INDICATIONS
Activated DEFINITY® (Perflutren Lipid Microsphere) Injectable Suspension is indicated for use in patients with suboptimal echocardiograms to opacify the left ventricular chamber and to improve the delineation of the left ventricular endocardial border.

CONTRAINDICATIONS
Do not administer DEFINITY® to patients with known or suspected right-to-left, bi-directional or transient right-to-left cardiac shunts, by intra-arterial injection, or to patients with known hypersensitivity to perflutren.

IMPORTANT SAFETY INFORMATION

WARNING: Serious Cardiopulmonary Reactions
Serious cardiopulmonary reactions, including fatalities, have occurred uncommonly during or following perflutren-containing microsphere administration [See WARNINGS AND PRECAUTIONS (5.1)]. Most serious reactions occur within 30 minutes of administration.
• Assess all patients for the presence of any condition that precludes DEFINITY® administration [See CONTRAINDICATIONS (4)].
• Always have resuscitation equipment and trained personnel readily available.

In postmarketing use, rare but serious cardiopulmonary or anaphylactoid reactions have been reported during or shortly following perflutren-containing microsphere administration [See ADVERSE REACTIONS (6)]. The risk for these reactions may be increased among patients with unstable cardiopulmonary conditions [See Postmarketing Experience (6.2)]. It is not always possible to reliably establish a causal relationship to drug exposure due to the presence of underlying cardiopulmonary disease.

• Fully synthetic formulation
• Microbubble persistency
• Several administration options
• Proven safety profile
• Proven diagnostic advantage

Visit us at Booth #109
The DEFINITY® Difference
A proven diagnostic advantage that optimizes outcomes, patient management, and cost-effectiveness¹

- Impacts cardiac diagnosis¹
- Avoids additional diagnostic procedures¹
- Alters patient management decisions¹
- Reduces resource utilization and per-patient expense¹

More than 5.6 million echo studies have been performed with DEFINITY®⁷

Please see brief summary on the next page, including boxed WARNING regarding serious cardiopulmonary reactions.

DEFINITY®

VAR (Perflutren Lipid Microsphere)

FOR INTRAVENOUS USE

WARNING: SERIOUS CARDIOPULMONARY REACTIONS
Serious cardiopulmonary reactions, including fatalities, have occurred uncommonly during or following perflutren-containing microsphere administration [See WARNINGS AND PRECAUTIONS]. Most serious reactions occur within 30 minutes of administration.

• Assess all patients for the presence of any condition that precludes DEFINITY® administration [See CONTRAINDICATIONS].
• Always have resuscitation equipment and trained personnel readily available.

INDICATIONS AND USAGE
Activated DEFINITY® (Perflutren Lipid Microsphere) Injectable Suspension is indicated for use in patients with suboptimal echocardiograms to opacify the left ventricular chamber and to improve the echodensity of the left ventricular endocardial border.

CONTRAINDICATIONS
Do not administer DEFINITY® to patients with known or suspected:
• Right-to-left, bi-directional, or transient right-to-left cardiac shunts,
• Hypersensitivity to perflutren [see WARNINGS AND PRECAUTIONS].
Do not administer DEFINITY® by intra-arterial injection.

WARNINGS AND PRECAUTIONS
Serious Cardiopulmonary Reactions:
Serious cardiopulmonary reactions including fatalities have occurred uncommonly during or shortly following perflutren-containing microsphere administration, typically within 30 minutes of administration. The risk for these reactions may be increased among patients with unstable cardiopulmonary conditions (acute myocardial infarction, acute coronary artery syndrome, worsening or unstable congestive heart failure, or serious ventricular arrhythmias). Always have cardiopulmonary resuscitation personnel and equipment readily available prior to DEFINITY® administration and monitor all patients for acute reactions.

The reported reactions include: fatal cardiac or respiratory arrest, shock, syncope, symptomatic arrhythmias (atrial fibrillation, tachycardia, bradycardia, supraventricular tachycardia, ventricular fibrillation, ventricular tachycardia), hypertension, hypotension, dyspnea, hypoxia, chest pain, respiratory distress, stridor, wheezing, loss of consciousness, and convulsions [see ADVERSE REACTIONS].

Anaphylactoid Reactions:
In postmarketing use, uncommon but serious anaphylactoid reactions were observed during or shortly following perflutren-containing microsphere administration including:
• Shock, hypersensitivity, bronchospasm, throat tightness, angioedema, edema (pharyngeal, palatal, mouth, posterior, localized), swelling (face, eye, lip, tongue, upper airway), facial hypoesthesia, rash, urticaria, pruritus, flushing, and erythema have occurred in patients with no prior exposure to perflutren-containing microsphere products [see ADVERSE REACTIONS].

Systemic Embolization of DEFINITY® in Patients with Cardiac Shunts:
In patients with right-to-left, bi-directional, or transient right-to-left cardiac shunts phospholipid-encapsulated microspheres can bypass the pulmonary particle-filtering mechanisms and directly enter the arterial circulation resulting in microvascular occlusion and ischemia. In an animal study utilizing intra-arterial administration of activated DEFINITY®, microsphere trapping was seen in small arterioles <15 μm, especially at branch points and in capillaries at all doses tested, including doses directly administered to those used in humans. An animal study utilizing intravenous administration did not result in arterial microvascular obstruction presumably because of filtering by the lungs. Do not administer DEFINITY® by intra-arterial injection [see CONTRAINDICATIONS].

High Ultrasound Mechanical Index:
High ultrasound mechanical index values may cause microsphere cavitation or rupture and lead to ventricular arrhythmias. Adverse, end-systolic triggering with high mechanical indices has been reported to cause ventricular arrhythmias. The safety of activated DEFINITY® at mechanical indices greater than 0.8 has not been evaluated [see DOSAGE AND ADMINISTRATION]. The safety of activated DEFINITY® with the use of end-systolic triggering has not been evaluated.

QTc Prolongation:
EGC parameters for doses up to 10 microL/kg were monitored in 221 subjects at multiple time points from 1 hour to 72 hours after the first bolus injection. In the 221 subjects, QTc prolongations of >30 msec were noted in 64 (29%) subjects. Forty-six out of 64 subjects with QTc prolongations were further evaluated and 39% (18/46) showed associated cardiac rhythm changes. The effects of concomitant drugs were not studied.

ADVERSE REACTIONS
Clinical Trials Experience
A total of 1716 subjects were evaluated in pre-market clinical trials of activated DEFINITY®. In this group, 1063 (61.9%) were male and 653 (38.1%) were female. The mean age was 56.1 years (range 18 to 93). Of these, 144 (8.4%) had at least one adverse reaction (Table 6.1).

There were 26 serious adverse events and 15 (0.9%) subjects discontinued because of an adverse event.

Deaths and Serious Adverse Events:
Among the 1716 activated DEFINITY® patients, 19 (1.1%) suffered serious cardiopulmonary adverse events including eight deaths. The deaths occurred several days after activated DEFINITY® administration and appeared to be related to the course of underlying disease. Of the 11 other serious adverse events, which appeared within days of the drug administration (2-15 days), all appeared to be a progression underlying cardiac and non-cardiac disease. However, a role for DEFINITY® in the etiology or course of these adverse events cannot be ruled out.

Discontinuations:
There were 15 discontinuations reported with a mean age of 41.5 years. Nine of these patients were discontinued after the first injection. One patient experienced a hypersensitivity reaction with urticaria and pruritus and all the other patients experienced dizziness, chest pain, dyspnea or back pain. These adverse reactions appeared within minutes (1-15 min) of the drug administration and were of moderate intensity resolving usually without treatment within minutes to hours after the administration.

For all adverse reactions, the overall incidence of adverse events, which appeared within days of the drug administration (2-15 days), all appeared to be a progression underlying cardiac and non-cardiac disease. However, a role for DEFINITY® in the etiology or course of these adverse events cannot be ruled out.

Table 6.1. New-Onset Adverse Reactions Occurring in ≥0.5% of All Activated DEFINITY®-Treated Subjects

<table>
<thead>
<tr>
<th>Adverse Reaction</th>
<th>All activated DEFINITY® (N=1716)</th>
<th>Activated DEFINITY® (N=1716)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Adverse Reactions</td>
<td>269</td>
<td>269</td>
</tr>
<tr>
<td>Total Number of Subjects with an Adverse Reaction</td>
<td>144</td>
<td>144</td>
</tr>
<tr>
<td>Body System</td>
<td>Preferred term</td>
<td>n (%)</td>
</tr>
<tr>
<td>Shock, hypersensitivity, bronchospasm, throat tightness, angioedema, edema (pharyngeal, palatal, mouth, posterior, localized), swelling (face, eye, lip, tongue, upper airway), facial hypoesthesia, rash, urticaria, pruritus, flushing, and erythema</td>
<td>n</td>
<td>(%)</td>
</tr>
</tbody>
</table>
| N=Sample size 1716 subjects who received activated DEFINITY®
| Number of subjects reporting at least one Adverse Reaction | Number of subjects reporting at least one Adverse Reaction |
| Cardiovascular: Abnormal ECGs, bradycardia, tachycardia, palpitation, hypertension and hypotension | Heart failure, fever, hot flushes, pain, rigors, and syncope | 19 | (1.1) | 19 | (1.1) | 19 | (1.1) |

OVERDOSAGE
The clinical consequences of overdosing with activated DEFINITY® are not known. Treatment of an overdose should be directed toward the support of all vital functions and prompt institution of symptomatic therapy [see CONTRAINDICATIONS and WARNINGS AND PRECAUTIONS].

PATIENT COUNSELING INFORMATION
Patients receiving activated DEFINITY® should be instructed to inform their healthcare provider if they:

1. have a congenital heart defect, or recent worsening of heart or lung conditions [see CONTRAINDICATIONS and WARNINGS AND PRECAUTIONS].
2. have had prior reactions to DEFINITY® [see CONTRAINDICATIONS].
3. may be pregnant, are trying to become pregnant, or are nursing [see USE IN SPECIFIC POPULATIONS].

Hematology:
Granulocytopenia, leukocytosis, leukopenia, and eosinophilia

Musculoskeletal:
Arthralgia

Nervous System:
Leg cramps, hypertonia, vertigo and dizziness

Platelet, Bleeding, and Clotting:
Hematoma

Respiratory:
Coughing, hypoxia, pharyngitis, rhinitis and dyspnea

Special Senses:
Decreased hearing, conjunctivitis, abnormal vision and taste perversion

Skin:
Pruritus, rash, erythematous rash, urticaria, increased sweating, and dry skin

Urinary:
Albuminuria

Postmarketing Experience
In a prospective, multicenter, open-label registry of 1053 patients receiving DEFINITY® in routine clinical practice, heart rate, respiratory rate, and pulse oximetry were monitored for 30 minutes after DEFINITY® administration. No deaths or serious adverse reactions were reported, suggesting that these reactions are unlikely to occur at a rate of more than 0.3% when DEFINITY® is used according to recommendations.

The following adverse reactions have been identified during the post-marketing experience among all racial or ethnic groups, and similar for bolus and infusion dosing.

Cardiopulmonary:
Fatal cardiac or respiratory arrest, shock, syncope, atrial fibrillation, tachycardia, bradycardia, supraventricular tachycardia, ventricular fibrillation, ventricular tachycardia, hypertension, hypotension, dyspnea, hypoxia, chest pain, respiratory distress, stridor, wheezing, loss of consciousness, and convulsions [see ADVERSE REACTIONS].

Anaphylactoid:
Anaphylactic/anaphylactoid reaction, anaphylactic shock, hypersensitivity, bronchospasm, throat tightness, facial hypoesthesia, rash, urticaria, pruritus, flushing, erythema, angioedema, edema (pharyngeal, palatal, mouth, posterior, localized), swelling (face, eye, lip, tongue, upper airway), facial hypoesthesia, rash, urticaria, pruritus, flushing, erythema, angioedema, edema (pharyngeal, palatal, mouth, posterior, localized).

Neurologic:
Coma, loss of consciousness, convulsion, seizure, transient ischemic attack, agitation, tremor, vision blurred, dizziness, headache, fatigue.

For ordering, tel. toll free: 800-299-3431
For Massachusetts and International, call 978-667-9531

For all other reactions, please see Full Prescribing Information available at www.definityimaging.com for additional information.

Lantheus Medical Imaging
331 Treble Cove Road
N. Billerica, Massachusetts 01862 USA

RA6811
## Table of Contents

### PROGRAM INFORMATION
- Conference at a Glance: 5
- Welcome Message: 9
- Registration Information: 10
- Claiming CME: 11
- Facility Information: 12
- Program Information and Regulations: 13
- Education Information: 14
- Scientific Program Tracks and Key: 16
- ASE 2016 Program Committee: 17

### FRIDAY, JUNE 10
- Schedule at a Glance: 19
- Friday Schedule: 21

### SATURDAY, JUNE 11
- Schedule at a Glance: 23
- Saturday Networking & Special Events: 24
- Saturday Schedule: 25

### SUNDAY, JUNE 12
- Schedule at a Glance: 33
- Sunday Networking & Special Events: 34
- Sunday Schedule: 35

### MONDAY, JUNE 13
- Schedule at a Glance: 41
- Monday Networking & Special Events: 42
- Monday Schedule: 43

### TUESDAY, JUNE 14
- Schedule at a Glance: 49
- Tuesday Schedule: 51

### SPECIAL AWARDS
- Special Awards: 59

### ABSTRACTS
- Original Science & Clinical Cases Presentation Schedule: 67
- Abstract Graders: 70
- Research Award Competitions (YIA, SIA): 72
- Oral Abstract Presentations (EUR, JSE, IE): 74
- Pediatric Orals (PC): 75
- Clinical Cases (CC): 76
- Poster Session 1 (P1): 77
- Poster Session 2 (P2): 93

### EXHIBITS
- Exhibit & Poster Hall Hours: 111
- Science & Technology Theater Schedule: 113
- Exhibitor Assignments: 118
- Exhibitor Descriptions: 120

### GENERAL INFORMATION
- About ASE: 131
- Officers and Board of Directors: 132
- Board, Council, and Committee Meetings: 134
- ASE Foundation: 135
- ASEF Contributors: 136
- 2015 Annual Appeal Campaign Donors: 138
- Fellows of the American Society of Echocardiography (FASE): 141

### FACULTY INFORMATION
- Disclosure Information: 145
- Index: 151
The American Society of Echocardiography is accepting applications for the position of Editor-in-Chief of the Journal of the American Society of Echocardiography (JASE) for a term beginning January 1, 2018.

The Journal of the American Society of Echocardiography (JASE) – the official journal of the American Society of Echocardiography – brings physicians, sonographers, and researchers the very latest clinical, scientific, legal, and economic information regarding the use of cardiovascular ultrasound. JASE is published monthly, and its original, peer-reviewed articles cover conventional procedures as well as newer clinical techniques, such as transesophageal echocardiography, intraoperative echocardiography, and intravascular ultrasound. JASE has a 2014 Impact Factor of 4.056 and publishes papers from worldwide authors.

Deadline for applications is July 1, 2016. For details go to ASEcho.org/Editor.

Direct questions to Deborah R. Meyer, JASE Managing Editor: 919-297-7155 • dmeyer@asecho.org
Main Course:
February 18-21, 2017

Preconference Optional Sessions
February 17-18, 2017 (additional fee required)

Hilton Tucson El Conquistador
Golf & Tennis Resort, Tucson, AZ

Course Director
Steven J. Lester, MD, FASE

Co-Director & Learning Lab Director
Bijoy K. Khandheria, MD, FASE

Learning Lab Co-Director
Roberto M. Lang, MD, FASE

Register now at ASEcho.org/SOTA
Welcome Message

Dear Friends and Colleagues,

It is an honor to welcome you to the 27th Annual Scientific Sessions of the American Society of Echocardiography.

The Scientific Sessions Program Committee has created an educational experience that is sure to spark the interest of all cardiovascular health professionals. We are guaranteed to be "Sleepless in Seattle" with all the creative learning opportunities featured this year.

To help you navigate this packed program, we wanted to highlight sessions of special note. ASE is proud to host two Live Case Demonstrations from the Cath Lab at the University of Washington on Monday. These sessions will highlight the critical role of echocardiography in structural heart interventions. Practitioners will be able to watch luminary faculty interact with interventional cardiologists and cardiovascular imagers in the cath lab during structural heart cases featuring percutaneous mitral valve repair, prosthetic valve dysfunction, or left atrial appendage occluder implants.

ASE’s Immediate Past President, Neil J. Weissman, MD, FASE, will present "The Future of Echocardiography: Disruptor or Disrupted?” as the 27th Annual Edler Lecture on Sunday morning. The inaugural Echovation Challenge competition will take place on Sunday afternoon where audience members and a panel of judges will watch and rate finalists showcasing their process and workflow innovations. Theodore P. Abraham, MBBS, MD, FASE, will deliver the 17th Annual Feigenbaum Lecture “Echo Muscles into the Mechanics Era – Strain Transforms Morphologists into Physiologists” on Monday afternoon during the Young Investigator’s Award Competition. Larry Sobal, MBA, Executive Vice President of Business Development for MedAxiom, will present the preliminary results of the first ever Echo Lab Benchmarking Research Study at the finale on Monday. Must see sessions on Tuesday include, Cases to Stump the Experts, Cardio-Oncology: At the Crossroads, The Great Debates, The Athlete’s Heart, LVAD A to Z, and a special Echo in Veterinary Medicine symposium.

The Exhibit & Poster Hall provides additional unique learning opportunities. Chalk Talks will take place during morning and afternoon breaks on Sunday and Monday. Industry-supported Science and Technology Theater sessions, will be offered during all four lunch breaks. Nearly 50 exhibitors will be presenting new concepts, technology, devices, and research. Also, be sure to visit more than 400 posters (including moderated sessions) featuring cutting-edge research on the latest advances in cardiovascular ultrasound or clinical cases illustrating evolutions in patient care will be presented.

Networking is always an important part of ASE’s Scientific Sessions. The ASE Foundation will be holding its annual Research and Awards Gala and Scavenger Hunt again this year. ASEF also wants to encourage everyone to get moving, and start a little friendly competition among participants with the Cardiovascular Challenge. Log your steps at the ASEF Booth for a chance to win great prizes. The ASEF Booth will be busy during the Member Reception when Roberto Canessa, MD, FASE, will be signing copies of his latest book as a fundraiser for the Foundation. He will also be doing a special reading of his book on Saturday afternoon. Please visit the ASEF Booth outside the Exhibit & Poster Hall on Level 4 for more details.

Located in the heart of Seattle, we hope you will have the opportunity to get out and explore the city that is resonating with innovative minds and a vibrant arts scene. We are pleased that you have decided to join us for this premier event designed to bring together echo enthusiasts from around the world!

Richard A. Grimm,
DO, FASE
ASE 2016 Program Chair
Cleveland Clinic
Cleveland, Ohio

Deborah A. Agler,
ACS, RDCS, FASE
ASE 2016 Sonographer Co-Chair
Cleveland Clinic
Cleveland, Ohio
Registration Information

ATTENDEE REGISTRATION

The ASE Registration Counter is located in the Atrium Lobby outside the Exhibit & Poster Hall on Level 4 of the Washington State Convention Center. Attendees may pick up their conference materials and name badge at this location.

REGISTRATION HOURS

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, June 10</td>
<td>12:00 PM – 5:00 PM</td>
</tr>
<tr>
<td>Saturday, June 11</td>
<td>6:00 AM – 6:30 PM</td>
</tr>
<tr>
<td>Sunday, June 12</td>
<td>6:30 AM – 6:00 PM</td>
</tr>
<tr>
<td>Monday, June 13</td>
<td>6:30 AM – 6:00 PM</td>
</tr>
<tr>
<td>Tuesday, June 14</td>
<td>6:30 AM – 2:30 PM</td>
</tr>
</tbody>
</table>

NAME BADGES

Admission to the educational sessions, ASE Exhibit & Poster Hall, and Science & Technology Theater is by badge only. Please wear your name badge at all times when in the convention center. We recommend, for your safety, that you do not wear your name badge outside of the convention center. ASE exhibitors may use a lead retrieval system in the Exhibit & Poster Hall or Science & Technology Theater to obtain your information. Your name badge is used for lead retrieval and provides exhibitors with your name, institution (where applicable), address, business telephone number, and email address. ASE will not release email addresses of attendees who declined the lead retrieval option on their registration form. Family members with guest badges will be admitted to the Exhibit & Poster Hall and may sit in on educational sessions as space allows, but they are not eligible for a conference bag or to claim CME/MOC/CEU credit. Guests must be at least 12 years old. You may purchase guest badges for family members at the ASE Registration Counter. ASE reserves the right to revoke or deny attendance to any registered participant, speaker, exhibitor, news media reporter, or photographer at presentations or activities during the 27th Annual ASE Scientific Sessions.

SPEAKER READY ROOM

The Speaker Ready Room is located in Room 604. Faculty name badges will be available at the ASE Registration Counter during registration hours. The Speaker Ready Room, staffed with technicians to assist faculty with uploading and previewing presentations, is open during the following times:

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, June 10</td>
<td>12:00 PM – 5:00 PM</td>
</tr>
<tr>
<td>Saturday, June 11</td>
<td>6:00 AM – 4:30 PM</td>
</tr>
<tr>
<td>Sunday, June 12</td>
<td>6:30 AM – 4:30 PM</td>
</tr>
<tr>
<td>Monday, June 13</td>
<td>6:30 AM – 4:30 PM</td>
</tr>
<tr>
<td>Tuesday, June 14</td>
<td>6:30 AM – 1:00 PM</td>
</tr>
</tbody>
</table>
Claiming Continuing Education Credit

To claim your CME credit for the 27th Annual ASE Scientific Sessions, please follow these steps using Mozilla Firefox, Google Chrome, or Safari browsers. Internet Explorer will not work.

THE DEADLINE TO CLAIM CREDIT FOR THIS CONFERENCE IS JULY 29, 2016.

1. **ASE Members:** Go to ASEcho.org and log on to the Member Portal with your username (email) and password.
   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 account.

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


5. Verify your registration information. 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.
   b. Remember to enter your ABIM number and birthdate if you choose to have MOC points for this meeting submitted to ABIM. There is a space for this indicated on the first page of the evaluation.

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

ASK QUESTIONS DURING SESSIONS

1. Go to: ASEcho.cnf.io from your smartphone, laptop, or tablet.

2. Find the session you are attending in the list or search by session name in the search box.

3. On the green "Social Q & A" bar click the "ASK" button to ask a question any time during the session. Questions will be answered at the end of the session. All approved questions asked by the audience will appear on your device.

4. You may click the arrow to the left of questions you like to "vote" the question up to the top of the list. The most popular questions will be answered first.
Facility Information

The Washington State Convention Center’s (WSCC) physical address is:

750 PIKE PLACE
SEATTLE, WA 98101

Located in the heart of Seattle, a city resonating with innovative minds and a vibrant arts scene, WSCC is within walking distance of world-class hotels, restaurants, entertainment, and attractions. With a longstanding commitment to sustainability, public art, and modern technology, WSCC serves its surrounding community and provides visitors with a truly unique Northwest experience.

FIRST AID

An emergency medical professional will be available during the hours of the ASE 2016 meeting, as well as during set-up and break down of the entire event. In the event of a medical emergency, please find a staff member or security guard to call the nurse on duty.

LOST & FOUND

Questions regarding lost or found items can be directed to the ASE Registration Counter located in the Atrium Lobby outside the Exhibit & Poster Hall on Level 4 of the convention center.

LEVEL 4

1. Registration Counter
2. Exhibits & Posters
3. Science & Technology Theater
4. ASE Foundation Booth
5. Session Rooms
6. FASE Lounge
7. Speaker Ready Room
8. Product Booth
9. Luggage Storage
10. Learning Labs

LEVEL 6

A4 Lobby
1. Speaker Ready Room
2. Product Booth
3. Learning Labs
4. Session Rooms
5. FASE Lounge
6. Exhibits & Posters
7. Science & Technology Theater
8. ASE Foundation Booth
9. Luggage Storage
10. Exhibit Hall

NOTE: ALL COMMITTEE MEETINGS ARE ON LEVEL 3.
Program Information & Regulations

FOOD FUNCTIONS
ASE will provide continental breakfast in the Lobby on Level 6, from 6:30 – 7:30 AM daily. Morning and afternoon coffee breaks are available for registered attendees in the Exhibit & Poster Hall on Sunday, June 12 and Monday, June 13 and on Level 6, on Friday, June 10, Saturday, June 11, and Tuesday, June 14. Please refer to the Schedule at a Glance pages for the times of the daily morning, afternoon, and lunch breaks.

ASE will provide lunch on a first come, first served basis (max. 350 participants) for attendees of the Science & Technology Theater, located in the Exhibit & Poster Hall on Level 4. See page 111 of this program for a detailed theater schedule.

INTERNET ACCESS
Complimentary Wi-Fi is available in the WSCC.

MOBILE DEVICE USE
We encourage you to use your mobile device to access ASE’s new online question and answer website ASEcho.cnf.io. After you have accessed the site and navigated to your session, you can ask questions of faculty or vote on your favorite question. Please remember to turn your mobile device to silent or 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. ASE reserves the right to close session rooms as needed, without compensation to attendees. 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 in the convention center. Be sure to remove your badge when you leave the convention center.

NEWS MEDIA
For information regarding news releases, news conferences, and interviews, please visit the ASE Registration Counter located outside the Exhibit & Poster Hall on Level 4 of the convention center. Copies of all news releases are also available under “News” on ASE’s website ASEcho.org. Media representatives must display their official ASE badge at all times. Please see our Photography and Audio/Visual Recording policy.

PHOTOGRAPHY AND AUDIO/VISUAL RECORDING POLICY
No person may record any portion of the ASE 2016 Scientific Sessions, either by video, still or digital photography, audio or any other recording or reproduction mechanism. Taking photos of or recording the content of meeting room slides or poster abstract presentations 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 conference badge and privileges. ASE reserves the rights to all recordings or reproductions at ASE meetings. Please be aware that during the Scientific Sessions, attendees, vendors, guests, and exhibitors may be photographed or videotaped by ASE contractors capturing the event. Some of these photographs or videos may be displayed by ASE in future publications or other materials. By virtue of your attendance, you agree to allow ASE to use photographs of you in its promotional materials.

CHILDREN
Information about childcare is available at your hotel’s concierge desk. ASE does not offer childcare services. Due to limited seating capacity and the highly technical nature of the program, children are not allowed to attend sessions. Children 12 and older must have a purchased guest registration before they will be allowed entry into the Exhibit & Poster Hall. Children 11 and younger, strollers, and infant carriers are not permitted on the exhibit floor at any time. For their safety, children must be accompanied by an adult at all times during the ASE 2016 Scientific Sessions.
TARGET AUDIENCE
The ASE 27th Annual Scientific Sessions will benefit all healthcare providers interested in the application of cardiovascular ultrasound imaging in the care of patients and in research. ASE’s membership is open to all echo enthusiasts, so this conference is designed to engage a diverse audience. Participants with a wide variety of interests and expertise in cardiovascular imaging will find sessions that meet their needs and help improve their practice. High quality lectures, debates, case-based presentations, and oral and poster research presentations offer a broad spectrum of educational opportunities in both large and small group settings. The curriculum is intended to enhance knowledge and performance for adult and pediatric cardiologists, cardiothoracic and vascular surgeons, cardiac anesthesiologists, cardiac sonographers, and emergency and critical care physicians, as well as hospitalists, radiologists, research scientists, primary care practitioners, residents and fellows in training, students, and nurses. Attendees are encouraged to interact with available faculty, and also to take advantage of the opportunity to gain new expertise.

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 the diagnosis and treatment options of a specific patient’s condition.

COMMERCIAL SUPPORT DISCLOSURE STATEMENT
EDUCATIONAL GRANTS
This activity is supported in part by educational grants from: Abbott Vascular, Actelion, Boston Scientific, Edwards Lifesciences, GE Healthcare, Lantheus Medical Imaging, Medtronic and Thoratec.

IN-KIND DONATIONS
This activity is supported in part by in-kind donations from: FUJIFILM SonoSite, Inc., GE Healthcare, Hitachi Aloka Medical America, Mindray North America, Philips, Siemens Healthineers, and TOMTEC IMAGING SYSTEMS GMBH.

CONFERENCE OBJECTIVES
This program has been designed to allow attendees to access a broad overview of topics or delve deeply into one or two topics. In addition, particular care has been taken to incorporate ASE guidelines into talks to demonstrate how and why they should be applied in your daily practice.

The goals of the conference to provide:
» A comprehensive review of current equipment and state-of-the-art techniques in cardiac and vascular ultrasound for the assessment of patients with a variety of cardiovascular conditions.
» An update of guidelines and recent advances in technology and research for the assessment of patients with cardiac and vascular disease.
» A review of fundamental and advanced interpretation of cardiac and vascular ultrasound and the impact of echocardiographic imaging on patient care and outcomes.
» Sessions that are appropriate for all levels of cardiac and vascular ultrasound professionals, including experts, intermediate learners, early career, fellows, and nurses.

After participating in this activity, attendees will be better able to:
» Utilize cardiac and vascular ultrasound for the comprehensive assessment and management of cardiovascular diseases, including but not limited to: valvular heart disease, coronary artery disease, cardiomyopathies, pericardial disease, congenital heart disease, peripheral artery disease, and effects of systemic disease on the heart.
Incorporate new guideline recommendations into clinical practice.

Recognize the recent advancements and future direction of cardiac and vascular ultrasound and the impact these advancements may have on patient care.

Integrate the latest technical developments into clinical practice.

Employ cardiac ultrasound in pre-procedural, intraprocedural, and post-procedural care of patients in the operating room and catheterization laboratory.

Delineate how the new changes in the healthcare delivery system affect the private and hospital-based practice of cardiology and cardiovascular imaging.

Improve quality and workflow in the echocardiography lab through practice-improvement measures.

**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.

The American Society of Echocardiography designates the ASE 27th Annual Scientific Sessions for a maximum of 29.5 AMA PRA Category 1 Credits™. Attendees should claim only the credit commensurate with the extent of their participation in the activity.

**DAILY BREAKDOWN OF CME CREDITS**

<table>
<thead>
<tr>
<th>Date</th>
<th>CME Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 10, 2016</td>
<td>3.75</td>
</tr>
<tr>
<td>June 11, 2016</td>
<td>6.75</td>
</tr>
<tr>
<td>June 12, 2016</td>
<td>7</td>
</tr>
<tr>
<td>June 13, 2016</td>
<td>6.75</td>
</tr>
<tr>
<td>June 14, 2016</td>
<td>5.25</td>
</tr>
</tbody>
</table>

This activity is approved by the American College of Emergency Physicians for a maximum of 5.50 hour(s) of ACEP Category I credit.

Successful completion of this CME activity enables the participant to earn up to 29.5 MOC points in the American Board of Internal Medicine’s (ABIM) Maintenance of Certification (MOC) program.

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 sponsored 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 relationship 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 145 of this program.
CASE-BASED LEARNING

During these sessions, the practice of clinical echocardiography and its relationship to patient management will be highlighted and stressed by experts. These sessions will cover patient-centered care, time-efficiency and "difficult" patients, vascular disease in the cardiology patient, and quality improvement. Other topics covered include contrast for chamber opacification, echo emergencies, phenotypes, and artifacts. This will be an excellent learning opportunity facilitated by the presentation of pertinent clinical cases to set the stage for specific questions related to imaging and management.

IMAGING ESSENTIALS

This track will instruct practitioners on techniques of assessment and quantitation. There are disease-based sessions that will help you improve your skills in chamber quantification and imaging a variety of disease states. In addition, there are practical sessions on workflow and quality that you can incorporate into your lab when you return home. Particular care has been taken to add more cases to each session to increase the impact of the lessons.

PERIOPERATIVE

This track has been designed by the ASE Council on Perioperative Echocardiography to bring surgeons, anesthesiologists, echocardiographers, and sonographers together. In addition to the live imaging from the University of Washington on Monday, June 13, the Saturday track features sessions on echo for temporary and durable support and 3D in the operating room, LVAD’s, and surgical considerations.

SYMPOSIA

The 2016 Program Committee has designed the Symposia Track to move from more basic lectures on Saturday to an increasing focus on new technology, techniques, and science on the other days. Each symposium discusses a specific topic in detail and instructs you on how to apply state-of-the-art cardiovascular ultrasound techniques in clinical practice.

PEDIATRIC/CONGENITAL

The ASE Council on Pediatric and Congenital Heart Disease has put together a program packed with cutting-edge science, imaging pearls, and hands-on instruction to benefit everyone, whether you are a pediatric echocardiographer or just learning more about the care of patients living with congenital heart diseases as adults. The popular staples of the track return: Pediatric Echo Jeopardy, Fireside Chat, case presentations, oral abstract sessions, and the always entertaining controversy debates. We will unveil the mysteries of some of the newer echo technologies, such as 3D printing, and see how expert care centers apply them in clinical practice.

RESEARCH

Investigators will present the latest advances in cardiovascular ultrasound throughout the conference. Don’t miss two special competitions designed to acknowledge exceptional research, the Sonographer Investigator’s Award Competition and the prestigious Arthur E. Weyman Young Investigator’s Award Competition, where the four best abstracts submitted compete in front of a panel of luminaries for international recognition. Meet the investigators during dedicated poster viewing times in the Exhibit & Poster Hall.

VASCULAR

ASE’s Council on Vascular Ultrasound has put together a rich program that will provide the attendee with an excellent overview on vascular ultrasound topics of interest to the practicing cardiologist/sonographer. Topics such as vascular disease in the cardiology patient and advanced vascular imaging will be covered. Additional state-of-the-art and cutting-edge technologies will also be presented in what promises to be an exciting track. You won’t want to miss the special session “Interactive Vascular Learning Lab” on Friday, June 10.
ASE 2016 Program Committee

Richard A. Grimm, DO, FASE
Chair

Rebecca T. Hahn, MD, FASE
Past Chair

Susan E. Wiegers, MD, FASE
President

Deborah A. Agler, ACS, RDCS, FASE
Sonographer Co-Chair

Jayashri R. Aragam, MD, FASE
Member at Large

Gerard P. Aurigemma, MD, FASE
Member at Large

Piers C.A. Barker, MD, FASE
Council on Pediatric and Congenital Heart Disease Representative

Thomas Costantino, MD
Member at Large

Rosario Freeman, MD
Local Liaison

Mark K. Friedberg, MD, FASE
Member at Large

Edward A. Gill, MD, FASE
Local Liaison

Amer M. Johri, MD, FASE
Council on Vascular Ultrasound Representative

Allan L. Klein, MD, FASE
President-Elect

Michael L. Main, MD, FASE
Member at Large

Sunil V. Mankad, MD, FASE
Abstract Co-Chair

Elizabeth F. McIlwain, MHS, RCS, FASE
Council on Cardiovascular Sonography Representative

Sherif F. Nagueh, MD, FASE
Member at Large

Philippe Pibarot, DVM, PhD, FASE
Member at Large

Geoffrey A. Rose, MD, FASE
Abstract Chair

Partho P. Sengupta, MBBS, MD, DM, FASE
Member at Large

Roman M. Sniecinski, MD, FASE
Council on Perioperative Echocardiography Representative

Lissa Sugeng, MD, MPH, FASE
International Representative

Karen G. Zimmerman, BS, ACS, RDCS, RVT, FASE
Member at Large
Your support means the world to us! Thank you for all the ways you continue to make a difference for the field of cardiovascular ultrasound.

Join the ASE Foundation in Seattle at the Annual ASE Scientific Sessions
Visit the Foundation booth located across from Registration to learn more.

**SATURDAY, JUNE 11**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30 AM - 5:00 PM</td>
<td>Sign up for the Cardiovascular Challenge!</td>
</tr>
<tr>
<td></td>
<td>ASE Foundation booth</td>
</tr>
<tr>
<td>2:30 PM - 3:00 PM</td>
<td>Special book reading by Roberto Canessa, MD, FASE</td>
</tr>
<tr>
<td></td>
<td>“I Had to Survive: How a Plane Crash in the Andes Inspired My Calling to Save Lives”</td>
</tr>
<tr>
<td></td>
<td>Science &amp; Technology Theater</td>
</tr>
<tr>
<td>7:00 PM - 11:00 PM</td>
<td>7th Annual ASE Foundation Research Awards Gala: Celebrating Twenty Years of Funding Cardiovascular Ultrasound Research</td>
</tr>
<tr>
<td></td>
<td>The Grand Hyatt Hotel                             Private event; tickets required</td>
</tr>
</tbody>
</table>

**SUNDAY, JUNE 12**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:15 PM - 2:45 PM</td>
<td>ASE Foundation Global Initiatives: Humanitarian Missions in Argentina and Vietnam</td>
</tr>
<tr>
<td></td>
<td>Ballroom 6A</td>
</tr>
<tr>
<td>6:00 PM - 10:00 PM</td>
<td>ASE Foundation Scavenger Hunt &amp; After-Party</td>
</tr>
<tr>
<td></td>
<td>Start: ASE Registration Desk</td>
</tr>
</tbody>
</table>

**MONDAY, JUNE 13**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00 PM</td>
<td>Last chance to log your steps for the Cardiovascular Challenge!</td>
</tr>
<tr>
<td></td>
<td>Winners to be announced during the 2:45 PM – 3:30 PM break in the Exhibit &amp; Poster Hall.</td>
</tr>
<tr>
<td></td>
<td>ASE Foundation booth</td>
</tr>
<tr>
<td>5:15 PM - 6:15 PM</td>
<td>Special Book Signing by Roberto Canessa, MD, FASE during the Member Reception</td>
</tr>
<tr>
<td></td>
<td>ASE Foundation booth</td>
</tr>
</tbody>
</table>

ASEFoundation.org

As a 501(c)(3) organization, contributions made to the ASE Foundation are U.S. tax deductible to the fullest extent of law.
### Schedule at a Glance

**FRIDAY, JUNE 10TH**

<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Activity</th>
</tr>
</thead>
</table>
| 1:15 – 2:45 PM | BALLROOM 6C  | E  | I ❤ Echo  
(Additional Fee Required) |
| 3:30 – 5:00 PM | ROOM 609     | EV | Interactive Vascular Lab       |

---

**FRIDAY, JUNE 10TH**

<table>
<thead>
<tr>
<th>Room</th>
<th>Activity</th>
</tr>
</thead>
</table>
| BALLROOM 6C| E  | I ❤ Echo  
(Additional Fee Required) |
| ROOM 609   | EV | Interactive Vascular Lab       |

---

**January 23-27, 2017**

Hapuna Beach Prince Hotel  
Kohala Coast, Big Island, HI

**Course Director**  
Thomas J. Ryan, MD, FASE  
Past President, ASE

**Co-Director**  
Neil J. Weissman, MD, FASE  
Immediate Past President, ASE

"Wonderful conference with outstanding faculty presenters. Overall, the talks were clinically applicable and will help me improve the way I practice echocardiography."  
Echo Hawaii Attendee

ASEcho.org/EchoHawaii

Jointly provided by the American Society of Echocardiography and the American Society of Echocardiography Education and Research Foundation, and held in cooperation with the Canadian Society of Echocardiography.

---

For detailed information, please download the ASE Live Educational Courses app or visit ASEScientificSessions.org.
Congratulations Dr. Sunil Mankad!

ASE 2016 Richard Popp Excellence in Teaching Award Recipient

Associate Program Director, Cardiovascular Disease Fellowship Program / Director, Transesophageal Echocardiography
1:00 PM - 5:00 PM
Learning Lab: 3D Echo of Congenital Heart Disease: Image Acquisition, Optimization - Room 620 (Additional Fee Required)
Chairs: D. Roberson, J. Simpson

1:00 PM - 1:20 PM
Left Atrioventricular Valve
J. Simpson

1:20 PM - 1:40 PM
Atrial Septal Defect
D. Roberson

1:40 PM - 2:00 PM
Ventricular Septal Defect
J. Simpson

2:00 PM - 2:20 PM
LVOT/AoV
G. Marx

2:25 PM - 2:35 PM
3D Quantification
J. Simpson

2:35 PM - 3:00 PM
Volumetrics
G. Marx, G. Shirali

3:05 PM - 4:00 PM
Demonstration of Cropping Modalities & Controls
G. Shirali

4:00 PM - 4:50 PM
Crop Data Sets
G. Marx, D. Roberson, G. Shirali, J. Simpson

1:15 PM - 5:00 PM
E I Love Echo - Ballroom 6C (Additional Fee Required)
Chairs: T. Costantino, R. Hoppmann

Lung Ultrasound - B lines
A. Morris

Exit - Aortic Outflow, Abdominal Aorta
H. Goett

FAST - Abdominal Orientation of Subcostal
B. Backlund

POCUS Intro
H. Goett

Effusions - (Sx/A4ch)
J. Fields

Ejection Fraction - Global Function (PSLA/PSSA)
M. Mulflur

Starting an Ultrasound Program for Medical Students
R. Hoppmann

Entrance - IVC Empty or Full
R. Gibbons

VTE - DVT PE
S. Shah

3:30 PM - 5:00 PM
Interactive Vascular Lab Part 2 - Room 609
Chairs: R. Benenstein, A. Johri

3:30 PM - 5:00 PM
Carotid Intima-Media Thickness and Plaque
J. Ahn, A. Liu, B. Fowler, S. Robison

1:00 PM - 2:45 PM
Interactive Vascular Lab Part 1 - Room 609
Chairs: R. Benenstein, A. Johri

1:00 PM - 2:45 PM
Carotid Duplex Ultrasound
J. Ahn, B. Fowler, A. Liu, S. Robison
Leipzig - Germany
7-10 December 2016

EuroEcho Imaging 2016

Important Deadlines
Clinical case submission 18 May 2016
Abstract submission 31 May 2016
Early registration 30 September 2016
Late registration 31 October 2016

#EuroEcho
www.escardio.org/EACVI
## Schedule at a Glance
### SATURDAY, JUNE 11TH

<table>
<thead>
<tr>
<th>ROOM</th>
<th>BALLROOM 6A</th>
<th>BALLROOM 6B</th>
<th>BALLROOM 6C</th>
<th>BALLROOM 6E</th>
<th>ROOM 609</th>
<th>ROOM 613</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REGISTRATION OPEN:</strong> 6:00 AM - 6:30 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EXHIBIT &amp; POSTER HALL OPEN:</strong> 4:30 - 6:30 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Session Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 - 7:50 AM</td>
<td><strong>CL</strong></td>
<td>Why Is My Patient Short of Breath? Breathless or Sleepless in Seattle</td>
</tr>
<tr>
<td></td>
<td><strong>CL</strong></td>
<td>Contrast for Chamber Opacification</td>
</tr>
<tr>
<td></td>
<td><strong>CL</strong></td>
<td>Echo Emergencies</td>
</tr>
<tr>
<td></td>
<td><strong>CL</strong></td>
<td>Mitral Regurgitation: Repair or Replace</td>
</tr>
<tr>
<td></td>
<td><strong>E</strong></td>
<td>The Right Direction: Quality Improvement</td>
</tr>
<tr>
<td></td>
<td><strong>CL</strong></td>
<td>Measure It!</td>
</tr>
<tr>
<td>8:00 - 9:30 AM</td>
<td><strong>S</strong></td>
<td>Strain Fundamentals Made Easy</td>
</tr>
<tr>
<td></td>
<td><strong>S</strong></td>
<td>Frontiers in Cardiac Ultrasound</td>
</tr>
<tr>
<td></td>
<td><strong>PC</strong></td>
<td>Pathology I Echo Correlation: Double Inlet Left Ventricle</td>
</tr>
<tr>
<td></td>
<td><strong>P</strong></td>
<td>Echo for Durable Mechanical Circulatory Support</td>
</tr>
<tr>
<td></td>
<td><strong>E</strong></td>
<td>It’s All About ASE</td>
</tr>
<tr>
<td></td>
<td><strong>S R</strong></td>
<td>Taking an Idea from Lab to Clinical Fruition</td>
</tr>
<tr>
<td>9:30 – 10:00 AM</td>
<td>REFRESHMENT BREAK</td>
<td></td>
</tr>
<tr>
<td>10:00 – 11:30 AM</td>
<td><strong>S</strong></td>
<td>Hiding in Plain Sight: Echo in Systemic Disease</td>
</tr>
<tr>
<td></td>
<td><strong>S</strong></td>
<td>Guidelines in Action: 3 Cases, 3 Key Points</td>
</tr>
<tr>
<td></td>
<td><strong>PC</strong></td>
<td>Pathology II Echo Correlation: Ventricular Non-compaction</td>
</tr>
<tr>
<td></td>
<td><strong>P</strong></td>
<td>Echo for Temporary Mechanical Circulatory Support</td>
</tr>
<tr>
<td></td>
<td><strong>E CL</strong></td>
<td>Sizing It Up: Getting it Done Right</td>
</tr>
<tr>
<td></td>
<td><strong>S R</strong></td>
<td>Echocardiography in Clinical Trials as Applied to Practice</td>
</tr>
<tr>
<td>11:30 AM - 1:00 PM</td>
<td>SCIENCE &amp; TECHNOLOGY THEATER: LANTHEUS MEDICAL IMAGING</td>
<td></td>
</tr>
<tr>
<td>1:00 – 2:30 PM</td>
<td><strong>S</strong></td>
<td>The Assessment of Aortic Stenosis: Echo as the Gold Standard</td>
</tr>
<tr>
<td></td>
<td><strong>S</strong></td>
<td>The Real World Echo Lab</td>
</tr>
<tr>
<td></td>
<td><strong>PC</strong></td>
<td>Focus on Quality Assurance and Appropriate Use Criteria</td>
</tr>
<tr>
<td></td>
<td><strong>P</strong></td>
<td>No 2D Allowed: 3D for the Operating Room</td>
</tr>
<tr>
<td></td>
<td><strong>E CL</strong></td>
<td>Guidance from the Guidelines and Standards</td>
</tr>
<tr>
<td></td>
<td><strong>S R</strong></td>
<td>How to Assess Left Atrial Size and Function</td>
</tr>
<tr>
<td>2:30 – 3:00 PM</td>
<td>REFRESHMENT BREAK</td>
<td></td>
</tr>
<tr>
<td>3:00 – 4:30 PM</td>
<td><strong>S</strong></td>
<td>Right On! The Right Heart</td>
</tr>
<tr>
<td></td>
<td><strong>S</strong></td>
<td>Contrast Perfusion</td>
</tr>
<tr>
<td></td>
<td><strong>PC</strong></td>
<td>Pediatric Echo Jeopardy</td>
</tr>
<tr>
<td></td>
<td><strong>P</strong></td>
<td>Hypertrophic Cardiomyopathy in the Operating Room</td>
</tr>
<tr>
<td></td>
<td><strong>E CL</strong></td>
<td>When It Does Not Make Sense: Putting the Pieces Together</td>
</tr>
<tr>
<td></td>
<td><strong>S</strong></td>
<td>Is Focused Echo Important? It’s Critical!</td>
</tr>
<tr>
<td>3:30 - 4:30 PM</td>
<td>EDUCATOR’S SUMMIT - ROOM 303</td>
<td></td>
</tr>
<tr>
<td>4:30 - 6:30 PM</td>
<td>PRESIDENT’S RECEPTION IN THE EXHIBIT &amp; POSTER HALL</td>
<td></td>
</tr>
<tr>
<td>7:00 - 11:00 PM</td>
<td>ASE FOUNDATION 7TH ANNUAL RESEARCH AWARDS GALA</td>
<td>This event requires a separate registration. Proceeds benefit the ASE Foundation’s charitable activities.</td>
</tr>
</tbody>
</table>

For detailed information, please download the ASE Live Educational Courses app or visit ASEScientificSessions.org.
Saturday, June 11th
Networking Opportunities
and Special Events

2016 KALMANSON LECTURE
8:00 – 9:30 AM
Ballroom 6B

The ASE Foundation is honored to recognize Peter N. Burns, PhD, Professor and Chairman of Medical Biophysics at the University of Toronto and Senior Scientist at Sunnybrook Research Institute, from Toronto, ON, Canada as the 2016 Kalmanson Lecturer. Established in memory of Professor Daniel Kalman, Kalmanson is a pioneer in the use of Doppler echocardiography, and funded through a grant from the International Cardiac Doppler Society (ICDS), this annual lectureship provides a forum for honoring worthy investigators while promoting research and education in cardiovascular Doppler ultrasound. Professor Burns will present his lecture entitled “New Doppler Techniques for Cardiac Contrast” during the Frontiers in Cardiac Ultrasound symposium.

DR. ROBERTO CANESSA, MD, FASE
SPECIAL BOOK READING
2:30 – 3:00 PM
Science and Technology Theater

Join Roberto Canessa, MD, FASE, as he reads excerpts from his latest book, I Had to Survive: How a Plane Crash in the Andes Inspired My Calling to Save Lives. Dr. Canessa, a pediatric cardiologist from Montevideo, Uruguay, was recognized as a hero in the famous 1972 Andes plane crash that was documented in the best seller Alive by Piers Paul Reed and the 2008 award-winning documentary “Stranded: I’ve Come from a Plane That Crashed on the Mountains.” There are a very limited number of copies of his signed book available for a donation to the ASE Foundation. Please visit the ASEF booth outside the Exhibit & Poster Hall on Level 4 for more information.

EDUCATOR’S SUMMIT
3:30 – 4:30 PM
Room 303

Join in on a round-table discussion for educators teaching cardiovascular ultrasound. Discussion includes international cardiovascular ultrasound education practices, development of international advanced cardiovascular sonographer programs, educational needs in different geographical locations, and the use of social media for reaching students in different geographical locations. Attendees will receive information regarding ASE’s educator resources for use in educational programs.

PRESIDENT’S RECEPTION
4:30 – 6:30 PM
Exhibit & Poster Hall

All attendees are invited to celebrate ASE 2016 at the President’s Reception, hosted by ASE President, Susan Wiegers, MD, FASE. This is an opportunity to network with colleagues and friends while learning more about the newest equipment and services in the cardiovascular field. Nearly 50 exhibitors will be showcasing their products. Complimentary hors d’oeuvres and cocktails will be available at many stations throughout the hall. Admission is included in your registration fee, and guest tickets can be purchased during the registration process.

ASE FOUNDATION 7TH ANNUAL RESEARCH AWARDS GALA
7:00 – 11:00 PM
The Grand Hyatt Hotel
Seattle, WA

The premier annual fundraiser for the ASE Education and Research Foundation is the 7th Annual Research Awards Gala in Seattle. The evening will celebrate the accomplishments of awardees and the dynamic field of cardiovascular ultrasound commemorating “20 Years of Funding Cardiovascular Ultrasound Research.” Event proceeds support research activities that advance the progress and future of our field. Pre-purchased tickets are required; tickets are not sold onsite. For more information, visit the ASE Foundation booth, located outside the Exhibit & Poster Hall.

PHOTO EXHIBITION
ASEF Booth, Level 4

A special juried showcase of photographs will be on display throughout the meeting. View the world through the eyes, and photos, of ASE members taken while they traveled across the world to participate in various medically-related humanitarian events.
**7:00 AM - 7:50 AM**  
**CL** Why is My Patient Short of Breath? Breathless or Sleepless in Seattle - Ballroom 6A  
*Chairs: T. Costantino, A. Morris*

**7:00 AM - 7:15 AM**  
Bronchial or Cardiac Asthma?  
*T. Costantino*

**7:15 AM - 7:30 AM**  
Low Ejection Fraction with Normal Filling Pressure  
*Y. Han*

**7:30 AM - 7:45 AM**  
Acute Pulmonary Embolism  
*J. Fields*

**7:45 AM - 7:50 AM**  
Question and Answer

---

**7:00 AM - 7:50 AM**  
**CL** Contrast for Chamber Opacification - Ballroom 6B  
*Chairs: H. Leong-Poi, S. Mulvagh*

**7:00 AM - 7:15 AM**  
Why Don’t We Just Give It To Everyone? Don’t Burst My Bubbles  
*P. Patil*

**7:15 AM - 7:30 AM**  
Optimizing Lab Operations for Success  
*J. Olson*

**7:30 AM - 7:45 AM**  
Maximizing Contrast Utilization for Stress Echo  
*S. Mulvagh*

**7:45 AM - 7:50 AM**  
Question and Answer

---

**7:00 AM - 7:50 AM**  
**CL** Echo Emergencies - Ballroom 6C  
*Chairs: M. Cohen, M. Puchalski*

**7:00 AM - 7:15 AM**  
Acute Coronary Syndromes  
*M. Wasserman*

**7:15 AM - 7:30 AM**  
Endocarditis  
*A. Schultz*

**7:30 AM - 7:45 AM**  
Aortic Dissection  
*R. Garg*

**7:45 AM - 7:50 AM**  
Question and Answer

---

**7:00 AM - 7:15 AM**  
**CL** Mitral Regurgitation: Repair or Replace - Ballroom 6E  
*Chairs: D. Shook, B. Taylor*

**7:00 AM - 7:15 AM**  
Basic Case: Pre-op Echo Predictors  
*K. Zimmermann*

**7:15 AM - 7:30 AM**  
Complex Case: Additional Information from Intraoperative TEE  
*A. Finley*

**7:30 AM - 7:45 AM**  
Impossible Case: When to Throw in the Towel  
*N. Skubas*

**7:45 AM - 7:50 AM**  
Question and Answer

---

**7:00 AM - 7:50 AM**  
**E** The Right Direction: Quality Improvement - Room 609  
*Chairs: M. Bierig, M. Roberts*

**7:00 AM - 7:15 AM**  
Lab Accreditation: What Has Changed  
*B. Gorman*

**7:15 AM - 7:30 AM**  
Sonographers Role in Quality Assurance  
*A. Dillenbeck*

**7:30 AM - 7:45 AM**  
Structure and Analytics for the Quality Assurance Process  
*N. Greenberg*

**7:45 AM - 7:50 AM**  
Question and Answer

---

**7:00 AM - 7:50 AM**  
**CL** Measure It! - Room 613  
*Chairs: S. Costa, J. Song*

**7:00 AM - 7:15 AM**  
Low Gradient Aortic Stenosis  
*J. Passeri*

**7:15 AM - 7:30 AM**  
Quantifying Mitral Regurgitation  
*E. Krieger*

**7:30 AM - 7:45 AM**  
Prosthetic Aortic Stenosis  
*R. Rasalingam*

**7:45 AM - 7:50 AM**  
Question and Answer
8:00 AM - 9:30 AM

$ Strain Fundamentals Made Easy - Ballroom 6A
Chairs: T. Edvardsen, V. Amuthan

8:00 AM - 8:15 AM
What is Strain? What Does It Measure?
S. Lester

8:15 AM - 8:30 AM
Strain in Routine Clinical Lab: Knobology and Beyond
T. Yingchoncharoen

8:30 AM - 8:45 AM
Common Scenarios Where Strain Gives Immediate Answers
T. Marwick

8:45 AM - 9:00 AM
Strain Imaging: Common Errors and Artifacts
Z. Popovic

9:00 AM - 9:15 AM
The Future of Strain Imaging
J. Thomas

9:15 AM – 9:30 AM
Question and Answer

8:00 AM - 9:30 AM

PC Pathology I Echo Correlation: Double Inlet Left Ventricle - Ballroom 6C
Chairs: M. Lewin, L. Lopez

8:00 AM - 8:20 AM
Fetal to Postnatal Imaging
J. Cnota

8:20 AM - 8:40 AM
Pathology
S. Sanders

8:40 AM - 9:00 AM
Surgical Palliation
J. Chen

9:00 AM - 9:20 AM
Long Term Outcome of Double Inlet Left Ventricle
G. Lui

9:20 AM – 9:30 AM
Question and Answer

8:00 AM - 9:30 AM

$ Frontiers in Cardiac Ultrasound - Ballroom 6B
Chairs: P. Burns, V. Mor-Avi

8:00 AM - 8:15 AM
Traditional Known Physical Limits of Cardiac Ultrasound Application
M. Belohlavek

8:15 AM - 8:30 AM
Overcoming Limitations: Ultrafast Cardiac Ultrasound
J. D’hooge

8:30 AM - 8:45 AM
Cardiac Elastography: Early Clinical Applications
C. Pislaru

8:45 AM - 9:00 AM
Limits of Miniaturization
B. Choi

9:00 AM - 9:15 AM
New Doppler Techniques for Cardiac Contrast
(Kalmanson Lecture)
P. Burns

9:15 AM – 9:30 AM
Question and Answer

8:00 AM - 9:30 AM

P Echo for Durable Mechanical Circulatory Support - Ballroom 6E
Chairs: F. Cobey, R. Sniecinski

8:00 AM - 8:10 AM
Council on Perioperative Echocardiography
Business Meeting
R. Sniecinski

8:10 AM - 8:25 AM
Predicting Right Ventricular Failure: 2D? 3D? Strain?
J. Kirkpatrick

8:25 AM - 8:45 AM
Intraoperative TEE for LVADs
K. Rehfeldt

8:45 AM - 9:00 AM
Surgical Options for Right Ventricular Dysfunction and Tricuspid Regurgitation in LVAD Patients
N. Mokadam

9:00 AM - 9:15 AM
Ramping It Up: LVAD Assessment in the ICU
J. Estep

9:15 AM – 9:30 AM
Question and Answer

SATURDAY, JUNE 11TH
8:00 AM - 9:30 AM

**E** It’s All About ASE - Room 609
*Chairs: P. Knoll, E. McIlwain*

8:00 AM - 8:15 AM
Council on Cardiovascular Sonography Business Meeting
*C. Mitchell*

8:15 AM - 8:30 AM
What Can ASE Do for You?
*M. Park*

8:30 AM - 8:45 AM
Career Pathways
*C. Mitchell*

8:45 AM - 9:00 AM
Making the Sessions Successful for You
*S. Nay*

9:00 AM - 9:15 AM
Humanitarian Efforts: ASE Around the World
*D. Adams*

9:15 AM – 9:30 AM
Question and Answer

8:00 AM - 9:30 AM

**S R** Taking an Idea from Lab to Clinical Fruition - Room 613
*Chairs: J. Lindner, R. Senior*

8:00 AM - 8:20 AM
Bubble Engineering
*E. Unger*

8:20 AM - 8:40 AM
Animal Studies: Data Needed Before First-in-Man
*H. Leong-Poi*

8:40 AM - 8:50 AM
Human Trials: Phase I-III
*J. Lindner*

8:50 AM - 9:10 AM
Reimbursement for a New Technology: The CMS Perspective
*R. Wright*

9:10 AM – 9:30 AM
Question and Answer

10:00 AM - 11:30 AM

**S** Hiding in Plain Sight: Echo in Systemic Disease - Ballroom 6A
*Chairs: S. Heinle, T. Zhu*

10:00 AM - 10:15 AM
Amyloidosis + Fabry
*V. Polsani*

10:15 AM - 10:30 AM
Sarcoidosis and Hemochromatosis
*B. Tamarappoo*

10:30 AM - 10:45 AM
Collagen Vascular Disease, Takayasu/Kawasaki
*S. Kim*

10:45 AM - 11:00 AM
Carcinoid Heart Disease
*S. Shah*

11:00 AM - 11:15 AM
Myocarditis
*A. Rodrigues*

11:15 AM – 11:30 AM
Question and Answer

10:00 AM - 11:30 AM

**S** Guidelines in Action: 3 Cases, 3 Key Points - Ballroom 6B
*Chairs: J. Mangion, M. Saric*

10:00 AM - 10:15 AM
Chamber Quantification
*M. Quiñones*

10:15 AM - 10:30 AM
Right Ventricular Function
*L. Rudski*

10:30 AM - 10:45 AM
PFO and Stroke
*F. Chaudhry*

10:45 AM - 11:00 AM
Valve Guidelines Update
*B. Carabello*

11:00 AM - 11:15 AM
Hypertension
*T. Marwick*

11:15 AM – 11:30 AM
Question and Answer
SATURDAY, JUNE 11TH

10:00 AM - 11:30 AM

PC Pathology II Echo Correlation: Ventricular Non-compaction With and Without Congenital Heart Disease - Ballroom 6C
Chairs: C. McMahon, J. Villafane

10:00 AM - 10:20 AM
Imaging Challenges in Diagnosis
B. Printz

10:20 AM - 10:40 AM
Pathology
S. Sanders

10:40 AM - 11:00 AM
Surgical Management of Heart Failure
R. Jaquiss

11:00 AM - 11:20 AM
Imaging in Patients on Mechanical Circulatory Support
T. Tacy

11:20 AM – 11:30 AM
Question and Answer

10:00 AM - 11:30 AM

Echo for Temporary Mechanical Circulatory Support - Ballroom 6E
Chairs: A. Finley, M. Taylor

10:00 AM - 10:10 AM
Mechanical Circulatory Support for Post-Cardiotomy Shock: Guidelines and Options
R. Sniecinski

10:10 AM - 10:25 AM
Surgical Considerations for Failure to Wean from Cardiopulmonary Bypass
N. Mokadam

10:25 AM - 10:40 AM
Echocardiography for Percutaneous VAD’s
M. Swaminathan

10:40 AM - 10:50 AM
Cases: Complications of Temporary VAD Support
S. Shillcutt

10:50 AM - 11:05 AM
Echo for Extracorporeal Membrane Oxygenation
A. Nicoara

11:05 AM - 11:20 AM
Is the Patient Ready for Weaning?
R. Stainback

11:20 AM – 11:30 AM
Question and Answer

10:00 AM - 11:30 AM

Echo for Extracorporeal Membrane Oxygenation
A. Nicoara

10:00 AM - 10:15 AM
Serial Changes in Cardiac Structure and Function: When is a Change Meaningful?
L. Gillam

10:15 AM - 10:30 AM
Diastolic Function Assessment: When Numbers Do Not Match
E. Gill

10:30 AM - 10:45 AM
Serial Assessment of Pulmonary Hypertension Right Heart Function: Pearls and Pitfalls
J. Hung

10:45 AM - 11:00 AM
Common Measurement Challenges in Guiding Structural Heart Interventions
F. Asch

11:00 AM - 11:15 AM
Best Practices in Core-Lab in the Era of Multimodality Imaging
P. Douglas

11:15 AM – 11:30 AM
Question and Answer
1:00 PM – 2:30 PM

§ The Assessment of Aortic Stenosis: Echo as the Gold Standard - Ballroom 6A

Chairs: A. DeMaria, W. Zoghbi

1:00 PM - 1:15 PM
Overview/Perspective
J. Dal-Bianco

1:15 PM - 1:30 PM
The Gold Standard: Echo/Doppler Evaluation
D. Rubenson

1:30 PM - 1:45 PM
Low Flow, Low Gradient Aortic Stenosis
I. Burwash

1:45 PM - 2:00 PM
Is It Truly Severe Aortic Stenosis? When TTE Just Isn’t Enough
M. Saric

2:00 PM - 2:15 PM
Guidance from the Guidelines
C. Otto

2:15 PM – 2:30 PM
Question and Answer

1:00 PM - 2:30 PM

§ The Real World Echo Lab – Ballroom 6B

Moderators: B. Byrd, P. Douglas

1:00 PM - 1:15 PM
What Sustainable Growth Rate Repeal Means to Your Operations
G. Rose

1:15 PM - 1:30 PM
Reimbursement 101: What You Must Know
M. Main

1:30 PM - 1:45 PM
How to Benchmark Your Lab’s Quality and Productivity
M. Picard

1:45 PM - 2:00 PM
"No Conflicts, No Interest" – New Issues Related to Conflict of Interest
J. Dent

2:00 PM - 2:15 PM
Putting It Together: A Strategy for Managing Your Lab
R. Stainback

2:15 PM – 2:30 PM
Question and Answer

1:00 PM - 2:30 PM

PC Focus on Quality Assurance and Appropriate Use Criteria - Ballroom 6C

Chairs: R. Sachdeva, A. Younoszai

1:00 PM - 1:15 PM
Reproducibility Between Sonographers (and Fellows)
J. Kreger

1:15 PM - 1:30 PM
Standardization Between Readers and Labs
L. Lopez

1:30 PM - 1:45 PM
Standard Display and Orientation of 3D Echo Anatomy
J. Simpson

1:45 PM - 2:00 PM
Real-Time Integration and Reporting of Novel Technologies
P. Frommelt

2:00 PM - 2:15 PM
Beyond QA: How to Create a Culture of Continuous Quality Improvement
A. Younoszai

2:15 PM – 2:30 PM
Question and Answer

1:00 PM - 2:30 PM

P No 2D Allowed: 3D for the Operating Room - Ballroom 6E

Chairs: A. Finley, S. Shillcutt

1:00 PM - 1:15 PM
Artifacts and General Principles for Optimizing 3D
S. Shernan

1:15 PM - 1:30 PM
Maximizing Multiplanar Reconstruction
F. Mahmoud

1:30 PM - 1:45 PM
How I Use 3D for the Mitral Valve
D. Shook

1:45 PM - 2:00 PM
How I Use 3D for the Aortic Valve
S. Shernan

2:00 PM - 2:15 PM
How I Use 3D for the Right Heart
G. Mackensen

2:15 PM – 2:30 PM
Question and Answer
1:00 PM - 2:30 PM

**ECL** Guidance from the Guidelines and Standards - Room 609
Chairs: L. Gillam, J. Marshall

1:00 PM - 1:15 PM
Diving into Diastology
M. Bierig

1:15 PM - 1:30 PM
Standing Up to the Aortic Valve
A. Pellett

1:30 PM - 1:45 PM
LVAD: Visualizing the Cannulas
K. McGregor

1:45 PM - 2:00 PM
The Right Wing: Pulmonic and Tricuspid Valve
J. Kreeger

2:00 PM - 2:15 PM
Cardiac Source of Emboli
M. Roberts

2:15 PM – 2:30 PM
Question and Answer

1:00 PM - 2:30 PM

**S** How to Assess Left Atrial Size and Function - Room 613
Chairs: L. Badano, T. Tsang

1:00 PM - 1:15 PM
Atrial Size: 2D vs. 3D; Which is Better?
K. Yared

1:15 PM - 1:30 PM
Anatomy and Function of the Left Atrium and Appendage
B. Hoit

1:30 PM - 1:45 PM
Lessons Learned About the Imaging the Left Atrial Appendage for Cardioversion
M. Stoddard

1:45 PM - 2:00 PM
Guidance of Left Atrial Appendage Closure
W. Jaber

2:00 PM - 2:15 PM
Is There a Role for Assessing Left Atrium Mechanics
L. Thomas

2:15 PM – 2:30 PM
Question and Answer

3:00 PM - 4:30 PM

**S** Right On! The Right Heart - Ballroom 6A
Chairs: L. Rudski, M. Vannan

3:00 PM - 3:15 PM
Applying the Guidelines
L. Rudski

3:15 PM - 3:30 PM
Ventricular-Ventricular Interaction in Pulmonary Hypertension
M. Friedberg

3:30 PM - 3:45 PM
3D Rules in the Assessment of the Right Ventricle
L. Badano

3:45 PM - 4:00 PM
The Lost Valves: How to Assess the Tricuspid Valve and Pulmonary Valve?
L. Sade

4:00 PM - 4:15 PM
Role of Strain to Assess Right Ventricular Function
G. Kane

4:15 PM – 4:30 PM
Question and Answer

3:00 PM - 4:30 PM

**S** Contrast Perfusion - Ballroom 6B
Chairs: J. Lindner, M. Main

3:00 PM - 3:15 PM
Perfusion Imaging: The Theory and the Reality
K. Wei

3:15 PM - 3:30 PM
Acute Myocardial Infarction: Stunning vs. Necrosis
M. Main

3:30 PM - 3:45 PM
Chronic Ischemic Heart Disease: Detecting Hibernation
R. Senior

3:45 PM - 4:00 PM
Myocardial Perfusion During Stress Echocardiography
K. Wei

4:00 PM - 4:15 PM
Differentiating Tumors and Masses
C. Taub

4:15 PM – 4:30 PM
Question and Answer
3:00 PM - 4:30 PM

**Pediatric Echo Jeopardy - Ballroom 6C**

*Chairs: M. Brook, D. Harrild*

**Team Midwest**  
C. Statile, T. Thorsson

**Team Pacific**  
G. Kung, M. Toyono

**Team Texas**  
S. Morris, R. Tunks

**Team Southeast**  
W. Border, C. Taylor

**Council on Pediatric and Congenital Heart Disease Business Meeting**

*Chair: M. Cohen*

3:00 PM - 4:30 PM

**Hypertrophic Cardiomyopathy in the Operating Room - Ballroom 6E**

*Chairs: F. Mahmood, M. Swaminathan*

3:00 PM - 3:15 PM

Measuring Myocardial Hypertrophy  
*S. Pai Cole*

3:15 PM - 3:30 PM

Alcohol Ablation Considerations  
*TBD*

3:30 PM - 3:45 PM

Surgical Considerations: Should Mitral Valve Be Replaced?  
*B. Taylor*

3:45 PM - 4:00 PM

Intraoperative TEE: Guiding the Myectomy  
*F. Cobey*

4:00 PM - 4:15 PM

Unusual Causes of Left Ventricular Outflow Obstruction  
*M. Taylor*

4:15 PM - 4:30 PM

Question and Answer

3:00 PM - 3:30 PM

**When It Does Not Make Sense: Putting the Pieces Together - Room 609**

*Chairs: G. Aurigemma, M. Umland*

3:00 PM - 3:15 PM

Diastology Discrepancies  
*C. Kramer*

3:15 PM - 3:30 PM

Low Flow Aortic Stenosis  
*J. Aragam*

3:30 PM - 3:45 PM

Mistaken Identities: What’s in the Heart  
*J. Cleve*

3:45 PM - 4:00 PM

When the Right Heart is Wrong  
*G. Aurigemma*

4:00 PM - 4:15 PM

Constriction vs. Restriction  
*S. Miller*

4:15 PM - 4:30 PM

Question and Answer

3:30 PM - 4:30 PM

**Is Focused Echo Important? It’s Critical! - Room 613**

*Moderators: K. Spencer, T. Costantino*

3:00 PM - 3:15 PM

POCUS in Dyspnea  
*A. Dean*

3:15 PM - 3:30 PM

RUSH Protocol  
*J. Fields*

3:30 PM - 3:45 PM

Transthoracic Echo for Aortic Dissection  
*K. Spencer*

3:45 PM - 4:00 PM

POCUS in the ICU  
*A. Morris*

4:00 PM - 4:15 PM

Focused Echo Guided Procedures  
*D. Sedehi*

4:15 PM - 4:30 PM

Question and Answer

3:30 PM - 4:30 PM

**Educators Summit - Room 303**
Creative Learning; Better Outcomes

This one-of-a-kind tool enhances the skills of sonographers and physicians by teaching consistent measurement and interpretation of cardiac ultrasound images.

ECHO TEST & TEACH APPLICATION

An Echocardiography Measurement & Interpretation Simulator

Benefits and Features

• Enhances patient care by reducing variability
• Facilitates and enforces echo lab quality standards
• Supports fulfillment of lab accreditation requirements
• Offers a hands-on, real-world training experience without being tied to an imaging device
• Cloud-based, so users have access anytime and anywhere
• Contains case studies covering multiple areas and new cases are continually added
• Includes analytic tools to enable administrators to analyze both individual and collective results

Earn AMA PRA Category 1 Credits™

“As we move into the era of rewarding value over volume, it becomes increasingly vital that echocardiographic measurements and interpretations must be accurate and reproducible for echocardiography to continue to be cost effective.”

Harvey Feigenbaum, MD, FASE, and Founder of ASE

Schedule your FREE demo today!
Email: TestandTeach@asecho.org

Order today on ASEMarketPlace.com
**Schedule at a Glance**

**SUNDAY, JUNE 12TH**

<table>
<thead>
<tr>
<th>ROOM</th>
<th>BALLROOM 6A</th>
<th>BALLROOM 6B</th>
<th>BALLROOM 6C</th>
<th>BALLROOM 6E</th>
<th>ROOM 609</th>
<th>ROOM 613</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>7:00 - 7:50 AM</strong></td>
<td>CL</td>
<td>CL</td>
<td>CL</td>
<td>E CL CL</td>
<td>CL</td>
<td>CL</td>
</tr>
<tr>
<td>Phenotype Look-Alike 1</td>
<td>Right Ventricular Function and Dysfunction</td>
<td>How to: 3D – From Imaging to Printing</td>
<td>Bubble Bubbles Toils and Troubles</td>
<td>Great Vibrations or Artifact</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>8:00 - 9:30 AM</strong></td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASE AWARDS PRESENTATIONS, ANNOUNCEMENTS, AND 27TH ANNUAL EDLER LECTURE - BALLROOM 6E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>9:30 - 11:45 AM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S REFRESHMENT BREAK, CHALK TALKS, AND VISIT EXHIBIT &amp; POSTER HALL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:15 – 11:45 AM</td>
<td>S Electric Echo</td>
<td>S Echo: Your Window to Detect Subclinical Disease</td>
<td>P PC Strain: Challenges and Opportunities (Joint ASE/EACVI Session)</td>
<td>S Strain: Challenges and Opportunities (Joint ASE/EACVI Session)</td>
<td>E CL What Does It Add?</td>
<td>S Contrast: Therapeutic Value</td>
</tr>
<tr>
<td><strong>11:45 AM - 1:15 PM</strong></td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCIENCE &amp; TECHNOLOGY THEATER: GE HEALTHCARE, SONOGRApher INVESTIGATOR’S AWARD COMPETITION, MEET THE INVESTIGATORS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2:45 – 3:30 PM</strong></td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REFRESHMENT BREAK, CHALK TALKS, AND VISIT EXHIBIT &amp; POSTER HALL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3:30 – 5:00 PM</strong></td>
<td>P Interventional Echo: A Burgeoning Subspecialty</td>
<td>P PC Extreme Imaging</td>
<td>S Deep Dive Into Diastology: Read with the Experts</td>
<td>E Advanced Imaging: It Takes a Team: Sonographer/ Cardiologist</td>
<td>S Stress Echocardiography: Read with the Experts (Joint ASE/EACVI Session)</td>
<td></td>
</tr>
<tr>
<td><strong>5:00 – 6:00 PM</strong></td>
<td>S R ECHOVATION COMPETITION - BALLROOM 6B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **6:00 - 8:00 PM** | ASE FOUNDATION’S ANNUAL SCAVENGER HUNT | This event requires a separate registration. Proceeds benefit the ASE Foundation’s charitable activities. | For detailed information, please download the ASE Live Educational Courses app or visit ASEScientificSessions.org.
Sunday, June 12th
Networking Opportunities and Special Events

27th Annual Edler Lecture
8:00 – 9:30 AM
Ballroom 6E
Neil J. Weissman, MD, FASE, ASE’s Immediate Past President, will present “The Future of Echocardiography: Disrupter or Disrupted?” as the 27th Annual Edler Lecture. The Edler Lecture was created in 1990 in honor of the founder of echocardiography, Inge Edler, MD.

Chalk Talks
9:30 – 10:15 AM & 2:45 – 3:30 PM
Exhibit & Poster Hall
Have clinical questions? This is your opportunity to get answers from luminaries in the field of echo in an intimate setting. During the morning break, James Thomas, MD, FASE, will be available to answer all of your questions about Hemodynamics. The afternoon break will be dedicated to Quantification of Regurgitant Volumes with Miguel Quiñones, MD, FASE.

2016 Sonographer Investigator’s Award Competition
12:00 – 1:15 PM
Exhibit & Poster Hall
Created to highlight sonographer-led research, this competition recognizes non-physicians who served as the primary investigator on their project of original work.

Poster Session 1 (P1) Moderated Posters
12:00 – 1:15 PM
Exhibit & Poster Hall

Fellow and Early Career Member Networking Reception
2:45 – 3:30 PM
Room 3A
The ASE Membership Steering Committee and Board of Directors invites fellow and early career physician and sonographer members for a dessert reception. Meet other members who are just beginning their careers, while networking with leaders in the field of echocardiography. Representatives from the special interest councils, the Membership Steering Committee, and ASE Past Presidents will be there to share how ASE helped their careers.

Echovation Challenge
5:00 – 6:00 PM
Ballroom 6B
This new competition will showcase process and workflow innovations that have either been adopted or are in development in echocardiography laboratories throughout the United States and across the world. A worldwide competition was initiated in 2015 and top-scoring finalists have been selected to present their innovations. Audience members and an esteemed judging panel will watch the finalists compete and rate their presentations. The winners will be awarded cash prizes. To add to the festivities the event will include cocktails and refreshments for the audience. Come and cheer on your favorite team and help us “crown” the winner of the 2016 challenge.

ASE Foundation Scavenger Hunt
6:00 – 10:00 PM
Capitol Hill is one of the most vibrant and interesting sections of Seattle and will serve as the location for the ASE Foundation’s 2nd annual philanthropic team-building Scavenger Hunt. Not only will you see an iconic bookshop, critically acclaimed coffee shops, a modern apothecary, a local record shop, ice cream shop, and eclectic locals, you will also get your daily workout while walking the route. A hosted, private after-party for the Scavenger Hunt participants will be held at Capitol Cider – another local attraction in the heart of Capitol Hill. This event is the perfect opportunity to network with friends and colleagues in a heart-healthy and fun way. Prizes will be awarded to the top finishers at the end of the evening. Tickets are available onsite until 1:30 PM on Sunday. For more information, visit the ASE Foundation booth, located outside the Exhibit & Poster Hall on Level 4.
7:00 AM - 7:50 AM
**CL Phenotype Look Alike-I - Ballroom 6A**
*Chairs: G. Aurigemma, S. Lester*

7:00 AM - 7:15 AM
Stress Cardiomyopathy vs. Massive LAD-Territory Myocardial Infarction
* M. Wood

7:15 AM - 7:30 AM
Athlete Heart vs. Subclinical Left Ventricular Systolic Dysfunction
* A. Magalski

7:30 AM - 7:45 AM
Neurocardiogenic Disease vs. Massive LAD Myocardial Infarction
* V. Krishnamoorthy

7:45 AM - 7:50 AM
Question and Answer

7:00 AM - 7:50 AM
**CL Right Ventricular Function and Dysfunction - Ballroom 6B**
*Chairs: J. Aragam, E. Tucay*

7:00 AM - 7:15 AM
Is This Right Ventricle Normal?
* P. Collier

7:15 AM - 7:30 AM
Is This Right Ventricle Good Enough to Support An LVAD?
* J. Kirkpatrick

7:30 AM - 7:45 AM
Right Ventricle and Plueral Effusion
* A. Shah

7:45 AM - 7:50 AM
Question and Answer

7:00 AM - 7:50 AM
**PC How to: 3D - From Imaging to Printing - Ballroom 6C**
*Chairs: D. Roberson, G. Shirali*

7:00 AM - 7:15 AM
Fundamentals and Limitations of 3D Transthoracic Echo
* G. Marx

7:15 AM - 7:30 AM
Intraoperative Management with 3D Transesophageal Echo
* A. Nicoara

7:30 AM - 7:45 AM
From Scan to Model: The Nuts and Bolts of 3D Printing
* T. Pietila

7:45 AM - 7:50 AM
Question and Answer

7:00 AM - 7:50 AM
**E CL Bubble Bubbles Toils and Troubles - Room 609**
*Chairs: C. Mitchell, T. Porter*

7:00 AM - 7:10 AM
Optimization: Role of Sonographer
* J. Odabashian

7:10 AM - 7:20 AM
Bubbles Show the Flow
* H. Carron

7:20 AM - 7:30 AM
Contrast Makes the Diagnosis
* J. Belcik

7:30 AM - 7:40 AM
Without Contrast I Would Have Missed That
* J. Marshall

7:40 AM – 7:50 AM
Question and Answer

8:00 AM - 9:30 AM
**S ASE Awards Presentations, Announcements, and 26th Annual Edler Lecture – Ballroom 6E**

8:00 AM - 8:15 AM
Welcome and State of ASE
* S. Wiegers

8:15 AM - 8:30 AM
Board of Directors Induction and Announcements
* S. Wiegers
8:30 AM - 8:50 AM  
Edler Lecture  
N. Weissman

8:50 AM - 9:20 AM  
Awards Presentations and Other Society Recognitions  
S. Wiegers

9:20 AM - 9:30 AM  
Incoming President’s Address  
A. Klein

9:30 AM - 11:30 AM  
Learning Lab: 3D Volume/Function Quantification - Room 620 (Additional Fee Required)  
Chairs: W. Tsang, K. Collins

10:15 AM - 11:45 AM  
Electric Echo - Ballroom 6A  
Chairs: J. Gorcsan, K. Poh

10:15 AM - 10:30 AM  
What the Heart Failure Specialist Wants From the Echo Lab Regarding CRT and Pacing?  
R. Cheng

10:30 AM - 10:45 AM  
AV and VV Optimization: How and When to do?  
T. Naqvi

10:45 AM - 11:00 AM  
Pacer Induced Tricuspid Regurgitation: How Often Does It Occur and How To Detect?  
G. Lin

11:00 AM - 11:15 AM  
The Mechanics of Left Ventricular Dyssynchrony  
F. Chaudhry

11:15 AM - 11:30 AM  
New Applications of Echo in Guiding CRT Treatment  
J. Gorcsan

11:30 AM - 11:45 AM  
Question and Answer

10:15 AM - 11:45 AM  
Subclinical Atherosclerosis  
A. Johri

10:30 AM - 10:45 AM  
The Diabetic Heart  
M. Galderisi

10:45 AM - 11:00 AM  
The Athlete’s Heart  
R. Weiner

11:00 AM - 11:15 AM  
Hypertension  
H. Dokainish

11:15 AM - 11:30 AM  
Left Ventricular Dysfunction and Chemotherapy  
M. Scherrer-Crosbie

11:30 AM - 11:45 AM  
Question and Answer

10:15 AM - 11:45 AM  
PC What I Wish I Knew About Echo - Ballroom 6C  
Chairs: J. Kovalchin, S. Srivastava

10:15 AM - 10:30 AM  
History of 2D and 3D Echo Imaging  
J. Kisslo

10:30 AM - 10:45 AM  
Artifacts - Pitfalls, Traps and Disasters  
H. Ko

10:45 AM - 11:00 AM  
The Toughest Fetal Diagnoses and How to Solve Them  
C. Fifer

11:00 AM - 11:15 AM  
Radiology Envy: Advantages of Echo in the Age of CMR and CT  
D. Parra

11:15 AM - 11:30 AM  
The Art of Doppler  
M. Brook

11:30 AM - 11:45 AM  
Question and Answer

10:15 AM - 11:45 AM  
Strain: Challenges & Opportunities (Joint ASE/EACVI Session) - Ballroom 6E  
Chairs: L. Badano, X. Shu

10:15 AM - 10:30 AM  
Challenges in Standardization: In-vitro Studies  
J. D’hooge

10:30 AM - 10:45 AM  
Challenges in Standardization: Clinical Studies  
J. Voigt

10:45 AM - 11:00 AM  
Regional Strain Assessments: Principal, Application, and Pitfalls  
T. Abraham
11:00 AM - 11:15 AM
3D Strain: Is There a Future? Which Strain Component to Measure?
G. Pedrizzetti

11:15 AM - 11:30 AM
Automated Strain Assessment and Big Data Analytics
P. Sengupta

11:30 AM – 11:45 AM
Question and Answer

10:15 AM - 11:45 AM
**E CL** 3D What Does It Add? - Room 609
Chairs: B. Roberts, L. Sugeng

10:15 AM - 10:30 AM
Pearls and Pitfalls of Getting Good Data
E. Kruse

10:30 AM - 10:45 AM
Should We Abandon 2D for Left Ventricular Volumes
R. Meece

10:45 AM - 11:00 AM
Role of 3D in Valvular Heart Disease
S. Govind

11:00 AM - 11:15 AM
Role of 3D in Device Guidance
B. Roberts

11:15 AM - 11:30 AM
Cases of Putting It All Together
M. Yamat

11:30 AM – 11:45 AM
Question and Answer

10:15 AM - 11:45 AM
**E** Contrast: Therapeutic Value - Room 613
Chairs: T. Porter, A. Rabiscoffsky

10:15 AM - 10:30 AM
Sonothrombolysis
T. Porter

10:30 AM - 10:45 AM
Ultrasound Mediated Microbubble Destruction for Targeted Therapy
H. Leong-Poi

10:45 AM - 11:00 AM
Acute Myocardial Infarction: Clinical Trials
O. Kamp

11:00 AM - 11:15 AM
Microvascular Imaging
F. Villanueva

11:15 AM - 11:30 AM
Molecular Imaging
J. Lindner

11:30 AM – 11:45 AM
Question and Answer

1:15 PM - 2:45 PM
**$** ASE Foundation Global Initiatives:
Humanitarian Missions in Argentina and Vietnam - Ballroom 6A
Chairs: J. Banchs, J. Kirkpatrick, R. Lang

1:15 PM - 1:25 PM
Making a Difference in the World: Anatomy of a Mission
J. Banchs

1:25 PM - 1:35 PM
Hanoi, Vietnam: Effect on the Delivery of Healthcare
J. Kirkpatrick

1:35 PM - 1:45 PM
What Did We Find? Unique Cases from Argentina
G. Lammertin

1:45 PM - 1:55 PM
Tartagal, Argentina: The Mission and Goals
R. Lang

1:55 PM - 2:05 PM
Vietnamese Perspective: Hopes for the Future
H. Nguyen Thi Thu

2:05 PM - 2:15 PM
Argentinian Perspective: Impact on the Local Community
R. Ronderos

2:15 PM - 2:25 PM
History of ASE Foundation Missions: A Pictorial Essay
T. Ryan

2:25 PM - 2:35 PM
ASE Sonographer-Vietnamese Nurse Connection
L. Sanchez

2:35 PM – 2:45 PM
Question and Answer

1:15 PM - 2:45 PM
**$** Valvular Heart Disease: Step-by-Step Approach:
Beyond Aortic Stenosis - Ballroom 6B
Chairs: A. Labovitz, A. Weyman

1:15 PM - 1:30 PM
Quantification of Aortic Regurgitation: Still A Challenge
B. Griffin
### Saturday, June 11th

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 1:30 PM - 1:45 PM | Interrogation and Quantification of Mitral Regurgitation  
M. Sarano          |
| 1:45 PM - 2:00 PM  | Mitral Stenosis: Added Value of 3D Imaging  
W. Tsang           |
| 2:00 PM - 2:15 PM  | Renewed Interest in the Tricuspid Valve  
R. Freeman         |
| 2:15 PM - 2:30 PM  | The Forgotten Pulmonic Valve  
W. Lai             |
| 2:30 PM - 2:45 PM  | Question and Answer                                                                             |

### Sunday, June 12th

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 1:15 PM - 2:45 PM | Strain and Cardiac Mechanics - Ballroom 6C  
Chairs: J. Marek, J. Thomas          |
| 1:15 PM - 1:30 PM  | Which Strain Do I Choose in 2016 and How Do I Do It?  
Practical Advice  
A. Dragulescu |
| 1:30 PM - 1:45 PM  | Strain and Early Detection of Cardiac Dysfunction  
J. Ganame         |
| 1:45 PM - 2:00 PM  | Strain and the Single Ventricle  
M. DiMaria        |
| 2:00 PM - 2:15 PM  | Cardiac Resynchronization Therapy in Congenital Heart Disease  
D. Forsha         |
| 2:15 PM - 2:30 PM  | Future Clinical Directions of Strain Imaging  
L. Mertens        |
| 2:30 PM – 2:45 PM  | Question and Answer                                                                             |

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 1:15 PM - 2:45 PM | The Great Debates: Training, Practice, and Ethics - Ballroom 6E  
Chairs: J. Hung, R. Martin          |
| 1:15 PM - 1:45 PM  | All Modality Training is Necessary for Optimal Careers in Cardiac Imaging  
M. Garcia – Pro  
T. Ryan – Con        |
| 1:45 PM - 2:15 PM  | Anyone Can Do Echo: We Can Hang Up Our Stethoscopes  
A. DeMaria – Pro  
N. Pandian – Con     |
| 2:15 PM - 2:45 PM  | Should Focused Cardiac Sonography Be Used Where Surgical/Interventional Treatment Options Are Not Available  
P. Sengupta – Pro  
K. Spencer – Con      |
| 1:15 PM - 3:15 PM  | Learning Lab: 3D Cropping - Room 620  
(Additional Fee Required)  
Chairs: M. Monaghan, B. Roberts |

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 1:15 PM - 2:45 PM | Looking at the Mitral Valve from All Sides - Room 609  
Chairs: B. Anderson, S. Kort          |
| 1:15 PM - 1:30 PM  | Mitral Valve Morphology  
J. Kisslo          |
| 1:30 PM - 1:45 PM  | Mitral Regurgitation: Go With the Flow  
G. Whalley         |
| 1:45 PM - 2:00 PM  | Mitral Stenosis: How Stiff Is This Valve?  
A. Venkateshvaran |
| 2:00 PM - 2:15 PM  | The Sonographers Role: Pre Intervention Assessment  
K. Zimmermann     |
| 2:15 PM - 2:30 PM  | Assessment of Prosthetic Mitral Valves  
J. Cleve           |
| 2:30 PM – 2:45 PM  | Question and Answer                                                                             |

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 1:15 PM - 2:45 PM | Vortex Imaging: Principles and Application (Joint ASE/JSE Session) - Room 613  
Chairs: Y. Otsuji, R. Shandas          |
| 1:15 PM - 1:30 PM  | Contrast Bubbles for Tracking Blood Flow: The Basics  
A. Kheradvar      |
| 1:30 PM - 1:45 PM  | Doppler Based Techniques for Left Ventricular Vortex Imaging  
S. Nakatani        |
1:45 PM - 2:00 PM
CMR Techniques for Blood Flow Quantification in Aorta
A. Bolger

2:00 PM - 2:15 PM
Echo–Particle Imaging Velocimetry: Clinical Application
K. Kusunose

2:15 PM - 2:30 PM
A. Falahatpisheh

2:30 PM – 2:45 PM
Question and Answer

3:30 PM - 5:00 PM
Interventional Echocardiography: A Burgeoning Subspecialty - Ballroom 6A
Chairs: S. Goldstein, L. Rodriguez

3:30 PM - 3:45 PM
Interventional Echocardiography: Training, Safety, Cost
N. Weissman

3:45 PM - 4:00 PM
Advanced Technology for Imaging Structural Heart Disease Interventions
S. Mankad

4:00 PM - 4:15 PM
New Devices: New Imaging Challenges
P. Grayburn

4:15 PM - 4:30 PM
Research in Interventional Echocardiography
F. Asch

4:30 PM - 4:45 PM
The Future of Structural Heart Disease Interventions: Essential Role of the Imager
I. Kronzon

4:45 PM – 5:00 PM
Question and Answer

3:30 PM - 5:00 PM
Extreme Imaging - Ballroom 6C
Chairs: N. Khoo, A. Powell

3:30 PM - 3:45 PM
3D Ventricular Fiber Anatomy and Function
S. Kutty

3:45 PM - 4:00 PM
Remodeling: Which Comes First, Flow or Geometry?
P. Claus

4:00 PM - 4:15 PM
Virtual Modeling and Computational Fluid Mechanics
P. Bhatla

4:15 PM - 4:30 PM
3D Modeling from Echocardiography Datasets
A. Ludomirsky

4:30 PM - 4:45 PM
The Future of Integrated Imaging Technology
A. Powell

4:45 PM – 5:00 PM
Question and Answer
3:30 PM - 5:00 PM
Stress Echocardiography: Read with the Experts (Joint ASE/EACVI Session) – Room 613
Chairs: P. Douglas, B. Popescu

3:30 PM - 3:45 PM
Stress Echo in CAD
P. Pellikka

3:45 PM - 4:00 PM
Dead or Alive? Viability Assessment with Dobutamine Stress Echocardiography
S. Sawada

4:00 PM - 4:15 PM
Stress Echo in Valvular Disease
E. Donal

4:15 PM - 4:30 PM
Perfusion Imaging: If Not Now, When?
R. Senior

4:30 PM - 4:45 PM
Diastolic Stress Test
B. Popescu

4:45 PM – 5:00 PM
Question and Answer

5:00 PM - 6:00 PM
Echovation Challenge – Ballroom 6B
Chair: S. Lester
**Schedule at a Glance**

**MONDAY, JUNE 13TH**

<table>
<thead>
<tr>
<th>Time</th>
<th>Ballroom 6A</th>
<th>Ballroom 6B</th>
<th>Ballroom 6C</th>
<th>Ballroom 6E</th>
<th>Room 609</th>
<th>Room 613</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 - 7:50 AM</td>
<td><strong>CL</strong> Phenytype Look Alike 2</td>
<td><strong>CL</strong> Pulmonary Hypertension</td>
<td><strong>PC</strong> Pericardial Disease</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00 - 9:30 AM</td>
<td><strong>S</strong> Imaging for TAVR</td>
<td><strong>S</strong> Functional Mitral Regurgitation</td>
<td><strong>P</strong> Echo and Intervention</td>
<td><strong>E</strong> The Advanced Cardiac Sonographer Role</td>
<td></td>
<td><strong>V</strong> Vascular Disease in the Cardiology Patient</td>
</tr>
<tr>
<td>9:30 - 10:15 AM</td>
<td><strong>REFRESHMENT BREAK, CHALK TALKS, AND VISIT EXHIBIT &amp; POSTER HALL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:15 - 11:45 AM</td>
<td><strong>S</strong> Strain: Clinical Applications</td>
<td><strong>S</strong> It’s All About the Aorta</td>
<td><strong>P</strong> The Stressed Right Ventricle (Joint ASE/EACVI Session)</td>
<td><strong>E</strong> Interventional Echocardiography Live Case Demonstration: Mitra-Clip Case</td>
<td><strong>E</strong> Cardiac Mechanics: Do We Need It?</td>
<td><strong>V</strong> Advanced Topics in Vascular Ultrasound</td>
</tr>
<tr>
<td>11:45 AM - 1:15 PM</td>
<td><strong>SCIENCE &amp; TECHNOLOGY THEATER: PHILIPS HEALTHCARE, MEET THE INVESTIGATORS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:15 - 2:45 PM</td>
<td><strong>S</strong> The Trials and Tribulations of Motherhood</td>
<td><strong>S</strong> Dermatology of the Heart</td>
<td><strong>PC R</strong> Oral Abstracts and Fireside Chat</td>
<td><strong>P</strong> Interventional Echocardiography Live Case Demonstration: Paravalvular Leak, Watchman, or Valve-in-Valve Case</td>
<td><strong>E</strong> Sonography From Around the World: How They Do It</td>
<td><strong>S</strong> Endocarditis: 3 Cases, 3 Key Points</td>
</tr>
<tr>
<td>2:45 - 3:30 PM</td>
<td><strong>REFRESHMENT BREAK, CHALK TALKS, AND VISIT EXHIBIT &amp; POSTER HALL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:30 - 5:15 PM</td>
<td><strong>S R</strong> ARTHUR E. WEYMAN YOUNG INVESTIGATOR’S AWARD COMPETITION/17TH ANNUAL FEIGENBAUM LECTURE - BALLROOM 6E</td>
<td></td>
<td></td>
<td><strong>E</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:15 - 6:15 PM</td>
<td><strong>MEMBER RECEPTION - ELLIS PLAZA, LEVEL 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For detailed information, please download the ASE Live Educational Courses app or visit ASEScientificSessions.org.
Monday, June 13th
Networking Opportunities and Special Events

CHALK TALKS
9:30 – 10:15 AM and 2:45 – 3:30 PM
Exhibit & Poster Hall
Don’t miss the opportunity to get your clinical questions answered by expert faculty. During the morning break, William Zoghbi, MD, FASE, will discuss Pearls in Diastology. The afternoon break will feature Jason Johnson, MD, Mark Lewin, MD, FASE, Colin McMahon, MD, FASE, and Christopher Statile, MD discussing the use of 3D Printing to understand and treat cardiac pathology.

POSTER SESSION 2 (P2) MODERATED POSTERS
12:00 – 1:15 PM
Exhibit & Poster Hall

ARTHUR E. WEYMAN YOUNG INVESTIGATOR’S AWARD COMPETITION AND 17TH ANNUAL FEIGENBAUM LECTURE
3:30 – 5:00 PM
Ballroom 6E
Investigators will present their research and Theodore P. Abraham, MBBS, MD, FASE, Director, Johns Hopkins Echocardiography Programs, will deliver the 17th Annual Feigenbaum Lecture “Echo Muscles into the Mechanics Era – Strain Transforms Morphologists into Physiologists” on the use of novel technologies in echocardiography.

ECHO LAB BENCHMARKING RESEARCH STUDY
5:00 – 5:15 PM
Ballroom 6E
Larry Sobal, MBA, Executive Vice President of Business Development for MedAxiom, will present the preliminary results of the first comprehensive study of Echo Labs. Spanning across the U.S., encompassing both large and small private practices and hospital systems, this view of the organizational and transformational practices in labs will be a captivating view of the patient care system. The survey provided much-needed baseline metrics for the field. Learn how labs across the U.S. compared in their workplace organizational, operational, clinical, and transformational workflows and techniques. Data obtained from the survey will be analyzed in context of the larger healthcare environment. Tips will be given on how you can use the results to set progressive goals for your lab that will allow you to better compete in your medical communities and improve patient care.

MEMBER RECEPTION
5:15 – 6:15 PM
Ellis Plaza, Level 4
All attendees are invited to this complimentary welcome reception. Enjoy beverages and hors d’oeuvres while connecting with colleagues and friends. Dr. Roberto Canessa will be at the ASE Foundation booth during this time to sign his latest book, *I Had to Survive: How a Plane Crash in the Andes Inspired My Calling to Save Lives*, for those who pre-ordered the book by making a donation to the Foundation.
7:00 AM - 7:50 AM  
**CL Phenotype Look Alike-II - Ballroom 6A**  
Chairs: B. Austin, A. Hays

7:00 AM - 7:15 AM  
Amyloid vs. Non-Obstructive Hypertrophic Cardiomyopathy  
D. Phelan

7:15 AM - 7:30 AM  
Athletes vs. Non-Obstructive Hypertrophic Cardiomyopathy  
K. Klarich

7:30 AM - 7:45 AM  
Hypertensive Heart Disease vs. Fabry’s Cardiomyopathy  
M. Keane

7:45 AM – 7:50 AM  
Question and Answer

7:00 AM - 7:50 AM  
**CL Pulmonary Hypertension - Ballroom 6B**  
Chairs: B. Byrd, O. Sanchez Osella

7:00 AM - 7:15 AM  
Pitfalls in Assessing Pulmonary Pressures  
S. Lester

7:15 AM - 7:30 AM  
Primary Pulmonary Hypertension  
P. Gutierrez-Fajardo

7:30 AM - 7:45 AM  
Pulmonary Hypertension Due to Ventricular Septal Defect  
S. Siu

7:45 AM – 7:50 AM  
Question and Answer

7:00 AM - 7:50 AM  
**PC Pericardial Disease - Ballroom 6C**  
Chairs: G. Ensing, G. Rose

7:00 AM - 7:15 AM  
Pericardial Tamponade: Imaging and Physiology  
S. Natarajan

7:15 AM - 7:30 AM  
Teratoma and Extrinsic Masses  
R. Beroukhim

7:30 AM - 7:45 AM  
Pericarditis: Restriction/Constriction  
T. Welch

7:45 AM – 7:50 AM  
Question and Answer
8:52 AM - 9:04 AM
Intraprocedural Guidance/Complications
L. Rodriguez

9:04 AM - 9:16 AM
Post Procedural Evaluation
K. Maganti

9:16 AM - 9:30 AM
Question and Answer

8:00 AM - 9:30 AM
Functional Mitral Regurgitation - Ballroom 6B
Chairs: R. Martin, H. Rakowski

8:00 AM - 8:10 AM
Impact of Functional Mitral Regurgitation on Outcomes
B. Carabello

8:10 AM - 8:25 AM
Mechanisms of Functional Mitral Regurgitation: Insights From Imaging
J. Hung

8:25 AM - 8:45 AM
How to Assess Functional Mitral Regurgitation Severity
M. Vieira

8:45 AM - 9:00 AM
Indications for Intervention in Functional Mitral Regurgitation
R. Siegel

9:00 AM - 9:15 AM
Percutaneous Repair vs. Surgical Options
M. Sarano

9:15 AM - 9:30 AM
Question and Answer

8:00 AM - 9:30 AM
Echo and Intervention - Ballroom 6C
Chairs: B. Eiden, W. Tworetzky

8:00 AM - 8:20 AM
Fetal Atrial Septoplasty in Hypoplastic Left Heart Syndrome
W. Tworetzky

8:20 AM - 8:40 AM
Device Closure of Ventricular Septal Defects
A. Cabalka

8:40 AM - 9:00 AM
Melody Valve Placement in the Non-Pulmonary Position
T. Geva

9:00 AM - 9:20 AM
TAVR in 2016: Selection, Placement, and Durability
T. Slesnick

9:20 AM - 9:30 AM
Question and Answer
10:15 AM - 11:45 AM
Strain: Clinical Applications - Ballroom 6A
Chairs: J. Mohan, J. Thomas

10:15 AM - 10:30 AM
Coronary Artery Disease
M. Bansal

10:30 AM - 10:45 AM
Valvular Heart Disease: Resistance Lesions
T. Marwick

10:45 AM - 11:00 AM
Valvular Heart Disease: Volume Lesions
S. Sengupta

11:00 AM - 11:15 AM
Infiltrative Cardiomyopathies
J. Oh

11:15 AM - 11:30 AM
Heart Failure Syndromes
S. Shah

11:30 AM - 11:45 AM
Question and Answer

10:15 AM - 11:45 AM
It's All About the Aorta - Ballroom 6B
Chairs: C. Chow, M. Malkowski

10:15 AM - 10:30 AM
Multimodality Imaging of the Aorta: Incorporating Guidelines
J. Meadows

10:30 AM - 10:45 AM
Ouch! Acute Aortic Syndromes - The Clock is Ticking
S. Goldstein

10:45 AM - 11:00 AM
Congenital Aortopathy
M. King

11:00 AM - 11:15 AM
Aortic Trauma
A. Patel

11:15 AM - 11:30 AM
Aortitis: An Inflammatory Situation
J. Cavalcante

11:30 AM - 11:45 AM
Question and Answer

10:15 AM - 11:45 AM
The Stressed Right Ventricle (Joint ASE/EACVI Session) - Ballroom 6C
Chairs: P. Barker, J. Marek

10:15 AM - 10:35 AM
Unique Right Ventricular Adaptation to Fetal Volume/Pressure Overloaded States
F. Crispi

10:35 AM - 10:55 AM
One or the Other: The Right Ventricle in High Afterload States
M. Friedberg

10:55 AM - 11:15 AM
One or the Other: The Right Ventricle in High Preload States
C. Fleishman

11:15 AM - 11:35 AM
The Right Ventricle in Transition: From Preload to Afterload via the Cone Procedure
J. Marek

11:35 AM - 11:45 AM
Question and Answer

10:15 AM - 11:45 AM
Interventional Echocardiography Live Case Demonstration: Mitra-Clip Case - Ballroom 6E
Convention Center Chair and Moderator: W. Stewart

University of Washington
Operator, Interventionalist
M. Reisman

Operator, Echocardiographer
G. Mackensen

Moderator, Echocardiographer
R. Hahn

Convention Center Panelists
S. Kapadia, P. Grayburn, S. Goldstein, K. Horton, R. Siegel

10:15 AM - 10:25 AM
Anatomy Pertinent to Mitral Interventions for Mitral Regurgitation, Mechanisms and Severity
S. Goldstein

10:45 AM - 10:55 AM
Patient Selection for MitraClip
R. Siegel

11:10 AM - 11:20 AM
Intraprocedural Guidance for Mitral Clip
P. Grayburn

11:30 AM - 11:40 AM
Future Percutaneous Devices For Treatment of Mitral Regurgitation
S. Kapadia
10:15 AM - 11:45 AM

Hot Topics in Vascular Laboratory Management (Joint Sonographer/Vascular Council Session) - Room 609
Chairs: B. Fowler, S. Robison

10:15 AM - 10:30 AM
Nuts and Bolts of Vascular Accreditation: Protocols and Reporting
M. Hutchisson

10:30 AM - 10:45 AM
Vascular Credentialing: Why and How
J. Shafer

10:45 AM - 11:00 AM
QI for the Vascular Lab: IAC-VL Changes Decoded
S. Robison

11:00 AM - 11:15 AM
Incorporating Vascular into the Echo Lab: Basic Considerations
B. Fowler

11:15 AM - 11:30 AM
Ergonomics: Keeping Cardiovascular Sonographers Injury Free
C. Coffin

11:30 AM – 11:45 AM
Question and Answer

10:15 AM - 11:45 AM

Prosthetic Valves 101 - Room 613
Moderators: M. Barbosa, L. Gillam

10:15 AM - 10:30 AM
Guidelines in Action: 3 Cases, 3 Key Points
W. Zoghbi

10:30 AM - 10:45 AM
Assessing Prosthetic Valve Stenosis: Clinical Pearls
A. Poppas

10:45 AM - 11:00 AM
Assessing Prosthetic Valve Regurgitation in the Device Closure Era
W. Stewart

11:00 AM - 11:15 AM
Prosthesis Patient Mismatch
P. Pibarot

11:15 AM - 11:30 AM
Composite Root/Stentless Aortic Valve Replacement: Imaging Essentials
L. Rodriguez

11:30 AM – 11:45 AM
Question and Answer

1:15 PM - 2:45 PM

The Trials and Tribulations of Motherhood - Ballroom 6A
Chairs: L. Blauwet, A. Patel

1:15 PM - 1:30 PM
Hemodynamics of Pregnancy
S. Sengupta

1:30 PM - 1:45 PM
Marfan’s and Bicuspid Aortopathy
H. Michelena

1:45 PM - 2:00 PM
Valve Disease in Pregnancy: It’s Complicated
L. Blauwet

2:00 PM - 2:15 PM
Complex Congenital Heart Disease in Pregnancy
S. Siu

2:15 PM - 2:30 PM
Cardiomyopathies and Pregnancy
A. Poppas

2:30 PM – 2:45 PM
Question and Answer

1:15 PM - 2:45 PM

Dermatology of the Heart - Ballroom 6B
Chairs: B. Hoit, J. Oh

1:15 PM - 1:30 PM
Anatomy and Pathophysiology of the Pericardium - The Basics
B. Hoit

1:30 PM - 1:45 PM
Multimodality Imaging of the Pericardium: Choosing Appropriate Imaging
M. Desai

1:45 PM - 2:00 PM
Acute/Recurrent Pericarditis: How to Image, What to do?
A. Klein

2:00 PM - 2:15 PM
Pericardial Effusion/Tamponade: When and How to Intervene?
J. Ha

2:15 PM - 2:30 PM
Pericardial Constriction and Mimickers
J. Oh

2:30 PM – 2:45 PM
Question and Answer
1:15 PM - 1:30 PM
PC-01: Preoperative Non-invasive Pressure-volume Loop Analysis Indices of Cardiac Mechanics can Predict Length of Stay after Stage 2 Palliation: Insights from the Pediatric Heart Network Single Ventricle Reconstruction Trial
S. Chowdhury

1:30 PM - 1:45 PM
PC-02: Global Left Ventricular Relaxation: A Useful Predictive Echocardiographic Marker of Heart Transplant Rejection and Recovery in Children
L. Hernandez

1:45 PM - 2:00 PM
PC-03: Era-based Trends in Diagnostic Accuracy of Fetal Echocardiography: An 18 Year Experience
L. Urbinelli

2:00 PM - 2:15 PM
PC-04: Fetal Growth Restriction Induces Different Prenatal Phenotypes of Cardiac Remodeling
F. Crispi

2:15 PM - 2:30 PM
PC-05: Applicability of the First Pediatric Appropriate Use Criteria for Outpatient Echocardiography to Clinical Practice
S. Kourtidou

2:30 PM - 2:45 PM
PC-06: Surgical Unroofing of Intramural Anomalous Aortic Origin of a Coronary Artery in Pediatric Patients: A Single Center Perspective on Diagnosis and Outcomes
S. Sachdeva

2:45 PM - 3:30 PM
Fireside Chat
Interviewer: C. Fleishman
Interviewee: J. Kisslo

1:15 PM - 2:45 PM
P Interventional Echocardiography Live Case Demonstration: Paravalvular Leak, Watchman, or Valve-in-Valve Case – Ballroom 6E
Convention Center Chair and Moderator: W. Stewart

University of Washington
Operator, Interventionalist
M. Reisman
Operator, Echocardiographer
G. Mackensen
Moderator, Echocardiographer
R. Hahn

Convention Center Panelists
S. Kapadia, C. Bruce, I. Kronzon, J. Passeri, Brad Roberts

1:15 PM - 1:25 PM
The Problem
J. Passeri

1:45 PM - 1:55 PM
Pre-Procedural Planning
I. Kronzon

2:05 PM - 2:15 PM
Intra Procedural Guidance by TEE
C. Bruce

2:25 PM - 2:35 PM
Outcomes, Follow Up, Future Directions
S. Kapadia

1:15 PM - 2:45 PM
E Sonography From Around the World: How They Do It - Room 609
Chairs: E. McIlwain, N. Weissman

1:15 PM - 1:35 PM
View from Down Under: Cardiac Mechanics
B. Anderson

1:35 PM - 1:50 PM
India Loves Echo: Pocket Ultrasound
A. Venkateshvaran

1:50 PM - 2:10 PM
Meeting Needs in Nigeria
K. Ogunyankin

2:10 PM - 2:30 PM
Valve Disease Around the Globe
G. Whalley

2:30 PM – 2:45 PM
Question and Answer

1:15 PM - 2:45 PM
S Endocarditis: 3 Cases, 3 Key Points - Room 613
Chairs: J. Li, V. Rigolin

1:15 PM - 1:30 PM
Left-sided Endocarditis
W. Katz

1:30 PM - 1:45 PM
Right-sided Endocarditis
Y. Otsuji

1:45 PM - 2:00 PM
Prosthetic Valve Endocarditis
G. Habib

2:00 PM - 2:15 PM
The Infected LVAD
T. Kolias
2:15 PM - 2:30 PM
Device Infections: Imaging and Clinical Decision-Making
V. Rigolin

2:30 PM – 2:45 PM
Question and Answer

3:30 PM - 5:15 PM

Arthur E. Weyman Young Investigator’s Award Competition/17th Annual Feigenbaum – Ballroom 6E
Chair: G. Rose
Judges: S. Mankad, G. Habib, S. Nakatani, L. Mertens, T. Porter, A. Weyman, S. Wiegers

3:30 PM - 3:35 PM
Welcome and Introduction of Judges
G. Rose

3:35 PM - 3:50 PM
YIA-1: Functional Tricuspid Regurgitation Due to Chronic Atrial Fibrillation: A 3-dimensional Transesophageal Echocardiography Study
H. Utsunomiya

3:50 PM - 4:05 PM
YIA-2: Novel Echocardiographic Measures of Left Ventricular Diastolic Stiffness in Children: A Validation Study
S. Chowdhury

4:05 PM - 4:20 PM
YIA-3: Echocardiographic Predictors of Transthyretin Cardiac Amyloidosis among Patients with Severe Aortic Stenosis Undergoing Transcatheter Aortic Valve Replacement
A. Castano

4:20 PM - 4:35 PM
YIA-4: Discovery of Multidimensional Aortic Stenosis Subphenotypes Using Unsupervised Cluster Analysis of Clinical and Imaging Data
I. Sherifi

4:35 PM - 4:55 PM
17th Annual Feigenbaum Lecture: Echo Muscles into the Mechanics Era – Strain Transforms Morphologists into Physiologists
T. Abraham

4:55 PM - 5:00 PM
Recognition of Feigenbaum Lecturer and Presentation of Plaque
H. Feigenbaum

4:58 PM - 5:00 PM
Presentation of the YIA Plaques and Announcement of the Winner
A. Weyman

5:00 PM - 5:15 PM
Echo Lab Benchmarking Research Study
L. Sobal

ASE proudly recognizes our International Alliance Partners (listed alphabetically)

Argentinian Federation of Cardiology (FAC)
President: Dra. Narcisa Celina Gutiérrez

Asian-Pacific Association of Echocardiography (AAE)
President: Dr. Jae K. Oh

Canadian Society of Echocardiography (CSE)
President: Dr. Chi-Ming Chow

Chinese Society of Echocardiography (CSE)
President: Dr. Yun Zhang

Department of Cardiovascular Imaging of the Brazilian Society of Cardiology (DIC-SBC)
President: Dra. Samira Saady Mortby

European Association of Cardiovascular Imaging (EACVI)
President: Dr. Gilbert Habib

Indian Academy of Echocardiography (IAE)
President: Dr. Vivekanandan Amuthan

Indonesian Society of Echocardiography (ISE)
President: Dr. Erwan Martanto

InterAmerican Association of Echocardiography (ECOSIA)
President: Dr. Rodrigo Hernández Vyhmeister

Iranian Society of Echocardiography (ISE)
President: Dr. Niloufar Samiei

Japanese Society of Echocardiography (JSE)
President: Dr. Satoshi Nakatani

Korean Society of Echocardiography (KSE)
Chairman: Dr. Joon-Han Shin

Philippine Society of Echocardiography (PSE)
President: Dr. Edwin S. Tucay

Vietnamese Society of Echocardiography (VSE)
President: Associate Professor Pham Nguyen Vinh

The definition of the word “alliance” is a pact, coalition or friendship between two or more parties, made in order to advance common goals and to secure common interests. The goal of the ASE International Alliance Partners program is to share knowledge, expand thought leadership, and enhance standards and practices based on the best thinking worldwide for improved patient care.
<table>
<thead>
<tr>
<th>ROOM</th>
<th>BALLROOM 6A</th>
<th>BALLROOM 6C</th>
<th>BALLROOM 6E</th>
<th>ROOM 609</th>
<th>ROOM 613</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 - 7:50 AM</td>
<td><strong>CL</strong> 3D Echo in Use</td>
<td><strong>PC</strong> Case Competition</td>
<td><strong>CL</strong> Cases to Stump the Experts</td>
<td><strong>E</strong> Stressing the Heart for All Ages</td>
<td><strong>CL</strong> Patient-Centered Care, Time-Efficiency and Difficult Patients: How Do We Find the Right “Humanistic Gain Settings”?</td>
</tr>
<tr>
<td>8:00 - 9:30 AM</td>
<td><strong>S</strong> The Echo Revolution</td>
<td><strong>PC</strong> Fetal Symposium</td>
<td><strong>S</strong> Relaxing in Seattle: Diastology Masterclass with Guideline Updates</td>
<td><strong>E</strong> Is This Really a Stat Echo?</td>
<td><strong>S</strong> Echocardiography in Cerebrovascular Accident</td>
</tr>
<tr>
<td>10:00 - 11:30 AM</td>
<td><strong>S</strong> Cardio-Oncology: At the Crossroads</td>
<td><strong>PC</strong> Controversies</td>
<td><strong>S</strong> Debates in Hemodynamics and Valvular Heart Disease</td>
<td><strong>E</strong> Cardiomyopathy Comes in All Varieties</td>
<td><strong>S</strong> Quality Matters</td>
</tr>
<tr>
<td>11:30 AM - 1:00 PM</td>
<td><strong>S</strong> Multimodality Imaging in Cardiomyopathy</td>
<td><strong>PC</strong> Congenitally Corrected Transposition of the Great Arteries</td>
<td><strong>S</strong> The Athlete’s Heart</td>
<td><strong>S</strong> LVAD: A to Z</td>
<td><strong>S</strong> Veterinary Cardiology Symposium</td>
</tr>
</tbody>
</table>

For detailed information, please download the ASE Live Educational Courses app or visit ASEScientificSessions.org.
Congratulations to Dr. Stanton K. Shernan

The National Board of Echocardiography is pleased to recognize our Past President Stanton K. Shernan, MD, FASE as the 2016 recipient of the ASE Outstanding Achievement in Perioperative Echocardiography Award. We applaud his numerous contributions to the field of echocardiography and extend our congratulations on this well-deserved honor.
7:00 AM - 7:50 AM

3D Echo in Use - Ballroom 6A
Chair: W. Tsang

7:00 AM - 7:15 AM
3D Left Ventricular Quantification
P. Patil

7:15 AM - 7:30 AM
3D Echo in Assessing Mitral Valve Repairability
L. Sugeng

7:30 AM - 7:45 AM
3D Right Ventricular Assessment
P. Collier

7:45 AM - 7:50 AM
Question and Answer

7:00 AM - 7:50 AM

Case Competition - Ballroom 6C
Chairs: N. Ayres, M. King, W. Lai, N. Silverman

7:00 AM - 7:10 AM
CC-01: Infantile Cardiomyopathy with Coronary Origins from the Appropriate Sinuses: Surprise!
It’s Still the Coronaries
T. Churchill

7:10 AM - 7:20 AM
CC-02: Ventricular Pre-excitation: An Unusual Etiology of Ventricular Dysfunction in the Fetus
R. Torok

7:20 AM - 7:30 AM
CC-03: Arrhythmogenic Right Ventricular Dysplasia, an Unusual Presentation and Fulminant Course
H. Rajagopal

7:30 AM - 7:40 AM
CC-04: Unusual Conal Septal Alignment in Transposition of the Great Arteries
A. Ybarra

7:40 AM - 7:50 AM
Question and Answer

7:00 AM - 7:50 AM

Cases to Stump the Experts - Ballroom 6E
Chairs: H. Feigenbaum, A. Pearlman, P. Pellikka

7:00 AM - 7:10 AM
Case #1
D. Owens

7:10 AM - 7:20 AM
Case #2
E. Martanto
TUESDAY, JUNE 14TH

8:00 AM - 9:30 AM

$ The Echo Revolution - Ballroom 6A
Chairs: T. Porter, P. Sengupta

8:00 AM - 8:15 AM
Miniaturization and Wearable Ultrasound for mHealth Applications
S. Bhavnani

8:15 AM - 8:30 AM
Best Organization and Workflow Strategies for Increasing Productivity
D. Reynolds

8:30 AM - 8:45 AM
Newer Displays: Fusion Imaging
V. Mor-Avi

8:45 AM - 9:00 AM
Automation Using Robotic Ultrasound Imaging
R. Doukky

9:00 AM - 9:15 AM
3D Bioprinting for Structural Heart Diseases
S. Little

9:15 AM – 9:30 AM
Question and Answer

8:00 AM - 9:30 AM

PC Fetal Symposium - Ballroom 6C
Chairs: L. Hornberger, R. Michelfelder

8:00 AM - 8:15 AM
Markers for Fetal Heart Disease in 2016: Reasons for Referral
S. Miller

8:15 AM - 8:30 AM
Early Trimester Fetal Echo
A. Moon-Grady

8:30 AM - 8:45 AM
Screening for Fetal Heart Disease with 3D Imaging
J. Solomon

8:45 AM - 9:00 AM
Advanced Fetal Imaging and Treatment: MRI and Maternal Oxygen
S. Peyvandi

9:00 AM - 9:15 AM
Is Fetal Detection of CHD Changing Outcomes: A 20 Year Perspective
J. Rychik

9:15 AM – 9:30 AM
Question and Answer

8:00 AM - 9:30 AM

$ Relaxing in Seattle: Diastology Masterclass with Guideline Updates - Ballroom 6E
Chairs: O. Smiseth, J. Tajik

8:00 AM - 8:15 AM
Pathophysiology of Relaxation and Filling Pressures
J. Ha

8:15 AM - 8:30 AM
Diastology 101
E. Donal

8:30 AM - 8:45 AM
Advanced Measurements (Pulmonary Veins and Intervals)
M. Garcia

8:45 AM - 9:00 AM
When It Doesn’t Fit, You Must Acquit (What to Do with Discrepant Measurements)
F. Miller

9:00 AM - 9:15 AM
Twist and Shout! New Technologies to Assess Diastolic Function
T. Marwick

9:15 AM – 9:30 AM
Question and Answer

8:00 AM - 9:30 AM

E CL Is This Really a Stat Echo? - Room 609
Chairs: E. Gill, G. Strachan

8:00 AM - 8:10 AM
Unwanted Visitors in the Heart
R. Palma

8:10 AM - 8:25 AM
Acute Chest Pain
M. Jankowski

8:25 AM - 8:45 AM
Is the Heart Floating in Fluid: Tamponade
M. Orsinelli

8:45 AM - 9:00 AM
Has the Prosthetic Valve Dehisced?
D. Oliver

9:00 AM - 9:15 AM
Just in a Car Accident Echo vs. CT
K. Chin

9:15 AM – 9:30 AM
Question and Answer
TUESDAY, JUNE 14TH

8:00 AM - 9:30 AM
5 Echocardiography in Cerebrovascular Accident - Room 613
Chairs: B. Khandheria, R. McNamara

8:00 AM - 8:15 AM
Does Everyone with Stroke Need a TEE?
R. McNamara

8:15 AM - 8:30 AM
No RESPECT for the PFO
H. Wang

8:30 AM - 8:45 AM
LA Appendage Closure for Stroke Prevention
R. Grimm

8:45 AM - 9:00 AM
Getting Through the Mandate? The Guideline Update
M. Saric

9:00 AM - 9:15 AM
Do Patients with Atrial Fibrillation and Stroke Require Cardiac Imaging?
M. Stoddard

9:15 AM - 9:30 AM
Question and Answer

10:00 AM - 11:30 AM
5 Cardio-Oncology: At the Crossroads - Ballroom 6A
Chairs: J. Banchs, M. Scherrer-Crosbie

10:00 AM - 10:15 AM
Types of Chemotherapy Related Cardiotoxicity
H. Narayan

10:15 AM - 10:30 AM
Radiation Related Cardiovascular Disease
D. Upadhyaya

10:30 AM - 10:45 AM
Strain Imaging and CMR Techniques: The Clinical Value
J. Banchs

10:45 AM - 11:00 AM
I Am A Clinician, Make It Simple: What Thresholds Do I Choose for Therapeutic Interventions?
J. Liu

11:00 AM - 11:15 AM
Building the Team: The Cardio-Oncology Program
M. Scherrer-Crosbie

11:15 AM - 11:30 AM
Question and Answer

10:00 AM - 11:30 AM
5 Controversies - Ballroom 6C
Chairs: C. Altman, W. Border

10:00 AM - 10:30 AM
Just Say No to MRI: Echo is Adequate to Assess Anatomy and Function
B. Soriano - Pro
A. Dorfman - Con

10:30 AM - 11:00 AM
Path Specimens are So 20th Century and Unnecessary in 2016
J. Kovalchin - Pro
A. Juraszek - Con

11:00 AM - 11:30 AM
TEE is Needed for All Surgeries Using Cardiopulmonary Bypass
J. Lu - Pro
L. Mercer-Rosa - Con

10:00 AM - 11:30 AM
5 Debates in Hemodynamics & Valvular Heart Disease - Ballroom 6E
Chairs: J. Thomas, V. Agrawal

10:00 AM - 10:30 AM
Strain Has Incremental Value in Cardio-Oncology and is Ready for Primetime
J. Plana

Strain is Not Worth It and Has Too Many Limitations
S. Mankad

10:30 AM - 11:00 AM
You Can Assess Filling Pressures with Echo/Doppler
M. Quiñones
You Need Invasive Hemodynamics to Assess Filling Pressures
Ž. Popovic

11:00 AM - 11:30 AM
Cardiac MRI is the Gold Standard for Assessing Mitral Regurgitation Severity
S. Uretsky
Echo is Currently the Appropriate Standard for Routine Assessment of Mitral Regurgitation Severity
R. Siegel
TUESDAY, JUNE 14TH

10:00 AM - 11:30 AM
Cardiomyopathy Comes in All Varieties - Room 609
Chairs: J. Belcik, R. Freeman

10:00 AM - 10:15 AM
Oh Baby: Post Partum Cardiomyopathy
S. Kachline

10:15 AM - 10:30 AM
Moving in: Infiltrative Disease
L. Bienvenu

10:30 AM - 10:45 AM
Heart Broken: Takotsubo
K. Edwards

10:45 AM - 11:00 AM
Overworked: Athletic Heart
L. Hua

11:00 AM - 11:15 AM
Hypertrophic Cardiomyopathy
K. Radigan

11:15 AM – 11:30 AM
Question and Answer

10:00 AM - 11:30 AM
Quality Matters - Room 613
Chairs: D. Orsinelli, L. Weinert

10:00 AM - 10:15 AM
Keeping the Bar High: Maintaining Quality
M. Bremer

10:15 AM - 10:30 AM
Establishing Quality in an Academic Echo Lab
P. Pellikka

10:30 AM - 10:45 AM
Quality in the Community Echo Lab
M. Malkowski

10:45 AM - 11:00 AM
Being Appropriate: Keeping with the Guidelines
D. Orsinelli

11:00 AM - 11:15 AM
Achieving IAC Accreditation: How to Get There
B. Gorman

11:15 AM – 11:30 AM
Question and Answer

1:00 PM - 2:30 PM
Multimodality Imaging of Cardiomyopathy - Ballroom 6A
Chairs: M. Desai, S. Nagueh

1:00 PM - 1:15 PM
Hypertrophic Cardiomyopathy
A. Woo

1:15 PM - 1:30 PM
Dilated Cardiomyopathy
V. Sorrell

1:30 PM - 1:45 PM
Restrictive Cardiomyopathy
A. Prado

1:45 PM – 2:00 PM
Left Ventricular Noncompaction
M. Desai

2:00 PM - 2:15 PM
Arrhythmogenic Right Ventricular Dysplasia
D. Yoeger Sanborn

2:15 PM – 2:30 PM
Question and Answer

1:00 PM - 2:30 PM
Congenitally Corrected Transposition of the Great Arteries - Ballroom 6C
Chairs: R. Canessa, J. Marek

1:00 PM - 1:15 PM
Fetal Assessment and Counseling: Positive or Negative
M. Frommelt

1:15 PM - 1:30 PM
Postnatal Imaging and Determining If or When to Intervene
S. Morhy

1:30PM - 1:45 PM
Longitudinal Follow-up After Surgical Palliation: Systemic Right Ventricle and Left Ventricle
B. Eidem

1:45 PM – 2:00 PM
Associated Lesions: Imaging and Impact on Prognosis
D. Coleman

2:00 PM - 2:15 PM
What the Fetal Cardiologist Should Have Really Said
Y. Kim

2:15 PM – 2:30 PM
Question and Answer
1:00 PM - 2:30 PM

The Athlete’s Heart - Ballroom 6E

Chairs: N. Nanda, M. Wood

1:00 PM - 1:15 PM
Effect of Athletic Training on the Heart
M. Wood

1:15 PM - 1:30 PM
Screening Athletes: Echo, Yes or No?
A. Patel

1:30 PM - 1:45 PM
Separating Athlete’s Heart from HCM
D. Phelan

1:45 PM - 2:00 PM
Other Thick Walled CM: Zebras
K. Klarich

2:00 PM - 2:15 PM
Doctor, My Echo Was Abnormal But Can I Still Play for the Seahawks?
D. Prior

2:15 PM – 2:30 PM
Question and Answer

1:00 PM - 2:30 PM

Veterinary Cardiology Symposium - Room 613

Chairs: B. Keene, P. Pibarot

1:00 PM - 1:20 PM
The Problem of Scale and Human/Animal Differences
R. Hamlin

1:20 PM - 1:40 PM
Valve Disease and Heart Failure
J. Abbott

1:40 PM - 2:00 PM
Ethical Use of Animals in Clinical Research
B. Keene

2:00 PM - 2:20 PM
Advanced Imaging Technology in Veterinary Cardiology
V. Luis-Fuentes

2:20 PM – 2:30 PM
Question and Answer

1:00 PM - 2:30 PM

LVAD: A-Z – Room 609

Moderators: J. Estep, D. Orsinelli

1:00 PM - 1:15 PM
Echo Determinants of LVAD Candidacy
C. Masri

1:15 PM - 1:30 PM
LVAD Surveillance Imaging
R. Stainback

1:30 PM - 1:45 PM
IE-01: Right and Left Ventricular Remodeling Post-Left Ventricular Assist Device Implantation Using 3-Dimensional Echocardiography and Shape Analysis
D. Medvedofsky

1:45 PM - 2:00 PM
Detecting LVAD Malfunction
A. Nicoara

2:00 PM - 2:15 PM
LVAD Weaning/RAMP
J. Estep

2:15 PM – 2:30 PM
Question and Answer
Who makes ASE strong? YOU

Recruit others to join and help make ASE even stronger.

YOU make ASE the largest voice in cardiovascular imaging in the world. YOU know the value of membership and can share it with your colleagues. YOU can encourage others to join ASE to maintain the influence of the echo community.

RECRUIT ONE new member and you BOTH receive an ASE branded travel phone charger.

RECRUIT FIVE OR MORE new members and your 2017 ASE membership will be FREE.

A Member Recruiting Toolkit is available at: ASEcho.org/MemberReferralProgram.

Offer expires August 31, 2016. New member must include the referring member’s name on the membership application to receive the ASE referral gift. Referring credit is received once the new member joins ASE. A maximum of one free membership per member can be earned.
THE ASE FOUNDATION WOULD LIKE TO THANK OUR ADVOCATE AND BENEFACtor TABLE CAPTAINS
for the 7th Annual
RESEARCH AWARDS GALA

ADVOCATE SUPPORTERS
Mayo Clinic, Rochester, MN
National Board of Echocardiography, Raleigh, NC
Edward Gill, MD, FASE, Denver, CO*
Raymond Stainback, MD, FASE, Houston, TX*

BENEFACtor TABLE CAPTAINS
Federico Asch, MD, FASE, Washington, DC*
Jose Banchs, MD, FASE, Houston, TX
Meryl Cohen, MD, FASE, Philadelphia, PA
Greater Houston Echo Society, Houston, TX*
Rebecca Hahn, MD, FASE, New York, NY
James Kirkpatrick, MD, FASE, Seattle, WA
Allan Klein, MD, FASE, Cleveland, OH
Oregon Health & Science University, Portland, OR
Michael Puchalski, MD, FASE, Salt Lake City, UT
Vera Rigolin, MD, FASE, Chicago, IL
Geoffrey Rose, MD, FASE, Charlotte, NC
Raymond Stainback, MD, FASE, Houston, TX*
Cynthia Taub, MD, FASE, New York, NY
A. Jamil Tajik, MD, FASE, Milwaukee, WI
Neil Weissman, MD, FASE, Washington, DC*
Susan Wiegers, MD, FASE, Philadelphia, PA

Celebrating 20 Years of Funding Cardiovascular Ultrasound Research
*Table Co-Captain
ECHO FLORIDA

October 9–11, 2016
Preconferences Available October 8
Disney’s Grand Floridian Resort and Spa
Walt Disney World®, FL

Course Director
Rebecca T. Hahn, MD, FASE
Columbia University
New York, NY

Course Co-Director
Gerard P. Aurigemma, MD, FASE
University of Massachusetts
Worcester, MA

Learning Lab Director
Deborah A. Agler, ACS, RDMS, FASE
Cleveland Clinic
Cleveland, OH

Register now at ASEcho.org/echoflorida
Special Awards

The American Society of Echocardiography is pleased to recognize the following award recipients during the ASE Annual Awards Presentations.

2016 EDLER LECTURER

ASE’s Immediate Past President, Neil J. Weissman, MD, FASE, Director of Cardiac Ultrasound and Ultrasound Core Laboratories at the Cardiovascular Research Institute at Washington Hospital Center, President of Medstar Health Research Institute, and Professor of Medicine at Georgetown University School of Medicine in Washington, DC will present “The Future of Echocardiography: Disruptor or Disrupted?” as the 27th Annual Edler Lecture on Sunday morning. Dr. Weissman’s research interests include valvular heart disease, left ventricular remodeling, and intravascular imaging. His ultrasound core laboratory has served as a site for more than 150 multi-center trials, including multiple studies on pharmacologic effects of valvular and ventricular function, prosthetic valve assessments, and intracoronary therapies. The Edler Lecture was created in 1990 in honor of the founder of echocardiography, Inge Edler, MD.

2016 FEIGENBAUM LECTURE

Theodore P. Abraham, MBBS, MD, FASE, Director, Johns Hopkins Echocardiography Programs, will deliver the 17th Annual Feigenbaum Lecture on Monday afternoon during the 2016 Arthur E. Weyman Young Investigator’s Award competition. Dr. Abraham will present “Echo Muscles into the Mechanics Era – Strain Transforms Morphologists into Physiologists” on the use of novel technologies in echocardiography. As the director of the Johns Hopkins Hypertrophic Cardiomyopathy Center of Excellence and the Athletic Heart Clinic, Dr. Abraham founded Heart Hype, a program that screens local high-school athletes for potentially serious heart issues. He holds several patents for image-guided catheters and ultrasound-related devices and is director of the Johns Hopkins Echocardiography Programs. The Feigenbaum Lecture was named in honor of the founder and first president of ASE, Harvey Feigenbaum, MD, FASE. This lectureship is awarded to a young investigator in recognition of their significant contributions to research in the field of echocardiography and their potential to continue at a high level of achievement.

LIFETIME ACHIEVEMENT AWARD

The Lifetime Achievement Award recognizes an individual who has had a lifetime of outstanding achievements in the field of cardiovascular ultrasound and has served as a role model through service, research, and teaching. This individual has a career in cardiovascular ultrasound spanning at least 25 years and is recognized at local, national, and international levels.

Martin G. St. John Sutton, MBBS, FASE, Emeritus Professor CE of Medicine, Hospital of the University of Pennsylvania, Philadelphia, PA, has been named as the 2016 Physician Lifetime Achievement Award recipient. Dr. St. John Sutton’s initial research focused on ventricular mechanics and fibrosis, and he became a well-known expert on ventricular remodeling in hypertensive, ischemic, and dilated cardiomyopathies. He has authored 320 peer-reviewed journal articles and another 16 book chapters. He is the author or editor of 12 books including two editions of the Textbook of Adult and Pediatric Echocardiography and Doppler. Dr. St. John Sutton is a well-loved educator and served 15 years as the Director of the Cardiovascular Fellowship. He is devoted to education and is a role model in the standard he holds himself to and the kindness with which he treats his patients, trainees, and colleagues.

MERITORIOUS SERVICE AWARD

ASE is pleased to recognize David H. Wiener, MD, FASE, Director of Clinical Operations, Jefferson Heart Institute, Thomas Jefferson University, Philadelphia, PA, as the 2016 recipient of the Meritorious Service Award. Dr. Wiener has served as Chair of the ASE Advocacy Committee for the past four years and has served on the committee for the past seven years. It is largely due to his efforts that ASE has become the voice of echocardiography on Capitol Hill and
has achieved so many successes. His clear command of the issues makes him an outstanding advocate for excellence in cardiovascular ultrasound. Dr. Wiener has also served on the Industry Relations Committee, as an Abstract Grader the past two years, and most recently has joined the Public Relations Task Force and the Board of Directors. The ASE Meritorious Service Award recognizes individual members for their substantial and generous efforts to the Society’s betterment.

**RICHARD POPP EXCELLENCE IN TEACHING AWARD**

Recognized as an extraordinary educator, clinician, and mentor who is nationally and internationally acknowledged as a leader in the field of non-invasive imaging, Sunil V. Mankad, MD, FASE, Associate Professor of Medicine, Mayo Clinic College of Medicine, Director, Transesophageal Echocardiography and Associate Program Director, Cardiovascular Disease Fellowship Program, Mayo Clinic, Rochester, MN, has been named the 16th annual recipient of the Richard Popp Excellence in Teaching Award. This award is given in honor of ASE’s second president, Richard L. Popp, MD, FASE, and recognizes physicians who epitomize the ideal qualities possessed by a mentor and role model.

**EXCELLENCE IN TEACHING IN PEDIATRICS AWARD**

Lloyd Y. Tani, MD, FASE, Division Chief of Pediatric Cardiology, University of Utah Healthcare and L. George Veasy Presidential Endowed Chair, University of Utah, Salt Lake City, UT, is being honored as the 2016 Excellence in Teaching in Pediatrics Awardee. Dr. Tani’s expertise is focused in the field of echocardiography, but he is widely known and respected for his extensive knowledge in all areas of pediatric cardiology. He is an exemplary role model for junior faculty, cardiology fellows, sonographers, pediatric residents, and medical students. Established in 2005, this biennial award recognizes ASE members for their exceptional commitment and skill mentoring students, serving as a role model for the profession, and teaching pediatric echocardiography.

**CARDIOVASCULAR SONOGRAPHER DISTINGUISHED TEACHER AWARD**

Maryellen H. Orsinelli, RN, RDCTS, FASE, The Ohio State University Wexner Medical Center, Columbus, OH, has been named the 13th recipient of the Cardiovascular Sonographer Distinguished Teacher Award. Maryellen is recognized for her inspirational energetic approach to creating curricula for continuing education of sonographers. She encourages everyone to achieve high standards in echocardiography and patient care. The award recognizes an active sonographer instructor who is attentive to cardiovascular sonography professional values and who exhibits values of leadership and dedication to the field of echocardiography for past, current, and future cardiovascular sonographers.

**OUTSTANDING ACHIEVEMENT IN PERIOPERATIVE ECHOCARDIOGRAPHY AWARD**

Stanton K. Shernan, MD, FASE, Director of Cardiac Anesthesia, Brigham and Women’s Hospital, Boston, MA, has been named the 4th recipient of the Outstanding Achievement in Perioperative Echocardiography Award. Dr. Shernan has transcended his specialty and provides outstanding instruction and lectures to surgeons, cardiologists, and anesthesiologists. He is a Full Professor at Harvard Medical School and is heavily involved with resident and fellow training. The ASE Council on Perioperative Echocardiography recognizes an individual who has made significant clinical, research, or educational contributions to the development of the field of perioperative echocardiography with presentation of this award.
INTERNATIONAL LEADERSHIP AWARD

Ricardo E. Ronderos, MD, PhD, FASE, Instituto de Cardiologia La Plata, La Plata, Argentina has been selected to receive the 2016 International Leadership Award. Dr. Ronderos has been a member of ASE since 1996 and FASE since 2010, and is a Past President of the Argentina Federation of Cardiology (FAC). He is recognized for his outstanding professional achievements, including the creation and leadership of his landmark master class for the past 16 years, and the successful leadership and organization of the recent ASE/FAC humanitarian event with the indigenous communities in northwest Argentina. This award was established in 2015 as a pathway for recognition of ASE members outside the United States who have already received FASE designation and are deserving of recognition for outstanding contributions to the field of cardiovascular ultrasound through innovations, education, or leadership.

HONORARY FASE

Each year ASE selects one or more of our colleagues to receive the special designation of Honorary Fellow of the American Society of Echocardiography. This honor is given to individuals outside the United States who have made significant contributions to the field of cardiovascular ultrasound or have played a strong role in building relationships with the Society. Pham Gia Khai, MD, PHD, Vietnam National Heart Institute, Hanoi, Vietnam, has been selected as the 2016 Honorary FASE recipient. Noted for pioneering cardiac ultrasound and interventional cardiology in Vietnam, Dr. Khai is ASE’s first Honorary FASE recipient from that country. Dr. Khai will be honored during the ASE awards presentations on Sunday, June 12th.

The following Awards and Grants are supported by the ASE Education and Research Foundation. Fostering the next generation of cardiovascular ultrasound professionals.

2016 ARTHUR E. WEYMAN YOUNG INVESTIGATOR’S AWARD COMPETITION FINALISTS

This annual competition is supported by the National Board of Echocardiography (NBE) in honor of its first president, Arthur E. Weyman, MD, FASE. These investigators will present their research during the 2016 Arthur E. Weyman Young Investigators Award (YIA) Competition and 17th Annual Feigenbaum Lecture plenary from 3:30 – 5:00 PM on Monday, June 13 in Ballroom 6E on Level 6. After the presentations, the winner will be selected by a panel of echo experts.

» Hiroto Utsunomiya, MD, PhD, Cedars-Sinai Heart Institute, Los Angeles, CA – “Functional Tricuspid Regurgitation Due to Chronic Atrial Fibrillation: A 3-dimensional Transesophageal Echocardiography Study”

» Shahryar M. Chowdhury, MD, Medical University of South Carolina, Charleston, SC – “Novel Echocardiographic Measures of Left Ventricular Diastolic Stiffness in Children: A Validation Study”

» Adam Castano, MD, Columbia University Division of Cardiology, New York, NY – “Echocardiographic Predictors of Transthyretin Cardiac Amyloidosis among Patients with Severe Aortic Stenosis Undergoing Transcatheter Aortic Valve Replacement”

» Ines Sherifi, MD, MSc, Mount Sinai Medical Center, New York, NY – “Discovery of Multidimensional Aortic Stenosis Subphenotypes Using Unsupervised Cluster Analysis of Clinical and Imaging Data”

2016 SONOGRAPHER INVESTIGATOR’S AWARD COMPETITION FINALISTS

Created to highlight sonographer-led research, this competition recognizes non-physicians who served as the primary investigator on their project of original work. These investigators will make a moderated poster presentation of their research from 12:00 – 1:15 PM on Sunday, June 12 in the Exhibit & Poster Hall.

» Amie Majerus, BS, ACS, RDGS, FASE, University of Colorado Health, Aurora – “Mid-systolic, Inner Edge to Inner Edge Echocardiographic Measurements of the Aortic Root and Ascending Aorta More Closely Approximate Those Made by Computed Tomography Than End-diastolic, Leading Edge to Leading Edge Measurements”
» Weimin (Allen) He, RDCS, Mazankowski Heart Institute in University of Alberta, Edmonton, AB, Canada – “Variability of Left Ventricle Volume and Ejection Fraction Measurements Using Contrast Echocardiography: The Influence of the LV Length Measurements in a Large Cohort of Patients During Monitoring Cardiotoxic Effects of Chemotherapy”

» Mary Craft, RDCS, FASE, University of Nebraska/Childrens Hospital and Medical Center, Omaha, NE – “Experience with 4DRV 2.0 Analysis Algorithm for Right Ventricular Quantification in Pediatric and Congential Heart Disease”

» Angela Malone, RDCS, RVT, Spectrum Health, Grand Rapids, MI – “Cost Effectiveness of Twenty-four Hour Echocardiography Coverage"

2016 ASE FOUNDATION TOP 25

The presentation of original research from around the world is an integral component of ASE’s annual meeting. New this year, a special group of investigators were selected as the ASE Foundation’s inaugural Top 25. These early career abstract presenters were selected by the Abstract Chairs based on the scientific merit of their research projects, and in exchange for their involvement at various events throughout the meeting, were awarded $1,000 from the Foundation for travel expenses.

» Chadi Ayoub, MD, Mayo Clinic, Rochester, MN

» Jorge Betancor, MD, Cleveland Clinic, Cleveland, OH

» Mohammed A. Chowdhury, MD, University of Toledo, Toledo, OH

» Merav Dvir-Orgad, MD, BC Women and Children’s Hospital, Vancouver, BC, Canada

» Eleonora Avenatti, MD, Houston Methodist Hospital, Houston, TX

» Waddy Gonzalez, MD, Montefiore Medical Center, Bronx, NY

» Serge C. Harb, MD, Cleveland Clinic Foundation, Cleveland, OH

» Lazaro E. Hernandez, MD, Joe DiMaggio Children’s Hospital, Hollywood, FL

» In-Chang Hwang, MD, Seoul National University Bundang Hospital, Seongnam, Republic of Korea

» Angela M. Kelle, MD, Mayo Clinic, Rochester, MN

» Raj Khandwalla, MD, Cedars Sinai Heart Institute, Los Angeles, CA

» Srikanth Koneru, MD, Cleveland Clinic Foundation, Cleveland, OH

» Soultana Kourtidou, MD, MSc, Seattle Children’s Hospital, Seattle, WA

» Hongyun Liu, MD, Johns Hopkins HCM Center of Excellence, Baltimore, MD

» Dai-Yin Lu, MD, Johns Hopkins University, Baltimore, MD

» Angela B. Malone, RDCS, RVT, Spectrum Health, Grand Rapids, MI

» Diego Medvedofsky, MD, University of Chicago, Chicago, IL

» Donna Chelle V. Morales, DO, Morristown Medical Center, Morristown, NJ

» Monica Mukherjee, MD, FASE, Johns Hopkins University, Baltimore, MD

» Bradley Peltzer, MD, Montefiore Medical Center/Albert Einstein College of Medicine, Bronx, NY

» Marija Vukicevic, PhD, Methodist Hospital, Houston, TX

» Guilherme S. Yared, MD, Johns Hopkins Hospital, Baltimore, MD

2016 TOMTEC INNOVATOR RESEARCH TRAVEL GRANT

Andrea Montero, MD from The Children’s Hospital of Philadelphia in Philadelphia, PA is the recipient of the 2016 TOMTEC Innovator Research Travel Grant. Supported by a grant to the ASE Foundation from TOMTEC IMAGING SYSTEMS GMBH, this annual award is given to assist a promising young researcher presenting his/her work at the ASE Scientific Sessions. For more than 20 years, TOMTEC has driven innovations in echocardiography, and the ASE Foundation thanks them for investing in the young researchers who will continue to drive the field forward. Dr. Montero received $4,000 from the Foundation to support travel expenses.

2016 ALAN D. WAGGONER STUDENT SCHOLARSHIP AWARDS

The Alan D. Waggoner Student Scholarship program was established in 2001 in recognition of Mr. Waggoner’s professional achievements and service to
ASE. Funding from the ASE Foundation provides a limited number of $1,000 scholarship awards for students enrolled in a cardiac ultrasound program accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in the United States or by an equivalent Canadian or external ultrasound program. Also included with each scholarship award is complimentary registration for the recipient to attend the ASE 2016 Scientific Sessions and limited travel support. This year’s recipients were chosen from a large number of students who were nominated by their program directors. The 2016 scholarship award recipients will be recognized during ASE’s Annual Awards Presentation and Edler Lecture from 8:00 – 9:30 AM, Sunday, June 12 in Ballroom 6E on Level 6.

» Beth Anderson – UAMS College of Health Professionals, Little Rock, AR
» Ellen Garcia – Community Regional Medical Center, DMS Program, Fresno, CA
» Abigail Kaminski – Aurora St. Luke’s Medical Center, School of DMS, Milwaukee, WI
» Pamela Keebler – South Hills School of Business and Technology, State College, PA
» Deanna Knox – Bellevue College, DMS Program, Bellevue, WA
» Gina Lamonaca – St. Francis Hospital and Medical Center, CVT Sonography Program, Hartford, CT
» Ashley M. Maes – Bellevue College, DMS Program, Bellevue, WA
» Melissa McKnight – El Centro College, CVT Sonography Program, Dallas, TX
» Erin Monroe – Mayo School of Health Sciences Echocardiography Program, Rochester, MN
» Ha Ni Nguyen – Louisiana State University Health Sciences Center, CVT Sonography Program, New Orleans, LA
» Alexis Pentheros – Sanford Brown College, CVT Sonography Program, Dallas, TX
» Jason Pereira – St. Francis Hospital and Medical Center, CVT Sonography Program, Hartford, CT
» Edward Pierson, Lackawanna College, DMS Program, Scranton, PA
» Lindsay Provenzano – Johns Hopkins Hospital, DMS Program, Baltimore, MD
» Bobbi Jo Schlick – Mayo School of Health Sciences Echocardiography Program, Rochester, MN
» Michael Silverman – Johns Hopkins Hospital, DMS Program, Baltimore, MD

2016 ULTRAECO, LTD. CARDIOVASCULAR SONOGRAPHER STUDENT TRAVEL GRANT
This award, supported by a grant to the ASE Foundation, is presented to a sonographer student enrolled in a CAAHEP accredited cardiac ultrasound program. This grant provides funding to assist a student to attend the annual Scientific Sessions or other ASE-sponsored educational courses. The 2016 student travel grant has been awarded to Kendra Harper, Johns Hopkins Sonography Training Program, Baltimore, MD. This award will be recognized during the Council on Cardiac Sonographer Business Meeting, on Saturday, June 11 at 8:00 AM in Room 609.

2016 FEIGENBAUM CARDIOVASCULAR SONOGRAPHER STUDENT TRAVEL GRANT
This award is supported by a grant to the ASE Foundation from Elsevier Inc. to honor Dr. Harvey Feigenbaum’s commitment and tenure as the former Journal of the American Society of Echocardiography (JASE) Editor for 20 years. It is presented to a sonographer student enrolled in a CAAHEP accredited cardiac ultrasound program. This grant provides funding to assist a student to attend the Scientific Sessions or other ASE sponsored educational courses. The 2016 student travel grant has been awarded to Kelsey Bogen, St. Francis Hospital and Medical Center, DMS Program, Hartford, CT. This award will be recognized during the Council on Cardiac Sonographer Business Meeting, on Saturday, June 11 at 8:00 AM in Room 609.

2016 COUNCIL TRAVEL GRANT AWARDS
The ASE Foundation sponsors Council Travel Grant Awards to fellows, trainees, and sonographers to fund their attendance at the Scientific Sessions. These travel grants are part of an ongoing effort by the Foundation, with the assistance of the Council Steering Committees, to encourage trainees in cardiovascular specialties to focus on the respective echocardiography sub-specialty. In addition, the Council Steering Committees hope to provide interested fellows with a deeper understanding of the imaging field and facilitate the development of meaningful mentoring opportunities for trainees with established imaging faculty.

Council On Pediatric And Congenital Heart Disease Travel Grant Award Recipients
» Carolyn Wilhelm, MD, Nationwide Children’s Hospital, Columbus, OH
» Rachel Torok, MD, Duke University Medical Center, Durham, NC

Council On Vascular Ultrasound Travel Grant Award Recipients
» Olivia Yau, MSc Candidate, Experimental Medicine-Queens University, Kingston, ON, Canada
Council On Perioperative Echocardiography Travel Grant Award Recipients

- Lucy Safi, DO, Massachusetts General Hospital, Boston, MA
- Daniel Walsh, MD, University of Nebraska Medical Center, Omaha, NE

Council On Cardiovascular Sonography Travel Grant Awards

- Lisa Bienvenu, RDCS, ACS, FASE, Ochsner Medical Center, New Orleans, LA
- Merissa Gatti, BS, RDCS, St. Thomas West Hospital, Nashville, TN

ANNOUNCING TWO NEW AWARDS TO BE PRESENTED AT ASE 2017

The Katanick Scholarship Award will be given annually and includes a $1,000 student scholarship for the highest ranking student sonographer candidate nominated for ASEF scholarship awards and up to $500 in travel reimbursement to attend the ASE Scientific Sessions. This award was named to honor the legacy of Sandy Katanick, RN, RVT, CAE, who retired as CEO of the Intersocietal Accreditation Commission after over 25 years of service to the field. Dr. Vera Rigolin, ASE’s Vice President, recognized Ms. Katanick’s service in February 2016 at an Intersocietal Accreditation Commission (IAC) event and announced that this Award would be created in her name.

The ASE Foundation is pleased to announce the Adams Global Service Award in honor of David B. Adams, ACS, RCS, RDCS, FASE, Duke University Medical Center, Durham, NC. This $1,500 travel grant award will be presented on an annual basis to one sonographer mission volunteer, beginning in 2017. Mr. Adams has contributed to the success of the ASEF humanitarian missions with his international mission experience, clinical skills, and leadership abilities. He has announced his retirement from Duke beginning in November 2016. Mr. Adams will be recognized at the ASE Awards Presentations, Announcements, and Edler Lecture session on Sunday, June 12, 8:00 – 9:00 a.m. in Ballroom 6E.

Both of these awards will be presented for the first time in June 2017.
Excellence in ECHOCARDIOGRAPHY EDUCATION

2016 Courses

**JUNE**

27th Annual Scientific Sessions  
June 10-14, 2016 | Seattle, WA  
Washington State Convention Center  
*Jointly provided by ASE and the ASE Foundation*

**JULY**

3rd Annual International Multimodality Cardiovascular Imaging Update of SONECOM  
July 21-23, 2016 | Puebla, Mexico  
Intercontinental President Hotel  
*Provided by The National Society of Echocardiography of Mexico and endorsed by ASE*

**AUGUST**

ECHONAGPUR 2016  
August 5-7, 2016 | Nagpur, India  
Hotel Centre Point  
*Organized by Nagpur Echo Summit and Cardiological Society of India and endorsed by ASE*

**SEPTEMBER**

38th Annual Echo Northwestern Conference  
September 17-19, 2016 | Chicago, IL  
Northwestern Memorial Hospital  
*Provided by Northwestern University Feinberg School of Medicine and held in cooperation with ASE.*

**OCTOBER**

5th Annual Echo Florida  
October 9-11, 2016 | Walt Disney World®, FL  
Disney’s Grand Floridian Resort & Spa  
*Jointly provided by ASE and the ASE Foundation*

2nd Annual Echo ASE ASEAN  
October 21-23, 2016 | Bangkok, Thailand  
Conrad Bangkok  
*Jointly provided by ASE and ASE Foundation*

**NOVEMBER**

Echocardiography 2016: Perioperative and Critical Care Medicine  
November 5-8, 2016 | Naples, FL  
Ritz Carlton Beach Resort  
*Provided by the University of Nebraska Medical Center and held in cooperation with ASE.*

**2017 Courses**

**JANUARY**

27th Annual Echo Hawaii  
January 23-27, 2017 | Kohala Coast, HI  
Hapuna Beach Prince Hotel  
*Jointly provided by ASE and the ASE Foundation*

**FEBRUARY**

30th Annual State-of-the-Art Echocardiography: Echo Southwest  
February 18-21, 2017 | Tucson, AZ  
Hilton Tucson El Conquistador Golf & Tennis Resort  
*Jointly provided by ASE and the ASE Foundation*

**APRIL**

18th Annual ASCeXAM/ReASCE Review Course  
April 29 - May 2, 2017 | Philadelphia, PA  
Loews Philadelphia Hotel  
*Jointly provided by ASE and the ASE Foundation*

Be sure to participate in these educational offerings!  
Discounted rates for ASE members.  
To learn more and register, visit us at ASEcho.org/education.
Experts in the field hold the designation of FASE

Want to achieve a FASE designation? A variety of specialists, in addition to cardiologists, can now meet application criteria. Apply at ASEcho.org/FASE.

Visit the FASE Lounge in Room 616
Saturday, June 11............ 9:00 AM – 4:00 PM
Sunday, June 12............. 9:00 AM – 4:00 PM
Monday, June 13............. 9:00 AM – 4:00 PM
Tuesday, June 14............ 9:00 AM – 2:00 PM
SUNDAY, JUNE 12TH, 2016

SONOGRAPHER INVESTIGATOR’S AWARD COMPETITION (SIA)
Presented: 12:00 – 1:15 PM
Page: 72

EXHIBIT & POSTER HALL

TOPICS
Outcomes / Comparative Effectiveness .... SIA-1
Contrast Echocardiography and New Technology ......................... SIA-2
3D Echocardiography ........................................... SIA-3
Value of Echocardiography (Quality and Cost) .......................... SIA-4

POSTER SESSION 1 (P1)
Presented: 9:00 AM – 4:00 PM
Pages: 77-92

EXHIBIT & POSTER HALL
Meet the Investigators: 12:00 – 1:15 PM
Moderated Poster Session: 12:00 – 1:15 PM

TOPICS
Pediatric and Adult Congenital Heart Disease............... P1-01 through P1-76
Intraprocedural Echocardiography (Operating Room and Interventional Lab) / TEE .................... P1-77 through P1-93
Valvular Heart Disease... P1-94 through P1-137
Outcomes / Comparative Effectiveness ........... P1-138 through P1-152
Value of Echocardiography (Quality and Cost) ...... P1-153 through P1-167
Contrast Echocardiography and New Technology ..... P1-168 through P1-192
Vascular Disease ........... P1-193 through P1-202
Echocardiography in SOE / Arrhythmias / Atrial Function ........ P1-203 through P1-212
MONDAY, JUNE 13, 2016

**POSTER SESSION 2 (P2)**
Presented: 9:00 AM – 4:00 PM  
Pages: 93-108

**EXHIBIT & POSTER HALL**
Meet the Investigators: 12:00 – 1:15 PM  
Moderated Poster Session: 12:00 – 1:15 PM

**TOPICS**
- 3D Echocardiography  …… P2-01 through P2-25
- Echocardiography in Systemic Disease (DM, HTN, Obesity, Cancer) / Pericardial / Primary Myocardial ……P2-26 through P2-62
- Doppler / Hemodynamics ……… P2-63 through P2-88
- Ischemic Heart Disease …..P2-89 through P2-98
- Emerging Use of Echocardiography / Point of Care Echocardiography …. P2-99 through P2-112
- Ventricular Function / Myocardial Mechanics.. P2-113 through P2-160
- Clinical Cases: Cardiovascular Ultrasound Imaging in Diagnosis, Clinical Decision-Making, and Patient Management…. P2-161 through P2-219

**PEDIATRIC ORAL ABSTRACTS (PC)**
Presented: 1:15 – 3:30 PM  
Page: 75  
Ballroom 6C

**TOPICS**
- Pediatric and Adult Congenital Heart Disease ……….. PC-01 through PC-06

**ARTHUR E. WEYMAN YOUNG INVESTIGATOR’S AWARD COMPETITION (YIA)**
3:30 – 5:00 PM  
Page: 73  
Ballroom 6E

**TOPICS**
- 3D Echocardiography ……………………… YIA-1
- Pediatric and Adult Congenital Heart Disease ……………………… YIA-2
- Echocardiography in Systemic Disease (DM, HTN, Obesity, Cancer) / Pericardial / Primary Myocardial …….. YIA-3
- Valvular Heart Disease ………………….. YIA-4
TUESDAY, JUNE 14, 2016

CASE COMPETITION (CC)
7:00 – 7:50 AM
Page: 76
Ballroom 6C

TOPICS
Clinical Cases: Cardiovascular Ultrasound Imaging in Diagnosis, Clinical Decision-Making, and Patient Management ............... CC-01 through CC-04

ORAL ABSTRACT IN LVAD: A TO Z (IE)
1:00 – 2:30 PM
Page: 74
Room 609

TOPIC
3D Echocardiography ......................... IE-01
ASE sincerely thanks the following volunteers for their time reviewing the 2016 abstract submissions.

**ABSTRACT CHAIR**

Geoffrey A. Rose, MD, FASE  
Chief of Cardiology  
Sanger Heart and Vascular Institute  
Charlotte, NC

**ABSTRACT CO-CHAIR**

Sunil Mankad, MD, FASE  
Director, Transesophageal Echocardiography  
Mayo Clinic  
Rochester, MN

**GRADERS**

Theodore P. Abraham, MD, FASE  
Karima Addetia, MD  
Deborah A. Agler, ACS, RCT, RDCS, FASE  
Dianne L. Altman, MS, RDCS, RVT, FASE  
Alicia C. Armour, BS, MA, RDCS, FASE  
Federico M. Asch, MD, FASE  
Jose Banchs, MD, FASE  
Puja Banka, MD  
Piers C.A. Barker, MD, FASE  
Harald Becher, MD, PhD  
J. Todd Belcik, BS, RCS, RDCS, FASE  
Aarti Hejmadi Bhat, MD, FASE  
Eduardo Bossone, MD, PhD  
Paul F. Braum, RDCS, RCS, RVT, VVS, ACS, FASE  
Scott M. Chadderdon, MD  
Robin B. Chamberlain, RDCS, FASE  
Su Min Chang, MD  
Farooq A. Chaudhry, MD, FASE  
Andrew K. Chen, MD  
Annabel A. Chen-Tournoux, MD  
Frederick C. Cobey, MD, FASE  
Meryl S. Cohen, MD, FASE  
Salvatore P. Costa, MD, FASE  
Ravin Davidoff, MBBCh, FASE  
Curt Gerald DeGroff, MD, FASE  
Hisham Dokainish, MD, FASE  
Mary T. Donofrio, MD, FASE  
Gregory J. Ensing, MD, FASE  
Nowell M. Fine, MD, FASE  
Craig E. Fleishman, MD, FASE  
Benjamin H. Freed, MD, FASE  
Mark K. Friedberg, MD, FASE  
Mario J. Garcia, MD  
Linda D. Gillam, MD, FASE  
Steven A. Goldstein, MD, FASE  
Aasha S. Gopal, MD, FASE  
Richard A. Grimm, DO, FASE  
Naomi Hamburg, MD, FASE  
Jeff Hill, BS, ACS, FASE  
Brian D. Hoit, MD, FASE  
Lanqi Hua, RDCS, FASE  
Raj Janardhanan, MD, MRCP, FASE  
Amer M. Johri, MD, FASE  
Martin G. Keane, MD, FASE  
Samer J. Khouri, MD, FASE  
Soo H. Kim, MD, MPH, RPVI, FASE  
Bruce John Kimura, MD  
Allan L. Klein, MD, FASE  
Smadar Kort, MD, FASE  
Itzhak Kronzon, MD, FASE  
Karla M. Kurrelmeyer, MD, FASE  
Arthur J. Labovitz, MD, FASE  
Bruce F. Landeck, MD, FASE  
Roberto M. Lang, MD, FASE  
Howard Leong-Poi, MD, FASE  
Stephen H. Little, MD, FASE  
Sheldon E. Litwin, MD, FASE  
Shizhen Liu, RDCS, FASE  
Frederick W. Lombard, MD  
Jimmy C. Lu, MD, FASE  
Humberto Machado, Sr., MD, FASE  
G. Burkhard Mackensen, MD, PhD, FASE
Research Award Competitions

2016 SONOGRAPHER INVESTIGATOR’S AWARD COMPETITION (SIA)

The ASE Foundation congratulates this year’s finalists.

Poster Presentations: Saturday, June 11 through Monday, June 13
Oral Competition Presentations: Sunday, June 12, 12:00 – 1:15 PM
Exhibit & Poster Hall
Judges: G. Rose, S. Mankad, D. Agler, M. Bremer

SIA-1
Mid-systolic, Inner Edge to Inner Edge Echocardiographic Measurements of the Aortic Root and Ascending Aorta More Closely Approximate Those Made by Computed Tomography Than End-diastolic, Leading Edge to Leading Edge Measurements
Amie Majerus1, Jeremy Nicolarsen1, Sonali Patel2, Robert Quaife3, Amber Khanna4, Ernesto Salcedo4. 1University of Colorado Health, Aurora, CO; 2Children’s Hospital Colorado, Aurora, CO; 3University of Colorado Anschutz Medical Campus, Aurora, CO
Disclosures: R. Quaife – 4 (Philips Ultrasound); E. Salcedo – 4 (Philips Ultrasound)
Presented by Amie Majerus, BS, ACS, RDCS, FASE

SIA-2
Variability of Left Ventricle Volume and Ejection Fraction Measurements Using Contrast Echocardiography: The Influence of the LV Length Measurements in a Large Cohort of Patients During Monitoring Cardiotoxic Effects of Chemotherapy
Weimin (Allen) He1, Eila Mirhadi1,2, Riitta Paakkanen1, Edith Pituskin3, Ian Paterson4, Jonathan Choy5, Harald Becher6, 1Mazankowski Heart Institute in University of Alberta, Edmonton, AB, Canada; 2University of Alberta Hospital, Edmonton, AB, Canada; 3University of Alberta, Edmonton, AB, Canada
Presented by Weimin (Allen) He, RDCS

SIA-3
Experience with 4DRV 2.0 Analysis Algorithm for Right Ventricular Quantification in Pediatric and Congenital Heart Disease
Mary Craft1, Peter Woolman1, Ling Li1, Scott Fletcher1, Anke Sedlmeier2, Rolf Baumann3, Berthold Klas3, Shelby Kutty3. 1University of Nebraska/Childrens Hospital and Medical Center, Omaha, NE; 2TomTec Imaging Systems, Unterschleissheim, Germany
Disclosures: A. Sedlmeier – 5 (TomTec); R. Baumann – 5 (TomTec); B. Klas – 5 (TomTec)
Presented by Mary Craft, RDCS, FASE

SIA-4
Cost Effectiveness of Twenty-four Hour Echocardiography Coverage
Angela B. Malone, Lenora L. Eberhart, David E. Langholz. Spectrum Health, Grand Rapids, MI
Presented by Angela Malone, RDCS, RVT
The ASE Foundation congratulates this year’s finalists, and thanks the National Board of Echocardiography™ (NBE) for its continued support of this annual competition.

Poster Presentations: Saturday, June 11 through Monday, June 13
Exhibit & Poster Hall
Oral Competition Presentations: Monday, June 13
3:30 PM – 5:00 PM
Ballroom 6E


TOPICS

3D Echocardiography.................................YIA-1
Pediatric and Adult Congenital Heart Disease................................. YIA-2
Echocardiography in Systemic Disease (DM, HTN, Obesity, Cancer) / Pericardial / Primary Myocardial ........... YIA-3
Valvular Heart Disease................................. YIA-4

Author Disclosure Key: 1) Speakers’ Bureau; 2) Consultant/Advisor; 3) Stock Ownership (not including stocks owned in a managed portfolio); 4) Research Grant (as principal investigator); 5) Employment Affiliation; 6) Royalty/Patents

YIA-1
Functional Tricuspid Regurgitation Due to Chronic Atrial Fibrillation: A 3-dimensional Transesophageal Echocardiography Study
Hiroto Utsunomiya, Yuji Itabashi, Hirotsugu Mihara, Sayuki Kobayashi, Javier Berdejo, Takahiro Shiota.
Cedars-Sinai Heart Institute, Los Angeles, CA
Disclosures: T. Shiota – 1 (Philips Ultrasound)
Presented by Hiroto Utsunomiya, MD, PhD

YIA-2
Novel Echocardiographic Measures of Left Ventricular Diastolic Stiffness in Children: A Validation Study
Shahryar M. Chowdhury¹, Ryan J. Butts¹, Anthony M. Hlavacek¹, Carolyn L. Taylor¹, Karen S. Chessa¹, Varsha Bandisode¹, Girish S. Shirali², Arni Nutting³, George H. Baker¹. ¹Medical University of South Carolina, Charleston, SC; ²Children’s Mercy Hospital, Kansas City, MO
Presented by Shahryar M. Chowdhury, MD

YIA-3
Echocardiographic Predictors of Transthyretin Cardiac Amyloidosis among Patients with Severe Aortic Stenosis Undergoing Transcatheter Aortic Valve Replacement
Adam Castano, Nadira Hamid, David Narotsky, Omar K. Khalique, Rachel Easterwood, Susheel Kodali, Sabahat Bokhari, Mathew S. Maurer, Rebecca T. Hahn.
Columbia University, Division of Cardiology, New York, NY
Disclosures: S. Kodali – 2 (Edwards Lifesciences, Medtronic); M. S. Maurer – 2 (Pfizer Inc., Alnylam Pharmaceuticals Inc., Prothena Inc., ISIS Pharmaceuticals); R. T. Hahn – 5 (Core Labs for the PARTNER Trial)
Presented by Adam Castano, MD

YIA-4
Discovery of Multidimensional Aortic Stenosis Subphenotypes Using Unsupervised Cluster Analysis of Clinical and Imaging Data
Ines Sherifi, Alaa M. Omar, Pritha Subramanyam, Naman Barman, Farooq Chaudhry, Anelechi Anyanwu, Jason Kovacic, Samin Sharma, Annapoorna Kini, Partho P. Sengupta. Mount Sinai Medical Center, New York, NY
Presented by Ines Sherifi, MD, MSc
Oral Abstract Presentations

**YOUNG INVESTIGATOR’S AWARD WINNERS FROM EUROPEAN ASSOCIATION OF CARDIOVASCULAR IMAGING & JAPANESE SOCIETY OF ECHOCARDIOGRAPHY MEETINGS**

Poster Presentations: Saturday, June 11 through Monday, June 13

Exhibit & Poster Hall

Moderated Poster Presentations: Monday, June 13, 12:00 pm – 1:15 pm

Exhibit & Poster Hall

Moderators: A. Weyman, G. Rose

**TOPIC**

Doppler / Hemodynamics ....................EUR-1

3D Echocardiography ......................JSE-1

Author Disclosure Key: 1) Speakers’ Bureau; 2) Consultant/Advisor; 3) Stock Ownership (not including stocks owned in a managed portfolio); 4) Research Grant (as principal investigator); 5) Employment Affiliation; 6) Royalty/Patents

**EUR-1 – 2015 EACVI YIA WINNER**

Ultrafast Doppler Imaging of Intramyocardial Coronary Arteries

David Maresca¹, Mafalda Correia¹, O Vilemain¹, B Ghaleh², Mickael Tanter¹ and Mathieu Pernot¹, ¹Institut Langevin, ESPCI ParisTech, Paris, France; ²Université Paris Est Créteil et École Nationale Vétérinaire d’Alfort, Maisons-Alfort, France

Presented by David Maresca, PhD

**JSE-1 – 2016 JSE YIA WINNER**

Left Atrial Dilatation Effect Mitral Annulus Geometry and Mitral Regurgitation in Patients with Atrial Fibrillation: Insights from Three-Dimensional Transesophageal Echocardiography

Yuki Izumi, Kanako Hagiwara, Aya Yoshinaga, Yukichi Tokita, Masatomo Yoshikawa, Hiroshi Honma, Wataru Shimizu. Department of Cardiovascular Medicine Nippon Medical School, Tokyo, Japan

Presented by Yuki Izumi, MD

**LVAD: A TO Z (IE)**

Presented: Tuesday, June 14

1:00 pm – 2:30 pm

Room 609

**TOPIC**

3D Echocardiography ......................IE-01

Author Disclosure Key: 1) Speakers’ Bureau; 2) Consultant/Advisor; 3) Stock Ownership (not including stocks owned in a managed portfolio); 4) Research Grant (as principal investigator); 5) Employment Affiliation; 6) Royalty/Patents

**IE-01**

Right and Left Ventricular Remodeling Post-left Ventricular Assist Device Implantation Using 3-dimensional Echocardiography and Shape Analysis

Diego Medvedofsky¹, Eric Kruse¹, Francesco Maffessanti², Karima Addetia¹, Victor Mor-Avi¹, Gabriel Sayer¹, Sirtaz Adatya¹, Nitasha Sarswat¹, Gene Kim¹, Takeyoshi Ota¹, Valluvan Jeevanandam¹, Nir Uriel¹, Roberto M. Lang¹. ¹University of Chicago, Chicago, IL; ²Center for Computational Medicine in Cardiology CCMC, Institute of Computational Sciences, Università della Svizzera italiana, Lugano, Switzerland

Disclosures: V. Jeevanandam – 2 (Thoratec, ReliantHeart, HeartWare); N. Uriel – 2 (HeartWare, Thoratec, HeartWare, Abiomed, Medtronic); R. M. Lang – 1 (Philips)

Presented by Diego Medvedofsky, MD
PC-01
Preoperative Non-invasive Pressure-volume Loop Analysis Indices of Cardiac Mechanics can Predict Length of Stay after Stage 2 Palliation: Insights from the Pediatric Heart Network Single Ventricle Reconstruction Trial
Shahryar M. Chowdhury, Eric M. Graham, Carolyn L. Taylor, Andrew M. Atz, George H. Baker, Ryan J. Butts. Medical University of South Carolina, Charleston, SC
Presented by Shahryar M. Chowdhury, MD

PC-02
Global Left Ventricular Relaxation: A Useful Predictive Echocardiographic Marker of Heart Transplant Rejection and Recovery in Children
Lazaro E. Hernandez, Maryanne Chrisant, Lilliam Valdes-Cruz. Joe DiMaggio Children’s Hospital, Hollywood, FL
Presented by Lazaro E. Hernandez, MD

PC-03
Era-based Trends in Diagnostic Accuracy of Fetal Echocardiography: An 18 Year Experience
Lindsay Urbinelli, Christopher Statile, James Cnota, Allison Divanovic, HalehHeydarian, Peace Madueme, Lindsay Rogers, Eunice Hahn, Regina Keller, Cheri Franklin, Erik Michelfelder. Cincinnati Children’s Hospital, Cincinnati, OH
Presented by Lindsay Urbinelli, MD

PC-04
Fetal Growth Restriction Induces Different Prenatal Phenotypes of Cardiac Remodeling
Merida Rodriguez-Lopez1, Monica Cruz-Lemini1, Brenda Valenzuela-Alcaraz1, Laura Garcia-Otero1, Marta Sitges2, Bart Bijnen3, Eduard Gratacos1, Fatima Crispi1. 1BCNatal (Hospitals Clinic and Sant joan de Deu), IDIBAPS, University of Barcelona, Barcelona, Spain; 2Cardiovascular Institute, Hospital Clinic, IDIBAPS, University of Barcelona, Barcelona, Spain; 3ICREA, Universitat Pompeu Fabra, Barcelona, Spain
Presented by Fatima Crispi, MD, PhD

PC-05
Applicability of the First Pediatric Appropriate Use Criteria for Outpatient Echocardiography to Clinical Practice
Soultana Kourtidou1, Patrick D. Evers1, Neal W. Jorgensen2, Richard A. Kronmal2, Mark B. Lewin1, Amy H. Schultz1. 1Seattle Children’s Hospital, Seattle, WA; 2University of Washington, Department of Biostatistics, Seattle, WA
Presented by Soultana Kourtidou, MD, MSc

PC-06
Surgical Unroofing of Intramural Anomalous Aortic Origin of a Coronary Artery in Pediatric Patients: A Single Center Perspective on Diagnosis and Outcomes
Shagun Sachdeva, Peter C. Frommelt. Children’s Hospital of Wisconsin, Milwaukee, WI
Presented by Shagun Sachdeva, MBBS
Clinical Cases (CC)

TUESDAY, JUNE 14, 2016

Clinical Cases: Cardiovascular Ultrasound Imaging in Diagnosis, Clinical Decision-Making, and Patient Management..... CC-01 through CC-04

Author Disclosure Key: 1) Speakers' Bureau; 2) Consultant/Advisor; 3) Stock Ownership (not including stocks owned in a managed portfolio); 4) Research Grant (as principal investigator); 5) Employment Affiliation; 6) Royalty/Patents

CC-01
Infantile Cardiomyopathy with Coronary Origins from the Appropriate Sinuses: Surprise! It’s Still the Coronaries
Tammy Lane Churchill, Carolyn L. Taylor, Minoo N. Kavarana, Anthony M. Hlavacek, Ann Perkins, Shahryar M. Chowdhury. Medical University of South Carolina, Charleston, SC
Presented Tammy Lane Churchill, AA, RDCS

CC-02
Ventricular Pre-excitation: An Unusual Etiology of Ventricular Dysfunction in the Fetus
Rachel D. Torok, Piers C.A. Barker, Stephen G. Miller. Duke University Medical Center, Durham, NC
Presented by Rachel D. Torok, MD

CC-03
Arrhythmogenic Right Ventricular Dysplasia, an Unusual Presentation and Fulminant Course
Presented by Hari Rajagopal, MD

CC-04
Unusual Conal Septal Alignment in Transposition of the Great Arteries
Tuan Nguyen, Aecha M. Ybarra, Roque Ventura, Nao Sasaki, Juan C. Muniz, Liz Welch, Leo Lopez. Nicklaus Children’s Hospital, Miami, FL
Presented by Aecha M. Ybarra, MD
**Poster Session 1 (P1)**

**SUNDAY, JUNE 12, 2016**

**POSTER SESSION 1 (P1)**
Presented: 9:00 AM – 4:00 PM

**EXHIBIT & POSTER HALL**
Meet the Investigators: 12:00 – 1:15 PM
Moderated Poster Session: 12:00 – 1:15 PM
Moderators: D. Orsinelli, S. Goldstein, R. McNamara, K. Wei, S. Little, B. Hoit

**TOPICS**

- Pediatric and Adult Congenital Heart Disease .......... P1-01 through P1-76
- Intraprocedural Echocardiography (Operating Room and Interventional Lab)/TEE ............ P1-77 through P1-93
- Valvular Heart Disease ... P1-94 through P1-137
- Outcomes/Comparative Effectiveness .............. P1-138 through P1-152
- Value of Echocardiography (Quality and Cost) ...... P1-153 through P1-167
- Contrast Echocardiography and New Technology ..... P1-168 through P1-192
- Vascular Disease ........ P1-193 through P1-202
- Echocardiography in SOE/Arrhythmias/ Atrial Function ........ P1-203 through P1-212

**Author Disclosure Key:** 1) Speakers' Bureau; 2) Consultant/Advisor; 3) Stock Ownership (not including stocks owned in a managed portfolio); 4) Research Grant (as principal investigator); 5) Employment Affiliation; 6) Royalty/Patents

---

**PEDIATRIC AND ADULT CONGENITAL HEART DISEASE**

**P1-01**
Left Ventricular Rotational Indices in Children with Hypertrophic Cardiomyopathy: Unique Characteristics and Differences from Adults

**P1-02**
Stress Echocardiographic Evaluation for D-transposition of the Great Arteries After Atrial Switch: Unmasking Early Signs of Myocardial Dysfunction and Baffle Stenosis
Merav Dvir–Orgad1, Meera Ramani1, Terri Zadorsky1, Astrid De Souza1, Marla Kiess2, James Potts1, George Sandor1. 1BC Woman and Children’s Hospital, Vancouver, BC, Canada; 2St Paul’s Hospital, Vancouver, BC, Canada

**P1-03**
Right Ventricular Reverse Remodeling After Transcatheter Pulmonary Valve Replacement
Angela M. Kelle1, Joseph T. Poterucha1, Edmund N. Gillis1, Muhammad Y. Qureshi1, Megan M. O’Byrne1, John P. Cheatham1, Thomas K. Jones1, Evan M. Zahn1, William E. Hellenbrand1, Doff B. McElhinney1, Philip A. Araoz2, Benjamin W. Eidem2, Patrick W. O’Leary1, ‘Mayo Clinic, Rochester, MN; ‘Nationwide Children’s Hospital, Columbus, OH; ‘Seattle Children’s Hospital, Seattle, WA; ‘Cedars-Sinai Medical Center, Los Angeles, CA; ‘Yale School of Medicine, New Haven, CT; ‘Stanford University, Palo Alto, CA

Disclosures: J. P. Cheatham – 2, 4 (Medtronic, NuMed, Inc); T. K. Jones – 2, 4 (Medtronic); E. M. Zahn – 2 (Medtronic); W. E. Hellenbrand – 1, 4 (Medtronic); D. B. McElhinney – 2 (Medtronic)

**P1-04**
Mitrail Valve Morphology in Marfan’s Syndrome Assessed by 3D Echocardiography: Comparison to Normal Controls
Matthew A. Jolley, Peter E. Hammer, Ronald V. Lacro, David M. Harrild. Boston Children’s Hospital, Boston, MA

**P1-05**
Exercise Stress Echocardiography in Children at Risk for Coronary Insufficiency Rarely Detects New Regional Wall Motion Abnormalities
Scott Wood, W. Reid Thompson. Johns Hopkins Hospital, Division of Pediatric Cardiology, Baltimore, MD
Longitudinal Assessment of Right Ventricular Function in Hypoplastic Left Heart Syndrome
Sowmya Balasubramanian1, Shea N. Smith2, Parthasarathy Srinivasan3, Theresa A. Tacy1, Frank L. Hanley4, Rajesh Punn1. 1Stanford Medical School, Palo Alto, CA; 2Cleveland State University, Cleveland, OH

Delayed Time-to-peak Relaxation as Assessed by Speckle-tracking Echocardiography is a Predictor of Late Graft Failure in Pediatric Heart Transplant Patient
John L. Colquitt1, S. Kristen Sexson Tejl1, Amir Jeeva2, Susan W. Denfield1, William J. Dreyer1, Douglas K. Feagin2, Ricardo H. Pignatelli1. 1Baylor College of Medicine/Texas Children’s Hospital, Houston, TX

Cerebrovascular Blood Flow in Patients with Tetralogy of Fallot: Prediction for Early Surgical Intervention
Matthew D. Campbell1, Rajesh Punn2, Theresa Tacy3, Sheila Markwardt4, Tao Fujioka1, Manfred Vogt2, Luc Mertens1, Mark K. Friedberg1. 1The Hospital for Sick Children, Toronto, ON, Canada; 2Deutsches Herzzentrum München, Technische Universität München, Munich, Germany

Effectiveness of Echocardiography Simulation Training for Pediatric Cardiology Fellows in Congenital Heart Disease
Jeffrey D. Dayton1, Alan M. Groves1, Hoda T. Hammad1, Kevin Ching2, Linda M. Gerber1, Julie S. Glickstein1, Patrick A. Flynn1. 1Weill Cornell Children’s Hospital, Little Rock, AR; 2Lucile Packard Children’s Hospital Stanford, Palo Alto, CA

Impact of Interventricular Interactions on Left Ventricular Filling in Ebstein Anomaly
Tao Fujioka1, Manfred Vogt2, Luc Mertens1, Mark K. Friedberg1. 1The Hospital for Sick Children, Toronto, ON, Canada; 2Deutsches Herzzentrum München, Technische Universität München, Munich, Germany

Reaching High-risk and Underserved Mothers: Fetal Cardiac Evaluation by Telemedicine is an Effective Screening Tool
Elijah H. Bolin1, Ronnie T. Collins1, II, Sean M. Lang1, Dala Zakaria2, Thomas H. Best1, Renee A. Bornemeir1. 1Baylor College of Medicine, Houston, TX; 2University of Nebraska/Creighton University, Children’s Hospital and Medical Center, Omaha, NE

Right Ventricular Contractile Reserve in Children After Heart Transplant
Barbara Cifra1, Andreea Dragulescu1, Cedric Manlhiot2, Mark K. Friedberg1, Luc Mertens1. The Hospital for Sick Children, Toronto, ON, Canada

Diagnostic Yield of Inpatient Pediatric Echocardiograms: Should Particular Hospital Units Require Cardiology Approval?
Sean M. Lang, Elijah Bolin1, Joshua A. Daily, Xinyu Tang, R. Thomas Collins1. II, University of Arkansas for Medical Sciences, Arkansas Children’s Hospital, Little Rock, AR

Understanding Fetal Cardiac Output and Pulsatility Indices in Different Congenital Heart Defects. The Effect of Fetal Hemodynamics on Fetal Growth
Tarek Alaiaed, Stephanie Tseng, Eileen King, Eunice Hahn, Allison Divanovic1, Mounira Habli, James F. Gnota. 1Cincinnati Children’s Hospital, Cincinnati, OH

Abnormalities in Left Ventricular Rotational Mechanics are Inherent in Repaired Tetralogy of Fallot in Early Childhood and are Independent of Right Ventricular Dilatation and Function
Ruchika Karnik, Hari Rajagopal, Simon Lee, Santosh Uppu, Alaa Omar, Zhanha Roytman, Shubhika Srivastava. Mount Sinai Medical Center, New York, NY

Maturational Patterns of Ventricular Septal Deformation in Preterm Infants: Ventricular Septal Remodeling in the First Year of Life
Eda Cristina Abuchaiabe. Washington University School of Medicine, St Louis, MO

Circumferential Strain Rate is Accurate in Assessing Function in the Single Right Ventricle: Echocardiography and Magnetic Resonance Imaging Comparative Study
Silvia Alvarez1, Michelle Noga1, Kumaradevan Punithakumar1, Lily Lin1, Benjamin Goot1, Edythe Tham1, Timothy Cole1, Shelley Kutty1, Nee Khoo1. 1Stollery Children’s Hospital, Divisions of Pediatric Cardiology and Diagnostic Imaging, University of Alberta, Edmonton, AB, Canada; 2Servier Virtual Cardiac Centre, Mazankowski Alberta Heart Institute and Department of Radiology and Diagnostic Imaging, University of Alberta, Edmonton, AB, Canada; 3Joint Division of Pediatric Cardiology, University of Nebraska/Creighton University, Children’s Hospital and Medical Center, Omaha, NE

Cardiovascular Remodeling and Dysfunction Across the Severity of Growth Restriction in Small for Gestational Age Infants
Yohei Akazawa1, Syoko Yamazaki1, Akira Hachiya1, Noriko Motoki1, Motoko Kamiya1, Yukihide Miyosawa1, Tomohiko Nakamura1. 1Department of Pediatrics, Shinsu University School of Medicine, Matsumoto, Japan; 2Division of Neonatology, Shinsu University School of Medicine, Matsumoto, Japan
PI-20
Pulmonary Vascular Disease Persists in Asymptomatic Preterm-borne Infants Beyond Infancy: Assessment by Pulmonary Artery Acceleration Time
Meghna D. Patel1, Swati Choudhry1, Philip T. Levy2, Gloria C. Lehmann1, Timothy J. Sekarski3, Mark R. Holland4, Aaron Hamvas1, Gautam K. Singh1, Washington University in St. Louis, St. Louis, MO; 1Goryeb Children’s Hospital, Morristown, NJ; 2Indiana University, Indianapolis, IN; 3Northwestern University Feinberg School of Medicine, Chicago, IL

PI-21
Tricuspid Annular Plane Systolic Excursion as a Marker of Right Ventricular Dysfunction in Pediatric Patients with Dilated Cardiomyopathy
Erica Scheller McLaughlin1, Curtis Travers1, Senthil Ramamurthy1, William L. Border1, Shriprasad Deshpande2, Ritu Sachdeva3, 1Children’s Healthcare of Atlanta Sibley Heart Center Cardiology, Atlanta, GA; 2Emory University School of Medicine, Atlanta, GA

PI-22
Physician Engagement in Educational Intervention is Associated with Improved Appropriateness of Outpatient Echocardiograms: PAUSE Study Participant Survey
Ritu Sachdeva1, Wyman W. Lai2, Michael S. Kelleman3, Courtney E. McCracken4, Leo Lopez5, Kenan WD Stern6, Rory B. Weiner7, Elizabeth Welch7, Robert M. Campbell1, Pamela S. Douglas7, 1Emory University School of Medicine, Atlanta, GA; 2NewYork-Presbyterian, Morgan Stanley Children’s Hospital, New York, NY; 3Department of Pediatrics, Children’s Healthcare of Atlanta, Sibley Heart Center Cardiology, Atlanta, GA; 4NewYork-Presbyterian, Morgan Stanley Children’s Hospital, New York, NY; 5Emory University School of Medicine, Atlanta, GA; 6Massachusetts General Hospital, Boston, MA; 7Duke University, Durham, NC

PI-23
The Impact of State Mandated Pulse Oximetry Screening on Resource Utilization
Whitnee Hogan1, Harper Randall2, Lorenzo Botto3, Amy Nance4, Nelangi Pinto5, 1University of Utah, Salt Lake City, UT; 2Utah Department of Health, Salt Lake City, UT

PI-24
Maternal Resource Use in Prenatally Diagnosed Congenital Heart Disease
Nelangi Pinto1, Richard Nelson1, Lorenzo Botto2, L. M. Minich3, Janice Byrne4, Sergey Kriok5, Norman Wainman6, University of Utah, Salt Lake City, UT

Disclosures: N. Pinto – 4 (American Heart Association Western Affiliate, NHLBI)

PI-25
The Clinical Utility of Exercise Stress Echocardiography: How Does it Impact Clinical Decision Making in Pediatric Patients?
Heather Friedman1, Nicole Allen1, Megan Stark1, Ritu Sachdeva2, William Border3, 1Children’s Healthcare of Atlanta, Atlanta, GA; 2Emory University School of Medicine, Atlanta, GA

PI-26
The Pediatric Echocardiography Boot Camp: Four-year Experience and Impact on Clinical Performance Throughout Fellowship
Shiraz A. Maskatia1, Carolyn A. Altman1, Shaine A. Morris1, Antonio G. Cabrera2, Baylor College of Medicine, Houston, TX

PI-27
A Novel Protocol with Quantitative Echocardiographic Measures for Assessment of Single Ventricle Function Post Fontan: Efficiency of Incorporation into Routine Clinical Practice
Rodrigo Rios1, IV, Sara Shrede, Salil Ginde, David Saudek, Peter Frommelt1, Medical College of Wisconsin, Children’s Hospital of Wisconsin, Milwaukee, WI

PI-28
Assessment of Right Ventricular Function and Severity of Pulmonary Hypertension Using Three Dimensional Echocardiography and Right Ventricular Strain in Pediatric Pulmonary Hypertension
Pei-Ni Jone1, Carlie Bremen1, Matthew J. Mulvahill2, D. Dunbar Ivy3, 1Pediatric Cardiology, Children’s Hospital Colorado, University of Colorado School of Medicine, Aurora, CO; 2Department of Pediatrics, University of Colorado School of Medicine, Aurora, CO

PI-29
Adding Echocardiographic Alternatives to Evaluate Ventricular Function to Dystrophinopathy Patients
Ricardo H. Piguetelli1, S. Kristen Saxon2, Douglas Feagin3, John Colquitt1, Hari Tunuguntla4, Timothy E. Loitz5, Amir Jeewa, Hugh D. Allen1, 1Boston College of Medicine, Boston, MA

PI-30
Estimation of Pulmonary to Systemic Flow Ratio by Transthoracic Echocardiography is Poor in Hemodynamically Significant Left to Right Shunt
Erin Faherty1, Hari Rajagopal2, Simon Lee2, Barry Love1, Shubhika Srivastava, Ira Parness1, Santosh Uppu1, Mount Sinai Hospital, New York, NY

PI-31
The Role of Regional Prenatal Cardiac Screening for Congenital Heart Disease: A Single Tertiary Center Experience with a Tiered Approach to Fetal Echocardiography
Michele M. Paiser1, Margaret M. Vernon, Bhaavary Ara, 1Seattle Children’s Hospital, Seattle, WA

PI-32
Quality Metric Evaluation of Pediatric Echocardiograms
Nao Sasaki1, Tuan Nguyen1, Irwin Seltzer1, Elizabeth M. Welch1, Juan-Carlos G. Muniz2, Leo Lopez2, Nicklaus Children’s Hospital, Miami, FL

PI-33
Circumferential Strain for Left Ventricular Function Assessment in Duchenne Muscular Dystrophy
Sujatha Buddhe1, Mark Lewin, Aaron Olson, Mark Ferguson, Brian Soriano, 1Seattle Childrens Hospital, Seattle, WA

PI-34
Lower Prenatal Detection of Critical Pulmonary Stenosis as Compared to Pulmonary Atresia with Intact Ventricular Septum: Insights Into the Natural History
Christina Ronai1, Lindsay R. Freud1, David W. Brown2, Wayne Tworetzky, 1Boston Children’s Hospital, Boston, MA

PI-35
Engaging Physicians to Improve Prenatal Screening for Heart Defects in Practice
Nelangi Pinto1, Kevin Henry1, Xiaoming Sheng1, William Grobman1, 1Children’s Healthcare of Atlanta, Atlanta, GA
PI-36
Determinants of Academic Productivity: Analysis from the Third Survey of the American Society of Echocardiography Committee on Pediatric Echocardiography Laboratory Productivity (C-PELP)
Brian D. Soriano, Craig E. Fleishman, Andrea M. Van Hoever, Bonnie Wright, Beth Printz, Theresa A. Taey, Vivek Allada, Wyman W. Lai, Sujatha Buddha, Shubhika Srivastava, Seattle Children’s Hospital, Seattle, WA; Arnold Palmer Hospital for Children, Orlando, FL; American Society of Echocardiography, Morrisville, NC; Children’s Healthcare of Atlanta, Atlanta, GA; UC San Diego, San Diego, CA; Lucile Packard Children’s Hospital, Palo Alto, CA; University of Pittsburgh, Pittsburgh, PA; CHOC Children’s Hospital, Orange, CA; Mount Sinai School of Medicine, New York, NY
Disclosures: B. D. Soriano – 2 (Precision Image Analysis)

PI-37
Correlation between Right Atrial Volume and Pulmonary Artery Hypertension in Term and Preterm Infants
Amit Shah, Eric Weldy, Lani Gao, Rehan Quayyum, Nisha Surenderanath, Children’s Hospital, Erlanger, Chattanooga, TN; University of Tennessee, Memphis, TN; University of Tennessee, Chattanooga, TN

PI-38
Contrasting the Impact of Prenatal Diagnosis on Costs and Outcome by Diagnosis
Whitnee Hogan, Richard Nelson, Norman Waitzman, L. L. Minich, Sergey Krikov, Michael Puchalski, Lorenzo Botto, Nelangi Pinto, University of Utah, Salt Lake City, UT
Disclosures: N. Pinto – 4 (American Heart Association Western Affiliate, NHLBI)

PI-39
Impact of Transcatheter Intervention on Myocardial Deformation in Patients with Coarctation of Aorta
Ahmed Kheiwa, Children’s Hospital of Michigan, Detroit, MI

PI-40
Interobserver Variability in Echocardiographic Assessment of Right Ventricle in Hypoplastic Left Heart Syndrome
Muhammad Yasir Qureshi, Megan M. O’Byrne, Chelsea L. Reece, Angela R. Miller, Rebecca K. Lindquist, Patrick W. O’Leary, Mayo Clinic, Rochester, MN

PI-41
Left Ventricular Function in Preterm Neonates: Reference Values for Left Ventricular Longitudinal Strain by Two-dimensional Speckle Tracking Echocardiography from Birth to One Year of Life
Philip T. Levy, Aura A. Sanchez, Meghna D. Patel, Gloria Lehmann, Mark R. Holland, Timothy J. Sekarski, Zach Vesoulis, Amit Mathur, Caroline Lee, Aaron Hamvas, Gautam K. Singh, Goryeb Children’s Hospital, Morristown, NJ; University of Minnesota, Minneapolis, MN; Washington University in St. Louis, St. Louis, MO; Indiana University, Indianapolis, IN; Northwestern University Feinberg School of Medicine, Chicago, IL
Disclosures: J. Kislo – 4 (Medtronic); D. Forsha – 4 (Medtronic)

PI-42
Early Mechanical Dyssynchrony Due to Right Bundle Branch Block Following Surgical Correction of Tetralogy of Fallot in Infants
Andrew W. McCrory, Andrea Kropf, Melissa Britt, Piers CA Barker, Joseph A. Kislo, Daniel E. Forsha, Duke University, Durham, NC; University of Florida, Jacksonville, FL; Children’s Mercy, Kansas City, MO
Disclosures: P. C. Barker – 4 (Medtronic); J. A. Kislo – 4 (Medtronic); D. E. Forsha – 4 (Medtronic)

PI-43
Right Atrial and Right Ventricular Deformation in Predicting Outcomes in Pediatric Pulmonary Hypertension
Pei-Ni Jone, Ling Li, Paul Homer, Matthew J. Mulvahill, Adel K. Younossi, D. Dunbar Ivy, Shelby Kutty, Pediatric Cardiology, Children’s Hospital Colorado, University of Colorado School of Medicine, Aurora, CO; Pediatric Cardiology, Children’s Hospital and Medical Center, University of Nebraska, Omaha, NE; Department of Pediatrics, University of Colorado School of Medicine, Aurora, CO

PI-44
Aortic Cusp Geometry in Children and Adolescents: New Insight Using Three-dimensional Transesophageal Echocardiography
Tanomo Ono, Masaki Nii, Mizuho Ishigaki, Keisuke Sato, Jun Yoshimoto, Sang-Hae Kim, Norie Mitsushita, Yasuhiro Tanaka, Yasuo Ono. Pediatric Cardiology, Sizuoka Children’s Hospital, Sizuoka, Japan

PI-45
Right Ventricular Strain Rate Prior to Stage 2 Palliation (Glenn) Improves Test Sensitivity and Negative Predictive Value for Death or Transplantation in Children with Hypoplastic Left Heart Syndrome
Lily Q. Lin, Jennifer Conway, Silvia Alvarez, Benjamin Goot, Edythe B. Tham, Timothy Golen, Shelby Kutty, Nee S. Kho, University of Alberta, Edmonton, AB, Canada; Children’s Hospital & Medical Center, Omaha, NE

PI-46
Left Ventricular Rotational Mechanics in Early Infancy: Normal Reference Ranges and Reproducibility
Shiraz A. Maskatia, Wesley Lee, Carolyn A. Altman, Nancy A. Ayres, Ricardo Pignatelli, Baylor College of Medicine, Houston, TX

PI-47
Intervendor Reproducibility of Left and Right Ventricular 2D Speckle Tracking Strain in the Structurally Normal Heart in Infants and Children
Sandhya R. Ramlogan, Rita France, Stephanie Schmidt, Julie Hinzman, Ashley Sherman, Suma Goudar, Girish Shirali, Niels Risum, Joseph Kislo, Daniel Forsha, Children’s Mercy Hospital Center, Kansas City, MO; Rigshospitalet, Copenhagen, Denmark; Duke University Medical Center, Durham, NC
Disclosures: J. Kislo – 4 (Medtronic); D. Forsha – 4 (Medtronic)
PI-48
Papillary Fibroelastoma: Clinical and Echocardiographic Features and Initial Approach in 54 Cases
Omar Prieto, Jr., Tomas Cianciulli, Jorge Lax, Maria C. Saccheri, Juan B. Soumoulou, Alberto Cozzarin, Martin Beck, Daniel E. Ferreiro, Horacio Prezioso. Hospital of the Government of the City of Buenos Aires "Dr. Cosme Argerich", Buenos Aires, Argentina

PI-49
The Left Ventricle in Severe Fetal Ebstein’s Anomaly/Tricuspid Valve Dysplasia with Retrograde Ductal Flow Lacks the Adaptation Observed in Other Functional Single Left Ventricles
Luke Eckersley1, Paul Brooks1, Nee Khoo1,2, Timothy Colen1, Shelby Kutty1, David Danford1, Lisa Hornberger1. 1Division of Paediatric Cardiology, Stollery Children’s Hospital, Edmonton, AB, Canada; 2University of Alberta, Edmonton, AB, Canada; 3Joint Division of Pediatric Cardiology, University of Nebraska/Creighton University, Children’s Hospital and Medical Center, Omaha, NE

PI-50
Right Ventricular Stroke Work Characterizes Ventricular-vascular Interactions in Children with Pulmonary Hypertension
Michael V. DiMaria1, Dale A. Burkett1, Adel K. Younoszai1, Bruce F. Landeck, II1, Luc Mertens3, Dunbar Ivy1, Mark K. Friedman1, Kendall S. Hunter1. 1Children’s Hospital Colorado, University of Colorado School of Medicine, Aurora, CO; 2The Labatt Family Heart Center, The Hospital for Sick Children, Toronto, ON, Canada; 3Stollery Children’s Hospital, Edmonton, AB, Canada; 4University of Alberta, Edmonton, AB, Canada; 5Joint Division of Pediatric Cardiology, University of Nebraska/Creighton University, Children’s Hospital and Medical Center, Omaha, NE

PI-51
Impact of Accreditation on Quality in Echocardiograms: A Quantitative Approach
Sarina K. Behera1, Shea N. Smith1, Theresa A. Tacy4. 1Stanford Children’s Health at California Pacific Medical Center, San Francisco, CA; 2Lucile Packard Children’s Hospital at Stanford University, Palo Alto, CA

PI-52
Left Ventricular Function in Preterm Neonates: Assessment of LV Rotational Mechanics from 32 weeks Post-menstrual Age to One Year
Meghna D. Patel1, Philip T. Levy1, Swati Choudhry1, Mark R. Holland1, Timothy J. Sekarski1, Aaron Hamvas1, Gautam K. Singh1. 1Washington University in St. Louis, St. Louis, MO; 2Goryeb Children’s Hospital, Morristown, NJ; 3Indiana University, Indianapolis, IN; 4Northwestern University Feinberg School of Medicine, Chicago, IL

PI-53
Can Speckle-tracking Echocardiography Detect Iron Overload in Children?
Soultana Kourtidou1, Sujatha Buddha1, Neal W. Jorgensen2, Mark R. Ferguson1, Brian D. Soriano1. 1Seattle Children’s Hospital, Seattle, WA; 2University of Washington, Department of Biostatistics, Seattle, WA

PI-54
Serial Evaluation of Right Ventricular Mechanics in Young Children after Tetralogy of Fallot Repair
Vidhya Annajavhal, Rajesh Punn, Doff McElhinney. Stanford University, Palo Alto, CA

PI-55
Right Ventricular Adaptation in Hypoplastic Left Heart Syndrome: Impact of the Norwood and Hybrid Procedures on its Progression
Kandice Mah1, Luke Eckersley1, Lily Lin1, Timothy Colen1, Edythe Tham1, Luc Mertens3, Nee Khoo1, 1The Labatt Family Heart Centre, The Hospital for Sick Children, Toronto, ON, Canada

PI-56
Sniff Nasal Inspiratory Pressure and Observed IVC Collapse in Pediatric Patients: Age-related Variance in Reproducibility
Karine Guerrier, Christopher Statile, Philip Khoury, Erik Michelfelder. Cincinnati Children’s Hospital Medical Center, Cincinnati, OH

PI-57
Improved Prenatal Detection Rates for Conotruncal Defects
Monika Drogosz, Max E. Godfrey, Kevin G. Friedman, David W. Brown, Gerald R. Marx, Jami C. Levine, Wayne Tworetzky. Boston Children’s Hospital, Boston, MA

PI-58
Comparison of Chloral Hydrate and Pentobarbital Sedation for Pediatric Echocardiography
Madhusudan Ganigara1, Shubhika Srivastava1, Ira Parness1, H. Helen Ko1, Sherman Fong1, Rajesh Shenoy1. 1Elmhurst Hospital Center, Icahn School of Medicine at Mount Sinai, Elmhurst, NY; 2Mount Sinai, Kravis Children’s Hospital, New York, NY

PI-59
Impact of Surgical Correction of Tetralogy of Fallot on Short-term Right and Left Ventricular Function as Determined by Two-dimensional Speckle Tracking Echocardiography
Yuman Li, Mingxing Xie, Xinfang Wang, Qing Lv. Department of Ultrasound, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China

PI-60

PI-61
Impact of Fetal Somatic Growth on Pulmonary Valve Z-Scores During Gestation and Through Birth in Patients with Tetralogy of Fallot
Alisa Arunamata, Sowmya Balasubramanian, Rajesh Punn, Amy P. Quirin, Theresa A. Tacy. Stanford Hospital and Clinics, Palo Alto, CA

PI-62
Pediatric Abstract Publication Rates for the American Society of Echocardiography Meeting
Adam K. Morrison, John M. Kelly, Brian Rivera, Carl H. Backes, Clifford L. Cua. Heart Center, Nationwide Children’s Hospital, Columbus, OH
Three-dimensional Echocardiography in the Evaluation of Right Ventricular Regional Volume and Systolic Function in Patients with Atrial Septal Defect
Dehong Kong, Haohua Yao, Cuizhen Pan, Daxin Zhou, Xianhong Shu. Zhongshan Hospital, Fudan University, Shanghai, China

Ventricular Changes Evaluated by Echocardiography During Impella Support: Single Pediatric Institution Experience
Ricardo H. Pignatelli1, Aamir Jeewa1, Qureshi M. Athar1, Iki Adachi1, Sebastian Tume1, Douglas Feagin1, Yunfei Wang1, Ricardo A. Najera1, Barbara Elias1, Nancy A. Ayres1, Henri Justino1, Dhaval Parek1. Baylor College of Medicine, Houston, TX; *Texas Children’s Hospital, Houston, TX

Morphological Features of Complex Congenital Cardiovascular Anomalies in Fetuses: As Evaluated by Cast Models
Mingxing Xie1, Jing Deng1, Yu Wang1, Haiyan Cao1, Hong Liu1, Wei Han1, Bencai Song1, 1Department of Ultrasound, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China; 2Department of Medical Physics, University College London, and Department of Echocardiography, Barts Heart Centre, London, United Kingdom; 3Laboratory of Anatomy, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China

Pulmonary Vascular and Volume Growth in Fetus with Congenital Heart Defects with Conotruncal Abnormalities
Qian Wang1, Yihua He1, Ying Zhao1, Ling Han1, Lin Sun1, Shuping Ge1. 1Beijing Anzhen Hospital, Capital Medical University, Beijing, China; 2St. Christopher’s Hospital for Children/Drexel University College of Medicine, Philadelphia, PA

Maternal Hyperoxygenation in Fetuses with Transposition of the Great Arteries
Nithya Swaminathan, Wyman Lai, Julie Glickstein, Ameen Shah, Anjali Chelliah, Ganga Krishnamurthy, Lindsay Freud, Stephanie Levasseur. Columbia University Medical Center, New York, NY

Echocardiographic Evaluation of Homograft-Valved Right Ventricle to Pulmonary Artery Conduits After First Stage Palliation of Hypoplastic Left Heart Syndrome
Nefshi Sandeep, Shea N. Smith, Sowmya Balasubramanian, Rajesh Punn, Doff McElhinney. Lucile Packard Children’s Hospital Stanford, Palo Alto, CA

Prevalence and Impact of Focused Cardiac Ultrasound: Survey of the American Society of Echocardiography Committee on Pediatric Echocardiography Laboratory Productivity (C-PELP)
Brian D. Soriano1, Craig E. Fleishman1, Andrea M. Van Hoeven1, Bonnie Wright1, Beth Printz1, Theresa A. Tacy6, Vivek Allada8, Wyman W. Lai8, Sujatha Buddhe3, Shubhika Srivastava4, Seattle Children’s Hospital, Seattle, WA; 5Arnold Palmer Hospital for Children, Orlando, FL; 6American Society of Echocardiography, Morrisville, NC; 7Children’s Healthcare of Atlanta, Atlanta, GA; 8UC San Diego, San Diego, CA; 9Lucile Packard Children’s Hospital, Palo Alto, CA; 10University of Pittsburgh, Pittsburgh, PA; 11CHOC Children’s Hospital, Orange, CA; 12Mount Sinai School of Medicine, New York, NY
Disclosures: B. D. Soriano – 2 (Precision Image Analysis)

Correlation of 2D Strain with Pressure/Volume Catheter Measurements for Intraoperative Assessment of Right and Left Ventricular Mechanics in Juvenile Pigs: Does Software Version Matter?
Sandhya S. Ramlogan1, Richard Hopkins1, Daniel Forsha1, Stephen Kaine1, Eric Buse1, Hongying Dai1, Shelby Kuty1, Suma Goudar1, Girish Shirali1. Children’s Mercy Hospital Center, Kansas City, MO; *University of Nebraska Medical Center, Omaha, NE

Comparison of Right Atrial Size Between Echocardiography and Cardiac MRI in Children
Sujatha Buddhe, Mark Ferguson, Heidi Hathaway, Brian D. Soriano. Seattle Children’s Hospital, Seattle, WA

Congenital Pericardial Defects: Clinical Features and Diagnosis
Sagar Alkarabasheh, Mohammad M. Asfari, Matthew Summers, Allan Klein. Cleveland Clinic Foundation, Cleveland, OH

Echocardiographic Illustrations of Reverse Circular Shunt in Prenatal Absent Aortic Valve
Hari Rajagopal, Ruchika Karnik, Santosh Uppu, Shubhika Srivastava, Sangeeta Sharma. Mount Sinai, New York, NY

Fetal Diagnosis of Bifid Superior Vena Cava with Dual Atrial Connection and Normal Pulmonary Venous Drainage
Nithya Swaminathan, Anjali Chelliah, Donna Timchak, Stephanie Levasseur. Columbia University Medical Center, New York, NY

Abnormal Cardiac Imaging Findings in a Pediatric Patient with ALL and Hypereosinophilia
Michael J. Campbell, Sihong Huang, Stephanie Wechsler, Andrew McCravy, Steve Darty, Piers C.A. Barker. Duke University, Durham, NC

Understanding the Anatomy and Physiology of Complex Congenital Heart Disease: A Rare Case of Double Inlet Right Ventricle
Neha Soni-Patel, Sarah Plummer. Rainbow Babies and Children’s Hospital, Cleveland, OH
Intraprocedural Echocardiography (Operating Room and Interventional Lab) / TEE

PI-77 Through PI-93

PI-77 moderated poster
Percutaneous Mitral Valve Repair Alters Dynamic Three-dimensional Echocardiography Indices of Mitral Valve Function
Andreas Schuler, Kei Togashi, Elizabeth Perpetua, Thomas K. Jones, Mark Reisman, Srdjan Jelacic, G. Burkhard Mackensen. University of Washington, Seattle, WA

PI-78 moderated poster
Patient-specific 3D Printed Models of the Mitral Valve Apparatus from 3D Transesophageal Echocardiographic Imaging
Marija Vukicevic, Eleonora Avenatti, Stephen H. Little. Methodist Hospital, Houston, TX

PI-79
The Impact of Ligation of Proximal Side Branches on Blood Flow and Functional Status of the Internal Thoracic Artery in Coronary Anastomosis
Jose S. Abreu1, Jean M. Tsutsui3, Sandra N. Falcao3, Jose A. Feitosa4, Eduardo A. Rocha1, Italo Oliveira3, Teresa C. Diogenes4, Jose N. Paes3, Joao C.N. Sano1, Luis A. Dallan1, Roberto Kalil1, Wilson Mathias, Jr.4, 1Public Health Department, State University of Ceará, Fortaleza, Brazil; 2Heart Institute (InCor)-University of São Paulo Medical School, São Paulo, Brazil; 3Messejana’s Heart and Lung Hospital, Fortaleza, Brazil; 4Prontocárdio Hospital, Fortaleza, Brazil

PI-80
The Mitraclip Delivery System Alters Dynamic Indices of Mitral Valve Function During Percutaneous Mitral Valve Repair
Andreas Schuler, Kei Togashi, Srdjan Jelacic, Thomas K. Jones, Donald Oxorn, Mark Reisman, G. Burkhard Mackensen. University of Washington, Seattle, WA

PI-81
The Value of Three-dimensional Transesophageal Echocardiography and Automatic Valve Analysis in Evaluation of Pure Aortic Regurgitation Patients Treated with New Generation of Transcatheter Aortic Valve
Weipeng Zhao, Yongle Chen, Lai Wei, Cuizhen Pan, Xianhong Shu. Zhongshan Hospital, Fudan University, Shanghai, China

PI-82
Isolated Chordal Shortening: A Novel Mechanism to Account for Functional Mitral Regurgitation
Evann Eisenberg, Neena Passi, Waddy Gonzalez, Ayesha Salahuddin, Daniel Spevack. Montefiore Medical Center, Bronx, NY

PI-83
Left Atrial Vortex Flow Features Associated with Stroke or Death in Patients with Left Atrial Appendage Occlusion Device Implantation
In-Cheol Kim, Geu-Ru Hong, Da-Rae Kim, Sang-Eun Lee, Ik sung Cho, In-Jeong Cho, Chi-Young Shim, Hyuk-Jae Chang, Jong-Won Ha, Namsik Chung. Severance Cardiovascular Hospital, Yonsei University, Seoul, Republic of Korea

PI-84
Real Time 3Dimensional Transesophageal Echocardiographic Prediction of Artificial Neochordae Length for Mitral Valve Repair
Manisha Mishra, Amit Chandra, Anand Kumar, Dhiraj Arora, Naresh Trehan. Medanta-The Medicity, Gurgaon, India

PI-85
Mitral Valve Gradient Following Successful Single vs Multiple MitraClip Device Repair
Lowie Van Assche, Mark J. Ricciardi, Albigayle M. Doerr, James Thomas, Jyothi J. Puthumana. Northwestern Memorial Hospital, Chicago, IL
Disclosures: M. J. Ricciardi – 2 (Abbott Vascular); J. Thomas – 1, 2, 4 (Abbott Vascular)

PI-86
3D Color Doppler Vena Contracta Area for the Quantification of Residual Mitral Valve Regurgitation after MitraClip Procedure
Eleonora Avenatti, Marija Vukicevic, Colin M. Barker, Stephen H. Little. Houston Methodist Hospital, Houston, TX

PI-87
Estimation of Pulmonary Artery Pressure Based on Pulmonary Artery Acceleration Time in Cardiac Surgery and Cardiac Intensive Care
Matthew J. Griffie, Joshua M. Zimmerman. University of Utah School of Medicine, Department of Anesthesiology, Salt Lake City, UT

PI-88
3D Echocardiographic Analysis of Aortic Annulus for Transcatheter Aortic Valve Replacement Using Novel Aortic Valve Quantification Software: Comparison with Computed Tomography
Anuj Mediratta1, Karima Addetia1, Robert J. Schneider1, Eric Kruse1, Atman P. Shah1, Sandeep Nathan1, Jonathan D. Paul1, John E. Blair1, Victor Mor-Avi1, Roberto M. Lang1. 1University of Chicago, Chicago, IL; 4Philips, Andover, MA
Disclosures: R. J. Schneider – 5 (Philips HealthTech); R. M. Lang – 1 (Philips)

PI-89
Incidence of Postoperative Dysphagia Using Micro-mini versus MiniMulti Transesophageal Echocardiography Probe
Jennifer Co-Vu1, Guillermo E. Pr1, Sabikha Alam3, Mark S. Bleiweis1, Curt G. DeGroff1, ‘University of Florida, Gainesville, FL; ’Children’s Healthcare of Atlanta, Atlanta, GA

PI-90
Multimodality Imaging for Transcatheter Aortic Valve Replacement Planning in Patients with Chronic Kidney Disease
Lucy Safi, Nandini Meyerson, Brian Ghoshharja, Jacob Dal-Bianco, Sammy Elmariah, Ignacio Inglissis, Igor Palacios, Gus Vlahakes, Serguei Melnitchouk, Jonathan Passeri. Massachusetts General Hospital, Boston, MA

ASE 2016 | 33
**P1-91**
Value of Holodiastolic Flow Reversal in Descending Aorta for Grading of Aortic Regurgitation Using Transesophageal Echocardiography
Hirotsugu Mihara, Kou Suzuki, Masanari Kurobe, Ryo Yamaguchi, Kouji Mizutani, Hideo Otsu, Masanobu Fujimoto, Hitoshi Ichimiya, Yasuhiro Uchida, Junji Watanabe, Masaki Kanashiro, Satoshi Ichimiya. Yokkaichi Municipal Hospital, Yokkaichi, MIE, Japan

**P1-92**
Assessment of Left Ventricular Diastolic Function by Time-volume Curve in Off-pump Coronary Artery Bypass Graft Surgery
Yuzuru Inatomi, Shinya Kato, Kenji Yoshitani, Yoshihiko Ohnishi. National Cerebral and Cardiovascular Center, Suita, Japan

**P1-93 WITHDRAWN**

**VALVULAR HEART DISEASE**

**P1-94 THROUGH P1-137**

**P1-94 MODERATED POSTER**
Three Dimensional (3D) Printing and Functional Assessment of Aortic Stenosis Using a Flow Circuit: Feasibility and Reproducibility
Serge C. Harb, Ryan Klatte, Brian P. Griffin, Leonardo L. Rodriguez. Cleveland Clinic Foundation, Cleveland, OH

**P1-95 MODERATED POSTER**
Prognostic Usefulness of Right Ventricular Focused Echocardiography in Patients with Ischemic Mitral Regurgitation Referred to Different Surgical Strategies
Carlo Fino1, Attilio Iacovoni1, Julien Magne1, Antonio Miceli2, Alice Calabrese3, Emilia D’Elia4, Giuseppe Romano5, Fletcher A. Miller, Jr.6, Joseph Maalouf7, Giuseppe Raffa8, Michele Pilato9, Lorenzo Galletti10, Diego Bellavia11. 1Ospedale Papa Giovanni XX-III, Bergamo, Italy; 2Limoges University Hospital, Limoges, France; 3Istituto Clinico Humanitas, Milano, Italy; 4ISMETT / UPMC, Palermo, Italy; 5Mayo Clinic and Foundation, Rochester, MN

**P1-96 MODERATED POSTER**
Computational Fluid Dynamics Characterization of Flow Through Dual Orifice Mitral Regurgitant Jets
Sumeet S. Mitter1, Scott Manifold1, Nicholas Furiasse1, Jyothy J. Puthumana1, Mark J. Ricciardi2, Gregory J. Wagner3, James D. Thomas1. 1Division of Cardiology, Department of Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL; 2Department of Mechanical Engineering, McCormick School of Engineering and Applied Science, Evanston, IL

**P1-97**
Familial Clustering of Mitral Regurgitation in the Community
Francesca N. Delling2, Shuo Li3, Qiong Yang3, Vanessa Xanthakis4, Birgitta Lehman5, Ewa Osypiuk1, Plamen Stanchev6, Emelia J. Benjamin7, Ramachandran S. Vasan7, 8, Beth Israel Deaconess Medical Center, Boston, MA; 9Framingham Heart Study, Framingham, MA; 10Boston University School of Medicine, Boston, MA; 11Boston University School of Public Health, Boston, MA

**P1-98**
Varying Stroke Volume in Atrial Fibrillation: Impact on Grading Severity of Aortic Stenosis and Clinical Outcomes
Said Alsidawi, Sana Khan, Colleen Lane, Jeremy Thaden, Sorin Pislaru, Robert McCully, Jae Oh, Patricia Pellikka, Vuyisile Nkomo. Mayo Clinic, Rochester, MN

**P1-99**
Ratio of Acceleration Time to Ejection Time Predicts True-severe in Patients with Low Gradient Aortic Stenosis: Dobutamine Stress Echocardiographic Study
Keisuke Minami, Masaki Izumo, Seisyou Kou, Yukiyo Satoh, Shingo Kuwata, Ryo Kamijima, Kei Mizukoshi, Kengo Suzuki, Tomohisa Harada, Yoshihiro Akashi. St. Marianna University, Kawasaki-shi, Japan

**P1-100**
Low-flow, Low-gradient Aortic Stenosis: Prognostic Value of Flow Rates vs. Stroke Volume During Dobutamine Echocardiography
Said Alsidawi, Robert B. McCully, Christopher G. Scott, Sorin V. Pislaru, Patricia A. Pellikka, Markam F. Eleid, Jae K. Oh, Vuyisile T. Nkomo. Division of Cardiovascular Diseases, Mayo Clinic School of Medicine, Rochester, MN

**P1-101**
Influence of Novel Parameters to Improve Inconsistent Grading of Severe Aortic Stenosis
Frederman Concepcion, Jay Mohan, David Houff, Chad Morreale. Swedish Covenant Hospital, Chicago, IL

**P1-102**
Long-term Outcomes of Tricuspid Annuloplasty for Very Severe Functional Tricuspid Regurgitation
Duk-Hyun Kang1, Jeong Yoon Jang2, Sahmin Lee3, Dae-Hee Kim4, Jong-Min Song5, Kee-Joon Choi6, Jae-Kwan Song7, Joo-Hee Zo8. 1Asan Medical Center, Seoul, Republic of Korea; 2Boramae Hospital, Seoul, Republic of Korea

**P1-103**
Diastolic Wall Strain in Severe Aortic Stenosis
Edinrin Obasare, Vikas Bhalla, Deepakraj Gajanana, Mary Rodriguez Ziccardi, Jose N. Codolosa, Vincent M. Figueredo, Dennis Lynn Morris, Gregg Pressman. Einstein Medical Center, Philadelphia, PA

**P1-104**
Prevalence and Impact of Coexistent Bicuspid Aortic Valve in Hypertrophic Cardiomyopathy
Ratnasari Padang, Bernard J. Gersh, Steve R. Ommen, Jeffrey B. Geske. Mayo Clinic, Rochester, MN

**P1-105**
Mitril Annuar Motion in Patients After Transcatheter MitraClip, Surgical Mitral Valve Repair and Replacement
Kentarou Toyama1, Kengo Ayabe2, Florian Radler3, Saibal Kar4, Alfredo Trento5, Michele A. De Robertis6, Robert J. Siegel7. 1The Heart Institute, Cedars-Sinai Medical Center, Los Angeles, CA; 2Department of Anesthesia, Cedars-Sinai Medical Center, Los Angeles, CA

**P1-106**
Reproducibility of Echocardiographic Parameters of Mitral Regurgitation Severity
Alicia Armour, Ashlee M. Davis, Ross B. Smith, Karen Strub, David B.
P1-107
Is Chronic Severe Mitral Regurgitation Always Associated with a Dilated Left Ventricle?
Mirmela Byku, Deana Mikhalkova, Tracy Hagerty, Nishath Quader. Washington University in St. Louis, St. Louis, MO

P1-108
Cardiac Remodeling in Patients with Mild Forms of Organic Mitral Regurgitation: Phenotype Dependent?
Zhenhua Li1*, Rakesh M Suri1, Thomas A Foley1, Sunil V Mankad2, Maurice Enriquez-Sarano1, Hector I Micheletti1, ’Mayo Clinic, Rochester, MN; 2Jinan Central Hospital, Jinan, China; 3Cleveland Clinic, Cleveland, OH

P1-109
Effect of Transcatheter Mitral Reconstruction with a Transfemoral Adjustable System on 3-Dimensional Geometry of the Mitral Annulus
Mani Arsalan1, Eustachio Agricola1, Ottavio Alfieri1, Stephan Baldus1, Antonio Colombo1, Akeem Latin1, Giovanni Filardo1, Christoph Hammerstingl2, Georg Nickensig, Michael Hungethurb1, Felix Kreidel3, KarlHeinz Kuck4, Giovanni LaCanna5, David Messika Zeitoun6, Yan Topilsky5, Francesco Maisano6, Benjamin D. Pollock7, Bradley J. Roberts7, Paul Grayburn4, ’Kerrhoff Heartcenter, Bad Neuenahr, Germany; 2San Raffaele Hospital, Milano, Italy; 3University Hospital Koln, Koln, Germany; 4Baylor Heart and Vascular Institute, Dallas, TX; 5University Hospital Bonn, Bonn, Germany; 6St George Hospital, Hamburg, Germany; 7Tel Aviv Sourasky Medical Center, Tel Aviv, Israel; 8University Hospital Zurich, Zurich, Switzerland

P1-110
Paravalvular Regurgitation in Sapien 3 versus Sapien XT Following Transcatheter Aortic Valve Replacement: A Meta-analysis
Tomo Ando1, Cynthia Taub1, ’Mount Sinai Beth Israel, New York, NY; 2Montefiore Medical Center, Bronx, NY

P1-111
Gender and Race Differences in Ventricular Remodeling in Severe Aortic Stenosis

P1-112
Elevated Mitral Valve Gradients Post Repair Using a Single Surgical Strategy: Functional Significance Evaluated Through Stress Echocardiography
James Lambert, Maithri Siriwardena, Babitha Thampinathan, Jennifer Lam, Nyla Girwar, Anna Woo, Tironie David, Wendy Tsang. Toronto General Hospital, Toronto, ON, Canada

P1-113
Feasibility of Myocardial Strain Analysis Based on Feature Tracking Gated Cardiac Computed Tomography and Its Correlation with Transthoracic Echocardiography in Patients with Severe Aortic Stenosis
Joao L. Cavalcante, Shasank Rijal, John Goresan, III. University of Pittsburgh, Pittsburgh, PA
Disclosures: J. L. Cavalcante – 4 (Medtronic, TomTec Corp)

P1-114
Clinical Significance of Elevated Bioprosthetic Gradients After Transcatheter Aortic Valve Replacement

P1-115
Early and Long-term Impact of Transcatheter Aortic Valve Replacement on Left Ventricular Deformation in Patients with Severe Aortic Stenosis
Kimi Sato, Serge Harb, Brandon M. Jones, Samir R. Kapadia, Richard A. Grimm, Brian P. Griffin, Leonardo Rodriguez, Zoran B. Popovi. Cleveland Clinic, Cleveland, OH

P1-116
Mitril Regurgitation Depends on Mitral Annular Anterior-posterior Diameter in Severe Aortic Stenosis: Assessment of Mitral Valve Complex by Three-dimensional Echocardiography
Masumi Iwai-Takano, Takashi Igarashi, Shinya Takase, Hiroshi Yokoyama. Fukushima Medical University, Fukushima, Japan

P1-117
Age Nulls the Obesity "Paradox" in Patients with Severe Aortic Stenosis Undergoing Surgical Aortic Valve Replacement
Dragos Alexandru, Simcha Pollack, Florentina Petillo, Eddy Barasch. St. Francis Hospital, The Heart Center/SUNY at Stony Brook, Roslyn, NY

P1-118 WITHDRAWN

P1-119
Characterization of Mitral Regurgitation in Cardiac Sarcoïdosis by Two-dimensional Echocardiography and PET Imaging
Shanti Nulu, Zartashia Shahab, Edward J. Miller, Lavanya Bellumkonda, Lisa Sugeng. Yale New Haven Hospital/Yale School of Medicine, New Haven, CT

P1-120 WITHDRAWN

P1-121
Impairment in Subendocardial Basal Longitudinal Strain: An Early Sign of Left Ventricular Dysfunction in Patients with Aortic Stenosis

P1-122
Impact of Elongation of Thoracic Aorta Caused by Progression of Atherosclerosis on Sigmoid Septum
Yasuaki Wada1, Ayano Fujii1, Toru Ariyoshi1, Hiroko Nishikawa1, Tomoko Tanaka1, Hirokazu Yoshiada1, Akayo Toyota1, Shinichi Okuda1, Nobuaki Tanaka1, Masafumi Yano1. Yamaguchi University Hospital, Ube, Japan; 2Yamaguchi University Graduate School of Medicine, Ube, Japan
PI-123
Interobserver Variability in the Assessment of Invasive Complication of Prosthetic Aortic Valve Endocarditis: Highlighting the Need for Further Study and Standardization
Jorge Betancur, Paul C. Cremer, Kunal Patel, Wael Jaber, L. Leonardo Rodriguez, Venu Menon. Cleveland Clinic, Cleveland, OH

PI-124
Determinants, Predictors and Results of Early Surgery in Prosthetic Endocarditis with Perivalvular Extension
Marina Mahia, Ricardo Roneros, Sr., Martin Vivas, Ana Iribarren, Pablo Fernandez Oses, Francisco Nacinovich, Laura Juarez, Avegliano Gustavo, Mariano Vrancic, Daniel Nava. Instituto Cardiovascular de Buenos Aires, Ciudad Autonoma de Buenos Aires, Argentina

PI-125
Global Longitudinal Strain Detects Systolic Dysfunction with Myocardial Fibrosis in Aortic Stenosis: Comparison with Late Gadolinium Enhancement and Histopathological Findings
Tsuyoshi Fujimiya, Masumi Iwai-Takano, Takashi Igarashi, Shinya Takase, Hitoshi Yokoyama. Fukushima Medical University, Fukushima, Japan

PI-126
Evaluation of Abnormal High Molecular Weight von Willebrand Factor Multimer Levels in Patients Undergoing Transcatheter Aortic Valve Replacement

PI-127
Abrupt Rightward Septal Motion in Severe Tricuspid Regurgitation: A Manifestation of Interventricular Dysynchrony?
Yuthlapong Temtanakitpaisan, Hsuko Kuo, Dennis A. Tighe, Gerard P. Aurigemma. University of Massachusetts, Worcester, MA

PI-128
Exercise Stress Echocardiography for Atrial Functional Mitral Regurgitation
Chihiro Saito, Kotaro Arai, Sae Tanino, Keiko Ikarashi, Kyomi Ashihara, Nobuhsa Hagihara. Tokyo Women’s Medical University, Tokyo, Japan

PI-129
Bicuspid Aortic Valve Area in Normal Heart

PI-130
The Incidence and Doppler Echocardiographic Characteristics of Normally Functioning Mitral Prostheses with Mean Gradient ≥ 10 mm Hg
Chad M. House*, Katie A. Moriarty***, William B. Nelson**, ‘Regions Hospital, St. Paul, MN; ‘HealthPartners Medical Group, Minneapolis, MN; ‘University of Minnesota Medical School, Minneapolis, MN

PI-131
Adverse Effects of Electrical Dyssynchrony on Left Ventricular and Left Atrial Reverse Remodeling and Prognosis after Aortic Valve Replacement
Soo Youn Lee*, Chi Young Shim*, Geu-Ru Hong*, Seng Chan You*, In Jeong Cho*, Sang Jin Ha*, Hyuk-Jae Chang*, Jong-Won Ha*, Namsik Chung*. ‘Cardiology Division, Severance Cardiovascular Hospital, Yonsei University College of Medicine/Sejong General Hospital, Seoul, Republic of Korea; ‘Cardiology Division, Severance Cardiovascular Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea; ‘Cardiology Division, Asan Hospital, Ulsan University College of Medicine, Gang-reung, Republic of Korea

PI-132
Changes in Mitral Valve Leaflets Strain Following Non-resectional Mitral Valve Repair of Primary Mitral Regurgitation
Sagit Ben Zekry*, Jeff Freeman*, Aarti Jajoo*, Jiwen He*, Stephen H. Little*, Gerals M. Lawrie*, Robert Azencott*, William A. Zoghbi*. ‘Houston Methodist DeBakey Heart and Vascular Center, Houston, TX; ‘University of Houston, Department of Mathematics, Houston, TX; ‘Houston Methodist DeBakey Heart and Vascular Center, Cardiovascular and Thoracic Surgery, Houston, TX

PI-133
Influence of the Left Ventricle Outlet Tract Diameter on the Dimensionless Index for Severe Aortic Stenosis
Frederman Concepcion, Jay Mohan, David Houff, Chad Morreale. Swedish Covenant Hospital, Chicago, IL

PI-134
Outcome of Anticoagulation Therapy for Bioprosthetic Valve Thrombosis: A Prospective Study
Alexander Egbe, Heidi Connolly, Patricia Pellikka, Hartzell Schaff, Sorin Pislaru. Mayo Clinic, Rochester, MN

PI-135
Correlation Between Exercise Tolerance and N-terminal Pro B-type Natriuretic Peptide in the Patients with Significant Valvular Heart Disease and Normal Left Ventricular Systolic Function
Ji-won Hwang, Sung-Ji Park, Sung-A Chang, Sang-Chol Lee, Seung Woo Park, A-Young Lim. Samsung Medical Center, Seoul, Republic of Korea

PI-136
Can Intraoperative Post Aortic Valve Replacement Transvalvular Pressure Gradients be Taken as Baseline Values for Future Comparisons?
Dragos Alexandru, Simcha Pollack, Florentina Petillo, Eddy Barasch. St. Francis Hospital, The Heart Center/SUNY at Stony Brook, Roslyn, NY

PI-137
Echocardiography After Transaortic Valve Implantation with Direct Flow Medical Prosthesis
Thomas Sturmberger, Veronika Eder, Josef Aichinger, Wolfgang Tkalec, Christian Ebner. Elisabethinen Hospital Linz, Linz, Austria
OUTCOMES/COMPARATIVE EFFECTIVENESS

P1-138 MODERATED POSTER
Pre-operative Right Ventricular Dysfunction Predicts Long Term Mortality after Coronary Artery Bypass Graft
Mohammed A. Chowdhury1, George Moukarbel1,*, Mark Bonnell1, Thomas Schwann1, Samer Khouri1. 1University of Toledo, Toledo, OH; 2University of Toledo Medical Center, Toledo, OH

P1-139 MODERATED POSTER
Predicting Readmission Due to Congestive Heart Failure Using Echocardiographic Parameters (PRECEPT Study)
Norasak Suvachittanont, Teerapat Yingchoncharoen. Ramathibodi Hospital, Bangkok, Thailand

P1-140 MODERATED POSTER
Morphological Assessment of the Left Atrial Appendage in Patients with Atrial Fibrillation by Gray-scale Inverted Volume-rendered Imaging of Three-dimensional Transesophageal Echocardiography: A Comparative Study with Computed Tomography
Hong-ning Song, Rui-qiang Guo, Qing Zhou. Renmin Hospital of Wuhan University, Wuhan City, China

P1-141
Sensitivity of Transthoracic Echo in the Detection of Pericardial Cysts
Saqer Alkharabsheh, Amr F. Barakat, Ahmed El-Telhany, Neha Gupta, Ayman I. Ayache, Allan Klein. Cleveland Clinic Foundation, Cleveland, OH

P1-142
Subclinical Disease Mediates the Relation Between Biomarkers and Cardiovascular Events and Death in African Americans
Eva J. Ingram1, Ervin R. Fox2, Vanessa Xanthakis1, Ramachandran Vasan1, Solomon Musani1. 1Brown University Medical School, Providence, RI; 2University of MS Medical Center, Jackson, MS

P1-143
Abnormal Right Ventricular Fractional Area Change is Associated with Poor Survival in Patients with Pulmonary Arterial Hypertension
Nisha Gandhi, Jaehee Kim, Howard Julien, Henry Siu, Arielle Fields, Michael Scharf, Praveen Mehrotra. Thomas Jefferson University Hospital, Philadelphia, PA

P1-144
Left Ventricular Hypertrophy in Preterm Infants: Risk Factors and Outcome
Swati Choudhry1, Tyler W. Cunningham1, Michael Wallendorf2, Philip T. Levy1,*, Gautam K. Singh1, Brian P. Hackett1, Mark C. Johnson1. 1Washington University School of Medicine, St. Louis, MO; 2Goryeb Children’s Hospital, Morristown, NJ

P1-145
Right Ventricular Failure Following Ventricular Assist Device Implant: Systematic Review and Meta-analysis of Clinical and Echocardiographic Predictors
Diego Bellavia1, Attilio Iacovoni2, Cesare Scardulla1, Giuseppe Romano1, Calogero Falletta1, Chiara Mini1, Gabriele Di Gasaro1, Sonia Dell’Oglio1, Michele Pilato1, Fletcher A. Miller, Jr.2, Sudhir S. Kasthura1, Cesar H. Baravoglia1, Joseph Maalouf1, Michale Dandel1. 1ISMETT/UPMC, Palermo, Italy; 2Ospedale Papa Giovanni XXIII, Bergamo, Italy; 3Mayo Clinic and Foundation, Rochester, MN; 4HerzZentrum, Berlin, Germany

P1-146
Prenatal and Postnatal Echocardiographic Characteristics of Ventricular Diverticulum and Clinical Outcomes
Lin Sun1, Yihua He1, Ying Zhao1, Xiaoyan Gu1, Jiancheng Han1, Ye Zhang1, Shuping Ge2. 1Beijing Anzhen Hospital, Capital Medical University, Beijing, China; 2St. Christopher’s Hospital for Children/Drexel University College of Medicine, Philadelphia, PA

P1-147
Normative Left Ventricular M-mode Echocardiographic Values in Preterm Infants
Swati Choudhry1, Tyler W. Cunningham1, Philip T. Levy1,*, Hoang H. Nguyen1, Michael Wallendorf2, Gautam K. Singh1, Mark C. Johnson1. 1Washington University School of Medicine, St. Louis, MO; 2Goryeb Children’s Hospital, Morristown, NJ

P1-148
A Novel Diagnostic Testing Strategy for Coronary Artery Disease: Incorporating Thresholds for Noninvasive and Invasive Testing
Chayakrit Krittanawong1, Anusith Tunhasiriwet1, Hong-Ju Zhang1, Tao Sun1, Zhen Wang2, Collin P. West2. 1Division of Cardiovascular Disease, Department of Medicine, Mayo Clinic, Rochester, MN; 2Department of Healthcare Policy and Research, Mayo Clinic, Rochester, MN; 3Department of Biomedical Statistics and Informatics, Mayo Clinic, Rochester, MN

P1-149
Appropriate Use of Transthoracic Echocardiography and Impact in Heart Failure Survival
Ricardo Fonseca1, John Galligan2, Samuel Neilson2, Quan Huynh1, Makoto Saito1, Kazuaki Negishi1, Thomas H. Marwick2. 1Menzies Institute for Medical Research, Hobart, Australia; 2Royal Hobart Hospital, Hobart, Australia; 3Baker-IDI Heart and Diabetes Institute, Melbourne, Australia

P1-150
Right Ventricle Systolic Remodeling Index is a New Echocardiography Parameter that Predicts Long Time Survival in Patients with Pulmonary Hypertension
Violeta Illatopa, Sr., Fernando Cordova, Sr., Jorge Ortega, Sr. National Heart Institute, Lima, Peru

P1-151
Left Atrial Remodeling Predicts Recurrence of Congestive Heart Failure in Patients with Atrial Fibrillation
Maidar Tumenbayar, Kazuto Yamaguchi, Hiroyuki Yoshiyomi, Takeshi Oshima, Misun Pak, Taku Nakamura, Taiji Okada, Nobuhide Watanabe, Nobuyuki Takahashi, Akihito Endo, Kazuaki Tanabe. Shimane University Faculty of Medicine, Department of Cardiology, Izumo, Japan
**PI-152**
Difference in Prognostic Impact of E/E’ Between Decreased and Preserved Left Ventricular Function in Patients with Acute Decompensated Heart Failure
Se Yong Jang¹, Dong Heon Yang¹, Nam Kyun Kim¹, Chang-Yeon Kim¹, Jihyun Son², Myung Hwan Bae³, Jang Hoon Lee¹, Hun Sik Park¹, Yongkeun Cho¹, Shung Chull Chae¹. ‘Kyungpook National University Hospital, Daegu, Republic of Korea; ¹Kyungpook National University Medical Center, Daegu, Republic of Korea

**PI-153**
VALUE OF ECHOCARDIOGRAPHY (QUALITY AND COST)

**PI-154**
Accuracy of Preliminary Interpretations of Echocardiograms by Cardiology Fellows
Selma Carlson, Kathleen Kearney, Song Li, Michelle Fujioka, Becky Schweagler, James Kirkpatrick. University of Washington, Seattle, WA

**PI-155**
The Correlation of Left Ventricular Outflow Tract Area Between Non-invasive Imaging Modalities
Evann Eisenberg, Neena Passi, Peter Vlismas, Mario Garcia, Daniel Spevack. Montefiore Medical Center, Bronx, NY

**PI-156**
Echocardiography in Centenarians: Indications, Impact and Repercussions
Jorge A. Brenes-Salazar¹, Punnaa Marella¹, Hari P. Chaliki¹, Christopher G. Scott¹, Heidi M. Connolly¹, Roger L. Click¹. ‘Mayo Clinic Rochester, Rochester, MN; ¹Mayo Clinic Scottsdale, Scottsdale, AZ

**PI-157**
Appropriate Use of Transesophageal Echocardiography and its Clinical Impact
Nay Hye¹, Tripti Gupta¹, Kelly Shum¹, Evan Jacobs¹, Bruce Wilson¹, Ravi Avati¹, Homaa Ahmad¹, Michael Cash¹, Homeyar Dinshaw¹, Yvonne Gilliland¹, Eiman Jahangir¹, Carl Lavie¹, John P. Reilly¹, Sangeeta Shah¹. ‘Ochsner Health System, New Orleans, LA; ¹Partners in Integrated Care, Margate, FL

**PI-158**
Pediatric Echocardiography in an Open versus Closed Access Environment: Comparison of Cost and Patient Charges in Children Under 4 Years of Age
Allison A. Divanovic, Christopher Statite, Erik Michelfelder, Jeffrey Anderson. Cincinnati Children’s Hospital, Cincinnati, OH

**PI-159**
Improvement of Quality and Completeness in Initial Pediatric Echocardiograms Using a Stepwise Standardized Protocol
Chalese Richardson, Zachary Goldstein, Dorota Gruber, Denise A. Hayes, Elena N. Kwon. Cohen Children’s Medical Center, New Hyde Park, NY

**PI-160**
Study of Left Ventricular Diastolic Function in Patients with DDD Pacemaker Implantation for Sick Sinus Syndrome During Atrioventricular Conduction and Right Ventricular Apex Pacing Mode
Li-juan Zhang¹, Jing Yao¹, Huang Tang¹, ‘Ultrasound Department, Pukou Hospital, Nanjing, China; ¹First Affiliated Hospital of Nanjing Medical University, Nanjing, China

**PI-161**
The Simplified Risk Assessment by Left Ventricular Global Strain Measurement for Clinical Use in Patients with Dilated Cardiomyopathy
Tetsuari Onishi, Misato Chimura, Yasue Tsukishiro, Hiroya Kawai. Himeji Cardiovascular Center, Himeji, Japan

**PI-162**
A Quantification of Radiation Exposure for Technicians Working in an Academic Noninvasive Cardiovascular Imaging Laboratory
Michael Velez, Maryellen Orsinelli, David Orsinelli. Ohio State University Wexner Medical Center, Columbus, OH

**PI-163**
Optimizing Workflow in a Pediatric Laboratory to Increase the Accuracy and Value of the Echocardiographic Report
Pei-Ni Jone¹, Brian Fonseca, Ruthanne Gould, Cindy Barrett, Adel K. Yoonoosai. Pediatric Cardiology, Children’s Hospital Colorado, University of Colorado School of Medicine, Aurora, CO

**PI-164**
Diagnostic Accuracy of Echocardiography for Bicuspid Aortic Valve
Renuka Jain¹, Khawaja A. Ammar¹, Susan Olet¹, Matthew M. Umland¹, Bijoy K. Khandheria¹, Abdul J. Tajik¹. ‘Aurora Cardiovascular Services, Milwaukee, WI; ¹Aurora Research Institute, Milwaukee, WI

**PI-165**
How Often is LBBB Dyssynchrony Identified on Transthoracic Echocardiography? A Quality Improvement Pilot Study
Wilson T. Hannah, Ara Tachjian, Gerard Aurigemma. University of Massachusetts Medical School, Worcester, MA

**PI-166**
Physicians Attitudes Towards the First Pediatric Appropriate Use Criteria Influence Their Impact on Appropriateness and Change in Practice
Ritu Sachdeva¹, Wyman W. Lai¹, Michael S. Kellemán¹, Courtney E. McCracken¹, Leo Lopez¹, Kenan WD Stern¹, Rory B. Weiner¹, Elizabeth Welch¹, Robert M. Campbell¹, Pamela S. Douglas¹. ‘Emory University and Children’s Healthcare of Atlanta, Sibley Heart Center Cardiology, Atlanta, GA; ¹NewYork-Presbyterian, Morgan Stanley Children’s Hospital, New York, NY; ¹Emory University School of Medicine,
P1-167
Evaluation of the Appropriate Use Criteria for Acute Echocardiography in a Real World Setting
Erik S. Marshall, Ahmed S. Abuazid. Christiana Care Health System, Newark, DE

P1-168 MODERATED POSTER
Detection of Residual Microvascular Obstruction following Contemporary Interventional Management of Acute ST Segment Elevation Myocardial Infarction
Sourabh Aggarwal, Gregory Pavlides, Fung Xie, Thomas R. Porter. University of Nebraska Medical Center, Omaha, NE
Disclosures: T. R. Porter – 4 (Lantheus Medical Imaging, Bracco Diagnostics, Astellas Pharma)

P1-169 MODERATED POSTER
Ultrasound-targeted Microbubbles Combined with a Peptide Nucleic Acid Binding Nuclear Localization Signal Mediates the Transfection of Exogenous Genes by Improving Both Cytoplasmic and Nuclear Import
Nan Jiang, Qian Chen, Sheng Cao, Bo Hu, Yi-jia Wang, Rui-qiang Guo. Renmin Hospital of Wuhan University, Wuhan City, China

P1-170 MODERATED POSTER
Altered Acoustic Behavior of Intravascular Definity when Administered as a Compressed Droplet and Activated Locally with Transthoracic Diagnostic Ultrasound
Songita Choudhury1, Fung Xie2, Paul Dayton3, Thomas R. Porter4. University of Nebraska Medical Center, Omaha, NE; University of North Carolina, Chapel Hill, NC

P1-171 MODERATED POSTER
New Software-based Beamforming Algorithm is Superior to Standard Hardware-based Beamformer in Endocardial Border Detection
Robert Kulina1, Sunil Aggarwal2, Brandon Wiley3, Adeena Traube1, Suzanne Schiller1, Soon Ka1, Lisa Clark1, Partho P. Sengupta1, Jagat Narula1, Farooq A. Chaudhry1. University of Nebraska Medical Center, Omaha, NE; University of North Carolina, Chapel Hill, NC
Disclosures: P. P. Sengupta – 2 (Heart Test Labs, Edward Lifesciences); J. Narula – 2, 4 (GE); F. A. Chaudhry – 2 (Lantheus Medical Imaging), 4 (Bracco, GE)

P1-172 MODERATED POSTER
Different Characteristics of Left Ventricular Vortex Flow Pattern in Patients with Hypertrophic Cardiomyopathy: Quantitative Vortex Flow Analysis Using Contrast Echocardiography
Darae Kim1, Geu-Ru Hong1, Jung-Woo Son2, In Jeong Cho1. Chi Young Shim1, Hyuk-Jae Chang1, Jong-Won Ha1, Namsik Chung1, Severance Hospital, Seoul, Republic of Korea; Hallym University, Chuncheon, Republic of Korea

P1-173
How Much Does the Precision of Strain Measurement Increase with Experience?
Tomoko Negishi1, Kazuaki Negishi1, Mark Nolan1, Manish Bansal1, Evgeny Shkolnik2, Andre La Gerche3, Philip Mottram3, Liza Thomas3, Swend Aakhus4, Stephanie Seldrum4, Nobuaki Fukuda5, Hirotsugu Yamada6, Julie Lemieux7, Krassimira Hristova7, Koji Kurosawa8, Martin Penicka9, Bogdan A. Popescu9, Dragos Vinereanu9, Goo-Young Cho10, Paaladinesh Thavendiranathan10, Thomas H. Marwick11, University of Tasmania, Menzies Institute for Medical Research, Hobart, Australia; Medanta-The Medicity, Gurgaon, India; Moscow State University of Medicine & Dentistry, Moscow, Russian Federation; ‘Baker IDI Heart & Diabetes Institute, Melbourne, Australia; Monash Medical Center, Melbourne, Australia; Liverpool Hospital, Sydney, Australia; ‘Oslo University Hospital, Oslo, Norway; ‘CHU UCL Mont-Godinne, Yvoir, Belgium; ‘Takasaki General Medical Center, Takasaki, Japan; ‘Tokushima University, Tokushima, Japan; ‘Centre de recherche du CHU de Québec, Québec, QC, Canada; ‘National Heart Hospital, Sofia, Bulgaria; ‘Gunma University, Maebashi, Japan; ‘Cardiovascular Center Aalst, Aalst, Belgium; ‘University of Medicine and Pharmacy Carol Davila, Bucharest, Romania; ‘Seoul National University Bundang Hospital, Seongnam, Republic of Korea; ‘University of Toronto, Toronto General Hospital, Peter Munk Cardiac Center, Toronto, ON, Canada

P1-174
Fully Automatic Echocardiographic Segmentation Using Machine-learning Algorithms
Arghavan Arafati1, Michael R. Avendi1, Daisuke Morisawa2, Reza Amini2, Ramin Assadi3, Arash Kheradvar1. University of California Irvine, Irvine, CA; Loma Linda University, Loma Linda, CA

P1-175
Feasibility of Three-dimensional (3D) Contrast-enhanced Ultrasound (CEUS) for Assessment of Carotid Artery Stenosis and Intra-plaque Neovascularization in Patients Undergoing Surgical Carotid Endarterectomy
Sandep A. Saha1, Venu Gourinemine2, Kunlin Cao1, Jorge E. Novo1, Vijaya Reddy2, Robert J. March1, Walter McCarthy1, Chad Jacobs1, Marshall Golden1, Boris Shur1, Frank Yamout1, Aaron M. Dentinger3, David M. Mills4, Steven B. Feinstein1. Rush University Medical Center, Chicago, IL; General Electric Company, Niskayuna, NY; GE Global Research, Milwaukee, WI
Disclosures: K. Cao – 5 (General Electric); A. M. Dentinger – 5 (GE Global Research); D. M. Mills – 3 (General Electric Company); S. B. Feinstein – 2 (GE Global Research)

P1-176
Relationship of Intraplaque Neovascularization, Cardiovascular Events and Lipoproteins: A Microbubble Contrast Enhancement Ultrasound Study: Interim Results
Runqing Huang1, Sahar S. Abdelmoneim1, Eric J. Dailey1, Mary E. Hagen1, Thanila A. Macedo1, Sharon L. Mulvagh1. Mayo Clinic, Rochester, MN; Harrington Heart & Vascular Institution, Cleveland, OH

P1-177
Evaluation of Acute Cellular Rejection in Heart Transplant Patients Using Speckle Tracking Echocardiography
Cecilia B.B.V. Cruz1, Wilson Mathias, Jr1, Marco S. Lofrano-Alvez1,
PI-178
Assessment of Left Ventricular Function: Left Ventricular Blood Flow Imaging (LVeFlow) versus Contrast Echocardiography
Masood Ahmad, Tianrong Xie, Meneleo Dimanno, Christine Stephens, Stacie Thompson. University of Texas, Galveston, TX

PI-179
Can Contrast-enhanced Echocardiographic Evaluation of the Outflow Cannula Improve the Assessment of the Left Ventricular Assist Device?
Eric J. Kruse, Diego Medvedofsky, Gabriel Sayer, Sirtaz Adatya, Gene Kim, Nitasha Saraswat, Takeyoshi Ota, Valluvan Jeevanandam, Nir Uriel, Roberto M. Lang, Karima Addetia. University of Chicago Medical Center, Chicago, IL
Disclosures: E. J. Kruse – 2 (Lantheus Medical Imaging); N. Uriel – 2 (Thoratec); R. M. Lang – 2 (Philips)

PI-180
Persistence of Higher Concordance of Strain Over Ejection Fraction for Evaluation of Left Ventricular Function: Results from the SUCCOUR Trial
Tomoko Negishi1, Kazuaki Negishi1, Mark Nolan1, Nobuaki Fukuda2, Hirotsugu Yamada3, Julie Lemieux4, Koji Kurosawa5, Krassimira Hristova6, Martin Penicka7, Bogdan A. Popescu8, Dragos Vinereanu8, Paaladinesh Thavendiranathan9, Goo-Yeong Cho10, Thomas H. Marwick1,11. 1University of Tasmania, Menzies Institute for Medical Research, Hobart, Australia; 2Takasaki General Medical Center, Takasaki, Japan; 3Tokushima University, Tokushima, Japan; 4Centre de recherche du CHU de Québec, Québec, QC, Canada; 5Gunma University, Maebashi, Japan; 6National Heart Hospital, Sofia, Bulgaria; 7University of Medicine and Pharmacy Carol Davila, Bucharest, Romania; 8University of Toronto, Toronto General Hospital, Peter Munk Cardiac Center, Toronto, ON, Canada; 9Seoul National University Bundang Hospital, Seongnam, Republic of Korea; 10Baker IDI Heart & Diabetes Institute, Melbourne, Australia

PI-181
Lipopolyasacharide-induced Myocardial Dysfunction can be Detected by Circumferential Strain Rate
Di Xu1, Yao Gao2. 1Nanjing Medical University, Nanjing, China; 2The First Affiliated Hospital with Nanjing Medical University, Nanjing, China

PI-182
Utility of Echocardiographic Particle Image Velocimetry Analysis During Ramp Studies
Diego Medvedofsky, Eric Kruse, Karima Addetia, Victor Mor- Avi, Gabriel Sayer, Sirtaz Adatya, Gene Kim, Nitasha Saraswat, Takeyoshi Ota, Valluvan Jeevanandam, Nir Uriel, Roberto M. Lang. University of Chicago, Chicago, IL
Disclosures: V. Jeevanandam – 2 (Thoratec, ReliantHeart, HeartWare); N. Uriel – 2 (HeartWare, Thoratec, Abiomed, Medtronic); R. M. Lang – 1 (Philips)

PI-183
Fully Automated Triplane Global and Segmental Left Ventricular Strain in Clinical Echocardiography: Ready for Prime Time?
Ameya Kutty1, Paul Homer1, Jennifer Winter1, Mary Craft1, Berthold Klas1, Shelby Kutty1, David Danford1. ‘University of Nebraska/Children’s Hospital and Medical Center, Omaha, NE; ‘TomTec Imaging Systems, Unterschleissheim, Germany
Disclosures: B. Klas – 5 (TomTec)

PI-184
Molecular Imaging of Inflammation Injuries in the Procession of Atherosclerosis with Microbubbles Targeted to Vascular Cell Adhesion Molecule-1
Yani Liu, Jie Tian, Jun Zhang, Ruiyin Sun. Tongji Hospital, Wuhan, China

PI-185
Proposal for Contrast-enhanced 2D Echocardiography Reference Values in Females
Riitta Paakkanen1, Weimin He2, Ian Paterson1, Edith Pituskin1, Eila Mirhadi3, Jonathan Choy4, John Mackey5, Harald Becher6. ‘University of Alberta Hospital, Edmonton, AB, Canada; ‘Cross Cancer Institute, Edmonton, AB, Canada
Disclosures: J. Choy – 1 (Philips Healthcare); H. Becher – 1, 2 (Bracco)

PI-186
Impact of Contrast-enhanced Carotid Ultrasoundography for Evaluation of Vasa Vasorum in Young Patients with Familial Hypercholesterolemia
Nobutaka Noto, Akiko Komori, Masataka Kato, Hirofumi Watanabe, Takahiro Nakamura, Hiroshi Kamiyama, Mamora Ayusawa, Shori Takahashi. Nihon University, Tokyo, Japan

PI-187
Speckle Tracking Echocardiography Assesses Effect of Qili Qiangxin Capsule on Doxorubicin-induced Cardiomyopathy
Yao Gao1, Di Xu2, Nanjing Medical University, Nanjing, China; ‘The First Affiliated Hospital of Nanjing Medical University, Nanjing, China

PI-188
Comparison of Shear Wave Elastography Measurements in Plaques with and without Presence of Intraplaque Neovascularization as Determined Using Microbubble Enhanced Ultrasound
Runqing Huang1, Matthew W. Urban1, Sahar S. Abdelmoneim1, Eric J. Dailey, Mary E. Hagen, Sharon L. Mulvaghi, ‘Mayo Clinic, Rochester, MN; ‘Harrington Heart & Vascular Institution, Cleveland, OH

PI-189
Validation of Automated Measurement of Left Ventricular Ejection Fraction and Volume Using the Philips EPIQ System
Qi Zheng1, Theresa Win1, Ninel Hovnanians2, Cynthia Taub3, ‘Montefiore Medical Center/Albert Einstein School of Medicine, Bronx, NY; ‘Jacobi Medical Center, Bronx, NY

PI-190
Expert vs. Novice Comparison of Machine Learning-enabled Automatic Image Analysis of Left Ventricular Function
Ameya Kutty1, Paul Homer1, Casey Krohn1, Mary Craft1, Berthold Klas1, David Danford1, Shelby Kutty1, ‘University of Nebraska/Children’s Hospital and Medical Center, Omaha, NE; ‘TomTec Imaging Systems, Corrales, NM
Disclosures: B. Klas – 5 (TomTec)
VASCULAR DISEASE

P1-193 THROUGH P1-202

P1-193
Assessment of Mid Ascending Aortic Diameter by Transthoracic Echocardiography: Age and Sex Specific Reference Values in Adults with and without Systemic Hypertension
Gautam Kumar1, Chadi Ayoub2, Prabin Thapa2, Fletcher A. Miller2, Peter C. Spittell2. 1Emory University School of Medicine, Atlanta, GA; 2Mayo Clinic, Rochester, MN

P1-194
Quantitative Ultrasound Evaluation of the Changes on Tissue Characteristics of Carotid Plaques by Lipid Lowering Therapy
Rie Amano1, Hirotugu Yamada1, Mika Bando1, Yuta Torii1, Susumu Nishio1, Hiromitsu Seno1, Masatake Sata1, Torakuma University Hospital, Tokushima, Japan; 1Saiseikai Kumamoto Hospital, Kumamoto, Japan

P1-195
Brachial Flow-mediated Dilatation is Associated with Pulmonary Artery Pressure in Scleroderma
Leah M. Wright1, Nathan Dwyer2, Thomas Marwick1. 1Baker IDI, Melbourne, Australia; 2Royal Hobart Hospital, Hobart, Australia

P1-196
Development of a Standard Carotid Artery Ultrasound Phantom to Characterize Plaque Density
Olivia Yau, Amer Johri. Queen’s University, Kingston, ON, Canada

P1-197
Quantification of Aortic Stiffness Using Speckle Tracking Imaging in Altered Notch Signaling Murine Model
Ming Chu, Di Xu, Bin Zhou. First Affiliated Hospital with Nanjing Medical University, Nanjing, China

P1-198
Does Aortic Stiffness Precede, Follows, or Occurs Simultaneously with Aortic Atherosclerosis?
Paola C. Roldan1, Theingi Tiffany Win1, Luis P. Roldan1, Michelle Ratliff1, Richard Snider1, Carlos A. Roldan1, ’University of Colorado, Denver, CO; ’University of New Mexico, Albuquerque, NM

ECHOCARDIOGRAPHY IN SOE / ARRHYTHMIAS / ATRIAL FUNCTION

P1-203 THROUGH P1-212

P1-203 MODERATED POSTER
Prognostic Value of Global Longitudinal Strain by 2-dimensional Speckle Tracking Imaging in Patients with Left Bundle Branch Block
In-Chang Hwang, Goo-Yeong Cho, Yeonhee E. Yoon, Jin Joo Park. Seoul National University Bundang Hospital, Seongnam, Republic of Korea

P1-204 MODERATED POSTER
Stage I Diastolic Functional Class Predicts Favorable Outcome Following Echo-guided AV Delay Optimization in Cardiac Resynchronization Therapy Independent of Age, Sex, NYHA Class and Systolic Function: Single Center Experience with 1,951 Patients
P1-205 MODERATED POSTER
Biatrial and Biventricular Cardiac Function in Patients with Constrictive Pericarditis
Veena Raizada1, Arnab Kumar1, Kimo Sato2, Alaa Alashi3, Deborah Agler1, Deborah Kwon1, Allan L. Klein2. 1University of New Mexico, Albuquerque, NM; 2Cleveland Clinic, Cleveland, OH

PI-206 Use of LA Strain and Stiffness to Categorize Diastolic Dysfunction in Patients with Preserved LV Ejection Fraction
Amita Singh, Karima Addetia, Francesco Maffessanti, Victor Mor-Avi, Roberto Lang. University of Chicago Medical Center, Chicago, IL

P1-207 Simultaneous 4-Chamber Longitudinal Strain and Mortality in Severe Pulmonary Hypertension
Amita Singh, Kanako Kishiki, Akhil Narang, Francesco Maffessanti, Mardi Gomberg, Victor Mor-Avi, Roberto M. Lang, Karima Addetia. University of Chicago Medical Center, Chicago, IL

P1-208 Evaluation of Atrial Electromechanical Characteristics by Tissue Doppler Imaging and Prediction Recurrence of Atrial Fibrillation after Successful Radio Frequency Catheter Ablation
Tuan-tuan Tan, Qing Zhou, Bo Hu, Jin-ling Chen, Hong-ning Song, Rui-qiang Guo. Renmin Hospital of Wuhan University, China, Wuhan City, China

P1-209 Value of Left Atrial Metrics as a Cardiac-Biomarker in Chronic Kidney Disease
Krishna K. Kadappa1, Lawrance Cai1, David Thomas1, Wei Xuan1, John K. French1, Liza Thomas2. 1South Western Clinical School, University of New South Wales and Western Sydney, Campbelltown and Liverpool Hospital, Campbelltown, Australia; 2South Western Clinical School, University of New South Wales, Liverpool Hospital, Liverpool, Australia; 3Biochemistry Department, Liverpool Hospital, Liverpool, Australia; 4Ingham Institute, Liverpool, Australia; 5South Western Clinical School, University of New South Wales, Liverpool Hospital, Liverpool, Australia; 6South Western Clinical School, University of New South Wales and University of Sydney, Liverpool and Westmead Hospital, Westmead, Australia

P1-210 Left Atrial Appendage Size and Thrombus in Matched Patients with Atrial Fibrillation: Implications in the Era of Percutaneous Left Atrial Appendage Occlusion
Paul C. Cremer, Jorge Betancor, Kunal Patel, Leonardo L. Rodriguez, Wael Jaber, Richard Grimm. Cleveland Clinic, Cleveland, OH

P1-211 Left Atrial Strain for the Evaluation of Left Ventricular Filling Pressure. Comparison with Standard Echocardiographic Criteria Using Mitral Valve and Tissue Doppler
Sophie D. Barbant1, Aarti Kale2, Marina Trilesskaya3, Miranda Weintraub1, Darwin Pastor1, Clare Waterloo1, Walter Stullman1, Thomas Frohlich1. 1Alameda Health System, Oakland, CA; 2Women’s Cancer Center at Stanford School of Medicine, Palo Alto, CA

P1-212 Attentive Assessment of Left Ventricular Diastolic Function in Patients with Paroxysmal Atrial Fibrillation
Risako Tanaka1, Kunihiko Sugimoto1, Hitoshi Inuzuka1, Satoshi Ito1, Miho Kato1, Ayaka Higashimoto1, Shinji Jinno1, Junichi Ishii1, Akira Yamada1, Yukio Ozaki1. 1Fujita Health University Hospital, Toyoake, Japan; 2Fujita Health University, Toyoake, Japan
Poster Session 2 (P2)

Presented: 9:00 AM – 4:00 PM

EXHIBIT & POSTER HALL

Meet the Investigators: 12:00 – 1:15 PM

Moderated Poster Session: 12:00 – 1:15 PM


TOPICS

3D Echocardiography...... P2-01 through P2-25

Echocardiography in Systemic Disease (DM, HTN, Obesity, Cancer) / Pericardial / Primary Myocardial.......P2-26 through P2-62

Doppler / Hemodynamics ............P2-63 through P2-88

Ischemic Heart Disease ...P2-89 through P2-98

Emerging Use of Echocardiography / Point of Care Echocardiography .......... P2-99 through P2-112

Ventricular Function / Myocardial Mechanics.. P2-113 through P2-160

Clinical Cases: Cardiovascular Ultrasound Imaging in Diagnosis, Clinical Decision-Making, and Patient Management ............. P2-161 through P2-219

Author Disclosure Key: 1) Speakers’ Bureau; 2) Consultant/Advisor; 3) Stock Ownership (not including stocks owned in a managed portfolio); 4) Research Grant (as principal investigator); 5) Employment Affiliation; 6) Royalty/Patents

3D ECHOCARDIOGRAPHY

P2-01 MODERATED POSTER
Application of Echocardiographic Three-dimensional Printed Left Atrial Appendage Model to Guide Transcatheter Left Atrial Appendage Occlusion
Hong-ning Song, Rui-qiang Guo, Qing Zhou, Bo Hu, Jin-ling Chen, Lan Zhang. Renmin Hospital of Wuhan University, Wuhan City, China

P2-02 MODERATED POSTER
Evaluation of Left Ventricular Twist and Synchrony in Patients with Lymphoma Received Anthracycline Therapy by Three-dimensional Speckle Tracking Echocardiography: A Large Single Center Clinical Study
Feiyan Song, Leilei Cheng, Jing Shi, Chujie Zhang, Xianhong Shu. Zhongshan Hospital, Fudan University, Shanghai, China

P2-03 MODERATED POSTER
Three Dimensional Right Atrial Speckle Tracking Echocardiography as a New Predictor of Clinical Outcome in Patients with Pulmonary Hypertension
Masataka Sugahara, Zhi Qi, Rishin Handa, Marc Simon, Michael Mathier, John Gorcsan, III. University of Pittsburgh, Pittsburgh, PA

Disclosures: J. Gorcsan – 4 (Biotronik, GE, Medtronic, St. Jude Medical, Toshiba)

P2-04 MODERATED POSTER
Prediction of the Origin of the Culprit Chord in P2 Prolapse or Flail Leaflet: Does it Originate from the Anterior or Posterior Papillary Muscle?
Kikuko Obase1, Husam H. Balkhy2, Valluvan Jeenanandam2, Shiro Uemura2, Roberto Lang2. 1Kawasaki Medical school, Kurashiki, Japan; 2University of Chicago, Chicago, IL

P2-05
Separate Quantification of Longitudinal and Radial Motion of the Right Ventricle Using 3D Echocardiography
Attila Kovács1, Zoltán Tösér2, Bálint Lakatos3, Márton Tokodi4, Annamária Kosztin1, Alexandra Assabiny1, Balázs Sax1, Béla Merkely1. 1Heart and Vascular Center, Budapest, Hungary; 2Department of Software Technology and Methodology, Eötvös Loránd University, Budapest, Hungary

P2-06
Measurement of the Right Ventricular Pressure Volume Curve by 3D Transesophageal Echocardiography
Shinya Kato, Kenji Yohitani, Yoshihiko Ohnishi. National Cerebral and Cardiovascular Center, Suita, Japan

P2-07
Non-invasive Evaluation of the Dynamic Heart Function Using Four-dimensional Echocardiography
Ran Chen, Meihua Zhu, Muhammad Ashraf, David J. Sahn. Oregon Health & Science University, Portland, OR

Author Disclosure Key: 1) Speakers’ Bureau; 2) Consultant/Advisor; 3) Stock Ownership (not including stocks owned in a managed portfolio); 4) Research Grant (as principal investigator); 5) Employment Affiliation; 6) Royalty/Patents
**P2-08**  
Verification of Pacemaker Lead Tip Location Using 3D Echocardiography: An Alternative to Chest X-ray or Biplane Fluoroscopy?  
Dave Pandya, Karima Addetia, Megan Yamat, Anuj Mediratta, Joshua D. Moss, Hemal Nayak, Martin Burke, Roderick Tung, Victor Mor-Avi, Roberto M. Lang, Gaurav A. Upadhyay. University of Chicago, Chicago, IL

**P2-09**  
Feasibility, Accuracy and Reproducibility of Aortic Annular and Root Sizing in Transcatheter Valve Implantation Using Novel Three-dimensional Automated Software: Comparison with Multi-detector Row Computed Tomography  
Edgard A. P rhadi, Philippe J. van Rosendaal, Mara Vollema, Jeroen J. Bax, Victoria Delgado, Nina A. Marsan. Leids Universitair Medisch Centrum, Leiden, Netherlands

Disclosures: V. Delgado – t (Abbott Vascular)

**P2-10**  
A Novel Approach to Fuse Parasternal and Apical 3D Echocardiography Datasets  
Kumaradevan Punithakumar, Abhilash Hareendranathan, Alexander McNulty, Marina Biamonte, Allen He, Michelle Noga, Pierre Boulanger, Harald Becher. University of Alberta, Edmonton, AB, Canada

**P2-11**  
Prospective Assessment of Incidence and Mechanisms of Tricuspid Regurgitation Post Endocardial Lead Placement  
Kalilur Anvardeen, Hongyan Dai, Karen Hay, Rajeev Rao, Samir Hazra, Nick Stoyanov, Seeger Shen, David Birnie, Girish Dwivedi, Kwan-Leung Chan. University of Ottawa Heart Institute, Ottawa, ON, Canada

**P2-12**  
Right Ventricular Systolic Deformation is Diminished in Patients with Pulmonary Hypertension: A Three-dimensional Speckle Tracking Imaging Study  
Yuman Li, Mingsing Xie, Mengmei Li, Lei Li. Department of Ultrasound, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China

**P2-13**  
Mitral Valve Mapping of Tethering Patterns in Ischemic Mitral Regurgitation by 3D Echocardiography Analysis  
Romain Capoulade, Mark D. Handschumacher, Chritos G. Mihos, Xin Zeng, Jonathan G. Teoh, Yong H. Park, Philipp Bartko, David A. D’Alessandro, Serguei Melnitchouk, Robert A. Levine, Judy W. Hung. Massachusetts General Hospital, Boston, MA

**P2-14**  
Early Left Atrial Dysfunction in Patients Treated with Anthracyclines Assessed by Real-time Three-dimensional Echocardiography  
Jing Shi1, Ye Guo1, Leilei Cheng2, Feiyun Song1; Xianhong Shu1.  
1Zhongshan Hospital, Fudan University, Shanghai, China; 2Department of Medical Oncology, Fudan University Shanghai Cancer Center, Shanghai, China

**P2-15**  
Inter- and Intra-reader Reproducibility of Left Ventricular Volumetric and Deformational Assessment by Three-dimensional Echocardiography in a Multi-center Community-based Study: The Coronary Artery Risk Development in Young Adults (CARDIA) Study  
Chike C. Nwabu1, Henrique T. Moreira1, Henrique D. Vasconcellos1, Guilherme Yared2, Bharath Ambale-Venkatesh1, Jared P. Reis1, Donald Lloyd-Jones1, Pamela J. Schreiner1, Cora E. Lewis1, Steve Sidney2, Kofo Ogundaykin1, Samuel S. Gidding3, Joao A.C. Lima4. Johns Hopkins University, Baltimore, MD; 1National Heart, Lung, and Blood Institute, Bethesda, Bethesda, MD; 2Northwestern University Feinberg School of Medicine, Chicago, IL; 3University of Minnesota, Minneapolis, MN; 4University of Alabama at Birmingham, Birmingham, AL; 5Kaiser Permanente, Division of Research, Oakland, CA; 6Nemours Foundation, Wilmington, DE

**P2-16**  
Patient Specific Three-dimensional Printing of the Calcified Mitral Valve  
Edinrin Obasee1, Emmanuel Melendres1, Chinualumogu Nwakile1, Deepakraj Gajana1, Solomon Samuel1. Lyes Kadem1, Alison M. Pouch2, Gregg Pressman1. Einstein Medical Center, Philadelphia, PA; 3Concordia University, Montreal, QC, Canada; 7University of Pennsylvania, Philadelphia, PA

**P2-17**  
Right Ventricular Longitudinal Strain by Three-dimensional Speckle Tracking Echocardiography: Comparison Between Vendor-dependent and Vendor-independent Softwares  
Arnav Kumar1, Kimi Sato1, Meneleo Dimaano2, Masood Ahmad1.  
1Cleveland Clinic, Cleveland, OH; 2University of Texas Medical Branch, Galveston, TX

**P2-18**  
Left Ventricular Wall Motion Analysis of Young Heart by Three Dimensional Speckle Tracking Echocardiography  
Kentaro Akagi1, Masaki Nii1, Keisuke Sato1, Jun Yoshimoto1, Norie Mitsushita1, Sung Hae Kim1, Yasuo Ono1, Ken Takahashi1, Kiyohiro Takigiku1, Manatomo Toyono1, Satoru Iwashima1, Nao Inoue1.  
1Shizuoka Children’s Hospital, Shizuoka, Japan; 2Juntendo University of Medicine, Tokyo, Japan; 3Nagano Children’s Hospital, Nagano, Japan; 4Akita University Graduate School of Medicine, Akita, Japan; 5Hamamatsu University School of Medicine, Shizuoka, Japan; 6Seirei Hamamatsu General Hospital, Shizuoka, Japan

**P2-19**  
Assessment 2D and 3D Global Longitudinal Strain of Abnormal LV Myocardial Deformation Properties Using 3D Speckle-tracking Echocardiography in Young HCM Patients  
Qian Yang1, Lei Zuo1, Peng Tang2, Xiaodong Zhou1, Liwen Liu1, Shuping Ge1.  
1Department of Ultrasound, Xijing Hospital, Fourth Military Medical University, Xi’an, China; 2Department of Orthopedics, Xijing Hospital, Fourth Military Medical University, Xi’an, China; 3St. Christopher’s Hospital for Children, Drexel University College of Medicine, Philadelphia, PA

**P2-20**  
Dynamic Systolic Changes in Tricuspid Regurgitation Vena Contracta Size and Proximal Isovelocity Surface Area on Color Doppler Three-dimensional Echocardiography  
Ling Li1, Shelby Kutty1, Collin Erickson1, Timothy M. Colen1, David Danford2, Jeffrey Smallhorn3, Nee Seze Khoo1.  
1University of Nebraska/Childrens Hospital and Medical Center, Omaha, NE; 2University
P2-21
Association of Left Atrial Volumes with Left Ventricular Structure and Function by Three-dimensional Echocardiography: The Coronary Artery Development in Young Adults (CARDIA) Study
Henrique D. Vasconcellos1, Henrique T. Moreira1, Chike C. Nwabuo1, Guilherme S. Yared1, Bharat A. Vendkatesh1, Anderson G. Armstrong1, Jared P. Reis1, Donald M. Lloyd-Jones3, Pamela J. Schreiner4, Cora E. Lewis5, Stephen Sidney5, Samuel S. Gidding5, Joao A.C. Lima1. 1Johns Hopkins, Baltimore, MD; 2National Heart, Lung, and Blood Institute, Bethesda, MD; 3Northwestern University Feinberg School of Medicine, Chicago, IL; 4University of Minnesota, Minneapolis, MN; 5University of Alabama at Birmingham, Birmingham, AL; 6Kaiser Permanent, Division of Research, Oakland, CA; 7Nemours Foundation, Wilmington, DE

P2-22
Correlation of 2 Dimensional and 3 Dimensional Echocardiographic Analysis to Surgical Measurements of the Tricuspid Valve Annular Diameter
Himani V. Bhatt1, John Spivack1, Pritul R. Patel2, Ahmed El-Eshmawi1, David H. Adams1, Gregory W. Fischer1. 1Icahn School of Medicine at Mount Sinai, New York, NY; 2David Geffen School of Medicine at UCLA, Los Angeles, CA

P2-23
Does Volume Rate Matter? Understanding Temporal Resolution for Mitral Valve Analysis
Tawat Ngernsritrakul1,2, Joseph Gnanaraj1, Ben A. Lin1, Rachel Kaplan1, Lissa Sugeng1, Yale University, New Haven, CT; 2Ramathibodi Hospital, Bangkok, Thailand

P2-24
Three-dimensional Echocardiographic Approach for Automated Quantification of Left Ventricular Volume Using Adaptive Analytics Algorithm: Comparison Against Two-dimensional Echocardiography
Lynn Weinert, Diego Medvedofsky, Victor Mor-Avi, Roberto M. Lang. University of Chicago, Chicago, IL

P2-25
Assessment of the Size and Function of Left Atrial Appendage by Three Dimensional Transesophageal Echocardiography
Go Hashimoto, Makoto Suzuki, Kenji Makino, Hiromasa Hayama, Yukiko Iskame, Hisao Yoshikawa, Takenori Otsuka, Hidehiko Hara, Masao Moroi, Masato Nakamura, Toho University Ohashi Medical Center, Tokyo, Japan

Echocardiography in Systemic Disease (DM, HTN, Obesity, Cancer) / Pericardial / Primary Myocardial Disease

P2-26 MODERATED POSTER
Global Longitudinal Strain Independently Predicts Outcomes in Hypertrophic Cardiomyopathy
Hongyun Liu, Iraklis Pozios, Berekebea Haileselassie, Alexandra Nowbar, Lars Sorensen, Susan Phillip, Dai-Yin Lu, Ioannis Ventoulis, Hongchang Luo, Roselle Abraham, Theodore Abraham, Johns Hopkins HCM Center of Excellence, Baltimore, MD

P2-27 MODERATED POSTER
Unique Abnormalities in Right Ventricular Longitudinal Strain in Scleroderma
Monica Mukherjee, Shang-En Chung, Von Khue Ton, Ryan J. Tedford, Laura K. Hummers, Fredrick M. Wigley, Theodore P. Abraham, Ami A. Shah, Johns Hopkins University, Baltimore, MD

P2-28 MODERATED POSTER
Left Ventricular Diastolic Function in Adult Survivors of Childhood Cancer
Vijaya M. Joshi1,2, Juan Carlos Plana4, Nan Zhang6, DeoKumar Srivastava3, Kristin K. Ness3, Daniel A. Mulrooney7, Daniel M. Green3, Leslie L. Robison3, Melissa M. Hudson3, Tom H. Marwick3, Gregory T. Armstrong3, University of Tennessee College of Medicine, Memphis, TN; 4Le Bonheur Children’s Hospital, Memphis, TN; 5St. Jude Children’s Research Hospital, Memphis, TN; 6Baylor College of Medicine, Houston, TX; 7Baker IDI Heart and Diabetes Institute, Melbourne, Australia

P2-29
Cardiac Remodeling in the Offspring of Mothers with Diabetes Persists into Early Infancy
Aparna Kulkarni1, Ling Li1, Sreejitha Khiyahi1, Barbara Tria1, Jose Miguel Lorenzo1, Shelby Kutty1, Bronx Lebanon Hospital Center, Bronx, NY; 1Children’s Hospital and Medical Center, Omaha, NE

P2-30
Echocardiographic Diagnosis of Constrictive Pericarditis: Applying the Mayo Clinic Criteria
Sager Alkharabsheh, Salima Qamruddin, Arnar Kumar, Neha Gupta, Ahmed El-Telbany, Ayman I. Ayache, Paul Cremer, Dougolus Johnston, Allan Klein. Cleveland Clinic Foundation, Cleveland, OH

P2-31
Layer Specific Quantification of Myocardial Deformation in Patients with Maintenance Hemodialysis
Minmin Sun, Xuesen Cao, Cuizhen Pan, Xianhong Shu. Zhongshan Hospital, Fudan University, Shanghai, China

P2-32
Changes in Echocardiographic Global Longitudinal Strain are Associated with Degree of Neurocardiac Injury in Patients with Subarachnoid Hemorrhage
Zhi Qi, Masataka Sugahara, Elizabeth A. Crago, Yuefang Chang, Theodore F. Lagattuta, Khalil Yousef, Robert M. Friedlander, Marilyn T. Hravnak, John Gorcsan, III. University of Pittsburgh, Pittsburgh, PA
P2-33
Cardiac Involvement in Acute Leukemia Patients Assessed by Left Ventricular Global Longitudinal Strain
Bruna M. Assunção1, Timothy Tan1,2, Kai-Hung Cheng3, Marielle Scherrer-Crosbie1. 1Massachusetts General Hospital, Boston, MA; 2Blacktown Hospital, University of Western Sydney, Sydney, Australia

P2-34
Myocardial Deformation Capacity and Microvascular Coronary Function in Relation to Cardiac Amyloid Deposit Burden
Tor S. Clemmensen1, Henning Mølgaard1, Hans Eiskjær2, Jens Soerensen1, Lars P. Toibod1, Hendrik J. Harms1, Steen H. Poulsen1. 1Department of Cardiology, Aarhus University Hospital, Aarhus, Denmark; 2Department of Nuclear Medicine, Aarhus University Hospital, Aarhus, Denmark

P2-35
Pertuzumab-Trastuzumab Combination Chemotherapy for Breast Cancer is Associated with Complex but Reversible Hemodynamic Abnormalities
Srikanth Koneru1, Adam Goldberg1, Shruti Tiwari1, Vedha Sanghi1, Alberto Montero2, Richard Grimm2, Leonardo Rodriguez2, Milind Desai3, Brian P. Griffin1, Patrick Collier1, Thomas G. Budd1, Balaji Tamarappoo1, Zoran B. Popovic1. Cleveland Clinic Foundation, Cleveland, OH

P2-36
Echocardiographic Predictors for Worsening of 6-minute Walk Distance in Patients with Connective Tissue Disease
Yoshihito Satjo1, Kenya Kusunose1, Hirotsugu Yamada1, Susumu Nishio1, Rie Amano1, Yukina Hirata1, Hiromitsu Seno1, Masataka Sata1. Tokushima University Hospital, Tokushima, Japan

P2-37
Long-term Remodeling Patterns of the Ventricular Septum are Associated with Ventricular Arrhythmias in Adult Hypertrophic Cardiomyopathy
Hsin-Yueh Liang1,2, Blaid Mbiyangandu2, Alex Hilser2, Roselle Abraham1, Theodore Abraham1, China Medical University Hospital, Cardiology, Taichung, Taiwan; 1Johns Hopkins University, School of Medicine, Baltimore, MD

P2-38
Tricuspid Annular Plane Systolic Excursion as a Predictor of Clinical Outcomes in Infants with Pulmonary Hypertension Secondary to Congenital Diaphragmatic Hernia
Sherzana Sunderji1, Martina Steurer-Muller1, Roberta Keller1, Michael Brook2, Hytham Nawaytou2, Anita Moon-Grady2, Shahnam Peyvandi2. University of California, San Francisco, San Francisco, CA

P2-39
A Study of the Prognostic Power of Non-invasively Estimated Pulmonary Artery Systolic Pressure versus Other Echocardiographic Parameters in Individuals with Hypertrophic Cardiomyopathy
Lauren H. Turvey1, Amir Aziz1, James Hodson2, Mohammed Nawaz2, Luke Pickup1, Paulus Kirchhof2, Michael J. Griffith3, Peter F. Ludman4, Francisco Leyva5, Richard P. Steeds5, Michael P. Frenneaux5, William M. Bradlow1. Queen Elizabeth Hospital Birmingham, Birmingham, United Kingdom

P2-40
Accuracy of Standard Echocardiography, Cardiac Magnetic Resonance and Derived Lumped Parameter Model for Prediction of Invasive Hemodynamics in Patients with Precapillary Pulmonary Hypertension: A Pilot Study
Diego Bellavia1, Giuseppe Romano1, Salvatore Pasto1, Giovanni Gentile1, Francesco Scardulla1, Alejandro Frangi2, Karim Ledakir3, Patrizio Vitulo1, Joseph Maalouf4, Fletcher A. Miller, Jr.5, Gabriele Di Gesaro6, Chiara Minà1, Giuseppe Raffa6, Michele Pilato6, Francesco Clemenza2, Cesare Scardulla1. ISMETT/UPMC, Palermo, Italy; 1RiMED, Palermo, Italy; 2University of Palermo, Palermo, Italy; 3University of Sheffield, Sheffield, United Kingdom; 4University of Barcelona, Barcelona, Spain; 5Mayo Clinic and Foundation, Rochester, MN

P2-41
Right Atrial Dilatation in Patients Diagnosed with Pulmonary Arterial Hypertension
Anusith Tunsahasiriwet1, Libo Chen1, Carolyn M. Larsen1, Rachel J. Le1, Cristina Pulparu1, Garvan C. Kane1. Division of Cardiovascular Disease, Department of Medicine, Mayo Clinic, Rochester, MN

P2-42
Differences of Myocardial Mechanics Between Hypertrophic Cardiomyopathy and Concentric Left Ventricular Hypertrophy Using a Novel Transthoracic Echocardiography Multi-layer Strain Technique
Ikusung Cho1, Islam El-Sayed Shehata2, Geu-Ru Hong2, In-Cheol Kim2, Soo-Youn Lee2, Jung-woo Son2, In Jeong Cho1, Chi Young Shim1, Hyuk-Jae Chang1, Jong-Won Ha1, Namsik Chung1. Division of Cardiology, Severance Cardiovascular Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea; 1Zagazig University, Zagazig, Egypt

P2-43
Effect of Hematopoietic Stem Cell Transplantation on Bi-ventricular Function as Assessed by Speckle Tracking Echocardiography
Stuart Covi1, Yaddanapudi Ravindranath1, Ahmad Farooqi1, Sureyya Savasan1, Sanjeev Aggarwal1. Children’s Hospital of Michigan, Detroit, MI

P2-44
The Association of Central Aortic Stiffness with Left Atrial Function in Patients with Hypertension: A Study with Speckle-tracking Echocardiography
Darae Kim1, Chi Young Shim1, Geu-Ru Hong1, Sang Jin Ha1, In Jeon Cho1, Hyuk-Jae Chang1, Jong-Won Ha1, Namsik Chung1. Severance Hospital, Seoul, Republic of Korea; 1Gangneung Asan Hospital, Gangneung, Republic of Korea

P2-45
Evaluation of Long-term Effects of Pericardiectomy on Left Atrial Functions in Constrictive Pericarditis with Speckle Tracking Echocardiography
Li Li1, You-Bin Deng1, Qiao-Ying Tang1, Ya-Ni Liu1, Xiao-Jun Bi1. Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China

P2-46
The Prognostic Value of Global Circumferential Strain in Peripartum Cardiomyopathy
Masataka Sugahara1, Dennis McNamara1, Navin Rajagopal1, Joan Briller2, Julie Damp1, Gretchen Wells2, Mark Drazner3, Lori Blauwet4.
P2-47
The Circumferential Mechanical Deformation Property Derived from STI Could Predict Carotid Arterial Stiffness
Jing Wang1, Benyu Jiang1. 1Department of Ultrasound, Union Hospital, Wuhan, China; 2Dept. Clinical Pharmacology, London King’s College, London, United Kingdom

P2-48
Left Ventricular Non Compactation with Systolic Dysfunction. Is the Prognosis Always Ominous?
Maria S. Andres, Ricardo Ronceros, Silvana Resti, Paola Kuschnir, Agustina Sciancalepore, Mirta Dize, Lujan Talavera, Marcelo Trivi, Gustavo Avegliano. ICBA, Buenos Aires, Argentina

P2-49
Speckle Tracking Abnormalities of Global Left Ventricle Strain in Children Following Chemotherapy
Gilda Kadriu, Jyothsna Akam Venkata, Sanjeev Aggarwal. Children’s Hospital of Michigan, Detroit, MI

P2-50
Clinical Implications of Right Ventricular Strain
Bianca Ummat1, Monica Mukherjee2, Helma Parikh1, Lynette Craney1, Brian G. Choi1, Jannet F. Lewis1. 1George Washington University, Washington, DC; 2Johns Hopkins University, Baltimore, MD

P2-51
Right Heart Dysfunction in HFPEF Related to Worsening Renal Function
Monica Mukherjee1, Kavita Sharma, Jose Madrazo, Ryan J. Tedford, Stuart D. Russell, Allison G. Hays. Johns Hopkins University, Baltimore, MD

P2-52
Effects of Hydroxyurea on Dilatation & Eccentric Hypertrophy in Pediatric Patients with Sickle Cell Anemia
Elizabeth Mitchell, Olivia Serigano, Dorota Gruber. Cohen Children’s Medical Center, Northwell Health System, New Hyde Park, NY

P2-53
Right Ventricular Systolic and Diastolic Dysfunction Occurs Early and is Influenced by Left Ventricular Diastolic Dysfunction in AL Amyloidosis
Ee-May Chia1, Queenie Lo2, Fiona Kwok3, Ming-Wei Lin1, David Richards1, Liza Thomas1. 1Liverpool Hospital, Liverpool, Australia; 2Westmead Hospital, Westmead, Australia; 3Liverpool & Westmead Hospital, Liverpool, Australia

P2-54
Left Ventricular Dynamic Changes in Patients with Gestational Diabetes Compared to Normal Pregnancy: A Speckle Tracking Echocardiography Study
Srinidhi Jayadevappa Meera1, Tomo Ando2, Cynthia C. Taub3. 1Montefiore Medical Center North Division, Albert Einstein College of Medicine, Bronx, NY; 2Mount Sinai Beth Israel, Icahn School of Medicine at Mount Sinai, New York, NY; 3Montefiore Medical Center, Albert Einstein College of Medicine, Bronx, NY

P2-55
Anticoagulation and the Development of Hemorrhagic Pericardial Effusions
Jamal H. Mahar, Saqer Alkharabsheh, Samuel Horr, Allan Klein. Cleveland Clinic Foundation, Cleveland, OH

P2-56
Does Elevated Blood Pressure at the Time of Serial Echocardiography Impact the Assessment of Aortic Stenosis?
Pritra Bansal, Kalyan Chaliki, Vidya Madineedi, Hari P. Chaliki. Mayo Clinic, Scottsdale, AZ

P2-57
The Association of Skin to Right Ventricle Distance on Echocardiogram with Metabolic Syndrome
Saroj Neupane1, Deepthi Vodnala1, Susan Szpunar1, Srujana Chakilam2, Renee Bess2, Michael Tucciarone1, Gerald I. Cohen3. 1St John Hospital and Medical Center, Detroit, MI; 2University of Missouri-Kansas City, Kansas, MO; 3St John Hospital and Medical Center, Warren, MI

P2-58
Peak Exercise Systolic Strain Rate Predicts Exercise Capacity After Septal Myectomy in Obstructive Hypertrophic Cardiomyopathy
Hongyun Liu, Iraklis Pozios, Beraketeab Haileselassie, Lars Sorensen, Susan Phillip, Hongchang Luo, Roselle Abraham, Theodore Abraham, Johns Hopkins HCM Center of Excellence, Baltimore, MD

P2-59
Aortic Intima-media Thickness is Feasible and More Sensitive than Protocols Targeting Other Vessels for Detecting Early Macro-vascular Changes in Children with Type 1 Diabetes at Risk for Micro-vascular Complications
Christian Lilje1, Julie C. Cronan1, Jeffrey P. Cardinale1, Elizabeth M. Owens1, Elridge J. Schwartzenburg1, Patrice Clesi2, Ricardo Gomez1, Sarah Stender1, Alfonso Vargas1, James M. Hempe1, Stuart Chalew1. 1Louisiana State University Health Sciences Center, New Orleans, LA; 2Children’s Hospital, New Orleans, LA

P2-60
Endothelial Function as a Potential Marker for Pulmonary Hypertension in Scleroderma
Leah M. Wright1, Nathan Dwyer2, Thomas Markwick3, ‘Baker IDI, Melbourne, Australia; 4Royal Hobart Hospital, Hobart, Australia

P2-61
Transient Left Ventricular Regional Ballooning During Dobutamine Stress Echocardiography

P2-62
2D Longitudinal LV Speckle Tracking Strain Pattern in Breast Cancer Survivors: Sports Activity vs Exercise as Prescription Model
Laura Stefani, Sr1, Gianni Pedrizzetti, Sr2, Stefano Pedri2, Tosi Benedetta2, Giorgio Galanti1. 1Sports Medicine Center-University of Florence, Clinical and Experimental Department, Florence, Italy; 2Architectural and Engineering Department of the University of Trieste, Trieste, Italy
P2-63 MODERATED POSTER
Exercise Stress-induced Outflow Tract Gradients Independently Predict Clinical Outcomes in Hypertrophic Cardiomyopathy
Dai-Yin Lu1, Bereketeab Haileselassie1, Ioannis Ventoulis1, Hong-Yun Liu1, Hsin-Yueh Liang2, Alexandra Nowbar2, Irlakis Pozios3, Marco Canepa4, Norma Flores4, M. Roselle Abraham5, Theodore Abraham5.
1Johns Hopkins University, Baltimore, MD; 2National Heart and Lung Institute, Imperial College, London, United Kingdom

P2-64 MODERATED POSTER
Criteria for Exercise-induced Pulmonary Hypertension Using 6-minute Walk Stress Echocardiography in Patients with Collagen Tissue Disease
Hirotsugu Yamada, Kenya Kusunose, Yuta Torii, Yoshihito Saijo, Hiromitsu Seno, Yukina Hirata, Rie Amano, Susumu Nishio, Masataka Sata. Tokushima University Hospital, Tokushima, Japan

P2-65 MODERATED POSTER
Contrast Enhanced Doppler Echocardiography may Overestimate Aortic Stenosis Severity
Eleonora Avenatti, Dimitrios Maragiannis, Marija Vukicevic, Muaz M. Abudiab, Nickalaus Gramze, Colin M. Barker, Stephen H. Little. Houston Methodist Hospital, Houston, TX

P2-66 MODERATED POSTER
Clinical Utility of Preload Stress Echocardiography for Predicting Future Pseudo-normal Transmitral Flow Pattern
Yoshihito Saijo, Hirotsugu Yamada, Kenya Kusunose, Hiromitsu Seno, Susumu Nishio, Rie Amano, Yukina Hirata, Masataka Sata. Tokushima University Hospital, Tokushima, Japan

P2-67 MODERATED POSTER
Noninvasive Doppler Estimation of Left Ventricular Filling Pressures in Patients with Mitral Annular Calcification
Muaz M. Abudiab, Lakshmi H. Chebrolu, Robert C. Schutt, Sherif F. Nagueh, William A. Zoghbi. Houston Methodist DeBakey Heart and Vascular Center, Cardiovascular Imaging Center, Houston, TX

P2-68 Evaluation of Mean Left Ventricular Pressure in Patients with Acute Coronary Syndrome: A Doppler Echocardiographic and Cardiac Catheterization Validation Study
Ara L. Tachjian, Jason Stencel, Matthew W. Parker, Nikolaos Kakouros, Gerard P. Aurigemma. UMASS, Worcester, MA

P2-69 Indexing Peak Rapid Filling Velocity to Both Relaxation and Filling Volume to Estimate Left Ventricular Filling Pressures
Steven J. Lavine, Kamesh Sivagnanam. Quillen College of Medicine, Johnson City, TN
Disclosures: S. J. Lavine – 1 (Daiichi Sankyo)

P2-70 Tricuspid Annular Plane Systolic Excursion and Pulmonary Arterial Systolic Pressure Ratio as a Predictor of Early Right Heart Dysfunction After Left Ventricular Assist Device Implant
Sophia Airhart, Richard Cheng, James Kirkpatrick, S. Carolina Masri. University of Washington, Seattle, WA

P2-71 Do Right Ventricular Diastolic Tissue Doppler Parameters Add Diagnostic Value in Pulmonary Hypertension?
Nishtha Sareen1, Alexandra Mariychina2, Cagijas Hector2, Meredith Mahan3, Karthikeyan Ananthasubramaniam4. 1Mount Sinai Medical Center, New York, NY; 2Henry Ford Hospital, Detroit, MI

P2-72 Hemodynamic Modeling of Fetal Aortic and Ductal Arches Using Computational Fluid Dynamics and 3D/4D Spatio-temporal Image Correlation Fetal Echocardiography
Zhuo Chen1, Yihua He1, Shengli Li2, Hongkai Zhao2, Xiaowei Liu3, Shuping Ge4. 1Beijing Anzhen Hospital, Capital Medical University, Beijing, China; 2Department of Laboratory Animal Science, Capital Medical University, Beijing, China; 3School of Aeronautic Science and Engineering, Beihang University, Beijing, China; 4St. Christopher’s Hospital for Children/Drexel University College of Medicine, Philadelphia, PA

P2-73 Serial Echocardiographic Assessment of Hemodynamics in Coarctation of Aorta in Fetuses
Xiaowei Liu1, Yihua He1, Shuping Ge5. 1Beijing Anzhen Hospital, Capital Medical University, Beijing, China; 2St. Christopher’s Hospital for Children/Drexel University College of Medicine, Philadelphia, PA

P2-74 WITHDRAWN
P2-75 Noninvasive Measures of Pulmonary Hypertension by Echocardiography in Children with Cardiomyopathy
Dor Markush, Sanjeev Aggarwal. Children’s Hospital of Michigan, Detroit, MI

Mary Craft1, Connie Casey1, Ameya Kutt1, Christopher Erickson1, Robert Spicer2, David Danford2, Shelby Kutt1. 1University of Nebraska/Childrens Hospital and Medical Center, Omaha, NE; 2Hitachi Aloka Medical America, Inc., Wallingford, CT

P2-77 The Association of LVH with Intraventricular Dyssynchrony at Diastolic Phase During Exercise in Hypertensive Patients
Hye-Sun Seo1, Se-Jung Yoon2, Mi-Jeong Kim3. In Hyun Jung4. 1Soonchunhyang University Hospital, Bucheon, Republic of Korea; 2Ilsan Hospital, National Health Insurance Service, Ilsan, Republic of Korea; 3Incheon St. Mary’s Hospital, The Catholic University of Korea, Incheon, Republic of Korea; 4Inje University Sanggye Paik Hospital, Seoul, Republic of Korea
P2-78
Changes in Left Atrial Volume and Diastolic Function in Hypertrophic Obstructive Cardiomyopathy Following Alcohol Septal Ablation
Ashley A. Waring, Barbara E. Griffin, Jeremy D. Rier, John M. Neathawk, Stewart M. Benton, Shawn Shaji, Christopher D. Nielsen, Valerian Fernandes, Sheldon E. Litwin. Medical University of South Carolina, Charleston, SC

P2-79
Comparison Between Transcatheter and Surgical Aortic Valve Replacement on the Basis of Effective Orifice Area in Patients with Severe Aortic Stenosis
Hideta Takushi. The Sakakihara Heart Institute of Okayama, Okayama, Japan

P2-80
Sum of Doppler Tissue Imaging Lateral Mitral Annular Velocities at Peak Systolic and Early Diastole Discriminates Diseased from Healthy Hearts
Jeffrey M. Tyler, Randell C. Thomas, Qizhi Fang, Dwight Bibby, Nelson B. Schiller. University of California San Francisco, San Francisco, CA
Disclosures: N. B. Schiller – 1 (General Electric Health Care, Lantheus Inc)

P2-81
Influence of Acute Hemodynamic Change after Pulmonary Endarterectomy for Chronic Thromboembolic Pulmonary Hypertension on Right Ventricular Function: Right Ventricular Speckle Tracking Strain Study
Yasuko Imai, Nobuhiro Tanaka, Nori Takahashi, Saiko Kurohane, Yasuyoshi Takei, Akira Yamashina. Tokyo Medical University, Tokyo, Japan

P2-82
Novel Index of Right Ventricular Myocardial Stiffness is Directly Related to Right Heart Performance in Patients with Pulmonary Hypertension
Chhaykrit Krittanawong, Anusith Tunhasiriwet, Panorkwan Toparkngarm, Mahmoud M. Alashry, Sorin V. Pislaru, Patricia A. Pellikka, Garvan C. Kane, Cristina Pislaru. Division of Cardiovascular Disease, Department of Medicine, Mayo Clinic, Rochester, MN

P2-83
Prenatal Diagnosis of Complete Vascular Rings by 2D and 3D/4D Fetal Echocardiography
Ye Zhang1, Yihua He1, Lin Sun1, Ying Zhao1, Shuping Ge1. Beijing Anzhen Hospital, Capital Medical University, Beijing, China; 2Department of Laboratory Animal Science, Capital Medical University, Beijing, China; 3School of Aeronautic Science and Engineering, Beihang University, Beijing, China; 4St. Christopher’s Hospital for Children/Drexel University College of Medicine, Philadelphia, PA

P2-84
Gender Difference in the Association Between Left Ventricular Relaxation and Afterload
Hidemi Sorimachi. Gunma University Graduate School of Medicine, Maebashi, Japan

P2-85
Do Echocardiographic Parameters Accurately Reflect Left Ventricular Filling Pressures in Patients with Severe Aortic Stenosis Being Evaluated for Transcatheter Aortic Valve Replacement?
Serge Harb, Kimi Sato, Brandon Jones, Samir R. Kapadia, Brian P. Griffin, Leonardo Rodriguez, Zoran Popovic. Cleveland Clinic Foundation, Cleveland, OH

P2-86
Diagnosing Heart Failure on the Descending Limb of the Starling Curve Using Echocardiography with Passive Leg Raising
Kanako Akamatsu1, Yukio Abe2, Yoshih Tatsumura1, Tsukishiro Takahata1, Kazato Ito1, Takahiko Naruko1, Kazuo Haze1, Minoru Yoshiyama1, Junichi Yoshikawa1, 1Osaka City General Hospital, Osaka, Japan; 2Osaka City University Medical School, Osaka, Japan; Nishinomiya-Wahabe Cardiovascular Center, Nishinomiya, Japan

P2-87
Can Diastolic Pressures be Estimated in the Presence of Mitral Annular Calcification: A Doppler-Hemodynamic Correlation Study
John Dickey1, A. Atiyeh2, Gerard Aurigemma1, 1Alpert Medical School of Brown University, Providence, RI; 2University of Massachusetts Medical School, Worcester, MA

P2-88
Hemodynamic Modeling of Coarctation of Aorta in Human Fetuses Using Computational Fluid Dynamics and 3D/4D Spatio-Temporal Image Correlation Fetal Echocardiography
Zhao Chen1, Yihua He1, Shengli Li1, Hongkai Zhao2, Xiaoqin Liu2, Shuping Ge1. Beijing Anzhen Hospital, Capital Medical University, Beijing, China; 2Department of Laboratory Animal Science, Capital Medical University, Beijing, China

P2-89
MODERATED POSTER
Strain Echocardiography Predicts 30-day Mortality in ST-elevation Myocardial Infarction after Primary Percutaneous Coronary Intervention and is Superior to TIMI and GRACE Risk Score
Hsin-Yueh Liang1, Surenjav Chimed2, Ke-Zheng Chen1, Theodore Abraham1, 1China Medical University Hospital, Cardiology, Taichung, Taiwan; 2Johns Hopkins University, School of Medicine, Baltimore, MD; 3Graduate Institute of Clinical Medical Science, China Medical University, Taichung, Taiwan

P2-90
MODERATED POSTER
Prognostic Value of Left Ventricular Global Strain and Cardiac Sympathetic Nerve Activity in Patients with Acute Myocardial Infarction
Tetsuari Onishi, Wataru Fujimoto, Sonoko Matsuyama, Yasue Tsukishiro, Hirono Kawai. Himeji Cardiovascular Center, Himeji, Japan

P2-91
MODERATED POSTER
Advantages of Regional Myocardial Blood Flow Over Strain in the Detection of Coronary Stenoses with Dobutamine Stress
John C. Stendahl1, Nripesh Parajuli1, Allen Lu1, Nabil E. Boutagy1, Imran Alkhalil1, Melissa E. Eberle1, Ben A. Lin1, Lawrence H. Stab1, Matthew O’Donnell1, James S. Duncan1, Albert P. Sinusas1. 1Yale University, New Haven, CT; 2University of Washington, Seattle, WA
Disclosures: M. O’Donnell – 2, 6 (Epsilon Imaging, Inc.)
Cleveland Clinic, Cleveland, OH

Menon, Richard A. Grimm, Brian P. Griffin, Umesh N. Khot.

Myocardial Infarction Impacts Clinical Decision Making Decline in Left Ventricular Function Early After Acute Myocardial Infarction

Newton B. Wiggins, Benicio Barzilai, Daniel J. Cantillon, Venugopal Menon, Richard A. Grimm, Brian P. Griffin, Umesh N. Khot. Cleveland Clinic, Cleveland, OH

Echocardiographic Evidence of a Possible Novel Etiology of Spontaneous Coronary Artery Dissection Whitney Coppolino, Lucy Safi, Jessica Duran, Malissa Wood. Massachusetts General Hospital, Boston, MA

Efficient Gene Therapy with the Combination of Ultrasound Targeted Microbubble Destruction and PEI/DNA/NLS Complexes Qing Zhou, Yi-jia Wang, Sheng Cao, Bo Hu, Qing Deng, Nan Jiang, Jing-jing Cui, Rui-qiang Guo. Renmin Hospital of Wuhan University, Wuhan City, China

Prediction of Left Ventricular Remodeling in Patients with Acute Myocardial Infarction by Speckle Tracking Imaging with Wall Motion Score Index: A Clinical Follow-up Study Bo Hu, Rui-qiang Guo, Qing Zhou, Hong-ning Song, Xue Yao. Renmin Hospital of Wuhan University, Wuhan City, China

Echocardiographic Evidence of a Possible Novel Etiology of Spontaneous Coronary Artery Dissection Whitney Coppolino, Lucy Safi, Jessica Duran, Malissa Wood. Massachusetts General Hospital, Boston, MA

Efficient Gene Therapy with the Combination of Ultrasound Targeted Microbubble Destruction and PEI/DNA/NLS Complexes Qing Zhou, Yi-jia Wang, Sheng Cao, Bo Hu, Qing Deng, Nan Jiang, Jing-jing Cui, Rui-qiang Guo. Renmin Hospital of Wuhan University, Wuhan City, China

Decline in Left Ventricular Function Early After Acute Myocardial Infarction Impacts Clinical Decision Making Newton B. Wiggins, Benicio Barzilai, Daniel J. Cantillon, Venugopal Menon, Richard A. Grimm, Brian P. Griffin, Umesh N. Khot. Cleveland Clinic, Cleveland, OH

EMERGING USE OF ECHOCARDIOGRAPHY / POINT OF CARE ECHOCARDIOGRAPHY

P2-99 THROUGH P2-112

P2-99 MODERATED POSTER

Prediction of Cardiovascular Events after Kidney Transplant Using Speckle-tracking Strain Analysis Bradley Peltzer, Kana Fujikura, Nilishh Tiwari, Hye Gi Shim, Sanyog G. Shitole, Ally Dinhofer, Mario J. Garcia. Montefiore Medical Center/Albert Einstein College of Medicine, Bronx, NY

P2-100 MODERATED POSTER

 Inferior Vena Cava (IVC) Diameter Measured by Vscan Identifies Heart Failure (HF) Patients at High Risk of Hospitalization Raj Khandwalla1, Kade Birkeland2, Raymond Zimmer3, Madhuri Sudan4, Roland Nazarian5, Jennifer Sanchez6, Ilan Kedan7. ‘Cedars Sinai Heart Institute, Los Angeles, CA; ‘Cedars Sinai Medical Group, Los Angeles, CA; ‘UCLA School of Public Health, Los Angeles, CA

Disclosures: R. Khandwalla – 4 (General Electric, Sentrian Inc.)

P2-101 MODERATED POSTER

Evaluation of the Effect of Echocardiography Settings on the Speckle-tracking Repeatability Kana Fujikura, Rupinder Kaur, Neeraja Yedlapati, Irwin Seltzer, Newton Phuong, Nicole Cyrille, Chaim S. Rube, Goutham Raviapat, Sanyog G. Shitole, Daniel M. Spevack, Mario J. Garcia. Montefiore Medical Center / Albert Einstein College of Medicine, Bronx, NY

P2-102 MODERATED POSTER

Focused Cardiac Ultrasound by Nurses in Rural Vietnam: Results of the ASE-Vietnam National Heart Institute Collaborative Project James N. Kirkpatrick1, Hoai T.T. Nguyen1, Loi Do Duan4, Thanh Le Tuan2, Son Pham Thi3, David Adams1, Liza Y. Sanchez4, Nova Sprague1, Jill Inafuku3, Rachel Quang4, Rebecca Hahn1, Andrea M. Van Hoever6, Tu Nguyen1, Thanh G. Kirkpatrick6, Jose Banchs1. ‘University of Pennsylvania, Philadelphia, PA; ‘Vietnam National Heart Institute, Bach Mai Hospital, Hanoi, Viet Nam; ‘Duke University Medical Center, Durham, NC; ‘The University of Texas MD Anderson Cancer Center, Houston, TX; ‘Tripler Army Medical Center, Kaneohe, HI, ‘Midcoast Hospital, Brunswick, ME; ‘Columbia University, New York, NY; ‘American Society of Echocardiography, Morrisville, NC; ‘Allergan Inc., Houston, TX; ‘Esperanza Health Center, Philadelphia, PA

P2-103


P2-104

Maturational Changes in Left Ventricular Rotational Mechanics in Normal Fetuses: Prenatal Cardiac Indices and Outcomes by Ultrasound (PRECIOUS) Investigators Ling Li1, Jennifer Winter1, Howard Hsu1, Collin Erickson1, Naya Joseph1, Mary Craft1, Berthold Klas1, Aparna Kulkarni2, David Danford2, Shelby Kutt1. ‘University of Nebraska/Childrens Hospital and Medical Center, Omaha, NE; ‘TomTec Imaging Systems, Unterschleissheim, Germany; ‘Bronx Lebanon Hospital Center, Bronx, NY

Disclosures: B. Klas – 5 (TomTec)

P2-105

Ultrasound Imaging of the Thoracic Duct in Clinical Echocardiography Cassandra H. Sung1, John L. Bass1, James M. Berry1, Charles W. Shepard2, Lazaros K. Kochilas3. ‘University of Minnesota, Minneapolis, MN; ‘Children’s Hospital and Clinics of Minnesota, Minneapolis, MN; ‘Emory University, Atlanta, GA

100 | ASE 2016
P2-106
Comparison of Three Metrics of Skill in Echo Image Acquisition
Florence Sheehan. University of Washington, Seattle, WA
Disclosures: F. Sheehan – 2, 3 (VentriPoint Inc), 3, 6 (Sheehan Medical LLC)

P2-107
Machine Learning-enabled Image Analysis for Fully Automated Assessment of Left Ventricular Volumes and Ejection Fraction: First Experience in Pediatric Echocardiography
Paul Homer¹, Mary Craft¹, Jonathan Cramer¹, Naya Joseph¹, Berthold Klas², David Danford³, Shelby Kutty¹. ¹University of Nebraska/Childrens Hospital and Medical Center, Omaha, NE; ²TomTec Imaging Systems, Unterschleissheim, Germany
Disclosures: B. Klas – 5 (TomTec)

P2-108
Hand Held Ultrasonography as a Gatekeeper to Standard Echocardiography for Rarely Appropriate Echocardiography Requests
Faraz Pathan¹, Ricardo Fonseca¹, Thomas H. Marwick². ¹The Menzies Institute for Medical Research, Hobart, Australia; ²Baker-IDI Heart and Diabetes Institute, Melbourne, Australia

P2-109
Use of Handheld Ultrasound in Ambulatory Heart Failure Patients: Relationship to Clinical Assessment and Outcomes
Jin H. Kim, Gurusher Panjra, Helma Parikh, Heather Young, Brian G. Choi, Janett F. Lewis. George Washington University, Washington, DC

P2-110
Usefulness of Transesophageal Simulator During a Continued Medical Education Event to Assess Competency of Transesophageal Performance Among Cardiologists
Zeina Ibrahim, Jyothy Puthumana, Nicholas Furiasse, Vera Rigolin, Clara Schroedl. Northwestern Memorial Hospital, Chicago, IL

P2-111
A Randomized Study on the Use of Pocket Ultrasound for Outpatient Medication Management in Patients with Heart Failure with Reduced Ejection Fraction
Kassra Poosti¹, Alaa M. Omar¹,², Sean Pinney¹, Ehimare Akhabue¹, Jagat Narula¹, Partho P. Sengupta¹. ¹Icahn School of Medicine at Mount Sinai, New York, NY; ²National Research Centre, Medical Division, Department of Internal Medicine, Cairo, Egypt

P2-112
Echocardiographic Screening in Older Adults and Health Insurance Decisions: A Report from the ASE-Vienna National Heart Institute Collaborative Project
James Kirkpatrick¹, Hoai T.T. Nguyen¹, Loi Do Duan¹, Thanh Le Tuan¹, Son Pham Thai¹, David Adams¹, Lisa Y. Sanchez¹, Nova Sprague¹, Jill Inafuku¹, Rachel Quang¹, Rebecca Hahn¹, Andrea M. Van Hoeven¹, Tu Nguyen², Than G. Kirkpatrick², Jose Bancha². ¹University of Pennsylvania, Philadelphia, PA; ²Vietnam National Heart Institute, Bach Mai Hospital, Hanoi, Viet Nam; ³Duke University Medical Center, Durham, NC; ⁴The University of Texas MD Anderson Cancer Center, Houston, TX; ⁵Tripler Army Medical Center, Kaneohe, HI; ⁶Midcoast Hospital, Brunswick, ME; ⁷Columbia University, New York, NY; ⁸American Society of Echocardiography, Morrisville, NC; ⁹Allergan Inc., Houston, TX; ¹⁰Esperanza Health Center, Philadelphia, PA

VENTRICULAR FUNCTION / MYOCARDIAL MECHANICS

P2-113 MODERATED POSTER
Left Ventricular Global Longitudinal Strain is an Independent Predictor of Exercise Capacity in Hypertrophic Cardiomyopathy Patients Undergoing Cardiopulmonary Stress Testing and Echocardiography
Jorge Betancor, Albree Tower-Rader, Ahmad Masri, Zoran B. Popovic, Maran Thamilarasan, Leslie S. Cho, Harry M. Lever, Milind Y. Desai. Cleveland Clinic, Cleveland, OH

P2-114 MODERATED POSTER
The Effects of Moderator Band Insertion on the Measurement of the Interventricular Septum
Waddy Gonzalez, Jeremy Miles, Daniel Spevack. Montefiore Medical Center, Bronx, NY

P2-115 MODERATED POSTER
Association of Coronary Artery Calcium Progression from Early Adulthood to Middle Age and Left Ventricular Structure and Function: The Coronary Artery Risk Development in Young Adults (CARDIA) Study
Guilherme S. Yared¹, Henrique T. Moreira¹, Chike C. Nwabuo¹, Henrique D. Vasconcellos¹, Bharath A. Venkatesh¹, Jared P. Reis¹, Donald M. Lloyd-Jones², Pamela J. Schreiner³, Cora E. Lewis³, Stephen Sidney³, John J. Carr³, Samuel S. Gidding³, Joao A.C. Lima³. ¹Johns Hopkins Hospital, Baltimore, MD; ²National Heart, Lung, and Blood Institute, Bethesda, MD; ³Northwestern University Feinberg School of Medicine, Chicago, IL; ⁴University of Minnesota, Minneapolis, MN; ⁵University of Alabama at Birmingham, Birmingham, AL; ⁶Kaiser Permanente Division of Research, Oakland, CA; ⁷Vanderbilt University Medical Center, Nashville, TN; ⁸Nemours Foundation, Wilmington, DE

P2-116 MODERATED POSTER
Suitability of Conventional Segmentation Schemes for Analysis of High-resolution Parametric Images of Left Ventricular Function: Lesson Learned from Fusion of 3D Echocardiography and Cardiac Computed Tomography
Disclosures: V. Mor-Avi – 4 (ASE); R. M. Lang – 1 (Philips Healthcare)

P2-117 Persistence of Cardiac Remodeling in Preadolescents who Suffered Fetal Growth Restriction
Merida Rodriguez-Lopez¹, Sebastian Imre Sarvari², Marta Stiges³, Eduard Gratacos¹, Bart Bijsnjen¹, Fatima Crispit¹. ¹Maternal Fetal-Medicine Department, BCNatal (Hospitals Clinic and Sant Joan de Deu); ²IDIBAPS, University of Barcelona, Barcelona, Spain; ³Cardiology Department of Internal Medicine, Sant Joan de Deu, (Hospitals Clinic and Sant Joan de Deu)
P2-118
Echocardiographic Predictors of Cardiac Outcomes with Resynchronization Therapy: Results from the DIRECT Study
Maros Ferencik1, Jackie Szymonifka2, Asaad A. Khan3, Mi Young Park3, Jagmeet P. Singh3, Quynh A. Truong4, Michael H. Picard4, 1Oregon Health and Science University, Portland, OR; 2New York-Presbyterian Hospital and Weill Cornell Medical College, New York, NY; 3Mount Sinai Hospital, New York, NY; 4Massachusetts General Hospital and Harvard Medical School, Boston, MA

Disclosures: M. Ferencik – 4 (AHA); J. P. Singh – 2 (Biotronik, Boston Scientific, Impulse Dynamics, LivaNova, Medtronic, St. Jude Medical); Q. A. Truong – 4 (ACRIN, NIH/NHLBI, SCCT, St. Jude Medical)

P2-119
Molecular and Cellular Correlates of Right Ventricular Function in a Pressure Overload Model: A Study Using Three-dimensional Speckle Tracking Echocardiography
Yuman Li, Mingsxing Xie, Lei Li, Mengmei Li. Department of Ultrasound, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China

P2-120
Serial Assessment of Left Ventricular Function by Echocardiography in Transplant-free Survivors versus Non-survivors in Children with Dilated Cardiomyopathy
Ryo Ishii, Cameron Slorach, Andreea Dragulescu, Luc Mertens, Mark K Friedberg. Hospital for Sick Children and University of Toronto, Toronto, ON, Canada

P2-121
Optimal Measurement of Right Ventricular Dyssynchrony in Pulmonary Hypertension
Mitsuhide Murata, Yugo Minakata, Jin Endo, Hikaru Tsuruta, Yuji Itabashi, Keiichi Fukuda. Keio University, Tokyo, Japan

P2-122
Left Ventricular Response to Exercise in Dilated Cardiomyopathy and the Potential for Reclassification of Heart Failure Severity
Kegan J. Moneghetti1, Yukari Kobayashi1, Miyuki Ariyama1, Matthew Wheeler1, Ingela Schnitter1, Johnathan Myers2, Euan Ashley3, Francois Haddad4. 1Division of Cardiovascular Medicine, Stanford University School of Medicine, Stanford, CA; 2Division of Cardiology, Veterans Affairs Palo Alto Healthcare System, Palo Alto, CA; 3Stanford Cardiovascular Institute, Stanford University, Palo Alto, CA

P2-123
Right Ventricular Myocardial Performance Index and NT-proBNP for Early Prediction of Bronchopulmonary Dysplasia in Preterm Infants Less Than 32 Weeks of Gestation
Christoph Czernik1, Ann-Katrin Minke1, Boris Metze1, Christoph Bührer1. 1Charité University Medical Center, Berlin, Germany; 2Department of Neonatology, Berlin, Germany

P2-124
Assessment of Myocardial Mechanical Parameters in Hypertrophic Cardiomyopathy Using 3 Dimensional Speckle Tracking Echocardiography
Maryam Esmaeizadeh1,2, Hooman Bakkshandeh Akkenar1, Rabiya Malik1, Hamid Reza Salehi1, Ayan R. Patel2, Natesa G. Pandian4. 1Rajaee Cardiovascular Medical and Research Center, Tehran, Iran, Islamic Republic of; 2Tufts Medical Center, Boston, MA

P2-125
Longitudinal Assessment of Myocardial Function in Childhood Chronic Kidney Disease, Dialysis, and Following Kidney Transplantation
Rawan Rummani1,2, Ronand Ramroop1, Rahul Chanchlani1,2, Mikael Ghany1, Diane Hebert3,4, Elizabeth Harvey1,5, Rulan Parekh1,6, Luc Mertens1,2, Michael Grattan1,2, Michael Chait1,2, Bonnie Ky1,2. 1Hospital for Sick Children, Toronto, ON, Canada; 2University of Toronto, Toronto, ON, Canada; 3McMaster Children Hospital, Hamilton, ON, Canada; 4LHSC Children’s Hospital, London, ON, Canada

P2-126
Echo Quantified RV Dysfunction via TAPSE is Strongly Associated with Decreased Effort Tolerance During Exercise Treadmill Testing
Jiwon Kim1, Aparna Srinivasan1, Tania Seoane1, Polydoros Kompaktsis2, Antonino Di Franco1, Tracy Paul1, Alexi Gevarghese1, Meenakshi Rosenstrauch1, Omar Khaliq1, Richard B. Devereux1, Jonathan W. Weinsaft1. 1Weill Cornell Medical College, New York, NY; 2Columbia University, New York, NY

P2-127
The Myocardial Contraction Fraction (MCF) is Highly Correlated with Global Longitudinal Strain in Transthyretin (ATTR) Cardiac Amyloidosis
Laura Cohen, Stephen Helmke, Sergio Teruya, Mathew M. Maurer, Smriti H. Deshmukh. Columbia University Medical Center, New York, NY

P2-128
Cardiac Mechanics and Cancer Therapeutics-related Cardiac Dysfunction in a Community-based Population Treated with Anthracyclines: Results from the PREDICT Study
Hari K. Narayan1, Wei Wei2, Ziding Feng2, Daniel Lenihan1, Michael Fisch1, Bonnie Ky1. 1The Children’s Hospital of Philadelphia, Philadelphia, PA; 2The University of Texas MD Anderson Cancer Center, Houston, TX; 3Vanderbilt University Medical Center, Nashville, TN; 4The University of Pennsylvania, Philadelphia, PA

P2-129
Intraventricular Pressure Gradient in the Left Ventricle During Early Diastole as an Early Indicator of Cardiac Dysfunction in Patients with Childhood Malignancies After Anthracycline Treatment
Sachie Shigemitsu1,2, Ken Takahashi1, Maki Kobayashi1, Mariko Yamada1, Katsumi Akimoto2, Sachi Sakaguchi1, Junya Fujimura1, Masahiro Saito1, Masaki Nii3, Kiyohiro Takigiku4, Manatomo Toyono5, Satoru Iwashima6, Keichi Itatani7, Toshiaki New England Medical Center, Boston, MA; 2Kawasaki Kyodo Hospital, Department of Pediatrics, Kanagawa, Japan; 3Shizuoka Children’s Hospital, Department of Cardiology, Shizuoka, Japan; 4The University of Texas MD Anderson Cancer Center, Houston, TX; 5Akita University Graduate School of Medicine, Department of Pediatrics, Akita, Japan; 6Department of Cardiology, Nagano, Japan; 7Department of Cardiology, Tokyo, Japan; 8Children’s Hospital of Philadelphia, Philadelphia, PA

Intraventricular Pressure Gradient in the Left Ventricle During Early Diastole as an Early Indicator of Cardiac Dysfunction in Patients with Childhood Malignancies After Anthracycline Treatment
Sachie Shigemitsu1,2, Ken Takahashi1, Maki Kobayashi1, Mariko Yamada1, Katsumi Akimoto2, Sachi Sakaguchi1, Junya Fujimura1, Masahiro Saito1, Masaki Nii3, Kiyohiro Takigiku4, Manatomo Toyono5, Satoru Iwashima6, Keichi Itatani7, Toshiaki New England Medical Center, Boston, MA; 2Kawasaki Kyodo Hospital, Department of Pediatrics, Kanagawa, Japan; 3Shizuoka Children’s Hospital, Department of Cardiology, Shizuoka, Japan; 4The University of Texas MD Anderson Cancer Center, Houston, TX; 5Akita University Graduate School of Medicine, Department of Pediatrics, Akita, Japan; 6Department of Cardiology, Nagano, Japan; 7Department of Cardiology, Tokyo, Japan; 8Children’s Hospital of Philadelphia, Philadelphia, PA

P2-129
Intraventricular Pressure Gradient in the Left Ventricle During Early Diastole as an Early Indicator of Cardiac Dysfunction in Patients with Childhood Malignancies After Anthracycline Treatment
Sachie Shigemitsu1,2, Ken Takahashi1, Maki Kobayashi1, Mariko Yamada1, Katsumi Akimoto2, Sachi Sakaguchi1, Junya Fujimura1, Masahiro Saito1, Masaki Nii3, Kiyohiro Takigiku4, Manatomo Toyono5, Satoru Iwashima6, Keichi Itatani7, Toshiaki New England Medical Center, Boston, MA; 2Kawasaki Kyodo Hospital, Department of Pediatrics, Kanagawa, Japan; 3Shizuoka Children’s Hospital, Department of Cardiology, Shizuoka, Japan; 4The University of Texas MD Anderson Cancer Center, Houston, TX; 5Akita University Graduate School of Medicine, Department of Pediatrics, Akita, Japan; 6Department of Cardiology, Nagano, Japan; 7Department of Cardiology, Tokyo, Japan; 8Children’s Hospital of Philadelphia, Philadelphia, PA

P2-129
Intraventricular Pressure Gradient in the Left Ventricle During Early Diastole as an Early Indicator of Cardiac Dysfunction in Patients with Childhood Malignancies After Anthracycline Treatment
Sachie Shigemitsu1,2, Ken Takahashi1, Maki Kobayashi1, Mariko Yamada1, Katsumi Akimoto2, Sachi Sakaguchi1, Junya Fujimura1, Masahiro Saito1, Masaki Nii3, Kiyohiro Takigiku4, Manatomo Toyono5, Satoru Iwashima6, Keichi Itatani7, Toshiaki New England Medical Center, Boston, MA; 2Kawasaki Kyodo Hospital, Department of Pediatrics, Kanagawa, Japan; 3Shizuoka Children’s Hospital, Department of Cardiology, Shizuoka, Japan; 4The University of Texas MD Anderson Cancer Center, Houston, TX; 5Akita University Graduate School of Medicine, Department of Pediatrics, Akita, Japan; 6Department of Cardiology, Nagano, Japan; 7Department of Cardiology, Tokyo, Japan; 8Children’s Hospital of Philadelphia, Philadelphia, PA
Speckle Tracking Strain-imaging Assessment of Impaired Contractile Recovery Following Ischemia-reperfusion in Mice
Alina Nicoara, Qing Ma, Zhiquan Zhang, Quintin Quiñones, Matthew Hirshey, Dennis Abraham, Madhav Swaminathan, Mihai Podgoreanu. Duke University Medical Center, Durham, NC

Impact of Left Ventricular Apical Wall Motion Abnormality on the Early Diastolic Suction
Hiroyuki Iwano1, Daisuke Kaminura1, Pavlos Vlachos2, Satoshi Yamada1, Hiroyuki Tsutsui1. ‘Hokkaido University Graduate School of Medicine, Sapporo, Japan; 1University of Mississippi Medical Center, Jackson, MS; 2School of Mechanical Engineering, Purdue University, West Lafayette, IN

Three Dimensional Speckle Tracking Quantification of Right Ventricular Function in Patients with Pulmonary Hypertension as a Marker Predictive of Clinical Outcome
Masataku Sugahara, Zhi Qi, Rishin Handa, Marc Simon, Michael Mathier, John Gorcsan, III. University of Pittsburgh, Pittsburgh, PA

Dispersion of Left Ventricular Segmental Peak Longitudinal Strain as a New Marker of Neurocardiac Injury in Patients with Subarachnoid Hemorrhage
Zhi Qi, Masataku Sugahara, Elizabeth A. Crago, Yuefang Chang, Theodore F. Lagattuta, Khalil Yousef, Robert M. Friedlander, Marilyn T. Hravnak, John Gorcsan, III. University of Pittsburgh, Pittsburgh, PA

Impact of Transcatheter Aortic Valve Replacement on Left Ventricular and Atrial Strains
Qi Sun1, Ming-Chon Hsiung2, Yiting Fan1, Gary Cheung1, Eugene B. Wu1, Alex P. Lee1. ‘The Chinese University of Hong Kong, Hong Kong, Hong Kong; 2Cheng Hsin General Hospital, Taipei, Taiwan

Significant Differences in Manual versus Automated Derived Left Ventricular Strain in Children
Martijn G. Sliker, Cameron Slorach, Wei Hui, Andreaa Dragulescu, Mark K. Friedberg, Luc Mertens. Hospital for Sick Children, Toronto, ON, Canada

Mechanism of the Left Ventricular Dysfunction as Assessed Through Layer Specific Strain Analysis in Patients with Repaired Tetralogy of Fallot
Mariko Yamada1, Ken Takahashi1, Maki Kobayashi1, Kana Ono1, Sachie Shigemitsu1, Katsumi Akimoto1, Masahiro Kishiro1, Keisuke Nakanishi1, Shiori Kawasaki1, Keichi Itozaki1, Toshiaki Shizumura1. ‘Department of Pediatrics and Adolescent Medicine, Juntendo University Faculty of Medicine, Tokyo, Japan; 2Department of Cardiovascular Surgery, Juntendo University Faculty of Medicine, Tokyo, Japan; 3Division of Cardiovascular and Pediatric Cardiovascular Surgery, Department of Surgery, Kyoto Prefectural University of Medicine, Kyoto, Japan

Differences in Cardiac Function in Hydropic and Non-hydropic Fetuses with Sacrococcygeal Teratoma
Eunice Hahn, Christopher Statile, Regina Keller, James Cnota, II, Erik Michelfelder. Cincinnati Children’s Hospital Medical Center, Cincinnati, OH

Comparison of Two-dimensional and Three-dimensional Speckle Tracking Echocardiography in Early Detection of Biventricular Systolic Function After Anthracycline Therapy in Patients with Lymphoma
Feiyan Song, Leilei Cheng, Jing Shi, Chujie Zhang, Xianhong Shu. Zhongshan Hospital, Fudan University, Shanghai, China

The Value of Pre-operative Global Longitudinal Strain in Predicting Post-operative Left Ventricular Systolic Dysfunction in Patients with Severe Primary Mitral Regurgitation and Normal Systolic Function Undergoing Mitral Valve Repair
Soohun Chun, James Lambert, Anna Woo, Tirone David, Paaladinesh Thavendiranathan. University of Toronto, Toronto, ON, Canada

Speckle Tracking Echocardiography Revealed Bellows-like Motion of the Elasmobranch Ventricle: A Possible Model for the Human Right Ventricular Mechanics
Yuji Hirasaki1, Susumu Minamisawa1, Masataka Okabe1. ‘The Jikei University Graduate School of Medicine, Tokyo, Japan; 2Department of Cell Physiology, The Jikei University School of Medicine, Tokyo, Japan; 3Department of Anatomy, The Jikei University School of Medicine, Tokyo, Japan

The E wave Penetration Index: A Novel and Easily Obtainable Echocardiographic Parameter for Accurate Prediction of Left Ventricular Thrombus Risk
Thura T. Abd1, Jung-hee Seo1, Nathaniel Welsh1, Hayden S. Yasir1, Theodore P. Abraham1, Armin Arbab-Zadeh1, Richard T. George1, Rajat Mittal1. ‘Johns Hopkins University, Baltimore, MD; 2Baltimore Medical System, Inc, Baltimore, MD

Is Semi-automated Assessment of Left Ventricular Global Longitudinal Strain Better Than Ejection Fraction?
Diego Medvedofsky1, Kalie Kebed1, Luke Laffin1, Jeremy Stone1, Jamie Hamilton1, Karima Addetia1, Victor Mor-Avi1, Roberto M. Lang1. ‘University of Chicago, Chicago, IL; 2Epsilon Imaging, Ann Arbor, MI

Role of Global Longitudinal Strain Imaging for Newly Diagnosed Patients with Heart Failure with Preserved Ejection Fraction (HFpEF): A Three Year Follow up in an Asian Cohort
Weiting Huang1, Siang Chew Chai2, Carmen Jia Wen Kam3, Choong Hou Koh1, Mohammed Rizwan Amanullah1, Tong Khim Leng1, Gerald Kui Tioh Leong1, Michael MacDonald1. ‘National Heart Centre Singapore, Singapore, Singapore; 2Changi General Hospital, Singapore, Singapore
P2-144 Differences in Symptom Resolution and Myocardial Mechanics in Hypertrophic Obstructive Cardiomyopathy in Patients Undergoing Septal Myectomy versus Alcohol Septal Ablation
Marissa Huebner, Jason Bensch, Jessica Minnier, Matthew Slater, Joaquin Cigarroa, Stephen Heitner. Oregon Health & Science University, Portland, OR

P2-145 Most Significantly Impaired Endocardial Strain in Patients with Slow Coronary Flow
Jing Shi, Cuizhen Pan, Qing Li, Yan Yan, Hongbo Yang, Juying Qian, Xionghang Shu. Zhongshan Hospital, Fudan University, Shanghai, China

P2-146 Intrinsic Abnormality in Left Ventricular Performance in Patients with Seemingly Normal Wall Motion After Subarachnoid Hemorrhage
Ayako Takahashi, Keiko Sugimoto, Kazuhiro Nakamura, Atsushi Kuno, Rika Arakawa, Kunihiko Sugimoto, Junichi Ishii, Takashi Ishikawa, Akira Yamada, Yukio Ozaki. Fujita Health University Hospital, Toyoake, Japan; Fujita Health University, Japan

P2-147 Echocardiographic Responses to Left Ventricular Assist Device Implantation in Axial vs. Centrifugal Continuous-flow Device Recipients
Andreas P. Kalogeropoulos, Kunal N. Bhatt, Vasili V. Georgiopoulou, Maria A. Pernetz, David W. Markham, J. David Vega, Andrew L. Smith. Emory University, Atlanta, GA

P2-148 What is the Role of Diastolic Function in the Quality of Life and Functional Capacity of Patients with Heart Failure Undergoing a Combined Exercise Program

P2-149 Diastology and Delayed Enhancement in Hypertrophic Cardiomyopathy
Kevin Manocha, David Snipelisky, Jeffrey Geske, Bernard Gersh. Mayo Clinic, Rochester, NY

P2-150 Study of Left Ventricular Systolic Function in Patients with Paced Ventricular Conduction and Right Ventricular Apex Pacing Mode
Jing Yao, Di Xu, Yanjuan Zhang, Huang Tang. Department of Cardiology, First Affiliated Hospital of Nanjing Medical University, Nanjing, China

P2-151 Early Detection of Abnormal Left Ventricular Deformation in Arrhythogenic Right Ventricular Cardiomyopathy by Strain Echocardiography
Hsin-Yueh Liang, Hugh Calkins, Theodore Abraham. Johns Hopkins University School of Medicine, Baltimore, MD

P2-152 Use of Isovolumetric Acceleration as an Afterload-independent Marker of RV Dysfunction in Scleroderma
Leah M. Wright, Nathan Dwyer, Thomas Marwick, Baker IDI, Melbourne, Australia; Royal Hobart Hospital, Hobart, Australia

P2-153 Left Ventricular Adaptation Following Orthotopic Heart Transplantation in Children: A Speckle Echocardiographic Imaging Study
Rini Sahewalla, Sanjeer Aggarwal. Division of Pediatric Cardiology, Children’s Hospital of Michigan, Detroit, MI

P2-154 Validation of 2D Speckle Tracking Strain Echocardiography with Sonomicrometer Array

P2-155 Left Ventricular Myocardial Stiffness by Intrinsic Wave Propagation Method Increases with Severity of Diastolic Dysfunction
Mahmoud Alashry, Anusith Tunchaisriwet, Chayakrit Krittanawong, Elise A. Oehler, Panokorn Toparknagarm, Ratsnasi Padang, Sorin V. Pislaru, Patricia A. Pellikka, Garvan C. Kane, Cristina Pislaru. Mayo Clinic, Rochester, MN

P2-156 The Longitudinal Systolic Function Evaluated by Tissue Motion Annular Displacement of the Mitral Valve Can Predict the Left Ventricular Ejection Fraction in Normal Children
Dat Asada, Kenichio Okumura. Kyoto Prefectural University of Medicine, Kyoto, Japan

P2-157 Evaluation of the Short Time Prognosis of the Right Ventricular Systolic Function after Percutaneous Coronary Intervention in Patients with Inferior Wall Myocardial Infarction
Xue Yao, Bo Hu, Jing-jing Zhu, Tuan-tuan Tan, Hong-ning Song, Qing Zhou, Rui-qiang Guo. Renmin Hospital of Wuhan University, Wuhan City, China

P2-158 Early Assessment of Right Ventricular Systolic Function in Pediatric Heart Transplant Patients
Kristal L. Woldu, Anna Joong, Lindsay R. Freude, Linda J. Addonizio, Marc E. Richmond. Division of Pediatric Cardiology, Columbia University Medical Center, New York, NY

P2-159 Left Ventricular Function in Hypertensive Pregnancy with Preserved Left Ventricular Eject Fraction: A 3D Speckle Tracking Imaging Study
Wei Han, Mingxing Xie, João L. Cavalcante. Department of Medicine, Division of Cardiovascular Diseases Heart & Vascular Institute, University of Pittsburgh Medical Center, Pittsburgh, PA

P2-152 Use of Isovolumetric Acceleration as an Afterload-independent Marker of RV Dysfunction in Scleroderma
Leah M. Wright, Nathan Dwyer, Thomas Marwick, Baker IDI, Melbourne, Australia; Royal Hobart Hospital, Hobart, Australia

P2-153 Left Ventricular Adaptation Following Orthotopic Heart Transplantation in Children: A Speckle Echocardiographic Imaging Study
Rini Sahewalla, Sanjeer Aggarwal. Division of Pediatric Cardiology, Children’s Hospital of Michigan, Detroit, MI

P2-154 Validation of 2D Speckle Tracking Strain Echocardiography with Sonomicrometer Array

P2-155 Left Ventricular Myocardial Stiffness by Intrinsic Wave Propagation Method Increases with Severity of Diastolic Dysfunction
Mahmoud Alashry, Anusith Tunchaisriwet, Chayakrit Krittanawong, Elise A. Oehler, Panokorn Toparknagarm, Ratsnasi Padang, Sorin V. Pislaru, Patricia A. Pellikka, Garvan C. Kane, Cristina Pislaru. Mayo Clinic, Rochester, MN

P2-156 The Longitudinal Systolic Function Evaluated by Tissue Motion Annular Displacement of the Mitral Valve Can Predict the Left Ventricular Ejection Fraction in Normal Children
Dat Asada, Kenichio Okumura. Kyoto Prefectural University of Medicine, Kyoto, Japan

P2-157 Evaluation of the Short Time Prognosis of the Right Ventricular Systolic Function after Percutaneous Coronary Intervention in Patients with Inferior Wall Myocardial Infarction
Xue Yao, Bo Hu, Jing-jing Zhu, Tuan-tuan Tan, Hong-ning Song, Qing Zhou, Rui-qiang Guo. Renmin Hospital of Wuhan University, Wuhan City, China

P2-158 Early Assessment of Right Ventricular Systolic Function in Pediatric Heart Transplant Patients
Kristal L. Woldu, Anna Joong, Lindsay R. Freude, Linda J. Addonizio, Marc E. Richmond. Division of Pediatric Cardiology, Columbia University Medical Center, New York, NY

P2-159 Left Ventricular Function in Hypertensive Pregnancy with Preserved Left Ventricular Eject Fraction: A 3D Speckle Tracking Imaging Study
Wei Han, Mingxing Xie, João L. Cavalcante. Department of Medicine, Division of Cardiovascular Diseases Heart & Vascular Institute, University of Pittsburgh Medical Center, Pittsburgh, PA
of Ultrasonography, Union Hospital of Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China

P2-160
Characterizing Functional Correlates of Cardiac Remodeling and Function among Elderly Adults without Cardiovascular Disease
Angela S. Koh¹, Ji Wong¹, FQ Huang¹, TT Le¹, Serene Chua¹, F. Gao¹, RS Tan¹, WP Koh¹, S. Cook¹. National Heart Centre Singapore, Singapore; ¹Duke-NUS Medical School, Singapore, Singapore

CLINICAL CASES: CARDIOVASCULAR ULTRASOUND IMAGING IN DIAGNOSIS, CLINICAL DECISION-MAKING, AND PATIENT MANAGEMENT

P2-161 THROUGH P2-219

P2-161
Unroofed Coronary Sinus Atrial Septal Defect: The Most Infrequent Type of Atrial Septal Defect
Disclosures: R. M. Lang – t. 4 (Philips)

P2-162
A Giant Left Atrium
Yehia Saleh, Abdallah Almaghraby, Mohamed Seleem, Ahmed Samoooka, Basma Hammad. Faculty of Medicine, Alexandria University, Alexandria, Egypt

P2-163
Late Presentation of Annular Rupture Initially Mimicking Prosthesis Dysfunction on Echocardiography after Transcatheter Aortic Valve Implantation
Jennifer Day, Christopher Feindel, Sami Alnasser, Eric Horlick, Mark Osten, Robert J.cusimano, Ashish Shah, Melissa Mezody, Wendy Tsang, Peter Munk Cardiac Centre, Toronto General Hospital, University Health Network, Toronto, ON, Canada
Disclosures: E. Horlick – 2 (Edwards Lifesciences)

P2-164
Real Time Transesophageal Echocardiography Guided Percutaneous Aspiration of Mobile Right Atrial Thrombus in Patient with Massive Pulmonary Embolism with AngioVac Aspiration Catheter
Anuj Mediratta, Akhil Narang, J. Raider Estrada, John E. Blair, Roberto M. Lang, Jeanne DeCara. University of Chicago, Chicago, IL
Disclosures: R. M. Lang – t (Philips)

P2-165
A Very Unusual Mass in the Left Atrium: A Rare Presentation of an Aortic Root Abscess
Rajesh Janardhanan, Naktal Hamoud, Todd Rutter. Sarver Heart Center, Banner-University Medical Center, Tucson, AZ

P2-166
Echo Contrast Use in the Differentiation of Apical Variants of Hypertrophic Cardiomyopathy and Hypereosinophilic Syndrome
Jennifer L. Schaaf, Wojciech Mazur. The Christ Hospital, Cincinnati, OH

P2-167
Rapidly Growing Cardiac Mass: A Case of Left Atrial Hematoma Complicating Coronary Artery Stenting

P2-168 WITHDRAWN

P2-169
A Case of a Persistent Left 5th Arch Vessel Arising from a Right Aortic Arch in a Patient with Pulmonary Atresia and Intact Ventricular Septum
Benjamin S. Frank, Amy Dossey, Michael Ross, Adel Younoszai. Children’s Hospital Colorado, Aurora, CO

P2-170
Rat Bite Fever Causing Endocarditis and Fistulous Connection Between the Right Sinus of Valsalva and Right Ventricle
Sara Greighton. Children’s Hospital of Wisconsin, Milwaukee, WI

P2-171
Right Atrial Blood Cyst: An Echocardiographic Diagnosis
Pratik K. Dalal, Disyashree Varma, Helenmari Merritt, Andrea J. Carpenter, Joe M. Moody. University of Texas Health Science Center, San Antonio, TX

P2-172
Rapid Diagnosis of Thrombus in Transit by TTE Avoids Potentially Devastating Complication of Thrombolytic Therapy as Well as Minimizing Long Term Morbidity
Steven Krall, Paul Cremer, Deborah Agler, Andrej Alferivic, Venugopal Menon, Zhen-Yu Tong, Richard A. Grimm. Cleveland Clinic, Cleveland, OH

P2-173
Single Leaflet Device Attachment (SLDA) Following MitraClip: Accurate Diagnosis by Real Time 3D-transesophageal Echocardiography
Rajesh Janardhanan, Naktal Hamoud, Micah Shane Scully. Sarver Heart Center, Banner-University Medical Center, Tucson, AZ

P2-174
Advanced Cardiac Imaging Techniques can Assist in Characterizing Cardiac Masses and Directing Management
Chadi Ayoub, Sushil A. Luis, Joseph J. Maleszewski, Patricia A. Pellikka. Mayo Clinic, Rochester, MN

P2-175
A Rare Case of Mitral Valve Aneurysm with Perforation: Mimicking as a Mitral Valve Mass
Rajesh Janardhanan. Sarver Heart Center, Banner-University Medical Center, Tucson, AZ

P2-176
First Reported Case of IgG4 Related Disease Manifesting as a Pulmonary Artery Mass
Jie Yang, Hong Zheng, Glenn Egrie, Andrew Rosenblatt. California Pacific Medical Center, San Francisco, CA
P2-177
The Utility of Echocardiography in the Diagnosis and Management of a Patient with a Giant Right Coronary Artery Aneurysm with Coronary Cameral Fistula
Lee A. Goeddel, Erin D. Michos, Mary B. Brady, Laeben Lester. Johns Hopkins University School of Medicine, Baltimore, MD

P2-178
Rare Case of Anomalous Coronary Artery Course
Alekhya Potluri, Sourabh Prabhakar, Jeffrey Mueller, Poornima G. Indu. Allegheny Health Network, Pittsburgh, PA

P2-179
Catheterization Lab or Operating Room? Echo and CT Guiding the Management of an Aortic to Right Ventricular Fistula
Adam Putschoegl, Angela Kelle, Jonathan Johnson, Alberto Pochettino, Crystal Bonnichsen. Mayo Clinic, Rochester, MN

P2-180
Echocardiographic Features of Cardiomyopathy Associated with ANT 1 Mutation
Devyani Chowdhury, Christine Pascua, Kevin Strauss, Erik Puffenberg, Bart Bijnen, ’Cardiology Care for Children, Lancaster, PA; ’Children’s Hospital of Philadelphia, Philadelphia, PA; ’Clinic for Special Children, Strasburg, PA; ’UPF, Barcelona, Spain

P2-181
Contrast Doppler versus Conventional Echocardiography for Evaluation of Aortic Stenosis Severity
Aswini Kumar, Answath Reddy, Kan Liu. ’SUNY Upstate Medical University, Syracuse, NY; ’Saint Vincent Hospital, Worcester, MA

P2-182
A Case of Methemoglobinemia from Topical Lidocaine Following Transesophageal Echocardiography
Niyati Y. Goradia, Sumeet Pawar, Sana Shah. ’Boston University, Boston, MA; ’Boston Medical Center, Boston, MA

P2-183
Intraoperative TEE for Total Endoscopic Repair of a Rheumatic Mitral Valve
Nikolaos J. Skubas, Christopher Tam, Meghann Fitzgerald, T. Sloane Guy, IV. Weill Cornell Medicine, New York, NY

P2-184
3-D Assessment of an Intracardiac Serpentine
Hong Zheng. California Pacific Medical Center, San Francisco, CA

P2-185
Use of Echo Contrast During Pericardiocentesis: Your Friend in Emergent Situations!
Venu Gourineni, Fareed Collado, Jason M. Rodriguez, Steven Feinstein. Rush University Medical Center, Chicago, IL

P2-186
It’s Not a Tumor: Presentations of Right Ventricular Outflow Tract Pseudoaneurysms
Nicole M. Cresalia, Gregory Ensing. University of Michigan, Ann Arbor, MI

P2-187
Distinguishing Subvalvular versus True Valvular Aortic Stenosis: Role of the Pacemaker
Mistyann-Blue Miller, Andrew Kohut. Drexel University College of Medicine/Hahnnemann University Hospital, Philadelphia, PA

P2-188
Improved Characterization of Mitral Paravalvular Leak Size in Real Time by Visualizing the Defect from the Left Ventricle
Jennifer H. Neary, Ernesto Salcedo, Robert Quaife, John Carroll, Michael Kim. University of Colorado Hospital, Denver, CO

P2-189
Catching a Serpent by Echo: Role of Echocardiographic Images in Diagnosis and Management of a Case with a Massive Migrating Thrombus
Divyashree Varma, Pratik K. Dalal, Ripa Chakravorty, Joe M. Moody, Son V. Pham, Ali J. Mehr. ’University of Texas Health Science Center, San Antonio, TX; ’Audie Murphy South Texas Veteran’s Affair Hospital, San Antonio, TX

P2-190
Left Atrial Thrombus After LARIAT Away from the Site of Occlusion: Coincidence or Pattern?
Saroj Neupane, Zain Azzo, Gerald Cohen. St John Hospital and Medical Center, Detroit, MI

P2-191
Delayed Suicide Left Ventricle following Transcatheter Aortic Valve Implantation
Ankur Gupta, Ashequl M. Islam, Leng Jiang. Baystate Medical Center, Springfield, MA

P2-192
Remember the Unicuspid Valve
Jae Yoon Park, Robert L. Frye. Mayo Clinic, Rochester, MN

P2-193
A Reversible Tako-tsubo Effect and “Reverse McConnell’s Sign” in a Patient with Coronary Artery Disease
Yun Cheng, Jin Chen, Jing Yan, Kan Liu. ’Zhejiang Hospital, Hang Zhou, China; ’SUNY Upstate Medical University, Syracuse, NY

P2-194
Biventricular Takotsubo Cardiomyopathy: Increasing Prevalence or Recognition?
Mitkumar Patel, Juan C. Mendieta Hernandez, Leng Jiang. Baystate Medical Center, Springfield, MA

P2-195
Rare Case of Right Atrial Appendage Thrombus in an Orthotopic Heart Transplant Patient
Alekhya Potluri, Orestis Pappas, Amresh Raina. Allegheny Health Network, Pittsburgh, PA
Massive Metastatic Melanoma Isolated to the Interventricular Septum
Emmanuel Ekanem¹, Hassan Tabandeh², Ivan Petrovitch². ¹Georgetown University Hospital, Silver Spring, MD; ²Virginia Hospital Center, Arlington, VA

Dynamic Pulmonary Regurgitation after Cardiac Transplantation
Sophia Airhart, Claudius Mahr, G. Burkhard Mackensen, Nahush Mokadam, S. Carolina Masri, Jay Pal. University of Washington, Seattle, WA
Disclosures: C. Mahr – 2 (Abiomed, HeartWare, St. Jude); J. Pal – 2 (HeartWare, Thoratec)

Where is the Aortic Valve?
Tia Gordon, Isam Mikati. Northwestern Memorial Hospital, Chicago, IL

Where did the ICD Lead go?
Megan Yamat, Roberto Lang, Amita Singh, Anuj Mediratta, Amita Singh, Anuj Mediratta, Victor Mor-Avi, Karima Addetta. University of Chicago Hospital, Chicago, IL
Disclosures: R. Lang – 1, 4 (Philips)

Cardiac Amyloidosis Primarily Presenting as Severe Mitral Regurgitation. A Case Series to Highlight the use of Contemporary Imaging Modalities, and Their Ability to Detect Pathology
Mustafa N. Muhammad¹, Khawaja Ammar ², Syed Haris A. Pir³, Mirza Muzdalif Ahmad⁴, Miranda Nubair Ahmad⁵, Bijoy Khandheria⁶, Tanvir Bajwa⁷, Steven C. Port⁸, Sohail Alsaqaband⁹, Renuka Jain¹⁰, A. Jamil Tajik¹¹. ¹Aurora St. Luke’s Medical Center, Milwaukee, WI; ²Aurora St Luke’s Medical Centre, Milwaukee, WI

Libman-Sacks Endocarditis, Rheumatic Heart Disease or Both: A Rare Case with Unique Imaging Findings
Mayank Sardana, Ibrahim Kassas, Jeffery A. Shih. University of Massachusetts Medical School, Worcester, MA

Constrictive Pericarditis After Cardiac Surgery: An Unexpected Etiology Revealed by Echocardiography
Allan Chen, Aarti Patel, Arthur Labovitz. University of South Florida, Tampa, FL

Intravenous Leiomyomatosis with Cardiac Involvement
Nina Rashedi, Aneet Patel, Alec Moorman, Gabriel Aldea. University of Washington Medical Center, Seattle, WA

A Yo-Yo in the Heart: 3-Dimensional Echocardiographic View of a Serpiginous, Mobile Intracardiac Mass
Chung Sang Tse, Roger L. Click. Mayo Clinic, Rochester, MN

TEE-Guided MitraClip Deployment in a Patient with a Zenker’s Diverticulum
William Katz, Kevin Megrath, Gail Hiles, Joao Cavalcante, Frederick Crock, Vinay Badhwar, Anson J. Smith. University of Pittsburgh, Pittsburgh, PA

The Case of Mysterious Cardiac Masses
Ripa Chakravorty, John Erikson, Rushit Kanakia. UT Health Science Center, San Antonio, TX

Transesophageal Echocardiography Facilitating Diagnosis of Multiple Paradoxical Emboli in a High Risk Patient
Shahab K. Pathan, Faraz Pathan. The Menzies Institute for Medical Research, Hobart, Australia

Delayed Repercussions of Blunt Trauma: Isolated Muscular Ventricular Septal Defect
Angela M. Kelle, Mohammed Al-Hijji, Jae Y. Park, Joseph A. Dearani, Nathaniel W. Taggart. Mayo Clinic, Rochester, MN

40-Year-Old with Coronary Compression from Aortic Aneurysm Following Waterston Shunt and Complete Repair of Tetralogy of Fallot
Carolyn M. Wilhelm, Jenne K. Hickey, Patrick McConnell, Kan Hor, May Ling Mah. Nationwide Children’s Hospital, Columbus, OH

It’s Never too Late for Cardiotoxicity Screening
Rachel Phillion, Lenora Eberhart, Erica Saari, Dale Chilton, Abigail Wenzlick, David Langholz. Spectrum Health, Grand Rapids, MI

A Case of a Male with Anorexia Nervosa, Second-degree Heart Block and Subclinical LV Systolic Dysfunctions: Role of Longitudinal Strain in Early Detection and Follow-up
Mohammed S.A. Qasem, Ajaz Ahamad, Mohammed Khalid. Prince Sultan Cardiac Center, Buryda Algassim, Saudi Arabia

A Case of Atypical Anginal Pain Presented with LM Disease: Role of Strain Image in Early Detection of Coronary the Diagnosis
Mohammed S.A. Qasem. Prince Sultan Cardiac Center, Buryda Algassim, Saudi Arabia

A Case of Takotsubo Cardiomyopathy with Prominent Post Systolic Shortening During the Recovery Phase
Go Hashimoto, Makoto Suzuki, Kenji Makino, Hiromasa Hayama, Yukiko Isekame, Hisa Yoshikawa, Takenori Otsuka, Hidehiko Hara, Masao Moroi, Masato Nakamura. Division of Cardiovascular Medicine, Toho University Ohashi Medical Center, Tokyo, Japan
P2-217
Unrepaired Persistent Truncus Arteriosus with Heart Function of NYHA Class 1 in a 32-Year-Old Woman
Cuizhen Pan', Xianhong Shu', Dehong Kong', Jing Hang', Leng Jiang'.
'Zhongshan Hospital of Fudan University, Shanghai, China; 'Baystate Medical Center, Springfield, MA

P2-218
Mitro-aortic Intervalvular Fibrosa (MAIVF) Aneurysm in a Patient with Loey-Dietz Syndrome
Oluwatosin Fatusin, Narutoshi Hibino, Luca Vricella, Shetarra Walker. Johns Hopkins Hospital, Department of Pediatric Cardiology, Baltimore, MD

P2-219 WITHDRAWN

“Of all my echo textbooks, this one is my favorite...
This textbook is truly comprehensive!... I could sell all the other textbooks and be perfectly happy keeping this book and Reynold’s pocket reference.”
- Amazon Reviewer

- Written by world experts from the American Society of Echocardiography.
- A unique multimedia resource with text, case studies, and online components.
- Over 200 chapters covering the latest uses of echocardiography, including the most recent 2D and 3D advances.
- Everything you need to assess cardiac anatomy and function for more accurate diagnosis and evaluation of heart disease.
- Includes an online version with an outstanding library of slides and videos of case presentations allowing you to view dynamic echocardiographic clips of various cardiac pathologies.

Visit the ASE Headquarters Booth #221, ASE Products Sales Booth on Level 6 or go to ASEMarketPlace.com to purchase ASE’s Comprehensive Echocardiography textbook.
ASE IS PLEASED TO OFFER ITS NEWEST EDUCATIONAL PRODUCTS AT ASE 2016

Purchase all of ASE's products at the following locations:

**ASE Headquarters Booth #221**
Saturday June 11... 4:30 – 6:30 PM
Sunday, June 12.... 9:00 AM – 4:00 PM
Monday, June 13... 9:00 AM – 4:00 PM

**ASE Products Sales Booth Level 6**
Friday, June 10...... 12:00 – 5:00 PM
Saturday, June 11... 6:30 AM – 4:30 PM
Sunday, June 12.... 6:30 AM – 6:00 PM
Monday, June 13.... 6:30 AM – 5:15 PM
Tuesday, June 14... 6:30 AM – 2:30 PM

Best of ASE Volume 2: Strain 2nd Edition DVD/Online
Best of ASE Volume 3: 3D 2nd Edition DVD/Online
Best of ASE Volume 9: Perioperative DVD/Online
Pediatric and Congenital Heart Disease - Online Lecture Series
Proper Echocardiographic Measurements: How and Why DVD/Online
TEE in Structural Heart Disease DVD/Online
The Role of Contrast-Enhanced Echocardiography in Patient Care – Online Lecture Series
Updated LV Diastolic Function Poster, Binder Insert, Pocket Guide, and Flip Chart Insert

Order Products Online at ASEMarketPlace.com
Exhibit & Poster Hall

EXHIBIT & POSTER HALL HOURS

SATURDAY, JUNE 11
President’s Reception .................................4:30 – 6:30 PM

SUNDAY, JUNE 12 ..............................9:00 AM – 4:00 PM

MONDAY, JUNE 13 ..............................9:00 AM – 4:00 PM

EXHIBIT & POSTER HALL BREAK SCHEDULE

SUNDAY, JUNE 12
Coffee Breaks .....................................9:30 – 10:15 AM
2:45 – 3:30 PM
Lunch Break ......................................11:45 – 1:15 PM

MONDAY, JUNE 13
Coffee Breaks .....................................9:30 – 10:15 AM
2:45 – 3:30 PM
Lunch Break ......................................11:45 AM – 1:15 PM

SCIENCE & TECHNOLOGY THEATER SCHEDULE

ASE will provide lunch on a first come, first served basis (max. 350 participants) for attendees of the Science & Technology Theater.

SATURDAY, JUNE 11
11:30 AM – 1:00 PM
Are You Really Improving Quality with Contrast Echocardiography?
Presented by Lantheus Medical Imaging

SUNDAY, JUNE 12
11:45 AM – 1:15 PM
The Power of cSound™: Revolutionizing Cardiovascular Ultrasound
Presented by GE Healthcare

MONDAY, JUNE 13
11:45 AM – 1:15 PM
Current and Emerging Innovations in Echocardiography
Presented by Philips

TUESDAY, JUNE 14
11:30 AM – 1:00 PM
Transcatheter Mitral Valve Repair: A New Frontier for the Echocardiographer
Presented by Abbott Vascular
WHERE INNOVATION AND SCIENCE MEET

ASE encourages you to visit the Exhibit & Poster Hall on Level 4 of the convention center. The exchange of information and access to new concepts, technology, devices, and research is a vital component of professional development. Get face-to-face with the industry’s leading developers and executives who can help you discover what’s new, assist you in making the right choices for your institution, and show you ways to reduce costs and improve productivity. Network with colleagues and friends while experiencing the best our rapidly-changing industry has to offer, including the newest equipment and devices as well as the latest in research and development. While you’re here, grab a cup of coffee, lunch, or snack.

The showcase of investigators from around the world presenting cutting-edge research on the latest advances in cardiovascular ultrasound is a highlight of ASE’s Scientific Sessions. Spend time in the poster area and gain firsthand knowledge and insight from scientific investigators.

DON’T MISS DAILY POSTER SESSIONS ON SUNDAY AND MONDAY. MORE DETAILED INFORMATION CAN BE FOUND ON PAGE 67 OF THIS PROGRAM.

ASE HEADQUARTERS BOOTH #221

As the largest organization representing the cardiovascular ultrasound community, ASE is a vibrant and progressive organization. Visit the ASE Headquarters booth #221 to find comprehensive information on all of our educational programs and products, membership opportunities, and advocacy efforts. In addition, don’t miss the debut of exciting new products and services designed to help with your practice of cardiovascular ultrasound. ASE staff is available to help you find whatever it is you need. If you have not logged into ASEUniversity or used Connect@ASE, come by for a tutorial. While you are there, be sure to pick up your complimentary copy of the updated ASE guidelines.

FREE DEMOS OF ECHO TEST AND TEACH APPLICATION

Are you challenged to ensure consistent quality echocardiograms? Do you need the freedom of a hands-on, real-world training experience without being tied to an imaging device? Echo Test and Teach is your answer. Designed through the expert guidance of Harvey Feigenbaum, MD, FASE, and founder of ASE, this application enhances the skills of sonographers and physicians in the measurement and interpretation of echocardiograms. It also supports quality improvement standards, including variability and correlation between different modalities in the measurement and interpretation of cardiovascular ultrasound images. Earn up to 10 AMA PRA Category 1 Credits™ per year. Visit the ASE Headquarters booth #221 in the Exhibit & Poster Hall on Level 4 for a FREE DEMO.

ECHO BINGO

Join in the fun! Each attendee will receive a set of ECHO Bingo Cards in their Conference Bag at Registration. Visit the exhibitors in the Exhibit & Poster Hall with a new bingo card each day. The exhibiting company will stamp your card. Bring your stamped card, completed either by row, column, or diagonally, to the ASE Headquarters Booth #221 to be entered into the drawing. Play all three cards! The drawing will be held on Monday, June 13 in the Exhibit & Poster Hall during the afternoon break 2:45-3:30 PM. MUST BE PRESENT TO WIN.

First Prize: Valued at Over $1550 Includes:

» Complimentary Full Meeting Registration for ASE 2017 Annual Scientific Sessions in Baltimore, MD.
» Hotel Accommodations at one of the designated hotels during ASE 2017 Annual Scientific Sessions
» ASE membership through December 31, 2017

Prize is Transferable — but must be utilized for the 2017 Scientific Sessions. All elements of the prize must be utilized by the same individual.

Second Prize: Valued at $225

» ASE Guideline Reference Book

Third Prize: Valued at $50

» Pocket Guideline Bundle (six pocketguides included)

ECHO AROUND THE WORLD

Located at the ASE Headquarters booth #221, visit Echo Around the World and explore literature, courses, and information from echocardiography societies worldwide. Take a trip around the world of echocardiography; no passports required. Learn about ASE’s International Alliance Program members and their contributions to ASE and the field of echocardiography.

MEET FACE TO FASE

Are you interested in becoming a Fellow of the American Society of Echocardiography (FASE) but have questions about whether you may qualify? Stop by the ASE Booth #221 in the Exhibit Hall, during the morning and afternoon breaks on Sunday and Monday, to talk one-on-one with a member of the FASE Advisory Group or ASE staff about any questions you have about achieving the FASE designation.
Science & Technology Theater Schedule

SATURDAY, JUNE 11

11:30 AM – 1:00 PM
Are You Really Improving Quality with Contrast Echocardiography?
Presented by Lantheus Medical Imaging

Join expert faculty in an interactive panel discussion on contrast echocardiography followed by a moderated Q&A session.

SUNDAY, JUNE 12

11:45 AM – 1:15 PM
The Power of cSound™: Revolutionizing Cardiovascular Ultrasound
presented by GE Healthcare

Please join us to see how the Vivid™ E95 with cSound technology is changing the field of cardiovascular ultrasound from everyday workflow to 4D TEE.

MONDAY, JUNE 13

11:45 AM – 1:15 PM
Current and Emerging Innovations in Echocardiography
presented by Philips

The challenges and constraints of cardiovascular ultrasound today require new tools for you to simplify and quicken the process of acquiring reproducible data and turning it into valuable information and proper care plans for your patients. Join our panel session to learn about the latest advancements and tools in echocardiography from our panel of industry experts, including recent results from a multi-center trial, the application of innovative echo techniques in the evaluation of cancer treatment-related cardiotoxicity, and the description and potential applications of Hyper 2D technology.

TUESDAY, JUNE 14

11:30 AM – 1:00 PM
Transcatheter Mitral Valve Repair: A New Frontier for the Echocardiographer
presented by Abbott Vascular

Join renowned faculty in echocardiography and interventional cardiology to learn about the latest advances in TMVr and the critical role that echocardiography plays. Topics covered will include procedural guidance, quantitative measurements, and how interventionalists and echocardiographers can work together to ensure successful outcomes.

Lunch is provided by ASE and is included in all Scientific Sessions registration fees, but space and boxed lunches are first come, first served. These sessions are not part of the official ASE 27th Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed or affiliated with ASE.
Lantheus Medical Imaging presents

Are You Really Improving Quality with Contrast Echocardiography?

### Improving Patient Outcomes

**Paul Bhella, MD, FAHA, FACC, FASE**  
JPS Health Network, Fort Worth, TX

### Contrast Implementation & Administration

**Paul Braum, BS, RDCS, RCS, RVT, RVS, ACS, FASE**  
Northeast Georgia Health System Inpatient and Outpatient Division, Gainesville, GA

### The Impact of a Quality Program

**Joan Crawford, DO, FACC, FASE, FASNC**  
St. John Providence, Macomb and Oakland Center, Warren, MI

**Saturday, June 11, 2016**

11:30 a.m. - 1:00 p.m.  
Lunch provided · SDMS credit available

Science and Technology Theatre, Level 4, Hall B  
Washington State Convention Center  
*Seattle, WA*

Join expert faculty in an interactive panel discussion on contrast echocardiography followed by a moderated Q&A session.

**See the advantages** contrast echo has over unenhanced echo in diagnostic outcomes, patient management, and cost effectiveness. Understand the importance of establishing a quality program in your echo lab, and gain practical insight into the implementation and administration of contrast echo.

**Register at Lantheus.com/rsvp**

Lunch is provided by ASE and is included in all Scientific Sessions registration fees, but space and boxed lunches are first-come, first served. These sessions are not part of the official ASE 27th Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed or affiliated with ASE.

In accordance with the PhRMA Code on Interactions with Healthcare Professionals and individual state compliance, attendance at this educational program is limited to healthcare professionals. Accordingly, attendance by guests or spouses is not permitted.
The Power of cSound™: Revolutionizing Cardiovascular Ultrasound

Please join us to see how the Vivid™ E95 with cSound technology is changing the field of cardiovascular ultrasound from everyday workflow to 4D TEE.

Sunday, June 12th 11:45 am – 1:15 pm
Washington State Convention Center

Moderator & Speaker:
Bijoy Khandheria, MD, MBBS, FACP, FESC, FASE, FAHA, FACC,
Aurora Healthcare, Milwaukee, WI

Faculty:
Rebecca Hahn, MD, FASE,
Columbia University Medical Center, New York, NY
Farooq Chaudhry, MD, FACP, FACC, FASE, FAHA,
Mt. Sinai, New York, NY

Register now!
https://ge.cvent.com/vivid-2016
Join us for a Science & Technology Theater Event

Current and Emerging Innovations in Echocardiography

The challenges of cardiovascular ultrasound today require new tools for you to simplify the process of acquiring reproducible data and turning it into valuable information for patients. Join our panel session at ASE, moderated by Professor Mark Monaghan from King’s College Hospital, to learn about the latest advancements in echocardiography from industry experts, including:

- Recent results from a multi-center trial with Dr. Victor Mor-Avi from the University of Chicago,
- Applications of innovative echo techniques in the evaluation of cancer treatment-related cardiotoxicity with Dr. Jennifer Liu of Memorial Sloan Kettering Cancer Center, and
- Potential applications of Hyper 2D technology with Pat Rafter, Clinical Scientist from Philips.

Monday, June 13
11:45 am - 1:15 pm
Session will be held adjacent to the Exhibit & Poster Hall

Science & Technology Theater sessions are not part of the official ASE Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed or affiliated with ASE.
Image Calendar COMPETITION is back for 2017

Deadline to submit images is August 12

Visit ASEcho.org/ImageCalendar for competition rules and instructions.
# Exhibitor Assignments

EXHIBITORS LISTED ALPHABETICALLY

<table>
<thead>
<tr>
<th>Company</th>
<th>Booth</th>
</tr>
</thead>
<tbody>
<tr>
<td>3D Systems, Healthcare</td>
<td>424</td>
</tr>
<tr>
<td>Abbott Vascular</td>
<td>121</td>
</tr>
<tr>
<td>Acertara Acoustic Labs</td>
<td>440</td>
</tr>
<tr>
<td>American Registry for Diagnostic Medical Sonography (ARDMS)</td>
<td>516</td>
</tr>
<tr>
<td>American Society of Echocardiography (ASE)</td>
<td>221</td>
</tr>
<tr>
<td>Biodex Medical Systems, Inc.</td>
<td>419</td>
</tr>
<tr>
<td>Bracco Diagnostics, Inc.</td>
<td>139</td>
</tr>
<tr>
<td>Bracco Diagnostics, Inc. Learning Lab</td>
<td>141</td>
</tr>
<tr>
<td>British Society of Echocardiography (BSE)</td>
<td>515</td>
</tr>
<tr>
<td>CAE Healthcare</td>
<td>425</td>
</tr>
<tr>
<td>Cardiovascular Credentialing International (CCI)</td>
<td>211</td>
</tr>
<tr>
<td>Cleveland Clinic Abu Dhabi</td>
<td>34</td>
</tr>
<tr>
<td>Core Sound Imaging, Inc.</td>
<td>417</td>
</tr>
<tr>
<td>Diagnostic and Interventional Cardiology</td>
<td>336</td>
</tr>
<tr>
<td>Digisonics</td>
<td>503</td>
</tr>
<tr>
<td>Echo Test and Teach</td>
<td>221</td>
</tr>
<tr>
<td>Elsevier</td>
<td>223</td>
</tr>
<tr>
<td>Epsilon Imaging, Inc.</td>
<td>341</td>
</tr>
<tr>
<td>Esaote North America</td>
<td>115</td>
</tr>
<tr>
<td>European Association of Cardiovascular Imaging (EACVI)</td>
<td>217</td>
</tr>
<tr>
<td>Flexible Informatics - EncaptureMD</td>
<td>509</td>
</tr>
<tr>
<td>Freeland Systems, LLC</td>
<td>325</td>
</tr>
<tr>
<td>FUJIFILM Medical Systems U.S.A., Inc.</td>
<td>116</td>
</tr>
<tr>
<td>GE Healthcare</td>
<td>101</td>
</tr>
<tr>
<td>Hawaiian Moon</td>
<td>40</td>
</tr>
<tr>
<td>Heritage Medical Products, Inc.</td>
<td>340</td>
</tr>
<tr>
<td>Hitachi Aloka Medical</td>
<td>128</td>
</tr>
<tr>
<td>Houston Methodist Hospital</td>
<td>10</td>
</tr>
<tr>
<td>Infinite Therapeutics</td>
<td>38</td>
</tr>
<tr>
<td>Intersocietal Accreditation Commission (IAC)</td>
<td>338</td>
</tr>
<tr>
<td>Joint Review Committee on Education in Cardiovascular Technology</td>
<td>442</td>
</tr>
<tr>
<td>Lantheus Medical Imaging, Inc.</td>
<td>109</td>
</tr>
<tr>
<td>LUMEDDX</td>
<td>337</td>
</tr>
<tr>
<td>Madigan Army Medical Center</td>
<td>42</td>
</tr>
<tr>
<td>Mayo Clinic</td>
<td>237</td>
</tr>
<tr>
<td>McKesson</td>
<td>331</td>
</tr>
<tr>
<td>MedAxiom</td>
<td>140</td>
</tr>
<tr>
<td>Medical Positioning, Inc.</td>
<td>142</td>
</tr>
<tr>
<td>Medstreaming</td>
<td>343</td>
</tr>
<tr>
<td>Merge Healthcare</td>
<td>438</td>
</tr>
<tr>
<td>Mindray North America</td>
<td>525</td>
</tr>
<tr>
<td>National Board of Echocardiography, Inc.</td>
<td>511</td>
</tr>
<tr>
<td>Oxford University Press</td>
<td>342</td>
</tr>
<tr>
<td>CIVCO Medical Solutions</td>
<td>524</td>
</tr>
<tr>
<td>Philips</td>
<td>300</td>
</tr>
<tr>
<td>ScImage, Inc.</td>
<td>241</td>
</tr>
<tr>
<td>Siemens Healthineers</td>
<td>400</td>
</tr>
<tr>
<td>Simulab Corporation</td>
<td>108</td>
</tr>
<tr>
<td>Sound Ergonomics LLC</td>
<td>517</td>
</tr>
<tr>
<td>St. Vincent Healthcare - SCL Health</td>
<td>44</td>
</tr>
<tr>
<td>Texas Children’s Hospital</td>
<td>421</td>
</tr>
<tr>
<td>TOMTEC IMAGING SYSTEMS GMBH</td>
<td>311</td>
</tr>
<tr>
<td>Toshiba America Medical Systems, Inc.</td>
<td>231</td>
</tr>
<tr>
<td>UltraLinq Healthcare Solutions, Inc.</td>
<td>225</td>
</tr>
<tr>
<td>UltrasoundJOBS.com</td>
<td>520</td>
</tr>
<tr>
<td>University of Washington</td>
<td>436</td>
</tr>
<tr>
<td>Valley Children’s Healthcare</td>
<td>36</td>
</tr>
<tr>
<td>Ventrilpoint, Inc.</td>
<td>144</td>
</tr>
<tr>
<td>Vidistar, LLC</td>
<td>410</td>
</tr>
<tr>
<td>Ward Family Heart Center - Children’s Mercy Kansas City</td>
<td>513</td>
</tr>
<tr>
<td>West Coast Ultrasound Institute</td>
<td>522</td>
</tr>
<tr>
<td>Whale Imaging</td>
<td>411</td>
</tr>
<tr>
<td>Wiley</td>
<td>243</td>
</tr>
<tr>
<td>Wolters Kluwer</td>
<td>412</td>
</tr>
</tbody>
</table>
## Exhibitor Assignments

### Exhibitors Listed Numerically

<table>
<thead>
<tr>
<th>Company</th>
<th>Booth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houston Methodist Hospital</td>
<td>10</td>
</tr>
<tr>
<td>Cleveland Clinic Abu Dhabi</td>
<td>34</td>
</tr>
<tr>
<td>Valley Children’s Healthcare</td>
<td>36</td>
</tr>
<tr>
<td>Infinite Therapeutics</td>
<td>38</td>
</tr>
<tr>
<td>Hawaiian Moon</td>
<td>40</td>
</tr>
<tr>
<td>Simulab Corporation</td>
<td>108</td>
</tr>
<tr>
<td>Madigan Army Medical Center</td>
<td>42</td>
</tr>
<tr>
<td>St. Vincent Healthcare – SCL Health</td>
<td>44</td>
</tr>
<tr>
<td>GE Healthcare</td>
<td>101</td>
</tr>
<tr>
<td>Lantheus Medical Imaging, Inc.</td>
<td>109</td>
</tr>
<tr>
<td>Esaote North America</td>
<td>115</td>
</tr>
<tr>
<td>FUJIFILM Medical Systems U.S.A., Inc.</td>
<td>116</td>
</tr>
<tr>
<td>Abbott Vascular</td>
<td>121</td>
</tr>
<tr>
<td>Hitachi Aloka Medical</td>
<td>128</td>
</tr>
<tr>
<td>Bracco Diagnostics, Inc.</td>
<td>139</td>
</tr>
<tr>
<td>MedAxiom</td>
<td>140</td>
</tr>
<tr>
<td>Bracco Diagnostics, Inc. Learning Lab</td>
<td>141</td>
</tr>
<tr>
<td>Medical Positioning, Inc.</td>
<td>142</td>
</tr>
<tr>
<td>Ventripoint, Inc.</td>
<td>144</td>
</tr>
<tr>
<td>Cardiovascular Credentialing International (CCI)</td>
<td>211</td>
</tr>
<tr>
<td>European Association of Cardiovascular Imaging (EACVI)</td>
<td>217</td>
</tr>
<tr>
<td>American Society of Echocardiography (ASE)</td>
<td>221</td>
</tr>
<tr>
<td>Echo Test and Teach</td>
<td>221</td>
</tr>
<tr>
<td>Elsevier</td>
<td>223</td>
</tr>
<tr>
<td>UltraLinq Healthcare Solutions, Inc.</td>
<td>225</td>
</tr>
<tr>
<td>Toshiba America Medical Systems, Inc.</td>
<td>231</td>
</tr>
<tr>
<td>Mayo Clinic</td>
<td>237</td>
</tr>
<tr>
<td>Sclimage, Inc.</td>
<td>241</td>
</tr>
<tr>
<td>Wiley</td>
<td>243</td>
</tr>
<tr>
<td>Philips</td>
<td>300</td>
</tr>
<tr>
<td>TOMTEC IMAGING SYSTEMS GMBHC</td>
<td>311</td>
</tr>
<tr>
<td>Freeland Systems, LLC</td>
<td>325</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company</th>
<th>Booth</th>
</tr>
</thead>
<tbody>
<tr>
<td>McKesson</td>
<td>331</td>
</tr>
<tr>
<td>Diagnostic and Interventional Cardiology</td>
<td>336</td>
</tr>
<tr>
<td>LUMEDX</td>
<td>337</td>
</tr>
<tr>
<td>Intersocietal Accreditation Commission (IAC)</td>
<td>338</td>
</tr>
<tr>
<td>Heritage Medical Products, Inc.</td>
<td>340</td>
</tr>
<tr>
<td>Epsilon Imaging, Inc.</td>
<td>341</td>
</tr>
<tr>
<td>Oxford University Press</td>
<td>342</td>
</tr>
<tr>
<td>Medstreaming</td>
<td>343</td>
</tr>
<tr>
<td>Siemens Healthineers</td>
<td>400</td>
</tr>
<tr>
<td>Vidistar, LLC</td>
<td>410</td>
</tr>
<tr>
<td>Whale Imaging</td>
<td>411</td>
</tr>
<tr>
<td>Wolters Kluwer</td>
<td>412</td>
</tr>
<tr>
<td>Core Sound Imaging, Inc.</td>
<td>417</td>
</tr>
<tr>
<td>Biodex Medical Systems, Inc.</td>
<td>419</td>
</tr>
<tr>
<td>Texas Children’s Hospital</td>
<td>421</td>
</tr>
<tr>
<td>3D Systems, Healthcare</td>
<td>424</td>
</tr>
<tr>
<td>CAE Healthcare</td>
<td>425</td>
</tr>
<tr>
<td>University of Washington</td>
<td>436</td>
</tr>
<tr>
<td>Merge Healthcare</td>
<td>438</td>
</tr>
<tr>
<td>Acertara Acoustic Labs</td>
<td>440</td>
</tr>
<tr>
<td>Joint Review Committee on Education in Cardiovascular Technology</td>
<td>442</td>
</tr>
<tr>
<td>Digisonics</td>
<td>503</td>
</tr>
<tr>
<td>Flexible Informatics - EncaptureMD</td>
<td>509</td>
</tr>
<tr>
<td>National Board of Echocardiography, Inc.</td>
<td>511</td>
</tr>
<tr>
<td>Ward Family Heart Center - Children’s Mercy Kansas City</td>
<td>513</td>
</tr>
<tr>
<td>British Society of Echocardiography (BSE)</td>
<td>515</td>
</tr>
<tr>
<td>American Registry for Diagnostic Medical Sonography (ARDMS)</td>
<td>516</td>
</tr>
<tr>
<td>Sound Ergonomics LLC</td>
<td>517</td>
</tr>
<tr>
<td>UltrasoundJOBS.com</td>
<td>520</td>
</tr>
<tr>
<td>West Coast Ultrasound Institute</td>
<td>522</td>
</tr>
<tr>
<td>CIVCO Medical Solutions</td>
<td>524</td>
</tr>
<tr>
<td>Mindray North America</td>
<td>525</td>
</tr>
</tbody>
</table>
Exhibitor Descriptions

3D Systems, Healthcare .................................... 424
17301 West Colfax Avenue
Suite 300
Golden, CO 80401
United States
Phone: 303-273-5344
simbionix.com

3D Systems is a leader in 3D modeling, simulation training, and 3D printing of personalized medicine. Comprehensive Echocardiography training offered on the U/S Mentor VR simulator provides thorough training in qualitative and quantitative TTE evaluation, and an enhanced TEE module for learning and practicing standard view acquisition and clinical reporting.

Abbott Vascular ............................................. 121
121 3200 Lakeside Drive
Santa Clara, CA 95054
United States
Phone: 408-845-3000
abbott.com

Abbott (NYSE: ABT) is a global healthcare company devoted to improving life through the development of products and technologies that span the breadth of healthcare. With a portfolio of leading, science-based offerings in diagnostics, medical devices, nutritionals, and branded generic pharmaceuticals, Abbott serves people in more than 150 countries.

Acertara Acoustic Labs ..................................... 440
1860 Lefthand Circle
Suite H
Longmont, CO 80501
United States
Phone: 303-834-8413
acertaralabs.com

Acertara Acoustic Labs is an independent ISO9001:2008 and ISO13485:2003 certified company providing diagnostic ultrasound test equipment and advanced probe repair to clinics, hospitals, and ISOs. Our ISO17025:2005 accredited acoustic measurement laboratory delivers engineering services, acoustic testing, and calibration services to ultrasound OEMs and regulatory bodies around the world.

American Registry for Diagnostic Medical Sonography (ARDMS) .............................................. 516
1401 Rockville Pike
Suite 600
Rockville, MD 20852
United States
Phone: 800-541-9754
ARDMS.org

The American Registry for Diagnostic Medical Sonography® (ARDMS), founded in 1975, is an independent, not-for-profit organization that administers examinations and awards credentials in the areas of medical ultrasound. With nearly 90,000 certified professionals worldwide, ARDMS is considered the global standard of excellence in sonography. For more information, visit ARDMS.org.

American Society of Echocardiography .................. 221
2100 Gateway Centre Boulevard, Suite 310
Morrisville, NC 27560
United States
Phone: 919-861-5574
Fax: 919-882-9900
ASEcho.org

Biodex Medical Systems, Inc ............................... 419
20 Ramsey Road
Shirley, NY 11967
United States
Phone: 631-924-9000
biodex.com/ultrasound

Biodex exhibits the latest in Ultrasound Table technology. Our ergonomically-designed tables include features to help prevent musculoskeletal injury to sonographers. The Echo/Vasc Pro™ and Vasc Pro™ tables feature a NEW adjustable foot support, providing sonographers comfortable access to patients of various heights. Foot support conveniently tucks beneath the table.

Bracco Diagnostics Inc ................................. 139
259 Prospect Plains Road
Building H
Monroe Township, NJ 08831
United States
Bracco Diagnostics Inc., a U.S.-based subsidiary of Bracco Imaging SpA, is a worldwide provider of diagnostic imaging solutions for use in CT, MR, Nuclear, and most recently for Ultrasound.

British Society of Echocardiography .................. 515
Docklands Business Center
10-16 Tiller Road
London E14 8PX
United Kingdom
Phone: 011 44 0 20 7345 5185
bsecho.org

Visit the BSE at stand 328 and download the Echocalc for iPhone and Android. You can also get temporary access to our online Echo Library and other educational material.

CAE Healthcare .............................................. 425
6300 Edgelake Drive
Sarasota, FL 34240
United States
Phone: 941-377-5562
cae.com/healthcare

CAE Healthcare offers advanced patient, surgical and imaging simulation, learning curriculum and simulation center management. Visit Stand 529 for a demo of CAE VIMEDIX, the only ultrasound simulator with the transthoracic, transesophageal, and abdominal-pelvic exams on one platform. Ask about CAE ICCU, the society-endorsed e-learning program for bedside ultrasound.

Cardiovascular Credentialing International (CCI) . 211
1500 Sunday Drive
Suite 102
Raleigh, NC 27607
United States
Phone: 800-326-0268
cci-online.org

CCI is a not-for-profit corporation established for the purpose of administering credentialing examinations as an independent credentialing agency. CCI began credentialing cardiovascular professionals in 1968. CCI offers eight credentials which, when earned, demonstrate that the registrant holds fundamental knowledge in the particular cardiovascular specialty. For more information, please visit cci-online.org.

Cleveland Clinic Abu Dhabi .................. 34
Al Maryah Island
Abu Dhabi
United Arab Emirates
Phone: 971 50 446 1517
clevelandclinicabudhabi.ae

Consultant Physician opportunities are available for board-certified physicians to join the Heart and Vascular Institute at Cleveland Clinic Abu Dhabi, a multi-specialty hospital under construction in Abu Dhabi, United Arab Emirates. This 360 bed facility will be a unique and unparalleled extension of the Cleveland Clinic model of care.

Core Sound Imaging, Inc .................. 417
Six Forks Road
Suite 102
Raleigh, NC 27615
United States
Phone: 919-277-0636, 866-332-2719
corestudycast.com

Core Sound Imaging, Inc. is built upon the principles of superior software development and uncompromised business ethics. Studycast® and the suite of Core products are leading the way in SaaS medical imaging. Studycast® represents a breakthrough in imaging workflow for cardiologists, radiologists, and those who rely on their services.

Diagnostic and Interventional Cardiology ........... 336
3030 W Salt Creek Lane
Suite 201
Arlington Heights, IL 60005
United States
Phone: 847-391-1000
DiCardiology.com

“The Trusted Resource for Technology and Clinical Applications in Diagnostic & Interventional Cardiology.” DAIC showcases the latest technology, device and service solutions. Edited for cardiologists, interventional cardiologists, cardiology administrators, sonographers, cath lab personnel, IT professionals, and business administrators in hospitals and heart centers. Visit our booth for a free copy.

Digisonics .................. 503
3701 Kirby Drive
Houston, TX 77098
United States
Phone: 800-940-3240
digisonics.com

For over 40 years, Digisonics has provided standards-based and vendor-neutral cardiovascular information system solutions for all cardiovascular modalities. Digisonics solutions maximize efficiency by integrating and automating the entire complex workflow resulting in maximum productivity.

---

**Echo Test and Teach ........................................ 221**

Schedule a Free Demo
Phone: 317-824-1225 ext. 14
Email: sales@kelabs.com
ASEcho.org/Echo-Test-and-Teach/

ASE and Ke Labs have collaborated to co-develop the Echo Test and Teach Application. Designed with the expert guidance of Dr. Harvey Feigenbaum, Echo Test and Teach is a “one-of-a-kind” software application for improving consistency and accuracy in the measurement and interpretation of cardiac ultrasound images as well as to educate users on interesting cases and new techniques. Visit Booth 221 for more information and a demo of the product.

---

**Elsevier ......................................................... 223**

1600 JFK Boulevard
Suite 1800
Philadelphia, PA 19103
United States
Phone: 215-239-3491
elsevierhealth.com

Elsevier, a premier worldwide health science publishing company, is proud to publish *Journal of the American Society of Echocardiography*, the official journal of the American Society of Echocardiography. Please stop by our booth to view the latest issue of the journal.

---

**Flexible Informatics - Encapture MD..................... 509**

19 Bala Avenue
Suite 203
Bala Cynwyd, PA 19004
United States
Phone: 800-399-7035
encapturemd.com

The EncaptureMD Web-based Image Review and Reporting system makes producing high-quality ICAEL, ICAVL, ICANL compliant medical procedure reports faster and easier. Modalities supported include Adult and Pediatric Echocardiography, Nuclear Cardiology, Vascular, Cath, and Electrophysiology. As physicians ourselves we designed the system to be easy to use and fully configurable.

---

**Epsilon Imaging, Inc ........................................341**

3917 Research Park Drive
Suite B7
Ann Arbor, MI 48108
United States
Phone: 734-369-5100
epsilon-imaging.com

As a provider of workflow enhancing visualization and analysis software with strain imaging, Epsilon Imaging is transforming cardiac diagnostic workflow with a vendor neutral suite of applications designed for clinical echocardiography. EchoInsight assists clinicians with innovative visualization and analysis that enhances, standardizes, and streamlines analysis, interpretation and monitoring of echo. Learn more at epsilon-imaging.com

---

**Esaote North America ....................................... 115**

8000 Castleway Drive
Indianapolis, IN 46250
United States
Phone: 317-813-6000
esaoteusa.com

Esaote North America, part of the Esaote Group, is a global leader in research, production, and marketing diagnostic imaging equipment; with an emphasis on ultrasound and MRI. Find us at esaoteusa.com.

---

**European Association of Cardiovascular Imaging (EACVI) .............................................217**

2035 Route des Colles Les Templiers BP-179
Sophia Antipolis 6903
France
Phone: 336-898-72038
escardio.org/EACVI

EACVI mission: To promote excellence in clinical diagnosis, research, technical development and education in cardiovascular imaging in Europe.

---

**Freeland Systems, LLC ................................. 325**

318 Montelluna Drive
North Venice, FL 34275
United States
Phone: 888-615-1888
freelandsystems.com

AccessPoint Suite of products offer traditional in-house PACS products along with cloud-based storage, disaster recovery, and our browser-based PACS solution – cPac Pro.
AccessPoint BacPac serves as a network gateway integrating disparate products, directing data traffic to local or cloud-based storage devices, and providing a Nuance Powerscribe 360 reporting interface.

FUJIFILM Medical Systems U.S.A., Inc .................. 116
419 West Avenue
Stamford, CT 6902
United States
Phone: 800-431-1850
fujimed.com

FUJIFILM Medical Systems U.S.A., Inc. (Booth # 116) will be showcasing Synapse Cardiovascular V 6.0 at ASE 2016. This version is a total revision of the Echocardiography reporting package and features a fully re-engineered user interface and streamlined measurement package, all built on Fujifilm™ new Advanced Reporting platform.

FUJIFILM
Value from Innovation

FUJIFILM

GE Healthcare .................................................101
9900 W. Innovation Drive
Wauwatosa, WI 53226
United States
Phone: 414-721-3096
gehealthcare.com

GE’s “healthymagination” vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access and improving quality and efficiency around the world. GE Healthcare is committed to serving healthcare professionals and their patients.

Hawaiian Moon ................................................40
321 S Missouri Ave.
Clearwater, FL 33756
United States
Phone: 888-256-3276
aloecream.biz

Say Goodbye to Dry Skin with Hawaiian Moon Organic Aloe Cream!

Heritage Medical Products, Inc ....................... 340
10380 CR 6310
West Plains, MO 65775
United States
Phone: 888-256-8748
sonobed.com

Since 1995, HMP is a Sonographer owned company specializing in ergonomic exam beds for all modalities of ultrasound. Manufacturing and distributing quality exam beds worldwide. We educate fellow Sonographers on the importance of ergonomics and the input of their decision when purchasing equipment.

Hitachi Aloka Medical ....................................128
10 Fairfield Boulevard
Wallingford, CT 06492
United States
Phone: 203-269-5088
hitachi-aloka.com

We are proud of the reputation we have built as an industry leader in diagnostic ultrasound. Known for our unparalleled image quality, superior system reliability and intuitive use of cutting edge technology, we remain the ideal choice for exceptional diagnostic ultrasound imaging in the field of cardiovascular medicine.

Houston Methodist Hospital .............................. 10
6560 Fannin St.
Houston, TX  77030
United States
Phone: 713-441-0225
houstonmethodist.org

Houston Methodist’s affiliated with the Weill Medical College of Cornell University and New York-Presbyterian Hospital. Consistently ranked in U.S. News & World Report’s “Best Hospital” list, recently named the #1 hospital in Texas. FORTUNE magazine has placed Houston Methodist on its annual list of “100 Best Companies To Work For.”

Infinite Therapeutics ......................................38
68 Route 125
Kingston, NH 03848
United States
Phone: 603-347-6006
infiniterx.com

Infinite Therapeutics is a division of Infinite Creative Enterprises (I.C.E.), a privately held company with a 20+ year record of commitment to excellence. Our extraordinary success is powered by a management team with over 60 years combined experience in product design,
manufacturing, and supply chain logistics. Our executive team is integrally involved from product inception to final QA/QC.

Intersocietal Accreditation Commission (IAC).......................... 338
6021 University Boulevard
Suite 500
Ellicott City, MD 21043
United States
Phone: 800-838-2110
intersocietal.org

A nonprofit organization highly regarded for its accreditation programs since 1990, the IAC offers accreditation for vascular testing, echocardiography, nuclear/PET, MRI, CT, dental CT, carotid stenting, vein treatment, and cardiac electrophysiology. The IAC programs are each dedicated to one common mission: Improving health care through accreditation®. Learn more at intersocietal.org.

Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT) ........................................... 442
6 Pine Knoll Drive
Beverly, MA 01915
United States
Phone: 978-456-5594
jrcvt.org

JRC-CVT, a Committee on Accreditation member of the Commission on Accreditation of Allied Health Education Programs (CAAHEP), provides accreditation services to certificate and degree programs in colleges and hospitals for any of five concentrations in cardiovascular technology. JRC-CVT is sponsored by ACC, ACR, ASE, SDMS, SICP, and SVU.

Lantheus Medical Imaging, Inc ......................................... 109
331 Treble Cove Road
North Billerica, MA 01862
United States
Phone: 800-362-2668
lantheus.com

Lantheus Medical Imaging, lantheus.com, a global leader in developing, manufacturing, selling and distributing innovative diagnostic imaging agents primarily used for the diagnosis of cardiovascular diseases, is headquartered in North Billerica, Massachusetts, with offices in Puerto Rico, Canada, and Australia.

LUMEDX .......................................................... 337
555 12th Street
Oakland, CA 94607
United States
Phone: 510-419-1000
lumedx.com

LUMEDX is the market leader in fully integrated, vendor-neutral cardiovascular information and imaging systems (CVIS). LUMEDX has helped more than 700 heart centers worldwide streamline and improve their CV workflows. In 2013, LUMEDX’s client base totaled more than 60% of the U.S. News & World Report Best Hospitals.

Madigan Army Medical Center ........................................ 42
9040 Fitzsimmons Drive
Tacoma, WA 98431
United States
Phone: 253-968-3320
mamc.amedd.army.mil

Madigan offers outstanding Graduate Medical and Nursing Education Programs. Physician, nurse and medic students enrolled in Madigan’s Graduate Medical Education programs consistently score in the 90th percentile on state and national examinations. Additionally, Madigan’s Andersen Simulation Center, which helps train thousands of doctors, nurses and medics each year, holds the distinction of being the first educational institution in the Department of Defense accredited by the American College of Surgeons.

Mayo Clinic ......................................................... 237
200 First Street SW
Rochester, MN 55905
United States
Phone: 800-283-6296
mayoclinic.org

Established in 1981, the Mayo Clinic Echocardiography Laboratory is one of the largest clinical, educational, and research echocardiographic laboratory facilities of its kind in the world. At Mayo Clinic, patients benefit from the integration of cardiologists, cardiovascular surgeons, and other specialists, to determine the appropriate care.

McKesson ............................................................. 331
5995 Windward Parkway
Alpharetta, GA 30005
United States
Phone: 404-338-2317
mckesson.com

McKesson Cardiology™ is a cardiovascular information system (CVIS) for fetal to adult care (including congenital)
that supports echocardiography, vascular ultrasound, nuclear cardiology, catheterization, hemodynamics monitoring, electrophysiology, and ECG/stress/holter management. Built on a singular platform, McKesson Cardiology focuses on streamlining workflows to help boost efficiencies and reduce costs.

**MedAxiom**

2050 King Circle South
Neptune Beach, FL 32266
United States
Phone: 904-372-2991
medaxiom.com

MedAxiom is a community of healthcare leaders focused on creating innovative solutions that influence and drive value in healthcare delivery, patient quality and outcomes by leveraging best-in-class data analytics, healthcare management expertise, and shared experiences.

**Medical Positioning, Inc**

1717 Washington Street
Kansas City, MO 64108
United States
Phone: 800-593-3246
medicalpositioning.com

MPI manufactures and sells patented specialty platforms designed to improve diagnostic imaging. Every product we offer comes with a story. Your story. The story of a cardiologist who demands more precise imaging. The story of a sonographer who wants a table that is simpler to use and offers pain-free operation.

**Medstreaming**

8201 164th Avenue NE
Suite 200
Redmond, WA 98116
United States
Phone: 206-724-2044
medstreaming.com

Medstreaming Cardiovascular Data-center establishes an exchange for the consolidation and dissemination of clinical based evidence for multiple modalities supporting all standards based vendors equipment. Medstreaming Cardiovascular Data-center affords both reading and referring physicians the capability to monitor and review a patient’s images and reports.

**Merge Healthcare**

200 E Randolph Street
STE 2435
Chicago, IL 60601
United States
Phone: 312-565-6868
merge.com

Merge Healthcare is a leading provider of enterprise imaging and interoperability solutions. Merge solutions facilitate the sharing of images to improve the electronic healthcare experience.

**Mindray North America**

800 MacArthur Boulevard
Mahwah, NJ 07430
United States
Phone: 201-995-8000
na.mindray.com

Mindray North America is headquartered in New Jersey. Mindray has been providing medical solutions to medical professionals, worldwide, for over 20 years. M7 & M5, laptop style ultrasound systems, are a practical and effective tool for clinical specialists.

**National Board of Echocardiography, Inc**

1500 Sunday Drive
Suite 102
Raleigh, NC 27607
United States
Phone: 919-861-5582
echoboards.org

As the national examination and certification body for Clinical Echocardiography, the NBE serves as a not-for-profit corporation established to publically recognize those physicians who have completed an approved training program in echocardiography and have passed the ASCeXAM.

**Oxford University Press**

2001 Evans Road
Cary, NC 27513
United States
Phone: 919-677-0977
oxfordjournals.org
oup.com

Oxford University Press publishes some of the most prestigious medical books and journals in the world, including the newly titled European Heart Journal.
CIVCO Medical Solutions ................................ 524
6 Winter Avenue
Deep River, CT 06417
United States
Phone: 860-526-2862
pcimedical.com

For 20 years, CIVCO Medical Solutions has helped over 6,000 healthcare facilities stay compliant in high-level disinfection of probes with GUS Disinfection Soak Stations™. CIVCO Medical Solutions is now moving toward automated reprocessing. CIVCO Medical Solutions also manufactures probe storage cabinets, spill kits, neutralizer, and other safety accessories.

Philips ..........................................................300
3000 Minuteman Road
Andover, MA 01810
United States
Phone: 800-934-7372
philips.com/healthcare

Philips is a technology company focused on improving people’s lives through meaningful innovation across the health continuum, from healthy living and prevention to diagnosis, treatment, and home care. It’s a unique perspective empowering us all to create a healthier future.

ScImage, Inc .................................................. 241
4916 El Camino Real
Suite 200
Los Altos, CA 94022
United States
Phone: 650-694-4858
scimage.com

ScImage provides Cardiology’s most comprehensive enterprise imaging solution with end to end imaging workflow and eliminates the barriers of multiple diagnostic disciplines in cardiology; tying together all images in a single database for management, storage, reporting and distribution to generate efficiencies and ease of access with a single sign-on.

Siemens Healthineers ......................................400
40 Liberty Boulevard
Malvern, PA 19355
United States

Siemens Healthineers helps providers meet clinical, operational and financial challenges. A global leader in medical imaging, laboratory diagnostics and IT, we understand the entire care continuum from prevention and early detection to diagnosis and treatment. For more:
usa.healthcare.siemens.com

Simulab Corporation ....................................... 108
13001 48th Avenue S.
Seattle, WA 98168
Phone: 206-299-1260
simulab.com

About Simulab® Corporation. Simulab is deeply committed to creating industry leading, easy-to-use, portable, affordable, and clinically-relevant substitutes for both animal and human subjects used in medical training.

Sound Ergonomics, LLC ...................................517
6830 NE Bothell Way
#C-236
Kenmore, WA 98028
United States
Phone: 425-489-3839
soundergonomics.com

Sound Ergonomics, LLC provides consulting services and ergonomic products for the prevention of occupational musculoskeletal disorders in allied health personnel with a particular focus on ultrasound. Our services include educational programs, worksite evaluations, and accreditation compliance programs. Our products include ergonomic chairs, arm support devices and a line of exam tables.

St. Vincent Healthcare - SCL Health ....................44
1233 N. 30th
Billings, MT 59101
United States
Phone: 406-237-4002
svh-mt.org

At St. Vincent Healthcare, we are committed to providing exceptional patient care, and providing a higher quality of life for our physicians. Located in a family friendly community, and as one of the largest medical facilities in the region, we provide big city Cardiology care in a better family environment.

Texas Children’s Hospital ................................. 421
6621 Fannin Street
Houston, TX 77030
Texas Children’s Hospital is committed to creating a healthier future for children throughout the global community by leading in patient care, education and research. Consistently ranked among the best children’s hospitals in the nation, Texas Children’s has garnered widespread recognition for its expertise and breakthroughs in pediatric health.

TOMTEC IMAGING SYSTEMS GMBH ............... 311
525 W. Monroe Street
Chicago, IL 60661
United States
Phone: 704-554-1289
tomtec.de
TOMTEC holds an inventive leadership position in the field of diagnostic medical imaging and Cardio PACS solutions. TOMTEC’s versatile 2D/3D imaging product portfolio is vendor independent and covers a wide range of clinical applications as well as advanced analysis solutions for Cardiac and Vascular US, MRI Imaging, Nuclear Medicine, and Angiography.

TOSHI B A
Leading Innovation ❯❯

Toshiba America Medical Systems Inc............... 231
2441 Michelle Drive
Tustin, CA 92780
United States
Phone: 714-669-4190
medical.toshiba.com
Toshiba America Medical Systems, Inc. understands today’s healthcare business and delivers diagnostic imaging and interventional solutions that put customers first. Toshiba markets, sells, distributes and services these solutions throughout the U.S. It is committed to listening to customers and giving them a voice through patient-focused technology and superior customer service.

UltraLinq Healthcare Solutions, Inc............... 225
236 West 30th Street, 15th Floor
New York, NY 10001
Phone: 646-666-9575
ultralinq.com
UltraLinq is a cloud-based image management service for evaluating, sharing, and archiving your imaging exams and reports.

UltrasoundJOBS.com ......................... 520
51 Mill Street, Building E, Suite 21
Hanover, MA 02339
United States
Phone: 781-795-1350
ultrasoundjobs.com
For over a decade, UltrasoundJOBS.com has aligned top-quality sonography professionals with premier employers. As the leading sonography career website, employers, and job seekers have unlimited access to the tools and resources they need to target the sonography market. UltrasoundJOBS.com is the exclusive career website of the ARDMS.

University of Washington ............... 436
Health Science Building, Room RR616
1959 NE Pacific Street
Seattle, WA 98195
United States
Phone: 206-543-4535
dep.ts.washington.edu/cvrtc
As part of the University of Washington’s educational mission, we provide echo simulation for self-paced training using genuine patient images, innovative learning accelerators, and validated skill metrics useful for training programs, curriculum assessment, or self-assessment. We feature real time response for natural scanning.

Valley Children’s Healthcare ..................... 36
9300 Valley Children’s Place
Madera, CA 93636
United States
Phone: 559-353-7055
valleychildrens.org
Valley Children’s Healthcare is a nonprofit network that offers specialized medical and surgical services to treat conditions ranging from common to the most unusual and complex at our 356-bed children’s hospital, as well as through partner hospitals, specialty care centers, satellite practices and primary care services.

Ventricpoint, Inc .................................. 144
100 W Harrison Street
North Tower, #410
Seattle, WA 98119
United States
Phone: 206-283-0221
ventripoint.com
Creating highly accurate 3D volumes from standard 2D ultrasound images. Our technology is focused on congenital heart disease and pulmonary hypertension. Our clinical trials have shown that the volumes we create are as accurate as MRI, the current standard of care.
VidiStar, LLC ................................................. 410
PO Box 8539
Greenville, SC 29604
United States
Phone: 888-518-7541
vidistar.com

VidiStar, LLC offers a comprehensive web-based PACS and patented DICOM reporting solution so clinicians can remotely read and report on cardiovascular procedures in multiple testing modalities over the Internet. VidiStar’s products include Cloud and Onsite imaging/reporting and data analytic software options for improved workflow, accreditation, and referring physician satisfaction.

Ward Family Heart Center -
Children’s Mercy Kansas City ......................... 513
2401 Gillham Road
Kansas City, MO 64108
United States
Phone: 816-234-3000
childrensmercy.org


West Coast Ultrasound Institute .......................... 522
291 S La Cienega
Beverly Hills, CA 90211
United States
Phone: 310-289-5123
wcui.edu

The Pediatric Cardiac Ultrasound and Congenital Heart Disease Program at West Coast Ultrasound Institute allows students to gain a comprehensive knowledge of the echocardiographic evaluation of congenital and acquired heart disease in children. The classroom lectures and laboratory classes utilizing pediatric volunteers, are taught by experienced practitioners.

Whale Imaging ................................................. 411
200 Reservoir Street, Suite 301
Needham, MA 02494
United States
Phone: 844-862-4868
whaleimaging.com

Whale Imaging is a high tech medical imaging device manufacturer with R&D and marketing headquartered in Boston USA and manufacturing based in Beijing’s Hi-Tech Enterprise zone. We combine expert R&D and efficient manufacturing practice with a highly skilled and experienced international management and workforce to produce high quality and optimal value for our customers, above average returns for our stakeholders and opportunity for our employees. Our G-Arm multi-planar surgical fluoroscopy systems are USA FDA 510(k) cleared and European CE approved. Next generation G-Arm and diagnostic echo ultrasound products are in development. We are ISO13485/9001 certified and own a number of valuable patents. Our IP provides the ability to create disruptive new technologies and our low cost manufacturing capability allows us to introduce these to a global market at highly competitive pricing.

Wiley ............................................................ 243
350 Main Street
Malden, MA 02148
United States
Phone: 781-388-8200
wiley.com/go/cardiology

Wiley-Blackwell is the international scientific, technical, medical, and scholarly publishing business of John Wiley & Sons, with strengths in major academic and professional field and partnerships with many of the world’s leading societies. For more information, please visit wileyblackwell.com or onlinelibrary.wiley.com

Wolters Kluwer .............................................. 412
Two Commerce Square
2001 Market Street
Philadelphia, PA 19103
United States
Phone: 215-521-8300
wolterskluwer.com

Wolters Kluwer is the proud publisher of the Journals of the American Heart Association, including Circulation: Cardiovascular Imaging. We offer a full range of specialized books, journals and electronic media.
THANK YOU
ON BEHALF OF ALL OF US FOR SUPPORTING
THE ASE FOUNDATION & FIELD OF CARDIOVASCULAR ULTRASOUND.

HUMANITARIAN MISSIONS & TRAINING EVENTS
“One of the situations that we were confronted with was the fact that we were dealing with indigenous populations in a remote area who have minimal access to medical care. These are cases where an activity like ours had a major impact on these patients by having access to really advanced echocardiography.” Roberto Lang, MD, FASE, Volunteer, 2015 Argentina Mission

RESEARCH INVESTIGATOR SUPPORT
“The ASE (meeting) gave me the opportunity to present my research to a wide audience, from residents to echo techs to staff physicians. Their thoughts and questions gave me new insight into my own research, and I think have greatly improved the quality of my project.” Michelle Carlson, MD, 2015 Abstract Presenter Travel Grant Recipient

TRAVEL GRANTS & SCHOLARSHIPS
“For me, it was much more than just an opportunity to bolster my education with each session. This was a chance of a lifetime to become immersed in the career I am passionate about.”
Steven Kiyokawa, 2015 Student Scholarship Award Recipient

GUIDELINES-BASED PROJECTS TO STANDARDIZE PATIENT CARE
“It became very clear to ASE years ago that the reach of our guideline documents/products goes far beyond the US borders. With the translation of our guideline posters, webinars, and apps, ASEF funding allows the content of these documents to reach out to users around the world by being part of their daily lives in their offices, echo lab computers, or handheld devices.” Federico M. Asch, MD, FASE, Chair, ASE Guideline Committee

Making a WORLD of Difference
ASEFoundation.org

ASE Foundation
To learn more about the 2016 Annual Appeal, how to become a Sustainer, or about volunteer opportunities, please call 919-297-7169 or email foundation@asecho.org.

As a 501(c)3 organization, contributions made to the ASE Foundation are U.S. tax deductible to the fullest extent of law.
GOOD COMPANIES.  
GOOD WORKS.  

ASE would like to thank our Industry Roundtable members.

Visit our Industry Roundtable members at ASE’s 27th Annual Scientific Sessions.
About ASE

As the largest global organization for cardiovascular ultrasound imaging, the American Society of Echocardiography is the leader and advocate, setting practice standards and guidelines.

Comprised of nearly 17,000 physicians, sonographers, nurses, and scientists, ASE is a strong voice providing guidance, expertise, and education to its members with a commitment to improving the practice of ultrasound and imaging of the heart and cardiovascular system for better patient outcomes.

ASE MEMBERSHIP

ASE is an organization that is open to all echo enthusiasts. It serves its members in numerous ways by providing education, advocacy, research, practice guidelines, and a community for their profession. ASE membership includes over $750 of FREE CME credits a year, in addition to discounts on all ASE educational courses and products. Members also receive a monthly subscription to the Journal of the American Society of Echocardiography (JASE), help with legislative coding and reimbursement issues, an image library, and other career resources. ASE membership through December 31, 2016 is included with all nonmember registrations for the ASE 27th Annual Scientific Sessions.

ASE STAFF

Chief Executive Officer .......... Robin Wiegerink, MNPL
Chief Operating Officer ............ Hilary Lamb, MPA
Chief Standards Officer ............. Rhonda Price
Office Manager ....................... Gloria Brown
Vice President of Health Policy ...... Irene Butler, MPP
Foundation Specialist ............. Stacy Cheetham, MPA
Digital Marketing Manager ....... Arissa Cooper
Vice President of Internal Relations .. Mary Alice Dilday
Information Systems Manager ...... Paulette Harmon
Membership and Meetings Coordinator .. Jessica James
Director of Grant Activities .......... Cathy Kerr, CAE
Director of Education ............... Christina LaFuria
Meeting Planner ...................... Jackie Levine
Associate Manager, Education and Products .......... Alyssa Lawrentz
Meeting Planner ...................... Erin McClure
Senior Marketing Project Manager .. Tricia Meeks
JASE Managing Editor .............. Deborah Meyer
Accountant/Controller .............. Eric Modrak
Corporate Relations Manager .... Andie Piddington, MBA
Marketing & Communications Department Manager .. Angie Porter
Director of Membership .............. Natalya Read
Executive Assistant ................ Lori Smith
Vice President of Research .......... Andrea Van Hoever
Education and CME Manager ........ Ronna Yates, MEd

CONTACT US

2100 Gateway Centre Boulevard, Suite 310
Morrisville, NC 27560
Phone: 919-861-5574
Fax: 919-882-9900
Email: ASE@ASEcho.org
ASEcho.org
Officers and Board of Directors

ASE EXECUTIVE COMMITTEE

**PRESIDENT**
Susan E. Wiegers, MD, FASE
Lewis Katz School of Medicine at Temple University
Philadelphia, PA

**PRESIDENT-ELECT**
Allan L. Klein, MD, FASE
Cleveland Clinic
Cleveland, OH

**VICE PRESIDENT**
Vera H. Rigolin, MD, FASE
Northwestern University
Chicago, IL

**TREASURER**
Benjamin W. Eidem, MD, FASE
Mayo Clinic
Rochester, MN

**SECRETARY**
Deborah A. Agler, ACS, RDCS, FASE
Cleveland Clinic
Cleveland, OH

**COUNCIL REPRESENTATIVE**
Joe Kreeger, ACS, RCCS, RDCS, FASE
Children’s Healthcare of Atlanta
Duluth, GA

**IMMEDIATE PAST PRESIDENT**
Neil J. Weissman, MD, FASE
MedStar Research Institute,
Washington Hospital Center
Washington, DC

CHIEF EXECUTIVE OFFICER

Robin Wiegerink, MNPL
American Society of Echocardiography
Morrisville, NC

DIRECTORS

Leo Lopez, MD, FASE
Miami Children’s Hospital
Miami, FL

Sunil V. Mankad, MD, FASE
Mayo Clinic College of Medicine
Rochester, MN

Sue D. Phillip, RCS, FASE
Johns Hopkins School of Medicine
Baltimore, MD

Juan Carlos Plana, MD, FASE
Baylor College of Medicine
Houston, TX

Brad J. Roberts, ACS, RCS, FASE
Baylor Research Institute
Dallas, TX

Hollie D. Carron, RDCS, FASE
Children’s Medical Center
Dallas, TX

Aasha S. Gopal, MD, FASE
St. Francis Medical Center
Roslyn, NY

Tasneem Z. Naqvi, MD, FASE
Mayo Clinic
Scottsdale, AZ

Andrew Pellett, PhD, RCS, RDCS, FASE
Louisiana State University Health Sciences Center
New Orleans, LA

Cynthia C. Taub, MD, FASE
Montefiore Medical Center
New York, NY

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

Raymond F. Stainback, MD, FASE
Texas Heart Institute
Houston, TX

Stephen H. Little, MD, FASE
Methodist DeBakey Heart & Vascular Center, Weill Cornell Medical College
Houston, TX

Maryellen H. Orsinelli, RN, RDCS, FASE
The Ohio State University Wexner Medical Center, Richard M. Ross Heart Hospital
Columbus, OH

Elaine A. Shea, ACS, RCS, RCCS, FASE
Alta Bates Summit Medical Center
Berkeley, CA
**BOARD MEMBERS AND COUNCIL STEERING COMMITTEE CHAIRS**

**COUNCIL ON PEDIATRIC AND CONGENITAL HEART DISEASE**
Meryl S. Cohen, MD, FASE
Children’s Hospital of Philadelphia
Philadelphia, PA

**COUNCIL ON PERIOPERATIVE ECHOCARDIOGRAPHY**
Roman M. Sniecinski, MD, FASE
Emory University
Atlanta, GA

**COUNCIL ON CARDIOVASCULAR SONOGRAPHY**
Carol K. Mitchell, PhD, RDMS, RDMS, RVT, RT(R), FASE
University of Wisconsin Hospital
Madison, WI

**COUNCIL ON VASCULAR ULTRASOUND**
Esther H. Kim, MD, MPH, RPVI, FASE
Cleveland Clinic
Cleveland, OH

**PAST PRESIDENTS & DIRECTORS**
Benjamin F. Byrd III, MD, FASE
Vanderbilt University Medical Center
Nashville, TN

Patricia A. Pellikka, MD, FASE
Mayo Clinic
Rochester, MN

James D. Thomas, MD, FASE
Northwestern Memorial Hospital
Chicago, IL

**PAST PRESIDENTS**

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>City, State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meryl S. Cohen</td>
<td>Children’s Hospital of Philadelphia</td>
<td>Philadelphia, PA</td>
</tr>
<tr>
<td>Roman M. Sniecinski</td>
<td>Emory University</td>
<td>Atlanta, GA</td>
</tr>
<tr>
<td>Carol K. Mitchell</td>
<td>University of Wisconsin Hospital</td>
<td>Madison, WI</td>
</tr>
<tr>
<td>Esther H. Kim</td>
<td>Cleveland Clinic</td>
<td>Cleveland, OH</td>
</tr>
</tbody>
</table>

**PAST PRESIDENTS & DIRECTORS**

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>City, State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benjamin F. Byrd III</td>
<td>Vanderbilt University Medical Center</td>
<td>Nashville, TN</td>
</tr>
<tr>
<td>Patricia A. Pellikka</td>
<td>Mayo Clinic</td>
<td>Rochester, MN</td>
</tr>
<tr>
<td>James D. Thomas</td>
<td>Northwestern Memorial Hospital</td>
<td>Chicago, IL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>City, State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan S. Pearlman</td>
<td>University of Washington</td>
<td>Seattle, WA</td>
</tr>
<tr>
<td>Michael H. Picard</td>
<td>Massachusetts General Hospital</td>
<td>Boston, MA</td>
</tr>
<tr>
<td>Richard L. Popp</td>
<td>Stanford University Medical Center</td>
<td>Palo Alto, CA</td>
</tr>
<tr>
<td>Harry Rakowski</td>
<td>The Toronto Hospital</td>
<td>Toronto, Ontario, Canada</td>
</tr>
<tr>
<td>Thomas Ryan</td>
<td>The Ohio State University Heart Center</td>
<td>Columbus, OH</td>
</tr>
<tr>
<td>David J. Sahn</td>
<td>Oregon Health &amp; Science University</td>
<td>Portland, OR</td>
</tr>
<tr>
<td>Arthur E. Weyman</td>
<td>Massachusetts General Hospital</td>
<td>Boston, MA</td>
</tr>
<tr>
<td>William A. Zoghbi</td>
<td>Methodist DeBakey Heart &amp; Vascular Center</td>
<td>Houston, TX</td>
</tr>
</tbody>
</table>
# Board, Council, and Committee Meetings

## Friday June 10

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASE Board of Directors</td>
<td>3:00 – 5:00 PM</td>
<td>Cirrus Room, Sheraton Seattle</td>
</tr>
<tr>
<td>Pediatric and Congenital Heart Disease Council Steering Committee</td>
<td>6:00 – 8:30 PM</td>
<td>Room 307-8</td>
</tr>
</tbody>
</table>

## Saturday June 11

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASE Foundation Annual Appeal Committee</td>
<td>7:30 – 9:00 AM</td>
<td>Room 303</td>
</tr>
<tr>
<td>Membership Steering Committee</td>
<td>9:00 – 10:00 AM</td>
<td>Room 304</td>
</tr>
<tr>
<td>Industry Roundtable Committee</td>
<td>9:30 – 11:30 AM</td>
<td>Room 305</td>
</tr>
<tr>
<td>Sonographer Council Steering Committee</td>
<td>10:00 – 11:30 AM</td>
<td>Room 307-8</td>
</tr>
<tr>
<td>Nominating Committee</td>
<td>11:00 AM – 12:00 PM</td>
<td>Room 304</td>
</tr>
<tr>
<td>International Relations Advisory Committee</td>
<td>1:00 – 2:30 PM</td>
<td>Room 305</td>
</tr>
<tr>
<td>WASE Normal Values Study</td>
<td>3:30 – 5:30 PM</td>
<td>Room 310</td>
</tr>
</tbody>
</table>

## Sunday June 12

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocacy Committee</td>
<td>9:45 – 11:15 AM</td>
<td>Room 303</td>
</tr>
<tr>
<td>Workflow &amp; Lab Management Task Force</td>
<td>10:00 – 11:00 AM</td>
<td>Room 306</td>
</tr>
<tr>
<td>Council on Perioperative Echocardiography Steering Committee</td>
<td>10:15 – 11:45 AM</td>
<td>Room 302</td>
</tr>
<tr>
<td>Finance Committee</td>
<td>10:45 AM – 12:00 PM</td>
<td>Room 309</td>
</tr>
<tr>
<td>Awards Committee</td>
<td>11:30 AM – 12:30 PM</td>
<td>Room 305</td>
</tr>
<tr>
<td>FASE Advisory Committee</td>
<td>2:30 – 3:30 PM</td>
<td>Room 304</td>
</tr>
</tbody>
</table>

## Monday June 13

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Committee</td>
<td>9:00 – 10:30 AM</td>
<td>Room 307-8</td>
</tr>
<tr>
<td>Education Committee</td>
<td>10:00 – 11:30 AM</td>
<td>Room 304</td>
</tr>
<tr>
<td>CME Committee</td>
<td>11:45 AM – 1:15 PM</td>
<td>Room 304</td>
</tr>
<tr>
<td>Guidelines and Standards Committee</td>
<td>11:45 AM – 1:15 PM</td>
<td>Room 309</td>
</tr>
<tr>
<td>Council on Vascular Ultrasound Steering Committee</td>
<td>12:00 – 1:30 PM</td>
<td>Room 302</td>
</tr>
<tr>
<td>Governance Task Force</td>
<td>12:00 – 1:00 PM</td>
<td>Room 306</td>
</tr>
<tr>
<td>Bylaws and Ethics Committee</td>
<td>1:00 – 2:00 PM</td>
<td>Room 304</td>
</tr>
<tr>
<td>Point of Care Task Force</td>
<td>1:00 – 2:00 PM</td>
<td>Room 305</td>
</tr>
<tr>
<td>Innovation Competition Task Force</td>
<td>2:00 – 3:00 PM</td>
<td>Room 303</td>
</tr>
</tbody>
</table>

## Tuesday June 14

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Relations Task Force</td>
<td>10:00 – 11:00 AM</td>
<td>Room 302</td>
</tr>
<tr>
<td>Scientific Sessions Program Committee</td>
<td>11:30 AM – 1:00 PM</td>
<td>Room 303</td>
</tr>
<tr>
<td>Pediatric Echocardiography Lab Directors</td>
<td>11:30 AM – 1:00 PM</td>
<td>Room 310</td>
</tr>
</tbody>
</table>

Initiative to Standardize Deformation Imaging | 3:00 – 5:00 PM  | Room 307-8  
JASE Editorial Board | 4:00 – 5:15 PM  | Room 310  

---

**Initiative to Standardize Deformation Imaging** | 3:00 – 5:00 PM | Room 307-8  
**JASE Editorial Board** | 4:00 – 5:15 PM | Room 310  
**MONDAY JUNE 13**  
**Research Committee** | 9:00 – 10:30 AM | Room 307-8  
**Education Committee** | 10:00 – 11:30 AM | Room 304  
**CME Committee** | 11:45 AM – 1:15 PM | Room 304  
**Guidelines and Standards Committee** | 11:45 AM – 1:15 PM | Room 309  
**Council on Vascular Ultrasound Steering Committee** | 12:00 – 1:30 PM | Room 302  
**Governance Task Force** | 12:00 – 1:00 PM | Room 306  
**Bylaws and Ethics Committee** | 1:00 – 2:00 PM | Room 304  
**Point of Care Task Force** | 1:00 – 2:00 PM | Room 305  
**Innovation Competition Task Force** | 2:00 – 3:00 PM | Room 303  

**TUESDAY JUNE 14**  
**Public Relations Task Force** | 10:00 – 11:00 AM | Room 302  
**Scientific Sessions Program Committee** | 11:30 AM – 1:00 PM | Room 303  
**Pediatric Echocardiography Lab Directors** | 11:30 AM – 1:00 PM | Room 310  

---
The ASE Education and Research Foundation (ASEF) is ASE’s charitable arm, helping to assure the viability and visibility of cardiovascular ultrasound. Every dollar raised through the Foundation’s Annual Appeal goes directly back out into the field. In 2015 over 3,800 donors gave more than $250,000 which exceeded the campaign goal by more than $25,000!

All contributions to the Foundation support the following 2016 initiatives:

» Area of Greatest Need
» Demonstrating the Value of Cardiovascular Ultrasound
» Guideline Translations and Global Dissemination
» Global Health Initiatives and Humanitarian Events
» Patient Awareness
» Research Investigator Support
» Research Studies
» Travel Grants and Scholarships

Stop by the ASE Foundation booth, outside the Exhibit & Poster Hall on Level 4, to learn more about the fundraising events being hosted in Seattle, such as the Annual Research Awards Gala and the Scavenger Hunt. Pick up your “I Donated!” sticker, inquire about volunteer opportunities, and learn more about ASEF. ASEF bracelets will also be on sale. Donate today and help us to make a world of difference!

COMPETE WITH YOUR FEET – CARDIOVASCULAR CHALLENGE

Get moving with ASEF! This year as a cardiovascular health initiative, ASEF will be supporting a “pedometer challenge” during the meeting. Key areas around the convention center will display step targets. Record your steps taken at the Conference each day, and compete to log the most steps. You must visit the ASEF Booth outside the Poster & Exhibit Hall on Level 4 by 12 Noon on Monday, June 13, to log your steps for a chance to win. The first place prize, a $100 Amazon gift card, will go to the person with the highest step total. Second place will receive a signed copy of I Had to Survive: How a Plane Crash in the Andes Inspired My Calling to Save Lives by Dr. Roberto Canessa. The person with the third highest step count will receive an ASEF hat. The winner will also be featured in an upcoming issue of the ASEF eNewsletter! For more information visit the ASEF Booth.

IMAGES FROM THE HEART PHOTO EXHIBITION

New this year, ASEF is presenting a curated photo exhibition of photos taken by ASE members as they traveled the world participating in humanitarian events. ASE members were encouraged to enter photographs that captured faces of people met along the way, landscapes, cultural observations, etc. and to write a few words about the heartfelt memories and what the photos meant to them. Stop by the ASEF Booth outside the Exhibit & Poster Hall on Level 4 to view the photos and stories submitted this year.
This list recognizes cumulative giving from individual donors as of December 31, 2015. Cumulative giving levels are updated annually at the conclusion of that year’s Annual Appeal.

FOUNDER’S CIRCLE ($100,000+)
A. Jamil Tajik, MD*

LEGACY CIRCLE ($25,000+)
Thomas Ryan, MD, FASE**
William A. Zoghbi, MD, FASE**

AMBASSADOR’S CIRCLE ($10,000+)
David B. Adams, RCS, RDCS, FASE*
Jose Banchs, MD, FASE
Harvey Feigenbaum, MD, FASE
David H. Forst, MD, FASE*
Edward A. Gill, MD, FASE
Rebecca T. Hahn, MD, FASE
Brian D. Hoit, MD, FASE*
Judy W. Hung, MD, FASE
Sanjiv Kaul, MD, FASE**
Roberto M. Lang, MD, FASE*
Steven J. Lester, MD, FASE
Barbara N. McCallister, RN, RDCS
Sherif F. Nagueh, MD, FASE
Navin C. Nanda, MD
Miguel A. Quiñones, MD
Vera H. Rigolin, MD, FASE
Geoffrey A. Rose, MD, FASE*
Samuel Chi Bun Siu, MD, SM, FASE
James D. Thomas, MD, FASE**
Susan E. Wiegers, MD, FASE

EDLER CIRCLE ($5,000+)
Merri L. Bremer, RN, RDCS, FASE
Benjamin F. Byrd, III, MD, FASE*
Pamela S. Douglas, MD, FASE*
Benjamin W. Eidem, MD, FASE
Craig E. Fleishman, MD, FASE
Julius M. Gardin, MD, FASE*
Linda D. Gillam, MD, FASE*
Bijoy K. Khandheria, MD, FASE*
Peg Knoll, RDCS, FASE*
Jonathan R. Lindner, MD, FASE
Sunil Mankad, MD, FASE
Randolph P. Martin, MD, FASE*
Marti L. McCulloch, MBA, BS, RDCS, FASE*
Fletcher A. Miller, Jr., MD, FASE
Bharatbhushan J. Patel, RDCS, RVS, RDMS, FASE
Alan S. Pearlman, MD, FASE*
Patricia A. Pelliikka, MD, FASE
Michael H. Picard, MD, FASE*
Peter S. Rahko, MD, FASE
Stephen G. Sawada, MD*
James B. Seward, MD, FASE*
Raymond F. Stainback, MD, FASE*
Lissa Sugeng, MD, MPH, FASE
Richard L. Weiss, MD, FASE*

DOPPLER CIRCLE ($1,000+)
Theodore P. Abraham, MD, FASE
Deborah A. Agler, RCT, RDCS, FASE
Devendra K. Amin, MD
Jayashri R. Aragam, MD, FASE
Federico M. Asch, MD, FASE
Dennis G. Atherton, RDCS, RCT, RRT, FASE
Gerard P. Aurigemma, MD, FASE
Ford Ballantyne, III, MD
Holly C. Bazarnick, RDCS*
J. Todd Belcek, BS, RCS, RDCS, FASE*
Marek Belohvalek, MD, PhD, FASE
Mark G. Berry, DO, FASE
Elizabeth A. Bisinov, MD, FASE
Lori Blauwet, MD, FASE
Michael J. Boland, MD
Juan-Carlos Brenes, MD, FASE
Deborah J. Creighton, RDCS, RVT, FASE
Linda J. Crouse, MD*
Anthony N. DeMaria, MD, FASE*
John M. Dent, MD, FASE
Manu and Rama Desai
Milind Y. Desai, MD
Teri Dittrich, RDCS, FASE
Jean G. Dumesnil, MD, FASE
Sidney K. Edelman, PhD*
Dali Fan, MD, PhD, FASE
Annita J. Flinn, BA, RDCS, FASE*
Rafael A. Flores, RVT, RDCS*
Michael C. Foster, RCS, RDCS, FASE
Kathryn E. Glas, MD, FASE
Steven A. Goldstein, MD
John Gorcsan, III, MD, FASE*
Frank J. Green, MD
Richard A. Grimm, DO, FASE
Ken A. Hahn, MD, FASE*
Kathleen A. Harper, DO*
Kenneth D. Horton, RCS, RDCS, FASE*
Rachel Hughes-Doichev, MD, FASE
Helen M. Hunt, MA*
Wael A. Jaber, MD
Cynthia Jones
Barry L. Karon, MD, FASE
Richard E. Kerber, MD, FASE*
Mary Etta King, MD, FASE
Allan L. Klein, MD, FASE
Smadar Kort, MD, FASE
Joe Kreeger, RCCS, RDCS, FASE
Itzhak Kronzon, MD, FASE
Karla M. Kurrelmeyer, MD, FASE
Arthur J. Labovitz, MD, FASE
Wyman W. Lai, MD, MPH, FASE
Georanne Lammertin, MBA, RCS, RDCS, FASE
Elizabeth Le, MD, FASE
Mark P. Lebeis, MD*
Howard Leong-Poi, MD, FASE
Stamatios Lerakis, MD, FASE*
Robert A. Levine, MD*
Richard C. Madlon-Kay, MD*
Joan C. Main, BS, RDCS, MBA, FASE
Michael L. Main, MD, FASE
Majesh Makan, MD, FASE
Judy R. Mangion, MD, FASE
Domenic Marini, MD*
Jane E. Marshall, BS, RDCS, FASE*
David McCarthy, MBCh
Elizabeth F. McIlwain, MHS, RDCS, RCS, FASE
David K. Millward, MD*
G. Wayne Moore, BSc, MBA, FASE*
Sharon L. Mulvagh, MD, FASE*
Brad I. Munt, MD*
Tasneem Z. Naqvi, MD, FASE
Vuyisile Nkomo, MD
Jae K. Oh, MD, FASE
Joan J. Olson, BS, RDCS, RVT, FASE
David A. Orsinelli, MD, FASE
Maryellen H. Orsinelli, RN, RDCS, FASE
Catherine M. Otto, MD*
Felix L. Oviasu, MD
Natesa G. Pandian, MD
Alfred F. Parisi, MD, FASE*
Sue D. Phillip, RCS, FASE
Richard L. Popp, MD, FASE*
Thomas R. Porter, MD, FASE
Kit B. Powers, MD, FASE*
Harry Acquatella, MD, FASE
William J. Alt, MD
Carolyne A. Altman, MD, FASE
Solomon Aronson, MD, MBA*
Thomas M. Brown, Jr., MD
Dan J. Carlile, RDCS, FASE*
Michael Chan, MD*
Kent Chastain, MD*
Nam S. Chung, MD, FASE
Craig B. Clark, DO, FASE
Meryl S. Cohen, MD, FASE
Keith A. Collins, MS, RDCS
Ranley M. Desir, MD*
Mary Alice Dilday
Hisam Dokainish, MD, FASE
John C. Drow, RTR, RVS, RDCS, FASE*
Norman S. Eshoo, MD
William H. Fabian, MD
George Gibson, MD
Andrew M. Hauser, MD, FASE*
Donna D. Hendeles, RCVT, RCS, FASE*
Sydni Hennemann, BS, RDCS, FASE
Jose E. Herrera, MD*
Jeff Hill, BS, RDCS, FASE
Howard W. Jackson, Jr., BS, RDCS
Madhavi Kadiyala, MD, FASE
Alan S. Katz, MD, FASE
William E. Katz, MD, FASE
Andrew M. Keller, MD, FASE
Thomas R. Kimball, MD, FASE
Richard A. Kirkpatrick, MD*
Joseph A. Kisslo, MD, FASE*
Jun Kwan, MD*
Oi Ling B. Kwan, BS, RDCS, FASE
Paula Medrano Lara, RDCS
David B. Lieb, MD, FASE*
Sheldon E. Litwin, MD, FASE
Helga Lombardo, RDCS, FASE
Sue Maisey, MBA, RDCS, RCS, FASE
Wilson Mathias, Jr., MD, PhD, FASE
David J. Mehlman, MD, FASE
L. LuAnn Minich, MD, FASE
Douglas Misch, RCIS, RCS, RDCS, RRT
Carol K. Mitchell, PhD, RDMS, RDCS, RVT, RVT, RT(R), FASE
Victor Mor-Avi, PhD, FASE
Vijay Nambi, MD, FASE
Aireza Nazeri, MD*
Ugo N. Okereke, MD
Roger C. On, MD
Margaret M. Park, BS, RDCS, RVT, FASE
Juan Carlos Plana, MD, FASE
Maria A. Pernetz, RDCS, RVT, FASE
Suzanne Poston, RDCS, FASE
Jose R. Rivera Del Rio, MD, FASE
Brad J. Roberts, RCS, FASE
Angela Sacca, RVT, RCS
Retu Saxena, MD
Nelson B. Schiller, MD
Jack S. Shanewise, MD, FASE*
David I. Silverman, MD, FASE
Norman H. Silverman, MD, FASE*
Binoy K. Singh, MD*
Aldona M. Siwinska, MD
Robert A. Skotnicki, DO, FASE
Kirk Spencer, MD, FASE
Robert L. Wade, MD*
Alan D. Waggoner, MHS, RDCS*
Rex J. Winters, MD

*Denotes Charter Supporter
^ Denotes Learning Lab Supporter
2015 Annual Appeal Donors

ASE thanks the following investors for their demonstrated leadership and generous support of the Foundation in 2015. This list reflects all gifts of $50 or more made from January 1 through December 31, 2015. A complete list of all 2015 Annual Appeal donors can be found at ASEFoundation.org.

LEAD INVESTORS

PHYSICIANS $2,000+, ALL OTHERS $1,000+
David Adams, RCS, RDCS, ACS, FASE
Jose Banchs, MD, FASE
Merri Bremer, EdD, RN, RDCS, ACS, FASE*
Manu and Rama Desai
Teri Dittrich, BA, RDCS, FASE
Harvey Feigenbaum, MD, FASE
Craig Fleishman, MD, FASE
Edward Gill, MD, FASE
Rebecca Hahn, MD, FASE
Brian Hoit, MD, FASE
Allan Klein, MD, FASE
Peg Knoll, RDCS, FASE
Georgia Lammertin, MBA, RCS, RDCS, FASE
Roberto Lang, MD, FASE
Steven Lester, MD, FASE
Joan Main, BS, RDCS, MBA, FASE*
Navin Nanda, MD
Bharathbushan Patel, RDCS, RVS, RDMS, FASE
Jaydev Patel on behalf of the Patel Family Foundation
Miguel Quiñones, MD, FASE
Vera Rigolin, MD, FASE
Geoffrey Rose, MD, FASE
David Rubenson, MD, FASE
Thomas Ryan, MD, FASE
Douglas Shook, MD, FASE
Samuel Siu, MD, FASE
Raymond Stainback, MD, FASE
Lissa Sugeng, MD, MPH, FASE
A. Jamil Tajik, MD, FASE
Susan Wiegard, MD, FASE

VISIONARY INVESTORS

PHYSICIANS $1,000+, ALL OTHERS $500+
Federico Asch, MD, FASE
Ford Ballantyne III, MD
Mark Berry, DO, FASE
Patrick Coon, RCCS, RDCS, FASE
Deborah Creighton, RDCS, RVT, FASE
Linda Gillam, MD, FASE
Steven Goldstein, MD, FASE
Judy Hung, MD, FASE
Sanjiv Kaul, MD, FASE
Joe Kreeger, ACS, RCCS, RDCS, FASE
Jonathan Lindner, MD, FASE
Stephen Little, MD, FASE
Rosemary Magee and Bridget Rubin in honor of David Adams, RCS, RDCS, ACS, FASE
Sunil Mankad, MD, FASE*
Tasneem Naqvi, MD, FASE
Maryellen Orsinelli, RN, RDCS, FASE
Alan Pearlman, MD, FASE
Patricia Pellikka, MD, FASE
Peter Rahko, MD, FASE
Frank Silverstey, MD, FASE
James Thomas, MD, FASE
Melissa Wasserman, RDCS, RCCS, FASE

PARTNER INVESTORS

PHYSICIANS $500+, ALL OTHERS $250+
Deborah Agler, RCT, RDCS, FASE
Hollie Carron, RDCS, FASE
Meryl Cohen, MD, FASE
David Forst, MD, FASE
Stefanie Fry, MD, FASE
Kymberly Glyde, RDCS, FASE
Ken Hahn, MD, FASE
Kenneth Horton, ACS, RCS, FASE
Rachel Hughes-Doichev, MD, FASE
Brenda Khadije
Howard Leong-Poi, MD, FASE
Leo Lopez, MD, FASE
G. Burkhard Mackensen, MD, PhD, FASE
Michael Main, MD, FASE
Jane Marshall, BS, RDCS, FASE
Elizabeth McIlwain, MHS, RCS, FASE
Carol Mitchell, PhD, RDMS, RDCS, RVT, RT(R), FASE
G. Wayne Moore, BSC, MBA, FASE
Sharon Mulvagh, MD, FASE
Stephanie Nay, RDCS, RCCS, FASE
Joan Olson, BS, RDCS, RVT, FASE
David Orsinelli, MD, FASE
Andy Pellett, PhD, RCS, RDCS, FASE
Evelina Petrovets, RDCS
Michael Picard, MD, FASE
Angela Saca, RVT, RCS
Retu Saxena, MD
Nikolaos Skubas, MD, FASE
Kirk Spencer, MD, FASE
David Wiener, MD, FASE
Karen Zimmerman, BS, ACS, RDCS, (AE, PE), RVT, FASE
advocate investors

physicians $250+, all others $100+
Jayashri Aragam, MD, FASE
Valerie Armstead, MD
Gerard Aurigemma, MD, FASE
Rolf Baumann
Holly Bazarnick, RDCS
Marek Belohlavek, MD, PhD, FASE
Lori Blauwet, MD, FASE
Paul Braum, RDCS, RCS, RVT, RVS, ACS, FASE
Donica Bryant, BS, RDCS
Abby Buerkett
Jeanne DeCara, MD, FASE
Mary Alice Dilday
Benjamin Eidem, MD, FASE
Dali Fan, MD, PhD, FASE
Brian Fey, BA, RDCS (AE, PE), FASE
Lise Fishman, RDCS
Michael Foster, RCS, RDCS, FASE*
Peter Frommelt, MD, FASE
Julius Gardin, MD, FASE
Kathryn Glas, MD, FASE
Asha Gopal, MD, FASE
Richard Grimm, DO, FASE
Jeff Hill, BS, ACS, FASE
Jill Inafuku, BS, RDCS, RDMS, FASE
Wael Jaber, MD, FASE
Thomas Johnson, MD, FASE
Martin Keane, MD, FASE
Richard Kerber, MD, FASE
Berthold Klas
H. Helen Ko, BS, ACS, RDMS, RDCS, RCCS, FASE
Smadar Kort, MD, FASE
Oi Ling Kwan, BS, RDCS, FASE
Christina LaFuria
Feroze Mahmood, MD, FASE
Gerald Marx, MD, FASE
Michael Mastela, MSEE
Philip McDuffee, RDCS
Rick Meece, ACS, RDCS, RCIS, FASE
Lynette Mendoza (De Los Santos), MBA, RDCS, FASE
Debbie Meyer
Mark Monaghan, PhD
James Moran, MD
Bernhard Mumm, MSc
Dakshina Murthy, MD, FASE
Sherif Nagueh, MD, FASE
Yetunde Olowe, MD, PhD
Margaret Park, BS, ACS, RDCS, RVT, FASE
Dilip Patel
Maria Pernetz, RDCS, FASE
Sue Phillip, RCS, FASE
Tammy Plumb
Angie Porter
Rhonda Price
Jose Rivera, RCS, CPT
A. Jody Rowland, MD
Joseph Sanborn
Gregory Sandidge, RDCS
Stephen Sawada, MD
Marielle Scherrer-Crosbie, MD, PhD, FASE
Russell Schiff, MD, FASE
Douglas Segar, MD, FASE
Partho Sengupta, MBBS, MD, DM, FASE
Mikel Smith, MD, FASE
Roman Sniecinski, MD, FASE
Vincent Sorrell, MD, FASE
William Stewart, MD, FASE
John Toptine, ACS, RCS, RDCS, FASE
Andrea M. Van Hoever
Thomas Van Houten, MPH, RDCS, FASE
Robin Wiegerink, MNPL
Susan Wilansky, MD, FASE
Sandra Witt, RDCS, FASE
Pierre Wong, MD
Malissa Wood, MD, FASE
Donna Yap, RDCS, RVT
Luciana Young, MD, FASE
William Zoghbi, MD, FASE

associate investors

physicians & all others $50+
Abdullah Alkhazmari, MD
Carolyn Altman, MD, FASE
Janine Arruda, MD
Jeanne Baffa, MD, FASE
Judith Becker, MD
Terry Bejot, MD
Sagit Ben Zekry, MD
Barbara Berko, MD
Alvin Stephen Blaustein, MD
Mary Beth Brady, MD, FASE
Joan Briller, MD, FASE
Leslie Brookfield, MD
Patricia Brown
Michael Cahalan, MD
Elena Castillo
Krishnaswamy Chandrasekaran, MD, FASE
Deyvani Chowdhury
Jan Claessens, MD
William Clark, RCS, RVS
Frederick Cobey, MD, FASE
Keith Collins, MS, RDCS, FASE
Elizabeth Crawford, RDCS (AE, PE, FE), FASE
Jacob Dal-Bianco, MD, FASE
Anthony DeMaria, MD, FASE
Kayla Devine
Evan Dixon, MD
Pamela Douglas, MD, FASE
Mamata Eagam, MD
William Elliott, DO
Sibel Enar, MD, FASE
Gregory Ensing, MD, FASE
Norman Eshoo, MD
Fang Fang, MD
Luiz Ferlante, MD
Julie Fetters, MD, FASE
Alan Finley, MD, FASE
David Friedman, MD, FASE
Mahender Gaba, MD
Kelvin Gabel
Audrey Gardner
Volker Gerling, MD
Tal Geva, MD, FASE
Nicole Giddins
Robert Glover, MD, FASE
V. Jason Godenir, MD
Sheryl Goss, RDQS
Vitor Guerra, MD
Sherif Helmy, MBBch, MSc, MD, FASE
John Hudson, MD
Edward Hulten, MD, MPH
Daniel Humiston, MD
Helen Hunt, MA
Juliet Jensen, RDQS
Garvan Kane, MD, FASE
William Katz, MD, FASE
James Kirkpatrick, MD, FASE
Georgia Korkokios, RDQS, RDQS, RVT
John Kovalchin, MD, FASE
Chris Kramer, BA, RDQS, FASE
Itzhak Kronzon, MD, FASE
Karla Kurrelmeyer, MD, FASE
Wyman Lai, MD, MPH, FASE
Gilead Lancaster, MD, FASE
Ruby Lara, RDQS (PE, FE), FASE
John Larry, MD
Elizabeth Le, MD, FASE
Judy Mangion, MD, FASE
Richard Martinez, MD, FASE
Veronica Massey
Martí McCulloch, MBA, BS, RDQS, FASE
Lawrence Melniker, MD, MS
Douglas Misch*
Victor Mor-Avi, PhD, FASE
Rajesh Movva, MD
Sandip Mukherjee
Deirdre Murphy, MD
Thippewamy Murthy, MD
Raymond Musarra, RDQS, RCS, FASE
Yoshie Nakajima
Dale Nelson, MD
Alina Nicoara, MD, FASE
Jill Odabashian, RDQS, FASE
Jae Oh, MD, FASE
Roger On, MD
Richard Palma, BS, RDQS, RCS, ACS, FASE
Ira Parness, MD, FASE
Amit Patel, MD
Sandeep Patel, MD
Daniel Patton, MD
Andie Piddington
Juan Plana, MD, FASE
Kit Powers, MD, FASE
Kimberly Radigan, RDQS, FASE
Emilio Raimondo, MD
Vijay Rao, MD, PhD, FASE
Staci Riley, RDQS, RDQS, RVT
Brad Roberts, ACS, RCS, FASE
L. Leonardo Rodriguez, MD
Veronika Rodriguez, RDQS, FASE
Terence Rourke, RCS
John Roy, MD, PhD
Lawrence Rudski, MD, FASE
Ritu Sachdeva, MBBS, FASE
Alberto San Juan, Jr., MD
Thriveri Sanagala, MD, FASE
Gonzalo Saravi, MD, FASE
Thomas Schleeter, MD
Earl Schulte, MD
Jackie See, MD
Sanjiv Shah, MD, FASE
Aldona Siwinska, MD
Timothy Slesnick, MD, FASE
Neha Soni-Patel, BS, RDQS
Shubhika Srivastava, MD, FASE
Nicola Stanley
G. Monet Strachan, RDQS, FASE
Madhav Swaminathan, MD, FASE
Nancy Szabo-Boryczewski, RDQS, AE, PE, FASE
Cynthia Taub, MD, FASE
Jasim Thamer
Wendy Tsang, MD
Hemavathi Umamaheswar, MA, RDQS, FASE
Patricia Vassallo, MD, FASE
Juan Villafane, MD, FASE
Maria Vivaldi, MD
Anh Vu, MD
Rory Weiner, MD, FASE
Richard Weiss, MD, FASE
Neil Weissman, MD, FASE
Arthur Weyman, MD, FASE
Hak Wong, MD
Justina Wu, MD

*Denotes an ASE Foundation Sustainer
Fellows of the American Society of Echocardiography (FASE)

This prestigious designation is only conferred upon a peer review of credentials specific to the field of cardiovascular ultrasound. ASE is proud to recognize these members for their dedication and accomplishments. Listed below are new FASE members from the February, April, June, August, October, and December cycles. For a complete list of FASE, please visit SeeMyHeart.org. Learn more about applying for FASE at ASEcho.org or stop by ASE’s booth #221.

NEW 2015 FASE RECIPIENTS
Sahar Abdelmoneim, MD, FASE
Shvetank Agarwal, MD, FASE
Ildiko Agoston, MD, FASE
Osama Ahmed Khalil, MD, FASE
Nausheen Akhter, MD, FASE
Andrei Alfirevic, MD, FASE
Sharif Al-Ruzzeh, MD, FASE
Mary Arthur, MD, FASE
Craig Asher, MD, FASE
Peter Bartz, MD, FASE
Anne Bello, BS-HCA, RDMS, RDCS, FASE
Himani Bhatt, MD, FASE
Nicole Bhave, MD, FASE
Crystal Blake-Parlin, RDCS, RVT, FASE
Daniel Blanchard, MD, FASE
Kunal Bodiwala, MD, FASE
Daniel Bourque, MS, RCS, FASE
Chad Bousanti, RCS, FASE
Hector Busto, RDCS, FASE
Raylene Choy, RDCS, FASE
Tomas Francisco Cianciulli, MD, FASE
Keith Collins, MS, RDCS, FASE
Mary Craft, RDCS, FASE
James Crandell, MD, FASE
Rameshchandra Dabhi, MD, FASE
Jacob Dal-Bianco, MD, FASE
Franca Dartnall, FASE
Brian Davidson, MD, FASE
Latha Doshetty, RDCS, FASE
Paulo Dourado, MD, FASE
Sanjay Dwarakanath, MD, FASE
Huda Elshershari, MD, FASE
Maryam Esmaeilzadeh, MD, FASE
Afsoon Fazlinezhad, MD, FASE
Daniel Forsha, MD, FASE
Grace Freire, MD, FASE

FASE LOUNGE

SATURDAY, JUNE 11 – MONDAY, JUNE 13 ...... 9:00 AM – 4:00 PM
TUESDAY, JUNE 14 ...... 9:00 AM – 2:00 PM
ROOM 616

Enjoy the benefits of being a Fellow of the American Society of Echocardiography (FASE) at the exclusive FASE Lounge. Come and pick up your FASE ribbon to show your dedication to your field and your prestigious designation. Lounge amenities will allow you to connect with friends, grab some refreshments, and take a break from the hustle and bustle of the day while being close to all the sessions.

MEET FACE TO FASE

Are you interested in becoming a Fellow of the American Society of Echocardiography (FASE) but have questions about whether you may qualify? Stop by the ASE Booth #221 in the Exhibit Hall, during the morning and afternoon breaks on Sunday and Monday, to talk one-on-one with a member of the FASE Advisory Group or ASE staff about any questions you have about achieving the FASE designation.
October 21-23, 2016
Conrad Bangkok
Bangkok, Thailand

**Course Director**
Jonathan R. Lindner, MD, FASE
Oregon Health & Science University, Portland, OR

**Course Co-Directors**
James D. Thomas, MD, FASE
Past President, ASE
Northwestern Memorial Hospital, Chicago, IL

Kian-Keong Poh, MBBChir, FASE
National Heart Center Singapore, Singapore

Register now at ASECho.org/ASEAN

Jointly Provided by ASE and the ASE Foundation, and held in cooperation with the Thai Society of Echocardiography
Optimizing Quality in Your Diagnostic Imaging Facility

Introducing the new Quality Improvement (QI) Self-Assessment Tool from IAC. Created to help your facility employ and document continuous process improvement, the IAC QI Self-Assessment Tool provides facilities with a mechanism for meeting the quality measures required by each IAC diagnostic imaging accreditation program (Vascular Testing, Echocardiography, Nuclear/PET, MRI and CT).

Now included as part of IAC’s Online Accreditation portal, the new QI tool provides participating facilities a data-driven, objective measure of their QI progress for use in complying with the IAC Standards and Guidelines for Accreditation and fulfilling a variety of facility quality initiatives. Over time, facilities will be able to benchmark their findings both internally and with the imaging community as a whole.

Using the new IAC QI tool, facilities self-assess their own imaging studies and receive a quantitative report that targets opportunities for improvements, leading to enhanced patient care.

Learn more about this exciting new IAC innovation at intersocietal.org/Qtool.

What can IAC accreditation do for your facility?

IAC

VASCULAR TESTING
ECHOCARDIOGRAPHY
NUCLEAR/PET
MRI
CT

DENTAL CT
CAROTID STENTING
VEIN CENTER
CARDIAC
ELECTROPHYSIOLOGY

Improving health care through accreditation®

800.838.2110 • intersocietal.org

Visit the IAC at ASE 2016 • Booth #338
It is the policy of ASE to ensure balance, independence, objectivity, and scientific rigor in all of its educational activities. All speakers at the 27th Annual Scientific Sessions have agreed to the following:

» The information presented to the learner will be unbiased, scientifically balanced and based on best available evidence and best practices in medicine.

» All reasonable clinical alternatives will be presented when making practice recommendations.

» All scientific research referred to, reported or used in support or justification of patient care recommendations will conform to the generally accepted standards of experimental design, data collection, and analysis.

» To disclose to the audience when products/services are not labeled for the use under discussion or when the products are still under investigation.

» To comply with patient confidentiality requirements as outlined in the Health Insurance Portability and Accountability Act (HIPAA) by removing any and all patient identifiers from presentations.

» Relationships with commercial interests will not influence or bias the presentations and/or planning of the activity.

ASE is committed to resolving all conflicts of interest issues, and its mandate is to retain only those speakers with financial interests that can be reconciled with the goals and educational integrity of the educational program. In accordance with these policies, the ASE implemented mechanisms 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.

In accordance with this policy and the ACCME, all presenters have indicated whether or not they and/or their spouse/significant other have a relationship with a commercial interest which, in the context of their presentation, may be perceived by the audience as a real or apparent conflict of interest (e.g. ownership of stock, research grant, etc.). The ACCME defines a commercial interest as any proprietary entity producing healthcare goods or services consumed by, or used on patients, with an exception of nonprofit or government organizations and non-healthcare related companies. The ACCME does not consider providers of clinical services directly to patients to be a commercial interest.

RELATIONSHIP CODES

1. SPEAKER/SPEAKERS’ BUREAU
2. CONSULTANT, ADVISOR
3. STOCK OWNERSHIP (NOT INCLUDING STOCKS OWNED IN A MANAGED PORTFOLIO)
4. RESEARCH GRANT SUPPORT (INCLUDING GRANTS IN WHICH YOU ARE LISTED AS PI)
5. EMPLOYMENT AFFILIATION/SPOUSE EMPLOYMENT AFFILIATION
6. ROYALTY, PATENTS
7. CORPORATE RESEARCH COLLABORATION (INCLUDING TRIALS/PRODUCT TESTING)
8. OTHER (EDUCATOR OR HONORARIA)
9. MEMBER DATA SAFETY AND MONITORING BOARD

Abbott, J. ......................................................None
Abraham, T. ..................................................None
Adams, D. .....................................................None
Agler, D. .......................................................None
Addetia, K. ....................................................None
Agrawal, V. ....................................................None
Ahn, J. .........................................................None
Altman, C. ....................................................None
Amuthan, V. ..................................................None
Anderson, B. .................................................None
Aragam, J. .....................................................None
Armstrong, W .................................................None
Asch, F. .......................................................None
Aurigemma, G. ..............................................None
Austin, B. .....................................................None
Ayres, N. .......................................................None
Backlund, B. ................................................None
Badano, L. ....................................................None
Banchs, J. .....................................................None
Bansal, M. .....................................................None
Barbosa, M. ...................................................None
Barker, P................................................None
Bastiansen, P..........................................None
Becher, H.................................................None
Belcik, J..................................................None
Belohlavek, M.........................................None
Benenstein, R..........................................None
Beroukhim, R..........................................None
Bhatia, P................................................None
Bhavnani, S..........................WellSeek (2); iVEDIX (2); Proteus Digital (2); Qualcomm (4)
Bienvenu, L........................................None
Bierig, M.................................................None
Blauwet, L.............................................None
Bolger, A.................................................None
Border, W...............................................None
Bremer, M............................................None
Brook, M...............................................None
Bruce, C..................Edwards LifeSciences (3)
Burgess, P.............................................None
Burkule, N.............................................None
Burns, P.................................................None
Burwash, I.............................................None
Byrd, B.................................................None
Cabalka, A.............................................None
Canessa, R............................................None
Carabello, B..........................................None
Carron, H..............................................None
Cavalcante, J.........................................None
Chaudhry, F............................................None
Chen, A................................................None
Chen, J................................................None
Cheng, R..............................................None
Chin, K.................................................None
Choi, B...............................................None
Chow, C...............................................None
Claus, P.................................................None
Cleve, J................................................None
Cnota, J................................................None
Cobey, F..............................................None
Coffin, C..............................................None
Cohen, M.............................................None
Colman, D............................................None
Collier, P.............................................None
Collins, K............................................None
Costa, S...............................................None
Costantino, T........................................None
Crabbe, D............................................None
Crispi, F...............................................None
Dal-Bianco, J.......................................None
Davis, A...............................................None
Dean, A...............................................None
DeMaria, A..........................................None
Dent, J...............................................None
Desai, M...............................................None
D’hooge, J.......GE Healthcare (7); Philips Healthcare (7)
DiMaria, M..........................Bracco (4, 1)
Dillenbeck, A..........................................None
Dokainish, H..........................................None
Donal, E...............................................None
Dorffman, A..........................................None
Douglas, P..........................................None
Doukkly, R............................................None
Dragulescu, A.........................................None
Eberhardt, R..........................................None
Edwardsen, T........................................None
Edwards, K...........................................None
Eidem, B...............................................None
Ensing, G.............................................None
Estep, J........St. Jude Medical/Thoratec Corporation (7)
Falahatpisheh, A.......................................None
Feigenbaum, H.......................................None
Fields, J..............................................None
Fifer, C..............................................None
Finley, A.............................................None
Fleishman, C.........................................None
Forsa, D..........................Medtronic (4)
Fowler, B................Medtronic Vascular (1, 2)
Friedman, R..........................................None
Friedberg, M.........................................None
Frommelt, M.........................................None
Frommelt, P..........................................None
Galdersi, M...........................................None
Ganame, J............................................None
Garcia, M...........................................None
Garg, R...............................................None
Geva, T...............................................None
Gibbons, R...........................................None
Gibbons Schwaegler, B..................None
<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation/Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gill, E.</td>
<td>None</td>
</tr>
<tr>
<td>Gillam, L.</td>
<td>None</td>
</tr>
<tr>
<td>Goett, H.</td>
<td>None</td>
</tr>
<tr>
<td>Goldberger, Z.</td>
<td>None</td>
</tr>
<tr>
<td>Goldstein, S.</td>
<td>None</td>
</tr>
<tr>
<td>Gorcsan, J.</td>
<td>None</td>
</tr>
<tr>
<td>Gorman, B.</td>
<td>None</td>
</tr>
<tr>
<td>Govind, S.</td>
<td>None</td>
</tr>
<tr>
<td>Grayburn, P.</td>
<td>None</td>
</tr>
<tr>
<td>Greenberg, N.</td>
<td>None</td>
</tr>
<tr>
<td>Griffin, B.</td>
<td>None</td>
</tr>
<tr>
<td>Grimm, R.</td>
<td>None</td>
</tr>
<tr>
<td>Gutierrez-Fajardo, P.</td>
<td>None</td>
</tr>
<tr>
<td>Ha, J.</td>
<td>None</td>
</tr>
<tr>
<td>Habib, G.</td>
<td>None</td>
</tr>
<tr>
<td>Hahn, R.</td>
<td>None</td>
</tr>
<tr>
<td>Hamlin, R.</td>
<td>None</td>
</tr>
<tr>
<td>Han, Y.</td>
<td>Gilead (4)</td>
</tr>
<tr>
<td>Harrild, D.</td>
<td>None</td>
</tr>
<tr>
<td>Hays, A.</td>
<td>None</td>
</tr>
<tr>
<td>Heinle, S.</td>
<td>None</td>
</tr>
<tr>
<td>Hill, J.</td>
<td>Philips Healthcare (1)</td>
</tr>
<tr>
<td>Hoit, B.</td>
<td>Philips Medical (1)</td>
</tr>
<tr>
<td>Hoppmann, R.</td>
<td>None</td>
</tr>
<tr>
<td>Hornberger, L.</td>
<td>None</td>
</tr>
<tr>
<td>Horton, K.</td>
<td>None</td>
</tr>
<tr>
<td>Hua, L.</td>
<td>None</td>
</tr>
<tr>
<td>Hung, J.</td>
<td>None</td>
</tr>
<tr>
<td>Hutchisson, M.</td>
<td>None</td>
</tr>
<tr>
<td>Jaber, W.</td>
<td>None</td>
</tr>
<tr>
<td>Jankowski, M.</td>
<td>None</td>
</tr>
<tr>
<td>Jaquiss, R.</td>
<td>None</td>
</tr>
<tr>
<td>Johnson, J.</td>
<td>None</td>
</tr>
<tr>
<td>Johri, A.</td>
<td>None</td>
</tr>
<tr>
<td>Juraszek, A.</td>
<td>None</td>
</tr>
<tr>
<td>Kachline, S.</td>
<td>None</td>
</tr>
<tr>
<td>Kamp, O.</td>
<td>None</td>
</tr>
<tr>
<td>Kane, G.</td>
<td>None</td>
</tr>
<tr>
<td>Kapadia, S.</td>
<td>None</td>
</tr>
<tr>
<td>Kaplan, R.</td>
<td>None</td>
</tr>
<tr>
<td>Katz, W.</td>
<td>None</td>
</tr>
<tr>
<td>Keane, M.</td>
<td>None</td>
</tr>
<tr>
<td>Keene, B.</td>
<td>None</td>
</tr>
<tr>
<td>Khandheria, B.</td>
<td>None</td>
</tr>
<tr>
<td>Kheradvar, A.</td>
<td>None</td>
</tr>
<tr>
<td>Khoo, N.</td>
<td>None</td>
</tr>
<tr>
<td>Kim, S.</td>
<td>Philips Ultrasound (2)</td>
</tr>
<tr>
<td>Kim, Y.</td>
<td>None</td>
</tr>
<tr>
<td>King, M.</td>
<td>None</td>
</tr>
<tr>
<td>Kirkpatrick, J.</td>
<td>None</td>
</tr>
<tr>
<td>Kisslo, J.</td>
<td>None</td>
</tr>
<tr>
<td>Klarich, K.</td>
<td>None</td>
</tr>
<tr>
<td>Klein, A.</td>
<td>None</td>
</tr>
<tr>
<td>Knoll, P.</td>
<td>None</td>
</tr>
<tr>
<td>Ko, H.</td>
<td>None</td>
</tr>
<tr>
<td>Kolias, T.</td>
<td>None</td>
</tr>
<tr>
<td>Kort, S.</td>
<td>None</td>
</tr>
<tr>
<td>Kovalchkin, J.</td>
<td>None</td>
</tr>
<tr>
<td>Kramer, C.</td>
<td>None</td>
</tr>
<tr>
<td>Kreeger, J.</td>
<td>None</td>
</tr>
<tr>
<td>Krieger, E.</td>
<td>None</td>
</tr>
<tr>
<td>Krishnamoorthy, V.</td>
<td>None</td>
</tr>
<tr>
<td>Kronzon, I.</td>
<td>None</td>
</tr>
<tr>
<td>Kruse, E.</td>
<td>None</td>
</tr>
<tr>
<td>Kung, G.</td>
<td>None</td>
</tr>
<tr>
<td>Kusunose, K.</td>
<td>None</td>
</tr>
<tr>
<td>Kutty, S.</td>
<td>None</td>
</tr>
<tr>
<td>Labovitz, A.</td>
<td>Bristol Myers Squibb/Pfizer (4)</td>
</tr>
<tr>
<td>Lai, W.</td>
<td>None</td>
</tr>
<tr>
<td>Lammertin, G.</td>
<td>None</td>
</tr>
<tr>
<td>Lang, R.</td>
<td>None</td>
</tr>
<tr>
<td>Leipsic, J.</td>
<td>Edwards Lifesciences (2); Neovasc (2);</td>
</tr>
<tr>
<td></td>
<td>Circl CVI (2); Samsung (2)</td>
</tr>
<tr>
<td>Leong-Poi, H.</td>
<td>Lantheus Medical Imaging (1)</td>
</tr>
<tr>
<td>Lester, S.</td>
<td>None</td>
</tr>
<tr>
<td>Lewin, M.</td>
<td>None</td>
</tr>
<tr>
<td>Li, J.</td>
<td>None</td>
</tr>
<tr>
<td>Lin, B.</td>
<td>Bracco Imaging (8)</td>
</tr>
<tr>
<td>Lin, G.</td>
<td>None</td>
</tr>
<tr>
<td>Lindner, J.</td>
<td>None</td>
</tr>
<tr>
<td>Linker, D.</td>
<td>None</td>
</tr>
<tr>
<td>Little, S.</td>
<td>None</td>
</tr>
<tr>
<td>Liu, A.</td>
<td>None</td>
</tr>
<tr>
<td>Liu, J.</td>
<td>None</td>
</tr>
<tr>
<td>Lopez, L.</td>
<td>None</td>
</tr>
<tr>
<td>Lowenstein, J.</td>
<td>None</td>
</tr>
<tr>
<td>Lu, J.</td>
<td>None</td>
</tr>
<tr>
<td>Ludomirsky, A.</td>
<td>None</td>
</tr>
<tr>
<td>Name</td>
<td>Company(s)</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>Lui, G</td>
<td>None</td>
</tr>
<tr>
<td>Luis-Fuentes, V</td>
<td>None</td>
</tr>
<tr>
<td>Mackensen, G</td>
<td>None</td>
</tr>
<tr>
<td>Magalski, A</td>
<td>None</td>
</tr>
<tr>
<td>Maganti, K</td>
<td>None</td>
</tr>
<tr>
<td>Mahmood, F</td>
<td>None</td>
</tr>
<tr>
<td>Main, M</td>
<td>None</td>
</tr>
<tr>
<td>Malkowski, M</td>
<td>None</td>
</tr>
<tr>
<td>Mangion, J</td>
<td>None</td>
</tr>
<tr>
<td>Mankad, S</td>
<td>None</td>
</tr>
<tr>
<td>Marek, J</td>
<td>None</td>
</tr>
<tr>
<td>Marshall, J</td>
<td>None</td>
</tr>
<tr>
<td>Martanto, E</td>
<td>None</td>
</tr>
<tr>
<td>Martin, R</td>
<td>None</td>
</tr>
<tr>
<td>Marwick, T</td>
<td>GE Medical Systems</td>
</tr>
<tr>
<td>Marx, G</td>
<td>None</td>
</tr>
<tr>
<td>Masri, C</td>
<td>None</td>
</tr>
<tr>
<td>Mayer, S</td>
<td>None</td>
</tr>
<tr>
<td>McCullough, D</td>
<td>None</td>
</tr>
<tr>
<td>McGregor, K</td>
<td>None</td>
</tr>
<tr>
<td>McIlwain, E</td>
<td>None</td>
</tr>
<tr>
<td>McMahon, C</td>
<td>None</td>
</tr>
<tr>
<td>McNamara, R</td>
<td>Pfizer, Inc.</td>
</tr>
<tr>
<td>Meadows, J</td>
<td>None</td>
</tr>
<tr>
<td>Meece, R</td>
<td>Tomtec USA, Inc.</td>
</tr>
<tr>
<td>Mercer-Rosa, L</td>
<td>None</td>
</tr>
<tr>
<td>Mertens, L</td>
<td>None</td>
</tr>
<tr>
<td>Michelenia, H</td>
<td>None</td>
</tr>
<tr>
<td>Michelfelder, R</td>
<td>None</td>
</tr>
<tr>
<td>Miller, F</td>
<td>None</td>
</tr>
<tr>
<td>Miller, Sally</td>
<td>None</td>
</tr>
<tr>
<td>Miller, Stephen</td>
<td>None</td>
</tr>
<tr>
<td>Mitchell, C</td>
<td>None</td>
</tr>
<tr>
<td>Mohan, J</td>
<td>None</td>
</tr>
<tr>
<td>Mokadam, N</td>
<td>Thoratec</td>
</tr>
<tr>
<td></td>
<td>HeartWare</td>
</tr>
<tr>
<td></td>
<td>St. Jude</td>
</tr>
<tr>
<td>Monaghan, M</td>
<td>Philips</td>
</tr>
<tr>
<td></td>
<td>Edwards</td>
</tr>
<tr>
<td>Moneta, G</td>
<td>None</td>
</tr>
<tr>
<td>Moon-Grady, A</td>
<td>None</td>
</tr>
<tr>
<td>Mor-Avi, V</td>
<td>None</td>
</tr>
<tr>
<td>Morhy, S</td>
<td>None</td>
</tr>
<tr>
<td>Morris, A</td>
<td>None</td>
</tr>
<tr>
<td>Morris, S</td>
<td>None</td>
</tr>
<tr>
<td>Mulflur, M</td>
<td>None</td>
</tr>
<tr>
<td>Mulvagh, S</td>
<td>None</td>
</tr>
<tr>
<td>Musarra, R</td>
<td>None</td>
</tr>
<tr>
<td>Nagueh, S</td>
<td>None</td>
</tr>
<tr>
<td>Nakatani, S</td>
<td>None</td>
</tr>
<tr>
<td>Nanda, N</td>
<td>None</td>
</tr>
<tr>
<td>Naqvi, T</td>
<td>St. Jude</td>
</tr>
<tr>
<td>Narayan, H</td>
<td>None</td>
</tr>
<tr>
<td>Natarajan, S</td>
<td>None</td>
</tr>
<tr>
<td>Nay, S</td>
<td>None</td>
</tr>
<tr>
<td>Nguyen Thi Thu, H</td>
<td>None</td>
</tr>
<tr>
<td>Nichols, K</td>
<td>None</td>
</tr>
<tr>
<td>Nicoara, A</td>
<td>None</td>
</tr>
<tr>
<td>Odabashian, J</td>
<td>None</td>
</tr>
<tr>
<td>Ogunyankin, K</td>
<td>None</td>
</tr>
<tr>
<td>Oh, J</td>
<td>None</td>
</tr>
<tr>
<td>Oliver, D</td>
<td>None</td>
</tr>
<tr>
<td>Olson, J</td>
<td>None</td>
</tr>
<tr>
<td>Orsinelli, D</td>
<td>None</td>
</tr>
<tr>
<td>Orsinelli, M</td>
<td>None</td>
</tr>
<tr>
<td>Otsuji, Y</td>
<td>None</td>
</tr>
<tr>
<td>Otto, C</td>
<td>None</td>
</tr>
<tr>
<td>Owens, D</td>
<td>None</td>
</tr>
<tr>
<td>Pai Cole, S</td>
<td>None</td>
</tr>
<tr>
<td>Palma, R</td>
<td>None</td>
</tr>
<tr>
<td>Pandian, N</td>
<td>None</td>
</tr>
<tr>
<td>Park, M</td>
<td>None</td>
</tr>
<tr>
<td>Parra, D</td>
<td>None</td>
</tr>
<tr>
<td>Passeri, J</td>
<td>None</td>
</tr>
<tr>
<td>Patel, A</td>
<td>None</td>
</tr>
<tr>
<td>Patil, P</td>
<td>None</td>
</tr>
<tr>
<td>Pearlman, A</td>
<td>None</td>
</tr>
<tr>
<td>Pedrizzetti, G</td>
<td>None</td>
</tr>
<tr>
<td>Pellett, A</td>
<td>None</td>
</tr>
<tr>
<td>Pellikka, P</td>
<td>None</td>
</tr>
<tr>
<td>Perpetua, E</td>
<td>None</td>
</tr>
<tr>
<td>Peters, F</td>
<td>None</td>
</tr>
<tr>
<td>Peyvandi, S</td>
<td>None</td>
</tr>
<tr>
<td>Phelan, D</td>
<td>None</td>
</tr>
<tr>
<td>Philip, S</td>
<td>None</td>
</tr>
<tr>
<td>Pibarot, P</td>
<td>None</td>
</tr>
<tr>
<td>Picard, M</td>
<td>None</td>
</tr>
<tr>
<td>Pietila, T</td>
<td>None</td>
</tr>
<tr>
<td>Pislaru, C</td>
<td>None</td>
</tr>
<tr>
<td>Plana, J</td>
<td>None</td>
</tr>
<tr>
<td>Poh, K</td>
<td>None</td>
</tr>
</tbody>
</table>

**ASE 2016**
<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polsani, V.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Popescu, B.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Popovic, Z.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Poppas, A.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Porter, T.</td>
<td>Lantheus Medical Imaging (4); Astellas Pharma Inc. (4); GE Global Research (4); Bracco (4)</td>
<td>None</td>
</tr>
<tr>
<td>Prior, D.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Puchalski, M.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Quiñones, M.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Quiroz, R.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Rabishoffsky, A.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Radigan, K.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Rakowski, H.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Rasalingam, R.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Rehfeldt, K.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Reisman, M.</td>
<td>Edwards Lifesciences (2,8); Abbott Vascular (2,8)</td>
<td>None</td>
</tr>
<tr>
<td>Reynolds, D.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Rigolin, V.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Roberson, D.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Roberts, B.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Roberts, M.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Robison, S.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Rodrigues, A.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Rodriguez, L.</td>
<td>Edwards (2)</td>
<td>None</td>
</tr>
<tr>
<td>Ronderos, R.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Rose, G.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Rubenson, D.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Rudski, L.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Ryan, T.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Rychik, J.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Sachdeva, R.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Sade, L.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Sanchez, L.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Sanchez Osella, O.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Sanders, S.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Sarano, M.</td>
<td>Edwards LLC (4)</td>
<td>None</td>
</tr>
<tr>
<td>Saric, M.</td>
<td>Medtronic (1)</td>
<td>None</td>
</tr>
<tr>
<td>Sawada, S.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Scalia, G.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Scherrer-Crosbie, M.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Schultz, A.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Sedehi, D.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Sengupta, P.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Sengupta, S.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Senior, R.</td>
<td>Bracco (1); Philips (1)</td>
<td>None</td>
</tr>
<tr>
<td>Seward, J.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Shafer, J.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Shah, A.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Shah, Sachita</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Shah, Sanjeeta</td>
<td>Edwards Lifesciences (1)</td>
<td>None</td>
</tr>
<tr>
<td>Shah, Sanjiv</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Shamoun, F.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Shandas, R.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Shea, E.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Sherman, S.</td>
<td>Philips (8)</td>
<td>None</td>
</tr>
<tr>
<td>Shillcutt, S.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Shiota, T.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Shirali, G.</td>
<td>Philips Medical (1)</td>
<td>None</td>
</tr>
<tr>
<td>Shook, D.</td>
<td>Edwards Lifesciences (8); Sorin Group (8)</td>
<td>None</td>
</tr>
<tr>
<td>Shu, X.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Sicari, R.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Silverman, N.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Silvestry, F.</td>
<td>Corvia (4); Edwards Lifesciences (4)</td>
<td>None</td>
</tr>
<tr>
<td>Simpson, J.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Siu, S.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Skubas, N.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Slesnick, T.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Smiseth, O.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Sniecinski, R.</td>
<td>Grifols (2,4); Shire ViroPharma (4)</td>
<td>None</td>
</tr>
<tr>
<td>Sohn, D.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Solomon, J.</td>
<td>GE Healthcare (8)</td>
<td>None</td>
</tr>
<tr>
<td>Solomon, S.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Song, J.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Soriano, B.</td>
<td>Precision Image Analysis (2); Ventrivpoint Diagnostics (7)</td>
<td>None</td>
</tr>
<tr>
<td>Sorrell, V.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Spencer, K.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Srivastava, S.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Stainback, R.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Statile, C.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Stewart, W.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Stoddard, M.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Strother, M.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Strother, M.</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Strachan, G.</td>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>
Sugeng, L .............................................. Siemens Healthineers (1)
Swaminathan, M ........................................ None
Tacy, T ..................................................... None
Tajik, J ..................................................... None
Tamarappoo, B ........................................ None
Taub, C ..................................................... None
Taylor, B .............................................. Medtronic (2)
Taylor, C ..................................................... None
Taylor, M ..................................................... None
Thomas, J .... Edwards Lifesciences (8); GE (8); Abbott (8)
Thomas, L ..................................................... None
Thorsson, T .................................................. None
Toptine, J ..................................................... None
Toyono, M ..................................................... None
Tsang, T ..................................................... None
Tsang, W ..................................................... None
Tucay, E ..................................................... None
Tunks, R ..................................................... None
Tworetzky, W ................................................ None
Umland, M ..................................................... None
Unger, E ..................................................... None
Upadhayaya, D ..............................................None
Uretsky, S ..................................................... None
Vannan, M ..................................................... None
Venkateshvaran, A ........................................ None
Vieira, M ..................................................... None
Villafane, J ................................................ None
Villanueva, F ................................................ None
Voigt, J ...................................................... None
Wang, H ...................................................... None
Ward, R ...................................................... None
Wasserman, M .............................................. None
Wei, K ...................................................... None
Weiner, R .................................................. None
Weinert, L .................................................. None
Weissman, N ................................................ None
Welch, T ...................................................... None
Wells, B ...................................................... None
Weyman, A ................................................ None
Whalley, G .................................................. None
Wiegens, S .................................................. None
Woo, A ...................................................... None
Wood, M ...................................................... None

ABSTRACT PRESENTERS

Castano, A ..................................................... None
Chowdhury, S ................................................ None
Churchill, T ................................................ None
Hernandez, L ................................................ None
Kortidou, S ................................................ None
Medvedofsky, D .............................................. None
Rajagopal, H ................................................ None
Sachdeva, S ................................................ None
Sherif, I ...................................................... None
Torok, R ...................................................... None
Urbinelli, L ................................................ None
Utsunomiya, H .............................................. None
Ybarra, A ...................................................... None
2016 Program Faculty &
Abstract Presenter Index

Jonathan Abbott
Virginia-Maryland
Regional College of
Veterinary Medicine
Blacksburg, VA
PG# 55, 145

Theodore P. Abraham,
MD, FASE
Johns Hopkins University
Baltimore, MD
PG# 9, 36, 40, 42, 48,
59, 70, 95, 96, 97, 98,
99, 103, 104, 136, 145

David B. Adams, ACS,
RCS, RDCS, FASE
Duke University Medical
Center
Durham, NC
PG# 27, 64, 84, 95, 100,
101, 136, 138, 145

Karima Addetia, MD
University of Chicago
Medical Center
Chicago, IL
PG# 51, 70, 74, 83, 90,
92, 94, 103, 105, 107, 145

Deborah A. Agler, ACS,
RDCS, FASE
Cleveland Clinic
Broadview Heights, OH
PG# 9, 17, 39, 40, 58, 70,
72, 92, 105, 132, 136, 138,
145

Vinayak Agrawal, MD,
DNB, FASE
Medanta, The Medicity
New Delhi, India
PG# 53, 97, 145

Julie Ahn, RDCS
NYU Langone Medical
Center
West New York, NJ
PG# 21, 145

Carolyn A. Altman, MD,
FASE
Baylor College of Medicine
Houston, TX
PG# 53, 78, 79, 80, 137,
139, 145

Vivekanandan Amuthan,
MD
Jeyalakshmi Heart Centre
Madurai, Tamil Nadu
PG# 26, 48, 145

Bonita A. Anderson,
MAppSc, DMU, AMS,
FASE
Prince Charles Hospital
Brisbane, Australia
PG# 28, 38, 47, 145

Jayashri R. Aragam, MD,
FASE
West Roxbury VA Hospital
Sudbury, MA
PG# 31, 35, 36, 139,
145

William F. Armstrong,
MD
University of Michigan
Ann Arbor, MI
PG# 28, 145

Federico M. Asch, MD,
FASE
Washington Hospital Center
Washington, DC
PG# 28, 39, 57, 70, 129,
132, 136, 138, 145

Gerard P. Aurigemma,
MD, FASE
UMass Memorial Medical
Center
Worcester, MA
PG# 17, 31, 35, 58, 86,
88, 98, 99, 136, 139, 145

Bethany A. Austin, MD,
FASE
Saint Luke’s Mid America
Heart Institute
Kansas City, MO
PG# 43, 51, 145

Nancy A. Ayres, MD,
FASE
Baylor College of Medicine
Houston, TX
PG# 51, 78, 80, 82, 145

Brandon Backlund, MD
University of Washington
Seattle, WA
PG# 21, 145

Luigi P. Badano, MD,
PhD
University of Padua
Padua, Italy
PG# 30, 36, 145

Jose Banchs, MD, FASE
University of Texas
Houston, TX
PG# 37, 39, 53, 57, 70,
100, 101, 136, 138, 145

Manish Bansal, MD, FASE
Medanta, The Medicity
Sector 38, Gurgaon,
Haryana, India
PG# 45, 89, 145

Marcia M. Barbosa, MD,
FASE
Hospital Socor
Nova Lima, MG, Brazil
PG# 46, 145

Piers C.A. Barker, MD,
FASE
Duke University Medical
Center
Durham, NC
PG# 17, 45, 47, 70, 76,
80, 82, 83, 146

Paul M. Bastiansen,
RDCS, FASE
Mayo Clinic
Rochester, MN
PG# 44, 146

Harald Becher, MD, PhD
University of Alberta
Edmonton, AB, Canada
PG# 44, 70, 92, 94, 146

J. Todd Belcik, BS, RCS,
RDCS, FASE
Oregon Health & Science
University
Portland, OR
PG# 35, 51, 54, 70, 136,
146

Marek Belohlavek, MD,
PhD, FASE
Mayo Clinic
Scottsdale, AZ
PG# 26, 139, 146

Ricardo J. Benenstei, MD, FASE
New York University
New Rochelle, NY
PG# 21, 44, 146
<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>City, State/Province/Country</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meryl S. Cohen, MD, FASE</td>
<td>Children’s Hospital of Philadelphia</td>
<td>Philadelphia, PA</td>
<td>PG# 25, 31, 57, 70, 133, 137, 138, 146</td>
</tr>
<tr>
<td>David M. Coleman, MD, FASE</td>
<td>Our Lady’s Children’s Hospital</td>
<td>Dublin, Ireland</td>
<td>PG# 54, 146</td>
</tr>
<tr>
<td>Patrick H. Collier, MD, PhD, FASE</td>
<td>Cleveland Clinic</td>
<td>Cleveland, OH</td>
<td>PG# 35, 51, 95, 146</td>
</tr>
<tr>
<td>Keith A. Collins, MS, RDCS, FASE</td>
<td>University of Chicago Medical Center</td>
<td>Milwaukee, WI</td>
<td>PG# 36, 85, 137, 139, 141, 146</td>
</tr>
<tr>
<td>Salvatore P. Costa, MD, FASE</td>
<td>Dartmouth Hitchcock Medical Center</td>
<td>Lebanon, NH</td>
<td>PG# 25, 70, 146</td>
</tr>
<tr>
<td>Thomas Costantino, MD</td>
<td>Staten Island Heart</td>
<td>Staten Island, NY</td>
<td>PG# 17, 21, 25, 31, 146</td>
</tr>
<tr>
<td>Deborah L. Crabbe, MD</td>
<td>Lewis Katz School of Medicine at Temple University</td>
<td>Philadelphia, PA</td>
<td>PG# 44, 146</td>
</tr>
<tr>
<td>Fatima Crispi, MD</td>
<td>University of Barcelona</td>
<td>Barcelona, Spain</td>
<td>PG# 45, 47, 75, 101, 146</td>
</tr>
<tr>
<td>Jacob P. Dal-Bianco, MD, FASE</td>
<td>Massachusetts General Hospital</td>
<td>Boston, MA</td>
<td>PG# 25, 83, 139, 141, 146</td>
</tr>
<tr>
<td>Ashlee M. Davis, BS, RDCS</td>
<td>Duke University Medical Center</td>
<td>Durham, NC</td>
<td>PG# 44, 84, 146</td>
</tr>
<tr>
<td>Anthony J. Dean, MD</td>
<td>University of Pennsylvania</td>
<td>Philadelphia, PA</td>
<td>PG# 31, 146</td>
</tr>
<tr>
<td>Anthony N. DeMaria, MD, FASE</td>
<td>University of California, La Jolla, CA</td>
<td>San Diego</td>
<td>PG# 29, 38, 133, 136, 139, 146</td>
</tr>
<tr>
<td>John M. Dent, MD, FASE</td>
<td>University of Virginia Medical Center</td>
<td>Charlottesville, VA</td>
<td>PG# 29, 136, 146</td>
</tr>
<tr>
<td>Milind Y. Desai, MD</td>
<td>Cleveland Clinic</td>
<td>Cleveland, OH</td>
<td>PG# 46, 54, 96, 101, 136, 146</td>
</tr>
<tr>
<td>Jan D’hooge, MSc, PhD</td>
<td>Katholieke Universiteit Leuven</td>
<td>B-3000 Leuven, Belgium</td>
<td>PG# 26, 36, 146</td>
</tr>
<tr>
<td>Michael V. DiMaria, MD</td>
<td>Children’s Hospital Colorado</td>
<td>Aurora, CO</td>
<td>PG# 38, 81, 146</td>
</tr>
<tr>
<td>Amy R. Dillenbeck, RDCS</td>
<td>Cleveland Clinic</td>
<td>Cleveland, OH</td>
<td>PG# 25, 44, 146</td>
</tr>
<tr>
<td>Hisham Dokainish, MD, FASE</td>
<td>McMaster University Hamilton, ON, Canada</td>
<td>PG# 36, 70, 137, 146</td>
<td></td>
</tr>
<tr>
<td>Erwan Donal, MD, PhD</td>
<td>University Hospital Pontchaillou</td>
<td>Rennes, France</td>
<td>PG# 40, 52, 146</td>
</tr>
<tr>
<td>Adam L. Dorfman, MD, FASE</td>
<td>University of Michigan</td>
<td>Ann Arbor, MI</td>
<td>PG# 53, 146</td>
</tr>
<tr>
<td>Pamela S. Douglas, MD, FASE</td>
<td>Duke University Medical Center</td>
<td>Durham, NC</td>
<td>PG# 28, 29, 40, 79, 85, 88, 133, 136, 139, 146</td>
</tr>
<tr>
<td>Rami Doukky, MD, FASE</td>
<td>Rush University Medical Center</td>
<td>Chicago, IL</td>
<td>PG# 52, 146</td>
</tr>
<tr>
<td>Andreia Dragulescu, MD, PhD</td>
<td>Hospital for Sick Children Toronto, Ontario, Canada</td>
<td>PG# 38, 78, 102, 103, 146</td>
<td></td>
</tr>
<tr>
<td>Robert T. Eberhardt, MD, FASE</td>
<td>Boston Medical Center</td>
<td>Boston, MA</td>
<td>PG# 43, 44, 146</td>
</tr>
<tr>
<td>Thor Edvardsen, MD, PhD</td>
<td>Oslo University Hospital</td>
<td>Oslo, Norway</td>
<td>PG# 26, 146</td>
</tr>
<tr>
<td>Kenneth Scott Edwards, RDCS</td>
<td>Piedmont Atlanta</td>
<td>Atlanta, GA</td>
<td>PG# 54, 146</td>
</tr>
<tr>
<td>Benjamin W. Eidem, MD, FASE</td>
<td>Mayo Clinic</td>
<td>Rochester, MN</td>
<td>PG# 54, 77, 132, 136, 139, 146</td>
</tr>
<tr>
<td>Gregory J. Ensing, MD, FASE</td>
<td>University of Michigan</td>
<td>Ann Arbor, MI</td>
<td>PG# 43, 70, 106, 139, 146</td>
</tr>
<tr>
<td>Jerry Estep, MD, FASE</td>
<td>Houston Methodist Hospital</td>
<td>Houston, TX</td>
<td>PG# 26, 55, 146</td>
</tr>
<tr>
<td>Ahmad Falahatpisheh, PhD</td>
<td>University of California, Irvine School of Medicine</td>
<td>Irvine, CA</td>
<td>PG# 39, 146</td>
</tr>
<tr>
<td>Harvey Feigenbaum, MD, FASE</td>
<td>Indiana University School of Medicine</td>
<td>Indianapolis, IN</td>
<td>PG# 32, 48, 51, 59, 63, 112, 122, 133, 136, 138, 146</td>
</tr>
<tr>
<td>J. Matthew M. Fields, MD</td>
<td>Thomas Jefferson University Hospital</td>
<td>Philadelphia, PA</td>
<td>PG# 21, 25, 31, 146</td>
</tr>
</tbody>
</table>
Carlen G. Fifer, MD, FASE  
University of Michigan  
Ann Arbor, MI  
PG# 36, 146

Alan Finley, MD, FASE  
Medical University of South Carolina  
Charleston, SC  
PG# 25, 28, 29, 139, 146

Craig E. Fleishman, MD, FASE  
Arnold Palmer Hospital for Children  
Orlando, FL  
PG# 45, 47, 70, 80, 82, 136, 138, 146

Daniel E. Forsha, MD, FASE  
Children’s Mercy Hospital  
Kansas City, MO  
PG# 38, 80, 82, 141, 146

Brian Fowler, BS, RVT, FASE  
Prairie Cardiovascular Consultants  
Dublin, OH  
PG# 21, 46, 146

Rosario Freeman, MD  
University of Washington Medical Center  
Seattle, WA  
PG# 17, 38, 54, 146

Mark K. Friedberg, MD, FASE  
The Hospital for Sick Children  
Toronto, ON, Canada  
PG# 17, 30, 45, 47, 70, 78, 81, 102, 103, 146

Michele A. Frommelt, MD  
Children’s Hospital of Wisconsin  
Milwaukee, WI  
PG# 54, 146

Peter C. Frommelt, MD, FASE  
Medical College of Wisconsin  
Milwaukee, WI  
PG# 29, 75, 79, 139, 146

Maurizio Galderisi, MD  
Frederico II University Hospital  
Naples, Italy  
PG# 36, 146

Javier Ganame, MD, PhD, FASE  
Saint Joseph’s Healthcare and Hamilton Health Sciences  
Hamilton, Ontario, Canada  
PG# 38, 146

Mario J. Garcia, MD  
Montefiore Medical Center  
New York, NY  
PG# 38, 52, 70, 88, 100, 146

Ruchira Garg, MD, FASE  
Cedars-Sinai Medical Center  
Los Angeles, CA  
PG# 25, 146

Tal Geva, MD, FASE  
Boston Children’s Hospital  
Boston, MA  
PG# 44, 139, 146

Ryan C. Gibbons, MD  
Temple University  
Philadelphia, PA  
PG# 21, 146

Becky Gibbons  
Schwaegler, BS, RDCS  
University of Washington Medical Center  
Seattle, WA  
PG# 51, 146

Edward A. Gill, MD, FASE  
University of Colorado Denver  
Denver, CO  
PG# 17, 28, 52, 57, 136, 138, 147

Linda D. Gillam, MD, FASE  
Morristown Medical Center  
Morristown, NJ  
PG# 28, 30, 46, 70, 88, 133, 136, 138, 147

Harry J. Goett, MD  
Lewis Katz School of Medicine at Temple University  
Philadelphia, PA  
PG# 21, 147

Zachary Goldberger, MD  
Harborview Medical Center  
Seattle, WA  
PG# 35, 147

Steven A. Goldstein, MD, FASE  
MedStar Washington Hospital Center  
Washington, DC  
PG# 39, 45, 70, 136, 138, 147

John Gorcsan, III, MD, FASE  
University of Pittsburgh Medical Center  
Pittsburgh, PA  
PG# 36, 39, 85, 93, 95, 97, 103, 136, 138, 147

Beverly L. Gorman, RDCS  
Intersocietal Accreditation Commission (IAC)  
Elliot City, MD  
PG# 25, 54, 147

Satish C. Govind, MD, FASE  
Narayana Institute of Cardiac Sciences  
Bangalore, Karnataka, India  
PG# 37, 147

Paul A. Grayburn, MD, FASE  
Baylor University Medical Center  
Dallas, TX  
PG# 39, 45, 85, 142, 147

Neil Greenberg, PhD  
Cleveland Clinic  
Cleveland, OH  
PG# 25, 147

Brian P. Griffin, MD  
Cleveland Clinic  
Cleveland, OH  
PG# 37, 84, 85, 96, 99, 100, 147

Richard A. Grimm, DO, FASE  
Cleveland Clinic  
Cleveland, OH  
PG# 9, 17, 39, 40, 51, 53, 70, 85, 92, 96, 100, 105, 136, 139, 147

Pedro Gutierrez-Fajardo, MD, PhD, FASE  
Hospital Bernadette Guadalajara JAL, Mexico  
PG# 43, 147

Jong-Won Ha, MD, PhD  
Yonsei University  
Seoul, South Korea  
PG# 46, 52, 83, 86, 89, 96, 147

Gilbert Habib, MD  
La Timone Hospital  
Marseille, France  
PG# 48, 73, 147
Mary Etta King, MD, FASE
Massachusetts General Hospital
Boston, MA
PG# 45, 51, 136, 147

James N. Kirkpatrick, MD, FASE
University of Washington Medical Center
Seattle, WA
PG# 26, 35, 37, 57, 88, 98, 100, 101, 140, 147

Joseph A. Kisslo, MD, FASE
Duke University Medical Center
Durham, NC
PG# 36, 38, 47, 80, 133, 137, 147

Kyle W. Klarich, MD, FASE
Mayo Clinic
Rochester, MN
PG# 43, 55, 142, 147

Allan L. Klein, MD, FASE
Cleveland Clinic
Cleveland, OH
PG# 17, 36, 46, 57, 70, 82, 87, 92, 95, 97, 132, 136, 138, 147

Peg Knoll, RDCS, FASE
University of California-Irvine Health
Orange, CA
PG# 27, 51, 136, 138, 147

H. Helen Ko, BS, ACS, RDMS, RDCS, RCCS, FASE
Mount Sinai Medical Center NY
New York, NY
PG# 36, 81, 139, 147

Theodore J. Kolias, MD, FASE
University of Michigan
Ann Arbor, MI
PG# 47, 147

Smadar Kort, MD, FASE
Stony Brook University Medical Center
Stony Brook, NY
PG# 38, 70, 136, 139, 147

John P. Kovalchin, MD, FASE
Nationwide Children’s Hospital
Columbus, OH
PG# 36, 53, 140, 147

Chris J. Kramer, BA, ACS, RDCS, FASE
Aurora Health Care
Milwaukee, WI
PG# 31, 140, 147

Joe R. Kreeger, ACS, RCCS, RDCS, FASE
Children’s Healthcare of Atlanta
Atlanta, GA
PG# 29, 30, 132, 136, 138, 147

Eric Krieger
University of Washington
Seattle, WA
PG# 25, 147

Vijay Krishnamoorthy, MD, BS
University of Washington
Seattle, WA
PG# 35, 147

Izhak Kronzon, MD, FASE
Lenox Hill Hospital
New York, NY
PG# 39, 47, 70, 136, 140, 147

Eric Kruse, RDCS, RVT, FASE
University of Chicago Medical Center
Chicago, IL
PG# 37, 74, 83, 85, 90, 91, 103, 105, 107, 129, 133, 136, 138, 147

Grace C. Kung, MD, FASE
Children’s Hospital of Los Angeles
Los Angeles, CA
PG# 31, 147

Kenya Kusunose, MD, PhD
Cleveland Clinic
Tokushima, Japan
PG# 39, 91, 96, 98, 147

Shelby Kutty, MD, FASE
University of Nebraska Medical Center
Omaha, NE
PG# 39, 72, 78, 80, 81, 82, 90, 94, 95, 98, 100, 101, 147

Arthur J. Labovitz, MD, FASE
University of South Florida
Tampa, FL
PG# 37, 70, 107, 136, 147

Wyman W. Lai, MD, MPH, FASE
CHOC Children’s Specialists
Orange, CA
PG# 38, 51, 79, 80, 82, 88, 136, 147

Georgeanne Lammertin, MBA, RCS, RDCS, FASE
University of Utah Healthcare
Salt Lake, UT
PG# 37, 51, 136, 138, 147

Roberto M. Lang, MD, FASE
University of Chicago Medical Center
Chicago, IL
PG# 37, 70, 74, 83, 85, 90, 92, 93, 94, 95, 101, 103, 105, 107, 129, 133, 136, 138, 147

Jonathon Leipsic, MD, FRCPC, FSCCT
University of British Columbia
Vancouver, British Columbia, Canada
PG# 43, 147

Howard Leong-Poi, MD, FASE
University of Toronto
Toronto, Ontario, Canada
PG# 25, 27, 37, 70, 136, 138, 147

Steven J. Lester, MD, FASE
Mayo Clinic Arizona
Scottsdale, AZ
PG# 26, 35, 40, 43, 136, 138, 147

Mark B. Lewin, MD, FASE
Seattle Children’s Hospital
Seattle, WA
PG# 26, 42, 75, 79, 147

Jennifer Li, MD
Duke University Medical Center
Durham, NC
PG# 47, 53, 147

Ben Lin, MD, PhD
Yale University
New Haven, CT
PG# 35, 147
Grace Lin, MD
Mayo Clinic
Rochester, MN
PG# 36, 147

Jonathan R. Lindner, MD, FASE
Oregon Health & Science University
Portland, OR
PG# 27, 30, 37, 136, 138, 143, 147

David T. Linker, MD, FASE
University of Washington
Seattle, WA
PG# 35, 147

Stephen H. Little, MD, FASE
Houston Methodist Hospital
Houston, TX
PG# 52, 70, 78, 83, 86, 98, 132, 138, 147

Jennifer E. Liu, MD, FASE
Memorial Sloan Kettering Cancer Center
New York, NY
PG# 53, 147

Anyi Liu, RDCS, RVT, RDMS
Cleveland Clinic
Cleveland, OH
PG# 21, 14

Leo Lopez, MD, FASE
Miami Children’s Hospital
Miami, FL
PG# 26, 29, 76, 79, 88, 132, 138, 147

Jorge A. Lowenstein, MD, FASE
Investigaciones Medicas
Buenos Aires, Argentina
PG# 39, 100, 147

Jimmy C. Lu, MD, FASE
University of Michigan
Ann Arbor, MI
PG# 53, 147

Achiau Ludomirsky, MD, FASE
NYU Langone Medical Center
New York, NY
PG# 39, 147

George K. Lui, MD
Stanford University Medical Center
Stanford, CA
PG# 26, 148

Virginia Luis-Fuentes, PhD, VetMB, DipACVIM
Royal Veterinary College
London, England
PG# 55, 148

G. Burkhard Mackensen, MD, PhD, FASE
University of Washington Medical Center
Seattle, WA
PG# 29, 45, 47, 70, 83, 107, 138, 148

Anthony Magalski, MD, FASE
University of Washington Medical Center
Seattle, WA
PG# 29, 45, 47, 70, 83, 107, 138, 148

Kameswari Maganti, MD, FASE
Northwestern University
Chicago, IL
PG# 44, 148

Feroze Mahmood, MD, FASE
Beth Israel Deaconess Medical Center
Boston, MA
PG# 29, 31, 139, 142, 148

Michael L. Main, MD, FASE
Saint Luke’s Mid America Heart Institute
Kansas City, MO
PG# 17, 29, 30, 51, 136, 138, 138

Michael Malkowski, MD
Heritage Medical Center
Wexford, PA
PG# 45, 54, 148

Judy R. Mangion, MD, FASE
Brigham and Women’s Hospital
Boston, MA
PG# 27, 71, 136, 140, 148

Sunil V. Mankad, MD, FASE
Mayo Clinic
Rochester, MN
PG# 17, 20, 39, 44, 48, 53, 60, 70, 72, 73, 85, 132, 136, 138, 148

Jan Marek, MD
Great Ormond Street Hospital
London, England
PG# 38, 45, 54, 148

Jane E. Marshall, BS, RDCS, FASE
Massachusetts General Hospital
Boston, MA
PG# 30, 35, 136, 138, 148

Jan Marek, MD
Great Ormond Street Hospital
London, England
PG# 38, 45, 54, 148

Erwan Martanto, MD
Padjadjaran University
Bandung, West Java, Indonesia
PG# 48, 51, 148

Randolph P. Martin, MD, FASE
Piedmont Heart Institute
Atlanta, GA
PG# 38, 44, 133, 136, 138, 148

Thomas H. Marwick, MBBS, PhD, MPH
Baker IDI Heart and Diabetes Institute
Melbourne, Australia
PG# 45, 52, 71, 87, 89, 90, 91, 95, 97, 101, 104, 148

Gerald R. Marx, MD, FASE
Boston Children’s Hospital
Boston, MA
PG# 21, 35, 81, 139, 148

Carolina Masri, MD
University of Washington
Seattle, WA
PG# 55, 98, 107, 148

Susan A. Mayer, MD, FASE
Johns Hopkins University
Baltimore, MD
PG# 44, 148

Daniel L. McCullough, RDCS, FASE
Mayo Clinic
Rochester, MN
PG# 39, 142, 148

Kelly M. McGregor, RDCS
Houston Methodist Hospital
Houston, TX
PG# 30, 148

Elizabeth F. McIlwain, MHS, RCS, FASE
Louisiana State University Health Sciences Center
New Orleans, LA
PG# 17, 27, 28, 47, 137, 138, 148

Colin McMahon, MB, FRCPI, FAAP, FASE
Our Lady’s Children’s Hospital
Dublin, Ireland
PG# 28, 42, 148
Alina Nicoara, MD, FASE
Duke University Medical Center
Durham, NC
PG# 28, 35, 55, 71, 103, 140, 148

Jill A. Odabashian, RDCS, FASE
Cleveland Clinic
Cleveland, OH
PG# 35, 140, 148

Kofo O. Ogunyankin, MD, FASE
Northwestern University
Chicago, IL
PG# 47, 94, 148

Jae K. Oh, MD, FASE
Mayo Clinic
Rochester, MN
PG# 45, 46, 148

Daniel Oliver, RCS, FASE
Providence St. Vincent Medical Center
Portland, OR
PG# 52, 148

Joan J. Olson, BS, RDCS, RVT, FASE
The Nebraska Medical Center
Omaha, NE
PG# 25, 137, 138, 148

Maryellen H. Orsinelli, RN, RDCS, FASE
The Ohio State University
Columbus, OH
PG# 52, 60, 88, 132, 137, 138, 148

David Orsinelli, MD, FASE
The Ohio State University
Columbus, OH
PG# 54, 55, 148

Yutaka Otsuji, MD
University of Occupational and Environmental Health
Kitakyushu, Japan
PG# 38, 47, 148

Catherine M. Otto, MD
University of Washington Medical Center
Seattle, WA
PG# 29, 137, 148

David S. Owens, MD
University of Washington Medical Center
Seattle, WA
PG# 51, 148

Sheela S. Pai Cole, MD
Stanford Medicine
Stanford, CA
PG# 31, 148

Richard A. Palma, BS, RDCS, RCS, ACS, FASE
St. Francis Medical Center
Burlington, CT
PG# 52, 140, 148

Natesa G. Pandian, MD
Tufts University Medical Center
Boston, MA
PG# 38, 71, 102, 137, 148

Margaret M. Park, BS, ACS, RDCS, RVT, FASE
Cleveland Clinic
Cleveland, OH
PG# 27, 28, 137, 139, 148

David Parra, MD
Vanderbilt Children’s Hospital
Nashville, TN
PG# 36, 148

Jonathan J. Passeri, MD
Massachusetts General Hospital
Boston, MA
PG# 25, 47, 83, 148

Ayan R. Patel, MD, FASE
Tufts University Medical Center
Boston, MA
PG# 45, 46, 55, 102, 148

Pravin Patil, MD, FASE
Lewis Katz School of Medicine at Temple University
Philadelphia, PA
PG# 25, 51, 148

Alan S. Pearlman, MD, FASE
University of Washington Medical Center
Seattle, WA
PG# 51, 133, 136, 138, 148

Gianni Pedrizzetti, PhD
University of Trieste
Prato, Italy
PG# 37, 97, 148

Andy Pellett, PhD, RCS, RDCS, FASE
Louisiana State University Health Sciences Center
New Orleans, LA
PG# 30, 132, 138, 148

Patricia A. Pellikka, MD, FASE
Mayo Clinic
Rochester, MN

Elizabeth Perpetua, DNP, ARNP, CCRN
University of Washington Medical Center
Seattle, WA
PG# 43, 83, 148

Shabnam Peyvandi, MD, FASE
University of California, San Francisco
San Francisco, CA
PG# 52, 96, 142, 148

Dermot Phelan, MD, PhD
Cleveland Clinic
Cleveland, OH
PG# 43, 55, 148

Sue D. Phillip, RCS, FASE
Johns Hopkins University
Baltimore, MD
PG# 40, 44, 95, 97, 132, 137, 139, 148

Philippe Pibarot, DVM, PhD, FASE
Quebec Heart & Lung Institute
Sainte-Foy, Quebec, Canada
PG# 17, 46, 55, 148

Michael H. Picard, MD, FASE
Massachusetts General Hospital
Boston, MA
PG# 29, 71, 102, 133, 136, 138, 148

Todd Pietila
Materialise
Plymouth, MI
PG# 35, 148

Cristina Pislaru, MD
Mayo Clinic
Rochester, MN
PG# 26, 85, 96, 99, 104, 148

Juan C. Plana, MD, FASE
Baylor College of Medicine
Houston, TX
PG# 53, 95, 132, 137, 140, 148

Kian-Keong Poh, MBBChir, FASE
National Heart Center
Singapore
SGP# 36, 143, 148
<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>City</th>
<th>State</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venkateshwar Polsani, MD, FASE</td>
<td>Piedmont Heart Institute</td>
<td>Atlanta, GA</td>
<td></td>
<td>PG# 27, 149</td>
</tr>
<tr>
<td>Bogdan A. Popescu, MD, PhD, FASE</td>
<td>University of Medicine and Pharmacy</td>
<td>Bucharest, Romania</td>
<td></td>
<td>PG# 36, 40, 89, 90, 149</td>
</tr>
<tr>
<td>Zoran B. Popovic, MD, PhD</td>
<td>Cleveland Clinic</td>
<td>Cleveland, OH</td>
<td></td>
<td>PG# 26, 53, 71, 85, 92, 96, 99, 101, 149</td>
</tr>
<tr>
<td>Athena Poppas, MD, FASE</td>
<td>Rhode Island Hospital</td>
<td>Providence, RI</td>
<td></td>
<td>PG# 46, 149</td>
</tr>
<tr>
<td>Thomas R. Porter, MD, FASE</td>
<td>University of Nebraska Medical Center</td>
<td>Omaha, NE</td>
<td></td>
<td>PG# 35, 37, 48, 52, 73, 89, 89, 131, 137, 149</td>
</tr>
<tr>
<td>Andrew J. Powell, MD, FASE</td>
<td>Boston Children's Hospital</td>
<td>Boston, MA</td>
<td></td>
<td>PG# 39, 71, 149</td>
</tr>
<tr>
<td>Aldo Prado, MD, FASE</td>
<td>Centro Privado de Cardiologia</td>
<td>Yerba Buena, Tucumán, Argentina</td>
<td></td>
<td>PG# 54, 66, 149</td>
</tr>
<tr>
<td>Beth F. Printz, MD, PhD, FASE</td>
<td>Rady Children's Hospital</td>
<td>San Diego, CA</td>
<td></td>
<td>PG# 28, 80, 82, 149</td>
</tr>
<tr>
<td>David L. Prior, MBBS, PhD, FASE</td>
<td>St. Vincent's Hospital</td>
<td>Melbourne, Australia</td>
<td></td>
<td>PG# 55, 149</td>
</tr>
<tr>
<td>Michael D. Puchalski, MD, FASE</td>
<td>University of Utah Hospital</td>
<td>Salt Lake City, UT</td>
<td></td>
<td>PG# 25, 57, 71, 80, 149</td>
</tr>
<tr>
<td>Miguel A. Quiñones, MD, FASE</td>
<td>Houston Methodist Hospital</td>
<td>Houston, TX</td>
<td></td>
<td>PG# 27, 34, 39, 53, 71, 103, 136, 138, 149</td>
</tr>
<tr>
<td>Rene Quiroz, MD, FASE</td>
<td>South Texas Vascular Health Center</td>
<td>San Antonio, TX</td>
<td></td>
<td>PG# 43, 142, 149</td>
</tr>
<tr>
<td>Arnaldo Rabishoffsky, MD</td>
<td>Pro Cardiaco</td>
<td>Rio de Janeiro, Brazil</td>
<td></td>
<td>PG# 37, 149</td>
</tr>
<tr>
<td>Kimberly A. Radigan, RDCS, FASE</td>
<td>Cleveland Clinic</td>
<td>Cleveland, OH</td>
<td></td>
<td>PG# 54, 140, 142, 149</td>
</tr>
<tr>
<td>Harry Rakowski, MD, FASE</td>
<td>Toronto General Hospital</td>
<td>Toronto, Ontario, Canada</td>
<td></td>
<td>PG# 35, 44, 133, 137, 149</td>
</tr>
<tr>
<td>Ravi Rasalingam, MD, FASE</td>
<td>Barnes-Jewish Hospital</td>
<td>St. Louis, MO</td>
<td></td>
<td>PG# 25, 149</td>
</tr>
<tr>
<td>Kent H. Rehfeldt, MD, FASE</td>
<td>Mayo Clinic</td>
<td>Rochester, MN</td>
<td></td>
<td>PG# 26, 149</td>
</tr>
<tr>
<td>Mark Reisman, MD</td>
<td>University of Washington Medical Center</td>
<td>Seattle, WA</td>
<td></td>
<td>PG# 45, 47, 83, 149</td>
</tr>
<tr>
<td>David Reynolds</td>
<td>ROCI, Inc.</td>
<td>Elmhurst, IL</td>
<td></td>
<td>PG# 52, 149</td>
</tr>
<tr>
<td>Vera H. Rigolin, MD, FASE</td>
<td>Northwestern University</td>
<td>Chicago, IL</td>
<td></td>
<td>PG# 47, 48, 57, 64, 101, 132, 136, 138, 149</td>
</tr>
<tr>
<td>David A. Roberson, MD, FASE</td>
<td>Advocate Health</td>
<td>Chicago, IL</td>
<td></td>
<td>PG# 21, 35, 149</td>
</tr>
<tr>
<td>Brad J. Roberts, ACS, RCS, FASE</td>
<td>Baylor College of Medicine</td>
<td>Houston, TX</td>
<td></td>
<td>PG# 37, 38, 149</td>
</tr>
<tr>
<td>Marsha L. Roberts, RCS, RDCS, FASE</td>
<td>Inside Echo, LLC</td>
<td>Grand Prairie, TX</td>
<td></td>
<td>PG# 25, 30, 149</td>
</tr>
<tr>
<td>Susana Robison, RVT, FASE</td>
<td>Keck Hospital of USC</td>
<td>Los Angeles, CA</td>
<td></td>
<td>PG# 46, 149</td>
</tr>
<tr>
<td>Ana Clara T. Rodrigues</td>
<td>Hospital Israelita Albert Einstein</td>
<td>Sao Paulo, Brazil</td>
<td></td>
<td>PG# 27, 149</td>
</tr>
<tr>
<td>L. Leonardo Rodriguez, MD</td>
<td>Cleveland Clinic</td>
<td>Cleveland, OH</td>
<td></td>
<td>PG# 39, 44, 46, 84, 85, 86, 92, 96, 99, 137, 140, 149</td>
</tr>
<tr>
<td>Ricardo E. Ronderos, MD, PhD, FASE</td>
<td>Instituto de Cardiología</td>
<td>La Plata, Argentina</td>
<td></td>
<td>PG# 37, 61, 86, 97, 149</td>
</tr>
<tr>
<td>Geoffrey A. Rose, MD, FASE</td>
<td>Sanger Heart and Vascular Institute</td>
<td>Charlotte, NC</td>
<td></td>
<td>PG# 17, 29, 43, 48, 57, 70, 72, 73, 136, 138, 149</td>
</tr>
<tr>
<td>David S. Rubenson, MD, FASE</td>
<td>Scripps Clinic Medical Group</td>
<td>San Diego, CA</td>
<td></td>
<td>PG# 29, 66, 137, 138, 149</td>
</tr>
<tr>
<td>Lawrence G. Rudski, MD, FASE</td>
<td>Jewish General Hospital</td>
<td>Montreal, Quebec, Canada</td>
<td></td>
<td>PG# 27, 30, 137, 140, 149</td>
</tr>
<tr>
<td>Thomas Ryan, MD, FASE</td>
<td>The Ohio State University Columbus, OH</td>
<td>Columbus, OH</td>
<td></td>
<td>PG# 19, 37, 38, 71, 133, 136, 138, 149</td>
</tr>
<tr>
<td>Jack Rychik, MD</td>
<td>Children's Hospital of Philadelphia</td>
<td>Philadelphia, PA</td>
<td></td>
<td>PG# 52, 149</td>
</tr>
</tbody>
</table>
Ritu Sachdeva, MBBS, FASE
Children’s Healthcare of Atlanta
Atlanta, GA
PG# 29, 79, 88, 140, 149

Leyla E. Sade, MD
University of Baskent
Ankara, Turkey
PG# 30, 149

Liza Y. Sanchez, RCS, FASE
University of Texas MD Anderson Cancer Center
Houston, TX
PG# 37, 39, 71, 100, 101, 149

Oscar F. Sanchez Osella, MD, PhD
InCor Heart Institute - São Paulo University
São Paulo, Brazil
PG# 43, 149

Stephen P. Sanders, MD
Boston Children’s Hospital
Boston, MA
PG# 26, 28, 149

Maurice E. Sarano, MD
Mayo Clinic
Rochester, MN
PG# 38, 44, 85, 149

Muhammed Saric, MD, PhD, FASE
New York University
New York, NY
PG# 27, 29, 53, 137, 149

Stephen G. Sawada, MD
Indiana University School of Medicine
Indianapolis, IN
PG# 40, 71, 136, 139, 149

Gregory M. Scalia, MBBS, FASE
Prince Charles Hospital Spring Hill, QLD, Australia
PG# 39, 149

Marielle Scherrer-Crosbie, MD, PhD, FASE
Massachusetts General Hospital
Boston, MA
PG# 36, 53, 71, 96, 137, 139

Amy H. Schultz
Seattle Children’s Hospital
Seattle, WA
PG# 25, 75, 149

Partho P. Sengupta, MBBS, MD, DM, FASE
Mount Sinai Medical Center
New York, NY
PG# 17, 37, 38, 52, 71, 73, 89, 101, 137, 139, 149

Shantanu Sengupta, MD, FASE
Sengupta Hospital and Research Institute
Nagpur, MAH, India
PG# 45, 46, 149

Roxy Senior, MD, DM, FRCP, FESC
Royal Brompton Hospital
London, England
PG# 27, 30, 40, 149

James B. Seward, MD, FASE
EchoMetrics Cardiologists
Rochester, MN
PG# 39, 136, 149

James “Jay” Shafer, BS, RCS, RVS, RVT
National American University
Austin, TX
PG# 46, 149

Amil M. Shah, MD, MPH
Brigham and Women’s Hospital
Boston, MA
PG# 35, 149

Sachita Shah, MD
University of Washington
Seattle, WA
PG# 21, 149

Sangeeta B. Shah, MD, FASE
Northwestern University
Chicago, IL
PG# 45, 140, 142, 149

Sanjiv J. Shah, MD, FASE
Mayo Clinic Arizona
Scottsdale, AZ
PG# 43, 149

Robin Shandas, PhD
University of Colorado
Boulder, CO
PG# 38, 149

Elaine A. Shea, ACS, RCS, RCCS, FASE
Alta Bates Summit Medical Center
Berkeley, CA
PG# 51, 71, 132, 149

Stanton K. Shernan, MD, FASE
Brigham and Women’s Hospital
Boston, MA
PG# 29, 50, 60, 149

Sasha K. Shillcutt, MD, FASE
University of Nebraska Medical Center
Omaha, NE
PG# 28, 29, 149

Takahiro Shiota, MD, FASE
Cedars-Sinai Medical Center
Los Angeles, CA
PG# 43, 71, 73, 137, 149

Girish S. Shirali, MBBS, FASE
Children’s Mercy Hospital
Kansas City, MO
PG# 21, 35, 73, 80, 82, 149

Douglas C. Shook, MD, FASE
Brigham and Women’s Hospital
Boston, MA
PG# 25, 29, 137, 138, 149

Xianhong Shu, MD, PhD
Zhongshan Hospital of Fudan University
Shanghai, China
PG# 36, 82, 83, 93, 94, 95, 103, 104, 108, 149

Robert J. Siegel, MD, FASE
Cedars-Sinai Medical Center
Los Angeles, CA
PG# 44, 45, 53, 84, 149
<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>City, Country</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liza Thomas, MD</td>
<td>Westmead Hospital</td>
<td>New South Wales, Australia</td>
<td>30, 89, 92, 97, 150</td>
</tr>
<tr>
<td>Thor Thorsson, MD</td>
<td>University of Michigan</td>
<td>Ann Arbor, MI</td>
<td>31, 150</td>
</tr>
<tr>
<td>John H. Toptine, ACS, RCS, RDCS, FASE</td>
<td>Duke University Medical Center</td>
<td>Durham, NC</td>
<td>43, 85, 137, 139, 150</td>
</tr>
<tr>
<td>Manatomo Toyono, MD</td>
<td>Akita University</td>
<td>Akita, Japan</td>
<td>31, 94, 102, 150</td>
</tr>
<tr>
<td>Teresa S.M. Tsang, MD, FASE</td>
<td>University of British Columbia</td>
<td>North Vancouver, British Columbia, Canada</td>
<td>30, 105, 150</td>
</tr>
<tr>
<td>Wendy Tsang, MD</td>
<td>University of Toronto</td>
<td>Toronto, Ontario, Canada</td>
<td>36, 38, 51, 71, 85, 105, 140, 150</td>
</tr>
<tr>
<td>Edwin S. Tucay, MD</td>
<td>Philippine Heart Center</td>
<td>Antipolo City, Rizal, Philippines</td>
<td>35, 48, 150</td>
</tr>
<tr>
<td>Robert Tunks, MD</td>
<td>Penn State Hershey Medical Center</td>
<td>Hershey, PA</td>
<td>31, 150</td>
</tr>
<tr>
<td>Wayne Tworetzky, MD</td>
<td>Children’s Hospital Boston</td>
<td>Boston, MA</td>
<td>44, 79, 81, 150</td>
</tr>
<tr>
<td>Matt M. Umland, RDCS, FASE</td>
<td>Aurora Health Care</td>
<td>Muskego, WI</td>
<td>31, 43, 88, 150</td>
</tr>
<tr>
<td>Evan Unger, MD</td>
<td>University of Arizona</td>
<td>Tucson, AZ</td>
<td>27, 150</td>
</tr>
<tr>
<td>Deepa Upadhyaya, MD</td>
<td>Saint Luke’s Health System</td>
<td>Kansas City, MO</td>
<td>53, 150</td>
</tr>
<tr>
<td>Seth Uretsky, MD</td>
<td>Morristown Medical Center</td>
<td>Morristown, NJ</td>
<td>53, 88, 150</td>
</tr>
<tr>
<td>Mani A. Vannan, MBBS, FASE</td>
<td>Piedmont Heart Institute</td>
<td>Atlanta, GA</td>
<td>30, 51, 137, 150</td>
</tr>
<tr>
<td>Ashwin Venkateshvaran, MSc, RCS, RDCS</td>
<td>Sri Sathya Sai Institute of Higher Medical Sciences</td>
<td>Puttaparthi, India</td>
<td>28, 38, 47, 150</td>
</tr>
<tr>
<td>Marcelo Vieira, MD</td>
<td>Heart Institute of Sao Paulo</td>
<td>Sao Paulo, Brazil</td>
<td>44, 150</td>
</tr>
<tr>
<td>Juan Villafane, MD, FASE</td>
<td>University of Kentucky</td>
<td>Louisville, KY</td>
<td>28, 140, 150</td>
</tr>
<tr>
<td>Flordeliza S. Villanueva, MD</td>
<td>University of Pittsburgh</td>
<td>Pittsburgh, PA</td>
<td>37, 137, 150</td>
</tr>
<tr>
<td>Jens-Uwe Voigt, MD</td>
<td>University Hospital</td>
<td>Gasthuisberg</td>
<td>36, 150</td>
</tr>
<tr>
<td>Hao Wang, MD, PhD</td>
<td>Beijing Fuwai Hospital</td>
<td>Beijing, China</td>
<td>53, 150</td>
</tr>
<tr>
<td>Melissa Wasserman, RDCS, RCCS, FASE</td>
<td>Children’s Hospital of Philadelphia</td>
<td>Philadelphia, PA</td>
<td>25, 138, 150</td>
</tr>
<tr>
<td>Kevin Wei, MD, FASE</td>
<td>Oregon Health &amp; Science University</td>
<td>Portland, OR</td>
<td>30, 71, 137, 150</td>
</tr>
<tr>
<td>Rory B. Weiner, MD, FASE</td>
<td>Massachusetts General Hospital</td>
<td>Boston, MA</td>
<td>36, 71, 79, 88, 140, 150</td>
</tr>
<tr>
<td>Lynn Weinert, BS, RDCS</td>
<td>Echo Heartbeat of Cardiology</td>
<td>Chicago, IL</td>
<td>54, 85, 95, 150</td>
</tr>
<tr>
<td>Neil J. Weissman, MD, FASE</td>
<td>MedStar Health Research Institute</td>
<td>Washington, DC</td>
<td>9, 36, 39, 47, 59, 132, 137, 140, 150</td>
</tr>
<tr>
<td>Malissa J. Wood, MD, FASE</td>
<td>Massachusetts General Hospital</td>
<td>Boston, MA</td>
<td>35, 36, 55, 100, 137, 139, 150</td>
</tr>
<tr>
<td>Richard Wright, MD</td>
<td>Pacific Heart Institute</td>
<td>Santa Monica, CA</td>
<td>27, 150</td>
</tr>
<tr>
<td>Bryan Wells, MD</td>
<td>Emory Healthcare</td>
<td>Atlanta, GA</td>
<td>43, 44, 150</td>
</tr>
<tr>
<td>Arthur E. Weyman, MD, FASE</td>
<td>Massachusetts General Hospital</td>
<td>Boston, MA</td>
<td>37, 48, 73, 133, 137, 140, 150</td>
</tr>
<tr>
<td>Gillian A. Whalley, PhD, FASE</td>
<td>Australasian Sonographers Association</td>
<td>Victoria, Australia</td>
<td>38, 47, 71, 150</td>
</tr>
<tr>
<td>Susan E. Wiegers, MD, FASE</td>
<td>Lewis Katz School of Medicine at Temple University</td>
<td>Philadelphia, PA</td>
<td>17, 35, 36, 48, 73, 132, 136, 138, 150</td>
</tr>
<tr>
<td>Anna Woo, MD, SM</td>
<td>Toronto General Hospital</td>
<td>Toronto, Ontario, Canada</td>
<td>54, 71, 85, 103, 138, 150</td>
</tr>
<tr>
<td>Malissa J. Wood, MD, FASE</td>
<td>Massachusetts General Hospital</td>
<td>Boston, MA</td>
<td>35, 36, 55, 100, 137, 139, 150</td>
</tr>
<tr>
<td>Richard Wright, MD</td>
<td>Pacific Heart Institute</td>
<td>Santa Monica, CA</td>
<td>27, 150</td>
</tr>
</tbody>
</table>
Megan Yamat, RDCS, RCS, FASE
University of Chicago Medical Center
Chicago, IL
PG# 37, 94, 107, 142, 150

Kibar Yared, MD
University of Toronto
Thornhill, Ontario, Canada
PG# 30, 71, 150

Teerapat Yingchoncharoen, MD, FASE
Cleveland Clinic
Ratchathewi, Bangkok
PG# 26, 87, 142, 150

Danita M. Yoerger Sanborn, MD, FASE
Massachusetts General Hospital
Boston, MA
PG# 54, 150

Adel K. Younoszai, MD, FASE
Children’s Hospital Colorado
Aurora, CO
PG# 29, 81, 105, 150

Tiangang Zhu, MD
People’s Hospital of Peking University
Beijing, China
PG# 27, 150

Karen G. Zimmerman, BS, ACS, RDCS (AE, PE), RVT, FASE
Webber Heart Center
Munson Medical Center Traverse City, MI
PG# 17, 25, 38, 138, 150

William A. Zoghbi, MD, FASE
Houston Methodist Hospital
Houston, TX
PG# 29, 46, 86, 98, 133, 136, 139, 150
Abstract Presenter Index

Adam Castano, MD  
Columbia University  
New York, NY  
PG# 48, 61, 73, 150

Shahryar M. Chowdhury, MD  
Medical University of South Carolina  
Charleston, SC  
PG# 47, 48, 61, 73, 75, 76, 150

Tammy Lane Churchill, AA, RDGS  
Medical University of South Carolina  
Charleston, SC  
PG# 51, 76, 150

Lazaro E. Hernandez, MD  
Joe DiMaggio Children’s Hospital  
Hollywood, FL  
PG# 47, 62, 75, 150

Soultana Kourtidou, MD, MSc  
Seattle Children’s Hospital  
Seattle, WA  
PG# 47, 75, 62, 81, 150

Diego Medvedofsky, MD  
University of Chicago  
Chicago, IL  
PG# 55, 62, 74, 90, 95, 101, 103, 150

Hari Rajagopal, MD  
Mount Sinai Medical Center  
New York, NY  
PG# 51, 76, 78, 79, 81, 82, 150

Shagun Sachdeva, MBBS  
Children’s Hospital of Wisconsin  
Milwaukee, WI  
PG# 47, 62, 75, 150

Ines Sherifi, MD, MSc  
Mount Sinai Medical Center  
New York, NY  
PG# 48, 61, 73, 150

Rachel D. Torok, MD  
Duke University Medical Center  
Durham, NC  
PG# 51, 64, 76, 150

Lindsay Urbinelli, MD  
Cincinnati Children’s Hospital  
Cincinnati, OH  
PG# 47, 62, 75, 150

Hiroto Utsunomiya, MD, PhD  
Cedars-Sinai Heart Institute  
Los Angeles, CA  
PG# 48, 61, 73, 150

Aecha M. Ybarra, MD  
Nicklaus Children’s Hospital  
Miami, FL  
PG# 51, 76, 150
# 2016 ASE Conference

**Online Library**
Includes unlimited online access indefinitely to the 2016 ASE Scientific Sessions

<table>
<thead>
<tr>
<th>On-Site</th>
<th>Post Conference</th>
</tr>
</thead>
<tbody>
<tr>
<td>$199</td>
<td>$299</td>
</tr>
</tbody>
</table>

**Multi-Year Online Library**
Includes unlimited online access indefinitely to the 2009-2016 ASE Scientific Sessions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Site</td>
<td>$399</td>
</tr>
<tr>
<td>Post Conference</td>
<td>$499</td>
</tr>
</tbody>
</table>

**2016 ASCeXAM/ReASCE Review Course**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ASE Member/Non-Member</td>
<td>$375/$525</td>
</tr>
</tbody>
</table>

To Order, Visit Us at the Digitell Booth Near Registration
Technical Support: 877-796-1325 Other Inquiries: 800-679-3646
ASEUniversity.org
American Society of Echocardiography

Be in the know.
ASE 2017

28th Annual Scientific Sessions

Baltimore, MD
June 2-6

Baltimore Convention Center
Learn more by visiting the GE Healthcare booth #101 at ASE 2016 in Seattle, WA.