

32nd Annual Meeting & Workshops

Learning Objectives

SATURDAY, APRIL 24, 2010

8:00 – 10:30 AM Refresher Course Lectures

Moderators: David Zvara, MD; Colleen G. Koch, MD

At the conclusion of this session, the participant will be able to:

1. Apply broad principles of anesthesiology to a variety of diverse practice areas to include: fluid therapy, heart failure, transfusion medicine, antifibrinolytic therapy, and outcomes research.
2. Prepare management strategies for patients with cardiovascular disease presenting for cardiac and vascular surgery.
3. Gain a clear understanding of where future therapeutic modalities may develop and intersect with practical clinical care.

Are we drowning our patients? Crystalloid versus colloid versus too much fluid!

Anthony Passannante, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand the advantages and disadvantages of both crystalloid-based and colloid-based fluid therapy
2. Be aware of the developing literature linking excess fluid administration to adverse postoperative outcomes
3. Be able to plan evidence-based fluid management strategies for patients having major surgery

Stem Cell Therapy, Anesthesiology and the New Age Clinician

Marie Csete, MD

Transfusion and TRALI: Is there a lesser evil?

Colleen G. Koch, MD

At the conclusion of the lecture, the participant will be able to:

1. Better understand the clinical presentation, proposed mechanisms and patient outcomes related to transfusion-related acute lung injury.
2. Recognize problems associated with application of current TRALI consensus criteria in the setting of cardiothoracic surgery.

New Horizons in Pharmacologic Based Blood Conservation Therapy: What does the future hold?

Edwin Avery, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand basic premise behind the development of new blood conservation drugs for surgical patients at risk for excessive hemorrhage

2. Recognize the new blood conservation drugs in development and be introduced to the data that supports their continued study
3. Understand how these drugs contrast to the approved drugs that we presently have clinically available

11:00 AM – 12:00 PM Poster Discussion I

Moderators: *Nikolaos J. Skubas, MD; Balachundar Subramanian, MD*

1:00 – 3:30 PM The Real, the Complex and the Possible

Moderators: *David Zvara, MD; Colleen G. Koch, MD*

Perioperative Genomics: Why Similar Patients have Different Outcomes
Mark Newman, MD

New Insights: The latest data on perioperative outcome and Anesthesiology Practice
Lee Fleisher, MD

Complex Case Discussions with Expert Panel (fellows chosen through a blinded, competitive process)
Douglas Shook, MD, James Abernathy, MD, Steve Konstadt, MD, and panel

At the conclusion of the lecture, the participant will be able to:

1. Discover how complex cases are managed at different institutions
2. Gain knowledge and experience from their peers and a panel of experts about managing complex cases

8:00 – 11:00 AM Workshop 1: Electrophysiology – Pacing and Defibrillation workshop

Moderator: *Aman Mahajan, MD, PhD*

At the conclusion of this session, the participant will be able to:

1. Management of Pacemaker/ICDs in the perioperative period
 - a. Review the guidelines for management of pacemakers and AICDs
 - b. Proper preop Evaluation, effect of EMI, role of magnets and programming
2. Understand functioning of pacemakers
 - a. Understand basic programming features of implantable pacemakers
 - b. Learn to optimize pacemaker timings, intervals, blanking & refractory periods, thresholds
3. Understanding true and pseudo pacemaker/ICD failures in the perioperative/ ICU settings
 - a. True failures of device, leads and/or programming
 - b. Pseudo-failures from errors in programming or interpretation
 - c. Pacemaker algorithm/ programs that interfere with perioperative care
4. Hands-on session
 - a. Learn interrogation and programming pacemakers/ICDs

- b. Review the use of magnet in the perioperative period
- c. Learn the use of temporary pacing devices and programmers
- d. Learn to identify pacemaker/ICD type, lead configuration, malfunction using radiographs

My patient has an implantable cardiac device- what do I need to do? Guidelines for perioperative management

Marc Rozner, PhD, MD

At the conclusion of the lecture, the participant will be able to:

- 1. Understand the management of Pacemaker/ICDs in the perioperative period
 - a. Review the guidelines for management of pacemakers and AICDs
 - b. Review thorough preoperative evaluation, effect of EMI, role of magnets and programming in patients with intracardiac rhythm management devices

Pacemaker function and programming

Ryan Crowley, MD

At the conclusion of the lecture, the participant will be able to:

- 1. Understand functioning of pacemakers
 - a. Understand basic programming features of implantable pacemakers
 - b. Learn to optimize pacemaker timings, intervals, blanking & refractory periods, thresholds

Pacemaker Failures- What's real, what's not!

Scott Streckenbach, MD

At the conclusion of the lecture, the participant will be able to:

- 1. Understanding true and pseudo pacemaker/ICD failures in the perioperative/ ICU settings
 - a. True failures of device, leads and/or programming
 - b. Pseudo-failures from errors in programming or interpretation
 - c. Pacemaker algorithm/ programs that interfere with perioperative care

Hands-on sessions: Multiple stations

Aman Mahajan, MD, PhD; Marc Rozner, PhD, MD; Ryan Crowley, MD; Alex Hughes, MD; Jonathan Leff, MD; Scott Streckenbach, MD

At the conclusion of the lecture, the participant will be able to:

- 1. Learn interrogation and programming pacemakers/ICDs
- 2. Review the use of magnet in the perioperative period
- 3. Learn the use of temporary pacing devices and programmers
- 4. Learn to identify pacemaker/ICD type, lead configuration, malfunction using radiographs

1:00 – 4:00 PM Workshop 2: Essentials of CPB

Moderator: Madhav Swaminathan, MD

At the conclusion of this session, the participant will be able to:

- 1. Identify important considerations for hemodilution and hematocrit management on bypass
- 2. Delineate strategies for organ protection on bypass
- 3. Review the use of external pacing and echocardiography to assist with discontinuation of bypass
- 4. Describe a practical approach to management of perfusion disasters

Optimizing Hematocrit and Hemodilution on CPB

Joseph Mathew, MD

At the conclusion of the lecture, the participant will be able to:

1. Outline issues associated with anemia and CPB management
2. Delineate outcomes associated with extreme hemodilution on CPB
3. Define strategies to optimize hematocrit during cardiac surgery

Protecting the Kidneys

Brian Barrick, MD

At the conclusion of the lecture, the participant will be able to:

1. Identify pathophysiology of kidney injury on CPB
2. Delineate management strategies to protect kidneys from acute injury
3. Describe novel strategies for renal protection

Protecting the Brain

Wanda Popescu, MD

At the conclusion of the lecture, the participant will be able to:

1. Identify mechanisms for neurological injury on CPB
2. Outline management strategies to protect the brain from acute injury
3. Describe novel techniques for neuroprotection

Optimal Pacing Strategies for Coming off CPB

Aman Mahajan, MD

At the conclusion of the lecture, the participant will be able to:

1. Describe abnormal rhythm patterns encountered during weaning from CPB
2. Identify common pacing modalities used to manage dysrhythmias
3. Outline novel techniques using electrical pacing to assist with weaning from CPB

Inotrope Selection

Alina Nicoara, MD

At the conclusion of the lecture, the participant will be able to:

1. Review common problems encountered with using inotropes when weaning from CPB
2. Outline important considerations for inotrope selection
3. Identify novel drugs in development for optimizing cardiac function

Using TEE to Come off CPB

Thomas Burch, MD

At the conclusion of the lecture, the participant will be able to:

1. Define the need for echocardiographic imaging to wean from CPB
2. Review the imaging techniques used to assist with management of weaning from CPB
3. Describe quantification of cardiac function using TEE to wean from CPB

Managing Perfusion Disasters

Richard Walzack, MD

At the conclusion of the lecture, the participant will be able to:

1. Outline perfusionists concerns when weaning from CPB

2. Review common strategies to optimize perfusion during CPB
3. Describe management of perfusion disasters

1:00 – 4:00 PM Workshop 3: Handheld Ultrasound

Moderator: François Béique, MD

At the conclusion of this workshop the participant shall be able to:

1. Identify vascular structures.
2. Image peripheral nerves in both upper and lower extremities.
3. Distinguish nerves from other anatomic structures.
4. Recognize and assess cardiac structures.
5. Apply the handheld US skills to achieve successful nerve blockade and vascular cannulation.
6. Apply the hand held US skills to avoid complications during vascular cannulation and peripheral nerve blockade.
7. Learn basic skills and imaging planes with TTE

This session will include didactic lectures related to the use of US for vascular, regional and TTE. This will be followed by hands on demonstrations during which the participants will rotate between these three stations and have the opportunity to identify structures with ultrasound on live models. No blocks or vascular access will be performed during the session but the participants will be able to perform ultrasound guided needle advancement on a blue phantom model.

Ultrasound for Regional Anesthesia

Brian Spence, MD

At the conclusion of the lecture, the participant will be able to:

4. Image peripheral nerves in both upper and lower extremities
2. Distinguish nerves from other anatomic structures
3. Apply the handheld US skills to avoid complications during peripheral nerve blockade
4. Apply the handheld US skills to achieve successful nerve blockade

Ultrasound for Vascular Access

Alex Mittnacht, MD

At the conclusion of the lecture, the participant will be able to:

1. Identify vascular structures
2. Apply the handheld US skills to avoid complications during vascular cannulation
3. Apply the handheld US skills to achieve successful vascular cannulation

Ultrasound for TTE

Katherine Grichnik, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand limitations and advantages of transthoracic echocardiography
2. Recognize and assess cardiac structures
3. Learn basic skills and imaging planes with TTE

"Hands on " Session

TTE: Kathryn Glas, MD, Katherine Grichnik, MD

Vascular: Bergez Mistry, MD, François Béique, MD, Alex Mittnacht, MD

Regional: Michael Byas-Smith, MD, Brian Spence, MD, Garrett Kovarik, MD

1:00– 6:30 Fellow Program

Moderators: James Abernathy, MD; Douglas Shook, MD

At the conclusion of this session, the participant will be able to:

1. Reinforce the benefit of becoming and staying involved in the SCA throughout a career
2. Provide educational content that is of interest to fellows and junior staff
3. Provide educational content that is of interest to the membership at large (complex case poster presentations, complex case oral presentation with panel discussion)

Complex Case Poster Presentations (fellows chosen through a blinded, competitive process)

At the conclusion of the session the participants will:

1. Discover how complex cases are managed at different institutions
2. Gain knowledge and experience from their peers about managing complex cases

Getting involved in the SCA

Quinton Gurley, MD

At the conclusion of the session the participants will:

1. Appreciate how SCA works to improve the discipline of cardiovascular anesthesiology.
2. Understand how to become more involved in the SCA.

Do I really need a PA catheter? - Medical Decision Making

Avery Tung, MD

At the conclusion of the session participants will:

1. Appreciate the complex decision making necessary in cardiac anesthesiology.
2. Understand better how to incorporate complex decision making into clinical practice.
3. Incorporate knowledge about the PA catheter into medical decision-making.

The First Five Years: Pathways to success

Joel Kaplan, MD and Panel

At the conclusion of the session participants will:

1. Better understand the various pathways to becoming a leader and educator in our profession
2. Gain the perspective and wisdom of accomplished anesthesiologists on how to succeed in the first several years after fellowship.

SUNDAY, APRIL 25, 2010

6:45 – 8:00 AM Problem Based Learning Discussions 1 – 7

PBLD 1: Collagen Vascular Disease (CVD) and Heart Surgery

C. David Collard, MD; Mark Taylor, MD

Learning Objectives:

1. Discuss the impact of CVD on surgical outcomes
2. Discuss the clinical variances of CVD

PBLD 2: Preparing and Managing DHCA

Marc Kanchuger, MD; Michael Andritsos, MD

Learning Objectives:

1. Discuss anesthetic considerations of DHCA
5. Discuss management of patients for DHCA

PBLD 3: Management Concerns in Minimally Invasive Surgery

Davy Cheng, MD; Roman Sniecinski, MD

Learning Objectives:

1. Discuss invasive monitoring and airway management issues for minimally invasive surgery
2. Discuss positioning and cardiac monitoring when you can't see the heart

PBLD 4: Temperature Management and Cardiac Surgery- What to do/does it matter

Nikolaos Skubas, MD; Manny Fontes, MD

Learning Objectives:

1. Discuss accuracy of various temperature monitoring sites
2. Discuss literature related to temperature management and outcomes

PBLD 5: Can we impact incidence of postoperative Afib from the OR?

Jamie Ramsay, MD; Allen Gustin, MD

Learning Objectives:

1. Discuss operative techniques that may decrease risk of Afib
2. Review literature recommendations for management of Afib

PBLD 6: Lung Isolation - When a double lumen isn't an option

Christopher O'Connor, MD; Jason Falterman, MD

Learning Objectives:

1. Review options for lung isolation
2. Review indications for various options

PBLD 7: Cerebral Protection and Heart Surgery

Hilary Grocott, MD ; Tamas Szabo, MD

Learning Objectives:

1. Review literature related to neuro outcomes after heart surgery
2. Discuss benefits of various options for cerebral protection

8:00 – 10:15 AM FOCUS Update

Moderator: Bruce Spiess, MD

At the conclusion of this session, the participant will have gained the most current information on:

1. Data gathered from the first 5 sites visited during the FOCUS project.
2. Data from a major database in Great Britain FOCUSSED upon human errors in cardiovascular care.
3. Impact the FOCUS program will have upon the larger problem of errors in medicine.
4. Plans for future studies, grants being developed and how they can participate in self assessments, education events etc.

The Need for a Focused Approach – Joyce A. Wahr, MD

An In-depth Analysis of FOCUS Data – Elizabeth A. Martinez, MD, MHS

Organizational and Clinical Outcomes: Are they related? – Juan A. Sanchez, MD, MPA

The Human Factors of FOCUS – Scott Shappell, PhD

Future Work Groups/Q&A – Bruce D. Spiess, MD

11:00 AM – 12:00 Noon Session A: Hot Topics in Review

Moderator: Mohammed Minhaj, MD

At the conclusion of this session, the participant will be able to:

1. Understand and discuss the recent literature regarding the topics of vascular anesthesia and perioperative beta-blockade.
2. Understand how this literature impacts practice paradigms in our patient populations.

2009 in Review: Selected Highlights in Vascular Anesthesiology

John Augoustides, MD

At the conclusion of the lecture, the participant will be able to discuss the most recent literature in vascular anesthesiology and how these advances will apply to patient care.

From the SF VA to Poise: A critical review of the beta-blockade literature

Art Wallace, MD

At the conclusion of the lecture, the participant will be able to:

1. Discuss the historical evidence in the literature for the role of perioperative beta-blockade in the reduction of cardiac complications.
2. Understand the recommendations in the literature as to which specific patient populations might most benefit from perioperative beta-blockade.

11:00 AM – 12:00 Noon Session B: Coagulation Management

Moderator: Ferenc Puskas, MD

Overall goal of this session is to provide participants with an enhanced knowledge of hemostatic challenges that can occur before, during and after cardiopulmonary bypass.

At the conclusion of the session, the participant will be able to:

1. Familiar with alternative anti-coagulation techniques for cardiopulmonary bypass
2. Understand and correct the physiology of heparin resistance
3. Manage and evaluate coagulopathic bleeding encountered during cardiac surgery

Patient with HIT

Glenn Gravlee, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand the diagnosis of HIT
2. Be familiar with alternative anti-coagulation techniques for cardiopulmonary bypass in a patient with Heparin Induced Thrombocytopenia (HIT)
3. Discuss risk and benefits of direct thrombin inhibitors

Refractory Bleeding

Adam Lerner, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand the pathophysiology of refractory bleeding during cardiac surgery
2. Discuss laboratory diagnosis and blood product management during refractory bleeding
3. Understand the role, use and timing of factor VII. administration during cardiac surgery

Heparin Resistance

Jerry Levy, MD

At the conclusion of the lecture, the participant will be able to:

1. Diagnose heparin resistance before cardiopulmonary bypass
2. Correct heparin responsiveness
3. Discuss the role of Antithrombin III as a therapeutic approach for heparin resistance

11:00 AM – 12:00 Noon Session C: Poster Discussion II

Moderators: Robina Matyal, MD; Joseph Mathew, MD

1:30 – 3:30 PM Session A: Organ Protection in Cardiac Surgery: Translating science to practice

Moderator: Andrew Shaw, MD

Overall objective: Discuss current approaches to preservation of organ function in cardiothoracic surgical patients

Preventing Acute Kidney Injury after Cardiac Surgery

Robert Sladen, MD

At the conclusion of the lecture, the participant will be able to review current strategies for preservation of renal function during and after CPB.

Cognitive Dysfunction after CPB

John Murkin, MD

At the conclusion of the lecture, the participant will be able to review recent advances in neurological protection during CPB and DHCA.

Reperfusion Injury and Myocardial Protection

Jacob Raphael, MD

At the conclusion of the lecture, the participant will be able to discuss metabolomic approaches to myocardial protection during aortic cross clamping.

Lungs in a Box – clinical use of ex vivo donor lung perfusion to recondition transplant organs

Duane Davis, MD

At the conclusion of the lecture, the participant will be able to discuss the use of ex vivo graft perfusion to improve donor lung function.

1:30 – 3:30 PM Session B: Thoracic Anesthesiology

Moderator: Lebron Cooper, MD

Following the session, the participant will:

1. Understand the old and new techniques of lung isolation
2. Discuss the advantages and disadvantages of double lumen tubes and bronchial blockers
3. Describe the advantages and disadvantages of fiberoptic bronchoscopy with each lung isolation technique
4. Understand the newest data on the microcirculation of the lung, in both hyperoxic and hypoxic environments
5. Understand the evidence supporting minimally invasive versus open esophagectomy and the implications for anesthesia management in the post-esophagectomy patient
6. Understand new strategies for ventilator management in the OR and ICU, the latest in lung protection, and the outcomes of nitric oxide and the management of pulmonary hypertension

Update on One-lung Ventilation: How to effectively achieve OLV

Javier Campos, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand the old and new techniques of lung isolation
2. Discuss the advantages and disadvantages of double lumen tubes and bronchial blockers
3. Describe the advantages and disadvantages of fiberoptic bronchoscopy with each lung isolation technique

Pulmonary Microcirculation, HPV and OLV

Edmond Cohen, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand the newest data on the microcirculation of the lung, in both hyperoxic and hypoxic environments
2. Discuss the existence of hypoxic pulmonary vasoconstriction

Anesthesia for Airway Surgery

Peter Slinger, MD

At the conclusion of the lecture, the participant will be able to:

1. Know the different and emerging anesthesia techniques for surgery of the tracheal and bronchial tree
2. Describe the options for lung isolation in the patient with a difficult airway
3. Describe endobronchial stenting

Esophagectomy - What is new?

Katherine Grichnik, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand the evidence supporting minimally invasive versus open esophagectomy and the implications for anesthesia management in the post-esophagectomy patient
2. Describe the benefits and risks of thoracic epidurals in esophagectomy

New Strategies for Ventilator Management After Thoracic Surgery

Ricardo Martinez-Ruiz, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand new strategies for ventilator management in the OR and ICU
2. Discuss the latest in lung protection strategies
3. Discuss the management and outcomes of nitric oxide in pulmonary hypertension

1:30 – 3:30 PM Perioperative Heart Failure

Moderator: Edwin Avery, MD

Clinically Relevant Anatomy and Pathophysiology of the Right Ventricle

Gus Vlahakes, MD

At the conclusion of the lecture, the participant will be able to:

1. Be familiar with right heart anatomy
2. Understand the pathophysiologic mechanisms at work during right heart failure
6. Recognize the clinical signs of right heart failure

Perioperative Insults to the Right Heart and How to Counterstrike After They Hit

Claude Tousignant, MD

At the conclusion of the lecture, the participant will be able to:

1. Recognize the usual suspects that account for right heart failure in the perioperative period
2. Understand the pharmacological therapies available to treat right heart failure
3. Understand the mechanical therapies available to treat right heart failure

Stem Cell Therapy for the Failing Heart

Marie Csete, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand the spectrum of potential therapeutic stem cell based therapies for the failing left ventricle
2. Be familiar with the human clinical trials of stem cell based therapies for the failing heart
3. Consider what new stem cell based therapies may be on the horizon for patients with congestive heart failure

An Anesthesiologist's Perspective on Surgical Treatments of Heart Failure

Marc E. Stone, MD

At the conclusion of the lecture, the participant will be able to:

1. Relate the current status of various surgical management strategies for heart failure
2. Understand why mechanical circulatory support remains a highly successful management strategy for heart failure in appropriate candidates
3. Discuss the rationale for the switch from pulsatile to non-pulsatile mechanical circulatory support devices

4:30 – 5:45 PM Session A: Vascular Anesthesiology: Catheter-based treatments for the thoracic aorta

Moderator: Stephane Lambert, MD; Roman Sniecinski, MD

Attendees will be presented with new procedures for treating diseases of the thoracic aorta and aortic valve. Specifically, aortic arch stents and percutaneous aortic valve placement will be discussed. Participants will become familiar with the indications, intraoperative management, and complications of each treatment. The necessary imaging modalities will be highlighted and examples of case types presented.

Aortic Arch Stents: Is there a limit to what we can do?

Francois Dagenais, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand the applications of endovascular aortic stents
2. Learn the indications, contraindications, and complications of their insertion
3. Become familiar with various types of stents and the imaging techniques for placing them
4. Become familiar with debranching and other vascular bypass procedures

Percutaneous Valve Replacement: Is this for everyone (eventually)?

William Whitley, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand the indications and selection process for percutaneous aortic valves
2. Understand the surgical approach to percutaneous aortic valve placement
3. Learn the anesthetic challenges associated with each stage of the procedure
4. Become familiar with the intraoperative assessment of the valve using TEE

4:30 – 5:45 PM Session B: Pharmacology to Think About

Moderator: David Royston, MD

Statins in our practice

Bernhard Riedel, MD

At the conclusion of the lecture, the participant will be able to:

1. Describe how HMG-CoA reductase inhibitors reduce cardiovascular disease separate from any effects on cholesterol metabolism
2. Discuss the recent data from human studies showing an outcome advantage associated with preoperative administration of these agents.
3. Discuss the rationale and logistics of initiating statin therapy prior to planned major cardiovascular surgery.

Antioxidants in Anesthesiologist's Hands

Ian Welsby, MD

At the conclusion of the lecture, the participant will be able to:

1. Describe the activation and inhibitor pathways thought to be pivotal in the process of 'oxidant stress' and reperfusion injury
2. Describe the interventions available for use in humans for reducing 'oxidant stress' and reperfusion injury.
3. Discuss the data supporting or refuting the benefits of these interventions in current clinical practice.

What's new in haemotomics?

Aryeh Shander, MD

At the conclusion of the lecture, the participant will be able to:

1. Describe the role of 'intravenous iron' in the management of preoperative anemia
2. Describe the role of erythropoietin and its new analogues in pre and post operative anemia management
3. Discuss the time course and cost-benefit of these agents in anemia management

4:30 – 5:45 PM Session C: Poster Discussion III

Moderators: Michael P. Eaton, MD; Feroze Mahmood, MD

5:30 – 6:30 PM Fireside Chat: Open Forum on ASA Practice Parameters: Central venous access

Moderator: David Zvara, MD

Open Forum on ASA Practice Parameters: Central venous access

Lee Fleisher, MD; Jonathan Mark, MD

At the conclusion of the session, the participant will be able to:

1. The participant will review recommendations (from the ASA task force on Central Venous Access) to prevent blood stream infections.
2. The participant will learn the task force's recommendations regarding prevention and management of vascular injury during central venous access placement.
3. The participant will learn the evidence to support use of ultrasound guidance in placement of central venous lines.
4. The participant will learn the task force's recommendations regarding practical support to anesthesiologists in achieving the highest level of safety in placement of central lines.

MONDAY, APRIL 26 2010

6:45 – 8:00 AM Problem Based Learning Discussions 8 – 14

PBLD 8: Endovascular Challenges

Maged Y. Argalious, MD; Antonio Hernandez, MD

Learning Objectives:

1. Discuss options for managing complex vascular stent procedures
2. Discuss monitoring needs for these cases

PBLD 9: New Strategies for Renal Protection

Mark Stafford-Smith, MD; Feroze Mahmood, MD

Learning Objectives:

1. Review literature related to renal function and heart surgery
2. Discuss operative management options to decrease risk of AKI

PBLD 10: Ventricular Assist Device and Non-cardiac Surgery

Richard Wolman, MD; Maya Jalbout MD

Learning Objectives:

1. Discuss anesthetic implications of the patient with a VAD
2. Review types of VAD's and specific management issues of each

PBLD 11: Perioperative Glucose Control: Is this hip or hype?

John Butterworth, MD; Joseph Miller, MD

Learning Objectives:

1. Review the literature related to glucose control in surgical patients
2. Discuss risks and benefits of tight glucose control during surgery

PBLD 12: Hybrid OR- Percutaneous valves and more

John Augoustides, MD; William Whitley, MD

Learning Objectives:

1. Discuss logistics of cases in a hybrid OR, or off-site cath lab
2. Discuss anesthetic considerations of percutaneous procedures

PBLD 13: Diagnosing and Managing Ischemic MR

Solomon Aronson, MD; Alina Nicoara, MD

Learning Objectives:

1. Review the diagnostic criteria for ischemic MR
2. Discuss management considerations for patients with ischemic MR

PBLD 14: Beta Blocker Guidelines

Marin London, MD; Faisal Masud, MD

Learning Objectives:

1. Review the literature related to perioperative beta blocker therapy
2. Discuss patient criteria
3. Discuss SCIP guidelines related to beta blockers

8:00 – 10:15 AM Monograph: The Metabolic Response to Anesthesia and Surgery: It isn't just about stress

Moderator: John Butterworth, MD; Shamsuddin Akhtar, MD

At the conclusion of this session, the participant will be able to:

1. Review the patho-physiology and modulators of metabolic response to surgical stress.
2. Discuss the genomic changes in the cardiac metabolome in response to cardiopulmonary bypass and cardio-thoracic surgery.
3. Discuss the endocrine response of heart to acute and chronic physiological stress, and the role of natriuretic peptides in risk assessment, diagnosis and treatment of cardiovascular disorders.
4. Discuss various interventions that may modulate the perioperative metabolic response and improve outcomes.

The Neuro-endocrine Stress Response: The good, the bad and the ugly

Gary Zaloga, MD

At the conclusion of the lecture, the participant will know the current understanding of the patho-physiology and modulators of metabolic response to surgical stress.

Insulin Resistance and Metabolic Response to Cardiothoracic Surgery: A systems approach

Mihai Podgorneau, MD

At the conclusion of the lecture, the participant will know the genomic changes that occur in the cardiac metabolome due to cardiopulmonary bypass and cardio-thoracic surgery.

Heart as an endocrine organ: clinical significance of natriuretic peptides

Shamsuddin Akhtar, MD

At the conclusion of the lecture, the participant will appreciate:

1. The endocrine response of heart to acute and chronic physiological stress.
2. The role of natriuretic peptides in risk assessment, diagnosis and treatment of cardio-vascular disorders.

Modulating the stress response: is it of academic interest only?

Davy Cheng, MD

At the conclusion of the lecture, the participant will appreciate the controversies associated with various therapeutic interventions, that can modulate the perioperative response and affect outcomes.

8:00 – 10:15 AM Workshop 4: Intermediate TEE

Moderator: Amanda Fox, MD; Kathryn Glas, MD

This workshop will offer case-based TEE presentations in order to teach intermediate level concepts related to echocardiography and perioperative decision making. The workshop will involve case-based lectures by a panel of echocardiography experts. Lectures will be followed by case-based echo “quiz” questions for which the panel of workshop presenters will show a series of echocardiography loops with accompanying questions and will go over related answers.

At the conclusion of this workshop, the participant will be able to:

1. Review echocardiographic characteristics of and techniques for interrogating prosthetic valves.
2. Learn approaches and findings encountered when TEE is needed for intraoperative emergencies outside of the cardiac operating room.
3. Learn how to assess for acute myocardial infarction and its complications.
4. Review principles for assessing the right ventricle and the tricuspid valve to determine when pharmacologic or surgical intervention is needed.

What’s wrong with this prosthetic valve?

Scott Streckenbach, MD

At the conclusion of the lecture, the participant will be able to use TEE to review echocardiographic characteristics of and techniques for interrogating prosthetic valves.

This non-cardiac surgical patient is crashing: Can echo help?

Annette Mizuguchi, MD

At the conclusion of the lecture the participant will be able to use TEE to approach intraoperative emergencies outside of the cardiac operating room systematically to identify key common findings.

Complications of Myocardial Infarction

Annette Vegas, MD

At the conclusion of the lecture the participant will be able to use TEE to assess for acute myocardial infarction and its complications.

Evaluating Right Heart Function: From diagnosis to intervention

Susie Martenelli, MD

At the conclusion of the lecture, the participant will be able to use TEE to assess the right ventricle and the tricuspid valve to determine when pharmacologic or surgical intervention is needed.

11:00 AM – 12:00 Noon Keynote Speaker

Moderator: Steve Konstadt, MD

Topic TBD: Michael Roizen, MD

1:30 – 3:30 Session A: Current Perspectives in Aortic Surgery

Moderator: Madhav Swaminathan, MD

At the conclusion of this activity, participants should be able to:

1. Define key elements of perioperative management of the patient undergoing complex aortic surgery.
2. Delineate appropriate surgical approaches to thoracic aortic pathology.
3. Identify strategies for organ function preservation during cardiopulmonary bypass in patients undergoing thoracic aortic surgery

Preoperative Risk Assessment

Kent Rehfeldt, MD

At the conclusion of the lecture, the participant will be able to:

1. Delineate essential components of assessment of surgical risk in aortic surgery
2. Define risk factors for adverse outcome in aortic surgery
3. Enumerate steps to reduce risk in this surgical population

Surgical options: What is the right surgical approach for this patient?

G. Chad Hughes, MD

At the conclusion of the lecture, the participant will be able to:

1. Identify current surgical options for management of complex aortic disease
2. Describe appropriate surgical options for the presented case
3. Examine pros and cons of available surgical approaches

Imaging the thoracic aorta: What measurements are important?

Paul Kazanjian, MD

At the conclusion of the lecture, the participant will be able to:

1. Define appropriate imaging modalities for aortic diseases
2. Describe intraoperative echocardiographic techniques for aortic surgery
3. Identify aortic measurements made by TEE that are surgically relevant

Organ Preservation: How do I protect the brain?

David J. Cook, MD

At the conclusion of the lecture, the participant will be able to:

1. Describe the risks of postoperative adverse neurological outcome after aortic surgery
2. Identify etiologies for postoperative neurological complications after aortic surgery
3. Examine current strategies for perioperative neuroprotection

Organ Preservation: How do I protect the kidneys?

Mark Stafford-Smith, MD

At the conclusion of the lecture, the participant will be able to:

1. Describe the risks of postoperative adverse renal outcome after aortic surgery
2. Identify etiologies for postoperative acute kidney injury after aortic surgery
3. Examine current strategies for perioperative renal protection and salvage

Surgical Perspective: What do I do during a hybrid repair?

G. Chad Hughes, MD

At the conclusion of the lecture, the participant will be able to:

1. Define current surgical approach for hybrid aortic surgery
2. Describe the surgical technique for hybrid aortic surgery
3. Examine perioperative management issues important to the surgical and anesthesia teams

Challenges in Hemostasis: How should I optimize coagulation?

Roman Sniecinski, MD

At the conclusion of the lecture, the participant will be able to:

1. Describe mechanisms of perioperative coagulopathy in aortic surgery
2. Define strategies for perioperative assessment of coagulation status
3. Delineate methods to optimize hemostasis in aortic surgery

1:30 – 3:30 Session B: Cardiac Physiology

Moderator: Albert T. Cheung, MD

At the conclusion of this session, the participant will be able to:

1. Learn what the engineers have discovered about the structural and functional relationships of the mitral valve and how this information is being applied to improve mitral valve repair.
2. Learn approaches to quantifying mitral valve structure and function that have been made possible by recent developments in 3D echocardiography.
3. Learn the advances that have been made in the quantification of left ventricular function using 3-dimensional echocardiography.

Structure and Function of the Mitral Valve from an Engineering Perspective.

Joseph Gorman MD, PhD

At the conclusion of the lecture, the participant will be able to:

1. Know what aspects of the three dimensional structure of the mitral contribute to its functional efficiency.
2. Know what aspects of the three dimensional structure of the mitral contribute to its long-term durability.

What does 3D add to mitral valve analysis and perioperative care?

Feroze Mahmood, MD

At the conclusion of the lecture, the participant will be able to:

1. Know how to quantify the most important parameters that characterize the 3-dimensional shape of the mitral valve.
2. Know what computer software is available to quantify the 3-dimensional shape of the mitral valve.
3. Understand the importance of preserving the 3-dimensional shape of the mitral valve during mitral valve repair.

Quantifying Left Ventricular Structure and Function using 3-D Echocardiography.

Ivan Salgo, MD, MS

At the conclusion of the lecture, the participant will be able to:

1. Understand how 3-dimensional TEE can quantify the 3-dimensional shape of the left ventricular cavity.
2. Know the advantages and limitations of 3-D echocardiography for the assessment of left ventricular size and function.

1:30 – 3:30 Session C: Poster Discussion IV

Moderators: Hong Liu, MD; G. Burkhard Mackensen, MD

4:15 – 5:30 PM Session A: Minimally Invasive Surgery

Moderator: Katja Turner, MD

Anesthetic Consideration of Prolonged One-lung Ventilation

Stuart Weiss, MD

At the conclusion of the lecture, the participant will be able to:

1. Review of history and demographics of robotic chest surgery
2. Monitoring the patient undergoing robotic surgery
3. One-lung ventilation in robotic surgery
4. Physiological changes during robotic surgery
5. Crisis management in the perioperative period

Robotic Heart Surgery

Randolph Chitwood, MD

At the conclusion of the lecture, the participant will be able to:

1. Review of history and demographics of robotic heart surgery
2. Procedures performed using the robotic systems (US versus Europe)
3. Surgical considerations during robotic surgery
4. Outcomes

4:15 – 5:30 PM Session B: SAGA: Drugging the Drugged: Pharmacology in the Elderly Patient

Moderator: Shamsuddin Akhtar, MD

At the conclusion of this session, the participant will be able to:

1. Review pharmacokinetic and pharmacodynamic changes with aging.
2. Understand how pharmacogenomics influences the efficacy of many medications.
3. Discuss appropriate dosing of common sedative and anesthetic drugs in the elderly, including drugs to avoid and the confounding issue of drug-drug interactions.
4. Discuss pertinent differences in physiological response to cardiovascular stress in the elderly and their rationale pharmacological management.

Nature vs nurture: How genomics and aging affect cardiovascular pharmacology?

Mihai Podgorneau, MD, FASE

At the conclusion of the lecture, the participant will be able to understand how genomic changes affect the pharmacology of many drugs that are used in the perioperative period in the elderly.

Are we dosing our elderly patients correctly?

Raymond C. Roy, MD

At the conclusion of the lecture, the participant will understand:

1. Why anesthetic dosing should be adjusted for age.
2. What the appropriate doses are of perioperative drugs in the elderly, including drugs to avoid and the confounding issue of drug-drug interactions.

Hemodynamic management in elderly patients: a physiological approach.

Martin London, MD, FASE

At the conclusion of the lecture, the participant will understand:

1. The physiological responses of an aging cardiovascular system to stress.
2. How hemodynamics should be managed in the elderly based on physiological principles.

4:15 – 5:30 PM Session C: The 2010 SCA Top Echo Challenging Cases

Moderator: Wanda Popescu, MD

At the conclusion of the panel the participant will:

1. Enhance knowledge on various echocardiographic techniques employed to solve intraoperative echocardiographic dilemmas
2. Understand how the use of transesophageal echocardiography provided the solution to challenging clinical scenarios

Panel: Katherine Glas, MD; Albert Perrino, MD; David Zvara, MD

TUESDAY, APRIL 27, 2010

6:45 – 8:00 AM Problem Based Learning Discussions 15 – 21

PBLD 15: An Adult Patient with a History of Congenital Heart Disease (CHD)

Scott Reeves, MD; Jin Huang, MD

Learning Objectives:

1. Review physiology of common CHD, including cyanotic
2. Discuss anesthetic considerations of a patient with CHD undergoing surgery

PBLD 16: Antiplatelet Meds and their Surgical Implications

Kenichi Tanaka, MD; Nathaen Weitzel, MD

Learning Objectives:

1. Discuss the current and future antiplatelet medications
2. Discuss implications of antiplatelet therapy on surgical bleeding

PBLD 17: Periop Strategies to Minimize TRALI

Robert Sladen, MD; Ricardo Martinez-Ruiz, MD

Learning Objectives:

1. Review causes of TRALI
2. Discuss therapies to prevent TRALI

PBLD 18: Cardiovascular Disease - What to operate on first?

John Ellis, MD; Wendy Bernstein, MD

Learning Objectives:

1. Review the literature on timing of vascular surgery in patient with CAD
2. Discuss local management differences that may affect outcomes

PBLD 19: Lung Transplantation (OLT)

Peter Slinger, MD; Javier Campos, MD

Learning Objectives:

1. Discuss indications for OLT, and decision related to single or double lung transplant
2. Discuss operative management for OLT, including indication for use of CPB

PBLD 20: Prevention of Spinal Cord Injury in Thoracic Aortic Surgery

Albert T. Cheung, MD; Salwa Shenaq, MD

Learning Objectives:

1. Review literature related to prevention of spinal cord injury
2. Discuss strategies to minimize risk of spinal cord injury

PBLD 21: Periop Management of pHTN

Jack Shanewise, MD; Alina Grigore, MD

Learning Objectives:

1. Discuss diagnostic criteria for pulmonary HTN
2. Discuss management strategies for pulmonary HTN

8:00 – 10:15 AM Blood Conservation for Cardiac Surgery

Moderator: François Béique, MD

Best Practice with Antifibrinolytic Agents: Pharmacokinetics and optimal dosage

Bruce Spiess, MD

At the conclusion of the lecture, the participant should be able to:

1. Review the BART data in the context of prior McSPI work
2. Evaluate whether we will see increased blood utilization with aprotinin being gone
3. Discuss optimal use of alternative agents: Tranexamic Acid and Amicar

Management of Heparin Insensitivity with Antithrombin (AT) during Cardiac Surgery

Kenichi Tanaka, MD

At the conclusion of the lecture, the participant should be able to understand physiological role of AT in coagulation, mechanism of heparin insensitivity, clinical management of AT deficiency, and difference between fresh frozen plasma and AT concentrate.

Transfusion Guidelines: A call to arms or to mediocrity

Simon Body, MD

At the conclusion of the lecture, the participant should be able to understand:

1. The rationale for guidelines in cardiopulmonary bypass and transfusion
2. The variability in current US, Canadian and International cardiopulmonary bypass and transfusion practices
3. Methods of achieving optimal practices in the complex environment of hospital politics and OR management

Factor VII and Prothrombin Complex Concentrates: Smart bombs or devil in disguise?

Keyvan Karkouti, MD

At the conclusion of the lecture, the participant will be able to:

1. Review the burden and causes of excessive blood loss in cardiac surgery
2. Review the mechanism of action of rFVIIa
3. Review current evidence on its risk-benefit profile in cardiac surgery
4. Explore its indications and dosage possibilities

The Versatility of Point of Care Testing

Linda Shore Lesserson, MD

At the conclusion of this session the participant will have been exposed to most of the available point of care coagulation testing devices used in cardiovascular patients. The participant will understand hemostatic abnormalities that present in cardiovascular patients and will be able to make informed

decisions about the use of such testing in cardiac surgical patients.

8:00 – 10:15 AM Workshop 5: Advanced TEE I

Moderator: Amanda Fox, MD; Kathryn Glas, MD

At the conclusion of this workshop, the participant will be able to:

1. To review concepts and controversies regarding assessment of the mitral valve before and after mitral valve repair in order to enhance likelihood of a successful long-term repair.
2. To learn how to evaluate patients with different types of ventricular septal defects both before and after repair.
3. To learn how and why to assess tissue Doppler and strain in the cardiac surgical patient.
4. To review the criteria for evaluating pericardial and restrictive cardiac disease.
5. To learn key techniques and reasons to perform an intraoperative epicardial echocardiography exam.

Pre- and post-repair assessments of the mitral valve: What should I look for?

Stanton Shernan, MD

At the conclusion of the lecture, the participant will be able to use TEE to assess the mitral valve before and after mitral valve repair in order to enhance likelihood of a successful long-term repair.

The patient is supposed to have a ventricular septal defect: How do I locate, characterize and assess it?

Thomas Burch, MD

At the conclusion of the lecture, the participant will be able to use TEE to evaluate patients with different types of ventricular septal defects both before and after repair.

The utility and "how tos" of tissue Doppler, strain and strain rate: How can I use it in the operating room?

Mary Beth Brady, MD

At the conclusion of the lecture, the participant will understand the fundamentals of how and why to assess tissue Doppler and strain in the cardiac surgical patient.

Pericardial versus restrictive cardiac disease: Which is it?

Edwin Avery, MD

At the conclusion of the lecture, the participant will be able to use TEE to differentiate pericardial and restrictive cardiac disease.

Epicardial echocardiography in the operating room: When and how can it help?

James Abernathy, MD

At the conclusion of the lecture, the participant will be familiar with the steps of performing an intraoperative epicardial echocardiography exam.

11:00 AM – 12:00 Noon RESEARCH: Research on Everest: from concept to completion

Moderator: Hilary Grocott, MD

Research on Everest: From concept to completion

Mike Grocott, MD

At the conclusion of the lecture, the participant will be able to:

1. Develop an appreciation for the unique challenges and complexities of carrying out medical research.
2. Better understand the tolerance of humans to environmental hypobaric hypoxia.
3. Increase their knowledge of the spectrum of physiologic challenges in extreme environments, particularly high-altitude.
4. Develop an understanding of the importance of translational research on improving our overall knowledge of anesthesia and critical care medicine.

1:30 – 3:30 PM Session A: ASCCA: Critical Care in 2010: What You Absolutely Must Know

Moderator: Michael Wall

At the conclusion of this session, the participants will:

This session will consist of brief lectures on the current status of six exciting areas in the perioperative management of critically ill patients. Each lecture will stress what is new in each area and how this knowledge can be applied to patients you take care of every day. Following the lectures, there will be a panel discussion with the experts on these topics.

Role of Vasopressin in Critical Illness

Eric Jacobsohn, MD

At the conclusion of this session, the participants will understand the use of vasopressin in the critically ill.

Use of Rescue Modes of Ventilation in ARDS

Kevin Hatton, MD

At the conclusion of this session, the participants will understand the role of “rescue modes” of ventilation in ARDS.

Use of New Markers of Renal Injury

Robert Sladen, MD

At the conclusion of this session, the participants will understand the potential use of markers of renal injury.

Role of Hand Held Ultrasound in Perioperative Medicine

Katherine Grichnik, MD

At the conclusion of this session, the participants will learn the role of hand held ultrasound in perioperative medicine.

Infectious Disease in Critical Illness, 2010 – What is New?

Ronald Pauldine, MD

At the conclusion of this session, the participants will review new and important topics in infectious disease in the critically ill.

Best Critical Care Papers 2009-2010

Laureen Hill, MD

At the conclusion of this session, the participants will gain exposure to the best manuscripts of 2009-2010 in the perioperative management of the critically ill surgical patient.

1:30 – 3:30 PM Session B: Electrophysiology

Moderators: Douglas Shook, MD; Lebron Cooper, MD

Advances in clinical electrophysiology: AF and VT therapy

Alex Hughes, MD

At the conclusion of the lecture, the participant will be able to:

1. Review the latest techniques in managing AF/VT ablations
2. Describe the standard EP measurements, mapping and monitoring use for the EP procedures

Anesthesia for complex EP cases: Does it really matter?

Aman Mahajan, MD, PhD

At the conclusion of the lecture, the participant will be able to:

1. Understand the effects of anesthetics on cardiac electrophysiology
2. Review the role of general anesthesia and MAC in management of clinical EP procedures- AF/VT ablations
3. Review the use of central and peripheral autonomic blockade in managing VT

Cardiac Resynchronization Therapy

Jonathan Leff, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand the indications, use and optimization of BiV (CRT) therapy, including hemodynamic, ECG, and echocardiographic goals.
2. Better understand the management of CRT devices in the perioperative and ICU settings.

1:30 – 3:30 PM Session C: Congenital Heart Disease in the Adult

Moderator: Wanda Miller-Hance, MD

At the conclusion of this session, the participant will be able to:

1. Understand long-term important sequelae in unoperated and postoperative adult patients with congenital heart disease and review the evolving worldwide challenges in the care of these patients.
2. Understand problems in the adult patient following repair of Tetralogy of Fallot, particularly those related to chronic right ventricular volume overload.

3. Review physiology in patients with single ventricle, emphasizing problems and long-term outcome in the Fontan circulation.

CHD in the Adult: Relevant Issues, Guidelines and Challenges

James A. DiNardo, MD

At the conclusion of the lecture, the participant will be able to:

1. Provide a general update on the growing population of adults with congenital heart disease regarding epidemiology, long-term prognosis, and outcomes.
2. Emphasize relevant issues and challenges in the care of these patients.
3. Highlight selected aspects of the ACC/AHA 2008 published guidelines for the management of adults with congenital heart disease.

The Adult with Repaired TOF: Dealing with the volume-loaded RV

Emad Mossad, MD

At the conclusion of the lecture, the participant will be able to:

1. Review the anatomical features and physiology that characterize Tetralogy of Fallot.
2. Provide a brief overview of the surgical approaches for this lesion, how they have evolved, and the “natural history” after surgical intervention.
3. Understand problems related to chronic right ventricular volume overload in the postoperative patient and management strategies.

The Patient with Single Ventricle and Fontan Physiology

SuAnne Daves, MD

At the conclusion of the lecture, the participant will be able to:

1. Brief review of the congenital cardiac pathology considered within the single ventricle spectrum.
2. Review palliative approaches for these patients.
3. Understand the physiology of single ventricle and implications for anesthetic care.

4:15 – 5:30 PM Session A: Financial Aspects of Care

Moderator: Bryant Murphy, MD

At the end of this session participants will be able to:

1. Understand current CMS and JCAHO rules and regulations and recognize which ones have specific implications for cardiac anesthesiologists
2. Understand how to effectively code and bill in order to maximize departmental and practice revenue
3. Understand the steps in successful hospital negotiations

Safe Coding in the Cardiac OR – How to safely ask for all that you deserve.

Christopher A. Troianos, MD

At the conclusion of this session participants will be able to:

1. Identify the factors that are important to consider while billing for Cardiac Anesthesia services.
2. Discuss the changes in billing for TEE services
3. Discuss recent changes in billing for Anesthesia services

Legislative and Regulatory Changes Affecting Cardiac Anesthesia

Dana Simpson, Esq.

At the conclusion of this session participants will be able to:

1. Discuss recent legislative and regulatory changes that affect the way that we are reimbursed for Anesthesia services
2. Discuss ways that Anesthesiologists can become involved in the legislative process
3. Describe the process that various governmental agencies (ex. CMS) use for rulemaking.

Leveraging your EMR System for Maximal Productivity and Profitability

David Reich, MD

At the conclusion of the lecture, the participant will be able to:

1. Discuss the process for selecting the optimal EMR system
2. Discuss the advantages of having an EMR system
3. Discuss the medicolegal implications of having an EMR system
4. Discuss how the EMR can be used to enhance revenue generation and productivity.

4:15 – 5:30 PM Session B: Cardiac Emergencies

Moderator: Kent Rehfeldt, MD

At the end of this session participants will be able to:

1. Review the updated guidelines for advanced cardiopulmonary resuscitation
2. Review the anesthesia management considerations for patients who have sustained cardiac or aortic trauma
3. Understand potential iatrogenic complications that may occur in the cath lab that require emergent treatment

ACLS Updates

Michael Wall, MD

At the conclusion of the lecture, the participant will be able to:

1. Review rationale for recent changes in ACLS guidelines
2. Discuss current theory regarding sequence of defibrillation attempts and chest compressions
3. Understand current ideas related to ventilation strategy during cardiac arrest

Anesthetic Considerations for the Patient with Cardiac or Aortic Trauma

Victor Baum, MD

At the conclusion of the lecture, the participant will be able to:

1. Review the mechanism and common sites of cardiac, aortic trauma
2. Explain the role of TEE/echo in evaluating cardiac and aortic trauma
3. Describe the management of concurrent head, abdomen or extremity injuries in a patient who may require cardiopulmonary bypass (eg, patient with open femur fracture requires emergent CPB)

Cath Lab Cases Gone Bad

Charles Hogue, MD

At the conclusion of the lecture, the participant will be able to:

1. Understand the types of injury in cath lab requiring emergent treatment: perforation, tamponade, coronary dissection, device embolization, access site injury

2. Discuss the impact of cath lab drug therapy on subsequent surgery: IIb/IIIa inhibitors, etc
3. Review temporary support strategies for the cath lab disaster: TandemHeart, Impella, etc

4:15 – 5:30 PM Session C: Cardiac Surgery in Infants and Children

Moderator: Brian Donahue, MD

At the end of this session participants will be able to:

1. Describe novel approaches to the management of hypoplastic left heart syndrome
 - a. New surgical treatments, perfusion management
 - b. Postoperative pharmacologic management
2. Discuss the role of hybrid OR / Cath Lab techniques for the treatment of congenital heart anomalies
 - a. Current state of hybrid OR procedures
 - b. Future projections
3. Describe the unique nature of cardiopulmonary bypass in infants, and the resulting perioperative challenges for the anesthesiologist
4. Describe the morbidity, risk factors, and possible prevention of perioperative thrombosis in pediatric cardiac surgery patients.

New Developments in Hypoplastic Left Heart Syndrome

Eckehard Stuth, MD

At the conclusion of the lecture, the participant will be able to:

1. Describe the unique pathophysiology of infants with HLHS at each stage of repair
2. Describe new surgical interventions for treatment of HLHS
3. Describe new developments in the medical and ICU management of HLHS

The Hybrid OR/Cath Lab: An evolving treatment site

Jim Spaeth, MD

At the conclusion of the lecture, the participant will be able to:

1. Outline the capabilities in the hybrid cath lab / operating room
2. Discuss the pathophysiologic lesions amenable to management in the hybrid cath lab
3. Discuss anesthetic implications of hybrid techniques

Perioperative Thrombosis in the Congenital Heart Patient

Suanne Daves, MD

At the conclusion of the lecture, the participant will be able to:

1. Outline the epidemiology and health burden of thrombosis in CHD patients
2. Discuss gaps in our current understanding of risks for thrombosis
3. Describe prospective management approaches to prevent thrombosis in CHD

5:30 – 6:30 PM Echo Jeopardy

Moderators: Andrew Maslow, MD; Feroze Mahmood, MD; Peter Panzica, MD

At the conclusion of this session, the participant will have learned about a variety of issues surrounding cardiothoracic and vascular anesthesia involving the evaluation, diagnosis, and management of the

patient. We will cover both normal and abnormal conditions that the anesthesiologist is faced with during their clinical practices.

WEDNESDAY, APRIL 28, 2010

6:45 – 8:00 AM Problem Based Learning Discussions 15 – 21

PBLD 22: A Complex Patient for Congenital Heart Surgery

James DiNardo, MD; Nina Guzzetta, MD

Learning Objectives:

1. Review physiology of complex CHD lesions seen in adult patients
2. Discuss monitoring and management issues for patients with complex CHD

PBLD 23: When Cardiac and OB Mix - What do you do?

Lebron Cooper, MD; Annette Mizuguchi, MD

Learning Objectives:

1. Discuss indication for cardiac surgery in the parturient
2. Discuss anesthetic considerations specific to the parturient

PBLD 24: Current Status of Hemoglobin Free Blood Substitutes

Bruce Spiess, MD; Marc Ereth, MD

Learning Objectives:

1. Review the literature related to blood substitutes
2. Discuss patient indications for use of blood substitutes

8:00 – 10:00 AM Workshop 6: Hands-on Hemostasis

Moderators: Marc Stone, MD; Ferenc Puskas, MD; David Royston, MD

The overall goal of this workshop is to provide the participant with an enhanced understanding of the theory and practice of available devices to assess hemostatic potential at the point of care. The workshop will consist of both didactic presentations and hands-on experience with each device.

At the conclusion of the workshop, the participant will be able to:

1. Provide a general description of each device
2. Relate the information one can obtain from each device
3. Discuss clinical scenarios in which each device may be useful
4. Understand general limitations of each device
5. Discuss potential advantages of a given device over other similar devices

Thromboelastography

Linda Shore-Lesserson, MD

At the conclusion of the lecture, the participant will be able to:

1. Provide a general description of thromboelastography
2. Relate the information one can obtain from thromboelastography
3. Discuss clinical scenarios in which thromboelastography may be useful
4. Understand general limitations of thromboelastography
5. Discuss potential advantages of thromboelastography over other POC devices

ROTEM

Kenichi Tanaka, MD

At the conclusion of the lecture, the participant will be able to:

1. Provide a general description of ROTEM
2. Relate the information one can obtain from ROTEM
3. Discuss clinical scenarios in which ROTEM may be useful
4. Understand general limitations of ROTEM
5. Discuss potential advantages of ROTEM over other POC devices

VerifyNow and PlateletWorks

Marc Stone, MD

At the conclusion of the lecture, the participant will be able to:

1. Provide a general description of the VerifyNow and PlateletWorks platforms
2. Compare and contrast the information one can obtain from the VerifyNow and PlateletWorks platforms
3. Discuss clinical scenarios in which the VerifyNow and PlateletWorks platforms may be useful
4. Understand general limitations of the VerifyNow and PlateletWorks platforms
5. Discuss potential advantages of the VerifyNow and PlateletWorks platforms over other POC devices

Hepcon

Ferenc Puskas, MD

At the conclusion of the lecture, the participant will be able to:

1. Provide a general description of the Hepcon device
2. Relate the information one can obtain from the Hepcon device
3. Discuss clinical scenarios in which Hepcon testing may be useful
4. Understand general limitations of Hepcon
5. Discuss potential advantages of Hepcon over other POC devices

8:00 – 11:00 AM Workshop 7: Advanced TEE II

Moderator: Amanda Fox, MD; Kathryn Glas, MD

Hands on 3D echocardiography workshop

This workshop will offer lectures and demonstrations to help the learner to develop a basic understanding of 3D echocardiography that is practical for the perioperative environment. The workshop will cover the modalities of 3D echocardiography, provide step by step demonstrations of how 3D images can be acquired in the operating room, and will give an overview of which cardiac structures are most amenable to 3D imaging using TEE. To aid in further learning about how to conduct and interpret 3D echocardiography in the operating room and the interventional suite, lectures will be accompanied by case based quiz questions.

At the end of this workshop participants will be able to:

1. Develop a basic understanding of modalities of 3D echocardiography and how to acquire and interpret 3D echocardiography images.
2. To understand which cardiac structures best lend themselves to 3D echocardiography imaging.
3. To understand specific roles for 3D echocardiography during cardiac surgeries and cardiac interventional procedures.

Introduction to Rotational Gated 3D Echocardiography

Feroze Mahmood, MD

At the conclusion of the lecture the participant will have a basic understanding of the different modalities of 3D echocardiography and will have an introductory understanding of how to acquire images using rotational gated 3D echocardiography.

Real-time 3D: Theory and Knobology

Douglas Shook, MD

At the conclusion of the lecture the participant will have a basic understanding of the theory and knobology related to acquiring images using real-time 3D echocardiography.

Real-time 3D: Data acquisition in the operating room

Madhav Swaminathan, MD

At the conclusion of the lecture the participant will be familiar with the basic steps involved in acquiring images in the operating room using real-time 3D echocardiography.

3D Echocardiography and Mitral Valve Surgery

Michael D'Ambra, MD

At the conclusion of the lecture the learner will have a better understanding of how 3D TEE images of the mitral valve translate to what the cardiac surgeon can see in the surgical field.

Case based 3D echocardiography

Stan Shernan, MD; Burkhard Mackensen, MD

At the conclusion of these case based presentations, participants will be able to understand important clinical applications for 3D echocardiography in the operating room and the cardiac catheterization laboratory.