

ICKSH 2021

2021 KOREAN SOCIETY OF HEMATOLOGY
INTERNATIONAL CONFERENCE
& 62nd ANNUAL MEETING

APRIL 1 - 3, 2021 VIRTUAL

PROGRAM
BOOK



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WELCOME MESSAGE

Dear Colleagues,

On behalf of the Organizing Committee, it is a great honor and privilege to welcome you to the 2021 Korean Society of Hematology (KSH) International Conference & 62nd Annual Meeting, hosted by KSH, from April 1 to 3, 2021.

As our first virtual conference, ICKSH 2021 will provide a unique opportunity to learn about the most recent findings and research from renowned experts and offer an occasion to exchange experiences and information with colleagues for the continued success and progress of our field.

ICKSH 2021 will include not only various scientific programs such as plenary lectures, scientific and education sessions, and several satellite symposiums with specialists on numerous hematology-related topics, but also exciting events for participants like ICKSH Points, SNS Hashtag Event, E-Booth Stamp Tour, and more.

We appreciate your interest in our first virtual conference and hope to see you in person in 2022 in a safe environment.



Kyung-Ha Ryu, 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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Chonnam National University Medical School

PROGRAM AT A GLANCE Thursday, April 1

Time	ROOM 1	ROOM 2	ROOM 3
08:00–09:00	Registration		
08:50–09:00	Opening Remark		
09:00–10:30	SS01 Acute Lymphoblastic Leukemia Contemporary Treatment of Pediatric Ph+ ALL (Kirk Schultz, Canada)	SS02 B-Cell Lymphoma Diffuse Large B cell Lymphoma: At the Intersection of Genetics and Epigenetics (Laura Pasqualucci, USA)	ES01 Myelodysplastic Syndrome Myelodysplastic Syndrome and Overlap Syndrome (Yoon Hwan Chang, Korea)
	Current Treatment Approaches to Newly Diagnosed Adult ALL (Daniel Joseph DeAngelo, USA)	Immunotherapy for Hodgkin Lymphoma (John Kuruvilla, Canada)	MDS with Genetic Predisposition (Meerim Park, Korea)
	Results of High Risk and Novel Subtypes of Pediatric ALL in Japan (Katsuyoshi Koh, Japan)	Optimal Treatment of High-Risk Aggressive B-Cell Lymphoma (Lorenz Trümper, Germany)	Diagnosis and Treatment of Chronic Myelomonocytic Leukemia (Jihyun Kwon, Korea)
10:30–11:15	PL01 Cutting Edge of Emerging Therapies Clonal Hematopoiesis and the Origins of Hematologic Malignancies (Benjamin Ebert, USA)		
11:15–11:30	Break		
11:30–12:10	[Satellite] SY01 	[Satellite] SY02 	[Satellite] SY03 
	New Treatment Options for FLT3 mutated AML (Alexander Edward Perl, USA)	Latest Treatment for Hemophilia A and B in Japan (Keiji Nogami, Japan)	Optimal Treatment with IMiDs in Newly Diagnosed Multiple Myeloma (Pieter Sonneveld, The Netherlands)

PROGRAM AT A GLANCE Thursday, April 1

Time	ROOM 1	ROOM 2	ROOM 3
12:10-12:55	E-poster Exhibition		
12:55-14:25	AS01 Recent Therapeutic Approaches in CML (12:55-13:55)	JS01 KAI-KSH Joint Symposium	SS03 Advances in Technology
	From Korean Perspective (Young Rok Do, Korea)	Regulating Regulatory T Cells for Enhancement of Cancer Immunotherapy (Sang-Jun Ha, Korea)	Mutational Landscape in Clonal Hematopoiesis of Indeterminate Potential (Elli Papaemmanuil, USA)
	Impact of Socio-demographic Co-variates on Disease Prognosis, TKI Use and Outcomes on Patients with CML (Qian Jiang, China)	IL-17-Producing Cells in Tumor (Yeon Seok Chung, Korea)	Intelligent Image-Activated Cell Sorting: Principles and Application to Hematology (Akihiro Isozaki, Japan)
	From Japanese Perspective (Shinya Kimura, Japan)	Pro-Inflammatory Cytokines in Graft-Versus-Host Disease (GVHD) (Young-Woo Jeon, Korea)	HARMONY: A Big Data for Better Outcomes Project in Hematological Malignancies (Jesús María Hernández Rivas, Spain)
		Harnessing Adaptive Natural Killer Cells for Immunotherapy in Multiple Myeloma (Hyunsoo Cho, Korea)	
14:25-14:40	Break		

PROGRAM AT A GLANCE Thursday, April 1

Time	ROOM 1	ROOM 2	ROOM 3
14:40- -16:10	AS02 Updates of Hematologic Disease in Asian Population (14:40-15:40)	JS02 KOGO-KSH Joint Symposium - Genomics for Precision Hematology -	SS04 Stem Cell: Biology and Therapeutic Target
	Management of TDT and NTDT Thalassemia in Indonesia (Tubagus Djumhana Atmakusuma, Indonesia)	Single Cell RNA Sequencing Reveals Transcriptional Programs Associated with Myeloma Progression (Hae-Ock Lee, Korea)	Discovery of New Regulators in Stem Cells and Malignancies (Dongjun Lee, Korea)
	Hemophilia Treatment in Singapore (Tien Sim Leng, Singapore)	Multi-Omics Analysis and Modeling of DNA Methylation in Cancer (Sun Kim, Korea)	AMD1 Is Essentially Required in Leukemic Stem Cells (Hyog Young Kwon, Korea)
	Thalassemia Treatment in Malaysia (Jameela Sathar, Malaysia)	Clinical Application of Next-Generation Sequencing in Acute Myeloid Leukemia (Jae-Sook Ahn, Korea)	BCL-2 as a Stem Cell Target in AML (Daniel A. Pollyea, USA)
		Challenges in the Introduction of Next-Generation Sequencing for Diagnostics of Hematologic Malignancies (Seung-Tae Lee, Korea)	
16:10- 16:25	Break		

PROGRAM AT A GLANCE

Thursday, April 1

Time	ROOM 1	ROOM 2	ROOM 3
16:25-17:55	JS03 EHA-KSH Joint Symposium 1 - Basic - (16:25-18:05)	SS05 Multiple Myeloma	ES02 Rare Hematologic Disorders
	Clonal Evolution under IDH Inhibitor Therapy in AML (Lynn Quek, UK)	Novel Strategies to Overcome Relapsed/Refractory Multiple Myeloma (Suzanne Trudel, Canada)	Molecular Diagnosis of Thalassemia (Jee-Soo Lee, Korea)
	Predicting Drug Sensitivity for Personalized Therapy of AML (Kimmo Porkka, Finland)	MRD Negativity - The Foremost Important Goal of Myeloma Treatment? (Bruno Paiva, Spain)	Current Understanding and Treatment Strategies of Langerhans Cell Histiocytosis (Kyung-Nam Koh, Korea)
	TET Loss-of-Function in Malignant Hematopoiesis (Myunggon Ko, Korea)	Light chain Amyloidosis (Kihyun Kim, Korea)	Pathogenesis and Treatment Overview on Secondary Hemophagocytic Lymphohistiocytosis (Yu Ri Kim, Korea)
	Novel Small Molecule Drug Discovery to Override NRAS-Mutated AML (Taebo Sim, Korea)		

PROGRAM AT A GLANCE Friday, April 2

Time	ROOM 1	ROOM 2	ROOM 3	ROOM 4
08:00–09:00	Registration			
09:00–10:30	JS04 ASH-KSH Joint Symposium - ALL -	SS06 Thrombotic Issues in Hematology	ES03 Lymphoma - Novel Diagnosis and Management of B-cell Lymphoma -	
	Epigenetic Control in T-ALL (Marjorie Brand, Canada)	Direct Oral Anticoagulants for the Treatment of VTE in Cancer Patients (Marc Carrier, Canada)	B-Cell Lymphoma's New Genomics (Youngil Koh, Korea)	
	CART cells for Leukemia: What Is Next? (Renier J Brentjens, USA)	Immune Mediated TTP (iTTP): Differential Diagnosis, Treatment, and Follow Up (Spero Cataland, USA)	Immuno-Oncology for B-Cell Lymphomas (Yoon Seok Choi, Korea)	
	Current Concepts in the Management of Relapsed/Refractory ALL in Korea (Joon-ho Moon, Korea)	Post-Transplant Thrombotic Microangiopathy (Vahid Afshar-Kharghan, USA)	Novel Combination Immunochemotherapy beyond CD20 for B-cell Lymphoma (Jun Ho Yi, Korea)	
	Pediatric Acute Lymphoblastic Leukemia in Korea (Hyoung Jin Kang, Korea)			
10:30–11:15	PL02 Clinical Hematology Lecture			
	Genetic Landscape of Lymphoma and Novel Treatment Approaches (Wyndham Hopkins Wilson, USA)			
11:15–11:30	Break			

PROGRAM AT A GLANCE Friday, April 2

Time	ROOM 1	ROOM 2	ROOM 3	ROOM 4
11:30-12:10	[Satellite] SY04  Ravulizumab: Next Generation of C5 Inhibitor for Standard Care of PNH (Jin Seok Kim, Korea)	[Satellite] SY05  Treatment of Relapsed/Refractory DLBCL: Role of Polatuzumab Vedotin (Laurie H. Sehn, Canada)	[Satellite] SY06  Treatment Strategies in Relapsed Multiple Myeloma: A Focus on Sequential Treatment for Survival Benefit (Joseph Mikhael, USA)	[Satellite] SY07  First-line Treatment of CLL in 2021 (Philip A. Thompson, USA)
12:10-12:40	E-poster Exhibition			
12:40-13:40	OP01 Acute Leukemia	OP02 Laboratory Hematology	OP03 Lymphoma and MM	OP04 Benign Hematology (Anemia, Thrombocytopenia)
13:40-13:55	Break			
13:55-14:40	Presidential Symposium Evolution in Acute Leukemia Diagnosis and Its Place on Treatment—Lessons from T-ALL to AML (Elizabeth Macintyre, France)			

PROGRAM AT A GLANCE Friday, April 2

Time	ROOM 1	ROOM 2	ROOM 3	ROOM 4
14:40-16:10	MS01 MOU Country Session - Lymphoid Malignancy - (14:40-15:40)	SS07 Benign Hematology	ES04 Myeloproliferative Neoplasm	
	Outcome of Autologous Transplant in T-Cell Lymphoma: Experience of NIHBT in Vietnam (Nguyen Vu Bao Anh, Vietnam)	Novel Treatment for Immune Thrombocytopenia (ITP) (Cindy Neunert, USA)	The Role of Interferon in MPNs (Seug Yun Yoon, Korea)	
	Subcutaneous Panniculitis-like T-Cell Lymphoma (Udomsak Bunworasate, Thailand)	Recent Understandings of Congenital Neutropenia (Hyoung Soo Choi, Korea)	Allogeneic Hematopoietic Cell Transplantation for Treatment of Myelofibrosis Patients in JAK Inhibitor Era (Sung-Yong Kim, Korea)	
	Update of Extranodal NK/T-cell Lymphoma: Treatment and Biology (Seok Jin Kim, Korea)	Non-Factor Approach including Emicizumab (Keiji Nogami, Japan)	To Modify the Disease Course of MPNs (Sung-Eun Lee, Korea)	
16:10-16:25	Break			

PROGRAM AT A GLANCE Friday, April 2

Time	ROOM 1	ROOM 2	ROOM 3	ROOM 4
16:25-17:55	JS05 EHA-KSH Joint Symposium 2 - Clinical-Translational - (16:25-18:05)	SS08 Supportive Care	SS09 Bone Marrow Failure Syndrome	
	Immunotherapy in AML: From alloSCT towards CAR-T Cell Therapy (Charles Craddock, UK)	Improving Palliative Care and Outcomes in Low- and Middle-Income Countries (Scott Howard, USA)	Challenges in the Diagnosis of Bone Marrow Failure Syndromes: The Role of Genetic Panels? (Ghulam J Mufti, UK)	
	The Emerging Role of MRD in AML (Gert Ossenkoppele, The Netherlands)	Renal Supportive Care and Palliative Care in Patients with Hematologic Diseases (Chung Hee Baek, Korea)	Clonal Hematopoiesis in Bone Marrow Failure (Austin G Kulasekararaj, UK)	
	Therapeutic Potential of ATO to Overcome Resistance of Bcl-2 Inhibitor in AML (Ji Eun Jang, Korea)	Vaccinations before/after Biologic Agents in Patients with Hematologic Malignancies (Wan Beom Park, Korea)	Current Guidelines for the Treatment of Acquired Aplastic Anemia in Japan: An Immune Marker-Based Approach (Shinji Nakao, Japan)	
	MRD in AML (Byung Sik Cho, Korea)			

PROGRAM AT A GLANCE Saturday, April 3

Time	ROOM 1	ROOM 2	ROOM 3
07:30–08:30	Business Meeting		
08:30–09:00	Working Party Reports		
09:00–10:30	SS10 Immunotherapy/ Transplantation	SS11 Pediatric Disease	SS12 T-Cell Lymphoma/HD
	CD8 ⁺ TILs Differentiate into TEMRA via a Bifurcated Trajectory, Deciphering Immunogenicity of Tumor Antigen (Jae-Ho Cho, Korea)	Juvenile Myelomonocytic Leukemia: Learning from Children in a World without Walls (Mignon Loh, USA)	PD1/PDL1 in ENKTL (Won Seog Kim, Korea)
	Immunosenescence in Pediatric Patients with Haploidentical HSCT from Parental Donors (Won-Woo Lee, Korea)	Sirolimus Therapy for Vascular Anomaly (Keon Hee Yoo, Korea)	Novel Therapies for T-cell Lymphoma (Francine Foss, USA)
	CAR-T Cells for AML: Lessons from the Clinic (Saar Gill, USA)	Langerhans Cell Histiocytosis 2021: New Insights and Opportunities (Carl Allen, USA)	Translational Research in Angioimmunoblastic T-Cell Lymphoma: From Genome to Bedside (Sakata-Yanagimoto Mamiko, Japan)
10:30–11:15	PL03 Genomics in Hematologic Malignancies		
	Latest Treatment Developments in Multiple Myeloma (Nikhil Munshi, USA)		
11:15–11:30	Break		

PROGRAM AT A GLANCE Saturday, April 3

Time	ROOM 1	ROOM 2	ROOM 3
11:30-12:10	[Satellite] SY08  NOVARTIS Updated ASH ITP Guidelines and Their Implications on Clinical Practice (Waleed Ghanima, Norway)	[Satellite] SY09  SYOWA KIRIN The Role of Myeloid Growth Factors (MGFs) in Patients with Lymphoma: Benefits, Risks, & Unmet issues (Yong Park, Korea)	[Satellite] SY10  Takeda Real-World Outcomes and Factors Impacting Treatment Choice in Relapsed/Refractory Multiple Myeloma: Special Focus on Ixazomib-Rd (Ji Hyun Lee, Korea)
12:10-12:55	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 2021 website. If you missed pre-registration, you may also conveniently register on-site.

» On-Site Registration Days
April 1-3, 2021

» 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	-

* Please note that simultaneous, duplicate logins with the same ID will not be possible.

SESSION STREAMING

All presentation files will be received in advance and streamed at a designated time (Korea standard time). After the pre-recorded files have been streamed, speakers and chairs will have real-time Q&A.

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

Come and learn the latest information and knowledge!

This is an event in which e-coupons will be awarded to those who complete viewing at least 30 minutes of the satellite symposium hosted by each of our sponsors over the three-day period! Don't miss this great opportunity!

DATE	ROOM 1	ROOM 2	ROOM 3	ROOM 4
APRIL 1, 2021 (11:30 - 12:10)				
APRIL 2, 2021 (11:30 - 12:10)				
APRIL 3, 2021 (11:30 - 12:10)				

VIRTUAL CONFERENCE INFORMATION

E-POSTERS

All participants can view the E-Posters in the E-Poster section of the ICKSH2021 virtual conference website. Participants will have an opportunity to win the Lucky Draw after viewing more than 100 of the presented posters.

VIRTUAL EXHIBITION HALL

Meet our sponsors virtually. If you visit more than 12 booths, gold level or higher, gifts will be given.

ICKSH 2021 SECRETARIAT OFFICE

- Onsite: T. +82+2-2193-1052 (Registration)
 T. +82+2-2193-1053 (Secretariat)
 E. icksh@icksh.org

- Post Conference: 1F, Haeoreum Bldg., 16 Yeoksam-ro 17-gil, Gangnam-gu, Seoul, 06426, Korea
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 E. icksh@icksh.org

VIRTUAL CONFERENCE INFORMATION

CME CREDIT INFORMATION (DOMESTIC PARTICIPANTS ONLY)

For online education, annual evaluation will be allowed for a limited time until June 30, 2021. Please mark your attendance record by pressing the enter/exit button for each session.

1) CME Credit Rating: By the Korean Medical Association

Category	April 1 st	April 2 nd	April 3 rd	Remarks
KMA CME Credit	6	6	3	-
KAIM CME Credit		2		During the conference period

2) Confirming Attendance: Only attendance times that include the enter/exit time for each session will be counted.
(It is necessary to mark attendance every day to receive Daily CME credits.)

3) Method: 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.

* Attendance confirmation is not possible when exiting from the browser (PC internet window) [Close].

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

4) Grade recognition criteria for online training attendance confirmation

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

** It is not possible to claim credits after omission, so please be aware of the contents in advance.

** Real-time attendance records can be checked on the Virtual Conference site during the conference period, but the final score cannot be confirmed because breaks and other times are included.

EVENTS

We have exciting events for participants. Participants who complete the mission will win a prize! Feeling Lucky? Go Register Now!

ICKSH POINTS

Earn points and win prizes! Gifts will be given when you reach 300P per day (200P on Saturday) ! You can check your accumulated points on My Page of the virtual conference homepage.

Action	Points
Enter the Platform (Log in)	100P/day
Submit the Congress Survey	50P
Attend an Oral Session	100P
Attend a Session (Except Satellite, Oral)	50P/session
Attend the Closing Ceremony	50P
Ask a question through the Q&A window (When chosen)	10P/each

PRIZES

Daily Gifts

Domestic

APRIL 1 st	APRIL 2 nd	APRIL 3 rd	
			* Those who obtain points on all 3 days can change the prize to a hand cream set or webcam. Contact the secretariat and we will be glad to help you exchange your prize.
Tumbler	Headset	Vitamin C	

Overseas

USD 20 DISCOUNT COUPON OFF ICKSH 2022 REGISTRATION FEES

	* Coupons will be issued every day for 3 days as points are accumulated. Coupon use is limited to ICKSH 2022 and is neither refundable nor transferable.
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EVENTS

EARLY BIRD PARTICIPANTS

Attend the first session and get an e-Gift card!

- Event Period: April 1st to 3rd, 09:00~10:30 (KST)
- Daily Event: It is required to watch at least 30 minutes of the lecture.

PRIZES



For Korean participants and those living in Korea, KRW 10,000 Starbucks eGift cards will be given for the prize.



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

E-POSTER LUCKY DRAW

View more than 100 of the e-Posters and get the chance to be a winner!

- Event Period: April 1st to 3rd (KST)
- Eligibility to win the Lucky Draw is awarded after viewing more than 100 e-Posters.
- The Lucky Draw will take place at the Closing Ceremony (April 3rd, 12:10~12:55, KST).

PRIZES



For Korean participants and those living in Korea, the following gifts will be given for prizes.



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

#ICKSH 2021

Upload your Instagram with the #ICKSH2021 hashtag and get one e-Coupon!

- Event Period: Until April 3rd 23:59(KST)
- To receive the prize, please take a screenshot of your post and send it to the Secretariat by e-mail: icksh@icksh.org

PRIZES



For Korean participants and those living in Korea, KRW 10,000 Starbucks eGift cards will be given for the prize.



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

EVENTS

E-BOOTH STAMP TOUR

If you visit more than 12 booths, gold level or higher, gifts will be given.

• Event Period: April 1st to 3rd (KST)

Diamond and Platinum booths are all required. The data from each booth must be downloaded. (New data must be downloaded daily.)

PRIZES

APRIL 1st



Umbrella

APRIL 2nd



Soap

APRIL 3rd



Hand Sanitizer



* For overseas participants,
USD 10 Amazon eGift cards
will be given for the prize.

ATTEND SATELLITE SYMPOSIA

Attend the Satellite Symposia and get an e-Gift card!

• Event Period: April 1st to 3rd, 11:30~12:10 (KST)

• Daily Event: It is required to watch at least 30 minutes of the lecture.

PRIZES



For Korean participants and
those living in Korea, KRW 10,000
Shinsegae Department Store
Gift Certificates will be given for
the prize.



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

SPONSORS (Acknowledgements)



SPONSORS (Acknowledgements)

GOLD



SILVER



BRONZE



KEY SPEAKERS

APRIL 1 (Thursday)



[PL01] Plenary Lecture 01

10:30 - 11:15 | Room 1

Clonal Hematopoiesis and the Origins of Hematologic Malignancies

Benjamin Ebert

Dana-Farber Cancer Institute, USA

APRIL 2 (Friday)



[PL02] Plenary Lecture 02

10:30-11:15 | Room 1

Genetic Landscape of Lymphoma and Novel Treatment Approaches

Wyndham Hopkins Wilson

National Cancer Institute, USA



[PS01] Presidential Symposium

13:55-14:40 | Room 1

Evolution in Acute Leukemia Diagnosis and Its Place on Treatment– Lessons from T-ALL to AML

Elizabeth Macintyre

The Hôpital Necker-Enfants Malades, France

APRIL 3 (Saturday)



[PL03] Plenary Lecture 03

10:30-11:15 | Room 1

Latest Treatment Developments in Multiple Myeloma

Nikhil Munshi

Dana-Farber Cancer Institute, USA

DAILY PROGRAM

DAILY PROGRAM Thursday, April 1

08:50-09:00

Opening Remark

09:00-10:30

[SS01] Acute Lymphoblastic Leukemia

Room 1

Chairs Hyoung Soo Choi (Seoul National University College of Medicine, Korea)
Young Rok Do (Keimyung University School of Medicine, Korea)

SS01-1

Contemporary treatment of pediatric Ph+ ALL

Kirk Schultz (Pediatrics University of British Columbia, Canada)

SS01-2

Current treatment approaches to newly diagnosed adult ALL

Daniel Joseph DeAngelo (Dana Farber Cancer Institute, USA)

SS01-3

Results of high risk and novel subtypes of pediatric ALL in Japan

Katsuyoshi Koh (Saitama Children's Medical Center, Japan)

09:00-10:30

[SS02] B-Cell Lymphoma

Room 2

Chairs Hyeon-Seok Eom (National Cancer Center, Korea)
Ho-Jin Shin (Pusan National University School of Medicine, Korea)

SS02-1

Diffuse large B cell lymphoma: At the intersection of genetics and epigenetics

Laura Pasqualucci (Columbia University, USA)

SS02-2

Immunotherapy for Hodgkin lymphoma

John Kuruvilla (University of Toronto, Canada)

SS02-3

Optimal treatment of high-risk aggressive B-cell lymphoma

Lorenz Trümper (Georg August University of Göttingen, Germany)

09:00-10:30

[ES01] Myelodysplastic Syndrome

Room 3

Chairs Yoon Hwan Chang (Seoul National University College of Medicine, Korea)
Yoo-Jin Kim (College of Medicine, The Catholic University of Korea, Korea)

ES01-1

Myelodysplastic syndrome and overlap syndrome

Yoon Hwan Chang (Seoul National University College of Medicine, Korea)

ES01-2

MDS with genetic predisposition

Meerim Park (National Cancer Center, Korea)

ES01-3

Diagnosis and treatment of chronic myelomonocytic leukemia

Jihyun Kwon (Chungbuk National University College of Medicine, Korea)

10:30-11:15

[PL01] Cutting Edge of Emerging Therapies

Room 1

Chair Je-Hwan Lee (University of Ulsan College of Medicine, Korea)

Clonal hematopoiesis and the origins of hematologic malignancies

Benjamin Ebert (Dana-Farber Cancer Institute, USA)

DAILY PROGRAM Thursday, April 1

11:15-11:30 Break

11:30-12:10

[SY01] Astellas



Room 1

Chair June-Won Cheong (Yonsei University College of Medicine, Korea)

New treatment options for FLT3 mutated AML

Alexander Edward Perl (University of Pennsylvania, USA)

11:30-12:10

[SY02] Sanofi-Aventis



Room 2

Chair Soon Ki Kim (Inha University Hospital, Korea)

Latest treatment for hemophilia A and B in Japan

Keiji Nogami (Nara Medical University, Japan)

11:30-12:10

[SY03] BMS-Celgene



Room 3

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

Optimal treatment with IMiDs in newly diagnosed multiple myeloma

Pieter Sonneveld (Erasmus MC Cancer Institute, The Netherlands)

12:10-12:55

E-poster Exhibition

12:55-13:55

[AS01] Recent Therapeutic Approaches in CML

Room 1

Chairs Dong-Wook Kim (College of Medicine, The Catholic University of Korea, Korea)
Hawk Kim (Gachon University College of Medicine, Korea)

AS01-1

From Korean perspective

Young Rok Do (Keimyung University School of Medicine, Korea)

AS01-2

Impact of socio-demographic co-variables on disease prognosis, TKI use and outcomes on patients with CML

Qian Jiang (Peking University People's Hospital, China)

AS01-3

From Japanese perspective

Shinya Kimura (Saga University, Japan)

DAILY PROGRAM Thursday, April 1

12:55-14:25

[JS01] KAI-KSH Joint Symposium

Room 2

Chairs Eui-Cheol Shin (Korea Advanced Institute of Science and Technology (KAIST), Korea)
Duck Cho (Sungkyunkwan University School of Medicine, Korea)

JS01-1 Regulating regulatory T cells for enhancement of cancer immunotherapy
Sang-Jun Ha (Yonsei University, Korea)

JS01-2 IL-17-producing cells in tumor
Yeon Seok Chung (Seoul National University, Korea)

JS01-3 Pro-inflammatory cytokines in Graft-Versus-Host Disease (GVHD)
Young-Woo Jeon (College of Medicine, The Catholic University of Korea, Korea)

JS01-4 Harnessing adaptive natural killer cells for immunotherapy in multiple myeloma
Hyunsoo Cho (Yonsei University College of Medicine, Korea)

12:55-14:25

[SS03] Advances in Technology

Room 3

Chairs Seongsoo Jang (University of Ulsan College of Medicine, Korea)
Jaewoo Song (Yonsei University College of Medicine, Korea)

SS03-1 Mutational landscape in clonal hematopoiesis of indeterminate potential
Eli Papaemmanuil (Memorial Sloan Kettering Cancer Center, USA)

SS03-2 Intelligent image-activated cell sorting: Principles and application to hematology
Akihiro Isozaki (University of Tokyo, Japan)

SS03-3 HARMONY: A big data for better outcomes project in hematological malignancies
Jesús María Hernández Rivas (University of Salamanca, Spain)

14:25-14:40

Break

14:40-15:40

[AS02] Updates of Hematologic Disease in Asian Population

Room 1

Chairs Hye Lim Jung (Sungkyunkwan University School of Medicine, Korea)
Nack Gyun Chung (College of Medicine, The Catholic University of Korea, Korea)

AS02-1 Management of TDT and NTDt thalassemia in Indonesia
Tubagus Djumhana Atmakusuma (Cipto Mangunkusumo National Hospital, Indonesia)

AS02-2 Hemophilia treatment in Singapore
Tien Sim Leng (Singapore General Hospital, Singapore)

AS02-3 Thalassemia treatment in Malaysia
Jameela Sathar (Ampang Hospital, Malaysia)

DAILY PROGRAM Thursday, April 1

14:40-16:10

[JS02] KOGO-KSH Joint Symposium: Genomics for Precision Hematology

Room 2

Chairs Sun Kim (Seoul National University, Korea)
Keon Hee Yoo (Sungkyunkwan University School of Medicine, Korea)

- JS02-1 Single cell RNA sequencing reveals transcriptional programs associated with myeloma progression
Hae-Ock Lee (The Catholic University of Korea, Korea)
- JS02-2 Multi-omics analysis and modeling of DNA methylation in cancer
Sun Kim (Seoul National University, Korea)
- JS02-3 Clinical application of next-generation sequencing in acute myeloid leukemia
Jae-Sook Ahn (Chonnam National University Medical School, Korea)
- JS02-4 Challenges in the introduction of next-generation sequencing for diagnostics of hematologic malignancies
Seung-Tae Lee (Yonsei University College of Medicine, Korea)

14:40-16:10

[SS04] Stem Cell: Biology and Therapeutic Target

Room 3

Chairs Deog-Yeon Jo (Chungnam National University College of Medicine, Korea)
Myung Geun Shin (Chonnam National University Medical School, Korea)

- SS04-1 Discovery of new regulators in stem cells and malignancies
Dongjun Lee (Pusan National University School of Medicine, Korea)
- SS04-2 AMD1 is essentially required in leukemic stem cells
Hyog Young Kwon (Soonchunhyang University, Korea)
- SS04-3 BCL-2 as a stem cell target in AML
Daniel A. Pollyea (University of Colorado School of Medicine, USA)

16:10-16:25

Break

16:25-18:05

[JS03] EHA-KSH Joint Symposium 1: Basic

Room 1

Chairs John Gribben (Barts Cancer Institute, UK)
Je-Hwan Lee (University of Ulsan College of Medicine, Korea)

- JS03-1 Clonal evolution under IDH inhibitor therapy in AML
Lynn Quek (King's College London, UK)
- JS03-2 Predicting drug sensitivity for personalized therapy of AML
Kimmo Porkka (Helsinki University Hospital Comprehensive Cancer Center, Finland)
- JS03-3 TET loss-of-function in malignant hematopoiesis
Myunggon Ko (Ulsan National Institute of Science and Technology (UNIST), Korea)
- JS03-4 Novel small molecule drug discovery to override NRAS-mutated AML
Taeho Sim (Yonsei University College of Medicine, Korea)

DAILY PROGRAM Thursday, April 1

16:25-17:55

[SS05] Multiple Myeloma

Room 2

Chairs Jin Seok Kim (Yonsei University College of Medicine, Korea)
Myungshin Kim (College of Medicine, The Catholic University of Korea, Korea)

SS05-1 Novel strategies to overcome relapsed/refractory multiple myeloma
Suzanne Trudel (University of Toronto, Canada)

SS05-2 MRD negativity - The foremost important goal of myeloma treatment?
Bruno Paiva (University of Navarra, Spain)

SS05-3 Light chain amyloidosis
Kihyun Kim (Sungkyunkwan University School of Medicine, Korea)

16:25-17:55

[ES02] Rare Hematologic Disorders

Room 3

Chairs Eun Sun Yoo (Ewha Womans University College of Medicine, Korea)
Young Kyung Lee (Hallym University College of Medicine, Korea)

ES02-1 Molecular diagnosis of thalassemia
Jee-Soo Lee (Seoul National University College of Medicine, Korea)

ES02-2 Current understanding and treatment strategies of Langerhans cell histiocytosis
Kyung-Nam Koh (University of Ulsan College of Medicine, Korea)

ES02-3 Pathogenesis and treatment overview on secondary hemophagocytic lymphohistiocytosis
Yu Ri Kim (Yonsei University College of Medicine, Korea)

DAILY PROGRAM Friday, April 2

09:00-10:30

[JS04] ASH-KSH Joint Symposium: ALL

Room 1

Chairs Alison Loren (Raymond and Ruth Perelman School of Medicine University of Pennsylvania, USA)
Hyoung Jin Kang (Seoul National University College of Medicine, Korea)

JS04-1

Epigenetic control in T-ALL

Marjorie Brand (Ottawa Hospital Research Institute, Canada)

JS04-2

CART cells for leukemia: What is next?

Renier J Brentjens (Memorial Sloan Kettering Cancer Center, USA)

JS04-3

Current concepts in the management of relapsed/refractory ALL in Korea

Joon-ho Moon (Kyungpook National University School of Medicine, Korea)

JS04-4

Pediatric acute lymphoblastic leukemia in Korea

Hyoung Jin Kang (Seoul National University College of Medicine, Korea)

09:00-10:30

[SS06] Thrombotic Issues in Hematology

Room 2

Chairs Sung-Hyun Kim (Dong-A University College of Medicine, Korea)
Sung Hwa Bae (Daegu Catholic University School of Medicine, Korea)

SS06-1

Direct oral anticoagulants for the treatment of VTE in cancer patients

Marc Carrier (University of Ottawa, Canada)

SS06-2

Immune mediated TTP (iTTP): Differential diagnosis, treatment, and follow up

Spero Cataland (Ohio State University, USA)

SS06-3

Post-transplant thrombotic microangiopathy

Vahid Afshar-Kharghan (The University of Texas MD Anderson Cancer Center, USA)

09:00-10:30

[ES03] Lymphoma: Novel Diagnosis and Management of B-cell Lymphoma

Room 3

Chairs Yeung-Chul Mun (Ewha Womans University School of Medicine, Korea)
Won Sik Lee (Inje University College of Medicine, Korea)

ES03-1

B-cell lymphoma's new genomics

Youngil Koh (Seoul National University College of Medicine, Korea)

ES03-2

Immuno-oncology for B-cell lymphomas

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

ES03-3

Novel combination immunochemotherapy beyond CD20 for B-cell lymphoma

Jun Ho Yi (Chung-Ang University College of Medicine, Korea)

10:30-11:15

[PL02] Clinical Hematology Lecture

Room 1

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

Genetic landscape of lymphoma and novel treatment approaches

Wyndham Hopkins Wilson (National Cancer Institute, USA)

DAILY PROGRAM

Friday, April 2

11:15-11:30 Break

11:30-12:10 **[SY04] Handok**



Room 1

Chair Jong Wook Lee (College of Medicine, The Catholic University of Korea, Korea)

Ravulizumab: Next generation of C5 inhibitor for standard care of PNH

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

11:30-12:10 **[SY05] Roche**



Room 2

Chair Won Seog Kim (Sungkyunkwan University School of Medicine, Korea)

Treatment of relapsed/refractory DLBCL: Role of polatuzumab vedotin

Laurie Sehn (BC Cancer Centre for Lymphoid Cancer, Canada)

11:30-12:10 **[SY06] Amgen**



Room 3

Chair Chang-Ki Min (College of Medicine, The Catholic University of Korea, Korea)

Treatment strategies in relapsed multiple myeloma: A focus on sequential treatment for survival benefit

Joseph Mikhael (Translational Genomics Research Institute (TGen), USA)

11:30-12:10 **[SY07] Janssen**



Room 4

Chair Deok Hwan Yang (Chonnam National University Medical School, Korea)

First-line treatment of CLL in 2021

Philip A. Thompson (The University of Texas MD Anderson Cancer Center, USA)

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

DAILY PROGRAM Friday, April 2

12:40-13:40

[OP01] Acute Leukemia

Room 1

Chairs Byung-Soo Kim (Korea University College of Medicine, Korea)
Jae Wook Lee (College of Medicine, The Catholic University of Korea, Korea)

- OP01-1 Physical and psychological impairments as practical frailty markers and/or survival predictors in elderly AML fit for intensive chemotherapy
Gi June Min (Seoul St. Mary's Hospital, Korea)
- OP01-2 Allogeneic hematopoietic stem cell transplantation can overcome the adverse prognosis of secondary-Type mutation positive acute myeloid leukemia
Ga-Young Song (Chonnam National University Hwasun Hospital, Korea)
- OP01-3 Epigenetic analysis reveals MiR-128-2-5p and MiR-378c as possible novel biomarkers for detection of relapse B-cell acute lymphoblastic leukemia
Prateek Bhatia (Postgraduate Institute of Medical Education & Research, India)
- OP01-4 Measurable residual disease assessment, T cell antigen stability and survival among immunophenotypic sub-categories of T-lineage acute lymphoblastic leukemia patients
Karthik Bommanna (Cancer Institute (W.I.A.), India)
- OP01-5 PTCy-based haploidentical vs matched unrelated donor transplantation using myeloablative targeted busulfan-based conditioning for pediatric acute leukemia
Kyung Taek Hong (Seoul National University College of Medicine, Korea)

12:40-13:40

[OP02] Laboratory Hematology

Room 2

Chairs Hyun Kyung Kim (Seoul National University College of Medicine, Korea)
Young-Uk Cho (University of Ulsan College of Medicine, Korea)

- OP02-1 Similar survival and genetic features between clonal cytopenia of undetermined significance and lower-risk myelodysplastic syndrome
Eun-Ji Choi (University of Ulsan College of Medicine, Korea)
- OP02-2 Clinical performance evaluation of an optical mapping technique for detection of structural variation in hematologic malignancies
Yeeun Shim (Yonsei University College of Medicine, Korea)
- OP02-3 Single cell analysis and cytoplasmic-Ig FISH on double primary acute myeloid leukemia and plasma cell myeloma
Dajeong Jeong (Seoul National University Hospital, Korea)
- OP02-4 Immunoglobulin gene rearrangement in Koreans with multiple myeloma: Clonality assessment and repertoire analysis using next-generation sequencing
Miyong Kim (Hallym University College of Medicine, Korea)
- OP02-5 Clinical performance of FISH analysis with FACS sorting system for detection of cytogenetic abnormalities in multiple myeloma
Jihye Ha (Hanyang University College of Medicine, Korea)

DAILY PROGRAM Friday, April 2

12:40-13:40

[OP03] Lymphoma and MM

Room 3

Chairs
Cheolwon Suh (University of Ulsan College of Medicine, Korea)
Ho-Young Yhim (Jeonbuk National University Medical School, Korea)

OP03-1 Genetic profile of primary plasma cell leukemia in Korea: Comparison with plasma cell myeloma
Young Eun Lee (Seoul National University College of Medicine, Korea)

OP03-2 CARTITUDE-1: Phase 1b/2 study of ciltacabtagene autoleucel in relapsed/refractory multiple myeloma
Deepu Madduri (Mount Sinai Medical Center, USA)

OP03-3 Expanded natural killer cells augment anti-myeloma effects of daratumumab, bortezomib, and dexamethasone in a human multiple myeloma xenograft model
Jaya Lakshmi (Chonnam National University, Korea)

OP03-4 Impact of primary prophylaxis with pegfilgrastim for febrile neutropenia receiving rituximab plus fludarabine and cyclophosphamide treatment in patients with chronic lymphocytic leukemia: A multicenter, prospective study
Youngwoo Jeon (College of Medicine, The Catholic University of Korea, Korea)

OP03-5 Mosunetuzumab shows promising efficacy in patients with multiply relapsed follicular lymphoma: Updated clinical experience from a phase I dose-escalation trial
Won Seog Kim (Sungkyunkwan University School of Medicine, Korea)

12:40-13:40

[OP04] Benign Hematology (Anemia, Thrombocytopenia)

Room 4

Chairs
Chul Won Choi (Korea University Guro Hospital, Korea)
Dong-Yeop Shin (Seoul National University College of Medicine, Korea)

OP04-2 Iptacopan effectively controls intra- and extravascular hemolysis and leads to durable hemoglobin increase in patients with treatment-naïve PNH
Jun Ho Jang (Sungkyunkwan University School of Medicine, Korea)

OP04-3 Developmental megakaryocytopoiesis: A study on novel role of clinically significant MicroRNA in understanding neonatal thrombocytopenia
Ravi Kumar Gutti (University of Hyderabad, Telangana, India)

OP04-4 Deficiency of immature B-cell tolerance by V(D)J rearrangement causes aberrant accumulation of autoantibodies in immune thrombocytopenia
Zi Sheng (Qilu Hospital, Shandong University, China)

OP04-5 Hematopoietic cell transplantation in patients with non-malignant disease
Sung Han Kang (University of Ulsan College of Medicine, Korea)

13:40-13:55

Break

13:55-14:40

[PS01] Presidential Symposium

Room 1

Chair
Kyung-Ha Ryu (Ewha Womans University School of Medicine, Korea)

Evolution in acute leukemia diagnosis and its place on treatment– Lessons from T-ALL to AML
Elizabeth Macintyre (The Hôpital Necker-Enfants Malades, France)

DAILY PROGRAM Friday, April 2

14:40-15:40

[MS01] MOU Country Session: Lymphoid Malignancy

Room 1

Chairs

Jae-Yong Kwak (Jeonbuk National University Medical School, Korea)
Ki-Seong Eom (College of Medicine, The Catholic University of Korea, Korea)

MS01-1

Outcome of autologous transplant in T-cell lymphoma: Experience of NIHBT in Vietnam
Nguyen Vu Bao Anh (Hanoi Medical University, Vietnam)

MS01-2

Subcutaneous panniculitis-like T-cell lymphoma
Udomsak Bunworasate (King Chulalongkorn Memorial Hospital, Thailand)

MS01-3

Update of extranodal NK/T-cell lymphoma: Treatment and biology
Seok Jin Kim (Sungkyunkwan University School of Medicine, Korea)

14:40-16:10

[SS07] Benign Hematology

Room 2

Chairs

Chuhl Joo Lyu (Yonsei University College of Medicine, Korea)
Soo-Mee Bang (Seoul National University College of Medicine, Korea)

SS07-1

Novel treatment for immune thrombocytopenia (ITP)
Cindy Neunert (Columbia University Medical Center, USA)

SS07-2

Recent understandings of congenital neutropenia
Hyoung Soo Choi (Seoul National University College of Medicine, Korea)

SS07-3

Non-factor approach including emicizumab
Keiji Nogami (Nara Medical University, Japan)

14:40-16:10

[ES04] Myeloproliferative Neoplasm

Room 3

Chairs

Chul Won Jung (Sungkyunkwan University School of Medicine, Korea)
Hyo Jung Kim (Hallym University College of Medicine, Korea)

ES04-1

The role of interferon in MPNs
Seug Yun Yoon (Soonchunhyang University College of Medicine, Korea)

ES04-2

Allogeneic hematopoietic cell transplantation for treatment of myelofibrosis patients in JAK inhibitor era
Sung-Yong Kim (Konkuk University School of Medicine, Korea)

ES04-3

To modify the disease course of MPNs
Sung-Eun Lee (College of Medicine, The Catholic University of Korea, Korea)

16:10-16:25

Break

DAILY PROGRAM Friday, April 2

16:25-18:05

[JS05] EHA-KSH Joint Symposium 2: Clinical-Translational

Room 1

Chairs Elizabeth Macintyre (The Hôpital Necker-Enfants Malades, France)
Hee-Je Kim (College of Medicine, The Catholic University of Korea, Korea)

JS05-1 Immunotherapy in AML: From alloSCT towards CAR-T cell therapy
Charles Craddock (University of Birmingham, UK)

JS05-2 The emerging role of MRD in AML
Gert Ossenkoppele (Amsterdam University Medical Center, The Netherlands)

JS05-3 Therapeutic potential of ATO to overcome resistance of Bcl-2 inhibitor in AML
Ji Eun Jang (Yonsei University College of Medicine, Korea)

JS05-4 MRD in AML
Byung Sik Cho (College of Medicine, The Catholic University of Korea, Korea)

16:25-17:55

[SS08] Supportive Care

Room 2

Chairs Seong Kyu Park (Soonchunhyang University Bucheon Hospital, Korea)
Inho Kim (Seoul National University Hospital, Korea)

SS08-1 Improving palliative care and outcomes in low- and middle-income countries
Scott Howard (University of Tennessee Health Science Center, USA)

SS08-2 Renal supportive care and palliative care in patients with hematologic diseases
Chung Hee Baek (University of Ulsan College of Medicine, Korea)

SS08-3 Vaccinations before/after biologic agents in patients with hematologic malignancies
Wan Beom Park (Seoul National University College of Medicine, Korea)

16:25-17:55

[SS09] Bone Marrow Failure Syndrome

Room 3

Chairs Jin-Yeong Han (Dong-A University College of Medicine, Korea)
Hoon Kook (Chonnam National University Medical School, Korea)

SS09-1 Challenges in the diagnosis of bone marrow failure syndromes: The role of genetic panels?
Ghulam J Mufti (King's College Hospital, UK)

SS09-2 Clonal hematopoiesis in bone marrow failure
Austin G Kulasekararaj (King's College Hospital, UK)

SS09-3 Current guidelines for the treatment of acquired aplastic anemia in Japan: An immune marker-based approach
Shinji Nakao (Kanazawa University, Japan)

DAILY PROGRAM Saturday April 3

07:30-08:30	Business Meeting	Room 1
08:30-09:00	Working Party Reports	Room 1
09:00-10:30	[SS10] Immunotherapy/Transplantation	Room 1
Chairs	Jong Ho Won (Soonchunhyang University College of Medicine, Korea) Ho Joon Im (University of Ulsan College of Medicine, Korea)	
SS10-1	CD8⁺ TILs differentiate into TEMRA via a bifurcated trajectory, deciphering immunogenicity of tumor antigen Jae-Ho Cho (Chonnam National University Medical School, Korea)	
SS10-2	Immunosenescence in pediatric patients with haploidentical HSCT from parental donors Won-Woo Lee (Seoul National University College of Medicine, Korea)	
SS10-3	CAR-T cells for AML: Lessons from the clinic Saar Gill (University of Pennsylvania, USA)	
09:00-10:30	[SS11] Pediatric Disease	Room 2
Chairs	Young-Ho Lee (Hanyang University College of Medicine, Korea) Jun Eun Park (Korea University Anam Hospital, Korea)	
SS11-1	Juvenile myelomonocytic leukemia: Learning from children in a world without walls Mignon Loh (University of California, Benioff Children's Hospital, USA)	
SS11-2	Sirrolimus therapy for vascular anomaly Keon Hee Yoo (Sungkyunkwan University School of Medicine, Korea)	
SS11-3	Langerhans cell histiocytosis 2021: New insights and opportunities Carl Allen (Baylor College of Medicine, USA)	
09:00-10:30	[SS12] T-Cell Lymphoma/HD	Room 3
Chairs	Seok-Goo Cho (College of Medicine, The Catholic University of Korea, Korea) Sukjoong Oh (Sungkyunkwan University School of Medicine, Korea)	
SS12-1	PD1/PDL1 in ENKTL Won Seog Kim (Sungkyunkwan University School of Medicine, Korea)	
SS12-2	Novel therapies for T-cell lymphoma Francine Foss (Yale University School of Medicine, USA)	
SS12-3	Translational research in angioimmunoblastic T-cell lymphoma: From genome to bedside Sakata-Yanagimoto Mamiko (University of Tsukuba, Japan)	

DAILY PROGRAM Saturday April 3

10:30-11:15	[PL03] Genomics in Hematologic Malignancies		Room 1
Chair	Jae Hoon Lee (Division of Hematology, Gachon University Gil Medical Center, Korea)		
	Latest treatment developments in multiple myeloma Nikhil Munshi (Dana-Farber Cancer Institute, USA)		
11:15-11:30	Break		
11:30-12:10	[SY08] Novartis		Room 1
Chair	Jun Ho Jang (Sungkyunkwan University School of Medicine, Korea)		
	Updated ASH ITP guidelines and their implications on clinical practice Waleed Ghanima (Østfold Hospital, University of Oslo, Norway)		
11:30-12:10	[SY09] Kyowa Kirin		Room 2
Chair	Seok Jin Kim (Sungkyunkwan University School of Medicine, Korea)		
	The role of Myeloid Growth Factors (MGFs) in patients with lymphoma: Benefits, risks, & unmet issues Yong Park (Korea University College of Medicine, Korea)		
11:30-12:10	[SY10] Takeda		Room 3
Chair	Je-Jung Lee (Chonnam National University Medical School, Korea)		
	Real-world outcomes and factors impacting treatment choice in relapsed/refractory multiple myeloma: Special focus on Ixazomib-Rd Ji Hyun Lee (Dong-A University College of Medicine, Korea)		
12:10-12:55	Award Ceremony & Closing		Room 1

POSTER LIST

POSTER LIST

BP01

Outcomes in gilteritinib-treated patients with FLT3-mutated relapsed or refractory acute myeloid leukemia who underwent transplantation

Yoshinobu Maeda^{1*}, Naoko Hosono², Hisayuki Yokoyama³, Masahiro Onozawa⁴, Shigeru Chiba⁵, Yoshinobu Kanda⁶, Alexander E Perl⁷, Nahla Hasabou⁸, Qiaoyang Lu⁸, Ramon Tiu⁸, Mikiko Kusano⁹ and Ja Min Byun¹⁰

¹Department of Hematology and Oncology, Okayama University Hospital, Okayama, Japan

²Department of Transfusion Medicine, University of Fukui, Fukui, Japan

³Department of Hematology and Rheumatology, Tohoku University Graduate School of Medicine, Sendai, Japan

⁴Department of Hematology, Hokkaido University, Hokkaido, Japan

⁵Department of Hematology, University of Tsukuba, Tsukuba, Japan

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⁷Division of Hematology/Oncology, Abramson Cancer Center, University of Pennsylvania, Philadelphia, PA, USA

⁸Department of Oncology, Astellas Pharma, Inc., Northbrook, IL, USA

⁹Department of Oncology, Astellas Pharma, Inc., Tokyo, Japan

¹⁰Department of Internal Medicine, Seoul National University College of Medicine, Seoul National University Hospital, Seoul, Korea

BP02

Transcriptional landscape profiling of cytogenetically normal acute myeloid leukaemia by high throughput deep sequencing technology

Angeli Ambayya^{1,3*}, Syed Carlo Edmund², Jameela Sathar¹, Sarina Sulong¹ and Rosline Hassan¹

¹Haematology Department, Hospital Ampang, Malaysia

²Department of Pathology, University of New Mexico, USA

³Haematology Department, Malaysia

BP03

Differential effects of donor lymphocyte infusion upon treatment response and GVHD according to relapse level and donor sources in patients with myelodysplastic syndrome

Silvia Park¹, Tong Yoon Kim¹, Jong Hyuk Lee¹, Joon yeop Lee¹, Gi June Min¹, Sung Soo 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*}

¹Department of Hematology, Seoul St. Mary's Hematology Hospital, College of Medicine, The Catholic University of Korea, Korea

²Department of Hematology, Incheon St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Korea

³Department of Hematology, Yeoido St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Korea

⁴Department of Hematology, Eunpyeong St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Korea

BP04

CXCR2 as a novel target for overcoming resistance to tyrosine kinase inhibitors in chronic myeloid leukemia cells

Ji-Hea Kim¹, Ka-Won Kang², Byung-Hyun Lee² and Byung Soo Kim^{2*}

¹Department of Biomedical Science, Korea University, Korea

²Department of Internal Medicine, Korea University, Korea

BP05

SIRT1 regulates SKP2-mediated P27 ubiquitination and degradation in NOTCH induced T-ALL

Fangce Wang¹, Zheng Li¹ and Aibin Liang^{1*}

¹Department of Hematology, Tongji Hospital, Tongji University School of Medicine, China

BP06

Development of novel anti-CD19 CAR T cells resistant to immune checkpoint for phase I/II study in patients with relapsed of refractory B cell lymphoma

Young-Ho Lee^{1,2}, Hyeon Ji Lee^{1,2}, Hyung Cheol Kim², Yujeon Lee¹, Su Kyung Nam¹, Cedric Hupperetz¹, Jennifer SY Ma³, Xinxin Wang³, Oded Singer³, Won Seog Kim⁴, Seok Jin Kim⁴, Youngil Koh⁵, Inkyung Jung¹ and Chan Hyuk Kim^{1*}

¹Biological Sciences, Korea Advanced Institute of Science and Technology, Korea

²R&D Center, Curocell Inc, Korea

³California Institute for Biomedical Research, Scripps Research, USA

⁴Medicine, Samsung Medical Center, Korea

⁵Internal Medicine, Seoul National University Hospital, Korea

BP07

Comprehensive clinical and molecular features analysis of follicular peripheral T-cell lymphoma and nodal peripheral T-cell lymphoma with T follicular helper phenotype compared to angioimmunoblastic T cell lymphoma and peripheral T-cell lymphoma-NOS

Sang Eun Yoon¹, Junhun Cho², Young Hyeon Ko², Yeon Jeong Kim³, Woong-Yang Park³, Seok Jin Kim¹ and Won Seog Kim^{1*}

¹Division of Hematology-Oncology, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

²Department of Pathology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

³Samsung Genome Institute, Samsung Medical Center, Seoul, Korea

POSTER LIST

- BP08** Immune checkpoint-related gene polymorphisms are associated with sensitivity and treatment response of primary immune thrombocytopenia
Shuwen Wang
Department of Hematology, Qilu Hospital, Cheeloo College of Medicine, Shandong University, China
- BP09** TINF2 mutations are associated with poor outcome post hematopoietic stem cell transplantation for dyskeratosis congenita
Yeon Jung Lim^{1,2}, Yigal Dror^{2*}, Omri A Arbiv², Melanie E Kalbfleisch², Mohammed Al Nuaimi⁶, MacGregor Steele³, Geoff Cuvelier⁴, Tal Schechter-Finkelstein⁵, Bozana Zlateska² and Michaela Cada²
¹Pediatrics, College of Medicine, Chungnam national university, Korea
²Genome and the Genetics and Genome Biology Program, Research Institute, The Hospital for Sick Children, Canada
³Pediatrics, Alberta Children's Hospital, Calgary, Alberta, Canada
⁴Pediatrics, CancerCare Manitoba, Winnipeg, Manitoba, Canada
⁵Blood and Marrow Transplantation Section, Division of Haematology/Oncology, The Hospital for Sick Children, Toronto, Canada
⁶Pediatrics, The Hospital for Sick Children and the University of Toronto, Toronto, Ontario, Canada
- BP10** Two-stage genome-wide association studies of hemoglobin concentration in Taiwan Han Chinese
Vanessa Joy Timoteo^{1*}, Kuang-Mao Chiang² and Wen-Harn Pan²
¹National Yang-Ming University and Institute of Biomedical Sciences-Academia Sinica, Taiwan International Graduate Program in Molecular Medicine, Rep of China (Taiwan)
²Academia Sinica, Institute of Biomedical Sciences, Rep of China (Taiwan)

POSTER LIST

- PP01-01** **Next generation sequencing (NGS)-based interpretation of FLT3/NPM1 mutations in adult patients with acute myeloid leukemia (AML) in a single institution**
Tong Yoon Kim¹, Hee-Je Kim^{1,2*}, Jong Hyuk Lee¹, Joon yeop Lee¹, Gi June Min¹, Sung Soo Park¹, Silvia Park¹, Seung-Ah Yahng³, Young-Woo Jeon⁴, Seung-Hwan Shin⁵, Jae-Ho Yoon¹, Sung-Eun Lee¹, Byung Sik Cho^{1,2}, Ki-Seong Eom^{1,2}, Yoo-Jin Kim^{1,2}, Seok Lee^{1,2}, Chang-Ki Min^{1,2}, Seok-Goo Cho^{1,2} and Jong Wook Lee^{1,2}
¹Department of Hematology, Seoul St. Mary's Hematology Hospital, College of Medicine, The Catholic University of Korea, Korea
²Department of Hematology, Leukemia Research Institute, College of Medicine, The Catholic University of Korea, Korea
³Department of Hematology, Incheon St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Incheon, Korea
⁴Department of Hematology, Yeoido St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea
⁵Department of Hematology, Catholic Hematology Hospital, Eunpyeong St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea
- PP01-02** **Impact of FLT3-ITD gene mutations in acute promyelocytic leukemia in Malaysia**
Siew Lian Chong
 Department of Hematology, Hospital Ampang, Selangor, Malaysia
- PP01-03** **Overexpression of prohibitin 2 mRNA and protein is associated with poor prognostic indicator in cytogenetically normal acute myeloid leukemia**
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- PP01-04** **Frequency and characteristics of risk-stratified adult acute myeloid leukemia according to the NCCN guideline version 2.2021 revealing categorization uncertainty and candidate cases for germline testing**
Young-Uk Cho¹, Hyunji Kim¹, Min-Sun Kim¹, Sang-Hyun Hwang¹, Seongsoo Jang¹, Chan-Jeoung Park¹, Eul-Ju Seo¹, Eun-Ji Choi², Je-Hwan Lee² and Kyoo-Hyung Lee²
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- PP01-05** **Clinical efficacy of venetoclax combined chemotherapy for newly diagnosed and relapsed or refractory acute myeloid leukemia (AML): 1-year experience in catholic hematologic hospital**
Silvia Park¹, Tong Yoon Kim¹, Jong Hyuk Lee¹, Joon yeop Lee¹, Gi June Min¹, Sung Soo Park¹, Seung-Ah Yahng², Young-Woo Jeon³, Seung-Hwan Shin⁴, Jae-Ho Yoon¹, Sung-Eun Lee¹, Byung Sik Cho¹, Ki-Seong Eom¹, Seok Lee¹, Chang-Ki Min¹, Seok-Goo Cho¹, Jong Wook Lee¹, Yoo-Jin Kim¹ and Hee-Je Kim^{1*}
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- PP01-06** **Allelic burden of FLT3-ITD mutation matters in AML patients who received allogeneic hematopoietic stem cell transplantation**
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- PP01-07** **Clinical characteristics and prognostic impacts of mutations of RAS pathway-related genes in acute myeloid leukemia patients**
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³Internal Medicine, Chungbuk National University College of Medicine, Korea
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- PP01-08** **Treatment patterns and clinical outcomes in unfit AML patients receiving first-line systemic treatment or best supportive care: Korean sub-analysis**
Soo-Mee Bang¹, Ka-Won Kang², Ik-Chan Song³, Alexander Delgado⁴, Maria Belen Guijarro Garbayo⁵, Cynthia Llamas⁶, Yinghui Duan⁶ and Je-Hwan Lee⁷
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- PP01-09** **Effect of delayed treatment in acute myeloid leukemia patients: Treatment delay matters in younger patients**
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- PP01-10** **A prospective randomized comparison of high-dose cytarabine and high-dose daunorubicin in the induction chemotherapy for acute myeloid leukemia**
Eun-Ji Choi¹, Jun-Hong Park¹, Han-Seung Park¹, Jung-Hee Lee¹, Kyoo-Hyung Lee¹, Young-Shin Lee¹, Young-Ah Kang¹, Mijin Jeon¹, Ji Min Woo¹, Hyeran Kang¹ and Je-Hwan Lee^{1*}
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- PP01-11** **Quality-adjusted time without symptoms of disease and toxicity analysis of CPX-351 Vs 7+3 in older adults with newly diagnosed high-risk/secondary AML**
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- PP01-12** **Children acute promyelocytic leukemia in the southern Vietnam: The 10 year experience**
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- PP01-13** **Phospholipase C beta 2 protein overexpression is a favorable prognostic indicator in newly diagnosed normal karyotype acute myeloid leukemia**
Mi Suk Park¹, Young Eun Lee², Hye Ran Kim³, Jong Hee Shin⁴, Hyun Wook Cho⁵, Jun Hyung Lee⁴ and Myung Geun Shin^{2,4*}
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- PP01-14** **Real time PCR based quantitative evaluation of WT1 gene expression from diagnosis to end of induction in acute myeloid leukaemia**
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- PP01-15** **Infectious complications of venetoclax-based chemotherapy in acute myeloid leukemia: Baseline for selecting proper antimicrobial prophylaxis**
Raeseok Lee¹, Sung-Yeon Cho¹, Dong-Gun Lee^{1*}, Sang Woon Bae¹, Silvia Park², Byung Sik Cho², Yoo-Jin Kim² and Hee-Je Kim²
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- PP01-16** **The application of the updated 2016 WHO classification of AML in pediatric patient cohort: A single center study**
Won Kee Ahn¹, Seungmin Hahn¹, John Hoon Rim², Jin Ju Kim², Saeam Shin², Seung-Tae Lee², Jong Rak Choi², Jung Woo Han¹ and Chuhl Joo Lyu^{1*}
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- PP01-17** Comparison of genetic mutations harbored by myeloid sarcoma and leukemic cells of the bone marrow in a patient treated with decitabine
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- PP01-18** Incidence of differentiation syndrome (DS) and other complications in acute promyelocytic leukaemia (APML) – A single centre retrospective observational study
Niket Mantri¹, Anand Kumar^{1*}, Poornima P¹, Mahesh Rajashekaraiah¹ and Sunil Udgire¹
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- PP01-19** Laboratory profile of acute myeloblastic leukemia promyelocytic type patients in Sardjito Hospital, Indonesia
Adika Zhulhi Arjana¹, Usi Sukorini^{1*}, Tri Ratnaningsih¹ and Setyowati Setyowati¹
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- PP01-20** Infection profile and outcomes of adult acute leukemia patients developing chemotherapy-associated febrile neutropenia
Camille Ariadne Tanchanco^{1*}, Monica Pia Reyes-Montecillo¹, Angelina Mirasol¹ and Karl Evans Henson¹
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- PP01-21** Variation and relationship of homo sapiens acute myeloid leukemia homo sapiens cDNA, mRNA sequence
Ramlah Ramlah
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- PP01-22** Src family kinase inhibitor bosutinib and dasatinib enhances differentiation of acute promyelocytic leukemia cell line induced by combination of all-trans-retinoic acid
Min-Young Lee¹, Hee-Jeong Cheong², Seug Yun Yoon¹, Kyoung-Ha Kim¹, Namsu Lee¹ and Jong-Ho Won^{1*}
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- PP01-23** Study of anti-leukemic activity of ethanolic extract of zingiber officinale in a leukemic rat model
Rahul Kumar
Zoology, JK College, India
- PP01-26** Role of hydro-ethanol extract of citrullus colocynthis seed in benzene-induced toxicity of acute myeloid leukemia mice
Gireesh Dayma
SLS, Manipal University, India
- PP01-27** Effect of madhuca longifolia on etoposide action in acute myeloid leukemia
Minakshi Sarswati^{1*} and Pooja Gupta¹
¹Internal Medicine, Shakuntla Hospital and research center, India
- PP01-28** Biological importance and therapeutic benefit of cirsimaritin against human leukemia cells: Medicinal importance through scientific data analysis
Dinesh Kumar Patel^{1*} and Kanika Patel¹
¹Faculty of Health Sciences, Sam Higginbottom University of Agriculture, Technology and Sciences, Payagraj, India
- PP01-29** Biological potential of tricetin against acute myeloid leukemia: Therapeutic benefit in the medicine for their anticancer effect through scientific data analysis
Dinesh Kumar Patel^{1*} and Kanika Patel¹
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- PP01-30** Potency of MicroRNA (miR142, miR302, and miR503): Biomolecular therapy of acute myeloid leukemia cells proliferation by targeting cyclin-D1 pathway: Systematic literature review
Han Yang
Internal Medicine, University of Sebelas Maret, Indonesia

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Chandan Kumar¹, Garima Jain¹, Anita Chopra¹ and Amar Ranjan¹
¹Laboratory Oncology, All India Institute of Medical Sciences, India
- PP01-32** **Impact of COVID-19 on the treatment of acute myeloid leukemia: A systematic review**
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- PP01-33** **Repeated and sustained remissions with decitabine therapy in an elderly male with acute myeloid leukemia**
Jeremiah Vallente¹ and Teresita Dumagay^{1*}
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- PP01-34** **A rare case of acute promyelocytic leukemia with BCR-ABL1 rearrangement**
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- PP01-36** **Nonleukemic myeloid sarcoma involving the ileum, duodenum, lungs, mesentery, posterior cul-de-sac and multiple lymph node groups: A case report**
Jeremiah Vallente^{1*}, Teresita Dumagay¹ and Rogelio Jr. Velasco¹
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- PP01-37** **Analytical performance of the oncomine myeloid research assay testing for myeloid neoplasms**
A-Jin Lee¹, Sang-Gyung Kim¹ and Chang-Ho Jeon¹
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- PP02-01** **Screening of dysplastic neutrophils using cell population data by automated hematology analyzer**
Hyunjung Kim¹, Eunhee Han¹, Hae Kyung Lee¹, Yonggook Kim¹ and Kyungja Han^{1*}
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- PP02-02** **TET2 mutation and high miR-22 expression as biomarkers to predict clinical outcome in myelodysplastic syndrome patients treated with hypomethylating therapy**
Seong Kyu Park^{1*}, Young Sok Ji¹, Jina Yun¹, Se Hyung Kim¹, Chan Kyu Kim¹ and Jong Ho Won¹
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- PP02-03** **Molecular profile in adult myelodysplastic/myeloproliferative neoplasms highlighting diagnostic ambiguity in certain cases**
Hyunji Kim¹, Young-Uk Cho^{1*}, Sang-Hyun Hwang¹, Seongsu Jang¹, Eul-Ju Seo¹ and Chan-Jeoung Park¹
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- PP03-01** **Germline and somatic mutations in Korean patients with ALL**
Sang-Yong Shin¹, Hyeonah Lee², Seung-Tae Lee³, Jong Rak Choi³, Chul Won Jung⁴, Hong Hoe Koo⁵ and Sun-Hee Kim^{6*}
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⁵Department of Pediatrics, Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea
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- PP03-02** **Spectrum of genetic mutations detected by next-generation sequencing in pediatric acute lymphoblastic leukemia**
Jae Wook Lee¹, Seongkoo Kim¹, Ari Ahn², Myungshin Kim², Yonggook Kim², Pil-Sang Jang¹, Nack-Gyun Chung^{1*} and Bin Cho¹
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- PP03-04** **Minimal residual disease status of patients with B-cell precursor acute lymphoblastic leukemia in South Korea**
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- PP03-05** **Prognosis of pediatric acute lymphoblastic leukemia treated by SCCLG-ALL 2016 protocol - A single institutional experience**
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- PP03-06** **Clinicopathological and immunophenotypic profile of T-cell acute lymphoblastic leukaemia**
Priya Pai¹, Sushma Belurkar¹ and Sindhura Lakshmi Koulmane Laxminarayana¹
¹Department of Pathology, Kasturba Medical College, Manipal, MAHE, India
- PP03-07** **Treatment response to targeted immunotherapy in adult ALL with isolated extramedullary relapse after previous allogeneic HCT**
Seung-Hwan Lee², Jae-Ho Yoon¹, Gi June Min¹, Sung-Soo Park¹, Silvia Park¹, Sung-Eun Lee¹, Byung-Sik Cho¹, Ki-Seong Eom¹, Yoo-Jin Kim¹, Hee-Je Kim¹, Chang-Ki Min¹, Seok-Goo Cho¹, Jong Wook Lee¹ and Seok Lee^{1*}
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- PP03-08** **Strategies to prevent and manage complications of acute lymphoblastic leukaemia in young people in Bihar**
Rajeev Sinha
Department of Pharmacology, Agra College, India
- PP03-09** **A case controlled study on digital dermatoglyphic patterns among children with acute lymphoblastic leukemia in Guyana**
Ameet Kumar Jha
Pre-clinical sciences, Texila American University, Guyana
- PP03-10** **Wearable technology to assess the sleep quality of patients with acute lymphoblastic leukemia after treatment with chemotherapy**
Manvendra Singh
HMFA-MIET, AKTU, AKTU, India
- PP03-11** **Methotrexate mitigates leukemia by targeting toll/NF-κB pathway in both in vivo and in vitro model systems**
Dushyant Gautam¹, Indira Paddibhatla¹ and Ravi Gutti^{1*}
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- PP03-12** **Anti-leukemic effects of Ibrutinib on B-cell acute lymphoblastic leukemia cells**
Han-Seung Park¹, Eun-Hye Hur¹, Bon-Kwan Goo¹, Juhyun Moon¹ and Je-Hwan Lee^{1*}
¹Department of Hematology, Asan Medical Center, University of Ulsan College of Medicine, Korea
- PP03-13** **Anti-proliferative and apoptotic effect of zeaxanthin on different malignant cell lines**
Pardeep Kumar^{1*} and Vinod Sharma¹
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- PP03-14** **Anti-leukemia effect of solid lipid nanoparticles of hesperidine against the benzene induced leukemia via regulation of growth factors and inflammatory mediators**
Prakash Bhatt
Biotechnology, Fermentis Biotech, India
- PP03-15** **Anti-leukemic effect of ajwain oil against DMBA induced leukemic rat model: Possible mechanism of action**
Niti Singh^{1*} and Deepika Singh¹
¹Information Technology, Continental Automotive LTD, Bangalore, India
- PP03-17** **Association MTHFR gene polymorphisms in promotor-677C/T with risk for adult acute lymphoblastic leukemia in Asia population: An update metaanalysis**
Bastomy Eka Rezki
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- PP03-18** **Factors related to quality of life of children with acute lymphoblastic leukemia who undergo chemotherapy**
Ramlah Ramlah
Biology, Universitas Gadjah Mada, Indonesia

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Rifaldy Fajar¹, Nana Indri Kurniastuti¹ and Prihantini Jupri¹
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- PP03-20** Acute lymphoblastic leukemia with lytic lesions
Namita Kumari¹, Amar Ranjan², Ekta Rahul², Pranay Tanwar² and Harshita Dubey²
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²Lab Oncology, Cancer Hospital, AIIMS, New Delhi, India
- PP03-21** A case illustrating therapy-related acute lymphoblastic leukemia eventually progressed to therapy-related myelodysplastic syndrome with clonal branching evolution
Youn-Ji Hong¹, Young-Uk Cho^{1*} and Han-Seung Park²
¹Laboratory Medicine, Asan Medical Center, University of Ulsan College of Medicine, Korea
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- PP03-22** Mixed phenotype acute leukemia - A pathologist's nightmare
Sushma Belurkar
Associate Professor, Pathology, Kasturba Medical College, Manipal Academy of Higher Education, Manipal, Karnataka, India
- PP04-01** Pulmonary hypertension in newly diagnosed and tyrosine kinase inhibitor-treated chronic myelogenous leukemia patients: A single center retrospective analysis
Ik-Chan Song¹, Sang-Hoon Yeon¹, Won-Hyoung Seo¹, Myung-Won Lee¹, Hyewon Ryu¹, Hyo-Jin Lee¹, Hwan-Jung Yun¹, Byung-Joo Sun², Jin-Ok Jeong², Jae-Hyeong Park² and Deog-Yeon Jo^{1*}
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²Division of Cardiology, Department of Internal Medicine, Chungnam National University Hospital, Korea
- PP04-02** Clinically diagnosed chronic myeloid leukemia in hyperleukocytosis complicated by acute respiratory distress syndrome from SARS-CoV-2 (COVID-19)
Leah Anne Legaspi¹, Camille Ariadne Tanchanco¹ and Loreta Zoleta¹
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- PP04-03** A case of e1a2 (Minor, P190) BCR-ABL1-positive chronic myeloid leukemia in Korea
Yu Jeong Choi¹, Ja Yoon Heo² and Jongha Yoo^{3*}
¹Department of Laboratory Medicine, Severance Hospital, Yonsei University College of Medicine, Korea
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- PP04-04** Measuring health related quality of life of chronic myeloid leukemia patients on newer generation TKIs using the Filipino version of the FACT-Leu questionnaire
Camille Ariadne Tanchanco¹, Karen Kate Tobias¹ and Teresita Dumagay¹
¹Internal Medicine, University of the Philippines - Philippine General Hospital, Philippines
- PP05-01** Outcome of non-Hodgkin lymphoma: A single center experience
Rohit Kapoor^{1*}, Neha Rastogi¹, Dhwanee Thakkar¹, Goutomi Chatterjee¹ and Satya Prakash Yadav¹
¹Pediatric Hematology Oncology and Bone Marrow Transplant Unit, Cancer Institute, Medanta The Medicity Hospital, Gurgaon, Haryana, India 122001., Medanta The Medicity Hospital, Gurgaon, Haryana, India
- PP05-02** Small extracellular vesicle-derived messenger RNA for liquid biopsy-based biomarker research in non-Hodgkin lymphomas
Seok Jin Kim^{1*}, Yeong Hak Bang², Joon Ho Shim², Kyung Ju Ryu², Ji Young Lee², Myung Eun Choi², Sang Eun Yoon² and Won Seog Kim¹
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- PP05-03** **Bone marrow involvement in lymphoma: Flow cytometry versus bone marrow biopsy; The gold standard?**
Garima Jain¹, Chandan Kumar¹, Pranay Tanwar^{1*} and Amar Ranjan¹
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- PP05-04** **Diagnostic accuracy and prognostic relevance of immunoglobulin heavy chain rearrangement and 18F-FDG-PET/CT compared with unilateral bone marrow trephination for detecting bone marrow involvement in patients with diffuse large B-cell lymphoma**
Mihee Kim¹, Seo-Yeon Ahn¹, Jae-Sook Ahn¹, Je-Jung Lee¹, Hyeoung-Joon Kim¹, Jun Hyung Lee², Myung-Geun Shin², Sang Yun Song³ and Deok-Hwan Yang^{1*}
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- PP05-05** **Role of FDG-PET/CT in the management of pediatric burkitt lymphoma**
Ahmed Abdelsalam
Pediatric oncology/hematology, Children's Cancer Hospital Egypt (CCH 57357), Egypt
- PP05-06** **Clinical outcomes of early-progressed follicular lymphoma in Korea: A multicenter, retrospective analysis**
Jun Ho Yi¹, Seok Jin Kim³, Dok Hyun Yoon⁷, Cheolwon Suh⁷, Won-Sik Lee⁹, Deok Hwan Yang⁶, Jae-Cheol Jo¹⁰, Youngil Koh⁵, Jeong-Ok Lee⁴, Byeong Su Kim¹¹, Sung Nam Lim¹⁴, Mi Hwa Heo¹³, Byeong Seok Sohn¹², Yoon Seok Choi¹⁵, Hyo Jung Kim¹⁶, Soon Il Lee⁸, Sung Yong Oh² and Won Seog Kim^{3*}
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- PP05-07** **Long-term clinical outcomes of gastric MALT lymphoma: A single-center experience of 207 patients in Catholic Hematology Hospital**
Gi June Min¹, Seok-Goo Cho^{1*}, Byung-Ock Choi⁵, Seung-Jun Kim⁶, Han Hee Lee⁷, Young-Woo Jeon², Jong Hyuk Lee¹, Sung-Soo Park¹, Silvia Park¹, Seung-Ah Yahng⁴, Seung-Hawn Shin³, Byung-Su Kim³, Jae-Ho Yoon¹, Sung-Eun Lee¹, Byung-Sik Cho¹, Ki-Seong Eom¹, Yoo-Jin Kim¹, Seok Lee¹, Hee-Je Kim¹, Chang-Ki Min¹, Dong-Wook Kim¹ and Jong Wook Lee¹
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⁶Department of Gastroenterology, Seoul St. Mary's Hospital, Korea
⁷Department of Gastroenterology, Yeouido St. Mary's Hospital, Korea
- PP05-08** **Long-term clinical outcome of R-CVP chemoimmunotherapy in treatment-naïve patients with orbital adnexal MALT lymphoma: A single-center experience**
Gi June Min¹, Seok-Goo Cho^{1*}, Seok-Woo Yang⁵, Young-Woo Jeon², Jong Hyuk Lee¹, Sung-Soo Park¹, Silvia Park¹, Seung-Ah Yahng⁴, Seung-Hawn Shin³, Byung-Su Kim³, Jae-Ho Yoon¹, Sung-Eun Lee¹, Byung-Sik Cho¹, Ki-Seong Eom¹, Yoo-Jin Kim¹, Seok Lee¹, Hee-Je Kim¹, Chang-Ki Min¹, Dong-Wook Kim¹ and Jong Wook Lee¹
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- PP05-09** **CNS involvement in relapsed mantle cell lymphoma**
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- PP05-10** **Efficacy and safety of ibrutinib in mantle cell lymphoma patients: Real world experience in a single center, retrospective analysis**
Jong Hyuk Lee¹, Gi-June Min¹, Young-Woo Jeon², Sung-Soo Park¹, Silvia Park¹, Jae-Ho Yoon¹, Sung-Eun Lee¹, Byung-Sik Cho¹, Ki-Seong Eom¹, Yoo-Jin Kim¹, Seok Lee¹, Hee-Je Kim¹, Chang-Ki Min¹, Dong-Wook Kim¹, Jong Wook Lee¹, Seok-Goo Cho^{1*} and Byung-Su Kim³
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- PP05-11** **Long-term real-world results of R-CHOP chemoimmunotherapy in 479 previously untreated elderly patients with diffuse large B-cell lymphoma: A single-center experience at Catholic Hematology Hospital**
Gi June Min¹, Seok-Goo Cho^{1*}, Young-Woo Jeon², Jong Hyuk Lee¹, Sung-Soo Park¹, Silvia Park¹, Seung-Ah Yahng⁴, Seung-Hawn Shin³, Byung-Su Kim³, Jae-Ho Yoon¹, Sung-Eun Lee¹, Byung-Sik Cho¹, Ki-Seong Eom¹, Yoo-Jin Kim¹, Seok Lee¹, Hee-Je Kim¹, Chang-Ki Min¹, Dong-Wook Kim¹ and Jong Wook Lee¹
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- PP05-12** **Role of upfront ASCT in patients with bone marrow involvement by immunoglobulin gene rearrangement of diffuse large B-cell lymphoma**
Yu Ri Kim¹, Ho jin Shin², Ho-Young Yhim³, Deok-Hwan Yang⁴, Yong Park⁵, Ji Hyun Lee⁶, Won-sik Lee⁷, Young Rok Do⁸, Yeung-Chul Mun⁹ and Jin Seok kim^{1*}
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- PP05-13** **Long-term follow-up of limited-stage ocular adnexal lymphoma patients treated with chemoimmunotherapy**
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- PP05-14** **Use of high dose methotrexate in patients with primary CNS lymphoma without therapeutic drug monitoring of methotrexate levels: Challenges & outcome**
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³Department of Neurology, PGIMER, Chandigarh, India
- PP05-15** **Efficacy and safety of high-dose etoposide cytarabine as consolidation in transplant ineligible primary central nervous system lymphoma**
Yu Ri Kim¹, Hyunsoo Cho¹, Soo-Jeong Kim², June-Won Cheong¹, Haerim Chung¹, Ji Eun Jang¹, Yoo Hong Min¹ and Jin Seok Kim^{1*}
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PP05-16

Effect of systemic intravenous methotrexate administration on CNS relapse in patients with primary intraocular lymphoma

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PP05-17

GIT DLBCL in hospital Malacca, Malaysia

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PP05-18

Subcutaneous mosunetuzumab shows promising safety and encouraging efficacy in relapsed or refractory B-cell lymphoma: Initial results from dose escalation

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PP05-19

Treatment outcomes of involved-field radiotherapy in elderly patients with high-grade or recurrent non-Hodgkin lymphoma

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PP05-20

ECHELON-2: 5-year results of a phase 3 study of frontline brentuximab vedotin + CHP vs CHOP in patients with CD30-positive peripheral T-cell lymphoma

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PP05-21

Prognostic effect of C-reactive protein-to-albumin ratio in peripheral T-cell lymphoma

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PP05-22

Cutaneous T cell lymphoma in Asian patients: A multinational, multicenter, prospective registry study in Asia

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PP05-23

Long-term clinical outcome of of ProMACE-CytaBOM regimen with sandwiched radiotherapy in newly diagnosed patients with localized extranodal NK/T-cell lymphoma, nasal type

Gi June Min², Sung-Soo Park², Silvia Park², Jae-Ho Yoon², Sung-Eun Lee², Byung-Sik Cho¹, Ki-Seong Eom², Yoo-Jin Kim², Hee-Je Kim², Seok Lee², Chang-Ki Min², Jong-Wook Lee², Seok-Goo Cho^{1,2,3*} and Youngwoo Jeon^{1,3}

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PP05-24

A novel ICOS gene mutation in a patient with common variable immunodeficiency and T large granular lymphocyte leukemia

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PP05-25

Brentuximab vedotin with chemotherapy for previously untreated, stage III/IV classical Hodgkin lymphoma: 5-year update of the ECHELON-1 study

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PP05-26

Influence of DNA repair and TLR4 gene variants on response to ABVD regimen in South Indian patients with Hodgkin lymphoma

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PP05-27

Multicenter, retrospective analysis of patients with chronic lymphocytic leukemia in Korea

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PP05-28

Possible correlation of torque teno virus/torque teno-like minivirus and human herpes virus-8 in kikuchi-fujimoto disease

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- PP06-01 Clinical study on risk-stratified treatment in children with HLH**
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- PP06-02 Clinical analysis of chronic active EBV infection with coronary artery dilatation and a matched case-control study**
Ang Wei¹, Honghao Ma¹, Tianyou Wang¹ and Rui Zhang^{1*}
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- PP06-03 Outcome of langerhans cell histiocytosis: A single center experience**
Rohit Kapoor^{1*}, Neha Rastogi¹, Dhawnee Thakkar¹, Goutomi Chatterjee¹ and Satya Prakash Yadav¹
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- PP06-04 Clinical analysis of pediatric systemic juvenile xanthogranulomas: A retrospective single-center study**
Huixia Gao¹ and Rui Zhang^{1*}
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- PP07-01 Generation of potent dendritic cells using interleukin-15 in multiple myeloma**
Tan-Huy Chu¹, Manh-Cuong Vo¹, Jaya Lakshmi¹, Seo-Yeon Ahn², Sung-Hoon Jung² and Je-Jung Lee^{2*}
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- PP07-02 Relationship between number of plasma cells with monoclonal protein levels in myeloma multiple patients**
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- PP07-03 Galectin-3 in multiple myeloma in residents of Gomel region of Belarus**
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- PP07-04 Translational data supporting the rational combination of iberdomide with proteasome inhibitors**
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- PP07-05 Adaptive natural killer cells facilitate effector functions of daratumumab in multiple myeloma**
Hyunsoo Cho¹, Haerim Chung¹, Yoon Seok Choi³, Ji Eun Jang¹, Yu Ri Kim¹, June-Won Cheong¹, Yoo Hong Min¹, Eui-Cheol Shin² and Jin Seok Kim^{1*}
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- PP07-06** **Translational data supporting the rational combination of iberdomide with CD38- and SLAMF7-directed monoclonal antibodies**
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- PP07-07** **Clinical implication of next-generation flow cytometry based minimal residual disease assessment in patients with multiple myeloma**
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- PP07-08** **Association between vitamin D receptor (VDR) gene polymorphisms and multiple myeloma susceptibility: A systematic review and meta-analysis**
Indah Sagitaisna Putri
Faculty of Medicine, Sebelas Maret University, Indonesia
- PP07-09** **Immunomodulatory drugs increase the risk of serious infections in multiple myeloma patients: A meta-analysis**
Zeba Haque
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- PP07-10** **Diagnostic impact of non-CRAB myeloma-defining events in multiple myeloma**
Sooyong Park¹ and Yoon Hwan Chang^{1*}
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- PP07-11** **Determinant factors for early mortality in newly diagnosed multiple myeloma patients**
Javad Alizargar
Research Center for Healthcare Industry Innovation, National Taipei University of Nursing and Health Sciences, Rep of China (Taiwan)
- PP07-12** **The clinical characteristics and survival outcomes of multiple myeloma patients aged 80 or over**
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- PP07-13** **Addition of cyclophosphamide to pomalidomide/dexamethasone has a benefit in refractory multiple myeloma?: The comparison with pomalidomide-based chemotherapy in Asian patients**
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- PP07-16** **Primary plasma cell leukemia with long term survival - A report of two cases**
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- PP07-18 Multiple myeloma in man 32 years old with metachronous soft tissue sarcoma. A multiple primary malignant tumors with successful chemotherapy medication**
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- PP08-01 Thrombotic and hemorrhagic events in 2016 who-defined Philadelphia-negative myeloproliferative neoplasms**
Deog-Yeon Jo¹, Myung-Won Lee¹, Sang Hoon Yeon¹, Won-Houng Seo¹, Hyewon Ryu¹, Ik-Chan Song¹, Hyo-Jin Lee¹, Hwan-Jung Yun¹ and Seon Young Kim²
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- PP08-02 Effect of CALR mutant type and allele burden on the phenotype of BCR/ABL1-negative myeloid proliferative neoplasms**
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- PP08-03 Impact of MPNs on quality of life: Korean landmark survey**
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- PP08-04 Characteristics of hydroxyurea-resistant or intolerant polycythemia patients in Korea**
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- PP08-05 The risks and benefits of hydroxyurea in children and young adults with essential thrombocythemia and polycythemia vera**
Hyounghoo Choi¹, Junshik Hong², Sang Mee Hwang³, Ju Hyun Lee⁴, Youngeun Ma¹, Sang-A Kim⁴, Ji Yun Lee⁴, Jeong-Ok Lee⁴ and Soo-Mee Bang^{4*}
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- PP08-06 Radiologic splenomegaly in patients with essential thrombocythemia and prefibrotic/early primary myelofibrosis**
Myungwon Lee¹, Sang Hoon Yeon¹, Won-Hyoung Seo¹, 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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- PP08-07 Clinical predictors in diagnosing essential thrombocytosis: A correlational study**
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- PP08-08 Soluble ST2 for prediction of bone marrow fibrosis**
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- PP08-09 Coexistence of JAK2 and CALR mutations in a patient with myelofibrosis**
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- PP08-10 Immune gene signature distinguishes overt primary myelofibrosis from other myeloproliferative neoplasms**
Sung-Eun Lee¹, Seowon Choi¹, Gi June Min¹, Sung-Soo Park¹, Silvia Park¹, Jae-Ho Yoon¹, Byung-Sik Cho¹, Ki-Seong Eom¹, Yoo-Jin Kim¹, Seok Lee¹, Chang-Ki Min¹, Hee-Je Kim¹, Seok-Goo Cho¹, Dong-Wook Kim¹ and Jong Wook Lee¹
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- PP08-11 A case of atypical chronic myeloid leukemia with concomitant CSF3R T618I and JAK2 V617F variants**
Eungjun Yoon¹, Hyun-Young Kim¹, Hee-Jin Kim¹, Chul-Won Jung² and Sun-Hee Kim^{1*}
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- PP08-12 Reslizumab treatment in a Korean adolescent patient with hypereosinophilic syndrome: A case report**
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- PP09-01 Evaluation of the efficacy of CsA combined with recombinant human erythropoietin in the treatment of patients with chronic aplastic anemia**
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- PP09-02 The outcome of hematopoietic stem cell transplantation in children with Shwachman-Diamond syndrome**
Yeon Jung Lim^{1,2}, Yigal Dror^{2*}, Omri A Arbiv², Melanie E Kalbfleisch², Yves D Pastore⁴, Robert J Klaassen⁵, Geoff Cuvelier⁶, Conrad Fernandez⁷, Meera Rayar⁸, MacGregor Steele⁹, Mariana Silva⁹, Josee Brossard¹⁰, Bruno Michon¹¹, Sharon Abish¹², Roona Sinha¹³, Mark J Belletrutti¹⁴, Vicky R Breakey¹⁵, Lawrence Jardine¹⁶, Lisa Goodyear¹⁷, Lillian Sung¹⁹, Tal Schechter-Finkelstein¹⁸, Bozana Zlateska² and Michaela Cada²
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- PP09-03** **A predictive scoring system for severe aplastic anemia patients treated with antithymocyte globulin and cyclosporine**
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- PP09-04** **Long-term outcome of allogeneic hematopoietic stem cell transplantation from HLA-matched sibling donor in young patients with severe acquired aplastic anemia**
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- PP10-01** **Authenticating a common NGS-detected ASXL1 codon 646 mutation using Sanger sequencing**
Miyoung Kim^{1,2}, Nan Young Kim², Sangkyoon Hong², Yonggeun Cho¹, Han-Sung Kim¹, Hee Jung Kang¹ and Young Kyung Lee^{1,2}
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- PP10-02** **HTLV-1 viral oncoprotein HBZ protects cells from pro-apoptotic stress by upregulating stabilization of HAX-1**
Takayuki Ohshima
Faculty of Pharmaceutical Sciences at Kagawa Campus, Tokushima Bunri University, Japan
- PP10-03** **Complete blood count and cell population data parameters are useful in differentiating myelodysplastic syndromes from other forms of cytopenia**
Sang Mee Hwang¹ and Youngwon Nam¹
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- PP10-04** **Comparison of hematology profile between recovery and death group of COVID-19 patient in Jember, East Java, Indonesia: Preliminary study**
Elvia Rahmi Marga Putri^{1*}, Nanda Eka Sri Sejati², Adhista Eka Noveyani³, Angga Madro Raharjo^{4,7}, Rini Riyanti¹, Diana Chusna Mufida⁵, Eprilia Dharma Sari⁶ and Putu Ayu Laksmi Lestari⁶
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- PP10-05** **Benign variants associated with hematologic malignancy in the catalogue of somatic mutations in cancer**
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- PP10-06** **Novel factor VII gene mutations in six families with hereditary coagulation factor VII deficiency**
Xiaoyu Zhang¹ and Jun Peng^{1*}
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- PP10-07** **Red blood cell deformability and distribution width in patients with hematologic neoplasms**
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- PP10-08** **Establishment of reference intervals in Malaysia: A performance evaluation and comparison of haematological parameters between Sysmex XE5000 and XN3000**
Siew Lian Chong
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- PP10-09** **Label-free rapid differential diagnosis of lymphocyte and leukemic blast using optical diffraction tomography**
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- PP10-10** **Determination of reference range (Based on CLSI) leukocyte parameters for Indonesian subject**
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- PP10-11** **Blood smear pitfall of platelet count confirmation examination: A case study**
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- PP10-12** **Effectiveness of quality assessment program for blood smear examination**
Nhu Cao Thi Bich¹, Son Nguyen Truong¹, Oanh Le Hoang¹, Tung Tran Thanh¹, Thao Nguyen Van¹, Thao Nguyen Thi¹ and Huy Vu Quang²
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- PP10-13** **A meta-analysis on the role of the -308 G/A polymorphism of the TNF- α gene with malaria susceptibility**
Raphael Enrique Tiongco^{1*}, Ivy Cayabyab¹, Benjie Clemente², Chastene Christopher Flake¹, Dianne Dizon¹, Joey Kyle Mallari¹ and Maria Ruth Pineda-Corte^{1,2,3}
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- PP11-01** **Hemoglobin polygenic risk score as a tool in elucidating the causal role of elevated iron status on cardiometabolic outcomes in Taiwan Han Chinese**
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- PP11-02** **Association of the V736A polymorphism in the TMPRSS6 gene with the risk of developing iron deficiency anemia: A meta-analysis**
Chastene Christopher Flake^{1,2*}, Marlex Lee Sanchez^{1,3}, Maurice Russel Espino^{1,2,4}, Jemimah Suba^{1,5}, Jane Nicolas^{1,6}, Michelle Bautista^{1,7}, Angelica Gueco¹, Allena Milan^{1,8}, Raphael Enrique Tiongco² and Annalyn Navarro^{1,2}
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- PP11-03** **Sickle cell anemia: A risk factor for craniofacial abnormalities and dental malocclusion— A systematic review**
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- PP11-04** **The prevalence of thalassemia in Bangladesh: Evidence from a molecular study**
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- PP11-05** A comprehensive study of prevalence and distribution of anaemia among OPD patients visiting Integral Institute of Medical Sciences Research & Hospital, Lucknow
Smriti Rastogi^{1*} and Narsingh Verma¹
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- PP11-06** Assessment of knowledge, attitude and practices on iron-deficiency anemia among Filipino teens in Laguna, Philippines
Cherry Ann Durante^{1,2*} and Estrella San Juan¹
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- PP11-07** The characteristics of anemia among patients with diabetic foot infection admitted to Dr. Hi. Abdul Moeloek General Hospital, Lampung, Indonesia
Gusti Ngurah P. Pradnya Wisnu^{1*}, Iswandi Darwis¹ and Sekar Mentari¹
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- PP11-08** Protein, iron, and vitamin C intake with anemia in adolescent girls in Yogyakarta city
Destriyani Destriyani
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- PP11-09** Screening of MT-CO3 gene mutations for sickle cell anaemia in tribes from Tamil Nadu, South India
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- PP11-10** Identifications of β -globin gene mutations among the sickle cell anaemia patients from the tribes of Coimbatore, Tamil Nadu
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- PP11-12** Risk factor for anemia in infancy: A literature review
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- PP11-13** Compliance of consuming iron tablets and anemia cases in pregnant women
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- PP11-14** Coping strategy in preventing anemia: Case study of Indonesian pregnant women on WhatsApp groups
Mahyuddin Mahyuddin^{1*} and Kadriah Kadriah²
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- PP11-15** Relationship of economic status with the occurrence of anemia in the third trimester of pregnant women at Caile Health Center, Bulukumba Regency, South Sulawesi
Sahnaz Vivinda Putri^{1*} and Rosmani Bahtiar²
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- PP11-18** The influence of health and socio-economic factors on prevalence of anemia among children in six countries based on income
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- PP11-19** Effect of *lavandula officinalis* leaves ethanolic extract on hematological and biochemical parameters in male rats
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- PP11-20** Study of punica granatum (pomegranate) seed oil extract in phenylhydrazine induced-anemia in albino rats
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- PP11-21** Anemia in pregnancy: Risk factors influencing age and level of education among mothers in Sawangan healthcare center
Fitri Rachmawati Putri
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- PP11-22** Automatic anemia identification based on machine learning on red blood cell image
Rifaldy Fajar^{1*} and Nana Indri Kurniastuti¹
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- PP11-23** Pregnant women, health crisis and hemoglobin detect in the age of COVID-19 in Indonesia
Kadriah Kadriah
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- PP11-24** A case of acute intermittent porphyria in a young woman with epilepsy
Sanka Vijayabandara
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- PP12-02** A delayed presentation of neonatal alloimmune thrombocytopenia (NAIT): A case report
Jian An Boo
Paediatric, Hospital Sultanah Bahiyah Alor Setar, Malaysia
- PP12-03** Treatment outcomes and profile of patients with immune thrombocytopenia at a tertiary hospital: The TOP-IT study
Rmin Sheila Miranda
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- PP12-05** A study on the association of immune thrombocytopenia with viral infection through public health data analysis
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- PP12-06** Efficacy of Helicobacter pylori eradication for the treatment of chronic or persistent immune thrombocytopenia patients with moderate thrombocytopenia: multicenter prospective randomized phase 3 study
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- PP12-07** Clinical outcomes after splenectomy for relapsed or refractory immune thrombocytopenia according to first-line intravenous immunoglobulin response
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- PP12-08** An escalating treatment strategy for children with severe chronic immune thrombocytopenia: The preliminary report from a single-center
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- PP12-10** **An intronic variant at a splice-site (c.5170+5G>A) of VWF gene causes exon 29 skipping in a patient with von Willebrand disease**
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- PP12-12** **Performance evaluation of coaguchek pro II in comparison with CoaguChek XS Plus and STA-R Max Analyzer**
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- PP12-13** **Promotion of platelet production by cotransplantation of tonsil-derived mesenchymal stem cells in allogeneic bone marrow transplantation mouse model**
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- PP12-14** **Extended platelet parameters on COVID-19**
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- PP13-01** **Low survival rate in patients with veno-occlusive disease whose creatinine levels have already begun to increase when defibrotide is administered**
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¹⁰Department of Internal Medicine, Kosin University College of Medicine, Korea
- PP13-02** **ABO incompatibility and outcomes of allogeneic hematopoietic stem cell transplantation**
Jun-Hong Park¹, Je-Hwan Lee¹, Kyoo-Hyung Lee¹, Jung-Hee Lee¹, Han-Seung Park¹, Eun-Ji Choi¹, Young-ah Kang¹, Hyeran Kang¹, Jimin Woo¹, Youngshin Lee¹ and Mijin Jeon¹
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- PP13-03** **DEFIFrance registry study: Defibrotide treatment of veno-occlusive disease/sinusoidal obstruction syndrome after hematopoietic cell transplantation**
Mohamad Mohty¹, Ibrahim Yakoub-Agha², Myriam Labopin¹, Didier Blaise³, Delphine Lebon⁴, Virginie Gandemer⁵, Sébastien Maury⁶, Charlotte Jubert⁷, Janet Pong^{8*}, Robert J. Ryan⁹, Jean-Hugues Dalle¹⁰ and Régis Peffault de Latour¹¹
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- PP13-04** **Haploidentical hematopoietic stem cell transplantation for malignant infantile osteopetrosis and intermediate osteopetrosis : A retrospective analysis of a single-center**
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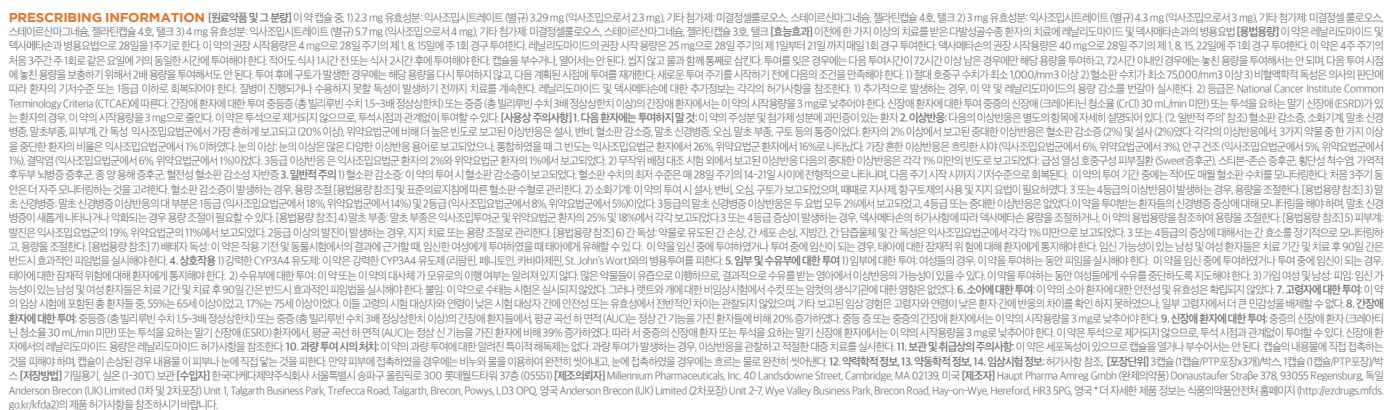
- PP13-05** **Outcome of allogeneic hematopoietic stem cell transplantation in chronic granulomatous disease: A single center experience of 31 patients**
Hyun Jin Park¹, Kyung Taek Hong¹, Jung Yoon Choi¹, Hong Yul An¹, Bo Kyung Kim¹, Hee Young Shin¹ and Hyoung Jin Kang^{1*}
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Ji Hyun Lee¹, Seok Jin Kim^{2*}, Won Seog Kim², Dok Hyun Yoon³, Cheolwon Suh³, Youngil Koh⁴, Sung-Soo Yoon⁴, Ja Min Byun⁴, Hyeon Seok Eom⁵, Hyewon Lee⁵, Jong Ho Won⁶, Ho Sup Lee⁷, Deok-Hwan Yang⁸, Ho-Young Yhim⁹, Ji Yun Lee¹⁰, Jae-Cheol Jo¹¹ and Yoo Jin Lee¹¹
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Stem Cell Transplantation, Blood Transfusion and Hematology Hospital, Viet Nam
- PP13-08** **Outcome of BK virus induced hemorrhagic cystitis in children undergoing haploidentical stem cell transplant with post transplant cyclophosphamide**
Rohit Kapoor^{1*}, Dhwanee Thakkar¹, Goutomi Chatterjee¹, Neha Rastogi¹ and Satya Prakash Yadav¹
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- PP13-09** **Predictive model by machine learning through repetitive internal validation for hepatic SOS/VOD and early death after allogeneic-HCT**
Jae-Ho Yoon^{1*}, Seung-Joon Lee³, Eun-Saem Lee², Sung-Soo Park¹, Min-Sue Park², Jae-Woo Jung³, Gi June Min¹, Siolvia Park¹, Sung-Eun Lee¹, Byung-Sik Cho¹, Ki-Seong Eom¹, Yoo-Jin Kim¹, Seok Lee¹, Hee-Je Kim¹, Chang-Ki Min¹, Seok-Goo Cho¹, Jong Wook Lee¹ and Hyung-Ju Hwang^{2,3}
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- PP13-10** **Metabolic syndrome as a recognized complication after allogeneic haematopoietic stem cell transplantation: A single Asian institute experience**
Ching Soon Teoh^{1*} and Ai Sim Goh¹
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Dexton Johns
Clinical Research, National Medicity Hospital, India
- PP14-01** **Single-cell characterization of hematopoietic stem and progenitor cells in immune thrombocytopenia**
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²Medical department, Shandong University, China
- PP14-02** **SETDB1, histone methyltransferase maintains blood cell homeostasis by modulating the differentiation into cancerous blood cells**
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Dongchan Kim^{1,2}, Dong-Yeop Shin^{1,2,3*}, Jun Liu^{1,2}, Na-Rae Jeong^{1,2}, Youngil Koh^{1,2,3}, Junshik Hong^{1,2,3} and Sung-Soo Yoon^{1,2,3}
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- PP14-04** Clonal hematopoiesis in cardio-cerebrovascular diseases
Jin-Yeong Han¹, Min-Sun Kwak¹, Ji-Hyun Lee², Sung-Hyun Kim³ and Moo-Hyun Kim³
¹Laboratory Medicine, Dong-A University College of Medicine, Korea
²Hematology, Dong-A University College of Medicine, Korea
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Anas Ahmad
Nano-Therapeutics, Institute of Nano Science and Technology, India
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Manh-Cuong Vo^{1,2}, Seo-Yeon Ahn¹, Tan-Huy Chu², Saji Uthaman³, Shammer Pillarisetti⁴, Thangaraj Jaya Lakshmi², Mihee Kim¹, Ga-Young Song¹, Sung-Hoon Jung¹, Deok-Hwan Yang¹, Jae-Sook Ahn¹, Hyeoung-Joon Kim¹, In-Kyu Park⁴ and Je-Jung Lee^{1*}
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Minsong Kim¹, Hyori Kim¹, Hyun Ju Hwang¹, Eun Seok Choi², Ho Joon Im², Nayoung Kim¹ and Kyung-Nam Koh^{2*}
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²Department of Pediatrics, Asan Medical Center, University of Ulsan College of Medicine, Korea
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Archie Policarpio¹, Imoan Shallom Aguas¹, Marc Nicole Mercado², Regine Gonzales³, Czar Kenneth Sarmiento⁴, Mark Aaron Buan⁵, Jenny David⁶, Raphael Enrique Tiongco¹ and Annalyn Navarro⁷
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⁷Graduate School, Angeles University Foundation, Philippines
- PP16-02** Transfusion of the least-incompatible blood with intravenous immunoglobulin and steroid to a patient with anti-Fy(a)
Joonsang Yu¹, Jin Seok Kim¹, John Jeongseok Yang¹, Sang-Hyun Hwang¹, Heung-Bum Oh¹ and Dae-Hyun Ko^{1*}
¹Department of Laboratory Medicine, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea
- PP16-03** The benefit of lekodepleted PRC transfusion for biliary patient after Kasai procedure
Adika Zhulhi Arjana¹ and Teguh Triyono^{1*}
¹Clinical Pathology and Laboratory Medicine, Universitas Gadjah Mada, Indonesia
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Divya Setya¹, Prashant Pandey^{1*}, Shweta Ranjan¹ and Supriya Sharma¹
¹Transfusion Medicine, Jaypee Hospital Noida, India
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Prashant Pandey^{1*}, Divya Setya¹, Shweta Ranjan¹ and Supriya Sharma¹
¹Transfusion Medicine, Jaypee Hospital Noida, India

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Alyssa Alessandra Hubo¹ and Camille Ariadne Tanchanco¹
¹Internal Medicine, De La Salle University Medical Center, Philippines
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Hyung Woo Kim¹, Mikyoung Park^{1*}, Chae Hoon Lee¹, Jong Ho Lee¹, Hee-Jung Chung² and Mina Hur²
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Elaina Pasangha¹, Arkadeep Dhali¹, Christopher D'Souza¹ and Soumya Umesh^{1*}
¹Internal Medicine, St John's Medical College, India
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²Virology and Cancer Pathobiology Research Center, Universitas Indonesia, Indonesia
³Internal Medicine Departement, RSUD Dr. Moewardi, Indonesia
- PP17-02** **Clinical characteristic in cancer patients with febrile neutropenia at Sanglah General Hospital, Denpasar – Bali Indonesia**
Joko Anggoro^{1*}, Ketut Suega², Tjok Gde Dharmayuda², Wayan Losen Adnyana² and Ni Made Renny Anggreni Rena²
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²Hematology and Oncology Division Department of Internal Medicine, University of Udayana, Denpasar, Indonesia
- PP17-03** **COVID-19 infection in hematological patients: Results of a prospective cohort study**
Igor Stoma^{1*}, Maryia Shapetska² and Igor Iskrov²
¹Infectious Diseases, Gomel state medical university, Belarus
²Hematology №3, Minsk Scientific and Practical Center of Surgery, Transplantology and Hematology, Belarus
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Poonam Goel^{1*}, Amar Ranjan¹ and Vaibhav Gupta¹
¹Laboratory Oncology, AIIMS, India
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Mega Dwi Septivani^{1*} and Indra Suwardi²
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²Department of Midwifery, Hasanuddin University, Makassar, Indonesia
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Salman Hussain
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[레볼라이드정 250mg, 50mg] 주성분: 엘트롬보파람린 **효능효과:** 1. 코르티코스테로이드 또는 면역글로불린 또는 비[정혈제술에 충분한 반응을 보이지 않은 만성 면역성혈소판 감소증 환자에서의 저혈소판증을 치료, 이 약은 출혈의 위험이 증가하는 임상적 상태의 저혈소판증을 갖는 환자에서만 사용한다. 혈소판 수를 정상화시키기 위한 목적으로 사용하지 않는다. 2. 만성 C형 간염 환자에서 인터페론 기반 요법의 시작 및 유지를 위한 저혈소판증(투여 시작시 혈소판 수치가 75×10⁹/L 미만) 치료, 이 약은 출혈의 위험이 증가하는 임상적 상태의 저혈소판증을 갖는 환자 또는 저혈소판증으로 인해 인터페론 기반 요법을 시작하지 못하거나 인터페론 기반 요법을 유지하는데 어려움이 있는 만성 C형 간염 환자에서만 사용한다. 혈소판 수를 정상화시키기 위한 목적으로 사용하지 않는다. 3. 면역억제요법과 병용하여 2세 이상 소아 및 성인 중증 재생불량성 빈혈 환자의 1차 치료 또는 면역억제요법에 충분한 반응을 보이지 않은 중증 재생불량성 빈혈의 치료 **용법용량:** 이 약의 투여 개시 전 및 투여 기간 동안 간 기능검사(ALT, AST 및 빌리루빈)를 모니터링하고 빌리루빈이 상승하는 경우에는 분석 검사를 실시한다. 또한 혈소판 수를 포함한 전 혈구 수를 모니터링하며, 모니터링 결과에 따라, 아래와 같이 용량 조절 또는 투여 중단을 결정한다. 이 약의 투여 중단 이후에는 최소 4주 동안 혈소판 수를 포함한 전혈구 수를 모니터링한다. **경향(신사) 시간 전 또는 신사 2시간 후에 이 약을 복용해야 한다.** 이 약 과 다음 약제에 제산제, 칼슘이 풍부한 음식, 유제품 및 갈증 보강 유산 또는 젤라, 살충, 알코올, 마그네슘, 셀레늄, 아연과 같은 다량 영양소를 포함한 보충제를 복용하기 최소 2시간 전 또는 복용하고 최소 4 시간 후에 이 약을 투여한다. 1. **만성 면역성(특발성) 혈소판 감소증** 출혈 위험을 감소시키기 위해 필수적인 혈소판 수 <25×10⁹/L에 도달 및 유지를 위한 이 약의 가장 낮은 용량 250mg을 1일 1회 투여한다. 혈소판 수 빈혈에 따라 용량을 조절해야 한다. 그리고 이 약의 투여 개시 후, 출혈 위험을 감소시키기 위해 필수적인 혈소판 수 <25×10⁹/L에 도달 및 유지를 위한 용량을 조절해야 한다. 1일 50mg을 초과해서는 안 된다. 이 약으로 치료하는 기간 동안 정기적으로 임상적 혈액 및 간 기능 검사를 모니터링 해야 한다. 이 약으로 치료하는 동안, 안정된 혈소판 수가 얻어질 때까지 매주 혈소판 수를 포함한 전혈구 수를 평가해야 한다. 이후 매월 혈소판 수를 포함한 전혈구 수를 측정해야 한다. 이 약의 1일 최대 용량 50mg으로 4주간 투여 후, 혈소판 수가 임상적으로 유의한 출혈을 막기 위한 충분한 수치로 증가하지 않는다면, 이 약의 투여를 중단해야 한다. **간장애 환자** 간장애(Child-Pugh 등급 A, B, C)가 있는 특발성 혈소판 감소증 환자의 경우, 이 약의 기대되는 이익이 문맥혈전증의 알려진 위험을 상회하는 경우에만 이 약을 투여한다. 간장애 환자(Child-Pugh 등급 A, B, C)의 경우 초기용량으로 250mg/일을 격일로 투여한다. 간장애 환자(Child-Pugh 등급 A, B, C)의 경우 초기용량 또는 이후 용량 증가 후에는 3주 후부터 다음 용량으로 증가하는 것을 권장한다. 2. **만성 C형 간염** 페그인터페론 및 라비비린 항바이러스 요법을 시작 및 유지하기 위해 필요한 혈소판 수에 도달 및 유지를 위한 이 약의 가장 낮은 용량 250mg을 1일 1회 투여한다. 혈소판 수 빈혈에 따라 용량을 조절한다. 항바이러스 요법을 시작하기 위해 2주마다 250mg의 용량을 조절한다. 항바이러스 요법을 시작하기에 앞서 매주 혈소판 수를 모니터링한다. 항바이러스 요법 중에, 페그인터페론을 감량하지 않도록 이 약의 용량을 조절한다. 이 약으로 치료하는 동안, 안정된 혈소판 수가 얻어질 때까지 매주 혈소판 수를 포함한 전혈구 수를 평가해야 한다. 이후 매월 혈소판 수를 포함한 전혈구 수를 측정해야 한다. 1일 750mg을 초과해서는 안 된다. 이 약으로 치료하는 동안 정기적으로 임상적 혈액 및 간 기능 검사를 모니터링 해야 한다. 항바이러스 요법을 중단하면, 이 약의 투여를 중단해야 한다. 혈소판 수의 과도한 증가 또는 중요한 간 기능 이상 시, 이 약의 투여를 중단해야 한다. 3. **중증 재생불량성 빈혈** [면역억제요법과 병용하여, 2세 이상 소아 및 성인 중증 재생불량성 빈혈 환자의 1차 치료] 면역억제요법과 병용하여 이 약의 투여를 시작한다. 초기용량으로 성인 및 만 12~17세 청소년은 이 약 750mg을 6개월동안 1일 1회 투여한다. 만 6~11세 소아는 이 약 37.5mg을 6개월 동안 1일 1회 투여한다. 이 약 37.5mg을 1일 1회 투여하기 위해 이 약 25mg과 50mg을 격일로 투여할 수 있다. 만 2~5세 소아는 이 약 1.25mg/kg 용량으로 6개월 동안 1일 1회 투여한다. 이 약으로 치료하는 기간 동안 임상 혈액검사 및 간 검사를 정기적으로 수행해야 한다. 이 약의 전체 치료기간은 6개월이다. 혈소판 수의 과도한 반응 또는 특정 이상반응 발생시, 이 약의 투여를 중단해야 한다. [면역억제요법에 충분한 반응을 보이지 않은 중증 재생불량성 빈혈의 치료] 초기용량으로 250mg을 1일 1회 투여한다. 혈액반응은 일반적으로 100mg까지 용량 약성이 감소하고 복용시작 후 16~가까지 소실될 수 있다. 필수적인 혈소판 수 50×10⁹/L 이상에 도달 및 유지하기 위해 2주마다 250mg의 용량을 조절한다. 이 약으로 치료하는 동안 정기적으로 임상적 혈액 및 간 검사를 모니터링 해야 한다. 이 약으로 투여 10주 후에도 혈액학적 반응이 일어나지 않는 경우, 새로운 세포유전적 이상이 관찰되는 경우, 혈소판 수의 과도한 반응 또는 중요한 간 검사 이상 시, 이 약의 투여를 중단해야 한다. **경고:** 1) 간독성 이 약은 간독성 임상 이상, 중증 간독성 및 잠재적으로 치명적인 간손상을 유발할 수 있다. 2) 만성 C형 간염 환자에서의 간 대장부전: 만성 C형 간염 환자에서 이 약과 인터페론/라비비린과 병용 시 간 대장부전의 위험을 증가시킬 수 있다. 간경변이 있는 만성 C형 간염 환자는 인터페론 알파 투여시, 간 대장부전의 사망 위험이 있다. 이 환자들은 간 대장부전의 징후나 증상에 대해 면밀히 모니터링 되어야 한다. 3) 골수 괴사 및 골수 섬유화의 위험 4) 혈전성/혈전색전성 합병증: 혈전색전성 이상반응은 특발성 혈소판 감소증 환자에서 나타날 수 있다. 5) 사망 위험성 및 골수 이형성 증후군(myelodysplastic syndrome, MDS)에서 급성 골수성 백혈병(AML)으로의 진행 위험성 증가 6) 혈청검사에 대한 영향: 이 약을 복용한 환자로부터 일부 실험실 검사 (혈청 분해, 총빌리루빈 및 크레아티닌)의 방해가 보고되었다. **다음 환자에게는 신중히 투여할 것:** 1) 간장애 환자: 중등증 및 중증 간질환 환자에서는 이 약의 낮은 초기 용량을 투여해야 하고, 면밀히 모니터링 해야 한다. 특히 동아시아 간장애 환자에서 이 약의 안전성 및 유효성은 확립되어 있지 않으므로 임상적 판단에 따라 신중히 투여해야 한다. 2) 골수 섬유화 등 혈구의 형태학적 이상 발생의 위험이 있는 환자 3) 혈전색전성(혈액 응고인자 Factor V Leiden, AT III 결핍, antiphospholipid syndrome, 만성 간질환 등)이 있는 것으로 알려진 환자 4) 신장애 환자 **처방하기 전, 상세 제품정보를 참조하시기 바랍니다.** (개정일: 2020년 3월 18일)

GO29365 study

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)*

플라이비® + BR 병용요법 및 BR요법에서 median OS는 각각 12.4개월, 4.7개월이었습니다.

(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.

Leonard JP, Trneny M, Izutsu K, et al. AUGMENT: A Phase III Study of Lenalidomide Plus Rituximab Versus Placebo Plus Rituximab in Relapsed or Refractory Indolent Lymphoma. *J Clin Oncol*. 2019 May 10;37(14):1188-1199.

- A phase III, multicenter, randomized trial of lenalidomide plus rituximab versus placebo plus rituximab in patients with relapsed and/or refractory follicular or marginal zone lymphoma
- Progression-free survival was significantly improved for lenalidomide plus rituximab versus placebo plus rituximab, with a hazard ratio of 0.46 (95% CI, 0.34 to 0.62; P, .001) and median duration of 39.4 months (95% CI, 22.9 months to not reached) versus 14.1 months (95% CI, 11.4 to 16.7 months), respectively.
- Overall survival results favored lenalidomide plus rituximab in follicular lymphoma (HR,0.45; 95% CI, 0.22 to 0.92; P = .02)

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전문 의약품

원료의약품 및 분량 1시린지(0.6밀리리터)중 (주성분) 페그필그라스티름(별규) ... 6mg, (첨가제) 병초산(글리시알아세테이트), 수산화나트륨, 소르비톨(30mg), 폴리소르베이트20(0.02mg), 주사용수 성상 무색의 용액이 충전 된 주사침이 달린 투명한 유리프리필드시린지 주사제. 효능효과 악성종양에 대한 세포독성 화학요법을 투여 받는 환자의 발열성 호중구 감소증의 발생과 호중구 감소증의 기간 감소(만성골수성 백혈병과 골수이형성증후군은 제외함) **용법용량** 이 약 6mg을 항암화학요법 이후 약 24시간 후에 피하주사 *소아에 대한 사용 제한 *말기 신장에 환자를 포함한 신장에 환자에게 용량 변경은 추천되지 않음 **사용상 주의사항** 1. 경고 1) 치명적 비장 파열이 발생할 수 있음. 이 약 투여후 좌측 상복부, 어깨 통증이 있는 환자는 비장비대, 비장파열 검사 2) 급성 호흡곤란 증후군(ARDS)이 발생할 수 있음. 열, 폐 침윤, 호흡곤란이 있는 환자는 ARDS 검사. ARDS가 발생한 환자에는 투여 중지 3) 아나필락시스를 포함한 심각한 알러지 반응이 발생할 수 있음. 심각한 알러지 반응이 발생한 환자에는 투여를 영구 중지 4) 경상적혈구질환 환자가 필그라스티름, 페그필그라스티름을 투여 받는 경우 중증, 때때로 치명적인 경상적혈구발증이 발생할 수 있음 5) 페그필그라스티름과 필그라스티름이 복용하는 G-CSF수용체가 알세포에서 발견됨. 페그필그라스티름이 골수성 알과 골수이형성증을 포함한 암 종류를 증가시키는 요소로 작용할 수 있음 2. **다음 환자에는 투여하지 말 것** 대장균으로부터 유래된 단백질, 페그필그라스티름, 필그라스티름 등에 과민증이 알려진 환자 3. **다음 환자에는 신중히 투여할 것** 1) 약물 과민증의 병력이 있는 환자 2) 알레르기 소인이 있는 환자 **표장기한** 1시린지/박스 **저장방법** 냉장보관(2-8도), 직방균지, 차광보관, 밀봉용기 **사용기한** 외부포장재에 표시된 사용기한 내에 사용 *제품에 대한 자세한 정보는 제품설명서를 참조해주시기를 바라며, 홈페이지(www.kyowa-kirin-korea.com)에서 확인하실 수 있습니다. [수입판매인] 한국교와이코가린주

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9.3 vs. 5.6 months²
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vs. salvage chemotherapy (95% CI: 4.7, 7.3)

HR=0.64 (95% CI: 0.49, 0.83); *p*<0.001

34.0% (n=84/247)²

CR[†] / CRh[‡]

Risk difference (95% CI)
: 18.6 (9.8–27.4)

mDOR=11 months (4.6-NE)²

STUDY DESIGN

In an open-label, multicenter, randomized, phase 3 clinical trial, this study randomly assigned adults with relapsed or refractory FLT3-mutated AML patients in a 2:1 ratio to receive either gilteritinib (at a dose of 120 mg per day, n=247) or salvage chemotherapy (n=124). The two primary end points were overall survival and the percentage of patients who had complete remission with full or partial hematologic recovery. Secondary end points included event-free survival (freedom from treatment failure [i.e., relapse or lack of remission] or death) and the percentage of patients who had complete remission.

*XOSPATA[®] was market approved by the Ministry of Food and Drug Safety on March 6th, 2020.

[†]FLT3 mutation status: FLT3-ITD, FLT3-TKD.

[‡]CR defined as normal marrow differential with <5% blasts, ANC ≥1.0x10⁹/L and platelets ≥100x10⁹/L, no evidence of extramedullary leukemia, and must have been RBC and platelet transfusion independent.¹

[§]CRh defined as marrow blasts <5%, partial hematologic recovery, ANC ≥0.5x10⁹/L and platelets ≥50x10⁹/L, no evidence of extramedullary leukemia, and could not have been classified as CR.¹

AML: acute myeloid leukemia; ANC: absolute neutrophil count; CI: confidence interval; CR: complete remission; CRh: complete remission with partial hematologic recovery; FLT3: FLT3-like tyrosine kinase; HR: hazard ratio; ITD: internal tandem duplication; mDOR: median duration of CR/CRh; NE: not be evaluated; RBC: red blood cell; TKD: tyrosine kinase domain; m: mutation-positive.

REFERENCES 1. XOSPATA[®] Prescribing Information. The Ministry of Food and Drug Safety. 2. Per AE, Martinelli G, Cortes JE, et al. Gilteritinib or Chemotherapy for Relapsed or Refractory FLT3-Mutated AML. *N Engl J Med* 2019;381(18): 1728-1740.

Important Safety Information

1. Warnings

1.1 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 dermatitis. 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 repolarization (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 initiation 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. Adverse reactions

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 initiation in patients who develop pancreatitis.

4. 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-CL0301) and

two supporting dose-escalation phase 1/2 trials (120mg dose arms of 2215-CL0101 and 2215-CL0102). 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 (55.1%), fatigue (50.4%), nausea (29.8%), constipation (28.2%), cough (28.2%), peripheral oedema (24.1%), dyspnoea (24.1%), dizziness (20.4%), hypotension (17.2%), pain in extremity (14.7%), arthralgia (13.8%), arthralgia (12.5%) and myalgia (12.5%). The most frequent serious adverse reactions (sARs) reported in patients were acute kidney injury, diarrhoea, ALT increased, dyspnoea, 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 conditions			
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 disorders			
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
Dyspnoea	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.

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Reference 1. Siegel DS, et al. *J Clin Oncol*. 2018;36(8):728-734.

키프로리스® 주 제형요약정보 제형명 키프로리스주60밀리그램, 30밀리그램(카르필조미브). 효능효과: 이전에 한 가지 이상의 치료법 받은 다발성골수종 환자의 치료에 레날리도마이드 및 덤스테레손 또는 덤스테레손과의 병용요법 용법용량: 3주 동안 매주 2일 연속으로 투여 후 12일간 휴약하여 총 28일을 1 치료주기로 한다. 첫 번째 주기의 1일, 2일에 20mg/m²의 시작용량으로 투여한다. 레날리도마이드 및 덤스테레손과의 병용요법: 10분 동안 정맥내 주입으로 투여, 시작 용량 투여 후, 첫 번째 주기의 8일에 목표 용량 27mg/m²로 증량한다. 13주기부터는 8일과 9일에 투여하지 않으며 18 주기 이후에는 투여를 중단한다. 레날리도마이드는 1-21일에 25mg을 경구 투여하고, 덤스테레손은 28일 주기의 1일, 8일, 15일, 22일에 40mg을 경구 또는 정맥투여한다. 덤스테레손과의 병용요법: 30분 동안 정맥내 주입으로 투여, 시작 용량 투여 후, 첫 번째 주기의 8일에 목표 용량 56mg/m²로 증량한다. 매 28일 주기의 1, 2, 8, 9, 15, 16, 22, 23일에 덤스테레손 20mg을 경구 또는 정맥투여 한다. **다른 환자에게는 투여하지 말 것** 이 약의 주사분 또는 다른 성분과 과민반응이 있는 환자, 이상반응: 레날리도마이드 및 덤스테레손과의 병용요법 임상시험에서 10% 이상 보고된 이상반응은 빈혈, 호중구감소증, 혈소판감소증, 설사, 변비, 구역, 피로, 발열, 말초혈관염, 무력증, 상기도감염, 비인두염, 기관지염, 바이러스성 상기도감염, 폐렴, 치아질환, 저칼슘혈증, 고혈압증, 근육경련, 등 통증, 기타 미분류 말초신경병증, 불면증, 기침, 호흡곤란, 발진, 색전증 및 혈전증, 고혈압이었고, 10% 이상 보고된 3-4등급 이상증상에서 이상은 림프구, 절대호중구수, 인, 혈소판, 총 백혈구수, 헤모글로빈, 간소 및 당 중기이었다. 덤스테레손과의 병용요법 임상시험에서 10% 이상 보고된 이상반응은 빈혈, 혈소판감소증, 설사, 구역, 변비, 구토, 피로, 발열, 말초혈관염, 무력증, 상기도감염, 기관지염, 근육경련, 오한, 두통, 말초신경병증, 불면증, 호흡곤란, 기침, 고혈압이었고, 10% 이상 보고된 3-4등급 이상증상에서 이상은 림프구수, 헤모글로빈, 혈소판, 인, 크레아티닌 혈소를 감소 및 오산, 칼륨중기이었다. 시판 후 용혈용독증후군 (HUS), 위장관 천공, 신장염이 자발보고 되었다. **일반적 주의 사항** 심장독성, 급성신부전, 중양용해증후군, 폐독성, 폐동맥고혈압, 호흡곤란, 고혈압, 장폐색전증, 주입반응, 출혈, 혈소판감소증, 간독성 및 간부전, 혈전성 미세혈관병증, 기억력 후두부 뇌병증 증후군(PRES), 배타지독성이 발생할 수 있으므로 모니터링, 용량감량, 투여중지, 중단 등의 필요한 의학적 조치를 취하여야 한다. **일부 및 수유부** 작용기간과 동물시험 결과로 볼 때, 태아독성을 야기할 수 있으므로 적절한 피임 조치를 해야 한다. 임신 중 사용하거나 환자가 투약 중에 임신하게 되면, 환자에게 태아에 위험이 있음을 알려야 한다. **보관 및 취급상의 주의사항** 차광 냉장 (2-8°C) 보관. 정맥 투여를 위한 제형성 및 조제방법: 과립투여를 막기 위해 투여용 계산에 주의해야 하며, 재구성하기 전 조제방법을 숙지하여야 한다. **수입판매처** 한진제약(주) (서울특별시 중구 을지로5길 19 베를타워 20층). **제제를 처방하시기 전 상세 제형설명서를 참고하여주시기 바랍니다.**

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[DOSAGE FORMS AND STRENGTHS] 1. **DOSAGE FORMS** IMBRUVICA capsules contain 140 mg of ibrutinib, 2. **STRENGTHS** White opaque, size 0, hard gelatin capsule marked with "ibr 140 mg" in black ink. **[Indications]** 1. **Mantle cell lymphoma (MCL)** : IMBRUVICA is indicated for the treatment of adult patients with MCL who have received at least one prior therapy. 2. **Chronic lymphocytic leukemia (CLL)** : IMBRUVICA is indicated for the treatment of adult patients with CLL who have received at least one prior therapy **[Dosage and Administration]** IMBRUVICA should be administered orally once daily with a glass of water at approximately the same time each day. The capsules or tablets should be swallowed whole with water. Do not open, break, or chew the capsules. Do not break or chew the tablets. IMBRUVICA must not be taken with grapefruit juice. IMBRUVICA should continue until disease progression or no longer tolerated by the patient. 1. **Mantle cell lymphoma (MCL)** The recommended dose of IMBRUVICA for MCL is 560 mg once daily. 2. **Chronic lymphocytic leukemia (CLL)** The recommended dose of IMBRUVICA for CLL is 420 mg once daily **[Warnings and Precautions]** 1. **Contraindications** IMBRUVICA is contraindicated in patients who have known hypersensitivity [e.g., anaphylactic and anaphylactoid reactions] to ibrutinib or to the excipients in its formulation 2. **Adverse Reactions** Isolated cases of leukostasis have been observed. 1) **Mantle cell lymphoma** The most commonly occurring non-hematological adverse reactions for MCL (≥ 20%) were diarrhea, fatigue, nausea, angioedema, dyspnea, contusion, upper respiratory tract infection, vomiting. The most commonly occurring hematological adverse reactions for MCL (≥ 20%) were neutropenia, thrombocytopenia, anemia. 2. **Chronic lymphocytic leukemia (CLL)** The most commonly occurring adverse reactions for CLL (≥ 20%) were diarrhea, musculoskeletal pain, upper respiratory tract infection, bruising, rash, nausea, pyrexia, neutropenia and anemia. 3. **Precautions** 1) Bleeding-related events 2) Leukostasis 3) Infections 4) Cytopenias 5) Interstitial lung disease (ILD) 6) Cardiac arrhythmias 7) Tumor lysis syndrome 8) Non-melanoma skin cancer 4. **Pregnancy, Breast-feeding and Fertility** 1) **Pregnancy** IMBRUVICA should not be used during pregnancy. 2) **Breast-feeding** breast-feeding should be discontinued during IMBRUVICA treatment 3) **Fertility** Men should be advised not to father a child while receiving IMBRUVICA, and for 3 months following completion of treatment **[COMPANY]** Janssen Korea * Please refer to full prescribing information for details.

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Selected prescribing information

울토미리스주 300 mg / 30 ml 라볼리주입

【일반적용 및 그 분량】 비이알(30mL) 중 유효성분: 라볼리주입(별고).....300mg **【주요-효과】** 성인의 발작성 야간 혈색소뇨증 (PNH)의 치료 **【일반-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 ±5일까지(이 약의 첫 번째 유지 용량 제1회) 때때로 변경될 수 있지만, 그 다음 투여는 원래 일정에 따라 관리해야 한다. 에볼리주입 제제에서 이 약으로 바꾸는 경우, 에볼리주입 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) **【비효율성의 주의사항】** 1. 경도 1) 중대한 수막구균 감염/패혈증 (Neisseria meningitidis)에 대한 환자의 감수성을 증가시킨다. 수막구균성 질환은 어느 환경군에 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 해야 한다. 수막구균 예방접종을 한 후 2주가 지나기 전에 이 약의 투여를 시작하는 환자는 예방접종 후 2주까지 적절한 예방적 항생요법 치료를 받아야 한다. 또한 병행성 수막구균 항정균을 예방하기 위하여 가능한다면 혈청군 A, C, Y, W135 및 B에 대한 백신이 권장된다. 환자들은 백신 사용을 위한 최신의 예방접종 지침에 따라 백신을 접종 혹은 재접종 받아야 한다. 만약 환자가 에볼리주입 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 부위 약제에 투여받은 환자에서 중대하거나 치명적인 수막구균 감염/패혈증 사례가 보고되었다. 모든 환자에 대하여 수막구균 감염 및 패혈증의 초기 증상이 나타나지 않더라도 투여가 다음 발생할 수 있다. 결과적으로, 발진성 야간 혈색소뇨증 (PNH)을 포함한 부위-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 환자에는 투여하지 말 것 1)** 이 약의 주성분 또는 첨가제에 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 시작할 환자로서 적절한 예방적 항생요법 치료를 받지 않은 환자이다. 이 약 투여 지연에 따른 위험이 수막구균 감염 발생 위험보다 중대한 경우를 제외) 4. 경도 1) 중대한 수막구균 감염 (항 원소) **3. 다음 환자에는 신중히 투여할 것 1)** 기저 질환 감염 혈청 전신감염이 있는 환자는 이 약으로 치료 시 주의해서 투여해야 한다. 이 약은 말단 부위 활성을 차단하므로 환자들은 감염, 특히 Neisseria 군 및 패상성 세균(encapsulated bacteria) 감염에 대한 감수성이 증가할 수 있다. 기타 말단 부위 약제를 투여한 환자들에서 패혈증 감염을 포함하는 N. meningitidis 및 Neisseria 종에 의한 중대한 감염이 보고되었다. 잠재적인 중대한 감염과 그 증상 및 징후에 대한 인식을 높이기 위하여 환자를 생활사를 제공해야 한다. 임상 예방에 관해 환자에게 조언해야 한다. **4. 약물이상반응** 가장 흔한 약물이상반응은 두통, 상기도감염, 비인두염, 두통, 혼혈(serum) <1/100 ~ <1/10) 이하리움, 근육, 메스꺼움, 설사, 복부 통증, 소화불량, 발진, 기타 증상, 유독, 관절통, 근육통, 근경련, 발열, 인플루엔자 유사 증상, 피로, 오한, 무기력, 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. **【제조회사】** Alexion Pharmaceuticals, Inc. **【제조자(판매의약품)】** Alexion Pharma International Operations Unlimited Company **【수입판매자】** (주)한독 **【최종개방일】** 2020. 05. 21 * 보다 자세한 정보는 제품설명서를 참조하시기 바랍니다.

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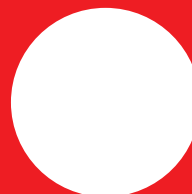


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2022 KOREAN SOCIETY OF HEMATOLOGY INTERNATIONAL CONFERENCE
& 64th ANNUAL MEETING

March 31 - April 2, 2022

Grand Walkerhill Hotel, Seoul, Korea



The Korean Society of Hematology

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