

ICKSH 2022

2022 KOREAN SOCIETY OF HEMATOLOGY
INTERNATIONAL CONFERENCE
& 63rd ANNUAL MEETING

March 31 - April 2, 2022

VIRTUAL



PROGRAM BOOK

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WELCOME MESSAGE

Dear Colleagues and Friends,

On behalf of the organizing committee, it is our great pleasure to invite you to participate in the 2022 Korean Society of Hematology (KSH) International Conference & 63rd Annual Meeting, hosted by KSH, from March 31 to April 2, 2022.

Held every year since 2018, the ICKSH conference shares up-to-date information and provides a unique opportunity for world class leaders in the field to debate vital and contentious issues in Hematology.

While many of us have endured personal and professional challenges over the course of the pandemic and the world is slowly taking the road to recovery, it remains our top priority and responsibility to ensure the health and safety of our participants. With this in mind, the ICKSH 2021 was held as a virtual event last year. Hoping to overcome all these difficulties, we are eagerly looking forward to meeting face to face in Seoul, Korea in the near future.

At the ICKSH 2022, our internationally renowned faculty will provide you with expert insights on the latest developments in benign hematologic diseases, various types of hematologic malignancies, coagulation/thrombosis related disorders and transfusion medicine, offering an unparalleled opportunity to explore the latest global updates.

We hope you to enjoy ICKSH 2022!



Dong-Wook Kim, MD., Ph.D.
Congress Chair
The Korean Society of Hematology



Je-Hwan Lee, MD., Ph.D.
President
The Korean Society of Hematology

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PROGRAM AT A GLANCE Thursday, March 31

Time	ROOM 1	ROOM 2	ROOM 3	ROOM 4
08:00-09:00	Registration			
08:50-09:00	Opening Remark			
09:00-10:30	JS01 KAI-KSH Joint Session	SS01 Pediatric Disease	SS02 Lymphoma (1) - B cell / CLL	ES01 Platelet Disorder
	Next generation CAR-T cell therapy against hematological malignancies (Kyungho Choi, Korea)	Primary immune regulatory disorder for the pediatric hematologist and oncologist (Shanmuganathan Chandrakasan, USA)	Molecular classification of diffuse large B-cell lymphoma and novel treatment strategies (Daisuke Ennishi, Japan)	Diagnostic work up of inherited platelet disorder (Bohyun Kim, Korea)
	Effective conditioning regimen in adoptive T cell therapy of cancer (Chungyong Han, Korea)	Clonal evolution and somatic reversion in bone marrow failure (Akiko Shimamura, USA)	Novel immunotherapeutic antibodies for B-cell NHL (Gilles Salles, USA)	Recent advances in treatments of immune thrombocytopenia (Dae Sik Kim, Korea)
	Tissue resident memory T cells in multiple myeloma (Yoon Seok Choi, Korea)			
	T-cell-based immunotherapeutic strategies against EBV-positive malignancies using the novel TCR specific for LMP1 antigen (Tai-Gyu Kim, Korea)	Molecular landscape of pediatric AML (Soheil Meshinchi, USA)	Targeting B-cell receptor and BCL-2 in chronic lymphocytic leukemia (Susan M. O'Brien, USA)	Thrombocytopenia in pregnancy (Young Hoon Park, Korea)
10:30-11:15	PLENARY LECTURE I			
	Immune landscape of hematological malignancies and functional screening tools (Satu Mustjoki, Finland)			
11:15-11:30	Break			

PROGRAM AT A GLANCE Thursday, March 31

Time	ROOM 1	ROOM 2	ROOM 3	ROOM 4
11:30-12:10	[Satellite] SY01  What is the role of C5 inhibitors in PNH? (Jin Seok Kim, Korea)	[Satellite] SY02  Gilteritinib: ADMIRAL study and real world experience (Byung Sik Cho, Korea)	[Satellite] SY03  Role of CD19-directed CAR-T therapy in patients with DLBCL (Novartis Kymriah symposium) (Koji Izutsu, Japan)	[Satellite] SY04  Immunotherapy in multiple myeloma (Ajai Chari, USA)
12:10-12:40	E-poster Exhibition			
12:40-13:40	Young Investigator Presentation	OP01 AML, MDS	OP02 Lymphoma, Histiocytosis	OP03 Laboratory Hematology
13:40-13:55	Break			
13:55-15:25	AS01 Asian Session 1 - AA (13:55-14:55) Korean treatment guideline for aplastic anemia (Jun Ho Jang, Korea)	SS03 MPN Recent advances in molecular diagnosis, prognosis and monitoring of MPNs (Myungshin Kim, Korea)	SS04 MM Evolution of myeloma from the normal plasma cell to disease complexity (Niccolo Bolli, Italy)	ES02 AML Human AML stem cell: evolution of concept (Dong-Yeop Shin, Korea)
	Aplastic anemia immunosuppressive therapy in China (Zhao Xin, China)	Molecular mechanisms underlying the development of MPN by mutant calreticulin and the therapeutic potential of an antibody targeting mutant calreticulin (Norio Komatsu, Japan)	The power of ONE: immunology in the age of single cell genomics (Ido Amit, Israel)	Recent update of AML risk stratification (Hyoeun Shim, Korea)
	Clinical significance of detecting HLA-class I allele-lacking leukocytes in patients with aplastic anemia (Kohei Hosokawa, Japan)	Targeting pro-inflammatory signaling, including IL8, in myelofibrosis: the pathway into the clinic (Andrew J. Dunbar, USA)	Clinical implication of immune network in multiple myeloma (Je-Jung Lee, Korea)	FLT3 mutated AML (Jae-Sook Ahn, Korea)

PROGRAM AT A GLANCE Thursday, March 31

Time	ROOM 1	ROOM 2	ROOM 3	ROOM 4
15:25-15:40	Break			
15:40-17:10	JS02 KOGO-KSH Joint Session	SS05 CML	SS06 Cell Therapy/ Transplantation	ES03 Thrombosis/ Hemostasis
	Developing single-cell data integration pipeline to find novel cell types and gene markers for immune diseases (Jong-Eun Park, Korea)	Resistance mechanism in CML (Kimmo Porkka, Finland)	Immune landscapes and chemotherapy resistance in AML (Sergio Rutella, UK)	Advances in laboratory assessment in thrombosis/hemostasis (Jaewoo Song, Korea)
	Detection of enhancer hijacking of oncogenes in multiple myeloma (Jin-Wu Nam, Korea)	Mutational landscape in CML (Simona Soverini, Italy)	Towards next-generation T cell engineering for cancer (Chan Hyuk Kim, Korea)	Cancer-associated thrombosis (Ho-Young Yhim, Korea)
	Pharmacogenetics of childhood acute lymphoblastic leukemia (Hyery Kim, Korea)			
	Evaluating leukemic structural variations using optical genome mapping (Saeam Shin, Korea)	CML/MPN stem cells and the bone marrow microenvironment (Steffen Koschmieder, Germany)	Endogenous retroviruses as a source of tumor antigens in solid tumors and acute myeloid leukemia (Stéphane Depil, France)	Recent advances in the management of immune mediated TTP (Sung Hwa Bae, Korea)

PROGRAM AT A GLANCE Friday, April 1

Time	ROOM 1	ROOM 2	ROOM 3	ROOM 4
08:00-09:00	Registration			
09:00-10:30	JS03 ASH-KSH Joint Symposium - Histiocytosis	SS07 Stem Cell Biology	SS08 Thrombosis & Hemostasis	ES04 Plasma Cell Disorder
	Biologic and clinical consequences of the BRAF ^{V600E} mutation in Langerhans cell histiocytosis (Kenneth McClain, USA)	Losing sense of self and surroundings: hematopoietic stem cell aging and leukemic transformation (Emmanuelle Passegue, USA)	Mechanism of thrombosis and bleeding in viral infection: focusing on COVID-19 (Marcel Levi, UK)	Diagnosis and management of monoclonal gammopathy of clinical significance (Hyungwoo Cho, Korea)
	Advances in the diagnosis and treatment of hemophagocytic lymphohistiocytosis (Kim E. Nichols, USA)	Hematopoietic stem and progenitor cell signaling in the niche (Peter Kurre, USA)	COVID-19 vaccine related hematologic manifestations (Soo-Mee Bang, Korea)	Update in the POEMS syndrome (Yu Ri Kim, Korea)
	Current status of diagnosis and treatment of Langerhans cell histiocytosis in Korea (Kyung-Nam Koh, Korea)			
	Adult hemophagocytic lymphohistiocytosis in Korea (Seok Jin Kim, Korea)	Thrombopoietin as an expansion factor for hematopoietic stem cells (Toshio Suda, Japan)	Thrombotic thrombocytopenic purpura in 2022: novel therapies and focus on long term outcomes (Shruti Chaturvedi, USA)	Update in the primary plasma cell leukemia (Sung-Hoon Jung, Korea)
10:30-11:15	PLENARY LECTURE II			
	Rational development of targeted therapies to cure molecular subtypes of DLBCL (Louis M. Staudt, USA)			
11:15-11:30	Break			

PROGRAM AT A GLANCE Friday, April 1

Time	ROOM 1	ROOM 2	ROOM 3	ROOM 4
11:30-12:10	[Satellite] SY05  Role of romiplostim in ITP and AA (Jun Ho Jang, Korea)	[Satellite] SY06  The updated information of ponatinib use in chronic myeloid leukemia (Jorge E. Cortes, USA)	[Satellite] SY07  Strategic treatment for diffuse large B-cell lymphoma; incorporating polatuzumab to DLBCL (Christopher Flowers, USA)	[Satellite] SY08  Optimal treatment with IMiDs in Newly diagnosed multiple myeloma (Luciano J. Costa, USA)
12:10-12:40	E-poster Exhibition			
12:40-13:40	OP04 ALL	OP05 Anemia, BMF, CML, MPN	OP06 MM	OP07 Platelet, Transfusion
13:40-13:55	Break			
13:55-14:40	Presidential Symposium Toward precision medicine in AML (Hartmut Döhner, Germany)			

PROGRAM AT A GLANCE Friday, April 1

Time	ROOM 1	ROOM 2	ROOM 3	ROOM 4
14:40-16:10	MS01 MOU Country Session - MM (14:40-15:40)	SS09 MDS	SS10 ALL	ES05 AA and BMF
	Managing multiple myeloma in a resource-limited region: diagnosis and treatment in Armenia (Yervand K. Hakobyan, Armenia)	Pathophysiology of spliceosome mutations in MDS (Andrea Pellagatti, UK)	Chemotherapy vs. allogeneic HSCT for Ph-negative adult ALL (Josep-Maria Ribera, Spain)	Genetics and genomics of bone marrow failure syndrome (Hyun-Young Kim, Korea)
	Renal involvement in plasma cell disorder: learning from real-life practice (Suporn Chun, Thailand)	Role of extracellular vesicles and miRNA in MDS (Sophie Park, France)	Clonal heterogeneity in ALL (Jan Cools, Belgium)	Aplastic anemia: transplant vs. non-transplant options (Ik-Chan Song, Korea)
	Treatment sequence decision in multiple myeloma considering reimbursement status (Youngil Koh, Korea)			
		Challenges in the diagnosis and treatment of overlap MDS/MPN syndromes (Antonio Almeida, Portugal)	Adoptive cellular immunotherapies based on chimeric antigen receptors (Pablo Menendez, Spain)	Overview of bone marrow failure syndrome (Meerim Park, Korea)
16:10-16:25	Break			

PROGRAM AT A GLANCE Friday, April 1

Time	ROOM 1	ROOM 2	ROOM 3	ROOM 4
16:25-17:55	JS04 EHA-KSH Joint Symposium - CML	SS11 Advanced Technology	SS12 Benign Hematology (Anemia)	ES06 Lymphoma
	Failing a second-generation TKI: when the guidelines don't always help (Jane Apperley, UK)	Hematopoiesis and leukemia through the lens of single cell genomics (Lars Velten, Spain)	The iron-erythropoiesis cross-talk in health and disease (Antonella Nai, Italy)	Lymphoma pathology: basic immunohistochemistry for lymphoma diagnosis (Junhun Cho, Korea)
	Discontinuation of tyrosine kinase inhibitors in CML patients in clinical practice (Antonio Almeida, Portugal)	Computer vision in hematologic malignancies (Oscar Brück, Finland)	Autoimmune hemolytic anemia: state-of-the-art hypotheses on pathogenesis and their application to treatment (Bruno Fattizzo, Italy)	Staging and response assessment of lymphoma (Kwai Han Yoo, Korea)
	Second and later line therapy: the role of ponatinib in Korean patients with CML (Jeong-Ok Lee, Korea)			
	Stopping tyrosine kinase inhibitor in CML; perspectives from Korean data (Hawk Kim, Korea)			
		Hydrogel-based stamping technology for solution-free blood cell staining (Dongyoung Lee, Korea)	Cold agglutinin disease: an update on pathogenesis and future prospects on therapy (Sigbjørn Berentsen, Norway)	Treatment of indolent lymphoma (Seong Hyun Jeong, Korea)

PROGRAM AT A GLANCE Saturday, April 2

Time	ROOM 1	ROOM 2	ROOM 3	ROOM 4
07:30-08:30	Business Meeting			
08:30-09:00	Working Party Reports			
09:00-10:30	AS02 Asian Hematology Session 2 - Pediatric ALL (09:00-10:00) Ma-Spore ALL studies: truly Asia approach to curing childhood ALL (Allen E.J. Yeoh, Singapore)	SS13 AML AML microenvironment and FLT3 inhibitor resistance (Elie Traer, USA)	SS14 Lymphoma (2) - T cell / HL Genomic landscape of peripheral T-cell lymphomas (Keisuke Kataoka, Japan)	ES07 Supportive Care Comprehensive geriatric assessment in older patients for intensive chemotherapy (Jung-Yeon Choi, Korea)
	Childhood ALL in Thailand and multicenter studies of Thai pediatric oncology group (Samart Pakakasama, Thailand)	Targeting TP53 mutation in AML (David A. Sallman, USA)	T-cell lymphomas of follicular helper T-cell derivation: pathology, mechanisms and therapeutic implications (Laurence de Level, Switzerland)	Evaluation and management of platelet transfusion refractoriness (Dae-Hyun Ko, Korea)
	The adherence to MRD time points improves treatment outcomes of childhood ALL in Taiwan: the experience of TPOG-ALL-2013 protocol (Hsi-Che Liu, Taiwan)			
		Adaptive immune resistance and immune evasion by programmed death-1 homolog (PD-1H/ VISTA) in AML (Tae Kon Kim, USA)	Targeted therapy to small molecules in peripheral T cell lymphomas (Deok Hwan Yang, Korea)	Advances in management of invasive fungal infections: perspectives on hematologic diseases (Dong-Gun Lee, Korea)
10:30-11:15	PLENARY LECTURE III			
	Improving outcomes after CD19-targeted CART T-cell therapy (Jordan Gauthier, USA)			
11:15-11:30	Break			
11:30-12:10	Award Ceremony & Closing			

VIRTUAL CONFERENCE INFORMATION

VIRTUAL CONFERENCE WEBSITE

<http://virtual.icksh.org>

REGISTRATION

Please log in using the ID and PW you used to pre-register on the ICKSH 2022 website. If you missed pre-registration, please register onsite.

>> On-Site Registration Days
March 31 - April 2, 2022

>> On-Site Registration Fees
- Overseas

Category	On-Site Registration Fees
General	USD 50
Resident / Trainee / Nurse / Student	USD 25

- Domestic

Category	On-Site Registration Fees	Note
KSH Member	KRW 50,000	Free for KSH members 65 years or above
Fellow / Nurse / Researcher	KRW 30,000	-
Student / Resident	KRW 20,000	-
Non-Member	KRW 150,000	-

* If you use multiple devices with the same ID, your login will be canceled automatically.

VIDEO LECTURES AND Q&A

All lectures and presentations are pre-recorded and broadcast during session time. After the videos are streamed, chairs and speakers have live Q&A and discussion.

Participants can watch VOD lectures for free for one month after the conference. VOD lectures are limited to lectures with consent for distribution.

SATELLITE SYMPOSIA

Please attend the satellite symposium hosted by each of our sponsors over the three-day period and get a point for the prize.

[SY01] Satellite Symposium 01



March 31 (Thursday), 11:30-12:10 / Room 1

Chair

Jun Ho Jang (Sungkyunkwan University, Korea)

Presentation

What is the role of C5 inhibitors in PNH?

Jin Seok Kim (Yonsei University College of Medicine, Korea)

VIRTUAL CONFERENCE INFORMATION

[SY02] Satellite Symposium 02



March 31 (Thursday), 11:30-12:10 / Room 2

Chair

Hyeoung-Joon Kim (Hwasun Chonnam National University Hospital, Korea)

Presentation

Gilteritinib: ADMIRAL study and real world experience

Byung Sik Cho (College of Medicine, The Catholic University of Korea, Korea)

[SY03] Satellite Symposium 03



March 31 (Thursday), 11:30-12:10 / Room 3

Chair

Sung-Soo Yoon (Seoul National University College of Medicine, Korea)

Presentation

Role of CD19-directed CAR-T therapy in patients with DLBCL (Novartis Kymriah symposium)

Koji Izutsu (National Cancer Center Hospital, Japan)

[SY04] Satellite Symposium 04



March 31 (Thursday), 11:30-12:10 / Room 4

Chair

Chang-Ki Min (Seoul St. Mary's Hospital, The Catholic University of Korea, Korea)

Presentation

Immunotherapy in multiple myeloma

Ajai Chari (Mount Sinai, USA)

[SY05] Satellite Symposium 05



April 1 (Friday), 11:30-12:10 / Room 1

Chair

Jong Wook Lee (Seoul St. Mary's Hospital, The Catholic University of Korea, Korea)

Presentation

Role of romiplostim in ITP and AA

Jun Ho Jang (Sungkyunkwan University, Korea)

[SY06] Satellite Symposium 06



April 1 (Friday), 11:30-12:10 / Room 2

Chair

Dong-Wook Kim (Uijeongbu Eulji Medical Center, Eulji University, Korea)

Presentation

The updated information of ponatinib use in chronic myeloid leukemia

Jorge E. Cortes (Georgia Cancer Center, USA)

[SY07] Satellite Symposium 07



April 1 (Friday), 11:30-12:10 / Room 3

Chair

Seok Jin Kim (Sungkyunkwan University School of Medicine, Korea)

Presentation

Strategic treatment for diffuse large B-cell lymphoma; incorporating polatuzumab to DLBCL

Christopher Flowers (The University of Texas MD Anderson Cancer Center, USA)

VIRTUAL CONFERENCE INFORMATION

[SY08] Satellite Symposium 08



April 1 (Friday), 11:30-12:10 / Room 4

Chair

Kihyun Kim (Sungkyunkwan University School of Medicine, Korea)

Presentation

Optimal treatment with IMiDs in newly diagnosed multiple myeloma

Luciano J. Costa (The University of Alabama at Birmingham, USA)

E-POSTER & ORAL PRESENTATIONS

All participants can view the E-posters and oral presentations in the E-Poster/Oral section of the ICKSH2022 virtual conference website. Participants will have an opportunity to win the Lucky Draw after viewing more than 50 of the E-posters.

VIRTUAL EXHIBITION HALL

Meet our sponsors virtually. If you visit e-booths and complete the stamp sheet, and win a chance to get prizes.

ICKSH 2022 SECRETARIAT OFFICE

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CME CREDIT INFORMATION (DOMESTIC PARTICIPANTS ONLY)

Please be sure that Korean participants who claim CME credit must press the Enter / Exit button when entering or leaving the session room to record the training time.

1) CME Credit Rating: By the Korean Medical Association

Category	March 31	April 1	April 2	Remarks
KMA CME Credit	6	6	2	-
KAIM CME Credit		2		During the conference period

2) Korean participants must attend the sessions and complete the viewing time everyday to get Daily CME credits.

3) After entering and exiting the session, please click the "Enter" and "Exit" buttons to record your attendance time. The entry/exit records for each session are required for the credit to be recognized.

* When moving between rooms, you must click the "Exit" button, and click the "Enter" button in the new room.

VIRTUAL CONFERENCE INFORMATION

4) Credits accrued per hour of attendance per day

Residence time	Recognition of Credit
From 1 hour or more to less than 2 hours	1 credit
From 2 hours or more to less than 3 hours	2 credit
From 3 hours or more to less than 4 hours	3 credit
From 4 hours or more to less than 5 hours	4 credit
From 5 hours or more to less than 6 hours	5 credit
From 6 hours or more	6 credit

****** The training time you see on My page of the Virtual conference website includes the break time. The exact session viewing time will be counted after the conference.

EVENTS

We have exciting events for participants. Participants who complete the mission will win a prize!

ICKSH POINTS

>> Event Period: March 31 to April 2 (KST)

The Point Event Prizes will be given if you get 300P (points) a day! (200P on Saturday)

You can check your accumulated points on My Page of the virtual conference website.

HOW TO EARN POINTS

Action	Points
Enter the Platform (Log in)	100P/Day
Attend an Oral Session	100P/Day
Attend a Session (Except Satellite Symposia, Oral Sessions)	50P/Session
Attend the Closing Ceremony (Saturday Only)	50P
Submit the Conference Survey (Saturday Only)	50P

PRIZES



For Korean participants and those living in Korea, KRW 10,000 (daily) Starbucks Gift Card will be given for the prize.



For others, USD 10 (daily) Amazon eGift cards will be given for the prize.

E-POSTER LUCKY DRAW

View more than 50 of the e-posters and get the chance to be a winner!

>> Event Period: March 31 to April 2, 11:00(KST)

Eligibility to win the lucky draw is awarded after viewing more than 50 E-Posters.

Winners will be posted on the ICKSH2022 website after the conference and will be contacted individually.

PRIZES

For Korean participants and those residing in Korea, gifts will be given for the prize.

1 winner



Dyson Airwrap™ styler Complete

3 winners



Apple Watch SE (GPS, 44mm)
or Galaxy Watch 4 Classic
(Bluetooth, 46mm)

10 winners



LG TONE Free



* For others, an Amazon eGift card in the amount of the product will be provided.

EVENTS

E-BOOTH STAMP TOUR

If you visit e-booths and complete the stamp sheet, the prizes will be given.

>> Event Period: March 31 to April 2 (KST)

ELIGIBILITY TO GET GIFTS: GET 21 STAMPS [DAILY]

Sponsor Level	How to Get Stamps
Diamond 8 E-Booths	Download 1 Leaflet & Watch 1 Advertisement (Each E-Booth)
Platinum 3 E-Booths	Download 1 Leaflet (Each E-Booth)
Gold 6 E-Booths	Download 1 Leaflet (Each E-Booth)
4 E-Booths of Silver & Bronze	Access E-Booth

PRIZES

MARCH 31	APRIL 1	APRIL 2	
			
Hand Sanitizer	Tea Set	Car Air Freshener	* For others, an Amazon eGift card in the amount of the product will be provided.

SATELLITE SYMPOSIA EVENT

Attend the Satellite symposium and get an e-gift card!

>> Event Period: March 31 to April 1 (KST)

>> Daily Event: It is required to watch at least 30 minutes of the luncheon symposium.

PRIZES

	For Korean participants and those residing in Korea, KRW 10,000 (Daily) Culture Land Certificate will be given for the prize.		For others, USD 10 (Daily) Amazon eGift cards will be given for the prize.
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KEY SPEAKERS

MARCH 31 (Thursday)



[PL01] Plenary Lecture 01

10:30 - 11:15 | Room 1

Immune landscape of hematological malignancies and functional screening tools

Satu Mustjoki
University of Helsinki, Finland

APRIL 1 (Friday)



[PL02] Plenary Lecture 02

10:30 - 11:15 | Room 1

Rational development of targeted therapies to cure molecular subtypes of DLBCL

Louis M. Staudt
National Cancer Institute, USA

APRIL 1 (Friday)



[PS] Presidential Symposium

13:55 - 14:40 | Room 1

Toward precision medicine in AML

Hartmut Döhner
University of Ulm, Germany

APRIL 2 (Saturday)



[PL03] Plenary Lecture 03

10:30 - 11:15 | Room 1

Improving outcomes after CD19-targeted CAR-T-cell therapy

Jordan Gauthier
University of Washington, USA

DAILY PROGRAM

Thursday, March 31

Friday, April 1

Saturday April 2

DAILY PROGRAM Thursday, March 31

08:50-09:00

Opening Remark

09:00-10:30

[JS01] KAI-KSH Joint Session

Room 1

Chairs

Kyungho Choi (Seoul National University College of Medicine, Korea)
Seok-Goo Cho (The Catholic University of Korea, Korea)

JS01-1

Next generation CAR-T cell therapy against hematological malignancies

Kyungho Choi (Seoul National University College of Medicine, Korea)

JS01-2

Effective conditioning regimen in adoptive T cell therapy of cancer

Chungyong Han (National Cancer Center, Korea)

JS01-3

Tissue resident memory T cells in multiple myeloma

Yoon Seok Choi (Ajou University School of Medicine, Korea)

JS01-4

T-cell-based immunotherapeutic strategies against EBV-positive malignancies using the novel TCR specific for LMP1 antigen

Tai-Gyu Kim (The Catholic University of Korea, Korea)

09:00-10:30

[SS01] Pediatric Disease

Room 2

Chairs

Hye Lim Jung (Sungkyunkwan University School of Medicine, Korea)
Hyeon Jin Park (National Cancer Center, Korea)

SS01-1

Primary immune regulatory disorder for the pediatric hematologist and oncologist

Shanmuganathan Chandrakasan (Emory University School of Medicine, USA)

SS01-2

Clonal evolution and somatic reversion in bone marrow failure

Akiko Shimamura (Harvard Medical School, USA)

SS01-3

Molecular landscape of pediatric AML

Soheil Meshinchi (Fred Hutchinson Cancer Research Center, USA)

09:00-10:30

[SS02] Lymphoma (1) - B cell / CLL

Room 3

Chairs

Jae-Yong Kwak (Jeonbuk National University Medical School, Korea)
Deok Hwan Yang (Chonnam National University Medical School, Korea)

SS02-1

Molecular classification of diffuse large B-cell lymphoma and novel treatment strategies

Daisuke Ennishi (Okayama University Hospital, Japan)

SS02-2

Novel immunotherapeutic antibodies for B-cell NHL

Gilles Salles (Memorial Sloan Kettering Cancer Center, USA)

SS02-3

Targeting B-cell receptor and BCL-2 in chronic lymphocytic leukemia

Susan M. O'Brien (University of California, USA)

DAILY PROGRAM Thursday, March 31

09:00-10:30

[ES01] Platelet Disorder

Room 4

Chairs Hyun Kyung Kim (Seoul National University College of Medicine, Korea)
Sung Hwa Bae (Daegu Catholic University Hospital, Korea)

ES01-1 Diagnostic work up of inherited platelet disorder
Bohyun Kim (Soonchunhyang University College of Medicine, Korea)

ES01-2 Recent advances in treatments of immune thrombocytopenia
Dae Sik Kim (Korea University Guro Hospital, Korea)

ES01-3 Thrombocytopenia in pregnancy
Young Hoon Park (Ewha Womans University Mokdong Hospital, Korea)

10:30-11:15

[PL01] Plenary Lecture 01

Room 1

Chair Dong-Wook Kim (Uijeongbu Eulji Medical Center, Eulji University, Korea)

Immune landscape of hematological malignancies and functional screening tools
Satu Mustjoki (University of Helsinki, Finland)

11:15-11:30

Break

11:30-12:10

[SY01] Handok



Room 1

Chair Jun Ho Jang (Sungkyunkwan University School of Medicine, Korea)

What is the role of C5 inhibitors in PNH?
Jin Seok Kim (Yonsei University College of Medicine, Korea)

11:30-12:10

[SY02] Astellas



Room 2

Chair Hyeoung-Joon Kim (Hwasun Chonnam National University Hospital, Korea)

Gilteritinib: ADMIRAL study and real world experience
Byung Sik Cho (College of Medicine, The Catholic University of Korea, Korea)

11:30-12:10

[SY03] Novartis



Room 3

Chair Sung-Soo Yoon (Seoul National University College of Medicine, Korea)

Role of CD19-directed CAR-T therapy in patients with DLBCL (Novartis Kymriah symposium)
Koji Izutsu (National Cancer Center Hospital, Japan)

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11:30-12:10

[SY04] Janssen



Room 4

Chair Chang-Ki Min (Seoul St. Mary's Hospital, The Catholic University of Korea, Korea)

Immunotherapy in multiple myeloma

Ajai Chari (Mount Sinai, USA)

12:10-12:40

E-poster Exhibition

12:40-13:40

[YI] Young Investigator Presentation

Room 1

Chairs Je-Hwan Lee (University of Ulsan College of Medicine, Korea)
Deok Hwan Yang (Chonnam National University Medical School, Korea)

YI-1 Establishment of a preclinical model for acquired resistance to FMS-like tyrosine kinase 3 (FLT3) inhibitors and development of a basis for overcoming the resistance in FLT3 mutated acute myeloid leukemia

Eun-Ji Choi (University of Ulsan College of Medicine, Korea)

YI-2 Identification of tyrosine kinase resistance mechanisms through next-generation sequencing analysis in chronic myeloid leukemia patients

Saeam Shin (Yonsei University College of Medicine, Korea)

YI-3 Correlation between cytomorphological findings and molecular genetic characteristics using digital imaging in patients with pre-myelodysplastic syndrome

Chang-Hun Park (Samsung Changwon Hospital, Korea)

YI-4 Clinical implication of plasma-derived circulating tumor DNA (ctDNA) changes in patients with advanced diffuse large B-cell lymphoma treated with immunochemotherapy

Ga-Young Song (Chonnam National University Medical School, Korea)

YI-5 A cohort study to investigate the correlation between the microbiome and diffuse large B cell lymphoma (DLBCL)

Sang Eun Yoon (Sungkyunkwan University School of Medicine, Korea)

YI-6 Analysis of marrow-infiltrating T cell subpopulation in newly diagnosed multiple myeloma

Myung-Won Lee (Chungnam National University College of Medicine, Korea)

YI-7 Multi-omics analysis of pediatric patients undergoing haploidentical hematopoietic stem cell transplantation with busulfan-based conditioning regimen and post-transplant cyclophosphamide

Kyung Taek Hong (Seoul National University College of Medicine, Korea)

YI-8 Development of acute GVHD biomarkers in pediatric patients

Sung Han Kang (Asan Medical Center, Korea)

12:40-13:40

[OP01] AML, MDS

Room 2

Chairs Byung-Soo Kim (Korea University College of Medicine, Korea)
Dong-Yeop Shin (Seoul National University College of Medicine, Korea)

OP01-1 Potential prognostic significance of promoter methylation status of DNA repair genes at diagnosis in acute myeloid leukemia: analysis of TCGA-LAML cohort and patients in a single institution

Sholhui Park (Ewha Womans University School of Medicine, Korea)

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- OP01-2 TP53-mutated AML with high variant allele frequency show better survival outcome with hypomethylating agents than with cytarabine-based induction
Hye Won Kook (Yonsei University College of Medicine, Korea)
- OP01-3 WT1 gene expression in primary acute myeloid leukemia
Ishan Gupta (All India Institute of Medical Sciences, India)
- OP01-4 Preliminary results by age group of treatment with CPX-351 plus venetoclax in adults with newly diagnosed AML: subgroup analysis of the v-fast trial
Vinod Pullarkat (City Of Hope Comprehensive Cancer Center, USA)
- OP01-5 A randomized, phase II, comparative study with a parallel control for evaluating the efficacy and safety of 5-day azacitidine for patients with lower-risk MDS
Silvia Park (The Catholic University of Korea, Korea)

12:40-13:40

[OP02] Lymphoma, Histiocytosis

Room 3

Chairs

Ki-Seong Eom (College of Medicine, The Catholic University of Korea, Korea)
Sukjoong Oh (Hanyang University Seoul Hospital, Korea)

- OP02-1 High incidence of MYD88 mutation associated with mutated IGHV gene in Korean chronic lymphocytic leukemias
Ari Ahn (The Catholic University of Korea, Korea)
- OP02-2 First interim analysis results of ALPINE phase 3 study of zanubrutinib vs ibrutinib in R/R chronic lymphocytic leukemias/small lymphocytic leukemias
Won Seog Kim (Sungkyunkwan University School of Medicine, Korea)
- OP02-3 CD 19 chimeric antigen receptor T cell therapy for relapsed/refractory B-cell lymphoid malignancies: the efficacies and safeties of tisa-cel in the real world
Sang Eun Yoon (Sungkyunkwan University School of Medicine, Korea)
- OP02-4 Long-term real-world experience of Castleman's disease treatment
Gi June Min (The Catholic University of Korea, Korea)
- OP02-5 Clinical analysis of modified HLH-04 regimen for the treatment of childhood hemophagocytic lymphohistiocytosis
Fenfen Cheng (Capital Medical University, China)

12:40-13:40

[OP03] Laboratory Hematology

Room 4

Chairs

Myung-Hyun Nam (Korea University Anam Hospital, Korea)
Young-Uk Cho (University of Ulsan College of Medicine, Korea)

- OP03-1 Clinical-biochemical screening and genetic analysis of suspected inherited iron metabolism related anaemias using targeted NGS approach
Pankaj Sharma (PGIMER, India)
- OP03-2 Comparison of clinical features, genetic alterations, and outcomes in patients with prefibrotic, overt primary myelofibrosis, and secondary myelofibrosis
Tong Yoon Kim (The Catholic University of Korea, Korea)
- OP03-3 Flow cytometry of body fluid specimens: diagnostic value in hematologic malignancy
Smeeta G (All India Institute of Medical Sciences, India)

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OP03-4 Single-cell analysis of Multiple Myelomas refines bortezomib treatment responsiveness
Sung-Soo Park (The Catholic University of Korea, Korea)

OP03-5 Empagliflozin modulates CD4+ T cell differentiation via metabolic reprogramming in immune thrombocytopenia
Qin Jing (Shandong University, China)

13:40-13:55 Break

13:55-14:55 [AS01] Asian Session I - AA

Room 1

Chairs Jong Wook Lee (Seoul St. Mary's Hospital, The Catholic University of Korea, Korea)
Hoon Kook (Chonnam National University Medical School, Korea)

AS01-1 Korean treatment guideline for aplastic anemia
Jun Ho Jang (Sungkyunkwan University School of Medicine, Korea)

AS01-2 Aplastic anemia immunosuppressive therapy in China
Zhao Xin (Institute of Hematology and Blood Diseases Hospital, China)

AS01-3 Clinical significance of detecting HLA-class I allele-lacking leukocytes in patients with aplastic anemia
Kohei Hosokawa (Kanazawa University, Japan)

13:55-15:25 [SS03] MPN

Room 2

Chairs Chul Won Choi (Korea University Guro Hospital, Korea)
Sung-Yong Kim (Konkuk University School of Medicine, Korea)

SS03-1 Recent advances in molecular diagnosis, prognosis and monitoring of MPNs
Myungshin Kim (The Catholic University of Korea, Korea)

SS03-2 Molecular mechanisms underlying the development of MPN by mutant calreticulin and the therapeutic potential of an antibody targeting mutant calreticulin
Norio Komatsu (Juntendo University Graduate School of Medicine, Japan)

SS03-3 Targeting pro-inflammatory signaling, including IL8, in myelofibrosis: the pathway into the clinic
Andrew J. Dunbar (Memorial Sloan Kettering Cancer Center, USA)

13:55-15:25 [SS04] MM

Room 3

Chairs Dong Soon Lee (Seoul National University College of Medicine, Korea)
Kihyun Kim (Sungkyunkwan University School of Medicine, Korea)

SS04-1 Evolution of myeloma from the normal plasma cell to disease complexity
Niccolo Bolli (University of Milan, Italy)

SS04-2 The power of ONE: immunology in the age of single cell genomics
Ido Amit (Weizmann Institute, Israel)

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SS04-3 Clinical implications of immune networks in multiple myeloma
Je-Jung Lee (Chonnam National University Medical School, Korea)

13:55-15:25

[ES02] AML

Room 4

Chairs Dong-Yeop Shin (Seoul National University College of Medicine, Korea)
Byung Sik Cho (College of Medicine, The Catholic University of Korea, Korea)

ES02-1 Human AML stem cell: evolution of concept
Dong-Yeop Shin (Seoul National University College of Medicine, Korea)

ES02-2 Recent update of AML risk stratification
Hyo Eun Shim (National Cancer Center, Korea)

ES02-3 FLT3 mutated AML
Jae-Sook Ahn (Chonnam National University Medical School, Korea)

15:25-15:40

Break

15:40-17:10

[JS02] KOGO-KSH Joint Session

Room 1

Chairs Hae-Ock Lee (The Catholic University of Korea, Korea)
Sun-Young Kong (National Cancer Center, Korea)

JS02-1 Developing single-cell data integration pipeline to find novel cell types and gene markers for immune diseases
Jong-Eun Park (Korea Advanced Institute of Science and Technology, Korea)

JS02-2 Detection of enhancer hijacking of oncogenes in multiple myeloma
Jin-Wu Nam (Hanyang University, Korea)

JS02-3 Pharmacogenetics of childhood acute lymphoblastic leukemia
Hyery Kim (University of Ulsan College of Medicine, Korea)

JS02-4 Evaluating leukemic structural variations using optical genome mapping
Saeam Shin (Yonsei University College of Medicine, Korea)

15:40-17:10

[SS05] CML

Room 2

Chairs Chul Won Jung (Sungkyunkwan University School of Medicine, Korea)
Won Sik Lee (Inje University College of Medicine, Korea)

SS05-1 Resistance mechanism in CML
Kimmo Porkka (Helsinki University Central Hospital, Finland)

SS05-2 Mutational landscape in CML
Simona Soverini (University of Bologna, Italy)

SS05-3 CML/MPN stem cells and the bone marrow microenvironment
Steffen Koschmieder (RWTH Aachen University, Germany)

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15:40-17:10

[SS06] Cell Therapy / Transplantation

Room 3

Chairs Hyeon-Seok Eom (National Cancer Center, Korea)
Hyoung Jin Kang (Seoul National University College of Medicine, Korea)

SS06-1 Immune landscapes and chemotherapy resistance in AML

Sergio Rutella (Nottingham Trent University, UK)

SS06-2 Towards next-generation T cell engineering for cancer

Chan Hyuk Kim (Korea Advanced Institute of Science and Technology, Korea)

SS06-3 Endogenous retroviruses as a source of tumor antigens in solid tumors and acute myeloid leukemia

Stéphane Depil (Université Claude Bernard Lyon 1, France)

15:40-17:10

[ES03] Thrombosis / Hemostasis

Room 4

Chairs Sung-Hyun Kim (Dong-A University College of Medicine, Korea)
Jin-Yeong Han (Dong-A University College of Medicine, Korea)

ES03-1 Advances in laboratory assessment in thrombosis/hemostasis

Jaewoo Song (Yonsei University College of Medicine, Korea)

ES03-2 Cancer-associated thrombosis

Ho-Young Yhim (Jeonbuk National University Medical School, Korea)

ES03-3 Recent advances in the management of immune mediated TTP

Sung Hwa Bae (Daegu Catholic University Hospital, Korea)

DAILY PROGRAM Friday, April 1

09:00-10:30

[JS03] ASH-KSH Joint Symposium: Histiocytosis

Room 1

Chairs Jane Winter (Feinberg School of Medicine, USA)
Ho Joon Im (University of Ulsan College of Medicine, Korea)

JS03-1 **Biologic and clinical consequences of the BRAF^{V600E} mutation in Langerhans cell histiocytosis**
Kenneth McClain (Texas Children's Cancer Center, USA)

JS03-2 **Advances in the diagnosis and treatment of hemophagocytic lymphohistiocytosis**
Kim E. Nichols (St. Jude Children's Research Hospital, USA)

JS03-3 **Current status of diagnosis and treatment of Langerhans cell histiocytosis in Korea**
Kyung-Nam Koh (University of Ulsan College of Medicine, Korea)

JS03-4 **Adult hemophagocytic lymphohistiocytosis in Korea**
Seok Jin Kim (Sungkyunkwan University School of Medicine, Korea)

09:00-10:30

[SS07] Stem Cell Biology

Room 2

Chairs Myung Geun Shin (Chonnam National University Medical School, Korea)
June-Won Cheong (Yonsei University College of Medicine, Korea)

SS07-1 **Losing sense of self and surroundings: hematopoietic stem cell aging and leukemic transformation**
Emmanuelle Passegue (Columbia University Irving Medical Center, USA)

SS07-2 **Hematopoietic stem and progenitor cell signaling in the niche**
Peter Kurre (Children's Hospital of Philadelphia, USA)

SS07-3 **Thrombopoietin as an expansion factor for hematopoietic stem cells**
Toshio Suda (Kumamoto University, Japan)

09:00-10:30

[SS08] Thrombosis & Hemostasis

Room 3

Chairs Soo-Mee Bang (Seoul National University College of Medicine, Korea)
Seongsoo Jang (University of Ulsan College of Medicine, Korea)

SS08-1 **Mechanism of thrombosis and bleeding in viral infection: focusing on COVID-19**
Marcel Levi (University College London Hospitals NHS Foundation Trust, UK)

SS08-2 **COVID-19 vaccine related hematologic manifestations**
Soo-Mee Bang (Seoul National University College of Medicine, Korea)

SS08-3 **Thrombotic thrombocytopenic purpura in 2022 - novel therapies and focus on long term outcomes**
Shruti Chaturvedi (Johns Hopkins University School of Medicine, USA)

09:00-10:30

[ES04] Plasma Cell Disorder

Room 4

Chairs Je-Jung Lee (Chonnam National University Medical School, Korea)
Dok Hyun Yoon (University of Ulsan College of Medicine, Korea)

ES04-1 **Diagnosis and management of monoclonal gammopathy of clinical significance**
Hyungwoo Cho (University of Ulsan College of Medicine, Korea)

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ES04-2 **Update in the POEMS syndrome**
Yu Ri Kim (Yonsei University College of Medicine, Korea)

ES04-3 **Update in the primary plasma cell leukemia**
Sung-Hoon Jung (Chonnam National University Hwasun Hospital, Korea)

10:30-11:15

[PL02] Plenary Lecture 02

Room 1

Chair Sung-Soo Yoon (Seoul National University College of Medicine, Korea)

Rational development of targeted therapies to cure molecular subtypes of DLBCL
Louis M. Staudt (National Cancer Institute, USA)

11:15-11:30

Break

11:30-12:10

[SY05] Kyowa Kirin



Room 1

Chair Jong Wook Lee (Seoul St. Mary's Hospital, The Catholic University of Korea, Korea)

Role of romiplostim in ITP and AA
Jun Ho Jang (Sungkyunkwan University School of Medicine, Korea)

11:30-12:10

[SY06] Otsuka



Room 2

Chair Dong-Wook Kim (Uijeongbu Eulji Medical Center, Eulji University, Korea)

The updated information of ponatinib use in chronic myeloid leukemia
Jorge E. Cortes (Georgia Cancer Center, USA)

11:30-12:10

[SY07] Roche



Room 3

Chair Seok Jin Kim (Sungkyunkwan University School of Medicine, Korea)

Strategic treatment for diffuse large B-cell lymphoma; incorporating polatuzumab to DLBCL
Christopher Flowers (The University of Texas MD Anderson Cancer Center, USA)

11:30-12:10

[SY08] BMS-Celgene



Room 4

Chair Kihyun Kim (Sungkyunkwan University School of Medicine, Korea)

Optimal treatment with IMiDs in newly diagnosed multiple myeloma
Luciano J. Costa (The University of Alabama at Birmingham, USA)

DAILY PROGRAM Friday, April 1

12:10-12:40 **E-poster Exhibition**

12:40-13:40

[OP04] ALL

Room 1

Chairs Inho Kim (Seoul National University Hospital, Korea)
Kyung-Nam Koh (University of Ulsan College of Medicine, Korea)

OP04-1 Expression pattern of non-homologous end joining DNA repair pathway genes and its clinical relevance in T-lineage acute lymphoblastic leukemia
Anita Chopra (All India Institute of Medical Sciences, India)

OP04-2 Interim analysis of the prospective phase II study of individualized 6-mercaptopurine dosing based on pharmacogenomics in childhood acute lymphoblastic leukemia
Hyery Kim (University of Ulsan College of Medicine, Korea)

OP04-3 Current treatment trends of infant Leukemia in Korea based on a retrospective multicenter review: the Korean society of hematology, pediatric all working group
Seung Min Hahn (Yonsei Cancer Center, Korea)

OP04-4 Prognostic impact of cytogenetic classification in adult all patients treated with intensive chemotherapy and allogeneic HCT-based post-remission therapy
Jae-Ho Yoon (The Catholic University of Korea, Korea)

OP04-5 DEFIFrance registry study: efficacy and safety of defibrotide for the treatment of severe/very severe VOD/SOS after hematopoietic cell transplantation
Mohamad Mohty (Hôpital St Antoine, Sorbonne University, France)

12:40-13:40

[OP05] Anemia, BMF, CML, MPN

Room 2

Chairs Hawk Kim (Gachon University College of Medicine, Korea)
Sung-Eun Lee (The Catholic University of Korea, Korea)

OP05-1 Causal role of iron status on anemia and on cardiometabolic outcomes among UK whites and Taiwanese Han Chinese using hemoglobin-genetic risk scores
Vanessa Joy Timoteo (National Yang Ming Chiao Tung University and Academia Sinica, Taiwan)

OP05-2 Favorable outcomes of familial-mismatched donor transplantation using post-transplant cylophosphamide(PTCy) for pediatric severe aplastic anemia
Jae Won Yoo (The Catholic University of Korea, Korea)

OP05-3 The long-term efficacy and safety of eculizumab in patients with paroxysmal nocturnal hemoglobinuria; retrospective study on behalf of Korean society of hematology aplastic anemia working party
Jin Seok Kim (Yonsei University College of Medicine, Korea)

OP05-4 Response to chemotherapy in patients with juvenile Myelomonocytic Leukemia in Korea: The Korean pediatric hematology-oncology group(KPHOG)
Eun Sang Yi (Korea University College of Medicine, Korea)

OP05-5 A multicenter, open-label, phase IV clinical study for efficacy and safety evaluation of anagrelide in patients with treatment-naïve, high-risk essential thrombocythemia as a primary treatment
Ja Min Byun (Seoul National University Hospital, Korea)

DAILY PROGRAM Friday, April 1

12:40-13:40

[OP06] MM

Room 3

Chairs Jeong Yeal Ahn (Gachon University Gil Medical Center, Korea)
Min Kyoung Kim (Yeungnam University Medical Center, Korea)

- OP06-1** Prognostic role of the ratio of natural killer to regulatory T cells in multiple myeloma treating lenalidomide and dexamethasone
Seung Yeon Kim (The Catholic University of Korea, Korea)
- OP06-2** Rejuvenation of antigen-specific CD8+ T cells using induced pluripotent stem cell technology and specific regulatory pathways for T cell commitment
Jooeun Bae (Harvard Medical School, USA)
- OP06-3** Busulfan and thiotepa as a conditioning regimen for autologous stem cell transplantation in multiple myeloma: KMMWP-1801 study
Ga-Young Song (Chonnam National University Medical School, Korea)
- OP06-4** Comparative analysis of single versus tandem autologous stem cell transplantation in patients with multiple myeloma in Korea: the KMM2102 study
Jongheon Jung (National Cancer Center, Korea)
- OP06-5** Subcutaneous daratumumab with bortezomib, cyclophosphamide, and dexamethasone in patients with newly diagnosed light chain (AL) amyloidosis: 18-month analysis of the phase 3 andromeda study
Kihyun Kim (Sungkyunkwan University School of Medicine, Korea)

12:40-13:40

[OP07] Platelet, Transfusion

Room 4

Chairs Eun Sun Yoo (Ewha Womans University Seoul Hospital, Korea)
Jaewoo Song (Yonsei University College of Medicine, Korea)

- OP07-1** 2021 operation of the surveillance system of covid-19 vaccination induced thrombosis with thrombocytopenia syndrome in Korea
Daehyun Chu (University of Ulsan College of Medicine, Korea)
- OP07-2** Validation of khorana score in cancer patients undergoing chemotherapy with east asian ethnicity
Junshik Hong (Seoul National University College of Medicine, Korea)
- OP07-3** Acute transfusion reactions of pediatric blood transfusions at Chiang Mai university hospital
Pattira Rungruansarn (Chiang Mai University, Thailand)
- OP07-4** Risk factors of platelet transfusion refractoriness in patients with AA/MDS who receive allogeneic hematopoietic stem cell transplantation
Jaeik Oh (Seoul National University Hospital, Korea)
- OP07-5** Combining pharmacokinetics and comprehensive evaluation system to individualize the prophylaxis in pediatric patients with hemophilia A
Kun Huang (Capital Medical University, China)

13:40-13:55

Break

DAILY PROGRAM Friday, April 1

13:55-14:40	[PS01] Presidential Symposium	Room 1
Chair	Je-Hwan Lee (University of Ulsan College of Medicine, Korea)	
	Toward precision medicine in AML Hartmut Döhner (University of Ulm, Germany)	
14:40-15:40	[MS01] MOU Country Session: MM	Room 1
Chairs	Jae Hoon Lee (Gachon University Gil Medical Center, Korea) Jin Seok Kim (Yonsei University College of Medicine, Korea)	
MS01-1	Managing multiple myeloma in a resource-limited region: diagnosis and treatment in Armenia Yervand K. Hakobyan (Armenian Hematology Association, Armenia)	
MS01-2	Renal involvement in plasma cell disorder: learning from real-life practice Suporn Chuncharunee (Ramathibodi hospital, Thailand)	
MS01-3	Treatment sequence decision in multiple myeloma considering reimbursement status Youngil Koh (Seoul National University Hospital, Korea)	
14:40-16:10	[SS09] MDS	Room 2
Chairs	Yoo-Jin Kim (College of Medicine, The Catholic University of Korea, Korea) Yoon Hwan Chang (Seoul National University Hospital, Korea)	
SS09-1	Pathophysiology of spliceosome mutations in MDS Andrea Pellagatti (University of Oxford, UK)	
SS09-2	Role of extracellular vesicles and miRNA in myelodysplastic syndromes Sophie Park (CHU de Grenoble Service hematologie clinique, France)	
SS09-3	Challenges in the diagnosis and treatment of overlap MDS/MPN syndromes Antonio Almeida (Hospital da Luz Lisboa, Portugal)	
14:40-16:10	[SS10] ALL	Room 3
Chairs	Nack-Gyun Chung (The Catholic University of Korea, Korea) Ho-Jin Shin (Pusan National University School of Medicine, Korea)	
SS10-1	Chemotherapy vs. allogeneic HSCT for Ph-negative adult ALL Josep-Maria Ribera (ICO-Hospital Germans Trias i Pujol, Spain)	
SS10-2	Clonal heterogeneity in ALL Jan Cools (Center for Human Genetics, Belgium)	
SS10-3	Adoptive cellular immunotherapies based on chimeric antigen receptors Pablo Menendez (Josep Carreras Leukemia Research Institute, Spain)	

DAILY PROGRAM Friday, April 1

14:40-16:10

[ES05] AA and BMF

Room 4

Chairs Myungshin Kim (The Catholic University of Korea, Korea)
Yeung-Chul Mun (Ewha Womans University College of Medicine, Korea)

ES05-1 Genetics and genomics of bone marrow failure syndrome
Hyun-Young Kim (Sungkyunkwan University School of Medicine, Korea)

ES05-2 Aplastic anemia: transplant vs non-transplant options
Ik-Chan Song (Chungnam National University Hospital, Korea)

ES05-3 Overview of bone marrow failure syndrome
Meerim Park (National Cancer Center, Korea)

16:10-16:25

Break

16:25-17:55

[JS04] EHA-KSH Joint Symposium: CML

Room 1

Chairs Kimmo Porkka (Helsinki University Central Hospital, Finland)
Sang Kyun Sohn (Kyungpook National University School of Medicine, Korea)

JS04-1 Failing a second-generation TKI: when the guidelines don't always help
Jane Apperley (Imperial College London, UK)

JS04-2 Discontinuation of tyrosine kinase inhibitors in CML patients in clinical practice
Antonio Almeida (Hospital da Luz Lisboa, Portugal)

JS04-3 Second and later line therapy: the role of ponatinib in Korean patients with CML
Jeong-Ok Lee (Seoul National University Bundang Hospital, Korea)

JS04-4 Stopping tyrosine kinase inhibitor in CML; perspectives from Korean data
Hawk Kim (Gachon University College of Medicine, Korea)

16:25-17:55

[SS11] Adv Technology

Room 2

Chairs Duck Cho (Sungkyunkwan University School of Medicine, Korea)
Ji-Myung Kim (Chungnam National University Hospital, Korea)

SS11-1 Hematopoiesis and leukemia through the lens of single cell genomics
Lars Velten (Centre for Genomic Regulation, Spain)

SS11-2 Computer vision in hematologic malignancies
Oscar Brück (University of Helsinki, Finland)

SS11-3 Hydrogel-based stamping technology for solution-free blood cell staining
Dongyoung Lee (Noul Co., Ltd, Korea)

DAILY PROGRAM Friday, April 1

16:25-17:55

[SS12] Benign Hematology

Room 3

Chairs Deog-Yeon Jo (Chungnam National University College of Medicine, Korea)
Hyoung Soo Choi (Seoul National University College of Medicine, Korea)

SS12-1 The iron-erythropoiesis cross-talk in health and disease

Antonella Nai (San Raffaele Scientific Institute, Italy)

SS12-2 Autoimmune hemolytic anemia: state-of-the-art hypotheses on pathogenesis and their application to treatment

Bruno Fattizzo (Università degli Studi di Milano, Italy)

SS12-3 Cold agglutinin disease: an update on pathogenesis and future prospects on therapy

Sigbjørn Berentsen (Haugesund Hospital, Norway)

16:25-17:55

[ES06] Lymphoma

Room 4

Chairs Jong Ho Won (Soonchunhyang University College of Medicine, Korea)
Young Rok Do (Keimyung University School of Medicine, Korea)

ES06-1 Lymphoma pathology: basic immunohistochemistry for lymphoma diagnosis

Junhun Cho (Sungkyunkwan University School of Medicine, Korea)

ES06-2 Staging and response assessment of lymphoma

Kwai Han Yoo (Gachon University Gil Medical Center, Korea)

ES06-3 Treatment of indolent lymphoma

Seong Hyun Jeong (Ajou University School of Medicine, Korea)

DAILY PROGRAM Saturday April 2

07:30-08:30 **Business Meeting** Room 1

08:30-09:00 **Working Party Reports** Room 1

09:00-10:00 **[AS02] Asian Session II - Pediatric ALL** Room 1

Chairs Chuhl Joo Lyu (Yonsei University Health System, Korea)
Keon Hee Yoo (Sungkyunkwan University School of Medicine, Korea)

AS02-1 **Ma-Spore ALL studies: truly Asia approach to curing childhood ALL**
Allen E.J. Yeoh (National University of Singapore, Singapore)

AS02-2 **Childhood ALL in Thailand and multicenter studies of Thai pediatric oncology group**
Samart Pakakasama (Mahidol University, Thailand)

AS02-3 **The adherence to MRD time points improves treatment outcomes of childhood ALL in Taiwan: the experience of TPOG-ALL-2013 protocol**
Hsi-Che Liu (Mackay Memorial Hospital, Taiwan)

09:00-10:30 **[SS13] AML** Room 2

Chairs Hee-Je Kim (The Catholic University of Korea, Korea)
Young Kyung Lee (Hallym University College of Medicine, Korea)

SS13-1 **AML microenvironment and FLT3 inhibitor resistance**
Elie Traer (Oregon Health & Science University, USA)

SS13-2 **Targeting TP53 mutation in AML**
David A. Sallman (H. Lee Moffitt Cancer Center and Research Institute, USA)

SS13-3 **Adaptive immune resistance and immune evasion by programmed death-1 homolog (PD-1H/VISTA) in AML**
Tae Kon Kim (Vanderbilt University Medical Center, USA)

09:00-10:30 **[SS14] Lymphoma (2) - T cell / HL** Room 3

Chairs Won Seog Kim (Sungkyunkwan University School of Medicine, Korea)
Ho-Young Yhim (Jeonbuk National University Medical School, Korea)

SS14-1 **Genomic landscape of peripheral T-cell lymphomas**
Keisuke Kataoka (National Cancer Center Research Institute, Japan)

SS14-2 **T-cell lymphomas of follicular helper T-cell derivation: pathology, mechanisms and therapeutic implications**
Laurence de Level (Lausanne University Hospital, Switzerland)

SS14-3 **Targeted therapy to small molecules in peripheral T cell lymphomas**
Deok Hwan Yang (Chonnam National University Medical School, Korea)

DAILY PROGRAM Saturday April 2

09:00-10:30

[ES07] Supportive Care

Room 4

Chairs
Seong Kyu Park (Soonchunhyang University Bucheon Hospital, Korea)
Hyo Jung Kim (Hallym University College of Medicine, Korea)

ES07-1 **Comprehensive geriatric assessment in older patients for intensive chemotherapy**
Jung-Yeon Choi (Seoul National University Bundang Hospital, Korea)

ES07-2 **Evaluation and management of platelet transfusion refractoriness**
Dae-Hyun Ko (University of Ulsan College of Medicine, Korea)

ES07-3 **Advances in management of invasive fungal infections: perspectives on hematologic diseases**
Dong-Gun Lee (Seoul St. Mary's Hospital, The Catholic University of Korea, Korea)

10:30-11:15

[PL03] Plenary Lecture 03

Room 1

Chair
Chuhl Joo Lyu (Yonsei University Health System, Korea)

Improving outcomes after CD19-targeted CART-cell therapy
Jordan Gauthier (University of Washington, USA)

11:15-11:30

Break

11:30-12:10

Award Ceremony & Closing

Room 1

POSTER LIST

BEST POSTER

- BP01 Acute Myeloid Leukemia** Identification of cell type-specific effects of DNMT3A mutations involved in relapse of acute myeloid leukemia
Seo-Gyeong Bae¹, Jihwan Park^{1*}, Jae-Sook Ahn^{2,3}, Hyeoung-Joon Kim^{2,3} and Mi Yeon Kim^{2,3}
¹School of Life Sciences, Gwangju Institute of Science and Technology (GIST), Korea
²Department of Internal Medicine, Chonnam National University Hwasun Hospital, Korea
³Genomic Research Center for Hematopoietic Diseases, Chonnam National University Hwasun Hospital, Korea
- BP02 Myelodysplastic Syndrome** DNA methylation-based biomarkers for azacitidine resistance in myelodysplastic syndrome
Da Yeon Kim^{1,2} and Eun Ju Kim^{1,2*}
¹Division of Radiation Biomedical Research, Korea Institute of Radiological and Medical Sciences, Korea
²Department of Radiological and Medico-Oncological Sciences, University of Science and Technology, Korea
- BP03 Acute Lymphoblastic Leukemia** Integrated targeted RNA fusion analysis and deep sequencing highlights diverse primary and secondary clonal abnormalities in a cohort of paired diagnosis-relapse pediatric B-cell acute lymphoblastic leukemia cases
Rozy Thakur
Pediatric Hematology-Oncology Lab-Advanced Pediatrics Centre, India
- BP04 Lymphoma** A retrospective analysis of real-world outcomes of dose-adjusted EPOCH compared with CHOP based chemotherapy as frontline therapy for untreated PTCL
Sang-Bo Oh¹, Ho-Jin Shin^{2*} and Do-Young Kim²
¹Division of Hematology-Oncology, Department of Internal Medicine, School of Medicine, Medical Research Institute, Pusan National University Yangsan Hospital, Yangsan, Korea
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- BP05 Multiple Myeloma** First-line treatment with either VMP or RD for Transplant-ineligible patients with multiple myeloma: a pooled analysis of multicenter real-world data
Jung Yeon Lee¹, Young-Woo Jeon², Seung-Ah Yahng³, Seung-Hwan Shin⁴, Chang-Ki Min¹ and Sung-Soo Park^{1*}
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⁴Department of Hematology, Eunpyeong St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Korea
- BP06 Myeloproliferative Neoplasm** Neutrophil-lymphocyte ratio and carotid plaque burden in patients with essential thrombocythemia and polycythemia vera
Seug Yun Yoon, Sun Young Jeong, Min-Young Lee, Kyoung-Ha Kim, Namsu Lee and Jong-Ho Won^{*}
Division of Hematology & Medical Oncology, Department of Internal Medicine, Soonchunhyang University Seoul Hospital, Seoul, Korea
- BP07 Laboratory Hematology** Detection of recurrent, rare gene fusions and correlation with clinical manifestations in acute leukemia by targeted RNA-sequencing
Seo Wan Kim
Department of Laboratory Medicine, Yonsei University College of Medicine, Seoul, Korea
- BP08 Anemia and Other Red Cell Disorders** Characterization of alpha beta double negative T cells in children with acquired aplastic anemia
Hui Chen
Hematologic Disease Laboratory, Beijing Children's Hospital, China

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BP09

Platelet/ Hemostasis

Levels of heparin induced anti-PF4 antibodies and endogenous glycosaminoglycans and their relationship with inflammatory biomarkers in pulmonary embolism patients

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BP10

Quality of Life

Differences in comorbidities by trajectory groups as a reference in identifying patients at risk for late mortality in childhood cancer survivors

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- PP01-01** **RUNX1 mutation in children with acute myeloid leukemia of a single-center**
Hong Bo He, Hu Yong Zheng and Chao Gao
Hematology Center, Beijing Children's Hospital, China
- PP01-02** **Establishment of a panel of biomarkers for immunophenotyping in acute leukemia**
Amar Ranjan, Harshita Dubey* and Pranay Tanwar
Lab Oncology Unit, AIIMS, New Delhi, India
- PP01-03** **The prognostic impact of reduced variant burden in elderly patients with acute myeloid leukemia treated with decitabine**
Mihee Kim¹, Seo-Yeon Ahn¹, Sung-Hoon Jung¹, Ga-Young Song¹, TaeHyung Kim³, Deok-Hwan Yang¹, Je-Jung Lee¹, Seung-Hyun Choi², MiYoen Kim², Hyeoung-Joon Kim^{1,2}, Dennis Dong Hwan Kim⁴ and Jae-Sook Ahn^{1,2*}
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³Computer Science, University of Toronto, Canada
⁴Medical Oncology and Hematology, Princess Margaret Cancer Centre, University of Toronto, Canada
- PP01-04** **Therapeutic effect of metformin on acute myeloid leukemia through targeting AMPK/mTOR, cell cycle, apoptosis and autophagy**
Juan liu and Wenyu shi*
Oncology and hematology, Affiliated Hospital of Nantong University, China
- PP01-05** **Epigenetic regulation and synthetic lethal targeting of genetically deficient acute myeloid leukemia by siRNA loaded customized polymeric and superparamagnetic multifunctional nanoparticles**
Anas Ahmad
Pharmacology, Chandigarh College of Pharmacy, India
- PP01-06** **Investigation of genes and pathways associated with low platelet count in normal karyotype acute myeloid leukemia**
Chang-Hun Park¹ and Jae Won Yun^{2*}
¹Department of Laboratory Medicine & Genetics, Samsung Changwon Hospital, Sungkyunkwan University School of Medicine, Korea
²Veterans Medical Research Institute, Veterans Health Service Medical Center, Korea
- PP01-07** **Clinical and molecular significance of multilineage dysplasia in acute myeloid leukemia: a single-center experience**
Hee Sue Park^{2,4}, Bo Ra Son^{2,4} and Jihyun Kwon^{1,3*}
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²Laboratory Medicine, Chungbuk National University College of Medicine, Korea
³Internal Medicine, Chungbuk National University Hospital, Korea
⁴Laboratory Medicine, Chungbuk National University Hospital, Korea
- PP01-09** **Stepwise combination of azacitidine and low-dose venetoclax in treatment-naïve, critically ill elderly patient with acute myeloid leukemia: a case report**
Truc Phan^{1,3}, Thanh Nguyen Huu³, Nghi Tran Phuong³, Trang Nguyen Le², Kelly Smith^{1,3,4} and Yi Hyeon Gyu^{1,3*}
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³College of Health Science, Vin University, Viet Nam
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- PP01-10** **Relevance of Wilms' tumor 1 (WT1) gene expression in AML patients among north Indian population**
Harsh Goel¹, Anita Chopra¹, Amar Ranjan¹, Ganesh Kumar Viswanathan², Aditya Kumar Gupta³, Jagdish Prasad Meena³, Sameer Bakhshi⁴, Maroof Ahmad Khan³ and Pranay Tanwar^{1*}
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⁵Biostatistics, All India Institute of Medical Sciences, New Delhi, India

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- PP01-11 Clinical outcomes in patients with relapsed/refractory acute myeloid leukemia treated with gilteritinib who received prior midostaurin or sorafenib**
Alexander E Perl¹*, Jessica K Altman², Naoko Hosono³, Pau Montesinos⁴, Nikolai Podoltsev⁵, Giovanni Martinelli⁶, Catherine C Smith⁷, Mark J Levis⁸, Christoph Röllig⁹, Marco Groß-Langenhoff¹⁰, Nahla Hasabou¹¹, Qiaoyang Lu¹¹, Ramon V Tiu¹¹ and Joon Seong Park¹²
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¹⁰HEOR Department, Astellas Pharma GmbH, Germany
¹¹Medical Department, Astellas Pharma US, USA
¹²Department of Hematology-Oncology, Ajou University Hospital, Korea
- PP01-12 Prognostic implications of Wilms' tumor 1 (WT1) gene expression in newly diagnosed cases of primary acute myeloid leukemia**
Pranay Tanwar¹*, Harsh Goel¹, Anita Chopra¹, Aditya Kumar Gupta³, Jagdish Prasad Meena³, Sameer Bakhshi² and Amar Ranjan¹
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³Pediatrics, AIIMS, New Delhi, India
- PP01-13 Arsenic trioxide-based regimen versus autologous hematopoietic stem cell transplantation as post-remission therapy in relapsed acute promyelocytic leukemia**
Gi June Min, Byung-Sik Cho*, Daehun Kwag, Tong Yoon Kim, Jong Hyuk Lee, Joonyeop Lee, Sung-Soo Park, Silvia Park, Jae-Ho Yoon, Sung-Eun Lee, Ki-Seong Eom, Yoo-Jin Kim, Seok Lee, Chang-Ki Min, Seok-Goo Cho, Jong Wook Lee and Hee-Je Kim
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- PP01-14 Diagnosis of acute promyelocytic leukemia with 3D microscope: toward an objective diagnosis**
Hyunji Kim¹, Seongsoo Jang¹, Daehyun Chu¹, Miyoung Kim¹, Young-Uk Cho¹, Sang-Hyun Hwang¹, Chan-Jeoung Park¹ and YongKeun Park²
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- PP01-15 Efficacy of cytarabine, daunorubicin plus etoposide as induction regimen for pediatric acute myeloid leukemia**
Huong-Giang Nguyen-Tran¹*, Tuan Nguyen¹ and Nghia Huynh²
¹Hematology, Cho Ray Hospital, Viet Nam
²Hematology, Ho Chi Minh University of Medicine and Pharmacy, Viet Nam
- PP01-16 Genetic characteristics according to subgroup of acute myeloid leukemia with myelodysplasia-related changes**
Silvia Park¹, Dain Kang², Byung-Sik Cho¹, Hee-Je Kim¹, Yeojae Kim², Jong Mi Lee³, Ari Ahn³, Yonggoo Kim³ and Myungshin Kim³*
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- PP01-17 Clinical significance of masked systemic mastocytosis with associated hematological neoplasm in AML with RUNX1: RUNX1T1**
Beom Joon Kim¹, Jee Soo Lee², Moon-Woo Seong², Soo Hyun Seo¹, Jinho Paik⁴, Sang A Kim³, Ji Yun Lee³, Jeong Ok Lee³, Soo Mee Bang³, Yoon Hwan Chang² and Sang Mee Hwang¹*
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- PP01-18 Incidence of therapy-related myeloid neoplasms and their risk factors for the selection of patients with an increased risk: a Korean nationwide study**
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²Department of Internal Medicine, Inha University Hospital, Korea
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- PP01-19 Induction of differentiation in acute myeloid leukemic stem cells by a natural compound: esculetin**
Ankit Mathur and Daman Saluja*
 Dr. B.R. Ambedkar Center for Biomedical Research, University of Delhi, Delhi, India
- PP01-20 Acute promyelocytic leukemia with cryptic IRF2BP2-RARA rearrangement in a patient with Germline DDX41 mutation: the first case in Korea**
Jae Joon Lee¹, Hyun-Young Kim¹, Jun Ho Jang², Sun-Hee Kim¹ and Hee-Jin Kim^{1*}
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²Department of Hematology-oncology, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea
- PP01-21 Therapy-related myeloid neoplasm with Inv(11)(p15q22)/NUP98-DDX10 rearrangement: the first case in Korea**
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²Department of Hematology-oncology, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea
- PP01-22 Gene expression profiling of VASH1 and its prognostic role in acute myeloid leukemia**
Avanish Kumar Pandey¹, Sarita Kumari¹, Jay Singh¹, Mohit Arora³, M Shadab Ali⁴, Jayanth Kumar Palanichamy³, Sameer Bakhshi², Atul Sharma², Mercilena Benjamin¹, Neha Thukral¹ and Anita Chopra^{1*}
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- PP01-23 Clinical usefulness of next-generation sequencing panel for myeloid neoplasms**
A-Jin Lee, Sang-Gyung Kim*, Chang-Ho Jeon and Eun-Hyung Yoo
 Department of laboratory medicine, Daegu Catholic University School of Medicine, Korea
- PP01-24 Differences of genetic alteration between pediatric and adult acute myeloid leukemia detected by panel-based next generation sequencing**
Jae Won Yoo¹, Tong Yoon Kim², Jong Mi Lee³, Ari Ahn³, Seongkoo Kim¹, Silvia Park², Jae Wook Lee¹, Myungshin Kim³, Yonggoo Kim³, Byung-Sik Cho², Hee-Je Kim², Nack-Gyun Chung¹ and Bin Cho^{1*}
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³Laboratory medicine, Seoul St. Mary's Hospital College of Medicine, The Catholic University of Korea, Seoul, Korea
- PP01-25 Allogeneic hematopoietic cell transplantation overcomes adverse prognosis in patients with low allelic ratio FLT3-ITD and NPM1 mutated AML**
Ga-Young Song¹, TaeHyung Kim^{2,3}, Seo-Yeon Ahn¹, Sung-Hoon Jung¹, Mihee Kim¹, Deok-Hwan Yang¹, Je-Jung Lee¹, Seung Hyun Choi⁴, Mi Yeon Kim⁴, Chul Won Jung⁵, Jun-Ho Jang⁶, Hee Je Kim⁶, Joon Ho Moon⁷, Sang Kyun Sohn⁷, Jong-Ho Won⁸, Seong-Kyu Park⁸, Sung-Hyun Kim⁹, Zhaolei Zhang^{2,3,10}, Jae-Sook Ahn^{1,4}, Dennis Dong Hwan Kim¹¹ and Hyeoung-Joon Kim^{1,4*}
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- PP01-27 Treatment outcomes of venetoclax and hypomethylating agents for newly diagnosed acute myeloid leukemia**
Eun-Ji Choi, Je-Hwan Lee*, Han-Seung Park, Jung-Hee Lee and Kyoo-Hyung Lee
Department of Hematology, Asan Medical Center, University of Ulsan College of Medicine, Korea
- PP01-28 Cannabidiol exhibits anti-leukemic and anti-inflammatory activities through regulation of the NF-κB signaling pathway in human leukemia monocytic cell line**
Krai Daowtak^{1,2}, Thitiya Luetragoon², Kanchana Usuwanthim² and Ruttiros Khonkarn^{3*}
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- PP01-30 Risk of serious infections with the use of immunomodulatory drugs in multiple myeloma patients**
Md. Sarfaraj Hussain
Pharmacology and Toxicology, Lord Buddha Koshi Pharmacy College, Bijjanathpur, Saharsa (Bihar) 852201, India
- PP01-31 An evaluation of the efficacy and safety of lenalidomide as monotherapy and as part of a combination regimen in the treatment of acute myeloid leukaemia**
Md. Sarfaraj Hussain
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- PP01-32 Early bone marrow assessment after 3+7 induction chemotherapy is predictable of outcome in AML with intermediate or adverse cytogenetics**
Daehun Kwag^{1,2}, Byung-Sik Cho^{1,2}, Tong Yoon Kim^{1,2}, Jong Hyuk Lee^{1,2}, Joonyeop Lee^{1,2}, Gi-June Min^{1,2}, Sung-Soo Park^{1,2}, Silvia Park^{1,2}, Young-Woo Jeon³, Seung-Hwan Shin⁴, Seung-Ah Yahng⁵, Jae-Ho Yoon^{1,2}, Sung-Eun Lee^{1,2}, Ki-Seong Eom^{1,2}, Yoo-Jin Kim^{1,2}, Seok Lee^{1,2}, Chang-Ki Min^{1,2}, Seok-Goo Cho¹, Jong Wook Lee¹ and Hee-Je Kim^{1,2*}
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- PP01-33 Decetabine plus venetoclax versus decetabine alone for older adults with newly diagnosed acute myeloid leukemia**
Daehun Kwag^{1,2}, Tong Yoon Kim^{1,2}, Jong Hyuk Lee^{1,2}, Joonyeop Lee^{1,2}, Gi-June Min^{1,2}, Sung-Soo Park^{1,2}, Silvia Park^{1,2}, Young-Woo Jeon³, Seung-Hwan Shin⁴, Seung-Ah Yahng⁵, Jae-Ho Yoon^{1,2}, Sung-Eun Lee^{1,2}, Ki-Seong Eom^{1,2}, Yoo-Jin Kim^{1,2}, Seok Lee^{1,2}, Hee-Je Kim^{1,2}, Chang-Ki Min^{1,2}, Seok-Goo Cho¹, Jong Wook Lee¹ and Byung-Sik Cho^{1,2*}
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- PP01-34 Real-world experience of gilteritinib in relapsed/refractory FLT3 mutated acute myeloid leukemia**
Jong Hyuk Lee, Daehun Kwag, Joonyeop Lee, Tong Yoon Kim, Gi-June Min, Sung-Soo Park, Silvia Park, Jae-Ho Yoon, Sung-Eun Lee, Byung-Sik Cho, Ki-Seong Eom, Yoo-Jin Kim, Seok Lee, Chang-Ki Min, Seok-Goo Cho, Jong Wook Lee, and Hee-Je Kim*
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- PP02-01 Genetic mutations associated with blood count abnormalities in myeloid neoplasms**
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- PP02-02** **Increased apoptotic activity in patients with lower risk myelodysplastic syndrome**
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⁴Department of Laboratory Medicine, Chungbuk National University Hospital, Korea
⁵Department of Laboratory Medicine, Pusan National University Hospital, Korea
⁶Department of Laboratory Medicine, Korea Cancer Center Hospital, Korea
- PP02-03** **DDX41-mutated myeloid neoplasms with propensity for higher-risk myelodysplastic syndrome and distinct bone marrow features depending on mutation type**
Youn Ji Hong¹, Young-Uk Cho^{1*}, Miyoung Kim¹, Seongsoo Jang¹, Chan-Jeoung Park¹, Eul-Ju Seo¹, Eun-Ji Choi², Je-Hwan Lee² and Kyoo-Hyung Lee²
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²Department of Hematology, Asan Medical Center, University of Ulsan College of Medicine, Korea
- PP02-04** **R-loop induced DNA damage and clinical features of DDX41- mutated Korean MDS**
Silvia Park¹, Won Chan Hwang², Kiboem Park², Jong Mi Lee³, Myungshin Kim³, Hongtae Kim² and Yoo-Jin Kim^{1*}
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- PP02-05** **Survival analysis of post-transplant MDS according to relapse and treatment pattern**
Joonyeop Lee¹, Gi-June Min¹, Sung-Soo Park¹, Silvia Park¹, Seung-Ah Yahng², Young-Woo Jeon³, Seung-Hwan Shin⁴, Jae-Ho Yoon¹, Sung-Eun Lee¹, Byung-Sik Cho¹, Ki-Seong Eom¹, Seok Lee¹, Hee-Je Kim¹, Chang-Ki Min¹, Seok-Goo Cho¹, Jong Wook Lee¹ and Yoo-Jin Kim^{1*}
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- PP02-06** **Treatment outcomes of secondary acute myeloid leukemia from myelodysplastic syndrome, according to previous treatment history**
Daehun Kwag¹, Tong Yoon Kim¹, Jong Hyuk Lee¹, Joon yeop Lee¹, Gi June Min¹, Sung Soo Park¹, Silvia Park¹, Seung-Ah Yahng², Seung-Hwan Shin³, Jae-Ho Yoon¹, Sung-Eun Lee¹, Byung Sik Cho^{1,4}, Ki-Seong Eom^{1,4}, Seok Lee^{1,4}, Hee-Je Kim^{1,4}, Chang-Ki Min^{1,4}, Jong Wook Lee¹ and Yoo-Jin Kim^{1,4*}
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- PP03-01** **Clinical application of next-generation sequencing -based monitoring of minimal residual disease in childhood acute lymphoblastic leukemia**
Mai Huirong* and Li Qin
 Department of Hematology and Oncology, Shenzhen Children's Hospital, China
- PP03-03** **Pediatric leukemia: a systematic review of oral manifestations, post-treatment complications & oro-dental management**
Vaibhav Gupta* and Poonam Goel
 National Institute of Pathology, India
- PP03-04** **IKZF1 plus profile and outcome analysis in a cohort of paediatric B-cell acute lymphoblastic leukaemia cases**
Prateek Bhatia^{1*}, Minu Singh¹, Pragna Hc¹, Rozy Thakur¹, Amita Trehan¹ and Neelam Varma²
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²Hematology, Pgimer Chandigarh, India
- PP03-06** **Genetic variation and relationship of homo sapiens t(4;11)(q21;q23) translocation breakpoint sequence, MLL-AF4 gene fusion, in acute lymphoblastic leukemia**
Ramlah Ramlah
 Biology, Universitas Sulawesi Barat, Indonesia

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- PP03-07 Prognostic utility of key copy number alterations in T cell acute lymphoblastic leukemia**
Sarita Kumari^{1,2,5}, Md Shadab Ali¹, Jay Singh², Mohit Arora³, Deepak Verma², Dr. Sameer Bakhshi⁴, Jayanth Kumar Palanichamy³, Atul sharma⁴, Inder Singh⁶ and Anita Chopra^{2*}
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⁴Department of Medical Oncology, All India institute of medical science, India
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- PP03-08 Segmentation of red blood cell image based on cell morphology to detect iron deficiency anemia**
Elfian Elfian^{*}, Rosmani Bahtiar and Bannure Bannure
Computational Science, Universitas Muhammadiyah Bulukumba, Indonesia
- PP03-09 Delineating CRLF2 positivity and its clinical significance in pediatric B-cell acute lymphoblastic leukemia**
Jay Singh¹, Mercilena Benjamin¹, Avani Kumar Pandey¹, Sarita Kumari¹, Mohit Arora³, Gunjan Sharma³, Md. Shadab Ali⁸, Deepak Verma⁷, Sameer Bakhshi², Rachna Seth⁴, Amitabh Singh⁶, Jayanth Kumar Palanichamy³, Inder Kumar Singh⁵ and Anita Chopra^{1*}
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⁸Department of Pulmonary, AIIMS, New Delhi, India
- PP03-10 High-throughput drug sensitivity analysis strategy and salvage autologous CD19 CAR-T therapy in second marrow relapse of acute lymphoblastic leukemia with NT5C2 mutation**
Xue Tang
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- PP03-11 Circular RNA (CircRNA) transcriptomic signature in T-cell acute lymphoblastic leukemia**
M Shadab Ali¹, Deepak Verma², Jay Singh¹, Sarita Kumari¹, Avani K Pandey¹, Mercilena Benjamin¹ and Anita Chopra^{1*}
¹Lab Oncology Unit, Dr. BRAIRCH, All India Institute of Medical Sciences, New Delhi, India
²Department of Oncology, School of Medicine, SKCCC, Johns Hopkins University, Baltimore MD, USA
- PP03-17 A real world experience of clinical characteristics & treatment outcome of T-ALL: the Ampang experience**
Siew Lian Chong^{*}, Kim Wah Ho, Tee Chuan Ong, Veena Selvaratnam and Sen Mui Tan
Department of Haematology, Ampang Hospital, Dr, Malaysia
- PP03-18 Role of SOX4 and KRAS activation in relapsed pediatric B- cell acute lymphoblastic leukemia**
Jae Wook Lee^{*}, Jae Won Yoo, Seongkoo Kim, Pil-Sang Jang, Nack-Gyun Chung and Bin Cho
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- PP03-19 Clinical and genetic characteristics of IGH aberrations detected by FISH analysis in childhood B-lymphoblastic leukemia**
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- PP03-20 Analysis of cerebrospinal fluid for malignant cells**
Saransh Verma, Amar Ranjan^{*}, Harshita Dubey and Pranay Tanwar
Laboratory Oncology Unit, All India Institute of medical Sciences, New Delhi, India
- PP03-21 Evaluation of genetic alterations in HBB gene and unravel the Biochemical parameters among the sickle cell anemia (SCD) patients**
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- PP03-22** **The outcome of blinatumomab in relapsed or refractory pediatric B-ALL: single center experience**
Hyun Jin Park^{1,2,3}, Kyung Taek Hong^{1,2,3}, Jung Yoon Choi^{1,2,3}, Hong Yul An^{1,2,3}, Bo Kyung Kim^{1,2,3} and Hyoung Jin Kang^{1,2,3*}
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- PP03-24** **Comparison of mutational spectrum of IDH2, NRAS and TP53 genes in B-cell precursor lymphoblastic leukemia and acute myeloid leukemia**
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³Internal Medicine, Chungbuk National University, College of Medicine, Korea
- PP03-25** **Efficacy and safety of decitabine in the management of acute myeloid leukemia**
Mohammad Asad Hussain
Health Outcomes Research, Jamia Millia Islamia, India
- PP03-26** **Anti-leukemic effect of Umbelliferone β-D-galactopyranoside against DMBA induced leukemic rat model: possible mechanism of action**
Vikas Kumar^{1*} and F Anwar²
¹Pharmaceutical Sciences, SHUATS, India
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- PP03-27** **A comparative study on digital dermatoglyphic patterns among adolescent with acute lymphoblastic leukemia in Guyana**
Ameet Kumar Jha
Department of Preclinical Sciences, Texila American University, Nepal
- PP04-01** **A single-center report on treatment outcomes of patients with CML treated with TKIs with a survey of health-related quality of life**
Hee Jeong Cho, Jung Min Lee, Ju-Hyung Kim, Dong Won Baek, Joon Ho Moon and Sang-Kyun Sohn*
Department of Hematology/Oncology, Kyungpook National University Hospital, School of Medicine, Kyungpook National University, Korea
- PP04-03** **Long-term outcomes of tyrosine kinase inhibitor discontinuation in chronic myeloid leukemia patients in real-world clinical practice**
Chang-Hoon Lee¹, So-Yeon Jeon¹, Ho-Young Yhim¹, Jeong-A Kim² and Jae-Yong Kwak^{1*}
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²Hemato-oncology, St. Vincent Hospital, The Catholic University, Korea
- PP04-05** **Clinical and hematological profile of chronic myeloid leukemia in sub-himalayan region**
Rajeev Sandal, Praveesh Dhiman*, Manish Gupta, Sunil Sharma, Vikas Fotedar, Sidharth Vats and Purnima Thakur
Department of radiotherapy and oncology, Indira Gandhi Medical College, India
- PP04-06** **Discontinuation of tyrosine kinase inhibitors based on BCR-ABL1 monitoring by digital droplet PCR in pediatric chronic myeloid leukemia**
Seongkoo Kim¹, Yeojae Kim², Jong Mi Lee^{2,3}, Ari Ahn^{2,3}, Jae Won Yoo¹, Jae Wook Lee¹, Bin Cho¹, Nack-Gyun Chung¹, Yonggoo Kim^{2,3}, Myungshin Kim^{2,3}
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- PP05-01** **Productivity of 18F-FDG-PET/CT diagnostic tool in the management of pediatric lymphoblastic lymphoma**
Ahmed Abdelsalam
Pediatric Hematology/Oncology, Children's Cancer Hospital Egypt (CCHE 57357), Pediatric Hematology/Oncology Consultant, Egypt
- PP05-03** **A case of primary effusion lymphoma**
Dawpadee Dharmasena^{1*}, Sanka Vijayabandara² and Champika Bodinayake²
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- PP05-04 Bone marrow infiltration in non-hodgkin lymphoma: 18 F-FDG PET/CT versus bone marrow aspiration biopsy**
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- PP05-05 Diabetic foot ulcer as a manifestation of T-cell lymphoma: a case report**
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- PP05-06 Flow cytometry v/s BM aspirate v/s BM biopsy as a screening tool for detection of marrow involvement by lymphoma: study at a tertiary cancer hospital**
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²Laboratory Oncology, AIIMS, New Delhi, India
- PP05-07 A retrospective analysis of the efficacy of low-dose metronomic cyclophosphamide for treatment in patients with low grade non-hodgkin lymphoma**
Boram Han, Bum Jun Kim, Ho Young Kim, Dae Young Zang and Hyo Jung Kim*
Internal Medicine, Hallym University Sacred Heart Hospital, Hallym University Medical Center, Korea
- PP05-08 The endothelial activation and stress index (EASIX) score is an independent prognostic factor in patients with diffuse large B cell lymphoma**
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- PP05-09 CC-95251, a novel anti-SIRPα antibody, enhances phagocytosis of non-hodgkin lymphoma (NHL) cells when combined with rituximab**
Henry Chan^{1*}, Christina Trout², David Mikolon¹, Preston Adams¹, Roberto Guzman³, Gustavo Fenalti⁴, Konstantinos Mavrommatis⁵, Mahan Abbasian⁶, Lawrence Dearth¹, Brian Fox⁷, Pallavur Sivakumar⁸ and Kandasamy Hariharan¹
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⁷Informatics and Predictive Sciences, Bristol Myers Squibb, USA
⁸Immuno-oncology and Cell Therapy Discovery, Bristol Myers Squibb, USA
- PP05-10 First clinical study of the anti-SIRPα Antibody CC-95251 combined with rituximab in patients with relapsed/refractory (R/R) non-hodgkin lymphoma (NHL)**
Paolo Strati^{1*}, Eliza Hawkes², Nilanjan Ghosh³, Joseph Tuscano⁴, Quincy Chu⁵, Mary Ann Anderson⁶, Amar Patel⁷, Michael R. Burgess⁷, Kristen Hege⁷, Sapna Chhagan⁷, Sarandeep Boyanapalli⁸, Tracey Day⁷, Frank Shen⁹, Jin-Seok Kim¹⁰ and Amitkumar Mehta¹¹
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- PP05-11** **The clinical outcome of rituximab biosimilars versus rituximab originator with CHOP as first-line treatment for patients with DLBCL**
Amitawan Maneenut and Kannadit Prayongratana*
Hematology unit, Department of medicine, Phramongkutklao hospital, Thailand
- PP05-12** **Bone marrow involvement in korean patients with various lymphoma types: a 21-year large single-center study**
Min-Sun Kim¹, Miyoung Kim^{2*}, Young-Uk Cho³, Sang-Hyun Hwang², Seongsoo Jang², Han-Seung Park³, Jung-Hee Lee³, Dok Hyun Yoon⁴, Cheolwon Suh⁴, Hyery Kim⁵, Kyung-Nam Koh⁵, Ho Joon Im⁵, Jooryung Huh⁶ and Chan-Jeoung Park²
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⁶Pathology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea
- PP05-13** **MicroRNA-196a sensitizes B cell lymphoma cells to daunorubicin through FOXO1**
Hyun Ju Hwang¹, Soyoung Kim¹, Young-Ho Ahn², Eun Seok Choi³, Sung Han Kang³, Hyeri Kim³, Sang-Hyun Hwang⁴, Seongsoo Jang⁴, Ho Joon Im³, Kyung-Nam Koh^{3*} and Nayoung Kim¹
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- PP05-14** **Clinicopathological correlation of mantle cell lymphoma**
Harshita Dubey, Amar Ranjan* and Pranay Tanwar
Laboratory Oncology, Dr.B.R.A-IRCH, AIIMS, New Delhi, India
- PP05-15** **Epigenetic priming improves salvage chemotherapy in diffuse large B-cell lymphoma via endogenous retrovirus-induced cGAS-STING activation**
Jun Liu², Ja Min Byun^{1,2}, Dong-Yeop Shin^{1,2}, Youngil Koh^{1,2}, Junshik Hong^{1,2} and Sung-Soo Yoon^{1,2}
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- PP05-16** **Morphologic variant of hairy cell leukemia: a diagnostic challenge**
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- PP05-17** **Diagnostic challenge for composite mature B cell lymphoma and CD8+ T cell lymphoma**
Sholhui Park¹, Min-Kyung So¹, Dong Jin Park¹, Min-Sun Cho², Seonggyu Byeon³, Young Hoon Park³, Yeung Chul Mun³ and Jungwon Huh^{1*}
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- PP05-18** **Exosomal miR-155 and miR-21 in ibrutinib-resistant diffuse large B cell lymphoma cells**
Bon Park¹, Myung Eun Choi¹, Kyung Ju Ryu¹, Jung Yong Hong², Won Seog Kim², Chaehwa Park¹ and Seok Jin Kim^{1,2*}
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- PP05-20** **Impact of the epstein-barr virus positivity on consolidation radiotherapy (RT) for hodgkin's lymphoma**
Tong Yoon Kim¹, Seok-Goo Cho^{1*}, Daehun Kwag¹, Gi June Min¹, Sung-Soo Park¹, Silvia Park¹, Young-Woo Jeon², Seung-Hawn Shin³, Seung-Ah Yahng⁴, Jae-Ho Yoon¹, Sung-Eun Lee¹, Byung-Sik Cho¹, Ki-Seong Eom¹, Yoo-Jin Kim¹, Seok Lee¹, Chang-Ki Min¹, Jong-Wook Lee¹ and Hee-Je Kim¹
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- PP05-21** Cytokine profile in patients with DLBCL: prognostic value of IL6 and C- reactive protein in predicting poor survival - a prospective study
Gaurav Prakash*, Vaishali Agrawal, Nidhi Jain, Manupdesh Singh, Arihant Jain, Deepesh Lad, Aditya Jandial and Pankaj Malhotra
Clinical Hematology and Medical Oncology, Postgraduate Institute of Medical Education and Research, India
- PP05-22** Bloodless treatment of Jehovah's witness patients with lymphoma: single center experience
Young Ha Kim, Sun Young Jeong, Seug Yun Yoon, Min-Young Lee, Namsu Lee and Jong-Ho Won*
Internal Medicine, Soonchunhyang University College of Medicine, Soonchunhyang University Hospital, Seoul, Korea
- PP05-23** Long term effectiveness of autologous peripheral blood stem cell transplantation (Auto-PBSCT) using busulfan, melphalan, and thiotepa (BMT) regimen in patients with recurrent or refractory CNS lymphoma: single center experience
Youngwoo Jeon^{1,2}, Gi June Min³, Sung-Soo Park³, Silvia Park³, Jae-Ho Yoon³, Sung-Eun Lee³, Ki-Seong Eom³ and Seok-Goo Cho^{1,2,3*}
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- PP06-01** 18F-FDG PET/CT for identifying the potential primary diseases and predicting prognosis of secondary hemophagocytic lymphohistiocytosis in children
Ang Wei, Honghao Ma, Sitong Chen, Zhigang Li, Tianyou Wang and Rui Zhang*
Hematology center, Beijing children's hospital, China
- PP06-02** Clinical analysis of chronic active EBV infection involving gastrointestinal tract: a retrospective analysis of a single-center
Ang Wei, Honghao Ma, Liping Zhang, Zhigang Li, Tianyou Wang and Rui Zhang*
Hematology center, Beijing children's hospital, China
- PP06-03** Clinical-biological characteristics and treatment outcome of children with multisystem Langerhans cell histiocytosis and secondary hemophagocytic lymphohistiocytosis
Lingling Fu, Dong Wang, Honghao Ma And Rui Zhang*
Hematologic Diseases Laboratory, Hematology Center, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, China
- PP06-04** Clinical significance of soluble CD25 in cerebrospinal fluid in hemophagocytic lymphohistiocytosis with central nervous system involvement
Wenxin Ou
Hematology, Beijing Children's Hospital, China
- PP06-05** Effect analysis of Ruxolitinib combinations liposomal doxorubicin, etoposide methylprednisolone +/- PEG-asparaginase in treatment of refractory and relapsed hemophagocytic lymphohistiocytosis in children
Ang Wei, Tianyou Wang* and Rui Zhang
Hematology center, Beijing children's hospital, China
- PP06-06** The role of pre-therapeutic 18F-FDG PET-CT in pediatric hemophagocytic lymphohistiocytosis with Epstein-Barr virus infection
Liping Zhang, Ang Wei, Rui Zhang and Tianyou Wang
Hematology, Beijing Children's Hospital, China
- PP06-07** A case report of adult bone eosinophilic granuloma
Altanshagai Boldbaatar¹, Ulzii-Orshikh Namkhai², Erdenetsetseg Battulga³, Elbegjargal Erdenebaatar¹ and Khishigjargal Batsukh^{1*}
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- PP07-02** Significance of LDH level in development of secondary plasma cell leukemia
Harshita Dubey, Amar Ranjan* and Pranay Tanwar
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- PP07-03 Clinical benefit of measurable residual disease assessment by fragment analysis or next-generation sequencing in patients with multiple myeloma**
Hyunsoo Cho¹, Saeam Shin², Haerim Chung¹, Ji Eun Jang¹, Yu Ri Kim¹, June-Won Cheong¹, Yoo Hong Min¹, Seung-Tae Lee², Jong Rak Choi² and Jin Seok Kim^{1*}
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- PP07-04 Updated risk assessment and staging systems in multiple myeloma - real world scenario**
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- PP07-05 Light chain multiple myeloma presenting as AL amyloidosis**
Dawpadee Dharmasena^{*}, Sanka Vijayabandara and Dhammika Palangasinghe
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- PP07-06 Overexpression of PFKFB4 promotes adaptation to hypoxic microenvironment in multiple myeloma**
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- PP07-07 Case series: Daratumumab monotherapy in relapsed and refractory multiple myeloma patients with severely compromised forced expiratory volume in one second**
Jin-Hyo Kim², Sung-Soo Park^{1*}, Jae-Ho Yoon¹, Sung-Eun Lee¹, Hee-Je Kim¹ and Chang-Ki Min¹
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- PP07-08 Multiple myeloma in borneo sarawak malaysia: a decade of experience in a single center**
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- PP07-10 Talquetamab, a GPRC5D x CD3 bispecific antibody, in patients with relapsed/refractory multiple myeloma: updated phase 1 results from monumental-1**
Amrita Krishnan^{1*}, Monique C. Minnema², Jesus G. Berdeja³, Albert Oriol⁴, Niels W.C.J. van de Donk⁵, Paula Rodríguez-Otero⁶, Elham Askari⁷, María-Victoria Mateos⁸, Luciano J. Costa⁹, Raluca Verona¹⁰, Joanne Ma¹¹, Suzette Girgis¹¹, Shiyi Yang¹², Brandi W. Hilder¹³, Jeffery Russell¹³, Jenna D. Goldberg¹³ and Ajai Chari¹⁴
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- PP07-11 The recovery of absolute lymphocyte count predicts a good prognosis in daratumumab-treated patients with relapsed/refractory multiple myeloma**
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- PP07-12 Galectin-1, Galectin-3, Galectin-9 and their role in monoclonal gammopathy of undetermined significance and multiple myeloma in residents of the Gomel region of Belarus**
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- PP07-13 CC-92480 when combined with bortezomib/dexamethasone enhances cell-autonomous cytotoxicity through G₂/M transition blockade in multiple myeloma**
Chad C. Bjorklund^{1*}, Michael Amatangelo¹, Jian Kang², Hsiling Chiu², Archana Mukhopadhyay¹, Krista Wollerman³, Michael Pourdehnad⁴, Patrick Hagner¹ and Anjan Thakurta¹
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- PP07-14 The GNRI (Geriatric Nutritional Risk Index) as a prognostic factor in patients with newly diagnosed multiple myeloma**
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- PP07-15 Treatment outcome and prognostic factors of newly diagnosed multiple myeloma receiving bortezomib-based induction in Hong Kong: an analysis of 448 patients**
Hoi Ki Karen Tang¹, Chi Yeung Fung¹, Yu Yan Hwang¹, Harold Lee², Sze Fai Yip³, Howard Wong⁴, Chi Kuen Lau⁵, Kwan Hung Leung⁶, Elaine Au⁷, Bonnie Kho⁴, Eric Tse¹, Joycelyn Sim¹, Yok Lam Kwong¹ and Chor Sang Chim^{1*}
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⁵Department of Medicine, Tseung Kwan O Hospital, Hong Kong
⁶Department of Medicine, United Christian Hospital, Hong Kong
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- PP07-16 Favorable outcomes of 3-weekly daratumumab-based regimens in relapsed/refractory multiple myeloma: impact of MRD, rapid doubling time, LDH, triplets and quadruplets**
Cheong Ngai¹, Hoi Ki Karen Tang¹, Chi Yeung Fung¹, Yu Yan Hwang¹, Kai Chung Vincent Wong² and Chor Sang Chim^{1*}
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- PP07-17 Effective substances for the treatment of multiple myeloma using a prohibitin-targeted chromanone compound derivatives**
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- PP07-18 Determinant factors for early mortality in newly diagnosed multiple myeloma patients**
Javad Alizargar
Nursing, Taipei University of Nursing and Health Sciences, Rep of China (Taiwan)
- PP07-19 Clinical profiles and survival outcomes of adult patients with multiple myeloma at a tertiary hospital in the Philippines**
Jeremiah Vallente*, Carlo Francisco Cortez and Ma. Angelina Mirasol
Department of Medicine, University of the Philippines - Philippine General Hospital, Philippines
- PP07-20 Treatment outcomes with reduced-dose bortezomib in adult patients with multiple myeloma: a single-center experience**
Jeremiah Vallente*, Carlo Francisco Cortez and Ma. Angelina Mirasol
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- PP07-21 Inhibition of mitochondrial thioredoxin by auranofin increases bortezomib-induced cell death through autophagy and mitochondrial ROS in multiple myeloma cell line**
Young Hoon Park, Jee Young Ahn and Yeung-Chul Mun*
Division of Hemato-Oncology, Department of Internal Medicine, Ewha Womans University Mokdong Hospital, Korea
- PP07-23 Real-world toxicity and efficacy of ixazomib, lenalidomide, and dexamethasone in Asian patients with relapsed and refractory multiple myeloma**
Ji Hyun Lee¹, Sung-hyun Kim¹, Hye Ryeon Kim¹, Joon Ho Moon², Chang-Ki Min³, Je-Jung Lee⁴, Ho-Jin Shin⁵, Jae-Cheol Jo⁶, Ji Yun Lee⁷ and Ki-Hyun Kim⁸
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⁷Department of Internal Medicine, Pusan National University Hospital, Korea
⁸Division of Hematology, Department of Internal Medicine, Yonsei University College of Medicine, Korea
- PP07-24 Prognosis of chronic kidney disease stage 5 or under dialysis in asian multiple myeloma patients - on behalf of Korean multiple myeloma working party (KMM177 study)**
Ji Hyun Lee¹, Sung-Hyun Kim¹, Ki-Hyun Kim², Chang-Ki Min³, Je-Jung Lee⁴, Sung-Hoon Jung⁴, Sung-Soo Yoon⁵, Dong-Yeop Shin⁵, Ja Min Byun⁵, Jae-Yong Kwak⁶, Ho-Young Yhim⁶, Byeong Seok Sohn⁷, Jin Seok Kim⁸, Hyo Jung Kim⁹, Ho Sup Lee¹⁰, Sung Hwa Bae¹¹, Gyeong-Won Lee¹², Sungwoo Park¹², Jae Hoon Lee¹³, Min Kyoung Kim¹⁴, Young Rok Do¹⁵ and Jun Ho Yi¹⁶
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- PP07-25 The benefit of pomalidomide in RRMM with plasmacytomas - on behalf of Korean multiple myeloma working party (KMM1907 study)**
Ji Hyun Lee¹, Sung-Hyun Kim¹, Ki-Hyun Kim^{2*}, Chang-Ki Min³, Sung-Soo Park³, Je-Jung Lee⁴, Sung-Hoon Jung⁴, Sung-Soo Yoon⁵, Ja Min Byun⁵, Jae-Yong Kwak⁶, Ho-Young Yhim⁶ and Ho-Jin Shin⁷
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⁵Department of Internal Medicine, Seoul National University College of Medicine, Seoul National University Hospital, Korea
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- PP07-26 A pilot study to identify role of minimal residual disease in multiple myeloma patients who received autologous stem cell transplantation**
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- PP08-01 Splenic infarction in patient with Philadelphia-negative myeloproliferative neoplasm**
Myung-Won Lee¹, Sang-Hoon Yeon¹, Hyewon Ryu¹, Ik-Chan Song¹, Hyo-Jin Lee¹, Hwan-Jung Yun¹, Seon Young Kim², Kyung Sook Shin³ and Deog-Yeon Jo^{1*}
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³Department of Radiology, Chungnam National University College of Medicine, Korea
- PP08-02 Volumetric splenomegaly in patients with polycythemia vera**
Myung-Won Lee¹, Sang-Hoon Yeon¹, Hyewon Ryu¹, Ik-Chan Song¹, Hyo-Jin Lee¹, Hwan-Jung Yun¹, Seon Young Kim², Jeoung Eun Lee³, Kyung Sook Shin³ and Deog-Yeon Jo^{1*}
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³Department of Radiology, Chungnam National University College of Medicine, Korea
- PP08-03 Tuberculosis of the bone marrow in a patient with JAK2- positive myelofibrosis presenting with jaundice: a case report**
Joseph Emmanuelle Siatan^{1*} and Chrystal Anne Catli-Burog
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- PP08-04 Myelofibrotic and leukemic transformation in 2016 WHO-defined Philadelphia-negative myeloproliferative neoplasm**
Ik-Chan Song¹, Sang Hoon Yeon¹, Myung-Won Lee¹, Hyewon Ryu¹, Hyo-Jin Lee¹, Hwan-Jung Yun¹, Seon Young Kim¹ and Deog-Yeon Jo^{1*}
Department of Internal Medicine, Chungnam National University Hospital, Korea
- PP08-05 Real-world outcomes of ruxitinib in patients with myelofibrosis focusing on RBC transfusion: a multicenter study from the MPN working party of the KSH**
Eunhee Jung¹, Junshik Hong^{1*}, Sung-Yong Kim², Young Park³, Young Jin Yuh⁴, Yeung-Chul Mun⁵, Won-Sik Lee⁴, Sung-Kyu Park⁶ and Soo-Mee Bang¹
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⁵Department of Hematology-Oncology, Ewha Womans University College of Medicine, Korea
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- PP08-07 Modified cell-based model of JAK2V617F mutation by using CRISPR/Cas9**
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- PP09-01** Pure red cell aplasia after ABO- mismatched allogeneic haematopoietic stem cell transplantation for very severe aplastic anaemia
Ching Soon Teoh
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- PP09-03** Application of next-generation sequencing to distinguish inherited from acquired in bone marrow failure syndrome: a single-center study
WonKee Ahn, Seungmin Hahn, Jung Woo Han and Chuhi Joo Lyu*
Division of Pediatric Hemato-oncology, Department of Pediatrics, Yonsei University College of Medicine, Korea
- PP09-04** Comprehensive genetic analysis for patients with inherited bone marrow failure syndrome
Jong Mi Lee^{1,2}, Hoon Seok Kim^{1,2}, Ari Ahn^{1,2}, Jisook Lim^{1,2}, Jae Won Yoo³, Seongkoo Kim³, Jae Wook Lee³, Bin Cho³, Nack-Gyun Chung³, Myungshin Kim^{1,2}, Yonggoo Kim^{1,2}
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- PP10-01** Performances of targeted RNA sequencing for the analysis of fusion, mutation, and expression in ph like B-ALL
Jing Li
R&D, SINO-US diagnostics, China
- PP10-02** Novel usefulness of krebs von den lungen 6 (KL-6) for assessing bone marrow fibrosis
Minjeong Nam¹, Mina Hur^{2*}, Mikyoung Park³ and Hanah Kim²
¹Laboratory Medicine, Korea University Anam Hospital, Korea
²Laboratory medicine, Konkuk University School of Medicine, Korea
³Laboratory medicine, Eunpyeong St. Mary's Hospital, Korea
- PP10-03** Diagnostic validity %Micro-R of the Sysmex Xn1000 for iron deficiency screening in adolescent female without anemia
Ikky Nabila Nandinanti and Tri Ratnaningsih*
Department of Clinical Pathology and Laboratory Medicine, Universitas Gadjah Mada, Indonesia
- PP10-05** Evaluation of somatic hypermutation status and cytogenetic abnormalities in Korean patients with chronic lymphocytic leukemia
Heekang Choi¹, Haerim Chung², Hyunsoo Cho², Seung-Tae Lee¹, Jin Seok Kim² and Saeam Shin^{1*}
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- PP10-06** Aplastic anemia and risk of incident atrial fibrillation - the good, the bad and the ugly
Wei Syun Hu
Department, CMUH, Rep of China (Taiwan)
- PP10-07** Association of HTLV-1 bZIP factor with PICT1 impairs the nucleolar stress inducible RPL11/MDM2 complex
Takayuki Ohshima
Faculty of Science and Engineering, Tokushima Bunri University, Japan
- PP10-09** Myeloproliferative Neoplasm (MPN)-associated gene mutations in non-MPN patients highlighting distinct features in plausible cases
Daehyun Chu¹, Young-Uk Cho^{1*}, Seongsoo Jang¹, Miyoung Kim¹, Chan-Jeoung Park¹, Eul-Ju Seo¹, Eun-Ji Choi², Je-Hwan Lee² and Kyoo-Hyung Lee²
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²Department of Hematology, Asan Medical Center, University of Ulsan College of Medicine, Korea
- PP10-10** Deep sequencing for BCR-ABL1 kinase domain variants analysis in chronic myeloid leukemia patients with TKI treatment
Taekgyu Lee¹, Hyeon Ah Lee¹, Saeam Shin^{2*}, Seung-Tae Lee² and Jong Rak Choi²
¹Department of Laboratory Medicine, Graduate School of Medical Science, Brain Korea 21 PLUS Project, Yonsei University College of Medicine, Seoul, Korea
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- PP10-11** **Routine use of targeted RNA sequencing in leukemia patients and comparative evaluation with commercially available panels**
Young Eun Lee^{1,2}, Ha Jin Lim¹, Ji Hu Jeon¹, Ju Heon Park¹, Hye Ran Kim³, Jong Hee Shin¹ and Myung Geun Shin^{1*}
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²BioMedical Sciences Graduate Program (BMSGP), Chonnam National University and Chonnam National University Hwasun Hospital, Hwasun, Korea
³College of Korean Medicine, DongShin University, Naju, Korea
- PP10-12** **Hemoglobin concentration, leukocyte and platelet counts in patients with gestational diabetes**
Nhu Cao Thi Bich, Thao Nguyen Van^{*}, Tung Tran Thanh, Tuan Nguyen Huu, Thao Nguyen Thi, Ha Vy The, An Pham Thi Thuy, Diem Pham Ngoc and Trung Thai Minh
Hematology, Cho Ray hospital, Viet Nam
- PP10-13** **Establishment of next-generation sequencing protocol for highly sensitive tracking of minimal residual disease in B-lymphoblastic leukemia**
Hyeon Ah Lee¹, Jin Ju Kim², Saeam Shin^{2*}, Seung-Tae Lee² and Jong Rak Choi²
¹Department of Laboratory Medicine, Graduate School of Medical Science, Brain Korea 21 PLUS Project, Yonsei University College of Medicine, Seoul, Korea
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- PP10-14** **Higher value of hemoglobin in optical methods of hematology analyzer ADVIA 2120 in diagnosing anemia**
Adika Zhulhi Arjana and Tri Ratnaningsih^{*}
Clinical Pathology and Laboratory Medicine, Faculty of Medicine Public Health and Nursing, Universitas Gadjah Mada, Indonesia
- PP10-15** **Diagnostic validity of percentage of hypochromic red cells (% HYPO) for iron deficiency screening without anemia**
Andri Christianalusi and Tri Ratnaningsih^{*}
Department of Clinical Pathology and Laboratory Medicine, Faculty of Medicine Public Health and Nursing, Universitas Gadjah Mada Yogyakarta, Indonesia
- PP10-17** **Correlation of reticulocyte hemoglobin content (CHr) and iron status parameters**
Pradita Sri Mitasari and Tri Ratnaningsih^{*}
Clinical Pathology, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia
- PP10-18** **Validation of a machine learning expert supporting system, immunogenius, using immunohistochemistry results of 3000 Korean patients with lymphoid neoplasms**
Yosep Chong¹, Jamshid Abdul-Ghafar¹, Hye-Ra Jung², Seung-Sook Lee³, and Gyeongsin Park²
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²Department of Pathology, Keimyung University, Daegu, Korea
³Department of Pathology, Korea Institute of Radiological and Medical Sciences, Seoul, Korea
- PP11-01** **Iron deficiency anaemia presenting as idiopathic intracranial hypertension**
Sanka Vijayabandara^{*}, Dawpadee Dharmasena and Malika Udugama
Teaching Hospital, Karapitiya, Galle, Sri Lanka
- PP11-02** **Risk factors associated with anemia among teens in Laguna, Philippines**
Cherry Ann Durante^{1*}, Rufo Jr. Calixtro² and Estrella San Juan¹
¹Nursing, University of Perpetual Help - Dr. Jose G. Tamayo Medical University, Philippines
²Research, University of Perpetual Help - Dr. Jose G. Tamayo Medical University, Philippines
- PP11-05** **Impairment of invasion and maturation and decreased selectivity of plasmodium falciparum in G6PD Viangchan and Mahidol variants**
Duangdao Palasuwan¹, Attakorn Palasuwan¹, Kanyarat Boonpeng¹, Mallika Imwong², Kasem Kulkeaw^{3*} and Nutpakal Ketprasit⁴
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³Department of Parasitology, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand
⁴Department of Biochemistry and Pharmacology, Bio21 Molecular Science and Biotechnology Institute, The University of Melbourne, Australia
- PP11-08** **Association of hematologic parameters with TMPRSS6 gene variations in iron deficiency anemia patients**
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- PP11-09 Identification of genetic alterations in TMPRSS6 gene of anaemic patients from tribal region of Tamil Nadu, India**
Balachandar vellengiri^{1*}, Dhivya Venkatesan¹, Nimmisha Eruppakotte¹, Soumya Kizhakkilach¹, Harsha Ganesan¹, Arul Narayanasamy² and Abilash Valsala Gopalakrishnan³
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³Department of Biomedical Sciences, Vellore Institute of Technology (VIT), India
- PP11-11 Identification of CYP2A6 alteration and its effect on sickle cell anaemia (SCA) in tribal population of Tamil Nadu, India**
Dhivya V¹, Soumya K¹, Harsha G¹, Krishnaswamy R¹, Arul N¹ and Balachandar V^{1*}
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- PP11-12 Risk factors of anemia in pregnancy woman: primary healthcare centre**
Fitri Rachmawati Putri
Medika Mulya Hospital, Indonesia
- PP11-13 Diagnostic performance of % hypo as discriminator parameter of iron deficiency and hemoglobinopathies**
Rhaina Khairani
Department of Clinical Pathology and Laboratory Medicine, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia
- PP11-14 Favism a common but rare seen cause for hemolytic anemia for glucose-6-phosphate dehydrogenase (G6PD) deficiency: a case report**
Jian An Boo^{*} and Shi Chyn Lim
Department of Paediatrics, Hospital Sultanah Bahiyah Alor Setar, Malaysia
- PP11-15 How Do current health expenditure per capita, labor force participation rate, GDP per capita relate to the prevalence of anemia among pregnant and non-pregnant women in the Philippines?**
Putri Ayu
Economics, Andalas University, Indonesia
- PP11-17 Analysis of the influence of the prevalence of anemia among pregnant women, current health expenditure and stunting on the prevalence of anemia among children in the Philippines**
Derizal Derizal^{1*} and Putri Ayu²
¹Economics, State Islamic Institute of Bukittinggi, Indonesia
²Economics, Andalas University, Indonesia
- PP11-18 The effect of analysis nutritional status and blood adding tablets on anemia in pregnancy**
Andi Makkasau¹, Sumiyati Sumiyati² and Andi Nursanti^{3*}
¹Management, Bina Generasi Bangsa of College Foundation, Indonesia
²Nursing, Bina Generasi Bangsa of College Foundation, Indonesia
³Pharmacy, Andini Persada College of Health Sciences Indonesia, Indonesia
- PP12-01 Single nucleotide polymorphisms of the HIF1A gene are associated with sensitivity of glucocorticoid treatment in pediatric ITP patients**
Hao Gu, Runhui Wu^{*} and Zhenping Chen
Hematology center, Beijing Pediatric Research Institute, Beijing Children's Hospital, Capital Medical University, China
- PP12-02 Efficacy and safety of two different low-dose rituximab regimens for chinese children patients with primary immune thrombocytopenia**
Xiaojing Zhu, Xingjuan Xie, Jialu Zhang and Runhui Wu^{*}
Hematology, Beijing Children's Hospital Affiliated to Capital Medical University, China
- PP12-03 Comparison of AggreGuide A-100 with platelet function tests and thromboelastography in patient with ischemic stroke**
Hyunjung Kim, Hey Kyung Lee and Young Woo Kim^{*}
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- PP12-04 Rare acquired bleeding disorders in adolescents and young adults**
Young Shil Park
Department of Pediatrics, Kyung Hee University Hospital at Gangdong, Korea
- PP12-05 Incidence of complications in Korean patients with haemophilia A based on the Korean health insurance review and assessment service database: a study by the Korean pediatric hematology oncology group (KPHOG)**
Ye Jee Shim^{1*} and Young Bae Choi²
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- PP12-06 CD4+CD25+FOXP3+, CD8+ predict development of chronic disease in newly diagnosed idiopathic Thrombocytopenia**
Zhi Wang^{1,2,3}, Zhenping Chen^{1,2,3}, Hao Gu^{1,2,3}, Jingyao Zhang^{1,2,3}, Shuyue Dong^{1,2,3}, Xinjuan Xie^{1,2,3}, Lingling Fu^{1,2,3}, Jialu Zhang^{1,2,3} and Runhui Wu^{1,2,3*}
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- PP12-07 Case of acquired hemophilia a post Covid-19 vaccination**
Guang Yong Chong^{*} and Nor Rafeah Tumian
Department of Hematology, Hospital Canselor Tuanku Muhriz University Kebangsaan, Malaysia
- PP12-08 Effect of anti-nuclear antibody positivity on adult newly diagnosed immune thrombocytopenia prognosis**
Ngoc-Sang Nguyen^{*}, Tuan Nguyen, Thanh-Thanh Suzanne and Tung Tran
Hematology, Cho Ray Hospital, Viet Nam
- PP12-09 Eltrombopag affects interferon-induced antiviral response through iron metabolism pathway**
Yuefen Hu, Sai Ma and Jun Peng^{*}
Hematology, Qilu Hospital, Cheeloo College of Medicine, Shandong University, China
- PP12-10 Piper betel ethanolic extract prolongs prothrombin time (PT) in plasma of Group O and Group A blood donors**
Evana Kamarudin
Medical Laboratory Department, University Technology MARA (UiTM), Malaysia
- PP12-12 Clinical characteristics of hemophilia in Korea – data from the Korean bleeding disorder registry (KBDR)**
Jung Woo Han^{1,2}, Hee Jo Baek³, Young Shil Park⁴, Sang Kyu Park⁵, Ki Young Yoo⁶, Eun Jin Choi⁷, Ji Yoon Kim⁸, Soon Ki Kim^{9*}
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⁸*Department of Pediatrics, Kyungpook National University School of Medicine, Korea*
⁹*Department of Pediatrics, College of Medicine, Inha University, Korea*
- PP12-13 Increased TCRαβ+ double-negative T Cells in pediatric Primary Immune Thrombocytopenia**
Xinjuan Xie¹, Runhui Wu^{2*}, Zhenping Chen¹, Hui Chen¹, Hao Gu¹ and Jingyao Ma²
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²*Hematology Center, Beijing Children's Hospital, Capital Medical University, Beijing, China*
- PP12-14 FOXO1 SNPs are associated with the severity and clinical outcome of pediatric immune thrombocytopenia in the Chinese population**
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- PP12-15 The metformin effect in adult patients with ITP and pre-existing T2DM**
Chaoyang Li, Ming Hou, Qi Feng^{*} and Jun Peng
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- PP12-16 Treatment and bleeding complications of cancer-associated venous thromboembolism: a Korean population-based study**
Sang-A Kim¹, Ju Hyun Lee¹, Ji Yun Lee¹, Hun-Gyu Hwang², Yang-Ki Kim³, Ho-Young Yhim⁴, Junshik Hong⁵, Jeong-Ok Lee¹ and Soo-Mee Bang^{1*}
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- PP12-17 Evaluation of guidelines for childhood primary immune thrombocytopenia**
Jialu Zhang
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- PP12-18 Adapted guideline for the diagnosis and treatment of primary immune thrombocytopenia in children in China (2021 edition): recommendations external review**
Jialu Zhang
Hematology Center, Hematology Center, Beijing Children's Hospital, Capital Medical University, Beijing, China
- PP12-19 Immune thrombocytopenia and incidence of H. pylori infection - a prospective study from India**
Rajeev Sandal¹, Gaurav Parkash^{2*}, Pankaj Malhotra², Shamoli Bhattacharya², Neelam Varma², Jasmina Ahluwalia² and Vishal Sharma²
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- PP12-22 To predict the pretest probability score in deep vein thrombosis (DVT) - a single center study**
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²*Clinical Hematology, National Institute of Blood disease and Bone Marrow Transplantation, Pakistan*
- PP12-23 Management of chronic adult ITP patients: a single center study**
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²*Clinical Hematology, National Institute of Blood disease and Bone Marrow Transplantation, Pakistan*
- PP12-24 An escalating treatment strategy for children with chronic immune thrombocytopenia: prospective clinical study from a single center**
Jialu Zhang
Hematology Center, Hematology Center, Beijing Children's Hospital, Capital Medical University, Beijing, China
- PP12-25 HDAC3 single-nucleotide polymorphism rs2530223 is associated with increased susceptibility and severity of primary immune thrombocytopenia**
Leng Shaoqiu, MD, Liu Anli, MD, Wang Shuwen, MD, Peng J, MD
Department of Hematology, Qilu hospital, Jinan, China
- PP13-01 Outcome of allogeneic hematopoietic stem cell transplantation for pediatric acute lymphoblastic leukemia: a retrospective analysis of a single-center**
Hongbo He, Huyong Zheng and Bin Wang
Hematology Center, Beijing Children's Hospital, China
- PP13-03 Early infectious complications among adult autologous hematopoietic stem cell transplant recipients at the national kidney and transplant institute**
Ernest Matthew Paggabao^{*} and Lynn Bonifacio
Internal Medicine, National Kidney and Transplant Institute, Philippines

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- PP13-05 Haploidentical stem cell transplantation using post cyclophosphamide: a single –center initial experience in Viet Nam**
Van Man Huynh
Stem Cell Transplantation, Blood Transfusion and Hematology Hospital, Viet Nam
- PP13-07 Efficacy of imatinib mesylate in patients with steroid-refractory chronic graft-versus-host disease**
Dong Won Baek¹, Hee Jeong Cho¹, Ju-Hyung Kim¹, Jae Sook Ahn², Hyung Joon Kim³, Sung Nam Lim³, Jun Won Cheong⁴, Sung-Yong Kim⁵, Ho Sup Lee⁶, Jong Ho Won⁷, Ho-Young Yhim⁸, Joon Ho Moon¹ and Sang Kyun Sohn^{1*}
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- PP13-09 Immune reconstitution following autologous hematopoietic stem cell transplantation: a study from AIIMS**
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- PP13-10 Post-transplant cyclophosphamide for GVHD prophylaxis in haploidentical peripheral blood stem cell transplantation**
Jinhang Kim, Nanyoung Yun and Jeong-A Kim*
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²Biomedical Science, Chonnam National University Medical School, Korea
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Reference 1. Bahis NJ, et al, *Leukemia* 2017;31:2435-42, 2. NCCN clinical practice guidelines in oncology ver 4, 2020

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References 1. Perlae, et al, Gilteritinib or Chemotherapy for Relapsed or Refractory FLT3-Mutated AML, N Engl J Med, 2019 Oct 31;381(18):1728-1740. 2. HIRA Notice 2022-38 Released on Feb 25th 2022, Effective on Mar 1st 2022. 3. XOSPATA® Prescribing Information

Precaution in use

1. Warnings 1) **Differentiation Syndrome** 3% of 319 patients treated with this drug experienced differentiation syndrome. Differentiation syndrome is associated with rapid proliferation and differentiation of myeloid cells and may be life-threatening or fatal if not treated. Symptoms of differentiation syndrome in patients treated with this drug included fever, dyspnea, pleural effusion, pericardial effusion, pulmonary edema, hypotension, rapid weight gain, peripheral edema, rash, and renal dysfunction. Some cases had concomitant acute febrile neutrophilic dermatosis. Differentiation syndrome occurred as early as 1 day and up to 82 days after this drug initiation and has been observed with or without concomitant leukocytosis. If differentiation syndrome is suspected, initiate corticosteroids and hemodynamic monitoring until improvement. Taper corticosteroids after resolution of symptoms and administer corticosteroids for a minimum of 3 days. Symptoms of differentiation syndrome may recur with premature discontinuation of corticosteroid treatment. If severe signs and/or symptoms persist for more than 48 hours after initiation of corticosteroids, interrupt this drug until signs and symptoms are no longer severe (see Posology and method of administration and 4. Adverse reactions' section). 2) **Posterior Reversible Encephalopathy Syndrome (PRES)** There have been reports of PRES with symptoms including seizure and altered mental status in patients (1%) treated with this drug. Symptoms have resolved after discontinuation of treatment. A diagnosis of PRES requires confirmation by brain imaging, preferably magnetic resonance imaging (MRI). Discontinue this drug in patients who develop PRES (see Posology and method of administration and 4. Adverse reactions' section). 3) **Prolonged QT interval** Among the patients with this drug, 1% were found to have a QTcF greater than 500 msec and 7% had an increase from baseline QTcF greater than 60 msec. This drug has been associated with prolonged cardiac ventricular repolarisation (QT interval) (see 4. Adverse reactions' section). Perform electrocardiogram (ECG) prior to initiation and during treatment with this drug, on day 8 and 15 of cycle 1, and prior to the start of the next two subsequent cycles. Interrupt this drug or reduce the dose of this drug for treatment reinitiation in patients who have a QTcF >500 msec. Hypokalemia or hypomagnesemia may increase the QT prolongation risk. Correct hypokalemia or hypomagnesemia prior to and during this drug administration (see Posology and method of administration and 4. Adverse reactions' section). 4. **Contraindications** Hypersensitivity to the active substance or to any of the excipients of the product. Anaphylactic reactions have been reported. 5. **Precautions** There have been reports of pancreatitis in patients (4%) treated with this drug. Evaluate and monitor patients who develop signs and symptoms suggestive of pancreatitis. Until symptoms resolve, interrupt and reduce the dose of this drug for treatment reinitiation in patients who develop pancreatitis. 6. **Adverse reactions** The safety of this drug was evaluated in 319 patients with relapsed or refractory AML who received at least one dose of 120 mg of this drug. The clinical trials included one multinational active-controlled, phase 3 trial (2215-CL-0101 and 2215-CL-0102). At the time of final analysis, the median duration of exposure to this drug was 111 days (range 4 to 1320 days). The most frequent adverse drug reactions (ADRs) with this drug were, alanine aminotransferase (ALT) increased

(82.1%), aspartate aminotransferase (AST) increased (80.6%), blood alkaline phosphatase increased (68.7%), blood creatine phosphokinase increased (53.9%), diarrhoea (35.1%), fatigue (30.4%), nausea (29.8%), constipation (28.2%), cough (28.2%), peripheral oedema (24.1%), dyspnea (24.1%), dizziness (20.4%), hypotension (17.2%), pain in extremity (14.7%), asthenia (13.8%), arthralgia (12.5%) and myalgia (12.5%). The most frequent serious adverse reactions (≥2%) reported in patients were acute kidney injury, diarrhoea, ALT increased, dyspnea, AST increased, hypotension and differentiation syndrome. Adverse reactions observed during clinical studies are listed below by frequency category. Frequency categories are defined as follows: very common (≥1/10); common (≥1/100 to <1/10); uncommon (≥1/1,000 to <1/100); rare (≥1/10,000 to <1/1,000); very rare (<1/10,000); not known (cannot be estimated from the available data). Within each frequency grouping, adverse reactions are presented in order of decreasing seriousness.

[Table 2] Adverse reactions observed during clinical studies

Adverse drug reaction	this drug 120 mg daily (N=319)		
	All Grades %	Grades ≥3 %	Frequency category
Cardiac disorders			
Pericardial effusion	4.1	0.9	Common
Pericarditis	1.6	0	Common
Cardiac failure	1.3	1.3	Common
Electrocardiogram QT prolonged	8.8	2.5	Common
Gastrointestinal disorders			
Diarrhoea	35.1	4.1	Very common
Nausea	29.8	1.9	Very common
Constipation	28.2	0.6	Very common
General disorders and administration site condition			
Fatigue	30.4	3.1	Very common
Peripheral edema	24.1	0.3	Very common
Asthenia	13.8	2.5	Very common
Malaise	4.4	0	common
Immune system disorders			
Anaphylactic reaction	1.3	1.3	common
Investigations			
Alanine aminotransferase increased*	82.1	12.9	Very common
Aspartate aminotransferase increased*	80.6	10.3	Very common

Blood alkaline phosphatase increased*	68.7	1.6	Very common
Blood creatine phosphokinase increased*	53.9	6.3	Very common
Musculoskeletal and connective tissue disorder			
Pain in extremity	14.7	0.6	Very common
Arthralgia	12.5	1.3	Very common
Myalgia	12.5	0.3	Very common
Musculoskeletal pain	4.1	0.3	common
Nervous system disorders			
Dizziness	20.4	0.3	Very common
Posterior reversible encephalopathy syndrome	0.6	0.6	Uncommon
Renal and urinary disorders			
Acute kidney injury	6.6	2.2	common
Respiratory, thoracic and mediastinal disorders			
Cough	28.2	0.3	Very common
Dyspnea	24.1	4.4	Very common
Differentiation syndrome	3.4	2.2	common
Vascular disorders			
Hypotension	17.2	7.2	Very common

Preferred term in MedDRA (v. 19.1). * Frequency is based on central laboratory values.
Description of selected adverse reactions 1) **Differentiation syndrome** Of 319 patients treated with this drug in the clinical studies, 11 (3%) experienced differentiation syndrome. Of the 11 patients who experienced differentiation syndrome, 9 (82%) recovered after treatment or after dose interruption of this drug. For recommendations in case of suspected differentiation syndrome (see Posology and method of administration and 1. Warning' section). 2) **Posterior Reversible Encephalopathy Syndrome (PRES)** Of the 319 patients treated with this drug in the clinical studies, 0.6% experienced PRES. PRES is a rare, reversible, neurological disorder, which can present with rapidly evolving symptoms including seizure, headache, confusion, visual and neurological disturbances, with or without associated hypertension. Symptoms have resolved after discontinuation of treatment (see Posology and method of administration and 1. Warning' section). 3) **QT prolongation** Of the 319 patients treated with this drug at 120 mg with a post-baseline QTc value in clinical studies, 4 patients (1%) experienced a QTcF >500 msec. Additionally, across all doses, 12 patients (2.3%) with relapsed/refractory AML had a maximum post-baseline QTcF interval >500 msec (see Posology and method of administration and 1. Warning' and 11) Pharmacodynamic properties section of 14. Information for experts' section)
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Selected prescribing information

울토미리스 주 300 mg / 30 ml 라플리주맴

[원료약품 및 그 분량] 1바일(30mL) 중 유효성분 : 라플리주맴(β글루).....300mg **[효능·효과]** 성인의 발작성 야간 혈색소뇨증 (PNH)의 치료 **[용법·용량]** 이 약은 환자의 체중에 따라 표1에 정한 용량으로 정맥 내 정적 투여한다. 초기 용량 투여 2주 후부터 8주마다 한 번씩 유지 용량으로 투여한다. 투여일정은 예정된 투여일의 ±7일까지(이 약의 첫 번째 유지 용량 제외) 때때로 변경될 수 있지만, 그 다음 투여는 원래 일정에 따라 관리해야 한다. 에글리주맴 제제에서 이 약으로 바꾸는 경우, 에글리주맴 제제 마지막 투여 2주 후에 이 약을 환자의 체중에 따라 표1에 정한 용량(초기용량)을 투여하고, 이후 2주 후부터 8주마다 한 번씩 유지 용량으로 투여한다. (표 1은 제품설명서 전문 참고) **[사용상의 주의사항]** **1. 경고** **1) 중대한 수막구균 감염** 작용 기전에 의해, 이 약의 사용은 수막구균 감염/패혈증 (Neisseria meningitidis)에 대한 환자의 감수성을 증가시킨다. 수막구균성 질환은 어느 혈청군에 의해서도 발생할 수 있다. 감염의 위험성을 낮추기 위하여, 이 약의 투여가 지연됨으로 인한 위험성이 수막구균 감염 발생의 위험성보다 큰 경우를 제외하고는 모든 환자들은 반드시 이 약의 투여를 시작하기 최소한 2주 전에 수막구균 예방접종을 해야만 한다. 수막구균 예방접종을 한 후 2주가 지나기 전에 이 약의 투여를 시작하는 환자는 예방접종 후 2주까지 적절한 예방적 항생요법 치료를 받아야 한다. 혼란 병환성 수막구균 혈청군을 예방하기 위하여 가능하다면 혈청군 A, C, Y, W135 및 B에 대한 백신이 권장된다. 환자들은 백신 사용을 위한 자신의 예방접종 지침에 따라 백신을 접종 혹은 재접종 받아야 한다. 만약 환자가 에글리주맴 제제를 투여하다가 이 약으로 바꾸는 경우, 의사는 최신의 예방접종 지침에 따라 수막구균 예방접종이 되었는지 확인해야 한다. 예방접종이 수막구균 감염을 막는데 충분하지 않을 수 있다. 적절한 항생제 사용에 대한 공식적인 지침 제공을 고려해야 한다. 이 약을 투여받은 환자에서 중대한 수막구균 감염/패혈증 사례가 보고된 바 있고, 다른 말단 보체 억제제로 치료받은 환자에서 중대하거나 치명적인 수막구균 감염/패혈증 사례가 보고되었다. 모든 환자에 대하여 수막구균 감염 및 패혈증의 초기 증상이 나타나는지 반드시 모니터링 해야 하며, 감염이 의심되는 경우에는 즉시 평가하고, 적절한 항생제로 치료한다. 환자는 이러한 증상이나 징후에 대해 통보받아, 즉각적인 의학적 조치를 받을 수 있어야 한다. 의료진은 환자에게 환자용 정보 안내서 및 환자용 안전성 카드를 제공해야 한다. **2) 예방접종 예방접종으로 보체가 더욱 활성화 될 수 있다.** 결과적으로, 발작성 야간 혈색소뇨증(PNH)을 포함한 보체-매개 질환이 있는 환자의 경우, 용혈과 같은 기저질환의 증상과 징후가 증가할 수 있다. 그러므로, 환자는 권장 예방접종 후 질병 증상을 더욱 면밀히 관찰해야 한다. **2. 다음 환자에게는 투여하지 말 것** **1) 이 약의 주성분 또는 첨가물에 과민반응이 있는 환자** **2) 치료되지 않은 수막구균 (Neisseria meningitidis) 감염 환자** **3) 수막구균(Neisseria meningitidis) 백신을 현재 접종하지 않은 환자 또는 백신 접종 이후 2주 이내 이 약 투여를 시작한 환자로서 적절한 예방적 항생요법 치료를 받지 않은 환자**(단, 이 약 투여 지연에 따른 위험이 수막구균 감염 발생 위험보다 중대한 경우는 제외)(**1, 경고**) **3. 다음 환자에게는 신중히 투여할 것** **1) 기타 전신 감염** 활성 전신감염이 있는 환자는 이 약으로 치료 시 주의해서 투여해야 한다. 이 약은 말단 보체 활성을 차단하므로 환자들은 감염, 특히 Neisseria 군 및 피낭성 세균(encapsulated bacteria) 감염에 대한 감수성이 증가할 수 있다. 기타 말단 보체 억제제를 투여한 환자들에서 파종성 인균 감염을 포함하는 N. meningitidis 외의 Neisseria 종에 의한 중대한 감염이 보고되었다. 잠재적인 중대한 감염과 그 증상 및 징후에 대한 인식을 높이기 위하여 환자를 설명서를 제공해야 한다. 임질 예방에 관해 환자에게 조언해야 한다. **4. 약물이상반응** 가장 흔한 약물이상반응은 두통, 상기도감염, 비인두염이었다. 임상시험 환자 중 가장 중대한 약물이상반응은 수막구균 감염 및 수막구균 패혈증이었다. 임상시험에서 관찰된 약물이상반응 (표 1, ≥1% 발생한 이상반응을 발해): 매우 흔하게(≥1/10) - 상기도감염, 비인두염, 두통, 흔하게(≥1/100 - <1/10): 어지러움, 구토, 메스꺼움, 설사, 복부 통증, 소화불량, 발진, 기려움증, 요통, 관절통, 근육통, 발열, 인플루엔자 유사 증상, 피로, 오한, 무기력 PNH 임상시험을 포함한 모든 임상시험에서 이 약으로 인한 가장 중대한 약물이상반응은 수막구균성 감염/패혈증이었다. 이 약으로 치료받은 환자에서 수막구균 감염은 수막구균성 패혈증으로 나타났다. 환자는 수막구균성 패혈증의 증상이나 징후에 대해 통보받아, 즉각적인 의학적 조치를 받을 수 있어야 한다. **[제조사의지]** Alexion Pharmaceuticals, Inc. **[제조자(원제약품)]** Alexion Pharma International Operations Unlimited Company **[수입·판매자]** (주)한독 **[최종개발일]** 2020. 05. 21 **※ 보다 자세한 정보는 제품설명서를 참조하시기 바랍니다.**

전역주 사용 전문의약품

KRPAA2021204

Multicenter, open-label, randomized phase 1b/2 trial to evaluate safety and antitumor activity of polatuzumab in DLBCL in combination with BR. The phase 2 part of the study randomised 80 patients to receive either BR, or BR in combination with polatuzumab for six 21-day cycles. Eligible patients had relapsed/refractory DLBCL after ≥ 1 prior line of therapy and were not candidates for hematopoietic stem cell transplant. The primary endpoint was complete response (CR) assessed by an independent review committee.

For previously treated R/R DLBCL
who are not eligible for HSCT

POWERED
FOR SURVIVAL

References. Sehn LH, Herrera AF, Flowers CR, et al. Polatuzumab Vedotin in Relapsed or Refractory Diffuse Large B-Cell Lymphoma. J Clin Oncol. 2020 Jan 10;38(2):155-165.

CR

40%
POLIVY+BR

17.5%
BR

P=0.026

ORR

45%
POLIVY+BR

17.5%
BR

mPFS

9.5
Months
POLIVY+BR

3.7
Months
BR

(HR, 0.36; 95% CI, 0.21 to 0.63; P<.001)^{1,*}

Median OS from POLIVY®+BR combination regimen and BR regimen was 12.4 mo and 4.7 mo respectively.

(Exploratory analysis, HR=0.42; 95% CI, 0.24-0.75; P=0.002)[†]

Median observation time: 22 months

*As defined by an IRC.

[†] Stratification by duration of response to prior therapy (≤ 12 months vs >12 months).

BR=bendamustine and rituximab; CI=confidence interval; CR=complete response; mPFS=median Progression Free Survival; HR=hazard ratio; ORR=overall response rate; OS=overall survival; DLBCL=Diffuse Large B-cell Lymphoma; HSCT=Hematopoietic Stem Cell Transplantation; R/R=Refractory/Relapse.

POLIVY injection (polatuzumab vedotin)

COMPOSITION

1 vial (448.5mg) contains
Active ingredient: Polatuzumab Vedotin (in-house) 140mg
Excipient (stabilizer): Sucrose 288mg
Other excipients: Sodium Hydroxide, Succinic Acid, Polysorbate 20

APPEARANCE

Colorless vial filled with white to grayish-white lyophilized cake. The reconstituted solution is colorless to slightly brown, clear to slightly opalescent.

INDICATIONS

POLIVY in combination with bendamustine and rituximab is indicated for the treatment of adult patients with relapsed or refractory diffuse large B-cell lymphoma (DLBCL) who are not eligible for hematopoietic stem cell transplant and who have failed at least one prior therapy.

DOSE AND ADMINISTRATION

The recommended dose of Polivy is 18mg/kg given as an intravenous infusion every 21 days in combination with bendamustine and rituximab for 6 cycles. Polivy/bendamustine, and rituximab can be administered in any order on Day 1 of each cycle. The recommended dose of bendamustine is 90mg/m²/day on Day 1 and 2 when administered with Polivy and rituximab. If not already premedicated, administer premedication with an antihistamine and antipyretic to patients prior to administration of Polivy. The initial dose of Polivy should be administered as a 90-minute intravenous infusion. Patients should be monitored for infusion-related reactions during the infusion and for at least 90 minutes following completion of the initial dose. If the prior infusion was well tolerated, the subsequent dose of Polivy may be administered as a 30-minute infusion and patients should be monitored during the infusion and for at least 30 minutes after completion of the infusion. If a planned dose of Polivy is missed, it should be administered as soon as possible and the schedule of administration should be adjusted to maintain a 21-day interval between doses.

Dose Modifications The infusion rate of Polivy should be slowed or interrupted if the patient develops an infusion-related reaction. Discontinue Polivy immediately and permanently if the patient experiences a life-threatening reaction. For dose modifications for peripheral neuropathy see Table 1.

Table 1 Polivy dose modifications for Peripheral Neuropathy

Severity on Day 1 of any cycle	Dose modification
Grade 2-3	Hold Polivy dosing until improvement to $\leq$ Grade 1. If recovered to Grade ≤ 1 on or before Day 14, restart Polivy at a permanently reduced dose of 14mg/kg. If a prior dose reduction to 14mg/kg has occurred, discontinue Polivy. If not recovered to Grade ≤ 1 on or before Day 14, discontinue Polivy.
Grade 4	Discontinue Polivy.

For dose modifications for myelosuppression see Table 2.

Table 2 Polivy, bendamustine, and rituximab dose modifications for myelosuppression

Severity on Day 1 of any cycle	Dose modification ^a
Grade 3-4 Neutropenia	Hold all treatment until ANC recovers to $>1000/\mu\text{L}$. If ANC recovers to $>1000/\mu\text{L}$ on or before Day 7, resume all treatment without any additional dose reductions. If ANC recovers to $>1000/\mu\text{L}$ after Day 7, restart all treatment, with a dose reduction of bendamustine from 90mg/m ² to 70mg/m ² or 70mg/m ² to 50mg/m ² . If a bendamustine dose reduction to 50mg/m ² has already occurred, discontinue all treatment.
Grade 3-4 Thrombocytopenia	Hold all treatment until platelets recover to $>75,000/\mu\text{L}$. If platelets recover to $>75,000/\mu\text{L}$ on or before Day 7, resume all treatment without any additional dose reductions. If platelets recover to $>75,000/\mu\text{L}$ after Day 7, restart all treatment, with a dose reduction of bendamustine from 90mg/m ² to 70mg/m ² or 70mg/m ² to 50mg/m ² . If a bendamustine dose reduction to 50mg/m ² has already occurred, discontinue all treatment.

^a If primary cause is due to lymphoma, the dose of bendamustine may not need to be reduced.

Table 3 Polivy, bendamustine and rituximab dose modifications for Infusion-related reactions (IRRs)

Severity of IRR on Day 1 of any cycle	Dose modification
Grade 1-3 IRR	Interrupt POLIVY infusion and give supportive treatment. For the first instance of Grade 3 wheezing, bronchospasm, or generalized urticaria, permanently discontinue Polivy. For recurrent Grade 2 wheezing or urticaria, or for recurrence of any Grade 3 symptoms, permanently discontinue Polivy. Otherwise, upon complete resolution of symptoms, infusion may be resumed at 50% of the rate achieved prior to interruption. In the absence of infusion-related symptoms, the rate of infusion may be escalated in increments of 50mg/hour every 30 minutes. For the next cycle, infuse Polivy over 90 minutes. If no infusion-related reaction occurs, subsequent infusions may be administered over 30 minutes. Administer premedication for all cycles.
Grade 4 IRR	Stop Polivy infusion immediately. Give supportive treatment. Permanently discontinue Polivy.

PRECAUTIONS FOR USE

1. WARNINGS

1) Myelosuppression Serious and severe neutropenia and febrile neutropenia have been reported in patients treated with Polivy as early as the first cycle of treatment (see 3. Undesirable Effects). Prophylactic G-CSF administration should be considered. Grade 3 or 4 thrombocytopenia or anemia can also occur with Polivy (see 3. Undesirable Effects). Complete blood counts should be monitored prior to each dose of Polivy. More frequent lab monitoring and/or Polivy delays or discontinuation should be considered in patients with Grade 3 or Grade 4 neutropenia and thrombocytopenia. **2) Peripheral Neuropathy** Peripheral neuropathy has been reported in patients treated with Polivy as early as the first cycle of treatment, and the risk increases with sequential doses (see 3. Undesirable effects). Patients with pre-existing peripheral neuropathy may experience worsening of this condition. Peripheral neuropathy reported with Polivy treatment is predominantly sensory peripheral neuropathy; however, motor and sensorimotor peripheral neuropathy have also been reported. Patients should be monitored for symptoms of peripheral neuropathy such as hypoesthesia, hyperesthesia, paresthesia, dysesthesia, neuropathic pain, burning sensation, weakness, or gait disturbance. Patients experiencing new or worsening peripheral neuropathy may require a delay, dose reduction, or discontinuation of Polivy. **3) Infections** Serious, life threatening, or fatal infections, including opportunistic infections, such as pneumonia (including pneumocystis jirovecii and other fungal pneumonia), bacteremia, sepsis, herpes infection, and cytomegalovirus infection have been reported in patients treated with Polivy (see 3. Undesirable Effects). Patients should be closely monitored during treatment for signs of bacterial, fungal, or viral infections. Anti-infective prophylaxis should be considered. Polivy and any concomitant chemotherapy should be discontinued in patients who develop serious infections. **4) Progressive Multifocal Leukoencephalopathy (PML)** PML has been reported with Polivy treatment (see 3. Undesirable effects). Patients should be monitored closely for new or worsening neurological, cognitive, or behavioral changes suggestive of PML. Polivy and any concomitant chemotherapy should be held if PML is suspected and permanently discontinued if the diagnosis is confirmed. **5) Tumor Lysis Syndrome** Patients with high tumor burden and rapidly proliferative tumor may be at increased risk of tumor lysis syndrome. Appropriate measures in accordance with local guidelines should be taken prior to treatment with Polivy. Patients should be monitored closely for tumor lysis syndrome during treatment with Polivy. **6) Embryo-Fetal Toxicity** Based on the mechanism of action and nonclinical studies, Polivy can be harmful to the fetus when administered to a pregnant woman. (See 6. Pregnancy, Lactation, Childbearing). Advise a pregnant woman of the risk to the fetus. Females of reproductive potential should be advised to use effective contraception during treatment with Polivy and for at least 9 months after the last dose. Male patients with female partners of reproductive potential should be advised to use effective contraception during treatment with Polivy and for at least 6 months after the last dose. **7) Hepatic Toxicity** Serious cases of hepatic toxicity that were consistent with hepatocellular injury, including elevations of transaminases and/or bilirubin, have occurred in patients treated with Polivy. Preexisting liver disease, elevated baseline liver enzymes, and concomitant medications may increase the risk. Liver enzymes and bilirubin level should be monitored. **2. CONTRAINDICATIONS** Polivy is contraindicated in patients with a known hypersensitivity to polatuzumab vedotin or any of the excipients.

Polivy-2020-10-27-10

*For more detailed product information and product-related AE cases, please contact Korea Roche 02-3451-3600. *The latest product information can be found on the Korea Roche website (www.roche.co.kr).



Roche Korea Co., Ltd. 17th fl. GT tower, 411, Seocho-daero, Seocho-gu, Seoul. (po) 06615



FN Prophylaxis through every cycle

Neulasta® used **first and every cycle**
helps reduce the incidence of
febrile neutropenia



REWRITING CANCER SURVIVAL

with KYMRIA[®]

In R/R DLBCL,

✓ DURABLE EFFICACY

- 2-year PFS rate of 33% & OS rate of 40%¹
- mDOR not reached at 40.3 months¹
- ORR 52% (95% CI 41-62) & CR 40%²

✓ QUALITY OF SURVIVAL

- Low rates of CRS (1-4.5%) & neurotoxicity (0-5%) in the real world^{3,4}
- QoL improvements⁵

✓ CONVENIENCE & FLEXIBILITY

- Simple, 1-time infusion⁶
- Flexible scheduling⁷



Product Information 김리아주 (티사젠렉류셀)

처방하시기 전 QR 코드 또는 식품의약품안전처
의약품통합정보시스템(<https://nedrug.mfds.go.kr>)을
통해 상세 제품정보를 참조하시기 바랍니다.

JULIET Study Design²

Single-group, open-label, multicenter, international phase 2 pivotal study of tisagenlecleucel in adults with relapsed or refractory DLBCL. The primary end point was the best overall response rate. Of the enrolled patients, 93 patients received a single infusion (median dose, 3.0 × 10⁶ CAR-positive viable T cells; range, 0.1 × 10⁶ to 6.0 × 10⁶) and were included in the evaluation of efficacy.

R/R, refractory/relapsed; PFS, progression-free survival; OS, overall survival; mDOR, median duration of response; ORR, overall response rate; CI, confidence interval; CR, complete response; CRS, cytokine release syndrome; QoL, quality of life; CAR-T, chimeric antigen receptor T-cell.

1. Jaeger U, et al. Poster presented at the 2020 ASH Annual Meeting & Exposition, held virtually on 5-8 December 2020. Poster 1194. 2. Schuster SJ, et al. N Engl J Med. 2019; 380:45-56. 3. Pasquini MC, et al. Blood Adv. 2020;4(21):5414-5424. 4. Riedell P, et al. Transplantation & Cellular Therapy Annual Meeting, February 19-23, 2020; Orlando, FL. Presentation 52. 5. Maziarz RT, et al. Blood Adv. 2020;4:629-37. 6. 김리아주 (티사젠렉류셀), 식품의약품안전처 의약품통합정보시스템 (nedrug.mfds.go.kr). 7. Tyagarajan S, et al. Cytotherapy. 2019;21(12):1198-1205.

* Disclaimer: The materials for KYMRIA[®] contained in this exhibition are approved for use only in Korea. Prescribing information may vary depending on local approval in each country. Therefore, before prescribing any product, always refer to local materials such as the prescribing information and/or the Summary of Product Characteristics (SPC).



NOW APPROVED

세계 최초의 CAR-T 세포 치료제 **KYMRIA[®]**
2021년 3월 국내 허가 승인⁶

적응증⁶

• 25세 이하의 소아 및 젊은 성인 환자에서의 이식 후 재발 또는
2차재발 및 이후의 재발 또는 불응성 B세포 급성 림프성 백혈병
(B-cell acute lymphoblastic leukemia, ALL)의 치료

• 두가지 이상의 전신 치료 후 재발성 또는 불응성 미만성 거대 B세포 림프종
(diffuse large B-cell lymphoma, DLBCL) 성인 환자의 치료



IV Busulfex[®] (busulfan) Injection

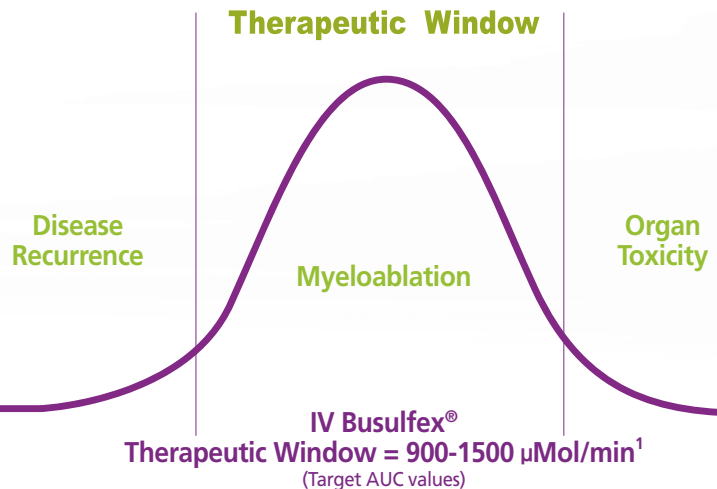


IV Busulfex (Busulfan)

- **IV Bu** formulation to **achieve absolute dose assurance** associated with its controlled administration¹
- The combination of Cy with **IV Bu** administration appeared **safer compared with that of oral Bu.**¹
- Significantly lower incidence of HVOD with **IV Bu** compared with oral Bu and a significantly lower day-100 TRM¹

- Cy : Cyclophosphamide, Bu : Busulfan, HVOD : Hepatic veno-occlusive disease
TRM : Treatment-Related Mortality

*Target AUC_{ss}
with precision*



Reference 1. Ciurea SO, et al. *Biol Blood Marrow Transplant.* 2009;15(5):523-536.

INFORMATION

제품명 : 부설팩스 주(바이알)(부설판)(성분명 : Busulfan) 성분 : 이 약은 바이알에 충전된 무색의 액상주사제이다. **성분·함량 :** 이 약 1바이알(10mL)중 (주성분) 부설판(USP) : 60.0mg (첨가제) 폴리에틸렌글리콜400 6.7mL, 디메틸아세트아미드 3.3mL. **효능·효과 :** 다음 질환에 대하여 시클로포스파미드와 병용하여 조혈모세포 이식 전처치요법으로 사용한다 : 급성 백혈병, 만성 골수성 백혈병, 림프종, 골수 이형성증후군 **용법·용량 :** 1) 성인 0.8 mg/kg으로서 이상 체중 또는 그 보다 낮은 실제 체중을 적용하여 4일간 매 6시간마다 16회를 중심 정맥 카테터를 통하여 2시간 동안 투여한다. 시클로포스파미드는 이 약 16회째 요법이 완료된 6시간 후, 골수이식 개시 3일전에 60 mg/kg용량으로 한시간 동안 주입한다. 과체중 혹은 심각한 비만 환자의 경우, 고정 이상 체중(AIBW)에 근거하여 용량을 산정하여야 한다. 이상 체중(BW)은 다음과 같이 계산된다.(단위 : 신장 cm, 몸무게 kg) BW(남성) = 50 + 0.91 × (신장 - 152) / BW(여성) = 45 + 0.91 × (신장 - 152) 고정 이상 체중(AIBW)은 다음과 같이 계산된다. AIBW = IBW + 0.25 × (실제체중 - IBW) 이 약은 고정 이상 체중 (AIBW)을 근거로 한 용량을 투여하였을 때 가장 좋은 클리어런스를 예상할 수 있다. 미혼환자, 임신 및 미혼 환자들의 경우 실제 체중, 이상 체중(BW) 또는 다른 인자들을 근거로 하여 투여했을 경우, 클리어런스에 유의성 있는 차이를 나타낼 수 있다. 이 약은 뇌-혈관 장벽을 통과하여 발작을 일으키는 것으로 알려져 있기 때문에 모든 환자는 페니토인으로 이를 예방하여야 한다. 페니토인은 부설판의 혈중농도- 시간곡선하면적(AUC)을 15% 감소시킨다. 다른 항경련제를 사용하면 부설판의 혈장 AUC가 높아지므로 간질 및 폐쇄성질환(VOD) 또는 발작의 위험성이 높아진다. 다른 항경련제를 사용할 경우에는 혈장 부설판 농도를 모니터링해야 한다. 5-HT3계열의 구토억제제를 이 약 초기 사용 이전에 투여하여야 하며, 이 약의 계획된 투여 기간동안 계속 투여하여야 한다. 최적의 치료를 위하여 가능한 한 약동학적 모니터링을 실시하는 것이 좋다. 2) 소아 소아(n=24)에 대한 약물 동태학적 결과에 근거한 권장용량은 환자의 실제 체중(ABW)을 적용하여 12 kg 이하일 경우 1.1 mg/kg, 12 kg 초과일 경우 0.8 mg/kg를 4일간 매 6시간마다 16회를 중심 정맥 카테터를 통하여 2시간 동안 투여한다. 이 약의 초기 투여 후, 투여용량의 조절 및 치료 약물농도 모니터링(TDM)의 실시가 권장된다. 시클로포스파미드는 이 약 16회째 요법이 완료된 후, 골수이식 개시 5일전부터 50 mg/kg용량으로 1일 1회, 4일간 주입한다. ※ 치료 약물농도 모니터링에 근거한 소아 환자의 투여용량의 조절 초기 투여 후 목표 AUC(1,125 µM·min)에 도달하기 위한 소아 환자의 고정 투여용량은 다음과 같이 계산된다. 고정투여용량(mg) = 실제 투여용량(mg) × 목표 AUC (µM·min) / 실제 AUC (µM·min) 3) 정맥 내 투여를 위한 준비 이 약은 60mg의 부설판을 6mg/mL의 농도로서 함유하고 있는 10mL 무균 용액이며, 일회용 유리 바이알로 공급된다. 이 약은 사용 전 0.9% 생리식염수 주사액 또는 5% 포도당 주사액에 희석되어야 한다. 희석액의 양이 이 약 부피의 10배가 되어야 하며, 최종농도가 약 0.5mg/mL으로 유지되어야 한다.

KD Code : 649900341 **포장단위 :** 10mL x 1, 8바이알 **저장방법 :** 2~8°C보관, 밀봉용기 **사용기한 :** 제조일로부터 30개월

* 기타 상세한 사항은 최신제품설명서를 참조하시기 바랍니다.

CML/Ph(+)/ALL

T315I mutation disease or
After failure of 2nd generation TKIs



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2세대 TKIs로 치료되지 않는 환자들에게 효과적인 약제입니다!

1. Massaro F, et al. *Curr Cancer Drug Targets*. 2018;18(9):847-856.

Product Information

[제품명] 아이클루시그정15밀리그램(포나타닙염산염) 아이클루시그정45밀리그램(포나타닙염산염) **[성상]** 흰색의 양면이 볼록한 원형 필름코팅 정제 **[효능효과]** 1. 다른 티로신 키나제 억제제(TKI)로 치료되지 않는 만성기, 가속기, 급성기 만성 골수성 백혈병(CML) 또는 필라델피아 염색체 양성 급성 림프구성 백혈병(Ph+ ALL) 성인 환자의 치료. 2. T315I 양성 만성기, 가속기, 급성기 만성 골수성 백혈병(CML) 또는 T315I 양성 필라델피아 염색체 양성 급성 림프구성 백혈병(Ph+ ALL) 성인 환자의 치료. **[용법용량]** 1. 권장 용량 권장 시작 용량은 1일 1회 45mg 이다. 주요 세포유전학적 반응에 도달한 만성기 CML 및 가속기 CML 환자에 대해 이 약의 감량을 고려해야 한다. 3개월 (90일)까지 반응이 없다면, 이 약의 중단을 고려해야 한다. 이 약은 음식물에 상관없이 복용할 수 있다. 정제는 통째로 삼켜야 한다. **[사용상주의사항]** 1. 경고 1) 동맥 폐쇄 제 1상 및 제 2상 임상시험에서 이 약을 투여 받은 환자 중 최소 35%에게서 치명적인 심근경색, 뇌졸중, 뇌의 큰 동맥 협착, 중증 말초혈관 질환을 포함한 동맥 폐쇄가 발생하였다. 제2상 임상시험에서 최소 48개월 추적조사 시 치료를 지속중인 환자(N=133)를 포함한 이 약을 투여 받은 환자 중 33%(150/449)가 심혈관(21%), 말초혈관(12%), 또는 뇌혈관(9%) 동맥폐쇄 사례를 경험하였으며, 일부 환자는 1가지 유형 이상의 동맥폐쇄 사례를 경험하였다. 이 약은 치료 시작 후 2주 이내 및 하루 15mg 정도의 낮은 용량에도 치명적이고 생명을 위협하는 동맥 폐쇄를 유발할 수 있다. 또한 이 약은 재발성 또는 다병소성 혈관 폐쇄를 유발할 수 있다. 환자들은 이 약에 의한 혈관 폐쇄로 인해 혈관재개통술 (관상동맥, 뇌혈관 및 말초동맥)을 받아야 했다. 제 2상 임상시험에서, 최초 심혈관, 뇌혈관 및 말초동맥 폐쇄성 사례의 발생 시까지의 기간 중앙값은 각각 193일(범위: 1-1355), 526일(범위: 5-1339), 478일(범위: 3-1344)이었다. 심혈관 위험인자가 있었던 환자와 없었던 환자 모두에서 이러한 사례들을 경험하였으며, 여기에는 50세 이하 환자도 포함되어 있었다. 동맥 폐쇄 사례가 나타난 환자에서 관찰된 가장 흔한 위험인자는 고혈압(62%, 93/150), 고지혈증(61%, 91/150) 및 심장질환 병력(48%, 72/150)이었다. 동맥 폐쇄성 이상사례들은 연령이 증가할수록, 그리고 허혈, 고혈압, 당뇨병 또는 고지혈증의 과거력이 있는 환자일수록 더 흔하게 나타났다. ※기타 상세한 사항은 최신의 제품설명서를 참조하시기 바랍니다.

ICKSH 2023

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& 63rd ANNUAL MEETING



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