KHRS 2022
The 14th Annual Scientific Session of the Korean Heart Rhythm Society
June 24(Fri.) - 25(Sat.), 2022
Swiss Grand Hotel, Korea

http://k-hrs.org/
MISSION

Constantly Challenging and Being Fully Committed to
Protect a Healthy Heart Rhythm

심장의 건강한 리듬을 지키기 위해
땀없이도 전하고 헌신한다

대한부정맥학회
Korean Heart Rhythm Society
A Leading Academic Society to Advance Healthcare Through Innovative Research, Education, and Public Awareness Improvement for Overcoming Arrhythmia

부정맥 극복을 위한 창의적 연구, 인재교육 및 국민인식개선을 통해 의료의 선진화를 주도해 나가는 학회

대한부정맥학회

Korean Heart Rhythm Society
**WELCOME MESSAGE**

Dear Friends and Colleagues,

It is our great pleasure to invite you to our upcoming KHRS 2022: The 14th Annual Scientific Session of the Korean Heart Rhythm Society, which will be held from June 24 (Fri.) to 25 (Sat.), 2022 in Seoul, Korea.

As the one and only conference in South Korea dealing with all about arrhythmia from basic research to clinical content related to diagnosis and treatment, KHRS 2022 will continue to serve as a meaningful platform for the sharing and discussions of the latest research results even in the midst of the COVID-19 pandemic, promoting academic development and solidarity among participants.

Especially, KHRS 2022 will bring together about 80 international speakers and 150 domestic speakers to feature more special programs this year than ever before, including live discussions with world-renowned scholars. Plans are underway to host an array of new sessions: “Special Lecture,” “Syncope and Others,” “Basic: GENE: Genetic Testing in Arrhythmia Syndrome 2022;” “CIED: Cardiac Physiological Pacing,” “New Research in Major Companies,” and “KHRS 2022 New AF & NOAC Guideline” in addition to such existing sessions as AF, Basic, CIED, PSVT, SCD and VT to help participants keep abreast of the latest knowledge and interact professionally with each other.

You may have fewer education opportunities amid the pandemic. So, we advise those who will not be attending KHRS 2022 in-person to participate online to continue their learning as KHRS 2022 will be live-streamed. We look forward to your active participation in the upcoming 14th scientific session, which we believe will be a key factor in hosting a successful conference.

Myungchul Hyun  
President  
Korean Heart Rhythm Society (KHRS)

Kee-Joon Choi  
Chairman, Board of Trustees  
Korean Heart Rhythm Society (KHRS)

Boyoung Joung  
Scientific Committee Chair  
Korean Heart Rhythm Society (KHRS)

**ORGANIZING COMMITTEE**

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Myungchul Hyun</td>
<td>Kyungpook National University School of Medicine</td>
</tr>
<tr>
<td>Chairman, Board of Trustees</td>
<td>Kee-Joon Choi</td>
<td>University of Ulsan College of Medicine</td>
</tr>
<tr>
<td>Vice President</td>
<td>Myung Yong Lee</td>
<td>Dankook University College of Medicine</td>
</tr>
<tr>
<td>General Secretary</td>
<td>Jong-II Choi</td>
<td>Korea University College of Medicine</td>
</tr>
<tr>
<td>Finance Committee Chair</td>
<td>Hyung Wook Park</td>
<td>Chonnam National University Medical School</td>
</tr>
<tr>
<td>Scientific Committee Chair</td>
<td>Boyoung Joung</td>
<td>Yonsei University College of Medicine</td>
</tr>
<tr>
<td>Publicity Committee Chair</td>
<td>Sung-Hwan Kim</td>
<td>College of Medicine, The Catholic University of Korea</td>
</tr>
<tr>
<td>Medical Information Committee Chair</td>
<td>Seongwook Han</td>
<td>Keimyung University School of Medicine</td>
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<tr>
<td>Publication Committee Chair</td>
<td>Tae-Joon Cha</td>
<td>Kosin University College of Medicine</td>
</tr>
<tr>
<td>Research Committee Chair</td>
<td>Hong Euy Lim</td>
<td>College of Medicine, Hallym University</td>
</tr>
<tr>
<td>Insurance Committee Chair</td>
<td>Hui-Nam Pak</td>
<td>Yonsei University College of Medicine</td>
</tr>
<tr>
<td>Eue-Keun Choi, Seoul National University College of Medicine</td>
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<tr>
<td>Policy Committee Chair</td>
<td>Jin-Bae Kim</td>
<td>School of Medicine, Kyung Hee University</td>
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<tr>
<td></td>
<td>Sung Won Park</td>
<td>Bucheon Sejong Hospital</td>
</tr>
<tr>
<td>Education Committee Chair</td>
<td>Young Keun On</td>
<td>School of Medicine, Sungkyunkwan University</td>
</tr>
<tr>
<td></td>
<td>Jun Kim</td>
<td>University of Ulsan College of Medicine</td>
</tr>
<tr>
<td>International Exchange Committee Chair</td>
<td>Seil Oh</td>
<td>Seoul National University College of Medicine</td>
</tr>
<tr>
<td>Allied Professional</td>
<td>Kyoung-Min Park</td>
<td>School of Medicine, Sungkyunkwan University</td>
</tr>
<tr>
<td>Pediatrics Committee Chair</td>
<td>June Huh</td>
<td>School of Medicine, Sungkyunkwan University</td>
</tr>
<tr>
<td>Audit Committee Chair</td>
<td>Gi-Byoung Nam</td>
<td>University of Ulsan College of Medicine</td>
</tr>
<tr>
<td>Guideline Committee Chair</td>
<td>Eun-Sun Jin</td>
<td>School of Medicine, Kyung Hee University</td>
</tr>
<tr>
<td>Korean Juniorhythm Committee</td>
<td>Eye Bin Gwag</td>
<td>School of Medicine, Sungkyunkwan University</td>
</tr>
<tr>
<td>Nominating Committee Chair</td>
<td>Yang Seog Oh</td>
<td>College of Medicine, The Catholic University of Korea</td>
</tr>
<tr>
<td>Interventional Electrophysiology Specialist Qualification Committee Chair</td>
<td>Myung Yong Lee</td>
<td>Dankook University College of Medicine</td>
</tr>
</tbody>
</table>

Kee-Joon Choi  
Chairman, Board of Trustees  
Korean Heart Rhythm Society (KHRS)

Boyoung Joung  
Scientific Committee Chair  
Korean Heart Rhythm Society (KHRS)
## INTERNATIONAL FACULTY MEMBERS

<table>
<thead>
<tr>
<th>Country</th>
<th>Members</th>
</tr>
</thead>
</table>
| Australia      | Christopher Semsarian, University of Sydney  
Jonathan Kalman, University of Melbourne and Royal Melbourne Hospital  
Justin Mariani, Central Clinical School, Alfred Hospital, Monash University |
| China          | Dan Hu, Renmin Hospital of Wuhan University  
Gary Tse, Tianjin Medical University  
Ligang Ding, National Center for Cardiovascular Diseases & Fuwai Hospital  
Minglong Chen, The First Affiliated Hospital of Nanjing Medical University |
| Denmark        | Jacob Thøi-Hansen, Copenhagen University Hospital                                           |
| Germany        | Kyoung-Ryul Julian Chun, CCB Frankfurt                                                      |
| Hong Kong      | Chu-Pak Lau, The University of Hong Kong  
Hung Fat Tse, The University of Hong Kong  
Joseph YS Chan, Prince of Wales Hospital, Chinese University of Hong Kong  
Ngai-Yin Chan, Princess Margaret Hospital                                           |
| Indonesia      | Yoga Yuniadi, National Cardiovascular Center Harapan Kita                                   |
| Japan          | Akiko Nogami, University of Tsukuba  
Akiho Ueda, Kyorin University Hospital  
Kaoru Okishige, Yokohama Minato Heart Clinic  
Koichi Inoue, Osaka National Hospital  
Kyoko Soejima, Kyorin University  
Mitsuharu Kawamura, Makita General Hospital  
Miyako Igarashi, University of Tsukuba  
Naokata Sumitomo, Saitama Medical University International Medical Center  
Seiji Takatsuki, Keio University School of Medicine  
Seiko Ohno, National Cerebral and Cardiovascular Center  
Shinsuke Miyazaki, Tokyo Medical and Dental University  
Takaniwa Ikeda, Toho University Faculty of Medicine  
Tetsu Ito, Sapporo Medical University  
Yoshito Kaneko, Gunma University Graduate School of Medicine  
Yukinobu Nii, Nagoya University Graduate School of Medicine |
| Myanmar        | Nwe Nwe, Yangon General Hospital                                                            |
| Netherlands    | Carol Ann Remme, Amsterdam UMC  
Connie Bezina, Amsterdam UMC  
Isabelle Van Gelder, University Medical Center Groningen                                   |
| Philippines    | Marcellus Francis L. Ramirez, University of Santo Tomas                                     |
| Singapore      | Chi Keong Ching, National Heart Centre Singapore  
Violet Hoon, Tan Tock Seng Hospital  
Kelvin Chua, National Heart Centre Singapore  
Shufien Liang, National Heart Centre Singapore                                             |
| Taiwan         | Cheng-Hung Li, Taichung Veterans General Hospital  
Chin-Yu Lin, Taipei Veterans General Hospital  
Fa-Po Chung, Taipei Veterans General Hospital  
Hsuan-Ming Tsao, National Yang Ming Chiao Tung University  
Li-Wei Lo, Taipei Veterans General Hospital  
Mei-Hwan Wu, National Taiwan University Children’s Hospital  
Ming-Hsiong Hsieh, Wan Fang Hospital, Taipei Medical University  
Wei-Chung Tsai, Kaohsiung Medical University  
Yu-Cheng Hsieh, Taichung Veterans General Hospital  
Yu-Feng Hu, Taipei Veterans General Hospital  
Yung-Lung Chen, Kaohsiung Chang Gung Memorial Hospital |
| Thailand       | Natcha Soontornmanoskij, Ramathibodi Hospital of Mahidol University                         |
| United Kingdom | Antonio Creta, Barlo Heart Centre, St Bartholomew’s Hospital                                |
| United States  | Alex Yi, Anthos Therapeutics  
Bradley Horst, Boston Scientific  
Bruce Wilkoff, Cleveland Clinic  
Chun Hwang, Reverie Health Care  
Daniel Schaber, Medtronic  
Hiroshi Nakagawa, Cleveland Clinic  
Konstantinos Siontis, Mayo Clinic  
Kyungmoo Paul Ryu, Abbott  
Manouk Razminia, AHRA Health Saint Joseph Hospital  
Natasha Troynova, Johns Hopkins University  
Niraj Varma, Cleveland Clinic  
Oussama Wazmi, Cleveland Clinic  
Seung Hoan Choi, Broad Institute of MIT and Harvard  
Sung Woo Lee, MedStar Heart and Vascular Institute  
Warren “Sonny” Jackman, University of Oklahoma  
Wilbert Su, Banner-University Medical Center, Phoenix  
Younghoon Kwun, University of Washington |
| Vietnam        | Kieu Hoac Dung, Cho Ray Hospital  
Le Uyen Phuong Tran, Cho Ray Hospital                                                    |
How to watch the KQRS 2022 Sessions on Virtual Site

**STEP 1**
*Log-in*

Notice: You will automatically log-out from the original website if you log-in using the same ID.

**STEP 2**
*Click the 'Program' Button*

Please check the time and place of the session you hope to watch, then click the session button to enter the session room.

**STEP 3**
*Click the 'PLAY' Button*

Please click the 'PLAY' button on the middle of the video player to start streaming.

**STEP 4**
*Go to 'My Page'*

Go to 'My Page' to confirm your account information and event participation information.
## EVENTS IN KHRS 2022

### SELFIE EVENT

Take a picture of yourself participating in KHRS 2022! Whether you’re on-site, or participating through the virtual page, take a selfie showing that you’re part of KHRS 2022!

**HOW TO JOIN**
- Take a Selfie ➔ Upload it at the Events tab on the Virtual Site

**DATE**
- June 24 (Fri.) ~ June 25 (Sat.)

**PRIZES**
- AirPod Pro, Nespresso Capsule Coffee Machine, Electronic Wine Bottle Opener, Starbucks Giftcard

### GENERAL ASSEMBLY EVENT

Participate in the KHRS 2022 General Assembly! A few people will be chosen at random to receive a grand prize during the Lucky Draw. So come and join the General Assembly Event!

**HOW TO JOIN**
- Join the KHRS 2022 General Assembly ➔ Participate the Lucky Draw

**DATE**
- June 24 (Fri.) 16:40 ~ 17:00

**PRIZES**
- iPad Air, InBody Scale, Nespresso Capsule Coffee Machine, Electronic Wine Bottle Opener

### EXHIBITION TOUR EVENT

Collect 🌹 stickers by visiting on-site exhibition booths of our partners! If you collect all stickers on the below board, visit the registration desk to apply for the event and get a chance to win a prize.

**HOW TO JOIN**
- Visit the on-site Exhibition Booth ➔ Gather all the stickers

**DATE**
- June 24 (Fri.) ~ June 25 (Sat.)

**PRIZES**
- Baemin (Delivery Food Coupon) 30,000

### E-BOOTH STAMP EVENT

Meet the Sponsors of KHRS 2022 by visiting the E-Booth on the virtual page! Try clicking the ‘STAMP’ button on every booth to win a gift card!

**HOW TO JOIN**
- Visit the Virtual Site E-Booth ➔ Click the ‘STAMP’ button on every E-Booth

**DATE**
- June 24 (Fri.) ~ June 25 (Sat.)

**PRIZES**
- Baemin (Delivery Food Coupon) 30,000

### SURVEY EVENT

Participate in the Survey Event and give your feedback about KHRS 2022! Your opinion is greatly treasured, so please participate in the Survey!

**HOW TO JOIN**
- Visit the Virtual Site ➔ Event Tab ➔ Click ‘Survey Event’ ➔ Take the Survey

**DATE**
- June 24 (Fri.) ~ July 3 (Sun.)

**PRIZES**
- Starbucks Gift card

* The secretariat will contact individually to prize winners after KHRS 2022.
## PROGRAM AT A GLANCE

### DAY 1 | JUNE 24(Fri.)

<table>
<thead>
<tr>
<th>Time/Room</th>
<th>Room 1</th>
<th>Room 2</th>
<th>Room 3</th>
<th>Room 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:10-08:30</td>
<td>Opening Ceremony</td>
<td></td>
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</tr>
<tr>
<td>08:30-08:30</td>
<td>Special Lecture</td>
<td>Atrial Fibrillation 1: Ablation Technique</td>
<td>CIED 1: Leadless PM</td>
<td>Noninvasive 1: Digital Health Care for Stroke Prevention</td>
</tr>
<tr>
<td>08:30-09:30</td>
<td>Industry Session (Daiichi-Sankyo / Daewoong)</td>
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</tr>
<tr>
<td>09:30-10:00</td>
<td>Break</td>
<td></td>
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<tr>
<td>10:15-11:15</td>
<td>Industry Session (BOSTON SCIENTIFIC KOREA CO., LTD.)</td>
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<tr>
<td>11:15-12:00</td>
<td>Break</td>
<td></td>
<td></td>
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<tr>
<td>12:00-13:00</td>
<td>Scientific Session (Pfizer Korea / BMS Korea)</td>
<td>Scientific Session (Abbott Medical Korea)</td>
<td>Scientific Session (YUHAN)</td>
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<tr>
<td>13:00-13:15</td>
<td>Break</td>
<td></td>
<td></td>
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<tr>
<td>13:15-14:15</td>
<td>Atrial Fibrillation 3: Complication Reduction</td>
<td>PSVT 1: Difficult SVT</td>
<td>Ventricular Tachycardia 3: Mapping and Ablation</td>
<td>Atrial Fibrillation 4: AF and Heart Failure</td>
</tr>
<tr>
<td>13:15-14:15</td>
<td>Industry Session (Abbott Medical Korea)</td>
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<td></td>
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<tr>
<td>14:15-15:00</td>
<td>Break</td>
<td></td>
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<tr>
<td>15:00-16:00</td>
<td>EKG Educational Course 1</td>
<td>Atrial Fibrillation 6: Innovative Approach</td>
<td>Allied Professional 1: Clinical Electrophysiology</td>
<td>Atrial Fibrillation 7: Early Rhythm Control</td>
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<tr>
<td>15:00-16:00</td>
<td>Industry Session (Bayer Korea)</td>
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<tr>
<td>16:00-17:00</td>
<td>Break</td>
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<tr>
<td>16:30-16:40</td>
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<td>General Assembly of KHRS 2022</td>
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### PROGRAM AT A GLANCE

<table>
<thead>
<tr>
<th>Time/Room</th>
<th>Room 1 (Grand Ballroom A)</th>
<th>Room 2 (Grand Ballroom B)</th>
<th>Room 3 (Grand Ballroom C)</th>
<th>Room 4 (Flamingo)</th>
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</thead>
<tbody>
<tr>
<td>08:30-09:30</td>
<td>ARC 1,2</td>
<td>Atrial Fibrillation 8: Rhythm and Rate Control</td>
<td>CIED 5: CRT and AF</td>
<td>EGM Tracing 1: Challenging Ventricular Tachycardias</td>
</tr>
<tr>
<td>09:30-10:00</td>
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<tr>
<td>10:00-10:15</td>
<td>Break</td>
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<tr>
<td>10:15-11:45</td>
<td>ARC 3,4</td>
<td>Atrial Fibrillation 9: Catheter Ablation</td>
<td>CIED 6: Infection and Lead Extraction</td>
<td>EGM Tracing 2: Unknown EGM Tracings</td>
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<tr>
<td>11:45-12:00</td>
<td>Break</td>
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<tr>
<td>12:00-13:00</td>
<td>Scientific Session (Daiichi-Sankyo / Daewoong)</td>
<td>Scientific Session (Medtronic Korea)</td>
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<tr>
<td>13:00-13:15</td>
<td>Break</td>
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<tr>
<td>13:15-14:15</td>
<td>Ventricular Tachycardia 5: VT Storm</td>
<td>CIED 7: Monitoring of CIED and Other</td>
<td>Allied Professional 2: Cardiovascular Implantable Electronic Devices &amp; Special Session</td>
<td>MR Education</td>
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<tr>
<td>14:15-14:45</td>
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<td>14:45-15:00</td>
<td>Break</td>
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</tr>
<tr>
<td>15:00-16:30</td>
<td>EKG Educational Course 2</td>
<td>Atrial Fibrillation 13: AF Ablation Using Balloon and RF Technology</td>
<td>CIED 8: Cardiac Physiological Pacing</td>
<td>SCD 3: Novel Insights into Sudden Cardiac Death: From Basic to Real-World</td>
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### DAY 2 \ JUNE 25 (Sat.)

<table>
<thead>
<tr>
<th>Room 5 (Skylark)</th>
<th>Room 6 (White Heron)</th>
<th>Room 7 (Cran)</th>
<th>Room 8 (Crane)</th>
<th>Room 9 (Pacocka)</th>
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<tbody>
<tr>
<td>08:30-09:30 Industry Session (SAMJIN PHARM)</td>
<td>08:30-10:00 Industry Session (Hanmi Pharm.)</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
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<tr>
<td>09:30-10:00 Industry Session (Hanmi Pharm.)</td>
<td>Break</td>
<td>Oral 5 (Basic)</td>
<td>Oral 6 (CIED, VT, SCD &amp; Genetics)</td>
<td>Oral 7 (AF)</td>
</tr>
<tr>
<td>09:30-10:00 Industry Session (Hanmi Pharm.)</td>
<td>Break</td>
<td>Oral 6 (CIED, VT, SCD &amp; Genetics)</td>
<td>Oral 7 (AF)</td>
<td>Oral 8 (AF)</td>
</tr>
<tr>
<td>14:15-14:45 Industry Session (Sanofi-aventis Korea)</td>
<td>Break</td>
<td>Oral 10 (Others)</td>
<td>PSVT 2: General Review of PSVT</td>
<td>Atrial Fibrillation 14: Stroke and Bleeding</td>
</tr>
<tr>
<td>15:00-16:00 Industry Session (Yuhan)</td>
<td>Break</td>
<td>Oral 10 (Others)</td>
<td>PSVT 2: General Review of PSVT</td>
<td>Atrial Fibrillation 15: Others</td>
</tr>
</tbody>
</table>
THE 13TH ANNUAL SCIENTIFIC SESSION
OF THE KOREAN HEART RHYTHM SOCIETY

PROGRAM DETAILS

June 24 Fri.
June 25 Sat.

KHRS 2022
The 14th Annual Scientific Session
of the Korean Heart Rhythm Society
PROGRAM DETAILS

SPECIAL LECTURE

08:30-10:00 | ROOM 1 | ENG

SPEAKER
Use of Resetting Response to Identify the Antegrade Slow Pathway Participating in Slow/Fast AVNRT
Warren "Sonny" Jackman, University of Oklahoma, United States
Future of Arrhythmia
Young-Hoon Kim, Korea University College of Medicine

Atrial Fibrillation 1:
Ablation Technique

08:30-10:00 | ROOM 2 | ENG

CHAIR
Yong Seog Oh, College of Medicine, The Catholic University of Korea
Gyo-Seung Hwang, Ajou University School of Medicine

SPEAKER
Advanced Techniques for Cryoballoon Ablation - Segmental and Extra-Pulmonary Vein Approaches
Willer Su, Banner-University Medical Center, Phoenix, United States
Ethanol Infusion in the Vein of Marshall: Feasibility, Pitfalls, and Complications
Tsukasa Kamakura, National Cerebral and Cardiovascular Center, Japan
Stop AF First and the Early Treatment of AF
Oussama Wazni, Cleveland Clinic, United States
The Role of High Density Mapping in Persistent AF Ablation
Seongwook Han, Keimyung University School of Medicine
AF Ablation (Extra-PV Triggers)
Hui-Nam Pak, Yonsei University College of Medicine

CIED 1:
Leadless PM

08:30-10:00 | ROOM 3 | ENG

CHAIR
Moon-Hyoung Lee, Yonsei University College of Medicine
Il-Young Oh, Seoul National University College of Medicine

SPEAKER
Practical Considerations for Leadless Pacemaker Therapy
Chu-Pak Lau, The University of Hong Kong, Hong Kong
Leadless Pacemaker
Kyoko Sasejima, Kyorin University, Japan
The Safety and Effectiveness of Leadless Pacemaker: Patients with Pre-existing in Situ CIEDs, Following Cardiac Valve Intervention and with Mechanical Heart Valves
Hee Tae Yu, Yonsei University College of Medicine
Validation of Leadless Atrioventricular Synchronous Pacing with Holter-ECG - Programming of Leadless Pacemakers: Sensors and AV Synchrony
Pi-sung Yang, CHA University
Future Directions of Leadless Pacemaker: Miniaturization in Implantable Cardiac Devices
Min Soo Cho, University of Ulsan College of Medicine

Noninvasive 1:
Digital Health Care for Stroke Prevention

08:30-10:00 | ROOM 4 | ENG

CHAIR
Hong Euy Lim, College of Medicine, Hallym University
Joong-Wha Chung, Chosun University College of Medicine

SPEAKER
Detecting Supraventricular Tachycardia with Smartwatches Facilitates the Decision for Catheter Ablation
Yu-Ching Hisieh, Taichung Veterans General Hospital, Taiwan
Application of Artificial Intelligence in the Prediction of Arrhythmia
Tetsuo Sasano, Tokyo Medical and Dental University, Japan
Wearable Devices for Screening, Diagnosis, and Monitoring of AF
Sungil Im, Kosin University College of Medicine
Cardiac Arrhythmia Detection Using Ballistocardiography
Joong-Wha Chung, Chosun University College of Medicine
The Role of Digital Health for AF Patients
Youngjin Cho, Seoul National University College of Medicine
## PROGRAM DETAILS

### SYNCOPE AND OTHERS  
08:30-10:00 | ROOM 5 | ENG

**CHAIR**  
June Namgung, Inje University College of Medicine  
Jae-Jin Kwak, Inje University College of Medicine

**SPEAKER**  
Artificial Intelligence to Detect Cardiac Structure Changes via Surface ECG  
Yu-Feng Hu, Taipei Veterans General Hospital, Taiwan  
Syncpe, Management Update  
Jae-Jin Kwak, Inje University College of Medicine  
Proper Management of Arrhythmias during Pregnancy  
Jinhee Ahn, Pusan National University School of Medicine  
Arrhythmia and COVID-19  
Han Joon Bae, Daegu Catholic University College of Medicine  
Management of Arrhythmia in Geriatric Patients  
Youmi Hwang, College of Medicine, The Catholic University of Korea

### CROSS SPECIALTY 1 (INTERVENTION): CARDIAC RHYTHM MANAGEMENT IN PATIENTS WITH ISCHEMIC HEART DISEASE OR WHO RECEIVED TAVI  
08:30-10:00 | ROOM 6 | ENG

**CHAIR**  
Sangjin Han, Hallym University Sacred Heart Hospital  
Myung-Jin Cha, University of Ulsan College of Medicine

**SPEAKER**  
Skin Sympathetic Nerve Activity and Ventricular Arrhythmias in Acute Coronary Syndrome  
Wei-Chung Tsai, Kaohsiung Medical University, Taiwan  
Periprocedural Management of Patients with Atrial Fibrillation Requiring Oral Anticoagulation Undergoing PCI  
Jin Bae Lee, Daegu Catholic University College of Medicine  
Management of Cardiac Arrhythmias in Patients with Coronary Artery Disease  
Ungjeong Do, Dongguk University School of Medicine  
TAVI/AVR and Cardiac Conduction Abnormalities  
Euijae Lee, Bucheon Sejong Hospital  
AF Impacts on TAVI Outcomes  
Kwang-No Lee, Ajou University School of Medicine

### POLICY & NEW TECHNOLOGY  
08:30-10:00 | ROOM 7 | ENG

**CHAIR**  
Sang Weon Park, Bucheon Sejong Hospital  
Daewoo Hyun, Andong Medical Group Hospital

**SPEAKER**  
Avatar and Gamification in Digital Cardiology  
Violet Hoon, Tan Tock Seng Hospital, Singapore  
What Is the Best Policy for AF Ablation in Korea?  
Ha Young Choi, Soon Chun Hyang University Hospital, Cheonan  
New Technology for Ablation of Arrhythmias  
Eun-Sun Jin, School of Medicine, Kyung Hee University  
New CIED Technologies Not Available in Korea  
Jung Hoon Sung, CHA University

### VENTRICULAR TACHYCARDIA 1: DIFFERENTIAL DIAGNOSIS  
08:30-10:00 | ROOM 8 | KOR

**CHAIR**  
Dae Kyeong Kim, Inje University Busan Paik Hospital  
Hyung Wook Park, Chonnam National University Medical School

**SPEAKER**  
Differential Diagnosis of Wide QRS Complex Tachycardia  
Minsoo Kim, Chungnam National University College of Medicine  
PVC-Induced Cardiomyopathy  
Jae-Sun Uhm, Yonsei University College of Medicine  
Entrainment Made Easy  
Ki-Woon Kang, Chung-Ang University College of Medicine  
Fascicular VT, Where Is the Circuit?  
Gi-Byoung Nam, University of Ulsan College of Medicine  
Functional Substrate Mapping of VT  
Jung Myung Lee, School of Medicine, Kyung Hee University
PROGRAM DETAILS

INDUSTRY SESSION
(DAIIICHI-SANKYO / DAEWOONG)
RECENT CLINICAL TRIAL UPDATE IN ASIAN PATIENTS

08:30-09:30 | ROOM 9 | KOR

CHAIR
YoungKeun On, School of Medicine, Sungkyunkwan University
Jong-II Choi, Korea University College of Medicine

SPEAKER
Recent Clinical Trial Update for Antithrombotic Therapy in Valvular Heart Disease
Hyoungdon Kook, Hanyang University College of Medicine
Safety and Effectiveness of Low Dose NOAC in Patients with AF: Addressing Issues and Challenges in Asian
Ju Youn Kim, School of Medicine, Sungkyunkwan University

INDUSTRY SESSION
(BOSTON SCIENTIFIC KOREA CO., LTD.)

09:30-10:00 | ROOM 9 | KOR

CHAIR
Jaemin Shim, Korea University College of Medicine

SPEAKER
HRS LBCT: ATLAS Results
VD0
Redo Procedures Using UHD Mapping in Patients with AF and PSVT
Jaemin Shim, Korea University College of Medicine

ATRIAL FIBRILLATION 2:
RISK FACTORS AND MECHANISM OF AF

10:15-11:45 | ROOM 1 | ENG

CHAIR
Jeong-Gwan Cho, Chonnam National University Medical School
YoungKeun On, School of Medicine, Sungkyunkwan University

SPEAKER
Reverse Remodeling of AF Substrate
Jonathan Kalman, University of Melbourne and Royal Melbourne Hospital, Australia
Epicardial Fat and Atrial Fibrillation
Jonathan Kalman, University of Melbourne and Royal Melbourne Hospital, Australia
Implication of Sleep Apnea in the Management of Atrial Fibrillation
Younghoon Kwon, University of Washington, United States
Racial, Ethnic and Sex Differences in AF Risk Factor and Management
Pil-sung Yang, CHA University
Lifestyle Intervention and AF Ablation: Alcohol, Physical Activity and Body Weight
Moo-Nyun Jin, Inje University College of Medicine

CIED 2:
CRT

10:15-11:45 | ROOM 2 | ENG

CHAIR
Dae Kyeong Kim, Inje University Busan Paik Hospital
Jun Hyung Kim, Chungnam National University College of Medicine

SPEAKER
Interventional Approaches to Cardiac Resynchronization
Sung Woo Lee, MedStar Heart and Vascular Institute, United States
Candidate Selection for CRT - Should US and EU Guidelines Be Applied in Asia?
Niraj Varma, Cleveland Clinic, United States
New Thinking on Remote Management of CRT Non-responders: Pulmonary Artery Pressure Monitoring
Niraj Varma, Cleveland Clinic, United States
How and Where to Implant LV Lead for CRT
Seung-Jung Park, School of Medicine, Sungkyunkwan University
CRT-P vs. Conduction System Pacing in HF with Reduced EF: CRT, Conduction System and Alternative Site Pacing
Tae-Hoon Kim, Yonsei University College of Medicine
## Program Details

### Ventricular Tachycardia 2:

**Chair**
- Tae-Joon Cha, Kosin University College of Medicine
- Seongwook Han, Keimyung University School of Medicine

**Speakers**
- ECMO Required Acute Heart Failure Due to Myocarditis or Tachycardia Induced Cardiomyopathy?
  - Le Uyen Phuong Tran, Cho Ray Hospital, Vietnam
- Stellate Ganglion Block and Cardiac Sympathectomy for Control of Ventricular Arrhythmia
  - Fa-Po Chung, Taipei Veterans General Hospital, Taiwan
- Neural Modulation for Heart Failure and Ventricular Arrhythmia
  - Ki-Woon Kang, Chung-Ang University College of Medicine
- Radiotherapy in VT Storm
  - Myung-Jin Cha, University of Ulsan College of Medicine

**Time and Location**
- 10:15-11:45 | Room 3 | ENG

### Pediatric 1:

**Chair**
- Myungchul Hyun, Kyungpook National University School of Medicine
- June Huh, School of Medicine, Sungkyunkwan University

**Speakers**
- Ablation of VT in Children
  - Naokata Sumitomo, Saitama Medical University International Medical Center, Japan
- Ablation of AVNRT in Children
  - Mei-Hwan Wu, National Taiwan University Children’s Hospital, Taiwan
- How to Reduce Radiation Exposure in Arrhythmia Procedures for Pediatric Patients
  - Jae-Sun Uhm, Yonsei University College of Medicine
- Arrhythmias in Ebstein’s Anomaly
  - Jae-Sun Uhm, Yonsei University College of Medicine

**Time and Location**
- 10:15-11:45 | Room 4 | ENG

### YIA Competition

**Judy**
- Boyoung Joung, Yonsei University College of Medicine
- Daewoo Hyun, Andong Medical Group Hospital
- Jun Kim, University of Ulsan College of Medicine
- Jin-Bae Kim, School of Medicine, Kyung Hee University
- Jin-Seok Kim, Korea University College of Medicine
- Namsik Yoon, Chonnam National University Medical School
- Eue-Keun Choi, Seoul National University College of Medicine

**Presenter**
- High Power Short Duration (HPSD) Ablation in Atrial Fibrillation is Associated with Low Esophageal Injury Rates and Improved Procedural Outcomes versus Conventional Lower Power Longer Duration (LPLD) Ablation: A Multi-Centre Randomised Controlled Study
  - David Chiang, Alfred Health, Australia
- Clinical Applicability of an Artificial Intelligence (AI) Algorithm for Early Prediction of Paroxysmal Atrial Fibrillation
  - Yeji Kim, Ewha Womans University Medical Center
- Lower Pulmonary Vein-To-Left Atrium Volume Ratio Predicts Poor Rhythm Outcome after Atrial Fibrillation Catheter Ablation
  - Jae-Hyuk Lee, Myongji Hospital
- The Early and Late Effects of High-Dose Radiation on Cardiac Injury in a Rat Model
  - Hye In Lee, Seoul National University Hospital
- Development of Artificial Intelligence to Estimate ECG-Derived Physiological Age and Risk of Overall Mortality Using Deep Learning
  - Seng Chan You, Yonsei University College of Medicine
- Thoracoscopic Ablation versus Radiofrequency Catheter Ablation for Persistent Atrial Fibrillation as a De Novo Procedure
  - Juwon Kim, Samsung Medical Center (Samsung Seoul Hospital)

**Time and Location**
- 10:15-11:45 | Room 5 | ENG
### CROSS SPECIALTY 2: EP & HF

**Chair:** Eun-Jung Bae, Seoul National University College of Medicine  
Dae-In Lee, Chungbuk National University College of Medicine

**Speakers:***
- The Benefit of SGLT-2 in HF and AF for Diabetes Mellitus  
  Dae-In Lee, Chungbuk National University College of Medicine
- Beta-Blocker in HFrEF and AF  
  Minsoo Ahn, Yonsei University Wonju College of Medicine
- The Role of ARNI in Management of Arrhythmia in HF Patients  
  Jin-Oh Choi, School of Medicine, Sungkyunkwan University
- Arrhythmia Burden in Acute Heart Failure Syndrome  
  Jong-Chan Youn, College of Medicine, The Catholic University of Korea
- AF Ablation in HF: Pros and Cons  
  Mi-Na Kim, Korea University College of Medicine

**Time:** 10:15-11:45 | **Room:** 6 | **Language:** KOR

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### NEW RESEARCH IN MAJOR COMPANIES

**Chair:** June Soo Kim, School of Medicine, Sungkyunkwan University  
Myung Yong Lee, Dankook University College of Medicine

**Speakers:**
- New Clinical Research from Medtronic  
  Carrie Schleis, Medtronic, Germany
- Abbott - Future  
  Kyungmoo Paul Ryu, Abbott, United States
- Boston Scientific - Future  
  Bradley Horst, Boston Scientific, United States
- Pulsed Electric Field Ablation: How to Create Durable Lesions  
  Hiroshi Nakagawa, Cleveland Clinic, United States
- Clinical Benefits and an Expanded Heart Failure Indication for Sacubitril/Valsartan  
  Dmytro Butylin, Novartis Pharma AG, Switzerland

**Time:** 10:15-11:45 | **Room:** 7 | **Language:** ENG

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### BASIC 1:

**Gene: Genetic Testing in Arrhythmia Syndrome 2022**

**Chair:** Hui-Nam Pak, Yonsei University College of Medicine  
Hyung Wook Park, Chonnam National University Medical School

**Speakers:**
- Discovery of Arrhythmia Genes Using Sequencing Studies  
  Seung Hoan Choi, Broad Institute of MIT and Harvard, United States
- Genetics in Cardiology in 2022  
  Christopher Senssarian, University of Sydney, Australia
- Electrical Storm: Rotors Anchored by Refractory Islands Drive Torsades de Pointes in an Experimental Model of Electrical Storm  
  Yukiomi Tsuji, Nagoya University Graduate School of Medicine, Japan
- Pulse Field Ablation of LV Myocardium in Swine Infarct Model  
  Sungil Im, Kook University College of Medicine

**Time:** 10:15-11:45 | **Room:** 8 | **Language:** ENG

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### INDUSTRY SESSION (ABBOTT MEDICAL KOREA):

**Mapping Without Compromise**

**Chair:** Young-Hoon Kim, Korea University College of Medicine  
Yong Seog Oh, College of Medicine, The Catholic University of Korea

**Speakers:**
- Impedance & Voxel Cardiac Mapping: The Power of Choice  
  Takanori Yamaguchi, Saga University, Japan

**Time:** 10:15-11:15 | **Room:** 9 | **Language:** ENG

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### INDUSTRY SESSION (CHONG KUN DANG PHARM.):

**Beta-Blocker in Patients with Cardiac Arrhythmias.**

**Chair:** Dilatrend SR: Atrial Fibrillation Phase 3 Trial (DILAF Study)  
Jong-II Choi, Korea University College of Medicine

**Speakers:**
- Impedance & Voxel Cardiac Mapping: The Power of Choice  
  Takanori Yamaguchi, Saga University, Japan

**Time:** 11:15-11:45 | **Room:** 9 | **Language:** KOR
### PROGRAM DETAILS

**SCIENTIFIC SESSION (PFIZER KOREA / BMS KOREA):**

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<tr>
<th>12:00-13:00</th>
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<th>ENG</th>
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**CHAIR**
Boyoung Joung, Yonsei University College of Medicine

**SPEAKER**
- What to consider for anticoagulation therapy of AF patients according to 2022 KHRS guideline
  - Jung Myung Lee, School of Medicine, Kyung Hee University
- AF patients with high bleeding risk: a room for improvement with Eliquis
  - Steven Deitelzweig, University of Queensland, United States

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**SCIENTIFIC SESSION (ABBOTT MEDICAL KOREA):**

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<th>12:00-13:00</th>
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<th>ENG</th>
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**CHAIR**

**SPEAKER**
- Remote Monitoring in Advancing ICD/CRT Patient Management
  - TAM, Tsz Kin Mark, Prince of Wales Hospital, Hong Kong
- Omnipolar Mapping Workflow in PVI & Complex Atrial Cases: What Should You Know?
  - Kim Rajappan, John Radcliffe Hospital, United Kingdom

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**SCIENTIFIC SESSION (YUHAN):**

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**CHAIR**
Gi-Byoung Nam, University of Ulsan College of Medicine

**SPEAKER**
- A New Wave from Innovation to Clinical Practice: Insight from Trials Using Wearable ECG Monitoring in South Korea
  - Jong-II Choi, Korea University College of Medicine
- Holter vs. Wearable Patch for Arrhythmia Evaluation
  - Il-Young Oh, Seoul National University College of Medicine

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**ORAL 1 (AF):**

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<th>ENG</th>
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**CHAIR**
Junbeom Park, Ewha Womans University School of Medicine

**PRESENTER**
- Healthcare Utilization after Cryoballoon Ablation for Patients with Atrial Fibrillation in Korea: One-Year Results from the Cryo Global Registry
  - Young Keun On, Samsung Medical Center (Samsung Seoul Hospital)
- Long-Term Rhythm Outcome after Radiofrequency vs. Cryoballoon Atrial Fibrillation Catheter Ablations: Propensity Score Matching Study
  - Je-Wook Park, Yonsei University Health System
- Efficacy of Cryoballoon Ablation for Atrial Fibrillation and Recurrence Predictors in an Asian Cohort
  - Shang-Ju Wu, Taichung Veterans General Hospital, Taiwan
- Clinical Usefulness of Virtual Ablation Guided Catheter Ablation of Atrial Fibrillation Targeting Restitution Parameter-Guided Catheter Ablation: CUVIA-REGAB Prospective Randomized Study
  - Byoungyun Lim, Yonsei University College of Medicine
- The Impact of Gastrointestinal Bleeding to Outcome in Cardioembolic Stroke Patients with Atrial Fibrillation: A Multivariate Analysis Study
  - Niyata Hananta Karunawan, Dr Adhyatma, MPH, Tugurejo General Hospital, Indonesia

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**ORAL 2 (AF):**

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<th>12:00-13:00</th>
<th>ROOM 7</th>
<th>ENG</th>
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**CHAIR**
Jumsuk Ko, Wonkwang University School of Medicine

**PRESENTER**
- Potential Role of Aquaporin 4 Channel Regulation Related to Atrial Remodeling in Atrial Fibrillation
  - Yeji Kim, Ewha Womans University Medical Center
- The Effects of Small-Conductance Calcium-Activated Potassium (SK) Channels on Metabolic Syndrome with Hypokalemia
  - Chia-Hao Kuo, Kaohsiung Medical University, Taiwan
- Atrial Fibrillation Detection by Photoplethysmography Monitoring with a Smart Ring during Daily Activity
  - Soonil Kwon, Seoul National University Hospital
- Corrected QT Computation for Non-automated Electrocardiograms with Atrial Fibrillation
  - Lora Grace Deles, University of Santo Tomas Hospital, Philippines
- Accumulated Burden of Hypertension on the Risk of Atrial Fibrillation in Patients with Diabetes Mellitus: A Nationwide Population-Based Study
  - Jungmin Choi, Seoul National University Hospital
## PROGRAM DETAILS

### ORAL 3 (AF)

**12:00-13:00 | ROOM 8 | ENG**

**CHAIR**
Daehhee Shin, Design Hospital

**PRESENTER**
- Discontinuation of Oral Anticoagulants with Clinical Outcomes after Atrial Fibrillation
  - Catheter Ablation
  - Daehoon Kim, Yonsei University College of Medicine

- Impact of Frailty on Early Rhythm Control Outcomes in Older Adults with Atrial Fibrillation: A Nationwide Cohort Study
  - Ga-In Yu, Gyeongsang National University Hospital

- Lifetime Risk of Atrial Fibrillation According to Optimal, Borderline, or Elevated Levels of Risk Factors: Cohort Study Based on Longitudinal Data from the Korea NHIS-HealIS and UK Biobank
  - Hanjin Park, Yonsei University College of Medicine

- Zero Fluoroscopy Atrial Fibrillation Ablation Using TEE and 3D Mapping System
  - Muhammad Yamin, Cipto Mangunkusumo Hospital, Indonesia

- Incidence and Predictors of Severe Tricuspid Regurgitation in the Long-Term Followed Atrial Fibrillation Patients without Structural Heart Disease
  - Min Soo Cho, Asan Medical Center

### PSVT 1: DIFFICULT SVT

**13:15-14:45 | ROOM 2 | ENG**

**CHAIR**
Hwancheol Park, Hanyang University College of Medicine
June Huh, School of Medicine, Sungkyunkwan University

**SPEAKER**
- Atypical AVNRT
  - Nwe Nwe, Yangon General Hospital, Myanmar

- Atypical Atrial Flutter
  - Kelvin Chua, National Heart Centre Singapore, Singapore

- Difficult SVT Cases
  - Sunhwa Kim, Presbyterian Medical Center

- Identification and Treatment of Atypical Bypass Tract
  - Choong Hwan Kwak, Gyeongsang National University College of Medicine

- Role of Microelectrode Catheter in Ablation of SVT
  - Gi-Byoung Nam, University of Ulsan College of Medicine

### ATRIAL FIBRILLATION 3: COMPLICATION REDUCTION

**13:15-14:45 | ROOM 1 | ENG**

**CHAIR**
Young-Hoon Kim, Korea University College of Medicine
Seil Oh, Seoul National University College of Medicine

**SPEAKER**
- How to Reduce Complication with Cryoballoon Ablation
  - Shin'zake Miyazaki, Tokyo Medical and Dental University, Japan

- How to Perform Safe Transseptal Puncture
  - Jong Sung Park, Dong-A University College of Medicine

- Esophageal Injury after Catheter Ablation of AF: Endoscopic Findings
  - Yun Young Cho, Korea University College of Medicine

- Wall Thickness and Catheter Ablation
  - Seil Oh, Seoul National University College of Medicine

### VENTRICULAR TACHYCARDIA 3: MAPPING AND ABLATION

**13:15-14:45 | ROOM 3 | ENG**

**CHAIR**
Yongkeun Cho, Kyungpook National University School of Medicine
Hyung Wook Park, Chonnam National University Medical School

**SPEAKER**
- Ethanol Infusion into the Cardiac Veins to Treat Ventricular Tachycardia Arising from the Left Ventricular Summit
  - Kao Ichihara, Yokohama Minato Heart Clinic, Japan

- Catheter Ablation of Scar-Related VT
  - Kyoko Soejima, Kyorin University, Japan

- Epicardial Radiofrequency Ablation: Who, When, and How?
  - Chin-Yu Lin, Taipei Veterans General Hospital, Taiwan

- Usefulness of ICE for Catheter Ablation
  - Miyako Igarashi, University of Tsukuba, Japan

- Ablation of Ventricular Tachycardia before or after (S-, TV-) ICD Therapy
  - Jin-Bae Kim, School of Medicine, Kyung Hee University
**PROGRAM DETAILS**

**ATRIAL FIBRILLATION 4: AF AND HEART FAILURE**

**13:15-14:45 | ROOM 4 | ENG**

**CHAIR**

Yong Seog Oh, College of Medicine, The Catholic University of Korea
Kee-Joon Choi, University of Ulsan College of Medicine

**SPEAKER**

- **Subclinical Atrial Fibrillation and Heart Failure**
  Mitsuharu Kawamura, Makita General Hospital, Japan

- **The Clinical Implication of AF in Patients with Heart Failure**
  Kyeol Mun, Daegu Veterans Hospital

- **Presence of HfPef and the Threshold for Early AF Ablation**
  Minsoo Ahn, Yonsei University Wonju College of Medicine

- **Management of Heart Failure with Atrial Fibrillation**
  Jin-ho Choi, Korea University College of Medicine

**CIED 3:**

**ICD**

**13:15-14:45 | ROOM 6 | ENG**

**CHAIR**

Byung-Chun Jung, Daegu Fatima Hospital
Jae-Sun Uhm, Yonsei University College of Medicine

**SPEAKER**

- **Latest Update of SCD**
  Hung Fat Tse, The University of Hong Kong, Hong Kong

- **Extravascular ICD**
  Joseph YS Chan, Prince of Wales Hospital, Chinese University of Hong Kong, Hong Kong

- **Updates on Guidelines for Primary Prevention of Sudden Death: Transvenous ICD vs. Subcutaneous ICD for Primary Prevention**
  Jinhoo Choi, Pusan National University School of Medicine

- **How to Avoid Inappropriate and Unnecessary ICD Shock**
  Lee-Young Jung, Chonbuk National University Medical School

- **ICD in Pediatric Patients**
  Mi Kyong Song, Seoul National University Hospital

**ORAL 4 (CIED, VT, SCD & GENETICS)**

**13:15-14:45 | ROOM 5 | ENG**

**CHAIR**

Seung-Jung Park, School of Medicine, Sungkyunkwan University

**PRESENTER**

- **Mid-Term Feasibility of Left Bundle Branch Area Pacing with Standard Stylet-Driven Pacing Leads and Predictors of Success: A Multicenter Center Experience**
  Ga-In Yu, Gyeongsang National University Hospital

- **Risk of Infective Endocarditis Related with Invasive Dental Procedures in Patients Who Have Cardiac Rhythm Devices**
  Tae Wan Chung, Samsung Medical Center (Samsung Seoul Hospital)

- **Orthodontic and Antimicrobial Snare Techniques for Left Ventricular Lead Implantation in Cardiac Resynchronization Therapy**
  Juwon Kim, Samsung Medical Center (Samsung Seoul Hospital)

- **Three-Day Monitoring of Adhesive Single-Lead ECG for Premature Ventricular Complex: Validation of Diagnostic Yield and Evaluation of Burden Fluctuation**
  Hyo-Jeong Ahn, Seoul National University Hospital

- **Temporal Elevation of Blood Pressure Is Associated with Increased Risk of Sudden Cardiac Death**
  Kyongjin Min, Korea University Anam Hospital

- **Looks Like Me, Sounds Like Me but It Is Not Me**
  Wei Shen Chye, Serdang General Hospital, Malaysia

**NONINVASIVE 2:**

**DIGITAL HEALTH CARE AND AF SCREENING**

**13:15-14:45 | ROOM 7 | KOR**

**CHAIR**

Myungchul Hyun, Kyungpook National University School of Medicine
June Soo Kim, School of Medicine, Sungkyunkwan University

**SPEAKER**

- **What Is the Digital Health in Cardiology?**
  Ju Youn Kim, School of Medicine, Sungkyunkwan University

- **The Clinical Implication of Wearables, Mobile Applications**
  You Ri Kim, Chonnam National University Medical School

- **How to Acquire an Appropriate Signal with a Single-Lead ECG**
  Il-Young Oh, Seoul National University College of Medicine

- **Wearable Devices and AI in AF Screening**
  Junbeom Park, Ewha Womans University School of Medicine

- **Clinical Implication and Development of Artificial Intelligence Electrocardiography**
  Yong-Soo Baek, Inha University School of Medicine

- **Diagnosis and Treatment of Atrial Fibrillation Using Wearable Device**
  Sung-Won Jang, College of Medicine, The Catholic University of Korea
**Program Details**

### Atrial Fibrillation 5: AF Screening and Subclinical AF

**Chair**: Myung Yong Lee, Dankook University College of Medicine  
Kyoung-Suk Rhee, Chonbuk National University Medical School

**Speaker**

- **Atrial Remodeling in Subclinical AF**
  - Hsuan-Ming Tsao, National Yang Ming Chiao Tung University Hospital, Taiwan

- **What Are the Key Messages from the APHRS Practice Guidance on AF Screening?**
  - Ngai-Yin Chan, Princess Margaret Hospital, Hong Kong

- **Treatment of Subclinical AF, When and How?**
  - WooHyun Lim, SMG-SNU Boramae Medical Center

- **Subclinical AF: When Do We Need OAC?**
  - Kiyung Boo, Jeju National University School of Medicine

**Time**: 13:15-14:45 | **Room**: 8 | **Language**: ENG

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### EKG Educational Course 1

**Chair**: Moon-Hyoung Lee, Yonsei University College of Medicine  
Nam-Ho Kim, Wonkwang University School of Medicine

**Speaker**

- **ECG Basics (Basic Physiology, ECG Leads and Axis)**
  - Tae-Seok Kim, College of Medicine, The Catholic University of Korea

- **P Wave and Sinus Node Dysfunction**
  - Jae-Hyuk Lee, Hanyang University College of Medicine

- **Cardiac Conduction System and Atrioventricular Block**
  - Hancheol Lee, National Health Insurance Service Ilsan Hospital

- **ECG Detection of Acute Coronary Syndrome**
  - Do Young Kim, College of Medicine, Hallym University

**Time**: 15:00-16:30 | **Room**: 1 | **Language**: KOR

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### Industry Session (Medtronic Korea): The Optimal Treatment Strategies for Persistent AF with Cryoballoon Ablation: New Insights from the Korean Evidence

**Chair**: YoungKeun On, School of Medicine, Sungkyunkwan University

**Speaker**

- **Impedance & Voxel Cardiac Mapping: The Power of Choice**
  - Hong Euy Lim, College of Medicine, Hallym University

- **Cryoablation for Pulmonary Vein Isolation Alone in Patients with Early Persistent AF Assessed by Continuous Monitoring (COOL-PER) - Interim Analysis Results**
  - Eui-Keun Choi, Seoul National University College of Medicine

**Panel**

- Sung Ho Lee, School of Medicine, Sungkyunkwan University
- Jaemin Shim, Korea University College of Medicine
- Chang Hee Kwong, Konkuk University Medical Center

**Time**: 13:15-14:15 | **Room**: 9 | **Language**: KOR

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### Industry Session (Johnson & Johnson Medical Korea)

**Chair & Speaker**: Using Latest Technology with Carto Finder for Zero-Fluro Workflow  
Hyoung-Seob Park, Keimyung University School of Medicine

**Time**: 14:15-14:45 | **Room**: 9 | **Language**: KOR

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### Atrial Fibrillation 6: Innovative Approach

**Chair**: Young-Hoon Kim, Korea University College of Medicine  
Byung-Chun Jung, Daegu Fatima Hospital

**Speaker**

- **Streamlined PFA Approach for PVI and Non-PV Targets**
  - Kyoung-Ryu Julian Chou, CCU Frankfurt, Germany

- **Role of Additional Low Voltage Area Ablation in Paroxysmal and Persistent AF**
  - Minglong Chen, The First Affiliated Hospital of Nanjing Medical University, China

- **Same-Day Discharge for AF Ablation: UK Experience**
  - Antonio Creta, Barts Heart Centre, St Bartholomew’s Hospital, United Kingdom

- **New Technology in AF Ablation: Pulsed Field Ablation**
  - Jumsuk Ko, Wonkwang University School of Medicine

- **Artificial Intelligence in AF Ablation**
  - Hui-Nam Pak, Yonsei University College of Medicine

**Time**: 15:00-16:30 | **Room**: 2 | **Language**: ENG
## PROGRAM DETAILS

### ALLIED PROFESSIONAL 1: CLINICAL ELECTROPHYSIOLOGY

**CHAIR**  
Hyon Soo Lee, Korea University Anam Hospital  
Kyunghee Jang, Hallym University Sacred Heart Hospital

**SPEAKER**  
Case Presentation of Challenging Supraventricular Tachycardias  
Shufen Liang, National Heart Centre Singapore, Singapore  
Ablation in Hemodynamic Compromised Patients  
Natcha Soontornmanokati, Ramathibodi Hospital of Mahidol University, Thailand  
Introduction of New Ablation Sources: Pulsed Field, Laser Balloon, Hot Balloon, Next Generation Cryoballoon  
Hyungjun Kim, Samsung Medical Center  
Common Mistakes to Interpret 3D Activation Mapping  
Cheolmin Moon, Boston Scientific  
Pitfalls and Interpretation of Para-Hisian Pacing  
Young Woong Ha, The Catholic University of Korea, Seoul St. Mary’s Hospital  
AVNRT Using Variants of Slow Pathway: Left Inferior and Right Superior Extensions  
Won Woo Yoo, Severance Hospital

### ATRIAL FIBRILLATION 7: EARLY RHYTHM CONTROL

**CHAIR**  
Eun-Sun Jin, School of Medicine, Kyung Hee University  
Jaemin Shim, Korea University College of Medicine

**SPEAKER**  
Role of Early AF Treatment  
Isabelle Van Gelder, University Medical Center Groningen, Netherlands  
Optimal Rhythm Control Strategy in Patients with Atrial Fibrillation  
Boyoung Jung, Yonsei University College of Medicine  
Early Rhythm Control in Asymptomatic AF  
Ki Hong Lee, Chonnam National University Medical School  
Atrial Fibrillation and Cognitive Function: Implication for Early Rhythm Control  
Dongmin Kim, Dankook University College of Medicine  
Predictors of Recurrence after Catheter Ablation of AF  
Jaemin Shim, Korea University College of Medicine

### PEDIATRIC 2: SUDDEN CARDIAC DEATH IN PED & CHD

**CHAIR**  
Eun-Jung Bae, Seoul National University College of Medicine  
June Huh, School of Medicine, Sungkyunkwan University

**SPEAKER**  
How to Prevent Sudden Cardiac Death in Children  
Naokata Sumitomo, Saitama Medical University International Medical Center, Japan  
Arrhythmias, Sudden Death, Heart Failure Late after Total Repair of Tetralogy of Fallot  
Mei-Hwan Wu, National Taiwan University Children’s Hospital, Taiwan  
Risk Stratification of SCD in Single Ventricle Physiology  
Eun-Jung Bae, Seoul National University College of Medicine  
Ablation of Ventricular Arrhythmias in Congenital Heart Disease  
June Huh, School of Medicine, Sungkyunkwan University

### CIED 4: NEW TECHNOLOGY

**CHAIR**  
Dong-Gu Shin, Yeungnam University College of Medicine  
Jung Hoon Sung, CHA University

**SPEAKER**  
Practice Changing Trials in Digital Health  
Dong-Hyeok Kim, Ewha Womans University School of Medicine  
MRI Conditional CIED: Automatic MRI Recognition Feature for CIED  
Daehee Shin, Design Hospital  
Routine Intracardiac Echocardiographically (ICE) Guided Cardiac Implantable Electronic Device (CIED) Implantation: Feasibility and Unmet Need  
Kwang-No Lee, Ajou University School of Medicine  
Cardiac Rehabilitation in Recipients of Cardiac Implantable Electronic Devices  
Jinhee Ahn, Pusan National University School of Medicine  
AI-ECG to Predict Incident AF  
Junbeom Park, Ewha Womans University School of Medicine
### SCD 1: EXERCISE & SCD

**Chair:** Kyoung-Suk Rhee, Chonbuk National University Medical School  
Hwancheol Park, Hanyang University College of Medicine

**Speakers:**
- Seiko Ohno, National Cerebral and Cardiovascular Center, Japan
  - Genetic Basis of Early Repolarization Syndrome
  - Early Repolarization in Athletes
- Minsu Kim, Chungnam National University College of Medicine  
  - Sport Cardiology - SCD in the Athletes
- Yoo Ri Kim, Chonnam National University Medical School  
  - Exercise in Patients with Inherited Arrhythmia
- Yongkeun Cho, Kyungpook National University College of Medicine  
  - Physical Activity and Sudden Cardiac Death
- Moo-Nyun Jin, Inje University College of Medicine

**Time:** 15:00-16:30  
**Room:** 7  
**Language:** ENG

### BASIC 2: CURRENT TRANSLATIONAL VIEWS

**Chair:** Tae-Joon Cha, Kosin University College of Medicine  
Young Soo Lee, Daegu Catholic University College of Medicine

**Speakers:**
- Inherited Arrhythmias Associated with SCN5A Mutations: A Translational Perspective  
  - Carol Ann Remme, Amsterdam UMC, Netherlands
- Targeting Sodium Channels to Prevent Sudden Cardiac Death: A Basic-Translational Perspective  
  - Carol Ann Remme, Amsterdam UMC, Netherlands
- Inherited Cardiac Disorders: From Monogenic to Polygenic  
  - Connie Bezzina, Amsterdam UMC, Netherlands
- Extracellular Vesicles and Pathogenesis of Atrial Fibrillation  
  - Tetsuo Sasano, Tokyo Medical and Dental University, Japan
- Work-up on the Family Left behind of Sudden Death  
  - Jacob Tfelt-Hansen, Copenhagen University Hospital, Denmark

**Time:** 15:00-16:30  
**Room:** 8  
**Language:** ENG

### INDUSTRY SESSION (BAYER KOREA):

**Chair:** Kee-Joon Choi, University of Ulsan College of Medicine  
Myung Yong Lee, Dankook University College of Medicine

**Speakers:**
- Protecting Vascular Events in NVAF Patient with Diabetes  
  - Ju Youn Kim, School of Medicine, Sungkyunkwan University
- Protecting Net Clinical Benefit in Elderly NVAF Patient  
  - Lae-Young Jung, Chonbuk National University Medical School
- Optimal Rivaroxaban Dose in Real Practice  
  - Myung Hwan Bae, Kyungpook National University School of Medicine

**Time:** 15:00-16:00  
**Room:** 9  
**Language:** KOR

### INDUSTRY SESSION (NORVATIS):

**Chair:** Yong Seog Oh, College of Medicine, The Catholic University of Korea  
Seongwook Han, Keimyung University School of Medicine

**Speakers:**
- Downshift Sudden Cardiac Death Pathway with ARNI  
  - Seung-Jung Park, School of Medicine, Sungkyunkwan University
- Upshift Paradigm with ARNI: Beyond 40%, First in History  
  - So-Ryoung Lee, Seoul National University College of Medicine

**Time:** 16:00-16:30  
**Room:** 9  
**Language:** KOR
**PROGRAM DETAILS**

**ARRHYTHMIA REVIEW COURSE 1:**  
**BASIC INTERPRETATION OF ARRHYTHMIA**  
08:30-09:15 | ROOM 1 | KOR  

**CHAIR**  | Jin-Seok Kim, Korea University College of Medicine  
**SPEAKER**  | Hancheol Lee, National Health Insurance Service Ilsan Hospital  
| Tae-Seok Kim, College of Medicine, The Catholic University of Korea  
| Do Young Kim, College of Medicine, Hallym University  

**ARRHYTHMIA REVIEW COURSE 2:**  
**BASIC BRADYCARDIA AND PACEMAKER**  
09:15-10:00 | ROOM 1 | KOR  

**CHAIR**  | Nam-Ho Kim, Wonkwang University School of Medicine  
**SPEAKER**  | Dong Geum Shin, College of Medicine, Hallym University  
| Kiyung Boo, Jeju National University School of Medicine  
| Jongmin Hwang, Keimyung University School of Medicine  

**ATRIAL FIBRILLATION 8:**  
**RHYTHM AND RATE CONTROL**  
08:30-10:00 | ROOM 2 | ENG  

**CHAIR**  | Dae Kyeong Kim, Inje University Busan Paik Hospital  
| Jin-Bae Kim, School of Medicine, Kyung Hee University  
**SPEAKER**  | Rhythm Control or Rate Control for Atrial Fibrillation? The Beginning of a New Paradigm  
| Ngai-Yin Chan, Princess Margaret Hospital  
| Cost Effectiveness of Different AF Management Strategies  
| Min Kim, Chungbuk National University College of Medicine  
| Rate Control of AF: Why? When? How?  
| Lae-Young Jung, Chonbuk National University Medical School  
| Principles of Antiarrhythmic Drugs  
| Minsoo Kim, Dongkang Hospital  
| Choice of Rhythm Control in AF Patients with or without Symptom  
| Kihong Lee, Chonnam National University Medical School  

**CIED 5:**  
**CRT AND AF**  
08:30-10:00 | ROOM 3 | ENG  

**CHAIR**  | Daehyeok Kim, Inha University School of Medicine  
| Sang Weon Park, Bucheon Sejong Hospital  
**SPEAKER**  | HF Management with CRT  
| Justin Mariani, Central Clinical School, Alfred Hospital, Monash University, Australia  
| Adaptive and SyncAV for CRT  
| Youngjin Cho, Seoul National University College of Medicine  
| How to Avoid and Treat CRT Nonresponders  
| Il-Young Oh, Seoul National University College of Medicine  
| RV Pacing and LV Dysfunction  
| Dongmin Kim, Dankook University College of Medicine  
| Response and Long-Term Outcomes with Resynchronization Therapy in Atrial Fibrillation  
| Young Soo Lee, Daegu Catholic University College of Medicine
# PROGRAM DETAILS

## EGM TRACING 1:
CHALLENGING VENTRICULAR TACHYCARDIAS

**08:30-10:00 | ROOM 4 | KOR**

**CHAIR**  
Seongwook Han, Keimyung University School of Medicine  
Chun Hwang, Revere Health Care, United States

**SPEAKER**

- **Case 1**  
  Je-Wook Park, Yonsei University College of Medicine

- **Case 2**  
  Young Choi, College of Medicine, The Catholic University of Korea

- **Case 3**  
  Jihyun Lee, Seoul National University College of Medicine

- **Case 4**  
  Yun Gi Kim, Korea University College of Medicine

## NONINVASIVE 3:
AI AND ECG

**08:30-10:00 | ROOM 6 | ENG**

**CHAIR**  
Choong Hwan Kwak, Gyeongsang National University College of Medicine  
Sangjin Han, Hallym University Sacred Heart Hospital

**SPEAKER**

- **Use of AI in Cardiac EP**  
  Natalia Trayanova, Johns Hopkins University, United States
- **Artificial Intelligence in Cardiology**  
  In-Soo Kim, Yonsei University College of Medicine
- **Artificial Intelligence-Based ECG Interpretation**  
  Dae-in Lee, Chungbuk National University College of Medicine
- **AI-Based AED Algorithm**  
  Namseok Yoon, Chonnam National University Medical School
- **The Evolution of Electrocardiography: From Paper Printouts to Artificial Intelligence Analysis**  
  Yong-Soo Baek, Inha University School of Medicine

## JOINT SYMPOSIUM WITH OVERSEAS SOCIETY 1:
ATRIAL FIBRILLATION

**08:30-10:00 | ROOM 5 | ENG**

**CHAIR**  
Yae Min Park, Gachon University School of Medicine

**PRESENTER**

- **A Redo Case of Atrial Tachycardia**  
  Anupam Jena, Kalinga Institute of Medical Sciences, India
- **Healing Souls by Pulmonary Vein Isolation**  
  Sze Man Fiona Yuen, North District Hospital, Hong Kong
- **Incessant Ventricular Tachycardia Induced Dilated Cardiomyopathy**  
  Saraul Tseveende, Third State Central Hospital Mongolia, Mongolia
- **Association between Sinus Rhythm Maintenance Duration after Electrical Cardioversion and Catheter Ablation Outcome for Atrial Fibrillation**  
  Kyongjin Min, Korea University Anam Hospital

## PSVT 2:
ADVANCED TECHNIQUE OF PSVT ABLATION

**08:30-10:00 | ROOM 7 | ENG**

**CHAIR**  
Dong-Gu Shin, Yeungnam University College of Medicine  
Jung Hoon Sung, CHA University

**SPEAKER**

- **Radiation Reduction Techniques in Catheter Ablation of SVT**  
  Mansour Razminia, AMITA Health Saint Joseph Hospital, United States
- **Complex Atrial Arrhythmias: Insights from HD Maps**  
  Chi Keong Ching, National Heart Centre Singapore, Singapore
- **Post-AF Atrial Tachycardia/Atrial Flutter**  
  Cheng-Hung Li, Taichung Veterans General Hospital, Taiwan
- **Fluoroless Catheter Ablation for SVT**  
  Hyoung-Seob Park, Keimyung University School of Medicine
- **Scar-Related Atrial Tachycardia after Open-Heart Surgery or AF Ablation**  
  So-Ryoung Lee, Seoul National University College of Medicine
**PROGRAM DETAILS**

**VENTRICULAR TACHYCARDIA 4: VT IN STRUCTURAL HEART DISEASE**  
08:30-10:00 | ROOM 8 | ENG

**CHAIR**  
Yongkeun Cho, Kyungpook National University School of Medicine  
Eun-Sun Jin, School of Medicine, Kyung Hee University

**SPEAKER**  
ARVC Substrates and Circuits Characteristics  
Fa-Po Chung, Taipei Veterans General Hospital, Taiwan  
Update on Ventricular Tachycardia Ablation in Cardiac Sarcoidosis  
Konstantinos Siontis, Mayo Clinic, United States  
Catheter Ablation of VT in Late Stage of ARVC Patients  
Minglong Chen, The First Affiliated Hospital of Nanjing Medical University, China  
The Application of High Density Mapping in VT with Structural Heart Disease  
Liping Ding, National Center for Cardiovascular Diseases & Fuwai Hospital, China  
Challenging VT Case in Post Fontan Procedure  
Yoga Yuniadi, National Cardiovascular Center Harapan Kita, Indonesia

**INDUSTRY SESSION (SAMJIN PHARM): UPDATE ON DIAGNOSIS AND TREATMENT OF ATRIAL FIBRILLATION**  
08:30-09:30 | ROOM 9 | KOR

**CHAIR**  
Jong-II Choi, Korea University College of Medicine  
Eue-Keun Choi, Seoul National University College of Medicine

**PRESENTER**  
Clinical Uses of Wearable Devices; Sharing Experience on S-PATCH EX  
Yong-Soo Baek, Inha University School of Medicine  
Review of Rivaroxaban 15MG Evidence for A-Fib Patients  
Yun Gi Kim, Korea University College of Medicine

**INDUSTRY SESSION (HANMI PHARM.)**  
09:30-10:00 | ROOM 9 | KOR

**CHAIR**  
Jin-Seok Kim, Korea University College of Medicine

**SPEAKER**  
Time to Consider Rivaroxaban for CV protection  
Hee Tae Yu, Yonsei University College of Medicine

**ARRHYTHMIA REVIEW COURSE 3: NARROW QRS TACHYCARDIA**  
10:15-11:00 | ROOM 1 | KOR

**CHAIR**  
Gyo-Seung Hwang, Ajou University School of Medicine

**SPEAKER**  
Young-Ab Park, Inje University College of Medicine  
Yoon Jung Park, Kyungpook National University College of Medicine  
In Geol Song, Baekje General Hospital

**ARRHYTHMIA REVIEW COURSE 4: WIDE QRS TACHYCARDIA**  
11:00-11:45 | ROOM 1 | KOR

**CHAIR**  
Myung Yong Lee, Dankook University College of Medicine

**SPEAKER**  
Euijae Lee, Bucheon Sejong Hospital  
Kwangjin Chun, Kangwon National University School of Medicine  
Unjeong Do, Dongguk University School of Medicine
PROGRAM DETAILS

ATRIAL FIBRILLATION 9:
CATHETER ABLATION
10:15-11:45 | ROOM 2 | ENG

CHAIR
Kee-Joon Choi, University of Ulsan College of Medicine
Doosang Kim, Veterans Health Service Medical Center

SPEAKER
New Developments in Atrial Fibrillation Ablation
Sung Woo Lee, MedStar Heart and Vascular Institute, United States

Omnipolar Mapping in Atrial Arrhythmia Ablation
Li-Wei Lo, Taipei Veterans General Hospital, Taiwan

Evidence of AF Ablation in Stroke Prevention
Dong-Hyok Kim, Ewha Womans University School of Medicine

AF Ablation Guided by Ablation Index
Eue-Keun Choi, Seoul National University College of Medicine

High-Power Short Duration Ablation for AF
Jun Kim, University of Ulsan College of Medicine

EGM TRACING 2:
UNKNOWN EGM TRACINGS
10:15-11:45 | ROOM 4 | ENG

CHAIR
Dong-Gu Shin, Yeungnam University College of Medicine
Sung-Won Jang, College of Medicine, The Catholic University of Korea

SPEAKER
Case 1-3
Chi Keong Ching, National Heart Centre Singapore, Singapore

Case 4-6
Akihiko Nogami, University of Tsukuba, Japan

Case 7-9
Sung-Won Jang, College of Medicine, The Catholic University of Korea

CIED 6:
INFECTION AND LEAD EXTRACTION
10:15-11:45 | ROOM 3 | ENG

CHAIR
Moon-Hyong Lee, Yonsei University College of Medicine
Daewoo Hyun, Andong Medical Group Hospital

SPEAKER
Prevention of CIED Infections
Bruce Wilkoff, Cleveland Clinic, United States

Transvenous Lead Extraction
Bruce Wilkoff, Cleveland Clinic, United States

Future of Transvenous Lead Extraction Approaches and Technologies
Tachapong Ngarmukos, Ramathibodi Hospital of Mahidol University, Thailand

Adherence to Guidelines of Diagnostic and Therapeutic Practices for Suspected Infections of Cardiac Implantable Electronic Devices
Young Soo Lee, Daegu Catholic University College of Medicine

Device Re-Implantation after Extraction
Boyoung Joung, Yonsei University College of Medicine

ORAL 5 (BASIC)
10:15-11:45 | ROOM 5 | ENG

CHAIR
Jun Hyung Kim, Chungnam National University College of Medicine

PRESENTER
Modulation of Atrial Fibrillation Inducibility Using Novel Laparoscopy-Based Renal Denervation
Soomi Kwon, Seoul National University Hospital

Identification of Serum Exosomal Long Non-coding RNAs as Diagnostic Biomarkers for Atrial Fibrillation
Ji-Young Kang, Yonsei University College of Medicine

The Chloride Intracellular Channel 1 Regulates Cardiac Hypertrophy by Triggering the ROS-Mediated Autophagy
Zhaochong Tan, The Second Affiliated Hospital of Nanchang University, China

FAT10 Regulates the IKs Potassium Channel via Competing Kv7.1 Ubiquitination
Chen Chen, The Second Affiliated Hospital of Nanchang University, China

Small Extracellular Vesicles Derived from Patients with Persistent Atrial Fibrillation Exacerbate Arrhythmogenesis via miR-30a-5p
Dasom Mun, Yonsei University College of Medicine

Knock-in Model and Molecular Mechanism in Mice with Ryanodine Receptor Type 2 Mutation p.G4825R
Xiaoqing Li, The Second Affiliated Hospital of Nanchang University, China
PROGRAM DETAILS

SCD 2:
EPIDEMIOLOGY & NOVEL CONCEPTS OF SCD

10:15-11:45 | ROOM 6 | ENG

CHAIR
Tae-Joon Cha, Kosin University College of Medicine
June Namgung, Inje University College of Medicine

SPEAKER
Concealed Cardiomyopathy in Sudden Cardiac Arrest
Christopher Semsarian, University of Sydney, Australia

Global Epidemiology of SCA
Seung-Young Roh, Korea University College of Medicine

Primary Prevention of SCD in HCMP
Yae Min Park, Gachon University School of Medicine

Sudden Cardiac Death in South Korea
Jong-II Choi, Korea University College of Medicine

ATRIAL FIBRILLATION 11:
ANTICOAGULATION AND STROKE PREVENTION

10:15-11:45 | ROOM 8 | ENG

CHAIR
Yong Seog Oh, College of Medicine, The Catholic University of Korea
Nam-Ho Kim, Wonkwang University School of Medicine

SPEAKER
Real-World Data from Asia Regarding Anticoagulation Therapy in NVAF Patients
Takanori Ikeda, Toho University Faculty of Medicine, Japan

Oral Anticoagulant Therapy for Very Elderly Patients
Koichi Inoue, Osaka National Hospital, Japan

Risk Factor of Stroke and Stroke Prevention in Patients with Low CHA2DS2-VASc Score
Oussama Wazni, Cleveland Clinic, United States

Future of Anticoagulants: The Potential of Factor XI Inhibition as a Hemostasis-sparing Anticoagulant
Alex Yi, Anthos Therapeutics, United States

Antithrombotics at a Glance in Various Clinical Settings: From Aspirin to NOAC
Sang Hoon Na, Seoul National University College of Medicine

ATRIAL FIBRILLATION 10:
STROKE PREVENTION

10:15-11:45 | ROOM 7 | ENG

CHAIR
June Soo Kim, School of Medicine, Sungkyunkwan University
Hyung-Seob Park, Keimyung University School of Medicine

SPEAKER
Tailored Anticoagulation in Atrial Fibrillation: Current Trends and Future Perspective
Marcellus Francis L. Ramirez, University of Santo Tomas, Philippines

AF and Pacing-Induced Cardiomyopathy in Patients with Pacemaker
Ki-Woon Kang, Chung-Ang University College of Medicine

The Role of Oral Anticoagulation & Lifestyle Modification
So-Ryoung Lee, Seoul National University College of Medicine

Anticoagulation Strategy after LAA Occlusion
Ki-Hun Kim, Inje University College of Medicine

Anticoagulation in Patients with Subclinical AF
Woohyun Lim, SMG-SNU Boramae Medical Center

KHRS 2022 NEW AF & NOAC GUIDELINE

10:15-11:45 | ROOM 9 | KOR

CHAIR
Choong Hwan Kwak, Gyeongsang National University College of Medicine
Gi-Byoung Nam, University of Ulsan College of Medicine

SPEAKER
KHRS 2021 AF & 2022 NOAC Guideline 개발의 서론
Beyoung Joung, Yonsei University College of Medicine

KHRS 2021 AF Guideline 1 - 심장세포 동맥류/혈관조절 진단 지침
Woohyun Lim, SMG-SNU Boramae Medical Center

KHRS 2021 AF Guideline 2 - 심장세포 압박성 심장질환, 심장혈관질환, 심장혈관질환
Jung Myung Lee, School of Medicine, Kyung Hee University

KHRS 2021 AF Guideline 3 - 특수 상황 심장질환에서 투여된 NOAC
Youni Hwang, College of Medicine, The Catholic University of Korea

KHRS 2022 NOAC Guideline - 한국인에 적합한 NOAC 사용 지침
Kihong Lee, Chonnam National University Medical School
PROGRAM DETAILS

SCIENTIFIC SESSION (DAIICHI-SANKYO / DAEWOONG):
ANTICOAGULATION GUIDE UPDATE AND LOW DOES STRATEGY IN VERY OLD POPULATION
12:00-13:00 | ROOM 1 | KOR

CHAIR | June Soo Kim, School of Medicine, Sungkyunkwan University
Myung Yong Lee, Dankook University College of Medicine

SPEAKER | What's New in 2022 KHRA NOAC Guideline?
Kihong Lee, Chonnam National University Medical School
Low-Dose Edoxaban in Very Elderly Patients with AF: In Whom Standard OAC Were Not Recommended
So-Ryoung Lee, Seoul National University College of Medicine

SCIENTIFIC SESSION (MEDTRONIC KOREA):
MICRA AV SYNCHRONY ADVANCED TECHNOLOGY IN LEADLESS CARDIAC PACING
12:00-13:00 | ROOM 2 | ENG/KOR

CHAIR | Boyoung Joung, Yonsei University College of Medicine
Seung-Jung Park, School of Medicine, Sungkyunkwan University

SPEAKER | Micra™ AV Technology & Latest Clinical Evidence
Todd Sheldon, Medtronic
Micra™ VR experience sharing – Patient Selection
Myung-Jin Cha, Seoul National University Hospital
Micra™ VR experience sharing – Procedure Tips
Ju Youn Kim, School of Medicine, Sungkyunkwan University

ORAL 6 (CIED, VT, SCD & GENETICS)
12:00-13:00 | ROOM 6 | ENG

CHAIR | Sung-Hwan Kim, College of Medicine, The Catholic University of Korea

PRESENTER | Effects of Radiofrequency Catheter Ablation on Right Ventricular Function in Patients with Premature Ventricular Complex Originating from Right Ventricular Outflow Tract
Jae-Sun Uhm, Severance Hospital
Is the Apical Hypertrophic Cardiomyopathy Benign in Terms of Sudden Cardiac Death Indeed?
Jeongduk Seo, Gachon University Gill Medical Center
Obesity Is Indirectly Associated with Sudden Cardiac Death through Various Confounders
Joo Hee Jeong, Korea University Anam Hospital
An Analysis of Baseline Characteristics and a Short-Term Device Interrogation Data in the DEDICATES Study
Yiye Bin Gwag, Samsung Changwon Hospital
SMALL Details Make BIG Difference
Wei Shen Chee, Serdang General Hospital, Malaysia

ORAL 7 (AF)
12:00-13:00 | ROOM 7 | ENG

CHAIR | Hee Tae Yu, Yonsei University College of Medicine

PRESENTER | Early Rhythm Control Therapy for Atrial Fibrillation in Low-Risk Patients Not Eligible for EAST-AFNET 4
Daehoon Kim, Yonsei University College of Medicine
Effect of Sodium-Glucose Cotransporter 2 Inhibitors on Major Adverse Cardiovascular Events and Hospitalization for Heart Failure in Patients with Type 2 Diabetes Mellitus and Atrial Fibrillation
Chang Hee Kwon, Konkuk University Medical Center
Ablation and Antiarrhythmic Drug Effects for PITX2+/- Deficient Atrial Fibrillation: A Computational Modeling Study
Ze Jin, Yonsei University Health System, China
Cost-Effectiveness of Ablation and Antiarrhythmic Drug for Rhythm Control in Patients with Atrial Fibrillation
Min Kim, Chungbuk National University College of Medicine
Risk of New-Onset Atrial Fibrillation among Heart, Kidney and Liver Transplant Recipients: Therapeutic Strategy and Clinical Implications
Wei-Syun Hu, China Medical University Hospital, Taiwan
## PROGRAM DETAILS

### ORAL 8 (AF)  
**12:00-13:00 | ROOM 8 | ENG**

**CHAIR**  
Hong Euy Lim, College of Medicine, Hallym University

**PRESENTER**

- **Fish Oil Supplements Increase Atrial Fibrillation Risk in Healthy Individuals: A Population-Based Cohort Study and Mendelian Randomization Analysis**  
  Tae-Min Rhee, Seoul National University Hospital

- **Pathophysioologic Characteristics and the Outcomes of Atrial Fibrillation Catheter Ablation in Patients with Hypertrophic Cardiomyopathy**  
  Jae-Hyuk Lee, Myongji Hospital

- **Higher Recurrence after Radiofrequency Catheter Ablation in Young Atrial Fibrillation Patients: Different Predictors and Impact of Substrate Modification**  
  Hye-Jeong Ahn, Seoul National University Hospital

- **Blunted Atrial Reverse Remodeling a Year after Catheter Ablation for Atrial Fibrillation and Their Long-Term Rhythm Outcome**  
  Moon Hyun Kim, Yonsei University College of Medicine

- **Effects of Early Recurrence and Extra-PV Triggers on Long-Term Recurrence after Catheter Ablation for Atrial Fibrillation**  
  Yoon Jung Park, Kyungpook National University Hospital

### VENTRICULAR TACHYCARDIA 5: VT STORM  
**13:15-14:45 | ROOM 1 | ENG**

**CHAIR**  
Gi-Byoung Nam, University of Ulsan College of Medicine  
Jin-Kyu Park, Hanyang University College of Medicine

**SPEAKER**

- **Ischemic VF Ablation**  
  Akihiko Nogami, University of Tsukuba, Japan

- **Beat-To-Beat ECG Morphological Variation and Ventricular Arrhythmia during Hypothermia in Isolated Rabbit Hearts**  
  Yu-Cheng Hsieh, Taichung Veterans General Hospital, Taiwan

- **General Management of VT Storm**  
  Jin-Kyu Park, Hanyang University College of Medicine

- **Catheter Ablation in VT Storm**  
  Kyoung-Min Park, School of Medicine, Sungkyunkwan University

### CIED 7: MONITORING OF CIED AND OTHER  
**13:15-14:45 | ROOM 2 | ENG**

**CHAIR**  
Choong Hwan Kwak, Gyeongsang National University College of Medicine  
Jung Hoon Sung, CHA University

**SPEAKER**

- **Should We Do His Bundle Pacing with ICD Lead**  
  Kieu Ngoc Dung, Cho Ray Hospital, Vietnam

- **Remote Monitoring Management: Guide to Efficiency and Value**  
  Youmi Hwang, College of Medicine, The Catholic University of Korea

- **Utility of Remote Monitoring of Implantable Cardiac Devices during COVID-19 Pandemic**  
  Jumsuk Ko, Wonkwang University School of Medicine

- **Digital Technology to Improve Heart Failure Management of Patients with an Implanted Cardiac Device**  
  Chang Hee Kwon, Konkuk University Professional Graduate School of Medicine

- **Result of Korean ILR Registry**  
  Ju Youn Kim, School of Medicine, Sungkyunkwan University

### ALLIED PROFESSIONAL 2: CARDIOVASCULAR IMPLANTABLE ELECTRONIC DEVICES & SPECIAL SESSION  
**13:15-14:45 | ROOM 3 | KOR**

**CHAIR**  
Soyoung Park, Seoul National University Hospital  
Sungho Moon, Asan Medical Center

**SPEAKER**

- **Wireless Device Pacing**  
  Yun Young Choi, Korea University College of Medicine

- **Anatomical Information for Normal Conduction System Pacing**  
  Daehoon Kim, Yonsei University College of Medicine

- **Tips and Tricks for Lead Placement of Left Bundle Branch Pacing**  
  Joon Kim, Samsung Medical Center

- **Lead Extraction in His-Purkinje System Pacing**  
  Min Soo Cho, University of Ulsan College of Medicine

- **A Case Based Approach to Pacemaker & ICDs**  
  ChurJa Yoo, Chonbuk National University Hospital
PROGRAM DETAILS

MR EDUCATION 13:15-14:45 | ROOM 4 | KOR

CHAIR | Myungchul Hyun, Kyungpook National University School of Medicine
Byung-Chun Jung, Daegu Fatima Hospital

SPEAKER
- Sung Ho Lee, School of Medicine, Sungkyunkwan University
- WooSeok Lee, Yeosu Jeil Hospital
- Sung Hwa Choi, Yonsei University Health System
- Hee-Sun Mun, Yonsei University College of Medicine
- Kyeongmin Byeon, Chung-Ang University College of Medicine

ATRIAL FIBRILLATION 12: ABLATION AND OTHERS 13:15-14:45 | ROOM 6 | ENG

CHAIR | June Namgung, Inje University College of Medicine
Doosang Kim, Veterans Health Service Medical Center

SPEAKER
- Left Atrial Appendage Ridge Is a Critical Substrate in Maintenance of Atrial Reentrant Tachycardia in Patients with Atrial Fibrillation
  - Ming-Hsiung Hsieh, Wan Fang Hospital, Taipei Medical University, Taiwan, Taiwan
- Coronary Sinus and PLSVC as Non-PV Target in AF Ablation
  - Yun Gi Kim, Korea University College of Medicine
- Targeting Atrial Fibrosis and Non-PV Trigger in Persistent AF Ablation
  - Seung-Young Noh, Korea University College of Medicine
- How to Perform Mitral Isthmus Ablation Effectively: RF Energy and Alcohol
  - Jun Kim, University of Ulsan College of Medicine
- 15-Year Follow-up Results of MCG Map-Guide AF Surgery in Structural Heart Disease and Long-Standing Persistent AF
  - Doosang Kim, Veterans Health Service Medical Center

ORAL 9 (AF) 13:15-14:45 | ROOM 5 | ENG

CHAIR | Kihong Lee, Chonnam National University Medical School

PRESENTER
- Associations of Obesity with Incident Atrial Fibrillation in Korea and the United Kingdom: Patient-Level Comparisons of the Korean National Health Insurance Service-Health Screening (NHIS-HealS) Cohort and UK Biobank
- Predictors of Stroke or Systemic Embolism in Patients with Non-valvular Atrial Fibrillation with CHA2DS2-VASc Score of 0
  - Yoon Jung Park, Kyungpook National University Hospital
- Clinical Implication of an Impaired Fasting Glucose and Prehypertension Related to New Onset Atrial Fibrillation: Two Cohort Studies
  - Juntai Kim, Dankook University Hospital
- Increased Risk of Incident Atrial Fibrillation in Young Adults with Mental Health Disorders: A Nationwide Population-Based Study
  - Hyun Jin Ahn, Seoul National University Hospital
- Prevalence and Characteristics of Atrial Tachycardia from Noncoronary Aortic Cusp during Atrial Fibrillation Catheter Ablation
  - Myung-Jin Cha, Seoul National University Hospital

CROSS SPECIALTY 3: SURGEON 13:15-14:45 | ROOM 7 | ENG

CHAIR | YoungKeun On, School of Medicine, Sungkyunkwan University
Seung Hyun Lee, Yonsei University College of Medicine

SPEAKER
- Conduction Abnormalities after TAVR
  - Sirin Apyayasawat, Ramathibodi Hospital of Mahidol University, Thailand
- Scar-Related VT Mapping/Ablation
  - Akiko Ueda, Kyorin University Hospital, Japan
- Tips of Mitral Isthmus Ablation
  - Seiji Takatsuki, Keio University School of Medicine, Japan
- Cardiac Rehabilitation in High-Risk Patients
  - Voeten Hoon, Tan Tock Seng Hospital, Singapore
- The Role of Left Atrial Wall Thickness(LAWT) as a Prognostic Factor for Recurrence of Atrial Fibrillation(AF) after Maze Operation
  - Won Kyung Pyo, Yonsei University College of Medicine
**PROGRAM DETAILS**

**JOINT SYMPOSIUM WITH OVERSEAS SOCIETY 2: SVT**

**INDUSTRY SESSION (PFIZER KOREA / BMS KOREA):**

- **2021 APHRS GUIDELINE FOR AF: CONSIDERATIONS FOR ASIAN PATIENTS**
  - CHAIR: Kee-Joon Choi, University of Ulsan College of Medicine
  - Seil Oh, Seoul National University College of Medicine
  - SPEAKER: Approach to Stroke Prevention & Treatment with NOAC in Asian AF patients
  - Tze-Fan Chao, Taipei Veterans General Hospital, Taiwan
  - Stroke Prevention in Special Patient Groups with AF
  - Eue-Keun Choi, Seoul National University College of Medicine

- **ATRIAL FIBRILLATION 13: AF ABLATION USING BALLOON AND RF TECHNOLOGY**
  - CHAIR: Kee-Joon Choi, University of Ulsan College of Medicine
  - Seil Oh, Seoul National University College of Medicine
  - SPEAKER: Clinical Experience of RF Balloon (Helioscat)
  - Kyoung-Ryu Julian Chun, CCB Frankfurt, Germany
  - Anatomical Considerations for Effective Cryoballoon Ablation of AF
  - Hee Tae Yu, Yonsei University College of Medicine
  - Cryoablation as First-Line Therapy in Paroxysmal AF
  - Jaemin Shim, Korea University College of Medicine
  - Role of Cryoablation in Persistent AF: How Enough Is PVAI Only with Cryoablation?
  - Eue-Keun Choi, Seoul National University College of Medicine
  - How to Perform Fluoroless Cryoablation
  - Hong Euy Lim, College of Medicine, Hallym University

**INDUSTRY SESSION (SANOFI-AVENTIS KOREA):**

- **THE IMPACT OF BALANCED RHYTHM CONTROL ON ATRIAL FIBRILLATION MANAGEMENT**
  - CHAIR & SPEAKER: The Impact of Balanced Rhythm Control on Atrial Fibrillation Management
  - In-Soo Kim, Yonsei University College of Medicine

**EKG EDUCATIONAL COURSE 2**

**CHAIR:** Sangjin Han, Hallym University Sacred Heart Hospital
- Joong-Wha Chung, Chosun University College of Medicine

**SPEAKER:**
- Narrow QRS Tachycardia
  - Hyoung Sun Cho, Dongdu Fatima Hospital
- Wide QRS Tachycardia
  - Jinhee Choi, Pusan National University School of Medicine
- EKG for Primary Physician (Atrial Fibrillation and Others)
  - Minsoo Kim, Dongbong Hospital
- EKG Related with Sudden Cardiac Death (Channelopathy)
  - Young-Ah Park, Inje University College of Medicine

**SPEAKER:**
- Narrow QRS Tachycardia
  - Hyoung Sun Cho, Dongdu Fatima Hospital
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  - Jinhee Choi, Pusan National University School of Medicine
- EKG for Primary Physician (Atrial Fibrillation and Others)
  - Minsoo Kim, Dongbong Hospital
- EKG Related with Sudden Cardiac Death (Channelopathy)
  - Young-Ah Park, Inje University College of Medicine
PROGRAM DETAILS

CIED 8:
CARDIAC PHYSIOLOGICAL PACING  15:00-16:30  |  ROOM 3  |  ENG

CHAIR  
Sang Weon Park, Bucheon Sejong Hospital  
Seung-Jung Park, School of Medicine, Sungkyunkwan University

SPARK  
Sang Weon Park, Bucheon Sejong Hospital  
Seung-Jung Park, School of Medicine, Sungkyunkwan University

SPEAKER  
Tools and Techniques of Left Bundle Area Pacing  
Hung Fat Tse, The University of Hong Kong, Hong Kong

His-Purkinje or Left Bundle Pacing for Patients with Indication of CRT  
Toshiaki Sato, Kyorin University, Japan

What Is Physiologic Pacing?; Physiological PACing: Current and Future Directions  
Jung Myung Lee, School of Medicine, Kyung Hee University

CIED after AV Junction Ablation: His Bundle or Left Bundle Branch Pacing vs. CRT?  
Young Jun Park, Yonsei University Wonju College of Medicine

How to Elevate the Success Rate of Selective LBBAP  
Tae-Hoon Kim, Yonsei University College of Medicine

Follow-up after HBP and LBBAP Implant  
Hye Bin Gwag, School of Medicine, Sungkyunkwan University

SCD 3:
NOVEL INSIGHTS INTO SUDDEN CARDIAC DEATH:  FROM BASIC TO REAL-WORLD  15:00-16:30  |  ROOM 4  |  ENG

CHAIR  
YoungKeun On, School of Medicine, Sungkyunkwan University  
Jong-Il Choi, Korea University College of Medicine

SPEAKER  
Genetics of Brugada Syndrome  
Connie Bezzina, Amsterdam UMC, Netherlands

Sudden Cardiac Death in the Young and Athletes  
Jacob Teitl-Hansen, Copenhagen University Hospital, Denmark

Risk Stratification in Brugada Syndrome: Insights from Asia and Opportunities for International Collaborations  
Gary Tse, Tianjin Medical University, China

From Genetics to Treatment in Real Practices of Brugada Syndrome  
NamSik Yoon, Chonnam National University Medical School

Secondary Causes of ECG Related to Sudden Cardiac Death  
Myung Hwan Bae, Kyungpook National University School of Medicine

Short QT Syndrome  
Jong Sung Park, Dong-A University College of Medicine

ORAL 10 (OTHERS)  15:00-16:30  |  ROOM 5  |  ENG

CHAIR  
Jin-Kyu Park, Hanyang University College of Medicine

PRESENTER  
The Arrhythmic Events and Short-Term Cardiovascular Outcomes in Patients Hospitalized with COVID-19 Infection in Taiwan: A Single Center Experience  
Ming-Hsiung Hsieh, Wan Fang Hospital, Taipei Medical University, Taiwan

Regular Coffee Consumption Is Associated with a Lower Incidence of Cardiac Arrhythmias: Findings from the UK Biobank Cohort Study  
David Chieng, Alfred Health, Australia

An Artificial Intelligence Algorithm with 24-Hour Holter Monitoring for the Identification of Occult Atrial Fibrillation during Sinus Rhythm  
Tae Wan Chung, Samsung Medical Center (Samsung Seoul Hospital)

Timing of Critical Ismmus and Usefulness of Activation Mapping with Window of Interest from End to End of P Wave in Complex Scar-Related Atrial Tachycardias  
Chang Hee Kwon, Konkuk University Medical Center

Feasibility and Usefulness of the Single-Lead Wearable ECG Monitoring during the Endurance Exercise in Athletes  
Yoo Ri Kim, Chonnam National University Hospital

Relationship between Heart Rate and Anxiety: A Population-Based Cross-Section Study in Korea  
Han Joon Bae, Daegu Catholic University Medical Center

PSVT 3:
GENERAL REVIEW OF PSVT  15:00-16:30  |  ROOM 6  |  ENG

CHAIR  
Hwan Cheol Park, Hanyang University College of Medicine  
Sung-Hwan Kim, College of Medicine, The Catholic University of Korea

SPEAKER  
Variation of Slow Pathway  
Yoshiaki Kaneko, Gunma University Graduate School of Medicine, Japan

Mapping of Atrial Tachycardia  
Shinsuke Miyazaki, Tokyo Medical and Dental University, Japan

Differentiation of SVTs  
Young Choi, College of Medicine, The Catholic University of Korea

Verapamil Sensitive Atrial Tachycardia  
Sung-Hwan Kim, College of Medicine, The Catholic University of Korea
PROGRAM DETAILS

ATRIAL FIBRILLATION 14:
STROKE AND BLEEDING
15:00-16:30 | ROOM 7 | ENG

CHAIR | Gyo-Seung Hwang, Ajou University School of Medicine
Daehyeok Kim, Inha University School of Medicine

SPEAKER | Stroke Prevention in Atrial Fibrillation: State of the Art
Gregory Lip, University of Liverpool, United Kingdom
Management of Atrial Fibrillation: Easy as ABC
Gregory Lip, University of Liverpool, United Kingdom
NOAC after Fatal Bleeding
Dahee Shin, Design Hospital
Is ILR Beneficial for the Risk Reduction of Ischemic Stroke in Silent AF?
Sung Ho Lee, School of Medicine, Sungkyunkwan University
Continuous Monitoring for the Risk Reduction of Ischemic Stroke in Silent AF
Sung Soo Kim, Chosun University College of Medicine

INDUSTRY SESSION (YUHAN):
THE LATEST TRENDS IN THE DIAGNOSIS AND TREATMENT
OF ARRHYTHMIA
15:00-16:00 | ROOM 9 | KOR

CHAIR | Jung Hoon Sung, CHA University

SPEAKER | Research Trends of Global Wearable ECG Solutions.
Junbeom Park, Ewha Womans University School of Medicine
Update of Practical Guideline for NOAC.
Pil-sung Yang, CHA University

ATRIAL FIBRILLATION 15:
OTHERS
15:00-16:30 | ROOM 8 | ENG

CHAIR | Jun Hyung Kim, Chungnam National University College of Medicine
Jin-Seok Kim, Korea University College of Medicine

SPEAKER | Relationship between Circadian Clock Gene Expression and Atrial Fibrillation
Yung-Lung Chen, Kaohsiung Chang Gung Memorial Hospital, Taiwan
Computational Tools to Assess Personalized Stroke Risk for Atrial Fibrillation Patients
Nikhil Palwal, University College London, United Kingdom
Importance of Risk Factor Management of Atrial Fibrillation for Early Rhythm Control
Yong-Giun Kim, University of Ulsan College of Medicine
Additional Cartofinder Guided Ablation beyond PVI
Hyoung-Seob Park, Keimyung University School of Medicine
Comparison of Left Atrial Appendage Closure vs. NOAC
Kiwon Hwang, Pusan National University School of Medicine
Memo