

ASCeXAM/ReASCE REVIEW COURSE

The most comprehensive review to help you prepare for the NBE certification examinations.

19th ANNUAL

FINAL PROGRAM

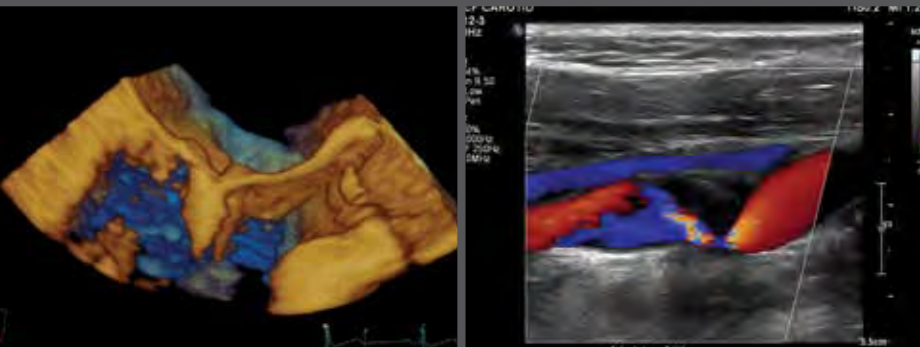
May 5-8, 2018
Marriott Copley Place
Boston, MA

Course Director

Roberto M. Lang, MD, FASE
Past President, ASE
University of Chicago Medical Center
Chicago, IL

Course Co-Director

Susan E. Wieggers, MD, FASE
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Temple University
Philadelphia, PA



Jointly Provided by ASE and the ASE Foundation

Welcome to the 19th Annual ASCeXAM/ReASCE Review Course designed by ASE as a preparatory course for the National Board of Echocardiography, Inc.™ (NBE) ASCeXAM® and ReASCE® examinations. This course will cover all aspects of cardiovascular ultrasound essential to pass these examinations, including physics, valvular heart disease, strain and 3D imaging, contrast echocardiography, ischemic heart disease, congenital heart disease, and much more.

This year our expert faculty will deliver excellent reviews on the most important topics of contemporary echocardiography and also present multiple ASCeXAM “type” questions at the end of each session. We believe that these “new” question and answer sessions will be valuable to familiarize you with the echo-board exam. As in other years, you will have the unique opportunity to interact and ask questions of our faculty.

The faculty will emphasize teaching by using multiple illustrative cases, case studies, lectures, and interactive sessions to help prepare you for the ASCeXAM® or ReASCE® examinations. The great majority of participants in this course have successfully passed the ASCeXAM® or ReASCE® examinations. To enhance the learning experience, an audience response system and question and answer sessions will facilitate faculty interaction and self-guided learning.

NEW this year! A digital copy of the lectures will be available online. We have heard your comments and have decided that all participants will receive all the recorded lectures of this course to enhance your review for the ASCeXAM® or ReASCE® examinations. You will be notified by email when the library of recordings is available to you.

I hope you will take advantage of this opportunity to ask the faculty questions and network with the other attendees and exhibitors. The Marriott Copley Place is set in the heart of downtown and within walking distance to many attractions, including the chic boutiques and restaurants of Newbury Street and the Prudential Center, Fenway Park, Copley Square, and Boston Common. Please let me know if you need anything while you are here. I look forward to meeting and spending time with you in the coming days. If you have any ideas on how to further improve this course, please let me know.



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Program Information

Overview of the ASCeXAM/ReASCE Review Course

The American Society of Echocardiography (ASE) has specifically designed the ASCeXAM/ReASCE Review Course as a preparatory course for the National Board of Echocardiography, Inc.™ (NBE) ASCeXAM® and ReASCE® examinations. Lectures given will emphasize illustrative cases.

This Review Course covers all aspects of cardiovascular ultrasound essential to these examinations, including, physics, valvular heart disease, strain and 3D imaging, contrast echocardiography, ischemic heart disease, heart failure, congenital heart disease, and more.

The expert faculty will use case studies, lectures, and interactive sessions to help prepare attendees for the ASCeXAM® or ReASCE® examinations. An audience response system and question and answer sessions will facilitate faculty interaction and self-guided learning.

The ASCeXAM/ReASCE Review Course gives attendees the unique opportunity to interact with and ask questions of the expert faculty. Attendees will be provided access to the presentation website that includes lectures released by faculty in a PowerPoint handout format.

Target Audience

This course is designed for physicians interested in sitting for the ASCeXAM® (Examination of Special Competence in Adult Echocardiography) or the ReASCE® (Recertification Examination of Special Competence in Adult Echocardiography), as well as physicians and sonographers interested in a broad review of cardiovascular ultrasound.

Learning Objectives

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

- Explain the essential physical principles of cardiac ultrasound.
- Recognize common ultrasound artifacts and their genesis.
- Estimate systolic function using standard M-mode and 2D echocardiography, as well as newer modalities such as strain imaging and 3D echocardiography.
- Identify and quantitate valvular heart disease severity.
- Describe the application of Doppler in the assessment of hemodynamics and diastolic function, and heart failure.
- Perform clinically relevant calculations of valve areas and intracardiac pressures.
- Explain proven techniques for interpreting stress echocardiographic examinations.
- Differentiate features of cardiac tamponade, constrictive pericarditis, and restrictive cardiomyopathy.
- List appropriate applications of echocardiography.
- Recognize newer applications of echocardiography such as myocardial contrast and 3D echocardiography.
- Explain the utility of Doppler echocardiography in disease of the Aorta.

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.

Online Lecture Recordings

This year all online recordings were included with your course registration. You will be notified by email when the library of lectures has been posted to ASEUniversity.org. **Look for notification about one month after the conclusion of the course.**

Why take the ASCeXAM® or ReASCE® Examinations?

NBE administers the ASCeXAM® and ReASCE® examinations to allow physicians to test and demonstrate their knowledge of echocardiography based on an objective standard. The ASCeXAM® is the Examination of Special Competence in Adult Echocardiography and is intended for those who wish to demonstrate special competence in all areas of echocardiography. The ReASCE® is the Recertification Examination of Special Competence in Adult Echocardiography designed specifically for those who have previously passed the ASCeXAM®. The purpose of ReASCE® is to promote continued excellence in all areas of echocardiography.

Passing these examinations is mandatory when applying for and maintaining NBE certification in any or all of the following areas: transthoracic echocardiography, transesophageal echocardiography or stress echocardiography.

The examinations are given at testing centers throughout the United States. The test will consist of one case-oriented block and three multiple choice blocks covering the following content areas:

- physical principles of ultrasound;
- valvular heart disease;
- ventricular size and function, coronary artery disease, cardiomyopathies;
- congenital heart disease and fetal echocardiography;
- cardiac masses, pericardial disease, myocardial contrast, and newer applications of echocardiography.

Questions will test knowledge of M-mode, 2D and Doppler echocardiography, transesophageal, contrast, and stress echocardiography. The case-oriented block will last up to 1½ hours while the other three blocks will last up to 60 minutes per block.

More details concerning these examinations can be found at EchoBoards.org.

Program Information

Accreditation & 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. ASE is accredited by the ACCME to provide continuing medical education for physicians.

ASE designates this live activity for a maximum of **32.50 AMA PRA Category 1 Credits™**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Successful completion of this CME activity enables the participant to earn up to **32.50 MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program**. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is ASE's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC points.

Daily breakdown of CME credits:

Saturday, May 5 = 6.0 hours
Sunday, May 6 = 9.25 hours
Monday, May 7 = 10.25 hours
Tuesday, May 8 = 7.0 hours



The ACCME and the European Board of Accreditation in Cardiology (EBAC) recognize each other's accreditation systems as substantially equivalent. To obtain EBAC credit for participation in this activity, submit evidence of participation directly to EBAC (www.ebac-cme.org).

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

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

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

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

Disclosure

ASE is committed to ensuring that its educational mission and all educational programs are not influenced by the special interests of any corporation or individual, and its mandate is to retain only those speakers whose financial interests can be effectively resolved to maintain the goals and educational integrity of the program. While a monetary or professional affiliation with a corporation does not necessarily influence a speaker's presentation, the Essential Areas and Policies of the ACCME require that any relationships that could possibly conflict with the educational value of the program be resolved prior to the educational session and disclosed to the audience. In accordance with these policies, ASE implemented mechanisms prior to the planning and implementation of this CME activity to identify and resolve conflicts of interest for all individuals in a position to control content. Disclosure information is referenced and can be found on page 11 of this program.

How to Obtain CME

To claim your CME for ASCeXAM/ReASCE Review Course, 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 **June 8, 2018**.

ASE Members:

1. Go to ASEcho.org and log in to the Member Portal with your username (email) and password.
 - a. If you forget your password, simply click "Retrieve" under the login.
2. Click on ASEUniversity. This will take you directly to your ASEUniversity account.

Nonmembers:

1. Go to ASEUniversity.org.
2. Log into your existing account or create a new one.

To Claim Credit:

3. On the ASEUniversity homepage, click My Account at the top right of the page.
4. Under My Account, click Add Access Code on the left sidebar and enter the code, "REVIEW2018"
5. Verify your registration information. Please be sure to use the same information that you used to register for the event.
6. Once verified, click CE Information tab and Take Exam button 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 My Account in the My Transcripts.

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 information on the first page of the evaluation.

Attendee Information and Regulations

Registration Location and Hours

Attendee registration is located at Registration Desk A, Ballroom Pre-Function Space.

Saturday, May 5, 2018	10:30 AM – 6:30 PM
Sunday, May 6, 2018	6:30 AM – 6:30 PM
Monday, May 7, 2018.....	6:30 AM – 7:30 PM
Tuesday, May 8, 2018	6:30 AM – 3:30 PM

Food Functions

On Saturday, May 5, there will be an afternoon refreshment break in Gloucester Ballroom. ASE will provide breakfast and coffee breaks for registered attendees in Gloucester Ballroom from 6:30 AM until the start of the session on Sunday, Monday, and Tuesday mornings. Please refer to the program schedule for the times of the daily coffee breaks.

Lunch will be provided for attendees in Gloucester Ballroom, Sunday, May 6 through Tuesday, May 8. Lunch times vary, so please refer to the program schedule for times.

Marriott Copley Place Dining Options

Champions: This sports bar is a sports lover's dream. A wall of TVs airs your favorite sporting action, as you enjoy American cuisine and tasty drinks. It's a Back Bay restaurant favorite of locals and travelers alike. Open for breakfast, lunch, and dinner.

Connexion Lounge: Meet up with colleagues or unwind after a busy day in the Connexion Lounge. This comfortable restaurant has a welcoming, relaxed vibe and is open daily for drinks or casual dinner.

In addition, Marriott Copley Place is located within less than a mile of many other high quality restaurants right in the heart of downtown Boston.

Internet Access

Attendees of the course receive complimentary internet in the meeting room, lobby, and other public areas at Marriott Copley Place.

Mobile Device Use

We encourage you to use your mobile device to download the new ASE Courses app. After you have downloaded the app, you will have

access to the entire meeting program at your fingertips. You can also use the app to ask questions during the sessions you attend. Please remember to turn your mobile device to silent or vibrate mode. Search "ASE Courses" in the Google Play and Apple Stores to download.

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 19th Annual ASCeXAM/ReASCE Review Course, 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 **#EchoReview** when posting on social media.

ASE reserves the rights to all recordings or reproductions at ASE meetings. Please be aware that during the 19th Annual ASCeXAM/ReASCE Review Course, 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.



Download the ASE Courses App and Test Your Knowledge with Practice Board Exam Questions

Use the free ASE Courses app to participate in the interactive question portion of each session. Go to Google Play or Apple Store and search for "ASE Courses."

Course Schedule

Saturday, May 5, 2018

10:30 AM	Registration Ballroom Pre-Function Space
Moderator: R. Lang Salons E-F	
12:00 PM	Welcome and Overview of ASCeXAM <i>R. Lang</i>
12:10 PM	Normal TTE Examination, Doppler Echocardiography, and Normal Antegrade Flow Patterns <i>P. Patil</i>
12:55 PM	Normal TEE Examination: Applications, Pitfalls, Probe Insertion and Manipulation, Risks and Complications <i>M. Keane</i>
1:40 PM	Guidelines for Chamber Quantification <i>R. Lang</i>
2:30 PM	Refreshment Break & Visit Exhibits Gloucester Ballroom
Moderator: G. Aurigemma Salons E-F	
3:00 PM	Endocarditis and Its Complications: The Role of Echocardiography <i>P. Patil</i>
3:45 PM	Echo-Doppler Assessment of Right and Left Ventricular Hemodynamics <i>I. Kronzon</i>
4:30 PM	Global and Regional Systolic Function: Basics of Remodeling, Hypertrophy, and Left Ventricle Mass <i>G. Aurigemma</i>
5:15 PM	Practice Board Exam Questions <i>G. Aurigemma, M. Keane, I. Kronzon, R. Lang, P. Patil</i>
6:30 PM	Adjourn

Sunday, May 6, 2018

6:30 AM	Registration Breakfast & Visit Exhibits Gloucester Ballroom
Moderator: M. Keane Salons E-F	
7:20 AM	Overview <i>R. Lang</i>
7:30 AM	Spectral Doppler and M-Mode Echo Cases <i>G. Aurigemma, I. Kronzon</i>
8:00 AM	Tissue Doppler and Strain Imaging <i>S. Lester</i>
8:30 AM	Cardiac Masses <i>D. Tighe</i>
9:00 AM	Quantification of Mitral Regurgitation: New Guidelines <i>S. Mankad</i>
9:30 AM	Refreshment Break & Visit Exhibits Gloucester Ballroom
10:00 AM	Mitral Stenosis <i>R. Levine</i>
10:30 AM	Degenerative and Functional Mitral Valve Disease <i>R. Lang</i>
11:15 AM	Practice Board Exam Questions <i>G. Aurigemma, I. Kronzon, R. Lang, S. Lester, R. Levine, S. Mankad, D. Tighe</i>
12:15 PM	Lunch & Visit Exhibits Gloucester Ballroom
Moderator: G. Aurigemma Salons E-F	
1:15 PM	Echocardiographic Evaluation of Mitral Valve Prostheses <i>D. Tighe</i>
1:50 PM	How to Assess Aortic Stenosis: New Guidelines (Bicuspid Valve, Dilated Aortic Root) <i>M. Keane</i>
2:30 PM	Different Variants of Aortic Stenosis <i>A. Abbas</i>
3:15 PM	Refreshment Break & Visit Exhibits Gloucester Ballroom
3:45 PM	Hypertrophic Cardiomyopathy or Phenocopy? <i>S. Lester</i>
4:45 PM	Echocardiography in Systemic Disease <i>S. Mankad</i>
5:15 PM	Practice Board Exam Questions <i>A. Abbas, M. Keane, S. Lester, S. Mankad, D. Tighe</i>
6:30 PM	Adjourn

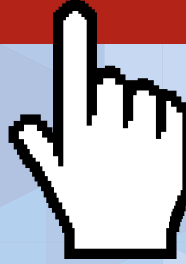


Course Schedule

Monday, May 7, 2018	
6:30 AM	Registration Breakfast & Visit Exhibits Gloucester Ballroom
Moderator: S. Mankad Salons E-F	
7:20 AM	Overview <i>R. Lang</i>
7:30 AM	Basic Ultrasound Physics <i>S. Edelman</i>
8:15 AM	Concepts of Imaging and Knobology <i>P. Patil</i>
9:00 AM	Fundamentals in Doppler Physics <i>S. Edelman</i>
9:45 AM	Artifacts: Theory and Illustrative Examples <i>R. Levine</i>
10:30 AM	Refreshment Break & Visit Exhibits Gloucester Ballroom
11:00 AM	Echocardiographic Evaluation of the Right Ventricle <i>S. Lester</i>
11:45 AM	Tricuspid and Pulmonary Valve Disease: New Guidelines <i>K. Addetia</i>
12:30 PM	Practice Board Exam Questions <i>K. Addetia, S. Edelman, S. Lester, R. Levine, S. Wieggers</i>
1:15 PM	Lunch & Visit Exhibits Gloucester Ballroom
Moderator: G. Aurigemma Salons E-F	
2:15 PM	Echocardiographic Evaluation of Aortic Valve Prostheses <i>A. Abbas</i>
3:00 PM	Quantitation of Aortic Regurgitation <i>S. Wieggers</i>
3:45 PM	Stress Echocardiography: Theoretical and Practical Considerations <i>M. Keane</i>
4:30 PM	Refreshment Break & Visit Exhibits Gloucester Ballroom
5:00 PM	Complications of Myocardial Infarction <i>S. Mankad</i>
5:30 PM	3D Echocardiography: Principles and Applications <i>R. Lang</i>
6:30 PM	Practice Board Exam Questions <i>A. Abbas, M. Keane, R. Lang, S. Mankad, S. Wieggers</i>
7:30 PM	Adjourn

Tuesday, May 8, 2018	
6:30 AM	Registration Breakfast & Visit Exhibits Gloucester Ballroom
Moderator: S. Lester Salons E-F	
7:00 AM	Contrast Echocardiography <i>S. Lester</i>
7:30 AM	Commonly Encountered Congenital Heart Disease in Adults <i>S. Phillips</i>
8:15 AM	Congenital Heart Disease: An Approach for Simple and Complex Anomalies <i>M. Pettersen</i>
9:00 AM	Congenital Heart Disease Cases <i>M. Pettersen, S. Phillips</i>
9:45 AM	Refreshment Break & Visit Exhibits Gloucester Ballroom
10:15 AM	Echocardiographic Evaluation of Diastolic Function <i>J. Oh</i>
11:15 AM	Echocardiographic Evaluation of Pericardial Disease: Constriction vs. Restriction <i>J. Oh</i>
12:00 PM	Practice Board Exam Questions <i>R. Lang, J. Oh, M. Pettersen, S. Phillips</i>
1:00 PM	Lunch & Visit Exhibits Gloucester Ballroom
Moderator: R. Lang Salons E-F	
2:00 PM	Diseases of the Aorta <i>S. Wieggers</i>
2:45 PM	Echocardiography in Heart Failure and Left Ventricular Assist Devices <i>K. Addetia</i>
3:30 PM	Adjourn

The ASCeXAM/ReASCE Online PRACTICE EXAM SIMULATION



The **ASCeXAM/ReASCE Online Practice Exam Simulation** is designed to prepare physicians for the National Board of Echocardiography's ASCeXAM or ReASCE certification examinations. Developed by renowned experts in the field of echocardiography, the test bank consists of 300 multiple choice questions containing over 400 images and videos covering: the physical principles of cardiovascular ultrasound; valvular heart disease; ventricular size and function; coronary artery disease and cardiomyopathies; congenital heart disease and fetal echocardiography; as well as cardiac masses, pericardial disease, myocardial contrast, and the latest applications in echocardiography. M-mode, 2-Dimensional, and Doppler echocardiography are also covered.

In addition to objective-based questions, case studies are included to evaluate your knowledge of the field. After purchasing this exam simulation, you have access for 18 weeks and are given the opportunity to take two simulated exams consisting of 150 questions each, assessing your skills and knowledge in all areas. You may repeat these exams a total of six times. The grading and feedback for all six attempts will be saved. In addition to an overall grade, a percentage breakdown of your incorrect and correct answers over the five categories will be provided for each attempt, allowing you to focus your study accordingly. Feedback includes explanations of the correct and incorrect answers, offering valuable instruction.

In a recent survey conducted by ASE, 97% of the people who took ASE's ASCeXam/ReASCE Review Course and used the Simulation Exam passed the echo boards.

NEW THIS YEAR: Choose from study or tutorial mode to get the most out of your simulation experience.

**The American Society of Echocardiography strives to be
the premier source for ASCeXAM/ReASCE preparation.**

Take advantage of this valuable preparation tool

\$199 ASE Members

\$250 Nonmembers



Visit ASEUniversity.org to purchase now!

Exhibit Information

Exhibit Location and Hours

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

Saturday, May 5, 2018	2:30 PM – 6:30 PM
Sunday, May 6, 2018	6:30 AM – 6:30 PM
Monday, May 7, 2018.....	6:30 AM – 7:30 PM
Tuesday, May 8, 2018	6:30 AM – 2:00 PM



Bracco Diagnostics Inc.
259 Prospect Plains Road, Building H
Monroe Township, NJ 08831
Phone: 603-490-5477
imaging.bracco.com/us-en/

Bracco Diagnostics Inc. (BDI), the U.S.-based subsidiary of Bracco Imaging SpA, and part of the Bracco Group, is a leader in innovative contrast imaging agents in the U.S. BDI, established in 1994, with headquarters and research offices in Monroe Township, NJ, offers a product and solution portfolio for all key diagnostic imaging modalities: X-Ray Imaging (including Computed Tomography-CT, Interventional Radiology, and Cardiac Catheterization), Magnetic Resonance Imaging (MRI), Contrast Enhanced Ultrasound (CEUS), and Nuclear Medicine through radioactive tracers. The diagnostic imaging offer is completed by several medical devices and advanced administration systems for contrast imaging products in the fields of radiology.



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Hitachi Healthcare is proud of the reputation we have built as an industry leader in diagnostic ultrasound. Known for our unparalleled Doppler performance, superior system reliability and intuitive use of cutting edge technology, Hitachi Healthcare remains the ideal choice for exceptional diagnostic ultrasound imaging in the field of cardiovascular medicine. Our focused dedication to diagnostic ultrasound imaging allows us to offer a full range of products to meet the needs for all your Cardiovascular applications.



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Lantheus Medical Imaging, a global leader in the development, manufacture and commercialization of innovative diagnostic imaging agents and products serving Echocardiography and Nuclear Medicine specialties, is headquartered in North Billerica, Massachusetts with offices in Puerto Rico and Canada.

Exhibit Information



National Board of Echocardiography, Inc. (NBE)
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Phone: 919-861-5582
echoboards.org

The National Board of Echocardiography, Inc. established in 1996, is a not-for-profit corporation that: Globally and domestically administers examinations in the field of Clinical Echocardiography; recognizes physicians who successfully pass our offered examinations; and offers a certification process that will publicly recognize physicians who complete an approved training program in echocardiography.



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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. Visit us today.



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Faculty Disclosures

The following faculty members do not have any relationships with industry/commercial supporters to disclose:

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Karima Addetia, MD
Gerard P. Aurigemma, MD, FASE
Sidney K. Edelman, PhD
Martin G. Keane, MD, FASE
Itzhak Kronzon, MD, FASE
Roberto M. Lang, MD, FASE
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Robert A. Levine, MD
Sunil V. Mankad, MD, FASE
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Michael D. Pettersen, MD
Sabrina D. Phillips, MD, FASE
Dennis A. Tighe, MD, FASE
Susan E. Wiegers, MD, FASE

The following faculty members do have financial relationships with industry/commercial supporters to disclose:

Jae K. Oh, MD, FASE - UpToDate (Royalty, Patents)

The following members of the ASE CME Committee, Education Committee, and Board of Directors (Not serving as faculty) do not have any relationships with industry/commercial supporters to disclose:

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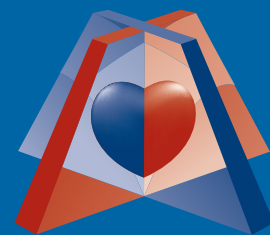
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