valuation was partial remission (PR) during this period.Serum CA125 level stayed at normal level(＜ 35μg/ml).Safety of fluzoparib administration was acceptable.All side effects were welltolerable and manageable.
Result: According to the gene test result and the therapy history,the patient was administrated systemic chemotherapy with AP.Up until today,the patient has received 3 cycles of systemic therapy and achieved CR.
Discussion: In summary,this case report has successfully demonstrated the great outcomes under the multidisciplinary regimens of genomics ,surgery ,chemotherapy ,as well as targeted therapies. A putative mechanism of fluzoparib resistance led by amplification of MYC,RAD52 as well as FGF6 was further explored. Further follow-up is essential to trace the toxicity of chemotherapy and long-term management due to continuous relapse.

PO-104

Prognostic values of tumor immune microenvironment related genes in Ovarian Cancer: A gene expression-based study

Ze Li,Li Ren
Tianjin medical university cancer institute and hospital

Abstract: Objective: The high mortality rate of ovarian cancer stems from a variety of factors, such as difficulty in screening, delayed diagnosis and limited treatment options.
Methods: In The Cancer Genome Atlas ovarian cancer cohort, based on the tumor microenvironment cell infiltration level and immune-related genes, we tried to systematically determine predictive molecular networks and key genes as prognostic markers.
Results : We identified 13 nodes in ovarian cancer, functional annotations indicated that the 13 hub-genes were mostly involved in Cell adhesion molecules , Natural killer cell mediated cytotoxicity, TNF

signaling pathway , Phagosome , etc.The expression of C3AR1, CD86, CXCL10 and FN1 significantly correlated with favorable outcome for OS and these genes also correlation with level of immune infiltrates . C3AR1, CD86, CXCL10 were significantly positive correlation with several immune checkpoint genes(PDCD1, PDCD1LG2, CTLA4, CD80).
Conclusions: In summary, we identified genes that are potentially associated with prognosis, while also being correlated with immune checkpoint expression.

PO-105

Acquisition of new tumor cell properties by MSC-derived exosomes

Yuanyuan Yang
Tongji university affiliated Tongji Hospital

Interaction between multi-functional mesenchymal stroma/stem cells (MSC) and human tumor cells involves the exchange of biological material via extracellular vesicles including exosomes. Protein analysis of MSC-derived exosomes demonstrated the presence of MMP-2 and MSC-specific markers including CD90 and ecto-5'-nucleotidase (CD73). Incubation of tumor cells with these membranous particles revealed a rapid uptake of MSC-released microvesicles whereby breast cancer cells incorporated ~19% and SCCOHT-1 cells representing a rare type of small cell ovarian cancer assimilated ~28% of available exosomes within 24 h. This interaction was accompanied by functional alterations of tumor cell properties during integration of exosomal content from MSC. Indeed, exosome-associated MMP-2 exhibited functional enzyme activity and MCF-7 breast cancer cells with undetectable MMP-2 protein acquired expres- sion of this enzyme and corresponding gelatinase functionality after stimulation with MSC-derived exosomes. Similar effects were observed in SCCOHT-1 cells during culture in the pres- ence of MSC-derived exosomes which enabled new metabolic activities in this tumor cell type. Together, these findings demonstrated that the internalization of MSC-derived exosomes was associated with the acquisition of new tumor cell properties by altering cellular functionalities and providing the capability to re-organize the tumor microenvironment.

PO-106

The RNA binding protein CELF2 inhibits ovarian cancer progression by stabilizing FAM198B

Qinhao Guo,Yong Wu,Xiaohua Wu
Department of Gynecologic Oncology， Fudan University Shanghai Cancer Center

Background: Since the functional roles of RNA-binding proteins (RBPs) have been increasingly identified as posttranscriptional drivers of cancer progression, a new paradigm for diagnosis or therapy could better ovarian cancer management.
Methods: We integrated the RBP database with RNA-seq of 10 ovarian cancer tissues and 8 normal ovarian tissues and GEO data to get candidate RBPs.Survival analysis were made by Kaplan-Meier method. Functional assays and animal experiments were used to determine the role of CELF2 in ovarian cancer tumorigenicity and metastasis in vitro and vivo. Furthermore, RNA-seq and RNA immunoprecipitation sequencing (RIP-seq) were applied to screen out the differential gene expression directly affected by CELF2, and Luciferase Reporter Assays were used to reveal the binding site of CELF2 and FAM198B.

Results: We identified a novel RBP CELF2, whose expression was downregulated in ovarian cancer and positively correlated with the overall survival (OS) and progression-free survival (PFS) of ovarian cancer patients. Altered CELF2 expression led to marked changes in proliferation, migration, and invasion of ovarian cancer cells in vitro and in vivo. We further showed that CELF2 expression increased the stability of its associated target FAM198B via binding to the AU/U-rich elements (AREs) in the 3′-untranslated region (3′-UTR). Knockdown of FAM198B expression restored CELF2-mediated suppression of proliferation and migration. Furthermore, we found that CELF2/FAM198B may repress ovarian cancer progression by inhibiting the MAPK/ERK signaling pathway. Increased CELF2 expression by curcumin treatment can increase ovarian cancer cell sensitivity to cisplatin.
Conclusions: Our study elucidated a novel mechanism of the CELF2/FAM198B axis in the regulation of proliferation and metastasis in ovarian cancer, potentially providing novel therapeutic targetsfor ovarian cancer.

PO-107
白细胞介素 33 在子宫内膜腺癌中的作用及机制研究

曾玺
四川大学华西第二医院

目的 探讨白细胞介素 33（interlukin-33, IL-33）对子宫内膜腺癌细胞生物学行为的调控作用及机制。
方法 收集收集于 2016 年 1 月至 2016 年 7 月之间在四川大学华西第二医院就医并行手术治疗 100 例子宫内膜样腺癌患者（肿瘤组）、100 例因其他良性疾病行子宫全切手术患者（对照组）的术后石蜡组织样本及临床病理资料。ELISA 检测 IL-33 的血浆水平；免疫组织化学染色定位 IL-33 在肿瘤中的表达部位；Western Blot 和 RT-qPCR 测定 IL-33 蛋白及 mRNA 表达。体外培养子宫内膜腺癌细胞株 HEC-1-A，采用 CCK-8 法、Annexin V FITC-PI 双染法、划痕实验、Transwell 实验及成管实验检测经低表达及过表达 IL-33 处理后子宫内膜腺癌细胞增殖、凋亡、迁移、侵袭及成管能力。Western Blot 检测 IL-33 对 AKT/mTOR 通路的影响。使用 SPSS 20.0 软件，采用 t 检验或方差检验、检验或 fisher 确切概率法、Pearson 相关系数或 Spearman 相关系数及多因素 logistic 回归分析进行统计学分析。
结果 患者血浆及组织中 IL-33 蛋白及 mRNA 表达均显著高于正常对照组，差异有统计学意义(P<0.05)。过表达 IL-33 的 HEC-1-A 细胞增殖、迁移、侵袭及成管能力均显著增强(P<0.05)，而凋亡率无显著改变(P>0.05)。过表达 IL-33 的 HEC-1-A 细胞中 Pten 蛋白表达显著下降而 AKT、PI3K、mTOR 磷酸化水平均显著升高(P<0.05)。在过表达 IL-33 的基础上，利用特异性 siRNA 低表达 IL-33 后，IL-33 介导的 Pten 表达下调及 AKT/PI3K.mTOR 的上调均被逆转，同时 IL-33 对 HEC-1-A 细胞侵袭和迁移过程的促进作用也被逆转(P<0.05)。
结论 子宫内膜腺癌患者血浆及肿瘤中 IL-33 水平均显著上升，IL-33 表达升高可能通过影响 Pten/AKT/mTOR 信号通路，调控肿瘤细胞的增殖、侵袭、迁移能力等生物学行为，从而在子宫内膜腺癌的发病机制中起重要作用。

PO-108
PD-L1 及 HPV-L1 蛋白双重染色对高危型人乳头瘤病毒呈阳性妇女的宫颈病变筛查研究

曾玺
四川大学华西第二医院

目的：探讨 PD-L1 和 HPV-L1 蛋白免疫组织化学双重染色在高危型人乳头瘤病毒(HR-HPV)呈阳性的妇女中的筛查效果。 方法：选择 2019 年 5 月至 10 月于四川大学华西第二医院就诊的诊断为 HPV-16、

18 阳性（HPV16、18、31、33、35、39、45、51、52、56、58、59、66、68)的 399 例妇女为研究对象。收集其宫颈脱落细胞学标本进行液基细胞学检测（LCT）和 PD-L1、HPV-L1 蛋白双重染色。对于 HPV-16、18 阳性，或其他 12 种 HR-HPV 呈阳性，且 LCT 结果≥未明确意义的非典型鳞状细胞(≥ASCUS)的受试者进行阴道镜检查，若阴道镜检查结果异常，再进行宫颈活组织检查。比较 PD-L1 和 HPV-L1 蛋白双重染色与 LCT，对 HR-HPV 呈阳性受试者宫颈病变筛查的敏感度、特异度、受试者工作特征(ROC)曲线下面积(AUC)，评估 PD-L1 和 HPV-L1 双重染色对 HR-HPV 呈阳性受试者宫颈病变筛查的有效性。本研究经过四川大学华西第二医院伦理委员会批准。所有受试者均同意参加并签署临床研究知情同意书。 结果：受试者中 PD-L1 阳性率随宫颈病变程度增高而呈上升趋势(χ^2 =32.17，P<0.001)；HPV-L1 阳性率呈下降趋势(χ^2=23.69，P<0.001)。HPV-16、18 呈阳性受试者的 PD-L1 阳性率为 63.95%(94/147)，高于其他 12 种 HR-HPV 呈阳性受试者的 48.02%，差异有统计学意义(χ^2=7.12，P=0.018)。 HPV-16、18 呈阳性受试者与其他 12 种 HR-HPV 呈阳性受试者的 HPV-L1 阳性率相比较，差异有统计学意义(χ^2=2.510 ，P=0.032)。LCT 及 PD-L1、HPV-L1 双重染色对受试者的宫颈病变筛查的敏感度分别为 52.32%、85.43%，特异度为 57.66%、81.05%，准确度分别为 55.64%、82.71%。PD-L1 及 HPV-L1 双重染色对 HR-HPV 呈阳性受试者宫颈病变筛查的 ROC-AUC 为 0.853，高于 LCT 的 0.591,差异有统计学意义(Z=3.32，P =0.014)。 结论：HPV-L1、PD-L1 双重染色对 HR-HPV 呈阳性妇女宫颈病变筛查的敏感度和特异度均高于 LCT，有望成为医疗资源严重短缺地区的 HR-HPV 呈阳性妇女阴道镜转诊分流的有效方法。

PO-109
Pten 及 CD4+Foxp3+T 细胞在子宫内膜样癌中的诊断和预后判断中的潜在临床价值

曾玺
四川大学华西第二医院

背景及目标:子宫内膜癌(Endometrial cancer)是妇科三大肿瘤之一，其中绝大部分为子宫内膜样癌。目前子宫内膜样癌的诊断通常基于临床表现、实验室诊断、病理诊刮，但大约 15％的患者无阴道出血等表现，肿瘤标记物仅在 20％至 30％的患者中升高，而病理诊刮属于有创性检查。因此，从肿瘤基因和肿瘤微环境层面研究寻找新的无创生物标记物，探讨 Pten 及 CD4+Foxp3+T 细胞在子宫内膜样癌中的诊断、预后判断中的潜在临床价值，有助于为子宫内膜样癌患者提供无创筛查新思路。
方法：收集于 2012 年 1 月至 2012 年 12 月之间在四川大学华西第二医院就医并行手术治疗 200 例子宫内膜样癌患者（肿瘤组）、100 例因其他良性疾病行子宫全切手术患者（对照组）的术后石蜡组织样本及临床病理资料。使用 Pten 抗体对石蜡切片标本行免疫组化染色,以 CD4、FOXP3 抗体对切片进行免疫荧光染色，并对染色结果进行评分。根据患者的临床病理资料和免疫染色结果进行统计学分析,分析上述指标表达的临床意义。手术后所有患者平均随访 5 年。双侧 P 值<0.05 为具有显著性差异。
结果：Pten 染色的 cut-off 值为 1.15，特异性为 78％，灵敏度为 83.5％；CD4+FOXP3+T 细胞染色的 cut-off 值为 4.75，特异性为 88％，灵敏度为 65.5％。受试者平均随访 56.3 个月，与对照相比，Pten 表达降低、CD4+FOXP3+T 细胞上升程度与子宫内膜癌的进展情况显著相关。此外，Pten 与 CD4+FOXP3+T 细胞的表达水平呈负相关，且与肿瘤分期，分化级别和患者的预后等临床特征相关。
结论：Pten 和 CD4+FOXP3+T 细胞的表达可能成为子宫内膜样癌诊断和预测的潜在生物标志物。

PO-110
Lipids-Coated-CaCO3 Nanoparticles as a Versatile pH-Responsive Drug Delivery Platform to Enable Combined Chemotherapy of Ovarian Cancer

徐月娟[1],陈友国[1]
1.苏州大学附属第一医院 2.苏州大学附属儿童医院

通过纳米药物递送体系实现肿瘤靶向递送和化学治疗药物可控释放以实现有效的癌症化学疗法正迅速发展。本研究中我们使用中空 CaCO3 纳米颗粒来有效负载阿霉素 DOX 和奥沙利铂前药，合成的 CaCO3-Pt(IV)-DOX 纳米颗粒具有出色的肿瘤归巢能力，在肿瘤的微酸环境下迅速降解，并具有 pH 响应性释放 DOX 的能力，从而达到在肿瘤部位有效释放负载的 DOX 和奥沙利铂前药，可以达到化疗药物在肿瘤部位有效累积和降低毒副作用，因此在联合化学疗法中大大提高了治疗效果，或许在临床肿瘤化疗中有可预期的应用前景。

PO-111
Bilateral huge ovarian dysgerminoma with torsion: A case report and literature review

Heng Zheng,Tan Xin
Department of Gynecology and Obstetrics， Development and Related Diseases of Women and Children Key Laboratory of Sichuan Province， Key Laboratory of Birth Defects and Related Diseases of Women and Children， Ministry of Education， West China Second Hospital， Sichuan University， Chengdu， Sichuan 610041， P.R. China

Background: Dysgerminoma accounts for 33% of malignant ovarian germ cell tumours, and most of them occur in young women. Most patients with ovarian dysgerminoma often present with non-specific symptoms, such as pelvic mass with or without abdominal pain, but when ovarian mass is accompanied with torsion, it often leads to drastic and sudden abdominal pain, although,it reported that malignancy rate in ovarian torsion was only about 2%.Bilateral huge ovarian dysgerminoma with torsion is extremely rare. Andit is difficult to diagnose ovarian torsion through symptom or imaging examination. In this study, we reported a 20-year-old girl diagnosed as bilateral huge ovarian dysgerminoma accompanied with adnexal torsion, missing early surgery, presenting as repeated fever and extremely poor general condition. Furthermore, we reviewed the previous literatures about malignant ovarian masses with torsionto assess a better diagnosis and treatment for dysgerminoma accompanied with torsion.
Materials and Methods: We summarized the diagnosis, treatment, prognosis and follow-up of this disease by reporting a 20-year-old female patient with bilateral ovarian dysgerminoma and reviewing the relevant literature of the disease for nearly 20 years.
Result：The patient's initial consultation was because of the rapid increase of abdominal mass and severe abdominal pain, nausea, vomiting, and anorexia. What followed were rapidly progressive decline in liver function, decreased hemoglobin and albumin, repeated fever, and a large number of pleural effusion and ascites, coagulation dysfunction. After treating with various supportive treatment, things got better, we got her into surgery at that time. During the operation, two huge solid tumours of bilateral ovarium with cauliflower hyperplasia on the surface were seen, and both of the ovarium rotated 360 degrees. Considering abnormal coagulation and extremely poor general condition of the patient, we performed bilateral salpingo-oophorectomy and omentectomy without pelvic lymphadenectomy or other recommending comprehensive staging procedures. Postoperative pathology showed the

bilateral ovarian tissues were dysgerminoma, and the bilateral fallopian tubes and the omentum were not involved. After that, the patient received 6 courses of the chemotherapy regimen of BEP. Up to now, the patient followed up by examined with the level of serum tumour markers, physical exams, and CT regularly in the outpatient department every 4-6 months after chemotherapy, and there have been no signs of tumour recurrence.

Conclusion: Bilateral huge ovarian dysgerminoma with torsion is quite rare. Early diagnosis and surgery are the key to a good prognosis. The most common and convenient used preoperative imaging diagnostic method is ultrasound. MRI and CT may also provide auxiliary diagnosis basis, moreover, SWI could is also helpful in diagnosing ovarian torsion although the diagnostic value of distinguishing malignant tumour from ovarian torsion is still limited. Elevation of serum tumour markers are additional diagnostic methods of patients with ovarian dysgerminomas. Treatment of dysgerminoma is mainly based on surgery, with or without chemotherapy. Salpingo-oophorectomy with adequate staging should be performed, including pelvic and abdominal exploration, peritoneal washings, lymph node sampling and biopsies of suspicion areas. 3 cycles of BEP for patients of stage IA who received completely resection is suggested, while 4 cycles for poor risks, and for patients of stage IB-III after resecting tumours. The prognosis of patients with dysgerminoma is usually good with long overall survival, expecting for patients with lymph node metastasis, which is a predictor of poor survival. Regular physical exam and serum tumour markershould be followed up within two years.

PO-112

手术治疗妊娠滋养细胞肿瘤患者的临床特征

熊莉莉,张涛红,余慧,薛艳,安瑞芳
西安交通大学第一附属医院

目的：分析手术治疗 GTN 患者的临床特点、治疗方法、手术方式和预后情况，分析影响预后的因素，评价手术治疗 GTN 的临床价值。

方法：选取西安交通大学第一附属医院妇科 2008 年 1 月 1 日至 2019 年 6 月 30 日手术治疗妊娠滋养细胞肿瘤患者共 93 例，其中 54 例侵葡，39 例绒癌（其中 1 例为输卵管绒癌）。

结果：侵葡子宫全切率 20%，绒癌子宫全切率 21.6%。41.9%患者主要因无生育要求行预防性子宫全切，余患者因病灶持续存在（21.5%）、化疗耐药或复发（17.2%）、出血穿孔（17.2%）行子宫全切治疗。急诊手术 15 例，7 例行开腹全子宫切除术；7 例行病灶切除术；1 例绒癌急诊行幕上开颅血肿清除术+内减压术。非急诊手术 78 例，70 例行全子宫切除术，其中 25 例为腹腔镜下全子宫切除术，1 例绒癌在子宫全切术前行幕上开颅肿瘤切除术，1 例绒癌在子宫全切术前行左肺下叶转移灶切除术；7 例行子宫病灶切除术；1 例绒癌行左肾上腺转移灶切除术。术后血 β-hCG 下降幅度 65.58%-99.6%。73 例 GTN 术前 β-hCG 阳性，其中 23 例通过手术后 β-hCG 转阴，但 14 例术后病理存在病灶。侵葡缓解率 98.1%，绒癌缓解率 87.2%。死亡 6 例(6.5%)，其中 1 例侵葡、5 例绒癌，3 例绒癌为 IV 期，伴多处转移。

结论：手术治疗 GTN 患者预后的危险因素包括：产次多、绒癌、距先期妊娠时间>12 月、评分≥7 分、临床分期= 4 * ROMANIV 期、先前化疗失败史、耐药或复发、手术前后化疗方案不一致。

PO-113

Integrated bioinformatics data analysis reveal that FAPB5 induces progression in endometrial cancer patients with postmenopausal status

Xingchen Li,Jianliu Wang
Peking University People's Hospital

Background: Endometrial cancer (EC) is one of the most common type female genital malignancies. The purpose of the present study was to reveal the underlying mechanism that played a pivotal role in postmenopausal EC patients.
Methods: Weighted gene co-expression network analysis (WGCNA) was conducted using the microarray dataset and clinical data of EC patients from The Cancer Genome Atlas (TCGA) and Gene Expression Omnibus (GEO) databases to identify significant gene modules and hub genes associated with postmenopausal status in EC patients. Gene set enrichment analysis (GSEA) was conducted to reveal the potential pathways of hub gene. Finally, we validated the function and GSEA indicated pathways in EC cell lines in vitro.
Results: According to the WGCNA results, we identified a brown module with 471 genes which was significantly associated with postmenopausal status in EC patients. The module mainly played its role in “cell-cell adhesion”, “channel activity”, and “long-chain fatty acid metabolic process”. Further GSEA results suggested FABP5 as the hub gene in the module. FABP5 promoted the proliferation, invasion, and metastasis of AN3CA cells, and the expression of FABP5 was induced by fatty acid and TGF-β. Moreover, our results also indicated that FABP5 promoted EC cell progression that is related to the promotion of EMT through activation of the WNT/β-catenin pathway.
Conclusion: Taken together, we uncovered a common FABP5-WNT/β-catenin–EMT mechanism underlying EC cell progression by integrated analyses.

PO-114

A ten-DNA methylation signature as a novel biomarker for improving prediction of prognosis and indicating DNA targets in endometrial cancer

Xingchen Li,Jianliu Wang
Peking University People's Hospital

Background: Endometrial cancer (EC) is a common female reproductive tumor worldwide. However, the pathogenesis of EC still remains ambiguous and has not been epigenetically elaborated. The goal of this study is to investigate whether DNA methylation signature is associated with overall survival (OS) for EC patients.
Method: Methylation profile and RNA-seq data of EC patients from The Cancer Genome Atlas (TCGA) database were analyzed to identify methylated DNA as biomarkers for EC prognosis. The Least Absolute Shrinkage and Selection Operator (LASSO) analysis was used to construct a model to divide patients into high and low risk groups. Then we built a nomogram based on the multivariate cox analysis which combined the risk score model with clinicopathological signatures together and then assessed. Weighted correlation network analysis (WGCNA) was conducted on RNA-seq data to identify the therapy target associated with the risk model. Finally, we did in vitro functional validation for the hub DNA from key module.

Results: We built a 10-DNA methylation risk model and the OS in high and low risk groups was significant different. The area under the curve (AUC) of this model was 0.856 at 5 years survival. The nomogram could accurately predict the OS for EC patients, which concordance index and AUC of 5 year survival reached 0.815 and 0.817, respectively. WGCNA revealed the pink module was a key gene group and further bioinformatics analysis indicated 6 genes as the hub genes in the module. Knockdown of MMP12 inhibited the proliferation, invasion and metastasis of EC cells.
Conclusion: A methylation signature and a nomogram based on the signature were constructed, and they could both be conveniently used to facilitate the individualized prediction of survival in patients with EC. MMP12 might be a potential target for the treatment of EC.

PO-115
“二孩”政策下手术治疗妊娠滋养细胞肿瘤患者的临床特点分析

熊莉莉,张涛红,余慧,薛艳,安瑞芳
西安交通大学第一附属医院

目的：探讨近 10 年妊娠滋养细胞肿瘤患者手术率的变化情况及“单独二孩”政策实行后手术治疗 GTN 患者的临床特点。
方法：通过西安交通大学第一附属医院病例管理系统，检索出 2008 年 1 月 1 日至 2019 年 6 月 30 日在西安交通大学第一附属医院妇科手术治疗的 93 例 GTN 的患者。其中 54 例侵蚀性葡萄胎，39 例绒癌。以开放“单独二孩”政策的 2013 年底为时间划分界限，分前期组及后期组。使用 SPSS 22.0 统计学软件进行数据分析，以 P＜0.05 为差异有统计学意义。
结果：前期组共收治 GTD 患者 252 例，平均每年 42 例。手术治疗妊娠滋养细胞肿瘤（Gestational trophoblastic neoplasia，GTN）48 例，其中子宫切除术 39 例，侵葡、绒癌的子宫全切率分别为 24.7%、26.3%，患者平均年龄 38.81±9.18 岁，45.8%超过 40 岁。而后期组收治 GTD 患者 383 例，平均每年 70 例。手术治疗 GTN 45 例，其中子宫切除术 38 例，侵葡、绒癌的子宫全切率分别为 16.8%、18.2%，患者平均年龄 41.62±8.04 岁，71.1%超过 40 岁。前期组与后期组手术治疗的 GTN 患者在产次、年龄≥40 岁比例、治疗前血 β-hCG（Beta human chorionic gonadotropin, β-hCG）水平（IU/L）、腹腔镜下手术治疗、术前是否化疗具有统计学差异。
结论：自“二孩”政策实施后，妊娠滋养细胞疾病患病人数增加，行手术治疗的妊娠滋养细胞肿瘤患者发病年龄多超过 40 岁，产次增多，腹腔镜下手术增多。

PO-116
妊娠合并宫颈癌并发原发性尿路上皮癌 1 例

罗晓雅,沈媛
暨南大学医学院第一附属医院/广州华侨医院

妊娠期发生的妇科肿瘤中宫颈癌的发生率居于首位，其发病率逐年增高，该个案报道的特殊性在于该例患者在妊娠合并宫颈癌确诊后 5 月余新确诊原发性尿路上皮癌，此为首例。通过回顾 32 岁妊娠期宫颈腺鳞癌并发原发性尿路上皮癌患者的资料，并进行相关文献复习，探讨妊娠合并宫颈癌的临床诊治方法，及多原发性恶性肿瘤的早期诊断与治疗。

PO-117

CD40 在卵巢黏液性腺癌的表达及临床意义

王帅
吉林省肿瘤医院

目的：观察 CD40 在卵巢黏液性腺癌的患者中的表达，并探讨其与各种临床因素、临床病理以及预后的关系和意义，从而为判断病情及预后和指导治疗提供重要依据。**方法：**回顾性分析吉林省肿瘤医院 2018 年 1 月-2019 年 10 月间诊断为卵巢黏液性腺癌的 40 例病例，应用免疫组织化学方法检测 CD40、Ki67、CK7、CK5/6、P63、CDX-2、SYN、CEA、CD56、Villin、CDX-2 的表达情况，并且详细记录每位患者的临床特征。应用 SPSS19.0 对数据进行分析，探讨 CD40 在卵巢黏液性腺癌患者中的表达情况与各临床因素的关系，分析各临床因素及 CD40 关系。**结论：** CD40 过度表达的卵巢黏液性腺癌患者总生存期比例显著高于 CD40 未过度表达者。而且 CD40 和 KI67 的表达具有一定的一致性。

PO-118

REBACIN® is an optional intervention for persistent high-risk human papillomavirus infection: a retrospective analysis of 364 patients

Ying Yang,Zhengyu Li
West China Second University Hospital， Sichuan University

Objective: Persistent high-risk human papillomavirus (hrHPV) infection is a crucial cause of cervical cancer, for which optimal pharmacological intervention remains unavailable. This study aimed at evaluating the therapeutic efficacy of REBACIN® in patients with persistent hrHPV infection.
Methods: This study is a combination of a retrospective analysis and a meta-analysis**.** The retrospective analysis included 364 patients who were persistently infected with HPV for at least twelve months, between September 2015 and February 2019, and only received REBACIN® intervention. HPV DNA typing, HC2 hrHPV DNA, and ThinPrep cytologic tests were performed before and after REBACIN® intervention, to evaluate the therapeutic efficacy. The meta-analysis included trials evaluating the therapeutic efficacy of interferons.
Results: After a follow-up period of three to six months, the overall effective rate of REBACIN® was 74.73% (272/364), which was higher than that of interferon (61.50%). The efficacy of REBACIN® was correlated with HPV type (OR: 0.549, 95% CI: 0.367–0.822, $P < 0.05$) and pretreatment cytology (OR: 0.358, 95% CI: 0.173–0.739, $P < 0.05$).
Conclusion: REBACIN® is potently efficacious at clearing persistent hrHPV infection; hence, it can serve as an optional intervention for persistent hrHPV infection.

PO-119
UBE2N regulates paclitaxel sensitivity of ovarian cancer via Fos/P53 axi

Qiuyuan Zhu[1],Xu Zhang[1],Jieyuan Chen[1],Peipei Pan[2],Feng Lin[1]
1.The first affiliated hospital of Wenzhou medical university
2.The second affiliated hospital of Wenzhou Medical University

Background: Chemo-resistance is considered one of the key factors in the mortality of ovarian cancer. We found that UBE2N is downregulated in paclitaxel-resistant ovarian cancer cells. It suggests that UBE2N may play a critical role in the regulation of paclitaxel sensitivity in ovarian cancer. **Method**: The expression of UBE2N and potential downstream target genes in ovarian cancer cells were determined by western blot. We exogenously upregulated UBE2N expression in ovarian cells and observed its impact on paclitaxel sensitivity. The cells overexpressed UBE2N stably were injected into nude mice to assess tumor growth and paclitaxel sensitivity.**Results:** Overexpressed UBE2N in ovarian cancer cells enhanced the paclitaxel sensitivity. Based on inhibiting the expression of UBE2N, changes in Fos expression could restore the paclitaxel sensitivity. Altered expression of p53 was accompanied by altered expression of UBE2N and Fos.**Conclusion:** Our study suggests that UBE2N could be used as a therapeutic agent for paclitaxel-resistant ovarian cancer through Fos/P53 pathway.

PO-120
前哨淋巴结定位在 II 型子宫内膜癌术中应用的研究进展

张珺,李星,毛林,张燕
武汉大学人民医院

前哨淋巴结（sentinel lymph node, SLN）检测已被推荐作为子宫内膜癌手术分期的系统性淋巴结清扫术的替代方案。大量研究证明，SLN 定位在早期子宫内膜癌分期术中具有可行性及安全性，对肿瘤结局无影响，同时可最大程度地减少手术并发症。II 型内膜癌具有高度侵袭性，宫外扩散及淋巴结转移率高，危险因素不确定，预后差。准确识别淋巴结转移是准确分期和预测预后的重要依据。近年来，SLN 定位在 II 型子宫内膜癌中的应用的研究进展迅速，本文对子宫内膜癌 SLN 检测的研究进展进行综述，为 II 型子宫内膜癌的临床诊治提供参考。

PO-121
CP 方案二线治疗晚期卵巢癌临床观察

秦汉林,胡长路
中国科学技术大学附属第一医院西区（安徽省肿瘤医院）

目的：观察 TP 一线治疗无效的晚期卵巢癌患者采用 CP 方案二线治疗的近期临床疗效。
方法：回顾性分析我院 2015 年 7 月～2019 年 11 月 24 例经 TP 一线治疗无效的晚期卵巢癌病例，二线采用 CP 方案化疗：环磷酰胺 600mg/m^2 d1+顺铂 75mg/m^2 d1，3 周为 1 周期，直至肿瘤进展或者出现患者无法耐受的化疗毒副反应。
结果：近期疗效：CR 2 例，PR 9 例，SD 6 例，PD 7 例，ORR 45.8%，DCR 70.8%，中位 PFS 4.1 个月，2 例 CR 患者的 PFS 分别为 11 和 14 个月。治疗后 CA125 及 HE4 较治疗前明显降低（P＜0.05）；DCR 患者的治疗前 CA125 及 HE4 水平明显低于 PD 患者（P＜0.05）。24 例患者中伴有癌

性腹水 6 例，经腹腔灌注顺铂化疗 1～2 疗程后腹水 3 例消失，1 例减少，2 例无明显变化。不良反应主要为：骨髓抑制、胃肠道反应及肾功能的损害。其中 3 级不良反应：骨髓抑制 13 例（54.2%），胃肠道反应 3 例（12.5%）；4 级不良反应骨髓抑制 2 例（8.3%）。

结论：TP 一线治疗无效的晚期卵巢癌患者采用 CP 方案二线治疗获得满意近期疗效，且毒副作用可控，患者依从性较好，值得临床推荐使用。

PO-122

同一术者的腹腔镜手术与开腹手术对早期宫颈癌患者预后影响的对比分析

张正茂,张婉莹,王红霞
河北医科大学第四医院

目的：通过回顾性分析对比同一术者的腹腔镜及开腹两种手术方式治疗早期宫颈癌（Early-Stage Cervical Cancer, ECC）的临床资料，探讨两种手术方式对早期宫颈癌患者生存预后的影响。

方法：选取 2008 年 8 月 1 日至 2019 年 8 月 31 日于河北医科大学第四医院确诊的由同一术者完成手术的 184 例早期宫颈癌患者，收集上述患者临床病理资料，并对其进行术后随访，回顾性分析腹腔镜组或开腹组早期宫颈癌患者生存结局。应用 SPSS R3.6.1 软件进行统计分析。

结果:2008-2019 年早期宫颈癌腹腔镜手术 119 例，以 50 例为节点进行前期与后期的生存分析，患者 3 年、5 年 PFS，OS 差异无统计学意义（3 年 PFS：98.0% vs. 98.5%；5 年 PFS：93.5% vs. 96.8%，P=0.72），（3 年 OS：98.0% vs. 98.5%，；5 年 OS：93.4% vs. 96.3%，P=0.66）。本研究在真实世界条件下对同一术者早期宫颈癌（ⅠA1(LVSI+）-ⅠB1）的生存结局。腹腔镜组与开腹组 3 年、5 年 PFS，OS 差异无统计学意义（3 年 PFS：97.4% vs. 95.3%；5 年 PFS：93.0%vs.95.3%，P=0.83），（3 年 OS：97.2% vs. 96.9%；5 年 OS：92.7%vs.95.3%，P=0.69）。开腹手术或腹腔镜手术在不同 FIGO 分期下早期宫颈癌的生存结局。FIGO2009 为ⅠB1 期时，腹腔镜组与开腹组 5 年 PFS，OS 差异无统计学意义（94.8%vs.95.2%，P=0.89），（94.5%vs.95.2%，P=0.95）。FIGO2018 为ⅠB1 期时，腹腔镜组与开腹组 5 年 PFS，OS 差异无统计学意义（93.3%vs.91.7%，P=0.45），（92.9%vs.91.7%，P=0.62）。FIGO2018 为ⅠB2 期时，腹腔镜组与开腹组 5 年 PFS，OS 差异无统计学意义（95.2%vs.97.0%，P=0.58），（94.9%vs.97.0%，P=0.64）。

结论：在真实世界条件下对同一术者早期宫颈癌（ⅠA1(LVSI+）-ⅠB1）的生存结局腹腔镜组不劣于开腹组。FIGO2009 为ⅠB1、ⅠB2 期的早期宫颈癌的生存结局腹腔镜组不劣于开腹组。本研究与国际大中心和国内大数据库相比，开腹手术、腔镜手术在生存率上不劣于国际、国内标准水平。

PO-123

SRD5A3 通过介导 EMT 促进子宫内膜癌侵袭转移

苗春影
安徽省第二人民医院

研究目的：子宫内膜癌是一组来源于子宫内膜的上皮性肿瘤，为女性生殖系统三大恶性肿瘤之一，在欧美国家其发生率高居女性生殖系统癌症首位。类固醇-5α 还原酶 3(steroid-5a redutase3，SRD5A3)为 NADPH-依赖性微粒体酶，之前有研究表明，SRD5A3 在子宫内膜癌中存在过表达现象，但其子宫内膜癌过表达是否起到促癌作用目前未有研究。本研究通过调控内膜癌细胞系中 SRD5A3 的表达水平

来检测其对子宫内膜癌细胞润转移能力的影响，以期能为子宫内膜癌的预后判断及基因靶向治疗提供可能的新靶点。
材料与方法：通过 IHC 染色及 RT-PCR 检测 SRD5A3 在发生浸润转移的子宫内膜癌组织和未发生转移组织中表达情况，构建 SRD5A3 过表达及低表达的稳定细胞系。采用 Transwell 实验探究 SRD5A3 在子宫内膜癌细胞侵袭转移能力方面的生物学作用，并通过 Western blot（WB）技术分析 EMT 相关分子在 SRD5A3 过表达及低表达的稳定细胞系的表达水平差异。
结果：我们通过 IHC 染色检测结果显示发生浸润转移的子宫内膜癌组织中的 SRD5A3 蛋白相对表达量高于未发生转移（P=0.0056）。通过卡方检验对 SRD5A3 高表达组和低表达组患者临床特征的相关因素分析，结果显示 SRD5A3 表达水平与 HGSOC 淋巴结转移及肿瘤 FIGO 分期相关。运用 WB 实验检测结果显示 SRD5A3 在转移子宫内膜癌组织中的表达水平显著高于未发生（P＜0.001）；随后我们采用 RT-PCR 技术检测 22 例发生转移子宫内膜癌内膜组织和未发生转移 6 例组织中 SRD5A3 mRNA 水平，结果显示发生转移的子宫内膜癌组织中 SRD5A3 mRNA 表达明显上调（P=0.0333）；Transwell 实验迁移和侵袭实验表明过表达 SRD5A3 促进内膜癌细胞穿越至 Transwell 小室下室；干扰 SRD5A3 后，结果相反；利用 Western Blot 检测 EMT 相关分子及 EMT 相关转录因子的蛋白水平，SRD5A3 过表达间质分子 N-cadherin，Slug，P-catenin 表达明显上调，SRD5A3 干扰后结果相反。
结论：SRD5A3 在发生转移的子宫内膜癌组织中表达上调，过表达 SRD5A3 促进内膜癌细胞的转移侵袭，因此，SRD5A3 可能是潜在的子宫内膜癌患者治疗的靶点。

PO-124

ApoA1 在宫颈癌铂类化疗耐药中的功能研究

何玥,韩素彬,张晶晶,吴玉梅
首都医科大学附属北京妇产医院

目的：探讨脂蛋白 A1（ApoA1）与宫颈癌铂类化疗耐药的相关性，明确 ApoA1 在宫颈癌铂类化疗耐药中发挥的具体功能。
方法：利用过表达 ApoA1 基因的慢病毒载体感染宫颈癌 SiHa、HeLa 细胞，筛选过表达 ApoA1 的稳定细胞系。将过表达 ApoA1 的 SiHa、HeLa 细胞经卡铂（CBP）处理后检测 IC50 值。通过 CCK-8 和平板克隆实验检测 SiHa 细胞增殖活力，流式细胞术（FCM）检测细胞凋亡率。构建过表达 ApoA1 宫颈癌 SiHa 细胞动物模型，监测裸鼠成瘤及卡铂化疗后移植瘤的体积和重量缩小情况。
结果：实时荧光定量 PCR 和免疫印迹（WB）结果显示在 SiHa 及 HeLa 细胞中，过表达（OE）组 ApoA1 表达量较阴性对照组（NC）明显提高 （P＜0.01）。CCK-8 实验结果提示在 SiHa 细胞中，OE 组对 CBP 的 IC50 值大于 NC 组（P＜0.05），但在 HeLa 细胞中差异无统计学意义（P＞0.05），因此我们选择 SiHa 细胞进行后续实验。细胞增殖和平板克隆实验结果表明，在 SiHa 细胞中 OE 组与 NC 组比较，细胞增殖活力和克隆形成能力未见明显差异；FCM 检测发现 SiHa 细胞经 CBP 诱导凋亡后 OE 组总凋亡率、早期凋亡率低于 NC 组（P＜0.01），晚期凋亡率未见明显差异。SiHa 细胞裸鼠成瘤结果提示给予 CBP 化疗后过表达 APOA1 组肿瘤体积缩小明显小于正常对照组（P<0.01），证明对铂类化疗产生耐药。
结论：过表达 ApoA1 导致 SiHa 细胞对铂类化疗的耐药，主要与抑制早期细胞凋亡有关。

PO-125
新型叶酸受体介导宫颈染色法（FRD）检测 CIN2 +的诊断性能：一项系统评价和荟萃分析

李元幸,王伟,赵卫红,王哲,郝敏
山西医科大学第二医院（山西红十字医院）

研究目的 早期发现和诊断高度宫颈上皮内瘤变（CIN2+）至关重要。本研究的主要目的是评估叶酸受体介导宫颈染色法（FRD）检测 CIN2+的诊断性能。
方法 使用“Folate Receptor”, “Cervical Cancer”, “Diagnosis”, “Sensitivity”, “Specificity” 等关键词，搜索了 2020 年 5 月前收录在 PubMed 和 EMBASE 数据库的原始英文文献。提取相关数据，并应用双变量模型比较了 FRD，HPV 和 TCT 的诊断性能。
结果 该荟萃分析共纳入 6 项研究，共计 2817 例患者。（1）FRD 检测 CIN2 +的合并特异性高于 HPV 和 TCT（0.65、0.12 vs 0.39）。（2）使用 FRD、HPV 和 TCT 检测 CIN2+的受试者工作曲线下面积（AUC）分别为 0.79、0.95 和 0.77，表明 FRD 优于 TCT。（3）FRD、HPV 和 TCT 的诊断比值比（DOR）分别为 6（95％CI：5-7），3（95％CI：2-5）和 3（95％CI：2-4），证明 FRD 具有良好的诊断性能。
结论 FRD 在检测 CIN2 +方面具有比 HPV 和 TCT 更高的特异性，且 FRD 具有良好的诊断性能。FRD 有望成为欠发达国家宫颈癌筛查策略的补充方案。

PO-126
叶酸及其代谢在宫颈癌防治中的应用前景探讨

李元幸,王伟,郝敏
山西医科大学第二医院（山西红十字医院）

叶酸，是一种水溶性 B 族维生素，在细胞正常生理过程中起重要作用。近年来叶酸在宫颈癌的预防、诊断和治疗中的应用中有显著的突破和进展。叶酸存在作为经济、易行的一级预防措施来降低疾病发生风险的可能性，有望成为宫颈癌风险评估的有效预测因子、宫颈癌筛查策略的补充、宫颈癌靶向治疗的新角度。

1.叶酸补充或强化在宫颈病变中的防治作用

目前全球已有 80 多个国家为降低神经管缺陷的发生率而实施了叶酸强化计划。研究显示，在叶酸强化地区美国，叶酸、维生素 B12 充足女性患 CIN2+的几率可降低 70％（P =0.04）。一项随机双盲对照试验提出补充叶酸（口服叶酸补充剂 5mg/d，持续 6 月）有助于宫颈病变的逆转。因此，叶酸补充或强化有望在宫颈病变的防治中发挥有力作用。

2.基于叶酸生物化学特性应用而生的宫颈癌筛查

叶酸受体介导的宫颈染色技术是近年来一种新型的宫颈病变检测法，此种染料可靶向宫颈病变细胞，具有快速、简便、经济的特点。研究报道此法对高级别 CIN 诊断能力很强，与细胞学相当，并优于 HPV 检测，可作为中国经济欠发达地区宫颈癌筛查策略的补充。

3.叶酸修饰或功能化的新型靶向药物

现今在“医工结合”的新形势下，已诞生出一系列更优质高效的医疗产品，叶酸在其中担任了重要角色。利用叶酸与 FR 之间的特异性结合和肿瘤细胞表面 FR 过度表达的特点，用叶酸来修饰或功能化药物，有更强的靶向能力和抗肿瘤能力，可用于影像成像技术和肿瘤化疗，为临床肿瘤的诊疗提供了一种新思路。

叶酸是机体维持正常生物学功能的关键营养元素。叶酸在临床中的应用前景非常广泛，尤其是叶酸的预防作用对于经济欠发达地区及贫困地区有着重要意义，其可以作为 HPV 疫苗的补充预防措施，无论从经济角度还是从实施的难易程度考量，都可能对宫颈癌的预防和消灭有所助益。

PO-127

叶酸摄入和生物水平与宫颈癌风险：系统评价和剂量反应 Meta 分析

李元幸,王伟,郝敏
山西医科大学第二医院（山西红十字医院）

目的 叶酸是参与一碳代谢途径的必需营养素，它在基因的合成和修复，DNA 甲基化以及与癌症有关中起着至关重要的作用。该研究的目的是研究叶酸摄入量和水平对宫颈癌风险的影响，以及叶酸补充对 CIN 转轨的潜在治疗作用。

方法 搜索截至 2020 年 1 月收录在 Ovid, MEDLINE, Embase, PubMed, Springer 数据库的英文原始文献，提取相关数据并进行质量评估，应用随机效应模型和剂量反应分析模型，以估计叶酸摄入量、叶酸生物水平，以及叶酸补充与宫颈癌风险的关系。

结果 纳入了符合标准的 24 篇文献。荟萃分析表明：叶酸缺乏症（定义为体内叶酸不足以维持生理功能）显着增加了患子宫颈癌的风险（合并 OR：1.42，95％CI：1.32，1.54）。然而，研究未提示叶酸补充可改善 CIN 的益处（OR：1.23，95％CI：0.88，1.72）。此外，剂量反应分析显示，叶酸摄入量，叶酸生物水平和宫颈癌风险之间存在显着的逆线性关系。血清叶酸每升高 10 nmol / L 和红细胞（RBC）叶酸每升高 100 nmol / L，宫颈癌的风险分别降低 14.5％和 15.4％。此外，饮食中叶酸摄入量每增加 200μg/天，患宫颈癌的风险可降低 14.2％。

结论 叶酸缺乏与子宫颈癌的发生和发展密切相关，叶酸摄入量和叶酸生物水平的增加可以预防子宫颈癌。

PO-128

Biocompatible AIEgen/P-glycoprotein siRNA@reduction-sensitive paclitaxel polymeric prodrug nanoparticles for overcoming chemotherapy resistance in ovarian cancer

jun dai[1],Quan Wang[2],Xiaoqi Dong[2],Min Xu[2],Juliang Yang[2],Xiaoqing Yi[3],Biao Chen[1],Xiyuan Dong[1],Ying Wang[4],Jun Wu[2],Xiaoding Lou[2],Fan Xia[2],Shixuan Wang[1]
1.Department of Obstetrics and Gynecology， Tongji Hospital， Tongji Medical College， Huazhong University of Science and Technology
2.Engineering Research Center of Nano-Geomaterials of the Ministry of Education， Faculty of Materials Science and Chemistry， China University of Geosciences
3.College of Pharmacy， Gannan Medical University
4.Department of Pathology， Tongji Hospital， Tongji Medical College， Huazhong University of Science and Technology

Chemotherapy resistance and serious side effects are obstacles to chemotherapy in patients with ovarian cancer. Therefore, we developed a multifunctional polymeric nanoparticle (Py-TPE/siRNA@PMP) to relieve resistance and side effects during chemotherapy against ovarian cancer. The Py-TPE/siRNA@PMP contained three parts as follows: (1) the reduction-sensitive paclitaxel polymeric prodrug (PMP) forming a shell of nanoparticle (NP) to prevent the degradation of siRNA in

the core and release paclitaxel (PTX) in tumor cells; (2) a P-glycoprotein (P-gp) siRNA to regulate the P-gp expression for restoring the sensitivity of chemo-resistant tumor cells to chemotherapy; (3) a positively charged aggregation-induced emission fluorogen (AIEgen) Py-TPE designing for tumor imaging and promoting encapsulation of siRNA into the nanoparticles. As a result, Py-TPE/siRNA@PMP can reverse chemotherapy resistance in vivo without significant side effects. These results demonstrated the Py-TPE/siRNA@PMP as a promising strategy for the highly efficient PTX-resistant models treatments and overcoming the shortage generated by chemotherapy in ovarian cancer.

PO-129

卵巢癌中过继性细胞免疫治疗研究近期进展

黄筱雨,洪莉
武汉大学人民医院

【摘要】卵巢癌是女性生殖系统恶性肿瘤中死亡率最高的类型，即使在综合治疗后仍有很高的复发率，因此寻找新治疗方式，提高治疗效果是亟待解决的问题。卵巢癌具有免疫原性，免疫系统在其发生发展中起重要作用。免疫治疗可克服肿瘤异质性，加强免疫识别和杀伤能力，打破免疫抑制和耐受状态。免疫治疗策略中，大量证据表明过继细胞治疗（Adoptive Cell Immunotherapy，ACT）能规避肿瘤逃逸，靶向能力强，在卵巢癌治疗方面有很大的前景。过继性细胞免疫治疗是将患者自身或者同种异体免疫效应细胞进行体外扩增和/或激活再输注，识别和杀伤肿瘤细胞。

从卵巢癌治疗中 ACT 研究现状和进展分析，目前研究致于提高其在卵巢癌治疗中的安全性和有效性，相关研究热点包括：靶点开发、效应细胞基因改造及 ACT 的最佳治疗策略。提高 ACT 靶向性关键在于靶点的选择，准确靶向肿瘤细胞对实际临床应用中避免 “在靶离瘤”、“离靶离瘤”等副作用及提高疗效具重要意义。在不同类型的 ACT 中，以基因工程改造为基础的 CAR 和 TCR-T 由于研究角度和方法选择范围广泛愈加受到研究者的青睐。不仅如此，这些基因修饰效应细胞可以拓展到多种细胞类型。TME 对 ACT 临床疗效有非常重要的影响，是 ACT 临床应用中不可避免的障碍，因此对卵巢癌 TME 的研究深入对 ACT 策略的改进具有重要意义。不同类型 ACT 近期研究中均发现联合治疗不仅能提高疗效，还能避免副作用、改善预后，必须纳入 ACT 临床治疗策略的考虑之中。未来研究不仅应关注于 ACT 的基础研究，更应关注于临床试验及应用中发现的具体问题，包括规避 TME 在临床治疗中的干扰，保证免疫效益因子大规模生产的高效性及安全性及实现 ACT 效应因子的制备同时满足个性化治疗需求及降低成本等。

本综述旨在通过介绍不同类型 ACT 的特点及在卵巢癌治疗研究的现状与进展，分析 ACT 在卵巢癌治疗策略的发展方向，为将来 ACT 在卵巢肿瘤治疗的基础及临床研究和临床应用提供依据。

PO-130

The role of jagged1stat3 signaling in cisplatin resistant ovarian cancer

Jiang Yang,Hong Li
Renmin Hospital of Wuhan University

Jagged1, the essential ligand of the Notch signalling pathway, is highly expressed in metastatic prostate cancer, and its high expression in breast cancer is linked to poor survival rates. However, the mechanism of Jagged1′s involvement in platinum‐resistant ovarian cancer has not been thoroughly elucidated to date. The purpose of the present study was to investigate the roles of Jagged1 in the

platinum resistance of ovarian cancer and its possible mechanisms. Compared with a platinum responsive group of ovarian epithelial cell carcinomas, we found the positive staining intensity of Notch1, Notch2, Jagged1, STAT3 and Epithelial‐mesenchymal transition (EMT) proteins were lower in a platinum‐resistant group. The DDP‐resistant ovarian cancer cell line (C13K) had a higher IC50 of DDP than its parental cell line (OV2008) ($P < 0.05$) and acquired an EMT phenotype and invasive characteristics. Inhibiting or knockdown of Jagged1 expression could not only reduce its capacity of migration and invasion but also reverse EMT and down‐regulate the expression of serine 727‐phosphorylated STAT3 (pS727) at the protein level but not total STAT3 or tyrosine 705‐phosphorylated STAT3 (pY705) in C13K cells. Furthermore, it was found that crosstalk between the Jagged1/Notch and JAK/STAT3 signalling pathways were involved in Jagged1‐promoting EMT in C13K cells. Experiments in vivo showed a reduced micrometastatic tumour burden in the lung, liver and spleen of mice implanted with C13K cells with knocked‐down Jagged1 compared with mice implanted with control cells. All of these results demonstrate that Jagged1 can crosstalk with the JAK/STAT3 pathway, and they all cooperate to promote the aberrant occurrence of EMT, further reinforcing the abilities of invasion and migration of platinum‐resistant ovarian cancer in vivo and in vitro.

PO-131

ATF5 在肿瘤中的研究进展

杨将,洪莉
武汉大学人民医院

信号转导作为细胞的神经中枢网络，在肿瘤的发生发展中具有重要作用。活化转录因子/cAMP 应答元件结合蛋白家族（activating transcription factor/cAMP response-element binding protein，ATF/CREB）可能是此网络的信息整合者，多种细胞信号交汇于此，现已成为肿瘤靶向治疗的一个重要研究方向。ATF5 作为 ATF / CREB 家族重要成员，对压力刺激敏感，可以靶向调控细胞质热休克反应、未折叠蛋白反应、抗凋亡、自噬等信号通路，介导细胞的增殖或凋亡。大部分肿瘤组织中 ATF5 高表达，且表达水平与肿瘤的分级分期呈正相关，通过敲减 ATF5 的表达，肿瘤的凋亡、侵袭能力明显减弱，同时对化疗和放疗更为敏感。本文通过整合近年来国内外的研究成果，对肿瘤中转录因子 ATF5 的分子机制予以综述。

PO-132

Treatment and prevention strategies for patients with gynecological malignancies during the COVID-19 Pandemic

Jiang Yang,Hong Li
Renmin Hospital of Wuhan University

COVID-19 has the characteristics of rapid onset, strong infectivity, and fast course change, which has caused a worldwide pandemic. Now our hospital and department have implemented a series of efficacious stratagems to control the spread of the COVID-19. However, the daily-increasing cases are continuously at an extraordinary level, which means the requirement and mission to prevent and control the pandemic is enormous and urgent. However, because of the urgency of the disease and the timeliness of treatment, gynecological tumor patients cannot be administered in the hospital until the pandemic situation could be controlled entirely. Consequently, this review proposes the following

suggestions and our experience about preventing and controlling of COVID-19 and the treatment for patients with gynecological tumors for gynecology departments.

PO-133

A comparison of extraperitoneal versus transperitoneal laparoscopic or laparotomy para-aortic lymphadenectomy for endometrial carcinoma staging

Wei Zhang,Xiaojun Chen
fudan university shanghai cancer center

Abstract
Objective: To compare the surgical outcomes of extraperitoneal laparoscopic, transperitoneal laparoscopic, and laparotomy para-aortic lymphadenectomy in endometrial carcinoma staging.
Methods: We retrospectively compared extraperitoneal laparoscopy (Group E, n=20), transperitoneal laparoscopy (Group T, n=43), and laparotomy groups (Group L, n=184). Statistical significance was defined as P< 0.05.
Results: The mean number of para-aortic lymph nodes was significantly higher in Group E than in Group T or Group L (11.9, 5.58, and 6.48, respectively; p=0.003 and <0.001, respectively). All patients in Group E were successfully dissected to the renal vessel (RV) level. The mean operation time (minutes) was significantly shorter in Group L than in Groups T and E (103.45, 203.02, and 233.25, respectively; p<0.001 and p=0.045). Estimated blood loss volume (ml) was higher in Group L than in Groups T and E (212.9, 133.3, and 148, respectively; all comparisons p<0.001), and the length of hospital stay (days) was significantly longer in Group L than in Groups T and E (7.83, 5.88, and 5.7, respectively; all comparisons p<0.001).
Conclusion: The extraperitoneal laparoscopic approach for staging endometrial carcinoma harvested higher numbers of para-aortic lymph nodes, with less intraoperative and postoperative complications. This approach could be considered for endometrial carcinoma staging.

PO-134

Appendiceal mucinous neoplasm mimics ovarian tumors: challenge for preoperative and intraoperative diagnosis and clinical implication

Wei Zhang,Xiaohua Wu
fudan university shanghai cancer center

Objective: The aim of this study was to investigate the clinicopathological characteristics of appendiceal mucinous neoplasm that had been preoperatively misdiagnosed as a mucinous ovarian tumor, and to discuss the clinical impacts of misdiagnosis.
Methods: Seventy-eight patients with a final pathologic diagnosis of appendiceal mucinous neoplasm during a 10-year period were retrospectively reviewed. All patients were diagnosed as ovarian tumor before treatment. A univariate analysis was performed to evaluate predictors of the diagnostic accuracy of frozen section.
Results: The patients' median age was 61 years (range, 21-82), and most were diagnosed as low-grade appendiceal mucinous neoplasm (LAMN) (84.62%). The diagnostic concordance between frozen section and final pathology was 56.92%. The most consistent diagnosis was LAMN (64.14%).

Univariate analysis indicated that maximal diameter of ovarian tumor (unilateral), laterality of the ovarian tumors (unilateral or bilateral), and frozen section site (appendix or extra-appendix) were significantly correlated with the accuracy of frozen section diagnosis (all $p<0.05$). Although the diagnostic discordance between frozen section and final pathology was 43.08%, only one patient was clinically impacted because of suboptimal surgery.
Conclusion: Appendiceal mucinous neoplasm should be considered as a differential diagnosis of a pelvic mass in women. For patients who do not require fertility sparing surgery, excision and frozen section of the bilateral ovaries and appendix regardless of the appearance of the appendix might improve the diagnosis. For older patients with peritoneal dissemination, appropriate cytoreductive surgery is recommended to reduce the clinical impact of misdiagnosis.

PO-135
紫杉醇周疗在晚期复发卵巢癌合并恶性肠梗阻中的应用体会

李静
吉林省肿瘤医院

目的：探讨紫杉醇周疗在晚期复发卵巢癌合并恶性肠梗阻患者中的应用疗效及安全性。**方法：**回顾性分析**医院 2016 年 3 月-2018 年 1 月收治的晚期复发卵巢癌合并恶性肠梗阻 42 例，按照治疗方案将患者分为常规治疗组（n=16）和联合化疗组（n=26），常规治疗组采用禁食水，胃肠减压，静脉营养，灌肠，抗炎，生长抑素抑制胃肠道分泌治疗；联合化疗组采用常规治疗联合紫杉醇周疗。分析比较两组患者临床资料、肠梗阻症状缓解、排气排便恢复、X 线肠管积气积液改善、KPS 功能状态评分变化。**结果：**联合化疗组患者腹痛、腹胀缓解率明显高于常规治疗组（$X^2=4.390$,$P=0.036$），差异有统计学意义（$P<0.05$）。联合化疗组患者肛门排气、排便恢复率明显高于常规治疗组（$X^2=4.072$,$P=0.0436$），差异有统计学意义（$P<0.05$）。联合化疗组患者 X 线检查肠管积气改善率明显高于常规治疗组（$X^2=4.627$,$P=0.0315$），差异有统计学意义（$P<0.05$）。联合化疗组患者治疗前后 KPS 功能状态评分均值明显升高（$t=-18.63$,$P=0.0001$），差异有统计学意义（$P<0.05$）。常规治疗组患者治疗前后 KPS 功能状态评分均值无显著升高（$t=-1.379$,$P=0.178$），差异无统计学意义（$P>0.05$）。**结论：**晚期复发卵巢癌合并恶性肠梗阻，常规治疗联合紫杉醇周疗较单纯常规治疗明显改善患者腹痛、腹胀症状，恢复肛门排气、排便，减轻 X 线肠管积气、积液，明显改善患者一般状态和生活质量，为进一步治疗创造条件。

PO-136
周期性禁食在肿瘤中的作用机制

张小艺,洪莉
武汉大学人民医院

肿瘤是威胁人类健康的一类重大疾病。周期性禁食（Periodic fasting）可以通过在肿瘤细胞和正常细胞中的不同机制，发挥延缓肿瘤生长，保护机体正常细胞免受毒性物质侵害的作用，且能协同增加化疗药物等治疗对肿瘤细胞杀伤能力。在多种饮食疗法中，周期性禁食的作用似乎最为明确和有效，逐渐成为肿瘤治疗的可能干预措施。了解周期性禁食的具体作用机制，可以为肿瘤的治疗提供新的思路。

PO-137
KDM2B 通过促进促凋亡基因 hrk 表达诱导卵巢癌体内外凋亡的机制研究

侯海瑞,况燕,杨慧兰,谭彩春,苏善恒,易叶叶
广西医科大学第一附属医院

目的：研究 KDM2B 与 hrk 在卵巢癌体内外的表达情况，同时探究 KDM2B 与促凋亡基因 hrk 对卵巢癌细胞的凋亡的研究。
方法：通过慢病毒降低 KDM2B 在 A2780、SKOV3 卵巢癌细胞株中的表达并构建 shKDM2B-SKOV3 异种移植瘤模型。运用 Western blot、RT- PCR 及免疫组化来探讨卵巢癌细胞敲除 KDM2B 后对促凋亡基因 hrk 表达的影响。在卵巢癌细胞株 A2780、SKOV3 中，采用慢病毒转染 sh-KDM2B, sh-hrk 及 sh-KDM2B、sh-hrk 共转染，并用流式细胞仪及凋亡荧光试剂盒检测卵巢癌细胞的凋亡情况。
结果：Western blot 及 RT-PCR 表明，抑制 KDM2B 的表达使促凋亡基因 hrk 表达升高；异种移植瘤结果显示，shKDM2B-SKOV3 组 hrk 的表达明显强于 shNC-SKOV3（$p<0.05$）；凋亡荧光及流式细胞仪结果表明：共转染 sh-KDM2B 与 sh-hrk 的凋亡率与细胞单独转染 sh-KDM2B 相比明显下降（$p<0.05$）。
结论：我们的结果在体内外水平上均证明了，KDM2B 能通过促进促凋亡基因 hrk 的表达来影响卵巢癌的凋亡，进而影响卵巢癌的发生发展；KDM2B 是一个潜在的卵巢癌治疗靶点。

PO-138
热疗通过下调 DNA 同源重组修复功能和增强氧化应激增加卵巢癌细胞对 Olaparib 的敏感性。

吴骞骞,李晓
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

目的 研究热疗(hyperthermia, HT)是否下调卵巢癌细胞的同源重组(homologous recombination，HR)修复功能并增强细胞内氧化应激以及热疗是否增加卵巢癌细胞对 Olaparib 的敏感性。
材料与方法 本研究采用人卵巢癌细胞株 A2780(HR-proficient)为实验对象，首先通过 RNA-seq 技术，观察 HT 处理后，HR 通路基因和氧化应激相关基因表达是否改变。其次，通过免疫荧光实验检测 HR 通路关键步骤-RAD51 点灶的形成情况，观察 HT 是否下调卵巢癌细胞的 HR。同时利用氧敏感荧光探针检测卵巢癌细胞内 ROS 水平，氧化 DNA 损伤标志蛋白 8-0HdG 的表达情况，观察 HT 是否增强卵巢癌细胞内氧化应激水平。然后，通过彗星实验观察尾长，免疫荧光实验和 WB 实验检测双链 DNA 损伤标志物-γ-H2AX 蛋白水平，观察热疗是否增强 Olaparib 造成的双链 DNA 断裂作用；最后通过 CCK8 和克隆形成实验观察热疗是否增强卵巢癌细胞对 Olaparib 的敏感性。
结果 我们的研究发现经过 HT 处理的卵巢癌细胞 HR 通路基因和氧化应激相关基因表达明显改变。HT 可以抑制卵巢癌细胞中 RAD51 点灶的形成，抑制 HR 修复能力。此外，HT 和 Olaparib 协同增加卵巢癌细胞氧化应激水平。两者协同加重卵巢癌细胞的双链 DNA 断裂。 最后我们证实 HT 可以增强卵巢癌细胞对 Olaparib 的敏感性。
结论 HT 通过下调 DNA HR 修复功能和增强氧化应激增加卵巢癌细胞对 Olaparib 的敏感性。

PO-139
阴超三维联合子宫内膜细胞学检查在子宫内膜癌筛查中的应用

张博慧,廖予妹,张玉雪,杜洁华
郑州大学第二附属医院

目的：探讨阴超三维联合子宫内膜细胞学检查在子宫内膜癌筛查中的临床应用价值。
方法：选取在 2018 年--2020 年期间于我院就诊的 65 例不规则阴道出血、阴道流液等疑似子宫内膜病变的妇女作为研究的对象，采取阴超三维联合一次性宫内膜采集器进行内膜采集，采取的脱落内膜同时行细胞学和组织学检查，宫腔镜或术后组织病理作为诊断的金标准。
结果：阴超三维联合宫内膜采集器：其中有 6 例患者未刷取成功(6／65，9．23％)，病理证实：良性子宫内膜病变患者有 39 例(39／65，60．00％)，不典型增生患者 5 例(5／65，7．69％)，子宫内膜癌患者 15 例(15／65，23.08％)。与宫腔镜或者术后组织病理学结果相比：子宫内膜良性改变、不典型增生、内膜癌的诊断符合率分别为：92．31％(36／39)、80．00％(4／5)、86．67％(13／15）。阴超三维和宫内膜采集器对内膜癌和非典型增生诊断的灵敏度为：93．2％，特异度为 87．7％。
结论：阴超三维联合一次性宫内膜采集器，筛查子宫内膜癌的准确性高，并且其操作简单，是一种较好的子宫内膜癌的筛查方法。

PO-140
SIK2 promotes reprogramming of glucose metabolism through PI3K/AKT/ HIF-1α pathway and Drp1-mediated mitochondrial fission in ovarian cancer

张晓红,刘淑娟
空军军医大学西京医院

Objective: To explore the role of SIK2 in glucose metabolism reprogramming remains unclear in ovarian cancer (OC) cells.
Methods: The role and underlying molecular mechanisms of SIK2 in glucose metabolism reprogramming was systematically explored in OC cells.
Results: SIK2 significantly enhanced the Warburg effect of ovarian cancer cells mainly through two mechanisms.SIK2 upregulated the expression of HIF- 1α by activating the PI3K/AKT signaling pathway, which in turn directly activated the transcription of major glycolytic genes to promote glycolysis. SIK2 promoted mitochondrial fission through phosphorylation of Drp1 at Ser616 site, which in turn inhibited the mitochondrial oxidative phosphorylation. Moreover, the SIK2-mediated reprogramming of glucose metabolism played a critical role in growth and metastasis of OC cells as shown by in vitro tumor growth and metastasis assays.
Conclusions: Our findings demonstrate that SIK2 is a crucial regulator of glucose metabolism in OC cells through activation of PI3K/AKT/HIF-1α pathway and Drp1 phosphorylation-mediated mitochondrial fission, which plays a critical oncogenic role in OC cells.

PO-141
SIK2 调控卵巢癌细胞糖代谢重编程的作用与机制研究

张晓红,刘淑娟
空军军医大学西京医院

目的 阐明 SIK2 调控卵巢癌细胞糖代谢重编程（糖酵解与氧化磷酸）的作用研究
阐明 SIK2 通过调控糖代谢重编程在促进卵巢癌生长与转移的机制研究。
方法 构建 SIK2 干涉/过表达细胞模型，通过试剂盒检测卵巢癌细胞中葡萄糖摄取、乳酸生成、培养基 PH 值的变化，并对糖酵解代谢中间产物及对糖酵解途径调控相关分子进行检测，分析 SIK2 对卵巢癌细胞糖酵解的影响；通过对卵巢癌细胞氧耗速率和线粒体氧化呼吸链复合体活性检测，分析 SIK2 对卵巢癌细胞氧化磷酸化的影响；通过体外实验检测干预糖酵解后对卵巢癌细胞生长和转移的影响。
通过 Western blot 实验检测 SIK2 对 AKT 信号通路相关分子表达的影响，并分析该通路活化在 SIK2 调控的糖酵解中的作用；分析 SIK2 对卵巢癌细胞线粒体分裂融合的影响，并分析线粒体分裂融合在 SIK2 调控的氧化磷酸化中的作用。
结果 过表达 SIK2 后，卵巢癌细胞中葡萄糖含量、乳酸水平上升，培养基 PH 下降，糖酵解代谢中间产物（葡萄糖、丙酮酸、乳酸）含量显著上升，糖酵解途径关键分子（HK2、PFKL、MCT4）表达上调，糖酵解增强；过表达 SIK2 后，卵巢癌细胞耗氧率和线粒体氧化呼吸链复合体活性降低，氧化磷酸化受抑制。体外实验发现，SIK2 通过增强糖酵解促进卵巢癌细胞的生长与转移。
过表达 SIK2 后，p-AKT、p-mTOR 及 Hif-1α 表达明显上调，抑制 PI3K/AKT 后，SIK2 激活的糖酵解被显著抑制，提示 SIK2 可能是通过激活 PI3K/AKT/Hif-1α 信号通路促进卵巢癌细胞糖酵解；过表达 SIK2 后，线粒体长度变短，DRP1 的 616 位点的磷酸化水平显著上升，抑制 DRP1 可显著逆转 SIK2 抑制的线粒体氧化磷酸化，提示 SIK2 可能通过促进线粒体分裂抑制卵巢癌细胞的氧化磷酸化。
结论 SIK2 表达上调一方面通过激活 PI3K/AKT/Hif-1α 的信号通路促进糖酵解，另一方面通过磷酸化 DRP1 介导的线粒体分裂而抑制氧化磷酸化，最终促进了卵巢癌细胞的生长与转移。

PO-142
The accuracy of HPV E6/E7 RNA examination using in situ hybridization in the diagnosis of cervical intraepithelial neoplasias

Huimin Bai,Huile Chang
Beijing Chao-yang Hospital， Capital Medical University， Beijing， China

Objective: The present study was aimed to compare the protein profiles between paired samples of cervical cancer (CC) and paracancerous tissue through quantitative proteomics and try to eveluate the potential role of the differentially expressed proteins (DEPs) in the tumorigenesis and treatment of CC.
Materials and methods: Proteomic profiles of three paired samples of CC and paracancerous tissue were detected and compared through quantitative proteomics. The gene functions of the identified DEPs were analyzed through bioinformatics analysis in combining with bibliographical information. The expression of the DEPs was detected through IHC examination in the CC tissue arrays. The relationship between the DEPs expression and patients' clinicopathological characteristics and prognosis were evaluated through Spearman rank correlation test and Kaplan-Meier survival analysis respectively.The effect of the candidate DEP on the biological characteristics of human CC cell line SIHA was eveluated through in vivo and in vitro cell function experiments.
Results: According to the TMT (Tandem Mass Tags) ratios (≥1.5 or ≤0.5), a total of 129 proteins were found to be differentially expressed in all the 3 paries of samples with a p value <0.05. To investigate

the gene functions of these DEPs in signal transduction in tumor cells, Kyoto Encyclopedia of Genes and Genomes (KEGG) pathway analysis was performed. Three DEPs, including HRAS, DUSP7, and PLD1, as well as P-ERK1/2, participating in RAS pathway, were selected for further verification. Western blot and IHC staining analyses consistently confirmed the results of the quantitative proteomic analysis that HRAS, P-ERK1/2, and PLD1 levels were increased, whereas DUSP7 level was decreased in CC tissue compared with the paried normal paracancerous tissue. Additionally, the decreased expresion of DUSP7 (P=0.045 and 0.044, respectively) and increased expresion of PLD1 (P=0.046 and 0.028, respectively) were significantly associated with a tumor size >2 cm and parametrial infiltration.The decreased expresion of DUSP7, and increased expresion of PLD1 and p-ERK1/2 were adversely related to patients' relapse (P=0.003, 0.040, and 0.001, respectively) and survival (P=0.034, 0.001, and 0.006, respectively). The expression of HRAS and p-ERK1/2 was decreased in DUSP7-SIHA cells compared to NC-SIHA cells (P=0.0003 and 0.0026, respectively). The difference of expression level of PLD1 between the two cell groups was not statistically significant (P=0.0947). Biological functions in vitro, including invasion, migration, and proliferation, and tumor formation in vivo were decreased in the DUSP7-SIHA cells (all P<0.05), yet increased in the siDUSP7-SIHA cells (all P<0.05).

Conclusions: DUSP7 was decreased in cervical cancer. Overexpression or down-expression of DUSP7 had a potential role in inhibiting or increasing the anchorage-independent growth viability of SIHA cells. The biological function of DUSP7 was possibly achieved through dephosphorylation of the ERK1/2 and inactivation of the RAS pathway. Up-regulating the expression of DUSP7 may be potential useful in the prevention or treatment of CC.

PO-143
The Feasibility of Loop Electrosurgical Excision Procedure in Managing Stage IA1 Cervical Squamous Cell Cancer

Huimin Bai,Shuya Chen,Zhang Zhenyu
Beijing Chao-yang Hospital， Capital Medical University， Beijing， China

Objective: This study was aimed to evaluate the feasibility of LEEP as the initial treatment for patients with FIGO stage IA1 MISCC with negetive lymph vascular space invasion (LVSI) .

Methods: Medical records of patients with FIGO stage IA1 MISCC with negetive LVSI, who received LEEP as initial treatment from February 2006 to December 2017, were retrospectively reviewed. The demographic characteristics as well as oncological and reproductive outcomes were retrospectively evaluated.

Results: The mean age of patients at diagnosis was 35.4 years, and 36 patients were nulliparous. Multifocal lesions were identified in 15 (13.8%) patients. The mean cone depth was 17.4 mm. Resection margins were positive, unevaluable and negative in 20 (18.3%), 6 (5.5%) and 83 (76.1%) cases, respectively. Salvage LEEP, CKC and simple hysterectomy were subsequently administrated in 17 cases, 1 cases and 6 cases, respectively. Residual disease was identified in 13 patients. Residual disease rates for patients with positive/unevaluable and negative margins were 84.6% and 18.2% (P=0.003), respectively. Eleven of 24 (45.8%) patients were over treated by second procedures. for the follow up period was 43.0±?? months. No relapse was identified. Of the 20 patients who desired to become pregnant, 15 (75.0%) successfully conceived, and the full-term live birth rate was 93.3% among this subgroup.

Conclusions: Initial LEEP with clear margin was safe and adequate as the definitive treatment for FIGO stage IA1 MISCC patients without LVSI. Patients with involved endocervical margin should be brought to second procedures. Multifocal MISCC cases, treated by LEEP meticulously, had favorable prognosis similar as unifocal lesions. The obstetric outcomes after LEEP were satisfactory. Long-term surveillance was necessitated.

PO-144

宫颈腺癌患者卵巢转移情况的临床分析

陈伟婷,林玲,陈炜,刘彬
福建省肿瘤医院

目的：分析宫颈腺癌卵巢转移率及高危因素，探讨宫颈腺癌保留卵巢的可行性。
方法：回顾性分析 2008 年至 2019 年于福建省肿瘤医院行手术治疗(所有患者均切除双附件）的宫颈腺癌患者的病理资料，对宫颈腺癌卵巢转移情况及高危因素进行统计学分析。
结果：232 例宫颈腺癌患者中出现卵巢转移的患者有 3 例，卵巢转移率为 1.29%。单因素分析显示：宫颈间质浸润深度大于 1/2、宫体累及、淋巴结转移皆是宫颈腺癌卵巢转移的高危因素。多因素分析显示：淋巴结转移是宫颈腺癌卵巢转移仅有的独立高危因素。
结论：早期宫颈腺癌患者卵巢转移率低，宫颈间质浸润深度小于 1/2、无宫体侵犯、无淋巴结转移的患者保留卵巢是安全的。

PO-145

The Diagnostic Value and Potential Clinical Significance and Diagnostic Value of Immunohistochemical Markers of Endometrioid Cancer for Mucinous Metaplasia and Mucinous Adenocarcinoma of the Endometrium

Huimin Bai,Shuya Chen
Beijing Chao-yang Hospital， Capital Medical University， Beijing， China

Abstract: Mucinous adenocarcinoma of the endometrium (MAE) is a rare kind of type II endometrial cancer. Complex mucinous metaplasia (MM) is its potential precursor. In this review, the diagnostic value and potential clinical significance of several IHC markers, commonly used for endometrial endometrioid carcinoma (EEC), in the detection of MAE are evaluated. Genetically, KRAS mutation is frequently detected in MAE and complex MM, and is associated with resistance to EGFR targeted treatment. Ki-67 proliferation indices significantly abate in both MM and MAE comparing with EEC, while $P16^{INK4A}$ staining is strong and diffuse, both presenting as effective discriminating markers for MAE. Expression of ER and PR decreased in mucinous areas when compared with endometrioid region, and putative use of exogenous estrogen and gestagens for MAE was further discussed. Loss of PTEN and PAX2, prominent in EEC, is also remarkable in complex MM. HPV DNA and p53 seem to be negative in this cancer subtype. The expression of vimentin harbored contradictory results, necessitating further evaluation.

PO-146

Bioinformatics analysis of PD-1 co-expression genes and their regulatory network in endometrial cancer

Lina Wang,Ailin Yao,Xinchun Bi,Fang Wang,Aihua Zhang
Third Central Hospital of Tianjin

Abstract Introduction and Hypothesis: This study aimed to construct a network of programmed cell death protein 1 (PD-1) co-expression genes and screen potential biomarkers for PD-1 expression in

endometrial cancer（EC）by bioinformatics analysis. Moreover, the genes and pathways participating in PD-1 and regulating the tumor immune status were determined. Methods: The EC transcriptomic dataset in TCGA was selected to retrieve gene sets on the cBioPortal platform, where PD-1 co-expressional genes were acquired. The co-expressional genes were subjected to GO and KEGG enrichment analysis using the DAVID database. The target protein-protein interaction (PPI) network was then constructed using Cytoscape 3.7.1 software and the hub genes were screened. Results: A total of 976 co-expression genes were obtained, enrichment analysis showed that PD-1 co-expressed genes were significantly enriched in integral components of cell structure, the interaction of cytokines with cytokine receptors, chemokine signaling pathways, and cell adhesion molecules (CAMs). Ten hub genes were obtained by node degree analysis. CD3E is an important gene related to the prognosis of EC. CD3E gene is involved in the immune process, and its expression is related to PD-1 (Pearson correlation coefficient is 0.82, P value<0.01). Those with low CD3E gene expression in EC have a poor prognosis. Conclusions: PD-1 co-expression hub genes are related to immunity, among which CD3E is prognostic marker with the possibility to be involved in PD-1/PD-L1-induced tumor immune escape. This gene provides new clues to study the mechanism and precision target medicine of PD-1/PD-L1 in EC.

PO-147
图像引导调强放疗在宫颈癌 FIGO IIIC1 期患者中的应用：疗效、毒性以及预后研究

刘晓亮,胡克,张福泉
中国医学科学院 & 北京协和医学院 北京协和医院 放射治疗科

目的：淋巴结转移是宫颈癌重要的预后不良因素，最新的 FIGO2018 版分期也是将淋巴结转移的宫颈癌患者定义为 IIIC 期，其中单纯盆腔淋巴结转移的患者归为 IIIC1 期。对于 IIIC1 期患者，其治疗选择多根据原发肿瘤 T 分期而定。目前报道调强放疗在 IIIC1 期宫颈癌患者中应用的研究较少。此外，自宫颈癌新版 FIGO 分期发布以来，已有多位学者发现 IIIC1 期患者存在很大的异质性。本研究旨在探讨调强放疗在宫颈癌 IIIC1 期患者中的临床应用，重点关注于临床疗效、毒性，以及预后因素。
方法：回顾性分析自 2008 年 1 月至 2017 年 12 月，在北京协和医院放疗科接受根治性放疗的宫颈癌 FIGO IIIC1 期患者。外照射采用调强放疗技术（IMRT），盆腔放疗剂量 Dt50.4Gy/28 次，盆腔转移淋巴结予以同步加量至 Dt59-61Gy/28 次。内照射采用 192Ir 放射源，予以 A 点 Dt30-36Gy/5-7 次。同步化疗首选顺铂每周方案（30-40mg/m2）。采用 KM 法计算患者总生存率（OS）、无病生存率（DFS）、局部控制率（LC）和局部区域控制率（LRC）。采用 COX 回归模型确定患者的不良预后因素。
结果：共入组 502 例 IIIC1 期患者，中位随访时间 42.1 月（2.3-137.3 月），全组 3 年 OS、DFS、LC 和 LRC 分别为 81.7%, 71.4%, 89.9%和 86.1%。预估的 5 年 OS、DFS、LC 和 LRC 分别为 75.5%, 68.6%, 89.9%和 84.3%。急性期 G3 及以上血液学、腹泻发生率分别为 53.5%和 9.5%。迟发 G3 及以上消化系和泌尿系毒性发生率分别为 2.7%和 0.8%。多因素分析表明，肿瘤 T 分期、盆腔阳性淋巴结数目、同步化疗周期数是影响 OS 的独立预后因素；盆腔阳性淋巴结数目、同步化疗周期数是影响 DFS 的独立预后因素；肿瘤 T 分期是影响 LC 的独立预后因素；LRC 则与阳性淋巴结数目和同步化疗周期数密切相关。
结论：宫颈癌 FIGO IIIC1 期患者接受调强放疗可取得很好的临床疗效，且耐受性良好；此类患者的原发肿瘤 T 分期和淋巴结数目均影响预后，这也进一步提示该患者异质性较大，值得进一步进行亚分期；同步化疗周期数与预后密切相关，建议至少做够 4 周期同步化疗。

PO-148
附件受累的IIIa 期子宫内膜样腺癌术后放疗疗效分析

李慧灵,李秀华,杨梅春,林惠娟,谢榕
福建省肿瘤医院

【摘要】 **目的** 回顾性分析附件受累的IIIa 期子宫内膜样腺癌术后放射治疗的疗效。**方法** 从 2007 年 01 月至 2016 年 12 月选取我院收治的 98 例IIIa 期(2009 FIGO 分期)子宫内膜样腺癌患者，年龄 35～80 岁，中位年龄 54 岁。均行手术分期并经病理学检查证实附件受累。术后放疗(radiotherapy RT group)60 例，无放疗(non-radiotherapy non-RT group)38 例。放射治疗采用外照射±内照射治疗，外照射范围包括腹主动脉旁淋巴结引流区、盆腔淋巴结引流区，阴道断端、部分阴道、瘤床及宫旁，每次 DT180～200cGy，总 DT 4000～5040cGy。内照射作为外照射后的补量治疗，目的补充宫旁、阴道断端和阴道表面剂量，1～3 次，剂量 600～2000cGy。RT 组 45 例联合化疗，non-RT 组 27 例行化疗，化疗方案为紫杉醇+铂类或多西他赛+铂类。**结果** 全组共 26 例死亡。98 例患者 5 年总生存率 77.59%，5 年 DFS 为 63.71%。RT 组 5 年 OS 为 85.68%，non-RT 组 5 年 OS 为 63.84%，术后放疗疗效优于无放疗（P=0.038）。RT 组 5 年 DFS 为 67.51%，non-RT 组 5 年 DFS 为 57.39%，两组相比较无统计学差异（P=0.611）。局部复发和远处转移是治疗失败的主要原因。局部复发部位主要包括阴道断端，盆腔，盆腔淋巴结，腹主动脉旁淋巴结。治疗副反应能耐受，RT 组未出现 IV 度放射性膀胱炎和直肠炎。**结论** 对于附件受累的IIIa 期子宫内膜样腺癌术后病理是 G3、深肌层受侵患者，术后放疗可以提高疗效，可能使生存获益，但仍需大样本病例证实。

PO-149
经脐单孔腹腔镜在妇科附件良性肿物的临床应用价值

郭瑞霞,付小雨
郑州大学第一附属医院

目的：研究经脐单孔腹腔镜在妇科附件良性肿物的临床应用价值。**方法:**对 2017 年 5 月至 2019 年 3 月于郑州大学第一附属医院行附件良性肿物手术的患者进行回顾性研究，其中 TU-LESS 组 68 例采用经脐单孔腹腔镜手术进行治疗，对照组 140 例则行普通腹腔镜手术，同期收集并比较两组患者的术中、术后以及随访情况等。**结果**:两组患者均顺利完成手术、无一增加辅助穿刺孔或中转开腹。两组患者 TU-LESS 组不同疾病手术时间〔单侧卵巢成熟性畸胎瘤剥除术：（49.7±7.3）min/（33.6±7.2）min；双侧卵巢成熟性畸胎瘤剥除术（68.2±7.3）min/（50.1±4.2）min;单侧浆液性囊腺瘤剥除术（68.2±7.3）min/（50.1±4.2）min;输卵管整形术（33.6±7.2）min/（15.6±4.5）min；输卵管切除术（33.1±4.9）min/(15.5±7.1)min〕均长于对照组（P ＜ 0.05），而 TU-LESS 组具有疼痛减轻｛术后 24h 疼痛视觉模拟评分(Visual analogue scale, VAS）〔（3.23±0.18）/(3.45±0.20)〕｝、以及术后切口的美容满意度较高｛术后美容满意度评分〔（8.95±0.21）/（8.70±0.34）〕｝等明显优势（P ＜ 0.05）。两组患者的术中出血量、术后镇痛药（包括盐酸曲马多针、氟比洛芬脂注射液）的使用、术后下床活动时间、术后 24h 发热等围手术期等情况比较均无明显差异（P ＞ 0.05）；TU-LESS 组与对照组患者术后随访 5 个月，均无内脏损伤、切口疝等并发症发生。**结论：**使用经脐单孔腹腔镜来进行附件良性肿物手术治疗不仅具有减轻术后疼痛以及美容等优势，随着技术精进，单孔腹腔镜手术的应用将更加广泛。

PO-150
全子宫切除术后阴道高级别鳞状上皮内病变临床分析

李碧军,郭瑞霞
郑州大学第一附属医院

目的：探讨全子宫切除术后阴道高级别鳞状上皮内病变（high-grade squamous intraepithelial lesion, HSIL）的临床特点及治疗方法。
方法：回顾性分析 2012 年 1 月至 2018 年 6 月郑州大学第一附属医院收治的子宫切除术后经阴道镜下活检病理确诊的 85 例阴道 HSIL 患者的临床资料。
结果：HPV 单独筛查的阳性率为 89.41%；细胞学单独筛查的阳性率为 82.35%；HPV+细胞学联合筛查的阳性率为 100%。因非宫颈疾病切除子宫的患者术后发现阴道 HSIL 的平均时间（107 个月）长于因宫颈疾病切除子宫的患者（28.92 个月），差异有统计学意义（P ＜0.05）。激光治疗治愈率 80.39%（41/51），切除性治疗治愈率 85.29%（29/34）,差异无统计学意义（P ＞0.05）。术后 6 个月复查，激光治疗组 HPV 转阴率 39.22%（20/51）低于切除性治疗组 HPV 转阴率 67.65%（23/34），差异有统计学意义（P ＜0.05）。激光治疗的平均费用 5945.53 远低于切除性治疗平均费用 21886.44 元，差异有统计学意义（P ＜0.05）。
结论：HPV 联合细胞学检查为筛查子宫切除术后阴道 HSIL 的有效手段，激光治疗和切除性治疗均为治疗时的有效方法，前者花费较少，后者 HPV 转阴率更高，具体应结合病史及阴道镜评估结果选择合适的治疗方式，因其有较高复发率，治疗后应严密随访。

PO-151
P16/Ki67 双染、HPV E6/E7mRNA 检测对于 TCT 诊断为 NILM、ASCUS、LSIL 患者的分流作用

李碧军,郭瑞霞
郑州大学第一附属医院

目的：探索免疫细胞化学 p16/Ki-67 双染色法、高危 HPV E6/E7 mRNA 是否能提高 TCT 联合 HPV 检测对 HSIL、宫颈癌（统称 HSIL+）的筛查效能。
方法：收集 2018 年 10 月—2019 年 10 月在郑州大学第一附属医院妇科门诊就诊的细胞学检查结果为 NILM、ASCUS、LSIL，且 HPV 结果为阴性或其他高危阳性的患者共 414 例，对每位患者的宫颈脱落细胞分别进行 p16/Ki-67 双染检测、E6/E7 mRNA 检测，并行阴道镜下活检，以病理诊断为“金标准”，采用灵敏度、特异度、阳性预测值、阴性预测值和受试者工作特征（ROC）曲线下面积（AUC）比较不同联合诊断方式的筛查效能。
结果：①以活检病理为金标准，双染检测中 LSIL 的阳性率 14.39%（38/264）显著低于 HSIL+ 64%（96/150），P＜0.05；E6/E7 检测中 LSIL 的阳性率 65.90%（174/264）与 HSIL+ 60%（90/150）无明显差异，P＞0.05。②双染和 E6/E7 检测的灵敏度分别为 64%、60%，两者比较无显著差异（P＞0.05）。双染检测的特异度、阳性预测值、阴性预测值、AUC（85.61%、71.64%、80.71%、0.748）均显著高于 E6/E7 检测（46.67%、34.09%、60%、0.530），P 均＜0.05。③TCT 联合 HPV 检测的灵敏度（90%）显著高于 TCT 联合 HPV 联合双染检测（78.67%）和 TCT 联合 HPV 联合 E6/E7 检测（74%），P 均<0.017。④TCT 联合 HPV 联合双染检测的特异度、阳性预测值、阴性预测值、AUC（50.37%、48.37%、80.61%、0.645）均显著高于 TCT 联合 HPV 联合 E6/E7 检测（26.14%、36.27%、63.89%、0.501）和 TCT 联合 HPV 检测（7.95%、35.71%、58.33%、0.510），P 均＜0.017。

结论：在宫颈癌筛查结果为 HPV（其他高危阳性/阴性）、TCT（≤LSIL）时，再进行 p16/Ki67 双染联合检测，能保持较高的灵敏度还能显著提高特异性，其筛查效能显著优于 TCT 和 HPV 联合筛查，有效降低阴道镜转诊率，避免过度诊疗；同时进行 E6/E7 检测，也能提高筛查的特异性，其筛查效能与 TCT 和 HPV 联合筛查相比无明显提高。

PO-152
PAX1 甲基化检测对细胞学轻度异常（ASCUS、LSIL 和 ASC-H）患者的分流作用

李碧军,郭瑞霞
郑州大学第一附属医院

目的：探讨配对盒基因家族 1（PAX1）甲基化检测在细胞学轻度异常女性中的分流作用。
方法：选择 212 例细胞学（TCT）诊断为意义未明的不典型鳞状细胞(ASCUS) 、不除外高度鳞状上皮内病变（ASC-H）、低度鳞状上皮内病变(LSIL)的病例进行 PAX1 甲基化检测和高危 HPV 检测，然后进行阴道镜检查和宫颈活检。以病理活检为金标准，比较 PAX1 和高危 HPV 检出 HSIL+（HSIL 和宫颈鳞癌）效能。
结果：LSIL 组（CT 和 LSIL）PAX1 阳性率 7.25%（10/138）显著低于 HSIL+（HSIL 和 CSC）组 86.49%（64/74），P＜0.05。LSIL 组 HPV 阳性率 69.57%（96/138）显著低于 HSIL+组 89.19%（66/74），P＜0.05。PAX1 诊断 HSIL+的敏感性（86.49%）与高危 HPV（89.19%）相比，无显著差异（P＞0.05）；特异性、准确性和 AUC （92.75%、90.56%、0.896）均显著高于高危 HPV（30.43%，50.94%和 0.598），P 均＜0.05。当使用高危 HPV 阳性进行分流时阴道镜转诊率为 76.41%（162/212），高于 PAX1 阳性进行分流时阴道镜转诊率 34.91%(74/212)。细胞学结果分别为 ASCUS、LSIL、ASC-H 时，PAX1 诊断 HSIL+准确性（84.21%、91.30%、100%）均显著高于高危 HPV（63.15%、34.78%、63.64%），P 均＜0.05。
结论 ：PAX1 基因的甲基化具有较高的灵敏度和特异度，在轻度细胞学异常（ASCUS、LSIL、ASC-H）女性中通过 PAX1 甲基化检测分流可提高对 HSIL+的检出率，其诊断效能优于高危 HPV 检测，并且能降低一定的阴道镜转诊率。

PO-153
等效均匀剂量优化法在宫颈癌调强放疗计划优化中的应用

冀传仙
郑州大学第一附属医院

目的:评估等效均匀剂量(EUD)优化法在宫颈癌调强放疗计划优化中的作用.**方法**:随机抽取 10 例治疗计划基于剂量-体积优化法得到,且已完成容积调强放射治疗（VMAT）的宫颈癌病例,将治疗计划中的危及器官膀胱、直肠、股骨头以及脊髓等的约束条件改为 EUD 约束,保持其它优化条件不变,设计出新的治疗计划,比较新旧治疗计划的剂量学差异.**结果**:在靶区剂量分布没有差别甚至更好的情况下,基于 EUD 优化能够使膀胱的 V40 和 V50 分别降低 3.5%、1.9%,直肠的 V40 和 V50 分别降低 5.1%、0.8%,脊髓的 D1cc 降低 5Gy,左右股骨头平均剂量 Dmean 降低 4.5%，差异均有统计学意义(P＜0.05).**结论**:EUD 优化能够有效降低膀胱、直肠、股骨头以及脊髓的受照剂量,能够更好地保护危及器官，减少放疗毒副反应,同时也为进一步提高肿瘤靶区剂量,提高肿瘤局部控制率提供了可能.

PO-154
早期宫颈神经内分泌小细胞癌的预后因素与治疗模式： 单机构回顾性分析和文献回顾

吴卿,李从铸
汕头大学医学院附属肿瘤医院

研究目的：回顾并分析早期宫颈神经内分泌小细胞癌的临床病理信息，总结临床病理特点，探讨治疗模式的有效性及相关的预后因素。
材料与方法：收集从 2012 年 10 月 01 日起，截止 2018 年 10 月 31 日初治于汕头大学医学院附属肿瘤医院肿瘤妇科的共 13 例宫颈神经内分泌癌患者的信息。随访截止时间为 2019 年 11 月 01 日。SPSS 20.0 软件用来进行统计学分析，检验方法选用 Fisher 检验，Kaplan-Meier 法，log-rank 检验和多因素回归分析。
结果：（1）病人信息：平均年龄 46.3 岁（30-56 岁），按 FIGO2009 版分期，全部属于Ⅰ期至Ⅱa 期，按FIGO2018版分期，Ⅰ期7例，Ⅲc期6例。术后病理：宫颈间质浸润深度大于等于1/2 占比69.2%；淋巴脉管浸润阳性率达 76.9%，淋巴结转移率达 61.5%；（2）治疗模式：所有患者均接受了根治性的手术治疗及辅助化疗，3 名患者接受了新辅助化疗，76.9%的患者接受了辅助放疗；(3)预后：截止随访日期 2019 年 10 月 31 日，无患者失访，总生存时间为 2-85 个月。9 例患者无瘤生存，4 例患者发生远处转移并死亡。（4）预后因素：单因素生存分析表明，宫颈神经内分泌癌患者的预后与临床分期和淋巴结转移相关（P＜0.05），多因素分析中未发现独立预后影响因素。
结论：宫颈神经内分泌小细胞癌在疾病早期就具有高侵袭性，预后较差。FIGO2018 版分期更加客观。根治性手术联合以 EP 方案为主的 4 至 6 程的序贯辅助放化疗可能是目前最佳的治疗方案。临床分期及淋巴结转移可能是影响预后的相关因素。

PO-155
MMP3 expression is correlated with cell polarity and may leads to poor prognosis in invasive ductal carcinoma of the breast

Bingbing Liu,Ling Chen,Lin Zhang,Yan Shen,Yixin Liu
Tianjin Central Hospital of Gynecology Obstetrics

Breast cancer is one of the high incidence malignant tumors in female. Invasion and metastasis are the most important factors that affect the outcome and prognosis of patients with breast cancer. When the polarity of tumor cells changed, it is more likely to invasion and metastasis. Our previous literature has proved that partial reverse cell polarity (PRCP) was related to lymph node metastasis in breast cancer.
Objects PRCP in IDC-NOS of the breast may play a role in lymphatic tumor spread. MMP3 is a kind of polarity related protein, which is a member of Scribble complexes. We here investigated the expression of MMP3 and PRCP status in IDC-NOS and evaluated their value for invasion, metastasis and prognosis in breast cancer.
Materials and methods The association of the expression of MMP3 and MUC-1 with clinicopathological parameters and prognostic significance was evaluated in 102 cases of IDC-NOS paraffin embedded tissue by immunohistochemical method. The MMP3 mRNA expression was measured by real-time polymerase chain reaction in 30 breast cancer patients, which were divided into

two groups of PRCP and no PRCP. We use siRNA to knockdown MMP3 in MCF-7 and MDA-MB-231, and then detected the migration and invasion capacity of the cells compared to negative control(NC) cells by wound healing and transwell assays.
Results We found that lymph node metastasis of PRCP patients was higher than no PRCP patients(P<0.05). The expression of MMP3 was downregulated in PRCP group than no PRCP group(P<0.05), and there was correlationship between the expression of MMP3 and PRCP status(P<0.05). The level of MMP3 mRNA expression in PRCP group was significant lower compared to no PRCP group (P<0.05).Loss of MMP3 expression increased the migration and invasive ability of MCF-7 and MDA-MB-231 cells compared with NC cells. Down-regulated expression of MMP3 correlates with poor prognosis of IDC-NOS patients(P<0.05).
Conclusion Our results showed that the expression of MMP3 was down-regulated in IDC-NOS with PRCP than no PRCP group. Down-regulated expression of MMP3 may leads to polarity change and increased the invasive ability of breast cancer.The expression of MMP3 was correlated with lymph node metastasis and polarity change in IDC-NOS and may lead to poor prognosis of breast cancer. Therefore, MMP3 could be a therapeutic target for breast cancer.

PO-156
初次肿瘤细胞减灭术有残留的铂敏感复发性卵巢癌患者进行二次肿瘤细胞减灭术的价值

窦莎,李艺
北京大学人民医院

背景和目标（Background and Objective）：卵巢癌是死亡率最高的妇科恶性肿瘤，多数患者会面临复发。二次肿瘤细胞减灭术是治疗复发性卵巢癌的方法之一，但其是否能够改善患者生存尚有争议。多个回顾性研究认为经选择的患者可从二次肿瘤细胞减灭术中获益。目前国际上有 3 个大型的随机临床试验评价二次肿瘤细胞减灭术是否改善患者预后，得出的结论不尽相同。在真实世界中，仅有约 40%患者在初次肿瘤细胞减灭术达到肉眼无残留，更多患者初次肿瘤细胞减灭术存在残留病灶，本文通过回顾性研究，探讨后者进行二次肿瘤细胞减灭术的价值。
方法（Methods）：回顾性分析从 2010 年 1 月至 2017 年 12 月在我中心治疗的复发性卵巢癌患者，满足以下条件：上皮性癌，初始治疗中包括肿瘤细胞减灭术+以铂为基础的化疗，第 1 次复发，铂敏感复发，ECOG 0 分，腹水＜500ml，评估可完全切除。根据初次肿瘤细胞减灭术病灶残留情况分为 2 组，每组又根据治疗方法分为 2 个亚组（接受二次肿瘤细胞减灭术+化疗和仅化疗），比较不同组别之间的总生存时间。
结果（Results）：病历和随访资料完整的患者共 155 例，初次肿瘤细胞减灭术（PCS）无残留病灶者 75 人(PCS R0 组，R0 代表无残留病灶)，其中二次肿瘤细胞减灭术+化疗者 59 人，仅化疗者 16 人；初次肿瘤细胞减灭术有残留病灶者 80 人（PCS R1 组，R1 代表有残留病灶），其中二次肿瘤细胞减灭术+化疗者 60 人，仅化疗者 20 人。所有二次肿瘤细胞减灭术的完全切除率为 76.5%，安全性可接受。PCS R1 组中，二次减瘤术+化疗者与仅化疗者的中位总生存时间分别为 47 个月和 29 个月，提示这类患者可能从二次减瘤术中获益。另外，PCS R1 组接受二次肿瘤细胞减灭术的患者中，无残留病灶者 41 人，有残留病灶者 19 人，中位总生存时间分别为 50 个月和 47 个月，无统计学差异，提示 PCS R1 患者在二次减瘤术应尽可能做到无残留，但若手术难度大，脏器切除应以不影响后续治疗和生活质量为首要考虑。
结论（Conclusions）：初次肿瘤细胞减灭术中有残留病灶，但其他条件符合 AGO 标准且为铂敏感复发，这类复发性卵巢癌患者行二次肿瘤细胞减灭术可能优于仅化疗，并且这部分患者二次减瘤术做到 R0 或 R1，总生存时间无显著性差异，切除脏器应以是否影响后续药物治疗及生活质量为首要考虑。

PO-157

外阴鳞状细胞癌 4 例临床分析

杨妮,陈灼英
宁德市闽东医院

通过分析 4 个外阴鳞状细胞癌病例，从外阴癌的临床表现、诊断、辅助检查、治疗等方面总结分析。根据患者不同情况采取个体化治疗，以提高患者生活质量、减少术后并发症为我们的终极研究目标。近年来，外阴癌的手术方式趋向于微创化发展，因其特有的优势（创伤小、出血少、术后恢复快），以及手术部位特殊，相对于开放性手术被患者所接受。

PO-158

术前 PLR 和 SII 与早期宫颈癌预后的关系

刘银霞,李征宇
四川大学华西第二医院

目的：免疫相关因子对于疾病的预后作用广受关注，血小板/淋巴细胞比（platelet-lymphocyte ratio，PLR）对宫颈癌患者的预后作用被部分学者研究，而全身免疫炎症指数（neutrophil×platelet/lymphocyte，SII）与宫颈癌患者预后的关系却极少被研究。我们设计了一个回顾性研究，以探讨术前 PLR 和 SII 与早期宫颈癌患者预后的关系。方法：2010 年到 2011 年，共 479 名早期宫颈癌患者于四川大学华西第二医院行手术治疗。根据这些患者的手术时间将其分为 2 组-研究组（254 名患者，2010 年手术）和验证组（225 名患者，2011 年手术）。根据 ROC 曲线计算 PLR 和 SII 的截断值。使用 Kaplan-Meier 方法分析患者的临床病理特征与总生存率之间的关系，使用单因素和多因素 Cox 回顾分析计算患者临床病理特征对总生存率的预测作用。结果：根据 ROC 曲线计算出 PLR 和 SII 的截断值分别为 187 和 412。Kaplan-Meier 方法结果显示，在实验组和验证组中，PLR≥187（p=0.022 和 p=0.034）、FIGO 分期 II 期（p<0.001 和 p=0.003）、淋巴脉管浸润（p<0.001 和 p=0.001）和淋巴结转移（p<0.001 和 p<0.001）均与不良总生存率相关。单因素分析结果表明，升高的 PLR（≥187）在实验组和验证组中均与不良预后相关（p=0.027 和 p=0.043），而 SII 在两组中均与预后无关（实验组，p=0.583 和验证组，p=0.115）。而在多因素分析中，PLR 和 SII 在两组中都与总生存率无关。结论：在行手术治疗的早期宫颈癌患者中，术前 PLR 跟预后相关，而 SII 跟预后无关。

PO-159

Preoperative low hematocrit is an adverse prognostic biomarker in ovarian cancer

Yingchao Yang,Junchen Chen,Sha Dou,Yuanfen Wang,Yi Li,Heng Cui
Peking University People's Hospital

Objective: The study aimed to investigate the prognostic value of preoperative hematocrit (HCT) on the survival of epithelial ovarian cancer (EOC) patients.

Methods: Patients who underwent primary debulking surgery (PDS) in our institution, from January 2010 to December 2015, were enrolled. The preoperative HCT, hemoglobin (Hb), tumor stage, ascites volume, age, albumin, BMI, ASA score, diabetes and other factors were collected and analyzed to find the risk factors for poor prognosis of EOC patients using Cox regression. Survival analysis was conducted with Kaplan-Meier method and log-rank test.

Results: 192 patients met the inclusion criteria. HCT < 35% (P = 0.031, HR: 1.715, 95%CI: 1.050-2.802) was an independent risk factor for poor overall survival in patients. The mean survival time was 83.7 months in patients with preoperative HCT ≥ 35% and 61.7 months in patients with HCT < 35% (P = 0.002). Patients with low HCT (< 35%) had a poor prognosis compared with patients with normal HCT, specifically in the patients of stage III/IV, age ≥ 65 years, BMI ≥ 25.0 kg/m2, ascites volume ≤ 500 mL, ASA score < 3, albumin ≥ 35 g/L and nondiabetic. Low HCT was more likely to occur in patients with advanced stage (III/IV), anemia (Hb < 110 g/mL), low albumin (< 35 g/L), high ASA score (≥ 3) and platelet > 400×109/L.
Conclusions: Preoperative low HCT was a valuable predictor for EOC patients' poor prognosis, specifically in obese, nondiabetic, elder, advanced stage but having relatively good performance status patients.

PO-160

不同手术路径与宫颈癌 LVSI 的关系

刘银霞,李征宇
四川大学华西第二医院

目的：LACC 提前结束并发表了关于宫颈癌预后与腹腔镜和开腹手术的关系，轰动全球。但是造成这一差异的原因尚不明确。目前对于造成这一结果的原因有很多猜测，其中有一个猜测就是腹腔镜手术器械的使用会影响淋巴脉管浸润（LVSI），而 LVSI 是宫颈癌预后不良的危险因素。本研究旨在探讨不同手术路径与 LVSI 的关系，同时分析腹腔镜手术中举宫器的使用是否会影响 LVSI。**方法：**本研究收集四川大学华西第二医院 2019 年 4 月到 2020 年 5 月收治的早期宫颈癌患者的临床病理资料，比较分析不同手术路径与 LVSI 的关系，并探讨影响 LVSI 的因素。**结果：**2019 年 4 月至 2020 年 5 月，共有 979 名宫颈癌患者就诊于四川大学华西第二医院行手术治疗。经过筛选，行广泛子宫切除术+盆腔淋巴结清扫术，术后病理报告确诊仍为宫颈癌的 IA2-IIA2 期的宫颈癌患者共有 735 名，其中开腹手术 378 名，腹腔镜手术 357 名。开腹手术和腹腔镜手术患者的 LVSI 分别为 48.41%和 47.34%，p=0.771。经 1:1 倾向性评分匹配（年龄、FIGO 分期、病理类型和病灶大小匹配），224 名开腹手术患者和 224 名腹腔镜手术患者中，LVSI 分别为 45.54%和 51.79%，p=0.186。357 名腹腔镜手术的患者中，242 名患者使用举宫器，而 115 名患者未使用举宫器，LVSI 在这两组中的比例分别为 48.35%和 45.22%，p=0.580。经年龄、FIGO 分期、病理类型和病灶大小按照 1：1 倾向性评分匹配后的 83 名使用举宫器的患者和 83 名未使用举宫器的患者，LVSI 分别为 55.42%和 45.78%，p=0.214。多因素回归分析结果显示，LVSI 与宫颈间质浸润深度及淋巴结转移相关（p<0.05）。**结论：**早期宫颈癌患者 LVSI 与手术路径无关，与举宫器的使用与否无关，而与宫颈间质浸润深度和淋巴结转移相关。

PO-161

恶性卵巢性索间质肿瘤 132 例临床分析

王春燕,杨兴升
山东大学齐鲁医院

目的：通过分析 132 例恶性卵巢性索间质肿瘤患者的临床特点、治疗及复发情况，探讨恶性卵巢性索间质肿瘤患者的预后影响因素。
方法：收集 1987 年 1 月至 2018 年 12 月于山东大学齐鲁医院接受手术治疗，病理诊断为恶性卵巢性索间质肿瘤的 132 例患者的病案资料及随访情况，回顾其临床特征及治疗情况。采用 Kaplan-Meier 法计算各组存活率并描绘生存曲线，使用 Log-rank 法检验各组生存曲线是否有显著性差异，使用 COX 回归法分析预后影响因素。

结果：1．患者平均发病年龄 43.86 岁，中位年龄 44 岁（11-82 岁）。其临床表现包括阴道不规则流血（43 例，32.57%，）；盆腔包块（39 例，29.55%）；下腹胀痛（35 例，26.52%）；继发闭经（13 例，9.84%），继发性不孕（1 例，0.76 %）及性早熟（1 例，0.76%）。 2．132 例患者均接受手术治疗，101 例患者行非保留生育功能手术，31 例患者行保留生育功能手术，62 例患者行盆腔淋巴结清扫术，2 例发现淋巴转移。术后 89 例患者接受化疗。 3．患者 FIGO 分期： Ⅰ期 106 例（80.3%），Ⅱ期 6 例（4.55%），Ⅲ期 19 例（14.39%），Ⅳ期 1 例（0.76%）,早期（Ⅰ、Ⅱ期）及晚期（Ⅲ、Ⅳ期）患者 5 年生存率分别为 92.8%及 17.1%（P<0.01）；患者肿瘤直径中位数为 10cm（2-20cm），肿瘤直径≤10cm 及＞10cm 患者 5 年生存率分别为 97.9%及 67.1%（P=0.01）。患者术后病理：颗粒细胞瘤 102 例（77.27），支持-间质细胞瘤 28 例（21.21%），恶性卵泡膜细胞瘤 2 例（1.52%）。 4．cox 单因素及多因素分析显示 FIGO 分期及肿瘤大小为影响恶性卵巢性索间质肿瘤患者生存率的预后因素，患者年龄（P=0.381）、Ⅰ期患者是否行保留生育功能手术（P=0.179）、术中是否清扫盆腔淋巴结（P=0.149）、Ⅰ期患者是否进行术后化疗（P=0.201））对患者术后生存率无显著影响。
结论：1．恶性卵巢性索间质肿患者多以不规则阴道流血为首发症状，发现时多为Ⅰ期，预后较好；
2．恶性卵巢性索间质肿瘤淋巴转移率低，可不行淋巴结清扫术，对于年轻的Ⅰ期患者可行保留生育功能的手术； 3．恶性卵巢性索间质肿瘤患者预后与手术病理分期及肿瘤大小相关； 4．Ⅰ期患者术后化疗与否对预后无影响。

PO-162

阴道恶性黑色素瘤的研究进展

陈静红 [1,2],尹如铁 [1,2]
1.四川大学华西第二医院 2.四川大学华西临床医学院

摘要：阴道恶性黑色素瘤是一种罕见但极具侵袭性且预后差的恶性肿瘤。手术是其最主要的治疗方式，辅助放、化疗作用有限。免疫治疗与靶向治疗药物的出现 恶性黑色素瘤的治疗提供新的思路，但诊治手段尚缺乏高级别证据。本文对阴道的恶性黑色素瘤相关研究进行综述，以期为临床诊治提供帮助。
Abstract: Primary malignant vagina melanoma is a rare but aggressive melanoma with a poor prognosis. Surgical resection is considered as the standard treatment at present. The effects of adjuvant radiotherapy and chemotherapy are limited. Emerging immunotherapy and targeted therapy would offer new therapeutic options for malignant melanoma. There is still a lack of high-grade evidence for diagnosis and treatment. This review focus on the related research about malignant melanoma of vagina in order to provide help for clinical diagnosis and treatment.

PO-163

OCT4、SOX2 在宫颈癌中的表达及临床意义

张微微 [1],王文文 [1],谢娅 [1],郭瑞霞 [1]
1.郑州大学第一附属医院 2.郑州大学第一附属医院

一、研究背景和目的 宫颈癌在我国女性生殖道恶性肿瘤中发病率最高，且近年来宫颈癌的发病有年轻化趋势[1]。肿瘤干细胞（cancer stem cell, CSC）假说认为，肿瘤是一种干细胞疾病，CSC 在肿瘤形成、生长、浸润、转移和复发中起关键性作用[2]。宫颈癌的发病机制至今不明确，所以对宫颈癌干细胞调控相关通路及其重要因子的研究有助于了解其生长和调控机制。
OCT4 是 POU5F1 基因（6p21.3）编码的转录因子家族中的一员，SOX2 是 SOX 家族 B1 亚族成员之一，两者对于维持干细胞的多潜能性及自我更新能力具有重要的作用，被认为是干细胞的转录因子[3]，

其表达水平反映了肿瘤干细胞成瘤能力，与肿瘤的恶性行为密切相关[4]。但两者在宫颈癌中的表达情况国外鲜有报道，国内尚无相关报道。

本研究旨在探讨 OCT4、SOX2 蛋白在宫颈癌中的表达情况以及其与宫颈癌患者临床病理特征的关系。

二、材料和方法

运用免疫组织化学 SP 法对 30 例正常宫颈组织、28 例宫颈鳞状上皮内瘤变组织、90 例宫颈癌组织中 OCT4、SOX2 的表达进行检测。

三、结 果

1、正常宫颈组织、宫颈鳞状上皮内瘤变和子宫内膜腺癌组织中 OCT4 蛋白的阳性表达率分别为 6.67%、32.1%和 62.2%，SOX2 蛋白的阳性表达率分别为 3.3%、25%、60%，差异均具有统计学意义（P＜0.05）；

2、OCT4、SOX2 在宫颈癌中呈细胞核阳性表达，且其表达均随着组织分化程度降低而上升（P＜0.05），在患者不同的年龄、肿瘤病理类型、病理分期、肌层浸润程度、有无淋巴结转移分组中无明显差异。

3、OCT4、SOX2 在宫颈癌中的阳性表达呈正相关关系（r=0.659，P＜0.05）。

四、结 论

1、OCT4 和 SOX2 蛋白表达的升高可能与宫颈癌的发生有关。

2、OCT4 和 SOX2 蛋白的表达与宫颈癌组织的分化程度有关，可能恶性程度高的宫颈癌组织中肿瘤干细胞含量较高。

3、OCT4 和 SOX2 蛋白共同调节维持了宫颈癌干细胞自我更新及多向分化能力。

PO-164

Near‐infrared dye‐labeled antibody COC183B2 enables detection of tiny metastatic ovarian cancer and optimizes fluorescence‐guided surgery

Chongyuan Zhu,Junchen Chen,Hui Li,Chen Zhang,Xiaohong Chang,Ruiqiong Ma,Hongyan Cheng,Xue Ye,Heng Cui,Yi Li
Peking University People's Hospital

Objective: To evaluate the ability of the fluorescent monoclonal antibody probe COC183B2‐Cy7 to detect tiny metastatic lesions of ovarian cancer and thus guide precise tumor resection.
Methods: The expression of the tumor‐associated antigen OC183B2 in lymph nodes and SKOV3‐Luc cells was detected. A subcutaneous mouse tumor model and an intraperitoneal ovarian cancer metastasis model were constructed. Near‐infrared fluorescence imaging was performed to determine the imaging parameters and evaluate the ability of COC183B2‐Cy7 to detect tiny metastatic lesions.
Results: OC183B2 was expressed in metastatic lymph nodes and SKOV3‐Luc cells. NIRF imaging of the mouse model showed that the tumor background ratio was significantly higher in the COC183B2‐Cy7 group than in the control group. COC183B2‐Cy7 didn't accumulate in other organs. COC183B2‐Cy7 can detect tiny metastatic lesions of ovarian cancer, smallest as 1 mm.
Conclusions: COC183B2‐Cy7 probe has relatively high specificity and sensitivity, which is a promising diagnostic tool for the complete and accurate resection of malignant lesions in fluorescence‐guided surgery.

PO-165
The Expression and significance of Epithelial cadherin and laminin in gestational trophoblastic disease

Xi Fu
Department of Obstertrics and Gynecology，Third Afliliated Hospital，GuangZhou Medical University，GuangZhou 510051，China

Abstract To analysis the expressions of E-cadherin(E - cad) and laminin (LN) in gestational trophoblastic disease (GTD), and discusses the significance of them. The expression of E-cad and LN in 45 cases gestational trophoblastic disease (GTD) was detected by immunohistochemical method (SP). The expression of E-cad and LN were 33.3% (15/45) and 60% (27/45),respectively.In hydatidiform mole (HM), invasive mole (IM) and choriocarcinoma (CC) , the expression of E - cad were 66.6%, 20% and 13.3% .and LN were 80%, 60% and 40% ..With the development of GTD malignancy, both of the positive expression rates of E-cad and LN were showing a reduced trend. The expression of the E-Cad and LN are associated with the malignant degree of gestational trophoblastic disease, and has potential effects on the occurrence and progression of GTD. So its important to detect these two markers to evaluate the invasion and metastasis during clinical treatment of the GTD.

PO-166
腹腔镜手术与开腹手术对于早期宫颈癌的肿瘤学结局的对比分析

梁美蓉,李元霞,江维,刘晖,刘银川,曾四元
江西省妇幼保健院

目的：比较腹腔镜与经开腹宫颈癌根治术治疗早期宫颈癌的肿瘤学结局。
方法： 收集我院 2013 年 1 月-2017 年 12 月宫颈癌 IA1（伴 LVSI+）-ⅡA1（FIGO2009）行宫颈癌根治术的患者 1226 例，经开腹宫颈癌根治术患者 1030 例（ARH 组），经腹腔镜宫颈癌根治术患者 196 例（LRH 组）；考虑两组数据基数不均衡，将两组数据按子宫颈癌复发的危险因素及基本情况（治疗年份、年龄、临床分期、宫旁浸润、阴道切缘浸润、淋巴结转移、子宫颈间质浸润深度、肿瘤直径、淋巴脉管受累、术后辅助治疗）进行 1：1 倾向得分匹配（PSM），匹配 192 对病例组，以 5 年无复发生存率（DFS）和 5 年总生存率(OS)为评判肿瘤结果的标准，对影响预后的因素进行单因素和多因素生存分析，进一步对影响预后的独立危险因素（P＜0.05）及不同术者间进行分层分析，比较两种手术方式在不同分层的预后。
结果：1.未控/复发与生存情况：LRH 组与 ARH 组未控/复发率均为 5.2%（10/192）；LRH 组中盆腔未控/复发占 50%（5/10），远部位转移占 30%（3/10）,复发部位不详占为 20%（2/10）；ARH 组中盆腔未控/复发占转移率为 50%（5/10），远部位转移占 40%（4/10）,复发部位不详占为 10%（1/10），差异无统计学意义（P=0.785）；LRH 组、ARH 组患者的 5 年 DFS 分别为 92．4％和 95．1％，5 年 OS 分别为 94.5％和 95.1％，差异均无统计学意义(P=0．591，P=0．779）；2.预后影响因素分析：多因素分析显示，肿瘤直径、腹主动脉旁淋巴结转移、阴道切缘阳性、子宫颈浸润深度是影响子宫颈癌患者预后的独立危险因素(P<0．01)。进一步对独立危险因素及不同术者进行分层分析，LRH 组与 ARH 组的 5 年 DFS 和 OS 差异均无统计学意义(P>0．05）。
结论：腹腔镜宫颈癌根治术治疗早期宫颈癌 IA1（伴 LVSI+）-ⅡA1 期的远期生存结局是安全可行。

PO-168
人源肿瘤异种移植模型对妇科肿瘤精准治疗的价值

杨雯,范文生,叶明侠,李立安,李震,张妮娜,孟元光
中国人民解放军总医院妇产医学部

研究背景及目的：探索人源肿瘤异种移植模型（patient-derived tumor xenograft，PDTX/PDX)对妇科肿瘤患者化疗及靶向治疗的预测价值。**方法：**①留取 16 例 2016 年 3 月至 2017 年 10 月期间中国人民解放军总医院妇产科手术或活检患者的新鲜肿瘤标本，其中 13 例卵巢癌，3 例宫颈癌样本建立 PDTX 模型，对模型传代后的 P2/P3 代肿瘤模型进行随机分组后给予不同方案治疗。观察肿瘤体积变化，计算相对肿瘤体积、相对肿瘤增殖率、肿瘤生长抑制率，并进行临床病例随访。②选取 28 例上皮性卵巢癌患者新鲜肿瘤组织建立 EOC SuperPDTX 模型，对比分析 SuperPDTX 模型与患者临床治疗的一致性。
结果：①16 例中共 8 例 PDTX 移植模型建模成功。宫颈癌建模成功率 100%，卵巢癌建模成功率 38.5%，其中上皮性卵巢癌建模成功率 41.6%。总体成瘤时间在 21 天-131 天，中位成瘤时间 73 天。建模 P1/P2 代肿瘤与患者 P0 代肿瘤的形态学方面，在组织病理类型、分化程度方面均能保持稳定的一致性。PDTX 模型的药效学分析中，对于宫颈癌模型与临床一致率为 50%，上皮性卵巢癌一致率为 100%。PDTX 模型建模成功与否与患者的临床预后相关，建模成功组患者预后更差，复发肿瘤建模更易建模成功。②建立 28 例上皮性卵巢癌快速 PDTX 模型。快速 EOC PDTX 模型对于铂耐药的预测敏感性为 100%，特异性为 60%，阳性预测值 55.6%，阴性预测值 100%。其中 10 例患者参考 superPDTX 结果更改治疗方案，治疗后与临床与模型一致/基本一致者占 70%。
结论：PDTX 模型对于发现临床铂耐药患者和筛选化疗及靶向治疗方案具有一定潜力。

PO-169
Development and validation of a novel nomogram to predict cancer-specific survival in patients with uterine cervical adenocarcinoma

Chengyan Luo
Jiangsu Province Hospital and First Affiliated Hospital of Nanjing Medical University

Objective: The present study aimed to develop and validate a prognostic nomogram for predicting the probability of 3- and 5-year cancer-specific survival (CSS) in patients with uterine cervical adenocarcinoma (UAC).
Methods: Among the 8991 UAC patients included in this study from Surveillance, Epidemiology, and End Results (SEER) database, those diagnosed between 1988 and 2010 (n=5655) were enrolled for model development and internal validation, and those diagnosed between 2011 and 2016 (n=3336) for temporal validation. Cox hazard regression analysis was used to construct the nomogram. The nomogram was internally validated with bootstrap resampling method and temporally validated.
Results: Tumor grade, stage T, stage N, stage M, tumor size and surgery of primary site were identified as independent prognostic factors and incorporated into the nomogram. The nomogram demonstrated accurate prediction of 3- and 5-year CSS with an optimism adjusted c statistic of 0.90 (95% CI: 0.89-0.91) and 0.89 (95% CI: 0.88-0.91) after internal validation, respectively, while, after temporal validation, the statistics were 0.89 (95% CI: 0.87-0.91) and 0.88 (95% CI: 0.83-0.94), respectively. The internal and temporal calibration curves demonstrated good consistency between predicted and observed values of CSS. Based on the model, the cases were stratified into high- and

low-risk group. Kaplan-Meier plot showed patients at high-risk exhibited significantly poorer survival than those at low-risk (P<0.0001).
Conclusions: In the form of a static nomogram or an online calculator (available at https://betteryuan66.shinyapps.io/dynnomapp/), the nomogram can help clinicians quantify the risk of mortality, make personalized survival assessment and optimal treatment plan for UAC patients.

PO-170

宫颈癌放疗中卵巢功能保护的关键问题研究

程晓龙
中国科学院大学附属肿瘤医院（浙江省肿瘤医院）

目的 探讨宫颈癌放疗中卵巢保护的关键问题。**方法** 检索 2008~2018 年国内外关于宫颈癌放疗中卵巢功能保护的文献资料，明确卵巢移位术式、卵巢勾画范围、卵巢剂量限值及放疗方法等技术动态；收集 2011~2017 年在浙江省肿瘤医院行保留卵巢功能的宫颈癌放疗患者资料，记录卵巢剂量学参数，随访患者放疗前、放疗后 3 个月和 1 年的卵巢内功能；整理 2016~2018 年在本院行双侧卵巢移位并实施放疗的 IA~IIB 期全部 10 例患者资料，分别进行保护卵巢的 IMRT、VMAT 和 HT 计划设计，明确最佳放疗计划方法；分析卵巢剂量限值及其功能能否成功保留的预判断方法。**结果** （1）检索表明近 10 年国内外仅有 24 篇较详细的报道：卵巢移位术已趋于成熟；卵巢准确勾画应结合 CT 与 MRI，建议设定卵巢保护区；裸卵巢的剂量限值目前尚未统一，但已明确与患者年龄、放疗方案和化疗密切相关。（2）经筛选 2011 年至 2017 年具备完整随访资料的患者共计有 77 例，经血清激素水平检查：放疗前 73 例卵巢功能正常、4 例提示功能下降；放疗后 3 个月 26 例卵巢功能正常、13 例提示功能下降、38 例提示功能衰退；放疗后 1 年 45 例卵巢功能正常、13 例提示功能下降、19 例提示功能衰退。（3）与 IMRT、VMAT 相比，HT 可降低左右卵巢的 Dmax 和 Dmean，且在 PTV 的 Dmax、CI，膀胱 V20、V30、V40，肠袋 V40，骨髓 V20，脊髓 Dmax 这些方面的差异具有统计学意义。IMRT 在 PTV 的 Dmin 限制上具有优势，其它剂量学参数次于 HT 优于 VMAT。（4）初步提出宫颈癌放疗时保留卵巢功能的裸卵巢剂量限值（Dmax<4Gy、Dmean<3Gy）和卵巢功能是否能保留的预判断方法（卵巢距离 PTV 边缘>2.5cm、卵巢下缘高于髂嵴）。**结论** 卵巢经受一定放射剂量后会出现短暂的功能下降或彻底衰竭；成功的卵巢移位术、准确勾画卵巢组织、明确不同年龄段患者卵巢剂量限值及 HT 技术和特殊布野的 IMRT 技术应用，是宫颈癌放疗中卵巢保护的关键；卵巢保护区设置、卵巢组织体积剂量及化疗与卵巢功能之间的关系有待进一步研究。

PO-171

转录因子 TCF3 抑制子宫内膜癌细胞增殖及分子机制研究

桂涛,黄美华,朱利,张蕾,倪勇艳,成臣,周文娟,万贵平
南京中医药大学附属中西医结合医院

【研究目的】子宫内膜癌（endometrial carcinoma，EC）的防治是当前女性生殖健康领域较为突出的公共卫生问题，探寻 EC 发病机制显得尤为迫切。TCF3（Transcription factor 3）属于碱性螺旋-环-螺旋转录因子家族成员之一，新近研究发现 TCF3 在不同肿瘤中扮演促癌或抑癌的双面角色，但尚未见有关 TCF3 在 EC 中研究报道。课题组生信学分析发现 TCF3 在 EC 患者癌组织中低表达，且其表达水平与患者生存时间呈负相关，提示 TCF3 在 EC 中扮演抑癌基因角色。本研究旨在考察 TCF3 对子宫内膜癌细胞增殖影响和调控机制。

【材料方法】以人子宫内膜癌细胞株（Ishikawa，ISK）为实验材料，首先构建人 TCF3 慢病毒过表达子宫内膜癌细胞株，通过流式细胞术实验、CCK8 实验及但克隆形成实验观察 TCF3 过表达对 ISK 细胞凋亡/周期、细胞生长及单克隆形成能力的影响；结合实 qPCR、WB、双荧光素酶报告基因及凝胶迁移（EMSA）等实验证实 TCF3 作为转录因子调控下游关键靶基因细胞周期蛋白依赖性激酶抑制剂 1A（CDKN1A）基因转录；最后，通过流式细胞术实验、CCK8 实验及克隆形成实验检测在过表达 TCF3 细胞株中敲低 CDKN1A 对其细胞周期、细胞生长及单克隆形成能力影响。
【结果】过表达 TCF3 可导致 ISK 细胞周期阻滞于 G2/M 期，但对其凋亡无显著影响；过表达 TCF3 可抑制 ISK 细胞生长和单克隆形成能力；过表达 TCF3 可通过直接结合 CDKN1A 启动子区特异性 Motif（GCCAGAT）促进 CDKN1A 转录和翻译。过表达 TCF3 导致 ISK 细胞株的 G2/M 期阻滞、细胞生长及单克隆形成能力受限可由进一步敲低 CDKN1A 解除，提示 TCF3 主要通过激活 CDKN1A 表达导致 G2/M 期阻滞进而抑制 ISK 细胞增殖。本研究将为 EC 恶性增殖分子机理研究提供借鉴，同时也为抗子宫内膜癌药物开发提供新靶点。
【结论】转录因子 TCF3 通过转录激活 CDKN1A 导致细胞周期阻滞进而抑制子宫内膜癌细胞增殖。

PO-172

Establishment of a risk-based therapeutic strategy recommendation for small cell neuroendocrine carcinoma of uterine cervix: experience from an academic cancer center

Foping Chen,Yi Ouyang,Cao Xin-Ping
sun yat-sen university cancer center

Background: The optimal treatment strategy for small cell neuroendocrine carcinoma of the uterine cervix (SCNEC) has not been established owing to the rarity of this disease. Hence, we conducted this study to investigate the role of different treatment modalities in the management of SCNEC.
Methods: We identified a total of 119 histopathologically-proven SCNEC cases from Sun Yat-sen University Cancer Center, diagnosed between January 2010 and December 2018. The primary endpoint was overall survival (OS), calculated from the initial diagnostic biopsy to date of death from any cause; secondary endpoint was progress-free survival (PFS), calculated from initial diagnostic biopsy to date of first relapse regardless of site or a 25% or more increase in size of any pre-existing lesion and/or death from any cause. Patients were divided into three following classifications according to the FIGO stage: early stage (FIGO stage I-IIA), locally advanced stage (FIGO stage IIB-IVA) and metastatic disease (FIGO stage IVB). Additionally, to determine the optimal sequencing of chemotherapy for SCNEC, we classified the patients into three groups: those received neoadjuvant chemotherapy alone (NACT), those treated with adjuvant chemotherapy alone (ACT), and those received neoadjuvant plus adjuvant chemotherapy (NACT+ACT). Survival analyses were performed using the Kaplan-meier method and compared by the log-rank test. Univariate and multivariable analyses were conducted by using cox proportional hazards model. All patients were followed until July 2020.
Results: We identified 62 (53.4%) patients with FIGO stage I-IIA, 43 (37.1%) with stage IIB-IVA, and 11 (9.5%) with stage IVB. A total of 60 (51.7%) patients developed disease failure (42 [36.2%] had distant metastasis alone, 2 [1.7%] had loco-regionally relapse, and 16 [13.8%] had both distant and loco-regional relapse). Median OS and PFS of the entire cohort were 37.7 and 25.4 months, respectively. FIGO stage was associated with the risk of death (HR: IIB-IVA vs I-IIA: 1.82 [95% CI, 1.02-3.24], P =0.044; IVB vs I-IIA: 9.43 [3.95-22.52], P <0.001) and disease failure (IIB-IVA vs I-IIA: 1.38 [0.82-2.33], P =0.223; IVB vs I-IIA: 4.26 [2.10-8.67], P <0.001). Radical surgery-based comprehensive therapy demonstrated superior PFS (median, surgery-based vs radiation-based: 32.5 vs 10.9 months) than radiation-based comprehensive therapy for FIGO stage I-IIA disease, and significant benefit of OS (53.5 vs 17.0 months) and PFS (30.8 vs 10.7 months) for stage IIB-IVA

disease, but not for stage IVB disease. Additionally, treatment with ≥5 cycles of cisplatin/etoposide (EP) regimen demonstrated most prolonged PFS (EP ≥5 cycles vs other regimens: NR vs 12.3-29.5 months) for FIGO stage I-IIA disease, and OS (NR vs 19.3-41.0 months) and PFS (NR vs 10.9-25.4 months) for stage IIB-IVA disease, but not for stage IVB disease. Furthermore, sequencing of chemotherapy showed great impact on survivals. ACT showed slightly better survival outcomes over NACT and NACT+ACT (median OS, ACT vs NACT vs NACT+ACT: NR vs NR vs 32.5 months; median PFS, ACT vs NACT vs NACT+ACT: 44.7 vs 10.9 vs 29.5 months) for stage I-IIA disease, but comparable outcomes for stage IIB-IVA and IVB disease.
Conclusion: Primary radical hysterectomy followed by EP regimen adjuvant chemotherapy for at least 5 cycles is the preferred treatment modality for patients with FIGO stage I-IVA SCNEC, and EP chemotherapy based comprehensive therapy is proposed for those with stage IVB disease.

PO-173
Apatinib, a Novel Tyrosine Kinase Inhibitor, Promotes ROS-Dependent Apoptosis and Autophagy via the Nrf2/HO-1 Pathway in Ovarian Cancer Cells

Xiaodan Sun
Jilin Tumor Hospital

Apatinib, a new-generation oral tyrosine kinase inhibitor targeting the vascular endothelial growth factor receptor 2 (VEGFR2) signaling pathway, shows favorable therapeutic effects in various malignant tumors. However, its effect on ovarian cancer has not yet been characterized. Here, we demonstrated that apatinib inhibited ovarian cancer cell growth and migration in a concentration-dependent manner. Further, we found that apatinib could directly act on tumor cells and promote ROS- dependent apoptosis and autophagy. Mechanistically, we showed that apatinib suppressed glutathione to generate ROS via the downregulation of the nuclear factor erythroid 2-related factor 2 (Nrf2)/heme oxygenase 1 (HO-1) pathway and maintained an antitumor effect at a low level of VEGFR2 in ovarian cancer, suggesting that combination of apatinib with Nrf2 inhibitor may be a promising therapy strategy for patients with ovarian cancer.

PO-174
RSPO3 is a marker candidate to prognose tumor aggressiveness in ovarian cancer

haifeng Gu,Hua Tu,Ting Liu,Jihong Liu
Sun Yat-sen University Cancer Center

Background: Ovarian cancer is a highly aggressive and heterogeneous gynecological malignancy that has long been difficult for physicians to identify and treat, which requires more effective and precise molecular targets. RSPO3 is a secreted protein that plays a tumorigenic role in several human cancers. However, the functional contribution and the prognostic role of RSPO3 in ovarian cancer remain unclear.
Methods: The expression of RSPO3 in ovarian cancer tissues was assessed using western blotting, quantitative real-time PCR and immunohistochemistry, and its relationships to clinicopathological parameters were investigated based on the data of 179 patients with ovarian cancer. The biological function of RSPO3 was evaluated using Cell Counting Kit-8, colony formation, wound healing and matrigel transwell assay in RSPO3-knockdown and RSPO3-overexpression ovarian cancer cell lines

SKOV3 and OVCAR3. The possible biological processes associated with RSPO3 were identified using functional enrichment analysis based on the transcriptome sequencing data from TCGA's ovarian cancer cohort and our experimental cells, and further verified using western blotting and immunofluorescence in ovarian cancer cell model.
Results: The RSPO3 mRNA and protein levels were both up-regulated in ovarian cancer tissues. High expression of RSPO3 was correlated with lymphovascular space invasion, lymph node metastasis, distant metastasis and advanced stage. Survival analysis showed that RSPO3 is an independent prognostic maker in ovarian cancer. Moreover, in vitro knockdown or overexpression of RSPO3 significantly inhibited or promoted the invasion ability of ovarian cancer cells, respectively in vitro knockdown of RSPO3 significantly inhibited the invasion ability of ovarian cancer cells, while overexpression significantly promoted it. With the method of transcriptome sequencing and pathway validation experiment, we demonstrated for the first time that RSPO3 promoted ovarian cancer invasiveness through the activation of PI3K/AKT pathway and modulation of Epithelial-mesenchymal transition, while the common Wnt/β-catenin signaling was not involved.
Conclusions: RSPO3 plays a definite oncogenic role and promotes tumor aggressiveness in ovarian cancer, which may serve as a potential prognostic marker and therapeutic target for this tumor.

PO-175

The role of secondary cytoreductive surgery in primary platinum-sensitive recurrent HGSOC patients with different BRCA1/2 mutation status: A retrospective study

Hualei Bu[1],Chengjuan Jin[2],Yana Ma[1],Mengdi Fu[1],Beihua Kong[1]
1.Qilu Hospital of Shandong University
2.Shanghai General Hospital

Purpose: The value of secondary cytoreductive surgery (SCS) for platinum-sensitive recurrent high grade serous ovarian cancer (HGSOC) patients and the effect**s** of BRCA1/2 mutation status on the value of surgery are inconclusive.
Methods: A retrospective analysis was conducted in HGSOC patients with primary platinum-sensitive recurrence who were admitted to the Department of Obstetrics and Gynecology, Qilu Hospital of Shandong University and Shanghai General Hospital from January 2015 to August 2019. The DESKTOP Trial Score was used to assess whether patients could be included in the study. Relevant medical records were collected, including age at diagnosed, FIGO stage, germline BRCA1/2 mutations status, platinum-free interphase (PFI), recurrence characteristics, progression-free survival (PFS) and overall survival (OS).
Results: A total of 195 HGSOC patients were included in the study, including 80 (41.0%) patients with BRCA1/2 germline mutation (BRCAmut) and 115 (59.0%) patients with germline BRCA1/2 wild-type (BRCAwt). SCS improved FPS in patients undergoing secondary cytoreductive surgery, regardless of BRCA1/2 mutation status (BRCAmut, median PFS, 16.3 vs 12.9 months, p = 0.003; BRCAwt, median PFS, 15.3 vs 11.0 months, p = 0.001). There was a significant survival benefit in BRCAwt patients undergoing SCS (median OS, 70.6 vs 52.5 months, p = 0.021), however, compared with chemotherapy alone, SCS in BRCAmut patients did not improve overall survival (median OS, 77.5 vs 76.8 months, p = 0.827).
Conclusions: SCS is recommended for platinum-sensitive recurrent HGSOC patients with BRCAwt. BRCA1/2 genetic test for all HGSOC patients is necessary to specify appropriate post-recurrence treatment strategies.

PO-176
The screening for clinically feasible mesenchymal stem cell for fertility preserving treatment in endometrial carcinoma

Yuhui Xu,XiaoJun Chen
Obstetrics and Gynecology Hospital of Fudan University

Background and Purpose
Endometrial carcinoma (ECC) is one of the most common gynecological cancer. Given the increasing incidence of risk factors such as obesity and diabetes, about 25% of patients have endometrial cancer or endometrial atypical hyperplasia in reproductive age. Though the conservative option is effective, somehow 20%-30% patients still have have the pool pregnancy outcome, resulting from progestin insensitivity or resistance. So, A new therapy in ECC become imperative for fertility preservation.
In recent years, cell therapy has been clinically applied in regenerative medicine and malignant tumors. Previous research by our group showed that endometrial stromal cells cooperate with progesterone to inhibit the proliferation of ECC cells. This suggests that supplementation of normal stromal cells may be a potential strategy for ECC. However, stromal cells have limited proliferative capacity and cannot exist for a long time, while fertility preservation treatment for ECC continues for 6-7 months. Mesenchymal stem cells (MSCs), as pluripotent stem cells, which can differentiate into stromal cells, are used for cell therapy in regenerative medicine. Therefore, we propose that mesenchymal stem cells may be effective for cell therapy in EEC. To identify the hypotheses, the effectiveness and safety of mesenchymal stem cells for fertility preservation therapy in ECC are needed.
Methods
1.the influence of different-tissue derived MSC on the biological behavior of endometrial cancer
To evaluate the effect of MSC on the growth of endometrial cancer cell line , RL952 and Hec-1a were cultured with MSC-conditional medium（MSC-CM）for 48 hours. Cell viability was evaluated by cell counting kit-8 (CCK8) assay. Then we try to figure out the function of MSC on tumor apoptosis in endometrial cancer. MSC and endometrial cancer cells were co-cultured for 48 hours by using 0.4um transwell chamber. After that, we analysed the protein level of Bcl-2 and Bax，which are members of the Bcl-2 family regulating cell death. To estimate whether MSC can affect tumor migration, MSC and endometrial cancer cells were co-cultured for 48 hours. Then the number of migrated cells in crystal violet staining of the semi-membrane were measured. To evaluate the effect of MSCs on endometrial cancer cell line growth in vivo , RL952 cells and MSCs (5:1ratio) were co-xenografted into the right side of uterus in immunodeficient nude mice. One month later, the weights of xenografted tumor were measured.
2.the safety of MSC-based therapy on endometrial cancer
We established long-term culture systems to culture EEC organoids from human primary tumor tissue in vitro and figure out four tumor stemness associated genes with EEC, including c-Myc, BMI-1, CXCR4 and Sox9. Then we co-cultured EEC organoid with MSCs, and estimated change of tumor stemness gene and 3D cell viability.
3.the mechanism of inhibitive function of mesenchymal stem cells on endometrial cancer
We tested the expression level of ALDOA and c-Myc in hec-1a and RL952 after treatment with different tissue-derived MSC.
Result
1.N-eMSC can inhibit endometrial cancer efficiently
AD-MSC-CM could significantly facilitate both Hec-1a and RL952's growth, and UC-MSC-CM had no influence, with N-eMSC-CM inhibiting cancer cells' proliferative capacity. Western blot results indicated N-eMSC groups in both Hec-1a and RL952 had remarkably decreased bcl-2 and increased Bax protein expression levels, which suggests that N-eMSC could stimulate tumor apoptosis. In addition, UC-MSC group had a slight promotion of apoptosis, for a relatively higher protein expression level of bax and lower protein expression level of bcl-2. On the contrary, the protein level in AD-MSC group showed the

inhibition of apoptosis. Crystal violet staining of the semi-membrane demonstrated remarkably increase tumor cell migration after co-culture with AD-MSC, while UC-MSC and N-eMSC group had no significant change in Hec-1a and RL952 cells. In orthotopic mouse model of EC, the growth of N-eMSC /RL92 co-injected tumors was significantly reduced compared with controls (no treatment). On the contrary, the group co-injected with either AD-MSC or UC-MSC would accelerate tumor growth.

2.the safety of N-eMSC-based therapy on endometrial cancer

RT-PCR showed both N-eMSC and UC-MSC promote transcription level of c-Myc, BMI-1, CXCR4 and Sox9, while AD-MSC stimulate the stemness of EC organoids. The 3D cell viability results showed that N-eMSC inhibit the proliferation of patient-derived ECC organoids.

3.N-eMSC can inhibit the ALDOA/c-Myc signal pathway

Western blot showed N-eMSC can inhibit the protein expression of both ALDOA and c-Myc, while AD-MSC and UC-MSC groups had no influence on the pathway.

Conclusion

In summary, our results show that normal endometrium derived-mesenchymal stem cell inhibit EEC growth via down-regulation of ALDOA/c-Myc pathway, while the safety for clinical use need further reseaches.

PO-177

The Feasibility of Bilateral Cardiophrenic Lymphnode Dissection in Patients During Debulking Surgery for Advanced Ovarian Cancer

Meili Xi[1,2],Wenbin Tang[1]

1.Division of Gynecologic Oncology， Department of Obstetrics and Gynecology， Zhongshan Hospital， Fudan University， Shanghai， China

2.Department of Obstetrics and Gynecology of Shanghai Medical College， Fudan University， Shanghai， 200032， China.

ABSTRACT

Background: Several studies have demonstrated the feasibility and role of bulky cardiophrenic lymph nodes (CPLNs) resection during debulking surgery for stage IV ovarian cancer (OC). However, no studies, to date, investigated the accuracy and feasibility of bilateral CPLNs dissection in patients during debulking Surgery for Advanced Ovarian Cancer

Material and Methods: A retrospective analysis of consecutive stage IV OC patients who underwent debulking surgery with bilateral CPLNs assessment and resection by video-assisted thoracoscopic surgery（VATS）from December 2016 to April 2018 was performed. Bulky CPLNs were considered for excision when imaging revealed enlarged or abnormal intake lymph nodes by Positron Emission Tomography-Computed Tomography(PET-CT).

Results: During the study period, 244 patients with OC were enrolled including 164 (67.2%) primary and 80 (32.8%)recurrent patients.Thoracoscopy was performed in 53 patients including 32 on the right, 9 on the left, and 12 on bilateral sides. Of all 12 patients, 3 received neoadjuvant chemotherapy and 2 refused IDS treatment.Closed thoracic drainage was applied in 3 cases.There was no bleeding in all thoracic surgeries.Postoperative drainage was less than 10ml.Eight patients underwent tumor reduction and seven (87.5%) achieved complete cell loss without residual lesions.We did not encounter any CPLNs resection-related complications.The final histological examination of the CPLNs reported metastatic disease in all (100%) of nine patients.5 patients (55.6%, 5/9) with bilateral positive CPLNs, 88.9% with positive in right side and 66.7% with positive in left side.The mean total number of harvested lymph nodes was 6.89±2.37, while the number of positive lymph nodes was 5.22±1.92.Three patients (33.33%, 3/9) relapsed, two patients relapsed in the abdomen and pelvis, and one patient had lung metastasis.No deaths have occurred by February 2020.

Conclusions: Bilateral CPLNS resection by VATS is safe and feasible, and the postoperative prognosis is good.

PO-178
Tomotherapy for advanced cervical cancer: A comparison of dosimetric and clinical outcomes with intensity modulated radiation therapy

Yueju Yin,Da peng Li
Shandong Cancer Hospital and Institute， Shandong First Medical University and Shandong Academy of Medical Sciences

Tomotherapy for advanced cervical cancer: A comparison of dosimetric and clinical outcomes with intensity modulated radiation therapy

Yue-ju Yin[1], Da-peng Li[1], and Xiu-gui Sheng[2]
1. Department of Gynecologic Oncology, Shandong Cancer Hospital and Institute, Shandong First Medical University and Shandong Academy of Medical Sciences, Jinan 250117, PR China.
2. National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital & Shenzhen Hospital，Chinese Academy of Medical Sciences and Peking Union Medical College，Shenzhen，518116，China
Corresponding author: Da-peng Li; No.440, Ji yan road, Huaiyin district, Jinan, Shandong province; E-mail: drldp@126.com; 15553115531.
Key word: Cervical cancer; Intensity-modulated radiation therapy; Tomotherapy; Intracavitary brachytherapy.

Abstract
Purpose: The aim of this study was to investigate the therapeutic response (loco-regional control, disease-free, overall survival), toxicities (acute and long-term toxicities) and dosimetric parameters between intensity-modulated radiation therapy (IMRT) and tomotherapy (TOMO) in patients with advanced cervical cancer.
Materials and Methods: This retrospective study included 310 patients with advanced cervical cancer and who received concurrent chemoradiation (CCRT) from August 2015 to March 2018. All patients were initially diagnosed with International Federation of Gynecology and Obstetrics (FIGO) stage ⅡB–ⅢB cervical cancer. A total of 155 patients were treated with TOMO, whereas the remaining 155 patients underwent IMRT. Intracavitary brachytherapy and concurrent chemotherapy were performed during external irradiation.
Results: A total of 310 patients were included in the present study. There was no statistical difference in age, FIGO stage, histologic type, tumor size, tumor grade, pathologic morphology type, ovarian conserving between the 2 groups (P=0.924, 0.352,0.954, 0.36, 0.11, 0.123, and 0.212, respectively). Pelvic lymph node metastases (PLNM) had occurred in 60 of 310 patients. Among them, there were 18 patients with para-aortic lymph node metastasis(PALNM). In comparing TOMO with IMRT, better CI (0.82±0.0327 vs. 0.75±0.064, P= 0.006) and HI (1.03±0.006 vs. 1.09±0.076, $p < 0.0001$) were observed by TOMO planning. TOMO provided better critical organ sparing than IMRT in the mean dose, and lower bladder V40 (p=0.029), V20 (p=0.001), femoral head V40 (p=0.014), and lower rectum V40 (p=0.035), V20 (p=0.005) were observed in the planning by TOMO compared to IMRT for patients with advanced cervical cancer. TOMO demonstrated a superior ability to protect the ovary (Dmax: 4.61Gy versus 5.81Gy, P = 0.026; Dmean: 2.99Gy versus 3.97Gy, P = 0.017). And femoral head V20 (p=0.066), exhibited a tendency toward more favorable values in TOMO than IMRT. There were no statistically significant differences in small bowel V20 (p=0.251), V40 (p=0.575) or bone marrow protection V20 (p=0.917), V40 (p=0.53) between the IMRT plan and the TOMO plan. But it gave significantly better values for Dmax parameters for bone marrow and small bowel with a statistically

significant level (P= 0.004, and 0.002, respectively). Only 17 patients underwent ovarian suspension. Two patients (33.33%) of ovarian function was preserved in the IMRT group and 5 (45.5%) of 11 patients in the TOMO group. There was no statistical difference for ovarian function between the 2 groups (P = 0.627). Acute major toxic effects included cystitis, proctitis, myelosuppression, dermatitis, and enteritis. Seventeen (11%) patients in the IMRT group and 5(3.22%) in the TOMO group experienced grade 3/4 acute proctitis. Grade 3/4 leukopenia occurred in 71 (45.81%) patients in the IMRT group and 60 (38.71%) patients in TOMO group. Four (2.58%) patients in the IMRT group and 3(1.94%) in the TOMO group experienced grade 3/4 acute cystitis. The acute radiation toxicity of proctitis, cystitis, and myelosuppression was significantly lower in TOMO group than IMRT group (P= 0.034, 0.049 and 0.025, respectively). There was no statistical difference in the acute radiation toxicity of enteritis, and dermatitis between the 2 groups (P= 0.082 and 0.616, respectively). The chronic toxicities were mainly enterocolitis and cystitis. Grade 3/4 late radiation cystitis 14 (9.03%) and enterocolitis 12 (7.74%) occurred in patients in the IMRT group after radiotherapy, respectively. But grade 3/4 late radiation enterocolitis and cystitis occurred in 4 (2.58%) and 5 (3.22%) patients in the TOMO group, respectively. The chronic radiation toxicity of enterocolitis, and cystitis was significantly lower in TOMO group than IMRT group (P= 0.028 and 0.025, respectively). No significant difference was observed in CR, PR, and total response rate (CR+ PR) between TOMO group and IMRT group (CR:94.84% vs. 95.48%, P= 0.791; PR:1.9% vs. 2.5%, P= 0.709; CR+ PR:96.77% vs. 98.06%, P= 0.902). There was no statistical difference for 1- and 3-year OS between the TOMO and IMRT groups (94.7% vs 94.8%, P = 0.544；81.5% vs 84.7%, P = 0.413). No obvious difference was found in 1- and3-year PFS rates between 2 groups (1-year: 89.5% vs 87%, P = 0.904; 3-year: 80.6% vs 82%, P = 0.708). But for the PLNM patients, there was no statistical difference for 1- and 3-year OS between the TOMO and IMRT groups (88.7% vs 90.9%, P = 0.956；74.3% vs 68.9%, P = 0.882). No obvious difference was found in 1- and3-year PFS rates between 2 groups with the PLNM patients (1-year: 81.5% vs 78.8%, P = 0.843; 3-year:73.5% vs 66.2%, P = 0.956). The 1-and 3-year OS were 77.8% and 48.7% in patient with positive para-aortic lymph nodes, respectively. And the 1-and 3-year PFS were 66.7% and 52.4% in patient with PALNM, respectively.

Conclusions: This retrospective study has shown that TOMO and IMRT are comparable in mean dose, dose conformity, dose homogeneity, and protection of the ovary. TOMO provided better critical organ sparing than IMRT in the lower bladder, and lower rectum were observed in the planning by TOMO compared to IMRT for patients with advanced cervical cancer. The acute and chronic toxicities were acceptable. So TOMO is a good option for adjuvant treatment of FIGO stage ⅡB–ⅢB cervical cancer, especially to young patients. Further prospective randomized multicenter studies are needed to confirm the benefits of TOMO.

PO-179
Stem cells in Endometrial Regeneration: Molecular Insights and Clinical Applications

Qiaoying Lv,Xiaojun Chen
Obestetrics and Gynecology hospital of Fudan University

Background and purpose Repeated diagnostic curettage, miscarriage, abortion, intrauterine infection that may cause irreversible endometrial damage, scarring, and intrauterine adhesions, which seriously affect pregnancy and live birth rates, cause a series of obstetric complications such as placental adhesions, implantation, and postpartum hemorrhaging. Additionally, in the early stage endometrial cancer, the invasive effect of endometrial cancer on the basal layer and fertility-preserving regimens, such as high-dose progesterone and repeated diagnostic mechanical scraping, may cause severe endometrial damage. Therefore, repairing the injured endometrium after complete remission in endometrial cancer patients is important. Stem cells with low immunogenicity, high proliferation, and a repair potential have been widely studied and applied to repair damaged

organs. Increasing evidence supports an important role of stem cells in cyclic regeneration of the endometrium and a repair potential through direct multilineage differentiation and the paracrine milieu. The aim of this study is to systematically review the molecular mechanisms of endometrial regeneration and discuss the recent progress in research into stem cells, especially their potential application and challenges in the repair of the injured endometrium.
Methods Literature refferenced in this manuscript was retrieved in PubMed with the search terms 'endometrial stem cells or endometrial regeneration' up to March 2020. This review includes animal models and human studies and related molecular mechanisms.
Results Studies have demonstrated endometrial stem cells (EndoSCs) participate in endometrial regeneration and repair. Currently, researchers have identified a small number of EndoSCs with a colony-forming ability, self-renewal, and differentiation potential in endometrial tissue, such as endometrial epithelial progenitor cells (EEPCs), mesenchymal stem cells (eMSCs), and side population (SP) cells. However, it is unclear whether one or more EndoSC types are involved in endometrial tissue regeneration. EndoSCs lack specific molecular markers and are often defined by their functional characteristics such as a cloning ability, long-term proliferation, multilineage differentiation potential, and stem cell markers.
Besides, a growing body of evidence supports an important role of adult stem cells in regeneration and repair of the endometrium. Clinical attempts hae been made to use stem cells to treat endometrial atrophy, extensive intrauterine adhesions, and scarring caused by dysfunction or excessive damage to the basal layer of the endometrium. It should be noted that there is no report of stem cell therapy for endometrial damage that occurs in endometrial cancer. Endometrial stromal cells isolated from a normal endometrium inhibit the proliferation of endometrial cancer cells, suggesting that such cell therapy may be a potential fertility-sparing treatment for endometrial cancer, but its effectiveness and safety should be explored further.
Currently, the combinatorial treatment of stem cells and tissue engineering scaffold materials may effectively improve the repair efficiency of stem cells in the damaged endometrium, and some studies have entered the clinical trial stage. Successful application of stem cells to treatment of endometrial atrophy, extensive intrauterine adhesions, and scarring will improve menstruation and greatly protect female fertility. However, there is still a lack of research on repair of the damaged endometrium after reversal of a gynecological tumor at present, especially endometrial cancer. Stem cells are easily affected by the microenvironment, such as oxidative stress, which can decrease stemness or drive stem cell senescence that inhibits stem cell differentiation and amplification.
Conclusion Successful application of stem cells for treatment of endometrial atrophy, extensive intrauterine adhesions, and scarring caused by dysfunction or excessive damage to the basal layer of the endometrium will improve menstruation and protect female fertility such as pregnancy and live birth rates. Furthermore, besides to injured endometrium alone, how to improve the injured endometrium after complete remission in endometrial cancer patients is of equal importance. The solutions of these problems will provide new directions and dimensions for future stem cell therapy.

PO-180

MUC16 抗体耦合 6-姜烯酚相变纳米粒靶向卵巢上皮性癌 TLR4/MyD88 通路和紫杉醇耐药的研究

朱熠[1],张国楠[1],黄建鸣[2]
1.四川省肿瘤医院 2.四川省肿瘤研究所

目的 在大多数黏蛋白 16（MUC16）膜表达增加的卵巢上皮性癌（卵巢癌）中，TLR4/MD2 复合物介导的 MyD88 依赖性途径激活可促进卵巢癌进展和紫杉醇耐药。基于证据表明，6-姜烯酚是一种具有亲脂性的 α，β-不饱和羰基化合物，可以阻断紫杉醇诱导的 TLR-4/MD2 复合物的形成，抑制 MyD88/NF-κB 信号通路活化。在本研究中，为了提高 6-姜烯酚的效力和增强靶向治疗能力，我们设计了一类与

MUC16 抗体偶联的载 6-姜烯酚相变纳米（6S@NBs-MUC16A），通过超声控释靶向递送 6-姜烯酚以增强紫杉醇对 MyD88$^+$卵巢癌细胞的敏感性。

方法 分别构建 MyD88$^+$和 MyD88$^-$人卵巢癌细胞裸鼠皮下移植瘤模型。通过小动物活体成像观察 6S@NB-MUC16A 对不同卵巢癌的靶向性。通过体内实验对 6S@NB-MUC16A 的治疗功效和安全性进行评估。将荷瘤裸鼠随机分为 5 组：（1）紫杉醇组（25mg/kg，腹腔注射）、（2）6-姜烯酚（10mg/kg，尾静脉注射）+紫杉醇组、（3）超声+6S@NB（非靶向纳米粒）+紫杉醇组、（4）超声+6S@NB-MUC16A+紫杉醇组、（5）对照组给予相同体积的生理盐水。治疗超声条件为 1MHz 的超声辐照，输出功率 3W/cm^2，占空比 20%，超声辐照 3min。每隔 3 天治疗 1 次，共 3 次。

结果 体内研究结果表明，6S@NB-MUC16A 具有对 MyD88$^+$卵巢癌的靶向性。与单独使用紫杉醇组相比，通过联合不同剂型 6-姜烯酚可提高 MyD88$^+$卵巢癌对紫杉醇的敏感性。1MHz 超声波可触发相变纳米气泡的“爆炸”并促进6-姜烯酚的释放。与游离6-姜烯酚组或非靶向纳米粒组相比，超声联合6S@NB-MUC16A 可显著改善 MyD88$^+$卵巢癌对紫杉醇的反应性、肿瘤生长的抑制率和生存时间，并对主要脏器无明显毒副作用。

结论 超声联合 6S@NB-MUC16A 纳米递药系统可克服 MyD88$^+$卵巢癌对紫杉醇的耐药性，这为卵巢癌治疗提供了新颖且更好的定制组合方案。

PO-181
阴道腔内 360°三维超声与核磁共振成像对宫颈癌阴道受累程度评估的一致性研究

朱熠,张国楠
四川省肿瘤医院

目的 探讨阴道腔内 360°三维超声（360°-3D TVUS）和核磁共振成像（MRI）对宫颈癌阴道受累程度评估的一致性。

方法 回顾性分析 36 例经病理证实的宫颈癌患者 MRI 以及二维超声和 360°-3D TVUS 影像学资料，以临床分期（FIGO2018）或术后病理结果为最终诊断阴道受累范围的标准，对比分析二维超声、360°-3D TVUS 和 MRI 的结果对宫颈癌阴道受累诊断的效能及一致性。

结果 36 例接受 360°-3D TVUS 检查的患者均未发生并发症，360°-3D TVUS 的形态学成像优于常规超声成像。二维超声和 MRI 在评估阴道受累方面的一致性为 75％（kappa=0.491），而 360°-3D TVUS 和 MRI 的一致性为 96.9％（kappa=0.842）。根据宫颈癌分期标准将肿瘤累及阴道分为上三分之二和下三分一两部分进一步分析，在肿瘤累及阴道上三分之二患者中，二维超声和 360°-3D TVUS 与 MRI 的一致性分别为 75.0％（kappa=0.538）和 95.8％（kappa=0.875）；在肿瘤累及阴道下三分之一患者中，二维超声和 360°-3D TVUS 与 MRI 的一致性分别为 75.0％（kappa=0.824）和 88.9％（kappa=0.923）。与 MRI 相比，360°-3D TVUS 可以更清楚地显示侵犯阴道的病变程度和范围，以及病变最低端到尿道口和宫颈口的距离。

结论 360°-3D TVUS 是评估宫颈癌阴道受累范围的简易、安全的影像学方法，且其能够提供与 MRI 具有同样价值的诊断评价。

PO-182
子宫内膜癌术后应用绝经激素治疗安全性的循证医学分析

睢丽婷
河北医科大学第四医院

研究目的：目前医学中关于子宫内膜癌术后应用绝经激素治疗的研究资料尚少，且在临床上存在慎用的情况，由于子宫内膜癌的发病与激素有相关性，部分妇产科医师担心在规范的治疗后患者体内残存的肿瘤细胞会因应用激素治疗而增殖，引起患者的死亡率、复发率增加。本研究的目的是采用循证医学的方法对子宫内膜癌术后应用绝经激素治疗的安全性进行评估。
材料与方法：检索中外各数据库，对建库至 2019 年 1 月之间关于子宫内膜癌术后给予激素治疗的已发表的文献进行检索和收集，包括回顾性、前瞻性等研究。患者均行至少行子宫+双附件切除术；术后病理确诊为子宫内膜癌；试验组为术后应用激素治疗，对照组术后未用。以术后复发例数、复发率及因子宫内膜癌死亡例数、死亡率为评价指标。
结果：通过对 10 篇研究的数据提取后进行的荟萃分析并通过改变选用模式降低异质性，结果示子宫内膜癌术后应用激素治疗不会增加其复发率、死亡率，且可能会降低其复发率及死亡率。
结论：1、子宫内膜癌患者术后应用激素治疗是安全的，不仅不会增加反而降低了子宫内膜癌的复发率及死亡率；
2、子宫内膜癌术后的患者应用雌孕激素联合方案比单纯雌激素方案更安全，加用孕激素起到了保护子宫内膜癌的作用；
3、高加索裔患者应用激素治疗较亚裔患者使用更安全。

PO-183
17 例达芬奇机器人辅助腹腔镜下子宫内膜癌根治术病人的护理

徐佩风
新疆维吾尔自治区人民医院

摘要:目的]总结机器人辅助腹腔镜下子宫内膜癌根治术病人的护理。[方法]分析 2019 年 10 月一 2020 年 1 月开展的 17 例机器人辅助腹腔镜下子宫内膜癌根治术病人的临床资料及手术情况,所有病人采取相应的围术期护理。[结果]病人手术时间为（100.10 士 32.93）min,失血量为(39.80 士 54.03)mL,阴道引流管留置时间为（(3.70 士 1.18）d,导尿管留置时间为（2.30 士 1.19）d,肛门排气 为(29.41 士 13.73)h,下床活动时间为（2.60 士 1.02）d,术后住院时间为(6.20 士 1.35)d,无其他并发症。[结论]围手术期的规范、合理系统的护理是机器人辅助腹腔镜下子宫内膜癌根治术手术成功的保证。对手术进行、术后康复、减少并发症、提高患者生活质量有重要意义。

PO-184
人附睾蛋白 4（HE4）对子宫内膜癌诊断准确性研究

刘靖,韩莉莉
新疆维吾尔自治区人民医院

目的：探讨 HE4（human epididymis protein4，人附睾蛋白 4）对子内膜癌的诊断准确性研究。方法：纳入自治区人民医院妇科住院部 2014-2019 年所有以“异常（不规则）阴道出血”为主诉、且使用 ELISA

方法已检测 HE4 值的患者。总共纳入经过金标准诊断为子宫内膜癌患者 136 例、子宫平滑肌瘤患者 40 例、卵巢囊肿患者 22 例、子宫脱垂患者 29 例、子宫内膜息肉患者 36 例。使用 SPSS 先绘制 ROC 曲线，寻找 HE4 临界值后将大于临界值的作为阳性、反之作为阴性建立诊断试验四格表，并计算 HE4 诊断子宫内膜癌的准确性。计算子宫内膜癌不同临床分期及不同病理类型患者中各自的 HE4 临界值，评价不同分层 HE4 诊断子宫内膜癌的准确性，将患者基本情况、生化指标等作为自变量、病理结果作为因变量，用 Logistic 回归分析研究可能影响 HE4 诊断价值的因素。结果：1.通过纳入疑似病例的方法，得出 HE4 诊断子宫内膜癌其临界值为 52.40pmol/L，其灵敏度为 57.35%（48.59%-60.70%），特异度为 76.38%（67.86%-83.26%）；2.HE4 诊断子宫内膜癌 I 期和 I 期以上的临界值为 36.9pmol/L，不同 FIGO 的分期的患者与血清 HE4 诊断 FIGO 分期差异无统计学意义（χ^2=3.700，P=0.054）；3.HE4 诊断子宫内膜癌不同病理类型其临界值为 30.60pmol/l,不同病理类型的患者与 HE4 诊断的子宫内膜癌差异无统计学意义（P＞0.05）；4.通过多因素分析，随着发病年龄增高，其 HE4 诊断子宫内膜癌价值更高。结论：1.通过纳入疑似病例的方法得出：HE4 诊断子宫内膜癌具备中度的诊断价值；2.HE4 诊断子宫内内膜癌 I 期和 I 期以上的临界值为 36.9pmol/L；3.HE4 诊断 I 型和 II 型不同子宫内膜癌病理类型的临界值为 30.60pmol/l；4.年龄是影响子宫内膜癌诊断准确性的最重要的要素，HE4 表达程度随着年龄增长，其诊断价值越高，因此年龄越高的人应尽早检测血清 HE4 值。

PO-185
单孔腹腔镜下保留生育功能的卵巢交界性肿瘤手术探索

秦真岳,王慧慧,陈继明,董智勇,鲍明月,郑亚峰,肖惠超,马洋,蒋云芬,施如霞
常州市第二人民医院

目的 探讨单孔腹腔镜下保留生育功能的卵巢交界性肿瘤手术技巧及其安全性与可行性。**方法** 回顾分析 2019 年 09 月 25 日于南京医科大学附属常州第二人民医院手术治疗的一例保留生育功能的卵巢交界性黏液性囊腺瘤患者的临床资料，该患者接受单孔腹腔镜下保留生育功能的手术。术中纵行垂直切开脐孔及上下缘约 1.5cm，逐层进入腹腔，采用专用单孔腹腔镜手术 PORT 形成操作通道后利用腹腔镜器械实施手术。**结果** 本例手术顺利完成，术中未增加通道转传统腹腔镜亦未中转开腹。术中未意外损伤临近其他脏器如输尿管、膀胱及结直肠等亦未伤及大血管及神经等。本例手术时间 245min，术中出血量约 100ml。术后 1d 体温 37.4℃，术后 1.5d 肛门排气，术后 2d 拔除导尿管后膀胱恢复正常排尿功能，无尿潴留发生。患者术后无需镇痛类药物。患者脐部切口愈合甲级，术后 5d 顺利出院，现门诊随访中，无复发迹象。**结论** 在单孔腹腔镜技术成熟的前提下，选择合适的病例，单孔腹腔镜下保留生育功能的卵巢交界性肿瘤手术可能是安全有效的。

PO-186
达芬奇人手术系统行 400 例宫颈癌手术临床分析

唐均英,欧阳熙坪,李津津,龚雪,黎埔君
重庆医科大学附属第一医院

研究目的 探讨达芬奇机器人手术系统在妇科宫颈恶性肿瘤手术中的安全性、可行性及临床应用价值。
材料与方法 回顾性分析 400 例于 2016 年 2 月至 2019 年 11 月期间在重庆医科大学附属第一医院妇科确诊为宫颈癌 IA1-IIIA 期（FIGO 2009）患者并行达芬奇机器人手术的临床资料及近期疗效。
结果 本研究 400 例宫颈癌患者均在机器人辅助下顺利完成手术，无一例中转开腹，无更改术式。患者平均年龄（49.28±9.74）岁，包括 IB 期以前 42 例（10.50%）、IB1 期 113 例（28.25%）、IB2 期 38 例（9.50%）、IIA1 期 56 例（14.00%）、IIA2 期 116 例（29.00%）、IIB 期及以后 35 例（8.75%）。

病理类型鳞癌 348 例（87%），腺癌 36 例（9%），其他类型 16 例（4%）。有 171 例（42.75%）患者行术前新辅助化疗，综合评估后予以 1-4 个疗程以紫杉醇联合铂类药物的术前化疗。400 例宫颈癌手术时间平均（158.13±38.26）min、术中出血量平均（87.02±71.88）ml、术后首次肛门排气时间（1.90±0.64）d、术后住院日（6.57±1.20）d、切除淋巴结数（35.84±15.16）个。术中并发症共 2 例（0.50%），包括 1 例 Trocar 损伤小肠和 1 例输尿管阴道瘘。术后并发症主要包括尿潴留、尿路感染、淋巴囊肿、下肢水肿等共 39 例（9.25%）。其中高难度宫颈癌手术 40 例，5 例保留生育功能的早期宫颈癌患者行机器人辅助腹腔镜下广泛宫颈切除术，5 例患者术后月经均正常来潮。IIB 期及以后患者共 35 人，其中 1 例宫颈腺癌 IIB 期复发伴膀胱直肠转移，行机器人辅助腹腔镜下盆腔廓清术；其余放化疗未控宫颈癌 11 例，局部晚期宫颈癌 15 例，IIIA 期宫颈癌 8 例。

结论 达芬奇机器人手术系统应用于妇科宫颈癌中在手术时间、术中出血量、术中术后并发症等方面具有一定的优势。同时达芬奇机器人系统在放化疗不敏感、放化疗未控、晚期局部复发转移、早期保留生育功能、局部晚期、盆腔廓清术等高难度的宫颈癌手术具有优势，患者经术前充分评估后行机器人手术，手术满意，并提高患者生存质量。

PO-187

Prognostic risk stratification of early-stage cervical cancer patients with pathological intermediate-risk factors: model development and validation based on the machine learning algorithm

Ran Chu,Shu Yao,Jinyu Meng,Junting Li,Zhongshao Chen,Kun Song
Qilu Hospital of Shandong University

ABSTRACT

Background.

Adjuvant therapy for cervical cancer (CC) patients with intermediate-risk factors remains controversial. The objectives of the present study are to assess the prognoses of early-stage CC patients with pathological intermediate-risk factors and to provide a reference for adjuvant therapy choice.

Materials and Methods.

This retrospective study included 481 patients with stage IB-IIA CC. Cox proportional hazards regression analysis, machine learning (ML) algorithms, Kaplan-Meier analysis and the area under the receiver operating characteristic curve (AUC) were used to develop and validate prediction models for disease-free survival (DFS) and overall survival (OS).

Results.

A total of 35 (7.3%) patients experienced recurrence, and 20 (4.2%) patients died. Two prediction models were built for DFS and OS using clinical information, including age, lymphovascular space invasion, stromal invasion, tumor size, and adjuvant treatment. Patients were divided into high-risk or low-risk groups according to the risk score cutoff value. Kaplan-Meier analysis showed significant differences in DFS (p=0.001) and OS (p=0.011) between the two risk groups. In the traditional Sedlis criteria groups, there were no significant differences in DFS or OS (p >0.05). In the ML-based validation, the best AUCs of DFS at 2 and 5 years were 0.69/0.69, and the best AUCs of OS at 2 and 5 years were 0.88/0.63.

Conclusion.

Two prognostic assessment models were successfully established, and risk grouping stratified the prognostic risk of CC patients with pathological intermediate-risk factors. Evaluation of long-term survival will be needed to corroborate these findings.

PO-188
Global, regional, and national endometriosis trends from 1990 to 2017

Shuang Zhang,Ting-Ting Gong,Han-Yuan Wang, Yu-Hong Zhao,Qi-Jun Wu
Shengjing Hospital of China Medical University

Objective: Endometriosis is a chronic inflammatory disease defined as the presence of endometrial tissue outside the uterus that causes pelvic pain and infertility. We used the Global Burden of Disease Study (GBD) 2017 to comprehensively analyze the burden of endometriosis between 1990 and 2017.
Methods: DisMod-MR 2.1 was used to estimate the incidence and prevalence in some countries/territories with sparse or absent data. Annual percent changes were calculated to quantify endometriosis burden estimate trends. Furthermore, the sociodemographic index (SDI) was used to assess the relationship between endometriosis burden estimates and development level.
Results: Between 1990 and 2017, endometriosis age-standardized incidence and prevalence and years of life lived with disability (YLDs) decreased globally by 0.21% (95% confidence interval [CI]: −0.23%, −0.20%), 0.29% (95% CI: −0.31%, −0.28%), and 0.28% (95% CI: −0.30%, −0.27%) per year, respectively. Apart from the high SDI quintiles with increasing trends of endometriosis incidence rate, prevalence rate, and YLDs, decreasing trends were observed in all SDI quintiles for all burden estimates.
Conclusions: It appears that all endometriosis burden estimates have decreased globally between 1990 and 2017. However, these results are based on limited data and highlight the need for increased data collection on the incidence and prevalence of endometriosis.

PO-189
双侧输卵管妊娠 1 例报告及文献复习

俞加正
恩泽医疗中心（集团）

异位妊娠是妇产科常见的急腹症之一，双侧输卵管妊娠极为罕见，据文献报道大约发生率为 0.03%。随着辅助生殖技术的应用，异位妊娠的发生率较自然妊娠发生率升高且表现更为复杂。本文报道 2019 年 3 月 29 日 1 例手术确诊的双侧输卵管妊娠，并讨论对双侧输卵管妊娠的管理与治疗。患者因“停经 50 天”于 2019 年 3 月 21 日入院。2019 年 3 月 21 日至台州中心医院复查 B 超示：右卵巢旁混合回声区（15*13*9mm），异位妊娠？。无下腹痛等不适。入院后查血总 β 人绒毛膜促性腺激素（稀释）2363.83mIU/ml，选择保守治疗。2019 年 3 月 29 日患者出现下腹痛不适，予复查阴超示：右侧附件区混合性团块（约 50*41*29mm，考虑：宫外孕可能），行手术治疗。术中发现双侧输卵管妊娠可能，术后病理示：（右侧）输卵管妊娠、（左侧）输卵管妊娠，两侧输卵管标本镜下均见少量绒毛。术后复查血总 β 人绒毛膜促性腺激素（稀释） 下降理想。与单侧异位妊娠比较，双侧异位妊娠并没有表现出特殊的临床症状，因此，双侧输卵管妊娠需经手术确诊。双侧输卵管妊娠的处理方式取决于患者发病时的情况、输卵管病变的范围、患者的生育要求等。对于双侧输卵管妊娠，腹腔镜下切除双侧输卵管是一个可以考虑的办法。如行保守或保守性手术治疗，术后需坚持追踪复查血 β-hCG 至正常水平是十分必要的。

PO-190
抑制 NDRG1 基因对人卵巢癌细胞株增殖、侵袭和迁移能力的影响

王蓓,野战鹰,代聪伟,李娜,赵静,秦英
河北省人民医院

[摘要] 目的 观察 NDRG1 对卵巢癌 OVCAR3 细胞增殖、侵袭及转移等生物学行为的影响，探讨其可能的调节机制。方法 用阳离子脂质体转染方法转染 shRNA-NDRG1 到 OVCAR3 细胞内 48h，下调 NDRG1 的表达；检测 NDRG1 基因 mRNA 及蛋白表达水平的变化；通过 MTT 实验、划痕试验及 Transwell 细胞侵袭试验进一步对下调 NDRG1 表达水平后的卵巢癌细胞增殖、侵袭和迁移能力进行分析。结果 shRNA-NDRG1 转染细胞后，OVCAR3 细胞中 NDRG1 的 mRNA 和蛋白表达水平明显降低，细胞的增殖、侵袭和迁移能力明显上升，差异具有统计学意义（P＜0.05）。结论 NDRG1 可能作为抑癌基因能够降低卵巢癌细胞增殖、侵袭和转移能力。

PO-191
KDM2B 调控 p21 的表达促进卵巢癌体内外进展的机制研究

侯海瑞,况燕,易叶叶,杨慧兰,谭彩春,苏善恒
广西医科大学第一附属医院

目的：研究 KDM2B 是否通过调控 p21 的表达参与卵巢癌的进展。
方法：采用短发夹 RNA (short hairpin RNA, shRNA)慢病毒载体敲除 KDM2B 在 A2780 和 SKOV3 卵巢癌细胞系中的表达，检测 KDM2B 和 p21 在卵巢癌细胞中的表达以及抑制 KDM2B 对细胞增殖和迁移的作用。建立裸鼠异种移植瘤模型，研究 KDM2B 和 p21 在卵巢癌体内的作用。
结果：体外研究发现抑制内源性 KDM2B 可增加 p21 的表达，降低卵巢癌细胞的增殖和迁移。此外，体内敲除 KDM2B 可抑制卵巢肿瘤的形成。
结论：我们的结果表明，p21 在卵巢癌中受到 KDM2B 的负调控，p21 和 KDM2B 在卵巢癌的发生中起着至关重要的作用。KDM2B 是一种治疗卵巢癌的潜在生物标志物。

PO-192
外阴恶性黑色素瘤的研究进展

陈静红 [2,1],尹如铁 [1,2]
1.四川大学华西第二医院
2.四川大学华西临床医学院

【摘要】：恶性黑色素瘤（malignant melanoma，MM）是一种起源于神经嵴的弥散神经内分泌细胞肿瘤，好发于皮肤和黏膜。原发于女性生殖系统的恶性黑色素瘤较罕见，发病率为 0.48-1.4/100 万。其中,外阴最常见，约占 70%，其次是阴道和子宫颈。本病恶性程度高，早期易发生远处转移，预后较差，5 年生存率为 47%。尚缺乏高级别证据的规范化诊疗手段，目前，治疗首选手术，如何优化化疗、免疫、靶向治疗在本病中的应用，提高其疗效值得关注。
【 **Abstract** 】 Malignant melanoma （ MM ） is a kind of malignancies that originated from neuroendocrine cells, with the most common sites being skin and mucous membranes. Primary malignant melanoma of the female reproductive system is rare with an incidence of approximately 0.48 to 1.4 per1,000,000 women annually. Vulva is the most frequent site（70%）,followed by vagina and

then cervix. The clinical outcome of patients with vulva melanoma is very poor due to late diagnosis and distant metastasis. The five-year survival rate is 47%. There is still a lack of high-grade evidence for standard diagnosis and treatment. Surgery is considered as the preferred operative approach. How to improve the therapeutic efficacy of chemotherapy, immunotherapy and targeted therapy in malignant melanoma deserves more attention.

PO-193

AXL 激活 mTOR 通路促进卵巢癌细胞顺铂耐药形成

徐国才,史圆圆,张丙忠
中山大学孙逸仙纪念医院

目的 体外建立卵巢癌顺铂耐药细胞株 A2780/DDP，研究 AXL 及 mTOR 信号通路与卵巢癌细胞系顺铂耐药的相关性， 初探 AXL 与卵巢癌细胞耐药形成的分子机制。**方法** 采用低浓度递增法诱导卵巢癌顺铂耐药细胞株；MTT 法检测其耐药指数；采用蛋白质印迹法 （Western blot） 检测两种细胞系的蛋白表达差异；构建 AXL 过表达 A2780 稳转细胞株，检测 AXL 过表达 A2780 细胞在顺铂药物敏感性及 AXL、mTOR 蛋白表达的变化。**结果** 建立的卵巢顺铂耐药细胞 A2780/DDP 的耐药指数 RI 为 2.277；Western blot 结果显示：（1）在不含顺铂培养基中培养的条件下，与正常 A2780 细胞的相比，A2780/DDP 的 AXL、mTOR 蛋白水平明显升高，差异有统计学差异（P＜0.05）；（2）A2780 及 A2780/DDP 分别予 30ug/ml 顺铂作用不同时间后，两者的蛋白水平变化亦不相同：AXL 蛋白、P-mTOR 蛋白及下游的 p70S6K 蛋白水平在两者中均有上调趋势，在 A2780 较耐药株变化较显著；A2780 为实验模型，构建 p-GFP-AXL 质粒，以慢病毒为载体，成功转染 A2780 细胞； western blot 检测 AXL 高表达稳转细胞株的 AXL 蛋白表达量较对照组明显升高，同时伴随 mTOR 表达的升高。A2780 AXL 稳转细胞株组的顺铂 IC50 为 5.625±0.303，A2780 空载细胞组的 IC50 为 2.613±0.113。差别有统计学意义，P=0.04。**结论**：AXL 的表达与上皮性卵巢癌的顺铂耐药相关，且上调 AXL 表达，上皮性卵巢癌的顺铂敏感性降低；AXL 参与上皮性卵巢癌的顺铂耐药形成与 mTOR 通路有关。

PO-194

早期宫颈癌保留生育功能手术的肿瘤及妊娠结局：Meta 分析

刘笛,王建英
河北医科大学第四医院

目的 本文应用单一率的 Meta 分析，评估早期宫颈癌患者行根治性宫颈切除术和新辅助化疗联合手术后的肿瘤和妊娠结局。**方法** 系统地检索 Cochrane 数据库、PubMed 及中文全文数据库，检索建库至 2018 年 12 月关于根治性宫颈切除术和新辅助化疗联合手术治疗早期宫颈癌患者以保留生育功能的相关文献，依据文献纳入和排除标准进行筛选，并对筛选的结果应用 RevMan5.3 软件进行单一率的 Meta 分析，以治疗后的复发率、妊娠率、流产率、早产率和活产率作为观察指标进行综合评估。**结果** 本文共纳入文献 48 篇，病例数共 4911 例。Meta 分析得到根治性宫颈切除术后复发率 5.66%，妊娠率 21.88%，流产率 30.07%，早产率 32.89%，活产率 62.55%。以肿块直径 2cm 为临界标准进行亚组分析，结果显示肿块直径＞2cm 的宫颈癌患者 RT 术后的复发率显著高于肿块≤2cm 者（P＜0.05）。新辅助化疗联合手术组亚组分析得出术后妊娠率 40.12%，术后流产率 19.35%，术后早产率 82.58%，术后活产率 70.93%。

结论 1.根治性宫颈切除术是治疗欲保留生育功能的早期宫颈癌患者安全有效的手术方式，并可取得相对良好的肿瘤结局，尤其对肿块直径≤2cm 者。2.相较于肿块直径≤2cm 的宫颈癌患者，肿块直径＞

2cm 者在根治性切除术后存在较高的复发风险。3.根治性宫颈切除术后可获得一定的妊娠率，虽然流产率和早产率较高，但是最终的活产率相对良好。

PO-195

卵巢低级别浆液性腺癌 47 例临床分析

李林,王冬
重庆大学附属肿瘤医院

目的：探讨卵巢低级别浆液性腺癌患者的临床特点、治疗以及预后影响因素。
方法：回顾性分析重庆大学附属肿瘤医院 2014 年 1 月至 2019 年 11 月收治的 47 例卵巢低级别浆液性腺癌患者的临床资料。
结果：47 例患者中位年龄 47 岁（21-65 岁），BMI≥25 kg/m^2 者 16 例，术前 CA125＞200U/ml 者 21 例。按照卵巢癌 FIGO 2013 分期，Ⅰ期 14 例，Ⅱ期 7 例，Ⅲ期 22 例，Ⅳ期 4 例。术前 15 例患者行 1~3 周期紫杉醇联合铂类方案（TP）新辅助化疗，全部患者均行卵巢癌减瘤术，24 例（51.1%）患者同时行盆腔和/或腹主动脉旁淋巴结清扫术，其中 6 例存在淋巴结转移。术后病理 33 例行 ER、PR 免疫组化染色：ER 表达阴性者 4 例，弱阳性表达者 5 例，强阳性表达者 24 例；PR 表达阴性者 10 例，弱阳性表达者 14 例，强阳性表达者 9 例。全组患者中 40 例（85.1%）达到满意减瘤（R0/R1）。术后除 3 例ⅠA 期患者未辅助化疗外，余患者均辅助 TP 方案化疗，其中 34 例患者化疗疗程数≥4 个。初次治疗结束疗效评价 43 例达 CR，3 例为 PR，1 例为 PD，总缓解率为 97.8%。随访截止 2020 年 5 月，1 例失访，中位随访时间为 25 个月。全组患者中 12 例复发，5 例死亡。总的 2 年无进展生存率为 77.7％，总生存率为 90.0%。单因素生存分析显示，残存肿瘤大小及是否行淋巴结清扫与无进展生存时间相关（P 均<0.05），而残存肿瘤大小、ER 表达、PR 表达、肿瘤分期与总生存时间相关（P 均<0.05）。多因素分析表明，残留病灶大小及 ER、PR 表达是影响卵巢低级别浆液性腺癌患者预后的独立因素(均 P<0.05)。
结论：是否行淋巴结清扫可能影响卵巢低级别浆液性腺癌患者的无进展生存时间，初次手术未满意减瘤及 ER、PR 表达阴性多提示预后不良。

PO-196

外阴肌上皮瘤样病变 1 例报道并文献复习

李杰
安徽医科大学附属省立医院妇产科

临床资料
女,38 岁。2016 年无明显诱因下出现左侧外阴近腹股沟处疼痛,自诉阴阜处可触及直径约 0.5cm 质硬包块，压痛明显,遂未予特殊治疗。2017 年疼痛加剧,盆腔 CT 未见明显异常。予中药外敷处理，效果不佳。2019 年 2 月再次就诊彩超提示外阴囊肿，遂手术切除不成形组织约 3cm*2.5cm*0.5cm，术后病理提示：倾向上皮恶性肿瘤，转移性肿瘤可能。病理送上海会诊考虑外阴肌上皮瘤样肿瘤。嘱定期复查，随访。
2019 年 10 月 10 日于我院全身麻醉下行外阴病灶根治性切除+左侧腹股沟淋巴结清扫术。术后病理（左侧外阴病灶）INI1 缺失性肿瘤，符合外阴肌上皮瘤样肿瘤 (Myoepithelioma-like tumor of the Vulvar Region：MELTVR)。
,逐渐增大,再次入院。2020 年 04 月 10 日在全身麻醉下行外阴广泛切除术。结果

2019-2 术后病理提示：倾向上皮恶性肿瘤，转移性肿瘤可能。病理送上海会诊考虑外阴肌上皮瘤样肿瘤。
2019-10-30 术后病理:1.（左侧外阴病灶）INI1 缺失性肿瘤，结合形态及免疫
:2020-04-16 外阴广泛切除肿块组织,外阴肿瘤病理外阴广泛切除肿块组织：1.结合原病史及原切片，符合外阴肌上皮瘤样肿瘤复发，肿瘤大小约 8cm×6cm×4cm，浸润至皮下脂肪层，请结合临床。2.皮肤长、短轴切缘及基底部未见肿瘤累及。
讨论 [1]，迄今为止，已有文献报道了 12 例 MELTVR 病例[2]。根据 WHO 第 4 版《软组织和骨肿瘤分类》未对该肿瘤分类。MELTVR 是 SMARCB1 缺陷性外阴肿瘤之一。由于其罕见，诊断困难，但可以通过组织学和免疫组织化学的结合来证实。此外，分子生物学也是鉴别诊断 MELTVRs 和其他肿瘤的重要工具。大多数患者表现为无痛性肿块或偶尔疼痛。临床诊断涵盖了多种疾病，包括孤立性纤维性肿瘤，侵袭性血管肌瘤，血管肌纤维母细胞瘤，脂肪瘤，血管瘤和神经鞘瘤。
是一种罕见的外阴间质肿瘤。组织学上，MELTVRs 通常与软组织肌上皮瘤相似；然而，它们具有特征性的免疫原性，包括上皮细胞膜抗原(EMA)、雌激素受体阳性和 S100 蛋白阴性、胶质纤维酸性蛋白(GFAP)阴性，以及 INI1/SMARCB1 表达缺失。恶性程度低、无转移、广泛切除、保证瘤缘阴性是一种合适的治疗方法。目前需要进一步的研究来明确该肿瘤的病理、免疫组织化学和分子特征。

PO-197

组合式适形调强阴道模具在腔内放疗中的应用

韩晓惠
辽宁省肿瘤医院

目的 宫颈癌不同程度的侵及阴道普遍存在，阴道原发癌，阴道转移癌，宫颈癌，宫体癌放疗和手术后阴道复发，采取近距离腔内放疗时须依赖阴道模具。本文采用一种新型的适形调强组合式阴道模具取代目前所有的各种阴道模具，并实现对阴道病灶的不同部位及阴道其它部位的精准适形调强照射，精准地控制调节阴道各个部位的照射剂量。
方法 采用新型的适形调强组合式阴道模具。此模具是由单元模块组成，模块是由单纯高分子材料圆柱体、单纯铅圆柱体以及高分子材料和不同厚度（1-5 个半价层，铱 192）、不同角度、弧度的铅经机械精密加工构成的圆柱体。铅挡的厚度用以调节照射剂量，铅挡的角度弧度和模块的厚度用以调节照射面积和体积。根据阴道病灶的形态、面积、体积和阴道各个不同部位所需要的照射剂量进行模块组合，形成一个个体化阴道模具。从而达到极大的个体化和理想的剂量分布以及所需要的剂量。
结果 适形调强组合式阴道模具的设计具备其它所有阴道模具的功能，而且能够达到适形调强。可满足不同的个体需要，达到放疗的极大个体化。完美的解决了施源器与阴道模具和阴道病灶相适应的关系。提高了肿瘤照射剂量，降低了正常组织照射剂量。肿瘤和正常组织的照射剂量精确可控可调。
结论 应用适形调强组合式阴道（直肠）模具进行阴道癌灶的近距离后装放疗是最理想的阴道模具。应用此模具可达到极大的个体化和适形调强。适形调强组合式阴道模具使用操作方便、高效、精确、实用、安全。使复杂问题简单化。

PO-198

宫颈癌腹腔镜根治术后腹腔洛铂灌洗对预后影响及相关危险因素分析

邓元美,张辉
河北医科大学第四医院

目的 评估宫颈癌根治术后进行腹腔灌洗并保留洛铂的安全性及对于无进展生存期的影响，并探索临床分期、病理类型、手术方式、肌层浸润深度、脉管瘤栓等相关危险因素对于肿瘤复发的作用。方法 选取 2016 年 2 月至 2019 年 8 月经河北医科大学第四医院妇科手术及病理证实的宫颈癌 IA2 期-IIA1 期患者 121 例，随访至 2020 年 1 月 31 日。采用抽签法将他们随机分成干预组与对照组，参照指南“Sedlis 标准”及“四因素模型”排除追加放化疗治疗的患者，排除术前化疗的患者。组中腹腔镜下宫颈癌根治术范围均达到 C2 型程度，干预组采用腹腔注药一次，手术结束时以灭菌注射用水冲洗盆腔并吸尽，避开手术结束后的 24 小时，此时残留癌细胞正在由对化疗药有抗药性的 G0 期变为增殖期，在残留癌细胞对腔内化疗最敏感的术后 3 天之内的第 2 天，将 30 mg 洛铂溶于 500ml 生理盐水后进行腹腔灌洗，保留 6 小时后开放腹腔引流管。对照组在术后，以灭菌注射用水冲洗盆腔后吸尽，留置腹腔引流管 1 条于术后开放，随访 6、12、24、36 月，对比两组复发差异，并对临床分期等相关危险因素进行分析，评估其对于肿瘤复发的作用。结果 两组患者术后及灌洗后的恶心、呕吐，血小板降低，肝肾功能异常等差异无统计学意义（P＞0.05）。2、随访期间对照组中患者有 8 例复发，干预组中 1 例复发。干预组中术后 12、24、36 月的内复发率分别为 0%、3.23%、3.23%；对照组 6、12、24、36 月复发率分别为 1.59%、3.18%、11.68%、14%。两组对比 2 年的复发率，差异有统计学意义（P＜0.05）。3、腹腔灌洗并保留洛铂的干预方式、临床分期及脉管瘤栓是影响宫颈癌复发的因素，临床分期为宫颈癌术后复发独立的影响因素。结论 宫颈癌根治术后腹腔灌洗并保留洛铂对患者是安全的，可以降低患者术后 2 年复发率，延长无进展生存期。肿瘤临床分期及脉管瘤栓是复发的危险因素。

PO-199

lncR-AS1 在卵巢癌细胞中的作用及其机制

韦欣仪,吕卫国
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

目的:探讨长链非编码 RNA(long non-coding RNA,lncRNA)R-AS1(lncR-AS1)对卵巢癌细胞增殖及凋亡的影响,并初步探讨其机制。
方法:采用 qRT-PCR 法检测卵巢癌细胞系中 lncR-AS1 的表达；用 siRNA 干扰 lncR-AS1 表达后,采用 CCK-8 法、克隆形成、EdU、流式细胞术试验检测其对细胞增殖及凋亡的影响;用慢病毒载体过表达 lncR-AS1 后，采用 CCK-8 法、克隆形成、EdU、流式细胞术试验检测其对细胞增殖及凋亡的影响，建立小鼠移植瘤模型，检测过表达 lncR-AS1 对移植瘤生长的影响。
结果：lncR-AS1 在卵巢癌细胞中的表达均明显高于正常卵巢上皮细胞，且在卵巢癌细胞系 HO8910 的高转移细胞系 HO8910PM 中明显高于其亲本细胞系 HO8910。敲低 lncR-AS1 可显著抑制卵巢癌细胞的增殖能力，促进其凋亡; 过表达 lncR-AS1 可显著增加卵巢癌细胞的增殖能力并抑制凋亡，可使卵巢癌细胞中 R 蛋白表达上调；可显著促进裸鼠移植瘤的生长。
结论：lncR-AS1 可促进卵巢癌细胞的增殖,其机制可能与调控 R 分子的表达相关。

PO-200
Characterization of potential role of NTPCR in epithelial ovarian cancer by integrating transcriptomic and metabolomic analysis

Hongkai Shang[1],Hongjiang Zhao[2],Jinyi Tong[1]
1.Affiliated Hangzhou First People's Hospital， Zhejiang University School of Medicine
2.Zhejiang Chinese Medical University

Background: Epithelial ovarian carcinoma (EOC) is a malignant tumor with high motility in women. Our previous study found that dysregulated NTPCR were associated with prognosis of ovarian cancer patients, and thus this present study attempted to explore the potential roles of nucleoside-triphosphatase cancer-related (NTPCR) in disease progression.
Methods: Expressed level of NTPCR was investigated in ovarian cancer cell lines by RT-qPCR analysis. shRNA targeting NTPCR was generated and transfected into SKOV3 cells to detect the effect of knocking out NTPCR on cell proliferation, cell cycle, cell migration and invasion. Transcriptomic sequencing and metabolite profiling analysis were performed in shNTPCR groups to identify transcriptome or metabolites alteration that might contribute to ovarian cancer. And finally, we searched the overlapped signaling pathways correlated with differential metabolites and DEGs by integrating analysis.
Results: NTPCR was upregulated in EOC cell lines compared with human ovarian epithelium cell IOSE80, especially in SKOV3 and OVCAR-3 (SKOV3 vs IOSE80, P<0.001; OVCAR-3 vs IOSE80, P<0.001). Knocking out NTPCR can induce cell proliferation and S phase arrest, promote migration and invasion in SKOV3 cell. RNA sequencing analysis demonstrated cohorts of differential expressed genes (DEGs) were identified in shNTPCR samples. PPI network were constructed for DEGs. STAT1 (degree = 43) and OAS2 (degree = 36) were identified as hub genes in network. Several miRNAs together with target genes were predicted to be crucial genes related to disease progression, including hsa-miR-124-3p, hsa-miR-30a-5p, hsa-miR-146a-5, EP300, GATA2 and STAT3. We also screened the differential metabolites from shNTPCR samples, including 22 upregulated and 22 downregulated metabolites. By integrating analysis, eight overlapped pathways were corelated with these DEGs and differential metabolites, such as primary bile acid biosynthesis, protein digestion and absorption, pentose and glucuronate interconversions.
Conclusion: NTPCR might serve as a tumor suppressor in EOC progression. Our results demonstrated that DEGs and differential metabolites were main related to several signaling pathways, which might be crucial role in progression of ovarian cancer.

PO-201
How important the hCG value for switching to dactinomycin is?

吴晓东,秦佳乐,沈涛,费伟东,陈丽莉,吕卫国
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

Objective: To assess the predictive power of serum human chorionic gonadotrophin levels before Act-D salvage therapy (hCGAct-D) to identify individuals with Act-D resistance in patients with low-risk gestational trophoblastic neoplasia (GTN) who failed methotrexate (MTX) chemotherapy.
Methods: This multiple-center retrospective study analyzed patients with low-risk GTN administered Act-D salvage therapy after failing MTX chemotherapy at five hospital between January 2000 and December 2015.

Results: The final analysis included 105 cases. Of these, 87 cases (82.86%) responded to salvage Act-D. The remaining 18 resistant cases were switched to EMA-CO chemotherapy and achieved complete remission. HCGAct-D in the Act-D-resistant cases were significantly higher than those in the Act-D responders (median 481.9 vs. 103 IU/L, P<0.01). However, the range of hCGAct-D values in Act-D responders was wider than that in Act-D-resistant cases (5.76–29,172 IU/L vs. 11.43–6,732 IU/L).
Conclusion: Although hCGAct-D was higher in the resistant group than in the responders in terms of population, its predictive value was limited for individuals.

PO-202

Emerging roles of NEDD4 proteins in cancer.

胡晓丽,赵红琴,颜笑健,周强勇*
温州医科大学附属第一医院（Department of Gynecology， The First Affiliated Hospital of Wenzhou Medical University， Wenzhou， 325000， China.）

A growing number of evidence indicates that NEDD4/NEDD4-like E3 ligases, the largest member in HECT E3 ligases, paly critical roles in a diverse variety of cellular processes, via the ubiquitination-mediated degradation of pleotropic substrate turnovers. The abnormal regulations of NEDD4 family have been implicated in multiple types of cancers. It is noteworthy that NEDDs have a great potential for novel targeted therapeutics in cancer, which lead us to gain an in-depth understanding of the mechanisms of NEDD4 proteins impacting on cancerogenesis. To date, the specific roles of NEDD proteins in cancer development have been still unclear, more genetic and mechanistic explorations need be addressed to further elaborate the effect of every NEDD4 family member in tumorigenesis, thereby promoting the development of promising anticancer therapeutics by targeting NEDD4 proteins. For example, Totland and colleagues found that NEDD4-1 promotes the degradation of Connexin 43 (CX43), which further induces the destruction of gap junctions in cervical cancer cells.

PO-203

Exosomal miRNAs acted as biomarkers to predicate endometrial cancer initiation and progression

Yunfeng Song,Kai Wang,Xiaoping Wan
Shanghai first maternity and infant hospital，P.R. China

[Objective] Endometrial cancer (EC) is one of the most common gynecological cancer. Early diagnosis of EC predicted a good prognosis.Exosome is small cup-like bi-layer vesicle with size between 30nm and 150nm,which allows the exchange of proteins, lipids and nucleic acids between cells,which also acted as an attractive alternative approach to diagnosis tumor and indicated prognosis since exosomal contents were altered during tumor progress.
[Methods] 6 human plasma samples were derived from EC patients without metastasis and 6 were from EC patients with metastasis.All EC patients were admitted at the Shanghai first maternity and infant hospital(Shanghai, China). Another 6 plasma samples were donated from healthy people.Plasma exosomes isolation and RNA extraction were performed,using the Exoquick reagent (QIAGEN, CA, USA) following the manufacturer’s protocol. miRNA profiling and RNA‐sequence data analysis were conducted to figure out differential miRNAs. Next,RT-PCR was performed to confirm differential miRNAs with 45 plasma samples from healthy people and 87 from EC patients.
[Results] Western blot analysis of protein expression of CD63,CD9,Hsp70 and CD81 to assure exosome makers.The number and size of exosomes were directly tracked using the Nanosight NS 300

system (NanoSight Technology, Malvern, UK) and by transmission electron microscopy.RNA sequence identified differential expressed miRNA in plasma exosomes from different groups. RT-qPCR confirmed 7 miRNA may act as bio-markers for EC cancer initiation.
[Conclusion] This study provides a new perspective on the identification of novel detection ways for ECC diagnosis and prognosis.We hope our findings can provide strategies for the identification EC tumor genesis and progress.

PO-204

卵巢恶性肿瘤细胞系中 YWHAZ 基因表达差异与细胞耐药性及调控机制的研究

尹骏[1],李莉[2]
1.新疆医科大学附属肿瘤医院
2.新疆医科大学附属肿瘤医院妇外一科

目的 探讨 YWHAZ 在卵巢恶性肿瘤中的表达差异的意义及其调控机制，初步检测 YWHAZ 在卵巢恶性肿瘤中的生物学功能。
方法 利用 GEPIA/TCGA 数据库分析 YWHAZ 在卵巢恶性肿瘤与良性病变的表达差异，并通过 Starbase 在线预测其上游调控基因。构建耐药细胞株通过体外实验，测定 YWHAZ 在不同细胞系中的表达，并绘制上游 miRNA 的定量表达关系。
结果 卵巢癌耐药细胞株中 YWHAZ 的平均相对表达量明显高于非耐药细胞株中 YWHAZ 的平均相对表达量，差异有统计学意义。
结论 YWHAZ 在可能在卵巢恶性肿瘤的耐药性中发挥作用，并且 YWHAZ 与 miR-423-5p 的表达呈正相关。

PO-205

D-二聚体联合纤维蛋白原检测对妇科恶性肿瘤术后并发 VTE 的诊断价值

卢艳
广西医科大学附属肿瘤医院

目的：探讨 D-二聚体（DD）联合纤维蛋白原（FIB）在妇科恶性肿瘤患者联合检测是否能提高诊断准确性及 VTE 的危险因素。**方法：**回顾性分析 2015 年 01 月-2019 年 12 月在广西医科大学附属肿瘤医院妇瘤科进行手术治疗的妇科恶性肿瘤患者的病例资料，用 ROC 曲线评估 D-二聚体联合纤维蛋白原在妇科恶性肿瘤 VTE 患者的诊断价值，采用 Logistic 回归模型进行单因素和多因素分析寻找 VTE 的高危因素。**结果：**包括 198 例行妇科手术的患者被纳入研究。术前 DD 联合 FIB 对 VTE 事件的灵敏度和特异度分别为 77.4％和 71.0％，阴性预测值为 89.6％，阳性预测值为 49.4％, AUC 为 0.807(95%CI：0.743~0.870)。根据 ROC 曲线评估，DD 的术前截断值为 1.49mg/L，术后为 4.46mg/L。Logistic 回归单因素回归显示，年龄、手术时长、术中出血量、全身性疾病、术后 PLT 水平、术前 DD 水平 (＞1.49 比≤1.49mg/L)、术后 DD 水平(＞4.46 比≤4.46mg/L)、术前 FIB 水平 (＞3.45 比≤3.45g/L)、术后 FIB 水平 (＞4.35 比≤04.35g/L)、与 VTE 的高风险显著相关。多因素回归显示，年龄、手术前后的 DD 水平、术前的 FIB 水平是妇科恶性肿瘤患者患术后并发 VTE 的独立危险因素。**结论：**DD、FIB 的联合监测,

可以提高诊断血栓的特异度；年龄、手术前后的 DD 水平、术前的 FIB 水平是妇科恶性肿瘤患者患术后并发 VTE 的独立危险因素。

PO-206
乳糜管显影技术在妇科恶性肿瘤腹主动脉旁淋巴结切除术中的应用研究

徐臻,王武亮,王璐,陈志龙,王倩,杨琳俐,赵虎,王利君
郑州大学第二附属医院

目的 探讨术前口服花生油在妇科恶性肿瘤腹主动脉旁淋巴结切除术术中乳糜管的显影情况和预防术后乳糜漏的作用。**方法** 选取 2018 年 7 月～2019 年 6 月在郑州大学第二附属医院进行盆腔淋巴结切除+腹主动脉旁淋巴结切除术的妇科恶性肿瘤患者共 112 例，于术前 10 小时口服花生油 60ml，观察术中乳糜管显影情况和区域分布特点，及术后乳糜漏发生情况和治疗结局。**结果** 术中肠干及其附属淋巴管总体显影率 97.32%（109/112），术中可清晰观察到小肠表面及腹主动脉区域有白色网格状乳糜管分布，乳糜管分布于腹主动脉左侧、肠系膜下动脉下方占 17.8%（20/112），左肾静脉下方、肠系膜下动脉上方占 79.4%（89/112），腹主动脉表面、十二指肠水平部下方占 69.6%（78/112），下腔静脉表面占 3.5%（4/112）。术后发生乳糜漏 2 例，经保守治疗后痊愈，乳糜漏发生率为 1.79%。**结论** 术前口服花生油乳糜管显影率高，方法简单有效，可在术中及时发现和处理乳糜管损伤部位从而减少腹主动脉旁淋巴结切除术后乳糜漏的发生。

PO-207
过表达 THBS2 通过 MMP2-VEGF 对宫颈癌 SiHa 细胞增殖、迁移、侵袭能力的影响

卢艳，广西医科大学附属肿瘤医院
广西医科大学附属肿瘤医院

目的 宫颈癌是最常见的妇科恶性肿瘤之一，但是其晚期疗效并不理想，宫颈癌的发生发展机制需要进一步研究，本研究探讨血小板反应蛋白 2（THBS2）通过基质金属蛋白酶 2（MMP2）、血管内皮生长因子（VEGF）影响了宫颈癌 SiHa 细胞增殖、侵袭、转移的能力。**方法 （1）**稳转过表达的 THBS2 重组慢病毒至 SiHa 细胞后得到实验组 THBS2-LV 组和相应的对照组 THBS2-NC-LV 组，通过 CCK8、Transwell 侵袭、迁移实验等细胞功能试验检测 SiHa 细胞的增殖、侵袭和迁移能力；过表达 THBS2 后，通过 Western blotting 和 PT-PCR 试验检测 MMP2 的表达情况。（2）稳转沉默 MMP2 慢病毒至 SiHa 细胞得到 MMP2-LV 组和相应的对照组 MMP2-NC-LV 组，通过 Western blotting 和 RT-PCR 试验检测下调 MMP2 后 MMP2、VEGF 的表达情况；然后通过细胞功能试验检，检验 SiHa 细胞增殖、侵袭和迁移的影响，以及裸鼠成瘤实验检测 MMP2 下调后裸鼠成瘤情况。**结果** （1）稳转慢病毒 THBS2 至 SiHa 细胞成功后，SiHa 细胞增殖、侵袭和迁移下降。（2）过表达 THBS2 的表达能导致 MMP2 蛋白的表达下调（P＜0.01，t=-10.13）；下调 MMP2 后 VEGF 蛋白的表达量低于对照组（P＜0.01，t=-11.34）。MMP2 表达水平下降使 SiHa 细胞增殖能力、侵袭、迁移能力下降（P＜0.05）；MMP2-LV 组细胞凋亡率高于对照组；MMP2-LV 组裸鼠的肿瘤平均体积显著小于对照组（P＜0.01，t=-7.80）。**结论** 过表达 THBS2 使 MMP2 蛋白的表达下降进而介导 VEGF 的表达来抑制宫颈癌 SiHa 细胞增殖、迁移、侵袭等生物学行为。

PO-208
5-氟尿嘧啶联合顺铂、长春新碱治疗妊娠滋养细胞肿瘤的疗效分析

徐臻,王璐,杨琳俐,王武亮,陈志龙,王倩
郑州大学第二附属医院

【摘要】 目的：探讨 5-氟尿嘧啶微量泵持续泵入联合长春新碱、顺铂（FPV 方案）治疗妊娠滋养细胞肿瘤的临床疗效。**方法：**回顾分析 2013 年 10 月至 2018 年 10 月于郑州大学第二附属医院接受 FPV（FPV 组）及 FAV（FAV 组）化疗方案的 82 例滋养细胞肿瘤患者的临床资料及治疗结局。**结果：**FPV 组的 1～2 级恶心呕吐、肝损害、口腔溃疡、3 级中性粒细胞减少的发生率高于 FAV 组，1～2 级腹泻、3 级口腔溃疡的发生率低于 FAV 组，差异具有统计学意义（P＜0.05），2 组 4 级副反应的发生情况差异无统计学意义（P＞0.05）。**结论** FPV 与 FAV 方案的疗效相当，主要的副反应为胃肠道反应和骨髓毒性，微量泵持续泵入的方法减少 5-氟尿嘧啶化疗副反应的发生率，提高了患者的耐受性。FPV 方案临床效果肯定，有进一步推广的价值。

PO-209
膳食模式与宫颈癌发病关系的研究进展

闻赵燕[1,2],夏阳[1,2],孙慧[1,2],赵玉虹[1,2],吴琪俊[1,2]
1.中国医科大学附属盛京医院临床流行病学教研室
2.中国医科大学附属盛京医院临床研究中心

在全球尤其是发展中国家，宫颈癌的发病率一直居高不下，对女性生命和健康产生了严重威胁，如何降低其发病风险成为了专家学者关注的重点。膳食模式针对整体膳食状况进行分析，同时考虑营养素和食物之间的交互作用，因此，膳食模式对宫颈癌发生的预防作用及意义更大。本综述归纳了不同膳食模式与宫颈癌发病关联情况，旨在为以后更深入的研究提供依据。

PO-210
腹腔热灌注化疗治疗晚期卵巢癌的临床疗效及安全性分析

杨家慧,张辉
河北医科大学第四医院

研究目的：分析 78 例接受腹腔热灌注化疗（HIPEC）晚期卵巢癌患者预后情况，评估 HIPEC 在晚期初治卵巢癌患者治疗上的临床疗效及安全性。
材料与方法：回顾 2017 年 6 月到 2019 年 6 月河北医科大学第四医院 78 例接受腹腔热灌注化疗（HIPEC 组）III-IV 期初治卵巢癌患者临床病例资料。与同期未行 HIPEC 的 41 例 III-IV 期初治卵巢癌患者（对照组）对比，比较两组患者的腹水缓解程度、术后 3 个月 CA125 变化、无进展生存期、不良反应等，评估 HIPEC 的临床疗效及安全性。所有患者均行肿瘤细胞减灭术（CRS）+术后辅助静脉化疗（IV）。根据改良 Fagotti 评分将术式分为初次肿瘤细胞减灭术（PDS）（Fagotti＜8 分），与新辅助化疗（NACT）+间歇性肿瘤细胞减灭术（IDS）（Fagotti≥8 分）。静脉化疗方案选用 TP 方案（注射用奥沙利铂 130 mg/m2，第 1 天；紫杉醇，135mg/m2，第 1 天；）间隔 21 天，共 6 个疗程。接受 HIPEC 患者于术后第一天、第三天、第五天以 43℃灌注 1h 行腹腔热灌注化疗。药物剂量分别为顺铂 75mg/m2（第一次），顺铂 75mg/m2（第二次），顺铂 60mg（第三次，保留 24h）。

结果：近期疗效：HIPEC 组中血 CA125 水平有效缓解率以及腹水缓解有效率均较对照组高，两者差异有统计学意义；远期疗效中 HIPEC 组的无进展生存期（PFS）较对照组的 PFS 明显延长。两组患者的不良反应主要集中在骨髓抑制、腹胀腹痛以及肠梗阻。骨髓抑制和肠梗阻发生率在两组之间无明显差异，但是在 HIPEC 组中腹痛腹胀发生率较对照组有所提高。经治疗后均可得到有效缓解，对患者的生存没有显著影响。并且在 HIPEC 组中接受 NACT+IDS 与 PDS 的患者其 PFS 无明显差异。在不良反应及术后并发症发生上也没有明显区别。无论行何种 CRS，HIPEC 组的 PFS 均优于对照组。
结论：与单纯静脉化疗相比，HIPEC 可以有效延长患者生存，控制恶性腹水的生成，缓解大量腹水给患者造成的生活质量下降，并且不会显著增加治疗风险。而且不论是 PDS 还是 NACT+IDS 后辅以 HIPEC，均较单纯静脉化疗对患者更有益。

PO-211

膳食模式与卵巢癌发病及预后关系的研究进展

闻赵燕[1,2],张家雨[1,2],赵玉虹[1,2],吴琪俊[1,2]
1.中国医科大学附属盛京医院临床流行病学教研室
2.中国医科大学附属盛京医院临床研究中心

卵巢癌是女性生殖系统常见的三大恶性肿瘤之一，由于早期起病隐匿，多数患者在诊断时已处于晚期，严重威胁女性健康。近些年，大多数营养流行病学研究只关注了单一食物或营养素对卵巢癌的影响，无法充分解释食物或营养素之间复杂的相互作用，而从膳食模式角度来阐明其与卵巢癌之间的关联更具有科学性，本文就膳食模式与卵巢癌关系进行综述。

PO-212

Long non-coding RNA AOC4P suppresses epithelial ovarian cancer metastasis by regulating epithelial-mesenchymal transition

Xiaojing Lin[1],Keqin Hua[2]
1.The First Affiliated Hospital of Wenzhou Medical University
2.Obstetrics and Gynecology Hospital of Fudan University

Objective: Currently，the function and mechanisms of long non-coding RNAs (lncRNAs) involved in the metastasis of epithelial ovarian cancer (EOC), especially those of the lncRNAs participated in the epithelial-mesenchymal transition (EMT) process, remains largely unknown. Here, we focused on a lncRNA named AOC4P and analysed its role in EOC.
Materials and methods: The expression of AOC4P gene was examined with quantitative real-time quantitative PCR (qRT-PCR). The cell migration and invasion were detected by Transwell and scratch assays. The in vivo metastatic activity was evaluated by intraperitoneal metastasis model. The downstream genes were investigated by a tumour EMT real-time polymerase chain reaction (RT-PCR) array, and validated by qRT-PCR and Western blot.
Results: The results showed that AOC4P expression levels were decreased in EOC tissues and cell lines, and that the under-expression of AOC4P was positively correlated with FIGO stage and lymph node metastasis. Furthermore, the knockdown of AOC4P expression in poorly metastatic EOC cell lines remarkably facilitated cell migration/invasion while the overexpression of AOC4P in highly metastatic EOC cell lines reduced the metastatic ability of these cells in vitro. Consistently, the anti-metastatic role of AOC4P in vivo was also verified by bioluminescence imaging and tumour

dissection. Mechanistically, the anti-metastatic effect of AOC4P in EOC was partially mediated by the EMT process accompanied by the alterations in MMP9 and COL1A2 expression.
Conclusion: These data highlight that AOC4P plays a critical role in EOC invasion/metastasis and could function as a novel and effective target for the lncRNA-based anti-metastatic clinical management of EOC.

PO-213

长链非编码 RNA MEG3 靶向调控 Rb1 抑制上皮性卵巢癌细胞增殖的研究

李剑琦
广州医科大学附属第三医院

目的：母系表达基因 3（Maternally expressed 3 ，MEG3）是一种长链非编码 RNA，可通过调控下游靶基因抑制多种肿瘤细胞的生长。本研究的目的是验证 MEG3 在上皮性卵巢癌中的表达，同时进一步探讨 MEG3 在上皮性卵巢癌细胞中的作用及其可能的机制。方法：采用 RT-PCR 检测 67 例人上皮性卵巢癌组织和 20 例正常卵巢组织中 MEG3 的表达，分析 MEG3 表达与上皮性卵巢癌临床病理特征之间的关系；过表达 MEG3 质粒成功转染卵巢癌细胞 OVCAR3 和 SKOV3 后，采用 MTT 实验、EdU 实验和凋亡实验评估 MEG3 对卵巢癌细胞生长的作用，采用双荧光素酶报告系统检测 MEG3 靶基因 Rb1 的转录活性，最后采用 RT-PCR 和 Western blot 检测 Rb1 的 mRNA 和蛋白表达水平。结果：正常卵巢组织中 MEG3 表达量为 3.32±0.25，上皮性卵巢癌组织为 0.35±0.11，两者比较具有统计学意义；并且，MEG3 表达量与临床病理分期呈负相关，但与病理类型和病理分级无关。在细胞水平，MTT 实验和凋亡实验结果显示，过表达 MEG3 抑制了 OVCAR3 和 SKOV3 细胞的增殖，并促进了 OVCAR3 和 SKOV3 细胞的凋亡；对比空质粒组，实验组中过表达 MEG3 增加了 Rb1 的转录活性，同时提高了 Rb1 mRNA 和蛋白的表达水平。结论：我们推测，MEG3 可能与上皮性卵巢癌的发生发展相关，其可通过调控 Rb1 从而抑制上皮性卵巢癌细胞的增殖。

PO-214

腹腔镜与开腹子宫肌瘤剔除术临床疗效比较

朱亚兰,王建英
河北医科大学第四医院

目的：比较腹腔镜子宫肌瘤剔除术（LM）与开腹子宫肌瘤剔除术（TAM）治疗子宫肌瘤的临床疗效。
方法：回顾性地收集 2013 年 1 月至 2014 年 12 月在河北医科大学第四医院同期行 LM 或 TAM 治疗子宫肌瘤的患者的临床资料，以纳入标准和排除标准为依据，筛选出 355 例作为研究对象，对两组观察指标数据进行统计学处理。
结果：两组一般资料差异无统计学意义（P＞0.05）；LM 组术中剔除的最大子宫肌瘤直径 15cm 小于 TAM 组 25cm，差异有统计学意义(P＜0.05)；LM 组的多发肌瘤比例 45.6%明显低于 TAM 组 76.5%，差异有统计学意义(P＜0.05)；LM 组和 TAM 组残留率分别为 12.6%、8.0%，对于剔除肌瘤数目≥4 个者，残留率分别为 8.3%、0%，但差异均无统计学意义(均 P＞0.05)；LM 组手术时间短于 TAM 组，LM 组术中出血量少于 TAM 组，差异均有统计学意义(均 P＜0.05)；LM 组与 TAM 组术中盆腔引流管放置率分别为 11.2%、17.6%,差异没有统计学意义(P＞0.05)；对于剔除肌瘤数目≥4 个者，LM 组与 TAM 组手术时间、术中出血量、术中盆腔引流管放置率比较，差异均无统计学意义(均 P＞0.05)；LM 组与 TAM 组并发症发生率分别为 5.6%、7.1%，对于剔除肌瘤数目≥4 个者，LM 组与 TAM 组并发症

发生率分别为 7.4%、10.0%，差异均无统计学意义(均 P＞0.05)；LM 组术后肛门排气时间早于与 TAM 组，LM 组术后住院时间短于 TAM 组，差异均有统计学意义(均 P＜0.05)；LM 组与 TAM 组术后症状完全改善率分别为 91.8%、97.1%，妊娠成功比例分别为 73.3%、62.5%，5 年累积复发率为 30.5%、34.1%，差异均无统计学意义(均 P＞0.05)；对于剔除肌瘤数目≥4 个者，LM 组与 TAM 组 5 年累积复发率分别为 58.3%，44.4%，差异仍无统计学意义(P＞0.05)，两组孕期均未发生瘢痕子宫破裂。

结论：1.TAM 与 LM 治疗子宫肌瘤均是安全、有效的。2.LM 治疗子宫肌瘤具有对腹腔干扰小、恢复快、切口美观等优势。3.LM 治疗子宫肌瘤的适应症是可以适当放宽的。4.LM 不能完全替代 TAM，TAM 的适应证比较广泛，具有可剔除的子宫肌瘤直径较大、剔除的肌瘤数目较多等优势。5. 肌瘤数目可能是影响临床疗效的风险因素，可进一步设计临床实验进行研究。

PO-215

15 例高级别浆液性卵巢癌患者体系突变 WES 数据分析

张军
河北医科大学第四医院

目的：利用全外显子测序技术对 15 例高级别浆液性卵巢癌患者体细胞突变进行生物分析，了解卵巢癌分子层面的发生发展机制，探讨是上皮性卵巢癌，特别高级别浆液性卵巢癌的靶向治疗。

材料与方法：标本收集于河北医科大学第四医院行妇科手术的高级别浆液性卵巢癌新鲜癌灶组织样本 15 例，于-80 ℃冷冻保存。所有患者以术后病理结果为准，按照国际妇产科联盟（FIGO）标准进行手术病理分期。从 15 例高级别浆液性卵巢癌患者的新鲜冰冻癌组织中提取基因组 DNA。采用 Agilent SureSelect Human All Exon V5/V6 试剂捕获基因组的外显子区域和建库。通过 Illumina HiSeq PE150 测序平台对 DNA 外显子区域进行测序，对下机得到原始测序序列(Raw data)进行精细过滤，得到 Clean data。通过 BWA 将 Clean data 与人类参考基因组对比得到变异信息。使用 muTects、Strelka 对变异行 Somatic SNP/INDEL 检测，使用 in-house 对比筛查驱动基因，使用 MuSic 分析高频突变基因。

结果：1.高频抑癌基因分析：在 15 例高级别浆液性卵巢癌组织中发现 4 种体系高频突变的抑癌基因，包括 TP53（10/15）、MMR 基因（4/15）、ATM（3/15）、BRCA2（2/15）；2.驱动基因分析：在 15 例高级别浆液性卵巢癌组织中找到 30 种已知驱动基因，其中 TP53 突变频率达 66.7%，均为错义突变。

结论：本研究通过对 15 例高级别浆液性卵巢癌患者的癌组织中 DNA 行全外显子测序，并进行生物分析，得出了基因组中相关高频抑癌基因、驱动基因的变异信息及特征，对高级别浆液性卵巢癌有了更加深入的认识，为高级别浆液性卵巢癌的早期防治及精准靶向治疗提供了理论基础

PO-216

基于 WES 研究高级别浆液性卵巢癌高频突变基因及肿瘤易感基因突变情况

刘恪昕
河北医科大学第四医院

目的：卵巢癌在女性生殖系统肿瘤中发病率仅次于宫颈癌和子宫内膜癌，其死亡率却位居第一。运用全外显子测序（WES）技术对高级别浆液性卵巢癌患者高频突变基因及相关易感基因突变情况进行分

析研究，寻找卵巢癌治疗新靶点，深入了解卵巢癌发病机理，根据患者特点制定不同的治疗方案，进行卵巢癌临床精准治疗。

方法：本研究所需要的卵巢癌组织标本均来自河北医科大学第四医院，此次课题共筛选了 15 例高级别浆液性卵巢癌患者。首先在 15 例患者的新鲜手术组织中提取 DNA，采用 Agilent 液相芯片捕获系统进行全外捕获，建库，库检合格后在 Illumina Hiseq 平台上进行高通量、高深度测序。本研究使用 SAMtools 进行 SNP/INDEL 检测，通过 in-house 筛选肿瘤易感基因，通过 MuSic 分析体细胞高频突变基因。

结果：

1.本课题获取了 15 例高级别浆液性卵巢癌患者的 WES 测序数据，其质量分布在 Q30（≥80%）以上。

2.在 6 种点突变变异类型中，主要类型为 C＞T / G＞A。

3.在 15 例样本中，筛选出 30 个高频突变基因，主要突变形式为错义突变，TP53 为高频突变基因，同一样本会发生多种形式突变。

4.本研究筛查得到 30 种肿瘤易感基因，PDE4D1P 在 12 例患者中发生突变，FOXP1 在 7 例患者中发生突变，还发现了 TP53、RUNX1、JAK2、STAT6、ARIDIA、LPP 等与卵巢癌发病相关的肿瘤易感基因。

结论：

1.TP53 是高频突变基因，是一种常见的抑癌基因，可以发现在同一患者体内可以发生多种形式突变，可进一步指导临床个体化治疗。

2.筛查得到的肿瘤易感基因中，TP53 与 DNA 损伤修复通路相关，是常见的抑癌基因；JAK2 与 STAT6 属于 JAK-STAT 信号通路；ARID1A 与 SMARCA4 属于 SWI/SNF 复合物家族，与染色质重塑密切相关；RUNX1 是 RUNX 家族一员，是重要的转录因子；MSH2 是 DNA 错配修复基因；这些基因均参与卵巢癌发病及进展。组蛋白甲基化转移酶 SETD2 是重要的表观遗传学调节因子，可介导 P53 蛋白调控细胞凋亡。

3.本实验局限性在于：此次研究的样本例数较少，发现的相关基因突变频率可能会与已有的结论有差异；个别基因具体与卵巢癌发病机制及预后，还需要临床大量实验去论证。

PO-217

Dosimetric predictors of hematological toxicity in cervical cancer patients using the Lyman Normal tissue complication probability model

Dandan Wang[1],Yueju Yin[1],Xingmin Ma[1],Zirong Li[2],Qichao Zhou[2],Yong Yin[1],Baosheng Li[1],Tong Bai[1],Dapeng LI[1],Jian Zhu[1]

1.Shandong Cancer Hospital and Institute， Shandong First Medical University and Shandong Academy of Medical Sciences

2. Manteia Technologies Co.， Ltd

Objective: To identify dosimetric parameters associated with acute hematological toxicity (HT) and analyze HT in cervical cancer patients receiving helical tomotherapy (Tomo) and fix-field intensity-modulated radiation therapy (ff-IMRT) with concurrent chemo-radiotherapy using the Lyman-Kutcher-Burman (LKB) Normal tissue complication probability (NTCP) model.

Methods: Data were collected from 269 cervical cancer patients who received Tomo or ff-IMRT from 2015-2018. Pelvis bone marrow (PBM) was contoured from the superior to the inferior boundary of the planning target volume (PTV). The cumulated dose of PBM was evaluated by integrating two plans for each patient on the MIM^{TM} system. The parameters (TD50(1), m, n) of the LKB model predicting ≥grade 2HT (RTOG grading criteria) were determined using maximum likelihood analyses. Univariate and

multivariate logistic regressions were enlisted to find the correlation between dose-volumetric parameters and the clinical factors of HT.
Results: 202 (75%) patients experienced ≥grade 2HT. The fitted LKB model parameters were: TD50(1)=30.23Gy, m=0.46, n=0.05. Per univariate analysis, NTCP (p=0.023), maximal PBM dose (p=0.064), V6-11Gy (p<0.100), and V46-55Gy (p<0.100) were associated with ≥grade 2HT. NTCP (p=0.032; AUC=0.606), maximal PBM dose≥54.5Gy (p=0.024, AUC=0.601), and V47≥11.5% (p=0.036; AUC=0.596) were significant predictive factors of ≥grade 2HT from the multivariate logistic regression analysis.
Conclusion: For cervical cancer patients treated with external beam radiotherapy, the volume of PBM receiving high-dose radiation was associated with HT. LKB NTCP, maximal dose, and V47 of PBM were strong predictors of HT. These results indicate that the potential to optimize the IMRT plan to avoid radiation hot spots on PBM may reduce the incidence of ≥Grade 2 HT. Both hot spots and large areas of low dose on PBM should be avoided, which means 'tight' dose distribution should be considered during planning.

PO-218

Oncological and reproductive outcomes of cystectomy compared with unilateral salpingo-oophorectomy as fertility-sparing surgery in patients with apparent early-stage pure immature ovarian teratoma

Dan Wang[1],Shan Zhu[1],Congwei Jia[2],Dongyan Cao[1],Jiaxin Yang[1],Yang Xiang[1]
1.Department of Obstetrics and Gynecology， Peking Union Medical College Hospital， Chinese Academy of Medical Science and Peking Union Medical College
2.Department of Pathology， Peking Union Medical College Hospital， Chinese Academy of Medical Science and Peking Union Medical College

Objective: To compare the oncological and reproductive outcomes of patients with apparent early-stage pure immature teratoma (IMT) of the ovary treated with cystectomy or unilateral salpingo-oophorectomy (USO).
Methods: We retrospectively reviewed the medical records of patients with apparent early-stage pure ovarian IMT who received fertility-sparing surgery (FSS) between 1984 and 2019. FSS was defined as preservation of the uterus and at least one adnexa. Recurrence rates were compared between patients receiving cystectomy and USO. Reproductive outcomes and menstrual histories were assessed by telephone interview.
Results: A total of 124 patients were included, of whom 41 underwent cystectomy and 83 underwent USO. After a median follow-up of 70.6 months (range: 6.2–410.6 months), eight patients suffered recurrences (3 in the cystectomy group and 5 in the USO group). All patients with recurrence were successfully salvaged by surgery, except for one death. Univariate analysis showed no difference in disease-free survival and overall survival between the groups (P = 0.781, 0.155). Of the 111 patients contacted by telephone, 97 resumed menstruation following the surgery. Of the 31 patients desiring pregnancy, 26 achieved 28 pregnancies. Ovarian cystectomy (85.7%), like USO (83.3%), resulted in excellent pregnancy rates.
Conclusions: Overall survival in patients with apparent early-stage pure ovarian IMT was not compromised by ovarian cystectomy. Restaging surgery may thus be avoided in these patients. Systematic treatment may be reserved for recurrent disease. Ovarian cystectomy is a feasible fertility-sparing therapy when a cystectomy is the only surgical option. Reproductive outcomes are promising.

PO-219

AP 蛋白在卵巢癌细胞中的作用及其机制

沈璋瑾,吕卫国
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

目的:探讨 AP 对卵巢癌细胞转移的影响,并初步探讨其机制。
材料与方法:采用 qRT-PCR，wb 法检测卵巢癌细胞系中 AP 的表达；用 siRNA 及用慢病毒干扰 AP 表达后，采用迁移侵袭，划痕，cck-8 试验检测其对细胞增殖及迁移侵袭的影响；用质粒过表达 AP 后，采用迁移侵袭，划痕，cck-8 试验检测其对细胞增殖及迁移侵袭的影响；构建小鼠卵巢原位异种移植瘤模型，观察在体内敲低 AP 后对移植瘤生长和转移能力的影响；收集 siNC 和 siAP 细胞，提取总 RNA，进行 RNA-seq 检测（每组设 3 次生物学重复），测序得到的数据进行 KEGG 和 GO 聚类分析，筛选并通过 qRT-PCR 技术验证参与 AP 调节卵巢癌转移的下游靶基因。
结果：AP 在卵巢癌细胞中的表达均明显低于正常卵巢上皮细胞，且在卵巢癌高转移细胞系中明显低于其亲本细胞系。敲低 AP 后，可显著促进卵巢癌细胞的迁移侵袭，对细胞的增殖没有影响; 过表达 AP 后，可显著抑制卵巢癌细胞的迁移侵袭能力。在免疫缺陷小鼠卵巢原位异种移植瘤模型中，在体内敲低 AP 后加速了移植瘤的腹腔转移。测序及生信分析，下调 AP 后，钙离子通道蛋白明显上调，钙离子相关通路激活。
结论：AP 可抑制卵巢癌细胞的迁移侵袭,其机制可能与调控钙离子通道相关。

PO-220

USP 14-BCL6 分子通路在上皮性卵巢的表达及铂耐药机制研究

沈晶
湖北省荆州市中心医院

卵巢癌是常见的妇科恶性肿瘤之一，由于其早期没有特异的临床症状而不易被察觉，多数患者就诊时已属晚期，晚期卵巢癌患者的 5 年生存率非常低。通过手术减少肿瘤负荷是影响预后的最重要治疗方法，首次手术后没有肉眼可见残留病灶的患者具有生存获益[2]。手术后进行铂类辅助化疗可以提高患者生存率。顺铂是治疗包括卵巢癌在内的多种人类肿瘤的有效药物。然而，对顺铂耐药成为卵巢癌治疗成功的主要障碍。目前顺铂耐药性的分子基础尚未确定。泛素特异性蛋白酶 14 (USP14)是三种与蛋白酶体相关的去泛素化酶之一，参与多种癌症的进展。然而，USP14 在卵巢癌中的作用尚不清楚。通过 qRT-PCR 筛选，我们发现 USP14 在顺铂耐药的卵巢癌细胞中显著升高。过表达 USP14 可产生对顺铂敏感性卵巢癌细胞的耐药性。基因或药物抑制 USP14 可以逆转卵巢癌细胞对顺铂的耐药，同时伴有 BCL6 蛋白表达的降低。顺铂耐药卵巢癌细胞中 BCL6 蛋白水平升高，BCL6 的沉默使卵巢癌细胞对顺铂的敏感性恢复。在分子水平上，我们发现 USP14 与 BCl6 相互作用，阻止了其蛋白酶体依赖性降解。因此，我们的研究结果为在卵巢癌中靶向 USP14-BCL6 轴提供了理论基础，这可能对治疗有益。

PO-221

子宫内膜不典型增生保留生育功能治疗的研究进展

苏晓燕
河北医科大学第四医院

子宫内膜不典型增生(Atypical hyperplasia, AH)，指过度增生的子宫内膜腺体存在细胞的异型性，但缺乏明确浸润证据的各种情况[1]。在 2014 年 WHO 发表的子宫内膜增生性病变的分类中正式引入了子宫

内膜上皮内瘤变(Endometrial intraepithelial neoplasia，EIN)的概念以简化过去的分类，EIN 即子宫内膜增生伴不典型增生，二者同义。是一类常见的、雌激素依赖型的、具有癌变倾向的妇科疾病，发病率逐年递增。若未能及时有效的进行治疗，极易发展成子宫内膜恶性肿瘤，继而威胁患者的生命安全。

PO-222

子宫内膜中肾样腺癌临床病理分析及文献复习

严淑萍[1],郭瑞霞[1],严淑萍[1],郭瑞霞[1]
1.郑州大学第一附属医院
2.郑州大学第一附属医院

【目的】探讨子宫内膜中肾样腺癌(Endometrial mesonephric-like carcinomas，MLCa) 的临床病理特征、免疫组织化学、分子遗传学改变及鉴别诊断，并进行相关文献复习，旨在提高病理及临床医师对子宫内膜中肾样腺癌的认识，避免漏诊与误诊。
【关键词】子宫内膜中肾样腺癌 子宫内膜 免疫组化 基因突变
中肾管癌被认为是由退行的中肾管(Wolffian)残余引起的，通常发生在子宫颈的外侧壁或后壁，但也可发生在阴道或子宫、卵巢门部或输卵管系膜。子宫内膜中肾样腺癌(Endometrial mesonephric-like carcinomas，MLCa)是一种罕见的肿瘤，迄今为止仅有几十例报道，占子宫内膜癌的≤1%，直到最近才在妇科病理文献中得到重视。以往的研究已经明确了 MLCa 的组织学、免疫组织化学和分子特征。所有的 MLCa 均具有明显的组织学结构和细胞学特征，表现为多种组织学结构，包括管状腺体，被覆无黏液立方上皮，局部腺腔内嗜酸性、透明分泌物；其它结构包括分枝状、裂隙样空隙，伴有腔内纤维性乳头；以及实性、乳头状、导管样和梭形细胞结构；类似于甲状腺乳头状癌核的特征，可见核沟、核重叠。子宫内膜中肾样腺癌通常表达 CD10、calretinin、GATA-3、TTF-1、PAX-8，其典型的免疫组化特征包括雌、孕激素受体低表达或缺失表达，至少局部表达的 GATA-3 和/或 TTF-1。大多数病例有 KRAS 突变。目前有关 MLCa 的报道的病例太少，大多数局限于个案报道或小数据研究，因此有关该肿瘤的预后信息是有限的。但与常见的子宫内膜样癌相比，MLCa具有更强的侵袭性，有早期和远处复发的倾向，肺是常见的转移部位。

PO-223

Cytology, high-risk human papillomavirus testing and serum CA19-9 in a large cohort of patients with invasive cervical adenocarcinomas: correlation with a new pathogenetic classification

Bingjian Lv,Haiyan Shi,Weiguo Lu,Ying Shao
Women's Hospital， School of Medicine， Zhejiang University

Cytology and high-risk human papilloma virus (hrHPV) testing are less effective for cervical adenocarcinoma than squamous cell carcinoma partly due to the histological heterogeneity in adenocarcinoma. In this study, we investigated the screening value of cytology, hrHPV testing and serum CA19-9 in cervical adenocarcinomas (n=209) and the pathogenetic subtypes incorporating HPV RNA in situ hybridization and immunohistochemistry (p16, p53, ER, PR and MUC6). The sensitivity of cytology or hrHPV test alone was 74.1% (129/174) or 72% (131/182), respectively. Non-HPV related adenocarcinoma showed a lower detection rate of cytology (60%, 27/45 vs. 79.1%, 102/129, p=0.017) or hrHPV testing (9.8%, 4/41 vs. 90.1%, 127/141, p<0.0001), compared to HPV-related

adenocarcinomas. The cytology and hrHPV co-testing significantly demonstrated a higher sensitivity (151/165, 91.5%) than single test alone (p<0.001). Nevertheless, the sensitivity of co-testing was substantially lower for gastric-type adenocarcinoma (GAC) (74.1%, 20/27) than that for non-GAC (94.9%, 131/138) (p=0.001). Serum CA19-9 (>40 U/mL) identified 44.1% (15/34) GACs including 75% (6/8) that were missed by co-testing, much higher than for non-GACs (10.7%, 19/177; p<0.001). The combination of cytology, hrHPV test and serum CA19-9 enhanced the detection rate of GACs (92.9%, 26/28). We conclude that cytology and hrHPV co-testing is not very effective for non-HPV related adenocarcinoma, particularly for GAC. As such, additional serum CA19-9 is useful for the detection of GAC.

PO-224
CT 成像与腹腔镜探查在 75 例晚期卵巢癌术前评估的差异性研究

李雅娇,张辉
河北医科大学第四医院

目的：晚期卵巢癌术前 CT 成像与腹腔镜探查结果分别与开腹手术做对比，分析两者在晚期卵巢癌患者开腹术前评估的差异性。
方法：回顾分析自 2017 年 9 月至 2019 年 9 月在河北医科大学第四医院妇科手术及病理证实为晚期卵巢癌 75 例。入院后均接受常规术前检查，包括详细询问病史，完整的妇科检查，超声检查，血清 CA125 水平评估，胸部 X 线检查和对比增强型全腹 CT。所有患者均接受腹腔镜探查，其中 56 例患者进行了开腹手术，19 例患者未进行手术。采用 SPSS 23.0 版进行统计分析，采用 x^2 检验，检验水准以 P<0.05 有意义，分析 CT 成像与腹腔镜探查对 56 例手术患者的灵敏度、特异度、阴性预测值（NPV）、阳性预测值（PPV）和准确性有无明显差异以及开腹手术患者和非手术患者在观察部位的一致性。
结果：CT 成像和腹腔镜探查评估分别与 56 例开腹手术结果对比，两种评估方式各自灵敏度为 66%、83%，特异度为 89%、93%，NPV 为 68%、81%和 PPV 为 88%、93%，总体准确性为 76%、87%，经卡方检验两者在灵敏度、特异度、NPV 对比中 P=0.000，具有统计学差异。PPV 和准确性的对比中 P 分别为 0.244、0.471，无统计学差异，表明两者的 PPV、准确性没有明显差别。在 CT 成像和腹腔镜探查 19 例非手术患者一致性的比较中，P=0.274，表明两者在手术和非手术鉴别 6 个解剖部位具有很高一致性。
结论：腹腔镜探查和 CT 成像，可优化对晚期卵巢癌的评估。CT 成像较腹腔镜探查所获得的准确性稍低，但两者在评估手术和非手术患者解剖部位一致性无明显统计学差异，鉴于腹腔镜探查判断直径 <1cm 的病灶更加精确，因此应用腹腔镜探查评估手术可行性、制定个性化治疗方法更加可取。此次研究样本数量尚少，若想得到更加肯定的结论，还需要在更大的队列中进行进一步验证。

PO-225
Preoperation evaluation difference research between CT imaging and laparoscopy on 75 patients with advanced ovarian cancer

yajiao li,Hui Zhang
The Fourth Hospital of Hebei Medical University

Objective: Analyzing the open surgery preoperation evaluation difference between CT imaging and laparoscopy on advanced ovarian cancer by comparing the examine results of these two technologies with the open-surgery results, respectively.

Methods: Information of 75 patients in the Fourth Hospital of Hebei Medical University suspected to have advanced ovarian cancer, ranging from 09-2017 to 09-2019, was collected for this work. All patients went through regular preoperation examination, including learning about their disease history, the serum CA125 levels assessment, thorough gynecological examination, ultrasound examination, chest X-ray and enhanced whole abdomen CT examination. All patients were examined by laparoscopy, among whom 56 cases went through open surgery and the rest did not. All patients were examined by laparoscopy. SPSS version 23.0 was employed to analyze these results. Statistical significance was tested by chi-square test with standard of P <0.05. Based on that, the differences between CT imaging and laparoscopy were analyzed on their sensitivity, specificity, negative predictive value (NPV), positive predictive value (PPV) and accuracy to the 56 patients went through operations. Besides, the consistency of CT imaging and laparoscopy was also analyzed on the observed anatomical sites of both open-surgery patients and non-surgery patients.
Results: 56 patients conducted open surgery, and their operation results were separately compared with CT imaging and laparoscopic evaluation results. According to the comparison, sensitivity, specificity, NPV and PPV of CT imaging and laparoscopy are 66% and 83%, 89% and 93%, 68% and 81%, and 88% and 93%, separately. The sum accuracies for them are 76% and 87%, respectively. According to chi-square test, sensitivity, specificity and NPV comparisons between CT imaging and laparoscopy showed P=0.000, meaning there are significantly statistic difference between them. Comparisons of PPV and accuracy between them showed P=0.244 and P=0.471, indicating there are no statistic difference between them therefore no significant difference for them. In the comparison of consistency between CT imaging and laparoscopy, P=0.274 revealing that they have high consistency on the identification of 6 anatomical sites from both operated patients and non-operated patients.
Conclusions: Laparoscopy and CT imaging could optimize the evaluation on advanced ovarian cancer. Although CT imaging is a little less accurate than laparoscopy, they showed no significant difference on consistency of evaluating anatomical sites from operative patients and non-operative patients. In consideration of laparoscopy is more accurate in identifying nidus less than 1cm in diameter, it is more viable to evaluate the operation feasibility and make individualized treatment plans. However, this study has small amount of samples. Therefore, the results needs to be further tested in bigger sample array if more definite conclusions want to be acquired.

PO-226

实体型子宫静脉血管平滑肌瘤病的超声误诊分析

蒋婧婧,吴茜子,徐晓燕,周琴
华中科技大学同济医学院附属同济医院

目的 总结实体型子宫静脉血管平滑肌瘤病（IVL）的超声影像学特征，分析误诊原因，提高诊断率。**方法** 对 2012 年 1 月至 2020 年 7 月在华中科技大学同济医学院附属同济医院妇产科进行手术且经病理诊断证实为 IVL 患者的术前超声声像图特征进行总结分析。**结果** 病理诊断为子宫 IVL 的 24 例患者中，7 例为外院病理切片会诊病例，另外 17 例有本院妇产科超声检查结果且在本院进行手术，故对该 17 例患者的超声图像及报告进行分析总结。17 例均为实体型 IVL，表现为子宫或盆腹腔内的实性肿块。7 例诊断为子宫肌瘤或宫颈肌瘤，1 例诊断为肌瘤变性，9 例诊断为子宫或盆腔肿块。以诊断为肌瘤或肌瘤变性者作为误诊病例，以其余 9 例作为对照，分析两组病人超声声像图的特征和差异。诊断为子宫肌瘤或宫颈肌瘤者超声表现为低回声团，边界清晰，周边可见条状血流信号。诊断为肌瘤变性者超声表现为不均稍高回声团，边界清晰，与子宫左峡部以蒂相连，蒂部可见较丰富的血流信号。9 例诊断为子宫或盆腔肿块者声像图具有以下一项或多项特征：1、肿块内有不规则无回声；2、肿块边界欠清晰或不清晰；3、肿块内血流信号丰富；4、肿块的血流阻力低，动脉 RI 均小于 0.6。基于以上一项或多项特征，超声医师报告为子宫或盆腔肿块，可提示临床医生进行术中评估及术中快速病理切片检查，其中一例术中快速病检提示（左）阔韧带间叶源性肿瘤，故行全子宫+左附件切除。**结论** 实体型子宫

IVL 超声易误诊为子宫肌瘤，超声检查时应仔细观察肿块内部回声是否均匀，肿块内有否无回声结构，同时评估肿块的边界及血供情况，可减少术前超声误诊，为临床手术提供参考依据。

PO-227

腹腔镜在早期卵巢癌中的治疗作用 Meta 分析

张正茂,杨签
河北医科大学第四医院

目的：近年来，腹腔镜手术（LPS）在卵巢癌中的应用越来越多，但仍在许多方面存在争议。本研究旨在探讨将腹腔镜技术应用于早期卵巢癌全面分期手术中的可行性、安全性及有效性。
方法：检索了个数据库，PubMed、Cochrane 图书馆、Embase、万方数据库，CNKI。中文搜索词包括“卵巢癌”“腹腔镜”“疗效”“早期”。英文搜索词包括“Ovarian Neoplasm”、“Ovary Neoplasms”、“Ovary Cancer”、“Peritoneoscopes”、“Laparoscope”、“Laparotomies”“early stage”等，对上述数据库进行检索，检索时间为 1990-01-01 至 2020-2-20。文献类型包括随机对照研究、病例对照研究、综述、指南。采用 Stata11.0 版软件进行统计分析。**结果：**最终筛选出 37 篇文献，纳入的 37 篇文献中共计 2663 名早期卵巢癌患者，均为腹腔镜与开腹（LPT）进行早期卵巢癌的全面分期手术的病例对照研究，其中腹腔镜手术组 1247 例，开腹手术组 1416 例。两组患者的基本情况：年龄、体质指数（BMI）或体质量、病理分期和病理分型具有可比性。腹腔镜下行早期卵巢癌的全面分期手术，可有效减少术中出血及输血量，并且患者术后并发症发生率、住院时间、排气时间、术后首次化疗间隔时间均比开腹手术少，一定程度上减轻了患者的痛苦，提高了患者的生活质量。**结论：**腹腔镜手术治疗早期卵巢癌是安全可行、有效的。在远期疗效上腹腔镜手术与开腹手术亦无明显差异，故腹腔镜手术在早期卵巢癌中的应用是可靠的，但须由腹腔镜操作经验丰富的术者来实施手术，才能使腹腔镜的优点得到更好地发挥。

PO-228

卵巢癌细胞经 Notch1-Myc-CD47 信号通路诱导免疫逃逸的机制研究

钱学茜,王芬芬,陈丽莉,程晓东,万小云
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

目的：本项目拟观察卵巢癌细胞中 Notch1 的表达对卵巢癌细胞激活树突状细胞的影响，研究卵巢癌细胞中 Notch1 通过 MYC 调控 CD47 影响卵巢癌细胞激活 DC 的机制。
方法：收集人卵巢癌组织及正常卵巢组织，免疫荧光和 WB 检测癌组织中 Notch1、MYC、CD47 的表达水平及 DCs 活化程度。分离 imDC，和卵巢癌细胞系共培养，流式和 ELISA 检测对 DCs 的影响。改变细胞株 Notch1 表达水平，和 DCs 共培养，流式和 ELISA 检测 DCs 功能变化。治疗后 28d 后，免疫荧光检测 ADSCs 分化，qRT-PCR 和 Western Blot 检测 Wnt 信号通路及对免疫的调节功能。过表达 Notch1 基础上，干扰 MYC 或 CD47，WB 观察卵巢癌细胞中 Notch1-CD47 途径变化和 imDC 活化的影响。
结果：卵巢癌组织高表达 Notch1、MYC 和 CD47，活化 DC 细胞较少，且和疾病分期有关；卵巢癌细胞和 DC 共培养，高表达 Notch1 的卵巢癌细胞，MYC 及 CD47 的表达升高，可以抑制 imDC 的激活，降低 DC 表面分子 CD83、CD86 细胞比例，降低 IL-12 分泌水平，反之相反；卵巢癌细胞 Notch1 高表

达促进 CD47 高表达，抑制 DC 细胞活化，活化相关基因 TLR4、TRAF6 表达水平降低，AKT 及 p65 磷酸化水平降低。
结论：卵巢癌细胞高表达 Notch1，激活 MYC-CD47 通路，抑制 imDC 细胞的活化，促进卵巢癌细胞发生免疫逃逸。

PO-229
Effectiveness of lymph node dissection in elderly women with stage I ovarian cancer: A SEER-MHOS Study

黄艮平
浙江省立同德医院

Purpose The potential benefits of lymphadenectomy in elderly women with early-stage ovarian cancer (OC) patients are still ambiguous. A retrospective analysis was conducted to determine the association between lymph node dissection and survival in elderly women with stage I OC.
Methods The study using the SEER-MHOS database enrolled 7,916 women with stage I OC with surgery from 1975 to 2016. Survival analysis the relationship between lymph node dissection status and the OS in women with stage I OC.
Results In the database from 1975 to 2016, there were 8,191 stage I OC patients. Among them, 96.81% patients underwent staging surgery, among all patients undergoing lymph node dissection, the majority patients were younger than 60 years. Lymph node conservation was associated with a higher mortality risk. Kaplan-Meier analysis showed that worse prognoses with lymph node conservation in <80 years. Univariate and multivariate analysis showed that age and lymph node dissection remained independent prognostic factors of OS with stage I OC.
Conclusions Lymph node dissection was an independent predictor of improved long-term OS in stage I OC patients.

PO-230
腹腔镜与开腹手术治疗宫颈癌的临床疗效对比研究

唐晓碧[1],张勇[2]
1.广西医科大学附属第五医院/柳州市人民医院
2.广西医科大学第一附属医院

目的：腹腔镜（LRH）与开腹(ARH)两种手术方式治疗ⅠB1-ⅡA2 期宫颈癌的疗效、并发症对比分析。
方法：收集 2012 年 5 月至 2015 年 3 月在广西两家三级甲等医疗机构接受手术治疗的 271 例ⅠB1-ⅡA2 期患者的临床资料进行回顾性分析。根据治疗方式分为 2 组：ORH 组 186 例，LRH 组 85 例。统计分析其生存情况、手术并发症及预后相关因素。
结果：ORH 组、LRH 组的手术完整切除率为(98.3% vs.97.6%, P=0.674)，淋巴结转移率(14.5% vs.15.3%, P=0.448)，脉管侵犯(9.1% vs.15.2%, P=0.134)，深肌层浸润(53.2% vs.48.2%, P=0.446)均无统计学差异。中位随访 52 个月（6-95 个月），总共有 24 例死亡(ORH 组 14 例，LRH 组 10 例），全组 271 例患者的 5 年 OS 为 86.3%，DFS 为 84.1%。ORH 组、LRH 组 5 年 OS 分别为 92.5%、88.2%(P=0.255)，5 年 DFS 分别为 90.9%、85.9%（P=0.216），5 年 LRFS 分别为 93.0%、87.1%（P=0.104）,5 年 DMFS 分别为 94.6%、90.6%（P=0.216）无显著性差异。经 LRH 组与 ARH 组比较平均手术时间长 (263.16±63.18min vs 303.2±80.45min， P=0.000)，平均术中失血量少 (253.18±182.38ml vs 435.59±434.16ml，P=0.000)，清扫淋巴结的个数无统计学差异（14.87±6.7 枚

vs 15.45±7.41 枚，P=0.526)。LRH 组术后切口愈合不良发生率更低（0% vs 17.2%，P=0.000），其他术后并发症发生率无明显差异。肿瘤分期晚、肿物≥4cm、脉管侵犯、深肌层浸润、加辅助治疗是影响 5 年 OS、DFS 的独立预后因素。
结论：与 ARH 相比，LRH 具有出血少、并发症发生率更低的优点,且在肿瘤预后和生存率方面无显著差异，具有临床应用价值。

PO-231
Plexiform schwannoma: an unusual clitoral mass

Hongxin Pan
the 3rd affiliated hospital of Shenzhen University Shenzhen Luohu People's hospital

Background: Schwannoma (neurilemoma) is a benign, slow-growing tumor of the nerve sheath. These tumors are rarely found in the female genitalia and to date only few cases of clitoral schwannoma has been reported. We report here a case of schwannoma of the clitoris in a young girl.
Case: A 11-year-old girl presented with an enlarging clitoris. An alteration in her clitoral appearance had first been noted at 3 years of age. On examination her clitoris was normal in size but beneath the clitoral hood, there was a 4 x 2 cm Cavernous mass. Her karyotype revealed normal 46XX female genotype. Magnetic resonance imaging of the abdomen and pelvis showed an isolated finding of diffuse enlargement of the clitoris. Surgical excision of the paraclitoral mass was performed under general anesthesia. Intraoperatively the clitoral tip and shaft did not appear to be involved. It was a well-defined, white and soft nodule measuring 4.2 x 1.6 x 1 cm. Microscopically, a plexiform (multinodular) growth pattern was clearly seen. Immunohistochemistry showed diffuse and
strong positivity for S-100 protein, these features are consistent with a plexiform schwannoma.
Conclusion: Though rare, benign plexiform schwannoma should occur in the clitoris and other external areas of female genitalias, we suggest that it should be considered as a differential diagnosis for any young girl with clitoral or paraclitoral asymmetrical irregular enlargement or mass. Simple surgical resection and follow-up is the most convenient treatment.

PO-232
TGF- β inhibiting different iron metabolism processes to regulate development and cisplatin resistance of ovarian cancer

Jianfa Wu
Shanghai University of medicine & health Sciences Affiliated Zhoupu hospital

Objective: To investigate the role of different iron metabolism processes in initiation, chemoresistance and prognosis in ovarian cancer.
Methods: Bioinformatics analysis was performed on gene chips GDS3754, GDS5351, GDS3592, GDS4950 and GDS1523 to study the role of iron metabolism genes in ovarian cancer. Kaplan-meier plotter was used to assess relationship between iron metabolism genes and prognosis of ovarian cancer.
Results: Compared to normal ovarian epithelium, expression of iron absorption genes in intestinal mucosa were lower in ovarian cancer, while iron transport genes in blood and iron absorption genes in cell were higher in ovarian cancer. Meanwhile, compared to clear ovarian cancer, higher expression of iron transport genes in blood and iron absorption genes in cell were found in serious ovarian cancer. Moreover, compared to cisplatin-sensitive cell or tissue, lower expression of iron absorption genes in

intestinal mucosa and higher expression iron absorption genes in cell were found in cisplatin-resistant cells or tissues. Furthermore, survival curve analysis indicated that iron overload in intestinal mucosa and abnormal iron transport in blood were related to poor prognosis of ovarian cancer. In addition, it was revealed that TGF- β inhibited expression of most iron metabolism-related genes in different iron metabolism processes.
Conclusions: Reduced iron absorption and increased intracellular iron were associated with the initiation or chemoresistance ovarian cancer, which suggested that anemia and intracellular iron overload might be associated with initiation and poor prognosis of ovarian cancer. Targeting iron metabolism pathways or TGF-β might be an effective way to improve prognosis of ovarian cancer.

PO-233
局部晚期宫颈鳞癌同步放化疗联合热疗的疗效与毒副反应分析

冯阳阳
宁夏医科大学总医院

目的 比较局部晚期宫颈鳞癌同步放化疗联合热疗组与同步放化疗组的疗效及毒副反应。 **方法** 回顾性分析 2016 年 4 月至 2018 年 12 月在宁夏医科大学总医院肿瘤医院放疗科初次接受治疗的ⅡB-ⅢB 期宫颈鳞癌患者 45 例，其中 21 例仅同步放化疗(每周单药顺铂 40mg/m^2，4-6 周)。24 例行同步放化疗(每周单药顺铂 40mg/m^2，4-6 周)，在外照射期间，每周热疗 2 次。对比两组 CR 率及毒副反应。 **结果** 同步放化疗组和同步放化疗联合热疗组完全缓解(CR)率分别为 68.3%、75.5%（=0.580，P=0.446）；≥3 级白细胞下降发生率分别为 46.3%、47.5%（=0.189，P=0.832）。 **结论** 局部晚期宫颈鳞癌同步放化疗联合热疗有提高患者生存率的趋势，并且没有增加放化疗毒副反应。

PO-234
Identification of a prognostic signature of epithelial ovarian cancer based on tumor immune microenvironment exploration

Jinhui Liu,Wenjun Cheng
The First Affiliated Hospital of Nanjing Medical University

Abstract
This study aims to develop an immune-related genes (IRGs) prognostic signature to stratify the epithelial ovarian cancer (EOC) patients who response to immune checkpoint inhibitors. We identified 332 up- and 154 down-regulated EOC-specific IRGs. Most differentials expressed IRGs were enriched in cytokines and cytokine receptors. As a result, candidate IRGs were idendified to construct prognostic models respectivy for overall survial and progression-free survival. The risk score was validated as a risk factor for prognosis and was used to built a combined nomogram. According to the IRG-realted prognostic modle, EOC patients were devided into high- and low- risk group and were further explored their association with tumor immune microenvironment (TME). CIBERSORT algorithm showed higher macrophages M1 cell, T cells follicular helper cell and plasma cells infiltrating levels in the low - risk group. In addition, the low-risk group was found with higher immunophenoscore and distinct mutation signatures compared with the high-risk group. These findings may shed light on the development of novel immune biomarkers and target therapy of EOC.

PO-235

183 例宫颈癌的临床特征及预后影响因素的分析

贾诗瑞,马彩玲
新疆医科大学第一附属医院

目的：研究新疆医科大学第一附属医院 183 例宫颈癌患者的临床特征及预后影响因素。
方法：回顾性分析新疆医科大学第一附属医院于 2010 年 1 月至 2017 年 12 月收治的 183 例宫颈癌患者临床资料。对所有数据采用 SPSS25.0 统计软件进行数据分析,P＜0.05 为差异有统计学意义，采用 Kaplan-Meier 法对生存率进行统计，用 Cox 回归对独立危险因素进行分析。
结果：1.宫颈癌在 40-49 岁年龄段发病人数最多。2.宫颈腺癌患者较宫颈鳞癌相比最常见的临床表现为阴道流液，差异具有统计学意义（P<0.05）。3.比较宫颈腺癌和宫颈鳞癌的妇科查体情况有差异性，宫颈腺癌 23 例患者中出现宫颈桶状增粗者有 6 例（26.1%），明显高于 160 例宫颈鳞癌患者中妇科查体提示宫颈桶状增粗者 18 例(11.3%)，差异有统计学意义（P<0.05）。4.年龄、病理分化程度、脉管侵犯为影响宫颈癌预后的独立危险因素。
结论：1.40-49 岁年龄段是宫颈癌的高发年龄段，子宫颈腺癌和子宫颈鳞癌的平均发病年龄对比无显著差异。2.宫颈腺癌患者中有临床表现是阴道排液者明显高于宫颈鳞癌。3.宫颈腺癌患者妇科查体中出现宫颈桶状增粗明显高于宫颈鳞癌。4.年龄（≥45 岁）、病理分化程度（低分化）、脉管侵犯为宫颈癌预后的独立危险因素。

PO-236

Multi‐omics analysis of tumor mutational burden combined with prognostic assessment in epithelial ovarian cancer

Jinhui Liu,Wenjun Cheng
The First Affiliated Hospital of Nanjing Medical University

Background: Tumor mutation burden (TMB) is considered as a novel biomarker of response to immunotherapy and correlated with survival outcomes in various malignancies. Here, TMB-related genes (TRGs) expression signatures were constructed to investigate the association between TMB and prognosis in EOC, and the potential mechanism in immunoregulation was also explored.
Methods: Based on somatic mutation data of 436 EOC samples from The Cancer Genome Atlas database, we examined the relationship between TMB level and overall survival (OS), as well as disease-free survival (DFS). Next, the TRGs signatures were constructed and validated. Moreover, differential abundance of immune cell infiltration, expression levels of immunomodulators and functional enrichment in high- and low-risk groups were also analyzed.
Results: Higher TMB level revealed promoted OS and DFS, and correlated with earlier clinical stages in EOCs (P = 2.796e-04). The OS-related prognostic model was constructed based on seven TRGs (B3GALT1, LIN7B, ANGPT2, D2HGDH, TAF13, PFDN4 and DNAJC19) and significantly stratified EOC patients into high- and low-risk groups in terms of OS (P ＜ 0.001). The AUC values of the seven-gene prognostic signature at 1 year, 3 years, and 5 years were 0.703, 0.758 and 0.777. While the DFS-related prognostic model was constructed based on the 4 TRGs (LPIN3, PXYLP1, IGSF23 and B3GALT1), with AUCs of 0.617, 0.756, and 0.731, respectively. Functional analysis indicated that immune‐related pathways were enriched in low‐risk groups. When considering the infiltration patterns of immune cells, samples in low-risk groups were found with higher proportions of follicular helper T (Tfh) cell and M1 macrophage, while lower infiltration of M0 macrophage (P < 0.05).

Accordingly, TMB levels of low-risk patients were significantly higher both in OS and DFS model (P < 0.01), with the top 4 mutated genes including TP53, TTN, CSMD3 and MUC16.
Conclusions: Our TRGs based models are a reliable predictive tool for OS and DFS, high TMB may confer with an immunogenic microenvironment and predict favorable outcomes in EOCs.

PO-237
Panobinostat induces cervical cancer cell apoptosis via regulation of endoplasmic reticulum autophagy

Bo Sheng
Taizhou Central Hospital (Taizhou University Hospital)

Introduction: Panobinostat (LBH589) is one of the most use of pan histone deacetylase inhibitor. It has been approved for application to patients with relapsed multiple myeloma by FDA for several years. Recently, it also exhibits anticancer effects in cervical cancers, but its detail mechanism is still undefined. Thus, this study was conducted to evaluate the potential for panobinostat to treat cervical cancer and explore the underlying mechanisms.
Methods: To measure cell viability, we performed Cell counting kit 8 (CCK 8) assay. We examined apoptosis by flow cytometric assay of apoptosis with Annexin V FITC Staining and western blot using poly (ADP-ribose) polymerase (PARP) and caspase-3 antibodies. To examine endoplasmic reticulum stress, we evaluated the expression of a series of endoplasmic reticulum stress protein (ATF4, ATF6, EIF2-α, P-EIF2-α, XBP-1and CHOP) by western blot. γ-H2AX is a marker of DNA double-stranded breaks. Positive staining for γ-H2AX can indicate genomic instability and telomere dysfunction in tumor cells. Therefore it can be used to monitor DNA damage. We evaluated it by western blot. To examine autophagy activation, we evaluated the expression of Light Chain 3 (LC3) and p62 by western blot. Cells were co-treated with panobinostat and chemical autophagy inhibitors: 3-methyladenine (3-MA), to explore the molecular mechanism and the relationship between panobinostat and autophagy.
Results: Panobinostat inhibited cell proliferation in a dose-dependent manner and stimulated apoptosis of cervical cancer cells by inducing caspase 3 and PARP activation. In addition, panobinostat induced the activation of ATF4, ATF6, XBP-1 and CHOP. There was little change on the protein of EIF2-α after panobinostat administration, while panobinostat use significantly increased the level of p-EIF2-α. Panobinostat promoted the expression of γ-H2AX. At the same time, panobinostat administration in cervical cancer cells increased the expression of LC3-II and down-regulate the expression of p62. Pharmacologic inhibition of autophagy significantly enhanced panobinostat-mediated apoptosis in cervical cancer cells.
Conclusions: In summary, our studies show that panobinostat could inhibite the proliferation and induce cell death of human cervical cancer cells. Indeed, panobinostat could induce endoplasmic reticulum stress and damage DNA of cervical cancer cells. Furthermore, panobinostat induces autophagy in cervical cancer cells. Moreover, pharmacologic inhibition of autophagy significantly enhances panobinostat-induced cytotoxicity in cervical cancer. Therefore, our results recommend that combination of autophagy inhibitors and panobinostat could be a promising therapeutic approach for cervical cancer.

PO-238

Inhibiting Importin 4-mediated nuclear import of CEBPD enhances chemosensitivity by repression of PRKDC-driven DNA damage repair in cervical cancer.

Yang Zhou
Shanghai Jiao Tong University Affiliated Sixth People's Hospital

Purpose:
Cervical cancer (CC) is the leading cause of reproductive cancer-related death in women, while cisplatin (CDDP) resistance is the reason behind the chemotherapeutic failure. Karyopherins (including exportin and importin) are known to transport cargos across the nuclear membrane, and overexpressed karyopherins could attribute to the localization shift of these chemoresistance-related mediators. Thus, targeting karyopherins may highlight its potential as a promising CDDP combination alternative in increasing chemosensitivity in cervical cancer.
Experimental Design:
We first simultaneously compared CDDP-incomplete responders with CDDP-complete responders of CC patients and CDDP‐insensitive CC cell lines with CDDP‐sensitive group. We finally identified that DNA-PKcs (PRKDC) was related to CDDP sensitivity after overlapping in CC sample tissues and CC cell lines. The chemoresistance role of PRKDC was demonstrated by a series of in vitro and in vivo experiments. γH2AX foci assays, co-immunoprecipitation (Co-IP) assay, cytoplasmic and nuclear fractionation, chromatin immunoprecipitation (CHIP) assay and luciferase reporter assay were used to investigate the potential mechanism of PRKDC.
Results:
In this study, we found that PRKDC was upregulated and associated with the poor prognosis in CC, when knockdown by shPRKDC and inhibited by NU7026, CDDP sensitivity was improved via increasing DNA damage(γ-H2AX). In addition, PRKDC was transcriptionally upregulated by CCAAT/enhancer-binding protein delta (CEBPD). while intriguingly, CDDP treatment strengthened the transcriptional activity of CEBPD to PRKDC. We further disclosed that Importin 4 (IPO4) augmented the nuclear translocation of CEBPD through nuclear localization signals (NLS) to activate PRKDC-mediated DNA damage repair in response to CDDP. Moreover, we demonstrated that IPO4 and CEBPD knockdown improved CDDP-induced cytotoxicity in vitro and in vivo. Moreover, knockdown of CEBPD, IPO4 were discovered to contribute to the CDDP sensitivity in CC in vitro and in vivo.
Conclusions:
Our finding revealed the role of targeting PRKDC in driving CDDP sensitivity in CC. Moreover, we molecularly established the role of IPO4-CEBPD-PRKDC axis in CC chemosensitivity, which gave a novel insight into targeting IPO4 as a chemotherapeutic strategy.

PO-239

全外测序（WES）技术在高级别浆液性卵巢癌 HRR 通路及有关耐药突变基因检测中的临床应用

何鑫
河北医科大学第四医院

目的：运用全外测序（WES）技术研究高级别浆液性卵巢癌患者中 HRR 通路及耐药基因的突变情况，指导临床治疗。

方法：本研究共筛选 15 例高级别卵巢浆液性癌患者，组织标本均来自河北医科大学第四医院。首先从患者的新鲜手术组织中提取 DNA，然后进行文库构建、文库质检、上机测序，最后对测序数据进行生物分析，对 HRR 通路相关基因进行筛选。

结果：

1.全基因组内碱基转换/颠换的比值是 2.34，比对到参考基因组且方向正确的 reads 比例均达到 98%以上，目标区域中碱基覆盖深度不低于 10X 的比例在 98%及 99%，说明 SNP 数据集符合准确性。

2.本研究得到了 15 例 HGSOC 患者新鲜组织标本的 WES 测序数据，样本中体细胞 SNV 突变主要聚集 C>A/G>T。

3.15 例 HGSOC 患者中各有 10 位患者发生了 TP53、BRCA1/2 突变，突变率均为 66.7%，与 DNA 修复相关，其中 TP53 为高频突变。

4.样本中发现了 PI3K-AKT、WNT、VEGF、MAPK、TP53 等信号通路的突变，涉及原癌基因的激活和抑癌基因的失活。

5.14 例 HGSOC 患者发生了 HRR 通路的突变，部分患者发生 BER、MMR、NER 通路突变。

6.2 例 HGSOC 患者存在 BRCA2 突变的耐药位点，可能对以铂为基础的化疗药物存在耐药。

结论：

1.TP53 为高频突变基因，BRCA1/2 是 HRR 通路中的主要突变基因，RAD50、RAD51、RAD54B、XRCC2 等 HRR 通路相关基因突变频率较低，可能受样本数量少影响。

2.基于 HRR 通路中相关突变基因，靶向药物可使高级别浆液性卵巢癌患者获益，如适用于 BRCA 突变的奥拉帕利。

3.对高级别浆液性卵巢癌患者进行基因突变位点的耐药检测，有望准确指导后续临床治疗。

4.PI3K-AKT、WNT、VEGF、MAPK、TP53 信号通路的突变涉及细胞生长及生命活动的各个方面，影响疾病的发生发展。

PO-240

彩色多普勒超声引导下的 252 锎快中子后装腔内放疗 结合相控阵聚靶向热疗治疗妇科恶性肿瘤的疗效观察

李晓玲
黑龙江省农垦总院

目的 观察彩色多普勒超声引导下的 252 锎快中子后装腔内放疗 结合相控阵聚靶向热疗治疗妇科恶性肿瘤的近期疗效以及并发症的发生情况。

方法　选择 5 例妇科恶性肿瘤，包括宫颈癌、阴道癌。临床分期为Ⅱ、Ⅲ期的患者 ,其中Ⅱb 期 1 例，ⅢIa 期 2 例，ⅢIb 期 2 例。252Cf 中子腔内后装治疗，A 点剂量为 6～10Gy/次 ,1 次 /周，共 4～6 次，使 A 点累积剂量达 38～45Gy。局部病灶外照射和中子后装同期进行，后装治疗当天不进行外照射，使总剂量达到 45～50 GY,总疗程 5～7 周。

结果　40 例患者均随访 1 年，1 年局部控制率为 97%,生存率为 92%,其中Ⅱb 期 100%，ⅢIa 期 90%, ⅢIb 期 75%。放射性膀胱炎发生率 6%，放射性直肠炎发生率 8%。

结论 彩色多普勒超声引导下的 252 锎快中子后装腔内放疗结合相控阵聚靶向热疗治疗妇科恶性肿瘤患者能较好耐受，同常规 γ 射线后装治疗比较，临床Ⅱ、Ⅲ期患者近期疗效好，并发症发生率低。

PO-241
E7 蛋白在 HPV16/18 型感染患者宫颈病变发展中的表达及意义

王海芳
天津市第三中心医院

目的探讨 HPV16/18 感染患者宫颈癌前病变不同阶段 E7 蛋白水平的变化、与宫颈癌前病变发展程度及预后的关系。**方法**：收集 HPV16/18 阳性患者 211 例，根据阴道镜结果分为正常组、LSIL 组和 HSIL 组，比较三组患者 E7 蛋白水平变化；比较 HISL 组宫颈锥切术前及术后 1 年复查 HPV 阳性及 HPV 阴性患者宫颈 E7 蛋白水平变化。**结果** HPV16/18 阳性合并 TCT 异常患者，宫颈病变发生率为 78.48%，明显高于合并 TCT 正常患者（X2 值为 25.04，P＜0.01），差别有统计学意义。正常组、LSIL 组、HSIL 组 E7 蛋白含量平均值为 44.52ng/ml、114.60 ng/ml、389.20ng/ml，三组间相互比较，差别均有统计学意义（P=0.000）。HSIL 组宫颈锥切术后一年，复查 HPV 阴性患者 E7 蛋白明显低于术前水平，差别有统计学意义（p=0.001），而 HPV 持续阳性患者，手术前后 E7 蛋白水平无明显变化（p=0.08）。.**结论** 宫颈脱落细胞 E7 蛋白水平与宫颈癌前病变的严重程度及预后密切相关，E7 蛋白有望作为监测宫颈病变发展的潜在生物标志物。

PO-242
Evaluation of Ovarian Tumors with Multidetector Computed Tomography and Tumor Markers: Differentiation of Stage I Serous Borderline Tumors and Stage I Serous Malignant Tumors Presenting as Solid-Cystic Mass

Xinping Yu[1],Ying Liu[2],Jinwen Jiao[1],Hongjuan Yang[1],Ruijing Wang[1],Shuai Zhang[1]
1.The Affiliated Hospital of Qingdao University，
2.Civil Aviation General Hospital， Civil Aviation Clinical Medical College of Peking University

The aim of this study was to determine multidetector computed tomography (MDCT) features and tumor markers for differentiating stage I serous borderline ovarian tumors (SBOTs) from stage I serous malignant ovarian tumors (SMOTs).
In total, 48 patients with stage I SBOTs and 54 patients with stage I SMOTs who underwent MDCT and tumor markers analysis were analyzed. MDCT features included location, shape, margins, texture, papillary projections, vascular abnormalities, size, and attenuation value. Tumor markers included serum cancer antigen 125 (CA125), carbohydrate antigen 19-9 (CA19-9), carcinoembryonic antigen (CEA), and human epididymis protein 4 (HE4). Parameters of clinical characteristic, MDCT features, and tumor markers were compared using a chi-square test and Mann-Whitney U tests. A binary logistic regression analysis was performed to detect predictors for SMOTs. A receiver operating characteristic (ROC) curve analysis was used to assess the potential diagnostic value of the quantitative parameters. Kappa and intraclass correlation coe cients were used to evaluate interobserver reproducibility for MDCT features. Median ages between patients with SBOTs and SMOTs were significantly different. Compared with SBOTs, vascular abnormalities were significantly more common in SMOTs. CA125, HE4, the maximum thickness of the wall, the maximum thickness of the septa, and the maximum diameter of the solid portions were significantly higher in patients with SMOTs. A binary logistic regression analysis revealed that age, vascular abnormalities, and the maximum diameter of the solid portion were independent factors of SMOTs. ROC analysis was used to assess the potential diagnostic value for predicting SMOTs. Moderate or good interobserver reproducibility for MDCT features were identified. Age, vascular abnormalities, and the maximum diameter of the solid portion were

independent factors for differentiating SBOTs from SMOTs. The combined analysis of age, vascular abnormalities, and the maximum diameter of the solid portion may allow better di erentiation between SBOTs and SMOTs.

PO-243
CT-based radiomics features for Differentiation of Serous Borderline Tumors and Serous Malignant Tumors

Xinping Yu
The Affiliated Hospital of Qingdao University，

Objectives: To investigate whether CT-based radiomic features can discriminate serous borderline ovarian tumors (SBOTs) and serous malignant ovarian tumors (SMOTs).
Material and methods: 80 patients with SBOTs and 102 patients with SMOTs, confirmed by pathology (training group: n = 127; validation group: n = 55) from January 2017 to June 2020 were enrolled in this study. Interclass correlation coefficient (ICC) and least absolute shrinkage and selection operator (LASSO) regression was applied to select radiomics parameters derived from CT images on arterial phase (AP), venous phase (VP) and equilibrium phase (EP). Receiver operating characteristic (ROC) analysis of each selected parameter was carried out, and the area under the ROC curve (AUC) was calculated for differentiating SBOTs and SMOTs. Three models incorporating selected radiomics parameters generated by support vector machine (SVM) classifiers in each phase was analyzed by ROC and compared using DeLong test.
Results: The most predictive features selected by ICC and LASSO regression between SBOTs and SMOTs included 9, 9 and 9 radiomics parameters on AP, VP, and EP. Three models incorporating the selected features generated by SVM classifiers produced an AUC of 0.80 (accuracy, 0.75, sensitivity, 0.74; specificity, 0.75), 0.86 (accuracy, 0.78, sensitivity, 0.80; specificity, 0.75) and 0.73 (accuracy, 0.69, sensitivity, 0.71; specificity, 0.67) on AP, VP and EP, respectively. There were no significant differences in AUC between the three models (AP vs. VP, P = 0.199; AP vs. EP, P = 0.260; VP vs. EP, P = 0.793).
Conclusion: CT-based radiomic features could be used as biomarker for differentiation of SBOTs and SMOTs.

PO-244
Lymphadenectomy failed to prevent lymph node recurrence in patients with endometrial cancer

He Li,Zhiqi Wang
Peking University People' s Hospital

Objective: To evaluate the efficacy of lymphadenectomy to reduce lymph node recurrence (LNR) in endometrial cancer (EC). Participants and methods: We retrospectively analyzed a total of 655 patients with EC undergoing the surgery at Peking University People’s Hospital. Clinicopathological data were collected. Data were analyzed using SPSS 26.0. Results: Among 655 patients, 543 (82.9%) underwent lymph node (LN) resection, among whom 99 (18.2%) experienced pelvic lymphadenectomy (PL) alone, while 380 (70.0%) experienced PL with para-aortic lymphadenectomy (PAL), and the rest experienced only lymph node biopsy. Eight patients exhibited LNR, with pelvic LNs most involved (4/8), and advanced stages (Ⅲ/Ⅳ) and type 2 EC constituted the majority of them (7/8 for each). FIGO stage, histological subtype, LN metastasis and adjuvant radiotherapy were proven to be risk factors of LNR

by a Kaplan-Meier analysis, while lymphadenectomy was not (P=0.365). A further Cox survival analysis suggested advanced stage and type 2 were independent risk factors of LNR in EC patients, while adjuvant radiotherapy and lymphadenectomy (P=0.613) were not. A layered χ2 test indicated no significant difference in LNR was observed between lymphadenectomy and non-lymphadenectomy groups, eliminating the confounding effect of LN status at initial treatment (P=0.952). And among certain patients undergoing lymphadenectomy, a Chi-square test suggested no significant difference in LNR observed between PL and PL with PAL groups (χ^2=0.000, P=1.000). Conclusion: Lymphadenectomy failed to prevent LNR in patients with EC.

PO-245
加速康复外科理念在上皮性卵巢恶性肿瘤手术中的应用及效果分析

侯文杰,陈友国,张跃明
苏州大学附属第一医院

目的：探讨加速康复外科(enhanced recovery after surgery，ERAS) 在上皮性卵巢恶性肿瘤手术围手术期的应用和效果。方法：回顾性分析 2017 年 1 月至 2019 年 12 月在苏州大学附属第一医院诊断为上皮性卵巢恶性肿瘤并行手术治疗的 52 例患者的临床资料，分别采用加速康复外科方法（ERAS 组 28 例) 和传统方法(对照组 24 例) 进行围术期管理。比较两组患者的一般临床情况及术中、术后恢复情况。结果：两组患者手术时间、术中出血量比较无统计学差异(P＞0.05) ，ERAS 组术后肠功能恢复时间、首次下床时间、住院时间、引流管放置时间、腹腔引流时间均明显短/少于传统对照组(P<0.05）；在疼痛 VAS 评分方面，术后即刻、6 h、24 h、48 h 疼痛 VAS 评分 ERAS 组也均小于传统组，差异有统计学意义(P<0. 05) 。ERAS 组 5 例发生术后并发症（17.86%），对照组为 9 例（37.50%），ERAS 组患者术后并发症发生率明显小于传统对照组（P=0.040）。结论：ERAS 理念在卵巢恶性肿瘤围手术期能有效加速患者术后恢复、减少住院时间并降低并发症发生率，相较传统护理模式具有更多优势。

PO-246
血小板衍生生长因子在治疗薄型子宫内膜中的应用

丁豆豆 [1,2,3],佐满珍 [2,3,1]
1.三峡大学医学院 2.湖北省宜昌市第一人民医院 3.湖北省三峡大学人民医院

子宫内膜是指附着于宫腔表面而具有生长功能的组织结构。对雌激素和孕激素都起反应，因此可随着性周期（发情周期、月经周期）发生显著的变化。然而子宫内膜一旦受损，修复起来相当困难。薄型子宫内膜是指因内分泌因素、宫腔操作、局部创伤感染等使子宫内膜细胞受损，导致内膜无法增生修复，从而导致子宫内膜功能减退。血小板衍生生长因子是贮存于血小板 α 颗粒中的一种碱性蛋白质，能促进多种细胞进入分裂增殖周期，从而刺激结缔组织的生长。本文从血小板衍生生长因子促进子宫内膜的生长这一角度方面的研究进展进行综述，从而为治疗薄型子宫内膜提供一种治疗方案。

PO-247

子宫颈癌不良预后生物学指标研究进展

赵昆
天津市中心妇产科医院

文献资料表明，宫颈癌在女性中的发病率位居第二位，而且在发展中国家较高比例的新发宫颈癌患者就诊时已处于临床晚期（超过 50%的病例已属 III 或 IV 期），无根治性手术指征[2]，是导致患者死亡最常见的妇科恶性肿瘤。死亡原因主要是因为宫颈癌的浸润、复发以及转移。因此，研究判断宫颈癌不良预后相关的生物学指标及给予有效的临床干预，对于宫颈癌治疗及预后尤为重要。目前，国内外学者的研究趋势是从蛋白和（或）基因水平上筛选出与宫颈癌不良预后相关的生物学指标，为准确地判断患者预后和制定治疗方案提供更为客观的理论依据。

PO-248

年轻局部晚期宫颈癌患者新辅助化疗术后的辅助治疗分析

龚琳,彭芝兰,尹如铁,李清丽,边策
四川大学华西第二医院

背景及研究目的: 宫颈癌是我国女性生殖道最常见的恶性肿瘤，且发病年龄趋向年轻化，部分患者确诊已属局部晚期（Local advanced cervical cancer, LACC）。2020 年 NCCN 指南推荐 LACC 标准治疗为同步放化疗，为更好的保护年轻患者的卵巢和阴道功能，欧洲、亚洲及拉丁美洲等国家采用新辅助化疗后手术作为一线治疗。但因新辅助化疗后可使病理结果降级，有肿瘤转移的淋巴结可能会转为阴性，从而掩盖术后的高危因素，使得新辅助化疗+根治术后辅助治疗的选择成为争议的焦点。为此，本文总结 2008 年 1 月-2018 年 12 月在四川大学华西第二医院收治的 45 岁及以下ⅠB3 和ⅡA2 期宫颈癌患者的临床病理资料，探讨新辅助化疗有效者行 III 型宫颈癌根治术后病检提示有复发中危因素者的辅助化疗效果和生存情况。

材料与方法：收集四川大学华西第二医院 2008 年 1 月-2018 年 12 月≤45 岁的ⅠB3 和ⅡA2 期宫颈癌患者的临床病理资料共 313 例，予新辅助化疗 1-3 疗程后评估化疗有效性，有效者行 III 型宫颈癌根治术，其中鳞癌患者术中保留一侧或双侧卵巢，术后病理检查提示有高危因素者补充放疗，有中危因素者充分知情告知后选择化疗。汇报术后有复发中危因素者的辅助化疗效果和生存情况。

结果：313 例 LACC 患者新辅助化疗后肿瘤均有不同程度缩小，其中化疗完全缓解者 16 例，占 5.1%（16/313），总有效率为 90.7%（284/313）。术后病理检查报告提示病理完全缓解者 11 例，微浸润者 5 例，除 2 例失访，余均无复发。术后随访时间 5 月-11 年 10 月不等，其中病理检查提示有中危因素（间质浸润>1/2 或脉管查见癌栓）补充化疗者 107 例，复发 3 例，其中 85 例鳞癌患者术中保留单侧或双侧卵巢，术后定期复查，均未出现明显的绝经综合征相关症状。术后补充辅助化疗者 2 年和 5 年生存率分别为 96.5%和 94.8%。

结论：新辅助化疗可显著缩瘤，部分患者可达病理缓解，对于新辅助化疗有效的 LACC 患者，术后仅有复发中危因素者，在充分沟通和知情告知后可选择化疗，一定程度上可减少术后补充放疗或同步放化疗的可能性，避免由此对年轻患者产生的不良反应，保护她们的卵巢和阴道功能，提高生活质量。也为今后相关的前瞻性研究奠定基础。

PO-249
一例无影像学证据的妊娠滋养细胞肿瘤病例报告与文献复习

赵秀敏,王丽萍,顾腾帅,严德文
台州市第一人民医院

诊治经过：患者，女，25 岁，1-0-2-1，末次妊娠 1 年前，为孕 50+天自然流产。LMP 2019.12.12，2009 年 1 月 28 日因“阴道出血 5 日”就诊本院，监测 HCG 波动于 2000IU / L -2451 IU / L，反复超声检查未见阳性灶。予 MTX 50mg/m2 肌注 1 次， 7 天后复查 HCG 797IU/L， 14 天后复查 HCG 上升至 1098 IU/L，18 天后复查 HCG 上升至 1474IU/L，双肺 CT 及全腹增强 CT 未见病灶。再次 MTX 50mg/m2 肌注治疗，第二次治疗 7 天后复查 HCG 577IU/L，14 天后复查 HCG 645IU/L，18 天后复查 HCG 上升至 966IU/L。第三次 MTX 50mg/m2 肌注治疗，治疗 7 天后复查 HCG 521IU/L，10 天后复查 HCG 349IU/L，15 天后复查 HCG 上升至 477IU/L。再次胸部+全腹 CT 检查未见病灶，B 超提示右卵巢囊性团块约 4cm，未见阳性灶。予行宫腹腔镜联合探查和刮宫术，未见阳性病灶，术后病理回报：增生期子宫内膜，右卵巢卵泡膜黄素囊肿，术后 3 天再次复查 HCG 1154IU/L，考虑 GTN，予 ACTD 化疗 3 周期后 HCG 降至正常，巩固化疗 1 周期。末次化疗 3 月前，随访至今 HCG 均<5IU/L。讨论：尽管 GTN 诊断中，影像学证据不是必需的，但多数文献报道随着 HCG 升高最终出现影像学证据或表现为 HCG 持续低水平升高。对于无影像学证据的 HCG 异常患者，GTN 应首先考虑，手术探查是有效的诊断及治疗手段，有助于避免不规范药物治疗。

PO-250
LEEP 术后诊断为子宫颈癌患者的子宫颈癌筛查情况分析

张梦培,尹如铁
四川大学华西第二医院

目的：了解西部地区医生对子宫颈癌标准筛查策略的掌握和实施情况。提高临床医生对宫颈癌标准化筛查的认知，为减少宫颈癌漏诊提供帮助。
方法:回顾性分析 2013 年 1 月至 2019 年 8 月在四川大学华西第二医院就诊的 191 例经电环切除(Leep)手术确诊的宫颈癌患者。收集这些患者的基本临床病理信息和所有宫颈癌筛查结果。采用 SPSS 26.0 软件对相关数据进行统计学分析。单因素分析采用卡方检验，多因素分析采用 Logistic 回归(P＜0.05 有统计学差异)。
结果：标准筛查率仅为 21%(40/191)，其中三甲医院标准筛查率为 50%，二级--三乙医院标准筛查率为 35%，二级以下医院标准筛查率为 15%。单因素分析结果显示:年龄≥40 岁、流产次数≥2 次、经阴道分娩、细胞学结果为高级别鳞状上皮内病变(HSIL)、宫颈组织活检结果为 CINIII 是经标准筛查漏诊的高危因素(p ＜0.05)。多因素分析结果显示，只有细胞学结果为 HSIL 是宫颈癌标准筛查后漏诊的独立危险因素(P=0.01)。191 例患者中腺癌 27 例，腺鳞癌 3 例。非鳞状细胞癌患者 HPV 阴性率和宫颈活检阴性率均高于鳞状细胞癌患者(27.3%vs1.7%， P=0.011;33.3%vs7.5%， P=0.048)。
结论：1、医务人员对标准的子宫颈癌筛查指南理解不足。2、细胞学结果显示，宫颈高级别鳞状上皮内病变(HSIL)是宫颈癌经标准筛查后漏诊的独立危险因素。3、HPV 检测和宫颈活检对诊断非鳞状细胞癌的准确性不足。

PO-251
CircRNA_079422 在子宫内膜癌中的表达及其功能研究

李雨葳[1,2],左玥[1],赵国云[1],朱梦迪[1],陈鑫[1],王颖[1],孙宇辉[1]
1.哈尔滨医科大学附属第一医院
2.广州医科大学附属第三医院

背景及目的
环状 RNA（circular RNAs，circRNAs）是内源性非编码 RNA 的一种，其结构特征是缺少 5'帽状结构和 3'腺苷酸尾，形成共价闭合环，具有稳定性高、不易降解的特点，在多种疾病和肿瘤中存在差异性表达，可作为 miRNA 海绵，调控靶基因的表达，参与各种生物学过程或信号传导通路，在疾病和肿瘤的发生与发展中发挥着重要的作用。子宫内膜癌的病因和发病机制目前尚未明确，发病的高危因素包括雌激素长期刺激、肥胖、高血压、糖尿病和遗传因素等。本研究目的为了解 circRNAs 在子宫内膜癌组织中的表达谱，通过生物信息学方法分析 circRNA_079422 可能结合的 miRNA 及靶基因、可能参与的通路和具有的功能，为进一步研究 circRNA_079422 在子宫内膜癌中发挥的调控作用及机制奠定基础，为子宫内膜癌的诊断和治疗提供新的思路。
方法
选取在哈尔滨医科大学附属第一医院和哈尔滨医科大学附属肿瘤医院因术前诊断性刮宫病理确诊为子宫内膜癌而进行外科手术治疗切除的标本 4 例，术中剖视子宫，以子宫内膜癌组织为实验组，癌旁组织为对照组。利用 CircRNAs 基因芯片技术对样本进行表达谱分析，qRT-PCR 进行验证。选取差异性表达下调较显著的 circRNA_079422 作为进一步研究对象。利用生物信息学软件，预测与 circRNA_079422 存在结合关系的 miRNA 及其靶基因，并进行 KEGG 及 GO 富集分析，探索 circRNA_079422 参与的信号通路和具有的基因功能。
结果
CircRNAs 基因芯片技术证实在子宫内膜癌组织中差异性上调表达的 circRNAs 共计 14 个，差异性下调表达的 circRNAs 共计 12 个，在差异性表达下调的 circRNAs 中选择差异最为显著（P=0.008）的 circRNA_079422 作为下一步研究对象。利用生物信息学软件预测 circRNA_079422 可能与 miR-4659a-3p、miR-4659b-3p、miR-526b-5p 和 miR-136-5p 存在相互结合位点。通过 KEGG 通路分析和 GO 富集分析预测 circRNA_079422 参与 Notch 通路等信号通路，具有组成细胞膜和离子通道、参与跨膜转运以及核苷酸合成等生物功能。

PO-252
Safety and Feasibility of Single-incision Radical Vulvectomy: A Novel Approach for the Treatment of Vulvar Cancer

Liqing He[1],Yifeng Wang[1],Gaowen Chen[1],Ying Ma[1],Xiaoxuan Li[1],Youhong Zheng[1],Mengting Wu[1],Huiyan Wang[1],Xiaohong Liu[2],Wuqi He[3]
1.Zhujiang Hospital， Southern Medical University
2.The Fifth People's Hospital of Zhuhai， Zhuhai
3.Guilin Women and Children's Medical Center

Objective
To report a novel surgical procedure, single-incision radical vulvectomy (SIRV), and evaluate its safety and feasibility.
Methods
Patients with advanced local vulvar tumors were to undergo SIRV. First, routine radical vulvectomies were performed. Following this, the flaps of the bridge area between the vulvectomy incisions and

femoral triangles were separated and the lymph-vessel underneath were removed. Anterior working spaces before the femoral triangle were then made. The saphenous vein was carefully identified and retained, while the superficial and deep lymph nodes of the groin were removed from the medial to the lateral sides. After careful hemostasis, the wounds were sutured. Patient demographics, clinico-pathologic data, operation time, node count, and complications were recorded.

Results

Ten patients underwent SIRV for vulvar cancer. Average hospital stay was 11.70±3.00 (range 9–13) days. The average number of harvested lymph nodes was 15.14±3.62 (range 11–20) for bilateral inguinal lymphadenectomy. Blood loss was ≤ 35 mL. Three patients developed groin lymphocysts and underwent needle aspirations and pressure dressing with elastic bandages. Two patients had impaired wound healing and achieved healing after dressing change. There were no other postoperative complications during follow-up.

Conclusions

Compared with conventional open inguinal lymphadenectomy and video endoscopic inguinal lymphadenectomy, SIRV is a more minimally invasive procedure. Our short-term observations showed that SIRV is safe and feasible and has good future application prospects. However, long-term oncologic outcomes and large-scale clinical trials are still warranted.

PO-253

Tumor-secreted Exosomal Wnt2B Activates Fibroblasts to Promote Cervical Cancer Progression

Luojiao Liang,Wei Wang
Department of Obstetrics and Gynecology， the First Affiliated Hospital of Guangzhou Medical University

Objective: The activation of stromal fibroblasts into cancer-associated fibroblasts (CAFs) has been suggested to promote primary tumor growth and progression; however, the mechanisms underlying the crosstalk between tumors and fibroblasts that drives stromal heterogeneity remain unknown. **Materials and Methods:** We investigated the effects of cervical cancer cell-derived exosomes on the pro-tumor activation of fibroblasts and elucidated the underlying mechanisms. The expression of wnt2B was detected by immunohistochemistry，real-time fluorescence quantitative method and multicolor immunofluorescence. Cervical cancer cell lines SiHa and Hela with the highest enrichment rate of exosomes Wnt2B were selected，and cervical cancer cells stably expressing Wnt2B were constructed. Exosome (Exo) secreted by the above cells isolated by different ultracentrifugation, which morphology and marker protein of Exo were identified by transmission electron microscopy and western blot. The human primary fibroblasts were isolated and then identified. The enrichment and biological activity of Wnt2B in cervical cancer cell exosomes were detected by ELISA and Western blot. Then, using Western blot, scratch assay, Transwell migration assay, and cell proliferation assay to detect the effects of SiHa-Exo and Hela-Exo on fibroblast activation. Using Western blot and immunofluorescence experiments to detect the effect of wnt / β-catenin signaling pathway on fibroblast activation. **Results:** High Wnt2B levels were positively correlated with the number of CAFs in cervical cancer (CC). More importantly, Wnt2B was characteristically enriched in CC cell-secreted exosomes and transferred into fibroblasts to promote fibroblast activation via Wnt/β-catenin signaling, and inhibiting exosomal release or the Wnt/β-catenin signaling pathway diminished the activation induced by exosomal Wnt2B. Moreover, circulating exosomal Wnt2B also promoted CAF conversion in vitro and its expression was significantly higher in CC patients. **Conclusion:**Our findings indicate that CC cell-derived Wnt2B can induce the activation of fibroblasts into CAFs, mainly via exosome-dependent secretion, thus providing directions for the development of diagnostic and therapeutic targets for CC progression.

PO-254

CircRNA_407202 在子宫内膜癌中表达的研究

左玥,李雨葳,孙宇辉
哈尔滨医科大学附属第一医院

子宫内膜癌为女性生殖道三大恶性肿瘤之一，占女性全身恶性肿瘤 7%，占女性生殖系统恶性肿瘤 20%~30%。近年来发病率在世界范围内呈上升趋势。因此，研究子宫内膜癌的发病机制及其肿瘤标记物，用于高危人群的筛查和早期诊断，对于子宫内膜癌的防治是非常必要的。
环状核糖核酸作为一种非编码核糖核酸，以往被认为是转录过程中的剪接错误，但随着高通量生物技术的发展，发现 circRNA 广泛存在于真核转录组。随着对 circRNA 研究的深入，人们逐渐发现 circRNA 具有高丰度、高稳定性、高度生物保守性及组织特异性等特点，该特性一定程度上决定了其功能，作为微小 RNA 海绵、基因转录和表达的调控因子、RNA 结合海绵等功能渐渐被研究者发现。尤其是 circRNA 与肿瘤的关系引起了学者们的高度重视，在与肿瘤发生、发展相关的细胞增殖和凋亡过程的复杂调控网络中，circRNA 起中心性调节作用。
子宫内膜癌的早期诊断及筛查与患者的预后密切相关，circRNA 的性质及功能使其有望成为肿瘤的靶向目标和标志物，研究 circRNA 在子宫内膜癌中的表达可以为阐明子宫内膜癌相关调控通路、干预靶标提供依据，为未来深入的研究奠定基础。
收集经病理诊断的子宫内膜癌患者 4 例，要求术前未经放化疗、未经内分泌治疗、排除其他恶性肿瘤。术中取癌和癌旁组织标本，置于冻存管中并于液氮中保存。应用荧光实时定量 PCR 反应检测组织中 circRNA_407202 的相对表达量。用 GraphPad Prism8.3.1 统计软件对数据进行统计学分析。最后应用生物信息学方法对 circRNA 的结合位点、生物学功能进行预测。
实验结果显示 circRNA_407202 在子宫内膜癌组织中上调，且差异具有统计学意义。生物信息学结果预测出具有 circRNA_407202 结合位点的 miRNA，基因本体（Gene Ontology, GO）富集分析结果显示 circRNA_407202 参与的生物过程包括高密度脂蛋白颗粒组装体、血浆脂蛋白颗粒组装、蛋白质-脂质复合物组装等，京都基因与基因组百科全书（Kyoto Encyclopedia of Genes and Genomes, KEGG）通路功能分析结果显示 circRNA_407202 与甘油磷脂代谢、胰岛素分泌、皮质醇分泌等相关。

PO-255

宫颈癌患者病耻感的研究进展

陈英
福建省肿瘤医院

对宫颈癌患者病耻感的测评工具及研究情况进行综述，旨在通过对目前已经研究的宫颈癌患者的病耻感研究现状进行总结，为临床改善宫颈癌患者病耻感水平提供方向。本文对国内女性宫颈癌患者病耻感的调查及研究进展进行综述，旨在总结宫颈癌患者的病耻感水平，为关爱女性患者，为降低其病耻感水平和实施干预策略提供依据。

PO-256
High serum Androgen and Insulin concentrations Increase the Risk of Type I Endometrial Carcinoma

fei Teng,Yingmei Wang,Fengxia Xue
Tianjin Medical University General Hospital

Purpose The objective of the study was to evaluate the important role played by androgen and insulin in the development of endometrial carcinoma (EC), and their combined effect on EC risk.
Methods We enrolled 510 type I EC patients and 510 age-, time-, and nationality-matched subjects into this study. Metabolic and hormonal parameters of enrolled subjects were examined.
Results EC risk was positively associated with C-peptide, estrone, androgen (including testosterone and androstenedione) and insulin levels, BMI, WHR, family history of cancer, nulliparity, irregular menstruation, diabetes, and hypertension. In multivariate logistic regression models, high C-peptide and testosterone levels, diabetes, and hypertension were independent risk factors after adjustment for BMI, WHR, family history of cancer, high serum insulin, and estrone levels. Increased serum total testosterone and insulin levels were positively correlated with EC risk in total, premenopausal, and postmenopausal women. Androstenedione was correlated with EC in total and postmenopausal, but not in premenopausal subjects. Compared with higher testosterone and insulin, odds ratios (ORs) for higher testosterone with lower insulin and lower testosterone with higher insulin were decreased in total, premenopausal, and postmenopausal women. Similarly, compared to both higher FAI and insulin, ORs for higher FAI with lower insulin and lower FAI with higher insulin were decreased in all three groups. Coordinately, ORs for higher androstenedione with lower insulin and lower androstenedione with higher insulin were decreased in total and postmenopausal, but not premenopausal subjects.
Conclusions These findings suggested that androgen and insulin were risk factors of type I EC, and relatively high levels of both testosterone and insulin synergistically affected EC risk.

PO-257
非编码 RNA 与肿瘤免疫

赵国云,朱梦迪,孙宇辉
哈尔滨医科大学附属第一医院

癌症的发病率和死亡率逐年上升，对人类健康造成了很大的威胁，因此找到安全有效的治疗方法一直是全世界的研究人员面临的巨大挑战。传统的肿瘤治疗方法包括手术切除、放疗和化学疗法，但依旧存在复发及耐药等一系列问题。近年来，随着肿瘤学、免疫学、分子生物学和其他相关学科的迅速发展，免疫疗法在癌症治疗方面带来了革命性的改变，其中包括免疫检查点抑制、肿瘤疫苗、过继细胞疗法等。2011 年，美国食品药品监督管理局批准了抗细胞毒性 T 淋巴细胞相关蛋白 4 抗体、抑制程序性细胞死亡受体 1 途径的单克隆抗体，用于治疗难治性黑色素瘤。但是目前临床试验及临床应用发现上述疗法反应性不尽人意，并且出现副作用及耐药性问题。因此，仍需对肿瘤免疫调节机制进行多方位研究。

人类免疫调节系统中一重要的表观遗传因素为非编码 RNA，非编码 RNA 包括线性非编码 RNA 及环状 RNA。非编码 RNA 在转录后水平调控基因表达，并且在固有免疫及适应性免疫系统的调节中均起重要作用。

在非编码 RNA 调节肿瘤免疫的研究中，目前线性非编码 RNA，尤其是 miRNA 的作用已广为人知。其具体机制包括 miRNA 通过调节肿瘤微环境中基质细胞参与免疫调节过程，例如在 T 细胞中，miR-138 抑制 CD4 +细胞中 CTLA-4 和 PD-1 的表达。其次针对特定 miRNA 的免疫治疗也受到了极大的关注。

环状 RNA 与肿瘤免疫的关系相对研究较少，但随着测序技术和生物信息学工具的迅猛发展，环状 RNA 越来越被人们重视并进行了广泛的研究。研究发现环状 RNA 可以作为肿瘤免疫方面的多效调节剂，通过直接调节肿瘤细胞或调节肿瘤微环境中多个靶标来促进肿瘤进展。其也可以在免疫细胞中充当肿瘤抗原，或与疫苗佐剂、miRNA、蛋白质一起使用，用于肿瘤免疫治疗。
免疫调节性非编码 RNA 的表达谱有望成为新生生物标志物，用作癌症免疫疗法反应性测定和临床结果的预测。

PO-258

肿瘤免疫疗法在子宫内膜癌中的研究进展

朱梦迪,赵国云,孙宇辉
哈尔滨医科大学附属第一医院

肿瘤免疫疗法是通过重新启动并维持机体在肿瘤发生、发展过程中受损的免疫功能，来控制和杀灭肿瘤细胞的一种治疗方法，具有副作用小、特异性强、杀瘤谱广、复发率低等优点。近年来，肿瘤免疫疗法已在黑色素瘤、非小细胞肺癌等多种恶性肿瘤中展示出了强大的抗肿瘤效果。子宫内膜癌是女性生殖系统中常见的恶性肿瘤之一，近年来发病率日渐上升且趋于年轻化，严重威胁着广大女性的生命健康。临床上常用的手术疗法及放、化疗对早期以及未转移的子宫内膜癌预后良好，但对于中、晚期的子宫内膜癌，疗效较差。目前，以免疫检查点抑制剂、细胞过继免疫治疗、肿瘤疫苗为主的多种肿瘤免疫疗法已用于子宫内膜癌的相关临床试验中，对于中、晚期子宫内膜癌患者具有较好的疗效，并能降低肿瘤的复发率。乐伐替尼与派姆单抗联合疗法已被批准用于 MSI-H/dMMR 型、不适于其它疗法的晚期子宫内膜癌患者的临床应用。肿瘤免疫疗法的低反应率为其广泛的临床应用带来阻碍，肿瘤免疫疗法的联合应用可改善肿瘤免疫反应性，提升肿瘤免疫反应率。降低肿瘤免疫药物耐受性与不良反应发生率的研究也是临床研究的重点。肿瘤免疫疗法在子宫内膜癌的治疗上具有广大前景，其临床应用对子宫内膜癌患者预后改善具有重要意义。

PO-259

Identification of novel FOXL2 pathogenic variants in patients with granulosa-cell tumors of the ovary using whole-exome sequencing

Wensheng Liu[1],Wei Xiaoli [2],Yi Xiao[1],Tang Yaling[3],Wang Yifeng[1]
1.Zhujiang Hospital， Southern Medical University
2.State Key Laboratory of Cellular Stress Biology， School of Pharmaceutical Sciences， Xiamen University
3.The First Affiliated Hospital of Xiamen University

Objective
To identify the genetic etiologies and provide potential targets for clinical diagnosis of Granulosa-cell tumors (GCTs).
Materials and Methods
Whole-exome sequencing and Sanger sequencing were carried out to identify the pathogenic variants. IHC was performed to detect the effect of the variants on protein expression in vivo. Mutant plasmids were constructed and transfected into KGN cells to detect the effects on the proliferation and apoptosis.
Results
Pathogenic variants of FOXL2 were identified from two patients and the variants are rare and deleterious. IHC results showed that FOXL2 is specifically expressed in the nuclei of the normal and

mutated granulosa cells. The proliferation of KGN cells transfecting with plasmids was significantly increased, while the apoptosis rate was reduced.

Conclusions

We identified novel FOXL2 pathogenic variants from two patients with GCTs. The variants are rare and deleterious and the mutant plasmids affected the proliferation and apoptosis of KGN cells. Our data provide that genetic mutations in FOXL2 are the pathogenesis and demonstrate that WES is a useful tool for the early molecular diagnosis of GCTs.

PO-260
新疆石河子城区 18378 例以 HPV 为初筛的宫颈癌筛查结果分析

韦艳,杨萍
石河子大学医学院第一附属医院

目的:以人乳头瘤病毒(human papilloma virus，HPV）基因分型为宫颈癌初筛，分析新疆石河子城区 HPV 流行及分布特征。**方法**: 收集 2018 年 12 月至 2019 年 5 月期间在石河子城区行宫颈癌筛查的病例资料 18378 例，采用实时荧光定量聚合酶链反应技术检测 15 种高危 HPV 基因型，并对结果进行分析。**结果**：18378 例接受宫颈癌筛查患者中宫颈 HPV 阳性者 2816 例，HPV 感染率 15.32%，有 1426 例（50.64%）HPV 阳性者完成最终宫颈癌筛查项目。HPV 单一感染占 11.38%，多重感染占 3.94%。在单一型 HPV 感染中，最常见的五种类型依次为 HPV52(2.37%)、HPV16(1.65%)、HPV53(0.97%)、HPV51(0.90%)和 HPV39/68 型(均为 0.87%)。在阴道镜活检≥LSIL 人群中，HPV16 或 18 型阳性者占 84.11%(90/107)，明显高于 HPV 其它亚型阳性者 15.89%（17/107）（P<0.05）。HPV16/18 双阳（35.71%）或 HPV16 阳性（30.86%）宫颈病变的检出率均明显高于 HPV18 阳性（8.95%)（P<0.05）。HPV52 型感染人数最多，但未检出宫颈癌前病变及宫颈癌的患者，致癌性较低。除 HPV16/18 型阳性外，其余亚型阳性 TCT 检查结果≥ASCUS 人群中，HPV58 型阳性人数最多 13.85%（9/65）。最终行组织病理学检查，在≥LSIL 人群中，HPV51、HPV56、HPV58、HPV33、HPV35 和 HPV39 为主要感染类型。不同年龄组 HPV 感染所占比例有统计学差异（χ^2=1302.875，P=0.000），50-59 岁所占比例最高 45.34%（1277/2816）,其次是 40-49 岁占 32.71%（921/2816），30-39 岁所占比例最低 10.44%（294/2816）。但多重感染者最终宫颈病变的检出率（48.15%）与单一感染的检出率（40.00%）比较，两者间没有统计学差异（P=0.725）。**结论**：新疆石河子城区 HPV 感染率为 15.32%，以单一型感染为主，50-59 岁年龄组感染比例最高。最常见的 HPV 感染类型为 HPV52 和 HPV16 型，HPV52 型感染率高，但致癌性低，HPV16 型、HPV18 型是导致宫颈癌最主要的病毒类型。

PO-261
POLE mutation characteristics in a Chinese cohort with endometrial carcinoma

Yiran Li,Wan Xiaoping
Shanghai First Maternity and Infant Hospital， Tongji University School of Medicine

Objectives: To study the characteristics of polymerase epsilon (POLE) mutations in Chinese patients with endometrial carcinoma (EC).

Methods: In this study, data from 529 patients with EC in The Cancer Genome Atlas (TCGA) and 467 EC patients evaluated at the Shanghai First Maternity and Infant Hospital (SFMIH) . POLE mutation heterogeneity was analyzed in paired curettage and hysterectomy samples from 120 SFMIH patients. Sanger sequencing identified mutations in the POLE exonuclease domain, and correlations between

POLE mutation status and various clinicopathological features were determined by chi-squared testing and Cohen's kappa analysis, with Kaplan–Meier survival curves generated to assess correlations between POLE mutation status and overall survival (OS).
Results: Thirty-five mutations were identified in 467 samples (7.5%), and novel mutations were detected in the SFMIH cohort. Compared to the TCGA cohort, the SFMIH cohort had fewer POLE mutations when matched by age (<60) and histology (endometrioid) ($p < 0.001$ and $p = 0.010$, respectively). In our study cohort, POLE mutations were significantly associated with adjuvant treatment ($p = 0.029$), and patients with POLE mutations who underwent chemoradiotherapy had a poor OS ($p < 0.0001$). Notably, shorter OS was significantly associated with POLE mutations in hysterectomy samples aged >60 years or with stage I disease in the paired curettage-hysterectomy group.
Conclusions: The significant difference in POLE mutation profiles between the TCGA and SFMIH cohorts, as well as the poor consistency between the curettage and hysterectomy samples, suggest that different parameters need to be applied to determine the prognosis of patients with EC in China

PO-262
子宫内膜癌及结直肠癌双原发患者的回顾性研究

张楠,郑虹,高雨农,王红国
北京大学肿瘤医院

目的 分析子宫内膜癌与结直肠癌双原发患者的临床病理特征、预后及影响因素。
方法 采用查阅病历、电话、门诊随访等方式回顾性分析 2001 年 12 月至 2017 年 4 月在北京大学肿瘤医院收治的子宫内膜癌及结直肠癌双原发患者共 40 例。
结果 40 例患者的中位随访时间为 49（5-264）个月。2 年生存率为 91.9%，3 年生存率为 86.1%，5 年生存率为 44.5%。19 例第一原发癌为子宫内膜癌的患者与 21 例第一原发癌为结直肠癌的患者生存时间无统计学差异（P=0.1）。双原发癌的发病间隔时间以及第一原发癌的发病年龄对预后的影响无统计学差异。在 17 例进行 MMR 蛋白免疫组织化学检测的患者中，是否存在表达缺失对预后的影响无统计学差异（P=0.486）。
结论 对于子宫内膜癌和结直肠癌的双原发癌患者，第一原发癌为子宫内膜癌的患者与第一原发癌为结直肠癌的患者生存时间无统计学差异。双原发癌的发病间隔时间、第一原发癌的发病年龄以及是否存在 MMR 表达缺失对预后的影响无统计学差异。所有患者的 2 年生存率为 91.9%，与散发型子宫内膜癌相近，3 年生存率为 86.1%，与散发型的结直肠癌相近，5 年生存率为 44.5%，较散发型结直肠癌预后差。按照 SGO 5-10%诊断模式，本研究中 20%（8/40）的患者符合林奇综合征诊断。

PO-263
TCT、HPV 联合阴道镜在子宫颈原位腺癌及腺癌诊断中的应用价值

周春华
绍兴市妇保院

目的 探讨液基细胞学检查(TCT)、高危型人乳头瘤病毒(HPV)联合阴道镜在子宫颈原位腺癌和腺癌诊断中的应用价值。**方法** 回顾性分析 2017 年 1 月至 2019 年 12 月绍兴市妇幼保健病理组织学确诊为子宫颈原位腺癌和腺癌患者的临床资料，比较单纯 TCT、单纯 HPV 和二者联合的检查阳性率；对比分析阴道镜下宫颈活检与切除术后病理组织学诊断。**结果** 69 例 AIS 及腺癌患者中，TCT 检查的阳性率为 78.13%（50/64）； HPV 检测的阳性检出率为 88.23%（60/68）；HPV 与 TCT 的阳性检出率比较差

异无统计学意义（χ^2=2.43，P>0.05）。TCT+HPV 联合的阳性检出率为 96.87%（62/64），与单纯 TCT 比较阳性检出率明显提高，差异有统计学意义（χ^2=8.64，P<0.005）；与 HPV 比较阳性检出率的差异无统计学意义（χ^2=3.51，P>0.05）。69 例患者的阴道镜检查图像诊断为低度病变 13 例，高度病变 41 例，可疑原位腺癌 4 例，可疑浸润癌 11 例；阴道下定位活检和/或 ECC 病理诊断为 AIS 者 40 例，腺癌者 14 例，高级别 CIN 者 12 例，低级别 CIN 者 3 例；阴道镜下活检 AIS 及腺癌的检出率为 78.26%（54/69）；阴道镜活检后最终病理诊断为 AIS 的准确率为 56.36%（31/55）。**结论** 宫颈细胞学联合高危型 HPV 检测可以显著提高宫颈原位腺癌的阳性检出率。阴道镜检查评估宫颈腺上皮病变特征不明显，多点活检+颈管搔刮病理组织学检查可以提高腺癌和原位腺癌的检出率，但区分是否存在浸润性病变需要行诊断性锥切术。

PO-264

IL9 预测子宫内膜癌预后研究

仝欢,胡翔,王梦霏,宋芸峰,万小平
上海市第一妇婴保健院

子宫内膜癌是妇科三大恶性肿瘤之一，目前尚缺乏有效的预测模型对其进行疗效评价。我们在前期研究中发现白介素-9 在子宫内膜癌免疫微环境中起着重要作用，对数据库的进一步研究提示在高-中分化内膜癌中 IL9+细胞浸润显著曾多（p＜0.05），且 IL-9+免疫细胞浸润与较好的总体生存期相关（p＜0.01）。通过对多个临床参数进行回归分析，发现年龄、FIGO 分期、IL9 评分、肿瘤类型、分化程度可作为预后判定的预测值。本研究揭示了 IL9-IL9R 轴在子宫内膜癌中的重要作用，并建立了子宫内膜癌预后预测模型，为子宫内膜癌个体化治疗提供参考。

PO-265

Elevated Expression Levels of Long Non-Coding RNAs, CTD-2292M14.1 and LINC00858, Are Associated with Radio Resistance in Cervical Cancer

Siyao Deng[1],Wenjing Ye[1],Shun Lu[2]
1.School of Medicine， University of Electronic Science and Technology of China， Chengdu， China
2.Department of radiation oncology， Sichuan Cancer Hospital & Institute， Sichuan Cancer Center， School of Medicine， University of Electronic Science and Technology of China， Chengdu， China

Background: As one of the most common malignancy in the female reproductive system, cervical cancer (CC) remains a vast challenge for many underdeveloped nations. Combination of concurrent chemotherapy with external beam radiation therapy (EBRT) followed by intracavitary brachytherapy (ICBT) boost achieved a favorable outcome for CC patients. However, radio resistance constitutes the main obstacles for curative treatment; therefore, it is urgent to find new targets to improve the cellular radio sensitivity in CC. Long non-coding RNAs (lncRNAs) are a class of RNA with more than 200 nt in length that can regulate the expression of genes at various levels, which have been demonstrated to be implicated in cancer radio resistance. The aim of our study was to investigate the association between expression levels of lncRNAs in CC tissues and radio resistance of CC.
Methods: Whole-exome sequencing and RNA sequencing were conducted in 32 patients with locally advanced cervical cancer (LACC) with FIGO stage IIB-IIIB to identify prognostic variants by a two-stage case-control design. 16 patients developed local recurrences in 3 years after standard concurrent chemotherapy with EBRT followed by ICBT were regarded as radio resistance group, while

another 16 patients did not show local recurrences were divided in control group. In the first stage, DNA and RNA were extracted from formalin-fixed paraffin-embedded tumor tissues of the 32 LACC patients. In the second stage, to validate the significant association between expression of lncRNAs and local control rate of patients found in the first stage, quantitative real-time PCR (qRT-PCR) was performed on 66 independent patients (with the same criteria of selection; radio resistance group containing 29 patients, control group containing 37 patients). Kaplan-Meier analysis was used to illustrate the association between expression of lncRNAs and overall survival (OS).
Results: A total of 1072 differentially expressed genes (DEGs) were identified between the two groups in RNA sequencing. Among these DEGs, the expression levels of 7 lncRNAs: RP11-335O4.1 (P = 0.011, OR = 10.863), CTD-2292M14.1 (P = 0.017, OR = 9.473), RP11-94H6.1 (P = 0.018, OR = 9.474), RP11-417L19.2 (P = 0.021, OR = 9.362), RP4-683M8.2 (P = 0.022, OR = 10.823), RP11-20B24.3 (P = 0.022, OR = 8.904) and LINC00858 (P = 0.036, OR = 6.409) were significantly increased in radio resistance group compared with control group. In the second stage, qRT-PCR analysis showed the expression levels of CTD-2292M14.1 (P = 0.012) and LINC00858 (P = 0.023) in radio resistance group were significantly higher than those in control group. Kaplan-Meier analysis indicated that patients with high expression levels of CTD-2292M14.1 (P = 0.015) and LINC00858 (P = 0.028) had a lower OS rate compared to patients with lower expression.
Conclusions: Elevated expression levels of CTD-2292M14.1 and LINC00858 were significantly associated with radio resistance. We suggest that CTD-2292M14.1 and LINC00858 may serve as predictive of radiosensitivity in CC and potential therapeutic targets for CC patients.

PO-266

Oncologic and obstetrical outcomes of fertility-preserving retreatment in patients with recurrent atypical endometrial hyperplasia and endometrial cancer

Yijiao He,Yiqin Wang,Rong Zhou,Jianliu Wang
Peking University People's hospital

Objective: This study intends to evaluate the safety and efficacy of fertility-preserving retreatment in patients with atypical endometrial hyperplasia and endometrial cancer after recurrence following initial fertility-preserving treatment.
Methods: The clinical data of 110 patients with atypical endometrial hyperplasia and endometrial cancer who received fertility-preserving treatment in the Department of Obstetrics and Gynecology, Peking University People's Hospital (Dec. 2005 to Sep. 2019) were collected, and a retrospective analysis was performed on the clinical characteristics, histopathology results, outcomes, and outcomes of 25 patients with recurrence.
Results: Twenty-five patients (9 patients with atypical endometrial hyperplasia and 16 patients with endometrial cancer) received fertility-preserving retreatment. After a median treatment duration of 5 months (range:3-18months),21 patients (84%, 21/25) achieved complete response and 4 patients (16%, 4/25) reached partial response. The median follow-up time was 19.5 months (range:8-76months), and 8 patients (38.1%, 8/21) relapsed. The time from retreatment to complete response for endometrial cancer was significantly longer than that for atypical endometrial hyperplasia (7.5 vs. 3 months; p=0.007). Among the 21 patients who achieved complete response, 12 patients had pregnancy desire, among whom 8 patients experienced successful pregnancy (66.7%, 8/12), and 6 patients experienced term birth (1 patient with natural pregnancy and 5 patients with assisted reproductive technology). Six patients (50%, 6/12) delivered 6 full-term babies.
Conclusion: A satisfactory complete response rate and a high pregnancy rate and live birth rate cloud be achieved with fertility-preserving retreatment in patients with recurrence of atypical endometrial hyperplasia and endometrial cancer in this study.

PO-267
Construction of MiRNA-mRNA Regulatory Network and Prognostic Signature in Endometrial Cancer

Rui Sun,Wenjun Cheng
The First Affiliated Hospital of Nanjing Medical University

Objective: To investigate the miRNA-mRNA regulatory network and the prognostic biomarkers in endometrial cancer (EC).
Methods: We downloaded RNA-seq and miRNA-seq data of endometrial cancer from the TCGA database, and then we used EdegR package to screen differentially expressed miRNAs and mRNAs (DE-miRNAs and DE-mRNAs). The differentially expressed genes (DEGs) were identified and their functions were predicted using the functional and pathway enrichment analysis. Protein–protein interaction (PPI) network was established using STRING database, and the hub genes were verified by Gene Expression Profiling Interactive Analysis (GEPIA). Then, we constructed a regulatory network of EC-associated miRNAs and hub genes by Cytoscape, and determined the expression of unexplored miRNAs in EC tissues and normal adjacent tissues by quantitative Real-Time PCR (qRT-PCR). A prognostic signature model and a predictive nomogram were constructed. Finally, we explored the association between the prognostic model and the immune cell infiltration.
Results: 11531 DE-mRNAs and 236 DE-miRNAs, as well as 275 and 118 candidate DEGs for upregulated and downregulated DE-miRNAs were screened out. These DEGs were significantly concentrated in FOXO signaling pathway, cell cycle and Focal adhesion. Among the 20 hub genes identified, 17 exhibited significantly different expression compared with normal tissues. The miRNA-mRNA network included 5 downregulated and 13 upregulated DE-miRNAs. qRT-PCR proved that the expression levels of miRNA-18a-5p, miRNA-18b-5p, miRNA-449c-5p and miRNA-1224-5p and their target genes, NR3C1, CTGF, MYC, and TNS1 were consistent with our predictions. Univariate and multivariate Cox proportional hazards regression analyses of the hub genes revealed that NR3C1, EZH2, and GATA4 showed a significant prognostic value. We identified the three-gene signature as an independent prognostic indicator for EC (p=0.022，HR=1.321, 95% CI: 1.041-1.675) and these genes were closely related to eight types of immune infiltration cells.
Conclusion: Our study revealed the mechanisms of the carcinogenesis and progression of EC.

PO-268
多学科一站式治疗子宫巨大肿瘤

王锦
大连医科大学附属第二医院

目的：旨在为子宫巨大肿瘤的一站式治疗提供临床依据。
方法：患者女，61 岁，因绝经后出现阴道流血来当地医院检查，但由于该患者心脏衰竭、房颤、肺动脉高压、高血压、风湿性关节炎、贫血等多种疾病，手术风险极高，遂当地医院转诊我院。查看患者子宫如妊娠 7 个半月大。查经阴式彩超提示：子宫明显增大，上缘达脐上约 9cm，左侧壁见低回声光团，大小约 15.5*7.7cm，回声欠均匀，未见明显血流信号。查增强磁共振提示子宫腺肌瘤可能。患者一般状态差，但患者如不进行手术，有阴道流血进行性增多，出现贫血甚至失血性休克可能，且子宫巨大肿瘤恶性不除外。遂给予患者行全子宫切除+双附件切除术。
结果：切除送检子宫 20*17*8cm，病理示：全子宫符合平滑肌瘤，伴水肿、玻璃样变性及梗死，肿物较大；子宫内膜息肉，伴腺体扩张，局部梗死。双侧卵巢病理可见白体形成，左侧包涵囊肿；双侧输卵管间质充血，左侧输卵管腔及间质内可见中性粒细胞浸润，脓肿形成。

结论：多学科协作给患者制定了个体化的治疗方案，为手术保驾护航，“一站式”手术切除，大大降低了罕见子宫巨大肿瘤的手术风险，减少了术中出血，具有安全性强，疗效显著的优点。

PO-269
Prophylactic salpingectomy did not reduce the risk of ovarian cancer induced by 7,12-dimethylbenz[a]anthracene in rats

Mingming Sun,Wei Jiang
Obstetrics and Gynecology Hospital of Fudan University

Background: High-grade serous carcinoma (HGSC) is now believed to arise most often from the fallopian tube epithelium. Theoretically, bilateral salpingectomy can reduce the incidence of ovarian cancer, and bilateral salpingectomy is routinely performed in patients who undergo hysterectomy due to benign diseases in many clinics. However, whether it is truly effective has not yet been reported. Therefore, we investigated the preventive effect of prophylactic salpingectomy in 7,12-dimethylbenz[a]anthracene (DMBA)-induced ovarian cancer in rats.
Methods: One hundred rats were assigned randomly to 2 experimental groups: the prophylactic salpingectomy (PS) group (n=50) and the control (C) group (n=50). We performed bilateral salpingectomy before the introduction of DMBA-soaked cloth strips to the ovaries of rats in the PS group, while in the C group, no salpingectomy was performed. Representative ovarian tissues were pathologically analyzed after surgery. Tumor growth, incidence rate and pathological type were analyzed. The distribution of variables between two groups was compared using the t test, with significance set at a P value less than 0.05.
Results: During the study period (30 weeks of observation), a similar overall tumor incidence was observed in the PS and C groups. Ovarian tumors in rats of the PS group reached a cumulative incidence of 72% (36/50) at 30 weeks post implantation, and the tumor incidence rate in the C group reached 62% (31/50) at 30 weeks. Moreover, there was no significant difference in tumor size between the PS (3.19 ± 0.92 cm) and C (2.78 ± 0.93 cm) groups (p=0.3942). According to the pathological analysis, in the PS group, the pathological type analysis and hematoxylin and eosin (H&E) staining of tumors revealed that 69.44% (25/36) of tumors were ovarian adenocarcinoma, squamous carcinoma (2/36), granulosa cell tumor (2/36), sarcoma (3/36), undifferentiated/poorly differentiated carcinoma (3/36) and malignant teratoma (1/36), while in the C group, tumor histology included only two types: adenocarcinoma 70.97% (22/31) and sarcoma 29.03% (9/31). Residual oviduct fimbria tissues were found on the surface of the ovary after PS.
Conclusions: Our results revealed that PS does not reduce the risk of ovarian cancer induced by DMBA-soaked cloth strips in rats. This is the first animal experiment to evaluate the preventive effect of salpingectomy on ovarian cancer occurrence.

PO-270
Development Trends and Research Hotspots of Endometrial Carcinoma Research from 2010 to 2019: A Bibliometric Study

Pengran 王,Ruixia Guo
The First Affiliated Hospital of Zhengzhou University

Background: Endometrial carcinoma is a serious threat to women’s health. In recent years, the pathogenesis, treatment methods, epidemiological characteristics and other related fields of endometrial carcinoma have developed rapidly. A large number of related literatures have been

published. This study builds a series of scientific maps to discuss the research status, development trend and hotspot of endometrial carcinoma in the past 10 years.
Methods: Based on the 12,587 document data retrieved from Web of Science Core Collection from 2010 to 2019, this article used CiteSpace 5.5.R2 as a tool to carry out a bibliometric analysis of endometrial carcinoma research from the perspective of scientific output characteristics, scientific research cooperation networks, keywords, and highly cited literature.
Results: Endometrial carcinoma has always been a hot area from 2000 to 2019, and the number of articles published each year is on the rise. GYNECOL ONCOL is the most popular magazine in this field. The United States is the country with the most research output in this field. Univ Texas MD Anderson Canc Ctr is one of the most contributing research institutions. HELGA B SALVESEN and JONE TROVIK are among the researchers who contributed the most. In addition to "endometrial carcinoma", the five most frequently occurring keywords are "expression", "breast cancer", "risk", "women", "survival". The research frontier is mainly in the invasion and metastasis mechanism of endometrial carcinoma and clinical trial.
Conclusion: Endometrial carcinoma is a rapidly developing hotspot area. This study explores the development trends and research hotspots in this area. This research will help clinicians and researchers grasp the field comprehensively and quickly, and provide valuable guidance for researchers to find research directions.

PO-271
我国加速康复外科在妇科中应用的文献计量学及可视化分析

王鹏冉,王文文,郭瑞霞
郑州大学第一附属医院

目的 分析我国加速康复外科在妇科领域的应用现状，为临床工作者及研究人员提供参考。 方法 以中国知网全文数据库(CNKI)和万方数据库为检索工具，以“加速康复外科”、“快速康复外科”、“妇科”为检索词，对相关文献进行文献计量学分析及可视化分析。 结果 共纳入文献 281 篇，妇科加速康复外科发文量逐渐上升但地区发展不平衡，核心作者群未形成且合作度、合著率不高，“腹腔镜手术”、“护理”、“麻醉镇痛”是当前研究热点。结论 我国加速康复外科在妇科领域处于快速发展期，已取得一定的成就，仍缺乏大样本、多中心、前瞻性的随机对照研究，在后续研究中需加深研究深度及广度，帮助临床工作者制定规范化加速康复外科流程，促进加速康复外科在妇科领域中的应用及发展。

PO-272
Establishment and validation of a prognostic nomogram based on a novel 5-DNA methylation signature for survival in endometrial cancer patients

Xingchen Li,Jianliu Wang
Peking University People's Hospital

Background: This study aimed to explore the prognostic role of DNA methylation pattern, and developed and validated a nomogram integrating clinicopathological features and the DNA signature for overall survival (OS) in endometrial cancer (EC) patients.
Methods: Differentially methylated genes (DMGs) of EC patients with distinct survival from The Cancer Genome Atlas (TCGA) database were analyzed to identify methylated genes as biomarkers for EC prognosis. The Least Absolute Shrinkage and Selection Operator (LASSO) analysis was used to

construct a model and divide patients into high and low risk groups. We then conducted the weighted correlation network analysis (WGCNA) on RNA-seq data to identify the potential mechanisms associated with the risk model. A nomogram was built based on the multivariate Cox analysis which combined the risk score model with clinicopathological signatures together in the training cohort, and then verified in the validation cohort. Kaplan-Meier survival curve was plotted to test the stability and reliability of the nomogram in different subgroups.
Results: In total, 92 DMGs were identified between different prognostic groups. Based on the LASSO analysis, five genes (GBP4, OR8K3, GABRA2, RIPPLY2, and TRBV5-7) were screened for the establishment of risk score model. The model outperformed in prognostic accuracy at varying follow-up times (AUC for 3 years: 0.824, 5 years: 0.926, and 7 years: 0.853). Multivariate analysis identified 4 independent risk factors including menopausal status (HR=3.006, 95%CI: 1.062-8/511, p=0.038), recurrence (HR=2.116, 95%CI: 1.061-4.379, p=0.046), LNM (HR=3.465, 95%CI: 1.225-9.807, p=0.019), and 5-DNA methylation risk model (HR=3.654, 95%CI: 1.458-9.161, p=0.006) in training cohort. The performance of the nomogram was good in the training (AUC=0.828), validation (AUC=0.866) and the whole cohorts (AUC=0.843). The subgroup analysis in different stratifications indicated that the accuracy was high in different subgroups for age, histological type, tumor grade, and clinical stage (all p <0.01).
Conclusions: Briefly, our work established a 5-DNA methylation risk model and a nomogram merging the model with clinicopathological characteristics to facilitate individual prediction of EC patients for clinicians.

PO-273
Insulin resistance and metabolic syndrome increase the risk of relapse for fertility preserving treatment in atypical endometrial hyperplasia and early endometrial cancer patients

Xingchen Li,Jianliu Wang
Peking University People's Hospital

Objective: Fertility-sparing treatment for young women with atypical endometrial hyperplasia (AEH) and early endometrial cancer (EC) is a difficult challenge. Insulin resistance (IR) and metabolic syndrome (MetS) are two potentially crucial, but currently enigmatic, factors in the recurrence of AEH and early EC patients. In this study we attempt to elucidate these factors.
Methods: A retrospective study was conducted from January 2010 to December 2018. Risk factors for recurrence and complete remission time after recurrence (RCR time) were investigated. ROC curves were built to estimate the accuracy of the metabolic characteristics and Kaplan-Meier (K-M) analysis was used to calculate recurrence-free survival (RFS) for patients with various IR or MetS statuses.
Results: A total of 111 AEH or early EC patients met the criteria and were enrolled in our study. Univariate analysis found that BMI ≥25kg/m^2 (OR=2.7, 95% CI: 1.1-6.4, P=0.03), IR (OR=9.5, 95% CI: 3.3-27.0, P<0.001), MetS (OR=4.9, 95% CI:1.5-15.5, P=0.008), IR+ and MetS+ (OR=21.0, 95% CI: 4.8-92.7, P<0.001), histological type (OR=3.5, 95% CI: 1.5-7.9, P=0.003), and maintenance treatment (OR=0.3, 95% CI: 0.1-0.6, P=0.005) were all significantly associated with recurrence and longer RCR time. Among these factors, IR and MetS were determined to be two independent risk factors for recurrence. Moreover, using IR and MetS as markers significantly improved the diagnostic accuracy of recurrence for fertility-sparing treatment patients (AUC=0.818, P<0.05) and may play synergistic roles in suppressing treatment. K-M analysis indicated both metabolic features played important roles in RFS (P<0.05).

Conclusion: Both IR and MetS were significantly associated with recurrence and longer RCR time in AEH and early EC patients receiving fertility-sparing treatment.

PO-274

通过激活 F-actin 细胞骨架重构介导子宫内膜癌耐药细胞的侵袭及生物力学特征改变的机制研究

姚田[1,2],滕瑶[3,4],李娜[1],刘锦锦[1],周静怡[1],王甲琪[1],赵丽君[1],王建六[1],熊春阳[3],李小平[1]
1.北京大学人民医院 2.西安市第四医院
3.北京大学工学院 4.新加坡国立大学

背景：通过顺铂浓度梯度诱导子宫内膜癌细胞化疗耐药并介导其侵袭转移的机制尚不清楚。
方法: 本研究通过划痕实验和 Trans-well 实验对子宫内膜癌细胞的侵袭转移能力进行研究。通过介电泳实验对子宫内膜癌细胞的生物力学特征进行研究。通过细胞免疫荧光实验对子宫内膜癌细胞骨架 F-actin 结构进行检测。通过 wb 实验对影响 F-actin 骨架重构的信号通路相关蛋白进行检测。
结果：（1）与 Ishikawa 细胞相比，Ishikawa/CisR 细胞形变量小，稳态粘性增加了 68%，瞬态弹性和瞬态粘性增加了 59%，提示细胞力学特征可能与子宫内膜癌化疗敏感性相关；（2）对照组 Ishikawa 细胞 F-actin 呈丝状分布，分布规律。在顺铂处理后，F-actin 明显变细，部分 F-actin 断裂为短丝，无排布规律。Ishikawa/CisR 细胞 F-actin 呈短棒状分布，无明显规律。与对照组相比，Ishikawa/CisR 细胞在顺铂处理后，F-actin 分布及规律无明显变化，提示细胞骨架 F-actin 与细胞形态参数、生物力学特征和顺铂敏感性相关；（3）与 Ishikawa 细胞相比，Ishikawa/CisR 细胞的迁移率升高（P ＜0.05）；（4）与 Ishikawa 细胞相比，Ishikawa/CisR 细胞 Rho B、RND1、RND2、Rho U 和 Rho H 的 mRNA 表达量明显升高（P ＜0.05），RND3、Rac1、 Rho G、 Miro-1 和 Rho D RND 的 mRNA 表达量明显降低（P ＜0.05）；而 Rac、p-Rac、PAK、LIMK1/2、cofilin 和 p-cofilin 蛋白表达均明显升高（P＜0.05），提示细胞骨架 F-actin 重构可能与激活 Rac/PAK/cofilin 通路相关。
结论：子宫内膜癌细胞系顺铂耐药可能与其细胞骨架重构相关，并通过细胞骨架重构介导其耐药性、侵袭能力及生物力学特征的变化。细胞的生物力学特征或可作为评估细胞化疗敏感性的新指标。

PO-275

SLC25A22 在卵巢癌细胞系中的表达及对卵巢癌细胞紫杉醇耐药性的影响

温启荣
广州市妇女儿童医疗中心

目的：探讨 SLC25 家族成员在紫杉醇耐药与非耐药卵巢癌细胞中的表达差异及其对卵巢癌紫杉醇耐药性的影响。**研究方法：**使用卵巢癌细胞株 A2780、OVCAR3、ES2 和 SKOV3 构建紫杉醇耐药细胞株 A2780/PTX、OVCAR3/PTX、ES2/PTX 和 SKOV3/PTX；使用 qRT-PCR 法在 A2780 与 A2780/PTX，ES2 与 ES2/PTX 中检测 SLC25A 家族成员的基因差异，初筛得出第一批结果；用 Western Blot 法对上述初筛得出的结果进行进一步的验证，确定最终的研究对象；用紫杉醇以不同时间和不同浓度来处理非耐药卵巢癌细胞株，观察目标基因的变化趋势；构建目标基因的病毒干扰载体，下调基因表达后观察卵巢细胞紫杉醇耐药性的变化。**结果：**SLC25A22 在紫杉醇耐药卵巢癌细胞中的表达较正常卵巢癌细胞明显增高；随着紫杉醇的作用时间增加，SLC25A22 的表达反应性增加；而随着紫杉醇的浓度增加，SLC25A22 的表达会出现先增高后恢复的趋势；下调 SLC25A22 后耐药与非耐药卵巢癌的紫杉

醇敏感度增加。**结论：**SLC25A22 在紫杉醇耐药细胞中的表达增高；紫杉醇能够上调卵巢癌细胞 SLC25A22 的表达；SLC25A22 的表达与耐药和非耐药细胞的紫杉醇耐药性成正相关。

PO-276
免疫检查点抑制剂联合抗血管生成抑制剂在卵巢癌中的应用

朱秀琳,蔡云朗
东南大学附属中大医院

在女性生殖系统肿瘤中，卵巢癌（OC）发病隐匿以及治疗手段有限，致发病率及死亡率极高，常规的手术加新辅助化疗治疗的效果并不理想。肿瘤微环境（TME）中的基质细胞、肿瘤相关成纤维细胞、髓源性抑制细胞、免疫细胞以及其中可溶性分子共同构成肿瘤抑制性微环境。免疫检查点抑制剂能够恢复 T 细胞的杀伤功能，非特异性杀伤肿瘤；抗血管生成抑制剂旨在阻断肿瘤血管的生成，避免肿瘤转移。免疫检查点抑制剂联合抗血管生成抑制剂共同调节 TME，通过协同作用发挥抗肿瘤效应，增加治疗效果，减少不良反应。本综述旨在讨论免疫检查点抑制剂联合抗血管生成抑制剂在 OC 中的应用中的所取的治疗效果和面临的挑战，为以后免疫联合治疗在 OC 中更好的应用提供理论参考。

PO-277
卵巢癌腹水来源的外泌体对卵巢癌干细胞干性特征及转移能力的影响

陈思盼[1],夏玉芳[1],姜欢欢[2],孙文瑜[1],娄艳辉[1]
1.青医附院
2.青岛妇女儿童医院

目的 探讨卵巢癌腹水来源的外泌体对卵巢癌干细胞(Ovarian cancer stem cells, OCSCs)干性特征及转移能力的影响。**方法**（1）超速离心法分别提取卵巢癌腹水、A2780 细胞上清来源外泌体，采用电镜、Western blot 和 NTA 等方法进行鉴定。（2）采用无血清悬浮培养法诱导卵巢癌 A2780 细胞生成 OCSCs 并通过成球实验、分化实验、CD133 流式分选进行干性特征鉴定。（3）将取自卵巢癌腹水及肿瘤细胞上清的外泌体与 OCSCs 共培养，观察各组细胞成球情况，根据成球率、成球周期和最大球直径来评估成球能力；采用 qRT-PCR 技术检测各组干细胞标志性基因 Oct-4、Nanog、CD133 mRNA 表达水平；显微镜下免疫荧光染色检测 CD133 表达情况；transwell 实验检测各组细胞侵袭转移能力变化。**结果**（1）成功提取腹水、A2780 细胞外泌体，电镜下呈脂质双层圆形小体，NTA 粒径分布主要在 50-130nm 范围之间，平均粒径 67.2nm，western blot 显示外泌体特异性蛋白 CD63、CD9 阳性表达。（2）诱导所得 OCSCs 悬浮成球生长，在特定培养体条件下可以分化成卵巢癌贴壁细胞，流式分析显示 $CD133^{+}$细胞比例较诱导前显著升高，具备干细胞样特征。（3）细胞外泌体组 OCSCs 全部维持干性特征，继续成球悬浮生长；腹水外泌体组的 OCSCs 呈现两种生长方式，部分细胞分化贴壁生长，部分细胞继续维持干细胞特性成球生长。（4）与空白对照组相比，两组外泌体共培养的 OCSCs 成球率明显升高，最大球直径更大，成球周期更短（$p<0.05$）。而且两组细胞中三种特异性标志物 Oct-4、Nanog 和 CD133 表达水平均较空白对照组增高（$p<0.05$），干性特征更显著且转移能力明显增强。其中，细胞外泌体组 OCSCs 干性特征最为显著（$p<0.05$）。**结论** 卵巢癌腹水来源的外泌体能够增强肿瘤干细胞干性，促进肿瘤细胞侵袭转移。同时，能够促进肿瘤干细胞分化，有助于转移瘤的定植生长。

PO-278
BRCA1/2 Mutations Predict Better Survival in High-grade Endometrioid Endometrial Cancer

Yibo Dai,Jingyuan Wang,Luyang Zhao,Zhiqi Wang,Jianliu Wang
Peking University People's Hospital

Background: Recent studies and clinical trials demonstrated the vital significance of BRCA mutational status in ovarian cancer treatment, but related evidence in endometrial cancer (EC) is still limited. This study aims to investigate the role of BRCA mutation in predicting EC patients' survival.
Methods: 510 eligible cases from the Cancer Genome Atlas database were retrospectively analyzed. Clinicopathological characteristics of patients with different BRCA1/2 mutational status were compared. To analyze the survival influence of BRCA1/2 mutation, Kaplan-Meier survival analyses and Cox regressions were conducted. In order to control confounding bias between groups, propensity score matching method was used.
Results: Among the eligible patients, 11 (2.2%) harbored BRCA1 mutation, 43 (8.4%) harbored BRCA2 mutation, and 36 (7.1%) harbored both. Body mass index, rates of hypertension history, proportion of non-endometrioid histology and rates of positive peritoneal cytology were lower in BRCA1/2 mutant patients compared with the wild-type counterpart ($p = 0.020$, 0.048, 0.001 and 0.012, respectively). Patients with BRCA1/2 mutations showed longer overall (OS) and recurrence-free survival (RFS) (in Kaplan-Meier analyses, $p < 0.001$ and $p = 0.004$, respectively; in Cox regressions, $p = 0.001$ and 0.007, respectively). Further analyses indicated that the survival influence of BRCA1/2 mutation was only significant in high-grade endometrioid EC patients. Based on the cohorts generated after propensity score matching, in high-grade endometrioid EC patients, the influence of BRCA1/2 mutation remained significant on OS, but not on RFS ($p = 0.003$ and 0.057 in Kaplan-Meier analyses, $p = 0.020$ and 0.071 in Cox regressions).
Conclusion: BRCA1/2 mutation could predict better survival outcome in high-grade endometrioid EC patients, indicating the value of BRCA testing in EC clinical management.

PO-279
哺乳动物雷帕霉素靶蛋白（mTOR）在宫颈癌中的相关进展

王圣超
浙江大学医学院附属妇产科医院

哺乳动物雷帕霉素靶蛋白（mammalian target of rapamycin，mTOR）在各种生理病理过程中的调控作用得到了越来越多的关注。机体和细胞利用 mTOR 信号通路感应并整合各种外界因素如生长因子、能量水平以及氨基酸水平等的影响，通过调控其下游各种信号途径调节机体内基因转录、蛋白质翻译、脂质体合成、能量代谢以及细胞自噬等生理过程，从而调节细胞的生长和代谢，并保持机体和细胞的稳态平衡。宫颈癌是女性最常见的恶性肿瘤之一，也是迄今病因较为明确的肿瘤。近来的研究证实，mTOR 和先天性和适应性免疫反应以及细胞增殖息息相关，其可能成为治疗宫颈癌的新策略。然而，mTOR 在妇科肿瘤中的作用仍不清楚，且目前对 mTOR 在宫颈癌中作用的认识还很有限，其在宫颈癌中的激活机制和功能仍有待阐明。在这篇综述中，我们着重介绍了 mTOR 与宫颈癌相关的最新进展。

PO-280
髓源性抑制细胞通过 HVEM 促进卵巢癌免疫逃逸的机制研究

李晓凤,吴维敏,王家坡,李莉,刘娜,韩凌斐,郭晓青
上海市第一妇婴保健院

研究背景：卵巢癌(Ovarian cancer，OC)死亡率高居妇科恶性肿瘤首位，严重危害女性健康与生命。髓源性抑制细胞（Myeloid-derived suppressor cells，MDSCs）来源于骨髓祖细胞和未成熟的髓细胞,其可通过多种途径抑制机体的获得性和天然抗肿瘤免疫，促进肿瘤发展。然而，目前国内外关于卵巢癌患者 MDSCs 的研究仍鲜有报道，调控机制亦不甚明了。疱疹病毒侵入介质（Herpesvirus entry mediator，HVEM）也称 TNFRSFl4，是肿瘤坏死因子受体家族成员。
研究目的：HVEM 参与卵巢癌患者 MDSCs 介导的免疫反应及机制
研究方法：①检测 MDSCs 在卵巢良性肿瘤患者外周血，卵巢癌患者外周血、腹水和肿瘤组织中的富集程度，分析其与卵巢癌的关系；②将分离得到的 MDSCs 和 T 细胞进行共培养，检测其抑制 T 细胞增殖以及诱导 Treg 细胞分化的比例。③阻断 MDSCs 上 HVEM 信号，T 细胞上 BTLA 或者 CD160 信号后，检测其对 MDSCs 抑制 T 细胞增殖以及诱导 Treg 细胞分化能力的影响。④阻断 MDSCs 表面 HVEM 信号后，qPCR 和 WB 方法检测 HVEM 信号通过哪些信号通路，进而影响 MDSCs 调控卵巢癌免疫逃逸。
研究结果：①卵巢癌患者体内 M-MDSCs 和 PMN-MDSCs 显著积累，并且倾向于在肿瘤部位聚集；卵巢癌患者呈免疫抑制状态。②MDSCs 显著抑制 T 细胞的增殖，诱导 Treg 细胞分化。③卵巢良性肿瘤患者 MDSCs 上的 HVEM 平均荧光强度显著高于卵巢癌患者 MDSCs 上的 HVEM 平均荧光强度；阻断 MDSCs 上 HVEM 信号后，MDSCs 抑制 T 细胞增殖的能力显著下降，诱导 Treg 细胞分化能力显著降低，细胞上清中 ARG1 和 INOS 的含量均下降；阻断 T 细 胞上 BTLA 或者 CD160 信号后，MDSCs 抑制 T 细胞增殖的能力显著下降。④阻 断 HVEM 信号后，MDSCs 中的 RELA 和 AKT 的 mRNA 水平显著下降；在蛋白水平，AKT 无明显变化，NF-κB 和 p-AKT 显著下降。
结论：MDSCs 通过 HVEM 分子结合 BTLA 或者 CD160，影响 MDSCs 的 NF-κB 和 p-AKT 表达，促进卵巢癌免疫逃逸。

PO-281
卵巢恶性生殖细胞肿瘤保留生育功能手术及化疗后的内分泌及生育功能变化的临床分析

胡明淼
广西医科大学附属武鸣医院

目的 研究分析卵巢恶性生殖细胞肿瘤（MOGCT）患者行保留生育功能手术及化疗后的内分泌及生育功能变化情况。方法 回顾性分析 2006 年 12 月～2019 年 3 月在广西医科大学附属肿瘤医院收治的 57 例 MOGCT 患者，其全部行保留生育功能手术及化疗。分析其临床病理因素、手术及化疗情况、治疗后生存、复发情况及内分泌、生育变化情况。结果 研究对象中，13 例为无性细胞瘤，22 例为未成熟畸胎瘤，18 例为卵黄囊瘤，3 例为混合性生殖细胞肿瘤，1 例胚胎癌。随访时间 5-152 个月，平均随访 45.93±33.97 个月，中位随访时间 39 个月，对不同年龄、分期、肿瘤类型、手术方式、化疗方案、疗程等的生存、复发情况、月经影响、生育功能、生存情况比较， 差异均无统计学意义(P ＞ 0.05) 。结论 对于卵巢恶性生殖细胞肿瘤患者行保留生育功能手术及规范化疗，治疗后生存率较高，对患者的月经及生育功能影响不大。

PO-282
The complexity of the correlation between HPV E6/E7 mRNA quantitative results and cervical lesions

Li Yang,Yuanhang Zhu,Chenchen Ren
The third affiliated hospital of zhengzhou university

Objectives: The clinical significance of HPV E6/E7mRNA qualitative and typing results in cervical cancer screening is reliable, however, no study explores the screening effect of HPV E6/E7 mRNA quantitative results in cervical cancer. We analyze factors related to the expression of E6/E7mRNA to explored the screening value of HPV E6/E7 mRNA tested by Aptima.
Methods: A total of 1825 HPV E6/E7 mRNA-positive women were collected in this study.The relationship between age,TCT,pathological results and quantitative results of HPV E6/E7 mRNA were analyzed.
Results: We found the expression level of HPV E6/E7 mRNA has no difference in different age groups. However, the expression of HPV E6/E7 mRNA in different HPV types showed that HPV 18/45 has the highest expression, followed by HPV 16 and HPV others the lowest. Cervical intraepithelial lesion grade is also associated with the expression of E6/E7 mRNA (the expression in HSIL and LSIL are higher than negative), while there is no tendency that expression of E6/E7 mRNA level increase as the severity of cervical lesions for total HPV E6/E7 mRNA expression or single type of HPV16,18/45 and others.
Conclusions: Our study for the first time explored the influencing factors of HPV E6/E7 mRNA quantitative results and found HPV types and cervical lesion severity are the influencing factors, although the severity of cervical lesions hasn't a strong effect. Thus, in the clinic, we should look at the quantitative test results critically. For high expression of HPV E6/E7 mRNA, cervical lesions should not be blindly overtreated, and those with low expression should not be taken lightly.

PO-283
Expression of UCP2 in epithelial ovarian cancer and its effect on biological function of ovarian cancer cells

Ying Tang[1,2],Yifeng Wang[2]
1.Affiliated Hospital of Guilin Medical College
2.Department of Obstetrics and Gynecology， Zhujiang Hospital of Southern Medical University

OBJECTIVE Ovarian cancer is the malignant tumor with the highest fatality rate in the female reproductive system. It is essential to search for more effective diagnostic and therapeutic methods for ovarian cancer. Uncoupling protein 2（UCP2） has been considered as a characteristic of cancer cells. In this study, we investigate the expression of UCP2 in epithelial ovarian cancer and explore its effect on the biological function of ovarian cancer SKVO3 cells.
METHODS Immunohistochemical was used to detect the expression of UCP2 in tissue sections of epithelial ovarian cancer patients from January 2010 to December 2014 in Zhujiang Hospital of Southern Medical University. The expression of UCP2 of SKOV3 cell was detected by qRT-PCR and Western blots. Inhibited the expression of UCP2 in SKOV3 through Genipin(inhibitor of UCP2). The cell proliferation activity was detected by CCK-8, apoptosis was detected by flow cytometry, and cell migration and invasion ability were detected by Transwell assay.
RESULTS The high expression rate of UCP2 in FIGO III/IV ovarian cancer tissues was 75.6% (31/41), which was significantly higher than the high expression rate of UCP2 in FIGO I/II tissues (36.8% (7/19)， The difference was statistically significant(χ^2=8.403，P=0.004).The apoptosis rate of Genipin group

was 15.067±0.664%, which was significantly higher than that of the control group 2.500±0.625%(t=16.629，P<0.001). The migration ability of Genipin group was 24.335±1.897% of the control group, which showed significantly elevated (t=69.098, P<0.001), and the invasive ability was 32.478±2.517% of the control group, the difference was statistically significant (t=46.464, P< 0.001). **CONCLUSION** UCP2 is highly expressed in FIGO III/IV epithelial ovarian cancer and can affect the biological behavior of ovarian cancer SKOV3 cells by regulating the proliferation, apoptosis, migration and invasion.

PO-284
子宫内膜癌及子宫内膜不典型增生患者免疫组化特征与保留生育疗效的相关因素分析

李立伟,王志启
北京大学人民医院

目的 探讨子宫内膜癌（EC）及子宫内膜不典型增生（AH）患者免疫组化特征与保留生育治疗疗效的关系。**方法** 回顾性分析 2010 年 1 月至 2020 年 1 月北京大学人民医院收治的 EC（40 例）及 AH（47 例）患者临床资料及免疫组化结果，采用醋酸甲羟孕酮（MPA）或醋酸甲地孕酮（MA）口服，联用促性腺激素释放激素激动剂(GnRH-a)和（或）左炔诺酮宫内缓释系统(LNG-IUS)，根据开始治疗后 9 个月内是否完全缓解（CR）将患者分为两组，进行统计学分析。**结果** （1）两组的治疗方法比较：≤9 个月达 CR 组使用 MA、MPA、MPA+GnRH-a、MPA+LNG-IUS、MPA+GnRH-a+LNG-IUS 例数分别为 0、27、4、2、1 例，≤9 个月未 CR 组使用 MA、MPA、MPA+GnRH-a、MPA+LNG-IUS、MPA+GnRH-a+LNG-IUS 例数分别为 2、22、4、3、4 例，差异无统计学意义（P＞0.05）；（2）两组的年龄、BMI、既往史比较，差异均无统计学意义（P＞0.05）；（3）≤9 个月达 CR 组 P16、P53、PTEN 阳性表达率为 81.0%（17/21）、32.0%（8/25）、27.3%（6/22），ER、PR、Ki-67 在癌灶中表达的均值为 69.03%±18.51%、70.14%±25.09%、13.63%±9.66%；≤9 个月未 CR 组 P16、P53、PTEN 阳性表达率为 91.7%（22/24）、51.5%（17/33）、28.0%（7/25），ER、PR、Ki-67 在癌灶中表达的均值为 64.11%±24.63%、72.72%±24.37%、28.72%±19.36%；（4）两组 ER、PR、P16、P53、PTEN 表达率无统计学差异（P＞0.05），Ki-67 表达率有统计学差异（P＜0.05）。**结论** 保留生育治疗前对刮宫标本进行免疫组化染色有助于了解 CA 与 AH 患者的预后，Ki-67 表达率对保留生育治疗疗效的预测意义较大。

PO-285
全子宫切除时同时切除双侧输卵管对育龄期女性的影响

樊亚男
河北医科大学第四医院

目的：探讨全子宫切除时同时切除双侧输卵管治疗妇科良性疾病育龄女性患者的临床效果。**方法：**选取 2005 年 10 月 1 日到 2015 年 10 月 1 日期间我院收治的 482 例子宫良性患者进行回顾性研究分析，其中 262 例行全子宫+双侧输卵管切除为观察组，220 例行全子宫切除为对照组。统计两组术中出血情况、术后住院时间、拔除尿管时间、术后胃肠道功能恢复时间、手术相关并发症；术后随访 3 年，统计围绝经期症状（改良 Kupperman 评分）及盆腔包裹性积液、卵巢癌发生情况。**结果：**两组患者术中出血量、术后住院时间、拔除尿管时间、术后胃肠道功能恢复时间等方面相比，差异均无统计学意义（P＞0.05）。术后 3 年随访中，两组患者术后改良 Kupperman 评分进行比较，差异无统计学意义（P

＞0.05）。观察组盆腔包块 11 例（4.20%）、盆腔恶性病变 5 例（1.91%）、二次手术 13 例（4.96%），对照组 19 例（8.64%）、8 例（3.64%）、29 例（13.18%），两组比较差异均具有统计学意义（P＜0.05）。**结论：**全子宫切除同时行双侧输卵管切除治疗子宫良性疾病是安全可行的，不会增加手术风险、影响患者术后恢复，可降低育龄女性患者盆腔积液和卵巢癌的发生率，且对卵巢功能无明显影响。

PO-286

The interaction between microbiota, metabolic and immune system in female genital tract of microenvironment

huanrong li,Fengxia Xue
tianjin medical university general hospital

Abstract：Objective:In order to clarify the interaction between microbes, metabolites and immune components in the female reproductive tract microenvironment, and the role of their interaction in maintaining the balance and health of the female reproductive tract internal environment.Methods:We searched databases such as Pubmed and Web of Science, trying to find the interconnection between microbiota, metabolic and immunity.Result:When any one of reproductive tract microorganisms, metabolites or immunity is out of balance, it will affect the other two, leading to the occurrence and development of diseases and the appearance of corresponding symptoms and signs, such as infertility, miscarriage, premature delivery, and gynecological tumors caused by infectious diseases of the reproductive tract. Nutrients in the female reproductive tract provide symbiotic and pathogenic microorganisms with a source of nutrients for their own reproduction and utilization. At the same time, this interaction with the host forms a variety of metabolites. Changes in metabolites in the host reproductive tract are not only related to the interaction between the host and microbiomta under dysbiosis, but also related to changes in host immunity or environmental changes , all of which will participate in the pathogenesis of diseases and lead to disease-related phenotypes. Current researches mostly use genital tract metabolites as indicators for new diagnosis and prognosis of diseases in addition to microbial characteristics. Microorganisms and their metabolites can also interact with host immunity, activate host immunity, change host immune status, and are closely related to persistent pathogen infection, aggravation of disease, adverse pregnancy outcome, and gynecology oncology.Conclusion:Therefore, studying the interaction between microorganisms, metabolites and immunity in the reproductive tract can not only explore the pathogenic mechanisms that lead to inflammation of the reproductive tract, adverse pregnancy outcomes and tumorigenesis, but also provide a basis for further research on diagnosis and treatment of targets.

PO-287

rh-IL-17D 对上皮性卵巢癌 SKOV3 细胞迁移及 VEGF-C 表达的影响

刘式浩,张辉
河北医科大学第四医院

目的：通过研究重组人 IL-17D（r-hIL-17D）对人上皮性卵巢癌 SKOV3 细胞迁移及 VEGF-C 表达的影响，探讨 IL-17D 对卵巢癌淋巴转移的作用。
方法：
1 体外培养 SKOV3 细胞。

2 取对数生长期的 SKOV3 细胞，Transwell 小室实验检测不同浓度 r-hIL-17D 对 SKOV3 细胞迁移能力的影响。
3 分别以不同浓度 r-hIL-17D 作用 SKOV3 细胞 48h 后，提取各组细胞 RNA，检测不同浓度 r-hIL-17D 对 SKOV3 细胞 VEGF-C mRNA 表达的影响。
4 分别以不同浓度 r-hIL-17D 作用 SKOV3 细胞 48h 后，，ELISA 法检测上清液中 VEGF-C 的含量。
结果：
1、Transwell 小室实验显示：在不同浓度 IL-17D 作用下，SKOV3 细胞的迁移数目差异有统计学意义（P＜0.05）。
2 RT-qPCR 结果显示：在不同浓度 r-hIL-17D 作用下，SKOV3 细胞 VEGF-C mRNA 相对表达量差异有统计学意义（P＜0.05）。
3 ELISA 结果显示：不同浓度组细胞上清液中 VEGF-C 的含量差异有统计学意义（P＜0.05）。
结论：
R-hIL-17D 可以提高 SKOV3 细胞的迁移能力，在不同水平增加 SKOV3 细胞 VEGF-C 的表达。IL-17D 可能因此而增加卵巢癌细胞淋巴转移的机会。

PO-288

PARP 抑制剂调节卵巢癌免疫微环境研究进展

王伟
华中科技大学同济医学院附属同济医院

聚 ADP-核糖聚合酶[poly(ADP-ribose) polymerase, PARP]抑制剂是一种 基于“合成致死性”机制治疗卵巢癌的新药，可明显延长患者的疾病无进展生存 期。近年来，研究发现 PARP 抑制剂介导的 DNA 损伤亦可通过一系列分子和细胞 机制来调节肿瘤免疫微环境。本篇综述总结了 PARP 抑制剂调节卵巢癌免疫微环 境的研究进展。

PO-289

CDK4/6 inhibition promotes immune infiltration in ovarian cancer and synergizes with PD-1 blockade in a B cell-dependent manner

Qianfeng Zhang,Biliang Chen
Department of Obstetrics and Gynecology， Xijing Hospital

Introduction: Great progress has been made in the field of tumor immunotherapy in the past decade. However, the therapeutic effects of immune checkpoint blockade (ICB) against ovarian cancer are still limited. Recently, an inhibitor of cyclin-dependent kinases 4 and 6 (CDK4/6i) has been reported to enhance antitumor immunity in preclinical models. The combined use of CDK4/6i and ICB may be beneficial, but the effects of CDK4/6is on the tumor immune microenvironment and whether they can synergize with ICB in treating ovarian cancer remain unknown.
Methods: In this study, we first assessed the antitumor efficacy of abemaciclib, an FDA-approved CDK4/6i, in a syngeneic murine ovarian cancer model. Then, immunohistochemistry, immunofluorescence and flow cytometry were performed to evaluate the number, proportion, and activity of tumor-infiltrating lymphocytes. Cytokine and chemokine production was detected both in vivo and in vitro by PCR array analysis and cytokine antibody arrays. The treatment efficacy of combined abemaciclib and anti-PD-1 therapy was evaluated in vivo, and CD8+ and CD4+ T cell activities were

analyzed using flow cytometry. Lastly, the requirement for both CD8+ T cells and B cells in combination treatment was evaluated in vivo, and potential cellular mechanisms were further analyzed by flow cytometry.
Results: We observed that abemaciclib monotherapy could enhance immune infiltration, especially CD8+ T cell and B cell infiltration, in the ID8 murine ovarian cancer model. Immunophenotyping analysis showed that abemaciclib induced a proinflammatory immune response in the tumor microenvironment. PCR array analysis suggested the presence of a Th1-polarized cytokine profile in abemaciclib-treated ID8 tumors. In vitro studies showed that abemaciclib-treated ID8 cells secreted more CXCL10 and CXCL13, thus recruiting more lymphocytes than control groups. Combination treatment achieved better tumor control than monotherapy, and the activities of CD8+ and CD4+ T cells were further enhanced when compared with monotherapy. The synergistic antitumor effects of combined abemaciclib and anti-PD-1 therapy depended on both CD8+ T cells and B cells.
Conclusion: These findings suggest that combined treatment with CDK4/6i and anti-PD-1 antibody could improve the efficacy of anti-PD-1 therapy and hold great promise for the treatment of poorly immune-infiltrated ovarian cancer.

PO-290
Major intraoperative blood loss of primary debulking surgery for ovarian cancer : risk factors and possible management strategies

Yuanfen Wang,Junchen Chen,Sha Dou,Yi Li,Heng Cui
Department of Obstetrics and Gynecology， Peking University People's Hospital

Objective: In order to alleviate the contradiction of the lack of blood source and propose a possible perioperative blood management strategy for patients with advanced ovarian cancer, we sought to find the risk factors for major intraoperative blood loss of primary debulking surgery (PDS) for ovarian cancer to identify patients with predicted intraoperative blood loss of at least 1000mL. Methods: Patients with ovarian cancer who underwent PDS in Peking University People's Hospital, from January 2010 to December 2017, were enrolled in this study. The association between risk factors with respect to major intraoperative blood loss was modeled with the use of logistic regression. Receiver operating characteristic (ROC) curve analysis was used to determine the predictive value of risk factors for intraoperative blood loss of at least 1000mL. Results: Three hundred forty-six patients met the inclusion criteria. There are 150 patients with intraoperative blood loss of at least 1000mL. Multivariate analysis showed that FIGO stage III/IV (OR2.712, 95%CI: 1.576-4.666, P<0.001), ASA score ≥ 3 (OR2.373; 95%CI: 1.550-7.318, P=0.044), ascites volume ≥ 500 mL (OR2.254; 95%CI: 1.867-4.909, P=0.002), radical or ultra-radical surgery (OR4.644; 95%CI: 2.526-15.879, P=0.002) and diabetes (OR2.240; 95%CI: 1.223-4.761, P=0.035) were independent risk factors for major intraoperative blood loss in patients with ovarian cancer. The ROC curves indicated that the logistic regression model is more reliable in the prediction of major intraoperative blood loss with an area under the ROC curve of 0.729 than the tumor stage (ROC curve=0.645) and surgical complexity (ROC curve=0.568). Conclusion: We first found the risk factors for major intraoperative bleeding in ovarian cancer patients undergoing PDS. Planned surgical procedures and preoperative risk factors can be used to help predict perioperative blood requirements. Neoadjuvant chemotherapy is an alternative for advanced ovarian cancer patients with massive ascites and high ASA score. Glycemic control in diabetic patients is also critical.

PO-291
基于 HPV16 感染相关 microRNA 上游转录因子核表达的宫颈癌预后预测模型构建

许珂[1,2],刘婵桢[1]
1.广西医科大学附属肿瘤医院
2.山东大学附属生殖医院

研究目的：探讨 HPV16 感染相关 microRNA 上游转录因子核表达与宫颈癌患者预后的关系，尝试构建相关预后预测模型。
材料与方法：生物信息学方法预测并筛选 HPV16 感染相关 microRNA 上游共转录因子。回顾性分析 2011 年 11 月-2014 年 5 月于广西医科大学附属肿瘤医院妇瘤科就诊的 143 例初治宫颈癌患者的临床病理资料，同步收集相关组织蜡块标本。免疫组织化学法检测各转录因子在宫颈癌组织内的核表达情况，结合术后随访，Kaplan-Meier 生存分析评估转录因子核表达与患者疾病特异性生存期（DSS）、无瘤生存期（DFS）的相关性。Cox 单因素和多因素分析筛选并确定影响患者生存、复发的独立预测因素，以回归系数为各因素进行加权，计算预后指数（PI），构建宫颈癌预后评分系统。采用 ROC 曲线下面积评估 PI 的预测准确性。将 PI 推广用于预测患者术后 1、3、5 年复发、生存情况，使用内插法计算基线生存函数，建立数字化预后预测模型。在此基础上，建立列线图预后预测模型，在不同角度对模型的预测效能进行评价。
结果：HPV16 感染相关 microRNA 上游转录因子 c-Rel、p65、p50、STAT1 和 ELK1 在 143 例宫颈癌病理标本中的核表达阳性率分别为 67.1%、64.3%、72.7%、45.5%和 45.5%。核 p65、p50 阳性者及核 STAT1 阴性者的 DSS、DFS 均明显小于对照组（Log-rank P<0.05）。宫颈癌患者生存相关独立预后因素包括宫旁浸润、p65 核表达及 STAT1 核表达，复发相关独立预后因素包括 FIGO 分期、术前血清 SCC-Ag 水平、p50 核表达、STAT1 核表达。利用回归系数建立了以 PI 为因变量的预后评分系统。生存 PI 和复发 PI 的 ROC 曲线下面积分别为 0.797 和 0.808。1 年、3 年、5 年相关 ROC 曲线下面积均大于 0.77。利用基线生存函数构建了宫颈癌患者个体化时间点预后预测模型，运用此数学模型可预测并估算各时间节点宫颈癌患者 DSS 和 DFS。基于 R 语言构建了可视化列线图模型，经 bootstrap 重抽样，列线图模型预测 DSS 和 DFS 的 C-index 分别为 0.736 和 0.734。1 年、3 年及 5 年的校准曲线与参考线贴合度较高。
结论：基于转录因子核表达的 PI 数字化和可视化列线图预测模型的鉴别力和精度较高，能够为个体化治疗提供一定参考，具有一定的临床应用价值。

PO-292
The value of Fertility-Sparing Surgery with complete staging in Non-epithelial Ovarian Cancer patients–A single institution experience in China

Xiaoying Sun,Ting Wan,Jihong Liu
State Key Laboratory of Oncology in South China， Collaborative Innovation Center for Cancer Medicine，
Department of Gynecologic Oncology， Cancer Center， Sun Yat-Sen University

Objective: To compare the differences of oncologic and fertility outcomes in non-epithelial ovarian cancer (EOC) patients underwent complete staging fertility-sparing surgery (FSS) with the incomplete surgery.

Methods: We retrospectively collected the clinical data and follow-up results of non-epithelial ovarian cancer patients who received FSS between January 2000 and December 2017. Statistical analysis was performed to evaluate the oncological and reproductive outcomes of these patients.
Results: Overall 155 patients with a median age of 22 years were included and divided into complete FSS (cFSS) and incomplete FSS (icFSS) groups. The former included patients undergoing FSS with complete staging surgery (lymphadenectomy may be omitted for OSCST), the later involved patients receiving FSS without complete staging. Pathological types included malignant ovarian germ cell tumor (MOGCT, n=129) and ovarian sex cord-stromal tumors (OSCST, n=26).
In univariate analysis, patients in icFSS group had a poorer prognosis comparing with cFSS group, with a lower disease-free survival (DFS) rate (80.2% vs. 98%, p=0.008) and lower five-year overall survival (OS) rate (92.4% vs. 100%, p=0.003). Meanwhile, omentum metastasis (p=0.000), residual tumor (p=0.003) had an adverse effect on the survival of patients. Multivariate analysis indicated that FSS with complete staging was an independent recurrence factors for non-EOC patients (p=0.0018).
Considering of fertility outcomes, 35(79.5%) of 44 patients who wishing to pregnant gave birth to 46 healthy children. The fertility rates of different pathological types of patients in this study were 83.8% in MOGCT and 57.1% in OSCST, respectively. Besides, there was no significant different between histological or surgical type on reproductive outcome (p=0.138 and p=0.250, respectively).
Conclusion: non-epithelial ovarian cancer patients who received FSS especially complete staging surgery carry a favorable prognosis and acceptable reproductive outcomes.

PO-293
环状 RNA circGli1 抑制子宫颈癌迁移侵袭的作用和机制研究

岑以璇
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

研究目的：子宫颈癌是当今世界威胁妇女健康的最常见恶性肿瘤之一。子宫颈癌局部浸润和脉管转移是中晚期子宫颈癌死亡率高、预后差的最主要的原因。因此针对转移性子宫颈癌迁移侵袭的内在机制及潜在治疗靶点的探索仍然十分必要。目前越来越多的研究显示，作为一种重要的非编码 RNA，环状 RNA 的异常表达与肿瘤的发展密切相关，而环状 RNA 在子宫颈癌发展中的机制仍有待探索。
材料与方法：在本研究中，我们通过提取组织 RNA、qPCR 验证在环状 RNAcircGli1 在正常宫颈组织和宫颈鳞癌组织中的表达差异；通过 Transwell 迁移侵袭、划痕实验以及小鼠的肿瘤细胞尾静脉转移实验等探索 circGli1 的体外、体内功能学表型。通过 RNA-pulldown 结合蛋白质质谱技术探索与 circGli1 存在内源性结合的蛋白质并通过 RNA 免疫共沉淀技术进行验证。通过 RNA-seq 技术进一步筛选 circGli1 的具体下游靶点，并从蛋白水平和功能学方面加以验证。
结果：在我们课题组前期组织测序结果中 circGli1 在子宫颈鳞癌中的表达显著低于正常宫颈组织。通过体内外功能学实验，我们发现过表达 circGli1 显著抑制子宫颈癌细胞 SiHa、Caski 的迁移迁徙，并显著抑制小鼠的肿瘤尾静脉-肺转移。通过 pulldown 联合质谱技术，我们发现 circGli1 与促癌蛋白多聚嘧啶区结合蛋白 1（PTBP1）存在内源性结合，且 circGli1 通过结合 PTBP1 抑制了其促癌功能。通过 RNA-seq，我们筛选并验证出含 CUB 结构域蛋白 1（CDCP1）为 circGli1 与 PTBP1 的共同下游靶点。
结论：我们的实验证实 circGli1 在子宫颈鳞癌中通过结合 PTBP1 从而抑制 CDCP1 的表达，抑制子宫颈癌的侵袭迁移,为探索转移性子宫颈癌治疗新靶点提供新的思路。

PO-294

LncRNA-ZXF1 regulated P21 expression in endometrioid endometrial carcinoma by managing ubiquitination-mediated degradation and miR-378a-3p/PCDHA3 axis

Deshui Kong,Yixin Hou ,Wenzhi Li,Xiaohong Ma,Jie Jiang
shandong university qilu hospital

Background Long noncoding RNAs (lncRNAs) have profound effects on biological processes in various malignancies. However, few studies have investigated their mode of function and specific mechanisms in endometrial cancer. LncRNA ZXF1 is a new lncRNA with a length of 2450 nt that is transcribed from chromosome 10. No study has investigated the function and mechanism of lncRNA ZXF1 in endometrioid endometrial cancer until now. The cell cycle, as a very critical biological process, is very important in the occurrence and development of malignant tumors. Many malignancies are mediated by the cell cycle, which is a complex regulatory pathway involving many molecules. Among them, P21 acts as a crucial cell cycle inhibitor to regulate cell replication and fate. The production and degradation of P21 are dynamically manipulated in the cell to reach equilibrium.
Methods We used bioinformatics and qRT-PCR to analyze the expression of lncRNA-ZXF1 in tumor tissues and adjacent normal tissues of endometrial cancer. The MTT assay, Celltiter-Glo assay, EdU incorporation assay, colony formation assay and flow cytometry cell cycle detection have been used to confirm the role of lncRNA-ZXF1 in cell proliferation. The wound healing and Transwell assays were performed to explore the role of lncRNA-ZXF1 in migration and invasion. A nude mouse subcutaneous tumor formation model was utilized to demonstrate the role of lncRNA-ZXF1 in vivo.
Results The online data and our collected sample data revealed that lncRNA-ZXF1 is downregulated in several tumors. Additionally, the elevated level of lncRNA-ZXF1 in endometroid endometrial cancer (EEC) attenuated cell activity, inhibited cell invasion, and slowed xenografted tumor growth in vitro. These discoveries demonstrated that the tumor-suppressing activity of lncRNA-ZXF1 modulated the protein level of P21 through two mechanisms: controlling the expression of P21 through the ZXF1/miR-378a-3p/PCDHA3 axis, and binding to P21 to prevent the degradation of P21 through the ubiquitin-proteasome system.
Conclusion In summary, we found that ZXF1 regulates P21 expression in endometrial cancer through two mechanisms: by regulating P21 protein expression through the miR-378a-3p/PCDHA3 axis and by directly binding to P21 to prevent its CDC20-mediated ubiquitin degradation. Additionally, increasing the expression of ZXF1 inhibits cell cycle progression and the migration ability of endometrial cancer. Our results demonstrated that ZXF1 has the potential to become a diagnostic indicator, prognostic indicator, and target for molecular targeted treatment in precision therapy. To our best knowledge, this is the first study to demonstrate that lncRNA ZXF1 acts as a tumor-suppressing lncRNA in EEC.
Abstract

PO-295

青春期前巨大卵巢肿瘤的诊治

张金玲[1],蔡如玉[1],李俤莹[1],张金玲[1],蔡如玉[1],李俤莹[1]
1.深圳市人民医院 2.深圳市人民医院

卵巢肿瘤多发生于成年女性，发生于青春期前女性较为罕见[1]。青春期前卵巢肿瘤发生率占同年龄段肿瘤的 1%-1.6%，占各年龄段卵巢肿瘤的 6%[2-5]。其中 10%-28%为卵巢上皮性肿瘤[6]，良性上皮性肿瘤以囊腺瘤多见（浆液性占 75%，粘液性占 25%）[4, 7]。大多数青春期前卵巢肿瘤因其年龄小且临床症状体征不典型，诊断困难甚至被误诊而延误治疗。对青春期前巨大卵巢肿瘤手术方式的选择也存

在争议。现就青春期前巨大卵巢肿瘤病例的诊治进行汇报及文献分析，避免误诊误治再次发生，对于青春期前巨大卵巢肿瘤术式的选择提供一个新思路。

PO-296

绝经后妇女宫颈病变特点的病例对照研究

郭瑞霞,刘媛媛
郑州大学第一附属医院

目的 探讨绝经后宫颈活检诊断为宫颈癌前病变患者的特点。方法 回顾性分析郑州大学第一附属医院 2017 年 6 月至 2018 年 11 月间，阴道镜下宫颈活检诊断为宫颈癌前病变，并行子宫颈锥切术的 2013 例患者的临床病理资料，其中绝经组 439 例，未绝经组 1574 例，对绝经组与未绝经组患者的 HPV 检测、液基薄层细胞学检查（TCT）、阴道镜检查及活检结果、子宫颈锥切术后病理等进行对比分析。结果 （1）高危 HPV 感染：绝经组高危 HPV 阳性率 92.0%（404/439），未绝经组为 94.4%（1486/1574），两组均以 HPV16 型感染最多见，绝经组 65.8%（289/439），未绝经组 68.0%（1070/1574），两组比较差异均无统计学意义（c^2=3.394，P=0.065；c^2=0.722，P=0.395）。（2）TCT 检查结果（包括 NILM，ASCUS，ASC-H，LSIL，HSIL）：两组比较差异无统计学意义（c^2=8.710，P=0.069）。（3）阴道镜检查：绝经组阴道镜检查不充分者 87.5%（384/439），宫颈为 III 型转化区者 80%（351/439），均高于未绝经组［32.5%（511/1574），21.9%（344/1574）；c^2=420.606，P=0.000、c^2=512.572，P=0.000］。绝经组中 155 例（35.3%，155/439）行颈管内膜刮取术（ECC），阳性者 105 例（(绝经组病变累及阴道壁者占 5.9%（26/439），高于未绝经组 1.0%（16/1574），c^2=40.443，P=0.000。(4)术后病理：绝经组宫颈锥切术后切缘阳性率 14.6%（64/439），高于未绝经组 4.8%（75/1574）c^2=51.427，P=0.000。绝经组术后病理升级率 14.4%（63/439）,高于未绝经组 7.6%（119/1574），c^2=19.246，P=0.000；其中绝经组锥切术后病理升级为癌者占 10.9%（48/439），高于未绝经组 5.5%（86/1574），c^2=16.530，P=0.000。**结论** 绝经后妇女临床症状体征不典型，阴道镜检查常不充分，多为 III 型转化区，病变更易累及宫颈管及阴道壁，临床上应重视宫颈管诊刮及阴道壁的全面检查。绝经后宫颈锥切切缘阳性率高，锥切术后病理升级比例高，直接行子宫切除术可能导致手术范围过度或不足。

PO-297

机器人腹腔镜与传统腹腔镜宫颈癌根治术临床对比研究

马迪蒙,郭瑞霞
郑州大学第一附属医院

目的：探讨机器人宫颈癌根治术治疗早期宫颈癌的安全性、可行性及优势。方法：回顾性分析 2014 年 11 月至 2018 年 1 月手术治疗的 IA1-IIA2 期宫颈癌患者的临床资料，分析、比较机器人宫颈癌根治术（RRH 组，n=213）与同期腹腔镜宫颈癌根治术(LRH 组，n=216) 手术时间、术中出血量、输血率、术后留置尿管时间、 排气时间、盆腔淋巴结数量、术后住院时间日、术后并发症及近期疗效等情况。还对所有患者的随访结果进行了分析。结果：两组患者具有相同的基线特征和肿瘤特征，RRH 组的手术时间短于 LRH 组［(220.2±84.6) min vs (237.1±58.6) min］（P=0.017，＜0.05）,RRH 组的术中并发症少于 LRH 组（术中输血：RRH 组：0 例 LRH：3 例),RRH 组的术后拔除引流管时间长于 LRH 组［(6.3±3.7) d vs (4.9±2.4) d］（P＜0.05），RRH 组手术出血量多于 LRH 组［(15.2±11.5)g/L vs (12.5±10.1)g/L］，RRH 组术中输液量多于 LRH 组［2151.23±788.347)ml vs (1931.35±636.283)ml］，RRH 组住院费用多于 LRH 组［60606.08±10868.33)￥vs (35088.28±6730.87)￥］，RRH 组术后留置

尿管时间少于 LRH 组［(16.7±11.2)g/L vs (21.1±14.4)d］（P=0.040，＜0.05），术后导尿量、术后肛门排气时间、住院时间差异均无统计学意义。结论：与腹腔镜手术相比，机器人手术具有手术时间短、术中并发症少、输血率低、留置尿管时间短等优势，该手术方式安全可行，值得临床推广。本研究的不足之处在于其为回顾性研究，且由于纳入对象手术结束时间较短，尚缺乏长期随访资料评估患者远期疗效。未来需要更多的前瞻性、大样本随机对照研究对机器人宫颈癌根治术做出全面客观的评价。

PO-298
绝经后宫颈癌前病变妇女宫颈锥切术后病理升级的影响因素分析

郭瑞霞,刘媛媛
郑州大学第一附属医院

目的 探讨绝经后宫颈癌前病变妇女宫颈锥切术后病理升级情况及其影响因素。**方法** 回顾性分析 2017 年 6 月至 2018 年 11 月在郑大一附院行宫颈锥切术的 2013 例患者（绝经组 439 例，年龄 42~80 岁，平均（56.64±6.97）岁；未绝经组 1574 例，年龄 15~54 岁，平均（38.32±7.72）岁）的临床特征。**结果**(1)绝经组宫颈锥切术后病理升级者 63 例（14.4%）,高于未绝经组（119 例，7.6%），（c^2=19.246，P=0.000）；其中绝经组锥切术后病理升级为癌者 48 例（10.9%），高于未绝经组（86 例，5.5%），（c^2=16.530，P=0.000）。（2）对宫颈癌前病变锥切术后病理升级的 182 例患者进行分析，将可能影响锥切术后病理升级的因素（包括高危 HPV 感染情况，TCT 检查结果，绝经与否，结婚年龄，妊娠次数，长期居住地（城镇/农村），病程，病变累及阴道壁情况，免疫抑制，宫颈转化区类型）进行单因素分析，再经多因素 logistic 回归分析发现，TCT 检查结果，绝经与否，妊娠次数，免疫抑制，宫颈转化区类型是影响患者锥切术后病理升级的独立危险因素（P<0.05）（3）对不同 TCT 检查结果分析，在 TCT 检查结果为 ASCUS 时，绝经组患者宫颈锥切术后病理升级比例明显高于未绝经组患者，（c^2=9.161,P=0.002），而在 TCT 检查结果为 NILM,ASC-H,LSIL,HSIL 时，俩者分别比较，差异均无统计学意义（P>0.05）。（4）TCT 检查结果为 ASCUS 的 533 例患者中，与阴道镜下活检病理检查结果相比，34 例病理升级为癌，其中绝经组占 12.2%（16/131），未绝经组占 4.5%（18/402），绝经组升级为癌的比例明显高于未绝经组（c^2=9.953,P=0.002）。**结论** 绝经后妇女宫颈锥切术后病理升级比例较高，宫颈锥切术后病理升级与 TCT 检查结果、绝经状况、妊娠次数、免疫抑制、宫颈转化区类型明显相关。因此临床上对待阴道镜下活检的病理检查结果需与绝经后妇女临床特征相结合，综合考虑避免漏诊。

PO-299
The safety and efficacy of robot-assisted laparoscopic surgery system in comprehensive staging surgery for endometrial adenocarcinoma：a prospective cohort study

Pengran Wang,Ruixia Guo
The First Affiliated Hospital of Zhengzhou University

Objective To evaluate the safety and effectiveness of robot-assisted surgery system in comprehensive staging surgery for endometrioid adenocarcinoma. **Methods** A prospective cohort study was made on the clinical data of 412 patients with endometrioid adenocarcinoma enrolled in The First Affiliated Hospital of Zhengzhou University during the period from December 2014 to December 2018. 130 patients received robot-assisted laparoscopic surgery (robot group) and 282 received traditional laparoscopic surgery(laparoscopic group). The clinical information and prognosis of the two

groups were compared. **Results** Compared with the laparoscopic group, the robot group had less estimated blood loss, intraoperative complications and postoperative complications (P＜0.010). The robot group had less vascular injury，more postoperative lymphatic fistula and more hospitalization costs(P＜0.010). There were no statistically significant differences between the two groups in the operation time, pelvic lymph node resection], para-aortic lymph node resection，total lymph node resection， intraoperative blood transfusion rate and length of postoperative hospital stay(P ＞ 0.010). No significant differences were detected between the two groups in terms of the overall survival rate(P＞0.010). **Conclusions** It is safe and feasible to treat endometrial adenocarcinoma by robot-assisted laparoscopic comprehensive staging surgery.

PO-300

Dose fusion and efficacy evaluation of different radical radiotherapy doses for cervical cancer

Xi Tang[1],Mingyi Li[1],Danxia Wen[1],Hui Yu[2],Xinglong Yang[1],Zhouyu Li[1],Xiaomin Wen[1],Jinquan Liu[1]
1.5th Ward of Radiotherapy Department， Affiliated Cancer Hospital & Institute of Guangzhou Medical University，Guangzhou
2.Radiotherapy Center Department， Affiliated Cancer Hospital & Institute of Guangzhou Medical University，Guangzhou

Background: The recommended external beam radiotherapy (EBRT) dose for cervical cancer is 45 or 50.4 Gy, but there is no consensus. In this study, 45- and 50.4-Gy treatment groups were compared for fused doses to target tumor areas and organs at risk (OARs), clinical efficacy, and quality of life.
Methods: Seventy-nine cases receiving radical radiotherapy within the past three years were retrospectively analyzed. EBRT and three-dimensional brachytherapy dose fusion values were calculated for target areas and OARs using Elastix V5.0. Clinical efficacy was assessed using Response Evaluation Criteria in Solid Tumors (RECIST), adverse events using Common Terminology Criteria for Adverse Events v4.03 (CTCAE4.03), and quality of life using the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire-Core 30 (EORTC QLQ-C30).
Results: Minimum fused dose delivered to 90% of clinical target volume (HRCTV D90) did not differ significantly between 45- and 50.4-Gy groups, whereas D2cc values of rectum and bladder (OARs) were significantly lower in the 45-Gy group (both P<0.05). Further analysis showed that these D2cc differences resulted primarily from EBRT. No grade III–IV adverse events were observed in either group during follow-up. Short-term clinical efficacy, adverse events, and EORTC QLQ-C30 functional and symptom scales also did not differ significantly between groups (all P>0.05). However, quality of life was markedly higher in the 45-Gy group (P<0.05).
Conclusion: Appropriate EBRT dose reduction can reduce OAR irradiation without compromising total target area dose or clinical efficacy. Dose fusion can facilitate judicious choice of EBRT to limit OAR exposure, reduce adverse events, and enhance quality of life.

PO-301

早期卵巢恶性肿瘤行再分期手术的必要性

郭瑞霞,刘亚娜
郑州大学第一附属医院

目的 探讨上皮性癌、生殖细胞肿瘤、性索间质肿瘤患者首次手术后行再分期手术的必要性。**方法** 对2013年1月至2019年5月在郑州大学第一附属医院行再分期手术的117例早期（IA-IC期）卵巢癌患

者进行回顾性分析，其中 IA 期患者 77 例，IB 期患者 3 例，IC 期患者 37 例；上皮性癌患者 52 例，生殖细胞肿瘤患者 25 例，性索间质肿瘤患者 40 例。使用 SPSS 21.0 统计软件对病例资料进行统计学分析。**结果** 经再分期手术后，上皮性癌中 19 例有阳性发现（指有肿瘤残存），再分期手术获益者占比 36.54%。生殖细胞肿瘤中 6 例有阳性发现，再分期手术获益者占比 24.00%。性索间质肿瘤中 3 例有阳性发现，再分期手术获益者占比 7.50%。 早期的上皮性癌、恶性生殖细胞肿瘤和性索间质肿瘤行再分期手术后，获益情况存在明显差异,上皮性癌的再分期获益率高于恶性生殖细胞肿瘤和性索间质肿瘤，上皮性癌与性索间质肿瘤之间的差异显著且具有统计学意义，两次手术间隔平均时间为 25.22 天（4-157 天）。出血是再分期手术主要的并发症，平均出血量为 81.28ml（5-500ml）。**结论** 对于早期未行全面分期手术的上皮性癌患者术后有必要行再分期手术，首次手术剥除肿瘤或切除附件的性索间质肿瘤可以不行再分期手术。

PO-302
探讨孕前经腹腔镜下宫颈内口环扎的治疗效果及临床应用

郭瑞霞,李思雨
郑州大学第一附属医院

[摘要]目的 分析孕前经腹腔镜下宫颈内口环扎与孕期经阴道宫颈内口环扎术的治疗效果及对妊娠结局的影响，探讨孕期腹腔镜下宫颈内口环扎的临床应用。方法 对郑州大学第一附属医院 102 例宫颈内口机能不全患者的临床资料进行回顾性分析，根据患者所接受的不同手术方式及治疗时机，将其分为两组，其中研究组（孕前接受经腹腔镜下宫颈内口环扎术）24 例，对照组（孕期接受经阴道宫颈内口环扎术）78 例，比较两组患者的治疗效果。 结果 研究组手术时间及术中出血量与对照组比较，差异无统计学意义（P>0.05）；且两组术后流产率、早产率、足月分娩率、新生儿存活率等方面比较差异无统计学意义（P>0.05）； 结论 孕前经腹腔镜下宫颈内口环扎与孕期经阴道宫颈内口环扎两种治疗方式效果均肯定，可有效延长宫颈机能不全患者孕周，改善分娩结局，而既往有孕期经阴道环扎失败史的患者，可以优先选择孕前行腹腔镜下宫颈环扎的治疗手段，以提高妊娠成功率。

PO-303
Identification Of Distinct Molecular Subtypes Of Endometrial Carcinoma

Jia Lei[1],Ruixia Guo[1],Jia Lei[1],Ruixia Guo
1.The first affilitated hospital of Zhengzhou university
2.The first affilitated hospital of Zhengzhou university

Endometrial carcinoma（EC）is one of the most common gynecological cancer for women around the worldwide. Endometrioid adenocarcinoma (EAC) is the major form of endometrial carcinoma which accounts for 75–80% of cases. By now, no molecular classification of EAC has been defined to apply in targeted treatments. In this study, we identified two distinct molecular subtypes of EAC with distinct gene expression patterns and clinic pathologic characteristics. Subtype I EAC accounts for the majority of endometrial cancer and recapitulates Type I EAC, in contrast subtype II EAC represents high grade EAC with higher tumor invasion rate and tumor weight. In addition, subtype I EAC is characterized by immune response, cell motion, and cell motility, whereas over-expressed genes in subtype II EAC are more involved in d cell cycle, cell cycle phase , DNA replication, and RNA processing. At last, we also found three certain potential subtype specific therapeutic targets, such as MDM2 (MDM2 proto-oncogene) for subtype I and MSH2 (mutS homolog 2), MSH6(mutS homolog 6) for subtype II. Our

results reveals a well identification for EAC molecular subtypes and subtype specific ontogenesis mechanisms, which would be benefit to discovery more specific targeted therapies options for these tumors.

PO-304

Detection of Human Cytomegalovirus in Patients with Epithelial Ovarian Cancer and its Impacts on Survival

Min Yin
Peking Union Medical College Hospital

Abstract
Background: The cause of epithelial ovarian cancer(EOC) is not elucidated. Viral infection may induce chronic inflammatory infection and play a role in the pathogenesis of cancers. Some viruses are considered to be oncomodulatory, modulating cellular pathways such as cell proliferation, tumor progression, vascular disease development, and immune evasion. Human cytomegalovirus (HCMV) has been detected in several types of cancers including ovarian cancer. However, the role of HCMV in ovarian carcinogenesis remains controversial.
Objective: To investigate the potential role of HCMV infection in EOC, we evaluated the prevalence of HCMV proteins in EOC tissue and its impacts on patients' survival.
Methods: Formalin-fixed paraffin-embedded tissues from 66 patients with EOC and 30 patients with benign ovarian cystadenoma were studied. Specimens were analyzed for expression of HCMV immediate early protein (IE) and HCMV tegument protein (pp65) by immunohistochemistry.
Results: HCMV-IE protein expression was detected in 82% of EOC and 36% of benign tumors; pp65 was detected in 97% of EOC and 63% of benign tumors. Extensive HCMV-IE protein expression was associated with higher stage of EOC. Reactivation of latent HCMV within the tumor at interval debulking surgery may be induced by neoadjuvant chemotherapy before surgery. Extensive HCMV-IE expression was associated with shorter median overall survival than focal or negative expression (39 versus 41 months, P=0.03). Multivariate analysis indicated that HCMV-IE expression was an independent prognostic factor for overall survival (P = 0.034).
Conclusions: This study demonstrate a high prevalence of HCMV proteins in tissue sections from patients with EOC. HCMV infection can be potential risk factor for EOC development. Extensive HCMV-IE expression indicated a poor prognosis. The relationship between HCMV and clinical outcomes highlight the need for further researches on the oncomodulatory role of HCMV in ovarian cancer.

PO-305

三种手术方式对子宫肌瘤患者卵巢功能的影响

王凯丽,郭瑞霞
郑州大学第一附属医院

目的：本文旨在探讨子宫肌瘤剔除术、全子宫切除术、全子宫切除术+双侧输卵管切除术三种手术方式对卵巢功能的影响；以及子宫切除术中同时切除双侧输卵管是否加重对卵巢功能的影响。
方法：选取 2015 年 10 月-2016 年 10 月在郑州大学第一附属医院妇科行腹腔镜手术治疗的子宫肌瘤患者共 120 例，年龄 40-45 岁。依据不同手术方式分为三组：实验组 A（全子宫切除术）、实验组 B（全子宫切除术+双侧输卵管切除术）和观察组（子宫肌瘤剔除术）各 40 例。收集三组患者术前与术后 3 个月、6 个月的血清雌二醇（E2）、促黄体生成素（LH）、促卵泡生成素（FSH）、抗苗勒氏管激素

(AMH)及女性绝经期自测表（Kupperman 改良评分）数值，采用 SPSS21.0 软件系统进行统计分析，定性资料比较应用 χ2 检验，定量资料组间比较应用 t 检验，并以 P＜0.05 为差异具有统计学意义。
结果：（1）三组患者术前 FSH、LH、E2、AMH 水平比较，差异均无统计学意义(P＞0.05)；与术前比较，实验组 A 与实验组 B 的 FSH、LH 水平均显著升高，E2、AMH 水平均显著下降，差异有统计学意义（P＜0.05）；观察组 FSH、LH、E2、AMH 水平术后 3 个月、6 个月与术前比较均无显著变化（P＞0.05）；实验组 A 与实验组 B 两组间 FSH、LH、E2、AMH 术后各时间点比较，无明显差异（P＞0.05）；.术后 6 个月实验组 A、实验组 B 分别与观察组比较，各激素水平均有显著差异（P＜0.05）。术后 6 个月，实验组 A 与实验组 B 的 FSH、LH 水平与术后 3 个月比较升高，E2、AMH 水平下降，但差异均无统计学意义（P＞0.05）。（2）三组患者术前改良 Kupperman 评分无明显差异；术后 6 个月时实验组 A 共有 6 例(15%)出现围绝经期症状，实验组 B 共有 7 例(17.5%)，组间比较无明显差异（P＞0.05）；实验组 A、B 术后 3 个月、术后 6 个月均较术前升高，差异有统计学意义（P＜0.05）；两组间术后各时间点比较，差异无统计学意义（P＞0.05）；术后 6 个月实验组 A、实验组 B 分别与观察组比较，差异有统计学意义（P＜0.05）。
结论：1.全子宫切除术和全子宫+双侧输卵管切除术两种手术方式短期内均可影响卵巢功能；而子宫肌瘤剔除术对卵巢功能未产生明显影响。2.相比于全子宫切除术，行全子宫+双侧输卵管切除短期内不加重对卵巢功能的影响。

PO-306

Study on the ability of 3D gamma analysis and bio-mathematical model in detecting dose changes caused by dose-calculation-grid-size (DCGS)

柏晗
云南省肿瘤医院（昆明医科大学第三附属医院）

Objective: To explore the efficacy and sensitivity of 3D gamma analysis and bio-mathematical model for cervical cancer in detecting dose changes caused by dose-calculation-grid-size (DCGS).
Methods: 17 patients' plans for cervical cancer were enrolled (Pinnacle TPS，VMAT). The dose distribution calculated by DCGS = 2.0mm as the "reference" data set (RDS), the dose distribution calculated by the rest DCGS as the"measurement"data set (MDS), the 3D gamma passing rates and the (N)TCPs of the all structures under different DCGS were obtained, and then analyze the ability of 3D gamma analysis and (N)TCP model in detecting dose changes and what factors affect this ability.
Results: The effect of DCGS on planned dose was obvious. When the gamma standard was 1.0mm, 1.0% and 10.0%, the difference of the results of the DCGS on dose-effect could be detected by 3D gamma analysis (all p value < 0.05). With the decline of the standard, 3D gamma analysis' ability to detect this difference shows weaker. When the standard was 1.0mm, 3.0% and 10.0%, the p value of > 0.05 accounted for the majority.
Conclusions: The 3D gamma analysis and bio-mathematical model can be used to analyze dose.

PO-307
快速康复外科理念在妇科达芬奇机器人腹腔镜子宫内膜腺癌手术患者中应用的随机对照研究

吴莹,郭瑞霞
郑州大学第一附属医院

目的 分析快速康复外科理念（enhanced recovery after surgery，ERAS）应用于妇科子宫内膜腺癌患者中的疗效及意义。

方法 随机选择 2019 年 1 月至 2019 年 12 月就诊于郑州大学第一附属医院并进行手术治疗的子宫内膜腺癌患者 76 例，使用随机数字表法，将患者分为试验组 38 例和对照组 38 例。试验组围手术期采取快速康复外科管理理念，对照组进行常规围术期管理。对两组手术患者围手术期各项指标及其变化情况进行观察并记录，包括：血清白蛋白（ALB）、前白蛋白（PAB）、皮质醇（Cor）、促肾上腺皮质激素（ACTH）、C 反应蛋白（CRP）、降钙素原（PCT）等，以及手术相关并发症、术后首次排气时间、住院时间、住院花费。

结果 两组患者术后第一天血清中白蛋白（ALB）、前白蛋白（PAB）均较术前有所下降，术后第三天上述值稍升高，但两组间变化幅度差异比较无明显统计学意义 (P＞0.05)；试验组皮质醇（Cor）、促肾上腺皮质激素（ACTH）、C 反应蛋白（CRP）指标术后上升幅度小于对照组，且能在较短时间内恢复至术前状态(P<0.05)；但降钙素原（PCT）比较无明显差异。试验组术后首次肛门排气时间较短、并发症发生率较低、住院花费较低、住院时间短(P<0.05)。

结论 对实施手术治疗的子宫内膜腺癌患者应用快速康复外科管理理念，能显著减轻因手术引发的炎症应激反应程度，并且能使患者更快的恢复术前生理心理状态，从而达到快速康复的目的。

PO-308
Exploration on correlation of high DLX2 expression with poor prognosis and cellular proliferation in epithelial ovarian cancers .

Menghui Huang,Yanli Zheng,Yun Han,Qinhua Xi
Department of Obstetrics and Gynecology， The Second Affiliated Hospital of Nantong University.

It has been found that overexpression of distal-less homeobox 2 (DLX2) is closely correlated with multiple cancers. However, the role of DLX2 in the pathogenesis of ovarian cancers remain unclear. This study aimed to explore the mechanism of action of DLX2 on cellular proliferation and apoptosis in epithelial ovarian cancers (EOCs). A total of 119 EOC tissue samples were analyzed immunohistochemically, and the correlation between DLX2 expression level and clinicopathological characteristics was determined. Moreover, western blot analysis was performed to detect DLX2 protein in EOC sample of different grades and EOC cell lines and explore its molecular mechanism of action. Kaplan-Meier survival analysis revealed that overexpression of DLX2 was obviously correlated with poor prognosis in EOCs (P＜0.01*). In addition, our study indicated that knocking down DLX2 using shRNA-DLX2 reduced the proliferation and enhanced the apoptosis in EOC cells. That is to say, DLX2 might serve as a new prognostic marker and be of great value for molecular targeted therapeutic drugs in EOCs.

PO-309
宫颈癌 PET-MRI 影像学特征和术前诊断中的价值

徐新鑫,曹广旭,陆建桥,雷蕾,牛苏梅,王芳,张建华,赵军,李芳
上海市东方医院（同济大学附属东方医院）

目的：宫颈癌严重危害女性健康且目前尚无可靠的术前精确分期手段。PET-MRI 诊断整合 MRI 对软组织分辨率高和 PET 对于恶性肿瘤显像敏感的优势，可分辨直径 5mm 的微小肿瘤组织和淋巴结转移病灶，使宫颈癌的精确术前分期诊断成为可能。本研究讨论 PET-MRI 在宫颈癌中的影像学特征及其在术前分期中的诊断价值。
方法：对 16 名在我院治疗且术前活检病理明确的宫颈癌/高级别上皮内瘤变（HSIL）患者进行随机分组，平均分为 PET-MRI 组和增强 MRI 组，并对两组患者进行 PET-MRI/增强 MRI 检查。随后对上述患者行手术治疗，采用 2018 年 FIGO 宫颈癌分期，以术后病理诊断作为金标准，对两种影像手段在病变的判读能力进行对比分析和统计。使用费希尔精确检验（Fisher's exact test）进行检验得出结论。此外，对 2 名行 PET-MRI 检查 HSIL 患者的图像特点进行分析。
结果：8 例行 PET-MRI 的患者，病灶均有明显的影像改变，表现为在混合图像的相应解剖部位 FDG 代谢增高，与周围正常组织的边界显示清晰。肿瘤转移淋巴结呈现沿血管分布的高摄取结节影。与患者术后病理对比分析后，8 例患者中 7 例病理诊断与 PET-MRI 诊断完全相符，5 例宫颈癌患者分期分别为 IB 期、IIIC1 期、IIIC1 期、IIIC2 期以及 1 例阴道复发癌，2 例为 HSIL。1 例患者的 PET-MRI 结果与病理结果不完全符合。比较两种影像手段在病变的判读能力：PET-MRI 发现并准确判断了 11 个病变，1 个病变不能判断；增强 MRI 发现并准确判断了 5 个病变，6 个病变不能完全准确判断。Fisher's exact test 检验两者存在统计学差异（p=0.047）。另外，2 例 HSIL 患者在 PET-MRI 图像中可观察到在宫颈管的影像学改变，同时可以观察到其 SUVmax 均低于肿瘤患者。
结论：与增强 MRI 检查相比，PET-MRI 可以分辨微小恶性病变，可作为宫颈癌术前精准分期的检查手段，同时，PET-MRI 还为宫颈病变早期筛查提供了新手段。

PO-310
TGF-β1 诱导肿瘤相关成纤维细胞旁分泌 POSTN 促进卵巢癌侵袭转移的机制研究

岳荟然,李文质,陈瑞芳,王杰玉,鹿欣,李俊
复旦大学附属妇产科医院

研究目的 探究卵巢癌间质中骨膜蛋白 POSTN 在卵巢癌侵袭转移中的作用和机制，及其与预后的关系。
材料与方法 表达检测：免疫组化检测 POSTN 在高级别浆液性卵巢癌（HGSC）组织水平的表达情况，RT-PCR、Western blot、ELISA 检测 POSTN 在细胞水平的表达情况。功能研究：慢病毒载体构建 POSTN 敲减或过表达的稳转细胞株，探究干预 POSTN 表达后肿瘤相关成纤维细胞（CAF）的功能变化。机制研究：通过转录组测序及基因集富集分析，寻找 POSTN 下游靶点和上游调控机制；同时，通过构建间接共培养体系，探究 POSTN 在 CAF-卵巢癌细胞互作过程中的功能。
结果 在卵巢癌患者中，POSTN 高表达与不良预后显著相关。在 HGSC 的间质组织中，POSTN 的表达水平较肿瘤成分显著上调，而 CAF 是 POSTN 表达的主要来源。CAF 旁分泌的 POSTN 可通过与卵巢癌细胞表面的整合素 αvβ3 结合，激活 PI3K/Akt 通路，进而促进上皮-间质转化过程，并增强卵巢癌细胞的体外迁移侵袭能力。与此同时，卵巢癌间质中 POSTN 表达上调主要与 CAF 活化过程有关，且该过程受 TGF-β1 调控。

结论 CAF 在 TGF-β1 的诱导下获得活化表型并上调 POSTN 表达，参与卵巢癌微环境的重塑过程，最终促进了卵巢癌细胞的侵袭转移。POSTN 作为卵巢癌侵袭转移和恶性进展相关的关键分子，其临床转化意义值得进一步探索。

PO-311

石河子地区 1080 例 TCT 和 HPV 双筛异常阴道镜活检患者宫颈病变特点

阮阳阳,杨萍
石河子大学医学院第一附属医院

【摘要】目的 探讨近两年新疆石河子地区宫颈病变特点，为临床工作和当地宫颈癌筛查提供指导。方法 收集 2017 年 5 月～2019 年 3 月在石河子大学医学院第一附属医院妇科门诊人乳头瘤病毒（human papilloma virus，HPV）和子宫颈脱落细胞检查（Thinprep Cytologic Test，TCT）双筛异常行阴道镜子宫颈组织活检的 1080 例患者的临床病理资料并分析其特点。**结果** ①1080 例患者 HPV 阳性 1064 例（98.52%），其中 HPV16 阳性 302 例（28.38%），HPV18 阳性 34 例（3.20%），HPV16 和 18 型双阳性 13 例（1.22%），其他亚型阳性 715 例（67.20%）；阴性 16 例（1.48%）；检出子宫颈上皮内瘤变（cervical intraepithelial neoplasias，CIN）522 例（48.33%），子宫颈癌 29 例（2.69%）。②CIN 在 30～39 岁组检出率最高（57.54%），子宫颈癌在≥60 岁组检出率最高（14.15%），其次是 40～49 岁年龄组（2.20%）。③40～49 岁年龄组高危 HPV 阳性率和 HPV16/18 阳性率均最高，分别是 33.18%和 39.38%。不同年龄组间 HPV 病毒载量无显著统计学差异（P＞0.05）。④ HPV16/18 阳性组 CIN3 和子宫颈癌的检出率均高于 HPV 其他亚型阳性 TCT≥ASC-US 组（18.34% vs 11.33%，4.30% vs 1.82%），P 值分别为 0.002 和 0.018。高载量组≥CIN2 的检出率（28.44%）高于中载量组（25.32%）和低载量组（15.79%）。⑤HPV 阳性 TCT 为 ASC-US 和 LSIL 人群中，HPV16/18 阳性组 CIN3 的检出率显著高于 HPV 其它亚型阳性组（ASC-US：21.43% vs 8.33%，LSIL：18.00% vs 7.04%），P 值分别为 0.005 和 0.001。**结论** 石河子地区 CIN 和宫颈癌变者与高危型 HPV 感染密切相关，尤其是 HPV16 感染。HPV 阳性年龄主要集中在 40～49 岁年龄组，CIN 和宫颈癌分别在 30～39 岁和≥60 岁年龄组检出率最高。HPV16/18 分型和高病毒载量人群 CIN2+检出率高于 HPV 其他亚型阳性和中低载量人群。如何有效分流 HPV 阳性 TCT 是 ASC-US 或 LSIL 人群有待于进一步研究。

PO-312

血清人附睾蛋白 4、糖链多肽抗原 125 与卵巢恶性肿瘤风险模型预测子宫内膜癌淋巴结转移的价值研究

王安娜,龙再秋
辽宁省肿瘤医院

摘要:目的 评价 HE4、CA125、ROMA 值预测子宫内膜癌淋巴结转移的价值。**方法** 回顾性选取 2016 年 1 月 1 日至 2020 年 1 月 1 日在辽宁省肿瘤医院因子宫内膜癌手术的 326 例患者为研究组，同期就诊体检中心的 163 例正常人群为对照组，评价 HE4、CA125 和 ROMA 值预测淋巴结转移的价值。**结果** 研究组与对照组比较 HE4、CA125、ROMA 值差异均具有统计学意义（P＜0.05）；无论绝经前后 CA125、ROMA 值均与淋巴结转移相关， HE4 与绝经前组淋巴结转移相关，HE4、CA125、ROMA 值淋巴结阳性组均高于淋巴结阴性组；绝经前 CA125≥69.45 KU/L，绝经后 CA125≥21.45 KU/L 为淋巴结转移的独立危险因素； CA125 预测淋巴结转移的绝经前、后的 ROC 曲线下面积分别为 0.810、0.671；

HE4、CA125、ROMA 值评估淋巴结转移的阴性预测值大于 90%。**结论** HE4、CA125、ROMA 值均可准确评估子宫内膜癌及淋巴结转移情况。CA125 比 HE4、ROMA 值评估淋巴结转移的准确性高。

PO-313
The diagnostic value of serum HE4 and CA125 together with enhanced CT in the evaluation of lymph node metastasis of endometrial cancer

Anna Wang,Danbo Wang
Department of gynaecology，Liaoning Cancer Hospital＆Institute

Purpose: To analyze the functional effects of HE4 and CA125 on lymph node metastasis of endometrial cancer, and to evaluate the diagnostic value of HE4 and CA125 together with enhanced CT in predicting lymph node metastasis. Methods: From January 2016 to December 2019, 326 patients with endometrial cancer surgery (experimental group) and 98 normal people (control group) were selected. A retrospective analysis was performed to compare the diagnostic efficacy of lymph node metastasis predicted by HE4 and CA125 together with enhanced CT. Results: We found statistically significant differences in HE4 and CA125 between the experimental group and the control group, and between the lymph node positive group and the negative group (P <0.001). The area under the HE4 curve was 0.73 (P = 0.001) and 0.578 (P = 0.164), respectively, and the area under the CA125 curve was 0.81 (P <0.001) and 0.671 (P = 0.002), respectively, in the premenopausal and postmenopausal groups for the diagnosis of lymph node metastasis. Regarding prediction of lymph node metastasis, the cutoff concentrations of HE4 and CA125 were 52.95 pmol/l and 69.45 U/ml, respectively, in the premenopausal group, and 69.15 pmol/l and 21.45 U/ml, respectively, in the postmenopausal group. The combination of enhanced CT with the results of parallel experimental sensitivity and negative predicted value, or with the results of tandem experimental specificity and positive predicted value, had better diagnostic performance than the single tests. Conclusions: Enhanced CT in combination with serum HE4 and CA125 improves the diagnostic efficacy in predicting lymph node metastasis.

PO-314
Clinicopathological characteristics and prognostic factors of primary small ovarian cancer

Anna Wang,Zaiqiu Long
Department of gynaecology，Liaoning Cancer Hospital＆Institute

Purpose:To explore the differences between primary small ovarian cancer (PSOC) and enlarged ovarian cancer with regard to clinicopathological features and prognostic factors.
Methods: We retrospectively compared with PSOC (experimental group) and enlarged ovarian cancer (control group) in Cancer Hospital of China Medical University between 2007 and 2014.
Results: PSOC accounted for 7.2% of all patients with ovarian cancer in our hospital between 2007 and 2014. The mean age of patients with PSOC was significantly higher than those control group (58 vs 54 years). Furthermore, the group of patients with PSOC had a significantly higher proportion of FIGO Ⅲ and Ⅳ cases than the control group (98.8% vs 85.9%; P = 0.003). The ratio of surgery results for ＜ R1 were 76.5% and 57.7%, P = 0.004. Residual areas were widely distributed. The median overall survival time (OS) for patients with PSOC and those with control group was 40 months and 47 months (P <0.001), while the progression-free survival (PFS) was 19 months and 26 months (P <0.001).

Multivariate Cox regression analysis indicated that ovarian size was an independent risk factor for both PFS and OS, while residual tumor size was an independent risk factor for PFS.
Conclusion: PSOC has a low incidence, a wide range of lesions, and a poor prognosis.

PO-315
基于外科乳胶手套的密闭旋切袋在妇科腹腔镜子宫肌瘤剔除术中的无瘤应用研究

朱亚飞,谢晓英,胡新平,陈洁
赣南医学院第一附属医院

目的：探讨自制外科乳胶手套密闭旋切袋在妇科腹腔镜子宫肌瘤剔除术中无瘤操作的应用价值。
方法：选择 2019 年 10 月至 2020 年 7 月住院的妇科腹腔镜子宫肌瘤剔除手术患者 60 例为研究对象，应用自制外科乳胶手套密闭旋切袋（手套袋组）进行旋切，对照组 60 例，使用康基商品化密闭旋切袋（商品袋组）。比较各种有效性、风险、成本效益等指标。
结果：手术均在腹腔镜下顺利完成，未出现术中意外损伤等并发症。各指标在手套袋组和商品袋组分别为，旋切时间(5.45±1.21) 和(5.13±0.99) min。两组组均一次性顺利旋切取出标本，且取出过程及术后均无并发症。两组术后腹腔冲洗液细胞学检查均未见梭形平滑肌细胞。成本分析，手套袋组整体医疗费用、耗材费用比降低、手术费/耗材费用比提高。
结论：妇科腹腔镜子宫肌瘤剔除术使用自制外科乳胶手套密闭旋切袋，与商品化旋切袋（商业袋）相比，在安全性、有效性方面，均无明显差异。但降低医疗费用和耗材费用比例，适合基层医院使用。在目前医疗改革要求限耗(材)，降费（用）的形势下，有着较特殊的实用意义。

PO-316
胸腹部恶性肿瘤精确放疗中多媒体信息技术的应用

惠华,王强
徐州市肿瘤医院（徐州市第三人民医院）

目的 《放射治疗质量控制基本指南》（NCC/T-RT 001-2017）明确鼓励采取各种信息化手段提高患者教育效果。本文探讨应用多媒体信息技术对胸腹部恶性肿瘤精确放疗患者施行宣教的作用。**方法** 选取 2018-2020 年胸腹部恶性肿瘤患者 96 例，其中食管癌 44 例、肺癌 30 例、直肠癌 12 例、宫颈癌 10 例，随机均分为 A、B 两组，同一固定装置、治疗师，分别应用多媒体信息技术与常规方法施行医学科普、医患沟通、患者个体化教育等宣教后放疗定位、摆位。调查治疗依从性、分析摆位误差、记录定位与摆位占机时间。多媒体患者宣教内容包括放疗的概念、流程；心理辅导、饮食营养；身体及着衣准备；拟用定位体位及体位固定装置；放疗反应等。由医护技人员实地演示、操作、讲解及三维动漫形成的语言、文字、图片、音频、视频等多种媒体，通过创立的放疗科普网站，病房、病区走廊、放疗大厅网络电视循环动态播放、宣传栏静态展示，患者和陪人手机微信或微信群等网络传播信息技术，突破时空限制进行医患互动，发挥集声音、图像、动画、影像于一体的多媒体演示功能，将抽象的放疗医嘱具体化、生动化、形象化，刺激患者各种感官，进行有计划、有目的的放疗医学科普、医患沟通、个体化教育，帮助患者了解病情、饮食营养，增强自我护理意识，减轻甚或消除抑郁、焦虑等不良情绪，直观地理解和执行医嘱，配合放疗，避免一些主观因素和严重并发症而中断放疗。从而改进重治疗、药物、身体而轻护理、营养、心理的传统肿瘤放疗模式，由单纯被动接受放疗摆位转换为患者主动配合放疗摆位。 **结果** 治疗依从性 A 组 93.8%高于 B 组 70.8%，P<0.05；中断放疗率 A 组 0 低于 B 组 12.5%，P<0.05。三维摆位误差：A、B 两组 x 轴向分别是（1.79±1.48）mm 和（1.91±1.42）

mm，P>0.05；y 轴向分别是（2.53±1.78）mm 和（3.19±2.15）mm，P＜0.05；z 轴向分别是（2.12±1.55）mm 和（3.15±1.98）mm，P＜0.05。定位占机时间 A 组（140.62±27.39）″低于 B 组（243.55±53.15）″，P<0.05；摆位占机时间 A 组（113.28±20.56）″低于 B 组（168.75±26.67）″，P<0.05。**结论** 胸腹部恶性肿瘤精确放疗中应用多媒体信息技术施行宣教，可显著增加患者依从性，放疗计划完成顺利，降低摆位误差，缩短定位与摆位占机时间。

PO-317
不同营养风险筛查方法在妇科恶性肿瘤中的应用比较

徐娟,李利
河北医科大学第四医院

目的：应用营养风险筛查 2002 (NRS 2002)和患者主观全面评价法(PG-SGA)，调查河北医科大学第四医院妇科恶性肿瘤患者营养风险发生率，筛选出适合妇科恶性肿瘤患者的营养风险筛查方法。
方法：选取河北医科大学第四医院妇科住院恶性肿瘤患者 212 例作为研究对象，分别完成 NRS 2002 和 PG-SGA 筛查，记录术前营养筛查结果和术后并发症的发生情况及临床结局等，比较 2 种筛查工具在调查结果上的差异。
结果：
1. 212 例妇科恶性肿瘤住院手术患者完成调查。其中卵巢癌、宫颈癌、子宫内膜癌分别为 76、72、64 例。经 NRS2002 和 PG-SGA 筛查营养风险发生率分别为 28.30%、38.21%。
2.卵巢癌营养风险发生率明显高于其他两种类型肿瘤，老年患者营养风险发生率明显高于中青年患者，且分期越晚，营养风险发生率越高。
3. 营养风险组患者的术后并发症发生率高于无营养风险组，且差异有统计学意义（P＜0.05）。PG-SGA 的阳性诊断率、灵敏度、约登指数和曲线下面积（AUC）均高于 NRS2002。
4.存在营养风险患者的 ALB、PA，均低于营养正常组患者，差异有统计学意义。且营养风险组的手术时间、术后首次排气时间、进食时间及住院时间长于营养正常组。术中出血量、住院花费多于营养正常组。
结论：
1.采用 NRS2002 和 PG-SGA 筛查，妇科恶性肿瘤患者营养风险的发生率分别为 28.30%、38.21%。卵巢癌的营养风险发生率最高（48.68%, 63.16%）。且年龄越大，分期越晚，营养风险发生率越高。
2. 有营养风险的患者术后恢复慢，住院时间延长、花费多。营养风险筛查是必要的。
3. 与 NRS2002 相比，PG-SGA 的检出率、灵敏度以及在预测术后并发症的价值上更好，推荐为妇科恶性肿瘤围手术期营养风险筛查工具。

PO-318
Ovarian fibrosarcoma: Experience of single institution and review of literature

Tingting Sun,Ninghai Chen,Dongyan Cao,Peng Peng
Department of Obstetrics and Gynecology， Peking Union Medical College Hospital， Chinese Academy of Medical Sciences

[Objective]Ovarian fibrosarcoma is an extremely rare and malignant sex-cord stromal tumor.Till now very few cases have been reported and most of them are sporadic. The treatments and prognostic factors of ovarian fibrosarcoma are still under discussion. **[Methods]**We report 5 cases of ovarian

fibrosarcoma in Peking Union Medical College Hospital during the past 20 years. **[Results]**The 5 patients were 41, 51, 54, 76, 76 years old with initial symptoms of pelvic mass or pain. Manifestations on ultrasound are usually as unilateral pelvic masses, within which are uneven echo enhancement and some blood flow signals. There was no significant increase in preoperative tumor markers such as serum CA125 and sex hormones. Final diagnosis depends on postoperative histopathological results since these tumors were easily misdiagnosed by intraoperative frozen sections. Pathological examinations showed the tumor cells were spindle shaped with moderate to severe atypia and high mitotic counts. Immunohistochemistry is not specific but the positive rate of Ki-67 was consistent with the degree of malignancy and prognosis of the tumor. In addition, Vimentin, α-inhibin, SMA, estrogen receptor and progesterone receptor could also be positive. There were significant differences in surgical methods and there is also no unified chemotherapy. The overall survival was >15, >7, >6, <1, <1 year for each patient. **[Conclusions]**After reviewing the literature, there is a lack of evidence-based large-scale case study. As for treatments, complete cytoreductive surgery plus regimens of malignant cord stromal tumors are recommended. Due to its low incidence, multi-center clinical studies and molecular studies are required to give gynecologists a better understanding and guidance for future managements of ovarian fibrosarcoma.

PO-319
利用 miRNA 芯片分析宫颈鳞癌 TC 方案新辅助化疗敏感性相关的 miRNA

王毅军,赵玲军
宁波市妇女儿童医院宁波市红十字医院

摘要 目的：运用 miRNA 芯片筛选紫杉醇联合卡铂（TC）方案新辅助化疗敏感的和耐药的宫颈鳞癌组织中差异表达的 miRNA，筛选可以用于评估化疗疗效的分子标记物。方法：利用华联生物科技公司 miRNA OneArray™ 芯片对 4 例 TC 方案新辅助化疗敏感的宫颈鳞癌患者及 3 例耐药患者的肿瘤组织行差异 miRNA 的筛选，用 IPA（Ingenuity Pathway Analysis）软件分析其相关的靶基因，构建 microRNA-基因网络图。结果：TC 方案新辅助化疗敏感的和耐药的宫颈鳞癌组织中差异表达的 miRNA 有 14 个，其中 12 个在新辅助化疗耐药组中出现上调，2 个出现下调。运用 IPA 软件分析 miRNA 芯片结果，12 个上调 miRNA 和 2 个下调 miRNA 可能的靶基因，构建其潜在的调控网络，试图找到宫颈鳞癌新辅助化疗耐药相关的分子标志物及可能的分子生物学机制。结论：通过 miRNA 芯片筛选出宫颈癌新辅助化疗敏感组和耐药组中差异表达的 miRNA，对其中明显差异表达的 miRNA 及其靶基因的深入研究，可作为宫颈癌新辅助化疗疗效评估的预测指标，并为进一步研究宫颈鳞状细胞癌对新辅助化疗敏感性奠定分子生物学基础。

PO-320
VEIL-L,VEIL-H and OIL for long-term survival outcomes of vulvar cancer: A retrospective multicenter cohort study

Liqing He,Yifeng Wang
Zhujiang Hospital， Southern Medical University

Objective：To compare the complications and oncological outcomes between video endoscopic inguinal lymphadenectomy(VEIL) and open inguinal lymphadenectomy (OIL) in women with vulvar squamous cell carcinoma(VSCC).

Patients and methods：A retrospectively collected institutional database were used to determine the outcomes in 82 eligible VSCC patients undergoing IL between January 2010 and May 2019 in 20 centres . According to different surgical procedure used to perform the IL, patients were divided into three groups including VEIL with the limb subcutaneous surgical approach (VEIL-L, 34 patients), hypogastric subcutaneous approach (VEIL-H, 24patients), and open inguinal lymphadenectomy (OIL, 24patients). The surgical procedure-related index and wound-related complications, length of stay, and oncological outcome between these three groups were compared.The mean duration of follow-up was 48.42±31.80 months,VEIL-L：29.88±16.53 months,VEIL-H：58.75 ±31.90months, respectively.

Result：There were no statistical differences in demographics (age, body mass index, parity,grade). But there is significantly more patients in FIGO stage (Ⅲ～Ⅳ) in the VEIL-L group than in VEIL-H group or in OIL group. The intraoperative blood loss of VEIL (including VEIL-L group and VEIL-H group) was less than that of OIL group, and the postoperative hospital stay was shorter than that of OIL group. The postoperative wound complications of VEIL-L are mainly inguinal lymphatic cysts, while poor wound healing for OIL. The overall inguinal recurrence rate of VEIL-L group was significantly higher than that of VEIL-H group and OIL group. However, after subgroup analysis, there was no statistically significant difference in inguinal lymph node recurrence between the three groups of I-II and III-IV. Neither in the recurrence rate of perineal wounds, total mortality, and disease-free survival among the three groups.

Conclusion：The VEIL has the comparable long-term oncologic outcome as the OIL and lower rate of morbidy and shorter hospital stay than OIL in the short term.

PO-321

上皮性卵巢癌术前深静脉血栓形成情况的调查

张春丽
河北医科大学第四医院

目的：对上皮性卵巢癌（Epithelial ovarian cancer，EOC）治疗前合并深静脉血栓形成（DVT）的危险因素以及患者生存情况进行分析。

方法：

1.研究对象：2016 年 8 月至 2019 年 8 月河北医科大学第四医院收治的术前发生 DVT 的 EOC 患者作为病例组。在未发生 DVT 的 EOC 癌患者中，使用 SPSS 26.0 按照 1:2 将对照组按照年龄±3 岁，肿瘤分期相同与病例组进行匹配。

2.数据分析：采用条件 Logistic 回归分析对数据进行单因素和多因素分析。Kaplan-Meier 生存曲线对无进展生存期（Progression free survival，PFS）进行评估，使用 log rank 分析对生存曲线差异性进行检验。

结果：

1.EOC、子宫内膜癌、宫颈癌术前合并 DVT 的发生率分别为 4.7%、0.93%、0.28%。经比较，EOC 术前 DVT 的发生率明显高于子宫内膜癌或宫颈癌（c^2=57.640，P ＜ 0.001），子宫内膜癌与宫颈癌患者术前 DVT 的发生率无差异。

2.病例组中，仅 3 例（9.7%）出现临床症状，沉默性血栓形成是 EOC 术前 DVT 的主要形式。

3.病例组患者中，有 11 名患者行新辅助化疗并同时行抗凝治疗，5 名患者置入 IVCF，其余 15 例经评估下肢肌间静脉血栓不易脱落，完善术前检查及准备后行手术。

4.单因素分析发现 EOC 患者术前合并 DVT 与体重指数（Bodymassindex，BMI）、D-二聚体（D-dimer，D-D）、糖类抗原 125（Carbohydrate antigen 125，CA125）、纤维蛋白原（Fibrinogen，FIB）、大量腹水明显相关（P ＜ 0.05）。

5.多因素分析发现 BMI≥25kg/m^2，D-D≥1.5ug/ml 是 EOC 患者术前发生 DVT 的独立危险因素。

6.术前合并 DVT 的 EOC 患者 PFS 明显低于未发生 DVT 的患者（c^2=5.933，P=0.015）。

结论:
1.EOC 术前合并 DVT 的发生率为 4.6%，高于子宫内膜癌患者（0.92%）和宫颈癌患者（0.28%）。
2.术前 BMI≥25kg/m^2、D-D≥1.5ug/ml 是上皮性卵巢癌术前 DVT 发生的独立危险因素。
3.治疗前发生 DVT 的 EOC 患者较未发生 DVT 的患者预后更差。
4.确诊术前 DVT 的患者应给予积极抗凝治疗，必要时置入下腔静脉滤器，合理选择治疗方式和时机，以降低术后发生肺栓塞的风险。

PO-322
Analysis of pregnancy-associated factors after fertility-sparing therapy in young women with early stage endometrial cancer or atypical endometrial hyperplasia.

Yuan Fan[1],Xingchen Li[1],Li Tian[2],Jianliu Wang[1]
1.Department of Obstetrics and Gynecology， Peking University People's Hospital
2.Reproductive Medical Center， Peking University People's Hospital

Objective: Fertility-sparing therapy is an alternative conservative treatment for patients with early stage endometrioid cancer or atypical endometrial hyperplasia. In this study, we investigated pregnancy outcomes and pregnancy-associated factors in young patients.
Methods: We retrospectively analyzed 120 patients and divided them into a pregnancy group and a non-pregnancy group. A Cox proportional hazard regression model was applied for univariate and multivariate analysis to determine factors associated with pregnancy. Kaplan–Meier analysis was used to calculate a patient's pregnancy probability and the distribution of recurrence-free survival (RFS).
Results: A total of 36 patients became pregnant with 47 pregnancies. Univariate and multivariate Cox analysis revealed that several factors were associated with pregnancy, including BMI at the time of pregnancy permission, the time to complete remission (CR), prolonged treatment time, the number of hysteroscopy procedures, the endometrium thickness after CR, and relapse before pregnancy. The mean RFS of patients who achieved pregnancy, and those who did not, was 27.6 months and 14.8 months, respectively (P=0.002). No significant difference was detected in terms of cumulative RFS when compared between assisted reproductive technology (ART) cases and those involving natural conception (NC) (P=0.707).
Conclusions: Normal BMI, a shorter time to complete remission, a prolonged three-month treatment, fewer hysteroscopy procedures, and a thicker endometrium may be positive indicators for successful pregnancies, while relapse before pregnancy may have a negative effect on conception. Moreover, a successful pregnancy protect the endometrium while ART does not increase the risk of recurrence.

PO-323
宫颈癌 IA2 期围手术期临床病理参数对手术方式的分析探讨

蔡卉苒,邢燕,房园园,谢满鑫,王聪
江苏省人民医院（南京医科大学第一附属医院）

目的：回顾性分析宫颈癌 IA2 期患者围手术期临床病理参数及预后，探讨广泛性子宫切除术及盆腔淋巴结清扫对于宫颈癌 IA2 期患者的获益及风险。方法：收集南京医科大学第一附属医院 2015 年 01 月-2019 年 09 月收治的 22 例 IA2 期宫颈癌患者的资料，对患者术中、术后并发症、术后病理参数（宫旁受累情况、脉管浸润情况、淋巴结转移情况），以及预后等临床指标进行综合评估。结果：符合研究标准的 19 例患者中，1 例（5.26%）行扩大子宫切除术，3 例（15.79%）行次广泛性子宫切除术，15

例（78.95%）行广泛性子宫切除术。17 例（89.47%）同时行盆腔淋巴结清扫，1 例（5.26%）同时行盆腔淋巴结清扫及腹主动脉旁淋巴结清扫。并发症：术中大出血（≥500ml）为 7 例（36.84%），术中输尿管支架置入为 2 例（10.53%），术后 3 周内高热（≥39.1℃）为 1 例（5.26%），淋巴囊肿为 2 例（10.53%），水肿（眼睑或下肢）为 2 例（10.53%），下肢血栓形成 1 例（5.26%），恶心（伴或不伴呕吐）为 2 例（10.53%），腹股沟淋巴结肿大为 1 例（5.26%），部分性肠梗阻为 1 例（5.26%），膀胱功能障碍 3 例（15.79%），术后 2 年内下肢麻木感为 2 例（10.53%）。术后病理参数：1 例（5.26%）为腺鳞癌（以腺癌为主），14 例（73.68%）为鳞状细胞癌，4 例（21.05%）为腺癌。宫旁受累阳性 0 例（0%），脉管浸润（淋巴血管侵犯）阳性 0 例（0%），淋巴结转移 0 例（0%）。19 例宫颈癌 IA2 期患者，随访期内无一例死亡，1 例复发(5.26%)。结论：宫颈癌 IA2 期根治性手术目前作为首选治疗方式，但该手术范围大，创伤及围手术期并发症也不容忽视，分析相关临床及病理参数，对于探讨宫颈癌 IA2 期的手术范围提供了有意义的临床数据。

PO-324

Bibliometrics and visualization analysis of enhanced recovery after surgery in gynecology in China.

Wenwen Wang,Pengran Wang,Ruixia Guo
The First Affiliated Hospital of Zhengzhou University

Objective : To analyze the application status of enhanced recovery after surgery in the field of gynecology in China, and provide reference for clinicians and researchers. **Methods:** Using CNKI and Wanfang Database as search tools, we searched the literature related to enhanced recovery after surgery in the field of gynecology in China, and carried out bibliometric analysis and visual analysis of the literature. **Results:** A total of 281 articles were included in this study, the number of publications of enhanced recovery after surgery in gynecology is gradually increasing, but the regional development is not balanced. The core author group has not been formed, and the degree of cooperation, the co-writing rate is not high. "Laparoscopy", "nursing", and "anaesthesia analgesia" are current research hotspots. **Conclusion:** Enhanced recovery after surgery is in a period of rapid development in the field of gynecology, and has achieved certain achievements. There is still a lack of large-sample, multi-center, prospective randomized controlled studies. In the follow-up research, the depth and breadth of research need to be deepened to help clinicians formulate standardization of enhanced recovery after surgery in gynecology, and promote the application and development of enhanced recovery after surgery in the field of gynecology.

PO-325

PIGR 在卵巢癌中的表达情况及对预后的影响

乔龙,郭瑞霞
郑州大学第一附属医院

目的：PIGR 全称是多聚免疫球蛋白受体，是黏膜免疫的重要组成部分，同时在很多肿瘤中也认为是影响预后的一个因素。曾经有研究表明，PIGR 的低表达使食管癌和胃癌的侵袭能力提高，我们的目的是在细胞系和组织切片水平上检测 PIGR 在卵巢癌中的表达情况，并进行与临床病理的联系和预后分析。方法：Western blot（蛋白免疫印迹技术）检测 PIGR 在正常卵巢上皮细胞系 OSE 和卵巢癌细胞系 OV2008、SKOV-3、OVCAR-3 的表达水平，并通过 RT-PCR（实时定量 PCR）检测各个细胞系在 mRNA 水平上 PIGR 的表达水平。接下来在 150 例卵巢癌组织和 25 例正常卵巢上皮组织切片中进行

PIGR 的免疫组织化学染色，并进行组化评分，通过 t 检验比较卵巢癌组织和卵巢正常上皮组织之间的表达差异。查询病历，通过非参数检验分析 PIGR 的表达与临床病理的关系。根据已有的随访信息，进行预后分析。
结果：PIGR 在正常卵巢上皮细胞的蛋白和 mRNA 水平上高表达（$p<0.001$），并且在组织切片水平上也得到了验证。同时通过分析发现 PIGR 的表达水平与卵巢癌的分级有关，与淋巴结转移无明显关系。结果显示高表达 PIGR 的卵巢癌患者的无复发生存期长一些。
结论：卵巢癌中高表达 PIGR 的可能预后相对较好，同时复发的风险低。我们的研究提示：PIGR 的表达水平在卵巢癌的恶性程度和预后中起着一定的作用，同时这些发现需要进一步的验证。

PO-326
Identification of a metabolism-related signature predicting overall survival for endometrial cancer patients

Yuan Fan,Xingchen Li,Jianliu Wang
Department of Obstetrics and Gynecology， Peking University People's Hospital

Background: Endometrial cancer (EC) is one of the most common gynecologic malignancies. In this study, we aim to construct prognosis prediction model with metabolism-related genes in EC and explore the molecular immune related mechanisms underlying the tumorigenesis of metabolism-induced EC.
Methods: We downloaded the transcriptome profiling and clinical data of EC from The Cancer Genome Atlas (TCGA) and Gene Expression Omnibus (GEO) databases. Common differentially expressed metabolism related genes were extracted from the databases and we constructed a risk signature by the least absolute shrinkage and selection operator (LASSO) regression analysis. A nomogram integrating the prognostic model and the clinicopathological characteristics was established and assessed by ROC curve to predict the overall survival (OS) of EC patients, and another clinical EC patients cohort was used for external validation. Furthermore, The Estimation of Stromal and Immune cells in Malignant Tumor tissues using Expression data (ESTIMATE) algorithm was used to explore the immune and stromal scores in low- and high-risk metabolism-related groups. The Tumor Immune Estimation Resource (TIMER) algorithm was used to analyze the immune cells infiltration of EC cells. Transcription factors (TFs) of hub genes were detected by NetworkAnalyst.
Results: In total, 61 metabolism-related genes were identified by analyzing two databases. Based on the LASSO regression analysis, six genes including CA3, HNMT, PHGDH, CD38, PSAT1, and GPI, were selected for the development of the risk evaluation model. The Kaplan-Meier curve indicated that patients in the low-risk group had considerably better OS (P = 7.874e-05). The area under the ROC curves (AUC) of this model was 0.756, 0.722, and 0.720 at 3-, 5-, and 7-year OS. Then a nomogram integrating risk model and clinical features was constructed, and the concordance index (C-index) of the nomogram was 0.820. The nomogram could accurately predict the OS (AUC=0.827, 0.821, 0.845 at 3-, 5-, and 7-year of OS, respectively). External validation of the nomogram with clinical patients showed that patients with low risk scores had a longer OS (p=4.191e-02), which was consistent with the actual survival outcomes (p=1.997e-01). Immune/stromal scores and infiltrating density of six types of immune cells were lower in high-risk group. TFs such as FOXM1 and LMNB1 might have a potential significant role in metabolism-related cancer prognosis.
Conclusions: In summary, our work provided six potential metabolism-related biomarkers as well as a nomogram for the prognostic prediction of EC patients and explored the underlying mechanism involved in the progress of EC.

PO-327

PD-L1 expression in tumor-associated macrophages was induced by tumor cells and associated with poor prognosis in high grade serous ovarian cancer

Wenjun Du
the first affiliated hospital of zhengzhou university

Abstract:
Background: Immunotherapy holds great potential for the treatment of various malignancies, but it is not an effective means of treating ovarian cancer at present. Tumor-associated macrophages (TAMs) are known to promote immune escape of tumor cells by expressing programmed cell death ligand-1 (PD-L1).
Methods: PD-L1 and CD163 (a TAM marker) were assessed via immunohistochemistry and immunofluorescent staining in 83 cases of high grade serous ovarian cancer (HGSOC). The relationships of PD-L1 and CD163 expression with clinicopathological characteristics and outcomes were analyzed. In addition, the impact of tumor cells on PD-L1 expression in TAMs was assessed by a co-culture system and flow cytometry.
Results: PD-L1 expression in TAMs was observed in 95% (79/83) cases and associated with lymph node metastasis (P=0.012). High intensity of PD-L1 expression in TAMs exhibited shorter disease-free survival (P=0.022). The group with high CD163 expression in tumor microenvironment (47%) was correlated with shorter disease-free survival (P=0.004). CD163 expression was also associated with lymph node metastasis (P =0.019). In addition, PD-L1 expression in tumor cells was observed in 88% of 83 cases, and the intensity of PD-L1 expression between tumor cells and TAMs was correlated (P<0.001). In vitro, PD-L1 expression in M2-type macrophages was induced by co-culture with ovarian cancer SKOV-3 cells. Conclusions: Both increased TAM infiltration and PD-L1 expression in TAMs were correlated with poorer prognosis in HGSOC patients. These results suggest the expression of PD-L1 in TAMs as a key prognostic biomarker in HGSOC.

PO-328

宫颈癌根治术辅助放化疗后复发转移的临床分析

朱慧婷,高玉华
辽宁省肿瘤医院

目的：本研究旨在探讨接受根治术并辅助放化疗后出现复发转移的宫颈癌患者的复发模式及与复发后癌症特异性死亡相关的预测因素。
方法：回顾性分析 2012 年 1 月 1 日至 2018 年 5 月 31 日于辽宁省肿瘤医院接受根治性手术辅助放化疗的宫颈癌患者中出现疾病复发转移患者的临床病理资料。
结果：共 153 例患者出现疾病复发，整体患者的中位无疾病复发生存期为 16 个月，75.2%（115/153）的患者在 2 年内出现疾病复发，24.8%（38/153）的患者出现疾病早期复发（治疗开始后≤6 个月复发）。105 例（68.6%）患者发生远处转移，其中 67 例（43.8%）为单纯远处转移，38 例（24.8%）为远处转移伴盆腔局部复发，48 例（31.4%）患者为单纯的局部盆腔复发。单纯局部复发和单纯远处转移的患者复发后中位生存时间分别为 26 个月和 18 个月，远处转移伴盆腔复发患者在复发后的中位生存时间为 17.5 个月。单纯远处转移和远处转移伴局部复发的患者复发后生存率明显低于单纯局部复发的患者（P=0.006，P<0.001）。多因素分析结果显示复发性宫颈癌特异性死亡的影响因素分别为切

缘阳性、髂总淋巴结阳性、腹主动脉旁淋巴结阳性、存在远处转移、复发后无治疗和疾病早期复发（≤6 个月）。

结论：接受根治术辅助放化疗的宫颈癌患者出现复发转移大多在初始治疗开始后的 2 年内。切缘阳性、髂总淋巴结阳性、腹主动脉旁淋巴结阳性、存在远处转移、复发后无治疗和疾病早期复发（≤6 个月）显著影响复发性宫颈癌患者的癌症特异性死亡率。可以考虑手术标本存在高危因素及淋巴脉管浸润阳性的患者在术后辅助治疗中添加靶向治疗或巩固全身化疗、口服药物维持治疗等手段以降低疾病复发率、延长总生存期。初始治疗结束后半年内可提高复查频率，每 1-2 个月复查一次可以更及时地发现疾病早期（≤6 月）复发的患者，及时接受治疗或许可以改善这部分患者的预后。

PO-329
经皮肾盂穿刺入路联合膀胱镜“上下会师”技术在妇科肿瘤术后输尿管损伤伴发阴道尿瘘中的应用

郑文恒,王丹波,毕缓,黄焱,于韬,曾宇
辽宁省肿瘤医院

目的 探讨临床应用经皮肾盂穿刺入路联合膀胱镜“上下会师”技术在妇科肿瘤术后输尿管损伤伴发阴道尿瘘中治疗的安全性、可行性。**方法** 收集 2015 年 8 月至 2020 年 6 月我院妇科肿瘤术后单侧输尿管下段损伤、临床出现阴道尿瘘的患者 10 例（年龄 38~64 岁），对所有患者采用经皮肾穿刺入路联合膀胱镜置入输尿管支架。置管操作按以下步骤进行：1.先尝试经膀胱镜引导将导丝逆行由患侧输尿管膀胱入口通过病损区域；2.如果步骤 1 失败，则由膀胱镜下置入造影导管，标记损伤段以下输尿管，并尝试通过经皮肾盂穿刺顺行开通病损区域；3.如果步骤 1、2 均失败，将顺行入路及逆行入路的导丝均经阴道残端在体外汇合，并沿逆行入路置入交换导管，从体外将顺行导丝置入交换导管，实现病损区域开通。**结果** 10 例患者均成功置入输尿管支架，术后 1~3 天阴道漏尿停止。其中步骤 1 成功 0 例，步骤 2 成功者 1 例,步骤 3 成功者 9 例。未见操作相关的感染、支架管移位脱落、大出血等并发症。所有患者随访 12 个月，术后 3 个月，患者尿瘘均愈合。5 例患者接受Ⅱ期输尿管修复手术治疗，术后恢复良好；5 例患者拒绝修复手术，定期行膀胱镜下支架导管更换。结论 妇科手术后医源性输尿管损伤的病例中，应用经皮肾盂穿刺入路联合膀胱镜下行输尿管支架置入技术可优化操作流程，创伤小，费用低，具有一定的临床应用价值。

PO-330
基于 SEER 数据库局部晚期宫颈癌预后因素分析及列线图的建立

徐璐,黄栎有,陈建章
南京鼓楼医院集团宿迁市人民医院

目的 分析局部晚期宫颈癌（LACC）患者的预后相关影响因素，并构建及评价预测模型。**方法** 提取美国国立癌症研究所数据库（SEER）2004-2015 年的 882 例ⅠB2 和ⅡA2 期局部晚期宫颈癌患者数据，通过卡方检验比较各变量之间的差异，得到预后危险因素。Kaplan-Meier 曲线用于生存分析。采用 Cox 比例风险回归模型确定多变量分析中癌症特异性生存的独立预后因素。构建预测列线图，分别采用 c 指数、校正曲线对模型进行判别能力，预测效力及临床实用价值的评价。**结果** 局部晚期宫颈癌患者的 3 年生存率为 83.2%,5 年生存率为 78.1%。在组织学等级中，GradeⅠ患者有 86 人占比 9.8%；GradeⅡ患者有 354 人占比 40.1%；GradeⅢ患者有 410 人占比 46.5%；GradeⅣ患者有 32 人占比 3.6%。FIGO 分期中，ⅠB2 期的患者 635 人占比 72.0%，明显多于ⅡA2 期患者 247 人占比 28%。未

手术的患者 360 人占比 40.8%，手术患者 522 人占比 59.2%。预后危险因素的单因素分析中，组织学分级(χ^2 =12.766，P=0.005)， FIGO 分期 (χ^2 =9.771，P=0.02)，手术情况(χ^2 =19.186，P＜0.0001)为局部晚期宫颈癌患者的预后危险因素。多因素分析结果显示组织学分级 GradeⅢ（HR = 2.4877，95%CI:1.1506- 5.3785，P＜0.05）；FIGO 分期ⅡA2 期（HR = 1.4130，95%CI:1.0239 -1.9499，P＜0.05）；不接受手术治疗（HR = 1.7444，95%CI:1.2732-2.390，P＜0.05）是降低局部晚期宫颈癌患者癌症特异性生存率的独立危险因素。列线图内部验证一致性指数（C-index）为 0.652（95%CI:0.61084-0.69316）。**结论** 局部晚期宫颈癌患者的预后与组织学分级、FIGO 分期及是否接受手术治疗密切相关。经验证列线图预测效果良好。

PO-331

卵巢支持细胞—间质细胞瘤 1 例

王欢,赵绍杰,王铁军
无锡市妇幼保健院

卵巢支持—间质细胞瘤 (sertoli-leydig cell tumor, SLCT)也称睾丸母细胞瘤，是一种女性较为罕见的肿瘤，占卵巢肿瘤的 8%，占卵巢性索—间质肿瘤的 1%，发病率低、临床罕见。本文为一篇病例报道，从该患者误诊到确诊再到治疗的整个过程，分析误诊原因，提高疾病认识，分享经验教训。

PO-332

Circulating Tie2-expressing monocytes: a potential biomarker for cervical cancer

Qing Han,Quan Zhang,Jiaxian Qian,Jing Cai
Union Hospital， Tongji Medical College， Huazhong University of Science and Technology

Background: Tyrosine kinase with immunoglobulin and epidermal growth factor homology domains 2 (Tie2)-expressing monocytes (TEMs) are a highly proangiogenic subset of myeloid cells, which characterized by expressing the angiopoietin receptor Tie2 with pro-tumor activity.
Purpose: The present study aimed to determine the clinical value of circulating TEMs (cTEMs) for cervical cancer.
Patients and methods: Peripheral blood mononuclear cells (PBMCs) were obtained from 7 healthy volunteers, 17 uterine fibroid patients, 24 cervical intraepithelial neoplasia (CIN) II patients, 31 CIN III patients and 99 patients with cervical cancer. The cTEMs were evaluated by the ratio of $Tie2^+$ $CD14^+$ cells to all $CD14^+$ monocytes in the PBMCs through flow cytometry. The diagnostic value of cTEM was assessed by Receiver Operating Characteristic (ROC) curves and the correlation between cTEM and clinicopathological characters in cervical cancer patients were analyzed.
Results: The proportion of cTEMs was gradually increasing from healthy volunteers, to patients with non-invasive lesions, then to cervical cancer patients. The area under the ROC curve was 0.913 when the level of cTEMs was used to distinguish cervical cancer from all the other women ranging from healthy volunteers to CIN III patients. In cervical cancer, an increased cTEM fraction was significantly correlated with advanced tumor stage, larger tumor size, lymph node metastasis (LNM), deep stromal infiltration, parametrial involvement and lymph-vascular space invasion, and was an independent risk factor for LNM.
Conclusion: The cTEM proportion might be a promising biomarker for the malignant transformation of cervical lesions and the progression of cervical cancer.

PO-333
后装治疗剂量对宫颈癌患者血液学和危及器官的影响

刘燚,高玉华
辽宁省肿瘤医院

目的：本研究不同后装治疗剂量和次数对宫颈癌患者血液学和危及器官的影响。**方法：**纳入 2019 年 7 月到 2020 年 3 月就诊于辽宁省肿瘤医院的应用后装治疗的宫颈癌患者 54 例。将患者分为两组，其中 26 人采取 600cGy 或 550cGy 后装治疗 5 次或 6 次，28 人采取 700cGy 或 650cGy 治疗 4 次。收集纳入患者治疗后的小肠 D2cc 剂量、膀胱 D2cc 剂量、结肠 D2cc 剂量、直肠 D2cc 剂量、白细胞、粒细胞、血红蛋白及血小板，采用独立样本 t 检验或非参数秩和检验统计学方法，比较两种治疗方式是否具有统计学差异。**结果：**通过独立样本 t 检验和非参数秩和检验得出，两组间小肠 D2cc 剂量、膀胱 D2cc 剂量、结肠 D2cc 剂量、直肠 D2cc 剂量、白细胞、粒细胞及血小板差异均无统计学意义（$p>0.05$,分别为 p=0.231，p=0.107，p=0.062，p=0.613，p=0.174，p=0.188，p=0.101），两组间血红蛋白差异具有统计学意义（$p<0.05$, p=0.009），采取 700cGy 或 650cGy 治疗 4 次的患者治疗后血红蛋白数值更高。**结论：**两种不同的治疗剂量次数并不会导致危及器官剂量、白细胞、粒细胞及血小板的差异，但对血红蛋白有影响，采取 700cGy 或 650cGy 治疗 4 次的患者治疗后更不易贫血。

PO-334
子宫内膜异位症相关卵巢癌与原发卵巢癌 临床病理相关性分析

陈聪,王丹波
辽宁省肿瘤医院

目的：本文旨在探讨内异症相关卵巢癌（EAOC）与原发卵巢透明细胞癌（OCC）及子宫内膜样癌（OEC）之间的临床病理联系，对内异症恶变诊断标准的修订提供参考依据。
研究方法：回顾性收集 2008 年 1 月至 2018 年 11 月在辽宁省肿瘤医院及中国医科大学附属盛京医院诊治的 174 例上皮性卵巢癌患者的临床以及病理资料，依据子宫内膜异位症相关卵巢癌诊断标准将患者分为内异症相关卵巢癌组及卵巢透明细胞癌及子宫内膜样癌组，按照病理类型的不同进一步将内异症相关卵巢癌组分为内异症相关卵巢透明细胞癌（EOCC）组及内异症相关子宫内膜样癌组（EOEC）组，将卵巢透明细胞癌及子宫内膜样癌组分为透明细胞癌（OCC）组及子宫内膜样癌（OEC）组。通过回顾病历资料，总结并比较内异症相关卵巢癌与原发卵巢透明细胞癌及子宫内膜样癌之间的一般资料、临床特点、术后病理及预后特点，并通过 Kaplan-Meier 分析及 log—rank 检验进行生存分析。
结果：内异症相关卵巢癌与卵巢原发透明细胞癌及子宫内膜样癌患者在 BMI、绝经年龄、手术史、痛经史、合并症、FIGO 分期、肿瘤性质、肿瘤大小、肿瘤侧别、腹水量、CA125、CA199、肿瘤分化程度、P53、P16、Ki67 及 MMR 的阳性表达率上均无明显差异（P>0.05）。EOCC 组平均发病年龄低于 OCC 组，差异具有统计学意义（48.2 VS 53.3 P<0.05），EOCC 组绝经者比例低于 OCC 组，差异具有统计学意义（35.8% VS 74.2% P<0.05），EOCC 组 HE4 水平低于 EOEC 组，差异具有统计学意义（89.4 VS 355.4 P<0.05）。EOEC 组 ER、PR 阳性表达率高于 EOCC 组，差异具有统计学意义（71.4% VS 5.1%,60.0% VS 7.7% P<0.05）。两组患者总生存(0S)及无进展生存(PFS)均无统计学差异(P>0．05)。
结论：推测卵巢原发子宫内膜癌与透明细胞癌与内异症相关卵巢癌起源相同，即按照卵巢癌二元论学说，卵巢子宫内膜癌与卵巢透明细胞癌来源于子宫内膜异位症,内异症恶变诊断标准需进一步探讨。

PO-335
miRNA-21 对晚期宫颈癌放化疗敏感性的影响及其意义

矫亮,高玉华
辽宁省肿瘤医院

目的：本研究旨在分析 miRNA-21 在晚期宫颈癌组织中的表达，探讨其作为放化疗敏感性标记分子的可行性。
方法：收集 2017 年 10 月至 2019 年 2 月在我院行同步放化疗的 IIB-IV 期宫颈癌患者资料，real-time PCR 检测 miRNA-21 在组织中的表达，并分析其表达与临床病理特征、临床疗效、放化疗敏感性和预后的关系。
结果：放化疗敏感组 75 例，放化疗抵抗组 36 例，放化疗抵抗组肿瘤直径明显大于敏感组（P<0.01)，在年龄、分化等一般临床资料上差别无统计学意义(P 均>0. 05)。miRNA-21 在肿瘤组织中的表达与肿瘤大小、放化疗敏感性相关，P 均<0.05。Kapla-Meier 分析发现 miRNA-21 低表达组的总生存期延长(Log rank 检验 P<0.05），COX 回归显示 miRNA-21 表达、肿瘤直径是影响宫颈癌 PFS 的独立危险因素，P 均<0.05，ROC 曲线显示 miRNA-21 诊断宫颈癌放化疗敏感性的灵敏度为 83.3%，特异度为 68.0%。
结论：miRNA-21 的表达与宫颈癌放化疗敏感性及预后相关，可能对评估临床疗效、选择个体化治疗方案有指导意义。

PO-336
宫颈随机活检在基于风险的阴道镜检查中的作用观察

王帆,刘荣,马焱,李静,李小林,瞿全新
天津市第一中心医院

目的 探讨宫颈随机活检在基于宫颈高级别病变风险的阴道镜检查中的作用。**方法** 收集 2017 年 9 月至 2018 年 12 月在天津市第一中心医院妇科行阴道镜下宫颈定位活检及随机活检的宫颈病变患者 201 例，所有患者临床病理资料完整。根据宫颈定位活检及随机活检的一致性结果分析宫颈随机活检在不同风险分层患者中的必要性。**结果** 1.经阴道镜活检病理确诊为 HSIL 者 53 例（26.37%），低、中、高风险组患者 HSIL 诊断率分别为 8.82%、27.27%和 73.91%，高风险组患者 HSIL 诊断率明显高于中风险组及低风险组（χ^2=37.606，P<0.001）。经两两比较 HSIL 诊断率差异均具有统计学意义。在病理诊断最终结果证实≥CIN Ⅱ 的 53 例患者中，定位活检漏诊率为 5.66%。2.宫颈高级别病变低风险组患者 68 例，定位活检和随机活检病理结果一致性较好(Kappa=0.477，P<0.001)，在定位活检病理证实为≥CIN Ⅱ 的 6 例患者中，随机活检病理≥CIN Ⅱ 者仅为 2 例。3.宫颈高级别病变中风险组患者 110 例，定位活检和随机活检病理结果一致性较差(Kappa=0.195，P=0.010)，最终病理诊断≥CIN Ⅱ 者 30 例（27.27%），仅为随机活检确诊者 3 例，定位活检漏诊率为 10.00%。4.宫颈高级别病变高风险组患者 23 例，定位活检和随机活检病理结果一致性较差(Kappa=0.138，P=0.191)。在定位活检病理证实≥CIN Ⅱ 的 17 例患者中，随机活检病理证实为≥CIN Ⅱ 者仅为 4 例。5.阴道镜拟诊结果≤LSIL 者，与最终病理诊断符合率为 80.72%；阴道镜拟诊为 HSIL 者，与最终病理诊断符合率为 60.00%。**结论** 宫颈高级别病变低风险患者在阴道镜检查中，随机活检对宫颈病变诊断无影响，而在宫颈高级别病变中风险和高风险患者中，阴道镜检查中的随机活检在避免漏诊及明确病变范围方面有一定作用。

PO-337
腹腔镜手术与开腹手术治疗早期上皮性卵巢癌临床效果的对比研究

张正茂,杨端,王红霞,张婉莹
河北医科大学第四医院

目的：本研究目的是通过对比早期上皮性卵巢癌采用腹腔镜与开腹手术两种手术方式患者的临床病理特征及术后相关并发症等临床数据的分析，探讨腹腔镜在早期上皮性卵巢癌治疗中应用的可行性和安全性，及对早期上皮性卵巢癌患者生存结局的影响。
方法：选取2009年1月至2019年1月就诊于河北医科大学第四医院的早期上皮性卵巢癌患者221例，其中腹腔镜组 69 例，开腹组 152 例。所有患者均经术后石蜡病理检查确诊为卵巢癌，并采用 FIGO 2013年分期标准重新进行手术-病理分期，均为Ⅰ期～Ⅱ期卵巢癌患者。对两组患者一般资料、围手术期相关参数指标及生存结局进行对比分析。
结果：两组患者 BMI、绝经情况、腹部手术史、术前血清 CA125，伴随疾病情况、手术-病理分期、病理类型对比均无显著差异（P＞0.05）。但是，腹腔镜组肿瘤直径、年龄明显小于开腹组（（9.1±4.1）cm vs（10.7±4.8）cm，（45.7±14.4）岁 vs（50.5±9.6）岁），差异具有统计学意义（P＜0.05）。腹腔镜组腹主动脉旁淋巴结切除数[分别为（6.9±6.5）vs（4.2±4.7）个]增多，术中出血量[分别为（148.2±179.9）vs（273.4±219.2）ml]减少，术后排气时间[分别为（2.5±0.6）vs（2.9±0.9）天]缩短，术后住院天数[分别为（9.7±3.3）vs（11.6±4.2）天]减少，且差异均有统计学意义（P＜0.01）。两组病例的盆腔淋巴结切除数、术中肿瘤破裂率、腹腔引流管留置时间、术后并发症发生率（5.8% vs 9.9%）、术后化疗开始时间相比均无显著差异（P＞0.05）。腹腔镜组中位随访时间 45 个月（15～123 个月），开腹组中位随访时间 58 个月（21～135 个月）。两组复发率（腹腔镜组 13.0% vs 开腹组 17.1%），5年生存率（腹腔镜组 89% vs 开腹组 88%）无统计学差异（P＞0.05）。
结论：在早期上皮性卵巢癌的治疗中，与开腹手术相比，腹腔镜手术具有术中出血少、术后胃肠功能恢复快、术后住院天数少等优势，且不影响患者的总生存期及无病生存期。在经选择的早期上皮性卵巢癌患者中，采用腹腔镜手术是安全可行的。

PO-338
HHLA2, a novel immune checkpoint molecule, predicts better survival in ovarian cancer patients

Yuanyuan Shi,Guocai Xu,Zhang Bingzhong
Sun Yat-sen Memorial Hospital

Purpose: HHLA2, a novel immune checkpoint ligand, is gradually being elucidated in various solid tumors recently. However, its role in ovarian cancer remains unclear. There is critical need to examine its expression profile and clinical significance in ovarian cancer.
Methods: We performed immunohistochemistry to examine expression of HHLA2 in 64 ovarian cancer tissues and 16 normal ovarian tissues. The relationship between the expression of HHLA2 and clinicopathological features, prognosis, and CD8+ tumor-infiltrating lymphocytes (TILs) in patients was analyzed. Meanwhile, Cancer Cell Line Encyclopedia (CCLE) database was used to analyze the correlation between HHLA2 and PD-L1 and B7x. In addition, the biological function of HHLA2 in ovarian cancer cells were initially explored.
Results: Our study indicated only 17.2% ovarian cancer patients showed HHLA2 expression. HHLA2 expression was significantly associated with the differentiation of ovarian cancer cells (p=0.027), and well-differentiated tumors expressed higher levels of HHLA2. The CD8+ tumor-infiltrating lymphocyte (TIL) density was associated with increased HHLA2 expression (p = 0.017), and the CD8+ TIL count

was higher in the HHLA2-positive group compared to the HHLA2-negative group (p = 0.023). Moreover, multivariate analysis identified expression of HHLA2 as an independent prognostic factor that predicted better survival (p = 0.049, HR = 0.156, 95% CI 0.025–0.992). Additionally, we also found that overexpressing HHLA2 inhibited the proliferation of ovarian cancer cells.
Conclusion: HHLA2 is associated with tumor differentiation and high CD8+TILs, and predicts better survival in ovarian cancer. Along with previously reported findings that HHLA2 behaves as a co-stimulatory ligand, our study suggests that loss of HHLA2 may contribute to the immunosuppressive microenvironment and progression of ovarian cancer.

PO-339

基于 2018 FIGO 分期下 IB 期宫颈癌分期及预后

杜燕军[1],卢冰[1],李凤虎[1],李杰慧[1],冉立[1],常建英[1],王鹤然[2],田雪[1],胡丽丽[1],左凯[2],梅烦[2]
1.贵阳医学院附属医院/贵州省肿瘤医院
2.贵州省肿瘤医院

目的 探讨 2018 FIGO 新分期下 IB 期宫颈癌患者分期合理性及预后。**方法** 收集 2007 年 1 月至 2016 年 11 月贵州医科大学附属肿瘤医院收治的初诊 IB 期宫颈癌病例 186 例，根据 2018 FIGO 分期进行重新分期，以 OS 及 PFS 为主要预后指标，比较新分期 IB 期的合理性及预后，并探讨 IB 期宫颈癌最佳治疗模式，Kaplan-Meier 法计算 OS，组间差异比较行 Logrank 检验和单因素分析，Cox 回归模型多因素分析。**结果** 全组 1、3、5 年总生存和无进展生存期分别为 99.5%与 90.8%、89.3%与 97.8%、89.4%与 88.7%，中位生存期为 58 个月。在全组病例中，手术较未手术者 OS 延长（P=0.000），在 IB1 中各种治疗模式下 OS 均未见明显差异。在 IB2 及 IB3 期中，手术＋术后放化疗组较单纯放疗/化疗组、单纯手术组、新辅助化疗＋同步放化疗组 3 年 OS 及 PFS 明显延长（P＜0.05），但新辅助化疗＋同步放化疗组较术后放疗/化疗 3 年 OS 及 PFS 明显生存优势（P=0.025）。在 76 例 IB3 期病例中，手术＋术后放化疗组较术后放疗/化疗组 3 年 OS 明显延长（P=0.002），而与新辅助化疗＋手术＋术后放化疗组对比却无生存优势（P=0.453）。单因素分析显示，手术＋术后放化疗、新辅助化疗＋同步放化疗组、手术治疗、接受后装近距离治疗 OS 显著延长,KPS 改善、接受过盆腔外照射治疗有延长生存趋势，多因素分析显示手术者、2018 FIGO 分期为影响 IB 期宫颈癌患者生存的独立预后因素。**结论** 2018 FIGO 分期对 IB 期预后方面有优势，分期合理，于 IB1 期宫颈癌最佳治疗模式需进一步前瞻性临床研究证实。IB2 及 IB3 期宫颈癌术后患者有必要进行术后放化疗。

PO-340

上皮性卵巢癌化疗药物现状和展望

王志
华中科技大学同济医学院附属同济医院

卵巢癌的主要治疗手段为手术联合着铂类/紫杉醇化疗。上皮性卵巢癌占卵巢癌患者的 80%，对化疗药物高度敏感。晚期上皮性卵巢癌腹腔播散的特点导致减瘤手术常无法完全切除病灶，因此化疗药物的治疗对患者的预后起到非常关键的作用。这篇回顾性研究对应用于上皮性卵巢癌治疗的药物进行了概括，包括其药物原理，对生存期影响，在卵巢癌治疗中的地位，主要副反应以及其最新的研究进展，旨在通过这篇回顾性分析对卵巢癌的化疗药物整体掌握。

PO-341
Study on Clinical Application of Homologous Recombination Repair Defect Genes Detection in Ovarian Cancer

Yingnan Ye,Ke Wang,Yanan Cheng,Lei Han,Jinpu Yu
Tianjin Medical University Cancer Institute and Hospital

Ovarian cancer (OC) is the second most common gynaecological malignancy worldwide and remains a significant cause of gynaecological cancer mortality. The defective homologous recombination (HR) repair genes increase tumor incidence as well as providing a survival advantage in patients with OC, such as BRCA1, BRCA2, RAD51, ATM and so on. Germ-line BRCA mutations are reported as the most significantly associated with high cancer risk, longer survival rates and generally favorable response to platin-based therapy. The significant activity of poly (ADP-ribose) polymerase inhibitors in BRCA mutation carriers has also focused attention on BRCA1/2 testing. We have analyzed BRCA genes mutation of total 158 blood samples by our six genes panel base on next-generation sequencing (NGS). 30 pathogenic mutations were identified in 35 samples following principles of ACMG. The 30 mutations composed of 21 frameshift mutations, 6 nonsense mutations, 2 splice site variants and 1missense mutation. All the 30 mutations were detected in BRCA genes, as 22 (73.33%) in BRCA1 and 8 (26.67%) in BRCA2. And 19 of them have never been reported. In 35 BRCA pathogenic mutations carriers, 26 patients (74.29%) were with BRCA1 mutations and 9 (25.71%) with BRCA2. Patients with BRCA mutations were more likely to be diagnosed at a younger age less than 50 (51.43% vs. 27.64%, P = 0.008). A higher proportion of patients with OC and/or breast cancer family history were found in BRCA mutations carriers (34.29% vs. 8.33%, P < 0.001). Pathogenic BRCA1/2 mutations carriers were identified with serous tumors (94.29% vs. 78.33%, P = 0.012) rather than other pathological subtype, increasing diagnosed with high-grade serous cancers (HGSC). It demonstrated that BRCA1/2 genes germline mutation was closely related with earlier incidence of OC and more family aggregation. We also found that most patients were not with BRCA1/2 genes mutations, which suggested that BRCA1/2 genes detection was not enough to benefit for more patients. We next analyzed 102 OC patients' germline mutations via 108 genes detection. In these samples, 19 pateints (18.63%) were detected BRCA pathogenic mutations, as 13 with BRCA1 and 6with BRCA2. However, 33 pantients (32.35%) was detected genes mutations in HR pathway, including ATM, BRCA1, BRCA2, MLH1 and PLAB2. It indicates that patients without BRCA pathogenic mutation were still with HRDs. Hence, it might fail to diagnosis by simple BRCA genes detecting.

PO-342
LncRNAs 在卵巢癌中的作用机制及研究进展

窦莹域,孙朝阳
华中科技大学同济医学院附属同济医院

卵巢癌是女性生殖系统恶性肿瘤死亡的首要原因。因为卵巢癌患者初期没有明显的临床症状，所以大约 70%患者在确诊时已经为卵巢癌晚期，五年生存率较低。此外经过初次治疗的患者中，大部分的患者会出现复发和耐药。在卵巢癌患者中反复出现的肿瘤复发和耐药，使得治疗效果极为有限。因此临床亟需方法改善卵巢癌患者的预后。近几年，非编码 RNA 中的长链非编码 RNA 成为了卵巢癌领域的研究热点。长链非编码 RNA 是一组转录本长度大于 200 个不具有编码蛋白功能的核苷酸组成。这一类长链非编码 RNA 可以参与调控染色质重构、转录及转录后水平，在多种肿瘤中 lncRNAs 的表达水平都出现了异常，参与肿瘤的恶性增殖和侵袭转移等生物学功能。目前，对于妇科恶性肿瘤卵巢癌相关的

lncRNAs 的报道也越来越多，本文归纳总结了国内外最新有关卵巢癌的 lncRNAs 情况，旨在为后续对于卵巢癌相关 lncRNA 的研究提供参考

PO-343
The molecular mechanism of cyclophosphamide induced short-term and long-term ovarian fibrosis

Yan Zhang
Department of Gynecology and Obstetrics， Tongji Hospital， Tongji Medical College， Huazhong University of Science and Technology

Objective: Chemotherapy induces ovarian failure and infertility in female with cancers. Cyclophosphamide (CTX), an alkylating anti-tumor agent causes gonadotoxicity via the stimulation of oxidative stress, inflammation, apoptosis and primordial follicle overactivation. Doxorubicin (DOX), as an anthracycline chemotherapy, has been revealed to cause ovarian toxicity by provoking DNA damage, oxidative stress, apoptosis of follicles and hyperactivation of primordial follicle, leading to the pathogenesis of ovarian failure. Increasing accumulated information showed ovarian fibrosis developed after remedy of CTX.
Methods: Fifty forth mice were randomly divided into Control, CTX and DOX experimental groups (six animals per group) and treated for 3, 7 and 28 days separately as follows: the first group acting as a control received intraperitoneal injection (i.p.) of Control (normal saline, 0.1 ml/mouse), once daily, for 3, 7 and 28 days. The second group received a single CTX (90 mg/kg body weight, i.p.) at first day, then received NS treatment, once daily, for 3, 7 and 28 days separately. For the third group, mice received a single DOX (10 mg/kg body weight, i.p.) at first day, then received NS treatment, once daily, for 3, 7 and 28 days separately. Ovarian function and fibrosis level were observed. In order to research the mechanism of different phenomenon, RNA-seq of mice ovaries was conducted.
Results: We first validated the presence of acute fibrosis to ovary after the exposure to CTX and DOX for 7 days, while severe chronic ovarian fibrosis (28 days) merely emerged in mice with CTX. Compared to control, RNA-seq analysis indicated both CTX and DOX has mediated ECM-associated gene before apparent ovarian fibrosis established as being treated for 3 days. In addition, compared to ovary of DOX group, particularly TGF-β signaling was enriched in CTX group.
Conclusion: Given these finding, we suggest that TGF-β is a promising pathway mediating CTX-induced ovarian fibrosis. Thus, inhibition of TGF-β and advanced intervention could be attractive for the research and development of new drugs and methods for preventing ovarian fibrosis during chemotherapy of CTX.

PO-344
62 例子宫颈神经内分泌癌患者的临床特征及 FIGO 2018 分期对其预后的影响

李佳,杨红,荆茹,张潍,刘淑娟,陈必良
空军军医大学西京医院妇产科

目的：探讨 62 例子宫颈神经内分泌癌（neuroendocrine carcinoma of the uterine cervix，NECUC）患者的临床特征、治疗决策及 FIGO 2018 分期系统对预后的影响。

方法：回顾性分析 2008 年 01 月至 2019 年 01 月空军军医大学西京医院妇产科收治的 62 例 IA1~IIA2 期 NECUC 患者的临床病理资料，并按照 FIGO 2018 新分期进行再分期，与 FIGO 2009 老分期系统进行比较，并分析与预后相关的影响因素。
结果：62 例 NECUC 患者的发病年龄为 44±8.79 岁。按照 FIGO 2018 新分期进行再分期后，62 例患者中有 28 例（45.2%）分期升级，大多数变化出现在Ⅰ B 期和Ⅲ C 期。单因素分析显示预后与肿瘤大小、FIGO 分期、辅助治疗、浸润深度及淋巴结转移有显著性相关（P<0.05）；多因素分析显示肿瘤病理类型、浸润深度和淋巴结转移是影响宫颈神经内分泌癌预后的独立因素，而 FIGO 2018 新分期系统及辅助治疗是 OS 的独立影响因素。
结论： 肿瘤大小、临床分期、浸润深度、淋巴转移和辅助治疗均为影响患者预后的重要因素。FIGO 2018 新分期系统对于判断 NECUC 预后要优于老分期系统，对于早期患者术前影像学评估淋巴结状态尤为重要，足疗程的化疗及放疗可能对改善患者的生存有益。

PO-345
抑制 CDCA8 增敏卵巢癌 PARP 抑制剂及其机制研究

齐贡花,孔北华
山东大学齐鲁医院

研究目的：
细胞分裂周期蛋白 8（CDCA8， cell division cycle associated 8 ），在非小细胞肺癌，前列腺癌，乳腺癌等多种肿瘤高表达，且与肿瘤恶性行为及患者不良预后相关。近期文献报道，CDCA8 与卵巢癌 PARP 抑制剂耐药相关，但其具体作用及耐药机制尚不清楚。本研究旨在：
1)明确 CDCA8 与卵巢癌 PARP 抑制剂使用疗效相关性
2)阐明 CDCA8 参与卵巢癌 PARP 抑制剂药物反应性的具体分子机制
材料与方法：
体外细胞生物学实验研究 CDCA8 对 PARP 抑制剂疗效的影响
RNA-seq 分析 CDCA8 下游相关通路变化，分析 CDCA8 参与卵巢癌 PARP 抑制剂药物反应性相关分子机制。
流式细胞仪分析细胞周期及凋亡，免疫荧光检测 DNA 损伤及修复能力以验证具体分子机制。
结果：
耐药实验提示卵巢癌细胞接受一定剂量的奥拉帕尼处理后，CDCA8 的表达水平升高；干扰 CDCA8 后 PARP 抑制剂治疗卵巢癌细胞的 IC50 明显降低；同等药物浓度下，干扰 CDCA8 后卵巢癌细胞系的成克隆能力减弱；抑制 CDCA8 同样增敏卵巢癌细胞对顺铂的敏感性。高通量测序表明 CDCA8 可以正性调控增殖、细胞周期，抑制凋亡；通路分析显示差异基因主要参与细胞周期，DNA 复制，同源重组修复通路等。进一步细胞生物学证实干扰 CDCA8 后细胞周期、DNA 复制及 DNA 损伤通路分子表达降低；干扰 CDCA8 及奥拉帕尼治疗导致细胞周期阻滞在 G2/M 期，凋亡细胞比例增加及 DNA 损伤能力增强，修复能力减弱；干扰 CDCA8 与奥拉帕尼联合治疗可能明显增强细胞周期阻滞，促进凋亡及 DNA 损伤能力增强从而增强卵巢癌细胞对奥拉帕尼的敏感性。
结论：
抑制 CDCA8 通过导致细胞周期 G2/M 期阻滞，促进细胞凋亡及增强 DNA 损伤能力，增加卵巢癌细胞对 PARP 抑制剂治疗敏感性。

PO-346
甲羟孕酮联合二甲双胍治疗早期子宫内膜样腺癌和子宫内膜非典型增生的前瞻性研究

王圆圆,郭瑞霞
郑州大学第一附属医院

1.目的：二甲双胍为治疗 II 型糖尿病的常用药物，目前多种研究广泛认为二甲双胍治疗后能够降低癌症发生率和复发率。高效孕激素治疗早期子宫内膜样腺癌及子宫内膜非典型增生具有较高的缓解率，但是较高的复发率目前是临床上存在的一个问题。本研究的目的是评估甲羟孕酮联合二甲双胍治疗的效果、复发率。
2.方法： 该研究纳入 60 例早期子宫内膜样腺癌（EC）和子宫内膜非典型增生（ACH）的患者，患者年龄限制在 20-42 岁。分为观察组和对照组，观察组 30 例患者，给予醋酸甲地孕酮（MA）160mg/天+盐酸二甲双胍缓释片（Met）850mg（BID），对照组 30 例患者，给予 MA 160mg/天，分别连续用药 3 个月为 1 疗程，停药 1 周后复查彩超，肿瘤标志物（Ca125、Ca199），并行宫腔镜检查加诊刮送病理 ，治疗后 6 个月和 9 个月评估内膜改善情况，计算病理反应率、复发率及妊娠情况。
3.结果：60 例早期 EC 和 ACH 患者纳入了此项前瞻性研究，其中 1 例早期
EC 和 1 例重度非典型增生患者在治疗过程中要求退出研究，其余 58 例患者按原计划完成了治疗，其中观察组 30 例，20 例 ACH，10 例早期 EC，在治疗 6 个月进行评估时，23 例（76%）达到病理完全反应（CR），5 例达到部分反应（PR），2 例病情稳定（SD），1 例病情进展（PD）。对照组 28 例患者，18 例 ACH，10 例早期 EC，17 例（61%）达到 CR，9 例达到 PR，1 例 SD，1 例 PD。治疗 9 个月进行评估时，在观察组，28 例（90%）达到了 CR，2 例达到 PR，1 例 SD，PD 为 0。在对照组，23 例（85%）达到 CR，1 例达到 PR，1 例 SD，1 例 PD。达到 CR 进行随访的患者中，观察组复发率为 18.5%，对照组为 30.4%。
结论：甲地孕酮联合二甲双胍治疗早期 EC 及 ACH，其缓解率较高，复发率较低，其在早期子宫内膜样腺癌及子宫内膜非典型增生患者中的治疗应进一步研究。

PO-347
Automatic model for Cervical Cancer screening based on convolutional neural network: a retrospective, multicohort, multicenter study

xiangyu tan[1],Kexin Li[1],Jiucheng Zhang[2],Wenzhe Wang[2],Bian Wu[3],Jian Wu[4],Xiaoping Li[1],Xiaoyuan Huang[1]
1.Department of Obstetrics and Gynecology， Tongji Hospital， Tongji Medical College， Huazhong University of Science and Technology
2.College of Computer Science & Technology， Zhejiang University， Hangzhou， 310027， China
3.Data Science and AI Lab， WeDoctor Group Limited， Hangzhou 311200， China
4.School of Public Health， Zhejiang University， Hangzhou， 310027， China

Background: The incidence rates of cervical cancer in developing countries have been steeply increasing while the medical resources for prevention, detection, and treatment are still quite limited. Computer-based deep learning methods can achieve high-accuracy fast cancer screening. Such methods can lead to early diagnosis, effective treatment, and hopefully successful prevention of cervical cancer. In this work, we seek to construct a robust deep convolutional neural network (DCNN) model based on a convolutional neural network that can assist pathologists in cytological screening of cervical cancer.

Methods: Thinprep cytologic test (TCT) images diagnosed by pathologists from many collaborating hospitals in different regions were collected. The images were divided into a training dataset (13775 images), validation dataset (2301 images), and test dataset (408030 images from 290 scanned copies) for training and effect evaluation of a faster region convolutional neural network (Faster R-CNN) system.
Results: The sensitivity and specificity of the proposed cervical cancer screening system was 93.3% and 55.4%, respectively. The area under the ROC curve (AUC) value of this model was 0.89. The sensitivity of atypical squamous cells of undetermined significance (ASCUS), the low-grade squamous intraepithelial lesion (LSIL), and high grade squamous intraepithelial lesions (HSIL) was 93.4%, 77.1%, and 78.9%.
Conclusions: In our study, a CNN-based TCT cervical cancer cell screening model was successfully established through a retrospective study of multicenter TCT images. This model showed improved speed and accuracy for cervical cancer screening and helps to overcome the shortage of medical resources required for cervical cancer screening.

PO-348
CXCR7/CXCR4 异二聚体通过 βarr1 促进子宫内膜样腺癌的增殖

毕新春,辛琪,张爱华,姚爱琳
天津市第三中心医院

目的 研究 CXCR7 与 CXCR4 在子宫内膜样腺癌中的存在形式，并探讨其与子宫内膜样腺癌生长的关系。**方法** 采用免疫组化方法检测 256 例子宫内膜样腺癌和 100 例正常子宫内膜组织中的 CXCR4 和 CXCR7 的表达情况，运用统计学分析二者的相关性；运用免疫荧光双染定位 CXCR4 和 CXCR7 在子宫内膜样腺癌中的表达位置；运用 Westin 和 RT-PCR 方法检测子宫内膜样腺癌细胞株（Ishikawa、HEC-1-A、KLE、）中 CXCR4 和 CXCR7 的表达，并选取其中两株细胞通过病毒转染质粒的方法分别调高 CXCR4 和 CXCR7 的表达，分别沉默 CXCR4 和 CXCR7 的表达，共同高表达 CXCR4 和 CXCR7，进行验证；运用 CCK8 进行增殖试验；加入拮抗剂 AMD3100 观察对各组的影响；Western 检测各组细胞中 βarr1 的含量；运用免疫共沉淀检测 CXCR4 和 CXCR7 在子宫内膜癌细胞中是否形成异二聚体；运用 Western 检测高表达和沉默 CXCR4 和 CXCR7 中的磷酸化水平；**结果** CXCR4 和 CXCR7 在子宫内膜样腺癌组织中高表达并呈正相关性；免疫荧光显示 CXCR4 和 CXCR7 共同表达在子宫内膜癌细胞中；高表达 CXCR4 和 CXCR7 的子宫内膜癌细胞株增殖能力最强，AMD3100 拮抗后 CXCR4 和 CXCR7 共同高表达组的增殖减低最明显，说明 CXCR4 和 CXCR7 可能通过形成二聚体发挥作用；高表达 CXCR4 和 CXCR7 组中 βarr1 的含量最多，免疫共沉淀显示 CXCR4 和 CXCR7 形成异型二聚体；高表达 CXCR4 和 CXCR7 的子宫内膜癌细胞 SGC7901 中 MAPK 磷酸化水平高；**结论** CXCR4/CXCR7 形成异型二聚体在子宫内膜样腺癌中通过招募 βarr1 激活 MAPK 信号通路引起子宫内膜样腺癌生长。

PO-349
伪原薯蓣皂苷通过 miR-182/Foxo1 通路抗子宫内膜癌的机制研究

张丽志
天津市第一中心医院

研究目的：研究伪原薯蓣皂苷（pseudoprotodioscin，PPD）对人子宫内膜癌细胞增殖、迁移、侵袭、凋亡的影响，初步探索其抗肿瘤机制。材料与方法：体外培养 HEC-1A 子宫内膜癌细胞株，采用 MTT 实验、划痕实验、Transwell 实验观察 PPD 对细胞增殖、迁移、侵袭的影响，采用流式细胞术观察 PPD 对细胞凋亡的影响，同时采用激光共聚焦技术观察线粒体膜电位变化。PCR 检测 miRNAs 水平，

并应用 miR-182-5p mimics 观察对 PPD 抑瘤作用的影响。Western 检测 FOXO1、凋亡相关蛋白 Bax、Bcl-2、Cleaved Caspase3、Pro-Caspase3 的表达情况。结果：PPD 可抑制子宫内膜癌增殖、迁移及侵袭，并促进子宫内膜癌细胞凋亡，共聚焦结果显示，PPD 可降低细胞线粒体膜电位。Western 结果显示 PPD 可上调凋亡相关蛋白 Bax/Bcl-2 以及 Cleaved Caspase3/Pro-Caspase3，提示 PPD 可能通过线粒体途径促进细胞凋亡。PCR 结果显示，PPD 可明显降低 miR-182-5P 水平，而 miR-182-5P mimics 可抑制 PPD 的抑瘤作用以及促凋亡作用。生物信息学软件预测显示 miR-182-5P 与 FoxO1 的碱基序列间可能存在互补序列，western 结果进一步显示，PPD 可上调 FOXO1 水平，而 miR-182-5P mimics 可抑制 PPD 上调 FOXO1 作用。采用 FOXO1 抑制剂 AS1842856 预处理子宫内膜癌细胞，亦可抑制 PPD 的抑瘤作用。结论：PPD 可能通过下调子宫内膜癌细胞中 miR-182-5P 的表达，并进一步上调 FOXO1 水平，促进子宫内膜癌凋亡，发挥抑瘤作用。

PO-350
Experience Of Fertility-Preserving Treatments In Patients of Placental Site Trophoblastic Tumors: A Retrospective Study Of 5 Cases

Jiawen Feng,Jun Ying,Xinying Yu,Bo Huang,Yuting Wang,Jianhua Qian
The First Affiliated Hospital， ZheJiang University School of Medicine， Hangzhou

Background: Placental site trophoblast tumor (PSTT) is a rare gestational trophoblast tumor, which directly affects women's fertility. Young patients need personalized treatments that cure the disease and preserves fertility.
Objectives: To summarize the fertility-preserving treatments for PSTT through the retrospective analysis on the clinical features, pathological characteristics and therapy methods of 5 patients with PSTT.
Methods: The clinical features, pathology, diagnosis, fertility-preserving treatments and fertility outcomes of 5 young patients with PSTT were studied and analyzed retrospectively. According to the different conditions of the cases, the fertility-preserving treatments were targeted with simple surgery or surgery combined with chemotherapy. 5 patients all received hysteroscopy combined with dilation and curettage, one of these patients had no other treatment after hysteroscopy. 3 patients with localized uterine masses had fertility-sparing partial hysterectomy (one case was laparoscopic operation). 4 patients were treated with a combination of operation and chemotherapy.
Results: After 0.5-11 months of treatment (mean, 3.9 months), 5 patients had complete remission, normal menstruation, and their hCG level was within the normal range. During the follow-up period of 6 years, 1 patients had normal childbirth.
Conclusions: For young patients with PSTT who need to preserve fertility, personalized comprehensive treatment options can be used. It includes: For cases that the lesion is confined to the uterus, low-risk patients can consider surgery alone, but this option is of high operating demand for the operators and of high medical compliance for the patients; For the other cases, appropriate chemotherapy can be used after the operation, according to intraoperative condition, postoperative pathology, hCG level and basic condition of the patients. Altogether, surgery combined with chemotherapy can be recommended as the principle of fertility-preserving therapy for PSTT.

PO-351
PARP inhibitors as maintenance therapy in newly diagnosed advanced ovarian cancer: A Meta-analysis

Qingqing Lin,Jinyi Tong
Hangzhou First People's Hospital

Objective: To investigate the efficacy and safety of PARP inhibitors (PARPis) as maintenance treatment after platinum-based chemotherapy in patients with newly diagnosed advanced ovarian cancer. Furthermore, we stratify results based on BRCA mutational and homologous recombination deficiency (HRD) status into five different categories: whole population, BRCA mutated patients, patients without BRCA mutation, HRD-positive patients and HRD-negative patients.
Methods: This systematic review and meta-analysis was conducted according to the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The PubMed, Medline, Embase, Cochrane Library and Web of Science databases were searched up to March 2020. Only English-language publications of randomized controlled trials (RCTs) that investigated the efficacy of PARPis as maintenance treatment after platinum-based chemotherapy in patients with newly diagnosed advanced ovarian cancer were selected for this analysis. All data syntheses and analyses were performed using RevMan 5.3 software (Cochrane Collaboration; Oxford, UK). For progression-free survival (PFS), pooled hazard ratios (HR) with 95% confidence intervals (CIs) were calculated and for the incidence of grade 3 or higher adverse events, we calculated pooled risk ratio (RR) with 95% CI. Statistical heterogeneity was assessed using both the I^2 and chi-square tests. In cases of I^2 being larger than 50%, a random-effect model was used, otherwise a fixed-effect model was used.
Results: Four RCTs for a total of 2687 patients were selected and included in the final analysis. In the overall population, all four studies with a total number of 2687 patients (1666 PARPis and 1021 placebo) were included. It showed the use of maintenance therapy with PARPis resulted in a statistically significant improvement in PFS among the whole population regardless of BRCA mutation status and HRD status (HR = 0.53; 95% CI = 0.40, 0.71; $p < 0.0001$), but heterogeneity was observed ($I^2 = 86\%$; $p = 0.0001$). All four RCTs of 1051 patients (677 PARPis and 374 placebo) evaluated the PFS in BRCA mutated subgroup. The benefit of PARPis on PFS in BRCA mutated patients was significant (HR = 0.35; 95% CI = 0.29, 0.42; $p < 0.00001$), heterogeneity was not observed ($I^2 = 0\%$; $p = 0.46$). In addition, a total of three studies involving 1467 patients (889 PARPis and 578 placebo) analyzed PFS in the subgroup of women without BRCA mutations. It also showed that PARPis provided a significant PFS benefit in patients with nonmutated BRCA (HR = 0.72; 95% CI = 0.63, 0.82; $p < 0.00001$). There was no obvious heterogeneity among the studies ($I^2 = 0\%$; $p = 0.39$). Besides, we identified three studies involving 1181 patients (716 PARPis and 465 placebo) with HRD positivity for analysis of PFS and the results indicated that PARPis was associated with significantly greater PFS in HRD-positive patients (HR = 0.43; 95% CI = 0.32, 0.60; $p < 0.00001$). But heterogeneity was observed ($I^2 = 70\%$; $p = 0.03$). Finally, the PFS analysis in HRD-negative patients was based on three trials, 775 patients (486 PARPis and 289 placebo). Even in this subgroup, the results indicated that the PFS of PARPis was significantly greater than of the placebo (HR = 0.83; 95% CI = 0.70, 0.99; $p = 0.04$). And there was little heterogeneity among the studies ($I^2 = 33\%$; $p = 0.22$). Grade 3 or higher adverse events were more common in the PARPis arm (RR = 1.75; 95% CI = 1.05, 2.93; $p = 0.03$), but few patients discontinued therapy.
Conclusions: PARPis are effective as maintenance therapy among patients with newly diagnosed advanced ovarian cancer after platinum-based chemotherapy, regardless of BRCA mutation or HRD status. The greatest magnitude of benefit was in women with BRCA mutations, followed by those with HRD-positive tumors. Furthermore, the PFS benefit of PARPis was also seen in patients without BRCA mutations, and even in HRD-negative subgroup.

PO-352
卵巢癌特异性荧光抗体探针近红外荧光成像的研究

陈俊臣,张琛,郭延秀,昌晓红,马瑞琼,程洪艳,叶雪,李艺,崔恒
北京大学人民医院

目的:为了满足临床需要，荧光导航手术已成为一种新的技术，外科医生在手术中通过显影肿瘤病变切除癌组织。我们的目的是评估新型卵巢癌特异性抗体荧光探针 COC183B2-800 近红外荧光成像是否可以指导帮助外科医生切除恶性病变。
方法:采用免疫组织化学技术检测OC183B2抗原在上皮性卵巢癌组织和细胞系中的表达。采用Western blot 技术检测 OC183B2 在 SKOV3-Luc 肿瘤中的表达。将 COC183B2 抗体和小鼠免疫球蛋白 IgG1 偶联 IRDye800CW 荧光染料，构建 COC183B2-800 和 IgG-800 抗体荧光探针。建立 SKOV3-Luc 裸鼠皮下肿瘤模型。生物发光成像检测肿瘤位置。小鼠尾静脉注射显影剂后进行近红外荧光成像。96 小时后处死小鼠，近红外荧光成像进行荧光探针生物分布测定。
结果:69 例上皮性卵巢癌患者组织中 OC183B2 总阳性率为 89.9%(62/69)。OC183B2 抗原在 SKOV3-Luc、3AO、ES2 和 A2780 细胞中呈阳性。SKOV3-Luc 肿瘤中可以检测到 OC183B2 抗原。不同剂量 COC183B2-800 探针近红外荧光成像肿瘤部位均显示高荧光信号，肿瘤显影部位与生物发光成像检测到的位置一致。肿瘤背景比 (TBR)在 COC183B2-800 组显著高于 IgG-800、IRDye800CW 和 PBS 组。荧光探针 COC183B2-800 主要通过肝脏代谢，不会在其他器官中积累。
结论:COC183B2-800 对上皮性卵巢癌具有有效的肿瘤特异性靶向作用，是一种有前途的荧光导航手术诊断和治疗工具。

PO-353
在未行全面分期的早期上皮性卵巢癌患者中腹腔镜再分期手术的安全性和肿瘤预后分析

王永学,潘凌亚
中国医学科学院北京协和医院

研究目的：早期上皮性卵巢癌发病率低，部分患者在初次治疗时没有接受全面的分期手术。本研究的目的是探讨在未行全面分期的早期上皮性卵巢癌患者中腹腔镜再分期手术的可行性以及对肿瘤预后的影响。
材料与方法：本研究回顾性纳入 2010 年至 2017 年间在北京协和医院妇产科进行在再分期手术的早期上皮性卵巢患者。按照再分期手术方式的不同将患者分为腹腔镜组和开腹组。比较两组患者再分期手术的相关因素，用 Kaplan-Meier 法比较两组的无进展生存期；运用 COX 回归分析方法比较影响无进展生存期的因素。
结果：研究共纳入 157 例患者，中位年龄为 38 岁（18-69 岁）。腹腔镜再分期组为 50（31.8%）例，开腹再分期组为 107（68.2%）例。病理类型包括透明细胞癌 47（29.9%）例，子宫内膜样癌 34（21.7%）例，粘液癌 48（30.6%）例，浆液性癌 25（15.9%）例，混合型癌 3（1.9%）例。两组患者年龄分布、BMI、初次手术方式、两次手术间隔时间、病理类型分布上均无统计学差异。腹腔镜组的手术时间（p=0.01）、术后住院时间(p=0.002)、术中出血量（p=0.000）明显低于开腹组。两组患者盆腔淋巴结和腹主动脉淋巴结的清扫数量无差异（p<0.05）。两组患者的术后 30 天内并发症发生率无差异（6% vs 9.3%，p=0.55）。完全分期后的手术病例分期为期别 IA 期 19 例，IC 期 120 例，II 期 10 例，III 期 8 例。再分期手术后 18 例患者分期提高，其中腹腔镜组为 5 例（10%），开腹组为 13 例（12.7%），两组无统计学差异（p=0.694）。

患者的中位随诊时间为 43.8 月（1.3-108.2 月），共有 13 例患者复发，其中腹腔镜组为 6 例，开腹组为 7 例。两组患者的 3 年无复发生存期分别为 85%和 92%，两组无统计学差异（p=0.26）。经 COX 风险回归分析，腹腔镜手术不影响患者的无复发生存期（HR=1.69，95% CI 0.54-5.31，p=0.36）。
结论：对于未进行全面分期的早期上皮性卵巢癌患者，腹腔镜再分期与开腹分期相比手术时间更短，术中出血更少，术后住院时间更短，不影响患者短期的肿瘤预后。

PO-354

在 HPV16 E6 表达剪接体状态下过表达 CCDC106 通过降解 TP53 促进宫颈癌细胞的增殖和迁移

智文华[1,2],曹灿晖[1,2],吴鹏[1,2]
1.华中科技大学同济医学院附属同济医院妇产科
2.华中科技大学同济医学院附属同济医院肿瘤生物医学中心（教育部重点实验室）

目的:之前的研究中我们发现 CCDC106 是一个 HPV 新的高频整合位点。我们发现在一例 HPV16 整合的宫颈癌样本中，HPV 整合到人基因 CCDC106 后 CCDC106 的表达升高，同时 HPV16 的癌基因 E6 的转录几乎全部转录为 E6 剪接体Ⅰ(E6*Ⅰ)形式，并且该样本中 TP53 呈低表达。既往研究发现 E6*Ⅰ不能降解 TP53，且其功能存在争议。本文主要探究高水平表达的 CCDC106 伴随 E6*Ⅰ存在对于 TP53 表达的影响，以及在宫颈癌发生中的作用。
方法:对 HPV-CCDC106 整合样本的 Hi-C 测序数据和 RNA-Seq 测序数据进行进一步分析。构建稳定表达 E6*Ⅰ的 SiHa-E6*Ⅰ的细胞系，在宫颈癌细胞系用 shRNA 干扰或慢病毒过表达 CCDC106，通过 CCK8 实验, 划痕， Transwell，流式分析等实验探究 E6*Ⅰ和 CCDC106 对宫颈癌恶性表型的影响,通过免疫荧光、免疫组化，免疫共沉淀、和 Western Blot 等实验分析 E6*Ⅰ、CCDC106 和 TP53 的关系；通过构建裸鼠皮下瘤模型进一步验证 E6*Ⅰ、CCDC106 对于肿瘤发生发展的影响。
结果:（1）在一例宫颈癌样本中 HPV16 整合到人基因 CCDC106 后 CCDC106 高表达，同时 HPV16 的 E6 癌基因几乎完全转录为 E6*Ⅰ，且该样本 TP53 呈低表达。（2）表达 E6*Ⅰ的 SiHa-E6*Ⅰ的 TP53 和 E-cadherin 表达水平上调，细胞增殖和迁移减慢；而宫颈癌样本中 CCDC106 表达水平与 TP53 负相关，且 CCDC106 通过降解 TP53 下调 TP53 水平进而促进宫颈癌增殖和迁移。（3）在 E6*Ⅰ同时存在的情况下，CCDC106 可降解 TP53 促进宫颈癌细胞恶性进展。（4）体内实验证实高水平的 CCDC106 在 E6*Ⅰ同时存在下，可以促进肿瘤增殖。
结论：宫颈癌中 CCDC106 和 TP53 的表达呈负相关且可促进 TP53 降解进而影响宫颈癌进展，而 E6*Ⅰ可阻止 TP53 降解。在 E6*Ⅰ的表达存在下，高水平 CCDC106 的表达依然可以有效下调 TP53 进而促进肿瘤进展。

PO-355

腹腔镜与经腹广泛性子宫切除术治疗早期宫颈癌的远期临床结局对比

王苗苗,郭玉,林丽红
安阳市肿瘤医院

目的：探讨腹腔镜与开腹行广泛性子宫切除两种不同手术方式治疗早期宫颈癌的远期临床疗效，为早期宫颈癌手术方式的选择提供依据。

方法：选取 2014.12-2015.12 安阳市肿瘤医院宫颈癌 IA2-IIA 期患者共 169 例，随机分为腹腔镜组与开腹组，其中腹腔镜组 42 例，经腹组 127 例，两组患者均实施广泛性子宫切除术+双附件切除+盆腔淋巴结切除术，对比两组术中手术时间、术中出血量、淋巴切除个数、术后排气排便时间、术后远期生存率及复发率。

结果：相对开腹组（171.15±32.8min），腹腔镜组需要更长手术时间（209.68±49.67min，结果存在显著统计学差异（p<0.05）；腹腔镜组术中出血量相对少于开腹组，结果存在显著统计学差异（腹腔镜组 164.74±14.7ml；经腹组 222.3±14.3ml，P<0.05）;腹腔镜组（2.6±0.4d）术后开始排气时间早于经腹组（3.2±0.5d），结果存在显著统计学差异（p<0.05）;两组切除淋巴的个数无统计学差异（腹腔镜组 22±7.9 个；经腹组 25±9.8 个，P>0.05）;总体平均随访时间 50.4±6.20 月，两组随访时间无显著统计学差异（腹腔镜组 49.9±4.5 月；经腹组 52.2±5.5 月，P>0.05）；经腹组与腹腔镜组生存率无显著统计学差异（腹腔镜组 97.5%；经腹组 94.1%，P>0.05）。经腹组与腹腔镜组复发率无显著统计学差异（腹腔镜组 2.5%；经腹组 5.9%，P>0.05）。

结论：与开腹手术相比，腹腔镜广泛性子宫切除术需要更长的手术时间，但具有术后较早排气时间、术中较少出血量等优势。在生存结局方面，腹腔镜广泛性子宫切除术并未显示存在远期更高的复发率和较低生存率等不足.因此，腹腔镜技术可用于早期宫颈癌的治疗。

PO-356
DNA 甲基化检测在宫颈癌及癌前病变人群筛查中分流价值的研究——一项基于中国人群的多中心研究

周冠楠[1],顾圆圆[2],汪清[1],丁景新[1],华克勤[1]
1.复旦大学附属妇产科医院
2.上海市长宁区妇幼保健院

目的：分析由 EPB41L3、HPV16L1.3、HPV16L2、HPV18L2、HPV31L1 和 HPV33L2 组成的 S5 甲基化评分与宫颈病变的关系，同时探究 S5 甲基化检测适合中国人群的最佳 cutoff 值及其在宫颈癌及癌前病变筛查中的敏感性和特异性。通过探究 S5 甲基化在降低非必需阴道镜诊中的作用，结合随访结果，分析 S5 甲基化在优化宫颈癌筛查方案中的作用。

方法：自 2017 年 12 月至 2018 年 11 月期间在复旦大学附属妇产科医院等三所医院妇科门诊进行常规宫颈癌筛查，年龄为 27-70 岁，门诊筛查结果为 HPV16/18+和/或细胞学异常 TCT≥HSIL+且接受阴道镜检查有明确病理检查结果的，588 例宫颈细胞标本，进行 S5 甲基化检测。分析 S5 甲基化评分与宫颈病变程度的关系，并确定 S5 甲基化检测的最适 cutoff 值，比较门诊筛查异常但阴道镜病理结果≤LSIL 患者中 S5 甲基化的评分情况。在阴道镜术后 1 年随访病理结果为宫颈病变≤LSIL 患者的 LCT 及 HPV 结果。探究 S5 甲基化在优化宫颈癌及其癌前病变筛查中的作用。

结果：S5 甲基化评分随宫颈病变程度的加重而升高。在针对中国人群中 HSIL+/LSIL-患者中分类诊断中，S5（cutoff = 2.85）具有较高的敏感性和特异性。门诊筛查≥HSIL+而阴道镜病理＜（His）HSIL 的患者中，70%（67/91）-79%（59/75）为 S5 甲基化阴性。阴道镜检查后 1 年的随访数据表明 S5 甲基化有助于预测宫颈病变的进展。

结论：S5 甲基化评分随宫颈病变程度的加重而升高。在针对中国人群中 HSIL+/LSIL-患者中分类诊断中具有较高的敏感性和特异性。S5 甲基化检测联合现有筛查方案具有减少非必需阴道镜转诊的潜在价值， 同时对宫颈病变的进展有较好的临床预测价值。

PO-357

外泌体与卵巢癌耐药关系的研究进展

周冠楠[1],顾圆圆[2],周方玥[1],沈方[1],张梦蕾[1],华克勤[1],丁景新[1]
1.复旦大学附属妇产科医院
2.上海市长宁区妇幼保健院

卵巢癌是女性生殖系统中恶性程度最高的肿瘤，目前化疗是其主要治疗方法之一，然而化疗药物的长期使用通常会引起卵巢癌的耐药性，从而导致治疗的失败。卵巢癌耐药机制及逆转耐药策略抑制是卵巢癌治疗研究的热点。外泌体是由细胞分泌的直径为 40-100nm 的球形囊泡，其携带多种生物活性分子（如 DNA、非编码 RNA、蛋白质等）调控多种生理和病理活动。本文就外泌体与卵巢癌耐药的关系及其机制进行综述，以期促进为卵巢癌耐药的预防和治疗提供新思路。

PO-358

Au25 纳米团簇在卵巢癌手术导航中的应用

辛琪,毕新春,刘贵秋,田灿,任美静
天津市第三中心医院

目的：在手术过程中能够看到卵巢癌的完整范围，包括区域转移扩散和显微镜下的病灶，对治疗结果有重要的影响。但目前妇科医生主要依靠触诊和目视检查。肿瘤特异性的术中荧光成像可以改善肿瘤细胞减灭术的分期和减瘤效果。在这里，我们报道了在近红外二区窗口(the second near-infrared window，NIR-II，波长 1000-1700nm)发射下的具有原子精度的纳米团簇 Au25，以改进图像引导下的转移性卵巢癌手术。
方法：合成 Au25 纳米团簇并进行表征，进行了在 PBS、胎牛血清中的稳定性试验，生物安全性试验和毒理学试验；小鼠皮下成瘤后，尾静脉注射 Au25 纳米团簇，在 NIR-II 荧光生物成像的肿瘤描绘效果通过 MRI 和组织病理学分析进一步评估。
结果：Au25 纳米团簇的 NIR-II 成像质量优于临床认可的 ICG，具有良好的光稳定性和深度组织穿透(8mm)。可以准确描绘肿瘤边缘和肿瘤，可以精确地切除肿瘤。肿瘤组织/正常组织比值明显提高，有利于腹部卵巢转移瘤的外科勾画。苏木精和伊红染色的组织学分析证实，在 NIR-II 荧光生物成像指导下，1mm 的转移灶可以被完全切除。
结论：这项新技术为未来妇科肿瘤手术提供了一个新的方向。

PO-359

两种临床常用 HPV 分型检测方法的结果比较及方法学评价

黄姗
贵州医科大学附属医院

摘要：目的 对两种临床常用的 HPV 分型筛查方法 PCR-电化学基因芯片法及荧光 PCR 法的检测结果进行比较分析，评价两种检测试剂盒的诊断效能及临床应用价值。**方法** 收集贵州医科大学附属医院临床检验中心 2019 年 6 月至 2019 年 9 月宫颈脱落细胞样本，分别以荧光 PCR 法和 PCR-电化学基因芯片法检测试剂盒进行检测，并且以 Sanger 测序法作为参考方法，评价两种方法的诊断效能，以及二者与参考方法结果的一致性。**结果** 共收集 309 例有效样本。PCR-电化学基因芯片法与荧光 PCR 法的敏

感性、特异性、阳性预测值、阴性预测值和约登指数分别为前者 98.44%、100%、100%、92.86%和98.44%，后者 100%、98.08%、99.61%、100%和 98.08%。两种方法与 Sanger 测序法检测结果的一致性均好（Kappa 值分别为 0.955 和 0.988，P 值均小于 0.001）。**结论** 两种 HPV 检测方法相比，PCR-电化学基因芯片法特异性更强、阳性预测值更高，而荧光 PCR 法更敏感、阴性预测值更高。两种方法的检测结果与 Sanger 测序法结果均具有高度一致性，在临床 HPV 分型诊断和治疗监测中具有较高的应用价值。

PO-360
HPV 整合在宫颈癌发生发展中的作用及其研究现状

智文华[1,2],吴鹏[1,2]
1.华中科技大学同济医学院附属同济医院妇产科
2.华中科技大学同济医学院附属同济医院肿瘤生物医学中心（教育部重点实验室）

目的：约有 5%的人类癌症是由高危型人乳头瘤状病毒（HPV）引起的。高危型 HPV 已被认为是宫颈癌的一个必要病因，超过 99%的宫颈癌病例已发现高危人乳头瘤病毒感染。HPV 整合到宿主基因组是 HPV 导致宫颈癌发生的关键步骤。近年来，关于 HPV 整合的机制及其宿主基因组的影响的研究层出不穷，尤其是由于测序技术的进步和生物信息学的发展，更加促进了我们对病毒整合的理解。本文主要整理了 HPV 整合在宫颈癌中的研究现状，以便于更好理解 HPV 整合对于宫颈癌发生的作用。
方法：通过在 PubMed、Web of Science 等数据库搜索“HPV 和宫颈癌”、“病毒整合”、“HPV 整合”等关键词查询相关文献，进行文献筛选，阅读分析，整合最新相关的研究，对过去的 HPV 整合的相关研究数据、资料、主要观点进行回顾、归纳整理、分析。
结果：（1）新一代测序技术促进 HPV 整合的研究；（2）HPV 整合导致宿主基因组不稳定改变；（3）HPV 整合导致人基因表达变化；（4）HPV 整合后人基因表达变化的机制需进一步研究。
结论：HPV 整合在癌症发展过程中是关键的。HPV 整合促进宫颈癌的发生机制是复杂的，HPV 整合导致宿主基因组不稳定性，整合位点附近关键基因的表达发生变化，且其变化机制需要进一步的探索，TCGA 等数据库中已经有大量的宫颈癌中 HPV 整合的数据可供分析，但高质量多组学的配对样本数据，尤其 DNA 样本和 RNA 样本配对数据的数量还需要进一步补充。

PO-361
I 期卵巢黏液癌患者保留生育功能治疗的肿瘤及妊娠结局

林蔚,曹冬焱
中国医学科学院北京协和医院

目的：探讨 I 期原发性卵巢黏液癌（mucinous ovarian carcinoma, MOC）患者接受保留生育功能手术（fertility-sparing surgery, FSS）的肿瘤及妊娠结局。
方法：回顾性分析 1996 年至 2019 年在我院诊治的 I 期原发性 MOC 患者的临床病理资料及随访信息。FSS 的定义为保留子宫、至少一侧输卵管和至少部分同侧卵巢。对比 FSS 组与广泛性手术（radical surgery, RS）组的肿瘤及妊娠结局。电话随访 FSS 组患者以了解其月经情况和生育结局。
结果：共纳入 162 例患者，FSS 组 79 例，RS 组 83 例；IA 期 55 例，IC 期 107 例。与 RS 组相比，FSS 组患者更年轻（中位诊断年龄 24 岁，P<0.001）、未产比例更高（83.5%, P<0.001）、肿瘤径线更大（中位 18cm, P=0.037）、接受一线化疗比例更低（55.7%, P=0.042）。两组的术前 CA125 水平、分期和全面分期手术比例无差异。FSS 组中，9 例行单侧附件切除术；70 例行全面分期手术，其中 55 例（78.6%）为再分期手术。中位随访时间 61.5 个月（6-240 个月），FSS 组和 RS 组各有 12 例

（15.2%）和 7 例（8.4%）复发，中位复发间隔分别为 14 个月和 41 个月；共有 4 例死于 MOC。5 年无病生存率和总体生存率分别为 87.4%和 98.6%。复发的 FSS 组患者中，复发部位以对侧卵巢居多（66.7%）；所有患者复发后均行手术治疗，11 例（91.7%）接受化疗；截止末次随访，7 例带瘤生存，3 例无瘤存活，2 例死于 MOC。单因素分析提示 FSS 组和 RS 组的 DFS 和 OS 无显著性差异。多因素分析发现术前 CA125 异常（P=0.005）、IC 期（P=0.014）以及未行全面分期手术（P=0.003）为 DFS 的独立预后因素。在 FSS 组中，初次手术分期者与接受再分期手术者的 DFS 无显著性差异。24 例患者术后有生育计划，其中 21 例患者共妊娠 26 例次，妊娠率 87.5%。19 例患者共分娩 23 例次，活产率 88.5%，其中足月分娩 20 例次（阴道分娩 19 例次，剖宫产分娩 1 例次），早产 3 例次（均为剖宫产分娩）；中期利凡诺引产 2 例次；尚未分娩者 1 例次。

结论：年轻的 I 期 MOC 患者可选择保留生育功能，不影响预后，且妊娠结局较好。初次手术仅行囊肿剔除或单侧附件切除者应接受再分期手术。

PO-362

Re-evaluation and simplification of risk factors in FIGO 2000 scoring system for gestational trophoblastic neoplasia: A 19-year retrospective analysis

旸 Weng,Yuanyuan Liu,Xiaodong Wu,Sangsang Tang,Xiameng Shen,Chen Lili,Xiao Li,Xing Xie,Weiguo Lu
Women's Hospital， School of Medicine， Zhejiang University

Objective: The purpose of this study is to re-evaluate the efficacy of risk factors in predicting single-agent chemoresistance and explore the feasibility to simplify the FIGO 2000 scoring system. **Methods**: The clinical data of 578 GTN patients who received chemotherapy between January 2000 and December 2018 were retrospectively reviewed. Univariate and multivariate logistic regression analyses were carried out to identify risk factors associated with the single-agent chemoresistance in low-risk GTN patients. Simplified models were built and compared with the original FIGO 2000 scoring system. **Results**: Of the eight FIGO risk factors, univariate and multivariate analyses identified pretreatment serum hCG level and interval from antecedent pregnancy were independent predictors for both first-line and sequential single-agent chemoresistance consistently. The simplified model with two independent factors showed a better performance in predicting single-agent chemoresistance than the model with the other four non-independent factors. However, the addition of other co-factors did improve the efficiency, and the original FIGO 2000 prognostic system owned the highest discrimination. **Conclusion**: Pretreatment serum hCG level and interval from antecedent pregnancy were independent predictors for both first-line and sequential single-agent chemoresistance and showed greater weight than other non-independent factors in predicting single-agent chemoresistance. The simplified system composed of merely independent factors is still insufficient to substitute the original FIGO 2000 prognostic system with preserving comparable performance.

PO-363

卵巢癌细胞活化网膜微血管内皮促进网膜转移的研究

应菲全,郭婧,王泽华
华中科技大学同济医学院附属协和医院

研究背景：上皮性卵巢癌是最致命的妇科恶性肿瘤，约占所有卵巢癌的 90%。卵巢癌的播散转移是卵巢癌预后不良的主要原因。上皮性卵巢癌具有早期转移的倾向，并呈现腹腔播散性种植和网膜浸润转

移。然而卵巢癌网膜转移的原因和具体机制尚不明确。血管新生是肿瘤的重要特点之一，内皮细胞是血管新生的重要参与者。有证据表明内皮细胞在多种肿瘤的进展过程中发挥重要功能，但是目前内皮细胞在卵巢癌网膜转移中的作用尚不明确 。**研究方法：**免疫组化分析不同网膜转移情况的卵巢癌病人网膜组织中 CD34 阳性和内皮糖蛋白阳性的微血管密度的差异。组织免疫荧光检测网膜组织中微血管内皮的细胞标志物 VE-CAD 和活化标志物 α-SMA。利用裸鼠卵巢原位移植瘤模型，分析比较不同组裸鼠转移前网膜微血管密度的差异。利用体外细胞实验检测癌细胞培养上清对病人来源的网膜微血管内皮细胞生物学功能和蛋白表达的影响。转录组测序分析高转移癌细胞和其亲本细胞株的基因差异表达。并探究癌细胞活化内皮细胞的具体机制。**研究结果：**卵巢癌病人有转移的网膜较未发生转移的网膜微血管密度显著增加，且 VE-CAD+网膜微血管 α-SMA 的表达增加。高转移性卵巢癌细胞原位移植瘤促进裸鼠网膜血管新生的能力更强。和亲本细胞相比，高转移细胞的培养上清体外促进网膜微血管内皮细胞增殖、迁移、侵袭和成管的能力均显著增强。并影响内皮细胞蛋白标志物的表达。转录组测序结果提示 ADAMTS2 基因在高转移性卵巢癌细胞中高表达。下调 ADAMTS2 的表达水平可以抑制高转移癌细胞对内皮细胞的活化作用。**研究结论：**卵巢癌可以通过分泌蛋白的方式促进网膜血管内皮活化和血管新生，形成有利于肿瘤生长转移的微环境，从而促进肿瘤的进展。这种活化作用可能是通过分泌 ADAMTS2 介导的。

PO-364

青年宫颈癌术后幸存者盆底功能障碍与盆底肌锻炼自我效能相关性分析

马丽丽[1],辛春艳[2],马静[1],苏建萍[1],叶金婵[1]
1.新疆医科大学
2.新疆医科大学第三临床医学院

目的 探讨青年宫颈癌术后幸存者盆底功能障碍与盆底肌锻炼自我效能水平，并分析两者之间是否存在相关性。**方法** 以 2020 年 1 月－2020 年 7 月在新疆地区某三级甲等肿瘤专科医科妇科肿瘤病区收治的 105 例青年宫颈癌术后幸存者为研究对象，采用问卷调查收集所有研究对象的年龄、住址、民族、婚姻状况、病理分期等临床资料以及盆底功能障碍与盆底肌锻炼自我效能评分情况，分析青年宫颈癌术后幸存者盆底功能障碍与盆底肌锻炼自我效能水平之间的相关性。**结果** 105 例青年宫颈癌术后幸存者盆底功能障碍平均得分为（19.01±23.01）分，盆底肌锻炼自我效能得分为（103.11±26.06）分；盆底肌锻炼自我效能中除了预期结果与盆底功能障碍中的排便功能障碍维度不具有相关性（P＞0.05），其余各维度之间均具有相关性（P＜0.05），盆底肌锻炼自我效能水平可以独立解释盆底功能障碍变异的 2.5%。**结论** 青年宫颈癌术后幸存者术后盆底功能障碍与盆底肌锻炼自我效能水平成正相关，因此医护人员应当结合青年宫颈癌术后幸存者术后常见的盆底并发症和独特心理信念，制定全方位综合护理干预策略，通过促进盆底肌锻炼自我效能水平的提升来预防或减轻盆底功能障碍的发生。

PO-365

125 例子宫肉瘤患者临床分析

阿依坚乃提·阿卜来提,马焱,尹俊,李莉
新疆医科大学附属肿瘤医院

[摘要]：目的：探讨子宫肉瘤发病的相关因素和临床特征，以及子宫肉瘤的预后影响因素。方法：回顾性分析新疆医科大学附属肿瘤医院妇科 2010 年 1 月-2017 年 1 月病理确诊为子宫肉瘤患者 125 例，收

集患者临床资料并进行随访，评估预后，随访终止日期为 2018 年 12 月 30 日。对其临床资料进行描述性统计和预后相关性分析，探讨其预后影响因素。结果：对子宫肉瘤患者预后影响因素进行单因素分析显示:患者年龄(P=0.014)、术前 CA125＞35(P=0.023)、淋巴结转移(P=0.000)、FIGO 分期(P=0.000)、肿瘤最大直径(P=0.000)、病理类型(P=0.000)是影响子宫肉瘤患者生存时间的相关因素。Cox 多因素分析，FIGO 分期高(OR= 2.433，95%CI 1.104-5.360，P=0.018)、肿瘤最大直径(OR=1.242，95%CI 1.007- 1.532，P=0.016)、病理类型(OR=2.157，95% CI 1.582-3.179，P=0.000)是影响子宫肉瘤预后的独立因素。结论：年龄≤50 岁的未绝经，肿瘤直径＞5cm 的子宫肌瘤患者应引起高度重视，术前利用 MRI、宫腔镜检查尽可能排除恶性可能性。FIGO 分期高、肿瘤最大直径及病理类型是影响子宫肉瘤预后的独立因素。

PO-366
TIM-3 基因基因多态性和表达与上皮性卵巢癌患者临床预后相关

吴建磊,张海波,赵健,李琰,康山
河北医科大学第四医院

研究目的：T 细胞免疫球蛋白和含有粘蛋白结构域分子 3（TIM-3）基因多态性与癌症风险和患者的生存有关，本研究旨在研究 TIM-3 基因多态性与上皮性卵巢癌（EOC）的易感性及患者临床预后的关系。
材料与方法：收集华北地区 700 名 EOC 患者和 710 名健康对照者的静脉血，采用经典苗勒法提取 DNA；使用聚合酶链反应/连接酶检测反应（PCR-LDR）方法对 TIM-3 基因三个位点（rs10053538，rs10515746 和 rs1036199）进行基因分型，并对术后随访满 5 年的 339 例患者的生存数据进行分析，确定 TIM-3 基因多态性与 EOC 易感性及患者临床预后的关系。收集已明确 TIM-3 基因型的卵巢癌组织 93 例，通过实时定量 PCR（RT-qPCR）检测不同基因型组织中 TIM-3 的表达水平，确定 TIM-3 基因多态性多 TIM-3 mRNA 表达的影响。使用 Kaplan-Meier Plotter 数据库评估 TIM-3 在 EOC 患者中的预后价值。
结果：TIM3 基因 rs10053538，rs10515746 和 rs1036199 基因多态性与发生 EOC 的风险无关（P＞0.05）。携带 rs10053538 CA + AA 基因型患者的 PFS 和 OS 均比携带 CC 基因型患者更差（中位 PFS：19 VS 13 月，HR=1.49，95％CI= 1.05-2.09，P= 0.024；中位 OS：44 VS 27 月，HR = 1.57，95％CI = 1.09-2.26，P= 0.017）；rs10515746 和 rs103619 与患者预后无关（P＞0.05）。RT-qPCR 结果显示，携带 rs10053538CA + AA 基因型的 EOC 组织中 TIM-3 mRNA 的表达水平显着高于 CC 基因型（3.58 VS 1.02，P=0.006），携带 rs10515746 不同基因型组织的 TIM-3 mRNA 的表达水平无差异（P＞0.05）；使用 Kaplan-Meier Plotter 数据库进行的分析表明，TIM-3 mRNA 的高表达与 EOC 患者差的 PFS 和 OS 显著相关（中位 PFS:12 VS 20 月，HR = 1.57，95％CI = 1.29-1.91，P＜0.001；中位 OS：39 VS 50 月，HR = 1.31，95％CI = 1.06-1.63，P = 0.013）。
结论：TIM-3 多态性与发生 EOC 的风险无关。rs10053538 和 TIM-3 mRNA 的表达水平可能与其 EOC 患者的临床预后有关。

PO-367
MEK 抑制剂在肿瘤中的研究及应用情况

刘陈,陆富年
同济医院

摘要： Ras/Raf/MEK/ERK 通路的异常激活发生在超过 30%的人类癌症中。作为该通路的一部分，MEK1 和 MEK2 在肿瘤发生、细胞增殖和抑制凋亡中起着重要作用。因此，抑制 MEK1/2 是一种很有

吸引力的治疗策略。许多临床研究已经开发和评估了高选择性和强效的非 ATP 竞争性变构 MEK1/2 抑制剂，但临床疗效不足和耐药现象等限制了其进一步发展。 MEK1/2 抑制剂与细胞毒化疗和/或其他靶向药物的组合，以扩大这类药物的疗效，成为了科研工作者新的研究方向。

PO-368
靶向 PRC2 增加卵巢癌对铂药和 PARP 抑制剂敏感性的研究

王文文,蔡晶,王泽华
华中科技大学同济医学院附属协和医院

目的：多梳抑制复合体 2（PRC2）通过组蛋白甲基转移酶 EZH2 介导的组蛋白甲基化 H3K27me3 抑制基因表达。本研究旨在探究 PRC2 促进 DNA 双链损伤修复参与卵巢癌化疗耐药的作用与机制，并阐明非同源重组修复缺陷卵巢癌中 PRC2 抑制剂对顺铂和 PARP 抑制剂的增敏作用
方法：1. 顺铂刺激上皮性卵巢癌细胞系蛋白免疫印记实验（WB）检测双链损伤标记物 P-H2AX 及组蛋白修饰标记物 H3K27me3、H3K4me3、H3K9me3、H3K36me3、H3K56ac、H3K36me2、H3K9me2，EZH2 随着药物作用时间的的变化。 免疫共沉淀(Co-IP)检测双链损伤位点 P-H2AX 上 H3K27me3、H3K4me3、H3K9me3、H3K36me3、H3K56ac 、H3K36me2、H3K9me2、EZH2 的结合及富集。
2. 免疫荧光检测 P-H2AX 评估卵巢癌细胞中 PRC2 的抑制对顺铂介导的 DNA 双链损伤的影响。
3. 流式细胞术检测 DR-GFP 质粒报告系统，评估 PRC2 功能对同源重组修复的影响 。
4 .流式细胞凋亡和克隆形成实验检测 PRC2 抑制剂 GSK126 对 cDDP 单药以及 cDDP 联用 PARPi 化疗的增敏作用；单用 GSK126 和 GSK126 联合 PARPi 对卵巢癌细胞的杀伤作用。
5. SKOV3 细胞系建立小鼠皮下移植瘤模型，成瘤后的裸鼠随机分为四组：（1）cDDP+溶剂对照（2）cDDP+GSK126（3）cDDP+ PARPi（4）cDDP+ PARPi +GSK126，监测瘤径、小鼠体重；评估不同药物联用的肿瘤生长抑制作用及药物的毒副作用。
6. 免疫组织化学染色（IHC）检测裸鼠瘤组织内 EZH2、Ki67（核增殖抗原）、Cleaverd-caspase3（凋亡蛋白）、H3K27me3，评估药物联用对移植瘤细胞增殖和凋亡的影响。
结果：1.组蛋白甲基化参与顺铂介导的 DNA 损伤反应
2.抑制 PRC2 降低卵巢癌同源重组修复增加双链损伤。
3.抑制 PRC2 可增加非同源重组修复缺陷型卵巢癌对顺铂和 PARPi 的敏感性。
结论：抑制 PRC2 功能可以降低卵巢癌同源重组修复功能，促进损伤积累，进而增加非同源重组修复缺陷的卵巢癌对顺铂和 PARP 抑制剂的敏感性。

PO-369
培美曲塞二钠治疗复发性上皮性卵巢癌的回顾性研究

吴艳梅[1],李洁[2],姜洁[2]
1.山东省妇幼保健院
2.山东大学齐鲁医院

目的：评估培美曲塞二钠在复发性上皮性卵巢癌、输卵管癌及原发性腹膜癌中的化疗疗效及相关副反应。
方法：搜集 2015 年 1 月至 2019 年 12 月在山东大学齐鲁医院接受培美曲塞二钠化疗的复发性上皮性卵巢癌（包括上皮性输卵管癌和原发性腹膜癌）患者，所有患者在应用含培美曲塞二钠的静脉滴注化疗方案治疗期间均给予叶酸补充治疗，若出现严重副反应可通过调整剂量或延长化疗周期以减轻毒副反

应，若出现疾病进展则换用其他化疗方案。化疗结束后观察培美曲塞二钠化疗方案在上皮性卵巢癌中的疗效，随访其无进展生存期、总生存期以及化疗副反应。

结果：共搜集病例 96 例，完成化疗周期 340 个周期（中位化疗周期 3 周期，范围 1~9 周期），总应答率（ORR）为 32.3%（31/96），其中完全缓解 16 例（16.67%），部分缓解 15 例（15.62%）；29 例（30.21%）患者疾病稳定，疾病控制率（DCR）为 62.5%（60/96）； 36 例（37.5%）患者出现疾病进展。共搜集到铂敏感复发患者 28 例，其 ORR 为 42.85%（12/28），其中完全缓解患者 9 例，部分缓解患者 3 例；搜集到铂耐药复发患者 68 例，7 例（10.29%）患者完全缓解，12 例（17.65%）患者部分缓解，ORR 为 27.94%（19/68），两种患者 ORR 无统计学差异（42.85%vs. 27.94%，P=0.16）。铂敏感复发卵巢癌患者及铂耐药复发卵巢癌患者的中位无进展生存期分别为 3.52 月和 2.97 个月（P=0.06），差异无统计学意义。铂敏感患者及铂耐药患者的中位总生存期分别为 36 个月和 18 个月（P=0.01），差异有统计学意义。在铂敏感复发的卵巢癌患者中，培美曲塞二钠联合各种铂类的化疗方案的 ORR 未见明显差异。在铂耐药的卵巢癌患者中，培美曲塞二钠联合奈达铂或奥沙利铂的疗效优于其单药或联合洛铂的化疗方案（ORR 分别为 61.54% 、29.41%、20%、11.11%）。所有患者毒副反应均较轻微，均未出现药物相关死亡，最常见的副反应为骨髓抑制、胃肠道反应及肝毒性，以 1 度及 2 度毒副反应最常见。3 度及以上的白细胞减少、粒细胞减少及血小板减少的发生率分别为 4.41%、6.47%、1.18%。

结论：培美曲塞二钠在复发性上皮性卵巢癌化疗中有一定的疗效，其毒性反应轻微，通过对症支持治疗均可缓解，因此培美曲塞二钠是复发性卵巢癌的可选化疗药物。

PO-370

CDKN3 在宫颈癌中的表达及临床意义

郑乐
辽宁省肿瘤医院

摘要：目的: 探讨细胞周期蛋白依赖性激酶抑制因子 3（Cyclin-dependent kinase inhibitor 3，CDKN3）在宫颈癌中的表达及临床意义。**方法:** 采用免疫组化 SP 法检测 60 例宫颈癌、30 例宫颈原位癌、30 例正常宫颈组织中 CDKN3 的表达情况并分析其与宫颈癌临床病理因素之间的关系；蛋白质免疫印迹法检测 20 例新鲜早期宫颈癌组织及配对宫颈癌旁组织的蛋白表达水平。**结果：**免疫组化结果显示 CDKN3 在宫颈癌组织中的阳性表达较其它各组明显升高（P<0.05）。CDKN3 在宫颈癌组织中的表达与年龄、分化程度、组织学分型无关(P>0.05)，随着临床分期的进展，CDKN3 阳性表达率呈上升趋势(P<0.05)；蛋白质免疫印迹检测结果提示 CDKN3 在早期宫颈癌中的表达水平高于癌旁组织，差异具有统计学意义(P<0.05)。**结论:** CDKN3 在宫颈癌中的表达水平与其进展呈正相关，在宫颈癌发生发展的过程中发挥致癌基因作用，有望成为预测宫颈癌发生发展、靶向治疗及判断患者预后的新的参考指标。

PO-371

DNA 错配修复状态与卵巢透明细胞癌患者临床病理特点分析

刘倩,周慧梅,杨佳欣,师晓华
中国医学科学院北京协和医院

【目的】探讨 DNA 错配修复（MMR）状态与卵巢透明细胞癌患者临床病理特征及预后的相关性。
【方法】随机入组了卵巢上皮性肿瘤 36 例，其中透明细胞癌（OCCC）24 例，高级别浆液性癌 12 例（HGSC）， Nanostring 法分别检测了两种类型肿瘤组织中 MLH1、MSH2、MSH6 的差异表达情况；将 24 例 OCCC 进一步分组，其中预后较好者 12 例（G），预后差者 12 例（P）。Nanostring 法检测

了两组患者肿瘤组织中 MLH1、MSH2、MSH6 的差异表达情况；采用免疫组化法检测 OCCC 肿瘤组织及癌旁组织 MLH1、MSH2、MSH6 和 PMS2 蛋白表达情况。
【结果】HGSC 组 MSH6 基因表达高于 OCCC 组，差异有统计学意义（P=0.01）。OCCC 组 MLH1 基因表达高于 HGSC 组（P=0.0221），差异有统计学意义。两组 MSH2 基因表达无明显差异。预后较好的 OCCC 组（G 组）与预后较差的 OCCC 组（P 组）比较，三种基因表达均无明显差异；为进一步验证在 OCCC 中 MMR 蛋白表达情况，行免疫组化检测，结果提示 92.3%（36/39）的患者为 pMRR，7.69%（3/39）的患者为 dMRR，dMMR 患者平均随诊 19.3 月，无复发及死亡病例。
【结论】卵巢透明细胞癌与高级别浆液性癌 MSH6 及 MLH1 基因的表达有差异，表明两种亚型肿瘤在起源上可能不同。dMRR 的透明细胞癌患者截止随诊日期预后较好，考虑 dMMT 可能为透明细胞癌肿瘤发生的早期事件。

PO-372
The Clinical Outcomes of Borderline Ovarian Tumor with an Emphasis on Pregnancy and Recurrence

Yue Zhang[1,2],Kun Song[1,2]
1.ShanDong University
2.Qilu Hospital of ShanDong University

Purpose: To evaluate the clinical outcomes of borderline ovarian tumor (BOT) patients, including pregnancy rate, progression-free survival (PFS), and overall survival (OS) and to assess related risk factors.
Method: We retrospectively reviewed 164 patients with BOT diagnosed and treated at Qilu Hospital of Shandong University between January 2005 and December 2015. Statistical analysis was constructed to evaluate the risk factors and statistical significance. Kaplan-Meier estimates were used to assess the PFS and OS.
Results: The median postoperative follow-up was 41 months. The total pregnancy rate was 18.9%, with 13.3% for unilateral cystectomy (UC), 25% for unilateral salpingo-oophorectomy (USO), 8.3% for bilateral cystectomy (BC), and 18.2% for unilateral salpingo-oophorectomy+ contralateral cystectomy (USO+CC). The overall recurrence rate was 4.9% (n=8). The median time for recurrence was 17.5 months. Advanced FIGO stage (p<0.001), histology (p<0.001), chemotherapy (p=0.006), and invasive implants (p=0.006) played an important role in recurrence. The overall death rate was 4.3%. Three- and five-year PFS rates were 94% and 89%, respectively. Mucinous histology (p=0.006), chemotherapy (p=0.02), and micro-invasion (p=0.041) were related to the PFS. Three- and five-year OS rates of the BOT patients were 97% and 93%, respectively. Age (p=0.01), menopause (p=0.026), and recurrence (p<0.001) were related to the OS.
Conclusions: BOT patients had excellent clinical outcomes. Different kinds of FSS would affect the pregnancy, USO tended to result in better pregnancy rates. We should pay attention to the patients with advanced FIGO stage, mucinous histology and invasive implants. Chemotherapy would not reduce the rate of recurrence, but benefit survival.
Abstract
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Conclusions: BOT patients had excellent clinical outcomes. Different kinds of FSS would affect the pregnancy, USO tended to result in better pregnancy rates. We should pay attention to the patients with advanced FIGO stage, mucinous histology and invasive implants. Chemotherapy would not reduce the rate of recurrence, but benefit the patients survival.

PO-373
Clin-TOF-II-MS 联合磁珠技术鉴定卵巢癌诊断相关血清蛋白生物标志物的研究

修琳[1],李宁[1],王文鹏[2],裴雨晴[3],袁光文[1],孙阳春[1],宋艳[1],杜强[1],吴令英[1]
1.中国医学科学院肿瘤医院 2.天津医科大学肿瘤医院 3.四川大学华西医院

目的：利用基质辅助激光解吸离子飞行时间质谱（MALDI-TOF-MS）联合磁珠技术探寻与卵巢癌诊断相关的血清循环多肽标志物。

方法：以 2018 年 03 月至 2018 年 09 月于中国医学科学院肿瘤医院经病理证实为卵巢癌的患者和体检中心各项检查结果正常的健康女性为研究对象，收集初次就诊时的血清样本。从卵巢癌患者组和正常健康组中各随机抽取 50%组成训练集，剩余患者组成验证集。采用 MALDI-TOF-MS 联合磁珠技术进行检测，对比训练集中健康女性与卵巢癌患者之间的差异蛋白峰，并在验证集中进行验证，筛选出与卵巢癌诊断相关的差异多肽峰，并进一步采用液相色谱-质谱/质谱(LC-MS/MS)技术明确差异多肽峰的成份。

结果：共筛选出 94 例患者，符合入组条件的健康女性血清组 40 例（42.6%），卵巢癌患者血清组 54 例（57.4%）。通过对比正常健康女性与卵巢癌患者的多肽谱，筛选出 102 个差异多肽峰（score＞5），在验证集中进行验证后，选取训练集和验证集中曲线下面积（AUC）均≥0.8 的差异多肽峰 42 个，其中在卵巢癌组有 19 个差异多肽峰高表达。根据 Youden index 计算训练集中最佳 cutoff 值，筛出 15 个高表达差异多肽峰在验证集中与诊断相关的敏感性与特异性均＞90%。二级质谱检查鉴定出 2 个血清多肽成份在卵巢癌组中高表达：1498.696 m/z 和 5913.417 m/z 分别对应丝甘蛋白聚糖（serglycin, SRGN）和纤维蛋白原 α 链。

结论：卵巢癌血清中血清甘蛋白聚糖（serglycin, SRGN）和纤维蛋白原 α 链升高可能与卵巢癌诊断相关，有必要进一步探讨其预测价值。

PO-374
LncRNA CCAT1 在卵巢癌中的研究进展

郭学旺,徐燕颖
天津医科大学第二附属医院

【摘 要】妇科恶性肿瘤的发病率呈逐年上升趋势，而改善其预后的关键为早期诊断、早期治疗。在未来医学发展中，疾病的诊断和治疗必将定位于基因水平。目前，关于非编码 RNA 对细胞表型调控机制

的研究正逐渐展开。自 2012 年长链非编码 RNA（lncRNA）结肠癌相关转录因子 1（CCAT1）在结直肠癌中的异常表达被发现以来，其在多种其他恶性肿瘤中的调控作用陆续被研究。目前对 lncRNA 作用机制的研究以 lncRNA 与微小 RNA（miRNA）的相互作用为主，LncRNA 通过 miRNA 调控的下游效应分子的致瘤作用参与恶性肿瘤的发生、发展。综述 CCAT1 在卵巢癌中的作用机制，分析其研究现状及未来发展。

PO-375

Ovarian cancer initially presenting with ipsilateral axillary lymph node metastasis: A case report

Xiyu Pan,Ran Chu,Xingsheng Yang,Kun Song,Beihua Kong
Qilu Hospital of Shandong University

Axillary lymph node metastasis as the initial presentation without extensive spread in the pelvis is extremely rare in cases of ovarian cancer. The present study reports a distinct case of 69 years old woman with high-grade serous carcinoma of ovary origin whose initial presentation was axillary lymph node metastasis. On the histopathologic evaluation of the primary pelvic tumor, minimal metastasis in the ipsilateral fallopian tube and several lymph nodes were confirmed, and no other pelvic tissues were involved. Also, except for axillary lymph node, there was no additional supradiaphragmatic tissue confirmed on computed tomography imaging. Staging laparotomy was performed, and the patient was proposed to accept six cycles of adjuvant chemotherapy with carboplatin and liposome. No local or systemic recurrence was noted during 6 months follow up period. This case emphasizes that patients with ovarian cancer who primarily present with distant metastatic lymph nodes and metastasize by lymph nodes should be appropriately diagnosed and might have an ambiguous prognosis.

PO-376

卵巢癌中基因治疗的发展现状

袁圆
华中科技大学同济医学院附属同济医院

卵巢癌是妇科肿瘤中致死率最高的恶性肿瘤之一，因为疾病早期缺乏特异性症状致使早期发现及诊断十分困难，于此同时卵巢癌术后及放化疗后的高复发率也是导致其高致死率的原因。目前，随着卵巢癌手术技术的进步，以铂类为基础的联合化疗的发展，以 PARP 抑制剂（poly ADP-ribose polymerase inhibitor）为代表的小分子抑制剂的开发，以及 PD-1/PD-L1 为代表的靶向药物的出现，卵巢癌的治疗已经出现了新局面。但是由于卵巢癌的高度异质性、免疫抑制微环境等原因，晚期卵巢癌患者的生存率并没有明显提高，其 5 年存活率仍不足 30%。因此，新型药物、治疗方式对于卵巢癌的治疗迫在眉睫。近几十年，基因治疗蓬勃发展，在各种疾病的治疗中已然崭露头角，在卵巢癌中基因治疗也占据了一席之地。 目前卵巢癌中基因治疗的发展主要集中在开发搭载新型治疗基因的载体，例如自杀基因、血管生成抑制基因、免疫调节基因等，另一方面，通过改造或研制新的载体，以提高目的基因的传递效率，如基因工程改造后的溶瘤病毒、新型化学材料制造的质粒或小干扰核酸治疗载体、与仿生材料相结合的基因载体等。在这篇综述中，我们将全面系统的回顾近年卵巢癌治疗中基因治疗的进展与成果，重点综述相应的临床实验，以及基因治疗在卵巢癌中当下所遇的挑战，以及其未来的发展与展望。

PO-377
不同化疗方案同步放疗治疗中晚期宫颈癌的临床研究

王海蓉
江苏省肿瘤医院

目的：探讨不同化疗方案同步放疗治疗中晚期宫颈癌的临床疗效。
方法：回顾性分析 2012 年 01 月～2013 年 02 月在江苏省肿瘤医院进行放化疗的 124 例宫颈癌病人，对其临床病理资料进行收集。进行不同化疗方案的亚组分析，运用统计学 Kaplan-Meier 法计算生存率，用卡方检验进行显著性检验，P<0.05 为差异有统计学意义。
结果：周化疗组与周期化疗组有效率分别为 97.56%（40/41）与 96.39%（80/83）（P=0.916）。1、3、5 年 OS 率 95.1%，68.3%，65.9%与 90.4%，72.3%，67.5%（P=0.845）。两组毒副反应无统计学差异（P>0.05），周期化疗组发生 4 例Ⅳ度骨髓抑制，发生骨髓抑制的严重程度偏高。两组主要死亡原因为肿瘤复发级远处转移。两组无明显统计学差异（P>0.05）。
结论：周化疗组与周期化疗组疗效及毒副反应均相似。

PO-378
基于高通量测序筛选 lncRNAs 在宫颈癌中的表达及临床意义

陈艳霞,马彩玲
新疆医科大学第一附属医院

目的：基于高通量测序，探讨长链非编码 RNA（TOPORS-AS1、TMPO-AS1、LINC00925、MIR155HG、NR2F2-AS1）在宫颈癌中的表达及其与人乳头瘤病毒 16 型(HPV16) 感染、临床病理特征的相关性。
方法:采用 qRT-PCR 法检测正常宫颈、重度宫颈鳞状上皮内病变和宫颈鳞癌组 lncRNAs 相对表达量，分析 lncRNAs 在各组中的差异及与 HPV16 感染的关系，并分析 MIR155HG 与宫颈癌患者临床病理特征的相关性。
结果：与宫颈炎组比较，宫颈癌组中 TOPORS-AS1、TMPO-AS1、LINC00925、MIR155HG 和 NR2F2-AS1 表达明显增高，差异有统计学意义（P＜0.05）；与重度宫颈上皮内瘤变组比较，除 TOPORS-AS1 外，其余在宫颈癌组中高表达，差异有统计学意义（P＜0.05）；LINC00925、MIR155H 表达与 HPV16 感染相关，在 HPV16 感染的宫颈癌组和重度宫颈上皮内瘤变组 LINC00925、MIR155H 表达明显增高（P＜0.05）；MIR155HG 表达与肿瘤大小及淋巴结转移相关，肿瘤直径＞4 cm 的宫颈癌组 MIR155HG 表达明显高于肿块直径≤4 cm 的宫颈癌组（P=0.005），有淋巴结转移的宫颈癌组，MIR155HG 表达明显高于无淋巴结转移的宫颈癌组（P=0.024）。MIR155HG 表达与患者年龄、癌浸润深度、子宫旁浸润、FIGO 分期、病理分级及 SCCA 无关。
结论: TOPORS-AS1、TMPO-AS1、LINC00925、MIR155HG、NR2F2-AS1 参与宫颈癌的发生发展，MIR155HG 可能成为宫颈癌诊断及病情预测的标记物。

PO-379

妊娠期糖尿病与妇科恶性肿瘤的关联 —— 基于瑞典双生子出生队列研究

孙琢玉[1],马耀梅[2]
1.天津医科大学 2.天津市肿瘤医院

目的：本研究的主要目的是探讨妊娠期糖尿病(gestational diabetes mellitus, GDM)与妇科癌症发病风险的关联性，分析 GDM 与妊娠高血压或月经周期不规律是否存在交互作用。方法：研究对象来自于瑞典全国注册于双生子登记系统的女性双生子。在 1998-2002 年期间对该人群进行了电脑辅助电话采访，根据排除和纳入标准，总共 15941 名女性双生子纳入研究。新发癌症的诊断来自于住院病人登记系统和癌症登记系统。采用广义估计方程（GEE）模型分析 GDM 与妇科癌症（宫颈癌、子宫体癌、卵巢癌、其他女性生殖器癌）的关联性。应用分层分析和 Andersson 公式探索 GDM 与妊娠期高血压或月经周期不规律是否存在相乘或相加的交互作用。结果：（1）与非暴露组相比，GDM 暴露组的研究对象受调查时的年龄偏小，已婚/同居、超重或肥胖的比例更高，糖尿病以及妊娠期高血压的患病率更高，差别具有统计学意义。（2）单因素和多因素 GEE 模型发现，妊娠期糖尿病与妇科癌症（宫颈癌、子宫体癌、卵巢癌、其他女性生殖器癌）之间均无统计学关联。（3）分层分析结果显示，有妊娠期高血压的女性中，患 GDM 增加卵巢癌的发病风险（OR=5.29,95%CI: 1.63-17.19）；有月经周期不规律史的女性中，患 GDM 与卵巢癌的发病风险增加呈正相关（OR=6.36,95%CI: 1.76~23.05）。GDM 与妊娠期高血压或月经周期不规律存在相加交互作用。结论：本研究未发现 GDM 和妇科癌症发病风险有统计学关联，但妊娠期高血压和月经周期不规律可能在 GDM-妇科癌症的关联中起修饰作用。GDM 与妊娠期高血压或月经周期不规律在卵巢癌发病中存在相加交互作用。

PO-380

PEG-rhG-CSF 预防妇科恶性肿瘤化疗后中性粒细胞减少症的真实世界研究

吴宇宁,李洁,姜洁
山东大学齐鲁医院

目的 比较妇科恶性肿瘤化疗后不同时间给予 PEG-rhG-CSF 预防中性粒细胞减少症（CIN）的有效性和安全性，分析预防性使用 PEG-rhG-CSF 后发生 CIN 和 FN 的危险因素。
材料与方法 本研究是一项前瞻性的真实世界研究，纳入 2019 年 1 月至 12 月在山东大学齐鲁医院接受化疗的妇科恶性肿瘤患者 109 例，试验组在化疗后 24 小时给予 PEG-rhG-CSF，对照组在化疗后 48 小时给药，比较两组的有效性和安全性，Logistic 回归分析发生 CIN 和 FN 的危险因素。
结果 本研究共入组 109 例患者，完成 306 个化疗疗程。其中试验组 71 例患者完成 190 个疗程，对照组 38 例患者完成 116 个疗程。两组基线资料无明显差异。共 52 个疗程发生 CIN，发生率为 17%，试验组发生率为 21.1%（40/190），对照组为 10.3%（12/116）（P=0.016）。两组 III/Ⅳ度 CIN 发生率分别为 12.1%和 7.7%（P=0.228）。共 11 个疗程出现 FN，发生率为 3.6%；试验组发生率为 4.2%（8/190）；对照组为 2.6%（3/116），差异无统计学差异。因 CIN 导致化疗延迟的发生率为 7.5%，平均延迟 3.90±3.53 天；试验组延迟率 8.9%，平均延迟 4.24±3.78 天；对照组 3.4%，平均延迟 2.50±1.91 天；因 CIN 导致药物剂量减量的发生率为 3.3%，两组分别为 4.2%和 1.7%；差异均无统计学意义。共 19 例患者发生骨痛，发生率分别为 14.1%和 23.7%（P=0.208）；未观察到脾破裂、严重过敏反应等毒副反应。单因素回归分析显示年龄大、BMI 值低、KPS 评分低、既往化疗疗程数越少以

及化疗后 24 小时给予 PEG-rhG-CSF 的患者 CIN 率较高；多因素分析显示 BMI 值、既往化疗疗程数、化疗后二级预防时间与 CIN 的发生相关。单因素及多因素回归分析均显示， BMI 值低、KPS 评分低以及既往化疗疗程数少的患者 FN 的发生率较高。
结论 妇科恶性肿瘤患者化疗后 24 小时给予 PEG-rhG-CSF 较 48 小时给药的 CIN 率高；FN 率、化疗延迟、剂量减量、不良反应等无明显差异；建议化疗后 48 小时用药，若无法按时给药，化疗后 24 小时用药也是安全、有效和方便的；患者的低 BMI、既往化疗疗程数较少及二级预防时间不足 48 小时是 CIN 的危险因素；低 BMI、低 KPS 评分、既往化疗疗程数较少是 FN 的危险因素。

PO-381

TCTP 在宫颈癌组织和血清中的表达

朱小雨[1],徐殿琴[2],成迪[3],谭玉洁[2],黄姗[1],任吉[1]
1.贵州医科大学
2.贵州医科大学附属院
3.贵州医科大学附属肿瘤医院

目的 探究宫颈癌患者癌组织和血清中 TCTP 水平和宫颈病变的关系。
方法 收集贵州医科大学附属医院病理科 2018 年 1 月-2018 年 9 月确诊为宫颈癌患者 20 例作为宫颈癌组，宫颈上皮内瘤变（Cervical intraepithelial neoplasia, CIN）患者 19 例作为 CIN 组，宫颈炎患者 21 例作为宫颈炎组及子宫肌瘤患者 20 例作为正常对照组，采用免疫组化法检测其癌组织中 TCTP 蛋白表达水平；收集贵州医科大学附属医院临床检验中心 2018 年 1 月-2018 年 9 月确诊为宫颈癌患者 30 例作为宫颈癌组，宫颈上皮内瘤变患者 20 例作为 CIN 组，选取同期健康体检者 28 例作为正常对照组，采用 ELISA 法检测其血清中 TCTP 表达水平；收集贵州医科大学附属医院妇科 2019 年 6 月-2019 年 8 月确诊为宫颈癌患 8 例，同时收取癌旁组织作为正常对照组，采用 Western Blot 检测 TCTP 蛋白表达水平。对不同宫颈病变 TCTP 蛋白水平进行比较。
结果 TCTP 定位于细胞质，宫颈癌组 TCTP 蛋白表达阳性率高于宫颈炎组与正常对照组，CIN 组和宫颈炎组高于正常对照组，差异具有统计学意义（P＜0.05）；宫颈癌组血清 TCTP 水平高于正常对照组（P＜0.05）；宫颈癌组 TCTP 蛋白高于正常对照组（P＜0.001）。
结论 TCTP 参与了宫颈癌的发生发展，可能成为诊断和治疗宫颈癌的潜在靶点。

PO-382

Associations with Single Rare Heterozygous NLRP7 Variants for Chinese Patients with Sporadic Gestational Trophoblastic Diseases

Peiwen Zhang[1],Jianhua Qian[1],Xinying Yu[1],Jun Ying[1],Ramesh Reddy[1,2],Xiaofei Zhang[3]
1.ZheJiang University School of Medicine， The First Affiliated Hospital
2.McGill University
3.Women's Hospital， School of Medicine， Zhejiang University

Background Gestational trophoblastic diseases (GTDs) encompass a group of clinically heterogeneous tumors of trophoblastic cell origin. In some populations and studies, single NLRP7 heterozygous mutations and some non-synonymous variants (NSVs) have been shown to confer genetic susceptibility to sporadic GTDs. Our study aims to investigate whether single rare heterozygous NSVs in NLRP7 predispose patients to GTDs in Chinese.

Methods We performed Sanger sequencing of all NLRP7 exons and exon-intron boundaries in a cohort of Chinese patients with non-recurrent sporadic GTDs and normal childbearing women. Using in-silico analysis and several prediction programs, we investigated the effects of identified NSVs on the function of the protein. Then we examine the function in inflammatory pathway to assessing the functional consequences of the identified rare NSVs in in-vitro studies.
Results We found that the number of patients with rare single heterozygous NSVs that are predicted to have functional effects on the protein is significantly higher in the first cohort of 292 patients than in the 300 controls (p=0.028). Analysis of the validation cohort of 130 patients confirmed the significant higher number of patients with rare NSVs than controls (p=0.0014). We show that most of the rare variants that are identified only in the patients are predicted to have functional effects on the protein by various algorithms and in-vitro experiments.
Conclusion Our results demonstrate that Chinese patients with GTDs have a higher burden of single heterozygous NLRP7 variants which were predicted to have effects on the protein than controls. We suggest that some of these single NSVs may contribute to the genetic susceptibility for GTDs in China.

PO-383
Is Adjuvant Chemotherapy Necessary for Women with Stage IC1 Epithelial Ovarian Cancer?

Liao Qiuyue,Li Kezhen
Department of Reproductive Medicine Center， Tongji Hospital， Tongji Medical College， Huazhong University of Science and Technology

Objective. To determine if adjuvant chemotherapy or extend cycles of chemotherapy improves prognosis in women with stage IC1 epithelial ovarian cancer (EOC).
Methods. This retrospective study included all eligible cases of women diagnosed with stage IC1 EOC from 2003 to 2019 in Tongji Hospital. Patient characteristics, tumor features, surgical types and chemotherapeutic treatments were collected. Kaplan-Meier analysis and Cox regression were performed to evaluate the progression-free (PFS) and overall survival (OS) of patients.
Results. Of the 140 patients (median age 47), 13 (9.3%) patients did not receive chemotherapy, and 127 (89.3%) received adjuvant chemotherapy. Kaplan-Meier analysis indicated that adjuvant chemotherapy had no obvious improvements in PFS and OS. Subgroup analysis was conducted to adjust the significant difference of staging surgery between the two groups, and chemotherapy still showed no benefit for survival. Cox regression indicated incomplete staging surgery was a risk factor for worse PFS (HR 3.409; 95%CI 1.095-10.608, p=0.034), and adjuvant chemotherapy remained unrelated with prognosis. The patients were further divided based on NCCN recommendations, for patients that either observation or chemotherapy is suitable, chemotherapy would not improve the prognosis. For patients that chemotherapy is recommended, our results showed that postoperative chemotherapy or not had little correlation with survival, while sufficient cycles of chemotherapy (>3 cycles) could improve the PFS and OS of these patients.
Conclusions. Our study suggests that postoperative chemotherapy was unnecessary for women with stage IC1 EOC. For patients that choose to receive chemotherapy, >3 cycles are needed to improve the prognosis. Incomplete staging surgery was a significant risk factor for PFS in this retrospective analysis.

PO-384
筛选预测晚期卵巢癌初始化疗效果的血清多肽标志物的研究

修琳[1],李宁[1],王文鹏[2],裴雨晴[3],袁光文[1],孙阳春[1],宋艳[1],杜强[1],吴令英[1]
1.国家癌症中心/中国医学科学院北京协和医学院肿瘤医院
2.天津医科大学肿瘤医院
3.四川大学华西医院

目的：晚期卵巢癌预后差，主要原因之一是化疗耐药。本研究应用蛋白组学技术寻找与晚期卵巢癌初始化疗效果相关的循环多肽标志物。
方法：以 2018 年 3 月至 2018 年 9 月于中国医学科学院肿瘤医院接受新辅助化疗（Neoadjuvant chemotherapy, NAC）+间隔肿瘤细胞减灭术+辅助化疗，且病理证实的 III/IV 期卵巢上皮癌（非粘液癌）患者为研究对象，收集初次就诊时的血清样本，根据 NAC（紫杉醇/卡铂方案）后组织病理学评价肿瘤消退情况及减瘤术+辅助化疗后的无进展生存期（剔除中度敏感者）分为化疗敏感组（病理评价为重度治疗反应，且 PFS>12 个月）和耐药组（病理评价为轻度治疗反应，且 PFS<6 个月）。从敏感与耐药组患者中各随机抽取 50%，组成训练集，剩余患者组成验证集。应用 Clin-TOF-II 飞行时间质谱仪联合磁珠技术筛查与 NAC 效果预测相关的差异多肽峰，并采用液相色谱-质谱/质谱(LC-MS/MS)技术明确差异多肽峰的成份。
结果：共筛选 64 例患者，符合入组条件的耐药组和敏感组患者分别为 25 例（39.1%）和 10 例（15.6%）。末次随访日期 2020 年 1 月 10 日，耐药组全部复发，敏感组 2 例复发。通过对比训练集中耐药组与敏感组的多肽谱，筛选出 71 个差异多肽峰（score > 5），在验证集中进行验证后，选取训练集和验证集中曲线下面积(AUC)均≥ 0.8 的差异多肽峰 22 个，其中在耐药组血清中有 10 个差异多肽峰高表达。根据 Youden index 计算训练集中最佳 cutoff 值，筛出 6 个高表达差异多肽峰在验证集中预测疗效的敏感性与特异性均> 90%。经二级质谱检测，鉴定出 3 个血清多肽成份在耐药组中高表达：4634.22 为血清淀粉样蛋白 A-1，1287.56 为凝血酶原，1099.56、2018.39 为补体 C3。
结论：初治晚期卵巢癌血清中血清淀粉样蛋白 A-1、凝血酶原或补体 C3 升高可能与紫杉醇/卡铂 front line 化疗疗效差相关，值得进一步研究。

PO-385
Successful pregnancy in an ovarian Sertoli-Leydig cell tumor patient with heterologous elements: case report

yali han,Shaohua Hao,Fengyi Guo,Lili Geng,Jie Li,Xue Du
Tianjin Medical University General Hospital

Background: Ovarian Sertoli-Leydig cell tumor (SLCT) is an extremely rare sex–cord stromal tumor of the ovary. Notably, ovarian SLCT with mucinous epithelium and liposarcoma is even rarer.There is also evidence that the presence of heterologous elements is a poor prognostic factor of SLCTs. Very often, ovarian SLCT patient first presents with high androgen levels and sometimes a clarge mass in the pelvic cavity, making it difficult for early diagnosis.
Case presentation: In this study, we reported a SLCT patient with heterologous elements and elevated the serum alpha-fetoprotein (AFP) levels. A 22-year old nulliparous female was first admitted with clinical symptoms of abdominal pain, a large mass in the pelvic cavity and elevated serum AFP levels, and for this she underwent left adnexectomy. Pathological examination revealed ovarian SLCT with intestinal type mucinous epithelium and liposarcoma, and immunohistochemical staining revealed positive staining for AFP in the intestinal type mucinous epithelium. The patient became pregnant naturally four years later, but SLCT was found in the opposite ovary with liposarcoma but no significant

increase in serum AFP levels.Further, we reviewed the literature in order to improve preoperative diagnosis and evaluation of long-term prognosis of SLCTs with heterologous elements.
Conclusion: The increase in serum AFP levels could be used for preoperative diagnosis of the presence of heterologous elements and the postoperative recurrence.

PO-386

两种重度宫腔粘连治疗策略的临床效果对比研究

朱前勇-重复数据
河南省人民医院

目的：比较两种不同的治疗策略治疗重度宫腔粘连患者的临床效果。
方法：2017 到 2019 年间，对 33 例重度宫腔粘连患者半随机分组，冷刀组分别采用冷刀切除粘连，之后二个月内至少行两次宫腔镜检查，常规组采用宫腔镜常规电切，术后两个月后只做一次宫腔镜检查，随访比较两种方法对宫腔形态、生育力等的治疗效果。
结果：冷刀组 17 例，无一例发生再粘连，妊娠率 90%。
结论：对重度宫腔粘连的患者用冷刀手术治疗，术后两个月内至少做二次宫腔镜检查有助于预防再粘连，保留生育力。

PO-387

Integrated analysis of lymphocyte infiltration-associated lncRNA for ovarian cancer via TCGA, GTEx and GEO datasets

Guoyan Liu[1],Xiaobin Shang[2],Meijing Wu[1],Yue Sun[1],Jing Wu[1]
1.Tianjin Medical University General Hospital
2.Tianjin Medical University Cancer Institute and Hospital

Background: Abnormal expression of long non-coding RNAs (lncRNA) play a significant role in the incidence and progression of high-grade serous ovarian cancer (HGSOC), which is a leading cause of mortality among gynecologic malignant tumor patients. In this study, our aim is to identify lncRNA-associated competing endogenous RNA (ceRNA) axes that could define more reliable prognostic parameters of HGSOC, and to investigate the lncRNAs' potential mechanism of in lymphocyte infiltration.
Methods: The RNA-seq and miRNA expression profiles were downloaded from The Cancer Genome Atlas (TCGA) and the Genotype-Tissue Expression (GTEx) database; while for obtaining the differentially expressed lncRNAs (DELs), miRNAs (DEMs), and genes (DEGs), we used edgeR, limma and DESeq2. After validating the RNA, miRNA and gene expressions, using integrated three RNA expression profiles (GSE18520, GSE27651, GSE54388) and miRNA profile (GSE47841) from the Gene Expression Omnibus (GEO) database, we performed Gene Ontology (GO) and Kyoto Encyclopedia of Gene and Genome (KEGG) pathway analyses through ClusterProfiler. The prognostic value of these genes was determined with Kaplan–Meier survival analysis and Cox regression analysis. The ceRNA network was constructed using Cytoscape. The correlation between lncRNAs in ceRNA network and immune infiltrating cells was analyzed by using Tumor IMmune Estimation Resource (TIMER), and gene markers of tumor-infiltrating immune cells were identified using Spearman's correlation after removing the influence of tumor purity.

Results: A total of 33 DELs (25 upregulated and 8 downregulated), 134 DEMs (76 upregulated and 58 downregulated), and 1, 612 DEGs (949 upregulated and 663 downregulated) were detected that could be positively correlated with overall survival (OS) of HGSOC. With the 1, 612 analyzed genes, we constructed a ceRNA network, which indicated a pre-dominant involvement of the immune-related pathways. Furthermore, our data revealed that LINC00665 influenced the infiltration level of macrophages and dendritic cells (DCs). On the other hand, FTX and LINC00665, which may play their possible roles through the ceRNA axis, demonstrated a potential to inhibit Tregs and prevent T-cell exhaustion.
Conclusion: We defined several prognostic biomarkers for the incidence and progression of HGSOC and constructed a network for ceRNA axes; among which three were indicated to have a positive correlation with lymphocyte infiltration, namely; FTX-hsa-miR-150-5p-STK11, LINC00665-hsa-miR449b-5p-VAV3 and LINC00665-hsa-miR449b-5p-RRAGD.

PO-388
Identification of hub genes in high grade serous ovarian cancer using weighted gene co-expression network analysis

Guoyan Liu,Meijing Wu,Yue Sun,Jing Wu
Tianjin Medical University General Hospital

Background: High-grade serous ovarian cancer (HGSOC) is the most malignant gynecologic tumor. This study reveals biomarkers related to HGSOC incidence and progression using the bioinformatics method.
Materials and methods: Five gene expression profiles were downloaded from GEO. Differentially expressed genes (DEGs) in HGSOC and normal ovarian tissue samples were screened using limma and the function of DEGs was annotated by KEGG and GO analysis using clusterProfiler. A co-expression network utilizing the WGCNA package was established to define several hub genes from the key module. Furthermore, survival analysis was performed, followed by expression validation with datasets from TCGA and GTEx. Finally, we used single gene GSEA to detect the function of prognostic hub genes.
Results: Out of the 1, 874 DEGs detected from 114 HGSOC versus 49 normal tissue samples, 956 were upregulated while 919 downregulated. The functional annotation indicated that upregulated DEGs were mostly enriched in cell cycle, whereas the downregulated DEGs were enriched in the MAPK or Ras signaling pathway. Two modules associated with HGSOC significantly were excavated through WGCNA. After survival analysis and expression validation of hub genes, we found that two upregulated genes (MAD2L1 and PKD2) and three downregulated genes (DOCK5, FANCD2 and TBRG1) were positively correlated with HGSOC prognosis. GSEA for single hub gene revealed that MAD2L1 and PKD2 were associated with proliferation, while DOCK5, FANCD2 and TBRG1 were associated with immune response.
Conclusion: In this study, we exhibited that, FANCD2, PKD2, TBRG1 and DOCK5 had prognostic value, which could be used as potential biomarkers for HGSOC treatment.

PO-389
短串联重复序列在葡萄胎及非葡萄胎妊娠中的诊断意义

张晶晶
首都医科大学附属北京妇幼保健院

目的 葡萄胎是妇产科最常见的妊娠滋养细胞疾病。由于临床上孕早中期超声检查的普遍应用，发现异常妊娠的时间提前，其绒毛发育不完全，特征性形态常常不明显，在没有辅助诊断技术的帮助下，仅从组织形态学上鉴别完全性葡萄胎尤其是早期完全性葡萄胎、部分性葡萄胎、双雌单雄性三倍体及非葡萄胎水肿性流产缺乏准确性，易造成过诊断或低诊断。在预后方面，葡萄胎及非葡萄胎水肿性流产发展为滋养细胞肿瘤（侵袭性葡萄胎或绒毛膜癌等）的风险不同，葡萄胎中不同受精类型也有不同的妊娠结局和预后。常用的辅助检测手段如流式 DNA 倍体分析和 p57 免疫组化染色可以提供一定程度的辅助作用，但不能完全鉴别葡萄胎及非葡萄胎，从而无法准确预测预后。因此，临床迫切需要提高葡萄胎诊断手段的敏感性和特异性。葡萄胎有其独特的遗传学机制，识别过剩的父源基因组被认为是最终诊断葡萄胎的“金标准”。近年来，以此为理论基础的短串联重复序列（short tandem repeat, STR）基因多态性分析逐渐被临床应用。

方法与结果 本文通过检索 PubMed、SinoMed、EMBASE 和万方数据库，对利用 STR 基因多态性分析进行葡萄胎相关诊断的研究进行综述，并对其诊断的优点和意义进行总结。

结论 STR 基因多态性分析诊断优于传统的 DNA 倍体分析和 p57 免疫组化染色是由于它能够从基因水平对完全性和部分性葡萄胎进行精确分型，并能够确定其遗传杂合性。其能够明确区分单精纯合型部分性葡萄胎、双精杂合型部分性葡萄胎、单精双卵三倍体、双精杂合完全性葡萄胎和二倍体非葡萄胎水肿性流产，精确的诊断对于患者流产原因的排查、随访时间及再生育时间的确定提供了可靠的证据，也有助于确定如三体或单体病等孤立的染色体异常疾病，已成为诊断葡萄胎最准确且实用的方法。

PO-390
DNA methylation markers as triage test for the early identification of cervical lesions in a Chinese population

Na Li[1],Yuanjing Hu[1],Xinying Zhang[1],Yixin Liu[1],Ate G. J. van der Ze[2],Ed Schuuring[2],G. Bea A. Wisman[2]
1.Tianjin Central Hospital of Gynecology Obstetrics
2. Cancer Research Centre Groningen， University of Groningen

Introduction: Objective strategies are required in cervical cancer screening. In order to improve the early detection of cervical cancer, we have identified several DNA methylation markers with high sensitivity and specificity to detect cervical intraepithelial neoplasia 2 or worse (CIN2+) in Dutch women. A Dutch cytologically abnormal cohort was primarily used to validate the diagnostic performance of several methylation markers. Combinations of various methylation markers (C13ORF18/EBP41L3/JAM3, C13ORF18/ANKRD18CP/JAM3 and ZSCAN1/SOX1) as triage methods showed similar sensitivity of ~75% for the detection of CIN2+ compared to high-risk human papillomavirus (hrHPV) testing (79%), but with better specificity (ranged between 72-83%) than hrHPV test (42%). Furthermore, similar sensitivity and specificity to detect CIN2+ were observed in a subgroup analysis of only hrHPV-positive samples. This study aims to analyze the diagnostic characteristics of these markers in a Chinese cohort.

Methods: A total of 246 liquid-based cytology samples from women who went to the gynecologic clinic from March 2017 to February 2018 in Tianjin Central Hospital of Gynecology Obstetrics were included in this study. Of which, 205 women underwent colposcopy due to an abnormal cytology result (atypical squamous cells of undetermined significance (ASCUS) or worse), while 227 were tested hrHPV positive. The final diagnosis was based on the results of tissue-proven pathology that served as the

gold standard. Methylation analysis for six markers (ANKRD18CP, C13ORF18, EPB41L3, JAM3, SOX1 and ZSCAN1) was performed using quantitative methylation-specific PCR (QMSP) in cervical scrapings.
Results: All 6 individual markers (ANKRD18CP, C13ORF18, EPB41L3, JAM3, SOX1 and ZSCAN1) showed enhanced methylation levels and frequency with increasing severity of the underlying lesion ($p \leq 0.001$). In cytological abnormal women, sensitivity to detect CIN2+ was 79%, 76% and 72% for the 3 panels (C13ORF18/EBP41L3/JAM3, C13ORF18/ANKRD18CP/JAM3 and ZSCAN1/SOX1, respectively), with a specificity of 57%, 65% and 68%. For the first 2 panels these diagnostic characteristics were similar to the Dutch cohort, while for ZSCAN1/SOX1 the sensitivity was higher in the Chinese cohort, but with a lower specificity (both $p<0.05$).
In hrHPV-positive samples, similar sensitivity and specificity for the detection of CIN2+ were found as for the abnormal cytology cohort. The sensitivity to detect CIN2+ lesions for the 3 panels (C13ORF18/EBP41L3/JAM3, C13ORF18/ANKRD18CP/JAM3 and ZSCAN1/SOX1) was 79%, 75% and 71% and the specificity of 63%, 67% and 67% respectively. The sensitivity and specificity of HPV16/18 genotyping in hrHPV-positive scrapings was 77% and 71% to detect CIN2+. The diagnostic performance of our methylation panels was non-inferior to HPV16/18 genotyping. The diagnostic efficacies of the 3 panels were now all similar between both cohorts.
Conclusions: Our analysis reveals that the diagnostic performances are highly comparable for C13ORF18/EBP41L3/JAM3 and C13ORF18/ANKRD18CP/JAM3 methylation marker panels in both Chinese and Dutch cohorts. In conclusion, methylation panels identified in a Dutch population are also applicable for triage testing in cervical cancer screening in China. The high reproducibility of established methylation panels enables its implementation in randomized controlled trials and further large prospective validation in population-based screening in future.

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卵巢癌外泌体通过 miR-92b-3p/ SOX4/ET-1 通路影响肿瘤相关的血管生成

王嘉颖,李阳
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

目的 肿瘤来源的外泌体 miRNA 是肿瘤与肿瘤微环境进行信息交换的重要媒介。目前，卵巢癌的传统抗血管生成治疗效果有限，寻找关键的分子机制和新颖的疗法成为抗肿瘤血管生成疗法的新目标。本文就肿瘤细胞来源的外泌体 miRNA 在卵巢癌血管生成及抗血管治疗中的作用进行研究。
方法 采用免疫印迹和透射电镜对从 IOSE-80 上清液和两种卵巢癌细胞系（SKOV3 和 A2780）提取的外泌体进行验证，然后用 PKH67 标记并与 HUVEC 共培养。我们使用 transwell，小管形成和斑马鱼模型来分析血管内皮细胞在体外和体内的迁移性和血管生成能力。通过高通量测序筛选这些外泌体中差异表达的 miRNA，并通过 qRT-PCR 进行验证。通过 Duo-Luciferase 报告基因，qRT-PCR，蛋白印迹实验以确认 miRNA 的靶基因。
结果 与 IOSE-80 相比，卵巢癌细胞的外泌体对 HUVEC 的迁移，小管形成的体外影响更大，甚至在使用阿帕替尼治疗后也会影响斑马鱼模型中的血管生长。高通量测序和 qRT-PCR 证实 miR-92b-3p 的表达在卵巢癌细胞的外泌体中表达较少。随后，我们证明了 miR-92b-3p 表达的改变在体外调节了 HUVEC 的迁移，小管形成，并能影响斑马鱼模型中的血管生长。通过构建慢病毒稳定转染的 SKOV3-92 细胞株，来自 SKOV3 的 miR-92b-3p 高表达的外泌体对血管生成和内皮细胞迁移能力的影响有所下降。上述过程是由于 miR-92b-3p 对 SOX4/ET-1 的直接调控所造成的。
结论 与正常卵巢上皮细胞 IOSE-80 相比，卵巢癌细胞释放的外泌体可以增加 HUVEC 的运动能力和肿瘤环境中的血管生成。该结果可以解释一些患者对抗血管生成疗法有抗性的现象。

PO-392
TXNDC17 protein overexpression in uterine papillary serous carcinoma is associated with chemoresistance

Qiaohua Peng,Zhng Songfa
Women's hospital school of medicine zhejiang university

TXNDC17 has primarily been associated with ovarian cancer. It concurs resistance to paclitaxel by inducing autophagy. However, limited information exists on its role in UPSC. This study investigated TXNDC17 expression by analyzing the immunohistochemistry of 55 UPSC tissues. A total of 55 UPSC patients of median age (63.3 years), 43.7% with late stages (stage III/IV), and 48.6 % exhibiting more than half of myometrium invasion were enrolled. Notably, 28 (50.9%) patients had TXNDC17 protein overexpression associated with chemoresistance and high BECN1 expression. BECN1 overexpression occurred at an advanced stage and was characterized by deep myometrial invasion. Of note, advanced stage, deep myometrial invasion, BECN1, and TXNDC17 overexpression were significantly associated with a poor outcome. Besides, co-expression of TXNDC17 and BECN1 occurred at an advanced stage causing deep myometrial invasion and chemoresistance thereby resulted in the shortest survival in UPSC. The multivariate proportional hazards model revealed that myometrial invasion and TXNDC17 overexpression were independent prognostic factors. This study showed that TXNDC17 overexpression is associated with chemoresistance and poor survival in UPSC patients. TXDNC17 may be a potential predictor or target in UPSC therapeutics.

PO-393
Inhibition of invasion and metastasis in choriocarcinoma by MIIP

Yan Yu,Qiaohua Peng,Lingfang Wang,Yang Weng,Xing Xie,Xiaodong Cheng
Women’s Hospital， School of Medicine， Zhejiang University

Objective:Choriocarcinoma is a malignancy with high invasiveness, but its molecular mechanism is poorly understood to date. Methods:The choriocarcinoma cell lines JAR and JEG-3 were transfected with lentivirus carrying the interfering RNA targeting MIIP to down-regulate MIIP expression or the negative control.Cell migration and invasion were detected by transwell assays and wound healing experiments. The tumor-burdened experiment was conducted in SPF nude-mice with small animal living imager. We detected the possible molecular signaling pathway involved by western blotting. Results:We observed the effect of MIIP on choriocarcinoma cells (JAR and JEG-3) and on immortalized trophoblast cells (SWAN) by regulating gene expression, and we further verified its function in animal models. The results showed that the enforced change in MIIP expression altered the migration and invasion ability of the choriocarcinoma and trophoblastic cells in vitro and the tumor-burden and metastasis ability in vivo. The expression of MIIP was negatively correlated with that of HDAC6 and positively with that of acetylated alpha-tubulin. Conclusions:Our results suggest that MIIP may act as a tumor suppressor gene by inhibiting cellular vitality in choriocarcinoma, and HDAC6 and acetylated alpha-tubulin may be involved in the regulatory effects of MIIP in the biobehavior of choriocarcinoma cells.

PO-394
Management in ovarian granulosa cell tumors: A review

Junting Li[1],Zhongshao Chen[1],Jinyu Meng[1],Ran Chu[1],Shu Yao[1],Kun Song[1,2]
1.Qilu Hospital， Shandong University
2.Gynecology oncology key laboratory， Qilu Hospital， Shandong University， Jinan， Shandong， P.R. China

Granulosa cell tumor (GCT) of ovary is a type of rare low-grade malignancy tumor and accounts for less than 5 % of all the ovarian tumors. The prognosis is favorable, but it has the characteristics of late relapse. So it highlights the need for standard treatment of the disease, especially postoperative adjuvant treatment methods, which are still in the exploratory stage. In this review, we focused on summarizing latest progress to explore the effect of different treatment methods and discussing reproductive and oncologic prognosis after FSS. Therefore, we searched studies of the disease in the PubMed database, China National Knowledge Infrastructure (CNKI) and National Comprehensive Cancer Network (NCCN). Finally, 64 articles were cited as references for this review, 48.4% (31/64) the included studies were published in the last five years. The main features of GCTs described are as follows: epidemiology and risk factors; tumor clinical characteristics; tumor molecular characteristics; Endometrial pathology; treatment; recurrence; prognosis and survival. More strikingly, two tables were made to summarize studies about FSS on GCTs and the effect of adjuvant chemotherapy.

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早期宫颈癌腹腔镜手术患者生存率：单中心十年病例分析

贺晓琪,杨守华,王泽华
华中科技大学同济医学院附属协和医院

研究背景：腹腔镜手术因并发症少、术后恢复快得到广泛应用。但 2018 年一项多中心随机对照研究（LACC 研究）显示腹腔镜手术患者的无进展生存 PFS 和总生存 OS 均显著低于开腹患者。随后发表的多个非随机研究和荟萃分析比较了腔镜和开腹手术患者的生存，但结果未能达成一致。各中心之间的不均衡性可能是导致结果偏差的重要因素，因此，有必要在高手术量的中心评估早期宫颈癌腹腔镜手术患者的生存率。
材料方法：回顾性分析本中心自 2008 年 2 月（第一例腹腔镜宫颈癌手术）至 2017 年 12 月所有随访超过 3 个月的腹腔镜宫颈癌根治术（Querleu-Marrow C 型）病例。分析患者 PFS 和 OS，并通过多因素分析研究生存相关的独立危险因素。将患者按照手术顺序分组，研究学习曲线对患者生存的影响。
结果：自 2008 年 5 月至 2017 年 12 月共有 1393 例宫颈癌腹腔镜手术，其中 1326 例为根治手术。1172 例随访超过 3 个月，中位随访时间 51 个月（范围 3-144 个月）， 包括 FIGO IA-IIB 期肿瘤，其中 245 例局部晚期宫颈癌接受新辅助化疗。IA 和 IB1 期宫颈癌患者的 5 年 PFS 分别为 97.8%和 92.8%，5 年 OS 分别为 98.8%和 96.7%。IB2 -IIB 期患者生存率逐渐降低。多因素分析显示肿瘤>2cm、非鳞癌、淋巴结阳性是复发和死亡的独立危险因素。第一个 1002 例（第 1-100 例）手术患者生存率显著低于第二个 100 例（第 101-200 例）及第二个 200 例（201-400 例）患者。
结论：高手术量中心宫颈癌患者患者腹腔镜手术后生存率未明显低于 LACC 研究的开腹组。在今后的随机对照研究中应考虑手术学习曲线以及中心手术量对肿瘤结局的影响。

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局部晚期宫颈癌新辅助化疗疗效及反应性预测

黄玉慧,贺晓琪,王泽华
华中科技大学同济医学院附属协和医院

目的：新辅助化疗(Neoadjuvant chemotherapy, NACT)因能够缩小肿瘤体积，提高手术切除术率，减少微转移病灶等特点成为局部晚期宫颈癌(Locally advanced cervical cancer, LACC)患者治疗的一个重要方案。然而，NACT 的疗效及其反应性对预后的影响在不同的研究中结果未能达成一致。因此，本研究拟评估 NACT 在 LACC 患者中的反应性及其反应性对生存的影响，并探讨治疗前与反应性相关的因素。
方法：回顾性分析自 2007 年至 2017 年间于我院接受 2-3 疗程 NACT（紫杉醇+卡铂）的 LACC 患者（FIGO 2009 分期为 IB2-IIA2）的病历信息。患者按照对 NACT 的反应性分为反应组和无反应组。比较两组患者总生存(Overall survival, OS) 和无进展生存(Progression-free survival, PFS)的差异，并通过多因素分析研究与生存相关的独立危险因素。比较不同反应性患者治疗前的临床特征，研究治疗前与 NACT 反应性相关的因素。
结果：研究共纳入 219 例完成 NACT 的 LACC 患者。患者对 NACT 的总反应率为 58.9%（129/219），其中 19（8.68%）例达到病理完全缓解。术后病理显示反应组淋巴结、LVSI 及宫旁浸润阳性率显著低于无反应组。NACT 反应组和无反应组的 5 年 OS 分别为 85.4%和 63.3% (P = 0.002)，5 年 PFS 分别为 71.4%和 52.4% (P = 0.002)。多因素分析显示 NACT 反应性是 LACC 患者疾病进展和死亡的独立危险因素。IB2/IIA1 患者反应率高于 IIA2 患者，肿瘤<5cm 的患者反应率高于肿瘤≥5cm 的患者。
结论：以铂为基础的 NACT 在 LACC 患者中的总反应率约为 60%。NACT 反应性是 LACC 预后的独立危险因素，分期较早及肿瘤较小的患者对 NACT 的反应性较好。

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FISH 方法检测 TERC 及 P16 基因在 ASCUS 分流中的应用

逦滢[1],曾文杰[2],王新宇[1],吕卫国[1],谢幸[1]
1.浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）
2.浙江省人民医院

研究目的：TBS 诊断中的 ASCUS 是宫颈癌筛查中最大的挑战及难点之一，如何对 ASCUS 患者进行有效分流一直是科研及临床工作中的重点。高危 HPV HC2 检测可以极大的提高分流的敏感性，但同时以损失特异性为代价，也可对 ASCUS 高危 HPV HC2 阳性患者进一步进行 HPV16/18 分型，然而这些都不是对未来疾病的有效预测，可能会造成漏诊风险或后续不必要的过度检查。因此迫切需要一种可靠的检测方法，帮助分流 ASCUS 患者，识别更可预见的宫颈高度 CIN 及宫颈癌。我们之前的研究发现，采用 FISH 方法检测宫颈脱落细胞中 TERC 及 P16 基因的表达，其阳性率与细胞学及组织病理学分级间均存在高度相关性，提示这两种标记物用于 ASCUS 分流可能。
材料与方法：我们选取妇科门诊 TCT 诊断为 ASCUS 的患者 112 例，每位患者均采用剩余脱落细胞进行高危 HPV HC2 检测、TERC 及 P16 FISH 检测、阴道镜及活组织病理检查。以组织病理学诊断作为金标准，比较几种分流方法在识别高度 CIN 及宫颈癌方面的优劣。
结果：1、三种分流方法与病理学分级间均存在相关性，在正常、CIN1、CIN2、CIN3 及 SC 中的阳性率，HPV HC2 为 64.71%、84.62%、100%、100%、100%；TERC 基因为 5.88%、19.23%、77.78%、75%、100%；P16 基因为 13.23%、30.77%、66.67%、100%、100%。2、三种分流方法比较：在识别 CIN2+的灵敏度、特异度及准确性方面，HPV HC2 为 100%、28.72%、40.18%；TERC 基因为 77.78%、90.42%、88.39%；P16 基因为 83.33%、81.91%、82.14%。HPV HC2 在 ASCUS 分流中与

TERC 及 P16 有着相似的敏感性（P=0.104，P=0.229），但其特异性和准确性较低，与 TERC 与 P16 组均有显著差异（P<0.01）；TERC 与 P16 有着相似的敏感性（P=1.0）、特异性（P=0.09）和准确性（P=0.19）。

结论：采用 FISH 方法检测 TERC 及 P16 基因，在 CIN2+中两者均具有与 HPV HC2 相似的高敏感性，及比 HPV HC2 更高的特异性和准确性，且安全无创、稳定可靠，均可用于 ASCUS 中 CIN2+的有效分流，是比 HPV HC2 更为优越的分流方法。

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Health-related Quality of life in Olaparib Maintenance in Ovarian cancer patients: Real World Data and experience of a single-center

姜旖,程文俊
江苏省人民医院（南京医科大学第一附属医院）

Methods: We assessed baseline and follow-up (3-month) QOL of Chinese women with recurrent ovarian cancer using the European Organization for Research and Treatment of Cancer 30-Item Core Quality of Life Questionnaire **(EORTC QLQ-C30),** and the Quality of Life Ovarian Cancer 28 Questionnaire **(QLQ-OV28)**. Linear or logistic regression models were applied to determine the relationship between QOL in each category, and key demographic and clinical factors. **Results:** All 20 ovarian cancer patients with oral Olaparib and 24 corresponding ovarian cancer patients without Olaparib met enrollment criteria were recruited to this study and completed baseline questionnaires. Our results showed that Olaparib as maintenance therapy was significantly associated with better QOL on all **functioning domains** and several **symptom domains**. A significantly greater number of patients without Olaparib maintenance therapy experienced deteriorating QOL in several domains.

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新辅助化疗减少局部晚期宫颈癌术后辅助放疗

黄玉慧,杨守华,王泽华
华中科技大学同济医学院附属协和医院

目的：对于局部晚期宫颈癌（Locally advanced cervical cancer），目前公认的首选方案是同步放化疗，但是放疗相关的副作用严重降低了患者的生活质量。近年来，新辅助化疗(Neoadjuvant chemotherapy)+手术成为宫颈癌治疗的重要组成部分，但是 NACT 对 LACC 患者根治术术后病理危险因素及辅助放疗的影响并不十分明确，因此，本研究拟探究 NACT 是否能够降低 LACC 根治术后辅助放疗率。

方法：回顾性分析自 2007 年至 2017 年间于我院行宫颈癌根治术的 LACC 患者(FIGO 2009, IB2-IIA2)的病历信息。术前接受 2-3 疗程 NACT（紫杉醇+卡铂）患者为 NACT 组，直接手术患者为 PRS 组。比较两组患者术后病理危险因素，术后累计放疗率及总生存(Overall survival，OS）和无进展生存(Progression-free survival，PFS)。

结果：研究共纳入 414 例 LACC 患者，其中 NACT 组 197 例，PRS 组 217 例。NACT 组的总反应率为 62.44%。与 PRS 组相比，NACT 组患者肿瘤 FIGO 分期更晚，肿瘤体积更大，两组患者的年龄、病理类型、肿瘤分化等无显著差异。NACT 组术前更多肿瘤<2cm，术后病理显示 NACT 组深部间质浸润率显著低于 PRS 组。NACT 组术后累计放疗率显著低于 PRS 组（54.7% vs 65.1%; P = 0.041）。NACT

组和 PRS 组的 5 年 OS 分别为 78.3%和 83.0%（P = 0.306），5 年 PFS 分别为 64.5%和 70.6%（P = 0.207）。
结论：尽管 NACT 组患者较 PRS 组患者 FIGO 分期更晚，但是 NACT 组术后累计放疗率显著低于 PRS 组，且两组生存率无显著差异，提示 NACT 可通过减少术后辅助放疗，减少放疗相关的并发症，从而提高 LACC 患者生存质量。

PO-400

局部晚期宫颈癌新辅助化疗患者 ctDNA 基因突变与化疗反应性的关系

黄玉慧,贺晓琪,王泽华
华中科技大学同济医学院附属协和医院

研究背景：新辅助化疗(Neoadjuvant chemotherapy, NACT)逐渐成为局部晚期宫颈癌(Locally advanced cervical cancer, LACC)患者综合治疗的重要组成部分。部分研究显示患者对 NACT 的反应性对预后有显著影响，化疗反应性好的患者预后显著优于无反应的患者。因此，本研究探讨及分析 LACC 患者循环肿瘤 DNA（Circulating tumor DNA, ctDNA）基因突变与化疗反应性的关系，筛选能够用来监测或预测化疗反应性的突变基因，用以指导临床个体化治疗。
方法：收集接受 NACT 的局部晚期宫颈癌（FIGO 2009，IB2-IIA2）患者化疗前后的血液标本，进行目标基因靶向测序。前瞻性的观察患者的化疗反应性，根据患者对 NACT 的反应性分为反应组和无反应组。比较两组患者化疗过程中及化疗前 ctDNA 突变的差异，并对差异基因进行生物信息学分析，筛选能够用于监测或预测化疗反应性的突变基因。
结果：研究共纳入 8 例患者，其中反应组 3 例，无反应组 5 例。反应组化疗后发生突变的基因及位点数目显著增多，无反应组化疗后发生突变的基因及位点数目无明显变化规律。化疗过程中 ctDNA 中 MTOR、FGFR3、PIK3R1 的突变在两组之间具有差异性；化疗前 ctDNA 中 AKT1、EGFR、MAP2K2 的突变在两组之间具有差异性。
结论：局部晚期宫颈癌新辅助化疗患者 ctDNA 基因突变与化疗反应性密切相关。化疗过程中及化疗前 ctDNA 发生的基因突变有希望用于监测或预测化疗反应性，其临床价值还有待进一步验证。

PO-401

Abnormal Expression of Nucleolar Protein 6 in Endometrial cancer

Junhui Liang[1],Hui Zhang[1,2]
1.Shandong Provincial Hospital， Cheeloo College of Medicine， Shandong University
2.Shandong Provincial Hospital Affiliated to Shandong First Medical University

Background: The rapid division and proliferation of cancerous endometrial cells need to synthesize a large amount of protein, and ribosome is an important organelle for protein synthesis. Nucleolar protein 6 (NOL6) is conserved in eukaryotes and participates in ribosomal biogenesis. We compared the expression of NOL6 in normal and cancer endometrial membrane tissue in order to analysis whether NOL6 plays a role in endometrial cancer.
Methods: Immunohistochemical staining was performed in 25 cases of normal endometrium (15 cases of proliferative phase and 10 cases of secretory phase) and 50 cases of endometrial adenocarcinoma (25 cases of stage IA and 25 cases of stage IB-IV). On the other hand, according to the grade of

differentiation, the cancer group was labeled into high differentiation (n=20), moderate differentiation (n=20) and low differentiation (n=10). The staining degree and positive cell proportion were graded and immunohistochemical fractions were obtained.
Results: NOL6 was upregulated in endometrial cancer compared with normal endometrium, regardless of high, middle or low differentiation. The expression of NOL6 was increased in early stage of endometrial cancer, but more significantly increased in late stage.
Conclusions: The results indicates that NOL6 is overexpressed in endometrial cancer, suggesting that it may play an important role in endometrial cancer even be an molecular target for inhibiting endometrial cancer development.

PO-402
3D 培养增加 ISHIKAWA 细胞孕激素受体 mRNA 表达

刘洁,何湘君,张凤,王志启,王建六
北京大学人民医院

研究背景和目的: 临床上对有保留生育功能需求的早期、低级别子宫内膜癌患者采用孕激素治疗，尽管这些患者癌组织中孕激素受体（PR）表达阳性，但仍有 23.8%的患者存在孕激素抵抗。目前孕激素抵抗的分子机制尚不清楚，尚未找到能够预测孕激素敏感性的分子标志物。由于内膜癌细胞系在体外长期培养过程中孕激素受体的表达量显著下降, 对孕激素的反应很弱，给研究带来困难，目前迫切需要建立一种对孕激素敏感的肿瘤细胞体外培养模型来更好地研究 PGR 通路的分子调控网络。
材料与方法：1、分析 28 种内膜癌细胞系的二代测序数据以及 TCGA 数据库中 543 例内膜癌二代测序数据。2、建立体外 3D 细胞培养体系 。3、提取 RNA，通过实时定量 PCR 检测 2D 和 3D 培养条件下 ISHIKAWA 细胞及子宫内膜成纤维细胞（HUF）孕激素受体基因（PGR）mRNA 的表达，以甘油醛-3-磷酸脱氢酶（GAPDH）为内参，分析 PGR 的相对表达量。4、用雌、孕激素处理 ISHIKAWA 3D 小球，ATP 定量法检测细胞增殖。
结果：1、数据分析发现，28 种内膜癌细胞系的 PGR mRNA 表达量普遍偏低，尽管 ISHIKAWA 细胞的 PGR mRNA 表达量明显高于其它细胞系，仍不到 GAPDH 的万分之一，而一例中等表达量的内膜癌组织中 PGR 的表达量为 GAPDH 的 0.01。我们用实时定量 PCR 方法也验证了 2D 培养的 ISHIKAWA 细胞中 PGR 表达量远低于内膜癌组织，为。2、成功培养出 ISHIKAWA 和 HUF 3D 小球。3、2 天后经实时定量 PCR 检测发现：ISHIKAWA 3D 小球 PGR 的表达增加了 4.1 倍，HUF 3D 小球的 PGR 表达也增加了 5.6 倍。4、雌、孕激素处理 7 天后， ISHIKAWA 小球的生长受到了显著抑制，活细胞产生的 ATP 总量仅为对照的 30%。
结论：3D 培养提供了一个类似生理条件的环境，可以部分恢复子宫内膜癌 ISHIKAWA 细胞系以及子宫内膜成纤维细胞 PGR 的表达，3D ISHIKAWA 小球对孕激素作用敏感，适用于孕激素相关通路分子机制的研究。

PO-403
卵巢癌靶向治疗的临床研究进展

张伟峰,钟惠珍
宁波市妇女儿童医院

卵巢肿瘤是女性生殖系统常见的恶性肿瘤之一,其具有早期诊断困难、易复发、预后差等特点，在妇科恶性肿瘤中死亡率居首位。在卵巢癌的治疗方面，传统的治疗模式即手术治疗+化疗的方式，在治疗效果上出现逐步停滞的情况，卵巢癌的五年生存率始终徘徊于 30%~40%。近年来,靶向治疗作为一种新

的治疗方式，逐步进入妇科肿瘤学者的视野，并随着各类靶向药物的临床应用而方兴未艾。靶向治疗作为一种可能有效的卵巢癌治疗手段,具有并发症少等优势，与传统治疗联合应用，有望明显提高卵巢癌患者的生存预后。本文从这一情况出发，对卵巢癌靶向治疗的类型、作用机制和可能的协同进行总结和瞻望,为了解卵巢癌的靶向治疗提供帮助。

PO-404

预防性抗凝治疗在子宫颈癌或子宫内膜癌患者腹腔镜手术围术期应用的安全性分析

张祯晶,杨文青,江春,朱欣,田焱,张瑜
中南大学湘雅医院

目的：分析预防性抗凝治疗在子宫颈癌或子宫内膜癌患者腹腔镜手术围术期应用的安全性，为围术期预防性抗凝治疗的临床应用提供参考。
方法：回顾性分析 178 例自 2016 年 10 月 1 日至 2018 年 12 月 1 日于湘雅医院妇科行腹腔镜子宫切除术的子宫颈癌或子宫内膜癌患者的临床资料，其中未预防性抗凝治疗组 81 例，预防性抗凝治疗组 97 例。采用血红蛋白平衡法计算围术期出血量。通过单因素分析比较两组间围术期出血量、住院时间及出血事件发生率，构建 Logistic 回归模型，筛选严重出血事件高危因素。
结果：（1）预防性抗凝治疗组与未预防性抗凝治疗组患者围术期出血量及术后住院天数无统计学差异（P＞0.05）（2）178 例患者中 54 例患者发生严重出血事件（均为手术后血红蛋白浓度下降＞2g/dl），两组间分布无显著差异（P＞0.05）；（3）通过 Logistic 回归模型分析，低体重（＜56Kg）患者使用预防性抗凝后出血风险显著增加（OR 1.995,95%(CI)1.02-3.902,P=0.044）。
结论：围术期应用预防性抗凝治疗未增加接受腹腔镜行妇科肿瘤手术患者的出血风险。对于低体重人群的预防性抗凝治疗应谨慎。

PO-405

Efficacy and Safety of Niraparib Combined With Oral Etoposide in Platinum Resistant/Refractory Recurrent Ovarian Cancer: protocal of a Single Arm, Prospective, Multicenter, Phase II trial in China

Huimei Zhou,Jiaxin Yang,Dongyan Cao,Keng Shen,Yang Xiang,Ming Wu,Ninghai Cheng
Peking Union Medical College Hospital

Background Late-line treatment options for patients with ovarian cancer are few, with the proportion of patients achieving an overall response typically less than 10%, and median overall survival after third-line therapy of 5–9 months. In this study, we investigated the activity of niraparib Combined With Oral Etoposide as the later line of therapy.
Objective To evaluate the efficacy and safety of niraparib combined with oral etoposide in platinum resistant or platinum refractory recurrent ovarian cancer.
Methods This is a single arm, prospective, multicenter, phase II study to evaluate the efficacy and safety of PARP inhibitor niraparib combined with oral etoposide chemotherapy in women with platinum resistant or refractory recurrent ovarian cancer. Subjects will receive niraparib and oral etoposide in 30-day treatment cycles. After 6-8 cycles, oral etoposide will be discontinued. Subjects will receive niraparib alone until disease progression, intolerable toxicity or withdrawal of informed consent. The

primary endpoint is efficacy as defined overall response rate by Response Evaluation Criteria in Solid Tumors (RECIST v1.1). Secondary endpoints include progression free survival, duration of response, disease control rate, CA125 response rate and safety.
Ethics and dissemination This study has been approved by the Institutional Review Board of Peking Union Medical College Hospital and is filed on record by all other centres. Written informed consent will be obtained from all eligible participants before enrolment. The results will be disseminated through community events, academic conferences, student theses and peer-reviewed journals.
Trial registration number NCT04217798.

PO-406
晚期卵巢癌盆腔肿瘤如何切除到 R0: 全盆腔腹膜切除术（TPPE）亦或改良后盆腔脏器切除术（MPPE）

杨慧娟,向礼兵,单波儿,叶双,孙敏,沈文彬,姜玮
复旦大学附属肿瘤医院妇科肿瘤

卵巢癌的种植播散是一种主要的转移途径，造成盆腔和腹腔腹膜广泛的肿瘤种植。由于人体重力原因，盆腔腹膜种植通常最早出现，并逐渐加重，从最初的粟粒状结节到团块状病灶，在子宫直肠陷凹腹膜面、膀胱返折腹膜面以及两侧结肠旁沟腹膜面形成明显的肿瘤，部分侵犯乙状结肠、直肠和膀胱，使手术达到 R0 切除的难度逐渐增加。我们经过多年的实践，对 Hudson 切除整个 Douglas 窝肿瘤的手术技术进行改良，提出了一种全盆腔腹膜的整块切除技术（Total Pelvic Peritoneum Excision， TPPE），该项技术手术要点如下：（1）从盆腔两侧前腹壁的壁层腹膜起始，暴露出腹膜外间隙及结构，断离子宫圆韧带、卵巢悬韧带、脐正中韧带、闭锁脐动脉；分离出盆腔两侧的壁层腹膜，至乙状结肠系膜的脏层腹膜缘；（2）剥离膀胱表面腹膜，游离并下推膀胱，暴露膀胱阴道间隙，分离出盆腔前部壁层腹膜和位于膀胱处的脏层腹膜；（3）游离两侧输尿管并外推输尿管，暴露子宫血管和宫旁组织，离断上述组织后， 在阴道穹窿平面切开阴道前后壁， 进入直肠阴道隔，剥离乙状结肠系膜面脏层腹膜、直肠、乙状结肠肠壁浆膜面腹膜。最终，全盆腔腹膜、子宫及卵巢肿瘤及盆底种植肿瘤完整切除。对于已经明显侵犯直肠乙状结肠的肿瘤， 需要结合肠道手术进行改良后盆腔脏器和腹膜面肿瘤的整块切除（Modified Posterior Pelvic Exenteration，MPPE）， 在前述 TPPE 技术基础上，游离乙状结肠系膜，断离乙状结肠动脉或直肠上动脉，在肿瘤上缘断离乙状结肠，分离直肠后间隙、游离直肠至 Douglas 窝肿块下缘，断离直肠，再行肠段吻合。TPPE 和 MPPE 技术，从腹膜外对种植肿瘤的盆腔腹膜、盆腔器官包括乙状结肠、直肠、子宫、和卵巢肿瘤进行整块切除，无需暴露子宫、卵巢与膀胱、直肠和乙状结肠的解剖间隙，明显减少手术出血并节省手术时间，提高 R0 手术切除率。

PO-407
基于 TMT-LC-MS/MS 技术筛选 HPV16 阳性宫颈癌差异表达蛋白的研究

徐殿琴[1],朱小雨[2],陈秀英[5],袁艳[3],谭玉洁[1]
1.贵州医科大学附属医院 2.贵州医科大学 3.贵州省人民医院
4.六盘水市人民医院 5.铜仁市人民医院

目的：探讨人乳头瘤病毒(Human papillomavirus，HPV)16 亚型阳性宫颈癌患者宫颈上皮脱落细胞中蛋白质的表达变化，以 HPV 阴性宫颈正常组为对照，筛选出 HPV16 阳性宫颈癌中差异表达的蛋白，推测宫颈癌的发生发展与蛋白表达水平失调的关系；分析这些差异表达蛋白的主要功能、涉及的主要

信号通路以及差异蛋白之间的相互作用，初步探索与 HPV16 阳性宫颈癌发生发展的关键蛋白及其分子机制。

方法：1）临床样本的收集：收集 2017 年 12 月至 2018 年 7 月间于贵州医科大学附属医院及贵州医科大学附属肿瘤医院行 HPV 基因分型检测，报告为单一 HPV16 亚型阳性或 HPV 阴性的宫颈脱落细胞样本，保存于-80°C 冰箱，并跟踪其病理诊断结果确诊为宫颈正常或宫颈癌的患者。2）分组：分为 HPV 阴性宫颈正常组(A 组)及 HPV16 阳性宫颈癌组(B 组)，并每个组进行三次生物学重复，分别为：A1、A2、A3；B1、B2、B3；共 6 个组，每个重复组 15 例混合，共 90 例。3）利用基于串联质谱标签(Tandem Mass Tag,TMT)联合液相色-谱串联质谱(Liquid chromatography-mass spectrometry/mass spectrometry, LC-MS/MS) 的定量蛋白组学技术对上述 6 个组的宫颈脱落细胞中的蛋白进行精确的鉴定及定量，筛选出 HPV16 阳性宫颈癌相对于 HPV 阴性宫颈正常组差异表达的蛋白质。4）为验证高通量蛋白质组学数据的可靠性，选择部分差异蛋白进行 Western Blot 检测。

结果：1）HPV16 阳性宫颈癌组与 HPV 阴性宫颈正常组比较，共鉴定到 351 个差异表达蛋白，包括 247 个上调蛋白和 104 个下调蛋白。2）Western Blot 检测结果证实，与 HPV 阴性宫颈正常组比较，PRDX2、GRP94 及 G6PD 蛋白表达水平在 HPV16 阳性宫颈癌的宫颈脱落细胞中显著上调，而 CSTA 及 Involucrin 蛋白显著下调（$P<0.05$），与高通量 TMT- LC-MS/MS 蛋白组学的研究相一致。

结论：1）HPV16 阳性宫颈癌与 HPV 阴性宫颈正常者比较存在多种差异表达蛋白；2）这些差异蛋白表达水平的上调或者下调可能与 HPV16 阳性宫颈癌的发生发展过程有关。

PO-408
Highly immunosuppressive HLADR hi regulatory T cells are associated with unfavorable outcomes in cervical squamous cell carcinoma

huijuan Yang[1],Shuang Ye [1],Shyamal Goswami [2], Teng Li[2],Xiaoming Zhang[2]
1.Fudan University Shanghai Cancer Center
2. The Center for Microbes， Development and Health， Key Laboratory of Molecular Virology and Immunology，Institut Pasteur of Shanghai， Chinese Academy of Sciences

Regulatory T cells (Tregs) are crucial for the maintenance of peripheral tolerance, but they also limit beneficial responses through cancer-induced immunoediting. The roles of Treg subsets in cervical squamous cell carcinoma (CSCC) are currently unknown. Here, we aimed to perform an extensive study with an increased resolution of the Treg compartment in the peripheral blood and tumor tissues of CSCC patients. We first identified that an HLADR hi Treg population in the peripheral blood was significantly increased in CSCC patients compared to precancer patients and healthy donors. We found that HLADR hi Tregs express high levels of a panel of inhibition and activation markers and the TCR-responsive transcription factors BATF and IRF4. However, this Treg subset showed reduced calcium influx after TCR crosslinking. In addition, HLADR hi Tregs are highly proliferative and vulnerable to apoptosis. Further studies demonstrated that the HLADR hi Tregs display high levels of suppressive activity. Quantitative multiplexed immunohistochemistry revealed that an increase in the number of tumor-infiltrating HLADR hi Tregs is associated with unfavorable classical risk parameters of advanced disease stage and stromal invasion. Context-based quantification revealed that a high frequency of stromal HLADR hi Tregs in patients is significantly associated with worse progression-free survival. In the current study, we characterized a population of highly activated and immunosuppressive HLADR hi Tregs in CSCC patients. An increased HLADR hi Treg frequency may be a potential biomarker to stratify CSCC patients and evaluate therapeutic efficacies in personalized immuno-oncology studies.

PO-409
Terfenadine reversal Multi-drug resistance via inhibiting CaMKII/CREB mediated P-glycoprotein expression

Wei Huang[1],Shu Yang[2],Liqing Chen[1],Wei Sun [2],Wei Zheng[2]
1.Women's hospital， Zhejiang University School of Medicine， Hangzhou 310006， China.
2.National Center for Advancing Translational Sciences (NCATS)， NIH， Bethesda， MD 20892， USA.

Ovarian cancer is one of the most lethal gynecological malignancies worldwide with a dismal prognosis. About 80% of patients who had ovarian cancer will relapse or develop resistance after several cycles of chemotherapy, which is the primary reason that causes treatment failure. Mounting evidence suggests that the over-expression of ATP binding cassette subfamily B member 1 (ABCB1), also known as P-glycoprotein, is closely associated with the multi-drug resistance (MDR), resulting in chemotherapy failure. However, the mechanism leading to ABCB1 abnormal expression remains obscure, and discover an effective therapeutics is an unmet need. Using a quantitative high-throughput combinational screen, we identified that terfenadine re-sensitized doxorubicin-induced apoptosis in an MDR ovarian cancer cell line A2780-ADR from IC50 of 6.59 μM to 0.46 μM. Besides, except for the over-expression of ABCB1, RNA-seq data showed the abnormal regulation of Ca^{2+} mediated signaling pathway, especially significant over-expression of Ca^{2+}/calmodulin-dependent protein kinase II delta (CAMK2D), in the MDR cell A2780-ADR comparing with the sensitive cell A2780. Furthermore, terfenadine was showed the ability of direct binding to CAMK2D to prevent its autophosphorylation and to repress the activation of the subsequent cAMP-responsive element-binding protein 1 (CREB1) mediated pathway. Directly inhibition of either CAMK2 or CREB1 showed the same effect as terfenadine treatment showed decreased expression of ABCB1 and baculoviral IAP repeat-containing 5 (BIRC5), also known as survivin, and increased doxorubicin-induced apoptosis in combinational treatment. Collectively, our data suggested the abnormal regulation of Ca^{2+} mediated CAMK2D/CREB1 pathway contributed to ABCB1 over-expression and MDR generation, and both CAMK2D and CREB1 are promising targets for the synergistic therapy with doxorubicin for MDR ovarian cancer.

PO-410
载有 ICG 和 DOX 的二氧化硅纳米粒子对卵巢癌的成像与治疗

张丹娅
华中科技大学同济医学院附属同济医院

现如今肿瘤的治疗越来越趋向于纳米精准成像与治疗和综合治疗，而目前来说卵巢癌是妇科常见肿瘤之一，是女性癌症死亡的主要原因，并且近年来发病率呈上升趋势。
材料与方法：为了研究目前热门的纳米药物对治疗卵巢癌细胞的成像与治疗效果，我们设计了多孔径的二氧化硅纳米粒子，其孔径可携带常用化疗药物 DOX，并可携带荧光染料 ICG。我们选用单独的二氧化硅纳米、游离 ICG、游离 DOX 和单独负载 ICG 或 DOX 的二氧化硅纳米作为对照，以 ID8 卵巢癌细胞腹股沟区皮下注射的荷瘤 C57 小鼠作为卵巢癌模型，当皮下肿瘤达 1cm*1cm*1cm 时，每周皮下注射二氧化硅纳米粒子，持续三周。三周后再次通过尾静脉注射二氧化硅纳米粒子后进行小鼠活体成像，可检测各组各器官和肿瘤组织的 ICG 荧光信号，检测时间点为 1 小时、2 小时、6 小时、24 小时和 48 小时，24 小时和 48 小时时每组取一只进行解剖，取心、肝、脾、肺、肾和肿瘤组织进行荧光成像，观察药物停留时间。而后可使用近红外光照射肿瘤组织，5min，2.5 W /cm²，由于光热转换，可促使二氧化硅负载的纳米粒子加速释放 DOX，DOX 在肿瘤处产生最大的化疗效应。最后，观察各组小鼠的生存时间，并解剖各组小鼠进行 HE 染色观察各器官的组织形态。

结果：负载有 ICG 和 DOX 的二氧化硅纳米粒子对卵巢癌肿瘤的治疗效果最好，其荷瘤小鼠的肿瘤组织体积最小，并且生存时间最长。其次，ICG 的成像效果对比于游离 ICG，由于二氧化硅纳米粒子的存在，滞留于肿瘤组织的时间明显延长，成像效果可持续48小时，而游离ICG在24小时时都不分被肝、肾代谢。此外，由于 ICG 还有光热转换效应，促进 DOX 释放，可对此进行更深一步的研究。
结论：负载有 ICG 和 DOX 的二氧化硅纳米粒子兼有荧光成像和化学治疗卵巢癌细胞的效应

PO-411
人工智能之多流卷积神经网络在宫颈脱落细胞学诊断中的价值

王娜[1],冯琦慧[1],张晓波[1],沈丹华[1],魏丽惠[1],李清丽[2],王悦[1]
1.北京大学人民医院
2.四川大学华西第二医院

目的 宫颈脱落细胞学是最重要且有效的宫颈癌筛查手段之一；但我国适龄筛查人口庞大，传统光镜检测和人工判读的效率低，且存在许多的临床漏诊和误诊，这些均是掣肘我国宫颈癌大面积筛查的重要因素。近年来，人工智能在细胞病理阅片中的探索和发展迅猛，有望弥补上述不足，但其诊断效能以及多大程度上可替代人工仍是未知数。**方法** 为探讨人工智能在宫颈脱落细胞学诊断中的价值，本文选取 “适合国人宫颈癌筛查方案建立”课题中纳入前期筛查（有性生活史、年龄＜65 岁、自愿参加、未确诊宫颈癌或癌前病变、未切除子宫），且筛查结果异常（HPV 阳性或细胞学≥ASCUS，无需转诊阴道镜和转诊阴道镜病理结果≤CIN1），并参与第二轮随访的 202 例患者进行宫颈细胞学检查，以人工判读结果为标准，评估多流卷积神经网络的诊断效能。**结果** 202 例中有效筛查病例 146 例，对比人工判读结果，人工智能筛查结果具有中度一致性，二分类和多分类算法的符合率分别为 78.08%和 84.25%。二分类算法的灵敏度、特异度、阴性预测值分别为 100%、72.88%、100%；多分类算法的特异度较高，阴性预测值为 99.03%。 **结论** 人工智能算法可极大提高筛查效率，并在检出异常细胞方面表现突出，该多流卷积神经网络二分类算法的漏诊率为零，故有望部分甚至在不久的将来完全替代细胞病理学医师的宫颈癌初筛工作。

PO-412
Ginkgolide B improves the efficacy of PD-1 monoclonal antibodies in a murine model of ovarian cancer by transforming the tumor immune microenvironment

Tong Gao,Wei Jiang
Obstetrics and Gynecology Hospital of Fudan University

Background: The immunotherapy PD-1 inhibitor is less than 20% effective on ovarian cancer. Traditional Chinese medicine have been reported anti-cancer immunomodulatory effects. Recent evidence suggests that combining traditional Chinese medicine with the PD-1 inhibitor can induce synergistic antitumor response. We previously determined GB can inhibit the proliferation and metastasis of ovarian cancer through PAF/PAFR signaling pathway. Here in this article, we investigate whether GB can enhance the PD-1 inhibitor antitumor effects in murine ID8 ovarian cancer model. Methods: We established three different ovarian cancer models including SKOV3 subcutaneous nude mice ovarian cancer models, patient-derived xenograft ovarian cancer models and ID8 subcutaneous C57BL/6 mice ovarian cancer models to observe the antitumor effects of GB and the growing development and physical inactivity of the mice. And we also evaluated therapeutic effects of PD-1 inhibitor, GB, and their combination in murine ID8 ovarian cancer model. The flow cytometry was used

to evaluated the number and composition of T lymphocytes and the content of interferon-gamma(IFN-γ) and (TGF-β). The expression of PAFR, CD4, CD8, IFN-γ, TGF-β, perforin, PD-L1 was assessed with immunohistochemistry (IHC). Results: Tumor weight of the three different ovarian cancer models in GB treated group was obviously lighter than the control group, GB can increase the weight of tumor bearing animals, and the the behavior of mice was active in GB treated group. Combined treatment with PD-1 inhibitor and GB yielded synergistic antitumor efficacy in the murine ID8 ovarian cancer model. Mechanistic investigation revealed that combination treatment promote the number of CD8+ T cells in spleen and lymph nodes, and combination treatment increased the IFN-γ and TGF-βproducing, promoted the function of T cells. The expression of CD4, CD8, IFN-γ, TGF-βand perforin in tumor was significantly up-regulated by GB. We also characterized the PAFR and PD-L1 was over expression in ovarian cancer patients. Conclusion: This study provides the evidence that GB can produce a synergistic antitumor efficacy when combined with PD-1 inhibitor, provides strong preclinical evidence to support a combination strategy for the treatment of ovarian cancer.

PO-413

DNA 损伤通过诱导衰老触发卵巢癌内质网应激

肖柔柔,游丽鑫
华中科技大学同济医学院附属同济医院

目的：当细胞受到基因组应激时，DNA 损伤反应通路对基因组稳定性和细胞存活至关重要。内质网应激是大量未折叠或错误折叠蛋白积累时的反应，会进一步触发未折叠蛋白反应(unfolded protein response, UPR)缓解内质网压力，调控细胞命运。由于分子调控是一个网络，弄清楚各种应激之间的联系对于理解细胞如何运作非常重要。然而，关于 DNA 损伤反应与内质网应激之间关系的研究却很少。本研究旨在以卵巢癌模型为基础，探讨 DNA 损伤与内质网应激的可能关系及相关机制。

材料和方法：本研究利用 OVCAR8 细胞分别通过 sh-ATR、sh-CHEK1 和 sh-WEE1 建立卵巢癌 DNA 损伤模型，并进行 RNA 测序。用 GO 和 GSEA 分析了差异显著基因的富集途径。通过 WB、q-PCR 和免疫荧光技术验证了 2 个卵巢癌细胞系(A2780 和 OV90)在 ATR 抑制剂(AZD6738)、CHEK 抑制剂(LY2603618)和 WEE1 抑制剂(AZD1775)处理后 DNA 损伤、内质网应激和衰老相关通路的激活。电镜观察了内质网的超微结构。用半乳糖苷酶检测细胞衰老。流式细胞仪检测和细胞周期。克隆实验检测细胞增殖。

结果：我们的 RNA seq 数据显示 DNA 损伤诱导后差异基因在未折叠蛋白反应（UPR）通路和炎症反应通路上有明显富集。我们观察到 2 株卵巢癌细胞系分别经 ATR 抑制剂(AZD6738)、CHEK 抑制剂(LY2603618)和 WEE1 抑制剂(AZD1775)处理后 UPR 通路的三个分支（PERK 分支、ATF6 分支和 IRE1 分支）均被激活。在机制探索中我们观察到这些抑制剂能激活 NF-KB 通路，诱导卵巢癌呈现衰老相关分泌表型（SASP），这种高分泌状态进而导致内质网应激反应发生。

结论：我们的研究建立了 DNA 损伤反应与内质网应激之间的相关联系。我们首次发现 DNA 损伤反应可诱导卵巢癌细胞呈现衰老相关分泌表型，进而引起内质网应激，触发未折叠蛋白反应。

PO-414

WEE1 抑制剂治疗诱导的衰老促进卵巢癌细胞耐药

肖柔柔
华中科技大学同济医学院附属同济医院

目的：卵巢癌的治疗一直是困扰临床医生的重大难题。近几年随着分子靶向治疗策略的推广应用，靶向 DNA 损伤通路的抗肿瘤策略获得了重大进展。WEE1 是细胞周期 G2/M 检查点重要的调控分子，在

高级别浆液性卵巢癌 TP53 突变的背景下，WEE1 的缺失将会使细胞陷入有丝分裂灾难。因此，WEE1 抑制剂在高级别浆液性卵巢癌治疗中具有非常大的应用潜力。目前靶向 WEE1 的小分子抑制剂 AZD1775 虽已进入 III 期临床，然而，与 PARP 抑制剂一样，原发耐药或继发耐药始终是一个无法回避的问题。探索 WEE1 抑制剂耐药的机制和相应的应对措施至关重要。本研究旨在探索 WEE1 抑制剂获得性耐药的新机制，为 WEE1 抑制剂耐药的卵巢癌患者提供更多的治疗策略。

材料和方法：本研究首先建立了耐 WEE1 抑制剂 AZD1775 的 OVCAR8 耐药株。选取不同诱导时间点的 OVCAR8 细胞进行形态对比、耐药性评估。利用 CCK8、克隆实验检测细胞的增殖；β-半乳糖苷酶检测细胞衰老；流式检测细胞凋亡和周期；WB 和免疫荧光用于检测细胞的 DNA 损伤。

结果：我们的研究结果显示，随着诱导时间延长和诱导浓度不断加大，OVCAR8 细胞的耐药性不断增强，细胞形态发生了扩张；我们通过检测衰老相关指标，发现经 AZD1775 诱导的细胞出现 G2/M 期阻滞、并且呈现出明显的衰老样变化。耐药的细胞 DNA 损伤不明显，抗凋亡家族明显高表达。使用抗衰老药物 Bcl-2 家族抑制剂（ABT-263）处理后，AZD1775 耐药的 OVCAR8 细胞衰老表型出现回退，并且对 AZD1775 的敏感性增强，凋亡显著增加。

结论：我们的研究显示 WEE1 抑制剂 AZD1775 长期诱导的卵巢癌细胞出现衰老的表型，这种表型通过抗凋亡作用促进卵巢癌细胞耐药。我们的研究证明了 WEE1 抑制剂耐药的新机制，可为 WEE1 抑制剂临床应用推广提供新思路。

PO-415
SREBP1 抑制剂 Fatostatin 诱导子宫内膜样腺癌细胞凋亡并逆转孕激素抵抗的研究

马小鸿,姜洁
山东大学齐鲁医院

研究目的：本研究明确 Fatostatin 对于子宫内膜癌孕激素抵抗细胞的作用及其恢复耐药细胞对孕激素敏感性的效果，分析 Fatostatin 与孕激素联用时产生的具体效应，并通过建立耐药移植瘤裸鼠模型来明确 Fatostatin 治疗孕激素耐药肿瘤细胞移植瘤的体内药效。从而探索 SREBP1 抑制剂 Fatostatin 对子宫内膜样腺癌的辅助治疗作用，为进一步研发逆转孕激素抵抗的药物提供理论依据，为保守治疗子宫内膜癌提供新的靶点，以期解决临床孕激素抵抗难题。

材料与方法：1.通过免疫组化检测子宫内膜样腺癌保守治疗患者临床样本用药前后 SREBP1 的表达 2.通过流式细胞术检测细胞周期和凋亡等体外实验验证 SREBP1 参与子宫内膜样腺癌孕激素抵抗的形成。3.通过 MTT 增殖实验、细胞集落形成实验及流式细胞术检测细胞凋亡体外实验、裸鼠移植瘤模型体内试验验证 Fatostatin 抑制子宫内膜样腺癌细胞增殖、诱导细胞凋亡的作用。4. 通过 Fatostatin 与孕激素同时作用于细胞进行体外实验及体内实验明确 Fatostatin 作为孕激素抵抗辅助治疗的可行性

结果： 免疫组化方法验证应用孕激素保守治疗子宫内膜样腺癌患者用药前后子宫内膜组织标本中 SREBP1 的表达与孕激素抵抗、临床特征及预后等具有明显的正相关性。通过对子宫内膜癌细胞的孕激素诱导，建立具有孕激素抵抗特征的孕激素抵抗细胞且验证构建成功，筛选出稳定高表达 SREBP1 子宫内膜癌细胞系、稳定敲除 SREBP1 的子宫内膜癌孕激素抵抗细胞系及相应的对照组用于后续实验。采用 MTT 实验、EDU 实验、细胞凋亡实验等体外实验及裸鼠移植瘤体内实验验证 SREBP1 参与子宫内膜癌的孕激素抵抗。通过细胞集落形成实验、MTT 增值实验、细胞周期及凋亡实验验证 Fatostatin 对子宫内膜癌的生长具有抑制作用。本研究利用体外增殖实验及裸鼠移植瘤实验证明在子宫内膜癌中 Fatostatin 与孕激素联用具有增敏效应，可作为孕激素的辅助治疗。

结论：本项目通过探究 SREBP1 在子宫内膜癌中孕激素抵抗形成过程中的作用及分子机制，明确 SREBP1 抑制剂 Fatostatin 作为子宫内膜癌及孕激素抵抗辅助治疗的可行性，为开发提高患者对孕激

素的敏感性、扩大适应人群的新型药物提供理论基础，为具有生育功能的早期子宫内膜癌患者提供新的治疗策略。

PO-416
HRR 基因胚系突变对高级别浆液性卵巢癌患者预后的影响

杨帆,李俊东
中山大学肿瘤防治中心/中山大学附属肿瘤医院

目的：随着基因研究的开展，发现越来越多与卵巢癌相关的同源重组修复（Homologous recombination repair，HRR）基因。但 HRR 基因突变对卵巢癌的确切影响尚未确定。因此，本研究旨在分析 HRR 基因胚系突变对高级别浆液性卵巢癌（High-grade serous ovarian cancer,HGSOC）患者临床病理特征及预后的影响，为患者的诊治提供可参考的临床依据。
方法：回顾性分析 2016 年 1 月至 2019 年 5 月在我院行胚系基因检测的 272 例 HGSOC 患者，选取基因检测报告提示有 HRR 基因致病突变或疑似致病突变的 87 例作为 HRR 突变组，同时选取基因检测报告提示意义未明突变或未发现突变的 185 例作为 HRR 野生组。运用 SPSS 22.0 统计软件评估两组患者的无进展生存期（Progression-free survival，PFS）。
结果：在 272 例 HGSOC 患者中，HRR 突变组有 87 例（32.0%），其中 BRCA1 突变 58 例（21.3%），BRCA2 突变 20 例（7.4%），BARD1 突变 1 例（0.4%%），CHEK2 突变 1 例（0.4%），PALB2 突变 2 例（0.7%），RAD50 突变 1 例（0.4%），RAD51C 突变 3 例（1.1%），RAD51 突变 1 例（0.4%）;HRR 野生组患者有 185 例（68.0%）。HRR 突变组的平均发病年龄比 HRR 野生组小 3.7 岁(49.5 岁 vs 53.2 岁，P =0.002＜0.05)。在 172 例复发患者中，HRR 突变组较 HRR 野生组更倾向于铂敏感复发（88.0% vs 71.3%，P =0.020＜0.05）。多因素分析显示 HRR 状态是 PFS 的独立预后影响因素(HR,0.356；95%CI,0.131-0.966；P =0.043＜0.05)。
HRR 突变组患者的中位 PFS 比 HRR 野生组长 8.0 个月，差异有统计学意义(26.0 个月 vs 18.0 个月，P =0.014＜0.05)。在 HRR 野生组中，术后肿瘤残留＜1cm 的患者中位 PFS 比术后肿瘤残留≥1cm 的患者长 4 个月，差异有统计学意义(18.0 个月 vs 14.0 个月,P =0.039＜0.05)。
结论：
1.约三分之一（32%）的 HGSOC 患者携带 HRR 基因胚系突变，最常见为 BRCA1/2 突变。
2.HRR 基因胚系突变的 HGSOC 患者发病年龄较早，对铂类化疗药物的敏感性较高，预后更好。

PO-417
STON2 通过 EGR1 介导的 EMT 途径调节卵巢癌侵袭迁移的机制研究

徐姗姗
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

研究目的：EGR1 在细胞生长分化、凋亡、胚胎发育、神经发育、肿瘤发生发展等中扮演着重要角色。越来越多的研究证实 EGR1 基因在人类肿瘤中发挥着重要作用，更有意思的是，EGR1 在不同类型的肿瘤中扮演着不同的角色，例如在肺癌、胶质瘤、肝癌、食道癌、乳腺癌等作为抑癌基因，而在前列腺癌、胃癌中为促癌基因。在卵巢癌的研究中，EGR1 的生物学功能目前尚未有一个明确的定论，有文献报道指出 EGR1 通过 EGR1 参与调解卵巢癌的侵袭能力。本研究旨在探讨研究 EGR1 在卵巢癌侵袭迁移中的机制研究。**研究方法：**收集本院卵巢癌患者的组织标本，免疫组化检测 EGR1 的表达，分

析其与卵巢癌临床病理参数的相关性；构建 EGR1 慢病毒 shRNA，转染 A2780 和 SKOV3 细胞，构建稳定 EGR1 低表达细胞模型，用 Western blot 检测 EMT 相关指标，transwell 评估细胞迁移和侵袭能力；Western blot 检测 EGR1 随着 STON2 下调的变化；构建稳定 STON2 低表达细胞模型，用 Western blot 检测 EMT 相关指标，transwell 评估细胞迁移和侵袭能力；shRNA-STON2 和 shRNA-EGR1 共转染，Western blot 检测 EMT 相关指标，transwell 评估细胞迁移和侵袭能力；构建稳定 EGR1 低表达的细胞系，设置对照组，SCID 鼠皮下注射成瘤，观察 EGR1 低表达对 SCID 鼠成瘤能力的影响。**研究结果**：Transwell 证实 STON2 下调后 A2780 细胞迁移侵袭能力增强；Western blot 证明 EGR1 的表达随着 STON2 下调而升高。**实验结论**：STON2 可能通过 EGR1 介导的 EMT 途径参与调节卵巢癌的侵袭迁移。

PO-418

多学科协作在卵巢癌患者临床应用的效果分析

杨帆,李俊东
中山大学肿瘤防治中心/中山大学附属肿瘤医院

目的：通过分析中山大学肿瘤防治中心卵巢癌单病种多学科协作（Multi-disciplinary team，MDT）会诊的开展情况，评价 MDT 模式对卵巢癌的临床应用效果。
方法：回顾性分析 2017 年 06 月至 2019 年 06 月参加中山大学肿瘤防治中心卵巢癌单病种 MDT 会诊的患者临床资料、MDT 会诊决策内容、执行情况和随访结果。统计学分析采用 SPSS 22.0。
结果 在 243 例患者中，诊断为 I~II 期有 4 例（4/243,1.6%），III~IV 期有 86 例（86/243,35.4%）,复发性有 113 例（113/243，46.5%）；组织学类型为上皮性肿瘤有 184 例（184/243，75.7%）。
全部病例共进行 265 人次讨论，建议化疗有 236 人次（236/265,89.1%），其中 203 人次（203/236，86.0%）执行化疗，184 人次（184/203,90.6%）达到预期疗效，与未执行者相比差异有统计学意义（90.6% vs 45.5%，P <0.001）；建议手术治疗有 154 人次（154/265，58.1%），其中 145 人次（145/154,94.2%）执行手术，143 人次（143/145,98.6%）达到预期疗效，与未执行者相比差异有统计学意义（98.6% vs 33.3%，P <0.001）；建议其他治疗有 168 人次（168/265,63.4%），其中 112 人次（112/168,66.7%）执行建议，95 人次（95/112,84.8%）达到预期疗效，与未执行者相比差异有统计学意义（84.8% vs 33.9%，P <0.001）。
结论 多学科协作（MDT）会诊在为卵巢癌患者评估病情、全程管理及改善近期治疗效果起着重要作用。但由于随访时间及病例数有限，对患者预后的影响仍需要进一步探索。

PO-419

Dicer 调节自噬促进上皮性卵巢癌顺铂耐药的分子机制研究

郭立丽,武雪
华中科技大学同济医学院

化疗耐药是肿瘤复发致死的关键因素，在卵巢癌中尤为明显。前期研究中，通过收集临床样本及组织芯片验证发现在卵巢癌的发生发展过程中，Dicer 呈现下调趋势，Dicer 低表达卵巢癌患者预后更差。进一步我们鉴定了 Dicer 基因在卵巢癌细胞系表达情况，并确认 Dicer 表达被干扰后，细胞凋亡比例明显下降，细胞的存活能力显著升高。为进一步探究 Dicer 作用的机制，我们在电镜下观察下调 Dicer 后自噬泡的情况，发现下调 Dicer 后自噬效应明显增强，而加入自噬抑制剂或者利用 RNAi 技术下调 ATG5 后能明显逆转化疗耐药，提示自噬参与了 Dicer 引起的化疗耐药。已有研究发现许多 microRNA 可以通过抑制自噬加强癌细胞对化疗药物敏感性，Dicer 是加工 miRNA 的重要工具酶,Dicer 下调能引

起多种 miRNA 发生变化，因此针对人 ATG5 3'UTR 采用生物信息学方法找到调控 ATG5 表达的 miRNA（有 let-7b，miR-15a，miR-106b，miR-34a，miR-135b 和 miR-30d 等），并在实验中发现在卵巢癌细胞中 RNAi 敲低 Dicer 后 miR-106b 和 miR-34a 的产量明显下降，这表明 Dicer 能通过特定 miRNA 调控 ATG5 基因表达及自噬信号通路。为探究其上游作用机制，通过 Starbase 数据库检索发现 RNA 结合蛋白 hnRNPC 与 Dicer 负相关，并通过对 Dicer RNA 附近的 hnRNPC eCLIP-seq 信号分析发现，Dicer RNA 的内含子上有 hnRNPC 的结合位点，并在实验中发现 hnRNPC 敲除后，Dicer 的蛋白水平明显升高，证实二者存在负调控关系。本研究通过阐明 hnRNPC 下调 Dicer 诱导自噬引起卵巢癌化疗耐药的分子机制，为改善卵巢癌化疗耐药的治疗效果提供更多理论依据。

PO-420

回顾性分析早期高危子宫内膜癌术后辅助治疗的临床疗效

周南靖,周航
遵义医科大学第二附属医院

研究目的：分析 I 期术后具有高危因素的子宫内膜样腺癌患者辅助治疗疗效及预后相关因素，为治疗选择提供临床依据。

材料与方法：回顾性分析 2010-2014 年我院收治的 I 期术后具有高危因素的子宫内膜样腺癌 97 例，其中 59 例行术后辅助治疗为治疗组：单纯放疗 22 例，采用三维盆腔外照射放疗或近距离放疗，总剂量 45Gy~50Gy 或 30Gy；联合放化疗 37 例，放疗方式同前，化疗方案为紫杉醇联合铂类，剂量：紫杉醇 135~175mg/m2，顺铂 75mg/m2，或卡铂取 AUC=5，均予静脉滴注，每 21 天重复，化疗 2-3 程。38 例予术后观察为观察组。主要观察指标为 5 年生存率（5-OS）、5 年无病生存率（5-DFS），次要观察指标为治疗相关毒副作用及临床-病理指标与预后的相关性。通过医院住院系统、门诊、电话等方式进行随访。所有数据采用 SPSS 22.0 统计分析系统，使用 Kaplan-Meier 法计算生存率，Log-rank 法单因素分析，Cox 比例风险模型进行多因素分析，采用 χ^2 检验不同治疗方式对不良反应的影响。ROC 曲线确定血液学参数的最佳临界值。

结果：治疗组与观察组 5-OS 分别为 96.6%、81.4%，差异具有统计学意义（P=0.010），5-DFS 分别为 89.1%、70.9%，差异具有统计学意义（P=0.020）。针对治疗组进一步行亚组分析，单纯放疗组与联合放化疗组 5-OS 分别为 100%、94.6%，5-DFS 分别为 92.9%、86.5%，差异均无统计学意义（P=0.272，P=0.272）。毒副作用方面：单纯放疗组骨髓抑制 11 例（50.0%），联合放化疗组骨髓抑制 32 例（86.5%），差异有统计学意义（P=0.000）。在单因素分析中，影响子宫内膜癌术后患者 5-OS 和 5-DFS 的因素有病理分化、淋巴脉管间隙受侵（LVSI）、深肌层浸润、术后辅助治疗、中性粒细胞/淋巴细胞比值（NLR）、血小板/淋巴细胞比值（PLR）、淋巴细胞/单核细胞比值（LMR），差异具有统计学意义（P＜0.05）。在多因素分析中，影响子宫内膜癌患者 5-OS 和 5-DFS 的独立危险因素有病理分化、LVSI、术后辅助治疗。

结论：I 期具有高危因素的 EC 患者行术后辅助治疗可减少复发转移、延长生存时间，但联合放化疗与单纯放疗比较未见明显优势，且骨髓抑制发生率明显升高。病理分化、LVSI、术后辅助治疗是 OS 及 DFS 的独立危险因素。

PO-421

PD-L1 转录后调控机制研究进展

方田
华中科技大学同济医学院附属同济医院肿瘤生物医学中心

免疫疗法近年来在肿瘤治疗领域发展迅速，尤其是 anti-PD-1/PD-L1，anti-CTLA-4 疗法的成功极大地鼓舞了研究者们对肿瘤进展的全新认识。由于肿瘤细胞以及肿瘤微环境中的其他细胞包括巨噬细胞、

树突状细胞等高表达免疫抑制性配体 PD-L1，CTLA-4 等，当其与抗肿瘤杀伤性 $CD8^+T$ 细胞表面相应的免疫抑制性受体 PD-1，CD28，我们也称之为免疫检查点，等结合时抑制特异性肿瘤杀伤 $CD8^+T$ 细胞活化，导致肿瘤免疫抑制性微环境，肿瘤细胞逃逸免疫系统的杀伤从而发生肿瘤进展。因此通过阻断免疫检查点信号，修复正常的活性肿瘤免疫微环境成为了对抗肿瘤的又一大热点策略。而 PD-L1 是目前发现的最为明确的广泛高表达于多种肿瘤细胞表面和肿瘤微环境中其他细胞的免疫抑制性配体之一，是导致免疫抑制性微环境的重要因子。Anti-PD-1/PD-L1 疗法已获批用于多种实体瘤的治疗，但总体响应率仍不容乐观，阐明 PD-L1 分子的表达调控机制将为完善抗肿瘤免疫疗法提供新的策略。目前对 PD-L1 表达调控机制的研究尚不完善，PD-L1 的表达调控可发生于基因水平、转录水平以及转录后水平。转录后调控是 PD-L1 表达的重要调控机制，在重塑免疫微环境中发挥着重要的作用。目前的研究发现 PD-L1 蛋白的糖基化、磷酸化、泛素化、磺酰化、乙酰化均能调控 PD-L1 表达，本文将就 PD-L1 的转录后调控机制及临床应用进展作一综述。

PO-422

免疫治疗在卵巢癌中的应用研究进展

李文婷
华中科技大学同济医学院附属同济医院

卵巢癌的临床早期症状不明显，筛查手段有限，就诊时常处于晚期阶段，5 年生存率仅 30%~45%，严重威胁着女性健康。免疫治疗尤其是免疫检查点抑制剂治疗因其持久的抗肿瘤效应已被批准用于晚期或复发性的多种类型癌症的治疗。目前免疫治疗的一些研究进展为卵巢癌患者的临床管理提供了新的机遇与挑战。

PO-423

卵巢子宫内膜异位症恶变致透明细胞癌的临床特征分析

张冰,赵绍杰,王铁军
无锡市妇幼保健院

目的：探讨卵巢子宫内膜异位症（EMS）相关卵巢透明细胞癌与非卵巢子宫内膜异位症相关卵巢透明细胞癌患者的临床特征差异。 方法：选择本院 2013 年 7 月至 2020 年 6 月的 EMS 恶变卵巢透明细胞癌患者（观察组）13 例、非 EMS 恶变卵巢透明细胞癌患者（对照组）21 例，对比两组患者的临床特征。 结果：观察组年龄＜45 岁、产次≤1、血清 CA125 水平≥82IU/mL 的患者的比例高于对照组（P＜0.05）；孕次、肿瘤直径、FIGO 肿瘤分期、合并子宫腺肌症、ROMA 后、ROMA 前，两组无统计学意义（P＞0.05）。以是否 EMS 致卵巢透明细胞癌为因变量，以年龄、孕次、产次、肿瘤直径、FIGO 分期、合并子宫腺肌症、CA125≥82IU/mL、ROMA 后、ROMA 前作为自变量。Logistic 回归分析显示：年龄、产次、CA125 是 EMS 恶变为卵巢透明细胞癌的独立危险因素（P＜0.05）。 结论：EMS 相关卵巢透明细胞癌患者与非 EMS 相关卵巢透明细胞癌患者临床特征明显差异，对于年龄轻、产次≤1、CA125≥82IU/mL 的卵巢癌患者应高度怀疑 EMS 相关卵巢透明细胞癌可能性。

PO-424
Efficiency of sentinel lymph node mapping in intermediate-high-risk endometrial cancer with comparison of two injection methods

Qian Wang,Bo Wang,Xiaojun Chen
Obstetrics and Gynecology Hospital of Fudan University

Objective: To evaluate the diagnostic accuracy of sentinel lymph node (SLN) mapping and the distribution location of Sentinel Lymph Nodes using cervical and fundal injection of indocyanine green (ICG) in laparoscopic surgery of intermediate-high-risk endometrial cancer (EC).
Methods: Women with intermediate-high-risk endometrial cancer were enrolled in this prospective surgical trial. According to the different injection sites,all patients were divided into the fundal ＆cervical group and cervical group with a laparoscopic surgery of hysterectomy, sentinel lymph node (SLN) mapping, and a completory pelvic and/or paraaortic lymphadenectomy.Pathologic ultrastaging was performed with immunostaining for cytokeratin after routine hematoxylin and eosin histological examinations.
Results:: Between April 2017 to January 2020, the 94/103 EC patients successfully mapped SLN at least one side. The overall SLN detection rate was 91.3%, with a bilateral detection rate of 78.4%.The para-aortic detection rate in the fundal ＆cervical group(38%) was significantly higher than in the cervical group(1.8%) with P＜0.01.The sensitivity of metastatic lymph nodes detection was 66.7% in cervical group which is lower than that in fundal ＆cervical group(88.8%).The distribution of SLNs was consistent in the two different injection groups which the most common anatomic sites where SLNs were identified were left external iliac and right obturator.No adverse events occurred during the SLN procedure.
Conclusion:Given the high sensitivity and high negative predictive value found in our study, we believe that the use of SLN mapping appears to be an appropriate staging procedure in intermediate-high-risk endometrial cancer.The fundal ＆cervical injection of indocyanine green achieved a higher para-aortic detection rate and a similar anatomic nodal distribution as a cervical injection for SLN mapping in endometrial cancer patients.But the fundal injection had no significant advantages over the detection of isolated para-aortic metastases.

PO-425
Integrative analysis of differentially expressed and abnormally methylated core genes for diagnosis and prognostic prediction in ovarian cancer

Xiaoming Xiong,Qinglei Gao
Tongji Hospital， Tongji Medical College， Huazhong University of Science and Technology

Abstract
Background: Ovarian cancer (OC) is the most fatal gynecological malignant tumor in women due to diagnosed at advanced stage (FIGO III or IV) and chemotherapy resistance. The standard treatment for ovarian cancer is staging surgery and debulking surgery, as well as platinum-based chemotherapy. Many novel therapies including targeted therapy and immunotherapy have appeared in the past decades, but the 5-year survival rate of ovarian cancer has not improved in the past 30 years. Because of unclear tumorigenesis and prognostic factors of the disease. Recent studies revealed epigenetic modifications, especially DNA methylation, played a key role in OC. The purpose of this study is to

identify abnormally expressed genes regulated by aberrant methylation for diagnosis and prognostic prediction in patients of OC.
Methods: The gene expression profiling dataset (GSE14407, GSE27651, GSE26712) and gene methylation profiling dataset (GSE75414) were downloaded from the Gene Expression Omnibus (GEO) database. GEO2R was applied for identifing differentially expressed genes (DEGs) and differentially methylated genes (DMGs). Methylation-regulated differentially expressed genes (MeDEGs) were derived from the intersection of DEGs and DMGs and analyzed and annotated with the DAVID database for GO Term and KEGG Pathway Enrichment. Protein-protein interaction (PPI) networks were established with Search Tool for Retrieval of Interacting Genes (STRING) and and visualized in Cytoscape to chase down hub genes. Validation of hub genes for expression and methylation was carried out with GEPIA and MethHC. We carried out ROC curve analysis with gene expression dataset GSE26712. Prognostic analysis was performed by Kaplan Meier-plotter database for OC. With the data from The Cancer Genome Atlas (TCGA) database, we evaluated the infiltration of immune cells in ovarian cancer tissues by CIBERSORTx.
Results: Three gene expression profiles, GSE14407, GSE5438, and GSE27651 microarray data of these three datasets were all on account of GPL570 Platforms, [HG-U133_Plus_2] Affymetrix Human Genome U133 Plus 2.0 Array. The GSE18520 dataset contained 53 high grade OC samples and 10 normal OV samples. GSE54388 contained 16 high grade OC samples and 6 normal OV samples while GSE27651 contained 22 high grade OC specimen and 6 normal OV specimen. Finally, there were 124 hypomethylated, upregulated genes and 62 hypermethylated, downregulated genes identified. These genes were significantly enriched in regulation of cellular component organization, apical junction complex, enzyme binding, and Pathways in cancer. We verified the expression and methylation of the top 20 hub genes obtained from PPI networks. After that, 8 MeDEGs were sellected for ROC curve analysis and prognostic analysis. All except UHRF1 showed good performance in OC diagnosis. We also found CDKN3, GATA4, NEK2, SFN, SOX9, TK1, and UHRF1 were associated with progression-free survival (PFS) or overall survival (OS). Furthermore, low expression of CCND1 and SOX9 were accompanied by more infiltration of M1 macrophages. The expression of NEK2 and UHRF1 were positively correlated with infiltration of $CD8^+$ T cells. What's more, higher expression of GATA4 means more activited natural killer (NK) cells and less resting NK cells infiltration.
Conclusion: Our study discovered 8 MeDEGs which maight be potential biomarkers for OC diagnosis and prognostic prediction, and provided new strategies for the treatment.

PO-426

性腺外混合生殖细胞肿瘤报道 1 例及文献复习

俞涵希,钱建华
浙江大学医学院附属第一医院

性腺外混合生殖细胞肿瘤是一种罕见且高度恶性，成分包括两种及以上的生殖细胞肿瘤，最常见于女性患者，而男性很少。我们报道了一名 52 岁的男性患者甲胎蛋白（AFP）水平升高（100 ng / ml）一年，无其他主诉。影像学检查显示纵隔占位。纵隔病灶切除及化疗后，β-人类绒毛膜促性腺激素（β-HCG）逐渐升高（133.8 mIU / ml）。最后，结合该患者的病史，证实为性腺外混合生殖细胞肿瘤，成分包括卵黄囊瘤（YST）和绒癌（CC）。
在全面回顾文献的基础上，我们首次报告了男性患者性腺外混合生殖细胞肿瘤的病例。准确的诊断，术前新辅助化疗，病灶切除以及适当的术后放疗为晚期混合生殖细胞肿瘤的患者带来极大益处。该患者通过我们的治疗已成功治愈。

PO-427

The comparative analysis of clinicopathological characteristics and prognosis between Seromucinous Borderline Ovarian Tumors (SMBOTs) and Mucinous Borderline Ovarian Tumors (MBOTs)

Beibei Wu,Ruifang Chen,Xiang Tao,Jun Li,Jieyu Wang,Yang Bai,Weiyong Gu,Xin Lu
Obstetrics and Gynecology Hospital of Fudan University

Abstract

Background: Borderline ovarian tumor (BOT) is a category of epithelial ovarian neoplasms with low malignant potential. In 2014, “endocervical-type” and “intestinal-type” mucinous borderline ovarian tumors, originally belonged to mucinous BOT together, were reclassified to be two independently different types, called Seromucinous BOT (SMBOT) and Mucinous BOT (MBOT) separately. In addition to histology, differences between SMBOT and MBOT are worthy of further exploration.

Objective: To investigate the differences of clinicopathological characteristics and prognosis in patients with SMBOT and MBOT.

Materials and Methods: 91 patients who had undergone surgery and pathologically diagnosed as SMBOT (including endocervical-type MBOT before 2014 and SMBOT after 2014) and MBOT (including intestinal- type MBOT before 2014 and MBOT after 2014) in Obstetrics and Gynecology Hospital of Fudan University from 2006 to 2016 are enrolled. Various clinicopathological features, including age, preoperative-serum tumor markers, growth pattern, surgical methods, pathological features, and follow-up data are compared between the two groups.

Results: The onset age of 39 SMBOTs (37.23±13.30 y) was lower than that of 52 MBOTs (39.25±16.82 y). Preoperative CA125 was increased in 39.39% SMBOTs patients comparing to 36.96% in MBOTs, preoperative CA199 was increased in 51.51% SMBOTs patients comparing to 42.86% in MBOTs. No statistical differences were observed between the two groups in fertility-sparing surgery rate (71.79% vs. 61.54%), intraoperative frozen pathological detection rate (82.05% vs. 69.23%), postoperative chemotherapy rate (5.15% vs. 5.77%), postoperative perimenopausal symptoms, and postoperative fertility rate. The lesions of SMBOTs could be involved in bilateral (4/39), while MBOTs were all unilateral (52/52), with a statistical difference (P=0.031). The diameter of the lesions of SMBOTs were 10.63±6.97 cm, while those of MBOTs were (18.55±8.91) cm, with a statistical significance (P<0.01). Positive coverage rate of immunohistochemical markers, including ER, PR, CA125, CK20 and vimentin differed significantly (P< 0.05), while p53, Ki-67, CEA, CK7, PTEN, VEGF, COX-2 had no statistical difference (P>0.05). The expression status of ARID1A in SMBOTs didn't present a superiority to MBOTs, even though approximately 1/3 patients had an expression loss of ARID1A. All clinicopathological factors between MBOTs with IECA and MBOTs without IECA, including postoperative recurrence rate, fertility rate, and survival rate, didn’t display statistically differences. (73.53±28.29) months’ follow-up were conducted. Data showed that 4 SMBOTs and 4 MBOTs patients experienced recurrence with a （36.13±39.28) months’ median recurrence interval, and they had been performed fertility-sparing surgery without exception. The recurrence rates of SMBOTs and MBOTs were respectively 10.53% vs. 9.76% (P>0.05). Among the recurrent cases, 6 cases were relieved by a second fertility-sparing surgery, 1 SMBOT progressed into low grade serous carcinoma of the contralateral ovary when a secondary recurrence occurred 32 months later, and 1 MBOT into mucinous carcinoma of the contralateral ovary with a secondary recurrence of 52 months later. No tumor related death occurred during the follow-up. Cox regression analysis indicated that conservative surgery is an independent risk factor for recurrence. While, growth pattern, whether combined IECA or not, lymph node dissection and postoperative chemotherapy were not related to recurrence (P > 0.05) without exception.

Conclusion： MBOT presented a higher incidence rate and bigger lesion coverage, but similar recurrent and survival rates compared to SMBOT. Both SMBOT and MBOT patients processed a good

prognosis in survival and reproduction. Conservative surgery showed a higher recurrent rate than bilateral salpingo-oophorectomy, while, no significant difference was observed in postoperative survival. Although conservative surgery could be performed once again after recurrence, the patients with secondary recurrence had a greater chance to progress into carcinoma. Therefore, it deserves much more evaluation to preserve the reproductive function when facing a secondary recurrence. Concomitant intraepithelial carcinoma (IECA) was not a risk factor affecting postoperative recurrence and survival of MBOT, and a good prognosis could still be obtained for these young patients with conservative operation, which is proved to be secure and feasible.

PO-428

阴式辅助腹腔镜宫颈癌根治术的疗效评价

李典臻,王丹波
辽宁省肿瘤医院

目的 探讨阴式辅助腹腔镜广泛性子宫切除术，避免全腹腔镜手术开放状态离断阴道对无瘤理念的质疑，同全腹腔镜手术、开腹手术比较疗效，为宫颈癌微创手术提供新路径。
方法 回顾性收集 2016 年 6 月至 2019 年 6 月在辽宁省肿瘤医院诊治，分别行经腹（ARH）、腹腔镜（LRH）、阴式辅助腹腔镜（VALRH）广泛性子宫切除术，病理类型为鳞癌、腺癌、腺鳞癌，临床分期包括 IB1-IIA2 期（FIGO2009）的患者，经开腹手术的患者为对照组，经腹腔镜手术或阴式辅助腹腔镜手术的患者为实验组，对其预后进行分析。
结果 共收集 396 例，包括 ARH 患者 216 例，LRH 患者 104 例，VALRH 患者 76 例，行 Kaplan-Meier 绘制生存曲线、log-rank 检验，将复发情况分为总体复发、广泛复发、盆腔局部复发，再根据病灶大小、淋巴结转移与否、以及术后是否进行辅助治疗的情况进行分层分析，两两比较。总体 DFS 生存分析：ARH、LRH、VALRH 的总体复发率分别为 5.55%、11.54%、5.26%，其中 LRH 同 ARH 差异有统计学意义（P=0.049）；对三种手术方式的各个亚组进行广泛复发率比较，差异均无统计学意义。对盆腔局部复发率进行比较：病灶大小≥2cm，＜4cm 时，ARH、LRH、VALRH 局部复发率分别为 1.32%、10.59%、1.92%，其中 LRH 同 ARH 生存分析差异具有统计学意义（P=0.016）。各亚组 OS 差异均无统计学意义。
结论 LRH 较 ARH 相比局部复发率及总体复发率升高，使其 DFS 缩短，但广泛复发率却无明显差异，VALRH 在各个亚组分析中同开腹手术相比均无明显差异。因此，VALRH 能够避免 LRH 离断阴道断端时造成的肿瘤暴露问题，形成包裹肿瘤的阴道袖套，患者预后同开腹相比差异均无统计学意义，有望成为宫颈癌微创手术的标准术式，值得推广。

PO-429

宫颈癌的驱动基因变异及潜在靶向治疗价值研究

杨慧娟[1],姜玮[1],向礼兵[1],周晓燕[2],杨文涛[2],裴璇[1],殷丽娜[1], 贺天聪[1]
1.复旦大学附属肿瘤医院妇科肿瘤
2.复旦大学附属肿瘤医院病理科

宫颈癌是女性下生殖道最常见的妇科恶性肿瘤。在临床上,局部晚期宫颈癌(FIGO IB3-IVA 期)，占了浸润性宫颈癌的绝大多数。这类患者经过规范治疗的五年生存率只有 60-70%，并有约 30-40%的患者 2-3 年内复发。而目前晚期、复发和转移宫颈癌的治疗手段有限，中位生存期 18 个月，预后极差。针对宫颈癌中驱动基因突变的靶向治疗是潜在的治疗手段。我们自 2015 年起，对宫颈癌的主要驱动基因突变进行了一系列研究， （1）首先，在 285 例宫颈癌患者中分析了目前临床上已有靶向治疗药物的 16

个驱动基因的突变情况,发现大约 30%的患者出现上述基因突变,其中最常见的为 PIK3CA、KRAS 及 HER2。该部分研究首次报道了中国人群宫颈癌的具有潜在治疗价值的驱动基因突变谱,为实现临床转化,选择适用于宫颈癌的靶向治疗药物、设计相关临床试验提供了证据；（2）进一步，在近 1000 例中国宫颈癌患者中分析上述基因突变情况，发现 PIK3CA 的突变率最高，且多见于鳞癌组织，而 KRAS 及 HER2 基因在腺癌、腺鳞癌及其它少见类型宫颈癌组织中突变率明显高于鳞癌组织，提示靶向 KRAS 及酪氨酸激酶抑制剂在宫颈非鳞癌组织，特别是神经内分泌肿瘤等其他少见类型宫颈癌中的临床应用前景。（3）进一步的功能研究发现，在宫颈癌患者中 PIK3CA 突变主要发生于螺旋区 E545K、E542K，不同于乳腺癌和子宫内膜癌。携带 PIK3CA E545K、E542K 突变的宫颈癌患者较野生型患者在行 PET-CT 检查时具有更高的最大 SUV 摄取值，提示该突变促进宫颈癌葡萄糖代谢；而一系列体内外研究发现这类突变可通过促进 β-catenin 表达及核转位抑制 SIRT3 转录进而提高宫颈癌糖酵解水平，并降低宫颈癌的放疗敏感性，而通过 shRNA 或 XAV939 抑制剂靶向 β-catenin 可明显提高其放疗敏感性，为放疗增敏提供了新思路和新方案。总之，上述研究结果为宫颈癌的靶向治疗提供了治疗靶点， 有助于相关临床研究的开展。

PO-430

Tanshinone IIA induces intrinsic apoptotic pathway in Endometrial carcinoma cells via stimulating TRIB3 expression.

meihua liu
Tianjin Central obstetrics and Gynecology Hospital

Objective The aim of this study is to determine the antiproliferative activity of Tanshinone IIA（Tan IIA ）against endometrial carcinoma cell line and investigate associated molecular mechanism.
Materials and methods Three well differentiated human endometrial carcinoma cell lines were exposed to Tan IIA treatment. The effects of Tan IIA on proliferation were measured by CCK8 and Ki67 staining. The apoptosis was determined by Flow cytometry analysis. Activation of intrinsic apoptotic pathway was determined by mitochondrial stress and cytochrome c release, caspase-3, 4, 6 activity. TRIB3 expression was regulated by lentivirals infection to detect downstream molecular mechanism.
Results We found that Tan IIA induces endometrial cancer cell apoptosis by intrinsic mitochondrial apoptotic pathway. This inhibition against proliferation was attenuated by TRIB3 knockdown. Furthermore, Tan IIA inhibited activity of ERK1/2 was reversed by TRIB3 knockdown.
Conclusions Tan IIA has significant anti-tumor effect by inducing apoptosis, which may become a new drug for early prevention and prognosis improvement of endometrial cancer.

PO-431

33 例妊娠合并卵巢子宫内膜异位囊肿的临床分析

余梦佳
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

摘要：研究目的：学习分析妊娠合并卵巢子宫内膜异位（以下简称内异）囊肿的临床表现及特点，指导其诊断及治疗方法。材料与方法：搜集 2019 年 01 月至 2020 年 06 月在我院收治住院手术并经病理检查证实的妊娠合并卵巢内异囊肿的患者共 33 例。统计比较所有病例相关特点，并复习相关文献，概括妊娠合并卵巢内异囊肿的诊断、治疗及并发症等特点。结果：在孕期发现附件包块约有 0.5-1.2%，

其中约 11%为内异囊肿。B 超是辅助诊断的首选手段，妊娠期卵巢内异囊肿可能表现为体积增大、囊内圆形光滑的乳头、囊壁血流信号丰富，这些不典型的表现使妊娠期 B 超对内异囊肿诊断的特异性和敏感性降低，同时可借助 CA125 联合 HE4 及 MRI 平扫检查辅助鉴别。妊娠期卵巢内异囊肿可能出现囊肿感染、破裂、扭转等并发症，但总体发生率低。妊娠合并内异症同时可能会导致前置胎盘、妊娠期高血压、宫内生长受限、早产等产科情况。结论：妊娠合并卵巢内异囊肿在临床上并不少见，在 B 超下可有一些不典型的表现，需与恶性肿瘤相鉴别。当考虑为卵巢内异囊肿时，除却发生扭转、破裂、出血等急腹症情况，建议选择观察治疗，避免发生手术带来的相应风险。此外，内异症除了会引起不孕之外，同时对妊娠也会产生出现前置胎盘、妊娠期高血压、宫内生长受限、早产等产科合并症，也应当引起关注。

PO-432

Evaluation of a methylation classifier for predicting pre-cancer lesion among women with abnormal results between HPV16/18 and cytology

Guannan Zhou[1],Yuanyuan Gu[2],Qing Wang[1],Jingxin Ding[1],Keqin Hua[1]
1.Obstetrics and Gynecology Hospital of Fudan University
2.Shanghai Changning District Maternal and Child Health Hospital

Background: Although HPV testing and cytology detection are successful for cervical screening in China, additional procedures are urgently required to avoid misdiagnosis and overtreatment. In this multicenter study, we collected cervical samples during screening in clinics. A total of 588 women with HPV16/18+ and/or cytology result ≥HSIL+ (high-grade squamous intraepithelial lesion or worse) were referred to colposcopy for pathological diagnosis. Methylation of S5 was quantified by pyrosequencing.
Results: The S5 classifier separates women with ≥HSIL+ from <HSIL with a high area under the curve (AUC) of 0.86(95% CI 0.840-0.910). The cutoff of 2.85 was conducted in our study. Remarkably, all cancer cases (n=67) were detected by S5. The sensitivity of S5 for “≥HSIL+” was 89.1% (95% CI 86.2%-92.4%) and the specificity was 76.6% (95% CI 72.2%-78.9%). S5 could reduce unnecessary colposcopy referrals by 74% (95% CI 71.3%-78.1%) with virtually no loss of sensitivity for HSIL+, and the follow-up data support the utility of the S5 classifier.
Conclusion: The S5 classifier with high sensitivity and specificity provided increasing diagnostic information for women with HPV16/18+ and/or cytology results, and could reduce the numerous unnecessary colposcopy referrals and avoid overtreatment.

PO-433

Organ-saving-treatment in atypical placental site nodules. Our preliminary experience

Guannan Zhou[1],Yuanyuan Gu[2],Xiang Tao[1],Keqin Hua[1]
1.Obstetrics and Gynecology Hospital of Fudan University
2.Shanghai Changning District Maternal and Child Health Hospital

Objectives: Atypical placental site nodules (APSN) is an intermediary lesion between typical placental site nodules (PSN) and intermediate trophoblastic tumors. Extensive surgeries were carried out for fearing the malignant tendency, while the standard treatment of APSN is uncertain. The objective was to present our initial experience with these lesions and evaluate the effectiveness of organ-saving-treatment in APSN.

Methods: Patients with histological diagnosis of APSN were enrolled and underwent organ-saving-treatment including hysteroscopic lesionectomy, laparoscopic lesionectomy, or curettage. One, three, six, twelve and 24 months and every year later, ultrasonic imaging and HCG was reevaluated.
Results: From 19 patients treated with organ-saving-treatment, the median age was 33 years (range 26-40 years). The size of the APSN lesion in ultrasonic imaging ranged from 2 to 56056 mm^3 (median, 360 mm^3). In 7 patients (36.8%) involved menstrual disorder. After the procedure, all patients gained improvement of symptoms，none of them remained APSN lesion and the HCG level of all the patients were within normal value. With a follow-up of 2 to 8 years, all patients were alive without relapse or relevant disease.
Conclusions: Our preliminary analysis suggests that APSN tend to be intermediary disease, organ-saving-treatment is a suitable treatment in APSN, with favorable prognosis.

PO-434
MTHFD2 promotes ovarian cancer cells progression via activation of STAT3 signaling pathway

Qiutong Li,Xiu Shi,Shimin Bian,Fengqing Fu,Fangrong Shen,Chenjie Zhu,Yuhong Wu,Jinhua Zhou,Juan Wang,Youguo Chen
The First Affiliated Hospital of Soochow University

Background: Ovarian cancer is the most common and lethal malignant tumor of the female reproductive system. Due to the asymptomatic nature of this disease in the early stage, 75% of patients with ovarian cancer are in the advanced stage at the time of diagnosis. This results in high mortality with only 47% of patients surviving 5 years after diagnosis. Therefore, it is of great clinical value to elucidate molecular mechanisms of ovarian cancer progression to identify more specific therapeutic targets and improve prognosis.
Metabolic reprogramming confers metabolic liabilities, which could be exploited for therapeutic targeting in cancer. In particular, one-carbon metabolism has been proposed as a vulnerability due to its contribution to cancer development. Growing evidence has shown that MTHFD2, which is a bifunctional enzyme located in the mitochondria and is involved in one-carbon metabolism, could be a promising anticancer target related to folate metabolism. It has been reported to be overexpressed in several malignant tumors and related to cancer development. This study aimed to investigate the effect of MTHFD2 on ovarian cancer progression.
Methods: The expression levels of MTHFD2 in ovarian serous carcinoma and normal ovarian tissues were detected by bioinformatics analysis and immunohistochemistry. Additionally, the expression levels of MTHFD2 in eight ovarian cancer cell lines were detected by RT-qPCR and Western blot. To identify the effects of MTHFD2 depletion on cell progression, SKOV3 and OVCAR8 cells were respectively transfected with two siRNAs both targeting MTHFD2 and non-target siRNA as normal control. After transfection, the proliferation of cells was determined through Cell Counting Kit-8, Colony formation and EdU assay. The migration and invasion abilities were detected by Transwell assays. Cell cycle and apoptosis were accessed by flow cytometry. The G2/M cell cycle arrest related protein and STAT3 signaling pathway protein expression was determined by Western blot.
Results: The differential expression of MTHFD2 mRNA in ovarian serous adenocarcinoma and normal ovarian surface epithelium was firstly analyzed using Oncomine microarray gene expression datasets. Bioinformatics analysis of the Lu Ovarian dataset showed that the expression level of MTHFD2 mRNA in ovarian serous adenocarcinoma was significantly higher than that in normal ovarian surface epithelium. Then, the expression of MTHFD2 in ovarian cancer was detected by immunohistochemical analysis using commercially available tissue microarray (TMA). MTHFD2 was highly expressed (++ to +++) in 8/10 (80%) cases of metastasis and in 26/62(41.94%) cases of ovarian serous carcinoma. However, the expression of MTHFD2 was not correlated with age, FIGO (International Federation of Gynecology and Obstetrics) staging and TNM stage. All the results above suggest that MTHFD2 may

contribute to ovarian cancer development. Therefore, we conducted qPCR and western blot analysis, which indicated that most ovarian cancer cell lines exhibited high MTHFD2 expression.

Based on evidence that MTHFD2 is upregulated in ovarian serous adenocarcinoma, we investigated whether MTHFD2 regulates tumor growth. Thus, SKOV3 and OVCAR8 cells were transfected with siRNA targeting MTHFD2 (siMTHFD2#1 and siMTHFD2#2). The CCK8 assay was performed to detect cell viability. The knockdown of MTHFD2 using siRNAs inhibited cell viability over 0–96 h after transfection compared with the normal control group. Colony formation activity was also inhibited after MTHFD2 depletion. Moreover, the EdU assay was used to detect newly synthesized DNA as a marker of proliferating cells. The number of positive staining cells reduced after transfection with MTHFD2 siRNAs, indicating that decreased viability was partially due to the impairment of proliferation.

Next, in the further investigation of the mechanism of the inhibitory effect of MTHFD2 inhibition on ovarian cancer cell growth, we postulated that MTHFD2 regulates ovarian cancer cell cycle progression. To verify this hypothesis, we harvested cells 72 h after transfection of control or MTHFD2 siRNAs to investigate the proportions of cells in various stages of the cell cycle by propidium iodide (PI) staining. Compared to the normal control group, an increased percentage of cells in G2/M phase was observed in MTHFD2 depleted groups. These results demonstrated that MTHFD2 depletion induced G2/M cell arrest. Additionally, an increase in apoptosis can also lead to an inhibitory effect on tumor growth. Therefore, annexin V FITC and PI staining were used to evaluate the apoptosis rate in transfected cells. The percentage of apoptotic OVCAR8 cells in MTHFD2 depleted groups were 12.8% and 19.97%, both higher than that in the normal control group (5.31%). Similar results were observed in SKOV3 cells.

Mitosis is triggered by progressive activation of the cyclin B1/Cdc2 complex at the end of G2 phase. To investigate whether the cell cycle change upon MTHFD2 depletion was associated with G2/M checkpoint, we detected the expression of the characteristic cell cycle promoting complex cyclin B1/Cdc2. The protein level of Cdc2 and cyclin B1 were both decreased with MTHFD2 depletion. Moreover, inhibitory regulators such as $p21^{waf1/cip1}$ and $p27^{kip1}$, which prevent mitosis by inactivating the cyclin B1/Cdc2 complex, were increased in the MTHFD2 siRNA-transfected ovarian cancer cells.

To evaluate the function of MTHFD2 in ovarian cancer metastasis, transwell assay was used to detect the migration and invasion abilities of tumor cells. The migration and invasion of siMTHFD2-transfected SKOV3 and OVCAR8 cells were both significantly suppressed compared to those transfected with control siRNA.

To understand the underlying molecular mechanisms for MTHFD2 in ovarian cancer development, western blot analysis was conducted to test the levels of p-STAT3, STAT3, and epithelial–mesenchymal transition (EMT)-related proteins. STAT3 phosphorylation was inactivated by MTHDF2 knockdown. Besides, the expression of N-cadherin and vimentin, which are important regulatory biomarkers of tumor aggressiveness, significantly reduced upon MTFD2 depletion. The up-regulated expression of p-STAT3 was detected in SKOV3 and OVCAR8 cells with overexpression of MTHFD2.

Discussion: Our findings demonstrate that MTHFD2 is upregulated in ovarian cancer tissues and cell lines. MTHFD2 depletion inhibits cell growth and metastasis, induces G2/M arrest and apoptosis in ovarian cancer cell lines. We also found that MTHFD2 could regulate cyclin B1/Cdc2 complex protein accumulation and STAT3 signaling pathway. Taken together, our results indicate an inhibitory effect of MTHFD2 knockdown on tumor development and suggest that targeting MTHFD2 maybe served as a novel approach for effective treatment of ovarian cancer.

PO-435

E7/JunD/CSN5 环路调控 Wnt/β-catenin 信号通路影响宫颈癌侵袭转移

曹竹
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

研究目的 阐明 JunD/CSN5/E7 形成正反馈环路促进宿主细胞侵袭迁移的分子机制，为明确 HPV16 早期癌蛋白 E7 的具体致癌通路提供充分的科学依据。材料与方法 通过 qRT-PCR 和 Western-blot 检测 HPV 16+宫颈癌（Siha，Caski）和 293T 细胞中的 mRNA 和蛋白质表达。利用 CO-IP,GST-Pull down 技术验证 JunD 与 CSN5 及 E7 与 JunD 蛋白的结合关系，通过荧光素酶报告基因检测 JunD 结合 HPV16 P97 启动子区, 通过质粒转染或干扰，调控 CSN5 表达，观察 JunD 对 P97 转录活性，通过 CCK8 增殖检测、PI 染色细胞周期检测，细胞 Annexin-V 联合 PI 凋亡检测、Transwell 迁移能力检测和 Transwell+基质胶侵袭能力检测研究细胞的生物学行为，并检测相应的功能标记蛋白，应用共聚焦显微镜观察 JunD、CSN5、β-catenin 在细胞中的定位及表达情况，通过蛋白合成抑制剂处及转录抑制剂处理宫颈癌细胞，并双向调控 CSN5，观察 β-catenin 的稳定性及泛素化水平。结果 在宫颈癌细胞中，JunD 与 HPV16 E6/E7 上游 P97 启动子区结合调控 E6E7 的转录，CSN5 与 JunD 结合，增强 JunD 对 P97 转录活性，上调 E6/E7 的表达。通过质粒转染上调 E7 表达，JunD 表达上调，形成一正反馈环路，干扰 JunD/CSN5 表达均显著抑制宫颈癌细胞迁移和侵袭，进一步研究显示 CSN5 影响 β-catenin 的泛素化系统，维持 β-catenin 的稳定介导 Wnt/β-catenin 信号通路参与宿主细胞的侵袭迁移。结论 在宫颈癌中，E7/JunD/CSN5 形成正反馈环路调控宫颈癌细胞的恶性行为，通过 CSN5 影响 β-catenin 泛素化，调控 Wnt/β-catenin 信号通路介导宫颈癌细胞的 EMT 行为。

PO-436

血清 CA125 在晚期上皮性卵巢患者术后随访及监测肿瘤复发中应用价值的临床研究

王乔,彭芝兰,边策,綦小蓉,尹如铁,李清丽
四川大学华西第二医院

目的：糖蛋白抗原 CA125 是上皮性卵巢癌的重要肿瘤标志物。血清 CA125 在卵巢肿瘤的诊断中有重要意义，目前受到公认的临床正常参考值为＜35U/mL。然而，血清 CA125 在卵巢癌患者治疗后的随访及监测复发中的价值仍有争议。并且，目前针对应用血清 CA125 监测肿瘤复发尚无明确的参考临界值。我们前期大样本量的研究已表明在正常绝经后妇女以及治疗后未复发的妇科恶性肿瘤患者中的血清 CA125 均值均在 10U/mL 以下。因此本研究的目的在于探讨血清 CA125 在上皮性卵巢癌患者术后随访、监测肿瘤复发中的临床应用价值，分析监测复发的参考值。**材料与方法：**本研究回顾性分析了 2012 年至 2017 年我院同一医疗组经治的 43 例晚期（FIGO III-IV 期）上皮性卵巢癌患者的临床资料。对比术后 3 年内复发患者和未复发患者的临床数据，并绘制血清 CA125 值与肿瘤复发的 ROC 曲线，研究血清 CA125 监测肿瘤复发的最佳参考临界值。**结果：**43 例晚期上皮性卵巢癌患者中均为满意缩瘤，24 例在 3 年内复发，3 年复发率为 55.8%，3 年生存率为 83.7%。复发组（n=24）与未复发组（n=19）患者在病理类型、FIGO 分期、术后血清 CA125 值（47.9±50.6 U/mL VS 27.8±34.7 U/mL）、化疗结束后血清 CA125 值（13.6±16.8 U/mL VS 6.4±4.1 U/mL）等情况的差异有统计学意义（P＜0.05），而在年龄、首诊时 CA125 水平、是否接受新辅助化疗等情况无明显差异（P＞0.05）。复发组患者确诊复发（包括临床诊断或影像学诊断）时，血清 CA125 值为 60.6±59.5（范围 25.1-223.1）U/mL。绘制以血清 CA125 值与肿瘤复发的 ROC 曲线，显示位于 ROC 曲线最左上点对应的 CA125 值

为 14.9U/mL。以诊断性试验分析中，当血清 CA125 值＞15U/mL 设为监测肿瘤复发的参考临界值时的诊断特异度为 89.5%，灵敏度为 100%，准确度为 95.3%；当参考值设为＞35U/mL 时的诊断特异度为 100%，而灵敏度仅为 58.3%，准确度为 76.7%。**结论：**血清 CA125 在上皮性卵巢癌患者术后随访、监测肿瘤复发中有重要的临床价值。我们认为，血清 CA125 值在术后随访时的参考值应与首诊时的参考值有差别。以 15U/mL 作为治疗后随访的参考值具有更满意的敏感度及特异度，更能帮助早期监测肿瘤复发。

PO-437

线粒体蛋白 sirt5 在宫颈癌中的作用及机制研究

王芬芬,李阳,陆伶佳,林梦燕,胡东晓,栗宝华
浙江大学医学院附属妇产科医院

研究目的：sirt5 是一个 NAD+依赖的蛋白去乙酰基酶，多项研究表明 sirt5 在多种恶性肿瘤中发挥重要作用。然而 sirt5 在人宫颈癌中的生物学功能及其相关分子机制还未见报道，本研究尝试对此进行一些初步探索。**材料与方法：**我们利用慢病毒系统构建了宫颈癌细胞 siha 和 hela 的 sirt5 过表达稳转细胞株。利用 transwell 方法检测不同表达水平的 sirt5 对肿瘤细胞迁移和侵袭能力的影响，利用超低黏附培养体系和 3D 培养技术检测了 sirt5 对肿瘤细胞的成球能力和体外成管能力的影响。同时利用荧光定量 PCR 和蛋白印记实验验检测 sirt5 对肿瘤的 EMT 相关基因以及干性标记相关基因表达的影响；利用细胞免疫荧光实验检测 TGF-β 信号通路 smad2/3 的磷酸化及核转运情况。**结果：**transwell 实验数据则表明 sirt5 过表达与对照组相比可显著促进细胞迁移和侵袭能力，同时体外超低粘附培养和 3D 培养技术检测发现 sirt5 过表达增强了肿瘤细胞的成球和体外成管能力。相较于对照组细胞，sirt5 过表达宫颈癌细胞中 EMT 关键指标如 N-cadherin、vimentin、slug、ZEB1 等表达明显升高；干细胞标志物蛋白 SOX2、OCT4、Nanog 等表达显著升高；此外 TGF-β 信号通路关键蛋白 smad2/3 的磷酸化明显增加，同时伴随核分布的富集。**结论：**在宫颈癌细胞中，sirt5 可通过激活了 TGF-β 信号通路关键蛋白 smad2/3 的磷酸化及影响细胞干性特征，促进肿瘤细胞的迁移和侵袭能力，初步阐明 sirt5 在宫颈癌中具有促进肿瘤进展的生物功能及相关机制。

PO-438

三种不同淋巴淋巴示踪剂在早期子宫内膜癌中的应用

李敏,申震,吴大保,张天骄,李跃波,周颖
中国科学技术大学附属第一医院（安徽省立医院）

研究目的:分析三种不同淋巴示踪剂（亚甲蓝、纳米炭及吲哚菁绿）在子宫内膜癌前哨淋巴结活检中的应用价值。**材料与方法**:将 2018 年 1 月--2020 年 7 月期间中国科学技术大学附属第一医院妇科肿瘤组 62 例早期子宫内膜癌患者分为亚甲蓝组 24 例、纳米炭组 20 例、吲哚菁绿组 18 例,分别根据不同示踪剂亚甲蓝、纳米炭及吲哚菁绿质控范围内的剂量，在手术前分别行宫颈注射。活检观察三组淋巴结着色情况,识别、标记并切除最先着色淋巴结作为前哨淋巴结(SLN)。比较三组 SLN 总检出率、SLN 双侧检出率、准确率、阴性预测值及敏感度;分析 SLN 在子宫内膜癌中总体分布情况。**结果**:亚甲蓝组、纳米炭组、吲哚菁绿组 SLN 总检出率分别为 71%、82.4%、96.3%，亚甲蓝组与吲哚菁绿组之间差异有统计学意义(P=0.03);三组 SLN 双侧检出率分别为 55.6%、62.5%、76.1%，差异无统计学意义(P=0.724)。三组检出 SLN 的准确率、阴性预测值及敏感度差异均无统计学意义(P>0.05);子宫内膜癌 SLN 主要分布在髂外淋巴结(40.7%)及闭孔淋巴结(37.1%)区域,腹主动脉旁淋巴结区域(0.5%)最少。

结论:尽管纳米碳及吲哚菁绿在基层医院中的推广受经济因素的影响，但因其操作简便、安全有效，三种不同淋巴示踪剂应用于子宫早期内膜癌 SLN 活检均具有较高临床应用前景。

PO-439
Comparative study on carcinogenicity of HPV58E7T20I/G63S variant

Tian Ding,Chang-kun Zhu,Yang Li,Sha-sha Zhang
Women's hospital， affiliated to Medicine College， Zhejiang University

Objectives: Accumulated studies have shown that HPV 58 accounted for 11.5–28% across the full spectrum of cervical neoplasia in Chinese and Asian women. Current studies on HPV58 carcinogenicity are scarce. Our previous study and Chan et al's epidemiological study on 1924 Hong Kong women identified an HPV58 variant (E7 T20I/G63S) conferring a stronger epidemiological association with cervical cancer. Here, we performed phenotypic assays to characterize and compare its carcinogenicity with HPV58E7 prototype in vitro.
Methods: Through genetic engineering and molecular biology methods, we constructed the lentiviral vectors containing HPV58E7 prototype or E7 variants, and stably transfected them into cervical cell lines. Through a series of phenotypic tests, we initially explored the carcinogenicity differences of HPV58E7 variants in vitro.
Results: Our results showed that overexpression of E7 T20I/G63S variant had a higher potential to promote the migration and invasion of the stably transfected cervical cancer cells and increased the clonal growth of them. Our results also showed that the cell cycle of Hacat cells stably transfected with different E7 was also different. Through the transplantation experiment, it was found that the cervical cancer cells infected with HPV58E7T20I/G63S variant had different tumorigenic ability from the prototype and was higher than the prototype.
Conclusions: Our work represents the first study to compare the oncogenicities of HPV58 E7prototype and variants using stably infected cervical cells. Our findings can further help to turn our previous observations into clinical use for improving HPV surveillance and therapeutic design, especially in East Asia

PO-440
LncRNA TCONS_00023531 suppresses cell proliferation and invasion by acting as a ceRNA of miR-6787-3p to modulate ST7 expression in ovarian cancer

Peng Wei,RuiXia Guo
The First Affiliated Hospital of ZhengZhou University

Long noncoding RNAs (lncRNAs) are important regulators in carcinogenesis. The molecular mechanisms of lncRNAs involved in the progression of ovarian cancer have not been clearly elucidated. Our study demonstrated the role of lncRNA TCONS_00023531 in ovarian cancer. qRT-PCR was used to measure the expression of lncRNA TCONS_00023531 in ovarian cancer. LncRNA TCONS_00023531 overexpression inhibited the proliferation and invasion of ovarian cancer cells, while TCONS_00023531 knockdown increased the proliferation and invasion of ovarian cancer cells. TCONS_00023531 increased the EMT of ovarian cells and the proliferation of ovarian cells in vivo. TCONS_00023531 promoted the effect of ovarian cells on HUVECs. RNA pull down and luciferase assays showed that TCONS_00023531 interacted with miR-6787-3p. miR-6787-3p mimics promoted

the proliferation and invasion of ovarian cancer cells, while miR-6787-3p inhibitors decreased the proliferation and invasion of ovarian cancer cells. miR-6787-3p regulated the expression of ST7. The effect of TCONS_00023531 on the proliferation and invasion of ovarian cancer cells was miR-6787-3p dependent. In conclusion, the newly identified regulatory mechanism of the TCONS_00023531/miR-6787-3p/ST7 axis was systematically studied in OvCa cells

PO-441
原发性输卵管癌合并子宫内膜癌 5 例临床分析并文献回顾

包灵洁,宁燕,易晓芳
复旦大学附属妇产科医院

目的：探讨原发性输卵管癌合并子宫内膜癌的临床特征、诊断、治疗及预后。**方法：**收集我院自 2003 年 02 月至 2010 年 12 月收治的原发性输卵管癌合并子宫内膜癌 5 例，回顾性分析其临床病理资料并进行文献复习。**结果：**患者平均发病年龄为 58.8 岁。主要症状为绝经后下腹坠胀 2 例, 阴道不规则流血 2 例及阴道排液 1 例。5 例患者入院前均超声发现盆腔包块，其中 4 例提示宫腔积液。术前诊断为输卵管癌 2 例，卵巢癌 3 例，其中 1 例合并子宫内膜癌。5 例患者均行开腹全子宫+双附件+大网膜切除术，其中 4 例行盆腔淋巴结清扫术，1 例因盆腔广泛转移，未行盆腔淋巴结清扫术。5 例患者均未行腹主动脉旁淋巴结切除术。术后诊断为 III 期输卵管浆液性腺癌合并 IA 期子宫内膜浆液性腺癌 2 例，余 3 例均合并 IA 期子宫内膜样腺癌，分别为 IB、IIA 期输卵管浆液性腺癌各 1 例及 IA 期输卵管癌肉瘤 1 例。术后 5 例患者均接受多西他赛联合卡铂化疗方案化疗 3~11 个周期。随访 26~167 个月，中位随访时间为 98 个月，其中死亡 2 例，无瘤生存 2 例，1 例术后 1 年转移至肝脏，接受放化疗联合治疗并带瘤生存至今。**结论：**老年女性若超声检查提示盆腔包块伴宫腔积液，需考虑输卵管癌合并子宫内膜癌可能。早期输卵管癌合并早期子宫内膜癌预后较好。治疗可采用全面分期手术并辅以 6 个疗程以上的 TP 化疗方案。

PO-442
PARP 抑制剂用于卵巢癌的治疗进展

代依林
华中科技大学同济医学院附属同济医院

摘要：卵巢癌作为最常见的女性生殖系统肿瘤之一，在女性生殖系统肿瘤中，发病率仅次于子宫颈癌。其复发率和死亡率非常高，严重危害了女性健康。在传统的卵巢癌的治疗中，治疗方式主要为手术治疗加以铂类药物为主的辅助化疗，但是患者对于化疗药物的耐药现象严重影响了患者的预后[1]。现在分子靶向药物——PARP 抑制剂的出现，卵巢癌的治疗有了更多的选择。PARP 抑制剂通过特异性结合 PARP（poly ADP-ribose polymerase）的结合位点，阻碍 PARP 从 DNA 受损部位释放，使 DNA-PARP 复合物一直存在，进而阻止损伤 DNA 的修复。另一种修复途径即同源重组修复（Homologous recombination repair，HRR）功能失常，PARP 抑制剂可靶向杀死 HRR（homologous recombination deficiency, HRD）缺陷的肿瘤细胞，在 HRD 的肿瘤细胞中，DNA 双链无法进行同源重组修复，PARP 抑制剂又阻碍了 DNA 单链的碱基切除和修复，从而发挥抗肿瘤作用，却不对正常细胞产生影响[2][3]。PARP 抑制剂主要包括：奥拉帕尼（Olaparib）、卢卡帕尼（Rucaparib）、尼拉帕尼（Niraparib）和维利帕利（Veliparib）。近年来，PARP 抑制剂作为卵巢癌的一线临床维持治疗药物开展了多项 III 期临床随机对照实验，疗效显著，为许多化疗出现耐药现象的病人提供了治疗选择[4]。本文就 PARP 抑制剂在卵巢癌治疗方面的进展做一个简要的综述。

PO-443

Serum Tie-1 is a valuable marker for predicting the progression and prognosis of cervical cancer

Ping Yang,Rui Bai
Department of Obstetrics and Gynecology， First Affiliated Hospital， School of Medicine， Shihezi University

Objective: To investigate whether sTie-1 is a valuable marker for predicting the progression and prognosis of cervical cancer.
Methods: Enzyme-linked immunosorbent assay (ELISA) was used to detect serum Tie-1 (sTie-1) concentrations in patients of 75 cervical cancer, 54 squamous intraepithelial lesions (SIL) and 55 healthy controls without cervical lesions, and sTie-1 levels were compared between the three groups. The receiver operating characteristic curves (ROC) was used to evaluate the diagnostic values of sTie-1. The relationship between sTie-1 concentration in patients with cervical cancer and their clinicopathological features and prognosis was analyzed. Cox univariate and multivariate proportional analysis were performed to predict the risk factors of postoperative recurrence in 68 followed-up cervical cancer patients.
Results: From healthy women to patients of SIL, then to cervical squamous cell carcinoma, the concentration of sTie-1 gradually increased (P＜0.05), and sTie-1 was also elevated significantly in adenocarcinoma（P＜0.05) compared with healthy controls. The area under ROC curves of sTie-1 to discriminate cervical cancer patients from normal was 0.846(P＜0.001). Increased sTie-1 in 75 cervical cancer patients had significant association with tumor size, advanced tumor stage (FIGO 2018), lymph node metastasis (LNM) and poorer progression free survival (PFS) (P ＜ 0.05). Cox multivariate analysis model showed that cervical cancer patients with high sTie-1 concentration had 4.359 times (95% CI：1.386-13.715, P = 0.007) higher risk for tumor recurrence than those with Low sTie-1.
Conclusions: Elevated sTie-1 in patients of cervical carcinoma has an association with tumor progression and poor prognosis. In the future, sTie-1 is a valuable marker for predicting the progression and prognosis of cervical cancer.

PO-444

人工智能在宫颈癌筛查中的研究进展

李可欣,谭向宇,黄晓园
华中科技大学同济医学院附属同济医院

研究目的：薄层液基细胞学检查（Thinprepcytologic test,TCT）联合人乳头瘤病毒（Human papillomavirus,HPV）检测能够有效降低宫颈癌的发病率及死亡率。然而由于我国拥有诊断资格的病理学家数量相对短缺的困境，从而导致了较低的宫颈癌筛查覆盖率。人工智能（Artificial Intelligence,AI）因其准确高效的及时诊断，有望为提高宫颈癌的筛查覆盖率提供解决方案。本文就 AI 在宫颈癌早期筛查诊断中的作用和研究进展进行了综述。
材料与方法：此篇综述以“人工智能”、“宫颈癌”、“细胞分割”、“自动分类”等字段在 PubMed 数据库中进行了查询和筛选，综合分析了近十年来发表的人工智能在宫颈癌涂片的图像识别方面的相关文献。
研究结果：现有研究显示，人工智能可作为颈癌早期筛查的有效辅助手段，在每张图片识别时间仅为 4.75s 的基础上，其准确率可高达 95%-100%。但由于公开共享的数据集、统一制片标准以及更为精准识别模型缺乏，我国目前尚未出现能够应用于临床的 AI 宫颈癌早期诊断系统。
研究结论：随着 AI 算法和临床大数据的进一步演进与应用，人工智能在宫颈癌早期筛查的应用前景十分广阔，但人工智能辅助宫颈癌筛查系统的诊断效能仍有待进一步提高，有望在宫颈癌的分级、分期

以及临床决策方面提供更有价值的信息，以达到提高筛查覆盖率、降低患者死亡率、改善患者预后的目标。

PO-445
IL-17 在宫颈癌 Caski 细胞生长及凋亡中的作用

薛纪森
温州医科大学附属第一医院

[摘 要] 目的：通过检测不同浓度 IL-17 处理后宫颈癌 Caski 细胞与 PBMC 共培养系统下的癌细胞生长率及凋亡率情况，探讨 IL-17 所介导的免疫反应在高危型 HPV 相关宫颈癌发生、发展中的作用。方法：选取包含高危型 HPV 序列的宫颈癌 Caski 细胞株与人外周血单核细胞（PBMC）共培养，经过不同浓度的 rhIL-17 处理，采用 CCK-8 法检测各组癌细胞的生长率，采用流式细胞术检测各组癌细胞的凋亡率。结果：①CCK-8 法结果显示低浓度 IL-17 组的癌细胞生长最快，与对照组相比差异有统计学意义（P<0.05）；高浓度 IL-17 组的癌细胞相比对照组生长快，但比低浓度组生长慢，差异无统计学意义（P>0.05）；②流式细胞术结果显示，低浓度组宫颈癌细胞的凋亡率最低，与对照组相比差异有统计学意义（P<0.05）；高浓度组的癌细胞相比对照组凋亡率也低，但比低浓度水平组凋亡率高，差异无统计学意义（P>0.05）。结论：IL-17 所介导的免疫反应与宫颈癌的发生、发展密切相关，其在肿瘤发展的不同阶段表现出双重效应，为进一步研究高危型 HPV 相关宫颈癌的免疫治疗措施提供了基本理论依据。

PO-446
泛素化修饰在调节 PD-1 / PD-L1 用于癌症免疫治疗中的作用

胡晓丽,周强勇,赵红琴,王志伟*
温州医科大学附属第一医院，妇科

PD-1 最初是在 1992 年从处于凋亡状态的 T 细胞杂交瘤和造血祖细胞系中发现的，是 B7- CD28 家族。PD-1 是活化 T 细胞上的重要免疫检查点受体，对抗原产生负调控作用。越来越多的证据表明，PD-1 及其配体 PD-L1（B7-H1）和 PD-L2（B7-DC）在肿瘤微环境中具有免疫抑制功能，从而极大地改变了癌症治疗的格局。从机制上讲，在肿瘤细胞表面表达的 PD-L1 与活化的 T 细胞上的 PD-1 受体连接，从而导致 T 淋巴细胞增殖受阻，细胞因子生成并抑制免疫反应。此外，PD-L1 在多种癌症中过表达，包括结肠直肠癌，胃癌，卵巢癌，甲状腺乳头状癌和膀胱癌。泛素-蛋白酶体系统（UPS）是主要的 PTM 机制，负责在生理和病理条件下降解蛋白质。UPS 由多种重要元素组成：泛素，泛素激活酶（E1s），泛素结合酶（E2s），泛素蛋白酶（E3s），去泛素酶（DUBs）以及 26S 蛋白酶体。其中，泛素是真核生物中一种高度保守的 76 个氨基酸的蛋白质，可作为翻译后修饰物，通过一系列酶联反应（包括 E1，E2 和 E3 连接酶）与底物共价连接。在功能上，E1-E2-E3 级联包括三个步骤。证据表明，PD-1/PD-L1 的泛素化和去泛素化在调节 PD-1 和 PD-L1 蛋白质的稳定性和动力学中起着至关重要的作用。 PD-1/PD-L1 的参与是调节癌症患者免疫逃逸的主要共同抑制性检查点途径，可显着改变肿瘤清除的格局。PD-1/PD-L1 的异常泛素化和去泛素化影响 PD-1/PD-L1 介导的免疫抑制。在这篇综述中，我们描述了通过多种 E3 连接酶和去泛素化酶的 PD-1/PD-L1 信号的泛素化或去泛素化介导的调节。此外，我们简要阐述了一些靶向相关 E3 连接酶的药物的抗癌潜力，这些药物进一步调节了 PD-1/PD-L1 在癌症中的泛素化和去泛素化，进一步进行 PD-1/PD-L 的后续调控。因此，这种 E3 连接酶或 DUB 介导的 PD-1/PD-L1 修饰为免疫治疗提供了新思路，尤其是在某些 PD-1/PD-L1 阳性肿瘤中。因此，本综述可以通过靶向 PD-1/PD-L1 的泛素化为癌症免疫疗法的发展提供一种很有前途的治疗方法。但是，将来需

要添加一些重大问题并进行进一步研究。例如，在 600 种 E3 连接酶中，其他 E3 连接酶是否参与 PD-1/ D-L1 的调节？除 USP22 和 USP9X 以外，其他 DUB 是否控制癌细胞 PD-1/PD-L1 的去泛素作用？

PO-447
雌二醇通过 GPER/SphK 通路促进子宫内膜癌增殖及迁移

张丽志
天津市第一中心医院

研究目的：研究雌二醇（Estradiol, E2）对 HEC-1A 子宫内膜癌细胞增殖、迁移和侵袭的影响，明确 E2 促子宫内膜癌作用与 GPER/SphK/ERK1/2 的相关性，以探讨其机制。材料与方法：体外培养 HEC-1A 子宫内膜癌细胞株，应用不同浓度的 E2 处理细胞，采用 MTT 实验、划痕实验、Transwell 实验观察 E2 对细胞增殖、迁移、侵袭的影响，采用化学发光法检测子宫内膜癌细胞 SphK 活性变化，采用 Western blot 方法观察细胞 ERK1/2 磷酸化变化以及 Cyclin D1、Cyclin E1、MMP-9 的蛋白表达情况。采用相关工具药（G 蛋白偶联雌激素受体（GPER）拮抗剂 G-15、鞘氨醇（SphK）抑制剂 DMS、ERK1/2 抑制剂 PD98059）干预的方法，观察相关靶点工具药对上述作用的影响。结果：E2 可促进 HEC-1A 子宫内膜癌细胞的增殖、迁移及侵袭，并提高 SphK 的活性。G15 可拮抗 E2 促增殖、迁移作用以及激活 SphK 的作用。Western 结果显示，E2 可促进 ERK1/2 的磷酸化，该作用亦可为 G-15、DMS 以及 PD98059 所阻断。此外，E2 亦可促进 Cyclin D1、Cyclin E1 及 MMP-9 的蛋白表达，G-15、DMS、PE98059 可抑制 E2 对上述蛋白表达的影响。结论：E2 能够促进 HEC-1A 子宫内膜癌细胞增殖、迁移和侵袭。GPER/SphK 通路参与了雌二醇介导的 HEC-1A 子宫内膜癌细胞增殖、迁移和侵袭，该作用与激活 ERK1/2 信号通路，诱导 Cyclin D1、Cyclin E1、MMP-9 蛋白表达有关。

PO-448
Value of Preoperative Routine Endometrial Biopsy for Non-endometrial Lesions of Gynecological Benign Disease in Peri-menopause and Menopause

Ping Yang,KaiLi Li
Department of Obstetrics and Gynecology， First Affiliated Hospital， School of Medicine， Shihezi University

Background.
To explore the necessity of routine endometrial biopsy and clarify clinical indicators for biopsy to exclude Atypical hyperplasia (AH) and Endometrial carcinoma (EC) in peri-menopausal or menopausal patients with non-endometrial lesions of gynecological benign disease.
Methods.
A retrospective analysis was conducted of 506 patients aged ≥40 yearswho underwent hysterectomy and received endometrial biopsy before surgery for gynecological benign diseases, and peri-menopausal and menopausal non-endometrial diseases between January 2015 and April 2019.
Results.
A total of 506 women were included in the study period. 13 cases were diagnosed with AH, five with EC, and 488 with benign and normal endometrium (BE+NE). The detection rate of AH +EC was 3.56% (18/506). Analysis indicated that ramdom endometrial thickening (RET) ≥10 mm or age ≥45 years with diabetes was higher in the AH+EC group than the NE+BE group. Eight cases of AH and four cases of EC were newly diagnosed after hysterectomy operation. One case received hysteroscopic diagnostic

curettage (HD&C) and 11 cases received diagnostic curettage (D&C). The rate of missed diagnosis of the D&C group was higher than the HD&C group (50.00% vs. 68.75%).
Conclusions.
For inpatients with non-endometrial lesions of gynecological benign disease in peri-menopause and menopause, RET ≥10 mm or age ≥45 years with diabetes were independent risk factors for AH and EC. HD&C can significantly reduce the rate of missed diagnosis of AH and EC as compared to D&C.

PO-449
Emerging roles of autophagy in gynecological cancer

Xiaoli Hu,Qiangyong Zhou*,Jiangtao Yu,Hongqin Zhao,Zhiwei Wang
Department of Gynecology， The First Affiliated Hospital of Wenzhou Medical University， Wenzhou， China.

Gynecological cancer comprise a variety of cancers that originate from the female reproductive organs/genital tract. The common types of gynecological malignancy include cervical, ovarian, uterine (endometrial cancer and uterine sarcoma), vaginal, and vulvar carcinoma . According to the American Cancer Society, there will be 109,000 new cases and 33,100 deaths from gynecologic cancer in the United States in 2019. The traditional treatments of gynecological oncology are surgery, chemotherapy and/or radiotherapy. However, the resistance to conventional chemo- and radiotherapy still remains a primary clinical problem, limiting therapeutic effects in gynecological cancer. Therefore, it is vital to better understand the mechanisms of cancer progression and discover novel therapeutic targets for potential clinical application. Recent evidences suggest that macroautophagy (hereafter referred to as autophagy) is an interesting mechanism of tumor development and potential target in the treatment of gynecological tumor. Autophagy is an evolutionarily conserved degradation process that delivers cytoplasmic inclusions to the lysosome, which is necessary for maintaining homeostasis. It mainly plays an adaptive role in a variety of physiological and pathological processes, such as cellular development, differentiation, neurodegeneration, infection and cancer. Autophagy has been reported to play a complicated role in cancer development, progression and treatment. The roles of autophagy in cancer are dependent to biological factors including the cancer type, stage, oncogene and cancer suppressor gene, as well as the research techniques like the in vitro and in vivo models to analyze the functions. It has been reported the apparently contradictory and dual functions of autophagy in gynecological cancer. Therefore, in this review, we emphasize the multiple roles of autophagy involved in the gynecological cancer, and discuss the attractive prospect of manipulating autophagic pathway as a novel strategy of cancer treatment. There is no evidence about the association between autophagy and vaginal, or vulvar cancer, thus, gynecological cancer in this review mainly refers to cervical, uterine cancer and ovarian cancer.

PO-450
卵巢原发鳞癌 1 例报道

伊碧霞
金华市人民医院

原发性卵巢鳞状细胞癌(Primary squamous cel l carc inoma of the ovary PSCC)，也称原发性卵巢鳞癌，是一种原发于卵巢部位的恶性肿瘤，其组织病理类型为鳞状细胞癌，属罕见肿瘤。Kashimura 等进行了 1 项长达 23 年的回顾性研究示，卵巢鳞癌占所有卵巢恶性肿瘤约 2%[1]，其包括了继发和原发的卵巢鳞癌，可见排除继发性卵巢鳞癌所占比率，PSCC 占所有卵巢恶性肿瘤不到 2%，大约只有 0．5%。

由于卵巢鳞癌的发生率低，最早于 1947 WAKEHAM I [2] 报道了 1 例发生于卵巢皮样囊肿的卵巢鳞癌，至今仍以个案报道及少数病例回顾性研究为主，但已逐渐引起重视。国内最早的报道是：1988 年乔惠珍等报道的 1 例右卵巢原发性鳞癌 III 期伴有子宫及小肠转移，术后 5 个月复发，术后 6 个月死亡 [3]，截至 2014 年英文文献报道卵巢单纯原发性鳞状细胞癌仅 30 例 [4] 。通过这些个案报道，学者们提供了关于 PSCC 的临床表现、实验室检查、病理检查、影像学检查、诊疗措施及预后情况，目前仍没有足够多的病例进行临床研究并形成初步的临床实践指南来指导治疗，但均以手术及化疗为主。

PO-451

uPAR 在女性恶性肿瘤中的研究进展

王亮,毛晓丹,孙蓬明
福建省妇幼保健院暨妇儿医院

尿激酶型纤溶酶原激活剂受体(urokinase-type plasminogen activator receptor, uPAR)是尿激酶型纤溶酶原激活剂(urokinase-type plasminogen activator, uPA)的膜蛋白受体，uPA-uPAR 的结合可以激活纤溶酶原进而引起细胞外基质(extracellular matrix, ECM)降解级联反应。在很多类型的肿瘤中，uPAR 的异常表达是肿瘤侵袭和转移的前提，也与肿瘤的增殖和生长有关，是一种有效的预后指标和治疗靶点。本文综述了 uPAR 的基本结构与功能、其在女性恶性肿瘤中发挥的主要作用和靶向 uPAR 开展的治疗策略，重点关注的是 uPAR 在女性乳腺癌和妇科肿瘤中的作用以希望通过临床及基础研究促进女性健康。uPAR 能够与 uPA 结合，介导激活纤溶酶原向纤溶酶的转化，参与水解作用并激活降解 ECM 的级联反应，其中 ECM 能为组织内的生物反应提供物理支持和复杂的内环境。由于 uPAR 缺乏跨细胞结构并不包含任何细胞内结构，需要与细胞表面的其他分子（如整合素）协同作用，传递细胞内到细胞外或者细胞外到细胞内的信号，值得注意的是，uPAR 和整合素相互协同作用时，可以不依赖 uPA-uPAR 的结合也不依赖相关水解作用。随着诊断手段和治疗方法的进步，利用 uPAR 和 uPA-uPAR 复合物对恶性肿瘤进行诊断、靶向治疗及预后评估，已经产生了较好的临床获益。近年来的研究显示，肿瘤微环境对于肿瘤的发生发展起到了巨大的作用。在实体肿瘤组织中，肿瘤微环境内存在许多成分，除肿瘤实质细胞外，还存在肿瘤相关基质细胞和非细胞基质成分，当前的大部分研究着眼于癌细胞实质，而肿瘤相关基质细胞与癌细胞之间的相互作用对于整个肿瘤研究领域而言仍知之甚少。既往研究发现，uPAR 在肿瘤组织中的分布不仅仅局限在肿瘤实质细胞上，而是同时也表达在部分肿瘤基质细胞上，由于 uPAR 在肿瘤细胞和间质细胞上的特殊分布，我们需要更为全面地审视 uPAR 在肿瘤研究中的价值。本文从 uPAR 的基本结构与主要功能、uPAR 在恶性肿瘤中的关键作用和针对于 uPAR 的靶向治疗等三个方面进行综述，意在重新审视和评估 uPAR 在肿瘤研究中的价值，提出需要进一步研究的方向以及抗 uPAR 靶向治疗的发展前景。

PO-452

miR-182-5p and miR-96-5p targets PIAS1 and mediates the negative feedback regulatory loop between PIAS1 and STAT3 in endometrial cancer

Yuzhen Xiao,Xiaomeng Xia
The Second Xiangya hospital

The expressions and roles of protein inhibitor of activated STAT (PIAS) proteins, a group of proteins with STAT inhibition and sumoylation E3-ligase activity, are rarely revealed in endometrial cancer (EC). Here we analyzed the expressions of PIASs and

their relations with clinical features by mining online data via web servers including UALCAN and GEPIA in EC. The expressions of PIASs in EC tissues were further validated by immunohistochemistry (IHC). The online analyses revealed only PIAS1 was consistently downregulated at mRNA and protein level in EC, which was validated by the IHC. PIAS1 restoration significantly inhibited the growh, proliferation, and invasion of EC cells. Subsequently, the mechanism of PIAS1 downregulation was explored with online tools like UALCAN, cBioPortal, LinkedOmics, and ENCORI. The results indicated that the mutation rate of PIAS1 was extremely low and not associated with PIAS1 expression. The promoter methylation level of PIAS1 was comparable between normal and EC tissues. A couple of miRNAs negatively correlated with PIAS1 level in EC and miR-182-5p and miR-96-5p, which were decreased in EC, were predicted to target PIAS1, and positively regulated by STAT3, was selected for experimental validation. Dual luciferase reporter assay confirmed miR-182-5p and miR-96-5p targeted PIAS1 and subsequently promoted malignant progression of EC cells. Moreover, ectopic PIAS1 expression and STAT3 inhibitor treatment significantly inhibited the activity of STAT3 and the levels of miR-182-5p and miR-96-5p in EC cells. Collectively, our findings revealed PIAS1 was downregulated and inhibited malignant progression of EC. Downregulation of PIAS1, caused by upregulations of miR-182-5p and miR-96-5p, activated STAT3 and feedback increased the expression of miR-182-5p and miR-96-5p, confirming miR-182-5p and miR-96-5p mediated the negative feedback regulatory loop between PIAS1 and STAT3 in EC.

PO-453

环状 RNA circR 分子通过抑制宫颈癌的凋亡和自噬来促进宫颈癌的发生

朱亭佳,王新宇
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

研究目的 探讨环状 RNA（circRNA）circR 分子在子宫颈癌组织和细胞株中的差异表达及其对宫颈癌细胞增殖、凋亡和自噬水平的影响。
材料与方法 选取浙江大学附属妇产科医院就诊患者的 40 例正常宫颈组织和 40 例宫颈癌组织标本。qRT-PCR 实验检测 circR 在正常宫颈和宫颈癌组织中的相对表达水平，为开展体外实验在子宫颈癌细胞株（SiHa 和 CaSki）细胞中检测其相对表达水平;CCK-8 和克隆形成实验检测沉默 circR 对 SiHa 和 CaSki 细胞活性和克隆形成能力的影响;流式实验检测沉默 circR 对 SiHa 和 CaSki 细胞的细胞周期和凋亡比例的影响；蛋白质印迹法（western blotting）检测沉默 circR 后自噬标记蛋白表达量的改变。
结果 circR 在宫颈癌组织的相对表达水平明显高于正常宫颈组织（P<0.05）; circR 在 SiHa 和 CaSki 细胞中的相对表达水平明显高于人永生化表皮细胞 HaCaT（P<0.05）。通过小干扰 RNA（siRNA）能显著下调 circR 的表达量（P<0.05）。在 SiHa 和 CaSki 细胞中沉默 circR，SiHa 和 CaSki 细胞的活性和克隆形成能力显著降低（P<0.05）,同时流式实验表明处理前后细胞周期无明显改变，而细胞早期凋亡比例明显增加（P<0.05），自噬标记蛋白 LC3B-II 表达量明显增高（P<0.05）。
结论 circR 在宫颈癌组织和宫颈癌细胞株（SiHa 和 CaSki）中的表达水平明显升高;沉默 circR 显著抑制宫颈癌 SiHa 和 CaSki 细胞的增殖，促进了凋亡和自噬发生。这提示我们 circR 的表达与宫颈癌细胞的生物学行为有关,具有成为宫颈癌诊断分子标记物和治疗靶点的潜力。

PO-454
冷刀锥切术后切缘阳性的育龄期妇女病灶残留危险因素分析

王新梅,徐娟,高阳,曲芃芃
天津市中心妇产科医院

目的：探讨切缘阳性的育龄期妇女冷刀锥切术(CKC)后病灶残留的危险因素，并确定切缘阳性的育龄期妇女后续处理策略。
方法：回顾性研究 245 例 CKC 术后切缘阳性的育龄期妇女，所有患者均在 3 个月内接受了二次手术，包括 CKC、环形电切术（LEEP）和全子宫切除术。 分析比较所有患者的年龄，妊娠，孕次，产次，HPV 种类，细胞学，转化区类型，宫颈管搔刮术(ECC)结果，象限受累，腺体受累及 CIN 分级，以确定病灶残留的危险因素。
结果：多因素分析发现，细胞学异常，高危 HPV 感染，III 型转化区，ECC 结果阳性，多象限受累是病灶残留的独立危险因素(P<0.02)。 此外，年龄>35 岁也是病灶残留的危险因素(P<0.03)。
结论：细胞学异常(包括 HSIL 和 ASC-H)、高危 HPV 感染、III 型转化区、ECC 结果阳性、多象限受累计及年龄>35 岁的切缘阳性患者为高危患者，对于这部分患者，应安排有经验的医生，在手术过程中谨慎操作，在考虑患者生育要求的同时，适当扩大手术范围。 此外，CKC 术后切缘阳性的患者应个体化管理。 在没有生育要求的患者中选择进一步的手术治疗是合理的，对于有生育能力要求的低危患者，特别是 35 岁以下的妇女，密切随访是可以选择的。

PO-455
髓系抑制性细胞在卵巢癌进展及转移中的研究进展

田婧君,李晓
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

卵巢癌是致死率最高的妇科恶性肿瘤，其进展和转移显著提高了患者的死亡率。肿瘤微环境中多种因素发挥了免疫抑制功能并促进卵巢癌的转移。其中,髓系抑制性细胞(myeloid-derived suppressor cells,MDSCs) 是一组激活的未成熟髓细胞异质性细胞群体，被认为是肿瘤微环境中发挥免疫抑制作用的重要成分。本文旨在通过回顾 MDSC 对癌细胞进展和转移的作用方式，着重探究在卵巢癌中分化与募集，抑制与调控的作用机理并提出潜在靶点的可能，综合目前已在卵巢癌治疗中进行的研究进展，为相关研究者提供参考和方向。

PO-456
Carbon nanoparticles combined with indocyanine green for sentinel lymph node detection in endometrial carcinoma

Sichen Liang,Zhiqi Wang,Jianliu Wang
Peking University People's Hospital

Objective:
To evaluate the feasibility and clinical value of the combination of carbon nanoparticles (CNPs) and indocyanine green (ICG) for identifying sentinel lymph nodes (SLNs) in endometrial cancer.
Materials and Methods:

153 patients with endometrial cancer were recruited from July 2015 to May 2019. All patients underwent SLN biopsy according to the SLN algorithm for surgical staging with ICG and/or CNPs, including 89 patients with CNP and ICG, 49 patients with CNP alone and 15 patients with ICG alone. The detection rate, factors associated with the detection rate, sensitivity and negative predictive value (NPV) of SLNs were analyzed.

Results:

The overall and bilateral detection rates of SLNs with combined method were the highest among different methods. As calculated per hemipelvis, the sensitivity and NPV with ICG alone or with ICG plus CNPs were 100%.

With CNP, patients ≥60 years old, through laparoscopy, tumor diameter ≥2 cm and high-risk histology had significant lower SLN detection rates according to univariate analysis. Multivariate analysis revealed that laparoscopy was significantly associated with an unsuccessful overall detection compared with laparotomy. The independent predictors of an unsuccessful bilateral SLN mapping procedure were ≥60 years old, BMI at least 30 kg/m^2, tumor diameter ≥2 cm and high-risk endometrial cancer.

Conclusion:

SLN assessment in endometrial cancer is feasible and safe, with high sensitivity and high NPV, when ICG and CNPs are combined and in low-risk patients. CNP shows better performance for laparotomy. Care should be taken with SLN mapping in patients ≥60 years old.

PO-457

伴性索样分化的子宫腺肉瘤临床病理分析

司婧文,申彦
天津市中心妇产科医院

【摘要】 目的 总结伴性索样分化的子宫腺肉瘤的临床病理学特点。 **材料与方法** 分析我院新发伴性索样分化的子宫腺肉瘤的临床表现、镜下形态与免疫组化表型，结合所复习的自 1986 年首次报道以来的 7 篇文献，总结该特殊亚型腺肉瘤的临床病理特点、鉴别诊断与生物学行为。 **结果** 我院新发 1 例伴性索样分化的子宫腺肉瘤，患者 25 岁，因不规则阴道出血就诊；宫腔镜下见宫颈外口处堵塞一息肉样肿物，直径 4cm，蒂部位于宫体近峡部处；镜下可见腺肉瘤的典型形态，即肿瘤性间质细胞围绕于良性苗勒氏腺体周围，部分呈息肉样突入腺腔，部分形成“套袖样”结构，核分裂像约 4 个/10HPF（活跃区可见 2 个/HPF），除此间质内可见巢团状分布、胞浆丰富、嗜酸或泡沫状、核圆的大细胞，与条索样排列、胞浆稀少、卵圆形核的中等大小细胞穿插于其中，偶见核沟，免疫组化显示这部分细胞 inhibin、MelanA、Calretinin、CK8/18、CK 广、CD56、ER、PR、AR 及 Desmin 阳性表达，HNF1β、CD68 及 BCOR 呈阴性表达，p53 呈非突变型表达。在 Pubmed 数据库中检索到 21 例伴性索样分化的子宫腺肉瘤病例，平均年龄 58 岁；几乎均以阴道出血为首发症状；辅助检查多数显示为定位在宫腔或峡部的息肉样肿块，平均大小 4.9cm；免疫组化染色均显示性索成份相关的标记物阳性表达；1 例性索样成份过生长的病例检出 JAZF1 和 BCORL1 重排；随访 7-102 个月，17 例患者未见复发、1 例患者 11 个月后复发并带瘤生存 38 个月、1 例患者 7 个月后死于其他疾病、2 例失访。 **结论** 伴性索样分化的腺肉瘤作为腺肉瘤的一种独特亚型，因病例罕见，对其发病机制与生物学行为的认识尚有限，目前诊断主要依赖镜下形态与免疫组化，是否出现 JAZF1 和 BCORL1 重排还需积累数据，生物学行为呈低度恶性，可复发，现有报道显示其预后好于腺肉瘤，尤其是伴肉瘤成分过生长的腺肉瘤，因此精准病理诊断有助于指导临床对年轻患者实施个性化的治疗方案。

PO-458

液体活检技术诊断子宫内膜癌的趋势 （综述）

赵礼蕴
中南大学湘雅二医院

研究目的
液体活检是近年来兴起的一种无创性生物标志物检测技术，可以作为一种早期癌症检测方法，可以为恶性肿瘤的诊断提供有价值的信息，同时也比目前的临床成像技术更能准确地监测肿瘤的发展进程。而子宫内膜癌是常见的女性恶性肿瘤，组织检查是诊断的金标准，但其具有创伤性，并且可能因操作者取样失误出现漏诊。此时，液体活检为子宫内膜癌的诊断提供了思路与方法。本文将对不同形式液体活检技术诊断子宫内膜癌的趋势进行综述，从而期待发现在妇科肿瘤领域，这项新兴技术的广阔的研究前景。
材料和方法
在这篇综述中，我们总结了近年来的文献，讨论了不同形式液体活检技术诊断子宫内膜癌的趋势，发现除血液外，唾液、尿液、脑脊液、子宫抽吸物、胸腔积液甚至粪便均可作为肿瘤源性物质的非侵入性来源，液体活检的生物标志物包括循环肿瘤细胞（CTCs）、循环肿瘤 DNA（ctDNA/cfDNA）、循环肿瘤微 RNA（miRNA）和蛋白质、外泌体等，我们分为三个部分，分别综述循环肿瘤细胞、循环肿瘤 DNA、循环肿瘤微 RNA 及外泌体在诊断子宫内膜癌以及预后上发挥的作用。
结果
本文综述表明均有研究表明提取循环肿瘤细胞、循环肿瘤 DNA、循环肿瘤微 RNA 及外泌体，均有潜力为子宫内膜癌的诊断、预后甚至个体化治疗提供帮助，但运用于临床诊疗之前，还需要进一步验证。另外，随着技术的发展，液体活检样本不仅仅局限于血液样本，也有学者从宫腔灌洗液，宫颈刮片标本中提取到循环肿瘤细胞或者循环肿瘤 DNA。甚至，ZAVESKY 等人从尿液中提取了 miRNA 用于诊断妇科肿瘤。
结论
我们期待液体活检在子宫内膜癌诊断上发挥更大的作用，但作为一项新兴技术必然存在着许多不足，如血液样本的检出率并不高，又如液体活检费用较常规检测要高出不少，由此我们提出思考，取材患者阴道的流血流液做为液体活检标本是否具有可行性，一方面取材简单，另一方面，具有绝对无创性。这需要未来进行实验进行验证。

PO-459

年轻早期子宫内膜癌及非典型增生患者保留生育功能治疗的荟萃分析

陈思敬,王娜,杨帆,郑莹
四川大学华西第二医院

目的：采用荟萃分析的方法，探讨口服高效孕激素（P 组）、宫内安置左炔诺孕酮宫内缓释系统(levonorgestrel-releasing intrauterine system, LNG-IUS)（LNG 组）和宫腔镜下病灶切除术(hysteroscopic resection, HR)联合孕激素（HR 组）的三种方案在年轻早期子宫内膜癌(endometrial carcinoma, EC)保留生育功能治疗中的疗效，旨在为子宫内膜癌保留生育功能寻求最佳治疗方案提供佐证。**材料与方法：**以“子宫内膜癌”和“保留生育功能治疗”及其同义词作为检索词对多个数据库进行相关文献的检索。根据纳入及排除标准对文献进行筛选，提取纳入文献中的相关数据。采用 R 软件(R 3.3.1)进行 meta 分析，最终分析指标为完全缓解率(complete response，CR)、复发率(relapse rate,

RR)、活产率。**结果：**荟萃分析中符合纳入标准的文献共 35 篇，总样本量 464 例。Meta 分析结果显示，EC 保留生育功能治疗的总完全缓解率为 89.5%，95%CI 为 86.4–93.7%，总复发率为 24.3%，95%CI 为 19.6–29.8%，总活产率为 33.8%，95%CI 为 23.0–45.5%。按照治疗方法分类,对比分析三组（P 组、LNG 组、HR 组）治疗情况，发现 P 组完全逆转率较低（P 组 vs LNG 组 vs HR 组：72.7% vs 88.5% vs 94.5%）、且复发率较高（P 组 vs LNG 组+HR 组：27.5% vs 13.6%, P=0.02），生育率(P 组 vs LNG 组+HR 组：40.7% vs 37.7%, P=0.28)上无明显差异。**结论：**荟萃分析显示年轻早期 EC 患者保留生育治疗是可行的。对于年轻早期 EC 保留生育功能治疗，LNG-IUS 和宫腔镜下病灶切除术联合孕激素治疗较单纯口服高效孕激素治疗更为有效。但由于文章纳入研究的局限性，需高质量的随机对照性研究证实此结论。

PO-460

Clarity 超声影像系统在局部晚期宫颈癌术后调强放疗中的初步应用

徐寒子[1],郭昌[1],贡震[2]
1.南京医科大学附属肿瘤医院 2.南京医科大学附属妇产医院

目的：本研究主要针对局部晚期宫颈癌术后补充放疗的患者，在体外调强放疗原有锥形束 CT(colic beam computerized tomography，CBCT)图像引导基础上，引入 CBCT+Clarity（医科达公司 IGRT 系统承载的三维超声图像引导系统）双模影像系统对图像进行引导，初步探讨该联合引导方法的可行性及有效性。
方法：收集整理 2019 年在我科接受 CBCT+Clarity 双模引导行术后补充放疗的局部晚期宫颈癌患者的资料，并与同期仅接受 CBCT 引导的患者进行对比，分析两组患者子宫体在三维方向的移位偏差、计划靶区剂量和危及器官(organ at risk, OAR)的剂量学差异、靶区适形性指数(conformity index, CI)、均匀性指数(homogeneity index, HI)等。
结果：以子宫体中心为参考点，全疗程分次间位置偏差分析提示：CBCT+Clarity 双模引导组靶体积左右方向的最大移动度为 5.4mm，前后方向的最大移动度为 8.5mm，头足方向的最大移动度为 6.8mm，显著低于 CBCT 单模引导组(P<0.05)；CBCT+Clarity 双模引导组和 CBCT 单模引导组，均能够满足剂量学要求；在靶区 CI 和 HI 上，CBCT+Clarity 双模引导组略优于 CBCT 单模引导组，但差异无统计学意义(P≥0.05)；OAR 保护方面，CBCT+Clarity 双模引导组直肠 V40、直肠 V50、小肠 V40 和膀胱 V40 的剂量均低于 CBCT 单模引导组(P<0.05)。
结论：对于局部晚期宫颈癌术后补充放疗的患者，选择 CBCT+Clarity 双模引导可行，且可明确较少摆位误差，并可减轻正常器官受照剂量，因而具有可能提高放疗耐受性的潜在临床应用价值。

PO-461

Accumulation of immunosuppressive tumor-infiltrating PD-1+ DCs links PD-1/PD-L1 blockade immunotherapeutic response in cervical cancer

Yumeng Wang,Guiling Li,Keqin Hua
Obstetrics and Gynecology Hospital of Fudan University

Background and aims:Inhibition of PD-1/PD-L1 axis by using specific inhibitor has emerged as a promising immunotherapy for cervical cancer (CC). Various trials are been conducting to explore the

biomarkers for treatment outcomes. However, the role of dendritic cells (DCs) in PD-1 immunotherapy remains unclear. Here, we investigated the special population of PD-1-expressing DCs in tumor bed, and uncovered their roles in immunosuppression and PD-1/PD-L1 blockade response.
Methods: A total of 30 CC fresh resected tumor specimens were collected for study. Of these, fresh tissues were checked for PD-1 expression and immune profiles including T cells, dendritic cells and NK cells by flow cytometry. The relationship between clinicopathologic variables and PD-1$^+$ DCs infiltration were also analyzed. Moreover, for the PD-1 blockade assay, isolated cell suspensions were cultured ex vivo with anti-PD-1 or control. The functional status of TILs and apoptosis of target cells were measured by flow cytometry. Additionally, bone-marrow derived DCs were cultured under tumor condition to investigate the induction of PD-1$^+$ DCs and evaluate the function of PD-1$^+$ DCs in vitro through T-cell proliferation and cytokine production.
Results:We identified a population of PD-1– expressing dendritic cells (PD-1$^+$ DCs) in the tumor microenvironment (TME). Accumulation of PD-1$^+$ DCs in cervical tumor was correlated to advanced stages, elevated preoperative SCC levels and lymph vascular space invasion. The expression of PD-1 was induced on activated DCs than their resting counterparts. This PD-1$^+$ DCs population was characterized by reduced cytokine secretion (IL-12, TNF-α, and IL-1β) and undamped chemotaxis, as well as suppression function of T cell response. Differences in the number of PD-1$^+$ DCs led to the identification of 2 subgroups of CCs: CCs with high tumor infiltrating PD-1$^+$DCs have features of more progressed T cell exhaustion than low-infiltration group. Moreover, PD-1 blockade significantly reinvigorated the population of PD-1$^+$ DCs than their counterparts. The TILs from higher PD-1 expressers could induce a greater killing effect of TILs by PD-1 blockade treatment.
Conclusion: Our findings suggested a role of PD-1$^+$ DCs in the escape of immune surveillance and the progression of CC. The density of PD-1 DCs in the tumor microenvironment may serve as a diagnostic factor for predicting the optimal beneficiaries of PD-1/PD-L1 blockade immunotherapy in CC.

PO-462
Role of hypoxia-induced periostin expression in malignant tumor migration and invasion

Pingping Su,Pengming Sun,Xiaodan Mao
Fujian Maternity and Child Health Hospital， Affiliated Hospital of Fujian Medical University

Hypoxia, a common feature of most solid tumors, plays an important role in invasion, metastasis, and other tumor-associated biological characteristics. In recent years, hypoxia has been proposed to increase the size of subpopulations of cancer stem cells (CSCs), inducing cancer cells to acquire CSC-like phenotypes. The extracellular matrix protein periostin, secreted by cancer cells and tumor mesenchymal cells, is highly expressed in the tumor microenvironment. As an important medium for the interaction between CSCs and the tumor microenvironment, periostin is involved in protein interactions and aggregation. Periostin contains integrin binding sites, which mediate tumor epithelial-mesenchymal transition, thereby regulating cell migration and adhesion. This article presents a review of the recent studies that throw light on the role of periostin in malignant CSCs, especially in endometrial cancer.

PO-463
Quantification and influencing factors of perioperative hidden blood loss in patients undergoing laparoscopic ovarian cystectomy for benign ovarian tumor

Junhan Zhou,Miaomiao Ye,Wenxiao Jiang,Xueqiong Zhu (Corresponding Author)
Department of Obstetrics and Gynecology， the Second Affiliated Hospital of Wenzhou Medical University，
wenzhou，zhejiang，China

Purpose: Compared with traditional laparotomy, laparoscopic ovarian cystectomy, as an alternative clinical surgical procedure, is associated with smaller wound, less intraoperative bleeding, lower complication rate and faster recovery. Despite the continuous improvements and reducing hemorrhage in perioperative management, there are a growing number of surgical patients with perioperative anemia which appears to be inconsistent with the visible intraoperative blood loss (IBL) and postoperative drainage. This substantial but easily underestimated blood loss is called hidden blood loss (HBL).This study confined to quantify HBL and investigate its influencing factors in benign ovarian tumor patients undergoing laparoscopic ovarian cystectomy.
Methods: 153 patients who underwent laparoscopic ovarian cystectomy were retrospectively reviewed. HBL was calculated using the formula derived from Nadler and Cross. Pearson correlation was carried out to measure the association between HBL and potential risk factors.
Results: The average HBL was 280.22±168.42 ml accounting for 84.13±19.20 % of total blood loss (TBL) (332.31±190.44 ml), which was almost fourteen-fold change relative to median visible blood loss [20.00 mL (10.00, 57.5)]. Surgical time, the number of excisional tumors and preoperative hemoglobin values were the risk factors for HBL. However, the volume of the largest excisional tumor, age and BMI exhibited no significant connection with HBL.
Conclusions: As a whole, HBL accounts for a large amount of TBL in laparoscopy for benign ovarian tumor. Surgical time, the number of excisional tumors and preoperative Hb values are the risk factors for HBL. The management of HBL is important for the administration of perioperative blooding loss. In this context, more attention should be paid and an accurate evaluation of HBL should be created to reduce postoperative complications and fasten postoperative rehabilitation.

PO-464
基于影像组学的子宫内膜癌的保留生育功能的相关研究进展

陈忠绍,李俊婷,褚然,孟金玉,宋坤
山东大学齐鲁医院

子宫内膜癌是常见的妇科肿瘤之一，常见于绝经后的女性。近年来随着女性肥胖率及糖尿病发病率的提高，育龄期女性子宫内膜癌患者逐渐增多，如何在有效治疗肿瘤的同时保留患者的生育功能，成为医患双方共同面临的选择与挑战。随着现代临床诊疗技术的日益进步，为部分年轻子宫内膜癌患者保留生育功能提供了可能。然而，并非所有患者均适合保留生育功能治疗，治疗需要在经过严格筛选并取得患者知情同意的情况下进行。保留生育相关功能治疗的选择需要排除患者一系列影响预后的高危因素，这往往需要进行相关影像学检查，但是这往往取决于影像科医师的经验，不同医师可能存在不同的解释。近年来随着影像组学概念的提出及其相关研究的进展，部分学者希望通过影像提取相应组学特征，并对这些特征进行建模分析，从而来诊断疾病并预测疾病的进展情况、治疗反应及其预后，并取得了预期的效果，但是因为数据较少，只有小部分显示出可行性。这篇综述主要是总结近几年已发表的影像组学在子宫内膜癌保留生育功能方面的相关进展，进而总结相关数据，从而有希望应用于

临床，为临床医生对患有子宫内膜复杂非典型增生及子宫内膜癌的相关患者进行治疗的评价与预测。目前仍迫切需要大数据平台来进行多中心研究。

PO-465
干扰素-γ 对低分化子宫内膜样腺癌及其外泌体 PD-L1 影响的初探

叶飞,马芳,王晓玉,蒋学风
暨南大学附属第一医院

目的 研究子宫内膜癌特别是 G3EECPD-1/PD-L1 的表达，探索 IFN-γ 对 G3EEC 及其外泌体 PD-L1 的影响，为 G3EEC 提供相应的更为有效的治疗靶点。
方法 临床水平发现 PD-1 及 PD-L1 在 G3EEC 中的重要作用：IHC 检测 G1/2EEC 患者 50 例，G3EEC 患者 50 例，正常子宫内膜组织 50 例 PD-1 及 PD-L1 的表达情况。
临床水平发现 IFN-γ 对 G3EEC 及其外泌体 PD-L1 起到重要作用：①使用 ELISA 法检测 G3EEC 20 例，G1/2EEC 20 例及正常对照组 20 例宫腔 IFN-γ、血清 IFN-γ、组织 PD-L1、组织外泌体 PD-L1,及血清外泌体 PD-L1；②ELISA 法检测 G3EEC 术前术后血清 IFN-γ 及血清外泌体 PD-L1 差异；
细胞水平发现 IFN-γ 对 G3EEC 细胞及其外泌体 PD-L1 起到重要作用：①WB 及 qPCR 检测 KLE 和 ISK 及其外泌体 PD-L1 的表达；②CCK-8 检测 IFN-γ 对 ISK 及 KLE 细胞增殖能力的影响；③WB 及 qPCR 检测 IFN-γ 对 ISK/KLE 细胞 PD-L1 及细胞外泌体 PD-L1 表达的影响。
结果 临床水平 IHC 结果：①PD-1 在 G3EEC 癌组织的表达高于 G1/2 EEC 癌组织的表达及正常子宫内膜组织。②PD-L1 在 G3EEC 癌组织的表达高于 G1/2EEC 癌组织的表达及正常子宫内膜组织。
临床水平 ELISA 结果：①相对于 NC，G3EEC 组织外泌体高表达 PD-L1；相对于 G1/G2EEC，G3EEC 组织外泌体高表达 PD-L1；相对于 NC，G1/2EEC 组织外泌体高表达 PD-L1。②相对于 NC，G3EEC 血清外泌体高表达 PD-L1；相对于 G1/G2EEC，G3EEC 血清外泌体高表达 PD-L1；相对于 NC，G1/2EEC 高表达 PD-L1。
细胞水平结果：①qPCR 发现相对于 ISK 细胞，KLE 高表达 PD-L1；相对于 ISK 细胞外泌体，KLE 细胞外泌体高表达 PD-L1；**WB** 结果也显示 KLE 外泌体高表达 PD-L1。**②qPCR 发现**相对于正常 KLE 细胞，加入 IFN-γ 后 KLE 表达 PD-L1 明显增高。
结论
1. 临床水平 IHC 发现 PD-1/PD-L1 可能在 G3EEC 的发病中起到重要作用；IFN-γ 可能促进 G3EEC 的发展，外泌体 PD-L1 可能成为 G3EEC 新的治疗靶点。
3. 细胞水平发现 IFN-γ 可能在 G3EEC 的发生中起到重要作用。

PO-466
Network pharmacology analysis on molecular targets and mechanisms of quercetin and cisplatin in Cervical Cancer

Huihui Ji[1],Kehan Li[1],Shangdan Xie[1],Liao Qi [2],Xueqiong Zhu (Corresponding author)[1]
1.Department of Obstetrics and Gynecology， The Second Affiliated Hospital of Wenzhou Medical University， Wenzhou， Zhejiang， China.
2.Department of Preventative Medicine， Zhejiang Provincial Key Laboratory of Pathological and Physiological Technology， Medical School of Ningbo University， Ningbo， China.

Background Cervical cancer (CC) is one of the most common tumours in the world and a serious threat to women's health. Cisplatin is a widely used agent for chemotherapy against CC. Yimucao is a

traditional Chinese medicine (TCM) which has been used in China for thousands of years. However, a holistic network pharmacology approach to understanding the active ingredients and the therapeutic mechanisms underlying CC has not been pursued. In this study, we investigated common genes of Yimucao active compounds and cisplatin, and further demonstrate its mechanisms against CC through network pharmacology.

Methods The components and targets of Yimucao were retrieved from the Traditional Chinese Medicine Systems Pharmacology Database (TCMSP) database. CC targets were collected via the GeneCards, Therapeutic Target Database (TTD), DisGeNET, and Kyoto Encyclopedia of Genes and Genomes (KEGG). Cisplatin-related genes were download from GeneWeaver database. Protein-protein interactions were constructed using the STRING database. The drug-disease-target network was constructed by Cytoscape. GO and KEGG analyses were performed to investigate common Yimucao active compounds, cisplatin, and CC targets.

Results According to the network pharmacological analysis, quercetin was the most bioactive compound of Yimucao, therefore we focused on the relationship between quercetin, cisplatin, and cervical cancer targets. Drug–compound–target network contained 93 nodes and 261 edges. Key targets contained EGFR, IL6, CASP3, VEGFA, MYC, CCND1, ERBB2, FOS, PPARG, CASP8, RELA, CASP9, AHR, etc. GO analysis showed that core targets included response to oxidative stress, regulation of apoptotic signaling pathway, intrinsic apoptotic signaling pathway, negative regulation of apoptotic signaling pathway and aging. The KEGG pathway analysis showed that quercetin and cisplatin may affect CC through platinum drug resistance, p53 signaling pathway, HIF-1 signaling pathway, proteoglycans in cancer, apoptosis and cellular senescence.

Conclusion Based on a systematic network pharmacology approach, our work successfully predict the potential targets of cisplatin and quercetin which form Yimucao for application to CC and helps to illustrate the mechanism of action on a comprehensive level. This study provides identify key genes and pathway associated with the pathogenesis of CC from new insights, which also demonstrates a feasible method for the research of chemical basis and pharmacology in quercetin and cisplatin.

PO-467

2020 宫颈原位腺癌诊断与处理指南解读

冯燕,陈小辉
河南省人民医院

现有的子宫颈癌筛查管理指南为宫颈病变的初始筛查和管理提供了详细的策略。宫颈原位鳞状细胞癌以及浸润癌的发病率有相应的降低。但是宫颈浸润性腺癌的发生并没有减少。原因可能宫颈原位腺癌诊断的延迟，或者疾病在原位腺癌到浸润性腺癌的疾病进展时间间隔更短，两者也可能并存。宫颈原位腺癌的发病率不断上升，与 HPV18 型感染相关，由子宫颈管内起源，跳跃性病变，这些都导致临床诊断相对困难。现有指南并未提供针对原位腺癌的详细管理和监测建议。本指南由美国妇科肿瘤学会起草，并经由美国阴道镜和宫颈病理学会(ASCCP)审查认可后，针对宫颈的原位腺癌的评估和治疗提供指导。包括确诊后的管理，尤其是对有保留生育功能患者治疗后的管理，妊娠期 AIS 的管理，标本切缘阳性与阴性所对应的管理。供临床医生参考。

PO-468

miR-200a-5p regulates ovarian cancer chemotherapy sensitivity by affecting the phenotype of CSCs and EMT

Mengyu Chen,Wanjia Tian,Junying Zhou,Ruixia Guo,Zhongfu Yuan,Lei Chang
First Affiliated Hospital of Zhengzhou University

Background: Ovarian cancer is a common female malignant tumor with the highest fatality rate. For advanced epithelial ovarian cancer, the current treatment strategy is cytoreductive surgery and

platinum-based combined chemotherapy. However, the occurrence of chemotherapy resistance can lead to tumor recurrence, metastasis and increase mortality. Therefore, it is an important challenge for the effectiveness of treatment of ovarian cancer.Chemotherapy tolerance is affected by many factors and the mechanism is still unclear. MicroRNAs (miRNAs) are small non-coding RNAs that are closely related to cell differentiation and growth, apoptosis, organ formation, tumor occurrence and development, and treatment tolerance. The miR-200 family is an important inhibitor of tumor cell epithelial-mesenchymal transition and invasion and metastasis. Preliminary studies found that the analysis of miRNA expression in ovarian cancer chemotherapy resistant and sensitive cell lines found that miR-200a-5p decreased most significantly in drug-resistant cell lines.For the first time, it was found that the decreased expression of miR-200a-5p is related to the chemotherapy tolerance of ovarian cancer.

Methods: The plasmid highly expressing miR-200a-5p was constructed by permanently transfecting the cisplatin-resistant cell line,and using qRT-PCR and western blot detected the expression of RNA and proteins related to cancer stem cells (CSCs) and epithelial-mesenchymal transition (EMT).Cell function experiments which were about clone formation experiment, cell invasion experiment, cell growth curve experimentand cell cycle experiment detected cell clone, proliferation, invasion ,cycle and so on. At the same time, after 48 hours of treatment with cisplatin, the half inhibitory concentration (IC50) and drug resistance index of different cell lines were determined, and apoptosis detection and autophagy-related protein detection were performed at the same time.

Results: The expression of miR-200a-5p was significantly down-regulated in cisplatin-resistant ovarian cancer cells. Up-regulating the expression of miR-200a-5p, the cell proliferation ability of cisplatin-resistant strains was enhanced, clone formation ability and invasion ability were weakened, the epithelial phenotype marker (E-cadherin) was significantly increased, and the mesothelial phenotype marker (N-Cadherin, Vimentin) and the expression levels of CSCs-related markers (CD117, CD105, ALDH1, CD44v6, Snail) were significantly reduced; at the same time, their drug sensitivity increased, the half inhibitory concentration(IC50) and drug resistance index decreased.

Conclusion: miR-200a-5p regulates ovarian cancer chemotherapy sensitivity by affecting the phenotype of CSCs and EMT. Down-regulation of miR-200a-5p increases the chemotherapy resistance of ovarian cancer cells; up-regulation of miR-200a-5p increases the sensitivity of ovarian cancer cells to cisplatin drugs.This study provides a new gene therapy target for overcoming drug resistance in ovarian cancer.

Keywords: miR-200a-5p; ovarian cancer; chemotherapy resistance; epithelial-mesenchymal transition; cancer stem cells

PO-469
Hsa-circ-0007874/miR-760/SOCS3 通路对卵巢癌生物学行为的影响及机制研究

陈其臻,王炎秋,尹喆,傅夏燕,焦雨帆
上海市同济医院(同济大学附属同济医院)

目的：卵巢癌为常见的妇科恶性肿瘤之一，由于早期症状隐匿且无有效的早期检测手段，70%-75%的患者在确诊时已是晚期，易复发转移，死亡率较高。环状 RNA（CircRNAs）为广泛存在于人体中的一种内源性非编码 RNA,已被证实在恶性肿瘤中起重要作用。本文以 Hsa-circ-0007874 为靶点，研究其表达改变对卵巢癌细胞增殖、迁移等生物学行为的影响及具体机制。

方法：1.应用 qRT-PCR 方法检测 Hsa-circ-0007874 在卵巢癌细胞系 SKOV3、A2780、OV2008、IGROV1、ES-2 和正常卵巢细胞系 ISOE80 中的表达。采用荧光探针原位杂交（FISH）对 Hsa-circ-0007874 进行细胞亚定位。2.构建 circ-0007874 过表达质粒，通过 CCK8 实验、细胞克隆形成实验、Transwell 实验明确 circ-0007874 表达水平变化对卵巢癌细胞系生物学功能的影响。3.采用生物学信息

学软件对靶基因进行初步预测，通过双荧光素酶实验确定 circ-0007874 与 miR-760、miR-760 与 SOCS3 的靶向结合。4.qRT-PCR 检测并分析卵巢癌细胞系中 circ-0007874 表达变化对 miR-760、SOCS3 的影响及 miR-760 表达变化对 SOCS3 的影响，同时细胞功能试验检测上述表达变化对卵巢癌细胞迁移、增殖能力的影响。

结果：1. Hsa-circ-0007874 主要表达于正常卵巢上皮细胞及卵巢癌细胞的胞质中（图 1A），Hsa-circ-0007874 在卵巢癌细胞系中表达明显低于正常卵巢细胞，差异具有统计学意义。（见图 1B，P<0.001）2.过表达 circ-0007874 可降低卵巢癌细胞增殖、迁移及侵袭能力，详见图 2（P<0.001）。3.生物信息学和双荧光素酶实验分析证实 miR-760 和 SOCS3 是 Hsa-circ-0007874 的下游靶点，详见图 3（P<0.001）。4.下调 SOCS3 表达或 miR-760 过表达可恢复高表达 Hsa-circ-0007874 卵巢癌细胞的迁移、增殖能力（见图 4，P<0.001）；SOCS3 下调可恢复 miR-760 敲低后卵巢癌细胞增殖、迁移能力（见图 5，P<0.001）。

结论：circ-0007874 表达上调可通过竞争性抑制 miR-760 并靶向调控其下游基因 SOCS3，在卵巢癌中发挥抑癌作用。

PO-470
The Role of the Vaginal Microbiome in the Development of HPV Infection

wenyu lin
Laboratory of Gynecologic Oncology， Fujian Provincial Maternity and Children's Hospital， Affiliated Hospital of Fujian Medical University，

Objectives: Human papillomavirus (HPV) infections account for over 600,000 new cancer cases every year. Factors, such as epithelial surface integrity, mucosal secretions, immune regulation, and the local microbiota, likely play a role in HPV persistence and progression to cancer. This study aimed to access the role of the vaginal microbiome in the development of high-risk human papillomavirus (HR-HPV) infection by high-throughput sequencing information technology. So as to provide new ideas for the screening and treatment of HPV infection.

Material and Methods: All participants in this study were from June 2018 to March 2020 the Fujian Province Cervical Lesions Screening Cohorts (FCLSCs), Fujian, China. A total of 448 participants were divided into Arm 1, in which HR-HPV genotyping, cytology, and microecology tests were performed, and Arm 2, in which vaginal microecological samples were characterized by amplification and sequencing the of bacterial 16S V4 rRNA gene region. The participants were considered eligible according to the following inclusion criteria: married, aged 20-74 years, had no immune system diseases, sexually transmitted diseases or related drug histories; there was no history of cervical disease treatment or chemoradiotherapy.The exclusion criteria included the following: washed vulva within 48 hours, had sexual intercourse or used drug in vagina within the last 3 days, used of antibiotics within one month. The study was approved by the Ethics Committee of the Affiliated Hospital of Fujian Medical University (2020KY015), and all individuals in this study provided written informed consent.

Results: In this study, bacterial vaginosis (BV) incidence was the highest, accounting for 38.53%. The HR-HPV infection rate was higher in women with BV(P =0.036). In women with Gardnerella infection, the infection rate of HR-HPV was 72.73%, which was significantly higher than the HR-HPV infection rate (44.72%) in the vaginal microbiome with lactobacillus (P=0.04). Compared with sialidase negative patients, the cervical lesions in sialidase positive patients was significantly increased (31.37% vs 17.46%, P=0.041). In the HPV-positive group, Shannon index was higher than the HPV-negative group (F=6.14, P=0.023), and Simpson index was lower (F=9.494, P=0.006), indicating that the number of bacteria in HPV-positive group was more.The α diversity in the patients with cervical intraepithelial neoplasia (CIN) was significantly higher than that in negative for intraepithelial lesion or malignancy

（NILM）by 16S rRNA amplicon sequencing. The number of bacteria in the normal group is less, suggesting that the complexity of the vaginal flora is increased in patients with HPV infection and decreased in cases of vaginal health. Lactobacillus was the dominant bacterial flora in the normal vaginal microbiome. Gardnerella and Prevotella were the major bacterial flora in patients progressed to CIN.

Conclusions: A disorder of vaginal microbiome is associated with HPV infection and cervical lesions. Mixed infection of HR-HPV and Gardnerella is a risk factor for cervical lesions. The finding enriched the mechanism about vaginal flora on cervical lesions, and provide the possibility for potential prevention and treatment of HPV infection, such as probiotics. Moreover, the results of this study also provide a possibility for future biological indicators in screening for cervical lesions.

PO-471
Silencing LGR6 Attenuates Stemness and Chemoresistance via Inhibiting Wnt/β-catenin signaling in Ovarian Cancer

Xiaohong Ruan[1],Aibin Liu[3],Meigong Zhong[4],Yifeng Wang[2]
1.Department of Gynecology， Jiangmen Central Hospital， Affiliated Jiangmen Hospital of Sun Yat-sen University， Jiangmen 529030， People’s Republic of China
2.Department of Obstetrics and Gynecology， Zhujiang Hospital， Southern Medical University， Guangzhou 510282， People’s Republic of China
3.Department of Geriatrics， Xiangya Hospital， Central South University， Changsha 410008， People’s Republic of China
4.Department of Pharmacy， Jiangmen Maternity and Child Health Care Hospital， Jiangmen 529030， China

Leucine Rich Repeat Containing G Protein-Coupled Receptors (LGRs) have been widely studied and found to be implicated with development and progression in multiple human cancer types. However, the clinical significance and biological functions of LGR6 in ovarian cancer has yet to be further investigated. In this study, LGR6 expression was examined by real-time PCR, western blotting and immunohistochemistry. Spheroid formation assay and flow cytometry were carried out to explore the effect of LGR6 on cancer stem cells (CSCs) characteristics in ovarian cancer cells. Mitochondrial potential assay and caspase-9 or caspase-3 activity assay were performed to investigate the effect of LGR6 on chemotherapeutic response of ovarian cancer cells to chemotherapeutics. Animal experiment was used to examine the effect of LGR6 on the chemoresistance of ovarian cancer cells in vivo. Western blot and luciferase assays, and Gene Set Enrichment Analysis (GSEA) were used to discern the underlying mechanisms contributing to the roles of LGR6 in ovarian cancer. Here, our results demonstrated that LGR6 expression was increased in ovarian cancer, which positively correlated with FIGO stages, poor chemotherapeutic response and poor progression survival in ovarian cancer patients. Loss of function assays showed that downregulating LGR6 abrogated the CSCs-like phenotype and chemoresistance in vitro. More importantly, silencing LGR6 improved the chemoresistance of ovarian cancer cells to cisplatin in vivo. Mechanistic investigation further revealed that silencing LGR6 inhibited stemness and chemoresistance by repressing Wnt/β-catenin signaling. Collectively, our results uncover a novel mechanism contributing to LGR6-induced chemotherapeutic resistance in ovarian cancer, providing the evidence for LGR6 as a potential therapeutic target in ovarian cancer.

PO-472

槲皮素联合顺铂对妇科肿瘤细胞的抑制作用

高英,徐文斌,朱雪琼（通讯作者）
温州医科大学附属第二医院妇产科

槲皮素是一种天然黄酮类提取物，具有抗氧化、抗炎、抗病毒和其他多种生理活性。近年来的研究表明，槲皮素具有较强的抗肿瘤活性作用，槲皮素能抑制癌细胞增殖、促进癌细胞凋亡、增强化疗药物敏感性并抑制癌细胞侵袭和迁移。此外，有研究发现，槲皮素联合顺铂能增强顺铂抗肿瘤作用，如促进癌细胞凋亡、抑制癌细胞增殖、增强顺铂对癌细胞的细胞毒性、增加癌细胞对顺铂敏感性等。本文整理了近年来槲皮素联合顺铂作用妇科肿瘤细胞的文献资料，阐述了槲皮素联合顺铂对妇科肿瘤细胞的抑制作用。

PO-473

421 例早期卵巢癌临床病理资料分析

龚照林[1],尹如铁[2]
1.成都市妇女儿童中心医院
2.四川大学华西第二医院

目的：对 421 例早期卵巢癌（EOC）患者的临床病理资料进行回顾性分析，总结其临床病理特征、诊断、治疗和预后并对预后相关因素进行分析，以期为本病的诊治提供参考。
方法：收集四川大学华西第二医院 2013 年-2017 年收治的 421 例早期卵巢癌患者的临床病理资料。
结果：1、本研究患者的发病年龄、临床症状、肿瘤发现方式、体重指数等方面无特异性，但对 314 例早期浆液性癌、粘液性癌、子宫内膜样癌、透明细胞癌、其他（癌肉瘤）等早期上皮性卵巢癌肿瘤标志物经统计分析显示子宫内膜样癌组 CA125 值明显高于透明细胞癌和浆液性癌，P＜0.05，差异有统计学意义。2、手术治疗分为开腹组和腹腔镜组，统计分析发现腹腔镜组较开腹组的手术时间更长，但术中出血量更少，住院天数更短，P＜0.05，差异有统计学意义；在淋巴结清扫个数、术后并发症、住院费用经统计分析两组无明显差异，P＞0.05。3、本研究中有 70 例保留生育，其平均年龄 22.6±5.7 岁，11 例术后顺利完成生育，1 例死亡，系卵巢高分化粘液腺癌ⅠC 期，因肠癌死亡。4、本研究中 395 例（93.8%）完成了全面分期手术，一次手术完成 239 例（60.5%），两次手术完成 156 例（39.5%）。统计分析显示一次完成手术组的术中冰冻送检率及符合率均高于两次完成组，P＜0.05，差异有统计学意义。统计分析显示我院术中冰冻送检率及符合率高于外院，P＜0.05，差异有统计学意义。5、本研究中患者平均 RFS 为 51.4±18.7 个月，对可能影响早期上皮性卵巢癌患者 RFS 的 12 个因素进行单因素分析，19 例未完成全面分期手术、290 例完成分期手术，两组 RFS 平均值分别为 58.2±5.3（95%CI:47.8-68.5）VS 79.4±1.1（95%CI:77.3-81.5）个月，经统计学分析全面完成手术分期组患者的 RFS 明显长于未完成组，P＜0.05，差异有统计学意义。
结论：1、卵巢癌早期诊断困难，需临床医生仔细甄别。早期卵巢癌中子宫内膜样癌患者术前 CA125 值高于透明细胞癌和粘液性癌。2、全面分期术中，腹腔镜手术术中出血量，住院天数方面较开腹手术有一定优势。3、对早期卵巢癌患者选择性的保留生育手术安全可行。4、增加术中冰冻送检和提高冰冻符合率可提高早期卵巢癌的诊断率，避免再次手术。5、完成全面分期手术是影响早期上皮性卵巢预后的主要因素。

PO-474
PARP 抑制剂在卵巢癌治疗中相关机制的基础研究现况

薛亦特,尤冰冰,程晓东
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

PARP 抑制剂是通过合成致死效应使有乳腺癌易感基因（BRCA）突变的患者通过同源重组（Homologous recombination, HR）来修复双链 DNA 断裂的能力受损。近年来大量关于 PARP 抑制剂在卵巢癌的治疗领域取得了瞩目的研究成果，而其深层次的作用机制等基础机理，更有待进一步探索。目前广大学者认为PARP抑制剂可以选择性杀伤BRCA1或BRCA2缺陷的细胞的机制是“合成致死性”，并针对此理论提出了四种 PARP 抑制剂作用机制的可能模型：抑制碱基切除修复、捕获受损 DNA 上的 PARP1、损伤 DNA 招募 BRCA1 能力丧失、激活易出错的非同源性末端链接。这四种机制从不同的角度阐释了“合成致死性”，但也各有理论上的局限性。
虽然具有同源重组缺陷和队 PARP 抑制剂敏感不是完全等同的事件，但目前大部分的研究显示，具有同源重组缺陷的人群对 PARP 抑制剂有更好的反应。因此，PARP 抑制剂与其他药物联用，以此来使原本对 PARP 抑制剂不敏感的人群获益，即成为研究的热点。PARP 抑制剂与抑制同源重组的药物联合使用可能是使能进行同源重组的肿瘤对铂和 PARP 抑制剂敏感的有效策略，因此，这些药物的使用范围扩展到同源重组缺陷的癌症中。经过一系列临床前评估，目前已有一些策略通过选择性阻断或抑制癌细胞中的同源重组过程并使其对 PARP 抑制剂敏感。这些策略主要包括：PARP 抑制剂与 CDK1 抑制剂、PI3K 或 AKT 抑制剂、CDK12 抑制剂、HDAC 抑制剂、HSP90 抑制剂的联合应用等。
PARP 抑制剂的面世，给卵巢癌的治疗带来了具有里程碑式的突破，但随着药物的长期应用，无法避免的是耐药问题的日益浮现。目前认为，肿瘤细胞对于 PARP 抑制剂的耐药主要通过同源重组缺陷的修复、PARG 的缺失、重建复制叉的稳定性、药物泵功能的改变等机制来实现。
PARP 抑制剂推动了卵巢癌精准化治疗的进展，但是目前对于 PARP 抑制剂的不敏感及耐药现象这两大问题的研究还局限于基础研究水平，应致力于基础研究到临床应用的转化和发展，发挥 PARP 抑制剂自身效应的最大化，探索中寻求对患者治疗最有效的方案。

PO-475
Identification and Functional Validation of Differentially Expressed microRNAs in Ascites-derived Ovarian Cancer Cells Compared With Primary Tumour Tissue

Yahui Jiang,Tianjiao Lyu,Weiwei Feng
Ruijin Hospital， Shanghai Jiaotong University， School of Medicine

Purpose: Ovarian cancer, manifested by malignant ascites, is the most lethal gynaecological cancer. Suspended ascites-derived spheroids may contribute to ovarian cancer metastasis. MicroRNAs (miRNAs) are also associated with ovarian cancer metastasis. Here, we aimed to investigate the differentially expressed miRNAs (DE-miRNAs) in ascites-derived spheroids compared with primary tumour tissue, which may regulate ovarian cancer metastasis.
Methods: The DE-miRNAs between ovarian cancer primary tumour tissues and ascites-derived spheroids were identified by GEO2R screening in dataset GSE65819. We used MiRTarBase and STRING to predict the target hub genes of DE-miRNAs and WebGestalt to perform functional analysis of hub genes. ALGGEN PROMO and TransmiR v2.0 were used to predict the common transcription factors (TFs) that potentially regulate DE-miRNAs expression. The observed differences in DE-miRNAs expression were validated with human ovarian cancer samples and ovarian cancer cell lines

using PCR. The functions of DE-miRNAs on ovarian cancer progression were verified by transwell and angiogenesis assays.
Results: Through bioinformatics screening and experimental validation, miR-199a-3p, miR-199b-3p, miR-199a-5p, miR-126-3p and miR-145-5p were identified as being significantly downregulated in ascites-derived spheroids compared with primary tumour tissues. In addition, TFAP2A was identified as a potentially common upstream TF regulating the expression of the abovementioned DE-miRNAs. The overexpression of miR-199a-3p, miR-199b-3p, miR-199a-5p could inhibit ovarian cancer invasion, and the overexpression of miR-145-5p could inhibit angiogenesis.
Conclusion: The downregulated expression of miR-199a-3p, miR-199b-3p, miR-199a-5p, miR-126-3p and miR-145-5p in ascites-derived spheroids plays a key role in promoting ovarian cancer progression, which may represent novel molecules for targeted therapy for ovarian cancer.

PO-476
“筷子”技术在单孔腹腔镜下广泛子宫切除术中的应用

王延洲,李宇迪,唐帅,陈勇,邓黎,梁志清
第三军医大学第一附属医院

目的 描述“筷子法”单孔腹腔镜手术技术，探讨“筷子法”单孔腹腔镜广泛子宫切除及盆腔淋巴结清扫治疗宫颈癌的可行性、安全性及围手术期结局。方法 2016 年 10 月至 2018 年 9 月，纳入陆军军医大学第一附属医院妇产科诊断为宫颈癌患者，采用“筷子法”单孔腹腔镜技术，行单孔腹腔镜广泛子宫切除+盆腔淋巴结清扫术。对患者人口学特征和围手术期效果进行总结分析。结果 73 例患者尝试手术，除 1 例因术中探查Ⅳ期子宫内膜异位症中转为多孔腹腔镜手术外，72 例成功完成(98%)。72 例均采用“筷子法”单孔腹腔镜技术，中位手术时间 225 min，平均术中失血量 200 mL。2 例术中血管损伤，1 例膀胱损伤，均发生在最初的 20 例手术中，且均在术中单孔腹腔镜下完成修补。术后 14 天发生输尿管阴道瘘 1 例，行输尿管膀胱再植术修补成功。有中度或高危因素者 43 例（59.7%），行化疗或放疗。患者出院时对美容效果的满意度为 8 分，30 天后提高到 9 分。结论 利用“筷子”技术完成子广泛性子宫切除术是可行的。这种方法为选定的病人和外科医生提供了更多的选择。

PO-477
女性生殖道炎性肌纤维母细胞瘤文献回顾

黄海霞
上海市第一妇幼保健院

【摘要】目的 探讨女性生殖道炎性肌纤维母细胞肿瘤(IMT)的临床特点、治疗及预后。方法 收集国内外文献报道共 21 例女性生殖道 IMT 的临床资料，分析和总结其主要的临床表现、病理组化、治疗及预后。结果 发病年龄 19～65 岁(平均 36.12 岁)。肿瘤部位不一，15 例(71.4%)发生于子宫肌层(酷似肌瘤)，1 例弥散于下盆腔，1 例于左侧输卵管，1 例于宫颈，1 例于阴道残端，1 例于外阴，1 例涵于分娩时胎盘组织中。大体观：肿块大小不等，最大径 1～9cm，切面实性灰白，质韧伴黏冻感，基本无坏死。免疫组化：表达 ALK(67.0%)、Ki-67(57.1%)、SMA(57.0%)、Vimentin(23.8%)和 Actin(14.3%)等。治疗：手术治疗为主，11 例行单纯肿块摘除术，12 例行子宫全/次全切除术(其中 2 例术后辅助放化疗)。随访：11 例患者术后无复发及转移(随访时间 6 个月~3 年不等)，4 例术后 1~2 年内死亡(其中 1 例死于肺腺癌)，1 例术后 1 年内多次复发，余 5 例尚无随访资料。结论 女性生殖道 IMT 发病罕见，多数良性转归，少数有复发、恶变、转移甚至致死的可能，临床治疗结局有一定差异，以期引起临床医生的重视。

PO-478

卵巢癌的综合治疗及靶向治疗的临床应用现状

尤冰冰,薛亦特,程晓东
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

卵巢癌是女性恶性肿瘤死亡的主要原因之一，在卵巢癌各种组织学类型中，上皮性卵巢癌约占 90%，由于缺乏有效的早期筛查手段和早期特定临床体征，70%的卵巢癌一经确诊已是进展期(FIGO III/IV 期)，预后不佳。近年来，随着手术技术及理念的更新和综合治疗体系的构建，卵巢癌有望在将来作为一项可控的慢性疾病进行管理。目前卵巢癌的标准一线治疗仍是手术配合以铂类为基础的化疗，腹腔热灌注疗法，靶向治疗等新型方式的出现为卵巢癌的综合治疗提供了新思路。

手术对卵巢癌的诊断，分期和治疗起到了重要作用，早期卵巢癌患者应行全面分期手术，术中进行诊断确认以及疾病分期。

NCCN 指南推荐卵巢癌初始化疗的方案首选铂类联合紫杉醇。对于复发性卵巢癌，根据无铂间隔期的时长分为铂敏感复发和铂类耐药复发，对于铂敏感复发，可选用和一线化疗方案相似的化疗方案。

腹腔热灌注疗法主要应用于晚期卵巢癌的腹腔转移，作用机制主要是热量直接对肿瘤细胞产生物理破坏，温度升高提高化疗药物在腹膜表面的渗透性以及破坏肿瘤细胞 DNA 的修复。已有充分的证据显示其可以改善卵巢癌患者的预后。

靶向治疗是利用肿瘤细胞与正常组织间存在的分子生物学差异，选择性的干扰癌变或肿瘤增生所需特定分子、信号通路，从而抑制癌细胞的增值或者是直接杀死癌细胞的一种治疗手段。从难治性复发性卵巢癌的治疗到一线的维持治疗，从单药治疗到多种靶向药物联合治疗，靶向治疗在卵巢癌治疗中正逐步突显重要性。目前对卵巢癌广泛研究的靶向治疗主要有针对抗血管生成药物，聚腺苷二磷酸核糖聚合酶（PARP）抑制剂，叶酸受体抑制剂以及免疫治疗等：

抗血管生成药物主要通过抗血管内皮生长因子抗体或小分子的络氨酸激酶抑制剂来抑制肿瘤病理性血管网的发展；已有研究表明叶酸受体 α 在卵巢癌上过表达（尤其是在铂耐药的患者中），当前针对叶酸受体 α 的靶向治疗策略主要面向抗 FRα 抗体，抗体-药物耦合物以及叶酸-药物耦合物；上皮性卵巢癌是一类能够被宿主的免疫系统所识别的免疫原性肿瘤，免疫疗法目的在于通过增强自身的免疫系统，破坏肿瘤的免疫逃逸从而来识别攻击肿瘤细胞，主要包括免疫检查点抑制剂、肿瘤疫苗和过继细胞免疫疗法；PARP 抑制剂是通过合成致死效应使有乳腺癌易感基因（BRCA）突变的患者通过同源重组来修复双链 DNA 断裂的能力受损，近年来 PARP 抑制剂在卵巢癌的治疗领域取得了瞩目的研究成果。

PO-479
Comparative performance evaluation of HPV genotyping and non-genotyping in cervical cancer screening in Fujian, China: a retrospective population-based cohort study

Binhua Dong[1,2],Huachun Zou[3,4],Xiaodan Mao[1,2],Yingying Su[5],Hangjing Gao[1],Fang Xie[6],Yuchun Lv[7],Yaojia Chen[1],Yafang Kang[1,2],Huifeng Xue[8],Diling Pan[1],Pengming Sun[1,2]

1.Laboratory of Gynecologic Oncology， Department of Gynecology， Fujian Maternity and Child Health Hospital， Affiliated Hospital of Fujian Medical University， Fuzhou， Fujian 350001， P.R. China;

2.Fujian Key Laboratory of Women and Children's Critical Diseases Research， Fujian Maternity and Child Health Hospital， Affiliated Hospital of Fujian Medical University， Fuzhou， Fujian 350001， P.R. China;

3.School of Public Health (Shenzhen)， Sun Yat-sen University， Shenzhen， PR China.

4.Kirby Institute， The University of New South Wales， Sydney， New South Wales， Australia.

5.State Key Laboratory of Molecular Vaccinology and Molecular Diagnostics， National Institute of Diagnostics and Vaccine Development in Infectious Diseases， Strait Collaborative Innovation Center of Biomedicine and Pharmaceutics， School of Public Health， Xiamen University， Xiamen， Fujian， China.

6.Department of Obstetrics and Gynecology， Mindong Hospital of Fujian Medical University， No. 89 Heshan Road， Fuan， Fujian 355000， China

7.Department of Obstetrics and Gynecology， Quanzhou First Hospital Affiliated to Fujian Medical University， Quanzhou， Fujian 362000， China.

8.Fujian Provincial Cervical Disease Diagnosis and Treatment Health Center， Fujian Maternity and Child Health Hospital， Affiliated Hospital of Fujian Medical University， Fuzhou 350001， Fujian， P.R. China

9.Department of Pathology， Fujian Maternity and Child Health Hospital， Affiliated Hospital of Fujian Medical University， Fuzhou 350001， Fujian， P.R. China

Background After 2015, HR-HPV genotyping combined with cytology screening has been widely used in China, but the impact of introducing HR-HPV genotyping on cervical cancer prevention and control in the real-world in China remains unclear. China's Fujian Cervical Pilot Project (FCPP, 2012–16) transitioned cervical cancer screening from high-risk human papillomavirus (HR-HPV) non-genotyping to genotyping. We investigated the clinical impact of this introduction, comparing performance indicators between HR-HPV genotyping combined with cytology screening (genotyping period) and the previous HR-HPV non-genotyping combined with cytology screening (non-genotyping period).

Methods A retrospective population-based cohort study was performed using data from the FCPP for Fujian province, southeast China. We obtained data for the non-genotyping period from January 1, 2012, to December 31, 2013, and for the genotyping period from January 1, 2014, to December 31, 2016. The primary outcome was the incidence of cervical intraepithelial neoplasia of grade 2 or worse (CIN2+) in women aged ≥25 years. Propensity score matching was used to match women from the two periods. Multivariable Cox regression was used to assess factors associated with CIN2+. Performance was assessed and included consistency, reach, effectiveness, adoption, implementation and cost.

Findings Compared with that in the non-genotyping period, in the genotyping period, more CIN2+ cases were identified at the initial screening (genotyping vs non-genotyping = 3.06% vs 2.32%, P<0.001); the rate of colposcopy referral was higher (genotyping vs non-genotyping=10.87% vs 6.64%, P<0.001); and the hazard ratio of CIN2+ diagnosis was 1.64 (95% CI 1.43–1.88; P<0.001) after controlling for health insurance status and age. The total costs of the first round of screening (genotyping vs non-genotyping=$66,609 vs $65,226, P=0.293) were similar during the two screening periods. Higher screening coverage (genotyping vs non-genotyping=25.95% vs 25.19%, P=0.007), higher compliance with age recommendations (genotyping vs non-genotyping=92.70% vs 91.69%, P=0.001), lower overscreening (genotyping vs non-genotyping=4.92% vs 10.15%, P<0.001), and reduced unqualified samples (genotyping vs non-genotyping=cytology: 1.48% vs 1.73%, P=0.099, HR-HPV: 0.57% vs 1.34%, P<0.001) were observed in the genotyping period.

Interpretation Introduction of an HR-HPV genotyping assay in China could detect more CIN2+ lesions at earlier stages and improve programmatic indicators. Evidence suggests that the introduction of HR-HPV genotyping is likely to accelerate the elimination of cervical cancer in China.

PO-480

基于附件肿块超声大数据的人工智能应用研究

陈高文[1],杨敏儿[1],张晓玉[1],谢咏[2],廖威林[3],刘鹏华[4],张金宝[3],陈扬平[2],王沂峰[1]
1.南方医科大学珠江医院妇产医学中心
2.佛山市第一人民医院妇科
3.中山大学地理科学与规划学院
4.阿里巴巴集团数据技术与产品部

目的：利用人工智能的深度学习技术对附件肿块的超声影像大数据进行良恶性的自动识别与分类。
方法：本研究回顾性收集了南方医科大学珠江医院 1577 张附件肿块超声图片作为训练图像，依据肿块的性质分别构建恶性库、交界库、良性库等 3 类超声数据集。利用卷积神经网络架构的 YOLO v3 模型对数据集进行迁移学习，开发基于人工智能深度学习技术的附件肿块超声良恶性类型自动分流系统（CNN-AM-HD）和病理类型自动识别系统（CNN-AM-HI）。
结果：第一阶段，我们构建了良性-恶性初级训练模型，对 366 张附件肿块超声图片进行测试，其灵敏度为 0.792，阳性预测值为 0.802。该模型有效提升了良性，恶性肿瘤在超声诊断中的分流效率及准确率。考虑到交界性肿瘤是卵巢肿瘤中重要的病理分型，我们在第二阶段构建了良性-恶性-交界性训练模型即 CNN-AM-HD，并对 396 张附件肿块超声图片进行测试，其灵敏度为 0.637，阳性预测值为 0.724. 由此可见，交界性肿块超声图片的加入使模型的灵敏度和阳性预测值有所下降，但仍有助于提高临床医生对交界性肿瘤诊断的准确率。
结论：本研究所构建 CNN-AM-HD 系统，可以初步实现女性附件肿块的无创化大体病理的自动鉴别与分流，减少不必要的手术治疗，有助于提高附件肿块的临床诊断准确率。未来，在扩大数据集的基础上，我们将进一步构建附件肿块的无创化病理类型的自动识别系统（CNN-AM-HI）。

PO-481

经脐单孔腹腔镜技术在子宫肌瘤剔除手术中的临床应用分析

谷杭芝
温州医科大学附属第一医院

摘要：目的 探讨经脐单孔腹腔镜技术在子宫肌瘤剔除手术中应用的安全可行性。**方法** 收集 2017 年 1 月至 2020 年 1 月温州医科大学附属第一医院收治的腹腔镜下子宫肌瘤剔除术患者 191 例的临床资料，分为单孔腹腔镜组(单孔组) 91 例和多孔腹腔镜组(多孔组)100 例。比较两组术中出血量、术后血红蛋白下降幅度、住院天数、术后病率(术后 24 h 至术后 5 天有连续 2 天体温≥38 ℃) 、术后残留率、术后并发症、术后 24 h VAS 评分、术后 2-3 月切口满意度和切口美观 CS 评分等指标。**结果** 191 例均成功完成手术，单孔组和多孔组住院总费用和术后病率有统计学差异。 而单孔组与多孔组术中出血量 、术后 Hb 下降幅度、术后肌瘤残留率比较差异均无统计学意义 ($P > 0.05$) 。单孔组与多孔组术后 24 h VAS 评分、切口满意度评分、CS 评分比较，差异有统计学意义($P < 0.05$) 。结论 对于子宫肌瘤数目小于 3 个，肌瘤最大直径不超过 10cm 的患者推荐使用经脐单孔腹腔镜下子宫肌瘤剔除术，不仅具有和常规多孔腹腔镜一样的疗效与安全性，且减少多孔腹腔镜的肌瘤粉碎带来的风险，也创造比多孔腹腔镜的术后美观，迎合女性患者爱美的需求。

PO-482

Effects of Tra2-beta1 on proliferation, apoptosis, and metastasis of hypoxic endometrial carcinoma cell and its correlation with clinicopathological features

Yangyiqin Ou,Wenhuizi Sun,Dhruba Paude
Department of Obstetrics and Gynecology， Tongji Medical College Affiliated Tongji Hospital，Shanghai

Background: This study aims to examine the influence of human transformer-2-beta1 (Tra2-beta1)on endometrial carcinoma (EC) development. The effects of Tra2-beta1 on the proliferation, apoptosis,invasion, and cell cycle of EC cells were also investigated. **Methods:** Functional in vitro experiments were performed on Tra2-beta1 knockdown cells and hypoxic model cells. Western blot was used to detect HIF-1a, vascular endothelial growth factor (VEGF), and Tra2-beta1 protein expression; CCK8 assay was used to detect cell proliferation; flow cytometry was used to detect apoptosis and cell cycle, and Transwell assay was used to detect cell invasion ability. Tumor specimens were collected from 128 consecutive patients to detect the expression of Tra2-beta1, and the relationship between and EC and Tra-beta1 were analyzed by clinical pathological data, which included lymph node metastasis,pathological types, histological grade, myometrial invasion, etc. **Results:** Tra2-beta1 was highly expressed in EC and was associated with clinical pathological features.It was related to the prognosis, and was found to promote proliferation (F=48.3, P<0.001) and migration (P<0.05), and inhibit apoptosis (P<0.05). Statistical analyses revealed a positive correlation between Tra2-beta1 and HIF-1a (correlation coefficient =0.36, P<0.001) and VEGF protein (correlation coefficient =0.23,P=0.021). In the hypoxic cell group and the combined intervention group, cell proliferation after 72 h was 9,783±45.6 and 6,783±68.4 (P<0.001), while the number of invasive cells was 421±16.8 and 276±11.2(P<0.001), respectively. The apoptosis rates were 0.45±0.03 and 1.28±0.16, respectively (P<0.05). **Conclusions:** The present findings demonstrate that the development of EC is positively correlated with Tra2-beta1. Tra2-beta1 may reverse the effect of hypoxia on EC, and this may provide new insights into the occurrence and development of EC.

PO-483

腹壁剖宫产切口子宫内膜异位症恶变为透明细胞癌 1 例

武明娟,赵绍杰
无锡市妇幼保健院

摘要：目的：探讨腹壁剖宫产切口子宫内膜异位症恶变为透明细胞癌的临床、病理特点。方法：对我院就诊的 1 例腹壁剖宫产切口子宫内膜异位症恶变为透明细胞癌患者的临床诊治经过、病理资料进行回顾性分析，并复习相关文献。结果：患者病程历时 19 年、疾病加速进展 1 年，经过 3 次手术方最终明确诊断，确诊后给于紫杉醇+卡铂、伊立替康+洛铂+贝伐单抗、切口溃疡修补术、特瑞普利单抗等多模式治疗后疾病仍进展迅速。最终发生腹壁肿瘤复发并局部肌肉、皮肤侵犯，全身多发淋巴结转移。此后患者选择进入康复治疗、临终关怀阶段。结论：腹壁子宫内膜异位症占到子宫内膜异位症的 1%~3%，而其恶变率仅 0.7%~1%，病例数少、多为个案报道；恶变的组织学形态首为子宫内膜样腺癌、次为透明细胞癌。该类患者典型特点为病程长、多次复发，从患者首次手术至确诊腹壁恶性疾病时间为 5-41 年。目前此病尚无明确的治疗标准，多采用局部病灶扩大切除辅助术后化疗，化疗方案多借鉴卵巢透明细胞癌的治疗经验，以紫杉醇联合铂类化疗药作为一线方案，然效果未明；术后可寻求多模式治疗以期延长患者生存时间、增加生存率。本例患者病程长、后期疾病进展迅速、对一线化疗方案及多种抗肿瘤药物治疗不敏感，警醒临床医生该疾病重在预防、及早干预治疗。

PO-484
Postoperative Chylous Ascites Following Two Operations （Transabdominal Excision of Uterine Benign Tumor, Laparoscopic Unilateral Salpingectomy and Unilateral Hydrotubation）at two different points in time: A Case Report

Xiaohui Xu,Xueqiong Zhu(Corresponding author）
Department of Obstetrics and Gynecology， the Second Affiliated Hospital of Wenzhou Medical University，wenzhou，zhejiang，China

Abstract
Background: We searched PubMed for pertinent literatures without limitation of published years. All the patients with postoperative chylous ascites were performed with chemoradiotherapy or malignancy related surgeries, such as laparoscopic or transabdominal total hysterectomy combined with retroperitoneal pelvic or para-aortic lymph node dissections. And there was no report of chylous ascites following transabdominal excision of uterine benign tumor and laparoscopic unilateral salpingectomy and unilateral hydrotubation. Therefore, this case report may be the first one to discuss the relationship between chylous ascites and surgery of gynecological benign tumor.
Case: A 41-year-old woman diagnosed with hydrosalpinx, underwent a laparoscopic surgery because of reproductive requirement on 26th December, 2018. Surprisingly, some milky white and turbid fluid was found in the rectouterine pouch and vesicouterine pouch after access to peritoneal cavity without any further laparoscopic procedures. Lysis of pelvic adhesions followed by unilateral salpingectomy and unilateral hydrotubation were performed on the patient. This operation was successfully accomplished by perfect operating technique without destruction of lymph nodes or lymphatic vessels. And a percutaneous drainage tube was placed postoperatively. Odorless, whitish and typical of chylous ascites fluid was noted coming from the postoperative drain. And peritoneal fluid specimen was sent for further testing to exclude other diseases like infected or pancreatic ascites, and the result of bacterial and fungal culture such as tubercle bacilli was negative, but chylous test was positive. Before definitive diagnosis of chylous ascites, the patient was given clear liquid diet and soft food on the postoperative day 0 to day 3, and the total amount of ascites drainage was 1.12L, including whitish ascites 0.82L and hydremic ascites 0.3L. After definitive diagnosis on the postoperative day 4, the patient accepted total parenteral nutrition (TPN) for conservative treatments. In addition, octreotide was given by subcutaneous injection, 0.1 mg every six hours to inhibit gastrointestinal secretion as an adjunctive therapy. Due to TPN and octreotide, the outflow of whitish ascites was significantly decreased. And the drainage tube was removed on the postoperative day 23. Ultimately, the patient was discharged one month after surgery. During the follow-up period, the patient presented with mild abdominal bloating, without abdominal pain, malnutrition, or significant weight change. The patient denied any other medical history of surgery or chemoradiotherapy except transabdominal excision of uterine adenomyomas which was performed on 25th June, 2015. Total seven adenomyomas (confirmed by pathologic diagnosis) were removed which was performed by a senior gynecologist without placing drainage tube. Besides, all the operative procedures were confined to only uterine without intraoperative injury of any other anatomical structures such as pelvic lymph or para-aortic node. And there were no complications such as massive hemorrhage or ileus happened intraoperatively or postoperatively. The patient was discharged 5 days after surgery without typical clinical manifestations. Furthermore, we detected abnormal variations of level of serum CA125 (normal range: 0.0-35.0U/ml) in this patient, and the level of CA125 increased significantly after the first operation.
Conclusion: There were no abnormal intraoperative findings in the first operation, but chylous ascites was found after access to peritoneal cavity without any further laparoscopic procedures during the second operation. And according to transvaginal ultrasound, pelvic cavity accumulates fluid was found

after operation 1, and volume was keeping increasing. So, it was thought that postoperative chylous ascites has already occurred after the first operation which was diagnosed until the second operation. **Discussion:** We reckoned that the incidence of postoperative chylous ascites was underestimated, and it may be necessary to place a routine abdominal drainage after gynecological operation. What's more, there may be an undiscovered correlation between chylous ascites and level of serum CA-125, which needed further research in the future.

PO-485
晚期卵巢癌新辅助化疗减瘤术后使用 PARP 抑制剂维持治疗成功患者一例分享

林梦园,樊荣荣,陈美一
深圳市人民医院

卵巢癌（ovarian cancer）是常见的女性恶性肿瘤，其死亡率位于妇科肿瘤之首。根据 WHO Globocan 数据显示，2018 年，中国新诊断卵巢癌患者 5.29 万人，因卵巢癌死亡人数达 3.08 万人。上皮性卵巢癌占卵巢恶性肿瘤的 90%，而其中高级别浆液性癌是最常见的亚型，约占 75%。卵巢癌通常早期无特殊临床表现，难以早期发现及诊断，往往发现时即为晚期，因此复发和死亡风险均高。近年来，靶向药物 PARP 抑制剂的研发，为卵巢癌的治疗提供了新的希望，但仍需要更多的研究及经验。现报道一例深圳市人民医院妇科收治的晚期卵巢癌新辅助化疗减瘤术后使用 PARP 抑制剂维持治疗成功的患者。

PO-486
Nomograms based on the lactate dehydrogenase predict postoperative prognosis in endometrial cancer

Huifang Lei,Yao Tong,XiaoDan Mao,YaoJia Chen,BinHua Dong,PengMing Sun
Laboratory of Gynecologic Oncology， Department of Gynecology， Fujian Provincial Maternity and Children's Hospital， Affiliated Hospital of Fujian Medical University.

Objective: Endometrial cancer (EC) is the most common gynecological cancer in developed countries. Patients with early endometrial cancer usually have a good prognosis, but those with advanced endometrial cancer have a poor prognosis. Therefore, early detection of the adverse prognostic potential of endometrial cancer has important clinical significance. However, difficulties still exist with current EC classification systems regarding prognosis estimation and prediction. Therefore, there is an urgent need to explore objective biomarkers for customized treatment programs, identify patients with poor prognosis, guide postoperative management, and establish follow-up programs. In recent years, many studies have shown that the prognosis of patients with endometrial cancer is closely related to metabolic abnormalities. Lactate dehydrogenase (LDH) is an important factor in the regulation of tumor cell metabolism. LDH is an important enzyme in the process of glycolysis. The change of serum level directly or indirectly reflects the strength of glycolysis, so as to predict the proliferation and development ability of tumor and provide theoretical basis for judging the prognosis of tumor. LDH is associated with the prognosis of various tumors, including cervical cancer, breast cancer. Our study aims were to identify the role of LDH in estimating the postoperative outcomes of EC patients and develop and validate nomograms including LDH and other selected clinical and histological variables to predict the individual risk of myometrial invasion and OS for postoperative EC patients.

Methods: A total of 525 women who had undergone primary hysterectomy treatment for EC were retrospectively collected from Fujian Provincial Maternity and Children's Hospital between January 2013 and January 2018. Data were randomly divided into a training set (70%, N =368) and an external validation set (30%, n =157). Demographic and clinical variables were collected, including age at surgery, parity, body mass index (BMI, calculated as weight in kilograms divided by the square of height in meters), menopause status, comorbidity, LDH, histological type, International Federation of Gynecology and Obstetrics (FIGO) stage, tumor grade, depth of myometrial invasion according to the electronic medical records from the hospital information system of Fujian Provincial Maternity and Children's Hospital. Univariate and multivariate cox regression analysis was performed in the training cohort to identify independent prognostic factors and the nomogram was constructed for survival rate prediction. The concordance index and calibration plot were used to evaluate the discriminative and calibrating capability.
Results: LDH was related to histology, FIGO stage and myometrial invasion (all P ＜0.05). The results of univariate cox regression analysis showed that age, menopause status, FIGO stage, histologic type, LDH were independently associated with poor OS(all P＜0.05). Furthermore, we developed and validated the nomograms based on Cox regression models. The nomograms showed that the LDH had the most influence on prognosis, and higher LDH indicated a worse prognosis. The model with the LDH possessed a great improvement over the model without the LDH in predicting prognosis.The discriminative ability and calibration of the nomograms revealed good predictive ability, as indicated by the C-indexes and calibration plots. Moreover, both the IDI and NRI were improved.
Conclusions: Nomograms based on the preoperative LDH, clinical and pathological indicators exhibited favorable prognostic discrimination and overall survival prediction ability for EC patients.

PO-487

绒毛膜癌治疗中新的靶向研究

阿巴斯
华中科技大学同济医学院附属同济医院

妊娠滋养细胞疾病是由异常繁殖活动后出现一组疾病，这些异常分为非癌性病变（部分及完全性葡萄胎）和恶性滋养细胞肿瘤，包括绒毛膜癌、胎盘部位滋养细胞肿瘤、类上皮滋养细胞肿瘤以及侵蚀性葡萄胎等。妊娠滋养细胞肿瘤能否远处转移都有可能，治愈率甚至接近 100%，而且经过专业个性化的指导，管理和治疗之后还能保留生育能力。
妊娠滋养细胞疾病的治疗上分为几个部分：①低风险疾病：非远处转移的患者（Ⅰ期）以及低风险转移者（Ⅱ期和Ⅲ期，评分＜7）应该给予甲氨蝶呤或放射菌素 A 的单药治疗；②高风险转移性疾病；高风险转移性妊娠滋养细胞疾病患者（FIGO 分期为Ⅳ期以及Ⅱ~Ⅲ期，评分≥7）应采取联合化疗用药和（或）手术、放射治疗的治疗方案。绒毛膜癌是妊娠滋养细胞肿瘤中恶性程度最高的上皮性肿瘤，其可能发生在任何状态。虽然其治愈率可达 95%以上，但仍有一部分患者因化疗耐药得不到有效控制，最终失去生命。因此，发现新的治疗靶点非常重要，意义重大。在相关研究中，研究人员发现了诸多表达上调和下调的一些基因位点，这些基因也许能在疾病进展过程中发挥着或多或少的作用，而把这些基因位点作为靶点来深入研究其在疾病治疗中的作用和针对性的干预措施，也许给疾病的治疗上带来新的潜在治疗策略。

PO-488
人乳头瘤病毒在性伴侣之间的感染情况研究现状及其影响因素探讨

胡佳明[1],金潇潇[1],史耀琪[1],倪新雨[1],朱华[1,2]
1.温州医科大学
2.温州医科大学附属第一医院

研究目的：了解国内外关于人乳头瘤病毒(Human Papillomavirus, HPV)在性伴侣之间感染情况的研究现状，并探讨影响人乳头瘤病毒在性伴侣中的吻合率高低的影响因素，有利于深入理解 HPV 性传播的特性，并为宫颈癌及其他 HPV 相关疾病的夫妻共同治疗和预防作理论指导。
材料与方法：搜集国内外相关领域的研究，对比分析不同研究结果并讨论。
结果：少部分研究中性伴侣外生殖器之间 HPV 类型吻合率较低（2.63%-9.5%），大部分的研究中吻合率相对较高(9.5%-78.6%)。当女性被诊断为 HPV 相关宫颈疾病或宫颈 HPV 阳性时，其男性伴侣外生殖器的 HPV 检出率将会大大提高，而患有不同的 HPV 相关疾病，会使其男性伴侣的 HPV 类型不同，如尖锐湿疣患者为 HPV6 型多见。多数国内外研究一致发现，HPV16 型是性伴侣间吻合率最高的 HPV 亚型，其次为HPV6 型、HPV18 型。HPV 阳性的男性，其第二任妻子感染同一类型 HPV 的概率较高。除了外生殖器，男女性之间也可通过口腔-外生殖器，手部-外生殖器，口腔-口腔、精液-外生殖器等方式传播 HPV。高病毒载量、吸烟、不洁性生活和多个性伴侣者会增加性伴侣感染 HPV 的风险，HIV 阳性的夫妻双方 HPV 吻合率远高于 HIV 阴性者，而妊娠次数的增加有降低夫妻双方的 HPV 吻合率的可能。
结论：夫妻双方均存在互相传播 HPV 的可能性，宫颈 HPV 阳性者会增加其男性伴侣感染 HPV 的风险，而感染了 HPV 的男性也会增加其女性伴侣再次感染的机会，无症状的男性也可能是 HPV 病毒的携带者，反复的 HPV 再感染和持续感染会增加女性或男性伴侣罹患 HPV 相关肿瘤的风险。而病毒载量、性生活情况、吸烟、是否感染 HIV 以及妊娠次数均是影响性伴侣间 HPV 吻合率的因素。在 HPV 相关疾病的诊治和预防中，我们应当注重夫妻共同的效应，而非只关注个人。

PO-489
HPV L1/PD-L1 检测联合阴道镜检查在宫颈癌前病变及宫颈癌中的临床意义

罗古坡
四川大学华西第二医院

摘要】宫颈癌是女性生殖器最常见、死亡人数最多的恶性肿瘤。降低我国落后地区宫颈癌的发病率仍面临较大挑战，宫颈癌的早期诊断、晚期治疗、复发治疗、生物免疫治疗成为研究热点。本研究将探讨 HPV L1 蛋白和 PD-L1 蛋白在宫颈癌前病变及宫颈癌中的表达，分析 HPV L1 表达和 PD-L1 表达与宫颈病变患者的病理和临床特征的相关性。通过分析 HPV L1 检测、PD-L1 检测联合阴道镜检查与宫颈病变发生发展的关系，以期明确其分流辅助诊断意义。**【方法】**将 2018 年 1 月至 2019 年 7 月于四川大学华西第二医院就诊的 HR-HPV 感染患者 130 例纳入研究，收集到宫颈细胞学标本 130 例，其中收集到 102 例宫颈组织学标本，其中 96 例病例行了阴道镜检查；并采用免疫化学的方法检测 HPV L1 蛋白和 PD-L1 蛋白的表达情况，采用 qRT-PCR 技术检测宫颈癌中 PD-L1 mRNA 水平。探讨 HPV L1 检测、PD-L1 检测联合阴道镜检查在发现宫颈病变中的灵敏度、特异度等。**【结果】1、**HPV L1 的阳性率在宫颈炎性细胞、LSIL、HSIL、宫颈癌细胞中分别为80.0%、55.0%、11.1%、2.2%。2、在宫颈细胞学组，PD-L1 在对照组、LSIL 组、HSIL 组和 CCC 组的阳性表达平均评分分别为 0.24、1.06、1.37、2.14；在宫颈组织学组，PD-L1 在对照组、CIN1 组、CIN2 组、CIN3 组和 CC 组的阳性表达平均评分

分别为 0.28、1.21、1.56、1.82、2.01。PD-L1 mRNA 在宫颈正常组织和宫颈癌中的相对表达量分别为 1.03±0.04、1.78±0.60。3、HPV L1/PD-L1 检测联合阴道镜检查诊断宫颈病变 CIN2 及以上的灵敏度为 70.7%、特异度为 92.4%。**【结论】**HPV L1 表达水平随宫颈病变程度加重逐步降低，两者呈负相关，HPV L1 表达可能对 LSIL 和 HSIL 起分流作用。PD-L1 蛋白的表达随着宫颈病变程度加重呈正相关。PD-L1 mRNA 在宫颈癌中表达高于宫颈炎性组织。PD-L1 表达可能对 LSIL 和 HSIL 以及 HSIL 中 CIN2 和 CIN3 起分流作用。HPV L1/PD-L1 检测联合阴道镜检查较单独 HPV L1 检测、单独 PD-L1 检测和单独阴道镜检查的特异度升高，可降低临床误诊率，对 CIN3 及以上病变具有重要的辅助诊断价值。

PO-490

紫杉醇联合卡铂剂量密集方案和传统三周疗法治疗卵巢癌的研究进展

巩文建,于睿迪,高庆蕾
华中科技大学同济医学院附属同济医院

背景介绍：紫杉醇联合卡铂化疗是 NCCN 推荐的卵巢癌一线化疗方案。传统三周疗法为紫杉醇 175mg/m^2 静脉滴注＞3h，卡铂 AUC5～6 静脉滴注＞1h，每 3 周 1 个疗程，共 6 个疗程，2019 版 NCCN 和中国专家共识方案推荐的剂量密集方案为紫杉醇 80 mg/m^2/周，卡铂 AUC 5～6，静脉滴注 1h，每 3 周一次，共 6 周期；老人（>70 岁）和（或）有合并症患者，体弱难以耐受 3 周化疗方案可采取紫杉醇 60 mg/m^2/周，静滴 1h，卡铂 AUC 2/周，静滴 30min，共 18 周。目前，传统三周疗法依旧是一线化疗方案（1a 级证据），而剂量密集方案的证据等级并不高（2b 级证据）或仅用于特定情况下，主要是因为不同国家对三周疗法和单周疗法的疗效和安全性的研究有不同的临床试验结果。
结果：JGOG3016 研究纳入 637 例日本患者，结果显示剂量密集组较标准组中位 PFS 显著增加（28.2 个月 vs 17.5 个月），中位 OS 显著延长（100.5 个月 vs 62.2 个月）。不良反应相似。GOG-0262 研究结果发现，剂量密集组和传统三周疗法中位 PFS（HR=0.89）及中位 OS（HR=0.94）差异均无统计学意义。但亚组分析发现提示不接受贝伐珠单抗的患者接受剂量密集方案较标准方案改善中位 PFS（14.2 个月 vs 10.3 个月）。同样 MITO-7 研究结果提示两组 PFS（18.3 月 VS 17.3 月）和两年 OS（77.3% VS 78.9%）无明显差别，但剂量密集组患者生活质量优于标准组，且具有更轻的不良反应。2020 年 ICON8 研究纳入了 1566 例欧洲患者，随机分为标准三周疗法组和剂量密集组，以及第 3 组：卡铂 AUC 2+紫杉醇 80 mg/m^2/周），研究发现，紫杉醇剂量密集组的 PFS 均无获益（24.4 月 VS 24.9 月 VS 25.3 月）。因此，在治疗欧洲卵巢癌患者时候，相对于传统三周疗法，单周疗法并不能显著改善 PFS。
结论：紫杉醇剂量密集疗法与传统三周疗法治疗晚期卵巢癌效果相似，在有些研究中表现更加优异，可以为患者提供更多一种的治疗方案；但还存在争议，需要进一步的临床研究。

PO-491

HSIL 患者锥切术后 HPV 持续感染相关因素研究现状

臧乐靖,胡燕
温州医科大学附属第一医院

摘要：宫颈锥切术后人乳头瘤病毒（human papillomavirus，HPV）持续感染是导致高级别鳞状上皮内病变（high-grade squamous intraepithelial lesion，HSIL）患者病灶残留、复发甚至进展为宫颈癌的显

著危险因素。锥切术后 HPV 持续感染与病毒、机体、治疗等多方面因素相关。了解其发生的相关因素对提高临床治疗效果、完善术后监测方案、指导女性的生活方式等都将起到重要的作用。

PO-492
ABO blood type and ovarian cancer: a systematic review and meta-analysis

Hanchu Wang
The First Affiliated Hospital of Wenzhou Medical University

Background: The objective of this systematic review and meta-analysis was to evaluate the relationship between ABO blood type and the risk, recurrence rate and mortality of ovarian cancer.
Methods: The eligible studies are selected and reviewed by two reviewers. Qualitative synthesis was performed through tabulation via applicable software. Quantitative synthesis was performed with the relevant software. Odds ratios with 95% confidence intervals (O.R. with 95%CI) were calculated to appraise the relevance of ABO blood type with the prevalence, recurrence rate and mortality of ovarian cancer.
Results: Fifteen studies were incorporated in the systematic review, and ten studies were incorporated in the meta-analysis. Compared to the non-A blood types, type A blood was related to an increased ovarian cancer risk (OR=1.12, 95% CI=1.04-1.20, P=0.001). Compared to the non-O blood type, blood type O was related with significantly reduced ovarian cancer risk (OR=0.87, 95% CI=0.81-0.95, P=0.001). No significant difference was found in ovarian cancer risk when blood type B or type AB was compared to other blood types. As for ovarian cancer recurrence rate, no significant difference was observed when comparing any blood type to another ABO blood type. Additionally, no appreciable difference was observed among different ABO blood types regarding ovarian cancer mortality.
Conclusion: In conclusion, blood type A correlates with increased risk of ovarian cancer, while the blood type O is correlated with reduced risk. Additionally, the ABO blood type is not associated with either relapse or lethal rate in patients with ovarian cancer.

PO-493
METTL3-mediated RAGE expression regulates cisplatin chemosensitivity of squamous cervical cancer cells

Ruyi Li,Xueqiong Zhu*Corresponding author
Department of Obstetrics and Gynecology， the Second Affiliated Hospital of Wenzhou Medical University，
Zhejiang， China

Aim: Cervical cancer is a common malignant tumor threatening women's health. Chemotherapy is the mainly component of cervical squamous cell carcinoma (CSCC) management and cisplatin is considered to be a petent chemotherapy agent in the treatment of CSCC. However, primary or obtained chemotherapy resistance leads to the treatment failure. Therefore, understanding of the molecular mechanisms for chemotherapy resistance in CSCC and exploring new target therapies to overcome the resistance are urgently needed. Methyltransferase-like 3 (METTL3) is one component of methyltransferase complex that catalyzing N6-methyladenosine (m6A), which is the most common epitranscriptome modification in mammalian mRNA. Alternation of METTL3 can give rise to a significant phenotype change, such as carcinogenesis. The receptor for advanced glycation endproducts (RAGE) expression has been reported to be implicated with cancer development. Our

team confirmed that RAGE is not only related to the occurrence and development of cervical squamous cell carcinoma, but also closely related to the sensitivity of SiHa to cisplatin. In this study, the relationship between METTL3 and RAGE expression and the mechanisms of METTL3 involved in cervical squamous cancer cell chemotherapy resistance was explored.
Methods: Immunohistochemistry and Immunofluorescence were performed to detect METTL3 and RAGE expression in human cervical squamous cancer tissues and paracancerous tissues. The METTL3 was overexpressed or downregulated by letivirus transfection. Effect of METTL3 expression and RAGE inhibitor FPS-ZM1 on cell proliferation and sensitivity to cisplatin treatment was explored by CCK-8, and the effect of METTL3 on tumor development was confirmed by xenograft mouse model. Apoptosis was investigated by flow cytometry. Western blotting was performed to investigate the expression of possible proteins, including MRP1, P-gp, LRP1, GST-π, Bax, Bcl-2, GFP, GAPDH, RAGE, Vinculin.
Results: METTL3 had higher expression level in paracancerous tissues compared with cervical squamous cancer tissues. Conversely, RAGE had higher expression level in cervical squamous cancer tissues compared with paracancerous tissues. Overexpression of METTL3 inhibited proliferation of CSCC and increased the sensitivity to cisplatin treatment. The in vivo results showed that overexpression of METTL3 inhibited tumor growth. In the meantime, METTL3 overexpression inhibited RAGE expression. Further, combination FPS-ZM1 and cisplatin improved sensitivity of SiHa cells to cisplatin treatment, and increased cell apoptosis and Bax/Bcl-2 ratio. Moreover, METTL3 overexpression promoted sensitivity of SiHa cells to cisplatin treatment, and increased cell apoptosis and Bax/Bcl-2 ratio. METTL3 overexpression also effectively enhanced the effect of cisplatin on downregulation of MRP1, LRP1, P-gp proteins.
Conclusions: METTL3 inhibits the growth ability of cervical squamous SiHa cells. In addition, METTL3 expression inhibits RAGE expression and enhances the sensitivity of SiHa cells to cisplatin treatment.

PO-494
CLDN6 and CLDN10 are associated with immune infiltration of ovarian cancer: a study of claudin family

Peipei Gao,Peng Wu
Tongji Hospital， Tongji Medical College， Huazhong University of Science and Technology

Background: Claudin family is a group of membrane proteins related to tight junction. There are many studies about them in cancer, but few studies pay attention to the relationship between them and the tumor microenvironment. In our research, we mainly focused on the genes related to the prognosis of ovarian cancer, and explored the relationship between them and the tumor microenvironment of ovarian cancer.
Methods: The cBioProtal provided the genetic variation pattern of claudin gene family in ovarian cancer. The ONCOMINE database and Gene Expression Profiling Interactive Analysis (GEPIA) were used to exploring the mRNA expression of claudins in cancers. The prognostic potential of these genes was examined via Kaplan-Meier plotter. Immunologic signatures were enriched by gene set enrichment analysis (GSEA). The correlations between claudins and the tumor microenvironment of ovarian cancer were investigated via Tumor Immune Estimation Resource (TIMER).
Results: In our research, claudin genes were altered in 363 (62%) of queried patients/samples. Abnormal expression levels of claudins were observed in various cancers. Among them, we found that CLDN3, CLDN4, CLDN6, CLDN10, CLDN15 and CLDN16 were significantly correlated with overall survival of patients with ovarian cancer. GSEA revealed that CLDN6 and CLDN10 were significantly enriched in immunologic signatures about B cell, CD4 T cell and CD8 T cell. What makes more sense is that CLDN6 and CLDN10 were found related to the tumor microenvironment. CLDN6 expression was negatively correlated with immune infiltration level in ovarian cancer, and CLDN10 expression was positively correlated with immune infiltration level in ovarian cancer. Further study revealed the CLDN6

expression level was negatively correlated with gene markers of various immune cells in ovarian cancer. And, the expression of CLDN10 was positive correlated with gene markers of immune cells in ovarian cancer.
Conclusions: CLDN6 and CLDN10 were prognostic biomarkers, and correlated with immune infiltration in ovarian cancer. Our results revealed new roles for CLDN6 and CLDN10, and they were potential therapeutic targets in the treatment of ovarian cancer.

PO-495
Characteristics of infiltrating immune cells and a predictive immune model for cervical cancer

Ruanmin Zou[1,3,2],Ruihong Gu[2],Xia Yu[4],Weiteng Zhang[2],Yingying Hu[1],Wenbin Huang[1],Junhui Yu[1],Wangkai Xie[2],Xiangwei Sun[2],Chenbin Chen[2],Zheng Han[2],Xiangyang Xue[1,2],Xueqiong Zhu(Corresponding author)[1]
1.Department of Obstetrics and Gynecology， The Second Affiliated Hospital and Yuying Children's hospital，Wenzhou Medical University， Wenzhou， People's Republic of China.
2.Department of Microbiology and Immunology， Institute of Molecular Virology and Immunology， Institute of Tropical Medicine， College of Basic Medicine， Wenzhou Medical University， Wenzhou， People's Republic of China.
3.Department of Obstetrics and Gynecology， The First Affiliated Hospital， Wenzhou Medical University，Wenzhou， People's Republic of China.
4.Department of Pathology， The First Affiliated Hospital， Wenzhou Medical University， Wenzhou， People's Republic of China.

Background: The role of infiltrating immune cells in the tumour microenvironment has received considerable attention, but their function in cervical cancer is unclear; thus, systematic research and evaluation of their predictive value are needed.
Method: Using cervical cancer samples from 406 patients, immune cell infiltration was evaluated via immunohistochemistry. CD3+, CD4+, CD8+, CD20+, CD57+, CD68+, and CD163+ cell infiltration was compared in adjacent tissues and the tumour centre (TC). We analysed associations between immune cell distributions in the TC, clinicopathological features, and prognosis and examined correlations between immune cell types. Using three immune features, we constructed an immune model based on a Cox regression model with lasso penalty and derived immune risk scores using the model.
Findings: Immune cells infiltrating the TC were closely related to clinicopathological characteristics and prognosis, and the number and function of these cells were different from those of adjacent tissues. The immune risk scores were an independent prognostic indicator and were found to predict cervical cancer prognosis as well as the effects of chemoradiotherapy.
Interpretation: Our work reveals the distribution characteristics and functions of infiltrating immune cells in cervical cancer. The TC immune model effectively predicted survival and may be a practical tool for identifying suitable candidates for chemoradiotherapy.

PO-496
69 例卵巢子宫内膜样癌的临床病理特征及生存分析

周灵[1],姚丽清[2],戴林[1],叶雪[1],祝洪澜[1],程洪艳[1],马瑞琼[1],昌晓红[1],崔恒[1]
1.北京大学人民医院
2.福建中医药大学附属福鼎医院妇产科

目的 探讨 69 例卵巢子宫内膜样癌（ovarian endometrioid carcinoma，OEC）的临床特点并对其进行生存分析，了解预后情况。

方法 收集北京大学人民医院 1998 年 8 月至 2017 年 12 月期间确诊为卵巢子宫内膜样癌的患者，进行回顾性分析并描述统计，了解其临床病理特征。并根据病理中是否合并子宫内膜异位症（Endometriosis，EMs）分为 EMs 组与非 EMs 组，根据是否同步发生子宫内膜癌/不典型增生分为同步病变组与非同步病变组。生存分析采用 Kaplan-Meier 曲线模型进行单因素分析，两组之间的比较通过 log-rank 或 landmark 模型来实现；采用 Cox 回归模型进行多因素分析。
结果 OEC 的整体预后较好，整体 3、5、10 年无复发率为 82.3%、75.4%、69.6%。利用 Kaplan-Meier 模型进行单因素分析发现：残余病灶、淋巴结转移、是否进行腹主动脉旁淋巴结切除术、FIGO 分期与预后相关（P＜0.05）。将有统计学差异的因素进行多因素 COX 回归分析后发现，FIGO 分期和残余病灶是预后的独立影响因素（P＜0.05）。OEC 患者中合并 EMs 者在病理复审后比例大大增加，相比非 EMs 组而言，EMs 组早期（I 期）患者的占比较多，而非 EMs 组则相反，两组间差异有统计学意义（P=0.032）。I 期患者中有 5 例复发，且均合并 EMs，结合 EMs 组间的 landmark 分析，EMs 是否存在也可能 OEC 患者的复发决定性因素之一。34.8%（24 例）的患者合并子宫内膜病变，发生同步癌和不典型增生者 13 人（18.8%），同步病变组与非同步病变组在以阴道流血流液为首发症状（p=0.027）及既往有无高血压病史（p=0.05）的表现上有显著性差异。
结论 OEC 整体期别较早，预后较好，FIGO 分期和残余病灶是预后的独立影响因素。早期患者中合并 EMs 的概率较高，晚期较低，且 OEC 患者中的合并 EMs 占比和其对 OEC 患者的影响可能被远远低估，应重点关注 OEC 中合并 EMs 的患者，手术时尽量达到癌症和 EMs 病灶的肉眼无残留，术后应长期随访，长期管理。18.8%的患者同步发生子宫内膜癌 / 不典型增生，提示子宫内膜病变可能与 OEC 发病相关，子宫内膜病变的高危因素在 OEC 中应得到重视。

PO-497
机器人辅助腹腔镜在女性盆腔腹膜后肿瘤切除术中的临床应用

朱迎,郭瑞霞,李留霞,彭萌萌,白晶
郑州大学第一附属医院

目的：对比达芬奇机器人和腹腔镜治疗女性盆腔腹膜后肿瘤的临床疗效，以探讨机器人手术系统在女性盆腔腹膜后肿瘤切除术中的临床可行性。
方法：本文回顾性总结了 2017 年 10 月至 2020 年 4 月在郑州大学第一附属医院接受手术治疗的女性盆腔腹膜后肿瘤患者 47 例，按手术方式分组，其中达芬奇机器人手术组 16 例、腹腔镜手术组 31 例。对比两组的手术相关因素包括手术时间、术中出血量、术后排气时间、术后住院时间、住院费用、并发症、距离大血管、骶前静脉丛的位置、与周围组织是否粘连。
结果：机器人组与传统腹腔镜组比较，两组出血量、术后住院时间、肛门排气时间、距离骶前静脉丛、大血管距离、与周围组织关系及并发症方面差异无统计学意义（P>0.05）。机器人组较传统腹腔镜组手术时间延长，住院费用增加，差异有统计学意义（P<0．05）。机器人组肿瘤均完整切除，术后无复发病例。腹腔镜组 3 例未完整切除，2 例术后复发。
结论：机器人手术系统适合在女性盆腔深部且狭小的空间内操作，本研究进一步验证了机器人辅助腹腔镜切除女性盆腔腹膜后肿瘤的可行性。但机器人手术器械单一，期待改进器械的研制。

PO-498
子宫内膜不典型增生曼月乐保守治疗后癌变两例病例报道

胡苏婉,李晓冬
河北医科大学第二医院

背景：对于有生育要求或者不愿意子宫切除的子宫内膜不典型增生患者，内膜逆转后常采用曼月乐治疗，但存在病变进展癌变风险。现分享子宫内膜不典型增生曼月乐维持治疗中进展为子宫内膜癌的两例病例。
病例 1：34 岁，G1P1。患者 2 年前主因月经过多行宫腔镜检查，术后病理为子宫内膜息肉与不典型增生，患者有生育要求，给予高效孕激素口服 3 个月内膜逆转为正常，宫腔置入曼月乐，院外超声监测内膜厚度。40 天前体检发现盆腔包块，超声内膜厚约 0.59cm，规则，不均质。CA125 90 U/ml，Roma 18.62。入院后行腹腔镜下探查术，术中见左侧骶韧带区域一类似子宫内膜样组织和约 3 厘米包块，边界清楚。双卵巢正常大小。行盆腔肿物切除+双卵巢活检术，病理回报病理形态结合免疫表型符合子宫内膜样腺癌，倾向子宫来源。行宫腔镜检查及全面刮宫，病理回报示子宫内膜不典型增生存在外源性孕激素影响后改变。最后行腹腔镜全子宫+双附件切除术+大网膜切除术+盆腔淋巴结清扫术+腹主动脉旁淋巴结取样。病例 2：45 岁，G1P1。患者 8 年前诊为子宫内膜不典型增生，给予口服高效孕激素内膜正常后宫腔内置入曼月乐，5 年时更换一次。此次主因阴道不规则出血半年就诊，阴道检查示宫颈肥大，宫口见息肉样组织。子宫体大小正常，双附件未触及异常。妇科超声示：宫颈内低回声病变（宫颈 CA？）。盆腔核磁提示宫颈内肿物，边界清楚，宫颈管肌层未见明显异常，肿物根部似位于子宫峡部，结合临床符合宫颈癌影像学表现。患者 TCT、HPV 正常。入院后行宫颈活检及宫颈息肉活检，病理示宫颈息肉送检破碎组织为腺鳞癌状分化，不除外子宫内膜来源。行宫腔镜检查，宫腔内膜平坦，宫颈管内有絮状组织血管明显，钳夹去除组织后，子宫下段后壁峡部组织发黄，其余宫颈管粘膜未见明显异常。再次病理回报为子宫内膜样腺癌。
结论：两例患者均为子宫内膜不典型增生采用曼月乐维持治疗后发生癌变。曼月乐对宫腔外和子宫峡部病灶的作用，值得关注。

PO-499
The predictive role of serum cholesterol and triglycerides in cervical cancer survival

Ruru Zheng,Feng Lin
The Department of Gynecology， First Affiliated Hospital of Wenzhou Medical University

Objective: Lipid profile had become the focus of attention on the possible role in different cancers' development**.** The aim of the current study was to investigate the predictive value of serum lipid profile, including total cholesterol, triglycerides, high density lipoprotein, and low density lipoprotein, on overall survival and disease-free survival for operable cervical cancer patients. In addition, the association between the lipids, inflammation and cervical cancer was also investigated.
Methods：A retrospective and consecutive cohort study from May 2005 and December 2012 in our hospital was performed. Detailed clinical data was collected within one week before operation. Data including total cholesterol, triglycerides, high density lipoprotein, low density lipoprotein, PLR (absolute platelet count divided by absolute lymphocyte count) and serum level of albumin were obtained. The endpoint in our study were overall survival and disease-free survival**.** The aim of the analysis was to investigate the associations between the lipids profile and oncological outcomes.
Results: The study cohort enrolled 795 cervical cancer patients who received operations. Both total cholesterol and triglycerides were identified to be independent prognostic factors for the operable

cervical cancer patients. High total cholesterol and triglycerides in the normal range were correlated to the better overall survival and disease-free survival significantly. However, patients with high total cholesterol and triglycerides level exceeding the normal range were not the survival benefits. Furthermore, the index of the Spearman's correlation between the lipid profile and our previous inflammation biomarkers, indicated that decreased total cholesterol and triglycerides were associated with the worse clinical outcomes indirectly.
Conclusion: In conclusion, our study emphasized the crucial role of triglycerides and total cholesterol as a promising predictor for overall survival and disease-free survival in patients with cervical cancer. Furthermore, the combination of lipid profile and the previous inflammation biomarkers, indicated that decreased total cholesterol and triglycerides were associated with the worse clinical outcomes indirectly.

PO-500
肠道 Akkermansia muciniphilla 对卵巢癌腹腔转移的影响

王子琢
同济医院

目的：卵巢癌发病隐匿，进展迅速，死亡率居妇科恶性肿瘤之首。多项研究表明生殖道微生物对卵巢癌病程有显著影响，而肠道菌群与卵巢癌的关系未见报道。本研究拟研究肠道 Akkermansia muciniphilla（Akk 菌）影响卵巢癌腹腔转移的机制。方法：抗生素清除 C57/B6 小鼠肠道菌群后，卵巢癌 ID8 细胞腹腔注射，分别给予卵巢癌患者来源（恶性组）、卵巢良性疾病患者来源（良性组）的粪便悬液或生理盐水（对照组）灌胃，使用生物发光活体成像技术检测各组小鼠肿瘤荧光强度，监测肿瘤生长；16s 测序检测各组粪便肠道菌群组成及丰度；收集 40 例初治卵巢癌患者和同期 40 例良性疾病患者粪便，16s 测序检测两组粪菌组成及丰度差异；向恶性组小鼠肠道补充 Akk 菌（Akk 组），观察肿瘤生长变化；ABPAS 染色观察肠粘膜厚度，免疫组化及免疫荧光检测肠道屏障指标 MUC2，Occludin 和 Tjp1；转录组测序分析各组肠壁转移灶基因表达改变。结果：恶性组活体成像荧光强度显著高于良性组和对照组（$p<0.05$）；16s 测序显示恶性组小鼠肠道 Akk 丰度显著降低（$p<0.05$），卵巢癌患者粪便 Akk 菌丰度也显著低于良性患者（$p<0.05$）；相比于恶性组，Akk 组肿瘤进展显著减缓（$p<0.05$）；恶性组肠粘膜厚度，肠道屏障蛋白表达量均显著低于良性组（$p<0.05$），而补充 Akk 菌后明显改善（$p<0.05$）；转录组测序显示 Akk 菌丰度高的小鼠癌灶免疫应答通路显著激活，免疫细胞浸润水平明显增高（$p<0.05$）。结论：卵巢癌患者肠道 Akk 菌减少，小鼠肠道 Akk 菌缺乏加快肿瘤进展，其机制可能是 Akk 菌缺乏导致肠道屏障功能下降，进而改变腹腔内肿瘤免疫微环境。Akk 菌调节腹腔免疫微环境的具体机制还有待进一步研究。本研究为从微生物角度理解卵巢癌进展的机制以及可能的干预措施提供了研究基础。

PO-501
452 例低危子宫内膜临床病理及预后分析

何亚静,李留霞,张瑞涛,汪蕾,邱雨欢,孙芳芳
郑州大学第一附属医院

目的 探讨低危子宫内膜癌临床病理指标与淋巴结转移及预后的关系。
方法 收集 2015.01-2019.08 于郑州大学第一附属医院行分期手术治疗的 452 例低危子宫内膜癌患者的临床病理资料（病理 G1/G2,浸润肌层小于 1/2 的子宫内膜样腺癌）。分析肿瘤大小（肿瘤最大直径≥2㎝及<2cm）、病理分级（G1、G2）及有无侵袭子宫肌壁与淋巴结转移及预后的关系。

结果 肿瘤直径≥2 ㎝与<2cm 的淋巴转移率分别为 2.8%、2.5%,差异不具有统计学意义（P<0.05）,但病灶弥漫生长占满宫腔是淋巴结转移的高危因素；G1 和 G2 淋巴转移率分别为 0.4%（1/249）和 5.4%(11/203)，差异具有统计学意义（P=0.004）； 病变局限于内膜患者的淋巴结转移发生率为 0%(0/183)，存在浅表肌层浸润患者的淋巴结转移率是 4.5% (12/269)，差异具有统计学意义（p=0.001）。

结论 低危子宫内膜癌复发率低，预后好。G1 及局限在子宫内膜患者淋巴转移风险极低，可以不行腹膜后淋巴结切除，G2、浅肌层浸润有一定淋巴结转移风险，可结合其他风险因素进行个体化选择。肿瘤大小与淋巴结转移无明显关系，不推荐通过评估肿瘤大小指导是否行淋巴结切除术。

关键词 子宫内膜癌，低危，淋巴结转移，肿瘤大小，分级，肌层浸润

PO-502
基于 SEER 数据库卵巢浆液性囊腺癌手术后预后模型的建立

陈小斌
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

【摘要】目的 建立手术后卵巢浆液性囊腺癌预测模型并绘制 Nomogram 图，探讨影响其预后的因素，可视化进行预后评估。 **方法** 回顾性分析 SEER 数据库 2010 年至 2015 年的 5906 例诊断为卵巢浆液性囊腺癌的手术后患者，通过多因素 Cox 比例风险回归模型得到其远期存活的独立危险因素。采用 C 指数检测模型预测能力；并用 R 语言绘制 3 年生存率和 5 年生存率的 Nomogram 图，用 ROC 曲线检验模型的区分度、校准图检验其校准度。 **结果** （1）Cox 比例风险回归模型结果显示：年龄、种族、组织学分级（低分化和未分化）、T 分期（T2a、T2b、T2c、T3a 、T3b 和 T3c）、M 分期（M1）是卵巢浆液性囊腺癌手术后患者预后的独立因素。C 指数值为 0.688 接近 0.70，说明该模型有一定的准确度。（2）R 语言建立 3 年和 5 年的生存率 Nomogram 图，能迅速通过年龄、种族、组织学分级、T 分期、N 分期、M 分期预测患者的 3 年和 5 年的生存率。（3） ROC 曲线结果示：3 年和 5 年生存率的 Nomogram 图的 AUC 分别为 0.708＞0.70、0.716＞0.70，说明该 Nomogram 图区分度较好。校准图结果提示：3 年和 5 年生存率的预测模型的曲线图中的预测值与实际值之间相一致，说明该 Nomogram 图校准能力较好。 **结论** 建立有效预测模型并绘制 Nomogram 图能有助于对手术后卵巢浆液性囊腺癌生存率进行评估，有利于指导临床治疗。

PO-503
Genome variation analyses of endometrioid carcinoma (EC) and endometrioid carcinoma of ovary (ECO) categorize EC into different molecular characteristic groups

曹灿晖[1,2],石宇[1],夏曦[1]
1.Peking University Shenzhen Hospital
2.Tongji Hospital， Tongji Medical College， Huazhong University of Science and Technology

背景：尽管子宫内膜样癌（EC）和卵巢子宫内膜样癌（ECO）表现出相似的病理，但它们之间的分子特征仍然不清楚。 **方法：**我们纳入了 COSMIC 数据库中的 2 777 例 EC，423 例 ECO 和 57 例子宫内膜异位症样本，用于点突变分析，以鉴定常见或疾病相关的变异。同时进行了基因富集分析，PathwayMapper 分析，生存分析和临床属性聚类，以证明疾病特异性变异的分子基础，并将 EC 分为不同的分子特征组。 **结果：**检测到的EC具有比ECO和子宫内膜异位症更高的突变负荷（P <0.0001），

并且在 PTEN（P = 3.35E-20），KRAS（P = 0.0003）和 PIK3CA（P = 7.26E-05）中显示出更高的点突变频率，CTNNB1 中较低的频率（P = 0.0093），而 ECO 与 EC 基因突变模式类似（275/277）。通过使用 275 个常见突变基因，将 EC 分为具有不同疾病结局（OS 中 P = 5.062 E-4 和 DFS 中 P = 8.146E-3）的不同变化组，并且具有不同的临床基础。尽管在 EC 和 ECO 中都发现了 DNA 复制途径的富集，但 BRCA1（P = 0.0146），BRCA2（P = 0.0321），ATR（P = 3.25E-11），RAD51（P = 3.95E-08），RAD1（P = 0.0003），TP53（P = 6.11E-33），BRIP1（P = 2.90E-09）在 EC 中突变频率更高，并且 EC 细胞系 A2780 显示出较高的 PARP 抑制剂（Olaparib / AZD2281）敏感性。基于这八个基因，EC 可以进一步分为具有不同突变基因和不同疾病结果的两个特征组（Signature1，Signature2）。 **结论：**我们的研究结果较全面比较了 EC 和 ECO 的基因组突变特征，从而为 EC 的分子异质性提供了新的认识。

PO-504
Anti-cancer effects of new EGFR inhibitors in endometrial cancer cells

Ruru Zheng,Feng Lin
The Department of Gynecology， First Affiliated Hospital of Wenzhou Medical University

Objective: Epidermal growth factor receptor (EGFR) overexpression is common in endometrial cancer, which may play an important role in tumor growth and progression. **Methods:** In this study, a series of novel EGFR inhibitors were designed, synthesized, and evaluated for anti-cancer effects in gynecological cancer cells (Hec-1-B, Hela229, and PM8910). **Results:** We found that 580 and 583 have a significant inhibitory effect on the phosphorylation of EGFR and following signaling pathway of MAPK/ERK and PI3K/Akt. Furthermore, the antitumor effects of 580 and 583 against HEC-1-B cells clearly inhibited tumor growth in vitro via apoptosis-related pathways. In the future, EGFR inhibitors could be further developed for the patients with EGFR-positive endometrial cancer in advanced or recurrent stage. **Conclusions:** These results may help to understand the role of EGFR serving as a potential therapeutic target for human endometrial cancer, which may pave the way for developing endometrial cancer biological therapy.

PO-505
The inhibition of CaSki and Ect1/E6E7 cells by oxymatrine via down-regulation of HPV16 E6

Lei Zhang
Tianjin Hospital of ITCME Nankai Hospital

Oxymatrine is a chemical compound that has been reported to significantly improve the body's biological response during viral hepatitis treatment. So far, studies have shown that oxymatrine has low toxicity in normal cells and has an inhibitory effect on the growth of tumor cells. The aim of this study was to explore the clinical applications of oxymatrine by studying its effects on cervical cancer caused by HPV16, on the cell lines CaSki and Ect1/E6E7. The HPV16 E6 gene plays an important role in the occurrence and development of cervical cancer. Oxymatrine preparations of different concentrations were applied to CaSki and Ect1/E6E7 cells. MTT assays were used to observe cell viability. The effect of oxymatrine on apoptosis and cell cycle in CaSki and Ect E6E7 cells was evaluated by flow cytometry. The expression levels of HPVE6 mRNA and proteins were detected by RT-PCR and western blotting, respectively. The results showed that oxymatrine inhibited the

proliferation of CaSki cells, and the transcription and expression of HPV16 E6 in cells treated with oxymatrine were significantly down-regulated. This suggested that oxymatrine could be administered as a potential therapeutic agent and shows preventive effects in cervical cancer.

PO-506
Applications of Systems Biology Approaches in Molecular Mechanism Study of Ovarian Carcinogenesis

Miaomiao Ye,Yibin Lin,Xueqiong Zhu(Corresponding author)
Department of Obstetrics and Gynecology， the Second Affiliated Hospital of Wenzhou Medical University

Abstract:
Objective: Ovarian cancer ranks the fifth most commonly cause of cancer-related death of female. The standard clinical treatment of epithelial ovarian cancer patients is comprised of cytoreductive surgery (whenever possible) followed by chemotherapy containing platinum. Currently, platinum-based chemotherapy followed by surgery is identified as a therapy for ovarian cancer patients who are not suitable for surgery at presentation. The challenge of early stage diagnosis and development of chemo-resistance contribute to the high mortality rates of ovarian cancer patients. Thus, it is necessary to further realize the molecular mechanism of ovarian carcinogenesis and chemo-resistance of ovarian cancer, to figure out the effective molecular targets for early stage diagnosis and clinical treatment. Recently, system biology approaches are applied to explore the mechanism of ovarian cancer, and our study aims to review the advancement of ovarian cancer on the platform of genomics (DNA), transcriptomics (RNA), proteomics (proteins), and metabolomics (metabolites) aspects.
Material and Methods: The PubMed (https://pubmed.ncbi.nlm.nih.gov/) database is searched to obtain the relevant experimental studies of ovarian cancer regarding to the genomics (DNA), transcriptomics (RNA), proteomics (proteins), and metabolomics (metabolites) aspects. The genomics (DNA) analysis includes DNA microarray and DNA methylation microarray. The transcriptomics (RNA) analysis includes Messenger RNAs (mRNAs) microarray、MicroRNAs (miRNAs) microarray、Long non-coding RNAs (lncRNAs) microarray and Circular RNA (circRNA) microarray. The emergence of proteomics techniques enabled the large-scale analysis of the full protein components of complex organelles, a single cell, a specific tissue, or biological fluids. The metabolomics is a high throughput technology to complement the genotype–phenotype landscape, which is able to explore hundreds to thousands of metabolites in biofluids, cells, and tissues. Moreover, the key information from the identified publications are summarized and reviewed.
Results: In the last two decades, accumulated researches perform systems biology approaches to search the novel biomarkers for diagnosis and treatment on the platform of genomics (DNA), transcriptomics (RNA), proteomics (proteins), and metabolomics (metabolites) aspects. The application of genomics in ovarian cancer generally illustrates the regulation of oncogene and antioncogene profiles at the DNA level. And our study also exhibits the association between gene expression changes and ovarian cancer pathological features. The transcriptomics study gene expression at RNA level, and function as a link between genetic genomics and functional proteomics. Moreover, the proteomics techniques are widely applied in ovarian cancer carcinogenesis, and a panel of proteins are considered as helpful biomarkers for ovarian cancer patients. The mass spectrometry (MS) and nuclear magnetic resonance (NMR) spectroscopy are the commonly used techniques for studying the metabolomics, and the metabolite profiling helps to gain deeper insight into the changes and interactions of metabolites related to ovarian cancer biology.
Conclusions: Molecular mechanism study of ovarian carcinogenesis is necessary for effective clinical therapy for ovarian cancer. The system biology approaches display some diagnostic and prognostic biomarkers and therapeutic targets for ovarian cancer, and these molecular signatures are beneficial for clarifying the development and progression of ovarian cancer. Moreover, the discovery of molecular signatures-target therapy strategies could efficiently improve the prognosis of ovarian cancer patients.

PO-507
Association between metabolic syndrome and endometrial cancer : results from a retrospective study

Xiao Yang,Wang Jianliu
People's Hospital of Peking University

Objective: More and more studies have confirmed that the occurrence of multiple malignant tumors was related to metabolic syndrome (MetS). Our study aimed to explore the association between MetS and clinicopathological features of endometrial cancer, and to investigate whether MetS affects the survival and outcome of patients with endometrial cancer.
Methods: The retrospective study included 560 patients who were surgically conformed to have endometrial cancer in the Department of Obstetrics and Gynecology, People's Hospital of Peking University between 2010-2016. The follow-up time was cutt-off until December 2019. We defined the MetS according to the Chinese Diabetes Society in 2004.
Results: A total of 510 patients were included in this analysis. 122 patients (23.9%) were diagnostic with MetS. The median overall survival (OS) time was 42.2 months (rang 18.3-66.1 months). The median recurrence-free survival (RFS) time was 41.1 months (rang 22.8-65.4 months). MetS was positive associated with increased tumor stage (P<0.001; OR=4.1), grade (P<0.001; OR=1.9), LNM (P<0.001; OR=4.7), LVSI (P<0.001; OR=2.4) and MI (P<0.001; OR=2.3). After adjusting for age, BMI, diabetes, hypertention and menopausal state, the correlation between MetS and above clinicopathological factors still existed (all p-value＜0.001). The univariate analysis showed that there was a signifcant correlation between MetS and OS (HR=2.3; 95% CI:1.2-4.7; P=0.018), RFS (HR=2.0; 95% CI:1.1-3.6; P=0.032) . Kaplan-Meier survival analysis showed the patients with MetS had a worse prognosis in OS (P＜0.01) and RFS (P＜0.01). The multivariable analysis indicated that after adjusting for age, BMI, diabetes, hypertension and menopausal state, there was still a correlation between MetS and OS (P=0.003), RFS (P=0.008). However, there was no statistically significant difference between MetS and OS, RFS when clinicopathological features were added to the adjustments. In addition, individual components of MetS showed no apparent effect on OS and RFS.
Conclusions: There was closely correlativity between MetS and the clinicopathological character of e ndometrial cancer, and MetS was closely related to poor prognosis in patients with endometrial cancer. Our study provided evidence supporting a role for MetS in endometrial cancer.

PO-508
子宫内膜癌分子分型与保守治疗研究进展

徐德欢
天津市中心妇产科医院

目的：该文就子宫内膜癌分子分型在子宫内膜癌保守治疗中的应用的研究进展作一系统性的回顾综述，总结现阶段子宫内膜癌分子分型在保守治疗方法中的研究成果及未来研究的方向。
方法：回顾 2015 年至 2019 年相关文献，检索词：子宫内膜癌及其同义词：子宫内膜癌，子宫体肿瘤，子宫恶性肿瘤，子宫内膜肿瘤，子宫体癌；“endometrial”or“endometrium”or“corpus uteri” 与“cancer”or“carcinoma”or“adenocarcinoma”or“malignant”or“neoplasm”组合。保留育功能治疗及其同义词：保留生育功能，保守治疗，孕激素，孕酮，内分泌治疗，激素治疗，曼月乐，宫内节育器，宫腔镜，促性腺激素释放激素类似物等“fertility sparing”or“fertility preserve”or“fertility preserving”or“fertility preservation”or“conservative“or “hysteroscopic resection“or“GnRH analogue“or“hormone

therapy“or“progesterone“or“progestin“or“levonorgestre releasin g intrauterine system”。分子分型及其同义词：“molecular classification“等。
结果：检索到符合要求相关文献 5 篇。目前相关研究仍然处于早期阶段，实验数据多为单中心，小样本研究。
总结：目前提供的数据是有希望的。但仍然需要多中心、大样本的研究来进一步评估分子分型整合传统病理因素及临床因素在评估子宫内膜癌患者在进行保留生育功能治疗预后的个体差异，指导治疗策略的选择，为精准医疗时代规范化、个体化、人性化的治疗奠定理论基础，在患有早期低体积疾病的妇女中，手术宫腔镜检查可能有利于提供样本以进行完整的遗传风险评估。

PO-509

HPV 整合是宫颈上皮内瘤变的重要致癌因素

熊劲风,沈慧,祝达,汪辉
华中科技大学同济医学院附属同济医院

研究目的：近年来研究提示，HPV 整合在宫颈癌中发生率高达 81.7%，可能是重要的致癌因素。探究尚未进展为宫颈癌的癌前病变状态下 HPV 的整合特征，找到其对宿主基因组产生的影响及可能的致癌机制，是本研究的目的所在。
研究方法：在本研究中，我们运用病毒捕获测序（HIVID）、全基因组测序（WGS）、转录组测序（RNA-seq）和甲基化测序技术（NGS-BSP）检测了 276 例宫颈上皮内瘤变，43 例宫颈癌和宫颈癌前病变细胞系 S12 的 HPV 整合情况及整合后转录水平发生的改变，以及 K14-HPV16 小鼠表观层面的特征。
结果：随着CIN1，CIN2，CIN3癌前病变病理级别升高至进展为宫颈癌，HPV整合率分别为18.18%，10.45%，35.20%和 69.05%。我们发现，在最接近宫颈癌的癌前病变状态 CIN3 中，HPV 整合率相较于 CIN1 和 CIN2 有显著的升高。进一步比较 CIN3 和宫颈癌的 HPV 整合断点分布情况发现，相同的是 E6 基因区在 CIN3 和癌中皆处于受保护状态，不同的是 L1 基因区在 CIN3 中处于易断裂状态，而在癌中却处于受保护状态，E2 基因区在 CIN3 中处于受保护状态而在癌中处于易断裂状态，LCR 基因区在癌中也处于显著性受保护状态；研究 HPV16 整合至宿主基因组中情况发现，HPV 整合在 Fragile X breakpoint cluster repeat、SINE-Alu、Short tandem repeat、LTR-ERV1 以及 LINE-1 等与基因组不稳定性相关的基因组元素中显著富集；在人基因组中，HPV 整合更多的发生在基因间区，较少发生在基因区。随着癌前病变进展，在 CIN3 中开始出现有 HPV 整合至外显子区域，宫颈癌中开始发现有 HPV 整合至上游调控区域，HPV 整合越来越趋向于发生在转座元件 LINE-1 和 SINE-Alu 附近。通过比较整合阳性与整合阴性 CIN3 转录组，我们发现差异基因主要富集在细胞外基质及 EMT 相关通路，提示这可能是 HPV 整合致癌的关键通路。通过检测 K14-HPV16 转基因小鼠 LINE-1 启动子甲基化水平，与 WT 小鼠相比发现了三个显著性去甲基化 CpG 位点，提示 HPV 整合可能通过表观层面发挥调控作用。
结论：HPV 整合是宫颈癌发生发展早期且关键的致癌因素。

PO-510

Comprehensive analysis of the association between the glycolysis prognostic risk signature and immune infiltration in endometrial cancer

Xiao Yang,Wang Jianliu
People's Hospital of Peking University

Background: Glycolysis is the primary mechanism of energy metabolism in tumor cells. The purpose of this study is to develop a glycolysis-related risk signature for endometrial cancer and analyze its relationship with immune function.
Methods: The mRNA expression profiling and clinical information of endometrial cancer were downloaded from TCGA database. GSEA was performed to screen out gene sets related to glycolysis, and the R software was used to screen DEGs. Univariate Cox and LASSO regression analyses were used to construct a glycolysis-related prognostic signature for endometrial cancer. WGCNA were performed to identify the potential mechanisms associated with the prognostic signature. Immune scores, stromal scores and ESTIMATE scores were calculated based on the R "ESTIMATE" algorithm. The "CIBERSORT" algorithm was used to evaluate the infiltration of immune cells. ROC curve, nomogram, gene alteration, coexpression analyses and PPIs were also performed.
Results: We identified a glycolysis-related gene signature (PFKM, PSMC4, NUP85, PDHA1, CDK1, CLDN9, CENPA, GPI, NUP155 and GPCI) for predicting the prognosis of endometrial cancer. Based on this gene signature, the patients were divided into high- and low-risk subgroups. The overall survival of patients in the high-risk subgroup was significantly lower than that of the low-risk group. Multivariate Cox regression analysis results showed that the ten-gene signature was an independent prognostic factor for endometrial cancer. The ROC curve confirmed the accuracy of the prognostic signature (AUC=0.730). The immune scores and ESTIMATE scores of patients in the high-risk subgroup were lower than those of the low-risk subgroup, while the low immune score and ESTIMATE scores were closely related to the poor prognosis of patients. The high-risk group was associated with lower cellular immune infiltration of resting dendritic cells, resting memory T cells and Tregs, while the overall survival rate of resting dendritic cells and Tregs in the low-proportion group was significantly lower than that in the high-proportion group.
Conclusions: we constructed a glycolysis-related ten-gene signature to predict the survival and prognosis of endometrial cancer. Our findings may help to elucidate the mechanism of glycolysis and provide new ideas for targeted therapy and prognosis of endometrial cancer.

PO-511

联合高通量病毒整合检测和基于质谱的蛋白质组学探索宫颈癌发生进程中关键的驱动因素

林诗通,吴鹏
华中科技大学同济医学院附属同济医院

目的： 人乳头瘤病毒（HPV）是宫颈癌发生发展中的关键驱动因素，但是目前对于 HPV 在 HPV 持续感染、宫颈上皮内瘤变（CIN）和宫颈癌这三个连续发展阶段中所起到的具体作用仍不清楚，此研究的目的在从基因组和蛋白组两个层面上上深入探究宫颈癌变的不同阶段所发生的关键改变。 **材料与方法：** 对符合入组标准的病人持续随访并收集宫颈刷片。共入组 42 名病人，其中 33 人经历持续感染-CIN。5 人收集三次样本：4 人前两次是持续感染，最后一次是 CIN；1 人第一次是持续感染，后两次是 CIN。另有 4 人收集 1 次样本：2 人是持续感染，2 人是 CIN。最后有 85 个标本进行了 HPV 整合捕获测序、

20 个标本（配对）进行蛋白质质谱分析。并纳入了 2015 年发表在 Nature Genetics 上的 125 个包含 CIN 和 tumor 的样本。**结果：**（1）病毒整合：持续感染阶段比 CINI 拥有更多的病毒整合数，CINII 比 CINI-II 有更多的病毒整合数，tumor 整合的平均数相较于 CINIII 有所下降，但出现了异常值（2）初级病变有更多型别的 HPV（3）超过 90%的 HPV 整合落于基因或 lncRNA 内部及其上下游 500kb 区域内。（4）持续性感染的 HPV 整合在增强子上富集，共影响了 65 个启动子和 44 个增强子区域。基因进行注释后，发现这些基因分与受体、蛋白质结合等生物过程有关（5）将 1041 个 HPV 整合注释到 909 个基因上，从持续感染到 tumor 阶段，复发性 HPV 整合基因逐渐增多，并发现了 KLF5、CCAT1、FHIT、CCDC106 四个热点基因（6）对持续病变进程的个体进行分析，找到至少在两名患者中出现 HPV 整合的相关基因，与群体水平的差异基因有一致性（7）蛋白质组：10 对配对样本中，共有 65 个差异表达蛋白，富集分析显示他们主要与补体途径的炎症反应和免疫功能细胞的募集有关。（8）将 63 个差异表达蛋白与上述 909 个 HPV 整合相关基因 merge，有 6 个重合基因：RAB2A、DSC3、PLEC、FBLN1、MUC5AC 和 SNX12。相对于持续感染阶段，这六个基因均在 CIN 中表达上调（9）体外实验证实过表达 RAB2A 后 SIHA 和 HELA 细胞系的侵袭、迁移等恶性转化能力增强 **结论：**该研究从两个层面联合揭示了 HPV 整合存在一些高频位点，并影响了某些关键蛋白的表达。该研究可能为我们更好理解 HPV 整合的致癌机制、宫颈癌靶向药物研发等提供帮助。

PO-512
Distinct prognostic values of CXCR5, CXCR6 and CXCR7 mRNA expression in human ovarian cancer

Fang Xue,Yi Liu,Shangdan Xie,Xiaohui Xu,Xueqiong Zhu(Corresponding author)
Department of Obstetrics and Gynecology， the Second Affiliated Hospital of Wenzhou Medical University.

Abstract
Purpose: To investigate the prognostic significance of CXC chemokine receptor (CXCR) in ovarian cancer patients.
Patients and methods: The correlation of five CXCRs mRNA expressions and overall survival(OS), progression-free survival(PFS) in patients diagnosed with ovarian cancer were systematically evaluated via the Kaplan-Meier (KM) plotter database, which were stratified by several covariates including three different chemotherapy regimens and histological types, pathological grades and clinical stages. Real-time Quantitative PCR Detecting System (QPCR) and Western Blot (WB) were used to detect the expression level of CXCR5, CXCR6 and CXCR7 in ovarian cancer cells. Immunohistochemistry (IHC) was used to detect the expression of these three genes in ovarian cancer tissues.
Results: Our results revealed that elevation of CXCR7 was highly correlated with poor OS and PFS for all patients, especially for grade III patients. Notably, its high expression was always associated with poor OS in serous cancer patients, all clinical stage patients and patients treated with Platin, Taxol and Taxol + Platin chemotherapy. Moreover, QPCR and WB results showed the expressions of CXCR7 in ovarian cancer cells OVCRA-3 and SKOV3 were significantly higher than that in normal ovarian epithelial cells ISOE80. IHC staining showed that the CXCR7 proteins were upregulated in serous ovarian carcinoma tissues compared with normal ovarian tissues. Additionally, high expressions of CXCR5 and CXCR6 were correlated to favorable OS and PFS for all ovarian cancer patients, especially for patients treated with Platin. However, in patients with different clinical characteristics, the prognostic value of CXCR5 or CXCR6 was inconsistent. Further analysis showed that CXCR5 and CXCR6 were related to advanced OS for serous patients, late stage (III+IV) patients, grade III patients, and patients receiving Taxol and Taxol+Platin chemotherapy. But CXCR6 was related to a decreased PFS for serous patients, endometrioid patients and patients treated with Taxol and Taxol+Platin chemotherapy. For grade I patients, CXCR5 and CXCR6 were highly connected with decreased PFS. The QPCR and WB results of CXCR5 consistently showed that expressions of CXCR5 mRNA and

protein in OVCRA-3 and SKOV3 cells were higher than that in ISOE80 cells. But CXCR5 was not expressed in both ovarian cancer tissues and normal ovarian tissues. Compared with ISOE80 cells, CXCR6 mRNA and protein were highly expressed in OVCAR-3 cells but not in SKOV3 cells. IHC analysis showed that there was no significant difference in the expression of CXCR6 between ovarian cancer tissues and normal ovarian tissues.
Conclusion: The expression of CXCR7 gene may help predict the prognosis of patients with ovarian cancer and would be useful for improving the targeting of chemotherapeutic drugs.

PO-513
通过调控 APOBEC 的活性来对抗病毒的研究现状与困境

彭婷
华中科技大学同济医学院附属同济医院

APOBECs 是单链 DNA 胞嘧啶-尿嘧啶脱氨酶，通过限制外来 DNA 在先天免疫系统中发挥重要作用，APOBEC 酶包括串联编码聚类在 22 号染色体上的胞嘧啶脱氨酶（hAID）、APOBEC1（hA1）、APOBEC2（hA2）、APOBEC3（hA3A-hA3H）和位于 1 号染色体上的 APOBEC4.其中四个 A3 酶（hA3D、hA3F、hA3G、hA3H）抑制人体免疫缺陷病毒 1 型（HIV-1）复制包装成新合成病毒颗粒，直接干扰反转录，变异新生 cDNA 胞核嘧啶尿嘧啶。后者称为病毒基因组链鸟嘌呤到腺嘌呤突变，为了抵消这些酶的有害作用，HIV-1 编码一种名为病毒粒子感染因子（Vif）的蛋白，该蛋白支撑 E3 泛素连接酶复合物的形成，与限制性的 A3 酶结合，并针对它们进行蛋白酶体介导的降解。在哺乳动物的进化过程中，动物与病毒共同进化，二者彼此之间也形成了相互作用。HIV-1 与 Vif 就是一种典型的病毒与宿主相互作用机制。而将近所以的慢病毒都会编码这种 Vif 蛋白来对抗宿主的限制因素，有研究表明在没有 Vif 的情况下，A3D/F/G/H 可以免受降解，自然防御网络也可以恢复。保护 APOBEC 这种广泛的抗病毒作用有望成为新的病毒治疗靶标。本文以 HIV-1 为例，总结了 APOBEC 家族中的 A3 作为抗病毒治疗的靶标研究现状和存在的问题，其中主要讨论通过 Vif 来调控 A3 活性。

PO-514
Comprehensive analysis of differentially expressed profiles of lncRNAs and miRNAs with their associated ceRNA network in endometrial cancer

Xiao Yang,Wang Jianliu
People's Hospital of Peking University

Abstract: The interaction between long noncoding RNAs (lncRNAs) and microRNAs (miRNAs) plays an important role in the occurrence and development of tumors, but the specific mechanism is not yet clear. Increasing evidence suggests that lncRNAs, as competing endogenous RNA (ceRNA), can play a key role in the initiation, invasion and metastasis of cancer. As a new hypothesis, the lncRNA-miRNA-mRNA ceRNA regulatory network has been successfully constructed in a variety of cancers. However, lncRNA, which plays a ceRNA function in endometrial cancer, is still poorly understood. In this study, we downloaded endometrial cancer expression profiling from the Cancer Genome Atlas (TCGA) database and used the R language edgeR package to analyze the genes differentially expressed (DEGs) between endometrial carcinoma and normal endometrium samples. Based on the "ceRNA hypothesis", we constructed a co-expression network of mRNA and lncRNA genes mediated by miRNA in the process of tumor genesis. Finally, we successfully constructed a dysregulated lncRNA-associated ceRNA network containing 96 DElncRNAs, 27 DEmiRNAs and 74 DEmRNAs. GO and

KEGG were used to analyze the differentially expressed mRNA functional and signaling pathways, indirectly detecting the cell biological functions and signal transduction pathways regulated by lncRNA. Through Kaplan-Meier curve analysis, we found that 9 DElncRNAs, 3 DEmiRNAs and 12 DEmRNAs were significantly correlated with the overall survival rate of patients among all DElncRNAs, DEmiRNAs and DEmRNAs involved in ceRNA (P<0.05). In conclusion, our research provides a new perspective for the interaction between lncRNAs and miRNAs and lays the foundation for further research on the mechanism of lncRNAs in the occurrence of endometrial carcinoma.

PO-515
金诺芬与其他药物联用增强对实体瘤杀伤作用的研究进展

朱佳伟
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

硫氧还蛋白还原酶抑制剂金诺芬是一种含+1 价金的化合物，过去被美国 FDA 批准用于治疗风湿性关节炎。近年来被发现了在实体肿瘤中其具有抗癌活性，金诺芬可诱导多种肿瘤细胞凋亡，同时抑制肿瘤细胞的增殖，从而发挥抗肿瘤作用，同时已经批准用于卵巢癌和肺癌的临床试验。值得注意的是近年来，越来越多的研究着眼于金诺芬的协同作用，与其他多种药物的联合应用来治疗多种实体肿瘤。本文就金诺芬与其他药物联用以增强其抗肿瘤活性的研究进展进行了综述。

PO-516
Does Adenocarcinoma Have a Worse Prognosis Than Squamous Cell Carcinoma in Patients with Cervical Cancer? A Real-World Study with A Propensity Score Matching Analysis.

Xingxi Pan,Wen Yang,Lihua Tong,Wubing Tang
Nanhai Hospital Affiliated to Southern Medical University

Objective: To compare survival outcomes between cervical adenocarcinoma (ADC) and squamous cell carcinoma (SCC) using a propensity score matching (PSM) analysis based on the Surveillance, Epidemiology, and End Results (SEER) Program.
Methods: Patients diagnosed with cervical cancer between 1998 and 2016 were identified from the SEER database. The Kaplan-Meier method and Cox regression analysis were used to analyze survival. A subgroup analysis of overall survival (OS) between patients with ADC and SCC was performed after the 1:1 PSM analysis.
Results: Of the 33,148 patients, 24,591 (79.19%) had SCC and 8,557 (25.81%) had ADC. In the unmatched cohort, after adjustment in multivariate analysis, patients with ADC had a worse prognosis than patients with SCC (hazard ratio [HR]=1.12; 95% confidence interval [CI]=1.07–1.18; p<0.001). In the propensity matched cohort, Kaplan-Meier analysis and subgroup analysis showed that ADC was associated with a worse prognosis than SCC (p=0.001). An analysis stratified by SEER stage revealed a worse prognosis for patients with ADC patients presenting with a regional disease than patients with SCC (HR=1.24; 95% CI=1.14–1.36 p<0.001), but no statistically significant differences were observed between the localized disease (HR=0.97; 95% CI=0.86–1.10; p=0.664) and distant disease (HR=1.09; 95% CI=0.97–1.22; p=0.162) subgroups.

Conclusion: The significant differences in survival outcomes between patients with cervical ADC and SCC were only observed in the regional disease subgroup, but not in the localized disease and distant disease subgroups.

PO-517

Well differentiated papillary mesothelioma with local malignant mesothelioma of female peritoneum: an “under-diagnosis” case report and review of published literature

Xiaohang Yang
Tongji Hospital; Tongji Medical College; Huazhong University of Science and Technology

Introduction: Well differentiated papillary mesothelioma（WDPM）of peritoneum, a rare type of mesothelioma that is usually seen in reproductive age women without history of asbestos exposure, is a borderline tumor or low malignant tumor with an uncertain outcome. Involving submusothelial mesenchymal tissue is the key to distinguish malignant mesothelioma (MM) from WDPM. Case report: An elderly lady presented with a 6-month history of abdominal distension and implants. The final pathological result from the superior hospital was WDPM with local MM of peritoneum. The patient only received 2 cycles of pemetrexed and platinum chemotherapy because of severe bone marrow suppression. After 11 months of follow-up, she was alive with intra-abdominal massive ascites. Conclusion: Transformation to MM has been found that the during the follow-up of WDPM patients. It's also possible that this kind of “transformation” could be due to under-diagnosis in hisopathology diagnosis for the first time. Therefore, short-term clinical follow-up and a broad spectrum of sampling on gross specimen and observing all sections carefully, in order to prevent "under-diagnosis".

PO-518

卵巢癌发生发展的表观遗传学研究

李倩,张新,王纯雁
辽宁省肿瘤医院

1.DNA 甲基化

DNA 甲基化是指 DNA 甲基转移酶（Dnmt）选择性地在基因组 CpG 二核苷酸的胞嘧啶 C5（5mC）位置上加上甲基的过程，在基因组印记、X染色体失活、胚胎发育和由此产生的表型变异等方面起着至关重要的作用 [1,2]。抑癌基因的高甲基化（沉默）和原癌基因的低甲基化（激活）参与卵巢癌发生发展 [3-6]，与肿瘤分期、病理分级和死亡率的增加有关 [6]。

2.组蛋白翻译后修饰

染色质组蛋白可以在 N-端发生各种位点特异性翻译后修饰（PTMs），包括乙酰化、磷酸化、甲基化、泛素化、SUMO 化、ADP 核糖基化和巴豆酰化，组蛋白修饰功能失调对基因组完整性和染色体分离有影响，可通过不同的机制调节染色体的结构和功能 [18]。组蛋白 PTMs 受许多酶复合物的调控，其中包括染色质组蛋白相关的“writers”酶、“erasers”酶和“readers”酶 [19,20]。EOC 中可以见到这些酶的异常表达 [21]。

3.非编码 RNA 干扰

lncRNAs-miRNAs-mRNAs 三者之间通过建立内源性竞争性 RNA 调控网络参与 EOC 发生发展 [22]。越来越多的研究发现 miRNA 和 lncRNA 可以通过调控 EMT 机制参与卵巢癌的侵袭和转移，可能会成为卵巢癌诊断与预后的新预测标记物。

上皮性卵巢癌（Epithelial ovarian cancer,EOC）是最常见的妇科恶性肿瘤之一，是女性癌症第五大致死原因[38]。最近的研究表明，EOC 应分为两类：Ⅰ型和 II 型[39]。Ⅰ型 EOC 恶性程度低、呈惰性生长、遗传稳定，p53（TP53）突变较少，常出现 KRAS、BRAF、PTEN、β-catenin、CDKN2A、PIK3CA6-9 突变[40-43]。而 II 型 EOC 高级别、期别晚、易转移、遗传不稳定性，p53（TP53）、BRCA1/2 和其他同源重组基因频繁突变[44-45]。不同类型的卵巢癌具有不同的基因组和表达谱特征、流行病学危险因素[46-48]和治疗应答[49]。越来越多的学者通过表观遗传学研究逐渐阐明卵巢癌病因、化疗应答和在预后中的作用。基因特异性改变不是肿瘤发生的唯一因素[50]，表观遗传学机制也有助于基因表达的调控[51]。表观遗传学包括上述的 DNA 甲基化、RNA 干扰和组蛋白翻译后修饰以动态调控基因的表达从而适应环境的变化。表观遗传畸变是可遗传的、可逆的、不改变 DNA 序列。探索表观遗传特征和机制对于寻找表观遗传生物标志物和开发表观遗传药物至关重要[52]。

PO-519
Ovarian hemangioma and stromal luteinization: a case of co-existence and review of the literature

Liqing Chen
Women's Hospital， Zhejiang University School of Medicine

A 30-year-old female (gravida 2, para 2) presented to the gynecological oncology clinic with a history of right lower abdominal pain for more than 1 year. She described the pain as intermittent and non-radiating. Her medical history was two cesarean sections.Tumor markers were within normal limits. The serum hormonal levels were LH 15.72IU/L, FSH 6.89IU/L, E2 83.73pmol/L, and P 3.92nmol/L. A trans-vaginal ultrasound examination demonstrated a hyper-echoic right pelvic mass measuring 2.5*2.9*2.3cm. Computed tomography scanning of the pelvis demonstrated that there was a 2.6*2.3cm circular highly enhanced area in the right ovary, with obvious venous phase enhancement and obvious dilatation and tortuosity of the ovarian veins, no enlargement of lymph nodes in pelvic wall and no ascites in pelvic floor. Laparoscopic ovarian cyst excision was performed, the right ovary is enlarged, with a size of about 4*3*3cm. There are abundant blood vessels on the surface of part of the ovary near the suspensory ligament. A Luteinoid cyst with a diameter of about 2.5cm was observed near the intrinsic ligament of the ovary. Intraoperative frozen section consultation revealed no evidence of epithelial malignancy, suggestting hemangioma and cystic luteum. The histopathology revealed benign vascular lesions (Fig A) and luteinized ovarian stromal cells (Fig B).

Ovarian hemangioma is very rare and the etiology is unclear, in 1896, Payne first reported a case of bilateral ovarian hemangioma with multiple hemangiomas in other organs of the body. our case did not have multiple hemangiomas. The histogenesis is however debatable, it is generally believed to come from non-specific ovarian tissue and is caused by abnormal hyperplasia of vascular endothelial cells. Some people also believed that it is a hamartoma or vascular malformation, and is a benign lesion. ovarian hemangiomas can be associated with pseudo-Meigs syndrome, elevation of CA 125, and massive ascites. It is well known that luteinization of ovarian stromal cells commonly occurs as a reactive phenomenon. In addition to the diagnostic difficulty, the therapeutic management of such an entity poses a challenge to the clinician which is compounded by the lack of evidence of specificity.

PO-520

盆腔弥漫性大 B 细胞淋巴瘤 8 例临床病例特征

王冰蓉[1],柯丽娟[1],孙阳[2],陈政[1],刘佳华[1]
1.福建省立医院
2.福建省肿瘤医院

研究目的：盆腔弥漫性大 B 细胞淋巴瘤（diffuse large B-cell lymphoma，DLBCL）缺乏临床特征，术前易漏诊或误诊，为提高 DLBCL 的认识，本文将对相关临床资料进行分析和相关文献进行复习回顾。
研究方法：收集 2013 年 01 月至 2020 年 06 月福建省立医院收治的 8 例盆腔弥漫性大 B 细胞淋巴瘤患者，回顾性分析盆腔弥漫性大 B 细胞淋巴瘤的临床特征。
结果：患者年龄为 49-77 岁，中位年龄为 66.5 岁。4 例肿块为盆腔（包括卵巢来源），1 例发生于卵巢和子宫，1 例主要位于阴道，1 例位于子宫体，1 例位于子宫颈（累及阴道），其中卵巢约占 55.56%，子宫占 22.22%，子宫颈及阴道均各占 11.11%。其中 4 例因绝经后阴道出血就诊；2 例因腹胀就诊，其中 1 例伴排尿困难；1 例因下腹闷痛就诊；1 例无明显临床症状，因彩超检查发现盆腔包块就诊。均无 B 症状。除 1 例患者病变在子宫腔内行诊刮术无法判断肿瘤性质，另 7 例均为实性、质硬肿块，表面凹凸不平或呈颗粒样。实验室检查：（1）LDH（U/L）：1 例正常，为 195，7 例患者超过正常值，最小为 315，最大值为 1795，中位数 661，平均值为 743.375；（2）CA125(U/mL)：3 例患者 CA125 超过正常值，最高者为 333.9，均为盆腔内肿物；影像学检查：（1）彩色多普勒：8 例患者均行彩色多普勒超声检查彩色多普勒超声均提示盆腔实性占位，（1）肿块性质：5 例直径大于 10cm，2 例直径约为 6cm，1 例约 8cm；5 例提示低回声，7 例提示不均质回声；8 例均提示丰富或稍/较丰富血流信号；（2）CT 检查：5 例患者行腹部或下腹部 CT 检查。3 例提示软组织密度影，1 例提示等密度融合性团块，1 例提示密度不均；4 例提示肿块边界不清/欠清，1 例未报。（3）磁共振：3 例，均提示长或稍长 T2WI 信号，压脂 T2WI 高信号，DWI 呈高信号，ADC 低信号，T1WI 可表现等、稍长信号。
结论：盆腔弥漫性大 B 细胞淋巴瘤常表现为质硬实性包块，若超声提示低回声实性肿物、血流信号丰富，CT 示软组织影、延迟强化或 MRI 示 T2WI 长/高信号、DWI 高信号、ADC 低信号，虽不能确诊盆腔淋巴瘤，但需将其纳入术前考虑范畴，以指导后续治疗及检查。

PO-521

ALDOA/LDHA 共表达调控糖酵解诱导宫颈癌放疗抵抗发生

周俊英,田万家,陈梦玉,郭瑞霞,苑中甫,常蕾
郑州大学第一附属医院

研究目的：探讨 ALDOA/LDHA 在宫颈癌放疗抵抗中的分子机制及相互作用，从而为提高宫颈癌放疗敏感性，寻找新的预测分子标记物和新的治疗靶点。
材料与方法：人宫颈癌细胞株 Siha、C33a、Caski 和 Hela，用含 10%胎牛血清的 MEM 培养基培养，在 37℃、5%二氧化碳的培养箱中保存细胞，通过放疗构建放疗抵抗细胞株 Siha、C33a、Caski 和 Hela,在高表达 ALDOA 的宫颈癌放疗抵抗细胞株中稳定沉默和过表达 LDHA，在高表达 LDHA 的宫颈癌放疗抵抗细胞株中稳定沉默和过表达 ALDOA,对比接受 6Gy 放射治疗后的克隆形成、细胞凋亡、增殖、侵袭能力。应用细胞抵抗模型建立宫颈癌皮下移植瘤动物模型，比较在接受 6Gy 放射治疗后的肿瘤大小和生长速度。应用实时定量 PCR，检测沉默 ALDOA 基因对 LDHA 基因 mRNA 表达量的影响及检测沉默 LDHA 基因对 ALDOA 基因 mRNA 表达量的影响。Western Blot 法，检测沉默 LDHA 对 ALDOA 蛋白表达量的影响及检测沉默 ALDOA 对 LDHA 蛋白表达量的影响。
结果：在高表达 ALDOA 的宫颈癌放疗抵抗细胞株中沉默和过表达 LDHA，接受 6Gy 放疗后，过表达 LDHA 的细胞较沉默 LDHA 的细胞其克隆形成、增殖、侵袭能力、细胞抵抗凋亡能力强；在高表达

LDHA 的宫颈癌放疗抵抗细胞株中沉默和过表达 ALDOA，接受 6Gy 放疗后，过表达 ALDOA 的细胞较沉默 ALDOA 的细胞其克隆形成、增殖、侵袭能力、细胞抵抗凋亡能力强。接受 6Gy 放疗后，移植沉默 ALDOA 和 LDHA 细胞的小鼠较移植过表达 ALDOA 和 LDHA 细胞的小鼠移植瘤体积小、生长速度慢。实时定量 PCR，沉默 ALDOA 基因后 LDHA 基因 mRNA 表达量降低，沉默 LDHA 基因后 ALDOA 基因 mRNA 表达量也降低。蛋白印迹，沉默 LDHA 后 ALDOA 蛋白表达量下降；沉默 ALDOA 后 LDHA 蛋白表达量也下降。

结论：ALDOA/LDHA 共表达增强宫颈癌放疗抵抗的发生，高表达 ALDOA 和 LDHA 的细胞克隆形成、增殖、侵袭、细胞抵抗凋亡能力强；低表达 ALDOA 和 LDHA 的细胞克隆形成、增殖、侵袭能力、细胞抵抗凋亡能力弱。

PO-522

宫颈脱落细胞特殊染色联合 CareHPV 检测用于宫颈病变筛查的临床应用研究

王泓沄[1,2],彭久君[2],杨军[1],史炯[1],袁夫娟[3],邹婧[3],洪颖[1,2,3]
1.南京大学医学院附属鼓楼医院
2.南京医科大学鼓楼临床医学院
3.南京中医药大学中西医结合鼓楼临床医学院

目的 评价宫颈脱落细胞特殊染色联合宫颈癌快速筛查（CareHPV）检测用于宫颈病变筛查的有效性，探索适合于缺少病理医师及实验室条件的基层妇女宫颈癌筛查的方法及方案。

方法 在南京鼓楼医院体检中心及妇科门诊募集自愿参加宫颈脱落细胞特殊染色联合 CareHPV 检测进行宫颈病变筛查的 20 岁以上已婚妇女 808 例，全部妇女进行了 TCT，CareHPV，宫颈脱落细胞特殊染色，有阴道镜检测指征的进行了阴道镜检查和病理组织检查，并对相关数据进行统计分析。

结果 液基细胞学检查（TCT）结果异常者[≥非典型鳞状细胞-不能明确意义（ASC-US）]共 340 人；CareHPV 检测结果异常者（>1.00RLU/CO）469 人。有阴道镜检查指征的给予检查及活检，病理结果 531 例：宫颈浸润癌 3 例，原位腺癌 2 例，宫颈上皮内瘤变 3 级（CIN3）有 41 例，CIN2~3 有 86 例，CIN2 有 105 例，CIN1 有 77 例，VaIN1 有 9 例，VaIN2-3 有 14 例，CIN 合并 VaIN 例 8，慢性炎症伴鳞状上皮增生（挖空细胞、化生、萎缩等）205 例。宫颈脱落细胞特殊染色阳性 170 例，可疑 396 例，阴性 242 例。宫颈脱落细胞特殊染色敏感度 77.65%，特异度 91.52%，阳性预测值 62.35%，阴性预测值 94.04%。宫颈脱落细胞特殊染色漏诊的 26 例高级别病变中，有 13 例局灶 CIN2-3，10 例为 ECC 病理 CIN3，没有漏诊一例宫颈癌。

在设计的基层宫颈病变筛查方法策略中，宫颈脱落细胞特殊染色联合 CareHPV 初筛及 TCT 分流有最高的阴性预测值；宫颈脱落细胞特殊染色及 Care 检测双阳有最好的阳性预测值；是性价比最好、适用性最优方法。

结论 在缺少病理医师及实验室条件的的基层地区开展宫颈脱落细胞特殊染色联合 CareHPV 检测为主的宫颈癌筛查方法，以阴道镜活检病理为准，能够有效检出>CIN2 的病变适用性最优方法。

PO-523

Prevalence and genotype distribution of human papillomavirus in two different areas in China--a cross-sectional study

qihui feng[1],Qingli Li[2],Keyong Bao[3],Yue Wang[1],Ping Song[4],Peng Zuo[1],Mingzhu Li[1],Chao Zhao[1],Na Wang[1],Jingran Li[1],Lihua Ren[1],Rutie Yin[2],Lihui Wei[1]
1.Peking University People's Hospital
2.West China Second Hospital of Sichuan University
3.Affiliated Hospital of Inner Mongolia University for the Nationalities
4.Huidong County People's Hospital

Objectives: The aim of the study was to investigate and compare the prevalence and distribution of high-risk human papillomavirus (HR-HPV) genotypes in Tongliao (TL) and Huidong (HD) region in China.
Materials and Methods: A cross-sectional study of cervical cancer screening was conducted between August 2017 and April 2018 in Tongliao, Inner Mongolia and Huidong, Sichuan Province. A total of 2473 and 1583 women were recruited from Tongliao and Huidong and all the participants underwent the screening with a cytology sample collected for liquid-base cytology test and PCR-based HPV genotyping test. Participants whose HPV and TCT results met the indications were referred for colposcopy.
Results: The overall prevalence in the Tongliao and Huidong cohort were 19.35% and 10.4% ($P < 0.05$), among which the five most common genotypes were HPV 16(3.91%), 52(3.79%), 53(2.42%), 68(2.04%), 51(1.96%) in Tongliao and HPV52(2.27%), 16(1.58%), 58(1.39%), 51(1.39%), 53(0.95%) in Huidong. In both two cohorts, Single-type infections were more common than multiple-type infections. The HPV16 was the most common genotype in high-grade squamous intraepithelial lesions (HSILs). In Tongliao cohort, the HPV33, HPV52, HPV58 showed a risk of carcinogenesis similar to HPV18.
Conclusions: Our study provides the information of HPV prevalence and genotype distribution in Tongliao and Huidong. The HPV prevalence and genotype distribution differ geographically. More real-world studies exploring the epidemiology of HPV infection in different areas are needed to help us achieve better screening and prevention of cervical lesions.

PO-524

Supplementary Extensive Surgery of Occult Invasive Cervical Cancer Discovered After Simple Hysterectomy

jiangtao yu,Haiyan Zhu,Yasin Sohawon,Ya Lin,Zhengzheng Shi,Hongqin Zhao
the First Affiliated Hospital of Wenzhou Medical University

Objectives: To identify the efficacy and morbidity of the supplementary extensive surgery in patients with occult invasive cervical carcinoma, and to discuss the optimum time interval between the simple hysterectomy and the supplementary extensive surgery.
Methods: 8 patients with occult invasive cervical carcinoma who underwent the supplementary extensive surgery from February 2016 to October 2017 were retrospectively analyzed and correlation analysis was performed on data collected.
Results: There were all 8 patients with stage IA1 to IB1 and a mean age of 53±7.8, in which 5 patients had a grade 1 tumors, 2 patients had grade 2 tumors and 1 patient had a grade 2-3 tumor. The supplementary extensive surgeries with a mean duration of the surgeries of 176.2 ± 67 min and the estimated average blood loss of 317.5±261.5 ml were performed in a mean of 3.7±2.0 weeks after the

simple hysterectomy. One patient was diagnosed with 3 positive pelvic lymph nodes and 2 patients received adjuvant treatments. There were 2 patients with operative complications: One patient had both a bladder injury and a lymphocyst while another patient had only a lymphocyst. The correlation analysis confirmed statistically significant relationships between the duration of surgery and estimated blood loss, duration of surgery and complications (P< 0.05).
Conclusion: The supplementary extensive surgery is safe, effective and feasible for the treatment of occult invasive cervical carcinoma. The optimum time interval between the two operations is believed to be 2 weeks.

PO-525

Relationship Between The Vaginal Micro-ecology Disorder And HPV Infection As Well As Cervical Lesions In 2147 Outpatients Undergoing Colposcopy From Wenzhou, Southeast China

Shuyuan Zhao,Yan Hu
the 1st Affiliated Hospital of Wenzhou Medical University

Objectives Although persistent infection of high-risk human papillomavirus (HR-HPV) is a high-risk factor for cervical cancer, the organism to promote their persistent existence was not understood. To promote the birth of related drugs to re-establish the original balance and help in solving persistent HPV infection as well as reducing cervical lesions, this study investigated the association between vaginal micro-environment factors, including pathogens, vagina cleanness, vaginal PH value, H2O2, leukocyte esterase, and sialidase and HPV infection as well as cervical lesions.
Materials and Methods 2147 outpatients undergoing colposcopy aged 15-84 at the 1st Affiliated Hospital of Wenzhou Medical University between August 2017 and August 2018 were enrolled in this study, who had complete results of vaginal secretions as well as one of the results of HPV typing, cytology, and histology of cervix. Vaginal micro-ecology was detected by manual microscopy and vaginal secretions analysis strip (Dirui medical technology Co., Ltd). The color strips could be applied to measure the vaginal PH value with a range of 3.8-5.4. Besides, Vagina cleanness was strictly classified according to the National Clinical Laboratory Practice Guideline. HPV genotypes were analyzed with Flowcytometry Fluorescence Hybridization Method (Tellgen, Shanghai, China). And then the prevalence and distribution of the vaginal micro-ecology disorder, HPV infection, and cervical lesions were analyzed. The relationship between factors and different HPV infection states or degrees of cervical lesions was also analyzed. Statistical analyses were performed by SAS 9.4 software.
Results 1. HPV infection rate assumed "double peak value" trend, peak value appeared in 25-34 years (86.3%) and ≥65 years (88.9%) respectively. 2. Nearly all of 2147 women had vaginal micro-ecology disorder. The abnormal rates of vaginal micro-ecology disorder (Z=-3.34, P<0.001), vaginal cleanness (Z=-3.31, P<0.001), PH (Z=-11.89, P<0.001), H2O2 (Z=-8.61, P<0.001) and leukocyte esterase (Z=-2.40, P=0.016) increased gradually as they got older. 3. HPV-positive was significantly associated with clue cell (OR 1.59; 95% CI 0.99-2.54) and sialidase (OR 1.54; 95% CI 1.01-2.35) after adjustment for age and histology. No significant difference was found for vaginal micro-environment factors in different HPV infection states (LR-HPV/HR-HPV, single/multiple types, and infection with/without HPV16/18). 4.The abnormal rates of PH (Z=-3.22, P=0.001) and vaginal cleanness (Z=-3.31, P<0.001) increased gradually as the disease progressed. The cervical cancer group was more likely to have an abnormal vagina PH comparing to normal individuals (OR 5.46; 95% CI 2.55-11.68). Vagina cleanness III and IV individuals to develop cervical cancer were respectively 2.26 and 4.80 times than normal vagina cleanness(I-II). Moreover, no significant difference was found in other vaginal micro-environment factors, including trichomonas, fungus, clue cells, H2O2, sialidase, and leukocyte esterase in different cervical lesions.

Conclusion The vaginal micro-environment factors played a significant role in HPV infection and the process of cervical lesions. Clue cell, as an indicator of BV, was related to HPV infection, while the relation between BV and cervical lesions was not clear. Sialidase might be a potential target for cervical cancer diagnosis and therapy through HPV infection. Vagina cleanness and vagina PH were closely associated with cervical lesions especially cervical cancer. Further researches will be needed to provide powerful evidence.

PO-526

妊娠合并宫颈癌 1 例分析

田小娟[1],索玉平[2]
1.山西医科大学 2.山西省人民医院

妊娠合并宫颈癌在临床上很少见，发病率为为 1-5/万，分期标准是按照国际妇产科联盟（International Federation of Gynecology and Obstetrics，FIGO）的分期[1]，且其中绝大部分为 2018 年 FIGO 分期中的Ⅰ期，目前国内外关于其治疗并没有统一的标准[2]。影响其结局的因素有很多，包括妊娠时间、肿瘤大小、分期、患者的意愿及心理状态，所以治疗的时机及方法需要综合考虑，并制定个体化的治疗方案。我科于 2019 年接诊 1 例妊娠合并宫颈癌的患者，诊治经过如下。

PO-527

基于机器学习方法的宫颈液基细胞学细胞筛选与图像分析

马京杭[1],王芳[1],冯振[2],张泉波[1]
1.温州医科大学附属第一医院 2.温州医科大学

目的：运用基于机器学习的细胞图像识别系统建立宫颈液基细胞病理学诊断模型。
方法：收集高哈蒂医学院和医院样本库以及温州医科大学附属第一医院宫颈液基细胞学标本共 1042 例。通过对宫颈液基细胞图像黑白处理以及反色处 理，对细胞核的识别，进而在细胞核的基础上继续识别相应细胞。通过箱线图对各类细胞的特征进行表征，得到了 14 个特征用于建立 SVM 细胞识别模型。以 70：15：15 的比例进行模型的训练、内部验证以及外部测试。
结果：该细胞识别模型在内部验证中总体预测准确性为 88.7%，其中对于 LSIL 细胞的识别敏感性为 67.2%，对于 HSIL 细胞的识别敏感性为 69.3%，对于 SCC 细胞的识别敏感性为 91.0%；该模型对于正常、病变细胞两个分类的细胞，细胞识别的总体准确性为 91.0%，对于病变细胞的识别敏感性为 92.2%，特异性为 98.0%；在外部测试中总体预测准确性为 89.8%，其中对于 LSIL 细胞的识别敏感性为 70.1%，对于 HSIL 细胞的识别敏感性为 70.5%，对于 SCC 细胞的识别敏感性为 92.0%；该模型对于正常、病变细胞两个中分类的细胞，细胞识别的总体准确性为 95.1%，对于病变细胞的识别敏感性为 91.5%，特异性为 98.5%。
结论：基于机器学习的细胞识别模型对于宫颈液基细胞学诊断具有较高准确性，可帮助病理医师进行细胞初筛，减少漏诊率。

PO-528
Relation of Galectins (LGALS) expression to prognosis of human ovarian cancer

Wenxiao Jiang,Mandika Chetry,Shuya Pan,Junhui Yu,Xueqiong Zhu(Corresponding author)
Department of Obstetrics and Gynecology， the Second Affiliated Hospital of Wenzhou Medical University，
wenzhou，zhejiang，China

Purpose: Galectins (LGALS) are S-type lectins bound to galactoside-containing glycoproteins and involved in cancer progression, angiogenesis, cell proliferation and metastasis in various cancers including ovarian cancer. However, distinct individual LGALS expression associated with the prognostic and predictive impacts on ovarian cancer patients remains unclear.
Methods: The prognostic roles of LGALS family members (LGALS1-15) in ovarian cancer were retrieved by using 'Kaplan-Meier plotter' (KM plotter) database from totally 1,816 ovarian cancer patients and the relation of every LGALS member to overall survival (OS) were evaluated. Additionally, individual LGALS expression and its prognostic events were analysed according to the specific clinicopathlogical features such as histological subtypes, pathological grades, clinical stages and TP53 mutation. Lastly, western blotting and quantitative real-time polymerase chain reaction (qRT-PCR) were used to detect the mRNA and protein expression of LGALS family members in ovarian cancer cells and normal ovarian cells. Then 10 ovarian cancer specimens and 10 normal ovarian specimens were collected, and immunohistochemistry was applied to evaluate the different protein expression of LGALS family members between ovarian cancer tissues and normal ovarian tissues.
Results: In total ovarian cancer patients, LGALS4, LGALS8, LGALS10 and LGALS13 mRNA level were related to a better OS, whereas LGALS2, LGALS3, LGALS12 and LGALS14 mRNA expression were not significantly associated with OS. LGALS1 mRNA overexpression was correlated with a worse OS in total ovarian cancer patients, especially in grade II and clinical stages III+IV ovarian cancer women. Furthermore, LGALS4 and LGALS10 mRNA expression in grade III, and LGALS3 in grade Ⅰ ovarian cancer patients were associated with a longer OS. LGALS3, LGALS4, LGALS8, and LGALS10, LGALS12, LGALS14 expression in stages I+II ovarian cancer patients, as well as LGALS8 and LGALS10 expression in stages III+IV, also showed a longer OS. However, high levels of LGALS10, LGALS13 and LGALS14 mRNA expression presented a poor prognosis in TP53 mutation ovarian cancer patients, whereas, LGALS12 showed a better prognosis in both TP53 mutation and wild type ovarian cancers. Notebly, qRT-PCR showed that the mRNA expression of LGALS4, LGALS8, LGALS10 and LGALS13 were all up-regulated in normal ovarian cells compared with that in ovarian cancer cells (all $P<0.05$). At the same time, western blotting analysis indicated that the protein levels of LGALS4, LGALS8, LGALS10 and LGALS13 were significantly increased in normal ovarian cells than that in ovarian caner cells (all $P<0.05$) . However, there was no significant difference of LGALS1 mRNA and protein expression between normal ovarian cells and ovarian cancer cells. In addition, immunohistochemistry analysis confirmed that LGALS8, LGALS10 and LGALS13 were more positively immunohistostained in normal ovarian tissues than those in ovarian cancer tissues, but LGALS1 was more positively immunohistostained in ovarian cancer tissues.
Conclusion: Distinct LGALS family members expression (LGALS8, LGALS10 and LGALS13) are significantly identified as a novel protectvive predictor for prognostic values in ovarian cancer patients.

PO-529
Clinicalpathologic and prognostic significance of CGI-58 in endometrial cancer

Zhengzheng Shi,Baoyou Huang,Yuanqiu Wang,Xishao Luo,Xu Chen,Jiangtao Yu
the First Affiliated Hospital of Wenzhou Medical University

Abstract
Objective: Recent studies have reported that CGI-58 played an important role in carcinogenesis and tumoral progression in several cancers. In this study, we investigated the expression and prognostic value of ABDH5 in patients with endometrail cancer.
Methods: Initially, the expression of CGI-58 was analyzed in 552 cases of endometrial carcinoma from TheCancer Genome Atlas (TCGA). Then,the mRNA level of CGI-58 from 32 normal endometrium and 40 endometrial cancertissues was determined using real-time PCR. In addition, immunohistochemical staining of CGI-58 was performed in 140 endometrialspecimensincluding 35 normal endometrial tissues, 25 atypical endometrial hyperplasia and 80 endometrial cancers.
Results: The expression of CGI-58 was significantly up-regulated in endometrial cancer tissues compared with normal endometrial tissueboth in TCGAdatabaseand clinical cohorts. Over-expression of CGI-58 was significantly correlated with poor histological differentiation. Furthermore, high levels ofCGI-58 expression were significantly associated with shorter overall survivalfor all analyzed cases.
Conclusion: Our findings demonstrate that CGI-58 is up-regulated in endometrial cancer and high CGI-58 expression is a poor prognostic marker for endometrial cancer. CGI-58 maybe a potential contributor to endometrial cancer oncogenesis and progression.

PO-530
子宫颈浸润性复层产粘液癌 1 例及文献复习

骆燕,尹如铁
四川大学华西第二医院

子宫颈浸润性复层产粘液的癌（invasive stratified mucin-producing carcinoma，ISMC），是一种近年来发现报道的罕见宫颈癌，最早于 2016 年由 Lastra 报道[1]，迄今为止，全球共计报道有 87 例。病变均位于宫颈鳞柱交界区，常可合并鳞状细胞、腺细胞病变，且病变区域内 P16 强阳性；其主要源于宫颈转化区的储备细胞，在高致病性 HPV 的持续感染下进展而来，现有明确感染的 HPV 类型多为 HPV16、18 型，亦可见其他少见类型，如 52 型。其与复层产粘液的上皮内病变（stratified mucin-producing intraepithelial lesion，SMILE）具有高度一致的流行病学特征及组织学改变，被认为是同一疾病的不同时期；发病年龄 22-78 岁不等，以中年女性居多；临床表现缺乏特异性，主要表现为异常阴道出血、流液，接触后出血，或无任何症状，体检发现异常宫颈病变进一步活检后发现；查体可见宫颈息肉样或菜花样赘生物，伴糜烂样改变，质地糟脆，触血明显；病变最大直径可达 6cm，病变切面可表现为白色或乳黄色，可见局灶性出血、坏死。镜下细胞学检查可见复层产粘液细胞巢，偶可见巢内裂隙，但通常无明显腺腔结构形成；巢内细胞表现为多层叠瓦状排列，周边细胞栅栏状排列；瘤细胞形态不规则，胞质内可见产粘蛋白改变，且粘蛋白多少不均一，细胞核具有轻到中度异型性，因细胞产粘蛋白的不一致及细胞间桥的缺乏，细胞核间距分布明显不一致，细胞内可见有丝分裂及凋亡小体，且细胞巢内可见中性粒细胞浸润。电镜下可见 ISMC 与 SMILE 均可见细胞表面微绒毛，但细胞间桥及张力丝缺乏。其免疫组化最主要表现为 P16 阳性或强阳性，Ki67 明显升高，粘蛋白标记物强阳性。

PO-531
AI 辅助宫颈超声弹性成像检测识别宫颈病变的级别及临床应用

洪颖[1,2],王泓沄[1,2],彭久君[2],茹彤[1],曹炜[3],汪丰[4]
1.南京大学医学院附属鼓楼医院
2.南京医科大学鼓楼临床医学院
3.江苏信望岛信息科技有限公司
4.东南大学苏州医疗器械研究院

目的：对目前最佳宫颈癌筛查（TCT+ HPV）方案中高危 HPV 检测阳性，而没有临床异常表现的妇女加之宫颈超声影像学检查，探讨 AI 辅助超声医学影像在高危 HPV 阳性妇女宫颈癌筛查中识别宫颈病变的级别、部位和范围，帮助临床分流及指导宫颈锥切手术范围的可能性。
方法：选自体检或宫颈门诊就诊妇女，对于采用常规宫颈宫颈癌筛查检查，其中高危 HPV 阳性的患者同意应用超声弹性成像检测宫颈病变情况患者入组，有阴道镜检查指征的患者行阴道镜下活检，所有活检患者中分为宫颈高级别病变组、宫颈低级别病变及慢性宫颈炎组。观察项目包括：病史、临床表现、HPV 分型检测、HPVHC2 检测、宫颈膜式液基细胞学检测（TCT）、宫颈弹性超声成像、阴道镜检查、宫颈活检病理检查等项目，对经过宫颈锥切病理证实的 CIN1、CIN2、CIN3，调取术前宫颈超声弹性成像信息，应用 AI 辅助下进行建模，再用新病例对模型进行验证。
结果：高危 HPV 阳性并进行阴道镜下活检病例 197 例，其中 HSIL 为 71 例（CIN2 为 30 例，CIN3 为 41 例），全部行宫颈 leep 术证实，CIN1（LSIL）33 例，慢性宫颈炎 93 例，常规宫颈癌筛查同时，对宫颈进行弹性超声成像检查。经观察，随着宫颈病变的发展，从宫颈炎症到宫颈高级别病变，宫颈弹性评分逐渐升高，宫颈炎与高级别宫颈病变差异显著，而宫颈炎与低级别病变无明显统计学差异。检查结果：1、本组患者中 TCT 检测：炎症 89 例，占总数 45.18%，ASCUS59 例，占总数 29.95%，LSIL37 例，占总数 18.78%，HISL12 例，占总数 6.1%，结果中 HSIL 阳性率较活检病例诊断差异明显，P＜0.01；2 宫颈超声弹性成像中，HSIL 与 LSIL 患者与宫颈炎患者比较差异均显著，P＜0.01，而 HSIL 差异明显。HISL 与 LISL 比较差异显著，P＜0.01。并可以清楚的识别宫颈病变的部位，及病变的深度。验证结果证明其模型有效可靠。
结论：正常宫颈组织与宫颈癌前病变或宫颈癌组织因宫颈组织弹性的改变在超声弹性成像中表现不一，易被超声弹性成像识别。可辅助用于宫颈癌的筛查结果异常的分流检测，提高宫颈癌筛查的分流准确性。实时超声弹性成像检查简单、快速，无创，可在 10-30 分钟得到。可辅助应用于妇科门诊癌症筛查中不同宫颈病变临床分流和指导锥切手术范围，并有很好的应用前景。

PO-532
Low red blood cell count as an early indicator for myometrial invasion in women with endometrioid endometrial carcinoma with metabolic syndrome

Yao Tong,Xiaoyan Xie,Xiaodan Mao,Huifang Lei,Yaojia Chen,Pengming Sun
Maternity and child care centers in fujian province

Abstract
Purpose: We investigated the relationship between metabolic syndrome (MetS) and its components and erythrocyte parameters such as red blood cell count (RBC) and hemoglobin (Hb) levels, and their association with the risk of deep myometrial invasion in endometrioid endometrial carcinoma (EEC).
Patients and methods: A total of 473 women diagnosed with EEC between January 2012 and December 2018 were included in the study. MetS was diagnosed using a modified version of the

Chinese Diabetes Society 2004 criteria. Demographic and clinical characteristics were stratified by MetS and compared. Logistic regression analyses were performed to calculate the odds ratios (ORs) of myometrial invasion.
Results: The prevalence of MetS was 18.8% (89/473). RBC and Hb levels were significantly higher in EEC patients with MetS. RBC and Hb values increased linearly with the number of MetS components. The OR of the MetS risk increased across the RBC quartiles (Q1 vs. Q4, OR=3.842, 95% Confidence interval [CI]=1.014-14.554, P=0.048). Among EEC patients with MetS, the OR of deep myometrial invasion increased across the RBC quartiles (OR=1.286, 95% CI=1.050-1.575, P=0.015). Similarly, in EEC patients with obesity and hyperglycemia or with ≥2 MetS criteria, the lowest RBC level (Q1) was a risk factor for deep myometrial invasion compared with the reference RBC group (Q4, P<0.05). However, this trend was not evident in EEC patients without MetS and its components.
Conclusion: EEC with MetS and its components had higher RBC and Hb levels. The association between the erythrocyte parameters and myometrial invasion differed with MetS. RBC was identified as a risk factor of myometrial invasion in EEC patients with MetS and its components.

PO-533

An integrated autophagy-related long noncoding RNA signature as a prognostic biomarker for human endometrial cancer: a bioinformatics-based approach

Ziwei Wang,Jun Zhang,Yan Liu,Rong Zhao,Xing Zhou,Hongbo Wang
Obstetrics and Gynecology， Union Hospital， Tongji Medical College， Huazhong University of Science and Technology， Wuhan， Hubei 430022， P.R. China

Endometrial cancer is one of the most common malignant tumors lowering the quality of life among women worldwide. Autophagy plays dual roles in these malignancies. To search for prognostic markers for endometrial cancer, we mined The Cancer Genome Atlas and the Human Autophagy Database for information on endometrial cancer and autophagy-related genes and identified five autophagy-related long noncoding RNAs (lncRNAs) (LINC01871, SCARNA9, SOS1-IT1, AL161618.1, FIRRE). Based on these autophagy-related lncRNAs, samples were divided into high-risk and low-risk groups. Survival analysis showed that the survival rate of the high-risk group was significantly lower than that of the low-risk group. Univariate and multivariate independent prognostic analyses showed that patients' age, pathological grade, and FIGO stage were all risk factors for poor prognosis. A clinical correlation analysis of the relationship between the five autophagy-related lncRNAs and patients' age, pathological grade, and FIGO stage was also performed. Histopathological assessment of the tumor microenvironment showed that the ESTIMATE, immune, and stromal scores in the high-risk group were lower than those in the low-risk group. Principal component analysis and functional annotation were subsequently performed to confirm the correlations. To further evaluate the effect of the model constructed on prognosis, samples were divided into training (60%) and validation (40%) groups, regarding the risk status as an independent prognostic risk factor. A prognostic nomogram was constructed using patients' age, pathological grade, FIGO stage, and risk status to estimate the patients' survival rate. C-index and multi-index ROC curves were generated to verify the stability and accuracy of the nomogram. From this analysis, we concluded that the five lncRNAs identified in this study could be affecting the incidence and development of endometrial cancer by regulating the autophagy process. Therefore, these molecules may have the potential to serve as novel therapeutic targets and biomarkers.

PO-534

PDX 模型在卵巢癌诊治中的研究进展

潘淳宇,朱雪琼（通讯作者）
温州医科大学附属第二医院、育英儿童医院妇产科

目的：卵巢癌是女性生殖器官常见的恶性肿瘤之一，美国最新统计数据显示，其在女性生殖系统肿瘤中的发病率达到第 2 位，死亡率高居于首位。然而临床上对卵巢癌的早期诊断、治疗等方面应对不足。患者来源的异种移植物（patient-derived xenografts，PDX）是指直接将患者的新鲜肿瘤组织植入免疫缺陷小鼠体内，建立的一种肿瘤动物模型。PDX 模型能够较为准确地保留患者肿瘤的生物学特性及异质性，因此被广泛应用于卵巢癌化疗药物耐药机制和抗瘤药物筛选的研究，因此本文就卵巢癌 PDX 模型的发展、影响因素以及临床诊治等方面的研究进展进行综述。
方法：通过 Pubmed 检索截至 2020 年 5 月公开发表的英文文献，检索词为“patient AND derived AND xenograft”，“ovarian”和“cancer OR tumor OR neoplasia OR malignancy”，共检索并筛选出全文文献 41 篇。提取文中数据，分析资料。
结果：卵巢癌 PDX 模型分为原位成瘤模型和非原位成瘤模型，按照具体部位不同，原位模型可分为卵巢移植瘤和腹腔移植瘤，非原位模型可分为皮下，乳腺脂肪垫以及肾包膜下。非原位移植瘤模型相较原位模型，技术操作要求低，耗时短，方便肿瘤检测，实际成瘤率也相近。有研究表明，卵巢细胞在 NOD/SCID 小鼠体内不同部位接种，移植成功率分别为乳腺脂肪垫 95％，肾包膜下 73％，腹膜原位接种 100％和卵巢原位接种 83％。另一项研究中，将 30 例上皮性卵巢癌组织经皮下移植植入裸鼠体内，成瘤率达也 100%（30/30）。因其能够重现亲代肿瘤及其微环境的异质性，同时也保留了肿瘤的生物学特性，PDX 模型在卵巢癌诊治中的应用体现在早期诊断，化疗耐药性研究以及靶向药物治疗等许多方面。卵巢癌 PDX 模型也存在一些不足，包括建立成本过高，构建时间过长，植入成瘤率低，在肿瘤免疫研究方面存在局限等等。
结论：PDX 模型在卵巢癌诊疗方面的应用逐渐增多，参与优化药物治疗方案设计肿瘤患者个体化治疗模式。但 PDX 模型也存在一定局限性，等待进一步完善。随着模型构建技术的不断改进，PDX 模型在卵巢癌治疗中的应用也将会有更广泛的前景。

PO-535

高脂饮食诱导的肥胖对子宫内膜非典型增生小鼠肠道菌群的影响

赵蓉,肖诚瑀,刘艳,章伟,汪宏波
华中科技大学同济医学院附属协和医院

背景：众所周知，肥胖与子宫内膜癌密切相关，非典型子宫内膜增生是子宫内膜癌的癌前期。先前的研究已经确定肠道菌群失衡是肥胖症发病机制的核心。肠道微生物组的改变可能与子宫内膜的恶性转化有关。然而，到目前为止，尚未使用高通量 DNA 测序来证明其与非典型子宫内膜增生的联系。
目的：研究饮食引起的肥胖后具有非典型子宫内膜增生的小鼠肠道微生物组的变化。
研究设计：研究设计为前瞻性随机实验。为雌性 CD-1 小鼠喂食高脂饮食（HFD），持续 13 周或 26 周，以诱导肥胖。另外，给一组小鼠口服 17β-雌二醇（E2）以诱导子宫内膜增生，然后处死。对从小鼠粪便样本中提取并扩增的 DNA 进行了元基因组测序。
结果：暴露于高脂饮食的小鼠变得肥胖。 HFD + E2 组小鼠子宫明显增大。 26 周后，HFD 和 HFD + E2 组小鼠均表现出子宫内膜腺体数量增加。在诱导的非典型子宫内膜增生的小鼠肠道菌群中发现了分类学和功能上的差异。小鼠的粪便微生物群落主要由三种门的微生物组成：纤毛虫，拟杆菌和变形杆菌。在 HFD 组中，小鼠表现出较高的 Firmicutes / Bacteroidetes 比值，而在 HFD + E2 组中，小鼠表

现出更低的比值。 COG 和 KEGG 分析预测了微生物群组成变化引起的功能变化，并证明了与代谢相关的 KEGG 功能类别的差异富集。
结论：诱发非典型子宫内膜增生的小鼠肠道微生物组显示出明显的分类学变化。由于宿主和肠道微生物组之间的相互作用是双向的，因此需要进一步研究来阐明这种关系。

PO-536
Construction of a prognostic immune-associated gene signature for cervical cancer

Lixiao Liu,Luya Cai,Xingwei Nan,Piaopiao Ye,Jiahua Chen,Xiaojian Yan
The First Affiliated Hospital of Wenzhou Medical University

Purposes: Cervical cancer is one of the most common malignant tumors in women, and cervical squamous cell carcinoma (SCC) is the main type of cervical cancer. Due to HPV vaccines, the incidence rate of cervical cancer is much lower than before in developed countries but is still high in developing countries, especially in China, which is the largest developing country in the world. Cervical cancer staging is one of the most commonly used indicators to evaluate prognosis, but this system only considers anatomical factors, not the individual genetic information and immune status of patients. To better predict the overallsurvival of cervical SCC, we established a trustworthy personalized immune prognostic signature.
Materials and methods: The gene expression profiles of cervical squamous cell carcinoma patients were downloaded from The Cancer Genome Atlas(TCGA) database (https://tcgadata.nci.nih.gov/tcga/).Clinical data such as age, tumor grading, staging and OS were also downloaded from the TCGA database. In addition, we obtained the relevant information of 11 normal samples from the GTEx database.A total of 254 tumor samples and 13 normal samples were obtained.Immune-related genes significantly related to prognosis were screened out and a model based on immune-related gene expression score was constructed to individually predict the prognosis of cervical cancer. In addition, this model was combined with clinical characteristics for comprehensive analysis to improve the accuracy of overall survival prediction.
Result: By comparing tumor and normal tissue samples from the TCGA database, we screened 425 differentially expressed genes, including 235 upregulated genes and 190 downregulated genes. there was a significant difference in gene expression between the SCC samples and normal samples. Then, we intersected the differentially expressed genes with the 4298 immune-related genes downloaded from ImmPort and obtained 254 candidate genes.To identify the differentially expressed immune-related genes related to prognosis, we performed univariate Cox analysis of the 254 genes in 254 SCC samples and screened 92 immune genes related to prognosis.Next,to screen genes with higher correlation and prevent overfitting of the model, we used theLASSO algorithm to reduce the number of candidate genes to 23. Then, stepwise multivariate Cox regression analysis was carried out.And 11 genes closely related to prognosis were finally selected. We selected 11 immune-related genes to construct a predictive model to evaluate the prognosis of patients with cervical cancer. The formula was as follows: risk score =0.344271*NRP1-0.55453*CCL17+0.271004*ANGPTL4-0.36469*DES+0.239425*SPP1+0.364611*ESR1+0.204052*CXCL1-0.1664*HLA-DRA+0.294187*TNF+0.46998*SLC22A17+0.240847*TGFA. Multiple Cox regression was used to calculate each regression coefficient, which was multiplied by the gene expression level to obtain the risk score.This risk model significantly divides patients into low-risk and high-risk groups. Survival analysis showed that the high risk scores obtained by this model were significantly correlated with adverse survival outcomes. Theimmune-related gene expression risk score model was demonstrated to be an independent prognostic factor and can well predict the prognosis of patients with cervical squamous cell carcinoma.

Conclusion: We successfully constructed a model that can predict the prognosis and reflect the tumor immune microenvironment of patients with cervical squamous cell carcinoma, which provides new insights into postoperative treatment strategies, promotes individualized therapy, and offers potential new targets for immunotherapy.

PO-537

微环境和相关基因预测宫颈癌患者的结局:TCGA 的证据和生物信息学分析

倪惠华,徐云钊
南通大学附属医院

宫颈癌是影响女性生殖健康最常见的癌症之一。人乳头状瘤病毒感染（HPV）已经确定为肿瘤发生的重要原因。HPV 感染可能诱发免疫系统变化以及限制宿主的免疫反应。免疫治疗是提高局部晚期和复发性宫颈癌（特别是宫颈腺癌）患者整体存活率的必要手段。我们采用了 304 例 TCGA 相关样本,评估了宫颈腺癌患者免疫细胞的功能,更好地了解肿瘤微环境细胞和免疫细胞的状态。通过功能富集分析、通路富集分析和 PPI 网络建设进行探讨差异表达基因（DEGs）。分析确定了 425 个 DEGs，其中包括 295 个上调差异表达基因和 130 个下调差异表达基因。其中上调差异表达基因 CCL5 在良好的生存结局里表达显著,这意味着 CCL5 可以作为宫颈腺癌病人预后的新的生物标志物。我们进一步关注 CCL5 在宫颈腺癌中作为枢纽基因，它与几种免疫细胞数量的增加有显著的相关性。M1 巨噬细胞的细胞类型在高免疫评分组中显著升高，这与较好的总生存率相关。因此我们得出结论，CCL5 是 CESC 的一个有前途的预后生物标志物，也是一个新的化疗靶点

PO-538

Identification of key pathways and genes in the progression of cervical cancer stem cell using bioinformatics analysis

Shizhou Yang,Tingting Chen,Xing Xie
Women's hospital，School of Medicine，Zhejiang University.

Cancer stem-cell like cells are thought to be the initiation of cancer and studies demonstrate there are cancer stem-cell like cells in the cervical cancer. High-risk human papillomavirus (HR-HPV) is a causal factor for cervical cancer, of which HPV16 is the predominant genotype and are demonstrated to influence proliferation, but it remains unknown whether HR-HPV oncoproteins contribute to the maintenance of the stemness properties of cervical cancer stem-cell like cells. We previously found HPV16 E7 maintain the stem-ness of SiHa and CaSki sphere cells and 320 differential expressed genes(DEGs) were identified in SiHa sphere cells with HPV16 E7 knockdown and controls. We carried out a series of bioinformatic analyses to learn more about the 320 DEGs, and found that DEGs were significantly enriched in the “cell circle”, “DNA replication” and “Oocyte melosls” terms through Genomes pathway enrichment and “cell cycle”，“cell cycle process” and “mitotic cell cycle” through Gene Ontology annotation. A total of 23 hub genes including CCNA2, WDHD1, MCM4, MCM2, PLK1, PCNA, CDC20, CDC6, CDC45, CHTF18, MCM5, MCM6, RFC2, CDK2, TIMELESS, GINS3, GINS4, GINS1, GINS2, NDC80, AURKB, BRCA1and CCNB1were predicted through protein-protein interactions(PPIs) and were significantly enriched in the “cell cycle”, “DNA replication”, “Progesterone-mediated oocyte maturation” terms and “mismatch repair” pathway through gene set enrichment analysis and PCNA was the core gene. PCNA and 4 stem-ness relative genes involved in PPI network

including APC2, EZH2, RACGAP1 and PHF19 were screened by co-expression analysis and enrichment analysis. Of those the expression of 3 (PCNA，APC2 and EZH2) were verified by RT-PCR and western blot. Suggested that PCNA, APC2, EZH2 may involved in HPV16 E7's maintenance of stem-ness in SiHa sphere cells. Our findings may improve the understanding of the process of stem-ness maintenance and the underlying molecular events in SiHa sphere cells which may be therapeutic targets for the treatment of cervical cancer.

PO-539

Piperlongumine induces reactive oxygen species (ROS) mediated proteasome dependent downregulate of survivin in human ovarian cancer

Xingwei Nan,Jiahua Chen,Xiaobo Yu,Bingxin Li,Xiaojian Yan
The First Affiliated Hospital of Wenzhou Medical University

Background Survivin is regarded as the strongest anti-apoptosis protein that has been implicated in both control of cell division and inhibition of apoptosis, and its overexpression in epithelial ovarian cancer (EOC) is associated with chemoresistance and poor survival. In previous study, we have suggested that piperlongumine (PL) induces apoptosis and synergizes with cisplatin or paclitaxel in human ovarian cancer cells in vitro. Further, we investigate the functional impacts of PL on survivin expression in EOC cells and delineate its mechanism of action.
Methods Expression and transcriptional level of survivin was detected by western blotting and Real-Time PCR, respectively. Reactive oxygen species (ROS) generation was examined by staining cells with a ROS indicator Dihydroethidium (DHE). Ovarian cancer cells were transfected by lentivirus transformed with pCDH-Neo-Venus-survivin plasmid to overexpress survivin and the stable cell lines for subsequent experiments. MTT assay was utilized to quantify cell proliferation. Nude mice xenograft assay was performed to evaluate the antitumor effects of PL in vivo.
Results The data of our experiments demonstrates that PL rapidly reduces survivin levels in EOC via ROS-mediated proteasome dependent pathway in vitro, while concurrently exerting a significant inhibitory effect on proliferation of EOC cells. Moreover, PL inhibits EOC cells xenograft tumor growth and downregulates survivin in vivo.
Conclusions Our investigation demonstrates for the first time that PL induces ovarian cancer apoptosis by inhibiting survivin via ROS-mediated proteasome dependent pathway.

PO-540

Identification of a seven-gene signature associated with glycolysis to predict the prognosis of patients with cervical cancer

Luya Cai,Lixiao Liu,Luyao Pan,Xingwei Nan,Xiaojian Yan
The First Affiliated Hospital of Wenzhou Medical University

Background: cervical cancer is one of the most common malignant tumors in women. Gene signature is considered reliable and can predict the survival rate of cancer patients. However, the relationship between glycolysis related gene signature and overall survival rate of cervical cancer patients has not been studied.

Materials and methods: We extracted the mRNA expression profiles of cervical cancer patients and normal cervical tissues from the University of California, Santa Cruz (UCSC) database. We screened out these differentially expressed genes. Secondly, univariate and multivariate Cox analysis were performed to screen out the glycolysis related genes which can predict the prognosis of cervical cancer patients. In addition, according to the above selected genes, risk score model was constructed to predict the overall survival rate of patients. Finally, the selected mRNAs were verified by quantitative real-time PCR and tumor amine database.
Results: the survival related mRNAs were divided into protective type (HR < 1) and risk type (HR > 1). In addition, by constructing the prognostic risk score model, we found that the overall survival rate of low-risk group was significantly higher than that of high-risk group. Moreover, gene signature is a prognostic indicator independent of other clinicopathological features. Finally, through the verification of PCR and oncomine database, the results showed that compared with normal cervical tissue, the expression level of selected mRNAs in cervical cancer tissue was significantly higher, which was consistent with our previous research results, which further confirmed our study.
Conclusion: We constructed glycolysis related gene signatures by bioinformatics to predict the prognosis of patients with cervical cancer. It is of great clinical significance to understand the relationship between glycolysis and cervical cancer, and to provide new targets and ideas for individualized treatment.

PO-541
一种基于熔解曲线分析技术的互锁 DNA 级联系统检测基因突变

章伟,肖先金,汪宏波
华中科技大学同济医学院附属协和医院

单核苷酸多态性主要是指在基因组水平上由单个核苷酸的变异所引起的 DNA 序列多态性。它是人类可遗传的变异中最常见的一种，占所有已知多态性的 90%以上。单碱基突变导致遗传信息发生改变，可能引起遗传性疾病、肿瘤、遗传倾向疾病等。因此单碱基突变的检测对肿瘤和其他基因相关疾病的预防、诊断、治疗及预后评价极为重要。熔解曲线分析方法目前是检测单碱基突变的最常用方法之一。但是，目前的熔解曲线分析技术不能同时具有通用性和抗 PCR 副产物干扰的能力，因而极大的限制了其临床应用。因此，我们需要解决的科学问题就是现有的熔解曲线方法无法兼具通用性与抗 PCR 干扰的检测性能。在这里，我们发明了一种基于通用熔解曲线分析的互锁 DNA 级联系统（ICU-MCA）。该方法基于探针溶解曲线技术，通过设计桥梁 DNA 链实现突变型 DNA 和野生型 DNA 的良好区分。更重要的是，该方法仅需更改桥梁 DNA 链的序列，即可取代传统探针熔解曲线分析中的特异且昂贵的探针，从而完成多路检测。我们对合成单链 DNA 上 BRAC1 / 2 基因的 6 个单基点突变进行了 6 重检测，结果显示了良好的突变型 DNA 和野生型 DNA 的区分效果。此外，为了在实际临床样本中验证该方法的可行性，我们验证了 ICU-MCA 和 PCR 是具有兼容性的。最后，我们成功检测到卵巢癌患者外周血中 BRCA1 / c.2082C> T 和 BRCA2 / c.7397T> C 的 DNA 突变，与 Sanger 测序法结果相一致。总体而言，ICU-MCA 是检测单个检测突变的解链曲线分析领域中的最佳方法之一。

PO-542
年轻早期子宫内膜癌保留生育功能治疗的前瞻性研究

陈思敬,王娜,刘舰鸿,王卡娜,郑莹
四川大学华西第二医院

目的：本研究总结现仍于四川大学华西第二医院进行的“左炔诺孕酮宫内缓释系统在早期子宫内膜癌保留生育功能治疗中的临床价值”前瞻性研究初步结果，阐述其保育疗效、妊娠结局等，旨在为探索保育治疗指针、规范诊治流程、寻求最佳治疗方案提供佐证。

材料与方法：纳入标准：①年龄≤40 岁；②病理诊断为 EC；孕激素受体阳性；③影像学检查提示病变局限于子宫内膜层；④血清 CA125≤35 U/L（必要时腹腔镜检查)。研究方法：①多学科会诊：经我院资深病理学专家复核、完善病史及相关检查，进行生殖内分泌、生殖、遗传、减重门诊等会诊。②治疗药物包括口服高效孕激素[醋酸甲羟孕酮、宫内安置 LNG-IUS、促性腺激素释放激素类似物。③治疗期间每 3 月进行一次宫腔镜下内膜病理学评估。治疗 6-9 月后，对于完全缓解（CR）的患者推荐辅助生殖，无反应或病情进展的患者建议手术治疗。

结果：遵循标准 2017 年-2019 年研究共纳入 12 例 EC 患者,予以 MPA 500mg 治疗 2 例、MPA+LNG-IUS 治疗 2 例、LNG-IUS 治疗 5 例 ，CR 率 100%（9/9），获得病理 CR 的平均时间为 4.2 月，复发率 22.2%（2/9），全部患者现均无瘤存活。不符合上述纳入标准但仍要求进行保留生育 EC 患者 4 例。3 例患者 MRI 评估存在极浅肌层侵犯（病灶局限于结合带内），经 MRI 定位后病理证实为 G1 EC 伴极浅肌层侵犯，予以 LNG-IUS+MPA/MA±GnRRHa 治疗后 CR（100%，3/3），获得 CR 平均时间为 6 月，无复发。1 例患者病理诊断为中分化（G2）EC，MRI 评估病灶局限于内膜层，予以 MA 治疗后获得 CR,8 月后复发为 AH，选择 LNG-IUS 再次保守治疗后失访。

结论：在经多科会诊、充分全面评估后的年轻早期 G1 无肌层侵犯 EC 患者予以 LNG-IUS 治疗，获得了与口服高效孕激素相当的完全缓解率，且用药依从性高、不良反应更易接受，在完全缓解后可继续使用以降低复发率，但生育结局尚需进一步随访。个案显示，对 IA 期 G2 无肌层侵犯 EC、 IA 期 G1 伴极浅肌层侵犯 EC 患者进行保留生育治疗同样有效。但由于研究时间尚短，远期复发事件及生育结局尚需进一步完善。

PO-543
Sevoflurane and isoflurane increase the sensitivity of ARK2 cells to cisplatin

Fang Xue,Yibin Lin,Shangdan Xie,Xueqiong Zhu(Corresponding author)
Department of Obstetrics and Gynecology， the Second Affiliated Hospital of Wenzhou Medical University.

Objective: To investigate the effect of sevoflurane and Isoflurane on the biological behavior of endometrial carcinoma cells, as well as exploring the effects and mechanisms of sevoflurane and isoflurane on cisplatin sensitivity of endometrial cancer cells.

Methods: ARK2 endometrial carcinoma cells were treated with 3% sevoflurane, 2% isoflurane, 10 μmol/L cisplatin or two anesthetics combined with cisplatin, respectively. Cell proliferation was evaluated by the CCK8 and BrdU assay. Cell migration was detected by Transwell assay. Immunofluorescence (IF) and Western blotting (WB) were performed to investigate the expression of E-cadherin and Vimentin in ARK2 cells.

Results: After treated with sevoflurane or Isoflurane, cell proliferation and migration rate in ARK2 cells were significantly inhibited. In addition, IF and WB results showed the expression of migration-related protein E-cadherin was increased accordingly, while Vimentin was decreased after sevoflurane or isoflurane treatment. Compared with cisplatin treatment, the proliferation and migration rate of ARK2 cells in sevoflurane + cisplatin or isoflurane + cisplatin groups were significantly decreased. In comparsion with cisplatin alone, the expression of E-cadherin was significantly increased, and the expression of Vimentin was notably decreased after combined use of anesthetics and cisplatin.

Conclusion: Sevoflurane and isoflurane could inhibit the progression and migration of endometrial carcinoma cells. At the same time, they could also promote the inhibitory ability of cisplatin on cell proliferation and migration, which increase the chemosensitivity of ARK2 cells to cisplatin.

PO-544

A functional polymorphism in the poly(ADP-ribose) polymerase-1 gene is associated with platinum-based chemotherapeutic response and prognosis in epithelial ovarian cancer patients

jian zhao
the People Hospital of Shijiazhuang

Objective: To explore the effects of two polymorphisms of PARP-1 on the susceptibility to epithelial ovarian cancer (EOC), the platinum-based chemotherapeutic response, and the prognosis of northern Chinese patients.
Materials and methods: This case-control study included 710 EOC patients in the case group and 700 healthy women in the control group. Two polymorphisms (rs1136410 and rs8679) of PARP-1 were genotyped by polymerase chain reaction and ligase detection reaction.
Results: There was no significant difference in the genotype or allele frequencies of the two SNPs between the case and control groups. However, the CC genotype of rs1136410 was significantly associated with a favorable response to platinum drugs. In assition, Kaplan–Meier plots showed that rs1136410 was significantly associated with the PFS of EOC patients.
Conclusion: The rs1136410 polymorphism may serve as a potential marker for predicting the response to platinum agents and prognosis of EOC patients treated with surgery and platinum-based chemotherapy.

PO-545

Stromal CYR61 overexpression is associated with chemoresistance and poor prognosis in ovarian cancer

Ping Jin
Cancer Biology Research Center (Key Laboratory of the Ministry of Education)， Tongji Hospital， Tongji Medical College， Huazhong University of Science and Technology， Wuhan， Hubei

Objectives To evaluate the prognostic value of stromal CYR61 expression in ovarian cancer and explore the possible mechanism.
Methods Pan-cancer genomic profiles and multidatabase of ovarian cancer were adopted to assess the prognostic value of CYR61 mRNA expression respectively in multiple cancers and epithelial ovarian cancer (EOC). GSE9891 were employed to analysis the clinical relevance of CYR61 mRNA expression to the stage and prognosis in ovarian cancer. The expression patterns of CYR61 were analyzed using multiple datasets and were further confirmed using immunofluorescence assay. CYR61 signature was screened out and used for GO, KEGG, gene set enrichment analysis(GSEA) and prognosis analysis. The prognostic value and clinical relevance of CYR61 expression on protein level was assessed using our epithelial ovarian cancer tissue microarray samples.
Results Elevated CYR61 mRNA expression was evidently associated with poor survival in some epithelial carcinomas and showed a significant association with short overall survival (OS) and worse progression-free survival (PFS) in EOC patients. In late stage, CYR61 expression was obviously elevated and correlated with worse overall survival (OS) and progression free survival (PFS). Multiple datasets analysis and immunofluorescence showed that CYR61 was significantly higher in mesenchymal phenotype and tumor stroma. A 38-gene "CYR61 associated stromal signature" was proved to be correlated with ECM remolding and stroma associated chemoresistance, and succeeded

in discriminating the OS of EOC patients. Finally, CYR61 expression in the stroma, instead of the epithelia, showed a significant prognostic effect and resistant relevance in our EOC tissue microarray samples.
Conclusion Stromal CYR61 expression is correlated with chemoresistance and worse prognosis of EOC patients.

PO-546
子宫内膜癌及非典型增生患者保留生育功能治疗后复发子宫切除 15 例临床分析

李远婷[1],王益勤[1],何翊娇[1],汤惠茹[2],徐礼江[3],何勉[4],李维丽[5],陈春林[5],张伟峰[6],王建六[1]
1.北京大学人民医院 2.北京大学深圳医院 3.佛山市第一人民医院
4.中山大学附属第一医院 5.南方医科大学南方医院 6.宁波妇女儿童医院

目的：初步探讨子宫内膜癌（endometrial cancer，EC）及非典型增生（endometrial atypical hyperplasia，EAH）患者保留生育功能治疗后复发行子宫切除患者的临床特征及结局。
方法：回顾性收集 6 家医院自 2003 年至 2019 年所有行切除子宫手术的经保留生育功能治疗后复发的 EC 及 EAH 患者的临床资料。根据患者子宫切除原因分为复发后直接切除、复发后保育治疗无效切除、保育治疗完全缓解且成功妊娠后切除及反复复发后切除组，分析各组患者的临床特征。
结果：（1）本研究共纳入 15 例符合条件的患者，包括 EC 6 例，EAH 9 例。中位复发时间 12 个月（3-92 个月），初次和复发后保留生育治疗均以口服孕激素为主要治疗方式，复发后患者更多联合促性腺激素释放激素激动剂及二甲双胍治疗。（2）手术方式及结局：9 例患者行全（次全）子宫切除术，6 例行内膜癌分期手术。术后 3 例患者子宫病理较宫腔镜诊刮病理出现升级，5 例（5/10）复发病理为 EC 的患者术后病理有肌层浸润。术后中位随访时间 17 个月（3-118 个月），所有患者均无瘤生存。（3）复发后治疗无效与反复复发的 7 例患者，6 例合并肥胖或超重，6 例合并胰岛素抵抗。其中术后病理有 2 例发现合并同时性卵巢原发肿瘤，1 例合并卵巢转移。
结论：子宫内膜病癌或非典型增生保留生育功能治疗后复发的患者，如合并超重或肥胖、胰岛素抵抗，再次保育治疗的失败风险增高。复发后治疗无反应或反复复发患者，建议行手术治疗。复发患者行子宫切除术后通常有较好的预后。

PO-547
SIS3, a specific inhibitor of smad3, preserves ovarian function during chemotherapy and protects against cancer progression

Mengge Cui
Tongji Hospital， Tongji Medical College， Huazhong University of Science and Technology

Background：Cyclophosphamide (CTX) is a chemotherapeutic agent widely used for patients with malignancies and autoimmune diseases. Ovarian function impairment has thought to be one of the main adverse effects caused by cyclophosphamide especially in patients of reproductive age. TGF-β /Smads signaling has a supportive role in follicular development as well as cancer progression and Smad3 is a key mediator. Therefore, our study is determining the accessibility of SIS3, a specific inhibitor of smad3, in protecting ovaries during cyclophosphamide treatment and anticancer effects.

Methods：Seven-week-old female C57 mice were randomly assigned to six groups: a control group, a SIS3 group, a CTX1 group, a CTX1+SIS3 group, a CTX2 group, and a CTX2+SIS3 group. SIS3 (5ug/g) or DMSO was administered intraperitoneally to mice before chemotherapy for 5 days. Then, animals received a single dose of cyclophosphamide (CTX1:80mg/kg, CTX2:120mg/kg) or normal saline intraperitoneally. After that, the mice were continuously given SIS3 or DMSO for 10 days and then sacrificed. HE staining and Follicle counting, CCK-8, Western Blot, and PCR were employed to evaluate the effects. And now we are doing further researches on mouse tumor models.
Results：The follicle counting showed that cyclophosphamide mainly influenced primordial follicle and atretic follicles. Co-administration with SIS3 reduced the primordial follicular depletion and significantly decreased the amount of atretic follicles. The CCK-8 assay was used to determine that SIS3 was exactly capable of suppressing proliferation of A2780 cells in a dose-dependent way in vitro. Besides, the mRNA expression of Myc, which was ascribed great important to promoting cell proliferation, was decreased after the usage of SIS3.
Conclusions：SIS3 can preserve the primordial follicle pool from cyclophosphamide and protect against cancer progression. These findings suggest that SIS3 may be a potentially effective pharmacologic approach for ovarian function during genotoxic chemotherapy.

PO-548

Increased Oncostatin M expression is overexpressed in ovarian cancer and promotes tumor progression

Yuyang Zhang[1],Haote Jiang[1],Xiaowan Huang[1],Xuan Liu[1],Huihua Cai[1],Huafeng Shou[2]
1.the first affiliated hospital of wenzhou medical university
2. Zhejiang Province People's Hospital

Abstract
Oncostatin M (OSM) is assocated with multiple biological responses including growth and differentiation. Recent studies have shown that OSM expression is increased in several types of cancer. However, its functional roles in tumor progression remain largely unknown, especially in ovarian carcinoma (OC). In this study, we show that oncostatin M (OSM) was expressed in OC carcinoma and invasive OC cell lines. OSM stimulation could induce the expression of mesenchymal markers while repressing E-cadherin expression via the STAT3 signaling pathway. These epithelial-mesenchymal transition (EMT)-related changes were further associated with enhanced OC cell progression and metatasis. Furthermore, STAT3 knockdown significantly reversed OSM-mediated EMT and OC cell motility. Our data demonstrate the capacity of OSM to regulate the EMT program that promotes tumorigenic properties, and STAT3 as a master switch of OSM-induced EMT. These findings highlight the importance of OSM in the cytokine-mediated phenotypic reprogramming of ovarian cancer cells and may represent a viable pathway for therapeutic intervention.

PO-549

Co-Existing Serous Epithelial Ovarian cancer with Hepatocellular Carcinoma: A Rare Case Report

Yuyang Zhang,Haote Jiang,Xiaowan Huang,Jianmin Li,Yunfeng Shan,Jinglin Xia
the first affiliated hospital of wenzhou medical university

Abstract: Serous epithelial ovarian cancer co-existing with primary liver cancer is a rare situation, and only few cases have been reported that patients have multiple primary cancers (MPCs) with ovarian

cancer. We present the case of a 57-year-old patient whose imaging examination results suggested liver and ovarian lesions. The patients underwent a positron emission computed tomography that revealed the presence of hypermetabolic areas in bilateral adnexal, uterus and pelvic region. After discussion at the multidisciplinary team meeting, the patient underwent surgery and her pathological results were high-grade serous epithelial ovarian cancer and hepatocellular carcinoma (mixed type), respectively. Complete cytoreduction was successfully performed. The follow-up of the patient will be continued. The present study delineates a rarely reported case of disease with a high incidence rate. Therefore, further studies are required for the perfection of its diagnosis, prevention, and treatment.

PO-550

前瞻性、开放、单臂临床研究评价聚乙二醇化重组人粒细胞刺激因子初级预防宫颈癌同期放化疗中性粒细胞减少的有效性和安全性期中分析

尤静,李小凡,古小旋,袁一迪,王维虎
北京大学肿瘤医院

研究目的：通过前瞻性、开放、单臂临床研究，评价聚乙二醇化重组人粒细胞刺激因子用于初级预防宫颈癌同步放化疗中性粒细胞减少的有效性和安全性。

材料与方法：自 2019 年 5 月拟入组 52 例宫颈癌患者，入组标准：（1）年龄≥18 岁，≤70 岁；（2）2018 FIGO 分期为 IIIC1、IIIC2、IVA 期和仅存在腹股沟淋巴结转移的 IVB 期，组织病理类型为宫颈鳞癌、腺癌或腺鳞癌；（3）接受同期放化疗，化疗方案为 TP 双药；（4）KPS 评分≥70 分；（5）入组前血常规在正常范围且无出血倾向。排除标准：（1）有难以控制的感染；（2）骨髓异常增生或其他造血功能异常；（3）肝功能在正常值上限 2.5 倍以内；肾功能在正常值上限 1.5 倍以内；（4）对本品过敏等。治疗方案：放疗采用外照射联合后装腔内放疗。外照射剂量为 95%PGTVnd（转移淋巴结）60Gy/25f；95%PTV（子宫+宫颈+双附件+部分阴道+盆腔/腹盆腔淋巴引流区）45Gy/25f。后装腔内放疗剂量：A 点剂量 28Gy/4f。化疗采用紫杉醇/紫杉醇脂质体+顺铂方案进行化疗，每 3 周进行 1 次，共 4 周期。每个化疗结束后 48 小时皮下注射津优力，体重≥45kg 者给予 6mg，体重＜45kg 者给予 3mg。治疗期间复查血常规，根据 CTCAE 5.0 评估中性粒细胞减少发生情况及中性粒细胞减少伴发热发生情况。

结果：截至 2020 年 7 月 3 日，共入组 35 例符合入组标准、同时不符合排除标准的患者，其中 2 例患者出组（1 例因诊断调整出组，1 例因疫情原因未能应用聚乙二醇化重组人粒细胞刺激因子出组），18 例完成治疗，15 例正在治疗中。共 18 例患者可供分析。其中，16 例为鳞癌，2 例为腺癌。根据 2018FIGO 分期，11 例为 IIIC1r 期，5 例为 IIIC2r 期，1 例为 IVA 期，1 例为 IVB 期。这 18 例患者共完成 67 个治疗周期，有 2 例患者在 2 个治疗周期发生 3/4 度中性粒细胞减少，1 例发生中性粒细胞减少伴发热（FN）。3/4 度中性粒细胞减少发生率为 11.11%，与既往本院宫颈癌放化疗数据（42%）相比，3/4 度中性粒细胞减少发生率明显降低。发生 1 例（5.55%）因中性粒细胞减少导致的化疗药物剂量调整，未发现与研究药物相关的严重的不良事件。

结论：期中分析结果显示，聚乙二醇化重组人粒细胞刺激因子初级预防可明显降低宫颈癌放疗同期 TP 方案化疗中性粒细胞减少的发生，使治疗顺利进行。

PO-551

SIK2 参与卵巢癌代谢重编程的研究进展

张晓红,刘淑娟
空军军医大学西京医院

能量代谢异常是癌细胞最显著的特征之一，代谢重编程在肿瘤存活、增殖、转移等多个环节发挥重要的促进作用。有氧糖酵解和脂肪酸代谢异常是肿瘤细胞能量代谢的重要特点，线粒体作为调控细胞代谢最重要的细胞器，在其中发挥着关键作用。盐诱导激酶 2（SIK2）属于 AMPK 家族，与糖脂代谢和卵巢癌转移密切相关。文章就 SIK2 在卵巢癌代谢重编程中的作用研究进展作一综述。

PO-552

Significance of serum and pathological biomarkers changes during fertility-sparing therapy in patients with endometrial cancer or atypical hyperplasia

Yiqin Wang,Rong Zhou,Xiaobo Zhang,Huixin Liu,Danhua Shen,Jianliu Wang
Peking University People's Hospital

Purpose: This study analyzed the changes of serum and pathological biomarkers during fertility-sparing (FS) therapy of EC or EAH to investigate their implications for early prediction of treatment efficacy.
Methods: A retrospective analysis of EC or EAH patients who received FS therapy between 2012 and 2016 was performed. Serum and endometrium sampling were obtained for each patient at three time points: baseline, 3-6 months' treatment and the end of FS treatment.
Results: For the 53 recruited patients, overall complete response, recurrence and pregnancy rates were 94%, 26% and 36.4%. The serum biomarkers of HbA1c and HOMA-IR remained stable during the treatment, while pathological markers including PRB and Ki67 expression diminished significantly. Multivariate analysis showed that baseline HOMA-IR≥2.5 negatively affected treatment time to remission (OR 0.206; p=0.017). While marked reduction of PRB (≥30%) at 3-6 months' treatment correlated with faster remission (OR 5.788; p=0.010).
Conclusion: For EC and EAH patients, baseline status of insulin resistance and marked reduction of PRB following initial treatment help predict response to FS therapy.

PO-553

miR-34a 和 miR-145 在宫颈癌及癌前病变中的表达及其与 HPV16 感染的相关性

喻金梅,邹美燕,安云婷
江西省妇幼保健院

目的 探讨 miR-145 和 miR-34a 在宫颈癌及癌前病变患者宫颈组织中的表达，并分析 HPV16 感染的相关性；
方法 选择我院 2017 年 6 月至 2020 年 6 月经刮诊病理学确诊的宫颈癌患者 41 例为 A 组，癌前病变患者 42 例为 B 组，宫颈炎患者 40 例为 C 组。采用 RT-PCR 法检测 miR-145 和 miR-34a 在三组患者宫颈组织中表达水平，同时采用原位杂交法检测三组患者 HPV16 的表达阳性率，分析三组患者宫颈组织

中 miR-34a 和 miR-145 的表达水平及 HPV16 感染阳性率的差异，同时采用 Spearman 相关性分析三组患者宫颈组织中 miR-34a 和 miR-145 的表达与 HPV16 感染之间的相关性；
结果 三组患者宫颈组织中 miR-34a 和 miR-145 的表达水平差异显著，同时宫颈癌组水平显著低于宫颈炎和癌前病变组，宫颈癌前病变组水平显著低于宫颈炎组患者（P＜0.05）。宫颈癌组患者 HPV16 感染阳性率显著低于癌前病变组患者,同时癌前病变组患者 HPV16 感染阳性率显著低于宫颈炎组患者(P＜0.05)。据 Spearman 相关性分析，宫颈癌及癌前病变患者组织中 miR-34a 和 miR-145 的表达与 HPV16 感染呈显著负相关（P＜0.05），同时宫颈癌组织中相关性更高，宫颈炎患者组织中上述表达与 HPV16 感染无相关性（P＞0.05）；
结论 宫颈癌及癌前病变患者 miR-145、miR-34a 呈低表达，与 HPV16 感染显著相关，miR-145、miR-34a 表达水平越低，患者 HPV16 感染风险越高，未来可将 miR-145 和 miR-34a 动态监测结果作为宫颈癌及癌前病变早期筛查与诊断的重要标志物。

PO-554

CNR1 在子宫内膜癌孕激素耐药机制中的研究

丁菲,邱春萍,姜洁
山东大学齐鲁医院

目的：探讨 CNR1 与子宫内膜癌孕激素耐药的相关性及潜在作用机制
材料与方法：构建 Ishikawa 孕激素耐药细胞系（IshikawaPR），MTT 验证其耐药性，RT-PCR 及 WB 检测 CNR1 在 Ishikswa 及 IshikawaPR 中的表达；在 Ishikawa 及 IshikawaPR 基础上构建 Ishikawa-shNC、Ishikawa-shCNR1、IshikawaPR-shNC、IshikawaPR-shCNR1，通过 EDU 增殖实验、MTT、平板克隆、流式细胞周期实验、Transwell、划痕实验检测细胞的增殖、侵袭迁移及凋亡，RT-PCR 及 Western Blot 验证细胞增殖、凋亡、侵袭迁移相关分子 mRNA 和蛋白的表达；四组细胞进行裸鼠体内成瘤实验，给予孕激素处理，观察四组小鼠成瘤情况以及对孕激素的反应；IHC 验证小鼠肿瘤组织中的 CNR1 及相关分子表达情况。
结果：成功构建 Ishikawa 耐药细胞株，耐药指数达 5。IshikawaPR 细胞系中 CNR1 的 mRNA 及蛋白表达明显高于 Ishikawa 细胞系，差异有统计学意义（P＜0.01）。IshikawaPR-shCNR1 与 IshikawaPR-shNC 相比，可以促进细胞凋亡，抑制增殖及侵袭迁移能力，与 Ishikawa-shCNR1 细胞相比无明显差异，表明子宫内膜癌孕激素耐药可能与 CNR1 相关。IshikawaPR-shCNR1 与 IshikawaPR-shNC 相比，CCD1、CDK4、N-Cadherin、MMP2 等增殖、迁移相关分子表达降低，BAX、BAD 等凋亡相关分子表达增高,差异有统计学意义（P＜0.05），与 Ishikawa-shCNR1 细胞相比，分子表达无明显差异。IshikawaPR-shNC 组小鼠移植瘤形成和生长速度明显高于其他三组（P＜0.01）,IshikawaPR-shCNR1 组与 Ishikawa-shCNR1 组无明显差异。免疫组化显示 IshikawaPR-shNC 组 CCD1、CDK4、N-Cadherin、MMP2 等增殖、迁移相关分子表达升高，BAX、BAD 等凋亡相关分子表达降低（P＜0.05），与体外研究结果一致。
结论：CNR1 促进子宫内膜癌孕激素耐药发生，可能通过增殖等相关通路发挥作用，为孕激素耐药子宫内膜癌分子靶向治疗提供新的思路和线索。

PO-555

PAX2 介导脂肪酸代谢途径促进卵巢癌细胞生长

冯雁,李力,王琪
广西医科大学附属肿瘤医院

目的：高级别卵巢浆液性癌（HGSC）占上皮性卵巢癌的 39%-62%，临床预后不佳。配对盒基因 2 (paired box 2，PAX2)通常在正常卵巢表达沉默，而在高级别卵巢浆液性癌（high-grade serous ovarian cancer，HGSC）中高表达，被认为与卵巢起源相关，但是 PAX2 高表达与卵巢癌患者的预后关系尚未由有定论。因此本研究主要探讨 P53 突变的 HGSC 组织 PAX2 表达与患者预后关系及其作用机制。

方法：分析 152 例 HGSC 中 P53 和 PAX2 蛋白表达与患者无进展生存期（PFS）关系；构建的 P53 缺陷及 K-Ras（KRASG12D）突变的转基因小鼠模型，分离获得恶性转化的小鼠输卵管上皮细胞 RM，慢病毒转染 PAX2 基因至 RM 细胞，进而建立重度免疫缺陷（Severe combinaed immunodeficiency，SCID）小鼠卵巢的致瘤模型，研究过表达 PAX2 基因对 RM 细胞生长，集落形成，侵袭，移植瘤转移及对 SCID 小鼠生存期影响；基于 iTRAQ 的蛋白质组分析 PAX2 调控卵巢癌细胞生长的机制。

结果：PAX2 基因表达缩短 P53 突变的 HGSC 患者的 PFS （HR=2.069,P=0.009）； PAX2 促进 RM 细胞在活体内外的生长和转移并显著缩短小鼠的生存期。通过 iTRAQ 蛋白质组发现高表达 PAX2 基因的 RM 细胞中脂肪酸代谢和氧化磷酸化通路蛋白表达上调，而与葡萄糖代谢相关的蛋白表达没有改变。Western Blot 证实 PAX2 表达与脂肪酸代谢关键基因 FABP4、ACAA2、PNLIP 相关。HGSC 队列研究也发现 FABP4、ACAA2、PNLIP 高表达患者 PFS 更短（P<0.05)。

结论：P53 突变与 PAX2 在 HGSC 中高表达相关，PAX2 通过调动脂肪酸代谢通路促卵巢癌细胞生长和转移，影响患者预后。

PO-556

透视下输尿管内梗阻双 J 管的更换方法探讨

陈呈世,黎海亮
河南省肿瘤医院

目的 探讨在透视下行输尿管内梗阻双 J 管更换的可行性及安全性。

方法 回顾性搜集 2016 年 4 月至 2019 年 8 月所有行“双 J 管更换术”并存在双 J 管梗阻的患者病例资料，包括患者性别、年龄、距上次双 J 管置入的时间、经尿道将双 J 管取出的方法、双 J 管更换方法、双 J 管梗阻位置及术后并发症等资料并进行分析。根据钙盐在双 J 管沉积的位置不同，将梗阻双 J 管分为：膀胱型：钙盐主要沉积在双 J 管位于膀胱内的一端；肾盂型：钙盐主要沉积在双 J 管位于肾盂内的一端；两端型：钙盐主要沉积在双 J 管的两端，肾盂端和膀胱端；全阶段型：钙盐在双 J 管的全阶段均有沉积。梗阻双 J 管的更换方法：剪末端法：应用剪刀剪去双 J 管膀胱端末端，可见到内部通畅的双 J 管，经双 J 管引入导丝至肾盂，更换新的双 J 管即可；细导丝法：将不能通过肾盂端梗阻的普通的导丝更换为微导丝，其能通过梗阻的肾盂端双 J 管的末端或侧孔穿出，进入肾盂内，撤出原有双 J 管，即可更换新的双 J 管；辅助鞘管法：以梗阻的双 J 管作支撑，送入血管鞘管至输尿管内，经鞘管送入导丝至肾盂，更换新的双 J 管即可。根据手术成功率和患者不同并发症的发生率判断疗效和安全性。

结果 本研究中，共 44 例患者（男 3 例、女 41 例）行 47 例次透视下行“双 J 管更换”术。在双 J 管取出中，应用直接法 37 例次，应用间接法 10 例次，双 J 管取出的总体成功率为 100%（47/47）。距离上次双 J 管置入的平均时间为 4.2 ± 1.3 月。应用剪末端法的成功率为 76.0 %（19/25）；应用细导丝法的成功率为 50.0%（2/4）；应用辅助鞘管法的成功率为 77.8%（14/18）。在剪末端法或细导丝法失败后，又进一步分别应用细导丝法或辅助鞘管法，另有 3 例取得成功。因此，双 J 管更换的总体成功率

为 80.9%（38/47）。没能够成功更换双 J 管的 9 例次患者均通过再次行经皮穿刺肾盂造瘘术置入输尿管双 J 管。根据梗阻双 J 管的分类：膀胱型梗阻为 48.9%（23/47），肾盂型梗阻为 17.0%（8/47），两端型梗阻为 10.6%（5/47），全阶段型梗阻为 23.4%（11/47）。本组患者中，术后发生尿道口疼痛不适的发生率为 8.5%（4/47），肉眼血尿的发生率为 4.3%（2/47）。所有术后并发症均自行缓解。
结论 在透视下行输尿管内梗阻双 J 管更换是可行并且安全的。

PO-557
Clinicopathological features and survival of cervical cancer patients aged 25 or younger

Shuya Pan[1],Wenxiao Jiang[1],Shangdan Xie[1],Haiyan Zhu [2],Xueqiong Zhu (Corresponding author)[1]
1.Department of Obstetrics and Gynecology， The Second Affiliated Hospital of Wenzhou Medical University，Wenzhou， People's Republic of China
2.Department of Gynecology， Shanghai First Maternity and Infant Hospital， Tongji University School of Medicine，Shanghai， People's Republic of China

Objective: In order to improve the understanding and strategies for management of cervical cancer in women aged ≤25 years, the clinical characteristics, treatment modalities and prognosis of cervical cancer patients aged ≤25 years were analyzed.
Methods: The Surveillance, Epidemiology, and End Results Program (SEER) database was used to extract data on cervical cancer patients. They were then stratified by age as young women (≤25 years old) and old women (>25 years old) and analyzed for clinicopathology characteristics and treatment modalities. Prognosis was analyzed using Kaplan-Meier method, as well as hazard ratios using Cox proportional hazards regression modeling. The nomogram was developed based on Cox hazard regression model.
Results: Among the total cohort, there were 625 (1.66%) cervical cancer patients aged ≤25 years. Compared to >25 years old women, the younger patients tended to be white ethnicity, unmarried, had earlier stage of disease. Among patients at FIGO (International Federation of Gynecology and Obstetrics) I stage, patients >25 years old remain at significantly worse OS (overall survival) and CSS (cancer-specific survival) compared to patients aged ≤25 years old. Grade, FIGO stage, histologic subtypes, surgical modalities influenced the survival outcomes of young patients. Specifically, the majority (89.8%) of young cervical cancer patients at earlier stage (IA1-IIA) underwent surgery. However, among advanced stage cervical cancer, most patients (56.1%) did not undergo cancer-directed surgery and received treatment with radiotherapy or chemotherapy and 43.3% of patients received operation and adjuvant radiation or chemotherapy. Among young patients diagnosed at IA1-IIA stage, surgery improved their survival rate, while there was no significant difference in prognosis among patients underwent local tumor excision and hysterectomy. However, among IIB-IVB young patients, surgery did not improve their survival time. Furthermore, the nomogram developed according to Cox hazards regression model performed well in predicting prognosis of young patients.
Conclusion: Cervical cancer patients ≤25 years old were uncommon more likely to be white ethnicity, unmarried, had earlier stage of disease than the older patients. What's more, young cervical cancer patients lived longer when compared to their older counterparts. Among these young patients at IA1-IIA stage, surgical modality did not affect their prognosis. The nomogram could perfectly predict the prognosis of young cervical cancer patients.

PO-558

Human Epididymis Secretory Protein 4 compromises Paclitaxel sensitivity via influencing the combination of microtube proteins in Endometrial cancer

Jianan Zhang[1],Wanglei Qu[1],Shiwen Jiang*(Corresponding author)[1,2]
1.Departmant of Obstetrics and Gynecology， The Second Affiliated Hospital of Wenzhou Medical University
2.Department of Biomedical Science， Mercer University School of Medicine

Background: Endometrial cancer is one of the most prevalent malignancies of female reproductive tract. It ranks the first common gynecologic malignancy tumor in US and is the only gynecologic cancer with increasing incidence and mortality. In 2019, there were an estimated 61,880 new cases of and 12,160 deaths from endometrial cancer in United States. Most patients of endometrial cancer are diagnosed at an early stage and enjoyed excellent survival owing to the symptom of abnormal uterine bleeding. Nevertheless，the patients at advanced stage or recurrent still have poor prognosis. The combination of paclitaxel and platinum compounds is the first-line chemotherapy regime for endometrial cancer, which shows a certain effect on primary endometrial cancer. However, in clinic, emergence of paclitaxel resistance greatly affects its effect and influences overall survival in advanced-stage disease. In this study, we aimed to dissect the roles and the underlying mechanism of HE4 in paclitaxel resistance endometrial cancer patients.
Materials and Methods: Human endometrial adenocarcinoma cell line HEC-1A was purchased from the Cell Bank of the Chinese Academy of Sciences and cultured in Dulbecco Modified Eagle Medium. ARK-2 cell lines were gifts from Prof. Shi-wen Jiang which was initially established from cultures of advanced stage of human uterine serous papillary carcinoma. ARK-2 was maintained in PRMI-1640. We used many technologies to Completion of the study, such as Construction of Stable cell lines, Cell viability assay, BrdU incorporation assay, Cell Cycle Detection, Immunofluorescence staining Studies, Western Blot Analyses, Immunohistochemical staining, Mouse Xenografts and Statistical analyses.
Results: The result of MTT showed that at certain concentration, recombinant HE4 protein significantly promoted the viability of endometrial cancer cells in a time-dependent manner when compared to the control group. Thus, extracellular HE4 has a robust effect on the proliferation of endometrial cancer cell lines. Paclitaxel treatment inhibited the ARK2 and HEC-1 cell viability, while cotreated with recombinant HE4 protein, the inhibition of paclitaxel ware significantly suppressed. We compared the viability of these stable cells and the null vector. The MTS result showed that overexpression HE4 gene significantly promoted the viability of ARK2 and HEC-1A cells. Meanwhile, downregulation led to suppression. In the ARK2-null vector groups, the average weight of tumor which treated with vehicle was significantly bigger than treated with paclitaxel. Meanwhile, in the ARK2-HE4OE groups, no significant difference ware found. Thus，it was concluded, overexpression HE4 promoted paclitaxel resistance in endometrial tumor in xenografted mice. A significantly increased number of cell in G0/G1, and decreased number of cells in s phase and G2/M phase were observed after paclitaxel treatment. Secondly we evaluated the effect of HE4 overexpression on cell-cycle distribution. HE4 overexpression in endometrial cancer cell significantly increased the number of cell in G2/M and S phase, and decreased the cell in G0/G1 phase. The percentage of cells in the sub-G1 phase was decreased in the HE4 overexpression groups treated with paclitaxel, compared with the EV group, indicating that the HE4 expression attenuated paclitaxel-induced G2/M arrest. Our previous study had confirmed that HDAC-6 was able to remove the acetyl group from tubulin. To investigate the possibility that HDAC-6 participated in the mechanism that HE4-mediated microtubules depolymerization, we examined HDAC-6 protein in HE4 overexpression cells. Overexpression HE4 led to a dramatic increase in HADC-6 protein expression, especially in type II endometrial cancer cell.
Conclusion: The results of this study show that either endogenous HE4 or exogenous rHE4 could led to resistance of EC cells to PTX. The mechanism by which HE4 affect the sensitivity of PTX is still unclear. One of the possible mechanism is that HE4 may play an important role in acetylation of α–tubulin so as to inhibiting microtubule polymerization. The result suggests that increased HE4

expression may occur during tumor chemotherapy, leading to drug resistance. The drug resistance process is related to the inhibition of the expression of HDAC-6 mediated by HE4, which could be a target for the reversal of PTX resistance.

PO-559

林奇综合征相关子宫内膜癌的诊治进展

沈晶
湖北省荆州市中心医院

子宫内膜癌是发生于子宫内膜的上皮性恶性肿瘤，以来源于子宫内膜腺体的腺癌最常见。大多数子宫内膜癌为散发性，但约有 5%与遗传有关，其中关系最密切的遗传综合征是林奇综合征（Lynch syndrome），又称遗传性非息肉性结直肠癌综合征 （hereditary non-polyposis colorectal cancer，HNPCC），是一种由 DNA 错配修复基因突变引起的常染色体显性遗传性疾病，与年轻女性的子宫内膜癌的发病有关。本文从林奇综合征的遗传学特点，诊断，与子宫内膜癌的关系，检测方法，患者管理等五个方面进行综述，以期对这一类少见疾病有更全面的认识，从而指导临床实践，减少漏诊。

PO-560

Identification and prognostic value of DLGAP5 in endometrial cancer

Qing Zhou[1],Ruoyi Zheng[1],Zhengzheng Shi[1],Wenzhi Li[2],Jianqin Yu[1],Yuli Wang[1]
1.The first affiliated hospital of Wenzhou Medical University
2.Obstetrics and Gynecology Hospital， Fudan University， Shanghai， China

Abstract

Background. Endometrial cancer poses a serious threat to women's health worldwide, and its pathogenesis, although actively explored, is not fully understood. DLGAP5 is a recently identified cell cycle-regulation gene not reported in endometrial cancer. This study was aiming to analyze the role of DLGAP5 in tumorigenesis and development and to investigate its prognostic significance of patients with endometrial cancer.

Methodology. Microarray datasets (GSE17025, GSE39099, and GSE63678) from the GEO database were used for comparative analysis, and their intersection was obtained by applying the Venn diagram, and DLGAP5 was selected as the target gene. Next, transcriptome data (n=578) was downloaded from TCGA-UCEC to analyze the mRNA expression profile of DLGAP5. Then, immunohistochemical data provided by HPA were used to identify the different protein expression levels of DLGAP5 in tumor tissues and normal tissues. Subsequently, the prognostic meaning of DLGAP5 in patients with endometrial cancer was explored based on survival data from TCGA-UCEC (n=541). Finally, the reliability of DLGAP5 expression was verified by RT-qPCR.

Results. Transcriptome data from TCGA-UCEC, immunohistochemical data from HPA, and RT-qPCR results from clinical samples were used for triple validation to confirm that the expression of DLGAP5 in endometrial cancer tissues was significantly higher than that in normal endometrial tissues. Kaplan-Meier survival analysis announced that the expression level of DLGAP5 was negatively correlated with the overall survival of patients with endometrial cancer.

Conclusions. DLGAP5 is a potential oncogene with cell cycle regulation, and its overexpression can predict the poor prognosis of patients with endometrial cancer. As a candidate target for the diagnosis and treatment of endometrial cancer, it is worthwhile to make further study to reveal the carcinogenicity of DLGAP5 and the mechanism of its resistance of organisms.

PO-561
药物流产分服法终止早期妊娠的治疗结局影响因素分析

朱如如
温州医科大学附属第一医院

目的：分析国内米非司酮片联合米索前列醇片分服法进行药物流产的效果和相关因素，为临床方案选择和预后判断提供依据。
方法：回顾性分析 2019 年 1 月至 2020 年 4 月在我院门诊行药物流产患者的临床资料，分析药物流产疗效及不完全流产、手术干预的高危因素。
结果：2019 年 1 月至 2020 年 4 月，共 261 患者进行药物流产，29 例患者失访，失访率为 11.11%。最终 232 例患者纳入分析，药物流产的完全流产率为 65.94%，不完全流产率为 34.05%，清宫率为 11.21%。其中不完全流产组的药流前血清 β-hCG 值（16140.76±1217.11）IU/L、孕囊（9.45±0.36）mm 显著低于不完全流产组药流前血清β-hCG 值（8433.58±645.27）IU/L、孕囊（12.36±0.48）mm，不完全流产组的随访时间间隔为（13.03±0.68）天，显著短于完全流产组（16.07±0.78）天。 通过二元 Logistic 回归分析，得出流产前血清 β-hCG 值（OR=1.085, P=0.000）、孕囊最大径（OR=1.172, P=0.017）、随访时间间隔（OR=0.925, P=0.006）是不完全流产的影响因素。
结论：当流产前血清 β-hCG 值高（＞14077.4 IU/L）、孕囊最大直径＞10mm、随访间隔≤8 天时，结局为不完全流产的风险增加。孕次、既往流产次数、是否有剖宫产史、子宫位置与药物流产结局无明显相关。

PO-562
MiR-9 targets NFAT5 to regulates DDP chemotherapy resistance of cervical cancer cells through the ATM-PKcs pathway

xingrao Wu,Xing LIu,Meiping Jiang
yunnan provincial cancer hospital

Abstract：
Cervical cancer (CC) is a common malignant tumor that endangers women's health. The resistance of tumor cells to first-line chemotherapy drugs is one of the reasons for that significantly reduce patient's survival period of patients. A large number of studies have confirmed that miRNA is related to chemoresistance. The purpose of this study was to investigate the function role and mechanism of miR-9 in cisplatin resistance (CPR) of cervical cancer. Our studies showed that, the level of miR-9 in CPR cells (SiHa/DDP, HeLa/DDP) was significantly up-regulated compared with to its parental cell (SiHa, HeLa). Next, the knockdown of miR-9 in two DDP-resistant cervical cancer cell lines significantly promoted the inhibitory effect of DDP on cell proliferation, obviously reduced cell migration and epithelial-mesenchymal transition (EMT) capacity, and especially particularly promoted DNA double-strand break. The dual-luciferase reporter gene indicated that NFAT5 is a target gene of miR-9. Further experimental results confirmed that NFAT5 could promote DDP-induced DNA double-strand fracture by inhibiting the ATM-PKcs signaling pathway. This suggests that the high expression of miR-9 facilitates chemotherapy resistance to DDP by promoting DNA damage repair and malignant biological behavior in drug-resistant strains of cervical cancer. In conclusion, we found that knockdown of miR-9 significantly promoted the sensitivity of cervical cancer DDP-resistant cells to cisplatin, which was achieved by targeting NFAT5 and then blocking the ATM-Chk-2-PKcs pathway.

PO-563
Decreased ovarian function in cancer patients before cytotoxic treatment

Qingqing Zhu,Mingfu Wu
Department of Obstetrics and Gynecology， Tongji Hospital， Tongji Medical College， Huazhong University of Science and Technology

Background: The incidence of cancer in reproductive women has increased constantly over the past decades. With cancer treatment dramatically improving survival rates, the well-known long-term side effect of cancer treatment in female cancer survivors has become a public concern, gonadal dysfunction especially, often resulting in ovarian aging. So fertility and ovarian function protection induced by cancer treatment forms a new field oncofertility, and the remarkable advances in cancer treatment have led to rethinking the management of malignancies in young female patients. Different from cancer treatment-associated ovarian dysfunction, the effects of cancer itself on ovarian function is still not well understood. And focusing on ovarian function protection for female cancer patients prior to cytotoxic cancer therapy appears to be more significant.
Objective: Hence we were purpose to review the ovarian function of women with cancer before undergoing surgical or chemotherapy treatments compared with age-matched women and analyze the potential mechanism of the ovarian dysfunction caused by tumor itself, which would provide valuable information for clinicians to more appropriately counsel young patients with cancer who are seeking fertility preservation treatment.
Methods: We used common ovarian hormone indexes including anti-Mullerian hormone (AMH), follicle stimulating hormone (FSH), antral follicle count (AFC), estradiol (E2) and inhibin B (inhB) to evaluate ovarian reserve and the total retrieved oocytes number as well as the number of mature oocytes when undergoing fertility preservation to predict ovarian response of fertility preservation outcomes for female cancer patients.
Results: Tumor itself indeed did harm to ovarian function in female cancer patients with endomertial cancer, breast cancer, glioma and hematological malignancy especially the lymphoma, reflecting in decreased basal AMH, FSH concentrations and AFC as well as poor ovarian response including lower numbers of total oocytes retrieved and mature oocytes. As for endometrial cancer, pretreatment AMH levels were generally lower in those who with advanced and metastatic cancer stages. Breast cancer women with breast cancer susceptibility genes (BRCA1/2) mutation (especially BRCA1 mutation) had diminished ovarian function. Impaired ovarian function in female cancer patients could be explained by the several potential mechanisms. In systemic level, first of all, cancer was often characteristic by anorexia, increased catabolic state and malnutrition, hence resulting in losing weight, which may lead to impairment in hypothalamic–pituitary (HPO) axis and reproductive capacity. And stress hormones secreted by the brain have biological interaction on hypothalamic–pituitary and reproductive organs. HPO axis damage caused by compromised health status in female cancer patients was associated with granulosa cell dysfunction, thus contributing to the diminished ovarian hormone secretion. Secondly, female fecundity decreasing with increasing chronological age also happened in cancer women like healthy female populations, called ovarian aging. Decreased fecundity accompanied by a rapid loss of primordial follicles and impairment of oocyte quality were accumulated with increase of chronological age, providing a “susceptibility window” for female cancer patients to experience diminished ovarian reserve. In genetic status, PTEN (phosphatase and tensin homolog deleted on chromosome 10), a tumour suppressor gene, exerted its role by negatively regulating the PI3'K/PKB/Akt signaling pathway. PTEN mutations have been also indentified in endometrial cancer individuals and oocyte-specific deletion of the PTEN gene prematurely promotes the growth of entire primordial follicles, thus exhausting primordial follicle depletion and contributing to premature ovary insufficiency (POI). Similarly, breast cancer often combined BRCA1/2 mutation. Cancer-related BRCA mutation, especially BRCA1 mutation, caused homologous recombination (HR) repair dysfunction, with DNA damage accumulating with the depletion of resting cells such as the oocytes of the primordial

follicle in ovarian, which would perfectly explain the triangular relationship BRCA1 gene mutation, breast cancer and ovarian reserve maintenance. In cellular level, inflammaging, which was characteristic by higher levels of inflammatory makers in cells and tissues in aging organism, was thought to be one of the most consequences of immunosenescence. Cancer-related inflammation of mediator and cellular effectors was highly correlated to ovarian aging by secreting inflammatory cytokines (IL-1, IL-6, IL-8, TNF-α, TGF-β and IFN- γ) and activating immune cells (T cells, B cells and tumor-assosiated macrophage). Cancer-related ovarian damage broke down the dynamic balance of inflammatory network with high-expressed proinflammatory cytokines and altered follicle–oocyte dialogue, which may be one of the potential causal mechanisms of ovarian reserve dysfunction with cancer status.

Conclusions: Ovarian function decreases in female cancer patients compared to controls, including in endometrial cancer in advanced and metastatic status, breast cancer with BRCA mutation (especially BRCA1 mutation), hematological malignancy (lymphoma in particular) as well as glioma. For female cancer patients, systemic health status as well as age, genetic mutations and cancer-related inflammation are associated with the impaired ovarian function. So for reproductive-age women with malignancy, it's of great significance for health care clinicians to inform the infertility risk of gonadotoxic cancer treatment and provide individual fertility preservations for their patients.

PO-564

A comprehensive analysis of gene expression signatures in type I endometrial cancer based on bioinformatics

Qing Zhou,Zhengzheng Shi,Ruoyi Zheng
The first affiliated hospital of Wenzhou Medical University

Abstract:

Purpose Endometrial cancer (EC) is the second most common cancer in the world. This study intends to integrate four different genomic data-sets (GSE17025, GSE29981, GSE7305, and GSE12446) to reveal the underlying key genes and molecular mechanisms in EC.

Methods After the integration analysis of R language, a total of 79 EC samples and 51 normal control samples were included, and 236 differentially expressed genes (DEGs) were used in subsequent studies. Through overall and grouping double perspectives, Gene Oncology (GO) and Pathway enrichment analysis, protein-protein interactions (PPI) network, and modular analysis were carried out.

Results The 28 crucial DEGs and three important modular subnetworks were obtained, major cellular events involve in cell cycle, p53 and TGF-beta signaling pathways, etc. The 212 coding DEGs were verified by the The Cancer Genome Atlas (TCGA) database, and the coincidence rate was 93.9%. In addition, 14 long non-coding RNAs (lncRNAs) had been discovered, 10 of which had the potential for excavation.

Conclusion This study identified the key genes and pathways for EC through the integrated bioinformatics analysis, promoted our understanding of the pathogenesis, and provided valuable biomarkers and therapeutic targets.

PO-565

基于宫颈癌分子分型的靶向治疗

马悦
辽宁省肿瘤医院

宫颈癌作为全球女性第 4 位最常见的肿瘤，其发病机制与高危型人乳头状瘤病毒(human papillomavirus，HPV)持续感染密切相关。据国家癌症研究所(National Cancer Institute，NCI)准则，

宫颈癌的规范治疗包括早期可以通过手术治疗，局部晚期则主要行放疗、化疗等综合治疗。但与早期宫颈癌相比，以铂类为主的化疗是晚期及复发性宫颈癌的标准治疗方案，尽管如此，晚期患者中位生存时间仍仅为 9 个月[1]。且复发时，60%的患者对铂类产生耐药性[2]，单纯静脉化疗仅为姑息性治疗的手段之一，正是由于当前治疗效果的局限，寻找高效且特异性治疗方法就显得至关重要。分子靶向治疗主要是通过生物学制剂来调节不同信号传导通路，从而影响肿瘤发生、发展并抑制肿瘤进展。目前临床上广泛研究的作用于不同分子靶点的靶向药物主要包括抑制血管形成，针对表皮生长因子受体及细胞周期，环氧化酶-2（COX-2）,哺乳动物雷帕霉素靶蛋白酶（m-TOR）及蛋白酶体等，这些针对不同靶点所设计生物药物可有效的阻止肿瘤进展。本文将对宫颈癌的不同分子靶点和各类分子靶向药物的研究进展概述

PO-566
Risk factor for the follow-up strategy of ASC-H cytology

Yeli Yao,Weiguo Lu
Women's Hospital， School of Medicine， Zhejiang University

Objective: to review the cases of ASC-H cytology whose histological results were LSIL or normal at their first colposcopic examination diagnosed at a single institution and discuss the risk factors relevant to the patients who have potential severe lesions.
Material and method: Medical records were reviewed of all consecutive women with ASC-H smears who had undergone colposcopy in our institution, from September 2016 to December 2018. Significant pathology (HSIL+) results included HSIL, squamous cell carcinoma, in situ adenocarcinoma and adenocarcinoma.
Result: 774 cases were enrolled in this study. Final histological results of HSIL+ were found in 568 cases (73.39%, 517 of HSIL and 51 of cancer). HPV positive status (OR=6.79)was an important risk factor for patients with HSIL+. HPV 16 (OR=23.19) were more relevant to result of HSIL+ than HPV 18/45 (OR=3.65) and other 11 HPV subtype. Age was not a factor relevant with high risk of HSIL+.
Conclusion: HPV status and HPV subtype are the potential risk factors to be considered for the follow-up strategy.

PO-567
A different technique in gasless, laparoendoscopic, single-site myomectomy

Guixiu Jin,Zhao Xiumin,Zhu Danyang
Department of Gynaecology and Obstetrics， TheFirst People's Hospital of Taizhou， Zhejiang， China

Background： The aim of this study was to introduce a novel technique for gasless, laparoendoscopic, single-site(GLESS) myomectomy and to evaluate its feasibility and safety.
Methods: A retrospective observational study was performed at a hospital from Sep 2017 to Nov 2018. Fifteen patients with symptomatic subserosal or intramural myomas underwent GLESS myomectomy.
Results: The mean age and body mass index were 41.73± 8.58 years and 22.72 ± 2.27 kg/m^2, respectively. Five patients had a history of abdominal surgery, including four caesarean deliveries and one myomectomy. The mean operative duration, blood loss volume, time to specimen removal, time of bowel activity and postoperative hospitalization duration were 156.47±62.19 min, 57.33±72.35 ml, 29.87±13.6 min, 27.67±10.06 h,and 3.4±0.74 days, respectively. The operation was successful in all patients, there were no surgical or wound complications in any patient, and the histopathological result was leiomyoma in all 15 patients.
Conclusion: The procedure is feasible and safe in selected patients with symptomatic myomas.

PO-568

卵巢囊肿蒂扭转保留卵巢手术的临床疗效分析

汪蕾,李留霞
郑州大学第一附属医院

目的 探讨卵巢囊肿蒂扭转保留卵巢手术的临床特点和疗效分析。
方法 回顾性分析 2015 年 1 月-2019 年 12 月我院收治的均行腹腔镜手术治疗的 120 例卵巢囊肿蒂扭转患者的临床资料，根据手术方式的不同将研究对象分为两组，A 组:腹腔镜下保留卵巢手术，B 组：腹腔镜下卵巢切除术。统计相关数据并分析。
结果 80.0%的患者表现为急性腹痛，术前超声检查检出率较其他影像学检查高。两组患者的年龄、囊肿大小、扭转方向、手术时间差异无统计学意义(P > 0.05)，A 组卵巢囊肿的扭转时间和扭转度数均小于 B 组差异有统计学意义(P < 0.05)。两组患者术后并发症均以发热为主，均无严重并发症发生，且两组术后并发症发生率差异无统计学意义(P > 0.05)。
结论 腹腔镜保留卵巢与切除卵巢均能达到相当的治疗效果，但从长远疗效考虑，卵巢囊肿蒂扭转患者手术时应尽量保留卵巢，这种术式更值得被推广。

PO-569

Prognostic significant and risk factors of pelvic and para-aortic lymph node metastasis in type I and type II ovarian cancer: a large population-based database analysis

Ruifang Chen,Jieyu Wang,Jun Li,Xin Lu
Obstetrics and Gynecology Hospital of Fudan University

Objectives: To compare the prognosis of lymphatic spread in different ovarian cancer types and to identify the risk factors for lymph node metastases.
Methods: Patients diagnosed with epithelial ovarian cancer were collected from the Surveillance, Epidemiology, and End Results (SEER) database. Overall survival (OS) and cancer-specific survival (CSS) were estimated. The Cox proportional hazards regression model was used to identify independent predictors of survival.
Results: A total of 10,819 patients were enrolled .The median patient age was 56.0 years. In the two-tier classification system, type II was found to be a risk factor for lymph node involvement ($p<0.0001$) in both pelvic lymph nodes (PLN) (p=0.047) and para-aortic lymph nodes (PALN) (p=0.027). In the type II group, patients with PALN metastasis have a more favorable prognosis (OS: P< 0.0001; CSS: P< 0.0001). However, in the type I group, the 10-y OS of PLN group (43.5%) was better than that of the PALN group (34.6%). Tumor size $>$10-≤15 cm (p=0.023) and $>$20 cm (p=0.003) were risk factors in PALN metastasis, while large tumor size had no statistical significance in PLN involvement.
Conclusion: Excision of PALN was recommended for patients with tumor size $>$10 cm. Type II patients with PLN metastasis and type I patients with PALN metastasis should take more aggressive therapy and intensive examination.

PO-570
Aquaporin-8: a novel marker protein for viability, invasion and migration of human cervical cancer cells

Weibo Li[1,2],Yizuo Song (Co-first author)[1],Jianan Zhang[1],Xueqiong Zhu* (Corresponding author)[1]
1.Department of Obstetrics and Gynecology， The Second Affiliated Hospital of Wenzhou Medical University， Wenzhou 325027， Zhejiang， China
2.Department of Obstetrics and Gynecology， Affiliated Taizhou Hospital of Wenzhou Medical University， Taizhou 318000， Zhejiang， China

Objective: Aquaporins (AQPs) are a family of water channel proteins that regulates fluid fluxes to cross the cell membranes, playing an important role in maintenance of intracellular water balance and tissue environment homeostasis. AQPs can be divided into 13 subtypes (AQP-0-AQP-12). Each of them has its unique distribution in various human tissues and cells. Accumulated evidences have found abnormal expression of AQPs in different neoplastic tumors. Our previous study has revealed a higher level of AQP-8 expression in cervical cancer tissues, compared with cervical intraepithelial neoplasia (CIN) and normal cervical samples. This work aims to explore the impacts of AQP-8 on cervical cancer cell proliferation, apoptosis, invasion and migration in vitro.
Methods: The expression of AQP8 in five cervical cancer cell lines (SiHa, HeLa, MS751, C33A, and Caski) was assessed by western blot analysis. One of the cell lines with moderate expression level of AQP-8 would be selected for constructing AQP-8 overexpression and knockdown cell lines. After screening, lentivirus-mediated transfection assay was used to upregulate (cDNA) and knockdown (shRNA) AQP-8 expression in cervical cancer cells. Cell viability and apoptosis were detected by Cell Counting Kit (CCK-8) and Annexin V-FITC/PI assays, respectively. Transwell invasion and migration experiments were performed to investigate cell invasive and migratory capabilities. Epithelial-mesenchymal transition (EMT)-related markers, including E-cadherin, N-cadherin, vimentin proteins, were further detected using western blot analysis.
Results: MS751 and Caski cells showed the highest and lowest expression of AQP-8, respectively. A moderate level of AQP-8 was observed in SiHa, HeLa and C33A cells, thus SiHa cells were selected for further experiments. Western blot analysis showed that AQP-8 was successfully overexpressed and knocked down in SiHa cells. As compared to control (empty vector) groups, AQP-8-overexpressed SiHa cells showed an enhanced viability, reduced apoptotic rate, increased invasive and migratory abilities. Knockdown of AQP-8 inhibited the viability, promoted the apoptosis, and suppressed invasion and migration in SiHa cells. Furthermore, AQP-8 overexpression in SiHa cells significantly upregulated vimentin and N-cadherin, and downregulated E-cadherin, which were reversed by AQP-8 knockdown.
Conclusion: AQP-8 increases cell viability, inhibits cell apoptosis, and promotes cell invasion and migration in cervical cancer cells, which may be associated with EMT-related markers including E-cadherin, N-cadherin, and vimentin proteins. AQP8 may serves as a potential marker protein for cervical cancer progression. Further studies are still needed to investigate the underlying mechanism through which AQP8 plays its tumorigenic role in cervical cancer. Furthermore, studies focusing on some potential inhibitors need to be explored that can specifically target AQP8 for cancer treatment.

PO-571
子宫内膜异位症相关性卵巢癌耐药研究进展

陈利青
浙江大学医学院附属妇产科医院（浙江省妇女保健院、浙江省妇女医院）

子宫内膜异位症相关性卵巢癌（endometriosis associated ovarian cancer, EAOC）是指与子宫内膜异位症（endometriosis, EMs）密切相关，从发生机制上可能从卵巢子宫内膜异位症演变而来，以透明细

胞癌（OCCC）和子宫内膜样癌（OEC）为主要病理类型的一组特殊的卵巢上皮癌。1925 年 Sampson首次报道了EAOC，经过近100年的研究发现EMs患者中发生恶变的总体比率不大，但EMs多发于育龄期妇女，25-45 岁占 76%，因此总的恶变人群并非少数。近年来国内外关于 EAOC 的报道不断增加，EAOC 的病因、发病机制和临床特点的研究已成为热点((Li Q, et al. 2019)，EAOC 治疗采用全面分期手术/肿瘤细胞减灭术及术后辅助以铂类为基础的联合化疗，研究显示，EAOC 发病年龄小，复发率低,（(Bassiouny D, et al. 2019； Lee HY，et al. 2020)，但 EAOC 中的 OCCC 具有易复发、对铂类药物为基础的一线化疗药物不敏感等临床特征（Morikawa A, et al. 2018），EAOC 化疗耐药性与 FIGO 分期、淋巴结切除、淋巴结转移、乳腺癌病史相关（Ren T, et al 2018)。既往研究表明（Crotzer DR, et al 2007)，多种二线化疗方案对复发的铂类药物耐药的 OCCC 患者有效率仅为 1%，阿霉素（doxorubicin, DOX）作为卵巢癌二线治疗药物，已被证明能够提高患者生存率(Lorusso D et al. 2019)，但与此同时，随着临床上阿霉素的广泛应用，其耐药问题也日益凸显。提高 EAOC 患者的生存时间，必须将研究的重心放在改善 EAOC 的预后上，然而，化疗耐药已成为影响患者预后的主要因素，有学者研究表明，低剂量的维替泊芬能有效地耐药细胞进行增敏，这一事实可能最终导致一种创新的治疗卵巢癌患者的联合疗法的发展(Dasari VR, et al. 2020)。聚乙二醇脂质体上的肽胸苷酸合酶抑制剂能增强化疗药物在人卵巢癌细胞中的抗肿瘤作用(Marverti G, et al. 2020)。寻找能有效杀伤铂类耐药和阿霉素耐药卵巢癌的新型药物，增强药物敏感性从而改善化疗效果具有深远的意义。

PO-572

Avoiding a parametrectomy in patients with early cervical cancer based on an evaluation of biological indicators in the parametrium

zhuo yang
Cancer Hospital of China Medical University

Objective: To assess apoptosis and the expression of biological indicators in different centrifugal sites of the parametrium in patients with cervical cancer and to suggest a basis for triaging a group of patients for whom type III radical hysterectomy may not be needed. We also provide preoperative triaging markers.
Study Design: A prospective study of 124 patients with cervical squamous cell carcinoma stage IB1 though IIA1 who underwent type III radical hysterectomy and pelvic lymphadenectomy. Apoptosis and expression of biological indicators at different centrifugal sites of the parametrium were detected by TdT-mediated dUTP nick-end labeling, immunohistochemistry, western blot, and enzyme-linked immunosorbent assays. Datas were analyzed with repeated-measures analysis of variance (ANOVA), one-way ANOVA, and the t-test.
Results: The expression levels of vascular endothelial growth factor, cytokeratin 19, high-risk human papilloma virus 16 and/or 18, and squamous cell carcinoma antigen (SCC-Ag) tended to decrease with increasing centrifugal distance from the parametrium, which were correlated with clinical stage, invasive depth of the cervix, and lymph node metastasis. Apoptosis and the expression of the biological indicators at the 2 cm centrifugal site from the cervix in the cardinal ligament and sacral ligament and at 3 cm in the vagina were not different between the “the early group” (stage IB1, ≤ 1/2 invasive depth of cervix and negative lymph node metastasis) and the normal control group. Sensitivity was 75.7% and specificity was up to 100% using serum SCC-Ag 2.45 ng/ml as the cut-off value for triage. Sensitivity was 97.3% and specificity was 71.4% when a tumor size of 1.5 cm was considered the optimal triage cut-off value.
Conclusions: Patients triaged into “the early group” with stage IB1, ≤ 1/2 invasive depth of the cervix, and negative lymph node metastasis should be selected for a less radical parametrectomy, while a

vaginal resection is still recommended for those > 3 cm. Preoperative serum SCC-Ag and tumor size were effective preoperative triaging markers.

PO-573

Genetic counseling and Surgical Strategy for Patients with Hereditary Breast-Ovarian Cancer Syndrome Based on a Family Pedigree in China

Shuanghuan Liu,Bin Li
National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital， Chinese Academy of Medical Sciences and PeKing Union Medical College， Beijing， 100021， China

Hereditary Breast-Ovarian Cancer Syndrome (HBOCS) accounts for 10-15% of all ovarian cancer cases worldwide and bears distinctive family genetic characteristics as well as typical gene variants. Here a family pedigree of HBOCS was filtrated from the database of Cancer Hospital/Chinese academy of Medical sciences, its genetic and clinicopathological characteristics were analyzed. Germline mutation testing of Breast Cancer Susceptibility Genes (BRCA) was conducted with the peripheral blood of four siblings belonging to the family using next-generation sequencing technology, all of them indicated positive BRCA1 germline mutation of the same type (c.2138C>G). Among the four siblings, two patients (III 10, III 12) had already developed ovarian high-grade serous carcinoma (HGSC) and the other two women (III 11, III 14) underwent prophylactic surgery. Focal HGSC lesion of the left fallopian tube was found of III 11, then she underwent comprehensive staging surgery and was diagnosed as stage IIIA1 because of isolated right pelvic lymph node metastasis. This study verified that HBOCS patients undertake an increased lifetime risk of ovarian/fallopian tube cancer and indicate an earlier onset age by generation. HGSC occurs as the most common histological type of HBOCS and shows metastatic trend at an early stage. It is of great significance to detect pathogenic mutations and conduct family genetic counseling for HBOCS patients. The specific strategy of prophylactic surgery calls for further study and normalization.

PO-574

腹壁子宫内膜异位症 231 例临床特点及诊治预后分析

蒋梦雨,李留霞
郑州大学第一附属医院

目的 探讨不同临床分型腹壁子宫内膜异位症（abdominal wall endometriosis，AWE）的临床特点、诊治方法及预后影响因素。
方法 对 2012 年 1 月至 2018 年 6 月郑州大学第一附属医院住院手术治疗的 231 例 AWE 患者的资料回顾分析，包括患者的发病年龄、潜伏期、病灶大小、辅助检查方法、手术范围、术后是否应用促性腺激素释放激素激动剂（GnRH-a）、疗效、术后复发的影响因素等。
结果 231 例 AWE 患者中 229 例既往有剖宫产史，术前彩超与术中探查分型总体符合率达 97.38%(223/229)。术后随访时间 1~6 年，随访病例资料完整的患者 216 例，其中 8 例复发，复发时间为术后 6 个月至 2 年，总体复发率 3.70%（8/216）；术后使用 GnRH-a 组与单纯手术组复发率比较，差异无统计学意义（4.35% vs. 3.53%，P＞0.05），复发组平均年龄、平均潜伏期均小于未复发组，差异有统计学意义（P＜0.05）。

结论 腹壁子宫内膜异位症绝大多数有剖宫产史。不同的临床分型有不同的临床症状，手术彻底切除病灶是有效的治疗方法。术后使用 GnRH-a 不能降低复发率，发病年龄早及潜伏期短的患者术后易复发，应重点加以关注和预防。

PO-575

Quercetin inhibits adenomyosis by attenuating cell proliferation, migration and invasion of ectopic endometrial stromal cells

Wenbin Xu[1],Yizuo Song (Co-first author)[1],Kehan Li[1],Biyun Zhang[2],Xueqiong Zhu* (Corresponding author)[1]
1.Department of Obstetrics and Gynecology， The Second Affiliated Hospital of Wenzhou Medical University， Wenzhou 325027， Zhejiang， China
2.Department of Obstetrics and Gynecology， Cixi Maternity and Child Health Hospital， Ningbo 315300， Zhejiang， China

Objective: Adenomyosis is a common benign uterine disorder in women worldwide, characterized as the deep infiltration of endometrial glands and stroma into the myometrium. It often causes abnormal uterine bleeding, dysmenorrhea, menorrhagia, and infertility. Currently, either surgery or medical approaches are not suitable for a proportion of patients because of several limitations. Quercetin, a natural polyphenolic flavonoid, is known to provide anti-inflammatory and anti-tumoral effects. Therefore, the aim of current study is to evaluate the effects of quercetin on proliferation, invasion and migration of endometrial stromal cells (ESCs) in vitro from adenomyosis patients.
Methods: Primary ectopic ESCs (EESCs) and eutopic ESCs (EuESCs) were obtained and purified from patients undergoing total hysterectomy for adenomyosis. Then, EESCs and EuESCs were cultured and identified by immunocytochemistry staining for vimentin and cytokeratin marker proteins. Next, the cytotoxicity and inhibition rate were determined by Cell Counting Kit-8 (CCK-8) assay to obtain the IC50 value. Cell proliferation was detected by BrdU assay. Moreover, cell migratory and invasive abilities were explored through wound scratch and transwell assays, respectively. Western blot analysis was employed to explore the effects of quercetin on the expression of invasion- and migration-related proteins (MMP-2, MMP-9, Ezrin and Fascin) in EESCs and EuESCs.
Results: Both EESCs and EuESCs were characterized with strongly positive staining for vimentin and almost negative for cytokeratin. CCK-8 results showed that quercetin inhibited the viability of EESCs and EuESCs in a dose- and time-dependent manner, with an IC50 = 33.00 μM for EuESCs and IC50 = 74.88 μM for EESCs at 72 h. Thus, the final concentrations and action time of quercetin in EuESCs (0, 20, 40, and 80 μM for 72 h) and EESCs (0, 40, 80, and 160 μM for 72 h) were selected. BrdU assay showed that quercetin dose-dependently suppressed the proliferation of EESCs and EuESCs, while the inhibition rate by 40 and 80 μM quercetin in EESCs was higher. Similarly, administration of quercetin in EESCs and EuESCs significantly decreased the motility and invasiveness in a dose-dependent fashion, with stronger inhibitory effects on EESCs after exposure to 40 and 80 μM quercetin. Finally, western blot analysis demonstrated that invasion- and migration-related proteins (MMP-2, MMP-9, Erzin, and Fascin) were significantly downregulated with the quercetin concentration increasing. Moreover, the decreased level of these proteins in EESCs under 40 and 80 μM quercetin administration was greater than that in EuESCs.
Conclusion: Quercetin can inhibit the proliferation of EESCs in adenomyosis and reduce their mobility and invasiveness in vitro. These inhibitory effects may be related to downregulation of MMP-2, MMP-9, Fascin, and Erzin proteins. Quercetin is a promising novel agent to treat adenomyosis and this potential should be verified by more basic and clinical studies in the future.

PO-576

Prognostic value of lymph nodes in 2018 International Federation of Gynecology and Obstetrics (FIGO) staging system for cervical cancer patients

Linzhi Yan,Shangdan Xie,Huihui Ji,Wenxiao Jiang,Xueqiong Zhu(Corresponding author)
Department of Obstetrics and Gynecology， the Second Affiliated Hospital of Wenzhou Medical University，wenzhou，zhejiang，China

Purpose: To evaluate the influence of lymph node metastasis to survival outcomes of cervical cancer patients in 2018 FIGO stage system.
Patients and methods: Cervical cancer patients between 2004 and 2011 were reviewed using the Surveillance, Epidemiology, and End Results (SEER) database and stratified by lymph node status. Patient demographic and clinicopathologic characteristics were assessed. Furthermore, univariate and multivariate Cox regression analyses were applied to analyze cause-specific survival (CSS) and overall survival (OS) among cervical cancer patients according to 2009 FIGO stage.
Results: A total of 24,182 cervical cancer patients were identified, including 79.1% with negative lymph nodes (N0) and 20.9% with positive lymph nodes (N1) diagnosed radiologically and pathologically. There were 3269 women with positive pelvic lymph nodes composing of 1,391 in stage I, 1,094 in stage II, and 784 in stage III, and there were 1,789 women with positive para-aortic or other distant lymph nodes. Among patients with N1, survival rates in different stages were significantly different. MOS, 5-year CSS and 5-year OS among patients with N1 in stage I and II were both longer than those with N0 in stage III (all P< 0.001). Lastly, age at diagnosis, marital status, histology, differentiation grade, tumor size, FIGO stage (2009) and lymph nodes were independent risk factors for OS and CSS in cervical cancer patients.
Conclusion: The survival outcomes of cervical cancer patients with positive lymph nodes in different stages are heterogeneous. Hence the 2018 FIGO system for stage IIIC can not completely predict the prognosis of patients.

PO-577

宫颈癌孤立性颅骨复发病例分析及文献复习

刘双环,李斌
中国医学科学院肿瘤医院

目的 探讨宫颈癌孤立性颅骨复发的发病机制、临床特征、诊疗方法及预后。
方法 分析 1 例出现孤立性颅骨复发的宫颈癌患者的临床病理特征及诊治思路，同时复习相关文献。
结果 收治 1 例宫颈癌患者，58 岁，首诊分期为 IIIB 期，经根治性放化疗获得完全缓解。患者 7 个月后出现复发，经诊断为孤立性颅骨转移，采取局部病灶切除联合全身化疗、靶向治疗获得完全缓解，目前在随访中。
结论 宫颈癌骨转移多见于椎骨和骨盆，颅骨转移，尤其是单发病灶者罕见，目前共计 6 例报道。宫颈癌孤立性颅骨复发可能与外周血微转移相关，局部减瘤术联合全身化疗及靶向治疗，有望延长患者生存时间。

PO-578
新辅助化疗对晚期上皮性卵巢癌铂耐药及预后的影响

杨卓,王丹波
辽宁省肿瘤医院

目的: 探讨新辅助化疗联合中间性肿瘤细胞减灭术对晚期上皮性卵巢癌患者铂耐药发生及预后的影响。
方法: 选取 2014 年 1 月至 2016 年 12 月辽宁省肿瘤医院收治的 FIGO 分期ⅢC 期和Ⅳ期（晚期）的上皮性卵巢癌患者纳入研究，根据治疗方案分为新辅助化疗联合中间性肿瘤细胞减灭术（NACT-IDS）和初始肿瘤细胞减灭术（PDS）组，随访至 2019 年 12 月 30 日。采用 Logistic 回归分析、Kaplan-Meier 分析和 Log-rank 检验及 Cox 风险评估模型等方法，分析患者一般基线资料、病理特征、治疗方案等对铂耐药发生、无进展生存期（PFS）、中位复发后生存时间（RS）、生存率及总生存期（OS）的影响。
结果: 共计 173 例纳入研究。其中 NACT-IDS 组 52 例，占 30.06%，PDS 组 121 例。NACT-IDS 组 FIGO 分期为 IV 期的比例明显增加（P<0.05），而 PDS 组术中合并肠道、肝、脾等其他脏器切除比例明显增加（P＜0.05）。截至随访终点，NACT-IDS 组与 PDS 组分别有 39 例（75%）和 85 例（70.25%）患者复发，复发比例无统计学差异（P>0.05）；NACT-IDS 组铂耐药性复发比例（28.20%）较 PDS 组（5.88%）明显增加（P<0.05）。术前新辅助化疗和治疗前高水平的 CA125 值是两个发生铂耐药复发的独立危险因素（OR=7.822，95%CI 2.121～28.855，P<0.05；OR=1.001，95%CI 1.000～1.001，P<0.05）。分层分析结果提示仅当手术减瘤达到 R0 时，新辅助化疗明显提高铂耐药的发生（NACT-IDS 组 20.69%；PDS 组 1.85%），并与化疗方案及疗程数无关（P>0.05）。截至随访终点，NACT-IDS 组中位 PFS 为 27 个月，PDS 组为 26 个月；NACT-IDS 组中位复发后生存时间（RS）为 25 个月，PDS 组的中位 RS 为 27 个月；IDS 组患者 28 例生存，生存率为 53.85%，PDS 组患者 73 例生存，生存率为 61.34%，以及两组 OS 比较均无统计学意义。
结论: 术前新辅助化疗和治疗前高水平的 CA125 值是两个发生铂耐药复发的独立危险因素。术前新辅助化疗明显增加 R0 减瘤患者术后发生铂耐药的风险，而并未带来 PFS、RS 及 OS 的获益。因此，对于全面评估可完成 R0 减瘤的晚期卵巢癌患者，应谨慎进行术前新辅助化疗。

PO-579
宫颈腺样基底细胞癌 14 例临床分析及文献复习

邹美燕[1],喻金梅[1],安云婷[1],吴海龙[2]
1.江西省妇幼保健院
2.南昌大学第二附属医院

目的：探讨子宫颈腺样基底细胞癌的临床特征及预后相关影响因素；
方法：回顾性分析我院收治 14 例子宫颈腺样基底细胞癌患者资料，进行病理组织学观察，结合相关文献报导复习。
结果：发病年龄 41～63 岁，平均年龄 53.3 岁，5 例 HPV 检测阳性。本组患者均行腹式扩大性子宫切除术，二例术前诊断为 ABC，术前一例诊断为宫颈腺癌、二例诊断为宫颈鳞癌，7 例诊断为 CINIII，后经术后病理诊断为宫颈腺样基底细胞癌。宫颈癌临床病理分期：IA1 期 2 例；IA2 期 2 例；IB1 期 10 例。一例术后补充放化疗，给予全盆 46GY，阴道双盒 10GY*2 次，紫杉醇+奈达铂月化疗 2 程，随访 8 年未见异常；一例术后补充 TP 方案化疗 4 程，2018 年因肝癌去世，去世前宫颈复查未见异常；其余患者术后均未补充治疗，随访至今未见异常。
结论：宫颈腺样基底细胞癌好发于中老年绝经后女性，术前常诊断为癌前病变或常见宫颈癌病理类型，肿瘤生物学惰性生长，根治性子宫切除效果良好，无需补充放化疗。

PO-580
SNAI2 3'untrasnlated region promotes the invasion of ovarian cancer cells by inducing MARCKS expression

Jun Li,Xin Lu
Obstetrics and Gynecology Hospital， Fudan University

Objective. This study is aimed to identify the potential role of SNAI2-3'UTR in ovarain cancer progression.
Study Design. First, we tried to explore the clinical significance of SNAI2 in ovarian cancer using TCGA and GSE26712 dataset. Then, gain-of-function studies were performed to establish the role of SNAI2-3'UTR in invasion and migration of ovarian cancer cells. Finally, efforts were made to identify the downstream targets of SNAI2-3'UTR.
Results. SNAI2 expression was significantly correlated with FIGO stage and lymphatic invasion status, whereas not with age and histological grade. Patients with higher SNAI2 expression had a shorter overall survival in both TCGA and GSE26712 dataset. SNAI2-3'UTR promoted the invasion of both OVCA433 and SKOV-3 cells without significantly affecting their migratory abilities. MARCKS was identified as a potential downstream target of SNAI2-3'UTR. SNAI2-3'UTR may function as a ceRNA to upregulate MARCKS expression in ovarian cancer.
Conclusion. In conclusion, our study demonstrated that SNAI2-3'UTR could promote the invasion of ovarian cancer cells by upregulating MARCKS expression.

PO-581
Benign ovarian tumor and ovarian cancer risk : a systematic review and meta-analysis of observational studies

zhuo yang
Cancer Hospital of China Medical University

Objective：Evidence of the association between benign ovarian tumor and ovarian cancer (OC) risk is limited and controversial, and thus far, no systematic review and meta-analysis comprehensively and quantitatively summarizes this topic.
Methods：We systematically conducted the present study based on relevant observational studies published up to 31 March 2020 retrieved from PubMed, Embase, and Web of Science databases, as well as relevant references cited within these retrieved studies. The risk of bias was evaluated using the Newcastle–Ottawa scale. The random-effects model was used to estimate the summarized relative risks (RRs) and 95% confidence intervals (CIs) for the association.
Results：Of 3781 articles, ten articles (two cohort studies, seven case-control studies, and one pooled analysis of eight case-control studies) of 10331 OC patients and 181326 participants were included in the present study. Eight included studies were graded as low risk of bias. Women with a history of benign ovarian tumors were more likely to develop OC (summarized RR=1.39; 95% CI:1.01–1.90) with high heterogeneity. The direction of the positive association was consistent among almost all subgroup analyses stratified by the study design, geographic location, quality grade, exposure assessment, histological subtype, invasiveness, and potential confounding adjustment, but not all associations were statistically significant.
Conclusion：These findings indicate that benign ovarian tumors are associated with an increased risk of OC. Further well-designed studies with better confounder adjustment and stratification by OC histological type and invasiveness are required to confirm this association.

PO-582
子宫富于细胞平滑肌瘤剥除术后复发并广泛盆腹腔淋巴结转移一例

项达军,施启丰
无锡市锡山人民医院

目的：报道 1 例子宫富于细胞平滑肌瘤剥除术后复发并广泛盆腹腔淋巴结转移患者的临床病理资料，旨在为临床诊治提供参考。
病例资料：女性，48 岁，已婚，以“反复下腹胀痛 2 年”于 2020 年 8 月 3 日收人本院。该患者月经初潮年龄为 12 岁，平素月经规律，行经 5 d，周期 30 d；2016 年于外院行腹腔镜下子宫肌瘤剥除术，术后病理报告：富于细胞型平滑肌瘤。近 2 年反复于月经中期开始下腹胀痛，持续 2 周左右，直至月经干净后缓解。2020年8月3日外院经阴道彩超检查发现子宫多发性肌瘤，肌瘤最大46mmX33mmX42mm，遂收入本院治疗。入院血常规、凝血功能检查、肝肾功能及血清肿瘤标志物（CEA、CA125、CA199、CA153）均在正常范围，胸部 CT 及肝胆脾胰超声未见异常。妇科检查：宫颈轻度糜烂；子宫前位，增大如孕 50 天大小，形态不规则，质地中等，无压痛，活动度欠佳。术中见子宫底部肌层内见 20mm 直径的糟脆组织，切除肿瘤送冰冻切片病理检查提示：富于细胞平滑肌瘤。检查右侧骨盆漏斗韧带明显增粗，组织糟脆，再次送冰冻切片病理报告提示：低度恶性平滑肌肿瘤。转开腹肿瘤细胞减灭术，术中见下腔静脉及腹主动脉中下段表面可及 100mmX50mmX20mm 肿块，部分与下腔静脉致密黏连，双侧闭孔窝可及 3cm 肿大淋巴结。术后病理检查报告：1.子宫低度恶性平滑肌肿瘤，增生期子宫内膜伴子宫内膜息肉宫颈慢性炎，双侧输卵管；2.子宫肿瘤免疫组织化学法检查：ER（+）、PR（+）、CD10（-）、Desmin（+）、SMA（+）、CD117（-）、CD34（血管+）、Ki67（5%+）；3.肠表面结节、大网膜结节、双侧卵巢表面、腹主动脉及下腔静脉前肿块均为低度恶性平滑肌肿瘤，双侧闭孔窝、右侧髂外和腹主动脉旁淋巴结均见肿瘤转移（6/8），免疫组织化学法检查：ER（+）、PR（+）、CD10（-）、Desmin（+）、SMA（+）、CD117（-）、CD34（血管+）、Ki67（5%+）、P53（局灶+）、EMA（-）、CK（+）CD68（-），S100（-）； 4.腹膜子宫内膜异位部分呈低度恶性间质性肿瘤改变。术后 7 天出院。
结论：富于细胞型平滑肌瘤保守治疗患者必须严格随访，一旦复发，建议术前及术中检查盆腹腔淋巴结情况，术中冰冻切片病理检查有助于术中手术范围的参考，无生育要求患者建议子宫切除术。

PO-583
同源盒基因 MSX1、MSX2 在子宫内膜癌中的表达和功能研究

万一聪,张林,姜旖,程文俊
江苏省人民医院（南京医科大学第一附属医院）

研究目的：通过检测 II 类同源盒基因 MSX1、MSX2 基因在肿瘤中的表达，分析其表达与临床病理参数的相关性，并初步探索这些基因在子宫内膜癌进展过程中的生物学功能。
材料与方法：拟通过 Real-Time PCR 及免疫组化方法检测正常子宫内膜及子宫内膜癌中 MSX1 与 MSX2 的表达情况。统计学方法分析 MSX1、MSX2 基因的表达与临床病理参数及预后的相关性。进一步，使用细胞培养，过表达/敲低靶基因的表达水平，分别采用 CCK8 实验、细胞划痕实验、Transwell 实验验证这些基因的表达与细胞增殖、侵袭、转移等表型的相关性。
结果：MSX1 基因在肿瘤中存在高表达，其表达水平与患者的临床病理数据无相关，MSX1 基因对肿瘤细胞的增殖、转移、侵袭能力无明显影响。MSX2 基因在肿瘤中呈现高表达，但其表达水平与 FIGO 分期及组织学分级呈现负相关，高表达 MSX2 的患者预后更好。并且 MSX2 基因的表达能够抑制子宫内膜癌细胞增殖，侵袭和转移能力。

结论：MSX1 基因在肿瘤中高表达，其表达水平与患者的临床病理数据无相关，对肿瘤细胞的增殖、转移、侵袭能力无明显影响。MSX2 基因在肿瘤中高表达，其表达水平与 FIGO 分期及组织学分级呈现负相关，高表达患者预后更好，MSX2 的表达能够抑制子宫内膜癌细胞增殖，侵袭和转移能力。

PO-584

Chemical composition of smoke produced during Loop electrosurgical excision procedure treating cervical intraepithelial neoplasia

Yi Liu[1],Menghuang Zhao[1],Yongqiang Shao[2], Linzhi Yan[1],Xueqiong Zhu(Corresponding author)[1]
1.Department of Obstetrics and Gynecology， the Second Affiliated Hospital of Wenzhou Medical University，wenzhou，zhejiang，China
2.WhenZhou Center For Disease Control And Prevention

Objective: As LEEP（Loop electrosurgical excision procedure）is being increasingly used for diagnosis and treatment of uterine cervical intraepithelial neoplasia, the surgical smoke during LEEP becomes an inevitable health issue. So in this study, the exposure to chemical substances of surgical smoke produced during LEEP was assessed.
Material and Methods: Smoke samples from patients with high-grade cervical intraepithelial neoplasia undergoing LEEP were collected by smoke absorbing devices situated 1 meter away the operating table and near the nose of operator during LEEP, respectively. Each plume sample was collected after 5 patients proceeding LEEP and each patient take 5 min for smoke collection. The expected chemicals of exposure to surgical smoke included benzene, toluene, xylene, ethylbenzene, styrene, butyl acetate, hendecane, acetone, acrylonitrile, 1,2-dichloroethane, phenol, chlorine, cyanide and hydrogen cyanide. Additionally, hazards classes of these chemical components were observed in International Agency for Research on Cancer. COREQ-guidelines were adhered to in the reporting of this study.
Results: Qualitative analysis of the smoke produced during LEEP revealed the varieties of potentially toxic chemicals were under the standard detection, such as benzene, toluene, xylene, ethylbenzene, styrene, butyl acetate, acrylonitrile, 1,2-dichloroethane, phenol, chlorine, cyanide, hydrogen cyanide and carbon monoxide. Additionally, the average concentration of carbon dioxide was 0.098±0.015 during the surgery and higher than before the surgery (0.072±0.007, $P<0.001$), and formaldehyde was significantly higher during the surgery (0.023±0.009, $P<0.05$) than before it (0.012±0.001), $P<0.05$.
Conclusions: The most of detected chemicals in smoke generated during LEEP were under the exposure limits when local exhaust ventilation procedures were efficiently used. However, concentrations of carbon dioxide and formaldehyde found in the smoke were significantly higher after the surgery. To use evacuation devices routinely and consistently when performing LEEP was recommended to protect the perioperative personnel.

PO-585

年龄和绝经状态是影响血清 HE4 水平的重要因素

程洪艳[1],曾琳[2],叶雪[1],马瑞琼[1],唐志坚[1],褚红玲[2],赵一鸣[2],朱丽荣[2],高雨农[4],昌晓红[1],崔恒[1]
1.北京大学人民医院妇科 2.北京大学第三医院临床流行病学研究中心
3.北京大学第一医院妇产科 4.北京肿瘤医院妇科

目的：人附睾分泌蛋白 4 (HE4)是一种继 CA125 之后，应用广泛的卵巢癌生物标志物，但影响 HE4 水平的因素尚不清楚，中国的参考数据有限。本文的目的是评估绝经期和年龄对 HE4 水平的影响，并为我国健康人群的 HE4 提供可能的参考值。

方法：从 2013 年 3 月至 2017 年 3 月，中国北京四家医疗机构合作共招募 2493 名 40 岁以上健康女性，血清中 HE4 和癌抗原 125 (CA125)水平分别用酶联免疫吸附法测定。采用 Wilcoxon 秩和方差检验和分层分析研究年龄、绝经状态和 HE4 或 CA125 水平之间的关系。在不同人群中确定置信区间 5%-95%的参考值范围。
结果：HE4 水平在绝经后(n = 2168)和绝经前组(n = 325) 有显著差异 36.46 vs 24.04 pmol / L, Z = 14.41, P < 0.001)。在绝经后，HE4 随着年龄增长而显著增加(H = 408.18, P < 0.001)；但在绝经前受试者并未随年龄增长发生显著变化(Z = 0.43, P = 0.67)。绝经前妇女 HE4 水平的 95%上限为 44.63 pmol/L，绝经后妇女为 78.17 pmol/L，总人群为 73.3 pmol/L。在绝经后人群中，从 40 岁开始以每 10 岁为年龄段分组，HE4 参考值范围分别为为 13.15 ~ 47.31 、14.31 ~ 58.04、 17.06 ~ 73.51、24.50 ~ 115.25、35.71 ~ 212.37 pmol/L。CA125 水平所受影响主要取决于更年期状况，而不是年龄。
结论：绝经状态和年龄都是影响 HE4 水平的重要因素，且绝经后 HE4 水平更受年龄因素影响。绝经后人群的 HE4 水平高于绝经前人群，并且随着年龄的增长而增长。

PO-586
The potential role of exosomes as diagnostic marker in gynecologic cancer

Jing Wang,Shuya Pan,Lihong Zheng,Xueqiong Zhu(Corresponding author)
Department of Obstetrics and Gynecology， the Second Affiliated Hospital of Wenzhou Medical University，wenzhou，zhejiang，China

Abstract
Background: Exosomes are small extracellular vesicles with double-membrane structures that derive from all types of cells and transport many contents, including proteins, mRNAs, long noncoding RNAs (lncRNAs), microRNAs (miRNAs), lipids and viral particles. Thus, exosomes can mediate communication between multiple cells and take part in various processes of life. Exosomes are secreted by various organisms and can be detected and isolated from body fluids. Remarkably, cancer cell-derived exosomes can play an essential role in cancer progressions, such as cell proliferation, angiogenesis and metastasis, immune modulation and drug resistance. In recent years, exosomes have been widely used in the diagnostic strategy of various diseases, including gynecological cancer, because they carry nucleic acids, proteins and lipids of specific tumor cells. The incidence of gynecological cancer is increasing year by year, which are incredibly harmful to life and health of women because they are difficult to be detected at the early stage. Therefore, the purpose of this review is to focus on the latest knowledge of exosomes in the diagnosis of gynecologic cancer, in order to solve their potential diagnostic application.
Methods: The PubMed database was fully searched to gather eligible studies regarding the exosomes in diagnosis of gynecologic malignancies with language restriction in English, using the following keywords and subject terms: Exosomes AND (breast cancer OR cervical cancer OR ovarian cancer OR endometrial cancers). No time restriction was performed. Full-text articles of all included studies were obtained and reviewed through a comprehensive browsing. All candidate studies were carried out by two independent reviewers and discrepancies were dissolved by consensus.
Results: A total of 85 studies were selected in this review. The contents carried by exosomes including lncRNA, miRNA, mtDNA, proteins can all be possible to regarded as an diagnostic mark of gynecologic cancer.
Conclusion: Our review suggests that targeting these exosomes derived by gynecologic cancer cells might be potential candidates to improve the diagnosis of gynecologic malignancies.

PO-587

妊娠滋养细胞肿瘤子宫动脉栓塞治疗病例分析

王娇
北京妇产医院

目的：探讨动脉灌注化疗能否提高子宫动脉栓塞联合静脉化疗治疗妊娠滋养细胞肿瘤的疗效。
方法：回顾性分析 2010 年 7 月至 2020 年 1 月在北京妇产医院行静脉化疗联合子宫动脉介入治疗的 27 例妊娠滋养细胞肿瘤患者的临床资料。
结果：患者平均年龄 35.37 岁，I 期（FIGO 2000）患者 6 例（22.2%），III 期患者 21 例（77.8%），活动性出血患者 17 例（62.96%），潜在出血高风险患者 10 例（37.04%），患者接受静脉化疗 4（3,5）(n=27)程。动脉介入治疗联合静脉化疗治疗后影像学近期疗效评价有效率为 66.7%，本疗程治疗后血 HCG 平均下降 2.07±0.91 个对数，是否行动脉化疗组间比较影像学近期疗效和血 βHCG 下降程度差异无统计学意义（P=0.785，P=0.987）。18 例（69.2%）患者术后需要使用止疼药物，其中使用第一类镇痛药物 14 例（77.8%），使用第二类镇痛药 3 例（16.7%），使用第三类镇痛药 1 例（5.6%）。随着栓塞用药剂量增加，术后需使用镇痛药物的患者有增多趋势。肿瘤治疗过程中行子宫切除 6 例，是否行子宫切除组间比较患者年龄差异有统计学意义（45 vs. 32.62 岁，P=0.007）。
结论：动脉灌注化疗未明显提高子宫动脉栓塞联合静脉化疗治疗妊娠滋养细胞肿瘤的疗效，子宫动脉栓塞治疗用于预防或控制高危 GTN 病灶出血效果肯定。

PO-588

妊娠孕晚期脑转移绒毛膜癌一例

李敏,周颖,申震,张天骄,陈川,吴大保,齐印宝
中国科学技术大学附属第一医院（安徽省立医院）

患者，女，26 岁，G2P1，因“孕 32 周，头痛头晕伴恶心呕吐一周”就诊神经外科，头颅 MRI 提示小脑部占位，经多学科讨论，同时行子宫下段剖宫产术+颅脑手术，剖宫产顺利分娩一活婴，APgar 评分 9 分-10 分，胎儿分娩后，即刻由神经外科医生行右侧旁正中开颅小脑半球肿瘤切除术，术后病理提示（右侧小脑）转移性绒毛膜癌；追问病史：患者 2 年前曾罹患葡萄胎，外院就诊时 HCG 最高达 227830mIU/ml，肺部曾提示转移灶，报告单无法提供，治疗过程中自清宫后追加 5-FU 及 MTX 化疗数次，化疗期间随访 HCG，未行头颅及其他全身检查，且 HCG 降至正常半年后自然受孕，此次就诊颅脑手术后肺部 CT 提示双肺及肝脏转移灶可能，术后 HCG：59486.28IU/L，诊断绒癌 IV：16 分（脑转移 4 分，肝转移 4 分，转移数目 4 分，HCG4 分，乳腺及淋巴结转移评分尚未计算），属极高危绒癌，根据患者处在颅脑手术围手术期，先予以 EP 方案诱导化疗 2 次，HCG 由化疗前 225858IU/L，下降至 180963IU/L，随后改为 EMA-CO 方案化疗 4 次后 HCG 下降至 2.74IU/L，因化疗期间出现严重的 IV 度骨髓抑制，且患者一般状况极为虚弱，更改 FAV 化疗一次及 TP 方案化疗一次，HCG 再次回升，继续更改为 EMA-CO 方案，期间辅助鞘内注射，化疗 4 次后 HCG 下降至正常，随后巩固化疗 4 次，化疗结束后目前随访 9 个月，HCG 正常，影像学评估良好。本例患者在产科及神经外科医生等多学科合作的基础上，全面、认真及综合性的思考并做出推断，终止妊娠的最佳时机选择，患者得到及时治疗，针对同时经历多重手术创伤的滋养细胞肿瘤患者，化疗方案的选择极为慎重，在治疗疾病的同时选择个体化因人而异的治疗更为适宜。

PO-589
一个同时具有卵巢癌和腹膜癌的罕见 HRD 家系报道

于津浦,叶英楠,董莉,曹彦东,刘文欣,王珂
天津市肿瘤医院(天津医科大学肿瘤医院)

卵巢癌是常见的妇科恶性肿瘤之一，部分卵巢癌病例呈家族性传递现象。家族性或遗传性卵巢癌综合征（familial or hereditary ovarian cancer syndrome, FOCS or HOCS）家系中的妇女患卵巢癌、乳腺癌及其他妇科肿瘤的风险增高。BRCA1/2 基因是评估 HOCS 发病风险的重要分子标志物。除此之外，同源重组修复缺陷（Homologous Recombination Deficiency, HRD）在 HOCS 评价中的重要作用也受到越来越多的关注。本家系先证者为卵巢癌患者，其亲属中有两名恶性肿瘤患者（一姐乳腺癌，一姐腹膜癌）。我们收集其外周血和卵巢癌组织样本，以及其亲属的外周血标本，采用 Ion Torrent S5™二代测序平台对 42 个基因的全编码区和可变剪接区进行测序。结果发现在本家系中的 3 个癌症患者同时检出 BRCA2 p.Cys44=，该变异为胚系变异。BRCA2 p.Cys44=为同义变异，一般认为不影响蛋白功能，易被误认为良性突变，但经预测及功能验证发现该位点可影响可变剪接，造成移码变异（r.[131-134del]），故该突变为可能致病性变异。我们又通过对先证者的组织样本进行染色体芯片检测，发现其 17 号染色体包含 BRCA1 基因的位置存在 1.42 Mb 缺失，HRD-score 为 71 分（参考范围<42 分），故判定为 HRD 阳性。该家系的突变特征提示我们，BRCA1/2 基因突变是 HOCS 聚集发病的关键分子之一，对于可变剪切区的深度测序及重点分析十分重要。并且体细胞检测及 HRD 评估对于进一步分析卵巢癌的发病因素起到了关键作用。

PO-590
Monaco 计划系统 increment 值对乳腺癌 VMAT 的影响

裴运通
郑州大学第一附属医院

目的：探讨 Monaco 计划系统容积旋转调强计划（VMAT）中， 机架 increment 值大小对乳腺癌放疗计划的影响。
方法：选取右侧乳腺癌病例 20 例，靶区处方剂量为 50Gy/25 次，所有放疗计划使用瑞典医科达 Monaco 计划系统制作 VMAT 计划，设置一个射野，射野角度从 65 度到 190 度，每个 Beam 设置 2 个 Arc，所有 VMAT 计划计算网格是 0.3mm，不确定度为 0.5%。计划 increment 值依次选取 10，15，20，25，30，35 和 40，分别命名为 IG10、IG15、IG20、IG25、IG30、IG35、IG40，以 IG10 计划作为参考计划，所有计划优化条件等保持一致，靶区归一到 95%。统计执行参数及剂量学参数，总跳数，子野数，投递时间，优化时间，靶区 PTV 均匀指数 (HI) 、适形指数(CI) 及最大量 D2%、最小量 D98%，右肺的 V5Gy，左肺的 V20Gy、V5Gy，心脏平均剂量，右肱骨头 V20Gy，脊髓最大量，肝脏平均量。使用统计学工具分析各数据随着 increment 值变化情况。
结果：不同 increment 值计划平均跳数依次为 1016、950、1005、905、811、787 和 834，IG25、IG30、IG35、IG40 与 IG10 均有统计学差异（P<0.05）；平均子野个数为 129、109、118、116、109、103 和 114，IG15、IG30、IG35 与 IG10 有统计学差异；计划优化时间平均量是 1577s、1673s、1680s、1844s、1116s、1131s 和 1079s，IG25、IG30、IG35、IG40 与 IG10 有统计学差异；投递时间平均值是 185s、150s、153s、159s、123s、130s、133s，IG10 与其他各组计划均有统计学差异。各计划与 IG10 的靶区 CI 相比均没有统计学差异（P>0.05）；IG35、IG40 与 IG10 在靶区 HI 上有统计学差异。靶区最大量、最小量、左肺、脊髓和心脏，各计划与 IG10 相比没有统计学差异。右肺除 IG35

和 IG40 的 V5 外，各参数与 IG10 相比没有统计学差异。右侧肱骨头，IG35 和 IG40 与 IG10 相比有统计学差异。
结论：综合计划执行效率及计划质量，使用 Monaco TPS 制作乳腺癌 VMAT 计划，机架的 increment 值选择 30 是合适的。

PO-591

子宫成熟性畸胎瘤 2 例及文献复习

于秀杰,庞淑洁,杜秋越,司婧文,申彦
天津市中心妇产科医院

摘要：畸胎瘤是常见的来源于生殖细胞的肿瘤，在女性多发生于卵巢，发生于子宫的畸胎瘤非常少见，发生部位可位于宫颈或子宫体。在此，我们报道我院 2 例发生于子宫的成熟性畸胎瘤，这 2 例在术前均考虑为粘膜下平滑肌瘤。
病例报道：病例 1，女，39 岁，因月经量多 3 个多月，及阴道淋漓出血就诊，超声提示宫腔内团块，大小 2.3×3.5×1.7cm，超声诊断“粘膜下肌瘤？”。遂选择住院宫腔镜手术治疗，宫腔镜手术过程中，在肿物表面可见毛发。病理检查，大体可见实性块状组织一堆，直径共 3.7cm，部分组织表面可见白色毛发，切面灰白、灰黄色，实性，质软；显微镜下可见皮肤、皮脂腺、汗腺、毛发、平滑肌及脂肪组织，病理诊断为：成熟性实性畸胎瘤。**病例 2**，女，50 岁，因月经量增多 5 个月，继发性贫血，月经期延长就诊，超声提示宫腔下段至宫颈管内团块，大小 5.6×3.5×2.4cm。为进一步治疗入院行宫腔镜手术，宫腔镜手术中见宫颈口脱出一肌瘤约 4×3×2cm 大小，完整切除。病理检查，大体可见一灰粉色肿物，表面呈多结节状，切面灰白灰黄相间，质软；显微镜下可见皮肤、皮肤附属器、毛发、涎腺、成熟神经成分、脂肪及平滑肌组织，病理诊断为：成熟性实性畸胎瘤。这两例病例切除后均无复发。
我们对这两例病例进行全外显子测序分析，结果发现，子宫的成熟性畸胎瘤共有 659 个变异位点，变异类型包括点突变、小的缺失和插入等，突变丰度最高的基因位于 X 染色体为 RBMXL3，位点 c.[1192G>A]，突变丰度 0.38，其次是位于 X 染色体为 SYTL4，位点 c.[215G>A]，突变丰度 0.26。
结论：子宫畸胎瘤的起源及发病机制仍不明确，其来源可能是生殖细胞游走至原始性腺残留下来的。也有研究认为子宫畸胎瘤可能起源于减数分裂前的原始生殖细胞或子宫的多能干细胞。我们的研究表明其发生可能与 X 染色体的突变有关，其发生机制还需进一步研究。

PO-592

早期子宫内膜癌前哨淋巴结示踪的临床进展及前景探讨

陈曦,张新
辽宁省肿瘤医院

近年来子宫内膜癌的发病率呈上升趋势，而子宫内膜癌的主要扩散方式是局部浸润和盆腔淋巴结转移，而常规全面分期手术中的淋巴结清扫术后产生的淋巴水肿、少见的乳糜性腹水及感染等，严重影响患者的生存质量，因此，子宫内膜癌区域淋巴结的检测评估对肿瘤分期、制订治疗方案、预测预后等都具有重要的指导价值。随着医学科学技术的发展，以示踪法检测子宫内膜癌前哨淋巴结越来越受到大家的关注，而示踪剂的种类及注射部位的选择、手术的具体流程、患者本身条件、术者手术经验等均对示踪剂的示踪效果产生不同程度的影响。本文通过统计学方法，对于以上因素对示踪效果产生不同程度的影响进行分析，从而找出示踪剂显影的影响因素。得出的结论有 1.纳米炭联合吲哚菁绿的 SLN 检出率显著高于单独使用吲哚菁绿或单独使用纳米炭。2.早期子宫内膜癌 SLN 示踪的注入部位主要有三种：经宫腔镜瘤体注射，子宫颈注射和子宫浆膜下注射，那么采取宫颈宫体联合注射的示踪剂显影

率高。3.其他影响因素身体肥胖、存在严重的盆腔脏器粘连等导致盆腔暴露不充分，或肿瘤、炎症侵袭引起淋巴引流阻塞或破坏等均会导致 SLN 定位失败，影响 SLN 的检出率并提高假阴性率。理想的子宫内膜癌手术范围是在不影响疗效的前提下，范围不断缩小，这样可以减少手术带来的创伤和并发症。SLN 示踪技术可以更加精准地反映淋巴结的转移情况，对早期子宫内膜癌患者的淋巴结评估是安全有效的，同时也对于早期子宫内膜癌的手术方式的选择有着指导意义，但该技术尚存在许多争议，需要更加完善的技术以及更多的前瞻性临床研究进一步探讨，其优点在于减少不必要的系统性淋巴结切除术，减少了盆腔组织的损伤，可以降低术中及术后并发症的发生率，提高患者生命质量，提高淋巴结微转移的检出率和检测效率，更准确地判断患者预后并指导治疗，同时还可以指导对初治方法的选择。其局限性在于子宫内膜癌淋巴引流途径复杂，同时还存在跳跃性转移的情况，以及解决准确诊断 SLN 是否存在转移的问题，还有术中冰冻切片检查诊断 SLN 转移的敏感度和阴性预测值不能令人满意，无法应用于诊疗常规等临床局限性。本文主要针对前哨淋巴结示踪技术在子宫内膜癌手术中的临床实践情况及目前存在的问题和争议进行综述。

PO-593

外阴癌 46 例临床特点及预后因素分析

刘达宾
福建省妇幼保健院

目的 探讨临床病理因素和治疗方法对外阴癌预后的影响。
方法 收集 2009 年 1 月至 2013 年 12 月福建省妇幼保健院收治的 46 例原发性外阴癌患者的临床资料，回顾性分析其预后。
结果 46 例外阴癌患者的 5 年生存率为 78.3%。根据 2009 年 FIGO 的手术病理分期，Ⅰ期 18 例，Ⅱ期 2 例，Ⅲ期 10 例，Ⅳ期 2 例。Ⅰ～Ⅱ期和Ⅲ～Ⅳ期的 5 年生存率分别为 80%和 50%。两组之间的生存率差异有统计学意义（P <0.05）。32 例患者接受了广泛的外阴切除术和腹股沟淋巴结切除/活检。淋巴结转移 12 例，无淋巴结转移 20 例。淋巴结转移和非淋巴结转移者的 5 年生存率分别为 50%和 100%。两组的生存率差异具有统计学意义（P <0.05）。
结论 腹股沟淋巴结转移和手术病理分期是影响外阴癌预后的不利因素。

PO-594

一种利用 CTX 和 aPDL1 载药纤维凝胶预防卵巢癌术后复发的方法

张琳,周金华,陈友国
苏州大学附属第一医院

目的：卵巢癌是威胁全球女性生命健康的恶性肿瘤，通常情况下，手术是减轻大多数患者肿瘤负担的主要选择。然而，临床中不满意的卵巢癌减灭术后的残余肿瘤复发的风险仍然是一个挑战，严重影响肿瘤患者的预后，导致卵巢癌患者的大量死亡。除了手术，我们现在传统的治疗手段，包括化学疗法，放射疗法等可以一定程度上延缓癌症的复发，但是通常副作用明显，严重影响患者健康和生活质量，防止卵巢癌术后癌症复发的新策略亟待发现。
方法：我们采用可自行降解的的纤维蛋白水凝胶作为载体包裹 CTX 和抗 PD-L1 抗体，在肿瘤局部实现药物缓释和调节免疫的作用。我们使用双管注射器合成 CTX&aPDL1@Gel 复合药物，并使用流变仪和 SEM 进行表征； 通过 MTT 法、H&E 染色法、拍照观察法、HPLC 法和 ELISA 法在体内和/或体外证实纤维蛋白水凝胶良好的缓释作用、生物安全性和生物降解性能；通过 FCM 法研究 CTX@Gel 和

CTX&aPDL1@Gel 对小鼠肿瘤的影响；通过动物治疗实验研究 CTX&aPDL1@Gel 对小鼠不完全卵巢癌切除模型的治疗效果。
结果：我们成功合成 CTX&aPDL1@Gel 复合药物，该复合物具有胶体性质并疏松多孔；CTX&aPDL1@Gel 具有良好的生物相容性和生物安全性，并可有效缓释药物；CTX&aPDL1@Gel 可以通过持续降低肿瘤中的 Treg 数量和比例，抑制肿瘤细胞的 PD-L1 功能，增强肿瘤细胞中的效应 T 细胞浸润，激活免疫； CTX&aPDL1@Gel 能有效治疗小鼠原位卵巢癌术后残余病灶。
结论：不满意的卵巢癌减灭术严重影响肿瘤患者的预后，Treg 诱导的免疫抑制微环境影响术后的治疗。既往研究发现低剂量的环磷酰胺（CTX）可以减少卵巢癌灶中的抑制性免疫细胞，激活抗肿瘤免疫，但效应短暂。基于纤维蛋白凝胶的药物递送支架可以递送 CTX 和 aPDL1 以预防术后肿瘤复发，这种顺序的局部递送增强了肿瘤的免疫原性，并持续降低肿瘤部位的 Treg 数量和比例，抑制肿瘤细胞表面的 PD-L1 功能，增强肿瘤中的效应 T 细胞浸润，激活免疫，达到抑制甚至完全消灭肿瘤的作用。我们惊喜的发现，该种疗法，在小鼠的不完全切除卵巢癌中疗效优异。

PO-595
82 例卵巢癌患者胚系 BRCA1/2 基因突变分析及预后探索

孟黄洋,程文俊
江苏省人民医院（南京医科大学第一附属医院）

目的 初步探讨卵巢癌患者胚系 BRCA1/2 基因突变状态,分析其与临床病理特征的关系，及对生存预后的影响。 方法 对 2015 年至今在南京医科大学第一附属医院妇科诊断为上皮性卵巢癌的 82 例患者进行 BRCA1/2 基因序列突变检测。首先分析患者的致病性突变情况，在此基础上进一步探讨临床病理特征包括发病年龄、月经状态、FIGO 分期、组织学分级、病理类型、铂敏感、CA125 水平、淋巴结转移、大网膜转移、膈顶转移、结肠侵犯等是否有统计学差异。单因素及多因素 COX 回归分析研究影响生存预后的因素。 结果 82 例上皮性卵巢癌患者中，BRCA1 致病性突变率为 20.73％， BRCA2 致病性突变率为 9.75％，总突变率为 30.48％。共发现 18 个致病突变位点及 2 个意义未明的突变位点；BRCA1/2 基因突变与病理类型、铂敏感、新辅助化疗相关比较差异具有统计学意义（P<0.05）；另外，BRCA1/2 突变组与 BRCA1/2 野生组相比，中位 PFS 延长了 5.8 个月（P<0.05）。 结论 上皮性卵巢癌患者中具有较高频率的 BRCA1/2 基因突变率，且与肿瘤的恶性生物学行为有关，BRCA1/2 基因突变的患者多为铂敏感，预后较好。对突变位点的检测将有助于评估疾病风险和预测患者病情进展，具有一定的临床意义。

PO-596
ALKBH5-HOX10 Loop Promotes Epithelial Ovarian Cancer Resistance to Platinum via activating JAK2/STAT3 pathway in N6-methyladenosine Dependent Manner

Sipei Nie,Wenjun Cheng
The First Affiliated Hospital of Nanjing Medical University

Backgrounds: N6-methyladenosine (m^6A) has been reported participating in cancer progression, and we explored whether m^6A is involved in epithelial ovarian cancer (EOC) chemoresistance.
Materials and Methods: The expression levels of ALKBH5 were validated in platinum resistant- and sensitive- EOC. The target m^6A-modified gene of ALKBH5 were screened out by RNA sequencing

(RNA-seq) and m6A-modified RNA immunoprecipitation sequencing (MeRIP-seq) . Both the up- and down-stream molecule regulation mechanisms of ALKBH5 were investigated.
Results: ALKBH5 was found up-regulated in platinum-resistant EOC, and promoted cancer cell proliferation and chemoresistance in vivo and vitro. Combining results of MeRIP-seq and RIP-seq, JAK2 was demonstrated as the target m⁶A -modified gene of ALKBH5. Additionally, HOXA10 was found as transcription factor of ALKBH5, and were also regulated by ALKBH5. ALKBH5-HOXA10 loop jointly activating JAK2/STAT3 signaling pathway.
Conclusions：Our study investigated the role of ALKBH5-HOXA10 loop in EOC chemoresistance , and highlighted ALKBH5 activated JAK2/STAT3 signaling pathway in m^6A-dependent way.

PO-597

宫颈癌根治术并发症与处理的研究现状

吴蓉,佐满珍
宜昌市第一人民医院（三峡大学人民医院）

宫颈癌是妇科常见的恶性肿瘤，早期宫颈恶性肿瘤主要以手术为主，手术方式分为开腹和微创手术，而手术并发症的发生，给广大妇女患者的身体健康带来严重威胁，用时也给其心理健康及生活质量带来影响。因此，使手术臻于完美、减少手术并发症的发生率是必要的。深入了解宫颈癌根治术并发症,并予以及时和得当的处理，为临床工作提供指导。

PO-598

超声造影在高强度聚焦超声治疗子宫肌瘤术中的评估价值

林媛
宜昌市第一人民医院（三峡大学人民医院）

目的：利用超声造影检查对子宫肌瘤高强度聚焦超声治疗中即时准确评价病灶的坏死情况,并指导对血供丰富部位及时有针对性的补充治疗,观察治疗后的临床效果,以及为超声消融子宫肌瘤术前制定合理的治疗计划提供参考依据。
方法：本研究采用随机对照试验设计，根据纳入排除标准，采用随机数字表法将 2016 年 6 月-2018 年 4 月期间在我院行 HIFU 治疗的子宫肌瘤患者共计 80 例随机分为和实验组和对照组两组，每组 40 例患者。实验组患者在手术过程中应用静脉推注声诺维造影剂，观察患者肌瘤周边及血流灌注情况，根据患者术中超声造影显影情况，指导并调整后续治疗方案，直到完成治疗操作。对照组在治疗过程不采用任何干预措施，根据经验常规治疗。对比分析两组患者子宫肌瘤消融率、残余瘤组织体积、术中疼痛情况（VAS 评分）、术后生活质量（标准化问卷表）、患者治疗满意度（标准化问卷表）、并发症及不良反应。
结果：实验组行超声造影检查时，能够清晰的显示出患者子宫肌瘤的形态、大小、边界以及范围情况。两组患者均于治疗后 3 个月, 治疗后 6 个月和治疗后 9 个月时行超声复查。实验组患者肌瘤消融率明显高于对照组，残余瘤组织体积明显低于对照组，患者术中疼痛感明显低于对照组患者，患者术中平均手术时长明显少于对照组患者，患者术中不良反应发生率明显低于对照组患者。
结论：患者在 HIFU 治疗时行超声造影检查，能调整 HIFU 的治疗方案和指导术中操作。能够提高消融率，降低残余瘤组织体积，降低患者术中疼痛感，缩短平均手术时长，减少术中不良反应发生情况。

PO-599
Clinical characteristics and prognostic outcomes of gynecological multiple primary malignant neoplasms

孙莹,程文俊
江苏省人民医院（南京医科大学第一附属医院）

Objectives: To investigate the clinical characteristics and the prognostic outcomes of patients with gynecological multiple primary malignant neoplasms (MPMN).
Methods: The patients with gynecological MPMN were retrospectively and continuously enrolled. The clinical characteristics and survival outcomes were collected and analyzed.
Results: A total of 126 patients with gynecological MPMN were enrolled. The OS of patients with gynecological cancer as first neoplasm was worse than those with non-gynecological cancer as first neoplasm (HR: 2.2, P=0.049); the OS of patients accompanied with breast cancer was better than those accompanied with other cancers (HR: 0.346, P=0.033). Multivariate COX regression analysis showed that “FIGO stage” was the independent risk factor (HR: 2.339, P=0.001), and “operation for second neoplasm” was the independent protective factor (HR: 0.212, P=0.005).
Conclusion: “First neoplasm as gynecological cancer” and “FIGO stage” were factors for poor survival for gynecological MPMN. “Accompanied with breast cancer” and “operation for neoplasm” were the factors for favorable survival.

PO-600
宫颈癌基因突变与不良预后关联性分析及基因检测 panel 初建

凌开建,梁志清
陆军军医大学第一附属医院（西南医院）

目的:本研究旨在探讨宫颈癌基因突变与不良预后及临床病理特征的关系，初步构建宫颈癌突变检测 panel。
方法: 研究纳入 2013 年 8 月至 2014 年 12 月在本院住院手术的宫颈癌患者 102 例，取血液和癌组织行 WES 和 WGS 基因检测，3 例良性疾病样本做对照。此外，癌组织行 HPV 检测及整合分析。统计临床资料并定期随访（2019 年 8 月随访终止），DVID 行生物学信息分析。
结果: 102 例患者中 7 例失访。随访期间，95 例中 15 例出现复发转移或死亡。不良预后组 HPV 整合达 46.7%，与非不良组比较具有差异，p<0.05。宫颈癌中基因突变以错义突变为主，达 87%。PIK3CA，HUWE1, FBXW7 为高频突变基因。各临床分期高频突变基因不同。FSIP2, GART, KDM4E 突变仅在不良预后组出现。KEGG-pathway 分析，ECM-receptor interaction 通路两组均居第一。Pathways in cancer、Pancreatic cancer、Renin-angiotensin system、Nicotinate and nicotinamide metabolism 仅在非不良组富集，Pathways in cancer 是显著突出通路。由此，构建宫颈癌基因检测 panel。
结论：宫颈癌基因突变具高度异质性，PIK3CA，HUWE1, FBXW7 基因可能为宫颈癌驱动基因。ECM-receptor interaction 通路在宫颈癌中较关键。FSIP2, GART, KDM4E 基因突变和 Pathways in cancer 通路可能与宫颈癌预后相关。

PO-601
Prognostic nomogram for patients with invasive endocervical adenocarcinoma incorporating HPV E6/E7 RNA in situ hybridization and clinical characteristics

刘莉莉,万挺,罗容珍
Sun Yat-sen University Cancer Center

Human papillomavirus (HPV) E6/E7 RNA in situ hybridization (HPV E6/E7 RNAscope) appears to be a sensitive and specific method. We aimed to examine the diagnostic and prognostic utility of this technique in endocervical adenocarcinoma (ECA) and build a useful prognostic nomogram model using this approach. The model's predictive efficiency defined by a concordance index (C-index) in 200 ECA patients. The independent factors derived from multivariable analysis of 200 ECA to predict overall survival (OS) were age, lymphovascular invasion, lymph node involvement, and HPV E6/E7 RNAscope, which were all incorporated into the nomogram with (nomogram B) or without (nomogram A) FIGO stage and treatment. The C-index of nomogram A for predicting OS was 0.825 ($p = 0.002$ and $p < 0.001$), which was significantly higher than the C-index for FIGO stage (0.653) and treatment (0.578). Furthermore, a risk stratification system was established to accurately stratify ECA into two subgroups with significantly different prognosis. Therefore, the proposed nomogram using HPV E6/E7 RNAscope showed more accurate outcome in terms of prognosis in patients with ECA.

PO-602
Transforming acidic coiled-coil protein-3: a novel marker for differential diagnosis and prognosis prediction in endocervical adenocarcinoma

刘莉莉,文艳林,罗容珍
Sun Yat-sen University Cancer Center

Transforming acidic coiled-coil protein-3 (TACC3) is an oncogene with frequent abnormal expression in various human malignancies. Our study aimed to examine the role of TACC3 in the diagnosis and prognosis of Endocervical adenocarcinoma (ECA). We analyzed 264 ECA patients and tumors were classified into HPVA and NHPVA subtypes. TACC3 expression was also elevated in HPVA compared with NHPA. Upon Kaplan-Meier analysis, the up-regulated TACC3 was tightly related to the poor overall survival (OS, $P= 0.001$), disease-free survival (DFS, $P< 0.001$) as well as recurrence survival ($P< 0.001$). Moreover, upon multivariate analysis, the elevated TACC3 level served as the marker to independently predict ECA prognosis. ROC curve analyses indicate that TACC3, P16 and HPV subtype showed similar results for distinguishing HPVA from NHPVA, with an area under the ROC curve of 0.640, 0.649 and 0.675, respectively. The combination of TACC3 and HPV subtypes improved diagnostic performance for ECA compared with TACC3, P16 and HPV subtype alone. Taken together, findings in this work reveal that TACC3 may be used as the new biomarker for the diagnosis and prognosis of ECA.

PO-603
Development and validation of a nucleotide excision repair-related prognostic signature for advanced patients with highly-grade serous ovarian cancer

danian dai[1,2],Bo Chen[3],Yong Chen[1],Jihong Liu[1,2]
1.The Fifth Affiliated Hospital of Sun Yat-Sen University
2.Sun Yat-sen University Cancer Center
3.Guangdong Provincial People's Hospital

Objectives: Most of the high-grade serous ovarian cancers (HGSOC) are accompanied by P53 mutations, which are related to the nucleotide excision repair (NER) pathway. This study aims to construct a risk signature based on NER-related genes that could effectively predict the prognosis for advanced patients with HGSOC.
Materials and Methods: The RNA sequence data of HGSOC and normal samples were obtained from TCGA and GTEx databases. The expression level and correlation analysis of 31 NER-related genes were unveiled, and the protein-protein interaction (PPI) network was used to explore the interaction of each gene. Consensus clustering analysis and principal component analysis (PCA) were performed to determine HGSOC clusters with different clinical outcomes. A 7-gene risk signature was finally established to predict overall survival (OS) on the TCGA cohort, four GEO datasets were used for external verification, and a nomogram was developed to predict individual survival risks. In addition,GSEA was used to explore the enriched signaling pathways in different risk groups.
Results: Two clusters of HGSOC with significantly different OS were identified by consensus clustering and PCA. Then, a 7-gene risk signature for OS prediction was developed subsequently based on TCGA cohort,and the risk score-based the risk signature was identified as an independent prognostic indicator for HGSOC. According to the risk score, HGSOC patients were divided into high-risk group and low-risk group with the distinct OS. More importantly, the predictive power of the risk signature was successfully verified in the GEO validation sets. We then constructed a nomogram, including the risk signature and clinical-related risk factors (age and treatment response) that predicted an individual's risk of OS, which can be validated by assessing calibration curves. Furthermore, GSEA showed the genes in the high-risk group were significantly enriched in cancer-related pathways, including "MAPK signaling pathway", "mTOR signaling pathway", "VEGF signaling pathway" and so on.
Conclusion: Our study has developed a robust NER-related genes-based molecular signature for prognosis prediction, and the nomogram could be used as a convenient tool for OS evaluation and guidance of therapeutic strategies in advanced patients with HGSOC.

PO-604
Nomograms to predict the density of tumor-infiltrating lymphocytes (TILs) in patients with high-grade serous ovarian cancer

danian dai[1,2],Lili Liu[3],He Huang[1],Shangqiu Chen[1],Junya Cao[1],Xiaolin Luo[1],Feng Wang[1],Rongzhen Luo[3],Jihong Liu[1,2]
1.The Fifth Affiliated Hospital of Sun Yat-Sen University
2.Sun Yat-sen University Cancer Center
3.State Key Laboratory of Oncology in South China

Background: Tumor-infiltrating lymphocytes (TILs) have important roles in predicting tumor therapeutic responses and progression, however, the method of evaluating TILs is complicated. We

attempted to explore the association of TILs with clinicopathological characteristics and blood indicators, and to develop nomograms to predict the density of TILs in patients with high-grade serous ovarian cancer (HGSOC).
Methods: The clinical profiles of 197 consecutive postoperative HGSOC patients were retrospectively analyzed. Tumor tissues and matched normal fallopian tubes were immunostained for CD3+, CD8+, and CD4+ T cells on corresponding tissue microarrays and the numbers of TILs were counted using the NIH ImageJ software. The patients were classified into a low- or high-density groups for each marker (CD3, CD4, CD8). The associations of the investigated TILs to clinicopathological characteristics and blood indicators were assessed and the related predictors for densities of TILs were used to develop nomograms; which were then further evaluated using the C-index, receiver operating characteristic (ROC) curves and calibration plots.
Results: Menopausal status, estrogen receptor (ER), Ki-67 index, white blood cell (WBC), platelets (PLT), lactate dehydrogenase (LDH), and carbohydrate antigen 153 (CA153) had significant association with densities of tumor-infiltrating CD3+, CD8+, or CD4+ T cells. The calibration curves of the CD3+ (C-index = 0.748), CD8+ (C-index = 0.683) and CD4+ TILs nomogram (C-index = 0.759) demonstrated excellent agreement between predictions and actual observations. ROC curves of internal validation indicated good discrimination for the CD8+ TILs nomogram (area under the curve [AUC] = 0.659, 95% CI 0.582-0.736) and encouraging performance for the CD3+ (AUC= 0.708, 95% CI 0.636-0.781) and CD4+ TILs nomogram (AUC = 0.730, 95% CI 0.659-0.801).
Conclusion: Menopausal status, ER, Ki-67 index, WBC, PLT, LDH, and CA153 could reflect the densities of T cells in the tumor microenvironment. Novel nomograms are conducive to monitor the immune status of patients with HGSOC and help doctors to formulate the appropriate treatment strategies.

PO-605
单中心低级别浆液性卵巢癌的初始治疗和复发后治疗的预后研究

陈洁平[1],侯建峰[2],杨乐伟[1],邓婷[1],刘松然[1],刘继红[1]
1.中山大学肿瘤防治中心妇科
2.广东省中医院珠海医院妇产科

背景：低级别浆液癌（low grade serous carcinoma, LGSC）是卵巢癌中少见的病理类型，总体预后相对较好。本文回顾性总结单中心的 LGSC 病例的初始治疗和复发后治疗的疗效和预后进行分析。
对象和方法：本研究选取本中心 2006 年 6 月至 2019 年 6 月收治并手术治疗的 LGSC 病例，收集临床病理参数、初始和复发的治疗资料，并进行随访和预后分析。
结果：本中心的 LGSC 患者的中位年龄为 46 岁（23-85 岁），其中 III 期及以上患者比例 71.4%，初次治疗直接手术的病例比例为 78.6%，理想的肿瘤细胞减灭手术的比例为 85.7%，14.3%的患者进行了 Dixon 手术并达到了肿瘤的满意减灭。在淋巴结切除方面，48.6%的患者进行了系统的盆腔淋巴结清扫手术，15.8%的患者仅进行了淋巴结切除或活检手术。新辅助化疗后手术的 15 名患者中，4 名（26.6%）患者出现了化疗后肿瘤进展或肿瘤标志物升高。此外，其中 5 名患者选择了保留生育功能的手术治疗。本队列中 55.7%的患者在初始治疗后出现复发或进展（39/70），复发后选择手术治疗的患者比例为 33.3%（13/39），其中仅 1 例为不满意肿瘤细胞减灭。3 年和 5 年总体生存率分别为 75.9%和 65.8%。单因素生存分析显示分期、治疗方式、手术满意度、淋巴结切除方式及腹膜转移均是影响患者生存的预后因素，而基于 Wald 检验的多因素 Cox 回归分析发现不满意减灭手术和腹膜转移是患者生存的不良预后因素【总生存：风险比（Hazard ratio，HR）分别为 4.333,p=0.011 和 7.811，p=0.053；无疾病生存：HR 分别为 3.93,p=0.005 和 4.197，p=0.002】。复发的患者中，铂敏感复发的比例为 69.2%，铂敏感复发患者的复发后生存相对更长（p=0.0046），而手术和单纯化疗患者的复发后总生存无明显差异(p=0.3006)。

结论：LGSC 的生存率较高，手术满意减灭度和腹膜转移是影响患者预后的独立因素，复发后治疗选择有待进一步研究。

PO-606
TRAF4 Promotes Tumor Cell Proliferation and Correlates with Poor Prognosis in Ovarian High-grade Serous Carcinoma

xiaolin luo,Jihong Liu
Sun Yat-sen University Cancer Center

Objective: TRAF4 has been identified to be up-regulated in several types of human cancers. However, the prognostic value and function of TRAF4 in ovarian high-grade serous carcinoma (HGSC) has not been elucidated. In this study, we aim to explore the prognostic value and function of TRAF4 in HGSC.
Methods: The expression of TRAF4 was evaluated by immunohistochemistry in 174 cases of HGSC. The patient survival rate was evaluated using Kaplan-Meier analysis. In vitro and in vivo experiments were further performed to reveal the function and mechanism of TRAF4 in ovarian cancer cells.
Results: High expression of TRAF4 in HGSC was significantly associated with a shorter overall survival (p=0.005) and recurrence-free survival (p=0.003). Knock-down of TRAF4 inhibited cell proliferation in ovarian cancer cells in vitro, whereas over-expression of TRAF4 increased cell proliferation. Furthermore, the proliferation and tumorigenicity of ovarian cancer cells in vivo were significantly induced by TRAF4 over-expression, but inhibited by TRAF4 knock-down. Moreover, we demonstrated that down-regulation of TRAF4 induced cell cycle arrest into G0/G1 phase in ovarian cancer cells by downregulating cell cycle proteins cyclin D1 and cyclin B1, whereas up-regulation of TRAF4 decreased the percentage of G0/G1 phase by upregulating the expression of cell cycle proteins cyclin D1 and cyclin B1.
Conclusion: TRAF4 could be a potential prognostic biomarker for HGSC, and TRAF4 increases cell proliferation by promoting cell cycle progression. TRAF4 might serve as a potential therapeutic target for HGSC.

PO-607
基于血清学检测及影像学检查对子宫内膜癌淋巴结转移预测模型的构建

鞠明秀
中国医科大学肿瘤医院

目的：基于血清学检测及影像学检查进行对子宫内膜癌淋巴结转移预测模型的构建，从而能够识别出淋巴结转移高风险的子宫内膜癌患者，使患者从精确个体化的手术中受益。
方法：回顾性分析中国医科大学肿瘤医院 2018 年 2 月 1 日至 2019 年 10 月 31 日确诊的子宫内膜癌患者 279 例，通过查阅病例资料详细记录患者主诉、发病年龄、绝经经况、血小板计数、纤维蛋白原值、CA125 值 、HE4 值及 MRI 检查中提示肿瘤大小、肌层浸润深度（＞肌层 1/2、＜肌层 1/2）。单因素分析临床病理参数与淋巴结转移之间的相关性，通过 Logistic 回归筛选出与淋巴结转移具有统计学意义的独立预测因子，构建淋巴结转移预测模型，通过验证模型病例组进行验证。
结果：纳入研究患者 279 例，绝经患者 191 例（68.4%），其中淋巴结转移患者 22 例。未绝经患者 88 例（31.6%），其中淋巴结转移患者 12 例，是否绝经与淋巴结转移与否无统计学意义（P≥0.05）。单因素分析结果表明血小板、纤维蛋白原、CA125、HE4、MRI 提示的肿瘤大小、肌层浸润深度在内膜

癌淋巴结有无发生转移上显著性均小于 0.05，对子宫内膜癌淋巴结有无发生转移有显著影响。多因素分析结果显示 CA125、纤维蛋白原及 MRI 提示的肌层浸润深度为子宫内膜癌淋巴结转移的独立危险因素。Logit(p)= -9.387+1.488X1+0.047X2+2.431X3 式中，X1 为纤维蛋白原、X2 为 CA125、X3 为肌层浸润深度（＞肌层 1/2 为 1、＜肌层 1/2 为 0），p 为内膜癌淋巴结发生转移的概率，Logit(p)=ln(p/(1-p))。该模型总体预测准确率为 92.5%，因此该模型可以比较准确的预测内膜癌淋巴结是否转移的情况。应用验证模型病例组对该模型进行检测，绘制 ROC 曲线，本实验模型 ROC 曲线下面积为 0.854，p=0.000，95%置信区间为 0.779-0.929。说明该模型应用于术前评估子宫内膜癌淋巴结转移具有较好的预测效能。纤维蛋白原和 CA125 进行 ROC 曲线分析，纤维蛋白原 ROC 曲线下面积为 0.790，p=0.000，95%置信区间为0.683-0.897，当纤维蛋白原为3.365（即为临界值）时，灵敏度为78.9%，特异性为 77.2%。CA125ROC 曲线下面积为 0.805，p=0.000，95%置信区间为 0.695-0.916，当 CA125 为 34.08（即为临界值）时，灵敏度为 78.9%，特异性为 74.0%。且二者准确率均低于该预测模型。

结论：1.CA125、纤维蛋白原及 MRI 提示的肌层浸润深度为子宫内膜癌淋巴结转移的独立危险因素。2.基于血清学检测和影像学检测所构建的模型总体预测准确率为 92.5%，因此该模型可以比较准确的预测内膜癌淋巴结是否转移的情况。 3.在评估子宫内膜癌淋巴结转移时，当纤维蛋白原为 3.365（即为临界值）时，灵敏度为 78.9%，特异性为 77.2%。当 CA125 为 34.08（即为临界值）时，灵敏度为 78.9%，特异性为 74.0%。

PO-608
hDMSCs 对氧化损伤人子宫内膜间质细胞的作用评估

罗新,叶家卓
暨南大学附属第一医院妇科

目的：建立人子宫内膜间质细胞氧化应激模型，模拟宫腔粘连损伤，然后在损伤的子宫内膜间质细胞中加入 hDMSCs 共培养，观察细胞形态学、细胞活性氧水平变化、细胞凋亡数目，评估 hDMSCs 对子宫内膜间质细胞氧化损伤的疗效。

方法：使用过氧化氢溶液建立人子宫内膜间质细胞体外氧化应激模型。分组：对照组 A 组、实验组 B 组。A 组分别以 0μM、10μM、40μM、80μM、160μM、320μM 的过氧化氢溶液作用于第三代的人子宫内膜间质细胞，6 小时后，观察其细胞形态学改变、氧化及抗氧化指标、检测活细胞内的活性氧 ROS、凋亡相关蛋白相对量的变化；B 组为在 A 组基础上加入 hDMSCs 共培养 6 小时，观察以上变化。

结果： 1.间质细胞的形态改变：正常的子宫内膜间质细胞可呈长梭型、三角形或多角型，随着浓度增加，其形状开始出现不规则变化，连接开始疏松，出现凋亡细胞，甚至开始破裂，溶解。 2.抗氧化指数：超氧化物歧化酶（SOD），在 A 组中观察到其酶的活力随着过氧化氢溶液浓度的增加而下降，B 组也是随着过氧化氢浓度的增加，SOD 酶活力下降，但是在相同过氧化氢浓度下 B 组酶活力明显高于 A 组（P<0.05）。3.氧化指标物：丙二醛（Malondialdehyde MDA），在 A 组中观察到其浓度随着过氧化氢浓度增加而升高，B 组中 MDA 浓度也是随着过氧化氢浓度的增加而升高，，但在过氧化氢浓度为 0-160μM 时，B 组的 MDA 浓度明显低于 A 组（P<0.05），在过氧化氢浓度为 320μM 时，两组之间差异无统计学差异（P=0.058）。 4.细胞活性氧 ROS 变化：在 A 组中观察到活性氧 ROS 随着过氧化氢浓度增加而增加，在过氧化氢溶液 10-80μM 浓度下，B 组活性氧 ROS 明显低于 A 组（P<0.05），但在过氧化氢 0μM，160μM 和 320μM 浓度下时，两者差异无统计学意义（P> 0.05）。 5.凋亡数量：凋亡数量：A 组中观察到随着过氧化氢浓度的增加，细胞凋亡数量增加，在过氧化氢溶液 10-80μM 浓度下，B 组细胞凋亡数明显低于 A 组（P<0.05），但在过氧化氢 0μM，160μM 和 320μM 浓度下时，两者差异无统计学意义（P> 0.05）。 6.相关凋亡蛋白定量：Caspase-3 凋亡蛋白，A 组中观察到其表达量随着过氧化氢浓度的增加而增加，在过氧化氢溶液 10-80μM 浓度下，B 组凋亡蛋白表达量明显低 A 组（P<0.05），但在过氧化氢 0μM，160μM 和 320μM 浓度下时，两者差异无统计学意义（P>

0.05）。 7.相关抗凋亡蛋白定量：XIAP，在 A 组中观察到其表达量随着过氧化氢浓度的增加而下降，在过氧化氢溶液 10-160μM 浓度下，B 组 XIAP 表达量明显高于 A 组（P<0.05），但在过氧化氢 0μM 和 320μM 浓度下时，两者差异无统计学意义（P> 0.05）。**结论：**在过氧化氢模拟的宫腔粘连模型中，在一定活性氧浓度下，加入 hDMSCs 培养的抗氧化能力会有所增强。降低活性氧含量，是提高干细胞疗效的治疗靶点。

结论：1.在过氧化氢处理后，模拟的子宫内膜间质细胞体外氧化应激损伤模型中可见，活性氧、凋亡蛋白的增加及抗凋亡蛋白的降低在子宫内膜间质细胞损伤中起到重要作用； 2.在过氧化氢处理后，模拟的子宫内膜间质细胞体外氧化应激损伤模型中可见，hDMSCs 可增加子宫内膜间质细胞的抗氧化能力，降低活性氧的产生，抑制凋亡蛋白的产生及增加抗凋亡蛋白的产生。

PO-609
hsa_circ_0005692 在低分化子宫内膜样腺癌中作用的初探

叶飞,蒋学风
暨南大学附属第一医院妇科

目的 研究低分化子宫内膜样腺癌（the grade 3 endometrioid endometrial carcinoma，G3 EEC）的环状 RNA 转录组学，分析并挖掘 G3 EEC 癌组织与癌旁组织差异表达的 circRNAs 以及下游相关靶点，为 G3 EEC 提供潜在生物治疗靶点，为探索 G3 EEC 的发生机制提供新思路。

方法 1. 寻找目标 cirRNAs：利用 circRNAs 高通量测序进行 2 例 G3 EEC 癌组织和癌旁组织的 circRNAs 转录组学分析，寻找差异的 circRNAs（包括上下调中差异最明显的且与肿瘤通路显著相关的 circRNAs 各 3 个）； 2. 上述 6 个 circRNAs 在 30 例子宫内膜样腺癌癌组织及癌旁组织（包括 15 例 G3 EEC 癌组织和癌旁组织以及 15 例高分化子宫内膜样腺癌（the grade 2 endometrioid endometrial carcinoma，G1 EEC）或中分化子宫内膜样腺癌（the grade 1 endometrioid endometrial carcinoma，G2 EEC）癌组织和癌旁组织）进行 RTqPCR 检测，分析与测序结果的一致性；上述 6 个 circRNAs 在 G3 EEC 细胞株 Ishikawa（ISK）和 G1 EEC 细胞株 KLE 细胞水平进行 RTqPCR 检测；选择与测序结果一致且差异最为明显的 circRNA 进一步分析，分析此 circRNA 与 30 例患者临床病理参数的相关关系； 3. 目标 microRNAs：为进一步探索此 circRNA 下游相关的 microRNAs 及 mRNAs 之间的关系，基于 miRanda、TargetScan 和 PicTar 数据库，进行 microRNAs 靶向预测，KEGG 分析 microRNAs，筛选出在肿瘤通路中最有意义的 microRNAs，使用 RTqPCR 在以上细胞及组织水平验证所预测的 microRNAs；circRNA 与 microRNAs 的表达分别在上述 G3 EEC 和 G1/G2 EEC 中进行 Spearman 相关性分析。 4. 目标 mRNAs：基于 miRmap、microT、miRanda、PicTar 及 TargetScan 数据库，进行有意义的 microRNAs 靶向预测 mRNAs，使用 RTqPCR 在以上细胞及组织水平检测验证所预测的 mRNAs；microRNAs 和 mRNAs 的表达分别在 G3 EEC 和 G1/G2 EEC 中进行 Spearman 相关性分析。 5. 为了进一步研究 CCL22 及 CCR4 在 G3 EEC 中的作用，免疫组织化学染色检测 30 例 G3 EEC 癌组织、30 例 G1/G2 EEC 癌组织及 30 例正常子宫内膜组织的 CCL22 和 CCR4 表达情况，并分析其与临床病理参数的相关关系；分析 CCL22 及 CCR4 对 G3 EEC 及 G1/G2 EEC 生存率的影响。

结果 1. circRNAs 高通量测序结果：发现了 62167 个在 G3 EEC 癌组织及癌旁组织差异表达的 circRNAs（上调中差异最明显的且与肿瘤通路显著相关的 circRNAs 包括 hsa_circ_0005692、hsa_circ_0001523 和 hsa_circ_0001610，下调中差异最明显的且与肿瘤通路显著相关的 circRNAs 包括 hsa_circ_0000437、hsa_circ_0001776 和 hsa_circ_0009043）； 2. circRNAs 的 RTqPCR 检测结果：组织水平发现 hsa_circ_0005692 和 hsa_circ_0001610 在 G3 EEC 相对 G1/G2 EEC 高表达（P＜0.05）且与测序结果一致，hsa_circ_0000437 和 hsa_circ_0001776 在 G3 EEC 相对 G1/G2 EEC 低表达（P＜0.05）且与测序结果一致；hsa_circ_0001523 和 hsa_circ_0009043 的表达与测序结果不一致；细胞水平发现 hsa_circ_0005692 和 hsa_circ_0001610 在 G3 EEC 细胞株 KLE 中高表达（P＜0.05），hsa_circ_0000437 和 hsa_circ_0001776 在 G3 EEC 细胞株 KLE 中低表达（P＜0.05）； 3. 选择差异

最明显的且与肿瘤通路相关的 hsa_circ_0005692 作进一步分析。分析 hsa_circ_0005692 与患者临床病理参数的关系分析结果：发现 hsa_circ_0005692 的表达水平与年龄，淋巴结转移，FIGO 分期和肌层浸润无关（P＞0.05），与肿瘤的分化显著相关（P=0.001）。 4. hsa_circ_0005692 的 microRNAs 靶向预测结果：hsa-miR-449c-5p 和 hsa-miR-34b-5p 与 hsa_circ_0005692 序列匹配且与肿瘤相关通路有关；二者 RTqPCR 检测结果：组织水平发现 hsa-miR-449c-5p 和 hsa-miR-34b-5p 在 G3 EEC 癌组织中表达低于 G1/G2 EEC 癌组织 （P＜0.05 ），在 G3 EEC 癌组织中表达低于癌旁组织（P＜0.05 ），在 G1/G2 EEC 癌组织中表达低于癌旁组织（P＜0.05 ）,在 G3 EEC 癌旁组织中表达高于 G1/G2 EEC 癌旁组织（P＜0.05 ）；在 ISK 和 KLE 中 RTqPCR 检测发现 hsa-miR-449c-5p 和 hsa-miR-34b-5p 在 G3 EEC 细胞株 KLE 中表达量更低（P＜0.05）；hsa_circ_0005692 与 hsa-miR-449c-5p/hsa-miR-34b-5p 分别在 G3 EEC 和 G1/G2 EEC 中的 Spearman 相关性分析结果显示：hsa_circ_0005692 与 hsa-miR-449c-5p/hsa-miR-34b-5p 在 G3 EEC 中存在明显的负相关，hsa_circ_0005692 与 hsa-miR-449c-5p/hsa-miR-34b-5p 在 G1/G2 EEC 中无明显的负相关； 5. hsa-miR-449c-5p 和 hsa-miR-34b-5p 靶向预测结果：CCL22 和 CCR4 与 hsa-miR-449c-5p/hsa-miR-34b-5p 序列皆匹配且与肿瘤相关通路有关；二者 RTqPCR 检测结果：CCL22 和 CCR4 在 G3 EEC 癌组织中表达高于在 G1/G2 EEC 癌组织（P＜0.05），在 G3 EEC 癌组织中表达高于癌旁组织（P＜0.05），在 G1/G2 EEC 癌组织中表达高于癌旁组织（P＜0.05）。同时在 ISK 和 KLE 细胞水平检测 CCL22 和 CCR4，结果表明 CCL22 和 CCR4 在 G3 EEC 细胞株 KLE 中表达量更高（P＜0.05）；hsa-miR-449c-5p/hsa-miR-34b-5p 与 CCR4 分别在 G3 EEC 和 G1/G2 EEC 中的 Spearman 相关性分析结果：hsa-miR-449c-5p/hsa-miR-34b-5p 与 CCR4 在 G3 EEC 中存在明显的负相关，hsa-miR-449c-5p/hsa-miR-34b-5p 与 CCR4 在 G1/G2 EEC 中无明显的负相关，CCR4 与 CCL22 在 G3 EEC 中存在明显的正相关。 6. 免疫组织化学染色结果：CCL22 和 CCR4 在 G3 EEC 癌组织中表达量高于 G1/G2 EEC 癌组织和正常子宫内膜组织的表达量（P＜0.05），CCL22 和 CCR4 在 G1/G2 EEC 癌组织表达高于正常子宫内膜组织（P＜0.05）； 7. CCL22 和 CCR4 与 60 例患者临床病理参数关系分析结果：CCL22 和 CCR4 的表达水平与年龄，淋巴结转移，肿瘤大小，FIGO 分期和肌层浸润无关（P＞0.05），差异无统计学意义；与肿瘤分化显著相关（P＜0.05），差异具有统计学意义；CCL22 及 CCR4 阳性表达的 G3 EEC 患者 5 年生存率低。

结论 1. hsa_circ_0005692 可能在 G3 EEC 的发展中起到重要作用，可能成为 G3 EEC 潜在生物治疗靶点； 2. hsa_circ_0005692—miR-449c-5p/miR-34b-5p—CCL22/CCR4 轴可能在 G3 EEC 的发展中起到重要的作用； 3. CCL22 及其受体 CCR4 与子宫内膜癌分化及其预后相关，可能成为 G3 EEC 潜在的生物治疗靶点。

PO-610

KRT17/Hippo 信号传导在宫颈癌细胞顺铂耐药中的作用及其机制研究

王晓玉,陈铭
暨南大学附属第一医院妇科

目的 宫颈癌是最常见的妇科恶性肿瘤，宫颈癌的复发及耐药严重影响宫颈癌患者的生存期及生活质量。角蛋白不仅是角质细胞的标志分子，它的异常表达也是肺癌、乳腺癌，口腔癌和宫颈癌等癌症的诊断和预后的标志事件。Hippo 通路在细胞接触抑制，器官发育及肿瘤的发生发展中发挥着至关重要的作用；此外，它作为一个非常重要的抑癌信号，它的异常关闭在肿瘤的形成、转移和耐药中有着极其重要的作用。本研究通过研究角蛋白 17（KRT17）上调 Hippo 通路相关的 YAP/TAZ 的分子机制，及其在宫颈癌化疗耐药中的作用，继而为宫颈癌的化疗提供新的理论依据和思考方向。

方法 1. 检测宫颈癌细胞株中 KRT17 及 Hippo 通路下游两个核心因子 YAP、TAZ 的表达情况：用 Western Blot 和荧光定量 PCR 检测人宫颈癌细胞株 SiHa、C33A 中 KRT17、YAP、TAZ 的表达情况。2. 用病毒转染法敲除 SiHa 细胞中 KRT17 的表达。Western Blot 检测 sh-Ctrl-SiHa 和 sh-KRT17-SiHa 细胞 KRT17、YAP、TAZ 的蛋白表达情况。荧光定量 PCR 检测 YAP、TAZ 靶基因 ctgf 和 cyr61 的表达情况。CCK8 法检测细胞的增殖情况。 3. 不同浓度（0、1uM、5uM、10uM）的顺铂作用于 sh-CTRL-SiHa 和 sh-KRT17-SiHa 细胞 48h 后，Annexin V-FITC PI 双染细胞凋亡试剂盒对各组细胞进行染色，用流式细胞术检测此两种细胞的凋亡情况。 4. 用病毒转染法在 C33A 细胞中过表达 KRT17。Western Blot 法检测 ov-CTRL-C33A 和 ovKRT17-C33A 中 KRT17、YAP、TAZ 的表达情况。双荧光素酶报告基因技术考察 KRT17 对 TEAD4 报告基因活性的影响。CCK8 法检测细胞的增殖情况和毒性实验。 5. 检测耐药基因 abcg1 和 abcg2 在 SiHa 和 C33A 这两个细胞中的基因表达情况 6. 不同浓度的顺铂（0、1uM、5uM）作用 sh-CTRL-SiHa 和 sh-KRT17-SiHa 细胞 48h 后，Western Blot 检测 KRT17、YAP、TAZ 的蛋白表达情况。 7. 不同浓度的顺铂（0、0.5uM、1uM）作用于 KRT17 低表达的 C33A 细胞 48h 后，Western Blot 检测 KRT17、YAP 和 TAZ 的表达情况。

结果 1. KRT17 在 SiHa 细胞中高表达，在 C33A 细胞中低表达；Hippo 通路下游的 YAP、TAZ 在 SiHa 细胞中比 C3AA 细胞中表达高。 2. SiHa 细胞敲降 KRT17 后，YAP、TAZ 表达下调，其靶基因 ctgf 和 cyr61 表达明显受到抑制（p***<0.001），细胞增殖情况也受到抑制（p***<0.001）。 3. 顺铂浓度为 0uM 和 1uM 时，sh-CTRL-SiHa 和 sh-KRT17-SiHa 细胞的凋亡率没有统计学差异；顺铂浓度为 5uM 和 10uM 时，sh-KRT17-SiHa 细胞的凋亡率明显高于 sh-CTRL-SiHa 的凋亡率（p**<0.01, p***<0.001）。4. C33A 细胞过表达 KRT17 后，YAP、TAZ 表达上升，且 KRT17 的表达量跟 TEAD4 表达活性呈正比（p**<0.01）。细胞增殖能力也得到了加强（p*<0.05）。 5. SiHa 和 C33A 中 abcg1 的表达没有统计学意义，而 abcg2 在 SiHa 中的表达比在 C33A 中明显要高（p***<0.001）。 6. 1uM 和 5uM 的顺铂作用后，在 sh-CTRL-SiHa 细胞中，YAP 和 TAZ 的表达比对照组增强了，而在 sh-KRT17-SiHa 细胞，YAP 和 TAZ 蛋白在顺铂的作用下仍未见明显表达。 7. 0.5uM、1uM 的顺铂作用于 C33A 细胞 48h，能够上调 KRT17、YAP、TAZ 的表达。

结论 1. 在 SiHa（高表达 KRT17 的宫颈癌细胞株）细胞中，Hippo 通路下游的两个核心转录共激活因子 YAP 和 TAZ 的表达水平明显高于 C33A（低表达 KRT17 的宫颈癌细胞株）细胞中相应基因的表达水平。 2. 敲除 SiHa 细胞中的 KRT17 表达能显著下调 Hippo 信号传导相关 YAP 和 TAZ 的蛋白表达，抑制其靶基因 ctgf、cyr61 和 abcg2 的转录；同时显著的抑制 SiHa 细胞的增殖，并增强顺铂对 SiHa 的杀伤作用。 3. 在 C33A 细胞中过表达 KRT17 能显著地促进 Hippo 通路相关 YAP 和 TAZ 的表达，TEAD4 报告基因的活性及其靶基因 ctgf，cyr61 和 abcg2 的转录；并促进 C33A 细胞的增殖，增强 C33A 对顺铂的耐受。 4. 顺铂能够上调宫颈癌 SiHa、C33A 细胞中 KRT17 以及 Hippo 通路相关的 YAP 和 TAZ 的表达，敲除 KRT17 后，能够抑制顺铂对 YAP 和 TAZ 蛋白的诱导作用。

PO-611
STX3 在子宫内膜癌中的表达及其与 PTEN、PIK3CA 的关系

沈媛,袁雨林岚
暨南大学附属第一医院妇科

目的： 检测子宫内膜癌中 STX3、PTEN、PIK3CA 的表达水平，比较三者在子宫内膜癌、不典型增生内膜、正常子宫内膜中的表达差异，分析 STX3 与子宫内膜癌各临床病理指标的相关性及其与 PTEN、PIK3CA 表达间关系，探讨 STX3 在子宫内膜癌中的意义。

方法： 取广州暨南大学附属第一医院病理科组织标本共 87 例，分设为子宫内膜癌组共 46 例、子宫内膜不典型增生组共 14 例及正常内膜组共 27 例。采用免疫组化、Western blotting 方法检测各组中 STX3、PTEN、PIK3CA 的表达水平。使用 χ2 检验或 Spearman 相关性分析分析 STX3、PTEN、PIK3CA 间的关系。使用 χ2 检验分析 STX3 表达与子宫内膜癌各临床病理指标的相关性。

结果： 1. 免疫组化、Western blotting 结果均示 STX3 在子宫内膜癌组中表达增多，统计学差异显著（P＜0.05）。 2. 免疫组化、Western blotting 结果均示 PTEN 在子宫内膜癌组中表达减少，统计学差异显著（P＜0.05）。 3. 免疫组化、Western blotting 结果均示 PIK3CA 在子宫内膜癌组中表达增多，统计学差异显著（P＜0.05）。 4. 经 χ^2 检验或 Fisher 确切概率法以及 Spearman 相关性分析分析，子宫内膜癌中 STX3 的表达与 PTEN、PIK3CA 的表达之间存在相关性(P＜0.05)，关联系数分别是-0.316、0.360。 5. 在子宫内膜癌组中，STX3 表达与年龄、FIGO 分期、肿瘤分化程度、附件转移具有相关性（P＜0.05）。与月经状态、组织学类型、肌层浸润深度、脉管癌栓、淋巴转移无明显相关性（P＞0.05）。

结论： 1. STX3 在子宫内膜癌中表达增多。STX3 表达阳性者年龄较小、FIGO 分期较早、肿瘤分化程度较好、存在附件转移趋势。 2. STX3 的阳性表达率在Ⅰ期子宫内膜癌组织中最高，Ⅲ~Ⅳ期次之，而Ⅱ期则较低，此规律与 PTEN 表达规律相符。 STX3 与 PTEN 的表达呈负相关关系，而 STX3 与 PIK3CA 的表达呈正相关关系，STX3 可能与 PTEN-PI3K/AKT 信号通路存在相关性。

PO-612
妇科患者截石卧位手术应警惕并发骨筋膜室综合征

郑少烈,王晓玉
暨南大学附属第一医院妇科

截石卧位便于会阴、阴道部位手术操作，是妇科腹腔镜、宫腔镜以及各种阴式手术的常用体位。研究表明，患者长时间处于截石卧位和头低脚高位与术后下肢并发骨筋膜室综合征密切相关[1]，已经有多个文献报道了截石卧位手术后并发小腿骨筋膜室综合征[2]。本综述旨在描述妇科患者截石卧位手术后并发骨筋膜室综合征的病理生理学、相关症状和体征、诊断和治疗以及预防措施。 **骨筋膜室综合征** 骨筋膜室综合征是指在坚硬的骨筋膜室内因筋膜室内压力高于血液灌注压引起的肌肉和神经急性缺血、缺氧而产生的一系列症候群[3]，最多见于前臂掌侧和小腿。表现为肢体持续性剧烈疼痛且进行性加剧，指或趾呈屈曲状态，肌力减弱，肿胀等[4]。挤压伤、严重热烧伤、绷带过紧、穿透性创伤和四肢血管结构损伤等创伤性因素；缺血再灌注损伤、血栓形成、出血性疾病、血管疾病、肾病综合征等非创伤性因素均可引起骨筋膜室综合征[5]。骨筋膜室综合征是泌尿外科、妇科和普通外科在截石卧位手术中罕见但严重的并发症[1, 6]。 **病理生理学** 患者截石卧位时小腿承受的外部压力可能阻碍或延缓下肢静脉和淋巴回流，导致下肢灌注不足引起肌肉和神经局部缺血水肿。随后筋膜室内压力升高进一步引起静脉循环闭塞导致该区域肌肉组织的功能性损伤，最终引起肌肉坏死、横纹肌溶解[7]。有研究显示，小腿承受的外部压力> 32mmHg 时可导致毛细血管闭塞和缺血性神经损伤[8]，皮肤表面压力持续存在会导致筋膜室内压力增加和局部缺血的恶性循环。临床研究报告显示，与仰卧位相比，截石卧位时大隐静脉的静脉压显著增加，静脉最先回流不畅，动脉供血最后受影响，最终当骨筋膜室压力接近或超过全身舒张压时开始出现骨筋膜室综合征[9]。 研究表明，骨筋膜室压力的正常范围在 0 至 10mmHg 之间[7]。当患者下肢被抬高于右心房一个厘米，平均动脉压下降约 0.78mmHg[10]。低平均动脉压会减少血液流动，从而阻断肌肉、神经细胞的营养和氧气供应。在小腿抬高 25 分钟后，平均动脉压从 100 下降到 77mmHg，而灌注压会从 103 下降到 21mmHg，相当于腓肠肌的氧饱和度从 68％降至 58％。这些结果说明，在截石卧位手术中平均动脉压的下降可引起组织缺血，导致小腿肌肉缺氧[11]。术后恢复平卧位后双下肢血液再灌注，会引起毛细血管渗漏和组织水肿[6]，此时血管内的静水压和组织间隙内的渗透压异常将进一步加剧局部组织缺血，细胞缺氧、酸中毒并死亡，形成组织水肿后引起骨筋膜室综合征。 肥胖已被认为是骨筋膜室综合征的危险因素[12]，肥胖的患者在截石卧位经过长时间的外科手术后发生横纹肌溶解有较多报道[4]。肥胖患者的代谢异常以及肥胖本身的重力效应为骨筋膜室综合征的两大危险因素。 **症状和体征** 骨筋膜室综合征主要表现为疼痛、低温、无脉、苍白、感觉异常以及瘫痪等六个主要临床症状，其中最早出现的是患肢剧烈的疼痛。在骨筋膜室综合征的晚期才出现无脉、感觉异常和完全性瘫痪[13]。 疼痛：随着骨筋膜室内压力的升高，肌肉水肿使筋膜内的神经纤维和肌肉组织受压引起疼痛

[14]。 低温：指动脉血灌注不足引起的患肢冰凉[15]。 无脉和苍白：无脉是骨筋膜室综合征晚期才出现的症状，而苍白症状不常出现。肢体脉搏消失和苍白表示动脉灌注不足[13]。 感觉异常以及瘫痪：随着筋膜室压力的增加超过平均动脉压，组织血流灌注中断，神经元组织缺血缺氧甚至坏死，引起神经功能障碍和感觉异常、局部麻痹和最终瘫痪[14]。 **诊断和治疗** 骨筋膜室综合征主要依靠体格检查和疼痛、低温、无脉、苍白、感觉异常以及瘫痪等六个主要临床表现来诊断[16]。而确诊要通过直接测量筋膜室内压力，传统有效的测量方法包括使用简易针式压力计、裂隙导管或电子晶体转换器进行侵入性测量[7]。但由于妇科医生对骨筋膜室综合征临床症状和筋膜室内压力测量不熟悉，对早期诊断该疾病有一定的困难。日本的一项研究表明 MRI 对骨筋膜室综合征诊断的有效性和实用性[17]。肌酸激酶是肌肉损伤最有用的血清标志物之一，血清总肌酸激酶升高提示骨骼肌细胞结构受损[18]。因此 MRI 检查和血清肌酸激酶水平测定有助于诊断骨筋膜室综合征，比直接测量筋膜室内压力要简单方便，且无创伤[19]。 筋膜室内压力达到 30 mmHg 以上是危险的，应急诊手术切开减压治疗。筋膜室内压力在 30mmHg 持续 8 小时，神经传导会被破坏，筋膜室内压力越高，对患肢组织的损害就越快（筋膜室内压力达 80mmHg 时，在两小时内即可发生肢体组织损害）[20]。如果不及时治疗，可能会出现挛缩、趾畸形、瘫痪和感觉神经病变等不良后果，严重情况下需要截肢[21]，甚至引起多器官功能衰竭、败血症最终死亡[16]。直接筋膜室切开减压是治疗骨筋膜室综合征的最有效方法，筋膜室切开减压的原则包括：（1）足够长的可伸展切口；（2）完全切开所有室间隔；（3）避免损伤重要结构；（4）彻底清创；（5）7-10 天缝合皮肤[22]。术后不高于心脏水平的肢体抬高有助于静脉回流，减少水肿并最大限度地提高组织灌注。此外，避免膝关节屈曲和足背屈将促进整个肢体的血液循环并抑制小腿深后肌群筋膜室内压力的增加[20]，有助于尽快恢复。 **预防措施** 到目前为止，还没有真正具有循证医学证据的预防措施存在，并且由于妇科医护人员缺乏对该并发症的认识而经常延误诊断[1]。相关文献研究提出以下建议：（1）截石卧位手术患者的手术时间超过 3h 都是高危患者，术后应密切留意骨筋膜室综合征的发生[2]；（2）最大限度地减少患者截石卧位时手术时间，如果不需要阴道操作，应考虑可能的体位替代方案，例如患者仰卧时的分腿位[23]；（3）头低脚高位应该尽可能少用[24]，如果可能，腿应该位于或低于右心房水平[25]；（4）常规使用肩托以防止患者头低脚高位时身体向头侧滑动引起腿部肌肉直接受压[26]；（5）应避免膝盖和小腿腘窝处受压；（6）参加较长时间截石卧位手术的医护人员都应该掌握骨筋膜室综合征的典型临床表现[1]。 **结语与展望** 截石卧位是妇科腹腔镜、宫腔镜以及各种阴式手术的常用体位。尽管截石卧位手术时并发骨筋膜室综合征发生率较低，但是骨筋膜室综合征一旦发生，延误诊断和治疗可导致肢体功能丧失甚至危及生命，因此必须引起妇科医护人员的高度重视，以便发生时及时做出正确的诊断和处理，防止遗留远期后遗症。同时我们需要更多的前瞻性研究和预防指南的指导[1]。

PO-613

腹腔镜与开腹手术治疗子宫内膜癌疗效的 Meta 分析及安全性的回顾性研究

郑少烈,王晓玉
暨南大学附属第一医院妇科

研究背景： 目前腹腔镜手术在治疗宫颈癌的生存率存在劣势引起了不同学者的争议。一项前瞻性多中心随机对照临床试验 ADDIN NE.Ref.{5CB9F03F-2CC9-4DDE-B896-5CDFAD162193}[1]结果显示：宫颈癌患者微创手术组 4.5 年无病生存率比开腹组降低了 10.6%（86%比 96.5%），3 年总生存率同样显著低于开腹组（93.8% 比 99.0%）。另有一项同时联合哈佛大学、哥伦比亚大学、西北大学以及两个大型数据库——美国国家癌症数据库（NCDB）和美国国家癌症中心（NCI）的回顾性流行病学调查研究 ADDIN NE.Ref.{DB01D346-6453-4CE0-B803-AEDE7918C0B2}[2]结果显示：宫颈癌患者微创手术组的死亡风险较开腹组高 65%(HR=1.65)；在未使用微创手术之前（2000 至 2006 年），宫颈癌患者的生存率随年份有所增加(虽然无统计学差异，但每年增加了 0.3%)；自 2006 年采用微创手术至 2010

年期间，宫颈癌的 4 年总生存率反而每年下降了 0.8%。2019 年 NCCN 指南明确指出：与开腹手术相比，腹腔镜手术治疗宫颈癌无病生存率与总生存率均下降，仅推荐用于治疗 IA1 期的宫颈癌患者，且术前须告知患者不同手术方式的短期效益及潜在肿瘤风险，并最终由患者自主选择手术方式。 2018 年 FIGO 指南 ADDIN NE.Ref.{C5459269-AA3F-42FA-8C08-F7BA2674D7C2}[3]推荐腹腔镜应用于早期子宫内膜癌患者的治疗中。但其安全性、有效性和复发率，是否和腹腔镜手术治疗宫颈癌一样具有风险，目前仍缺乏循证医学证据证明腹腔镜手术治疗子宫内膜癌在生存率方面存在劣势，我们通过 Meta 分析及回顾性研究评价腹腔镜与开腹手术治疗子宫内膜癌的安全性及有效性，为临床治疗提供有力依据。

研究目的： 通过 Meta 分析评价腹腔镜与开腹手术治疗子宫内膜癌的安全性及有效性。 回顾性分析暨南大学附属第一医院住院行腹腔镜或开腹手术治疗子宫内膜样腺癌患者病例资料，探讨腹腔镜与开腹手术治疗子宫内膜癌的安全性。

资料与方法： 利用计算机检索工具，以“子宫内膜癌”“腹腔镜手术”“开腹手术”“随机试验”及其同义词为关键词，最大限度的检索自 2009 年 1 月至 2018 年 8 月发表在 The Cochrane Library、PubMed、万方数据库、CBM 和 CNKI 等数据库的相关文献。根据纳入及排除标准对收集文献进行严格筛选，排除不符合标准及低质量文献；提取各纳入文献中腹腔镜手术组与开腹手术组手术时间、住院时间、术中出血量、术中术后并发症、术中盆腔淋巴结切除数目、复发率、总生存率以及无瘤生存率。采用 RevMan 5.3 软件进行 Meta 分析。 复习暨南大学附属第一医院于 2011 年 1 月 1 日至 2019 年 1 月 1 日因“子宫内膜样腺癌”收治入院并行腹腔镜或开腹手术治疗的患者病例资料。统计分析手术时间，术中出血量，住院时间，盆腔淋巴结清扫数目，术中术后并发症，术后肛门排气时间及盆腔引流量等信息。

结果： 符合纳入标准的文献共 11 篇随机对照试验,共 6574 例患者。Meta 分析结果显示与开腹手术相比，腹腔镜手术治疗子宫内膜癌手术时间更长（MD=37.56，95％CI：13.56～61.56，P=0.00200）、住院时间更短（MD=-2.41，95％CI：-3.08～-1.74，P＜0.00001）、术中出血量更少（MD=-97.09，95％CI：-104.91～-89.28，P＜0.00001）、术中盆腔淋巴结切除数目更多（MD=1.02，95％CI：0.83～1.21，P＜0.00001）、术中并发症发生率更高（OR=1.27，95％CI：1.01～1.60，P=0.04000）、术后并发症发生率更低（OR=0.63，95％CI：0.54～0.73，P＜0.00001）、术后复发率差异无统计学意义（OR=1.02，95％CI：0.85～1.24，P=0.81000）、术后总体生存率差异无统计学意义（OR=1.06，95％CI：0.87～1.29，P=0.54000）、术后无瘤生存率差异无统计学意义（OR=0.97，95％CI：0.81～1.16，P=0.74000）。 2011 年 1 月 1 日至 2019 年 1 月 1 日期间因“子宫内膜样腺癌”收治入暨南大学附属第一医院妇科并行腹腔镜或开腹手术治疗患者，共 123 例。腹腔镜手术组（268.44±65.00min）较开腹手术组（234.75±46.99min）手术时间长，差异有统计学意义（P=0.00200）；腹腔镜手术组（211.67±347.92ml）较开腹手术组（494.53±493.94ml）术中出血量少，差异有统计学意义（P=0.00000）；腹腔镜手术组（16.22±6.30 天）较开腹手术组（22.31±7.27 天）住院时间短，差异有统计学意义（P=0.00000）；腹腔镜手术组（496.08±701.97ml）与开腹手术组（423.36±772.55ml）盆腔引流量差异无统计学意义（P=0.58500）；腹腔镜手术组（42.72±14.89h）较开腹手术组（53.22±19.03h）术后排气时间短，差异有统计学意义（P=0.00100）；腹腔镜手术组（14.04±6.32 枚）较开腹手术组（21.18±6.38 枚）淋巴结清扫数目少，差异有统计学意义（P=0.00000）；腹腔镜手术组（6（10.00%）例）与开腹手术组（14（22.22%）例）术后并发症差异无统计学意义（P=0.06600）。

结论： 1、腹腔镜手术与开腹手术治疗子宫内膜癌疗效相似，虽然腹腔镜手术术中风险略高，但长期疗效无差异。由此推荐腹腔镜手术治疗早期子宫内膜癌。 2、早期子宫内膜癌淋巴结切除数目与术后生存率无明显关系，切除淋巴结的主要目的是手术病理分期。

PO-614

宫腔菌群对子宫内膜增生发生发展的机制初探

蔡蕾,蒋学风
暨南大学附属第一医院妇科

目的：探索子宫内膜增生患者的宫腔菌群构成及多样性差异，从菌群的角度探讨子宫内膜增生的发病机制，寻找子宫内膜增生的特定菌群治疗靶标。
方法：1.16S rRNA 基因测序分析子宫内膜癌、子宫内膜增生和正常组子宫内膜组织的菌群构成多样性和丰度差异。 2.流式细胞术检测三组内膜组织中 Treg 免疫细胞水平。 3.ELISA 法检测三组内膜组织中 β-葡糖醛酸糖苷酶活性及各组宫腔冲洗液中 IL-6 水平。 4.化学发光免疫分析法检测三组宫腔冲洗液中 E2 含量。
结果：1.正常宫腔并非无菌；门水平上，厚壁菌门、变形菌门和拟杆菌门的相对丰度在内膜增生组明显高于正常组；属水平上，拟杆菌属的相对丰度在增生组更高，而乳杆菌的相对丰度明显低于正常组。种水平上，大肠杆菌和脆弱拟杆菌的相对丰度在增生组明显增高。除此之外，子宫内膜增生不伴不典型增生组的厚壁菌门和变形菌门的相对丰度明显高于正常组，但其与不典型增生组无明显差异。大肠杆菌和脆弱拟杆菌的相对丰度在不典型增生中最高，其次是子宫内膜增生不伴不典型增生组，而正常组最低。 2.内膜增生组和内膜癌组 Treg 比例明显高于正常组。内膜组织 β-葡糖醛酸糖苷酶活性和宫腔冲洗液 E2、IL-6 水平在增生组和内膜癌组均高于正常组，其中子宫内膜增生不伴不典型增生组的 β-GD 活性和 E2 水平明显高于正常组，但与不典型增生组无明显差异。IL-6 含量在不典型增生组中最高，其次是子宫内膜增生不伴不典型增生组，而正常组最低。
结论：1. 正常女性宫腔是有菌的，而且菌群构成及其多样性丰富。 2. 宫腔菌群中厚壁菌门、拟杆菌门相对丰度增加，影响内膜组织 β-葡糖醛酸糖苷酶活性，进而可影响宫腔局部 E2 水平，参与子宫内膜增生，可能是子宫内膜增生的始动因素；在种水平，脆弱拟杆菌和大肠杆菌相对丰度的增加可通过影响 IL-6 炎症因子水平及 Treg 细胞介导的局部免疫，可能在不典型子宫内膜增生中发挥着更重要作用，甚至可能在子宫内膜癌的发病中也有着一定潜在作用。 3. 微生物组靶向方法即调节宫腔菌群，可能为治疗子宫内膜增生带来新思路。

PO-615

子宫内膜癌肠道菌群分析及相关机理初步探讨

蒋学风,梁月明
暨南大学附属第一医院妇科

目的：研究子宫内膜癌与肠道菌群之间的相关关系，分析有无差异菌群在子宫内膜癌中起到重要作用，初步研究肠道菌群在子宫内膜癌中的机理，为子宫内膜癌的治疗提供新的肠道菌群治疗靶点。
方法 1. 利用 16S rRNA 测序法对 15 例子宫内膜癌(EC)患者粪便样品、15 例子宫内膜增生症(EH)患者粪便样品和 15 例正常人群(H)粪便样品进行肠道菌群测序； 2. 分析测序的深度、样本量以及物种丰富度是否充分； 3. 分析在子宫内膜癌组粪便、子宫内膜增生症组粪便及正常子宫内膜组粪便之间的差异肠道菌群；分别在门纲目科属种不同层次水平进行差异肠道菌群的具体分析； 4. 利用直接化学发光法检测子宫内膜癌组粪便、子宫内膜增生症组粪便及正常子宫内膜组粪便之间雌二醇的含量差异；雌二醇与 Megasphaera 之间进行 Spearman 相关性分析； 5. 使用 ELISA 法检测子宫内膜癌组粪便、子宫内膜增生症组粪便及正常子宫内膜组粪便之间 β-GD 的含量差异；β-GD 与 Megasphaera 之间进行 Spearman 相关性分析； 6. 使用 ELISA 法检测子宫内膜癌组粪便、子宫内膜增生症组粪便及正常子宫内膜组粪便之间 IL-6 的含量差异；IL-6 与大肠杆菌之间进行 Spearman 相关性分析。

结果 1、成功进行了三组肠道菌群测序，45 个样品共产生 698 个 OTU，物种丰富度足够； PCA 分析表明 EC 组、EH 组和 H 组在互相之间总体组成的 OTU 构成上差异不显著；物种累积曲线显示样本测序的物种丰富度足够，测序的样品数量充分；OTU PLS-DA 分析表明循环到 X 和 Y 两个贡献度最高的两个成分时，我们可以看到 EC 组、EH 组和 H 组互相之间存在明显差异；OTU Rank 曲线显示整体上 EC 组和 EH 组曲线较为陡峭，物种丰富度较 H 组稍差，说明 EC 和 EH 组优势菌群占比比较大，特别是 EC 组更为明显；样品的 Alpha 多样性显示 shannon 指数与 simpson 指数共同说明了 H 组丰富度及多样性稍多于 EC 组和 EH 组，EC 组和 EH 组可能有优势菌群占比大； 2、门水平差异肠道菌群分析结果：门水平发现有差异的菌群包括变形菌门 Proteobacteria（p=0.055724）和疣微菌门 Verrucomicrobia（p=0.002883）,其中变形菌门在 EC 组及 EH 组丰度高于 H 组，EC 组丰度稍高于 EH 组；疣微菌门在 EC 组及 EH 组丰度低于 H 组，EC 组丰度稍低于 EH 组； 3、纲水平差异肠道菌群分析结果：纲水平发现有差异的菌群包括芽孢杆菌纲 Bacilli（p=0.003529）、丙型变形菌纲 Gammaproteobacteria（p=0.011581）、疣微菌纲 Verrucomicrobiae（p=0.002883）和 柔膜菌纲 Mollicutes（0.028714）。其中丙型变形菌纲在 EC 组及 EH 组丰度高于 H 组，EC 组丰度稍高于 EH 组；疣微菌纲在 EC 组及 EH 组丰度低于 H 组，EC 组丰度稍低于 EH 组。 4、目水平差异肠道菌群分析结果：目水平发现有差异的菌群包括 Aeromonadales（p=0.043351）、肠杆菌目 Enterobacteriales（p=0.010019）、疣微菌目 Verrucomicrobiales（p=0.002883）和 RF39(p=0.028714)。其中肠杆菌目在 EC 组及 EH 组丰度高于 H 组，EC 组丰度高于 EH 组；疣微菌目在 EC 组及 EH 组丰度低于 H 组，EC 组丰度低于 EH 组； 5、科水平差异肠道菌群分析结果：科水平发现有差异的菌群包括 Barnesiellaceae（p=0.022743）、丛毛单胞菌科 Comamonadaceae（p=0.008555）、 肠杆菌科 Enterobacteriaceae（p=0.010019）、微球菌科 Micrococcaceae（p=0.0.01786）、普雷沃氏菌科 Prevotellaceae（p=0.028288）、瘤胃菌科 Ruminococcaceae（p=0.032969）、琥珀酸弧菌科 Succinivibrionaceae（p-0.043351）和疣微菌科 Verrucomicrobiaceae（p=0.002883）。其中肠杆菌科在 EC 组及 EH 组丰度高于 H 组，EC 组丰度稍高于 EH 组；疣微菌科在 EC 组及 EH 组丰度低于 H 组，EC 组丰度稍低于 EH 组； 6、属水平差异肠道菌群分析结果：属水平发现有差异的菌群包括 Akkermansia（p=0.002883）、Alistipes（0.026678）、Anaerococcus（p=0.013828）、奇异菌属 Atopobium（p=0.027157）、丛毛单胞菌属 Comamonas（p=0.008555）、埃希氏杆菌属 Escherichia（p=0.005194）、巨球形菌属 Megasphaera（p=0.041379）、Odoribacter（p=0.030707）、Parvimonas（p=0.012678）、Peptoniphilus（p=0.02521）、Porphyromonas（p=0.04508）、Prevotella（p=0.04508)、Rothia（p=0.01786）、Shigella(p=0.046072)、Succinatimonas（p=0.043351）、Sutterella（p=0.057903）和 p_75_a5（p=0.043351）。其中埃希氏杆菌属在 EC 组及 EH 组丰度高于 H 组，EC 组丰度稍高于 EH 组；Akkermansia 在 EC 组及 EH 组丰度低于 H 组，EC 组丰度稍低于 EH 组； 7、种水平差异肠道菌群分析结果：种水平发现有差异的菌群包括 Akkermansia_muciniphila（p=0.00661）、Alistipes_onderdonkii(p=0.009251)、Clostridium_bifermentans(p=0.043351)、Clostridium_paraputrificum(p=0.041575)、Escherichia_coli(p=0.005194)、Lactobacillus_mucosae(p=0.011573)、Prevotella_stercorea(p=0.013976)、Rothia_mucilaginosa(p=0.012977)、Ruminococcus_bromii(p=0.012977)和 Shigella_boydii(p=0.043351)。其中埃希氏杆菌在 EC 组及 EH 组丰度稍高于 H 组，EC 组丰度高于 EH 组；Akkermansia 在 EC 组及 EH 组丰度低于 H 组，EC 组丰度稍低于 EH 组； 8、ELISA 法检测 IL-6 结果：IL-6 在 EC 组粪便中表达高于 EH 和 H 组（P＜0.05），IL-6 在 EH 组中表达高于 H 组（P=0.0102）；IL-6 与大肠杆菌的 Spearman 相关分析结果显示：相关系数 r=0.8201，IL-6 与大肠杆菌之间存在显著的正性相关。 9、直接化学发光法检测雌二醇结果：雌二醇在 EC 组粪便中表达高于 H 组（P=0.0022），雌二醇在 EH 组粪便中表达高于 H 组（P=0.0020），雌二醇在 EC 组粪便中表达和 EH 组无明显差异（p=0.2050）,但总体上 EC 组表达稍高于 EH 组；雌二醇与 Megasphaera 的 Spearman 相关分析结果显示：相关系数 r=0.7946，雌二醇与 Megasphaera 之间存在显著的正性相关； 10、ELISA 法检测 β-GD 结果：β-GD 在 EC 组粪便中表达高于 H 组（P=0.0286），β-GD 在 EH 组粪便中表达高于 H 组（P=0.0163），β-GD 在 EC 组粪便中表达和 EH

组无明显差异（p=0.4648）；β-GD 与 Megasphaera 的 Spearman 相关分析结果显示：相关系数 r=0.8479，β-GD 与 Megasphaera 之间存在显著的正性相关。

结论 1. 成功进行了子宫内膜癌肠道菌群测序分析； 2. 变形菌门 Proteobacteria、丙型变形菌纲 Gammaproteobacteria、肠杆菌目 Enterobacteriales、肠杆菌科 Enterobacteriaceae、埃希氏杆菌属 Escherichia、大肠杆菌 Escherichia_coli 菌群分支在子宫内膜癌中上调最明显，Megasphaera 属也在子宫内膜癌中明显上调； 3. 疣微菌门 Verrucomicrobia、疣微菌纲 Verrucomicrobiae、疣微菌目 Verrucomicrobiales、疣微菌科 Verrucomicrobiaceae、Akkermansia 和 Akkermansia_muciniphila 菌群分支在子宫内膜癌中明显下调； 4. Megasphaera 可能产生 β-GD 增多，解离结合雌二醇增加雌二醇的产生，雌二醇重新吸收到循环中，使雌二醇水平升高，作用于靶器官子宫内膜促进子宫内膜癌的发生；Akkermansia_muciniphila 减少可能促进肥胖的发生，增加脂肪组织产生雌激素， Akkermansia 减少与 Megasphaera 可能存在相互协同作用。 5. 大肠杆菌 Escherichia_coli 在子宫内膜癌中明显的上调可能促进 IL-6 的产生，IL-6 重新吸收到循环中，使 IL-6 水平升高，作用于靶器官增加子宫内膜癌肿瘤间质细胞中芳香化酶表达的增加，促进瘤体内雌二醇合成的增加，增加的雌二醇进一步促进子宫内膜癌的发展。

PO-616

子宫内膜息肉发病特征及预防其复发的临床研究

王晓玉,黄高廷
暨南大学附属第一医院妇科

目的：探讨子宫内膜息肉的临床发病特征，以及宫腔镜电切术后不同策略预防其复发的临床效果，加强对其发病因素的认识，并为临床选择较好的预防措施提供理论依据。

方法：首先，回顾性分析我院 2013 年 1 月至 2017 年 12 月子宫内膜息肉患者，共 1746 例，对照组 680 例。统计资料：年龄、BMI、孕次、产次、分娩方式、流产方式、合并症（卵巢囊肿、子宫肌瘤、子宫内膜异位症、多囊卵巢综合征、不孕症、子宫腺肌症、异常子宫出血、盆腔炎性疾病、糖尿病、高血压）及息肉数目与大小。其次，回顾性研究单纯 TCRP 组、宫内节育器组、口服复方短效避孕药组与孕激素组的息肉复发率，术后有生育意愿患者的妊娠率，且在前瞻性研究中增加了对曼月乐组疗效的统计，并对痛经改善情况，口服药物依从性进行分析。

结果：1.EP 发病相关因素中，具有统计学意义的有：年龄(40.21±9.81 岁)、剖宫产、BMI（22.43±3.47kg/㎡）、少孕产次、人工流产，合并症如子宫内膜异位症(OR=2.241，95%CI：0.807)或糖尿病(OR=0.349，95%CI：-1.052)。EP 总恶变率为 1.26%，BMI 波动在 24.90±3.91kg/㎡（OR=1.169，95%CI：0.156）或合并子宫肌瘤(OR=0.277，95%CI：-1.284)与恶变显著相关。 2.回顾性研究中，4 组的 EP 复发率分别为：18.1%、23.5%、2.2%、7.9%，有显著性差异（P＜0.05），而单纯 TCRP 组与宫内节育器组，口服避孕药组与孕激素组间的差异均无统计学意义（P＞0.0125）。术后 1 年内，TCRP 联合口服孕激素组妊娠率（62.37%）明显高于单纯 TRCP 手术组（27.44%），P＜0.05。 3.前瞻性分析中，5 组 EP 复发率分别为：19.7%、26.3%、6.3%、7.2%、0.0%（P＜0.05）。单纯 TCRP 组与宫内节育器组，口服避孕药组与孕激素组或 LNG-IUS 组的差异均无统计学意义（P＞0.010）。术后 8 个月内，观察组妊娠率明显高于对照组（P＜0.05）。除开宫内节育器组，其余 4 组的痛经改善率分别为：21.2%、73.2%、51.2%、87.2%，差异有统计学意义（P＜0.0125）；孕激素组与 LNG-IUS 组间有显著差异（P＜0.0125）；避孕药组与孕激素组或 LNG-IUS 组间差异则无统计学意义（P＞0.0125）。TCRP 术后 2 个月经周期内，口服避孕药组的良好依从率要高于口服孕激素组（81.0% VS 66.7%），差异有统计学意义（P＜0.05）。

结论：1.子宫内膜息肉易复发，其发病特征包括：育龄期、剖宫产史、BMI<25kg/㎡、人工流产，合并子宫内膜异位症、糖尿病等，而多孕产次可能具有一定保护作用，BMI≥25kg/㎡、合并子宫肌瘤可能易致其恶变。 2.预防子宫内膜息肉复发的措施中，LNG-IUS 的疗效最优，口服避孕药或孕激素亦有效，

而放置宫内节育器可能易出现 EP 复发。LNG-IUS 不仅与短效避孕药均可改善痛经，而且明显优于孕激素药物。短周期内，口服避孕药的依从性较孕激素更好，易被患者接受，而口服孕激素治疗可能更适用于术后有妊娠意愿的患者，具有临床指导意义。

PO-617

子宫内膜癌临床病理特征与预后的关系

姚远洋,陈勇,王延洲,李宇迪,张文希,胡群英,陈功立,周莉,梁志清
陆军军医大学第一附属医院（重庆西南医院）

目的:探讨子宫内膜癌临床、病理特征与预后的关系。
方法:收集 577 例原发性子宫内膜癌患者的临床信息，组织病理、免疫组化结果及随访资料，进行统计学分析。
结果:①子宫内膜癌病例中 ER、PR、 p53 的阳性表达率分别为 90.5%、88.5%和 43.2%。②发病年龄、分娩次数与 p53 阳性表达呈正相关(P=0.031; P=0.06)。③手术病理分期与 ER 阳性表达呈负相关(P=0.017)，其中 1 期患者 ER 阳性率高于 II 期及以上患者(P=0.013)。④组织学分级与 ER、PR 阳性表达呈负相关(P=0.002; P=0.000)组织学 III 级 ER、PR、p53 的表达与其他级别比较，差异有统计学意义(P<0.01)。⑤肌层浸润深度与 ER 阳性表达呈负相关(P=0.046)，在有无深肌层浸润上 ER、PR 表达率均有统计学意义(P<0.05)。⑥多因素生存分析显示 PR 不同表达的患者总生存时间的差异有统计学意义(P=0.014)。
结论:术前对诊刮标本进行免疫组化研究，有助于了解子宫内膜癌的临床病理特征，预测预后。