Content available on May 9, 2020
Live Q&A Sessions on August 22 and August 23

Course Director
Vera H. Rigolin, MD, FASE
Past President, ASE
Northwestern Medicine
Chicago, IL

Featuring:
• Access to All Presentation Recordings, including Physics
• New Faculty and Presentations

Register now at ASEcho.org/ReviewCourse
Overview of the ASCeXAM/ReASCE Review Course: Virtual Experience

This experience will be available on Saturday, May 9 and will offer access to recordings and PDF slides of all scheduled presentations, including physics. 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 and as such will not be “canned talks” from other cardiovascular ultrasound courses.

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

The expert faculty will use case studies and lectures to help prepare attendees for the ASCeXAM® or ReASCE® examinations. Registrants will have the opportunity to submit questions for two 2-hour live webinar sessions on August 22 and 23 that will facilitate faculty interaction and self-guided learning.

Registrants will have access to recordings and PDF slides of all scheduled presentations, including physics, for three years.

Learning Objectives

- 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, 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.

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.

As of now, the ASCeXAM® and ReASCE® exams will be held on Tuesday, September 15, 2020. More details concerning these examinations can be found on the NBE website at echoboards.org.

Who Should Attend

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.

Course Registration

Registration fees include all recorded presentations, post test questions, two 2-hour question and answer sessions and 30 CME credits. ASE members can take advantage of reduced registration fees as a benefit of membership. Register online at ASEcho.org/ReviewCourse.
ASE Membership

Nonmember registrants for the 21st Annual ASCeXAM/ReASCE Review Course will receive a complimentary membership through December 31, 2020, with their registration. This membership is only available to those who have never been a member of ASE. ASE serves its members in numerous ways by providing education, advocacy, research, practice guidelines, and a community for their profession. ASE membership includes over $750 of FREE CME credits a year, in addition to discounts on all ASE educational courses and products. Also included is a monthly subscription to the Journal of the American Society of Echocardiography (JASE), access to CASE, ASE’s online case reports journal, help with legislative coding and reimbursement issues, and other career resources. A plethora of online tutorials, webinars, and other educational activities make membership beneficial to echocardiographers located around the world. View the extensive list of member benefits at ASEcho.org.

Accreditation and Designation

The American Society of Echocardiography is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

ASE designates this live activity for a maximum of 30 AMA PRA Category 1 Credits™ pending approval. 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 30 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.

Invited Faculty

Course Director
Vera H. Rigolin, MD, FASE
Past President, ASE
Northwestern Medicine
Chicago, IL

Expert Faculty
Karima Addetia, MD
University of Chicago Medical Center
Chicago, IL

Gerard P. Aurigemma, MD, FASE
University of Massachusetts Medical School
Worcester, MA

Benjamin W. Eidem, MD, FASE
Mayo Clinic
Rochester, MN

Martin G. Keane, MD, FASE
Lewis Katz School of Medicine at Temple University
Philadelphia, PA

Steven J. Lester, MD, FASE
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Rehka Mankad MD, FASE
Mayo Clinic
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Sunil V. Mankad, MD, FASE
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Rochester, MN

Akhil Narang, MD
Northwestern Medicine
Chicago, IL

Pravin Patil, MD, FASE
Lewis Katz School of Medicine at Temple University
Philadelphia, PA

Sabrina D. Phillips, MD, FASE
Mayo Clinic
Jacksonville, FL

Muhamed Saric, MD, PhD, FASE
New York University
New York, NY

Partho P. Sengupta, MBBS, MD, DM, FASE
West Virginia University Healthcare
Morgantown, WV

James A. Zagzebski, PhD
University of Wisconsin-Madison
Madison, WI

“The faculty was terrific, and their love of echo was infectious.”
Past Review Course Attendee
# Course Schedule

**TTE, TEE, Right and Left Ventricular Hemodynamics, Endocarditis, Chamber Quantitation, and Systolic Function**

- Welcome and Overview of ASCeXAM/ReASCE Exam
  - V. Rigolin
- Normal TTE Examination, Doppler Echocardiography, and Normal Antegrade Flow Patterns
  - P. Patil
- Normal TEE Examination: Applications, Pitfalls, Probe Insertion and Manipulation, Risks and Complications
  - M. Keane
- Echo-Doppler Assessment of Right and Left Ventricular Hemodynamics
  - G. Aurigemma
- Endocarditis and Its Complications: The Role of Echocardiography
  - P. Patil
- Chamber Quantitation: Left Ventricle, Left Atrium, Aorta (2D&3D)
  - G. Aurigemma
- Global and Regional Systolic Function: Basics of Remodeling, Hypertrophy, and Left Ventricular Mass
  - G. Aurigemma

**Spectral Doppler, Deformation, Stress Echo, Mitral Stenosis, Mitral Valve Disease, and Mitral Regurgitation**

- Spectral Doppler and M-Mode Echo Cases
  - G. Aurigemma
- Deformation Imaging
  - S. Lester
- Stress Echocardiography: Theoretical and Practical Considerations
  - M. Keane
- Mitral Stenosis
  - R. Mankad
- Degenerative Mitral Valve Disease
  - K. Addetia
- Functional Mitral Valve Disease
  - V. Rigolin
- Quantification of Mitral Regurgitation: New Guidelines
  - S. Mankad

**Mitral Valve Prostheses, Aortic Stenosis, HCM, Systemic Disease and Formulas**

- Echocardiographic Evaluation of Mitral Valve Prostheses
  - S. Lester
- How to Assess Aortic Stenosis: New Guidelines
  - V. Rigolin
- Different Variants of Aortic Stenosis
  - S. Mankad
- Hypertrophic Cardiomyopathy
  - S. Lester
- Echocardiography in Systemic Disease
  - R. Mankad
- Which Formulas Should I Know For the Exam?
  - A. Narang

**Physics, Knobology, Artifacts, Right Ventricular Function, Tricuspid and Pulmonary Valve Disease, Appropriate Use Criteria, and IAC Accreditation**

- Overview
  - V. Rigolin
- Basic Ultrasound Physics
  - J. Zagzebski
- Concepts of Imaging and Knobology
  - P. Patil
- Fundamentals in Doppler Physics
  - J. Zagzebski
- Artifacts: Theory and Illustrative Examples
  - M. Keane
- Evaluation of the Right Ventricle
  - V. Rigolin
- Tricuspid and Pulmonary Valve Disease: New Guidelines
  - K. Addetia
- More Formulas I Need to Know for the Exam
  - A. Narang

**Aortic Regurgitation, Aortic Prosthesis, Cardiac Masses, Myocardial Infarction, and Interventional Echocardiography**

- Quantitation of Aortic Regurgitation
  - V. Rigolin
- Evaluation of Aortic Prosthesis
  - S. Mankad
- Cardiac Masses
  - A. Narang
- Complications of Myocardial Infarction
  - S. Mankad
- Primer of Interventional Echocardiography
  - M. Saric

**Contrast, Congenital Heart Disease, Diastolic Function, Pericardial Disease, Diseases of the Aorta, Heart Failure and LVADs**

- Contrast Echocardiography
  - M. Saric
- Commonly Encountered Congenital Heart Disease in Adults
  - S. Phillips
- Congenital Heart Disease: An Approach for Simple and Complex Anomalies
  - B. Eidem
- Congenital Heart Disease Cases
  - B. Eidem, S. Phillips
- Echocardiographic Evaluation of Diastolic Function
  - P. Sengupta
- Echocardiographic Evaluation of Pericardial Disease: Constriction vs. Restriction
  - P. Sengupta
- Diseases of the Aorta
  - M. Saric
- Echocardiography in Heart Failure and Left Ventricular Assist Devices
  - K. Addetia
Faculty Disclosures

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

Karima Addetia, MD
Benjamin W. Eidem, MD, FASE
Martin G. Keane, MD, FASE
Steven J. Lester, MD, FASE
Rehka Mankad, MD, FASE
Sunil V. Mankad, MD, FASE
Akhill Narand, MD
Pravin Patil, MD, FASE
Sabrina D. Phillips, MD
Muhammed Saric, MD, PhD, FASE
Partho P. Sengupta, MBBS, MD, DM, FASE
Vera H. Rigolin, MD, FASE

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

Gerard P. Aurigemma, MD, FASE – TomTec (Speaker/Speaker’s Bureau)
James A. Zagzebski, PhD – SunNuclear (Consultant/Advisor), Gammex (Consultant Advisor)

The following members of the ASE CME Committee (not serving as faculty) do not have any relationship with industry/commercial supporters to disclose:

Bhawna Arya, MD, FASE
Jennifer Betz, BS, RDCS, FASE
Mary Corretti, MD, FASE
Loren Francis, MD
Denise Ignatowski, BS, RDCS, FASE
Eric Kallstrom, MBA, ACS, RDCS, FASE
Jin Kyung Kim, MD, PhD, FASE, FACC
Rebecca Klug, BA, ACS, RDCS, PE, FASE
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Jeffrey Scott, DO
Timothy Slesnick, MD, FASE
Richard Stacey, MD, FASE
Carolyn Lee Taylor, MD, FASE
Ratna Vadlamudi, MD, FASE
Anita Wokhlu, MD, FASE

All members of the ASE staff who were involved in the planning and implementation of this activity do not have any relationships with industry/commercial supporters to disclose:

Jennifer Goss, Healthcare Education Specialist
Kelly Joy, Meeting Planner
Christina LaFuria, Vice President of Educational Activities
Elizabeth Lane, Online Education Manager
Jaclyn Levine, Meeting Planner Manager
Robin Wiegerink, MNPL, Chief Executive Officer
The ACSeXAM/ReASCE Online Practice Exam Simulation is designed to prepare physicians for the National Board of Echocardiography’s ACSeXAM 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.

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

Take advantage of this valuable preparation tool
$199 ASE Members
$250 Nonmembers

Visit ASEUniversity.org to purchase now!
Your ASCeXAM/ReASCE Review Course registration fee includes all recorded presentations, post test questions, two 2-hour Q&A sessions and 30 CME credits.

Name:

Credential: [ ] MD  [ ] DO  [ ] PhD  [ ] RN  [ ] RCS  [ ] RDCS  [ ] Other

Institution:

Email Address:

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

Street Address:

City: ___________________________ State/Province: ___________ Zip/Postal Code: _________ Country: ___________

Telephone: ___ Fax: _____

ASE encourages participation by all individuals. If you have a disability or other specific needs, including dietary, advance notification will help ASE to better serve you. Please contact ASE by email at Registrar@ASEcho.org or by telephone at 919-861-5574.

### Registration Fees

**Prices include access to all online lecture recordings, post test questions, and two 2-hour Q&A sessions.**

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* This registration fee includes ASE membership through December 31, 2020. Membership is only available to those who have never been a member of ASE.

### ASCeXAM/ReASCE Online Practice Exam Simulation

☐ Order your ASCeXAM/ReASCE Online Practice Exam at the same time you register. $199 ASE member $250 Nonmember.

### 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: ___________ CVC #: ___________

Registration cancellation fees may apply and ASE reserves the right to determine if a refund is possible. Please see the full cancellation policy online at ASEcho.org/ReviewCourse.