

27th Annual
State-of-the-Art
ECHOCARDIOGRAPHY



February 14 - 18, 2014

**Hyatt Regency Scottsdale
Scottsdale, AZ**

Learning Lab Co-Directors:

Roberto M. Lang, MD, FASE

Bijoy K. Khandheria, MD, FASE

Course Director:

Vera H. Rigolin, MD, FASE

Learning Lab

February 14 - 15

Maintenance of Certification Program

February 15

Main Conference

February 16 - 18

New Course Highlights:

- Expanded learning laboratories:
 - Session now expanded to two days
- Maintenance of Certification (MOC) sessions:
 - Maintain your cardiology board certification in a relaxed setting
- Special symposium on valvular heart disease:
 - Latest trends in the treatment of valve disease
 - The novel uses of echo for the treatment of valvular heart disease
- Updates on new echo technology including strain images
- Revisit the old standbys: Heart failure, CAD, stress echo, pulmonary hypertension, right heart disease
- Cases, cases, cases

Program Information

Program Overview

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 16, 2014, 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.
- 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.

Learning Lab

A learning lab will be offered for two full days this year on Friday, February 14th and Saturday, February 15th. This workshop requires separate registration and is a part of the total hours of educational content offered for attending the course.

This intimate workshop features easy access to faculty members. Individual computer workstations are provided to teach each participant how to quantitate fundamental aspects of clinical echocardiography. The small group environment allows the opportunity for nearly private instruction from top practitioners in the field.

Maintenance of Certification

The Maintenance of Certification (MOC) session will be a half-day session on Saturday, February 15, 2014. This session requires separate registration. Upon completion registrants will be given access to an online module to complete to be awarded MOC credits. This session highlights several key topics through a study of clinical patient scenarios provided and analyzed by field experts. Guided by faculty moderators and audience response, topics covered will include new technology, artifacts, valvular heart disease, ventricular size and function, coronary artery disease, cardiomyopathies, congenital heart disease, Doppler, diastolic function, pericardial disease, stress echocardiography and cardiac masses. Registration for this session includes access to the ASE Online MOC Module.

Who Should Attend

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.

Fee

Your registration will be confirmed by email only. Registration fee includes continental breakfasts, breaks, lunches, a welcome reception and a memory stick containing course materials.

One of the many benefits of being an American Society of Echocardiography (ASE) member is receiving a reduced rate for State-of-the-Art Echocardiography, as well as for all ASE educational courses. If you are not currently a member and wish to become one, visit www.asecho.org.

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 sponsorship 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 35.75 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the

Program Information

extent of their participation in the activity.

ASE designates the State-of-the-Art Echocardiography Learning Lab for a maximum of 16 hours, the Maintenance of Certification session for 3.75 hours, and a maximum of 19.75 hours for the Main Conference. Attendees must be registered for the Learning Lab to claim full credit. The total amount of hours that can be claimed for attending both the Main Conference and Learning Lab is 35.75 hours and 23.50 for attending both the Main Conference and Maintenance of Certification session.

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

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

The American Society of Echocardiography 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 relationships that could possibly conflict with the educational value of the program be resolved prior to the educational session and disclosed to the audience.

Cancellations

If you wish to cancel your participation in this course, your registration fee, less a \$100 administrative fee, will be refunded when written notification is received before Tuesday, January 14, 2014. No refunds will be made after Tuesday, January 14, 2014. No refund will be given for no-shows.

Registration for any ASE course is non-transferable to another participant or another course. In the event that an individual is unable to attend the conference due to inclement weather or chooses not to attend due to a health epidemic, ASE is unable to refund the conference fee. In the unlikely event the meeting/course is cancelled, ASE is responsible only for refund of the registration fee (minus any processing fee) and not for transportation, hotel accommodations or any miscellaneous expenses incurred by the participant.

Lodging

To secure your room at the Hyatt Regency Scottsdale, please call 888-421-1442 and state that you will be attending the **State-of-the-Art Echocardiography** program. The room rate is \$289 single/double a night. A deposit of one night's stay plus tax will be held at the time of reservation. Deposit will be forfeited for any cancellations occurring within 72 hours of arrival.

The room block is scheduled to be held until Monday, January 13, 2014, but may be sold out before this date. Therefore, we advise you to register for the program and reserve your lodging as soon as possible. A resort fee of \$15 per room per day will automatically

be applied. This fee includes in-room wireless internet, access to fitness center, shuttle service to local areas, unlimited use of tennis courts, resort bicycles and golf bag storage. When you make your reservation, please be sure to ask about any additional fees, early departure fees, or cancellation penalties.

Transportation

The Phoenix Sky Harbor International (PHX) Airport is located 18 miles from the Scottsdale area, where the Hyatt Regency Scottsdale is located. Transportation discounts on shuttle service from the airport and car rental will be available at www.asecho.org/SOTA.

Learning Lab Co-Directors

Bijoy K. Khandheria, MD, FASE

Past President, American Society of Echocardiography
Aurora Health Care, Milwaukee, WI

Roberto M. Lang, MD, FASE

Past President, American Society of Echocardiography
University of Chicago, Chicago, IL

Course Director

Vera H. Rigolin, MD, FASE

Northwestern University, Chicago, IL

Faculty

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Northwestern University, Chicago, IL

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

Schedule of Events

LEARNING LAB

FRIDAY AND SATURDAY, FEBRUARY 14-15, 2014

This session requires separate registration.

FRIDAY, FEBRUARY 14, 2014

7:00 am	Continental Breakfast
8:00 am	Welcome and Introduction to the Classroom <i>R. Lang, B. Khandheria</i>
8:15 am	Introduction to Software and Computers <i>M. Umland</i>
8:30 am	Basic Measurements: LV, LA, RV, Biplane Simpson, LVEF <i>R. Lang, K. Collins</i>
9:30 am	Basic Hemodynamics: VTI, SV, CO, CI, PA Pressure <i>B. Khandheria, M. Umland</i>
10:30 am	Break
10:45 am	Aortic Valve Regurgitation: Vena Contracta, Regurgitant Orifice <i>R. Lang, B. Kane</i>
11:45 am	Aortic Valve: Mean Gradient, Valve Area, TAVR Measurements <i>B. Khandheria, C. Kramer</i>
12:45 pm	Question and Answer <i>All Faculty</i>
1:00 pm	Lunch
2:00 pm	Mitral Stenosis <i>B. Khandheria, C. Kramer</i>
3:00 pm	Mitral Regurgitation: Vena Contracta, Regurgitant Orifice <i>R. Lang, B. Kane</i>
4:00 pm	Diastolic Function, Constriction, Restriction <i>B. Khandheria, M. Umland, C. Kramer</i>
5:00 pm	Question and Answer <i>All Faculty</i>
5:15 pm	Adjourn

SATURDAY, FEBRUARY 15, 2014

7:15 am	Continental Breakfast
8:00 am	Right Ventricle; Size and Function <i>R. Lang, B. Kane</i>
9:00 am	Myocardial Mechanics 101 <i>P. Sengupta, C. Kramer</i>
10:00 am	Prosthetic Heart Valve: Gradients, Valve Area <i>B. Khandheria, M. Umland</i>
11:00 am	Break
11:15 am	Challenging Cases, Mystery Cases. Who Will Win? <i>R. Lang, B. Khandheria, M. Umland, K. Collins</i>
12:15 pm	Lunch

1:15 pm	Pulmonary Hypertension: Comprehensive Evaluation <i>R. Lang, K. Collins</i>
2:15 pm	Everything You Want to Ask and Case Reviews <i>All Faculty</i>
3:00 pm	Break
3:15 pm	Myocardial Mechanics: Beyond 101 <i>P. Sengupta, C. Kramer</i>
4:15 pm	Wild Wild West, Cases from the Echo Corral <i>All Faculty</i>
5:15 pm	Question and Answer <i>All Faculty</i>
5:30 pm	Adjourn

MAINTENANCE OF CERTIFICATION

SATURDAY, FEBRUARY 15, 2014

This session requires separate registration.

1:00 pm	Maintenance of Certification by Case-Based Echocardiography <i>I. Kronzon, S. Shah, M. Saric</i>
3:00 pm	Break
3:15 pm	Maintenance of Certification by Case-Based Echocardiography <i>I. Kronzon, S. Shah, M. Saric</i>
5:00 pm	Adjourn

VALVE SYMPOSIUM

SUNDAY, FEBRUARY 16, 2014

MITRAL VALVE DISEASE

V. Rigolin, presiding

8:00 am	Clinical Spectrum of the MV Disease in the US in 2013 <i>B. Carabello</i>
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DEGENERATIVE MITRAL VALVE DISEASE

V. Rigolin, presiding

8:30 am	2D and 3D Imaging of Degenerative MV Disease <i>R. Lang</i>
8:45 am	Percutaneous Treatment Options – the Critical Role of Echo <i>I. Kronzon</i>
9:00 am	Echo Before, During and After MV Repair Surgery <i>V. Rigolin</i>
9:15 am	Case Presentations Posterior Prolapse – <i>B. Khandheria</i> Anterior Prolapse – <i>D. Mehlman</i> Bileaflet Prolapse – <i>M. Saric</i> Barlow's Valve – <i>P. Sengupta</i>
10:00 am	Break and Visit Exhibits

Schedule of Events

FUNCTIONAL AND ISCHEMIC MITRAL REGURGITATION

V. Rigolin, presiding

- 10:30 am **What is it and Why is it So Challenging to Treat?**
P. McCarthy
- 10:50 am **2D and 3D Imaging of Functional and Ischemic Mitral Regurgitation**
P. Sengupta
- 11:05 am **Case Presentations**
Valve Should Be Repaired – *M. Saric*
Is This Valve Too Complex to Repair? – *V. Rigolin*
Valve Should Be Replaced – *R. Lang*
Can This Valve Be Clipped? – *I. Kronzon*

TRICUSPID VALVE DISEASE

R. Lang, presiding

- 11:40 am **Anatomy and Function of the “Other” Valve**
V. Rigolin
- 11:55 am **When to Fix the Tricuspid Valve in Patients With and Without MV Disease**
P. McCarthy
- 12:15 pm **Case Presentations**
TV Disease Due to Carcinoid – *M. Umland*
TV Disease Due to Afib – *I. Kronzon*
TV Disease Due to Pacemaker – *C. Kramer*
- 1:00 pm **Lunch and Visit Exhibits**

AORTIC VALVE DISEASE

B. Khandheria, presiding

- 2:00 pm **2D and 3D Imaging of AS**
B. Khandheria
- 2:15 pm **Low Gradient, Low Output AS With Low and Normal EF**
B. Carabello
- 2:35 pm **When Should I Refer a Patient for TAVI? What's the Data?**
I. Kronzon
- 2:50 pm **Echo Before, During and After TAVI – What Are the Critical Elements?**
M. Saric
- 3:05 pm **Case Presentations**
TAVI – Perfect Candidate – *D. Mehlman*
TAVI – Controversial Candidate – *V. Rigolin*
TAVI Complications – How Echo Helped Find the Problem – *I. Kronzon*
- 3:40 pm **New Surgical Innovations in the Treatment of Aortic Valve Disorders**
P. McCarthy
- 4:00 pm **Break and Visit Exhibits**

AORTIC VALVE DISEASE

M. Saric, presiding

- 4:15 pm **Quantification of Aortic Regurgitation – How Do I Do it?**
M. Saric
- 4:30 pm **Case Presentations**
Bicuspid Valve – *D. Mehlman*
Aortic Dissection – *B. Khandheria*
Endocarditis – *R. Lang*
Marfans – *P. Sengupta*

PROSTHETIC VALVES

- 5:00 pm **Pathologic Specimens with Echo Correlates**
D. Mehlman
- 6:00 pm **Adjourn**

MONDAY, FEBRUARY 17, 2014

HEART FAILURE

S. Shah, presiding

- 8:00 am **Quantitation of Systolic Function – The Old and the New**
S. Shah
- 8:20 am **Case Presentations**
Nonischemic Cardiomyopathy – *V. Rigolin, B. Kane*
Ischemic Cardiomyopathy – *B. Khandheria, C. Kramer*
Noncompaction – *R. Lang, K. Collins*
Stress Cardiomyopathy – *M. Saric, M. Umland*
- 9:00 am **Cases: How Do I Use Echo to Assess a Patient With an LVAD or Transplant?**
Normal LVAD – *C. Kramer*
LVAD Complications – *M. Umland*
Healthy Post Heart Transplant Patient: What to Look for With Echo – *D. Mehlman*
Transplant Rejection – *R. Lang*
- 9:40 am **Cases: Resynchronization Therapy – Can Echo Identify the Optimal Candidate?**
Responder – *B. Khandheria*
Nonresponder – *M. Saric*
Optimization – *K. Collins*
- 10:00 am **Break and Visit Exhibits**

HEART FAILURE

P. Sengupta, presiding

- 10:30 am **Heart Failure with Preserved EF: Who, What, Where and How?**
S. Shah
- 10:50 am **How Do I Use the ASE Guidelines to Measure Diastolic Function?**
R. Lang

Schedule of Events

11:10 am	Demystifying Strain Imaging <i>P. Sengupta</i>
11:30 am	Twist and Shout <i>B. Khandheria</i>
11:50 am	Case Presentations Grade 1, 2, 3 – <i>V. Rigolin</i> Indeterminate LV Filling Pressures – <i>M. Saric</i> Where Strain Helped Me – <i>P. Sengupta</i> Abnormal LV Mechanics – <i>B. Khandheria</i>
12:40 pm	Lunch and Visit Exhibits

THE RIGHT VENTRICLE

V. Rigolin, presiding

1:30 pm	Anatomy and Function of the Right Ventricle <i>S. Shah</i>
1:50 pm	Case Presentations RV Infarct – <i>I. Kronzon</i> PE – <i>D. Mehlman</i> RV Dysplasia – <i>R. Lang</i>
2:30 pm	The ABCs of Pulmonary Hypertension <i>S. Shah</i>
2:50 pm	Imaging in Pulmonary Hypertension <i>B. Khandheria</i>
3:10 pm	Case Presentations Primary Pulmonary Hypertension – <i>R. Lang</i> Scleroderma – <i>S. Shah</i> LV Dysfunction – <i>M. Saric</i>
3:45 pm	Break and Visit Exhibits

THE PERICARDIUM

D. Mehlman, presiding

4:00 pm	Pericardial Constriction: What is It and How Do I Diagnose It? <i>I. Kronzon</i>
4:20 pm	Myocardial Restriction: What is It and How Does It Differ from Constriction? <i>M. Saric</i>
4:40 pm	Case Presentations <i>B. Kane, K. Collins, V. Rigolin, D. Mehlman</i>
5:30 pm	Adjourn

TUESDAY, FEBRUARY 18, 2014

MISCELLANEOUS MYOCARDIAL DISORDERS

B. Khandheria, presiding

8:00 am	The Heart of an Athlete: When Do I Ring the Alarm? <i>R. Lang</i>
8:20 am	Hypertrophic Cardiomyopathy: The Triumphs and Pitfalls of Echo Imaging <i>V. Rigolin</i>
8:40 am	Case Presentations Is It LVOT Obstruction or MR? – <i>D. Mehlman</i> Alcohol Ablation – <i>I. Kronzon</i> Surgical Myomectomy – <i>B. Khandheria</i> Associated Mitral Valve Disorders – <i>P. Sengupta</i>
9:30 am	Break and Visit Exhibits

CORONARY ARTERY DISEASE

M. Saric, presiding

10:00 am	Stress Echo: The Basics and Beyond <i>D. Mehlman</i>
10:20 am	Case Presentations Single Vessel Disease – <i>B. Kane</i> Multivessel Disease – <i>K. Collins</i> False Negative – <i>M. Umland</i> False Positive – <i>C. Kramer</i>
11:00 am	Cases: How to Use Contrast to Improve Your Echo Images Optimizing Machine Settings – <i>B. Kane</i> Contrast Helped Me Make the Diagnosis in the Stress Lab – <i>B. Khandheria</i> Unusual Findings in the Heart After Contrast Injection – <i>R. Lang</i>
11:30 am	Illustrative Cases: Post MI Complications Is It LV Aneurysm or Pseudoaneurysm? – <i>M. Saric</i> Ruptured Papillary Muscle – <i>V. Rigolin</i> Ischemic MR – <i>I. Kronzon</i>
12:00 pm	Adjourn

27th Annual State-of-the-Art Echocardiography REGISTRATION FORM

February 14–18, 2014 • Hyatt Regency Scottsdale, Scottsdale, AZ

Your State-of-the-Art Echocardiography registration fee includes continental breakfasts, breaks, lunches, and a welcome reception. A memory stick containing course materials will be handed out at the registration desk. For more information on this course and to register online please visit www.asecho.org/SOTA.

Name: _____
First Name Middle Initial Last Name

Credential: ☐ MD ☐ DO ☐ PhD ☐ RN ☐ RCS ☐ RDCS ☐ Other

ASE Member Number: _____

Institution: _____

Email Address: _____

(All correspondence regarding your registration including your confirmation will be sent to this email address.)

Which is your preferred mailing address? ☐ Work/Business ☐ Home

Street Address: _____

City: _____ State/Province: _____ Zip/Postal Code: _____ Country: _____

Telephone: _____ Fax: _____

☐ If you need disability accommodations, please check here and advise us of your needs at least two weeks before the program.

Special Needs: ASE encourages participation by all individuals. If you have a disability or other specific needs, advance notification will help ASE to better serve you. Please contact ASE by email at ase@asecho.org or telephone at (919) 861-5574.

Special Dietary Needs: _____

Registration Fees (prior to January 16, 2014)

**State-of-the-Art
Echocardiography
Main Conference
February 16–18, 2014**

☐ ASE Physician Member (\$725) ☐ ASE Sonographer/Allied Health Member* (\$550)
☐ Physician Non-Member (\$825) ☐ Sonographer/Allied Health Non-Member* (\$650)

After January 16, 2014: ASE Physician Member \$825; Physician Non-Member \$925; ASE Sonographer/Allied Health Member \$650; ASE Sonographer/Allied Health Non-Member \$750
*Registrants in the Allied Health category include Sonographers, Nurses, Physician Assistants and Fellows in Training.

One-day Rate: \$250 ☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday
(only one day can be selected)

Preconference Fees

Attendees must register for this workshop in advance in order to attend due to limited seating.

Learning Lab

February 14–15, 2014

☐ ASE Member (\$425) ☐ Non-Member (\$525)

**Maintenance of Certification
February 15, 2014**

☐ ASE Member (\$350) ☐ Non-Member (\$450)

Payment Information

Payment must accompany this form.

☐ Check (payable to American Society of Echocardiography in U.S. dollars drawn on a U.S. bank)

Credit Card:

☐ Visa ☐ Mastercard ☐ American Express

Cardholder's Name: _____

Card Number: _____ Expiration Date: _____

Credit Card Billing Address: _____

Register online and receive an immediate receipt! www.asecho.org/SOTA

American Society of Echocardiography
2100 Gateway Centre Blvd., Suite 310, Morrisville, NC 27560
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Email: ase@asecho.org, Web site: www.asecho.org/SOTA



ASE Foundation

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Register now at www.asecho.org/SOTA



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