COURSE OBJECTIVES

Fundamentals of Echocardiography
Monday, May 5–Wednesday, May 7
The format of this program will include didactics, workshops, and small group interactive case discussions to review the role of perioperative echocardiography in diagnosing cardiac and great vessel pathology in patients undergoing cardiac and noncardiac procedures or interventions in surgical or other clinical settings. Upon completion of this course, the participant will be able to understand the application of fundamental echocardiographic principles, including the physics of ultrasound, Doppler echocardiography, and hemodynamic quantification. The participant will have a better understanding of the pathophysiology of valvular heart disease, cardiac function and dysfunction, and diseases of the great vessels.

Upon completion of this educational activity, the participant should be able to
• apply the essential principles of 2D echocardiography and spectral and color Doppler echocardiography in clinical settings
• recognize the components of the comprehensive perioperative echocardiographic examination
• identify cardiac and great vessel anatomy and evaluate the function of the ventricles and heart valves
• describe common artifacts and misinterpretations of normal cardiac anatomy
• perform echocardiographic measurements essential for clinical decision making
• recognize the role of echocardiography in the identification of diastolic dysfunction in heart failure
• dissect a porcine heart.

Designation Statement
The Society of Cardiovascular Anesthesiologists designates this live activity for a maximum of 20.0 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Porcine Heart Wet Lab: Hands-On Dissection With Echocardiographic and Surgical Correction
Wednesday, May 7
Upon completion of this educational activity, the participant should be able to
• identify cardiac and great vessel anatomy in the porcine heart
• correlate porcine anatomical structures to 2D echocardiographic structures
• correlate porcine anatomical structures to surgical anatomic landmarks.

Designation Statement
The Society of Cardiovascular Anesthesiologists designates this live activity for a maximum of 3.5 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Application of Echocardiography
Thursday, May 8–Friday, May 9
This program will include advanced perioperative echocardiography concepts and will discuss the influence of perioperative echocardiography on the anesthetic management and surgical and clinical decision-making process of patients undergoing cardiac and noncardiac surgical procedures, including the care of critically ill patients outside the operating room. Educational formats used to achieve the educational goals will include didactic lectures, workshops, and interactive case presentations.

Upon completion of this course, the participant will be able to apply advanced echocardiographic diagnostic principles in the care of the surgical patient, including the ability to
• assess ventricular function and regional wall motion with correlation to other diagnostic studies such as coronary angiography
• recognize the role of echocardiography in the identification of diastolic dysfunction in heart failure
• rectify the perioperative assessment and pathophysiology of valvular heart disease with 2D and 3D echocardiography
• list the role of perioperative echocardiography in guiding surgical decision making for cardiac patients undergoing myocardial revascularization, valve repair or replacement, congenital heart disease surgery, thoracic aortic repair, biventricular resynchronization, and procedures for heart failure
• list the role of perioperative echocardiography in percutaneous procedures commonly performed in the catheterization lab or hybrid operating room
• explain the echocardiographic evaluation of ventricular assist devices to support the separation from cardiopulmonary bypass
• recognize the role of echocardiography in the care of critically ill patients outside of the operating room
• describe the interaction between the different specialties—surgeons, cardiologists, and anesthesiologists—in complex decision-making processes involved in the perioperative care of surgical patients with cardiovascular disease
• list the basic knowledge necessary to establish an echocardiography service that incorporates quality assurance as part of a perioperative TEE program and enhances patient care.

Designation Statement
The Society of Cardiovascular Anesthesiologists designates this live activity for a maximum of 19.5 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

3D Echocardiography and Tissue Doppler, Strain, and Speckle
Wednesday, May 7
This program will include both large group didactics and rotating interactive small group instruction and case discussions to review the role of new and innovative imaging techniques in perioperative decision making. The participant will gain a better understanding of how to incorporate innovative imaging into daily practice.

Upon completion of this educational activity, the participant should be able to
• recognize and acquire routine 3D echocardiographic images
• perform basic manipulation and measurements of 3D datasets
• recognize and acquire images for tissue Doppler analysis
• describe cardiac deformation with Doppler and speckle imaging
• incorporate these modalities in clinical decision making.

Designation Statement
The Society of Cardiovascular Anesthesiologists designates this live activity for a maximum of 6.0 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Advanced Hands-On Imaging Workshop
Friday, May 9
This program will include didactics and hands-on teaching using laptop computers. Each participant will have the opportunity to practice dataset image analysis in clinical scenarios. Small teaching groups will allow for interactive discussion. The participant will gain a better understanding of how to use image analysis software to better understand ventricular function and valvular pathophysiology.

Upon completion of this workshop, the participant should be able to
• utilize image analysis programs to assist with clinical decision making
• incorporate these modalities into clinical practice.

Designation Statement
The Society of Cardiovascular Anesthesiologists designates this live activity for a maximum of 3.0 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

This activity is limited to the first 180 registrants.
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Disclosures

(As of March 3, 2014)

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Monday, May 5

6:30 am–5 pm  Registration Open ......................................................... Ellington Foyer
6:45–7:15 am  Continental Breakfast .................................................. Ellington Foyer
7:15–7:30 am  Overview and Announcements D. Shook, N. J. Skubas, M. Swaminathan .................. Ellington

Image Creation and Views
Moderator: N. J. Skubas
7:30–8:30 am  Ultrasound Physics S. K. Edelman .................................... Ellington
8:30–9 am  Doppler Physics S. K. Edelman ............................................ Ellington
9:30–10 am  The 28 Views G. S. Hartman ............................................ Ellington
9:30–10 am  Image Optimization: You Are the Artist K. Glas .................. Ellington
10–10:30 am  Break .............................................................. Ellington Foyer

Basic Functional Assessment
Moderator: N. J. Skubas
10:30–11 am  Left Ventricular Systolic Function M. A. Taylor .................. Ellington
11–11:30 am  Right Ventricular Systolic Function K. P. Grichnik ............ Ellington
11:30 am–Noon  Diastology A. Thompson .......................................... Ellington
Noon–1 pm  Lunch Provided .................................................. Overlook

Valve Structure and Function
Moderator: K. Glas
1–1:30 pm  Mitral Regurgitation A. Vegas ............................................. Ellington
1:30–2 pm  Mitral Stenosis L. B. Heller .................................................. Ellington
2–2:30 pm  Aortic Stenosis R. Sniecinski ............................................. Ellington
2:30–3 pm  Aortic Regurgitation A. Fox ............................................... Ellington
3–3:30 pm  Coffee Break .......................................................... Ellington Foyer

Potpourri
Moderator: M. A. Taylor
3:30–4 pm  Aorta B. Spence .......................................................... Ellington
4–4:30 pm  Tricuspid and Pulmonic Valves A. Mittnacht ......................... Ellington
4:30–5 pm  Which Doppler Mode to Use? N. J. Skubas .......................... Ellington
5–5:30 pm  Epiartic/Epicardial K. Glas ................................................ Ellington
5:30–6 pm  Audience Q & A .......................................................... Ellington
6–7:30 pm  Dinner on Your Own ...................................................... Ellington

Physics and Hemodynamics
Moderator: M. Swaminathan
7:30–8:15 pm  Physics and Artifacts S. K. Edelman, N. J. Skubas ............. Ellington
8:15–9 pm  Hemodynamics Made Easy D. Shook, N. J. Skubas ................ Ellington

Tuesday, May 6

6:30 am–5 pm  Registration Open ......................................................... Ellington Foyer
6:45–7:25 am  Continental Breakfast With Exhibitors .......................... Ellington Foyer
7:25–7:30 am  Overview and Announcements D. Shook, N. J. Skubas, M. Swaminathan .................. Ellington
Case-Based Small Groups With Discussion of Fundamentals

Moderator: N. J. Skubas

Workshop Organization: This workshop will be divided into seven, 45-minute sessions, during which all seven topics will be covered concurrently. See your supplement for room assignments.

1. Mitral Regurgitation G. S. Hartman, A. Vegas
2. Mitral Stenosis and Filling Pressures L. B. Heller, B. Spence
3. Left Ventricle: Ischemia and Function M. A. Taylor, W. M. Popescu
4. Right Ventricle/Tricuspid Valve/Pulmonic Valve K. P. Grichnik, A. Mittnacht
5. Aortic Stenosis R. Sniecinski, G. Whitener
6. Aortic Regurgitation A. Fox, E. Bogdanov
7. Diastology A. Thompson, K. H. Rehfeldt

7:30–8:15 am Session 1
8:15–9 am Session 2
9–10:15 am Session 3
10:15–11 am Session 4
11–12:15 pm Session 5
12:15–1:30 pm Session 6
1:30–2:15 pm Session 7
2:15–3 pm Coffee Break With Exhibitors
3–3:30 pm Coffee Break With Exhibitors

Potpourri

Moderator: A. Thompson

3:30–4 pm Echo Safety M. Swaminathan
4–5 pm Prosthetic Valves K. Glas
5:30–6 pm Pericardium K. H. Rehfeldt
5–6 pm Cardiomyopathies W. M. Popescu
6:30–7 pm Dinner on Your Own

Fundamental Review

Moderator: N. J. Skubas

7–9 pm Review of the Posted Cases, Images, and Movies B. Spence, R. Sniecinski, G. Whitener

Wednesday, May 7

6:30 am–5 pm Registration Open
6:45–7:25 am Continental Breakfast With Exhibitors
7:25–7:30 am Overview and Announcements D. Shook, N. J. Skubas, M. Swaminathan

Porcine Heart Wet Lab: Hands-On Dissection With Echocardiographic and Surgical Correlation

Moderator: M. Swaminathan


7:30–8 am Overview of Cardiac Surface Anatomy D. Shook
8–11 am Porcine Heart Dissection With 2D/3D TEE and Surgical Correlation D. Shook, M. Maxwell
Wednesday, May 7 (continued)

3D Echocardiography and Tissue Doppler, Strain, and Speckle

Part I: Introduction
Moderator: N. J. Skubas

12:45–1:30 pm  The Basic 3D Exam: What to Do in the Operating Room G. B. Mackensen ........................................ Ellington
1:30–2:15 pm  Tissue Doppler/Strain/Speckle: An Overview A. Nicoara .......................................................... Ellington
2:15–2:30 pm  Stretch Break and Exhibits Open ................................................................. Ellington Foyer

Part II: Acquisition and Application
Moderator: B. Bollen

Workshop Organization: This workshop will be divided into six, 45-minute sessions, during which all six topics will be covered concurrently. See your supplement for room assignments.

1. Acquisition of 3D Datasets M. Swaminathan, G. S. Hartman
2. Making Measurements in 3D S. Sherman, G. Whitener
3. Application of 3D–Mitral Valve F. Mahmood, A. Thompson
4. Application of 3D–Aortic Valve A. Vegas, G. B. Mackensen
5. Application of Tissue Doppler/Strain/Speckle N. J. Skubas, A. Nicoara
6. Application of 3D Cases D. Shook, C. B. Nyman

2:30–3:15 pm  Session 1
3:15–4 pm  Session 2
4–4:45 pm  Session 3
4:45–5:15 pm  Coffee Break With Exhibitors ................................................................. Ellington Foyer
5:15–6 pm  Session 4
6–6:45 pm  Session 5
6:45–7:30 pm  Session 6

Thursday, May 8

6:30 am–5 pm  Registration Open ................................................................. Ellington Foyer
6:45–7:25 am  Continental Breakfast With Exhibitors ........................................ Ellington Foyer
7:25–7:30 am  Overview and Announcements D. Shook, N. J. Skubas, M. Swaminathan .................................... Ellington

Aortic Valve Dilemmas
Moderator: M. Swaminathan

7:30–7:50 am  When the Area and Gradient Don’t Add Up: The Dilemma of Low-Gradient Aortic Stenosis J. Mark ........ Ellington
7:50–8:10 am  Should Incidental Moderate Aortic Stenosis Be Fixed? Case-Based Discussion P. Panzica .................. Ellington
8:10–8:30 am  Post AVR Complications: Nightmare Scenarios in My OR F. Mahmood ....................................... Ellington
8:30–8:50 am  Pro: Why TAVR Is a Better Option for All AVRs J. K. Harrison ........................................ Ellington
8:50–9:10 am  Con: Why TAVR Is NOT the Option of Choice for All AVRs M. Maxwell ........................................ Ellington
9:10–9:30 am  Panel Discussion and Audience Q & A ........................................ Ellington
9:30–10 am  Coffee Break With Exhibitors ................................................................. Ellington Foyer

Mitral Valve Dilemmas
Moderator: B. Bollen

10–10:20 am  Degenerative Mitral Valve Disease: Etiology and Mechanism W. C. Culp ........................................ Ellington
10:20–10:40 am  3D TEE for More Accurate Assessment of Mitral Disease: Let Me Show You How S. Sherman ........ Ellington
10:40–11 am  Incidental Mitral Regurgitation in CABG Surgery: What Does My Surgeon Need to Know? G. B. Mackensen ........................................ Ellington
APPLICATION OF ECHOCARDIOGRAPHY

11–11:20 am Matching the Ring With the Disease: Mitral Repair Options D. Shook ........................................ Ellington
11:20–11:40 am Management of Mitral Regurgitation in HCM: When to Fix? J. Mark ........................................ Ellington
11:40 am–Noon Panel Discussion and Audience Q & A ..................................................... Ellington

Lunch Session
Moderator: M. Swaminathan
Noon–12:15 pm Lunch Provided ................................................................. Overlook
12:15–1 pm Complex Case Discussion Panel D. Shook, M. Maxwell, J. K. Harrison, F. Mahmood, G. B. Mackensen .......... Ellington

Critical Care Symposium
Moderator: M. Swaminathan
1–1:20 pm Critical Care Ultrasound: What Are the Current Guidelines? D. Clanton ...... Ellington
1:20–1:40 pm Hemodynamic Instability in the ICU: Which Is the Best Imaging Modality? P. Panzica ...... Ellington
1:40–2 pm Performing a Complete Yet Focused Ultrasound Exam in the ICU or ER J. Broder ...... Ellington
2–2:20 pm Is There a Role for Continuous TEE for Hemodynamic Monitoring? D. Clanton ...... Ellington
2:20–2:40 pm Pulmonary and Pleural Pathology: You Can Diagnose It Too S. Shernan ...... Ellington
2:40–3 pm Panel Discussion and Audience Q & A ..................................................... Ellington
3–3:30 pm Coffee Break With Exhibitors ................................................................. Ellington Foyer

Hands-On Ultrasound Workshop
Moderator: M. Swaminathan
Workshop Organization: Self-paced workshop with simulators and live models to practice TTE, TEE, and lung exams.
3:30–5:30 pm Echocardiography for the Critically Ill Patient ........................................ Mercer Ballroom
5:30–7 pm Dinner on Your Own

Who Wants to Be an ECHO Millionaire? ................................................................. Ellington
Moderators: A. D. Maslow, F. Mahmood, P. Panzica
7–9 pm
An interactive game show in which audience members can participate, answer questions (ask the audience), ask the experts (phone a friend), or reduce the number of options (50/50). A fun and relaxed way to learn some pearls in perioperative echocardiography.

Friday, May 9

6:30 am–5 pm Registration Open ................................................................. Ellington Foyer
7–7:25 am Continental Breakfast ................................................................. Ellington Foyer
7:25–7:30 am Overview and Announcements D. Shook, N. J. Skubas, M. Swaminathan ........................................ Ellington

Echocardiography in Heart Failure
Moderator: M. Swaminathan
7:30–7:50 am What’s New in Mechanical Circulatory Assist? W. C. Culp ........................................ Ellington
7:50–8:10 am VADs: My Imaging Approach for Pre- and Post-VAD Insertion R. Sniecinski ........................................ Ellington
8:10–8:30 am Acute Right Heart Failure: Using TEE to Guide Management J. Mark ........................................ Ellington
8:30–8:50 am Assessment of Mitral Regurgitation in Heart Failure: Determining the Mechanism S. Shernan ................. Ellington
8:50–9:10 am Diastolic Heart Failure: Putting the Numbers to Work A. Nicoara ........................................ Ellington
9:10–9:30 am Panel Discussion and Audience Q & A ..................................................... Ellington
9:30–10 am Coffee Break ................................................................. Ellington Foyer
Friday, May 9 (continued)

Image-Guided Interventions
Moderator: M. Swaminathan

10–10:20 am  Coronary-Sinus Catheterization: My Tips and Tricks A. Nicoara
              Ellington

                 Ellington

10:40–11 am  Percutaneous Paravalvular Leak Closures: Techniques and Results J. K. Harrison
             Ellington

11–11:20 am  TAVRs: My Imaging Approach C. B. Nyman
             Ellington

11:20–11:40 am  Closing ASDs and VSDs: An Update From the Cath Lab J. K. Harrison
                 Ellington

11:40 am–Noon  Panel Discussion and Audience Q & A
                 Ellington

Lunch Session
Moderator: M. Swaminathan

Noon–12:15 pm  Lunch Provided
               Overlook

12:15–1 pm  7th Annual Arthur E. Weyman, MD, Lecture R. Lang
            Ellington

Training, Certification, and Logistics
Moderator: A. Nicoara

1–1:20 pm  Certification in Basic TEE Explained: What You Can and Cannot Do C. A. Troianos
           Ellington

1:20–1:40 pm  Certification in Advanced TEE Explained: How to Get the Numbers S. Sherman
              Ellington

1:40–2 pm  Running and Maintaining a Quality Echo Service J. Mark
           Ellington

2–2:20 pm  TEE Training During Residency: How You Can Get It Done C. A. Troianos
           Ellington

2:20–2:40 pm  TEE Training: The NBE Perspective S. Sherman
              Ellington

2:40–3 pm  Panel Discussion and Audience Q & A
           Ellington

3–3:30 pm  Coffee Break
           Ellington Foyer

Valve Surgery
Moderator: N. J. Skubas

3:30–3:50 pm  Prosthetic Valves Gone Bad W. C. Culp
              Ellington

3:50–4:10 pm  Tricuspid Valve in Left Heart Surgery: When to Fix? F. Mahmood
              Ellington

4:10–4:30 pm  Infections and Valve Complications: Imaging in Endocarditis A. Maslow
              Ellington

4:30–4:50 pm  Complications After Mitral Valve Surgery J. Mark
              Ellington

4:50–5:10 pm  Imaging in Mitral Stenosis: Assessment of Severity and Associated Lesions S. Sherman
              Ellington

5:10–5:30 pm  Panel Discussion and Conference Wrap-Up
              Ellington

5:30–6:30 pm  Dinner on Your Own

Advanced Hands-On Imaging Workshop
Moderator: M. Swaminathan, D. Shook

Workshop Organization: This workshop is divided into three, 1-hour sessions, during which three topics will be covered concurrently. Attendees will rotate through each of the three topics. This workshop is limited to 180 participants. See your supplement for room assignments.

1. 3D MV Cases and LV Cases S. Sherman, B. Bollen

2. 3D MV Cases and AV Cases F. Mahmood, C. B. Nyman

3. DTI/Strain/Speckle N. J. Skubas, A. Nicoara

6:30–7:30 pm  Session 1

7:30–8:30 pm  Session 2

8:30–9:30 pm  Session 3
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