



**1<sup>st</sup> Annual Meeting of  
Asian Pediatric Hematology and  
Oncology Group (APHOG)**  
Joint meeting with 14<sup>th</sup> SIOP Asia 2022

**July 31<sup>st</sup> Sunday, 2022**  
(Third day of SIOP Asia Congress 2022)  
**13:30~17:30 Beijing time**  
**Virtual platform**

Supported by 14<sup>th</sup> SIOP Asia Congress 2022 and NGO  
Magokoro Organization for Childhood Cancer (MOCC)



## How to participate?

Free Participation to the “1<sup>st</sup> APHOG Meeting” is through the following online!!

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The free 1<sup>st</sup> APHOG meeting zoom access is:

<https://us02web.zoom.us/j/81192059259?pwd=SWF6RCtSeXplekhsc0NKUVJXRkVodz09>

Conference ID: 811 9205 9259

Password: 2022

# The capacity of the Zoom Room is 300 for this meeting

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# Please encourage your colleagues to register for the SIOP-Asia meeting as well. Registration can be accessed thru:

<https://siopasia2022.sciconf.cn/en/web/index/13116>

### **“APHOG General Assembly 2022 Spring”:**

**July 31<sup>st</sup> SUN 17:30-18:30, 2022**

- |  |                      |
|--|----------------------|
| 1. Opening   | Akira Nakagawara     |
| 2. Report of APHOG activities during 2021-2022             | Akira Nakagawara     |
| 3. A report from Secretary                                 | Godfrey C. Chan      |
| 4. Manuscripts preparation ongoing                         | Chi-Kong Li, et al.  |
| 5. A big scale questionnaires survey                       | Muhammad Saghir Khan |
| 6. Direction of clinical study and drug discovery in APHOG | Godfrey C. Chan      |
| 7. Plans for 2022-2023                                     | Akira Nakagawara     |
| 8. Discussion  |                      |
| 9. Closing   | Purna Kurkure        |

**“1<sup>st</sup> Asian Pediatric Hematology and Oncology Group (APHOG) Meeting”**  
**(Joint meeting with SIOP Asia 2022: July 29<sup>th</sup>-31<sup>st</sup>, 2022)**

**Date: July 31<sup>st</sup> SUN, 2022**  
**Time: 13:30 to 17:30 (Beijing time)**  
**Style: Virtual meeting sponsored by SIOP Asia 2022**

**PROGRAM**

|             |  |                         |
|-------------|--|-------------------------|
| 13:30-13:35 | Opening Remark   | Akira Nakagawara        |
| 13:35-15:20 | Session-1 "APHOG therapeutic strategy for hematological malignancies in Asia"<br>Chairpersons: Hiroki Hori and Panya Seksarn |                         |
|             | 1. Leukemia and Lymphoma in Asian LMICs  | Rashmi Dalvi            |
|             | 2. Risk-adapted therapy for Juvenile myelomonocytic leukemia: a multicenter, prospective study                               | Jing Chen               |
|             | 3. Clinical study of Hemophagocytic lymphohistiocytosis (HLH) in Asia  | Yongmin Tang            |
| 15:20-15:30 | Intermission   |                         |
| 15:30-17:15 | Session-2 "APHOG challenge against solid tumors in Asia"<br>Chairpersons: Godfrey Chan and Purna Kurkure                     |                         |
|             | 1. Wilms tumor in Asian LMICs  | Muhammad Saghir Khan    |
|             | 2. Clinical study of medulloblastoma in Asia   | Keita Terashima         |
|             | 3. Clinical study of neuroblastoma in Asia   | Godfrey Chan & Alice Yu |
| 17:15-17:25 | General comments   | Chi-Kong Li             |
| 17:25-17:30 | Closing Ceremony   | Bharat Agarwal          |
| 17:30-18:30 | =====<br>"APHOG General Assembly 2022 Spring"<br>=====   |                         |

July 31<sup>st</sup>, 2022 13:30-13:35 (Beijing time)

## Opening Remark



### **Akira Nakagawara, MD, PhD (Japan)**

Chairman, Asian Pediatric Hematology and Oncology Group (APHOG)  
President, Saga Heavy Ion Medical Accelerator in Tosu (HIMAT) Foundation

#### **Current positions and members (related to childhood cancer):**

Chairman, Executive Council, Asian Pediatric Hematology and Oncology Group (APHOG)  
President, NGO Magokoro Organization for Childhood Cancer (MOCC)  
Board member & Chairman of Pediatric Cancer Committee, UICC-Japan  
INRG Executive Committee member & PCDC Scientific Advisory Committee member  
Vice President, Japanese Society for Quantum Medical Science (J-QMS)  
Director, The Quantum Medicine Foundation (QMF)  
Visiting Professors of Nagasaki University and Saga University  
Honorary member, The Japanese Society of Pediatric Hematology/Oncology (JSPHO)  
Member, International Society of Paediatric Oncology (SIOP)  
Founding Member, Japan Children's Cancer Group (JCCG)  
Former President, Advances in Neuroblastoma Research Association (ANRA)  
Past-continental president of SIOP Asia

#### **Specialty in childhood cancer:**

Neuroblastoma, Signaling, Genomics, Drug development, Tissue bank,  
Molecular diagnostics, Long term follow-up, spontaneous regression

## Opening Remark

Akira Nakagawara, MD, PhD  
Chairman, Executive Council, APHOG

First of all, congratulations on the great success of 14<sup>th</sup> SIO Asia Congress in China!

It is our great honor and pleasure to be able to hold the 1<sup>st</sup> annual meeting of Asian Pediatric Hematology and Oncology Group (APHOG) today in support of and collaboration with the 14<sup>th</sup> SIO Asia congress hosted by Guangdong Children's Hospital Group (GCCG) on virtual platform. On behalf of Executive Council of APHOG as well as all other APHOG members, I would like to express sincere thanks to the 14<sup>th</sup> SIO Asia Organizing Chairpersons, Dr. Ruihus Xu, Dr. Musheng Zeng and Dr. Yizhuo Zhang, and all other organizing committee members in China.

In April, 2012, when there was the SIO Asia Congress in Yogyakarta, Indonesia, we had the first preparatory meeting to discuss about the necessity of clinical study group of childhood cancer in Asia, that was agreed by all the participants including many leaders of pediatric cancer in Asian countries. Dr. Gabriele Calaminus, President of SIO at that time, also joined the meeting and said that SIO strongly supports for founding the APHOG.

Since then, we had more than several meetings, and finally, APHOG has been successfully founded in March, 2021. We would like to thank many people including Dr. Kathy Pritchard-Jones, President of SIO, and Dr. Andre Ilbawi, WHO, for their heartfelt encouragement. APHOG is a clinical study group for better treating the children with cancer in Asia, and its basic concept is to work together with SIO Asia like the two-wheels of a cart, a Chinese proverb.

This is the first annual meeting of APHOG. It is a half day meeting but its significance and importance are incredible. A small start is enough to get an enormous success to save the children with cancer in Asia in the future.

Again, I would like to say "thank you" to the 14<sup>th</sup> SIO Asia organizing committee for your helping us to hold this meeting in addition to saying "thanks" to the main SIO and WHO for their strong support on the APHOG's activity.

Thank you very much for your participation.

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**Session-1 “APHOG therapeutic strategy for hematological malignancies in Asia”**

**Chairpersons: Hiroki Hori and Panya Seksarn**



**Hiroki Hori, MD, PhD (Japan)**

President, SIOF Asia (2022~)

Professor and Deputy director, Mie University Graduate School of Medicine, Japan

**Current positions and members:**

Member, Executive Council, Asian Pediatric Hematology and Oncology Group (APHOG)

SIOF Continental President, Asia

Trustee, NGO Magokoro Organization for Childhood Cancer (MOCC)

Steering Committee member, Japan Children's Cancer Group (JCCG)

Councilor, Japanese Society of Pediatric Hematology/Oncology (JSPHO)

**Specialty in childhood cancer:**

Clinical trial, Chemotherapy, Pharmacology and pharmacogenomics of anti-cancer agents, International collaboration, Psycho-social care and long-term follow-up for children with cancer



### **Panya Seksarn M.D. (Thailand)**

Department of Pediatrics, Faculty of Medicine Chulalongkorn University,  
Bangkok, Thailand

**Current positions and members (related to childhood cancer):**

- Chairman of Thai Pediatric Oncology group
- Chairman of Board of Pediatric Hematology/Oncology Training Committee, Thai Medical Council
- Chairman of Expert Committee in Hematology/Oncology, Royal College of Pediatricians of Thailand
- Advisory board of Thai National Health Security Office for Childhood Cancer and Stem Cell Transplantation
- Member of Thai Essential Drug List Committee (Hematology/oncology-section), Ministry of Health

**Specialty in childhood cancer:**

Childhood Leukemia, Histiocytosis

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## **Session-1      “APHOG therapeutic strategy for hematological malignancies in Asia”**

### **Session-1-1**



### **RASHMI DALVI    MBBS, MD, DCH**

Professor & Head, Dept of Pediatrics , Consultant Pediatric Hematologist Oncologist  
Bombay Hospital Institute of Medical Sciences  
Visiting Consultant, NH-SRCC Children's Hospital  
Visiting Faculty PHO & BMT: LTMG Medical College & Hospital Mumbai, India

Immediate Past Continental President SIOP Asia (2018-2021)  
APHOG : Steering committee member & SIOP/WHO-GICC liaison  
Co-Chair, SIOP Membership Committee (2022)  
Member, Steering Committee of SIOP-PARC program (Program for Advancing Research Capacity in Pediatric Oncology)  
Member, SIOP Committee for Education & Training  
Lead for SIOP Global Mapping Project for Asia  
SIOP Asia liaison: Rare Cancers ESMO-Asia & Asian Society for Oncofertility Member Ethics Committee, Stem Cell Committee, King Edward Memorial Hospital, Mumbai  
Board Member, Cherish Life India (Childhood Cancer NGO)  
Founding Member InPOG (2010-15)  
Member, Editorial Advisory Board, Pediatric Hematology Oncology Journal  
Member, SIOP Governance Committee (2020-2021)  
Chair, SIOP-PODC Committee on Training & Education (2010-2013)  
SIOP-PODC Consultant (1994-2010)  
Office Bearer SIOP Asia Board in various capacities: (2001-2013)  
Past Chairperson, PHO Society, India\* (2009-2012)  
ICON\* Ethics Committee Chairperson (2001-2003) & Member(2004-2016)



## **APHOG Strategy: Leukemias & Lymphomas in Asian LMICs**

Rashmi Dalvi

Leukemias & lymphomas account for 40% of childhood cancers worldwide, and Asia, which is home to several populous low and middle-income countries (LMICs) bears 2/3<sup>rd</sup> of this global burden. Childhood Acute lymphoblastic leukemia (ALL), Burkitt Lymphoma (BL) & Hodgkins disease (HD) are among the 6 index cancers targeted by the WHO Global Initiative for Childhood Cancers (GICC); being prevalent across most countries & shown to be highly curable with standard treatments. In high income countries, excellent long term survival rates for standard risk ALL & limited stage BL stand over 90%, and HD > 95%; with 70-80 % survival for high risk states. In contrast, LMICs where pediatric cancer therapy is compounded by complex social, economic & logistic barriers; delayed /underdiagnosis, undertreatment, medical & financial toxicity which result in outcomes ranging from 20-60%. We plan to discuss with examples how we can develop partnerships within HICs & LMICs in Asia to define the scope of the problem including in countries with no collaborative group participation, using known adaptations and approaches to affordable cancer care. It is important to remember that ALL and most pediatric lymphomas are treatable and curable cancers, but need a cost-effective philosophy for care, an aim to minimize morbidity & toxic deaths and to remember that efforts here need to concentrate on achieving cure with frontline therapy, as the first chance is often the best and only chance. However in addition, feasible options for acute myeloid leukemia and for high-risk or relapsed disease states, enabling access to newer therapies may be a further goal for Asian LMICs through APHOG.

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**Session-1      “APHOG therapeutic strategy for hematological malignancies in Asia”**

**Session-1-2**



**Jing Chen. MD, Ph.D (China)**

Department of Hematology/Oncology, Shanghai Children's Medical Center,  
Shanghai Jiaotong University School of Medicine

- Chief physician of hematology/Oncology Department, Shanghai Children's Medical Center, Shanghai Jiaotong University School of Medicine
- Director of China Hematology/Oncology Pediatric Alliance (CHOPA), National Children's Medical Center
- Specializes in pediatric HSCT for BMF, congenital rare disease. She finished a multi-center clinical trial on first-line alternate donor HSCT for children with severe aplastic anemia and organizing a multicenter, prospective study on risk-adapted therapy for JMML in China now
- She has published more than 100 papers as the first author/corresponding author on "cancer cell" and won China Anti-Cancer Association Science and Technology Award, Huaxia Medicine Award and Soong Ching Ling Pediatric Medicine Award

## **Risk-adapted therapy for Juvenile myelomonocytic leukaemia: a multicenter, prospective study**

Jing Chen. MD.Ph.D

JMML, a rare heterogeneous disease, lack of recommended treatment option other than HSCT. Our study intends to establish an accurate diagnosis and risk classification system for JMML based on multiple omics such as RAS mutation, accompanying secondary mutation and methylation degree. This is a prospective clinical trial (ChiCTR2000035471 ) on the efficacy of azacytidine, a demethylation drug, for medium-high risk JMML. To explore the feasibility of non-transplant therapy in non-high-risk children with complete remission at the gene level after demethylation treatment. To explore the efficacy of splenectomy for splenomegaly JMML with CBL and to explore the effects of azacytidine post HSCT to prevent disease recurrence. Between Jan. to Oct. 2021, 57 JMML patients from 23 CHOPA (China Hematology Oncology Alliance) centers participated in this trail. The current data suggested that the clinical remission rate (cPR+cCR) of upfront AZA treatment in the LM and IM group (100.0%) is higher than that in the HM group (40.0%).

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**Session-1 “APHOG therapeutic strategy for hematological malignancies in Asia”**

**Session-1-3**



**Yongmin Tang (China)**

Prof/Dr-in-Chief, MD/PhD Mentor, US ECFMG Certified

Division/Center of Pediatric Hematology/Oncology,  
Children’s Hospital of Zhejiang University School of Medicine

Director, Division/Center of Pediatric Hematology/Oncology at Children’s Hospital of Zhejiang University School of Medicine

Chairman, Chinese Children’s Cancer Group (CCCCG),

China Anti-Cancer Association Scientific Committee Member of Histiocyte Society

Member of SIOP,

Member of ASH

Vice Chairman of 16<sup>th</sup> board member of Pediatric Hematology Study Group,  
Pediatric Branch, Chinese Medical Association

Vice Chairman of the National Pediatric Hematology/Oncology Union

Board Member of National Childhood Leukemia Board

Chairman of Pediatric Hematology Study Group of Zhejiang Province

Board Member of Pediatric Blood & Cancer

Board Member of Pharmaceutics

Board Member of World Journal of Pediatrics

Board Member of Frontiers in Oncology

Board Member of Frontiers in Pediatrics

Board Member of Chinese Journal of Pediatrics

Board Member of Chinese Experimental Hematology

Vice Editor-in-Chief of the Journal of Chinese Pediatric Hematology-Oncology

peer-reviewed publications or presentations: more than 200 papers and more than 100 presentations

# Clinical study of Hemophagocytic lymphohistiocytosis (HLH) in Asia

Yongmin Tang and Xiaojun Xu

APHOG-HLH-2022 protocol drafted by Yongmin Tang and Xiaojun Xu from the Division/Center of Pediatric Hematology-Oncology at the Children's Hospital of Zhejiang University School of Medicine

Background and objectives: Hemophagocytic lymphohistiocytosis (HLH) is a rapidly fatal disease caused by immune-dysregulation characterized by hypercytokinemia, with about 30%-40% of patients suffering death in children. Early death is an important issue in HLH treatment, which is greatly caused by hypercytokinemia resulting in multi-organ dysfunction and partially due to the treatment toxicities. Thus, stratification strategy and individualized treatment is important to improve the survival. In our recent retrospective study which enrolled 256 pediatric patients, the patients were stratified into low, intermediate and high risk according to their IL-10 and IFN- $\gamma$  levels. The 8-week mortality for low, intermediate and high-risk patients were  $5.4\pm 2.4\%$ ,  $16.9\pm 3.4\%$  and  $48.7\pm 8.0\%$ , and the 5-year OS rate were  $82.9\pm 4.0\%$ ,  $67.0\pm 4.3\%$  and  $51.3\pm 8.0\%$ , respectively. This indicated that IFN- $\gamma$  and IL-10 are helpful for stratifying HLH patients into different risk groups to receive individualized therapies. However, evidence of cytokine application based on multi-center prospective study is still lacking. The aim of this protocol is to establish a model to early identify the patients with low and high mortality and to guide the precise treatment of pediatric HLH.

Methods and protocol design: A multicenter prospective study in Asian countries is to be launched for children with HLH. The inclusion criterion is newly diagnosed pediatric HLH patients who has not received steroids or etoposide when enrollment. In this study, the patients are identified as low, intermediate and high-risk cytokine groups according to their cytokine levels: (1) low-risk: IFN- $\gamma$ <3700pg/mL and IL-10<200pg/mL; (2) intermediate-risk: IFN- $\gamma$ <3700pg/mL and IL-10 $\geq$ 200pg/mL; (3) high-risk: IFN- $\gamma$  $\geq$ 3700pg/mL. The patients' clinical manifestation and laboratory findings are evaluated as well and those fulfill either one of the following criteria are considered as "severe": (1) present  $\geq 2$  out of 3: ① albumin<26.0 g/L; ② direct bilirubin>55.0 $\mu$ mol/L; ③ fibrinogen<0.75g/L. (2) CNS involvement, shock, mechanical ventilation, renal failure.

Based on the cytokine risk and disease severity, different intensity of treatment will be started. For low/intermediate risk and not severe patients, steroid or ruxolitinib will be used initially; while those with high risk or "severe" disease, DXM+VP16+ruxolitinib will be administered. The treatment strategy could be adjusted after evaluation 48-72 hours later. A total of 300 pediatric patients under 18 years old are to be recruited. The primary end-point of the study is the 8-weeks of responsive rates and mortality; The second end-point of the study is one-year overall survival.

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## **Session-2 “APHOG challenge against solid tumors in Asia”**

**Chairpersons: Godfrey Chan and Purna Kurkure**



### **Godfrey Chi-Fung Chan (Hong Kong, China)**

*DMD, MD, LMCHK, MSc, FHKAM, FHKCPaed, FRCP(Edin), FRCPCH(UK), FAAP(USA)*

Departments of Pediatrics, the Hong Kong Children’s Hospital and HKU-Shenzhen Hospital

#### **Current positions and members (related to childhood cancer):**

Secretary, Executive Council, Asian Pediatric Hematology and Oncology Group (APHOG)  
Chief of Service, Department of Paediatrics, Hong Kong Children’s Hospital  
Chief of Service, Department of Paediatrics, HKU-Shenzhen Hospital  
Director, Molecular Laboratory of Traditional Chinese Medicine, HKU  
Member, International Society of Paediatric Oncology (SIOP)  
Continental Chairman (Asia, Australia & Africa), Advances in Neuroblastoma Research Association (ANRA)  
Chairman, Smashed Childhood Cancer Consortium  
Chairman of Rare Tumor Board, St. Jude VIVA Foundation

#### **Specialty in childhood cancer:**

Specialist of Pediatric Hematology Oncology  
Clinical trials and novel drugs development for neuroblastoma, brain tumors, and neurocutaneous syndrome  
Stem cells and cancer immunology

#### **Publications, Presentations & Awards:**

>390 publications in international indexed journals (H Index 52, total citation >10,000)  
>300 regional and international conference presentations  
Research Awards of ANR, SIOP & ASPR; Endeavor Executive Award-Australian Government; Outstanding Pediatrician of APPA

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### **Purna Kurkure, Dr. (India)**

Treasurer, APHOG (2021~); President, SIOP Asia (2007~2010)

#### **Present affiliation**

- Senior Advisor, oncology collegium, Narayana Health(NH)
- Head Dept of Paediatric oncology & BMT, SRCC children's hospital managed by Narayana Health, Mumbai
- Joint Managing Trustee & In charge survivorship programme, Indian cancer society, Mumbai
- Treasurer, Asian Paediatric Haematology/Oncology Group
- Joint Secretary (2022-23), Indian Academy of Paediatrics ( IAP)
- President, Indian Society of Neuro-Oncology

#### **Publications & Conferences**

>200 in International & National Journals

Textbooks / Monographs & Contribution to Guidelines : 18

Organizer of many International (SIOP Asia 2002 & SIOP2007) & National Pediatric Oncology conferences

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## **Session-2 “APHOG challenge against solid tumors in Asia”**

### **Session-2-1**



### **Muhammad Saghir Khan, Dr. (Pakistan)**

- Co-Chair of SIOG Global Health Network (formerly known as SIOG PODC Committee; Pediatric Oncology Developing Country of International Society of Pediatric Oncology)
- Member of SIOG Board of Directors
- Chair, SIOG Education and Training Committee
- Member, SIOG Governance Committee
- Member, SIOG Membership Committee
- Member, SIOG Publication and Endorsement Committee
- Member, SIOG Scientific Program Advisory Committee (SPAC)
- Member, SIOG PARC Committee (Program for Advancing the Research Capacity for Pediatric Cancer Clinical Trials in Low-Income Countries and Middle-Income Countries)
- Member, Editorial Board Pediatric Blood & Cancer (PBC)
- Member, Executive Committee Asian Pediatric Hematology and Oncology Group (APHOG) Co-Chair, Taskforce for POEM group’s 10<sup>th</sup> Anniversary Celebrations



## **Wilms Tumor in Asian LMICs**

Muhammad Saghir Khan

Wilms tumor (WT) is the commonest malignant kidney neoplasm in children. Survival of WT patients is one of the great achievements in the field of pediatric oncology by the virtue of multidisciplinary and collaborative management, focused research, and appropriate risk stratification strategies. WT is included in the list of WHO index cancers (WHO Global Initiative for Childhood Cancers) because of high cure rates with proven therapies. Most high-income countries (HIC) report survival at 5 years of more than 90% for early disease and 70% for metastatic disease. On the other hand, low- and middle-income countries (LMICs) continue to struggle with Wilms tumor detection and treatment, with a 5-year survival outcome of less than 50%. Key barriers resulting in this disparity in outcome comprise delayed diagnosis, poor compliance to treatment, and lack of multidisciplinary team management.

This presentation will highlight the WT treatment strategies for LMICs, and share briefly about the clinical trials on WT within the Asian Continent based on the findings of a recently concluded survey titled "Pediatric Oncology Clinical Trials in Asia: A Baseline Assessment Survey by Asian Pediatric Hematology and Oncology Group (APHOG)". The scope of multicentric prospective clinical studies on WT within Asian LMICs will also be discussed in this lecture, followed by an interactive discussion with the participants.

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## Session-2 “APHOG challenge against solid tumors in Asia”

### Session-2-2



### **Keita Terashima, M.D., Ph.D. (Japan)**

Division of Neuro-Oncology, Children's Cancer Center  
National Center for Child Health and Development, Tokyo

**Specialty:** Pediatric Neuro-Oncology

**Qualifications:** Japan Medical license, ECFMG Certificate, American Board Certification in Pediatrics and Pediatric Hematology/Oncology

**Research Interests:**

Genomics and molecular biology of central nervous system germ cell tumors, clinical trials of pediatric brain tumors, early drug development for pediatric brain tumors

**Academic Affiliations:**

Japanese Pediatric Society, Japanese Society of Pediatric Hematology and Cancer, Japanese Brain Tumor Society  
Japanese Society of Pediatric Neurosurgery  
Japan Children's Cancer Group (JCCG) Brain Tumor Committee, Germ Cell Tumor Committee

## **Clinical study of medulloblastoma in Asia**

Keita Terashima

Medulloblastoma is one of the success stories of clinical study in childhood brain tumors. Serial clinical studies in North America and Western Europe showed improved survival of children with medulloblastoma. Classic clinical stratification, importance of tumor resection, cranio-spinal irradiation and multi-agent chemotherapy are established in those clinical studies and now regarded as international standard. However, advance in molecular biology research in medulloblastoma has revealed that medulloblastoma is way more complex and heterogenous disease than it is thought to be. Ongoing modern medulloblastoma studies require more stratification by multiple molecular tests and aim for reduction of treatment in lower risk patients and intensification of treatment in higher-risk group as well as introducing targeted drugs for specific group of medulloblastoma.

In many Asia countries, despite technology advance and larger pediatric population, inequality in medical care, limitation of clinical medical resources, language barriers between countries and lack of international clinical research group have resulted poor track record of medulloblastoma clinical trials.

This lecture will discuss the potentials and problems in developing inter-nation clinical studies of medulloblastoma in Asia.

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## **Session-2 “APHOG challenge against solid tumors in Asia”**

### **Session-2-3**



### **Alice Yu, Dr. (Taiwan)**

**COG, Pioneer of Cancer Immunotherapy, Taiwan**

Alice L. Yu, M.D., Ph.D. is an Academician of Academia Sinica in Taiwan. She is a Distinguished Chair Professor & Deputy Director of the Institute of Stem Cell & Translational Cancer Research at Chang Gung Memorial Hospital & Chang Gung University, and Professor Emeritus of Pediatrics at the University of California in San Diego. Previously, she was the Chief of Pediatric Hematology Oncology at the University of California in San Diego. From 2003 to May 2013, Dr. Yu served as a Distinguished Research Fellow and Associate Director at the Genomics Research Center, Academia Sinica, in Taiwan. She has been a long-time member of the Children’s Oncology Group in the United States, serving on the Steering Committee of Neuroblastoma.

As a pioneer in cancer immunotherapy, Dr. Yu has taken an anti-GD2 monoclonal antibody (Dinutuximab) from preclinical to phase III clinical trial, culminating in its FDA approval for the treatment of high-risk neuroblastoma in 2015. This marks the first immunotherapeutic agent to target carbohydrate antigen worldwide. She has continued to pursue strategies to improve the efficacy of anti-GD2 immunotherapy through international collaboration.

She received the Pediatric Oncology Award by the American Society of Clinical Oncology (ASCO) in 2020, Excellence in Technology Transfer Award from Federal Laboratory Consortium, USA in 2016, The 55th Academic Award from the Ministry of Education, The 19th Wang Min-Ning Memorial Award for Outstanding Contribution to the Development Medical Science and Technology, National Health and Society, Year 2000 “Key to Life” Award, Leukemia & Lymphoma Society, USA, etc..

## Clinical study of neuroblastoma in Asia

Godfrey Chi-Fung Chan & Alice Yu

Among different childhood cancers, neuroblastoma is unique because some spontaneously regresses; some responds to low intensity chemotherapy and surgery; but > 60% of them with high-risk features requiring all the known methods that we can use to achieve a modest survival. In recent 2 decades, immunotherapy with antio-GD2 monoclonal antibody significantly improves the survival of patients with high-risk neuroblastoma as shown by multi-centre randomized trials and single centre cohort study (COG-Yu A; SIOPEN-Ladenstein R; MSKCC-Cheung NK; SJCRH-Furman W). However, questions remain as of how to use the antibody. Whether it should be combined with chemotherapy in the induction phase or just as sole consolidation strategy in the maintenance phase, or even using it in both phases. But all these may not be relevant to most children with high-risk neuroblastoma in Asia for they simply cannot afford this expensive treatment. Are there any other alternatives? Yoshiyuki T, et al. utilized tandem transplant with autologous PBSC then KIR ligand mismatched cord blood and showed a comparable outcome with his cohort. This may be a possible way to go. The German, Korea, HK and Russian groups have tried to use haploidentical peripheral blood stem cells (PBSC) transplant as salvaging therapy for patient with relapsed or refractory neuroblastoma and showed some encouraging preliminary results. However, adding anti-GD2 after the transplant significantly improved the outcome suggesting anti-GD2 is still important. One observation is that simply prolonging chemotherapy is not a good way to improve outcome in high-risk neuroblastoma. Adding epigenetic agents or targeted therapy to existing chemotherapy regimen may help but needs to be studied carefully. Another possibility is to apply systemic radiotherapy such as <sup>131</sup>I-MIBG or <sup>177</sup>Lu-DOTA to those patients with refractory disease, however, they are all expensive and requiring special expertise and equipment. How to formulate a feasible and affordable clinical regimen for neuroblastoma in Asia countries with limited resources should be explored beyond the medical professional's level.

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## **General discussion**

### **Organizer**



### **Chi-Kong Li, Dr. (Hong Kong, China)**

MBBS, MD, FRCPCH, FHKAM (Paediatrics)

Department of Paediatrics, The Chinese University of Hong Kong

Research Professor, Department of Paediatrics, The Chinese University of Hong Kong.

Honorary Consultant, Department of Paediatrics, Hong Kong Children's Hospital.

Executive Council member, Asian Pediatric Hematology and Oncology Group (APHOG)

President, SIOP Asia (2015~2018), Hong Kong SAR, China

Vice-chairman, Scientific Committee, Chinese Children Cancer Group ALL Studies 2015, 2020.

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## Closing Remark



### **Bharat Agarwal, Prof., Dr. (India)**

MD, DCH, DNB (MNAMS), FIAP

Department of Pediatric Hematology & Oncology, B.J. Wadia Hospital for Children,  
Parel, Mumbai

- Prof Emeritus & Former Head of Department, Dept of Pediatric Hematology & Oncology, B.J. Wadia Hospital for Children, Parel, Mumbai
- Past Chairman PHO Chapter of IAP (2004-07), Treasurer & Secretary IAP (2003-06), Fellow IAP-2017
- Hon. Gen. Secretary SIOP, International Society of Pediatric Oncology, 2005-2011
- Associate Editor : Archives of Dis in Children, Pediatric Blood & Cancer, Indian Pediatrics, IJPP & others

