

# State-of-the-Art ECHOCARDIOGRAPHY

# 28<sup>th</sup> ANNUAL



**Main Course: February 21 – 24, 2015**

**Preconference Optional Sessions:**

February 20 – 21, 2015

**Hyatt Regency Scottsdale  
Scottsdale, AZ**

**Course Director:**

**Vera H. Rigolin, MD, FASE**

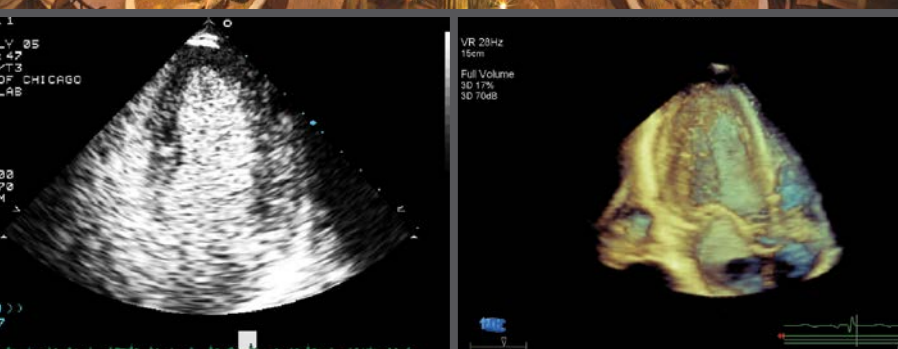
**Course Co-Director:**

**Steven Lester, MD, FASE**

**Learning Lab Co-Directors:**

**Roberto M. Lang, MD, FASE**

**Bijoy K. Khandheria, MD, FASE**



Jointly Provided by ASE and the ASE Foundation



# Welcome Message

## Welcome Message

Welcome to the 28th Annual State-of-the Art Echocardiography conference, a premier program organized by the American Society of Echocardiography.

In keeping with past tradition, we continue to have first-rate physicians and sonographers presenting a broad range of echo-related topics to enhance your clinical practice. We will continue to discuss information on pertinent topics such as stress echo, hemodynamics, heart failure and contrast echo using a combination of didactic lectures and case presentations. We will once again offer hands-on training in our computer learning lab. We heard you and back by popular demand is the half-day Congenital Heart Symposium. Returning this year will be the full-day valve symposium, where cardiologists, surgeons and sonographers will discuss medical, percutaneous and surgical options for patients with valve disorders. Also returning will be a Maintenance of Certification (MOC) session that will allow for credit towards ABIM recertification.



Arizona is beautiful this time of year allowing for outdoor activities in a comfortable environment. The location for our conference at the Hyatt Regency Scottsdale offers numerous indoor and outdoor activities for you and your family to enjoy.

Welcome to Scottsdale and the 28th Annual State-of-the-Art conference!

**Course Director**  
Vera Rigolin,  
MD, FASE



## Course Director

**Vera H. Rigolin, MD, FASE**

Northwestern University  
Chicago, IL

## Course Co-Director

**Steven Lester, MD, FASE**

Mayo Clinic  
Scottsdale, AZ

## Learning Lab Co-Directors

**Roberto M. Lang, MD, FASE**

Past President, ASE  
University of Chicago  
Chicago, IL

**Bijoy K. Khandheria, MD, FASE**

Past President, ASE  
Aurora Healthcare  
Milwaukee, WI

## Program Faculty

**Robert Bonow, MD**

Northwestern University  
Chicago, IL

**Keith A. Collins, MS, RDCS**

University of Chicago Medical Center  
Chicago, IL

**Bonnie J. Kane, BS, RDCS, FASE**

Northwestern University  
Chicago, IL

**Christopher J. Kramer, BA,  
RDCS, FASE**

Aurora Healthcare  
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**Patrick McCarthy, MD**

Northwestern University  
Chicago, IL

**Sabrina Phillips, MD, FASE**

Mayo Clinic  
Rochester, MN

**Muhammed Saric, MD, PhD, FASE**

New York University  
New York, NY

**Partho P. Sengupta, MD, DM, FASE**

Mount Sinai Heart Medical Center  
New York, NY

**Sanjiv J. Shah, MD**

Northwestern University  
Chicago, IL

**Matt. M. Umland, RDCS, FASE**

Aurora Healthcare  
Milwaukee, WI

# Program Overview



## About ASE

As the largest global organization for cardiovascular ultrasound imaging, the American Society of Echocardiography (ASE) is the leader and advocate, setting practice standards and guidelines. Comprised of over 16,000 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 serves its members in numerous ways by providing education, advocacy, research, practice guidelines and a community for their profession. Did you know your ASE membership affords you over \$400 of FREE credits a year, in addition to discounts on all ASE educational courses and products? Also included is a monthly subscription to the *Journal of the American Society of Echocardiography* (JASE), help with legislative coding and reimbursement issues and other career resources.

## Overview of State-of-the-Art Echocardiography

State-of-the-Art Echocardiography is a premier educational venue for cardiovascular ultrasound in clinical practice. This superbly rated meeting is filled to capacity year after year. Although the course is refocused yearly to ensure the most up to date information, topics will include quantitative echocardiography, valvular and ischemic heart disease, stress/contrast echocardiography, advances in imaging in coronary disease, and myopericardial diseases. A full-day Heart Valve Symposium will be held on Sunday, February 22, 2015, which will include echo innovations and applications for clinical practice.

Participants should have a practical knowledge of echocardiography to fully benefit from this program. The setting is ideal for participants to bring their families and take advantage of some vacation time.

## Objectives

To present recent advances in the diagnosis and treatment of cardiovascular disease to a wide range of cardiovascular health care providers.

To present established and emerging cardiac ultrasound imaging modalities that can be used to provide optimal patient care.

To discuss the ASE guidelines in the context of case examples and clinical applications.

To present information that highlights the utility of an integrated and multidisciplinary approach to patient care.

To provide the opportunity for interaction between experts and practitioners, which will facilitate implementation of information presented into clinical practice.

## Upon completion of this program, attendees should be better able to:

- Incorporate state-of-the art clinical applications of echocardiography/Doppler ultrasound into clinical decision-making.
- Explain how to use color and spectral Doppler in a quantitative fashion.
- Identify specific valvular lesions and understand the various medical, interventional and surgical options for treatment.
- Assess left and right ventricular function quantitatively.
- Differentiate between the various stages of diastolic dysfunction.
- Describe the value and pitfalls of contrast echo.
- Recognize how to implement ASE guidelines in management of patients with valvular heart disease, systolic and diastolic dysfunction.
- Apply knowledge of echocardiography in the care of patients with left ventricular assist devices and who have undergone heart transplantation.

## Target Audience

State-of-the-Art Echocardiography's program is designed for adult and pediatric cardiologists, cardiovascular surgeons, anesthesiologists, radiologists, nurses, sonographers and fellows in training. Participants should have a practical knowledge of echocardiography.

## Disclaimer

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

## Commercial Support Disclosure

**Educational Grants:** This activity is supported in part by educational grants from Abbott Vascular, Actelion, Biosense Webster, GE Healthcare, Lantheus Medical Imaging, Medtronic and Thoratec.

**In-kind Donations:** This activity is supported in part by in-kind donations of software from Philips Healthcare, GE Healthcare, FUJIFILM Medical Systems USA, Inc., and Epsilon Imaging.



## 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 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 this live activity for a maximum of 37.00 *AMA PRA Category 1 Credits*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ASE designates the State-of-the-Art Echocardiography Learning Lab for a maximum of 13.25 hours, MOC (Maintenance of Certification) Session for a maximum of 3.75 hours, and a maximum of 26.25 hours for the Main Conference. Attendees must have registered for the Learning Lab and MOC Session to claim credit for those sessions.

- Main Conference = 26.25
- MOC + Main Conference= 30
- Learning Lab + Main Conference= 37

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

This educational activity has been awarded a maximum of 10 BSE re-accreditation points, with no more than 2 points provided per day of attendance.

The American Society of Echocardiography is committed to ensuring that its educational mission and all educational programs are not influenced by the special interests of any corporation or individual, and its mandate is to retain only those speakers whose financial interests can be effectively resolved to maintain the goals and educational integrity of the program. While a monetary or professional affiliation with a corporation does not necessarily influence a speaker's presentation, the Essential Areas and policies of the ACCME require that any relationships that could possibly conflict with the educational value of the program be resolved prior to the educational session and disclosed to the audience.

## How to Obtain CME Credit

To claim your CME for State-of-the-Art Echocardiography, please follow the steps below using your Mozilla Firefox, Google Chrome or Safari browser. Internet Explorer will not work. The deadline to claim credit is **March 25, 2015**.

1. **ASE Members:** Go to [www.asecho.org](http://www.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 profile).
2. **Non-Members:** Go to [www.aseuniversity.org](http://www.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."**
4. Under **"Your Account"** click on **"Add Access Code"** and enter the code **SOTA2015**.
5. Verify your registration information. Please be sure to use information that you used to register for the event.
6. Once verified, click **"Take Evaluation"** to claim your CME credit. CME credits are not earned until the entire evaluation has been completed.
7. Your certificate will be available for immediate download and can also be found under **"Your Account"** in the **"CE Transcript."**

# Attendee Information



## Registration Location and Hours

Attendee registration is located outside the Arizona Ballroom.

### **Thursday, February 19, 2015**

4:00 pm – 6:00 pm

### **Friday, February 20, 2015**

7:00 am – 4:45 pm

### **Saturday, February 21, 2015**

7:00 am – 5:30 pm

### **Sunday, February 22, 2015**

7:00 am – 6:00 pm

### **Monday, February 23, 2015**

6:30 am – 6:00 pm

### **Tuesday, February 24, 2015**

6:30 am – 1:00 pm

## Food Functions

ASE will provide a continental breakfast, morning coffee breaks and afternoon refreshment breaks for registered attendees of the main conference in the Vaquero Ballroom. Please refer to the program schedule for the times of the daily coffee breaks and continental breakfast.

ASE will provide lunch for registered attendees of the main conference in the Vaquero Ballroom on Sunday, February 22nd and Monday, February 23rd. Lunch times may vary. Please refer to the program schedule for times.

The Hyatt Regency Scottsdale offers their guest a variety of dining options. Please see Location Information (page 7) for more details.

## Welcome Reception

ASE cordially invites you and your guests to the 28th Annual State-of-the-Art Echocardiography Welcome Reception on Sunday evening, February 22nd from 5:45 pm – 6:45 pm in the Vaquero Ballroom. This casual reception welcomes you to “the heart of the Sonoran Desert” and offers you the perfect opportunity to meet faculty, friends and colleagues.

## Cell Phone Use

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

## Safety

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

## Photography/AV Policy

No person may record any portion of the 28th Annual State-of-the-Art Echocardiography, either by video, still or digital photography, audio or any other recording or reproduction mechanism. This includes recording of presentations and supporting audio visual materials.

Taking photos of, or recording the content of, presentation slides is also prohibited and is considered intellectual piracy. Attendees who ignore this policy will be asked to leave the educational session and are at risk of losing their name badge and attendance privileges.

ASE reserves the rights to all recordings or reproductions at ASE meetings. Please be aware that during the 28th Annual State-of-the-Art Echocardiography, attendees, vendors, guests and exhibitors may be photographed or videotaped by ASE staff capturing the event. Some of these photographs or videos may be displayed by ASE in future publication or other materials. By virtue of your attendance, you agree to allow ASE to use photographs of you in its promotional materials.

## Children

ASE does not offer childcare services. Due to limited seating capacity and the highly technical nature of this program, children are not allowed to attend the educational session. For their safety, children must be accompanied by an adult at all times when attending the course events.

# Location Information

## Scottsdale, Arizona

When it comes to unique experiences, Scottsdale has you covered with boredom-busting options that run the gamut from world-class museums and a renowned botanical garden to guided city tours, architectural wonders and the nation's largest wilderness preserve.

You'll also find culinary attractions like a working olive mill and a winery where you can create your own special blend. Amusement parks, an award-winning zoo and a railroad museum appeal to kids of all ages. And for those hankering for a taste of Scottsdale's frontier roots, the state's largest remake of a 1880s Western town is just minutes away.

## Hyatt Regency Scottsdale Dining Options

- **Alto ristorante e bar:** Winner of the 2013 Wine Spectator Restaurant Award, this comfortable Italian restaurant offers fresh and flavorful dishes with an emphasis on "the season." In the Formaggio & Salumi Cellar, Alto's unique collection of Italy's best artisanal cheeses and meats are complemented by their extensive selection of wines from around the world, with an emphasis on Italy. Dinner is served both indoors and alfresco nestled around terrace fire pits, creating a convivial atmosphere. Top off your evening with a complimentary gondola ride along the resort's waterways, complete with singing gondoliers.
- **Cantina Due:** Discover the hotel's best kept secret; Cantina Due. Half-way between SWB, a Southwest bistro, and Alto ristorante e bar, this lively Scottsdale bar is nestled between the two restaurants. Here, you can experience the quintessential handcrafted cocktail made from freshly squeezed juices, artisan syrups and only natural and organic ingredients. Where the two restaurants collide, so do their menus! For only in Cantina Due can you relax and enjoy an open-air terrace while dining from the best of both worlds; SWB and Alto ristorante e bar.
- **Canyon Market:** Canyon Market is a 24 hour market and hiking lifestyle store that embraces the Sonoran outdoors. Stop by for directions to the best hiking locations around the Valley. Purchase performance food and gear essential to an active lifestyle, or simply visit to enjoy a cup of Starbucks coffee and a freshly-baked muffin. Throughout the afternoon and evening, sandwiches, wraps, salads, daily organic offerings, pastries and homemade ice cream are available for an easy "grab and Go" option.
- **Center Stage Bar:** Cascading fountains and glowing fireplaces set the mood for the indoor/outdoor allure of Center Stage Bar. Come and experience the sounds of our live music showcase ... from southern pop with a country flare and acoustic soul to edgy folk and soulful vocals. Entertainment nightly.
- **Noh:** Serving a theatre of Japanese cuisine ... sushi, sashimi and traditional Japanese dishes with a contemporary twist
- **SWB, a southwest bistro:** Energized by the delicious aromas and activity coming from its open kitchen, this casual bistro features southwest specialties prepared in wood-fired ovens. Set against a backdrop of the majestic McDowell Mountains, relax and enjoy breakfast, lunch and dinner and Sunday Brunch, indoors or out.

Source: <http://scottsdale.hyatt.com>.

Registration  
Open!

THE  
**6<sup>th</sup>**  
Annual

ASE  
FOUNDATION  
RESEARCH  
AWARDS GALA

Saturday  
June 13, 2015

The Fairmont  
Copley Place  
Boston, MA

Tickets available at  
[asefoundation.org/gala](http://asefoundation.org/gala)



# Schedule of Events

## FRIDAY, FEBRUARY 20, 2015

### Vaquero Ballroom E-G

7:00 am **Continental Breakfast**

#### Learning Lab: A Road to Comprehensive Quantification Using ASE Guidelines (additional fee)

8:00 am **Welcome and Introduction to the Classroom**

*B. Khandheria, R. Lang*

8:15 am **Introduction to the Software and Computer**

*M. Umland*

8:30 am **Cases in Chamber Quantification: LV and RV Dimensions, 2D and 3D LVEF, LA Volume**

*R. Lang, K. Collins*

9:00 am **Basic Doppler Calculations: VTI, SV, CO, CL, RSVP**

*B. Khandheria, M. Umland, B. Kane*

9:30 am **Diastolic Function 101: Cases to Evaluate**

*B. Khandheria, M. Umland*

10:00 am **Refreshment Break**

10:15 am **Aortic Valve: Quantify Stenosis; Mean Gradient, Valve Area, TAVR Measurements**

*B. Khandheria, C. Kramer*

10:45 am **Aortic Valve: Quantify Regurgitation; Volume, ERO, Vena Contracta**

*R. Lang, K. Collins, B. Kane*

11:30 am **Test Your Measuring Skills: Interpret with the Faculty**

*All faculty*

12:00 pm **Question and Answer – All faculty**

12:15 pm **Lunch – Arizona Ballroom 4**

1:30 pm **Mitral Valve: Quantify Stenosis; Mean Gradient, Valve Area, 2D and 3D**

*B. Khandheria, M. Umland, B. Kane*

2:00 pm **Mitral Valve: Quantify Regurgitation; Volume, ERO, Vena Contracta, PISA**

*B. Khandheria, C. Kramer*

2:30 pm **Myocardial Mechanics: Global Longitudinal Strain**

*R. Lang, C. Kramer*

3:15 pm **Refreshment Break**

3:30 pm **Test Your 3D Cropping Skills**

*All faculty*

4:30 pm **Question and Answer – All faculty**

4:45 pm **Adjourn**

## SATURDAY, FEBRUARY 21, 2015

### Vaquero Ballroom E-G

7:00 am **Continental Breakfast**

#### Learning Lab: A Road to Comprehensive Quantification Using ASE Guidelines (additional fee)

8:00 am **Cardio Oncology: What to Measure? How to Measure?**

*B. Khandheria, C. Kramer*

9:00 am **Prosthetic Heart Valves: In the Reading Room**

*B. Khandheria, M. Umland*

9:30 am **Tricuspid and Pulmonary Valves: Comprehensive Evaluation**

*R. Lang, K. Collins, B. Kane*

10:00 am **Refreshment Break**

10:15 am **Left Ventricular Assist Device; What Are the Measurements, Cases**

*C. Kramer, M. Umland*

10:45 am **Selected Case Studies in 3D Quantification**

*R. Lang, K. Collins*

11:15 am **Mystery Cases – All faculty**

11:45 am **Question and Answer – All faculty**

12:00 pm **Lunch – Arizona Ballroom 4**

1:00 pm **Let Us Read Together and Manage These Cases**

*B. Khandheria, C. Kramer*

2:30 pm **Grand Finale: Potpourri of Cases – All faculty**

## MAINTENANCE OF CERTIFICATION (additional fee)

### Arizona Ballroom

8:00 am **Maintenance of Certification by Case-Based Echocardiography**

*V. Rigolin, S. Shah, S. Lester*

10:00 am **Refreshment Break**

10:15 am **Maintenance of Certification by Case-Based Echocardiography**

*V. Rigolin, S. Shah, S. Lester*

12:00 pm **Adjourn**

## SATURDAY, FEBRUARY 21, 2015

### Arizona Ballroom

#### CONGENITAL HEART DISEASE SYMPOSIUM

1:00 pm **Rosetta Stone: An Echo Guide to Congenital Nomenclature**

*S. Phillips*

1:20 pm **Evaluation of Atrial Septal Defects**

*M. Saric*

1:40 pm **Evaluation of VSD, PDA, Anomalous Veins**

*M. Saric*

2:00 pm **Congenital Left Heart Obstructions I: Cor triatriatum, Supramitral Ring, Congenital Mitral Stenosis**

*S. Phillips*

2:20 pm **Congenital Left Heart Obstructive Lesions II: SubAS, Supravalvar AS, Coarctation**

*M. Saric*

2:40 pm **Refreshment Break**

3:00 pm **Tetralogy of Fallot – S. Phillips**

3:20 pm **Ebstein's Anomaly – S. Phillips**

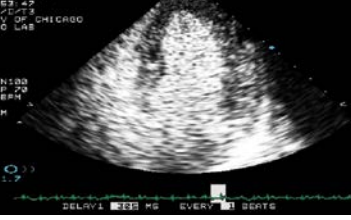
3:40 pm **Transposition of Great Arteries – M. Saric**

4:00 pm **Congenital Heart Disease & Pregnancy – S. Phillips**

4:20 pm **Percutaneous and Surgical Treatment of Congenital Heart Disease Case Presentations**

*B. Khandheria, M. Umland*





# Schedule of Events

4:40 pm	<b>Eisemenger Syndrome</b> – <i>S. Phillips</i>
4:50 pm	<b>Coronary Fistula</b> – <i>S. Phillips</i>
5:00 pm	<b>Gerbode Defect</b> – <i>S. Phillips</i>
5:10 pm	<b>AV Canal</b> – <i>M. Saric</i>
5:20 pm	<b>Adjourn</b>

## SUNDAY, FEBRUARY 22, 2015

### Arizona Ballroom

7:00 am	<b>Continental Breakfast and Visit Exhibits – Vaquero Ballroom E-G</b>
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### VALVE SYMPOSIUM

8:00 am	<b>AHA/ACC Valve Guidelines — What's New?</b> <i>R. Bonow</i>
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### MITRAL VALVE DISEASE

*V. Rigolin, presiding*

#### Degenerative Mitral Valve Disease

8:30 am	<b>2D and 3D Imaging of Degenerative MV Disease</b> <i>S. Lester</i>
8:45 am	<b>Surgical Treatment — How Does Echo Help?</b> <i>P. McCarthy</i>
9:00 am	<b>Percutaneous Treatment — Critical Role of Echo</b> <i>V. Rigolin</i>
9:15 am	<b>Case Presentations: Should This Patient Be Treated With Surgery, Clip or Watchful Waiting?</b> <i>B. Khandheria, M. Saric, P. Sengupta</i>

10:00 am	<b>Refreshment Break and Visit Exhibits</b>
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### Ischemic Mitral Valve Disease

10:30 am	<b>Surgery for Ischemic MR: When to Repair vs. Replace</b> <i>P. McCarthy</i>
10:50 am	<b>Clinical Spectrum of Ischemic MR</b> <i>R. Bonow</i>
11:05 am	<b>Case Presentations: Should this Patient Be Treated With Valve Replacement, Repair, Clip or Medical Therapy</b> <i>R. Lang, S. Lester, V. Rigolin</i>

### TV VALVE DISEASE

*R. Lang, presiding*

11:40 am	<b>Anatomy and Function of the “Other” Valve</b> <i>S. Phillips</i>
11:55 am	<b>Surgical Considerations of Tricuspid Regurgitation</b> <i>P. McCarthy</i>
12:15 pm	<b>Case Presentations:</b> <b>TV Disease in Patient with MR</b> – <i>B. Khandheria</i> <b>TV Disease Due to Pulmonary Hypertension</b> – <i>C. Kramer</i> <b>TV Disease Due to Pacemaker</b> – <i>R. Lang</i>

1:00 pm	<b>Lunch and Visit Exhibits – Vaquero Ballroom E-G</b>
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### AORTIC VALVE DISEASE

*S. Lester, presiding*

2:00 pm	<b>2D and 3D Imaging of AS</b> – <i>B. Khandheria</i>
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2:15 pm	<b>Low Gradient, Low Output AS with Low and Normal EF</b> <i>S. Lester</i>
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2:35 pm	<b>When Should a TAVR Be Considered? What Do the Guidelines Tell Us?</b> – <i>R. Bonnow</i>
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3:00 pm	<b>Echo Before, During and After TAVR — What Are the Critical Elements</b> – <i>M. Saric</i>
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3:15 pm	<b>Case Presentations: How Should This Patient Be Treated? AS in High Risk Patient</b> – <i>B. Khandheria</i> <b>AS in Patient with Past Chest Radiation</b> – <i>P. Sengupta</i> <b>Bicuspid AV</b> – <i>S. Phillips</i>
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4:00 pm	<b>Refreshment Break and Visit Exhibits</b>
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### PROSTHETIC VALVES

*V. Rigolin, presiding*

4:30 pm	<b>Imaging Prosthetic Valves Using ASE Guidelines</b> <i>V. Rigolin</i>
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4:45 pm	<b>Prosthetic Valve Dysfunction</b> <i>S. Lester</i>
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5:05 pm	<b>Case Presentations:</b> <b>Prosthetic Valve Stenosis</b> – <i>M. Umland</i> <b>Patient Prosthesis Mismatch</b> – <i>P. Sengupta</i> <b>MV Perivalvular Leak</b> – <i>V. Rigolin</i>
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5:45 pm	<b>Adjourn</b>
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5:45 pm	<b>Welcome Reception and Visit Exhibits – Vaquero Ballroom E-G</b>
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## MONDAY, FEBRUARY 23, 2015

### Arizona Ballroom

6:30 am	<b>Continental Breakfast and Visit Exhibits – Vaquero Ballroom E-G</b>
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### SUNRISE SESSION: ECHO IN SYSTEMIC DISEASE

*M. Saric, presiding*

7:00 am	<b>Amyloid</b> – <i>S. Shah</i>
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7:15 am	<b>Sarcoid</b> – <i>V. Rigolin</i>
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7:30 am	<b>Hemochromatosis</b> – <i>M. Saric</i>
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7:45 am	<b>Carcinoid</b> – <i>S. Phillips</i>
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### HEART FAILURE

*S. Shah, presiding*

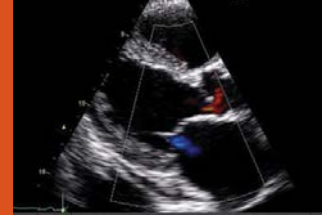
8:00 am	<b>The Face of Heart Failure in 2015</b> <i>S. Shah</i>
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8:20 am	<b>Case Presentations: Patients with Low EF</b> <b>2D Echo Assessment</b> – <i>B. Kane</i> <b>3D Echo Assessment</b> – <i>K. Collins</i> <b>Strain Analysis</b> – <i>P. Sengupta</i>
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9:00 am	<b>Case Presentations: How Do I Use Echo to Assess a Patient With an LVAD or Transplant?</b> <b>Normal LVAD</b> – <i>C. Kramer</i> <b>LVAD Complication</b> – <i>M. Umland</i> <b>Healthy Post Heart Transplant Patient: What to Look for with Echo</b> – <i>B. Khandheria</i> <b>Transplant Rejection</b> – <i>S. Shah</i>
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10:00 am	<b>Refreshment Break and Visit Exhibits</b>
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# Schedule of Events



## HEART FAILURE

*P. Sengupta, presiding*

10:30 am	<b>Heart Failure with Preserved EF: The Basics and Beyond</b> – <i>S. Shah</i>
10:50 am	<b>New Guidelines for LV Chamber Quantitation: What is old and what is new?</b> – <i>R. Lang</i>
11:10 am	<b>Demystifying Strain Imaging</b> – <i>S. Lester</i>
11:30 am	<b>Case Presentations:</b> <b>Hypertension</b> – <i>V. Rigolin</i> <b>Infiltrative Disease</b> – <i>S. Lester</i> <b>Where Strain Helped Me</b> – <i>P. Sengupta</i> <b>Where LV Mechanics Helped</b> – <i>S. Shah</i>
12:30 pm	<b>Lunch and Visit Exhibits – Vaquero Ballroom E-G</b>
1:30 pm	<b>ASE President's Address</b> – <i>N. Weissman</i>

## THE RIGHT VENTRICLE

*V. Rigolin, presiding*

1:45 pm	<b>New Guidelines for RV Chamber Quantitation: What is old and what is new?</b> – <i>R. Lang</i> <b>How Do I Measure LV Diastolic Function?</b> – <i>S. Lester</i>
2:15 pm	<b>Echocardiography: A PA Catheter in a Box</b> <i>S. Lester</i>
2:35 pm	<b>A Cardiologist's View of Pulmonary Hypertension</b> <i>S. Shah</i>
2:55 pm	<b>Case Presentations:</b> <b>Primary Pulmonary Hypertension</b> – <i>M. Saric</i> <b>Connective Tissue Disease</b> – <i>S. Shah</i>
3:15 pm	<b>Refreshment Break and Visit Exhibits</b>

## CARDIO-ONCOLOGY

*B. Khandheria, presiding*

3:45 pm	<b>Adverse Cardiac Effects of Chemotherapy</b> <i>B. Khandheria</i>
4:05 pm	<b>Early Detection of Ventricular Dysfunction Using Strain</b> <i>P. Sengupta</i>
4:25 pm	<b>Adverse Effects of Chest Radiation on the Heart</b> <i>V. Rigolin</i>
4:45 pm	<b>Primary and Metastatic Cancers of the Heart</b> <i>M. Saric</i>
5:05 pm	<b>Case Presentations:</b> <b>Chest Radiation Complication</b> – <i>V. Rigolin</i> <b>Breast Cancer Patient Needing Surveillance</b> – <i>P. Sengupta</i> <b>Anthracyclin Toxicity</b> – <i>B. Khandheria</i> <b>Pregnancy in a Patient with Past Cancer History</b> – <i>S. Phillips</i>
6:00 pm	<b>Adjourn</b>

## TUESDAY, FEBRUARY 24, 2105

Arizona Ballroom

6:30 am	<b>Continental Breakfast and Visit Exhibits – Vaquero Ballroom E-G</b>
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## SUNRISE SESSION: CONTRAST ECHO “HOW TO”

*R. Lang, presiding*

7:00 am	<b>When and Why Do I Give Contrast? — ASE Guidelines</b> <i>K. Collins</i>
7:15 am	<b>What Agents are Available? How Do They Differ?</b> <i>M. Umland</i>
7:30 am	<b>How Do I Administer Contrast?</b> <i>B. Kane</i>
7:45 am	<b>How Do I Prepare My Lab for a Contrast Emergency?</b> <i>C. Kramer</i>

## CORONARY ARTERY DISEASE

*M. Saric, presiding*

8:00 am	<b>Everything You Always Wanted to Know About Stress Echo</b> – <i>S. Lester</i>
8:20 am	<b>Case Presentations:</b> <b>CAD True Positive</b> – <i>K. Collins</i> <b>CAD False Negative</b> – <i>M. Umland</i> <b>CAD False Positive</b> – <i>C. Kramer</i> <b>Hemodynamic Stress Echo</b> – <i>B. Kane</i>
9:00 am	<b>Contrast Echo: What is the Word About Safety</b> <i>R. Lang</i>
9:15 am	<b>How Do I Set Up My Machine So That My Pictures Are Perfect?</b> – <i>M. Umland</i>
9:30 am	<b>Case Presentations:</b> <b>A Surprise in the Apex</b> – <i>B. Kane</i> <b>MI Complication</b> – <i>V. Rigolin</i> <b>Contrast with 3D Echo</b> – <i>K. Collins</i>
10:00 am	<b>Refreshment Break and Visit Exhibits</b>

## ATRIAL FIBRILLATION

*B. Khandheria, presiding*

10:30 am	<b>The Anatomy and Echo Assessment of the Left Atrial Appendage</b> – <i>B. Khandheria</i>
10:50 am	<b>Percutaneous Left Atrial Appendage Closure — The Role of Echo</b> – <i>V. Rigolin</i>
11:10 am	<b>Case Presentations:</b> <b>How Contrast Helped Assess the LAA</b> – <i>R. Lang</i> <b>Left Atrial Appendage Closure Device - 1</b> – <i>V. Rigolin</i> <b>Left Atrial Appendage Closure Device - 2</b> – <i>M. Saric</i> <b>Surgical LAA Closure Failure</b> – <i>B. Khandheria</i>
12:15 pm	<b>Question, Answer and Wrap Up</b>
1:00 pm	<b>Adjourn</b>

## Exhibit Location and Hours

Exhibits are located in the Vaquero Ballroom during the dates and hours listed below.

Sunday, February 22 .....6:30 am – 12:30 pm  
Monday, February 23.....6:30 am – 12:30 pm  
Tuesday, February 24 .....6:30 am – 4:00 pm

## Exhibitor Descriptions



**American Society of Echocardiography (ASE)**  
2100 Gateway Centre Blvd., Suite 310  
Morrisville, NC 27560  
United States  
Phone: 1-919-861-5574  
Fax: 1-919-882-9900  
Website: [www.asecho.org](http://www.asecho.org)



**Epsilon Imaging, Inc.**  
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United States  
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Fax: 1-734-369-5120  
Web Site: [www.epsilon-imaging.com](http://www.epsilon-imaging.com)

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Fax: 1-317-813-6600  
Web Site: [www.esaoteusa.com](http://www.esaoteusa.com)

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