13th Annual Comprehensive Review & Update of Perioperative Echo

Learning Objectives

MONDAY, February 8, 2010

Cardiac Anatomy – Image Plane Correlation/Basics of Echocardiography
Moderator: KP Grichnik

7:30 – 8:00 Basic Echo cases that you will be able to handle - KP Grichnik, CA Troianos
At the conclusion of this lecture, the participant should be able to:
Recognize the general scope of cases they should be able to understand and diagnose. Cases will be presented along with representative videos and sample questions.

8:00 – 8:30 Physics of Ultrasound – AC Perrino, Jr.
At the conclusion of this lecture, the participant should be able to:
1. Recite the physical principles of ultrasound
2. Recognize ultrasound properties
3. Explain ultrasound imaging principles

8:30 – 9:00 Probe Placement and Manipulation – GS Hartman
At the conclusion of this lecture, the participant should be able to:
1. Understand the technical aspects to facilitate probe insertion
2. Identify the anatomic considerations impacting probe insertion and manipulation
3. Understand the relation of the standard probe positions and normal cardiac anatomy
4. Identify their correlates to the standard – “SCA 20” views
5. Recognize the standard probe manipulation and scan plane nomenclature

9:00 – 9:30 Knobology for Image Optimization – LB Heller
At the conclusion of this lecture, the participant should be able to:
1. Be able to identify the physical principles behind the knobs on common echocardiography platforms
2. Use common echocardiography platform functions to obtain 2-D and Doppler images

9:30 – 10:00 Comprehensive Exam Review – JS Shanewise
At the conclusion of this lecture, the participant should be able to:
1. Recognize echocardiographic views are recommended as part of a comprehensive examination
2. Recite image plane nomenclature and anatomic correlation
3. Manipulate a TEE probe to acquire appropriate image planes

Anatomic Imaging Small Group
Interactive Session – Part I
Moderators: NJ Skubas/CA Troianos

10:30 - 12:00 and 1:30 – 5:00 pm

The purpose of this workshop is to enhance the participants understanding of the normal cardiac anatomy and TEE scan planes. The audience will be divided into multiple subgroups and distributed to workstations at which preserved anatomical cardiac sections, corresponding scan planes and recorded TEE
video exam segments will be available to facilitate these small group “tutorial” sessions. This framework will afford opportunities for hands-on anatomical section examination, group participation and extensive moderator interactions. The participants will be divided into 9 groups and rotate evenly through all stations across both parts 1 and 2 of the workshop.

At the conclusion of this lecture, the participant should be able to:
1. Recognize and identify structures in the SCA-20 views
2. Identify different views required for complete imaging of different cardiac structures
3. Explain how the probe as is required to obtain these views
4. Utilize basic measurements during the routine echocardiographic exam

“Making Pretty Pictures” Luncheon Session
Moderator: KP Grichnik

12:15 – 12:45 pm Image Enhancement using Knobology – A Williams
At the conclusion of this lecture, the participant should be able to:
1. Demonstrate the effect of overall gain, lateral gain and time depth compensation on image quality
2. Assess the effect of various color patterns on 2D image quality
3. Utilize depth to optimize cardiac structure identification
4. Apply color flow Doppler appropriately to a 2 D to gain useful information

12:45 – 1:15 pm Image Enhancement using Probe Manipulation – D Porembka
At the conclusion of this lecture, the participant should be able to:
1. Use anteflexion, retroflection, left/rightward tip deflection and whole probe turning to enhance image quality and structure detection
2. Utilize the beam angle to optimize cardiac structure detection
3. Identify a single cardiac structure from multiple viewing planes using probe manipulation

Basic Principles of TEE
Moderator: KP Grichnik

7:00 – 7:30 Artifacts – LB Heller
At the conclusion of this lecture, the participant should be able to:
1. Understand the sound principles that lead to artifacts
2. Explain the causes of the common artifacts
3. Recognize the difference between and artifact and a true pathological finding

7:30 – 8:00 pm Anatomic Pitfalls – KP Grichnik
At the conclusion of this lecture, the participant should be able to:
1. Understand the embryological basis of many common anatomic variants
2. Classify the anatomic pitfalls by location in the heart
3. Differentiate anatomic pitfalls from a true pathological finding

8:00 – 8:30 pm Artifacts and Pitfalls Cases- LB Heller and KP Grichnik
At the conclusion of this lecture, the participant should be able to:
1. Recognize artifacts in selected unknown cases
2. Recognize cardiac pitfalls in selected unknown cases
TUESDAY, February 9, 2010

Cardiac Anatomy Wet Lab
Moderator: GS Hartman/D Shook

7:30 – 8:00 am Overview of Cardiac Anatomy – D Shook
At the conclusion of this lecture, the participant should be able to:
1. Explain the gross external anatomy of the heart
2. Recite the external landmarks for cardiac anatomy
3. Review the nomenclature and location of epicardial vessels
4. Describe the anatomic features and nomenclature of individual chambers
5. List the location of developmental anatomic remnants
6. Name the location, orientation and underlying structure of different cardiac valves
7. List the anatomic relationship of the coronary circulation and conduction system to the cardiac valve
structure Explain the anatomic basis of surgical procedures and complications involving cardiac valves

8:00 – 10:30 am Wet Lab Heart Dissection – Faculty: M Maxwell, D Shook, R Savage
This is a hands-on dissection lab in which participants have the opportunity to watch a prosection of the heart and then perform a similar dissection on their own. Correlations of cardiac anatomy, valvular three dimensional orientation, external and internal anatomical landmarks and their TEE scan planes correlates will be illustrated.
At the conclusion of this lab, the participant should be able to:
1. Identify surface porcine heart anatomy
2. Dissect a porcine heart
3. Identify internal porcine heart anatomy

10:30 – 11:00 am TEE Correlations of Cardiac Anatomy – D Shook
Upon completion of this lecture, the participant should understand the TEE correlates of the anatomical structures discussed in the previous lecture and wet-lab demonstrations, including:
1. Explain the correlation of anatomical to echocardiographic sections
2. Describe the 3-dimensional aspects of the heart and great vessels
3. Correlate probe scan planes to anatomical windows into the heart

Knobology and Image Optimization
Moderator: KP Grichnik

12:30 – 1:30 Knobology and Imaging Optimization (3 smaller groups) - LB Heller, KP Grichnik, D Shook
At the conclusion of this lecture, the participant should be able to:
1. Describe the function of basic knobs on an echocardiography console
2. Discuss the use and function of the basic knobs to optimize image resolution

Basic Transesophageal Echocardiography I
Moderator: CA Troianos

1:45 – 2:15 pm Left Ventricular Systolic Function – MJ London
At the conclusion of this lecture, the participant should be able to:
1. Identify normal and abnormal left ventricular systolic function
2. Perform qualitative and quantitative assessment of left ventricular systolic function
3. Recognize the LV segments and their corresponding coronary distribution

2:15 – 2:45 pm Right Ventricular Systolic Function – L Shore-Lesserson
At the conclusion of this lecture, the participant should be able to:
1. Identify normal and abnormal right ventricular systolic function
2. Develop pertinent TEE views for RV function assessment
3. Perform qualitative assessment of right ventricular systolic function
4. Describe the concept of ventricular interdependence

2:45 – 3:15 pm Basic Diastology of the Left Atrium – GS Hartman
At the conclusion of this lecture, the participant should be able to:
1. Explain the importance of diastolic function assessment in the perioperative setting
2. Define diastolic physiology by 2D and Doppler echocardiography using LA measurements
3. Determine the degree of diastolic dysfunction using echocardiographic modalities

3:15 – 3:45 pm Case Discussions with Faculty – A Gosalia
At the conclusion of this lecture, the participant should be able to:
1. Utilize knowledge of LV function, RV function and diastolic parameters to diagnose pathology in clinical examples.

4:15 – 4:45 pm Aortic Regurgitation – CA Trojanos
At the conclusion of this lecture, the participant should be able to:
1. Review the structural anatomy of the normal aortic valve
2. Describe the mechanisms and causes of aortic regurgitation
3. Recognize the 2D TEE findings of aortic regurgitation
4. Assess and quantify aortic regurgitation

4:45 – 5:15 pm Aortic Stenosis – R Sniecinski
At the conclusion of this lecture, the participant should be able to:
1. Describe the mechanisms and causes of aortic stenosis
2. Recognize the 2D TEE findings of aortic stenosis
3. Assess and quantify aortic stenosis

5:15 – 5:45 pm Aortic Aneurysm and Dissection – MA Taylor
At the conclusion of this lecture, the participant should be able to:
1. Describe the echocardiographic characteristics and classification of aneurysms and dissections
2. Describe the echocardiographic characteristics and significance of intramural hematomas and penetrating ulcers
3. Compare the diagnostic utility of various imaging modes, including TEE and TTE, in the evaluation of suspected aortic dissection

5:45 – 6:00 pm Aortic Valve and Aorta Cases – J Abernathy
At the conclusion of this lecture, the participant should be able to:
1. Recognize aortic regurgitation, stenosis, aortic aneurysms and dissections in selected unknown cases
Ultrasound for Regional Anesthesia and Vascular Access Workshop
*Moderators: KP Grichnik/GS Hartman*

7:30 – 9:30 pm

Group I: Vascular Access (mannequins/phantom and live demonstrations) – GS Hartman, SK Shermann, RS Sniecinski, MA Taylor
At the conclusion of this lecture and hands-on demonstration, the participant should be able to:
1. Defend the rationale for the use of ultrasound guidance during central venous catheterization
2. Identify the techniques used and the currently available ultrasound equipment for ultrasound guided vascular cannulation
3. Describe and/or perform an ultrasound to simulate vascular access

Group II: Regional Anesthesia – B Spence, A Williams
At the conclusion of this lecture and hands-on demonstration, the participant should be able to:
1. Defend the rationale for the use of ultrasound guidance during regional anesthesia
2. Identify the techniques used and the currently available ultrasound equipment for regional anesthesia
3. Describe and/or perform an ultrasound to simulate regional anesthesia

Group III: Transthoracic – KP Grichnik, KE Glas, D Porembka
At the conclusion of this lecture and hands-on demonstration, the participant should be able to:
1. Recognize the technique of transthoracic echocardiography scanning
2. Identify the best views to assess a patient for aortic stenosis, mitral regurgitation, LV function and pericardial effusion
3. Describe and/or perform a transthoracic echocardiogram

WEDNESDAY, February 10, 2010

Basic Transesophageal Echocardiography II
*Moderator: LB Heller*

7:30 – 8:00 am Mitral Regurgitation – MJ London
At the conclusion of this lecture, the participant should be able to:
1. Review the structural anatomy of the normal mitral valve
2. Describe the mechanisms and causes of mitral regurgitation
3. Recognize the 2D TEE findings of mitral regurgitation
4. Assess and quantify mitral regurgitation

8:00 – 8:30 am Mitral Stenosis – LB Heller
At the conclusion of this lecture, the participant should be able to:
1. Describe the mechanisms and causes of mitral stenosis
2. Recognize the 2D TEE findings of mitral stenosis
3. Assess and quantify mitral stenosis

8:30 – 9:00 am Tricuspid Valve and Pulmonic Valve – N Skubas
At the conclusion of this lecture, the participant should be able to:
1. Review the structural anatomy of the normal tricuspid and pulmonic valves
2. Describe the most common mechanisms for tricuspid/pulmonic regurgitation and stenosis
3. Recognize the 2D TEE findings of tricuspid and pulmonic valvular disease
4. Assess and quantify tricuspid valvular disease

9:00 – 9:30 am Mitral, Tricuspid, and Pulmonic Case Presentations: C Hudson
At the conclusion of this lecture, the participant will be able to:
1. Recognize mitral, tricuspid and pulmonic valve pathology in selected unknown cases

Echo and Ultrasound Potpourri – Part I
Moderator: KE Glas

10:00 – 10:30 am Prosthetic Valves – L Shore-Lesserson
At the conclusion of this lecture, the participant should be able to:
1. Identify different types of prosthetic valves and their unique echocardiographic findings
2. Describe the advantages and indications for each of the prosthetic valve options
3. Recite the echocardiographic criteria for diagnosis of abnormal prosthetic valve function

10:30 – 11:00 am Aortic Endovascular Stents and Echocardiography – M Swaminathan
At the conclusion of this lecture, the participant will be able to:
1. Recite the types of aortic pathology leading to stent placement
2. List the indications for stent placement
3. Detail the use of echocardiography to facilitate stent placement

11:00 – 11:30 am Non-operating Room Applications of TEE – JG Ramsay
At the conclusion of this lecture, the participant will be able to:
1. Describe the role of echocardiography in the evaluation of chest pain and hemodynamic instability in the ER, ICU or other trauma setting
2. Explain the role of echocardiography in the ICU for the evaluation of hypoxemia
3. Explain the role of echocardiography in the ICU for the evaluation of suspected endocarditis

11:30 am – 12:00 Potpourri Case Presentation – A Williams
At the conclusion of this lecture, the participant will be able to:
1. Recognize prosthetic valves pathology, aortic endovascular stents and ICU applications of echocardiography in selected unknown cases

Luncheon Session
Moderator: C Troianos

12:15 – 12:45 pm Certification and Recertification Update – JS Shanewise
At the conclusion of this lecture, the participant should be able to:
1. Recite the guidelines for training and certification in perioperative TEE including prerequisite medical knowledge and training, echocardiographic knowledge and skills, training components and duration, training environment and supervision, and equivalence requirements for post graduate physicians already in practice
2. Identify the process for obtaining certification including case-log, training documentation and lab requirements

12:45 – 1:15 pm Billing for Intraoperative TEE – CA Troianos
At the conclusion of this lecture, the participant should be able to:
1. Recite the principles involved in the establishment, operation and quality maintenance of an intraoperative echocardiography service.
2. List the physical requirements for data storage and archival, report generation and billing and collection strategies.

**Echo and Ultrasound Potpourri – Part II**
*Moderator: KE Glas*

*1:30 – 2:00 pm Aortic Atheromatous Disease and Its Implications – JG Ramsay*
At the conclusion of this lecture, the participant will be able to:
1. Describe the causes and risks of aortic atheromatous disease
2. Utilize the techniques needed to assess and grade aortic atheromatous with echocardiography
3. Correlate aortic atheromatous disease with the risk of an adverse neurocognitive outcome

*2:00 – 2:30 pm Epicardial and Epiaortic Ultrasound – KE Glas*
At the conclusion of this lecture, the participant will be able to:
1. Recite the indications for epiaortic and epicardial imaging; describe the relevant imaging planes
2. Describe the available windows for Doppler interrogation during epicardial imaging
3. Illustrate how epiaortic and epicardial echocardiography are utilized to guide cardiovascular surgical decision making

*2:30 – 3:00 pm Basic Congenital Heart Disease – K Rouine-Rapp*
At the conclusion of this lecture, the participant will be able to:
1. Describe the common congenital heart conditions
2. Recognize echocardiographic images of common congenital heart conditions
3. Recite appropriate TEE views to diagnose common congenital heart conditions
4. Name the pitfalls in differentiating congenital heart lesions from normal variants

*3:00 – 3:30 pm Aorta and Basic Congenital Cases - C Hill*
At the conclusion of this lecture, the participant should be able to:
1. Recognize aortic atheromatous pathology, epicardial and epiaortic imaging planes and basic congenital heart disease in selected unknown cases

**Putting It All Together: Basic Course Review**
*Moderators: KP Grichnik/CA Trojanos*

*4:00 – 5:00 pm Basic Course Review - KP Grichnik, CA Trojanos*
At the conclusion of this lecture, the participant should be able to:
1. Describe the role of echocardiography in evaluating basic pathology
2. Demonstrate the techniques needed to assess for ventricular and valvular dysfunction
3. Review how to perform, analyze and report an echocardiography examination

**New, Old & Emerging Technology in the OR**
*Moderators: KP Grichnik/CA Trojanos*

*5:00 – 5:20 pm Neurological Monitoring – CA Trojanos*
At the conclusion of this lecture, the participant should be able to:
1. Identify and assess the various types of neurological monitoring commonly used in cardiac surgery
5:20 – 5:40 pm  Why MUFF?  – K Routine-Rapp
At the conclusion of this lecture, the participant should be able to:
1. Describe the technique of MUFF and the rationale for its use

5:40 – 6:00 pm  3D in the OR – M Swaminathan
At the conclusion of this lecture, the participant should be able to:
1. Recognize intracardiac anatomy and pathology using 3D imaging to guide surgical decision-making

THURSDAY, February 11, 2009

Advanced Echocardiography I

7:45 – 8:00 am  Advanced Echo Cases That You Should be Able to Handle – KP Grichnik, CA Trojanos
At the conclusion of this lecture, the participant should be able to:
1. Recognize the general scope of advanced cases they should be able to understand and diagnose.
   Cases will be presented along with representative videos and sample questions.

Advanced Echocardiography II

Aortic Valve – Advanced
Moderator: BA Bollen

8:00 – 8:30 am  Timing of Surgery/Intervention in Asymptomatic Aortic Valve Disease – T Ryan
At the conclusion of this lecture, the participant should be able to:
1. Describe the outpatient evaluation and assessment of aortic valve disease
2. Identify when intervention is necessary in patients with asymptomatic aortic valve disease
3. Evaluate the appropriate time for surgical intervention

8:30 – 9:00 am  Patient Prosthetic Mismatch/Pressure Recovery after AV Replacement – AT Cheung
At the conclusion of this lecture, the participant should be able to:
1. Review the causes for patient and valvular prosthetic mismatch
2. Describe the phenomenon and significance of pressure recovery
3. Review the treatment options and decision process for patients with small aortic root dimensions

9:00 – 9:30 am  Reconstruction of the Aortic Root – M Maxwell
At the conclusion of this lecture, the participant should be able to:
1. Recite the pathological anatomy leading to the need for aortic root reconstruction
2. Review the surgical options and procedures for aortic root reconstruction
3. Describe the intraoperative challenges of aortic root reconstruction

Advanced Mitral Valve
Moderator: BA Bollen

10:00 – 10:30 am  Non-Ischemic Mitral Regurgitation – SN Konstadt
At the conclusion of this lecture, the participant should be able to:
1. Explain the MV anatomy and function associated with non-ischemic mitral regurgitation
2. Describe the pharmacologic maneuvers to manipulate mitral regurgitation severity
3. Recite the decision-making for surgical correction of non-ischemic mitral regurgitation

10:30 – 11:00 am  Ischemic Mitral Regurgitation – RM Savage
At the conclusion of this lecture, the participant should be able to:
1. Describe the etiology of ischemic mitral regurgitation
2. Explain mitral valve anatomical and functional changes associated with chronic myocardial ischemia
3. Depict the long-term strategy for the surgical management of ischemic mitral regurgitation

11:00 – 11:30 pm  Surgical Repair of the Mitral Valve – B Mackensen
At the conclusion of this lecture, the participant should be able to:
1. Review the mitral valve anatomy from the surgeon’s perspective
2. Correlate the surgical inspection with the intraoperative echo examination
3. Discuss the causes for unsuccessful mitral valve repair

11:30 – 12:00 pm  What kind of ring is it? – Feroze Mahmood
At the conclusion of this lecture, the participant should be able to:
1. Review various types of mitral valve rings
2. Describe the normal and abnormal functioning of various mitral valve rings

**Luncheon Series**
*Moderator: C Troianos*

12:15 – 1:15 pm  Second Annual Arthur E. Weyman, MD Lecture – T Ryan

**3-D Echocardiography**
*Moderator: SK Shernan/KP Grichnik*

1:30 – 2:00 pm  How to do 3D and 4D Echo – B Mackensen
At the conclusion of this lecture, the participant should be able to:
1. Describe the steps necessary to use a 3D echocardiography machine and probe
2. Recall the steps necessary to manipulate a 3D image to obtain useful information
3. Recite how to perform a live 3D (4D) echo

2:00 – 2:30 pm  What to do with 3D and 4D Echo – D Shook
At the conclusion of this lecture, the participant should be able to:
1. Apply 3D echocardiography to the evaluation of mitral and aortic valve pathology
2. Utilize 3D echocardiography to the evaluation of LV function
3. Describe how to use 3D echocardiography for endocarditis evaluation

2:30 – 3:00 pm  Cases: 3D and 4D Echo – SK Shernan
At the conclusion of this lecture, the participant should be able to:
1. Utilize knowledge of 3D and 4D echocardiography to evaluate and diagnose pathology in clinical case examples

**Echocardiography for Surgery Outside the Heart**
*Moderator: SN Konstadt*

3:30 – 4:00 pm  Tamponade and Pericardial Disease – SN Konstadt
At the conclusion of this lecture, the participant should be able to:
1. Identify the subcategories of pericardial disease
2. Use echocardiography to analyze LV function in patients with pericardial disease
3. Recognize pericardial tamponade

4:00 – 4:30 pm  Echo 911 - Rescue Echocardiography for cases gone bad – A Maslow
At the conclusion of this lecture, the participant should be able to:
1. Diagnose causes for hypotension and hypoxia using echocardiography
2. Evaluate cardiac or vascular causes for neurological events using echocardiography

4:30 - 5:00 pm  “Outside of the Heart” Cases – SN Konstadt, A Maslow
At the conclusion of this lecture, the participant should be able to:
1. Utilize knowledge of pericardial disease, causes for hypoxemia, causes for hypotension and causes for neurological events to evaluate and diagnose pathology in clinical case examples

Advanced Hemodynamic Interactive Session
Moderator: CG Koch

7:00 – 7:45 pm  Review of Advanced Hemodynamic Principles and Quantitative Doppler – CG Koch
At the conclusion of this lecture, the participant should be able to:
1. Describe the physics and formulae used in quantitative Doppler echocardiography
2. Describe the limitations of quantitative Doppler echocardiography

7:45 – 9:00 pm  Advanced Hemodynamic Case Discussions – AT Cheung, A Maslow
At the conclusion of this lecture, the participant should be able to:
1. Apply quantitative Doppler echocardiography and knowledge of hemodynamic principles to clinical care
2. Obtain estimates of intracardiac velocity, flow, chamber pressures and valve areas using a case discussion format
3. Complete calculations of valvular dysfunction obtained by quantitative Doppler echocardiographic techniques in clinical case examples

FRIDAY, February 12, 2009

Advanced Echocardiography III
Ventricular Function
Moderator: M Swaminathan

8:00 – 8:30 am  Advanced Systolic Function – AT Cheung
At the conclusion of this lecture, the participant should be able to:
1. Apply echocardiography for assessment of left ventricular systolic function
2. Recognize the advantages and disadvantages of various techniques

8:30 – 9:00 am  Advanced Diastolic Function – M Swaminathan
At the conclusion of this lecture, the participant should be able to:
1. Differentiate left ventricular systolic function from diastolic function
2. Assess diastolic dysfunction with various echocardiographic techniques
3. Recognize the advantages and limitations of each technique
9:00 – 9:30 am Common Cardiomyopathies – A Maslow
At the conclusion of this lecture, the participant should be able to:
  1. Assess cardiac failure utilizing echocardiography
  2. List the common cardiomyopathies

9:30 – 10:00 am Assist Devices for Heart Failure and use of Echo for Placement - KP Grichnik
At the conclusion of this lecture, the participant should be able to:
  1. Describe the mechanical devices used to treat heart failure
  2. Assess the echocardiographic characteristics of mechanical assist devices

**Role of Echocardiography in Perioperative Clinical Decision-making: Part I**
**Moderator: RM Savage/CA Trojanos**

10:30 – 11:00 am Percutaneous Approaches to Valve Dysfunction – RM Savage
At the conclusion of this lecture, the participant should be able to:
  1. Verbalize the valve procedures performed in the cardiac catheterization lab
  2. Describe the role of echocardiography in the placement of a percutaneous valve
  3. Name the indications and contraindications for percutaneous procedures

11:00 – 11:30 am Role of TEE in Major Aortic Surgery and Reconstruction – AT Cheung
At the conclusion of this lecture, the participant should be able to:
  1. Describe the role of intraoperative echo during the surgical management of complex aortic root pathology
  2. List the aortic root surgical complications that can be detected with echocardiography
  3.

11:30 – 12:00 noon 3D Echo for Mitral Valve Surgery – SK Shernan
At the conclusion of this lecture, the participant should be able to:
  1. Utilize 3 D echocardiography to assess mitral valve anatomy and function prior to surgery
  2. Orient the surgical team to the 3D echocardiographic anatomy of the mitral valve
  3. Communicate 3D echocardiographic findings effectively to the surgical team
  4. Utilize 3 D echocardiography to assess anatomy and function after mitral valve surgery

**Luncheon Series**
**Moderator: SK Shernan**

12:15 – 12:45 pm Pediatric Cardiac Anesthesia: Pearls from a Pro - IA Russell
At the conclusion of this lecture, the participant should be able to:
  1. Recognize common pediatric congenital cardiac conditions
  2. Describe the unique anesthetic considerations in caring for pediatric patients with congenital heart disease.

**Role of Echocardiography in Perioperative Clinical Decision-making: Part II**
**Moderator: RM Savage/CA Trojanos**

1:00 – 1:30 pm How to Use Echocardiography to Help Wean from Bypass – CG Koch
At the conclusion of this lecture, the participant should be able to:
  1. Assess the anesthetic and hemodynamic considerations in successful weaning from CPB
  2. Recite the etiologies of myocardial dysfunction during separation from CPB
  3. Describe the use of intraoperative echo to guide the separation from CPB
1:30 – 2:00 pm  
**Echo for EP and Cardiac Cath Lab - RM Savage**  
At the conclusion of this lecture, the participant should be able to:  
1. List the uses for echocardiography in the electrophysiology laboratory  
2. List the uses for echocardiography in the cardiac catheterization laboratory  
3. Describe the role for echocardiography in assessing complications of electrophysiology and cardiac catheterization procedures.

2:00 – 2:30 pm  
**Pediatric and Adult Congenital Heart Disease – IA Russell**  
At the conclusion of this lecture, the participant should be able to:  
1. Recognize echocardiographic images of common uncorrected pediatric congenital heart conditions  
2. Recognize the echocardiographic images of repaired congenital heart disease in the adult  
3. Name the pitfalls in differentiating congenital heart lesions from normal variants  
4. List the conditions that lead to an adult with congenital heart disease to undergo reoperation

2:30 – 3:00 pm  
**Stump the Panel: Unusual Cases from the Faculty - CG Koch, AT Cheung, IA Russell**  
At the conclusion of this lecture, the participant should be able to:  
1. Evaluate and diagnose pathology in clinical echocardiography examples of weaning from cardiopulmonary bypass, aortic disease, pediatric and adult congenital heart disease

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**“Test Yourself”**  
**Moderator: F Mahmood**

3:30 – 5:00 pm  
**“Test Yourself” Mock Test - A Lerner, F Mahmood, P Panzica**

7:00 – 9:00 pm  
**Mock Exam Review - A Lerner, F Mahmood, P Panzica**  
At the conclusion of this session, the participant should be able to:  
1. Take a test and be successfully graded on a broad range of echocardiographic knowledge in a simulated testing environment  
2. Determine individual areas of relative strength and weakness in preparation for the standardized echocardiography competency examinations  
3. Compare individual testing knowledge relative to the aggregate results of the other participants taking the mock examination

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**SATURDAY, February 13, 2009**

**Putting It All Together Advanced Course Review**  
**Moderators: KP Grichnik/CA Trojanos**

7:30 – 8:00 am  
**Cases you can do now! Advanced Clinical Case – CA Trojanos, KP Grichnik**  
At the conclusion of this lecture, the participant should be able to:  
1. Use echocardiography for perioperative decision-making through the use of interactive case discussions  
2. Review and assess unusual cases using echocardiography  
3. Verbalize how to apply perioperative ultrasound to the clinical care of patients with cardiovascular disease

8:00 – 10:00 am  
**You’re the Intraoperative Echocardiography Consultant for this Advanced Case - A Lerner, F Mahmood, P Panzica**  
At the conclusion of this lecture, the participant should be able to:
1. Assess common and uncommon echocardiographic findings to guide clinical care
2. Assess, echocardiographically, the results of surgical interventions in cardiac disease
3. Effectively communicate echocardiographic findings to colleagues as a consultant