FINAL PROGRAM
January 23-27, 2017
Hapuna Beach Prince Hotel
Kohala Coast, Big Island, HI

Course Director
Thomas Ryan, MD, FASE
Past President, ASE
The Ohio State University
Columbus, OH

Co-Director
Neil J. Weissman, MD, FASE
Past President, ASE
MedStar Health Research Institute
Washington, DC
Why Guess When You Can Know?  
Contrast Matters

Join Us For A Free Continuing Education Lunch Symposium

Tuesday, January 24, 2017  
12:00 PM – 1:15 PM

12:00 PM  Welcome and Introductions  
Anthony N. DeMaria, MD, FASE, FACC  
Past President, ASE  
University of California San Diego, La Jolla, CA

12:05 PM  Contrast Matters - What Are the Options?  
Jonathan R. Lindner, MD, FASE  
Oregon Health & Science University, Portland, OR

12:25 PM  Becoming a Champion of Contrast-enhanced (CE) Echocardiography in a Busy Echo Lab  
James D. Thomas, MD, FASE, FACC  
Past President, ASE  
Northwestern Memorial Hospital, Chicago, IL

12:45 PM  Determining Factors for CE-echocardiography Utilization - Case Presentations  
Anthony N. DeMaria, MD, FASE, FACC

1:05 PM  Panel Discussion

1:15 PM  Meeting Concludes

Educational Objectives
After completing this activity, participants will be able to:

• Describe the wide array of clinical applications for CE-echocardiography in the diagnosis, classification, and monitoring of cardiovascular disease

• Discuss current evidence-based recommendations and clinical guidelines for CE-echocardiography

• Review CE-echocardiography protocols and techniques that improve workflow in the echocardiography lab

Approved by the Society of Diagnostic Medical Sonography (SDMS) for 1.0 SDMS CME Credit.  
1.0 AMA PRA Category 1 Credit™ for physicians is pending.

This activity is not a part of the official ASE 27th Annual Echo Hawaii, as planned by the Program Committee, or in any way endorsed or affiliated with ASE.
Welcome Message

On behalf of the American Society of Echocardiography, welcome to the Big Island! Whether you are a regular attendee or a first-time visitor, we are certain you will enjoy the experience and come away a better echocardiographer and clinician. Throughout this five-day meeting, you will learn state-of-the-art echocardiography and how it is applied to clinical decision-making. The international faculty for this meeting are world-class in terms of expertise and teaching prowess. We will start the day early and pack every morning with lectures, cases, and interactive sessions. Mid-afternoons will be free to enjoy the island with friends and family. On Monday and Wednesday, we will reconvene in the late afternoon for workshops, cases, and a poster session. But rest assured, we will always finish in time to enjoy the spectacular Hawaiian sunset!

Of the many special events you won’t want to miss are the Welcome Reception on Monday evening featuring unique local cuisine, libations, and music, and Wednesday’s Sundown Reception and Poster Session featuring original echo research. These events provide an opportunity to interact with faculty, colleagues, and exhibitors in a casual setting.

Echo Hawaii is much more than education, after all you are in Hawaii! The Big Island has something for everyone. Enjoy the waves at the world-class Hapuna Beach, or try snorkeling or scuba diving along the unique volcanic reefs. You may even want to head down the coast for surfing lessons irrespective of your level of experience. Explore the rain forest just 20 miles north of the Hapuna Beach Prince Hotel.

For the more adventurous, take a walk on the wild side in Volcano National Park where you can hike right up to rivers of lava (with appropriate shoes of course). If you are astronomically inclined, be sure to tour the top of The Big Island’s 14,000-foot Mauna Kea volcano for an evening of unmatched stargazing. Not feeling so adventurous? You can always just lay on the beach or by the pool and be glad you’re not shoveling snow! The resort features 32 ocean front acres! On the Kohala Coast, there is sunshine almost all year round with an average temperature of 78 degrees in January. In addition, Echo Hawaii takes place during peak humpback whale watching season, something you won’t want to miss. You will also find dozens of excellent restaurants close-by for every budget and taste.

Enjoy your time and thank you for your participation at Echo Hawaii 2017!

Aloha!

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MedStar Health Research Institute
Washington, DC
Invited Faculty

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Columbus, OH

Co-Director
Neil J. Weissman, MD, FASE
Past President, ASE
MedStar Health Research Institute
Washington, DC

Invited Faculty
William F. Armstrong, MD
University of Michigan
Ann Arbor, MI

Federico M. Asch, MD, FASE
MedStar Washington Hospital
Washington, DC

Anthony N. DeMaria, MD, FASE
Past President, ASE
University of California San Diego
San Diego, CA

Hisham Dokainish, MD, FASE
McMaster University
Hamilton, Ontario, Canada

Nowell Fine, MD, FASE
University of Calgary
Calgary, Alberta, Canada

Jonathan R. Lindner, MD, FASE
Oregon Health Science University
Portland, OR

Jane E. Marshall, BS, RDCTS, FASE
Massachusetts General Hospital
Boston, MA

Satoshi Nakatani, MD, PhD
Osaka University
Osaka, Japan

Jae K. Oh, MD, FASE
Mayo Clinic
Rochester, MN

David A. Orsinelli, MD, FASE
The Ohio State University
Columbus, OH

Maryellen H. Orsinelli, RN, RDCTS, FASE
The Ohio State University
Columbus, OH

Sung-Ji Park, MD, PhD
Samsung Medical Center
Seoul Republic of Korea

Michael H. Picard, MD, FASE
Past President, ASE
Massachusetts General Hospital
Boston, MA

David Prior, MBBS, PhD, FASE
St. Vincent’s Hospital
Melbourne, Victoria, Australia

Vera H. Rigolin, MD, FASE
President Elect, ASE
Northwestern Medicine
Chicago, IL

Lawrence G. Rudski, MD, FASE
Jewish General Hospital
Montreal, Quebec, Canada

Sangeeta B. Shah, MD, FASE
Ochsner Heart and Vascular Institute
New Orleans, LA

Madhav Swaminathan, MD, FASE
Duke University Medical Center
Durham, NC

James D. Thomas, MD, FASE
Past President, ASE
Northwestern Medicine
Chicago, IL

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Overview of Echo Hawaii

Echo Hawaii presents the latest information on established and emerging cardiovascular ultrasound technologies. Expert U.S. and international faculty discuss state-of-the-art technologies with a particular focus on how they can be effectively applied in the clinical setting. Case-based approaches are used to discuss new and established applications of echocardiography for diagnosis and guiding management in patients with a broad array of cardiovascular conditions. Topics include: advanced assessment of systolic and diastolic function, 3D/4D imaging, adult congenital heart disease and contemporary approaches to valve disease, guidance of interventional procedures, contrast echocardiography, ischemic heart disease and aortic pathology. When appropriate, multimodality imaging is also covered. Special sessions include workshops on perioperative and critical care and 3D echocardiography.

Target Audience

This course is designed for adult cardiologists, critical care specialists, cardiovascular surgeons, cardiovascular anesthesiologists, fellows in training, cardiovascular sonographers, internists, and intensive care specialists with special interest in echocardiography.

Learning Objectives

Upon completion of this program, participants will be better able to:

- Integrate echocardiographic information in clinical decision making.
- Assess ventricular and valvular function using Doppler hemodynamics.
- Describe Doppler assessment of diastolic function/dysfunction.
- Explain new advances in the echocardiographic assessment of left and right ventricular function.
- Integrate echocardiographic assessment of cardiomyopathies and systemic diseases in patient management.
- Define clinical uses of TEE and 3D echocardiography.
- Recognize how echocardiography is used to help manage patients with ischemic heart disease.
- Recognize the role of echo contrast and be able to incorporate its use in the echo laboratory.
- Integrate echo information in the management of complex valvular heart disease.
- Explain the role of echocardiography in the perioperative and critical care environment.

Disclaimer

The information provided during this CME activity is for continuing education purposes only and is not meant to substitute for the independent medical judgment of a healthcare provider relative to diagnostic and treatment options of a specific patient’s condition.

Accreditation and Designation

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Society of Echocardiography and the American Society of Echocardiography Education and Research Foundation. The American Society of Echocardiography is accredited by the ACCME to provide continuing medical education for physicians.

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The American Society of Echocardiography designates this live activity for a maximum of 24.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity. Successful completion of this CME activity enables the participant to earn up to 24.75 MOC points in the American Board of Internal Medicine’s (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is ASE’s responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

Daily breakdown of CME credits:

- Monday, January 23 = 6.25 hours
- Tuesday, January 24 = 4.75 hours
- Wednesday, January 25 = 5.25 hours
- Thursday, January 26 = 3.75 hours
- Friday, January 27 = 4.75 hours

The ACCME and the European Board of Accreditation in Cardiology (EBAC) recognize each other’s accreditation systems as substantially equivalent. To obtain EBAC credit for participation in this activity, submit evidence of participation directly to EBAC (www.ebac-cme.org). The European Union of Medical Specialists (UEMS)-European Accreditation Council for Continuing Medical Education (EACCME) has an agreement of mutual recognition of continuing medical education (CME) credit with the American Medical Association (AMA). European physicians interested in converting AMA PRA Category 1 Credit™ into European CME credit (ECMEC) should contact the UEMS (www.uems.eu).

ARDMS, CCI, and Sonography Canada recognize ASE’s certificates and have agreed to honor the credit hours toward their registry requirements for sonographers.

All or a portion of this educational activity may meet the CME requirement for IAC Echocardiography accreditation.

This activity is eligible for Section 1 credits in the Royal College of Physicians and Surgeons of Canada’s Maintenance of Certification (MOC) Program. Participants must log into MAINPORT to claim this activity.
Disclosure

ASE is committed to ensuring that its educational mission and all educational programs are not influenced by the special interests of any corporation or individual, and its mandate is to retain only those speakers whose financial interests can be effectively resolved to maintain the goals and educational integrity of the program. While a monetary or professional affiliation with a corporation does not necessarily influence a speaker’s presentation, the Essential Areas and Policies of the ACCME require that any relationships that could possibly conflict with the educational value of the program be resolved prior to the educational session and disclosed to the audience. In accordance with these policies, ASE implemented mechanisms prior to the planning and implementation of this CME activity to identify and resolve conflicts of interest for all individuals in a position to control content. Disclosure information is referenced and can be found beginning on page 15 of this program.

Commercial Support Disclosure Statement

Educational Grants: This activity is supported in part by unrestricted educational grants from Actelion, Lantheus, and Medtronic.

How to Obtain Credit

To claim your CME for Echo Hawaii, please follow the steps below using your Mozilla Firefox, Google Chrome, or Safari browser. Internet Explorer will not work. The deadline to claim credit is February 28, 2017.

1. **ASE Members:** Go to ASEcho.org and log on to the Member Portal with your ASE member e-mail and password. If you forget your password, simply click “Retrieve” under the login.
   a. Click on ASEUniversity and CME Credits (This will take you directly to your ASEUniversity member profile).

2. **Nonmembers:** Go to ASEUniversity.org and create a new account or log into your existing ASEUniversity account.

3. Once logged into ASEUniversity, the top of the page should say, “Hello, ____. Click Your Account.

4. Under Your Account, click on Add Access Code and enter the code “HAWAII2017”

5. Verify your registration information. Please be sure to use the same information that you used to register for the event.

6. Once verified, click Take Evaluation to claim your CME credit. CME credits are not earned until the entire evaluation has been completed.

7. Your certificate will be available for immediate download and can also be found under Your Account in the CE Transcript.
Attendee Information & Regulations

Registration Location and Hours

The ASE Registration desk is located outside the Hapuna Ballroom. ASE staff will be happy to renew your ASE membership or discuss the wide variety of educational products available to you. ASE Members receive a significant discount on DVD’s, books, and more. The Registration desk will be staffed during the following hours:

Sunday, January 22, 2017
4:00 – 6:00 PM

Monday, January 23, 2017
6:30 AM – 12:00 PM

Tuesday, January 24, 2017, through Friday, January 27, 2017, the registration desk will be open during all session hours.

Food Functions

ASE will provide breakfast and coffee breaks for registered attendees in the Hau/Lehua room from 6:30 AM until the start of the session each morning.

ASE will provide a box lunch and an afternoon coffee break for registered attendees on Tuesday, January 24.

Please join us for a Welcome Reception on Monday evening 6:30 – 7:30 PM and enjoy unique local cuisine, refreshments, and music. ASE will also hold a Sunset Reception on Wednesday, January 25 at 5:00 PM featuring original echo research.

Please refer to the program schedule for the times of the daily coffee breaks. The Hapuna Beach Prince Hotel offers guests a variety of dining options along with Echo Hawaii attendee discounts. Please see page 8 for more details.

Internet Access

Attendees of the course receive complimentary internet in their guest rooms at the Hapuna Beach Prince Hotel. There is WiFi access in the meeting room.

Business Center

The Hapuna's Ricoh Business Center, located on the lobby level and directly across from the gift shop, is open 9:00 AM – 5:00 PM daily. It offers self-service computers, printers, fax, copier, shipping services and more (price per printed black and white documents is $0.15 each). For more information and pricing, please contact the Ricoh Business Center directly by phone 808-880-3470 or email at BusCtr@maunakearesort.net.

Cell Phone Use

Cell phones should not be used in the educational sessions. For consideration of faculty and other attendees, please remember to turn your cell phones and/or other electronic devices off or set to vibrate mode.

Safety

Audience seating is on a first-come, first-served basis. According to fire code, a session must be closed if the room fills to capacity. Inappropriate behavior or undesirable conduct, including, but not limited to, verbal or physical abuse, whether threatened or performed, will not be permitted or tolerated. You must wear your name badge at all times when attending the session or events.

Photography/AV Policy

No person may record any portion of the 27th Annual Echo Hawaii, either by video, still or digital photography, audio or any other recording or reproduction mechanism. This includes recording of presentations and supporting audio visual materials and of poster presentations and supporting poster materials.

Taking photos of, or recording the content of, presentation slides is also prohibited and is considered intellectual piracy. Attendees who ignore this policy will be asked to leave the educational session and are at risk of losing their name badge and attendance privileges. Photographs taken for the purpose of sharing on social media is allowed, but should avoid showing presentation slides. Please use #EchoHawaii when posting on social media.

ASE reserves the rights to all recordings or reproductions at ASE meetings. Please be aware that during the 27th Annual Echo Hawaii, attendees, vendors, guests and exhibitors may be photographed or videotaped by ASE staff capturing the event. Some of these photographs or videos may be displayed by ASE in future publication or other materials. By virtue of your attendance, you agree to allow ASE to use photographs of you in its promotional materials.

Children

ASE does not offer childcare services. Due to limited seating capacity and the highly technical nature of this program, children are not allowed to attend the educational session. For their safety, children must be accompanied by an adult at all times when attending the course events. If needed, babysitting services are available. Information is available at the Hapuna Beach Prince Hotel’s concierge desk.
The Big Island, Hawaii

You will have some free time to enjoy the many sights and activities available on the Big Island such as snorkeling, whale watching, visiting the Volcano National Park, or driving to the summit of the tallest mountain in the world when measured from its oceanic base, Mauna Kea. The Hapuna Beach Prince Hotel features a beautiful, white sand beach for your enjoyment and relaxation as well. This has been rated the best beach in America by Conde-Nast. Visit the hotel concierge to see what this hotel and island have to offer.

Hapuna Beach Prince Hotel

The Hapuna Beach Prince Hotel is happy to extend these special discounts for all ASE attendees:

- Buy 1 entrée and receive the 2nd at 50% off in Mauna Kea Hotel restaurants, including the Hau Tree, Manta Restaurant and Number 3 Restaurants; must present attendee name badge prior to ordering.
- Complimentary turndown service.
- Complimentary self-parking.
- Complimentary access to the Hapuna Beach Prince Golf Clubhouse’s state-of-the-art fitness center.

To receive these discounted offers, please identify yourself as an ASE Echo Hawaii attendee.

Hapuna Beach Prince Hotel Dining Options

- **Coast Grille, Poke & Oyster Bar** serves the freshest seafood and guests enjoy beautiful sweeping views of Hapuna Beach. They offer the island’s only oyster bar and design-your-own-Poke menu. These options complement a menu of fresh seafood and natural steak and delicious, shareable plates such as the Oysters Rockefeller Six Pack, Crab Cakes or the Ahi Poke Nachos. The “Big Island Locavore” is a monthly prix fixe menu inspired by a Big Island seasonal local ingredient. Meet up with friends for a drink or casual dinner in the comfortable Coast Grille Lounge or dine on the Coast Grille Terrace, which offers spectacular views and the perfect place to watch the sun set beyond the ocean’s azure horizon. Open daily 6:00 – 9:00 PM. Cocktails and lighter dining 9:00 – 10:00 PM. Evening Casual Attire.
- **Café Hapuna**: Located in the lobby, the Café Hapuna offers made-to-order or ready-to-go sandwiches, specialty coffee drinks, breakfast sweets, calzones, pizza, gourmet cookies, cupcakes and a salad bar where you can build-your-own salad. Open daily 6:00 – 9:00 AM. Casual Resort Attire.
- **Ocean Terrace**: Overlooking Hapuna Beach and the blue Pacific, this casual open-air restaurant offers a thoughtful mix of healthy, creative items along with familiar favorites at the daily breakfast buffet and an extensive à la carte menu. Open daily 6:30 – 10:30 AM. Resort Attire.
- **Beach Bar**: Located poolside, the Beach Bar is open daily 5:00 – 8:00 PM. Casual Resort Attire.

Networking and Social Opportunities

**Welcome Reception:** ASE cordially invites you and your guests to the 27th Annual Echo Hawaii “Welcome Reception” on Monday evening, January 23, 2017, from 6:30 – 7:30 PM in the hotel courtyard, featuring Hawaiian hors d’oeuvres, beverages and local music. This casual reception welcomes you to paradise and offers you the perfect opportunity to meet faculty, friends and colleagues.

**Poster Session and Sunset Reception:** Attendees are invited to this year’s poster presentation of original research on Wednesday evening, January 25, 2017, from 5:00 – 6:00 PM, featuring hors d’oeuvres and beverages. Posters will be displayed in the meeting area on the balcony overlooking the Pacific Ocean. This reception gives the presenters the opportunity to briefly present the key findings of their work and allows for open discussion. Please refer to pages 11–12 for the Echo Hawaii 2017 poster finalists.

Download the ASE Live Courses app for Echo Hawaii information at your fingertips
## Schedule of Events

### Sunday, January 22, 2017

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>4:00 –</td>
<td>Registration</td>
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### Monday, January 23, 2017

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<td>Breakfast and Visit Exhibits</td>
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<td>Hau/Lehua Room</td>
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#### ECHO IN VALVE DISEASE

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>7:00 AM</td>
<td>Welcome</td>
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<tr>
<td></td>
<td>T. Ryan, N. Weissman</td>
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<tr>
<td>7:10 AM</td>
<td>Hemodynamics and General Principles</td>
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<td>F. Asch</td>
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<tr>
<td>7:30 AM</td>
<td>Aortic Stenosis: Going Beyond Gradient</td>
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<td>J. Thomas</td>
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<tr>
<td>7:50 AM</td>
<td>Valvular Regurgitation: Can We do Better Than Color Doppler?</td>
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<td>D. Prior</td>
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<td>8:10 AM</td>
<td>A Practical Approach to Prosthetic Valves</td>
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<td>S. Park</td>
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<td>8:30 AM</td>
<td>Percutaneous Approaches to Aortic and Mitral Valve Disease</td>
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<td>J. Thomas</td>
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<td>Constriction and Restriction</td>
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<td>J. Oh</td>
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<td>9:10 AM</td>
<td>Question and Answer</td>
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<td>Refreshment Break and Visit Exhibits</td>
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<td>9:50 AM</td>
<td>Rare and Exotic Causes of Valvular Heart Disease</td>
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<td>S. Park</td>
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<td>10:10 AM</td>
<td>Case Studies in Complex Endocarditis</td>
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<td>V. Rigolin</td>
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<tr>
<td>10:30 AM</td>
<td>The Forgotten Valves: Tricuspid and Pulmonic Valve Pathology</td>
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<td>L. Rudski</td>
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<td>10:50 AM</td>
<td>Incorporating Valve Guidelines into Clinical Practice</td>
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<td>J. Thomas</td>
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<td>11:10 AM</td>
<td>Complex Valve Cases</td>
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<td>N. Fine, D. Orsinelli, M. Orsinelli</td>
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<td>11:40 AM</td>
<td>Question and Answer</td>
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### Tuesday, January 24, 2017

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#### LEFT VENTRICULAR FUNCTION, CORONARY ARTERY DISEASE, AND CONTRAST

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>7:00 AM</td>
<td>Basic Physiology and New Approaches to Left Ventricular Function</td>
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<td></td>
<td>M. Picard</td>
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<tr>
<td>7:20 AM</td>
<td>Interventions in Adult Congenital Heart Disease: Role of Echo</td>
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<td></td>
<td>S. Shah</td>
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<td>7:40 AM</td>
<td>Basics of Contrast Echo</td>
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<td>M. Orsinelli</td>
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<td>8:00 AM</td>
<td>What You Should Know About Perfusion Imaging</td>
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<td>J. Lindner</td>
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<td>8:20 AM</td>
<td>Getting the Most Out of Stress Echo</td>
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<td>T. Ryan</td>
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<td>8:40 AM</td>
<td>Stress Echo Cases</td>
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<td>W. Armstrong</td>
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<td>9:00 AM</td>
<td>Question and Answer</td>
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<tr>
<td>9:40 AM</td>
<td>When Does 3D Echo Make a Difference?</td>
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<td>A. DeMaria</td>
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<tr>
<td>10:00 AM</td>
<td>Echo in Atrial Fibrillation (and Other Arrhythmias)</td>
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<td></td>
<td>M. Picard</td>
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<td>10:20 AM</td>
<td>Handheld Echo as an Extension of the Echo Lab</td>
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<td>A. DeMaria</td>
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<tr>
<td>10:40 AM</td>
<td>Point-of-Care Echo: NOT an Extension of the Echo Lab</td>
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<td>N. Weissman</td>
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<tr>
<td>11:00 AM</td>
<td>Difficult Cases in Coronary Artery Disease and Stress Echo</td>
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<td></td>
<td>D. Prior</td>
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<tr>
<td>11:20 AM</td>
<td>Question and Answer</td>
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### Wednesday, January 25, 2017

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#### PERIOPERATIVE AND CRITICAL CARE ECHO

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<tbody>
<tr>
<td>8:00 AM</td>
<td>Echo for the Assessment of Acute Chest Pain?</td>
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<td></td>
<td>H. Dokainish</td>
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<tr>
<td>8:25 AM</td>
<td>Coronary Artery Bypass Grafting: Monitoring Patients and Detecting Complications</td>
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<td></td>
<td>M. Swaminathan</td>
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<tr>
<td>Time</td>
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<tr>
<td>8:50 AM</td>
<td>Diseases of the Aorta</td>
</tr>
<tr>
<td>9:15 AM</td>
<td>Pulmonary Arterial Hypertension and Pulmonary Embolism: Role of Echo</td>
</tr>
<tr>
<td>9:40 AM</td>
<td>Intraoperative Echo: When to Go Back on Pump</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Question and Answer</td>
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<tr>
<td>10:20 AM</td>
<td>Refreshment Break and Visit Exhibits</td>
</tr>
<tr>
<td>10:40 AM</td>
<td>TAVR: When Things Go Wrong</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>Echo Emergencies</td>
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<tr>
<td>11:20 AM</td>
<td>The Patient with Shock</td>
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<tr>
<td>11:40 AM</td>
<td>Question and Answer</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>Adjourn</td>
</tr>
<tr>
<td>3:30 – 5:00 PM</td>
<td>Workshop: Perioperative and Critical Care Cases</td>
</tr>
<tr>
<td>5:00 – 6:00 PM</td>
<td>Poster Reception featuring heavy hors d’oeuvres and cocktails</td>
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<tr>
<td>6:30 AM</td>
<td>Registration</td>
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<tr>
<td>7:00 AM</td>
<td>Early Bird Cases</td>
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<tr>
<td>8:00 AM</td>
<td>The Basics of Systolic Function</td>
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<tr>
<td>8:20 AM</td>
<td>A Practical Approach to Diastole</td>
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<tr>
<td>8:40 AM</td>
<td>The Patient with Heart Failure: When to Echo?</td>
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<tr>
<td>9:00 AM</td>
<td>Hypertrophic Cardiomyopathy: Beyond Gradient and Wall Thickness</td>
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<tr>
<td>9:20 AM</td>
<td>Complications of Myocardial Infarction: Critical Role of Echo</td>
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<td>9:40 AM</td>
<td>Question and Answer</td>
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<tr>
<td>10:00 AM</td>
<td>Refreshment Break and Visit Exhibits</td>
</tr>
<tr>
<td>10:20 AM</td>
<td>Echo in Systemic Diseases: Sarcoïd, Amyloid, etc.</td>
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<tr>
<td>10:40 AM</td>
<td>Intraoperative Echo: Advanced Heart Failure and Ventricular Assist Devices</td>
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<tr>
<td>11:00 AM</td>
<td>Adult Congenital Heart Disease: What All Echocardiographers Should Know</td>
</tr>
<tr>
<td>11:20 AM</td>
<td>Cases in Cardiomyopathy and Heart Failure, Including Diastole</td>
</tr>
<tr>
<td>11:40 AM</td>
<td>Question and Answer</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>Adjourn</td>
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**FRIDAY, JANUARY 27, 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>6:30 AM</td>
<td>Registration</td>
<td>Outside Hapuna Ballroom</td>
</tr>
<tr>
<td>7:00 AM</td>
<td>Early Bird Cases</td>
<td>Hapuna Ballroom</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>Five Echo Diagnoses You Should Never Miss</td>
<td>W. Armstrong</td>
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<tr>
<td>8:20 AM</td>
<td>Masses: A Multimodality Approach</td>
<td>D. Orsinelli</td>
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<tr>
<td>8:40 AM</td>
<td>Future of Contrast Echo: The Bat Lecture</td>
<td>J. Lindner</td>
</tr>
<tr>
<td>9:00 AM</td>
<td>Cardio-Oncology From an Imaging Perspective</td>
<td>V. Rigolin</td>
</tr>
<tr>
<td>9:20 AM</td>
<td>Refreshment Break and Visit Exhibits</td>
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<tr>
<td>9:40 AM</td>
<td>Role of Stress Echo in Valvular Heart Disease</td>
<td>S. Nakatani</td>
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<tr>
<td>10:00 AM</td>
<td>Pericardial Disease and Tamponade</td>
<td>J. Oh</td>
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<tr>
<td>10:20 AM</td>
<td>Pregnancy and Heart Disease</td>
<td>S. Shah</td>
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<tr>
<td>10:40 AM</td>
<td>The Athlete’s Heart: Role of Echo, Including Screening</td>
<td>N. Weissman</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>Final Cases from the Faculty</td>
<td>All Faculty</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>Adjourn</td>
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**THURSDAY, JANUARY 26, 2017**

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<tr>
<th>Time</th>
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<td>6:30 AM</td>
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<td>Outside Hapuna Ballroom</td>
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<tr>
<td>7:00 AM</td>
<td>Early Bird Cases</td>
<td>Hapuna Ballroom</td>
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<tr>
<td>8:00 AM</td>
<td>The Basics of Systolic Function</td>
<td>V. Rigolin</td>
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<tr>
<td>8:20 AM</td>
<td>A Practical Approach to Diastole</td>
<td>J. Oh</td>
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<tr>
<td>8:40 AM</td>
<td>The Patient with Heart Failure: When to Echo?</td>
<td>A. DeMaria</td>
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<tr>
<td>9:00 AM</td>
<td>Hypertrophic Cardiomyopathy: Beyond Gradient and Wall Thickness</td>
<td>F. Asch</td>
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<tr>
<td>9:20 AM</td>
<td>Complications of Myocardial Infarction: Critical Role of Echo</td>
<td>S. Nakatani</td>
</tr>
<tr>
<td>9:40 AM</td>
<td>Question and Answer</td>
<td>All</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Refreshment Break and Visit Exhibits</td>
<td></td>
</tr>
<tr>
<td>10:20 AM</td>
<td>Echo in Systemic Diseases: Sarcoïd, Amyloid, etc.</td>
<td>D. Orsinelli</td>
</tr>
</tbody>
</table>
Sunset Reception & Poster Session
Wednesday, January 25, 2017
5:00 – 6:00 PM
Located in Hapuna Beach Prince Hotel Breezeway

P1-01: A Novel Practical Algorithm to Identify Chronic Severe Aortic Regurgitation Requiring Surgery
Darae Kim1, Chi Young Shim2, In-Jeong Cho3, Geu-Ru Hong1, Namsik Chung1, Sak Lee1, Byung-Chul Chang4, Jong-Won Ha1. 1Cardiology Division, Severance Cardiovascular Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea; 2Department of Thoracic and Cardiovascular Surgery, Yonsei University College of Medicine, Seoul, Republic of Korea. Presented by Darae Kim, MD

P1-02: Consideration of Clinical Risk Factors May Augment the Accuracy of Left Ventricular Global Longitudinal Strain Impairment in the Prediction of Cancer Therapeutics-related Cardiac Dysfunction
M. Wesley Milks1, Michael R. Veale2, Nishaki Mehta Oza3, Abidun Ishola1, Thomas Van Houten1, Vedat O. Yildiz4, Raquel Reinbolt6, Maryam Lustberg5, Sakima A. Smith1, David A. Orsinelli1. 1Division of Cardiovascular Medicine, Department of Internal Medicine, The Ohio State University Wexner Medical Center, Columbus, Ohio, United States of America; 2Mount Carmel Health System, Columbus, Ohio, United States of America; 3Heart & Vascular Center, Brigham and Women’s Hospital, Boston, Massachusetts, United States of America; 4Center for Biostatistics, The Ohio State University, Columbus, Ohio, United States of America; 5Division of Medical Oncology, Department of Internal Medicine, The Ohio State University Wexner Medical Center, Columbus, Ohio, United States of America. Presented by M. Wesley Milks, MD

P1-03: Prognostic Value of Electrocardiographic Parameters and Longitudinal Strain in Cardiac Amyloidosis
Hyun Sung Joh, Lee Ga Yeon, Jin-Oh Choi, Eun Seok Jeon. Division of Cardiology, Department of Medicine, Samsung Medical Center, Seoul, Republic of Korea. Presented by Eun Seok Jeon, MD, PhD

P1-04: Comparison of Left Ventricular Systolic Strain, Strain Rate, and Torsion/Twist between Normal and Left Ventricular Hypertrophic Patients
Sung Uk Kwon. Department of Internal Medicine, Vision 21 Cardiac and Vascular Center, Ilsan-Paik Hospital, Inje University College of Medicine, Goyang, Republic of Korea. Presented by Sung Uk Kwon, MD, PhD

P1-05: Left Ventricular Geometry Determines Prognosis and Reverse J-shaped Relation between Blood Pressure and Mortality in Ischemic Stroke Patients
Jun-Bean Park1, Hae-Young Lee1, Chan Soon Park1, Ji-Hyun Jung1, Yerim Kim2, Yeonjee E. Yoon1,3, Seung-Pyo Lee1, Hyung-Kwan Kim1, Yong-Jun Kim1, Goo-Young Cho1,3, Dae-Won Sohn1, and Seung-Hoon Lee4. 1Cardiovascular Center, Seoul National University Hospital, Seoul, Republic of Korea; 2Department of Neurology, Bucheon St. Mary’s Hospital, College of Medicine, The Catholic University of Korea, Gyeonggi-do, Republic of Korea; 3Cardiovascular Center, Seoul National University Bundang Hospital, Seongnam, Gyeonggi-do, Republic of Korea; 4Department of Neurology, Seoul National University College of Medicine, Seoul, Republic of Korea. Presented by Jun-Bean Park, MD, PhD

P1-06: Echo Evaluation for Chemotherapy Mediated Cardiomyopathy in Breast Cancer Patients
Bilal Ayach, Robinder Singh, Davinder Jassal. Section of Cardiology, Department of Internal Medicine, University of Manitoba, Winnipeg, Canada. Presented by Bilal Ayach, MD, PhD

P1-07: Reduction of Global Longitudinal Strain Correlates with Degree of Subendocardial Damage in a Murine Cardiomyopathy Model
Jana Grune1, Niklas Beyhoff2, Sarah Brix1, Robert Kloppeisch2, Anna Foryst-Ludwig1, Philipp Stawowy1, Fabian Knebel1, Ulrich Kintscher1. 1Institute of Pharmacology, Center for Cardiovascular Research, Charité – Universitaetsmedizin Berlin, Berlin, Germany and DZHK (German Centre for Cardiovascular Research), Berlin, Germany; 2Department of Veterinary Pathology, College of Veterinary Medicine, Freie Universitaet Berlin, Berlin, Germany; 3Department of Medicine/Cardiology, Deutsches Herzzentrum Berlin, Berlin, Germany; 4Department of Cardiology and Angiology, Campus Mitte, Charité – Universitaetsmedizin Berlin, Berlin, Germany. Presented by Jana Grune, PhD

P1-08: The Association of Aortic Regurgitation and Cryptogenic Embolic Infarction with Aortic Complex Plaque
Jung Sun Cho1, Dae-Won Kim1, Jae Yeong Cho2, Kye Hun Kim2, Byung Joo Sun3, Jae-Hyeng Park1. 1Department of Cardiology, Daejeon St. Mary’s Hospital, Daejeon, Republic of Korea; 2Department of Cardiovascular Medicine, Chonnam National University Hospital, Gwangju, Republic of Korea; 3Department of Cardiology in Internal Medicine, School of Medicine, Chungnam National University, Chungnam National University Hospital, Daejeon, Republic of Korea. Presented by Jung Sun Cho, MD, PhD

P1-09: Echocardiographic Diagnosis of Total or Left Congenital Pericardial Absence without Use of Other Imaging Modalities
Ji-Hyun Jung1, Min Jeong Kim1, Eric J. Velazquez2, Yeonjee E. Yoon1, Hack-Lyoung Kim1, Jun-Bin Park1, Seung-Pyo Lee1, Goo-Young Cho1, Yong-Jin Kim1, Dae-Won Sohn1, Hyung-Kwan Kim1. 1Division of Cardiology, Cardiovascular Center, Department of Internal Medicine, Seoul National University Hospital, Seoul, Republic of Korea; 2Division of Cardiology, Cardiac Diagnostic Unit & Echocardiography Laboratories, Duke University Health System, Duke Clinical Research Institute, Durham, North Carolina, United States of America. Presented by Ji-Hyun Jung, MD
P1-10: A Method for Ultrasound Image Contrast Enhancement by Using Probabilistic Edge Map  
Woohyuk Choi¹, Junyoung Park¹, Wonseuk Jang², Sungyun Park². ¹Department of Diagnostics, College of Korean Medicine, Dongguk University, Gyeongju, Republic of Korea; ²Department of Medical Engineering, College of Medicine, Yonsei University, Seoul, Republic of Korea.  
Presented by Woohyuk Choi

P1-11: Clinical Usefulness of Echocardiography in Acutely-ill Patients with Elevated Cardiac Enzymes  
Dong Hee Kim, Jin-Man Cho, Hui-Jeong Hwang, Il Suk Sohn, Chang-Bum Park, Eun-Sun Jin, Chong-Jin Kim. Department of Cardiology, Kyung Hee University Hospital at Gangdong, Kyung Hee University, Seoul, Republic of Korea.  
Presented by Dong Hee Kim, MD

P1-12: Estimation of Left Ventricular Filling Pressure using Doppler Echocardiography and Tissue Doppler Imaging in Severe Mitral Regurgitation  
Jae-Bin Seo, Hack-Lyoung Kim, Yong-Jin Kim. Boramae Medical Center, Seoul, Republic of Korea.  
Presented by Jae-Bin Seo

P1-13: Recurrent Stroke in Relation to the Grades of Patent Foramen Ovale Determined on Transesophageal Echocardiography  
Mirae Lee, Yoon-Jung Jang, Woo Jin Jang, Gu Hyun Kang, Yong Hwan Park, Woo Jung Chun, Ju Hyeon Oh. Division of Cardiology, Department of Medicine, Samsung Changwon Hospital, Sungkyunkwan University School of Medicine, Changwon-Si, Gyeongsangnam-Do, Republic of Korea.  
Presented by Mirae Lee, MD

P1-14: Different Characteristics of Structural and Functional Remodeling of Carotid Artery in Patients with Bicuspid versus Tricuspid Aortic Valves: A Study with Velocity Vector Imaging  
Mihyun Kim, Chi Young Shim, Seong-Chan You, In-Jeong Cho, Hyuk-Jae Chang, Geu-Ru Hong, Jong-Won Ha, Namsik Chung. Department of Internal Medicine, Severance Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea.  
Presented by Mihyun Kim, MD

P1-15: Prognostic Value of Left Atrial Volume Index Change after Primary Coronary Intervention in Patient with ST-Elevation Myocardial Infarction  
Ki Hong Lee, Hyung Wook Park, Nam Sik Yoon, Ji Eun Kim, Jae Yeong Cho, Jeong Gwan Cho. The Cardiovascular Center of Chonnam National University Hospital, Gwangju, Republic of Korea.  
Presented by Ki Hong Lee, MD, PhD

P1-16: Indexing Left Ventricular Mass to Lean Body Mass in a Hispanic Population  
Eduardo Macias¹, Ashish Loomba², Sucheta Gosavi³, Luis A. Alvarado⁴, Alok K. Dwivedi⁵, Aamer Abbas⁴. ¹Department of Pediatrics, Division of Cardiology, Saint Louis Children’s Hospital, Washington University School of Medicine, St. Louis, Missouri, United States of America; ²Department of Pediatrics, Texas Tech University Health Sciences Center, Paul L. Foster School of Medicine, El Paso, Texas, United States of America; ³Department of Internal Medicine, Division of Cardiology, Texas Tech University Health Sciences Center, Paul L. Foster School of Medicine, El Paso, Texas, United States of America; ⁴Department of Biostatistics, Texas Tech University Health Sciences Center, Paul L. Foster School of Medicine, El Paso, Texas, United States of America.  
Presented by Eduardo Macias, MD

P1-17: Prognostic Implications of Global Longitudinal Strain in Patients with Complete Atrioventricular Block Predicting Right Ventricular Pacing-induced Cardiomyopathy  
Jung Yeon Chin, Ki-Woon Kang, Yu Jeong Choi, Kyung Tae Jung, Won-ho Kim, Sang Huyun Park. Division of Cardiology, Eulji University Hospital, Eulji University School of Medicine, Daejeon, Republic of Korea.  
Presented by Jung Yeon Chin, MD

P1-18: Effect of E/e’ and Left Atrial Dimension on Prediction of Long-term Clinical Outcomes in Acute Myocardial Infarction Patients with Near Normal Left Ventricular Function  
Jae Yeong Cho, Kye Hun Kim, Ji Eun Kim, Hyukjin Park, Hyun Ju Yoon, Min Chul Kim, Ki Hong Lee, Do Sun Sim, Nam Sik Yoon, Young Joon Hong, Hyung Wook Park, Ju Han Kim, Youngkeun Ahn, Myung Ho Jeong, Jeong Gwan Cho, Jong Chun Park. Department of Cardiovascular Medicine, Chonnam National University Hospital, Gwangju, Republic of Korea.  
Presented by Jae Yeong Cho, MD, PhD

P1-19: Atrial Fibrillation Cycle Length Measured by Transesophageal Echocardiography Predict Maintenance of Sinus Rhythm after DC Cardioversion  
Yong Hyun Park, Soo Yong Lee, Sang Hyun Lee, Ki Won Hwang, Jeong Su Kim, June-Hong Kim, Kook-Jin Chun. Division of Cardiology, Department of Internal Medicine, Pusan National University Yangsan Hospital, Yangsan, Republic of Korea.  
Presented by Yong Hyun Park, MD

P1-20: Comparisons of Layer Specific Strain between Patients with Asymmetric Septal Hypertrophic Cardiomyopathy and Apical Cardiomyopathy  
Jeong-Sook Seo, Han-Young Jin, Jae-Sik Jang, Tae-Hyun Yang, Dae-Kyeong Kim, Dong-Soo Kim. Inje University Pusan Paik Hospital, Busan, Republic of Korea.  
Presented by Jeong-Sook Seo, MD, PhD
Exhibitor Information

Exhibit Location and Hours
Exhibits are located in the Hau/Lehua Room during the dates and hours listed below.

Monday, January 23 ........................................ 6:30 AM – 12:00 PM
5:00 – 7:30 PM
Tuesday, January 24 ........................................ 6:30 AM – 12:00 PM
Wednesday, January 25 .................................... 6:30 AM – 12:00 PM
3:30 – 6:00 PM
Thursday, January 26 .................................... 6:30 AM – 12:00 PM
Friday, January 27 ........................................... 6:30 AM – 12:00 PM

Exhibitor Descriptions

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Fax: 1-919-882-9900
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ASE would like to thank our Industry Roundtable members.