

State-of-the-Art ECHOCARDIOGRAPHY™

36th ANNUAL



FINAL PROGRAM

February 17 – 19, 2024

Optional Preconference Learning Lab

February 16–17, 2024

**The Westin Kierland Resort & Spa
Scottsdale, AZ**

Course Director

Sunil V. Mankad, MD, FASE

Mayo Clinic
Rochester, MN

Course Co-Director

G. Burkhard Mackensen, MD, PhD, FASE

University of Washington
Seattle, WA

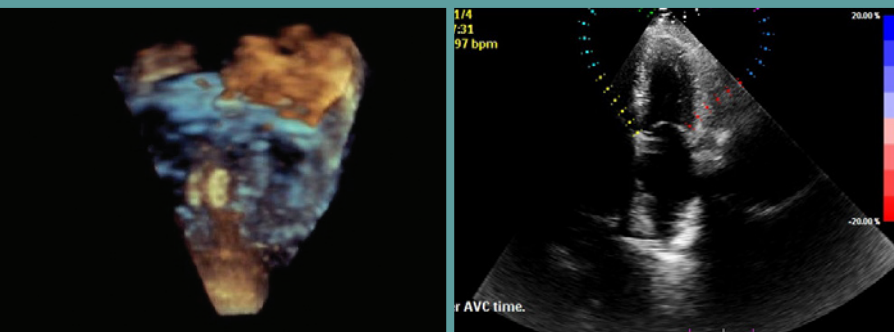
The Bijoy Khandheria Echocardiography Learning Lab Co-Directors

Roberto M. Lang, MD, FASE

Past President, ASE
University of Chicago Medical Center
Chicago, IL

Matt M. Umland, ACS, RDCS, FASE

Aurora Health Care
Milwaukee, WI



Welcome to the 36th Annual State-of-the-Art Echocardiography™ conference, a premier program organized by education enthusiasts within the ASE. Past attendee feedback is invaluable, and we've modified the program to reflect their suggestions. Valvular, structural heart, and hemodynamic cases and workshops have been added in addition to case-based reviews incorporating new technologies in echocardiography for physicians and sonographers. We have condensed the program to allow maximum learning within a short. In keeping with past tradition, we continue to have first-rate physicians and sonographers presenting a broad range of echo-related topics designed to enhance your clinical practice. Upon completion of this course, you should have a "state-of-the-art" knowledge of clinical echocardiography including 3D, contrast, and myocardial strain imaging and their practical application including in structural heart interventions.

The blue skies, sunshine, and first-class education awaits you at SOTA in Scottsdale, Arizona.

Welcome to the 36th Annual State-of-the-Art Echocardiography conference.



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Mayo Clinic
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University of Washington
Seattle, WA



SAVE THE DATE

37th Annual State of the Art Echocardiography
February 14–17, 2025, Scottsdale, AZ

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Milwaukee, WI

Faculty

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Rochester, MN

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Mayo Clinic
Rochester, MN

Natesa Pandian, MD
Hoag Heart Hospital
Newport Beach, CA

Vera Rigolin, MD, FASE
Past President, ASE
Northwestern Medical Center
Chicago, IL

Lucy Safi, DO, FASE
Mount Sinai Hospital
New York, NY

Jennifer A. Warmsbecker, RDCS, BS, FASE
Mayo Clinic
Rochester, MN

Carole Warnes, MD
Mayo Clinic
Rochester, MN

Megan Yamat, RDCS, RCS, ACS, FASE
University of Chicago Medical Center
Chicago, IL

William A. Zoghbi, MD, FASE
Past President, ASE
Houston Methodist Hospital
Houston, TX

Program Information

Overview of State-of-the-Art Echocardiography

This year's program follows the themes of structural heart disease, myocardial and pericardial disease, coronary artery disease, and interventional echocardiography. During the course, presentations will highlight what echo brings to each theme, help clinicians recognize and avoid common errors and pitfalls, and learn how to apply the guidelines in a practical manner.

The faculty consists of recognized leaders in the field of echocardiography acclaimed for their teaching abilities. Participants will have the opportunity to interact with the faculty one-on-one in the preconference, computer-based Learning Lab, and during the question and answer session.

NEW in 2024!

- Expanded Learning Lab: New topics include advanced hemodynamics, myocardial strain, and structural heart disease. Participants will perform 3D cropping, measurements such as left ventricular and right ventricular strain, left atrial strain, critical measurements for TAVR, TMVR, TEER, and left atrial appendage occluder.
- Case-based Learning: The course will include a special focus on hemodynamics, structural heart disease, interventional echocardiography, 3D echocardiography, strain imaging, and advanced diastolic function.
- More opportunities to directly interact with faculty during and after the meeting.
- Glimpse of the Future: Learn about the impact of artificial intelligence and machine learning in the field of echocardiography.

Who Should Attend

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

Learning Objectives

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

- Incorporate state-of-the-art clinical applications of echocardiography and Doppler ultrasound into clinical decision-making
- Utilize echocardiography in valvular heart disease
- Evaluate patients prior to, during, and following various structural heart disease procedures such as TAVR, mitral clip, and left atrial appendage closure
- Perform a 3D acquisition and measurement of biventricular size and function; and have a better understanding of the "knobology"
- Explain the new diastolic function guidelines
- Assess right and left ventricular function with state-of-the-art echocardiographic technology including strain imaging

The Bijoy Khandheria Echocardiography Learning Lab

(Additional Fee Required. Please visit the ASE registration desk to check availability.)

A learning lab will be offered for a full day on Friday, February 16, and a half day on Saturday, February 17, 2024. Separate registration is required, and

this session is included in the total hours of educational content offered at the course.

Limited to 90 registrants, this intimate workshop allows easy access to faculty members. Computer workstations are provided to teach each participant how to quantitate fundamental aspects of clinical echocardiography. Expert faculty will demonstrate advanced hemodynamics, 3D, and myocardial strain imaging. Each participant will have plenty of case studies to practice demonstrated techniques. The small group environment allows the opportunity for nearly private instruction from top practitioners in the field.

Disclaimer

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

Accreditation and Designation

ASE is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide accredited continuing education for physicians.

ASE designates this live course for a maximum of **32.00 AMA PRA Category 1 Credits™**. To claim all 32.00 CME credits, you must register for both the pre-conference Learning Lab and main conference. The main conference will offer a total of 20.5 CME credits.

In addition to offering CME credits, this activity has been developed and registered with ACCME to provide MOC and MOCA 2.0 credits in alignment with *AMA PRA Category 1 Credit™*.

Successful completion of this CME activity enables the participant to earn up to 32.00 MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program, the American Board of Pediatrics (ABP) MOC program, and/or the American Board of Anesthesiology's (ABA) Maintenance of Certification in Anesthesiology Program® or MOCA 2.0®. It is ASE's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM and ABP MOC points and/or ABA MOCA 2.0®.

Participants should claim only the credit commensurate with the extent of their participation in the activity. Physicians will earn MOC and/or MOCA 2.0 points equivalent to the amount of CME credits claimed for the activity.

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

ASE's 36th Annual State-of-the-Art Echocardiography has been reviewed by the British Society of Echocardiography and is approved for BSE Points.



Maintenance of Certification in Anesthesiology Program® and MOCA® are registered certification marks of the American Board of Anesthesiology®. MOCA 2.0® is a trademark of the American Board of Anesthesiology®.

Program Information

Daily breakdown of CME credits:

Learning Lab

Friday, February 16, 2024 = 8.25 hours

Saturday, February 17, 2024 = 2.75 hours

Main Conference

Saturday, February 7, 2024 = 5.25 hours

Sunday, February 18, 2024 = 8.0 hours

Monday, February 19, 2024 = 7.75 hours

The **American Osteopathic Association (AOA)** automatically recognizes *AMA PRA Category 1 Credit™* as AOA Category 2 credit. The ACCME and the **European Board of Accreditation in Cardiology (EBAC)** recognize each other's accreditation systems as substantially equivalent. To obtain EBAC credit for participation in this activity, submit evidence of participation directly to EBAC (www.ebac-cme.org).

The **European Union of Medical Specialists (UEMS)-European Accreditation Council for Continuing Medical Education (EACCME)** has an agreement of mutual recognition of continuing medical education (CME) credit with the American Medical Association (AMA). European physicians interested in converting *AMA PRA Category 1 Credit™* into European CME credit (ECMEC) should contact the UEMS (www.uems.eu).

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

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

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

The **National Commission on Certification of Physician Assistants (NCCPA)** accepts *AMA PRA Category 1 Credit™* from organizations accredited by ACCME.

Disclosure

ASE is committed to ensuring that its educational mission, and all accredited continuing educational programs provide a protected space to learn, teach, and engage in scientific discourse free from influence from organizations that may have an incentive to insert commercial bias into education.

While a monetary or professional affiliation with an ineligible company does not necessarily influence a speaker's presentation, the Standards for Integrity and Independence in Accredited Continuing Education and policies of the ACCME require that all financial relationships with ineligible companies be identified and mitigated prior to engaging in an accredited CE activity. In accordance with these policies, ASE actively identified relevant financial relationships between faculty in control of this accredited CE activity and ineligible companies, and implemented mitigation strategies to eliminate any potential influence from persons or organizations that may have an incentive to insert commercial bias in this activity. Disclosure information is referenced and can be found on page 14 of this program.

Commercial Support Disclosure Statement

Educational Grants: This activity is supported in part by unrestricted educational grants from Alnylam, Boston Scientific, Bristol Myers Squibb, Edwards Lifesciences, LivaNova USA, Inc, Medtronic, and Pfizer.

In-Kind Donations: This activity is supported in part by in-kind donations from FujiFilm, GE Healthcare, and Philips.

How to Obtain CME

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 18, 2024.**

An email will be sent to you on Monday, February 19 at 3:00 PM ET with instructions on how to complete the evaluation and claim your CME credits. Be sure to enter your specialty board number (ABIM, ABA, ABP, ARDMS, CCI) in order for your credits to be transferred.

Attendee Information & Regulations

Registration Location and Hours

Attendee registration is located outside of the Herberger Ballroom.

Friday, February 16, 2024.....	7:00 AM –5:30 PM
Saturday, February 17, 2024	7:00 AM – 7:00 PM
Sunday, February 18, 2024.....	6:30 AM – 5:40 PM
Monday, February 19, 2024.....	6:30 AM – 5:30 PM

Food Functions

ASE will provide breakfast and coffee breaks for registered attendees in Herberger Ballroom 2.

Lunch will be provided for registered attendees of the main conference on Sunday, February 18 – Monday, February, 19. Lunch times vary. Please refer to the program schedule for times.

Refer to the program schedule for the times of the daily coffee breaks. The Westin Kierland Resort & Spa offers their guests a variety of dining options. Please see Location Information on page 7 for more details.

Welcome Reception “Questions and Answers: Ask Anything You Want” Sponsored by Visura

ASE cordially invites you to the State-of-the-Art Echocardiography Welcome Reception on Saturday evening, February 17, 6:00 – 7:00 PM in the Exhibit Hall Herberger Ballroom 2. The casual reception includes light appetizers

and drinks. We look forward to welcoming you and providing you the perfect opportunity to meet faculty, friends, and colleagues..

Mobile Device Use

We encourage you to use your mobile device to download Whova, the new app ASE is using for live courses. Whova will give you access to the entire meeting program at your fingertips. You can also use the app to ask questions during the sessions you attend. Search “Whova” in the Google Play and Apple Stores to download. For more details on the Whova app and using it at State-of-the-Art Echocardiography, see page 6. **Please remember to turn your mobile device to silent or vibrate mode.**

Internet Access

Any attendee staying at the Westin Kierland Resort & Spa receives propertywide complimentary internet access as part of the resort fee. Log in using your guest room number and last name to access. If you are a local attendee or not staying at the Westin Kierland Resort & Spa, please visit the Registration desk to receive login details for internet access.

FedEx Office

The FedEx Office Print & Ship Center, located inside the Westin Kierland Resort & Spa, offers many services such as packing and shipping, office supplies, copying, and printing services. The FedEx office is conveniently open seven days a week.



Attendee Information & Regulations

Safety

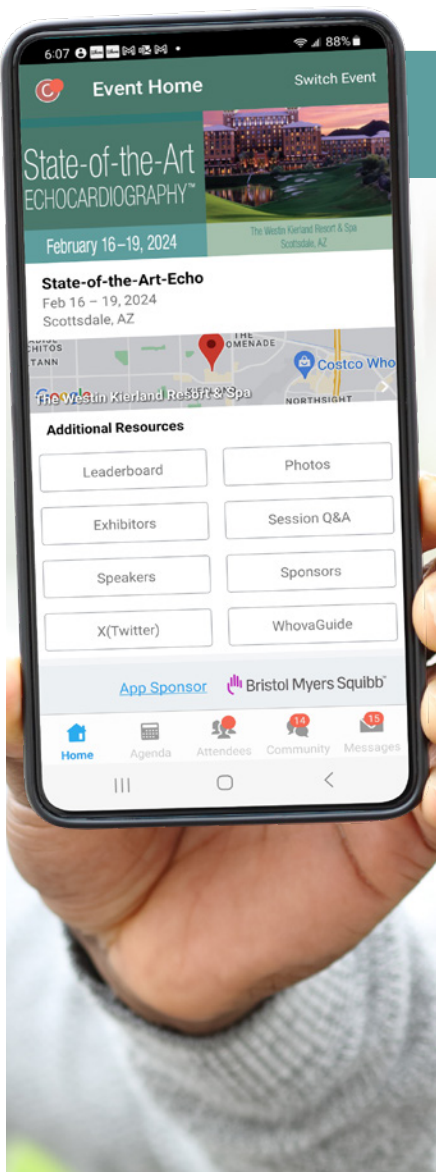
Audience seating is on a first come, first served basis. According to fire code, a session must be closed if the room fills to capacity. Inappropriate behavior or undesirable conduct, including, but not limited to, verbal or physical abuse, whether threatened or performed, will not be permitted or tolerated. 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 36th 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 and of poster presentations and supporting poster materials.

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

ASE reserves the rights to all recordings or reproductions at ASE meetings. Please be aware that during the 36th 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.



Download Whova, ASE's Live Course App

ASE is using the online platform Whova as its new live courses app. Whova will give you access to the entire meeting program at your fingertips. You can also use the app to ask questions during the sessions you attend. Search "Whova" in the Google Play and Apple Stores to download.

Whova allows for more interaction among participants at the meeting including:

- Finding others who are attending State-of-the-Art Echocardiography and reaching out to them at any time.
- Planning social activities such as a morning run, coffee hours, or meet-ups with your fellow attendees.

Important course information like:

- The event agenda and planning your personal schedule.
- Access to documents and slides shared by organizers or speakers.
- Updates like possible last minute session changes from the organizers.

If you have already used the Whova app, just double-check what is installed on your phone, tablet, or computer, and log in using your existing account email and password.

First Time Whova User?

MOBILE APP

After downloading Whova, you will be prompted to create an account. We suggest that you use the email address you used when registering for State-of-the-Art Echocardiography and create a strong password. By using the email address you used when registering for State-of-the-Art Echocardiography, the platform will automatically associate you with the event and take you to your event page automatically.

WEB PORTAL

Simply use the web portal link https://whova.com/portal/webapp/echoh_202401/. Login using the same email and password as your mobile device.

If you are not automatically connected to the event and you are prompted for an event code, please reference the email you were sent on Monday, February 12, from Christina LaFuria at "event-noreply@whova.io", on the back of your name badge, or visit the registration desk outside the Herberger Ballroom.

Location Information

Scottsdale, Arizona

Make time to stretch your legs on a wildflower hike and possibly catch a spring training baseball game. The nearby McDowell Sonoran Preserve is an other-worldly landscape of rugged mountains, towering saguaros, and whimsically shaped cacti. By day, this lush landscape is ideal for sunrise hikes, hot air ballooning, and other desert adventures. After dark, the desert continues to delight with stargazing excursions and technicolor sunsets.

Old Town Scottsdale is full of public art installations, galleries, boutiques, spas, and restaurants. It also boasts award-winning craft breweries and wine-tasting rooms, as well as two of the city's most popular museums, the Western Spirit: Scottsdale's Museum of the West and the Scottsdale Museum of Contemporary Art.

Other sights you won't want to miss are Taliesin West, architect Frank Lloyd Wright's former home and studio, and a stroll among thousands of colorful species at Butterfly Wonderland. You will not go hungry in Scottsdale as it is home to more than 800 restaurants citywide.

The Westin Kierland Resort & Spa

Just steps from upscale shopping, dining, and entertainment in Kierland Commons, the resort features three golf courses at Kierland Golf Club. Enjoy a relaxing massage at Agave, The Arizona Spa that offers treatments inspired by traditional practices handed down through many of Arizona's native cultures as well as therapies infused with healing traditions from the best practices all over the world. Reenergize in the WestinWORKOUT® Fitness Studio, open 24 hours with room card access which includes a hot tub, steam room, and sauna. One of the resort's biggest attractions is the Adventure Water Park, which offers the iconic Kierland FlowRider flow-board simulator for surfing in the desert, a lazy river, a 110-foot-long waterslide, and more! Rent a family-friendly poolside cabana to relax in shaded luxury or enjoy your very own Tommy Bahama Relaxation Reef private island. The Aguamiel pool is the heated adult pool and is a quiet retreat that features lap lanes for fitness swimming, a hot tub, and private cabanas.

Westin Kierland Resort & Spa Dining and Beverage Options

Brittlebush Bar & Grill: After a round of golf, visit Brittlebush Bar & Grill, the resort's gastropub restaurant. Sip on local craft beer, microbrews, and signature label, "Piper's Pale Ale." Relax in a lodge-like setting with copper accents and wood beams. Serving lunch; casual dress.

Coffee Flats: Stop by Coffee Flats before you explore sunny Scottsdale. Offering Starbucks® coffees, pastries, and hot breakfast sandwiches. At lunch, grab a salad, wrap, or snack from a selection of to-go items. Serving breakfast and lunch; casual dress.

J. Swilling's Poolside Bar & Grill: Eat well with a casual menu after drifting in the lazy river or boarding the Kierland FlowRider. Reenergize with salads, sandwiches, and snacks. Relax in the sunshine with a frosty cocktail or beverage. Serving lunch and dinner; casual dress.

The Rim: Take in serene views of Dreamweavers Canyon at The Rim. This lobby lounge includes premium tequilas and an award-winning selection of wines and vintage cigars. Unwind with live, local music. Serving food 4:00–9:00 PM; casual dress.

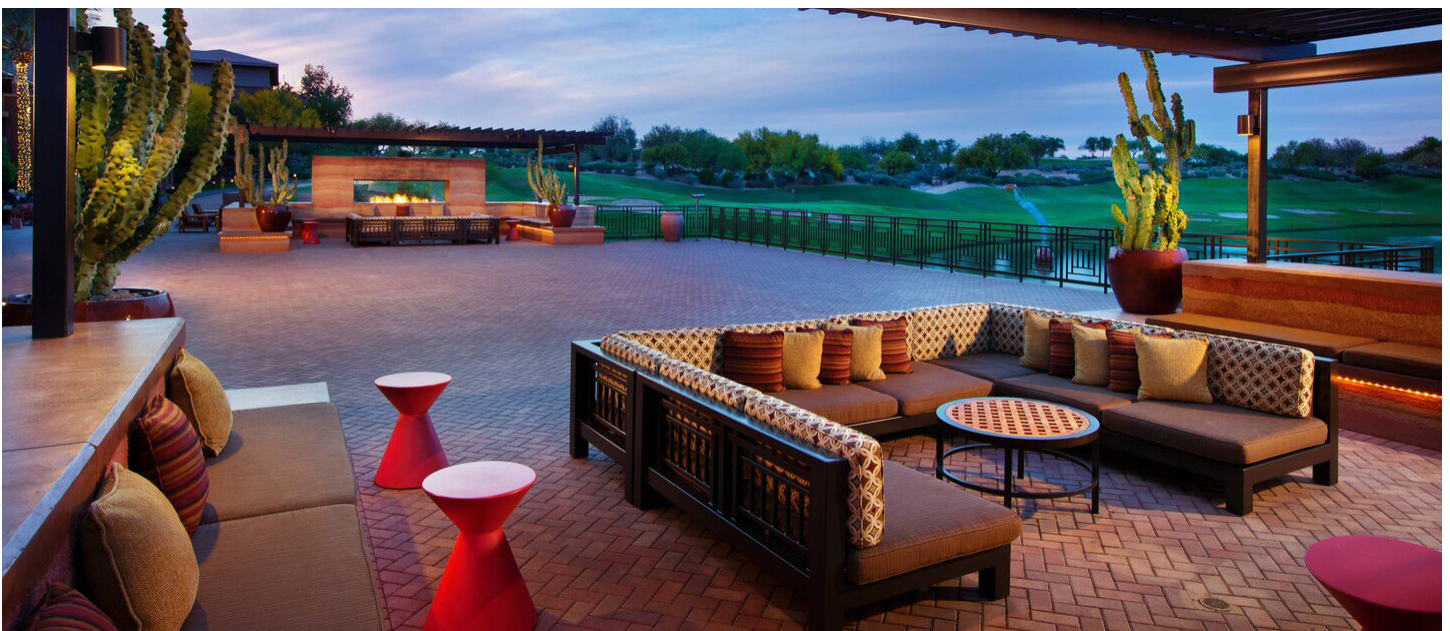
The Scotch Library: Let the Scotch Library Ambassadors guide you through more than 300 whiskey labels. Aficionados and first-timers find something to love with invigorating single malts and blended selections.

Waltz & Weiser Whiskey Bar and Cantina: Offering balanced menu items and a selection of fine tequilas and whiskeys, it's the perfect place to watch the game or relax in the cool, evening air. Serving lunch and dinner; casual dress.

Westin Kierland Resort & Spa Address

6902 E. Greenway Parkway, Scottsdale, AZ 85254

Phone: (480)-624-1000.

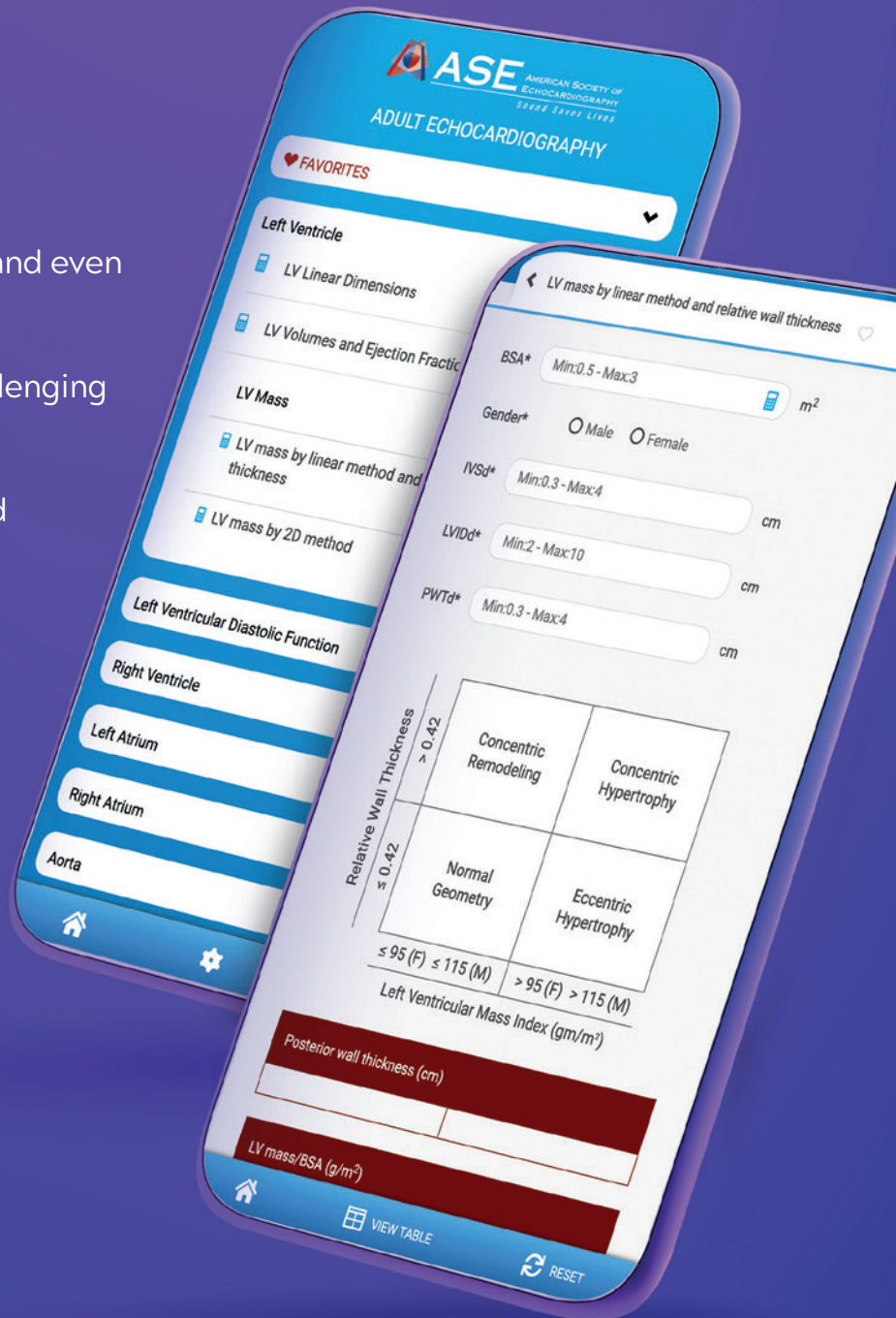
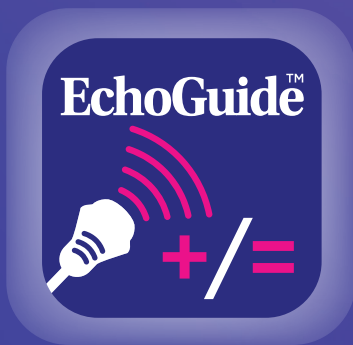


DOWNLOAD THE NEW ASE GUIDELINE CALCULATOR AND ALGORITHM APP.

Available now for FREE in the Apple and Google Play app stores

EchoGuide™

- Works on smartphones, tablets, and even includes a web-based interface.
- Quick access to common and challenging echo measurements and values.
- Calculators and algorithms based on the most popular guidelines published by ASE.



Schedule of Events

FRIDAY, FEBRUARY 16, 2024

LEARNING LAB: DAY 1 (additional fee required) Herberger Ballroom 3

7:00 AM	Registration and Breakfast Herberger Foyer and Herberger Ballroom 2
7:45 AM	Welcome, Objectives, and Introductions <i>R. Lang, M. Umland</i>
8:00 AM	Introduction to Computers and Software <i>M. Umland</i>
8:15 AM	2D Assessment of Left Ventricular Systolic Function, Left Atrium, and Introduction to 3D <i>R. Lang, E. Kruse, M. Yamat</i>
9:00 AM	Basic Left Ventricular Diastolic Function and Cases <i>D. Ignatowski, R. Jain, A. Kaminski, C. Kramer, M. Umland</i>
9:45 AM	3D Echo for Left Ventricular Systolic Function <i>E. Kruse, R. Lang, M. Yamat</i>
10:30 AM	Refreshment Break Herberger Foyer
10:45 AM	Conventional and Basic Strain Measurements of Right Ventricular Systolic Function <i>D. Adams, J. Betz, S. Mankad, J. Warmsbecker</i>
11:30 AM	Basic Left Ventricular Strain Measurements <i>D. Ignatowski, R. Jain, A. Kaminski, C. Kramer, M. Umland</i>
12:15 PM	Lunch Break Herberger Ballroom 2
1:15 PM	Quantification of Aortic and Mitral Regurgitation <i>J. Betz, C. Kramer, S. Mankad, J. Warmsbecker</i>
2:00 PM	3D Echocardiography for Mitral Disease <i>E. Kruse, R. Lang, M. Yamat</i>
2:45 PM	Aortic Stenosis: Measurements for Native and Prosthetic Valves <i>D. Adams, J. Betz, S. Mankad, J. Warmsbecker</i>
3:30 PM	Refreshment Break Herberger Foyer
3:45 PM	Advanced Diastolic Cases Including Constriction and Restriction <i>D. Ignatowski, R. Jain, A. Kaminski, C. Kramer, M. Umland</i>
4:30 PM	Crop Til You Drop I: Cases <i>All Faculty</i>
5:30 PM	Adjourn

SATURDAY, FEBRUARY 17, 2024

LEARNING LAB: DAY 2 (additional fee required) Herberger Ballroom 3

7:00 AM	Registration and Breakfast Herberger Foyer and Herberger Ballroom 2
8:00 AM	Advanced Left Ventricular Strain: Hypertrophic Cardiomyopathy, Amyloid, Other Thick Walls <i>D. Adams, J. Betz, C. Kramer, S. Mankad, M. Umland, J. Warmsbecker</i>
8:45 AM	3D Echocardiography for Tricuspid Valve Disease <i>C. Kramer, E. Kruse, R. Lang, M. Yamat</i>
9:30 AM	Structural Heart Cases and Measurements <i>D. Ignatowski, R. Jain, A. Kaminski, C. Kramer, M. Umland</i>
10:15 AM	Refreshment Break Herberger Foyer

10:30 AM	Crop Til You Drop II: Cases <i>All Faculty</i>
11:45 AM	Wrap Up, Question and Answer <i>All Faculty</i>
12:00 PM	Adjourn

MAIN CONFERENCE

VENTRICULAR FUNCTION AND CORONARY ARTERY DISEASE

Moderators: *J. Betz, S. Mankad*
Herberger Ballroom 3

1:00 PM	Welcome and Course Introduction <i>B. Mackensen, S. Mankad</i>
1:10 PM	Presidential Address: State of ASE <i>B. Eidem</i>
1:25 PM	Quantitation of Ventricular Function: How to Complement 2D with 3D in Your Laboratory <i>R. Lang</i>
1:45 PM	Contrast Enhanced Echocardiography: In Search of Truth! <i>N. Pandian</i>
2:05 PM	Stress Echocardiography for Coronary Artery Disease: Cases and Caveats <i>W. Zoghbi</i>
2:25 PM	Complications of Myocardial Infarction <i>S. Mankad</i>
2:45 PM	Question and Answer <i>All Presenters</i>
3:00 PM	Refreshment Break and Visit Exhibits Herberger Ballroom 2

VENTRICULAR FUNCTION II, CORONARY ARTERY DISEASE II, INTRO TO VALVULAR HEART DISEASE

Moderators: *A. Kaminski, B. Mackensen*
Herberger Ballroom 3

3:30 PM	Echocardiography for Right Ventricular Function: The Right Stuff! <i>R. Jain</i>
3:50 PM	Stress Echocardiography for Valvular Heart Disease: Go with the Flow! <i>V. Rigolin</i>
4:10 PM	Non-Conventional Uses of Stress Echocardiography: Diastolic Stress Testing and Beyond <i>S. Lester</i>
4:30 PM	Question and Answer <i>All Presenters</i>
4:45 PM	Echo and the Case Base Approach to Clinical Decision Making in Complex Valvular Heart Disease <i>R. Nishimura</i> Panelists: <i>J. Hung, N. Pandian, W. Zoghbi</i>
5:45 PM	Adjourn
6:00 – 7:00 PM	Reception “Questions and Answers: Ask Anything You Want” <i>Sponsored by Visura</i> Light appetizers and drinks in Herberger Ballroom 2 Moderators: <i>B. Mackensen, S. Mankad</i> Panelists: <i>D. Adams, J. Hung, R. Lang, R. Nishimura, N. Pandian, V. Rigolin, M. Umland, C. Warnes, W. Zoghbi</i>

Schedule of Events

SUNDAY, FEBRUARY 18, 2024

6:30 AM **Registration and Breakfast**
Herberger Foyer and Herberger Ballroom 2

VALVULAR HEART DISEASE: PART I

Moderators: *M. Yamat, W. Zoghbi*
Herberger Ballroom 3

7:00 AM **Aortic Stenosis: Tips and Tricks in the Assessment of Different Hemodynamic Variants and Gradient-Valve Area Mismatch**
J. Hung

7:20 AM **Echocardiography for TAVR Complications**
S. Mankad

7:40 AM **Echocardiography for Assessment of Aortic Valve Prosthetic Dysfunction**
V. Rigolin

8:00 AM **Transcatheter Treatment Guidance for Dysfunctional Aortic Prostheses**
B. Mackensen

8:20 AM **Question and Answer**
All Presenters

VALVULAR HEART DISEASE: PART II

Moderators: *D. Ignatowski, V. Rigolin*
Herberger Ballroom 3

8:30 AM **Mitral Regurgitation: Degenerative vs. Ischemic Etiology Including the Role of 3D Echocardiography**
J. Hung

8:50 AM **Mitral Regurgitation: Quantification Pearls and Pitfalls of Echocardiography/Doppler and Role of Cardiac MRI**
W. Zoghbi

9:10 AM **Mitral Clip: Echo Guidance for Simple and Complex Cases**
R. Jain

9:30 AM **Imaging for Mitral Valve-in-Valve Procedures**
B. Mackensen

9:50 AM **Question and Answer**
All Presenters

10:00 AM **Refreshment Break and Visit Exhibits**
Herberger Ballroom 2

VALVULAR HEART DISEASE: PART III

Moderators: *S. Lester, J. Warmsbecker*
Herberger Ballroom 3

10:30 AM **Echocardiography for Mitral Prosthetic Function/Dysfunction**
W. Zoghbi

10:50 AM **Echocardiography for Mitral Stenosis**
S. Mankad

11:10 AM **Pathologies of Tricuspid Valve: Carcinoid, Flail, Endocarditis, Pacemaker Lead Impingement**
R. Lang

11:30 AM **Echocardiography for Tricuspid Valve Structural Procedures**
B. Mackensen

11:50 AM **Question and Answer**
All Presenters

12:00 PM **Lunch and Visit Exhibits**
Herberger Ballroom 2

12:30 PM **Science & Technology Theater
A Treatment Option for the Polyneuropathy of hATTR Amyloidosis**
Sponsored by Alnylam
Herberger Ballroom 3

1:30 PM **Break and Visit Exhibits**
Herberger Ballroom 2

VALVULAR HEART DISEASE III AND ADULT CONGENITAL HEART DISEASE I

Moderators: *D. Adams, M. Umland*
Herberger Ballroom 3

2:00 PM **Aortic Regurgitation: Etiology and Quantification**
J. Hung

2:20 PM **Echocardiography for Endocarditis**
R. Jain

2:40 PM **Congenital Heart Disease Part 1: Simple Lesions**
C. Warnes

3:00 PM **Question and Answer**
All Presenters

DIASTOLOGY AND PERICARDIAL DISEASE

Moderators: *C. Kramer, M. Yamat*
Herberger Ballroom 3

3:10 PM **Echo/Doppler Assessment of Diastolic Function: Basic Understanding and Going Beyond the Guidelines**
S. Lester

3:30 PM **Echocardiography for Pericardial Effusion and Echo Guided Pericardiocentesis**
S. Mankad

3:50 PM **Echocardiography for Constriction vs. Restriction**
N. Pandian

4:10 PM **Question and Answer**
All Presenters

4:20 PM **Refreshment Break and Visit Exhibits**
Herberger Ballroom 2

4:40 PM **Hemodynamic Workshop: A Case-Based Approach to Diastolic Function and Clinical Decision Making**
Moderator: *R. Nishimura*
Panelists: *S. Lester, S. Little, N. Pandian*

5:40 PM **Adjourn**



MONDAY, FEBRUARY 19, 2024

6:30 AM **Registration and Breakfast**
Herberger Foyer and Herberger Ballroom 2

MYOCARDIAL MECHANICS AND CARDIOMYOPATHY I

Moderators: *L. Safi, J. Warmsbecker*
Herberger Ballroom 3

7:00 AM **Basics of Myocardial Strain Imaging**
M. Umland

7:20 AM **Clinical Applications of Global Longitudinal Strain Including Cardio-Oncology**
S. Lester

7:40 AM **Cardiac Amyloidosis and Other Restrictive Cardiomyopathies**
A. Narang

8:00 AM **Left Atrial Strain: Incremental Clinical Value or Yet Another Parameter We Can Measure?**
R. Lang

8:20 AM **Question and Answer**
All Presenters

CARDIOMYOPATHY II AND OTHER TOPICS

Moderators: *A. Kaminski, A. Narang*
Herberger Ballroom 3

8:30 AM **Echocardiography for Hypertrophic Cardiomyopathy**
S. Lester

8:50 AM **Cardiac Masses**
R. Jain

9:10 AM **Echocardiography: Name that Systemic Disease!**
L. Safi

9:30 AM **Congenital Heart Disease Part II: Complex Lesions**
C. Warnes

9:50 AM **Question and Answer**
All Presenters

10:00 AM **Refreshment Break and Visit Exhibits**
Herberger Ballroom 2

10:30 AM **Challenging Structural Heart Disease Cases**
Moderator: *S. Little*
Panelists: *R. Jain, B. Mackensen, N. Pandian, V. Rigolin*
Presenters: *S. Mankad, A. Narang, L. Safi*

11:30 AM **Lunch and Visit Exhibits**
Herberger Ballroom 2

12:00 PM **Science & Technology Theater**
Cracking the Case: Improving Your Confidence with Echocardiography in the Diagnosis and Management of Hypertrophic Cardiomyopathy
Provided by Answers in CME
Supported by Bristol Myers Squibb
Herberger Ballroom 3

1:00 PM **Break and Visit Exhibits**
Herberger Ballroom 2

1:30 PM **Challenging Cases in Cardiomyopathies**
Moderator: *S. Mankad*
Panelists: *S. Lester, A. Narang, N. Pandian*
Presenters: *D. Adams, D. Ignatowski, A. Kaminsky, M. Umland, J. Warmsbecker*

2:30 PM **Challenging Valve Cases**
Moderator: *S. Mankad*
Panelists: *J. Hung, S. Little, V. Rigolin*
Presenters: *D. Adams, J. Betz, C. Kramer, M. Umland, M. Yamat*

3:30 PM **Refreshment Break and Final Chance to Visit Exhibits**
Herberger Ballroom 2

MISCELLANEOUS TOPICS

Moderators: *A. Kaminski, C. Kramer*
Herberger Ballroom 3

3:50 PM **Artificial Intelligence (AI) or Intelligent Automation (IA) in Echocardiography: "I Think Therefore I Am"**
A. Narang

4:10 PM **Echocardiography for Left Atrial Appendage Closure**
L. Safi

4:30 PM **Echocardiography for Paravalvular Leak Closure**
B. Mackensen

4:50 PM **Echocardiography for Left Ventricular Assist Devices**
S. Mankad

5:10 PM **Closing Remarks**
B. Mackensen, S. Mankad

5:30 PM **Adjourn**



Exhibitor Information

Exhibit Location and Hours

Exhibits are located in Herberger Ballroom 2 during the dates and hours listed below.

Saturday, February 17..... 3:00 PM – 7:00 PM

Sunday, February 18..... 6:30 AM – 4:40 PM

Monday, February 19..... 6:30 AM – 3:50 PM

Exhibitor Descriptions

Anylam Pharmaceuticals

300 Third Street
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Anylam.com
Amvuttra.com



Since its founding, Anylam has led the translation of RNA interference (RNAi) into a new class of approved and investigational medicines for rare genetic, cardio-metabolic, hepatic infectious, and central nervous system (CNS)/ocular diseases. Based on Nobel Prize-winning science, RNAi therapeutics are a clinically validated approach for the treatment of rare diseases with unmet medical need and prevalent diseases. Anylam is headquartered in Cambridge, MA. For more information, please visit Anylam.com.

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Cracking the Case:

Improving Your Confidence with Echocardiography in the Diagnosis and Management of Hypertrophic Cardiomyopathy



Dermot Phelan, MD, PhD, FASE, FACC

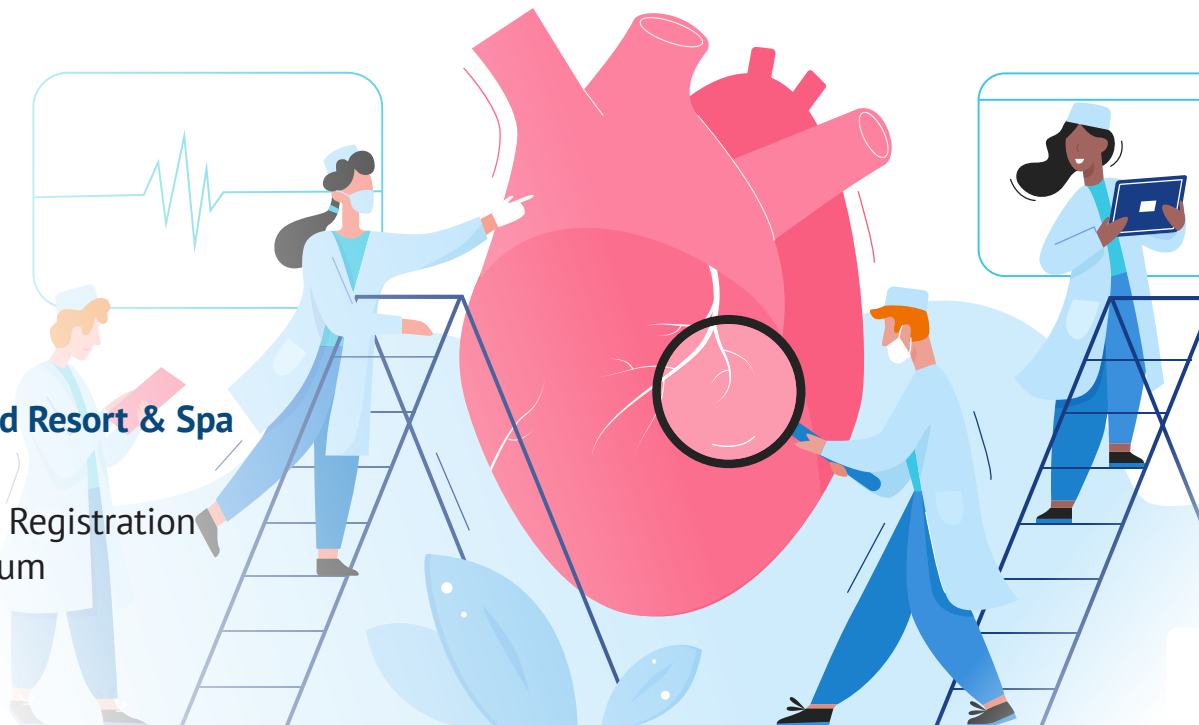


Madeline Jankowski, RDCS, ACS, BS, FASE

MON
FEB 19

📍 **The Westin Kierland Resort & Spa**
Herberger 3/A/B

🕒 **11:30 AM** Lunch & Registration
12:00 PM Symposium



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2018-2024, Answers in CME

State-of-the-Art ECHOCARDIOGRAPHY

36th ANNUAL

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