LEARNING OBJECTIVES

SUNDAY, FEBRUARY 10, 2013

2:00 – 6:30 pm  Workshop 1: CPB

Moderators: Kenneth Shann, CCP; Eugene A. Hessel II, MD

This workshop will be an interactive and interdisciplinary session where we will explore several challenging scenarios related to CPB, such as, massive air embolism, poor oxygenation, vasoplegia, high arterial line pressure, and poor venous return.

Attendees will be encouraged to solve problems utilizing contemporary evidence and techniques.

Learning format:
1. Three-quarters of time the attendees will be involved in small groups at hands-on work-stations with heart-lung machines or simulators to demonstrate and work on solving these scenarios.
2. One-quarter of the time the attendees will meet in an interactive group session in which they will assess their baseline knowledge about the problems and work as a group in developing solutions, and share their experience and knowledge with these problems and review the best practices as derived from the literature.
3. This will be supplemented by material supplied in the syllabus.

Work Station 1 (heart lung machine with simulator): “Boot camp” with orientation to CPB equipment – Kenny Shann, CCP

Work Station 2 (heart lung machine with simulator): High Fidelity Simulation – Edward Darling, MS, CCP

Work Station 3 (heart lung machine with simulator): High Fidelity Simulation – Jeffrey Riley, CCP

Discussion Station: Role of anesthesiologists in conduct of CPB, monitoring, check-lists, and role of TEE in conduct of CPB – Eugene A. Hessel II, MD

3:00 – 7:00 pm  Workshop 2: TEE

Moderators: Bonnie L. Milas, MD; Alexander Mittnacht, MD

Perioperative Transthoracic Echocardiography – Jack S. Shanewise, MD

At the conclusion of this lecture, participants should be able to:
1. Give an overview of standard transthoracic views.
2. Identify the strengths and limitations of TTE versus TEE.
3. Recognize the value of TTE outside of the operating room.

Assessment of the Right Ventricle – Michael P. Fanshawe, MD

At the conclusion of this lecture, participants should be able to:
1. Apply techniques for the quantitative assessment of right ventricular function using TEE.
2. Make a qualitative assessment of right ventricular function using TEE.
3. Make hemodynamic assessments of the right ventricle and pulmonary circulation.
4. Explain the clinical and prognostic significance of right ventricular assessment.
5. Decide what role if any 3D echocardiography has in right ventricular assessment.

**TEE for Positioning Devices and Cannulas – Bonnie L. Milas, MD**
At the conclusion of this lecture, participants should be able to:
1. Describe the standard position of devices and cannulas within cardiac or vascular structures.
2. Apply techniques to optimize echocardiographic visualization during device and cannula placement.
3. Explain methods to detect and troubleshoot cannula migration or device malfunction.

**Breakout session with vendors:**
1. TEE simulator – Bryan Ahlgren, DO
2. Transthoracic Examination – Jack S. Shanewise, MD

**Billing and Medicolegal Aspects of TEE – Steve N. Konstadt, MD**
At the conclusion of this lecture, participants should be able to:
1. Ensure compliance with TEE documentation & billing.
2. Optimize collections.
3. Recognize the importance of documenting optimal patient care for medico-legal reasons.

**TEE for Hemodynamic Monitoring – Alexander Mittnacht, MD**
At the conclusion of this lecture, participants should be able to:
1. Explain the various echo modes and approaches to hemodynamic monitoring in the OR.
2. Recognize limitations of echocardiographic hemodynamic monitoring.
3. Recognize where TEE fits into multimodal hemodynamic monitoring in the OR and ICU.

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**3:00 – 7:00 pm Workshop 3: Critical Care Life Support: CIEDs, Temporary Mechanical Support, and Point-of-Care Coagulation Testing**

*Moderators: Abe DeAnda, MD; Gregory M. Janelle, MD; Linda Shore-Lesserson, MD*

This workshop has been developed to fulfill a gap in knowledge and competency identified in the medical support of patients with electrical and mechanical devices for whom the attendee cares for in practice. Additionally, this workshop has been developed to fulfill a gap in knowledge in the perioperative care of cardiac surgical patients who may benefit from point-of-care tests of coagulation and platelet function. The objectives will be accomplished by rotating attendees through multiple hands-on stations where they will interact with a moderator in a small group format. At the end of this workshop, attendees should be able to:
1. Identify the nuances of caring for patients with electrical and mechanical devices.
2. Identify the appropriate reasons for interrogating permanently implanted pacemakers and automatic internal cardiac defibrillators and for temporarily changing setting in the perioperative period.
3. Troubleshoot ventricular assist devices, cardiac implantable electrical devices, intra-aortic balloon pumps, and extracorporeal membrane oxygenation circuits.
4. Understand the clinical applicability, advantages, and disadvantages of several currently available point-of-care monitors of hemostasis.

1. TEG - James H. Abernathy, MD, MPH
2. ROTEM - Linda Shore Lesserson, MD
3. VerifyNow - Patricia M. Murphy, MD
4. Medtronic Pacer Interrogation - Gregory M. Janelle, MD
5. Boston Scientific - Laurie K. Davies, MD
6. St. Jude Pacer Interrogation/Programming - Nathaen S. Weitzel, MD
7. Intra-aortic Balloon Counterpulsation - Abe DeAnda, MD
MONDAY, FEBRUARY 11, 2013

6:55 – 9:30 AM  Adult Congenital Heart Disease

Moderators: Laurie K. Davies, MD; Patricia Murphy, MD

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

1. Discuss the implications and changes to the physiology of pregnancy that occur in the adult with congenital heart disease.
2. Identify the common non-cardiac surgical procedures in adults with CHD and the potential problems and outcomes that can occur perioperatively.
3. Apply management strategies (physiologic, pharmacologic and mechanical) for RV failure after adult congenital heart redo operation

Adult Congenital Heart Disease and Pregnancy - Laurie K. Davies, MD

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

1. Identify the usual physiologic changes of pregnancy and how these changes interface in the patient with structural heart disease
2. Discuss some of the unique concerns in managing the pregnant patient with congenital heart disease
3. Identify the risks and develop a rational management plan for a pregnant patient with CHD.

Non-Cardiac Operations in the patient with complex congenital heart disease - Patricia Murphy, MD

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

1. Identify of the common non-cardiac surgical procedures in the adult with congenital heart disease and the surgical implications
2. Discuss the Pathophysiology of the Fontan circulation, Repaired TOF and the Univentricular Heart
3. Discuss of the pathophysiologic effects seen with various surgical procedures i.e. laparoscopic appendectomy, perforated DU, etc in the patient with congenital heart disease

RV failure after Redo Congenital repair – TBA

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

1. Discuss the diagnosis of RV failure after congenital redo repair
2. Identify the potential pharmacologic treatment options for RV failure after congenital redo surgery
3. Identify the physiologic alterations that can affect PVR and how to manipulate to achieve effects on PVR
4. Discuss the potential mechanical support options for RV failure after redo congenital surgery

Ventricular Assist Devices for Adult congenital heart disease - Vivek Rao, MD, PhD

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

1. Recognize patient considerations in the assessment of the ACHD candidate for VAD
2. Identify “who” is not a suitable candidate for VAD insertion for failing congenital heart disease
3. Identify the potential innovations in the field of mechanical heart assist that would be applicable to the congenital heart population
4:00 – 6:30 pm  Ethics – Doing the right thing...but what is the right thing?

Moderators: Eugene A. Hessel II, MD; Abe DeAnda, MD

At the conclusion of this session, the participants should be able to:
1. Recognize the various ethical dilemmas that practitioners, patients and families face with cardiothoracic surgical procedures.
2. Discuss controversies related to the development and implementation of guidelines.
3. Consider the ethics of providing “everything” to every patient – where do we draw the line (or should we draw the line)?

Organ Donation in 2012: Impact of DCD and Declaration of Brain Death – Eugene Hessel II, MD

At the conclusion of this lecture, the participants should be able to:
1. Identify the criteria, complexities and indications for declaring a patient to be brain dead and concerns of the public.
2. Discuss the impact of DCD and how it affects decision making of the practitioners as well as influencing the families of the organ donor.
3. Recognize the controversies surrounding the duration of observation after cardiac arrest until start of harvesting (concerns with auto-resuscitation), and with use of perfusion after declaration of circulatory death.
4. Present the challenges of organ donation in meeting the needs of patients awaiting transplantation.

How to handle bad outcomes: The Patient, the Family, and the Caregivers – Abe DeAnda, MD

At the conclusion of this lecture, the participants should be able to:
1. Discuss how bad outcomes impact on various participants including the patient, family members, and the caregivers.
2. Discuss the “normal” grieving process and how each member may be different in their handling of a bad outcome.
3. Debate right and wrong ways of dealing with bad outcomes, and the influence of the fear of litigation.

What to do with the colleague that ignores guidelines? – Steven N. Konstadt, MD

At the conclusion of this lecture, the participants should be able to:
1. Discuss the need and utility of clinical guidelines.
2. Consider reasons why guidelines are sometimes ignored.
3. Identify ways to intervene with colleagues that ignore guidelines.

Does everyone deserve everything? – Vivek Rao, MD

At the conclusion of this lecture, the participants should be able to:
1. Discuss the implications of health care access and what the rights of the patient are.
2. Consider what constitutes “heroic measures”.
3. Debate the concepts of utility versus futility in health care delivery.

TUESDAY, FEBRUARY 12, 2013

6:55 – 9:30 am  Management of the Hypertrophic Ventricle

Moderators: Bonnie L. Milas, MD; Patricia Murphy, MD

At the completion of the session the participants will be able to:
1. Explain the pathophysiology of left ventricular hypertrophy, hypertrophic regression, and acute treatment of diastolic dysfunction.
2. Apply techniques to optimize TEE characterization of the hypertrophied left ventricle and obstructive outflow states.
3. Describe various surgical approaches to ameliorate left ventricular hypertrophy and obstruction.

Pathophysiology and treatment of left ventricular hypertrophy and diastolic dysfunction
At the conclusion of this lecture, the participants should be able to:
1. Explain the various pathophysiologic processes of left ventricular hypertrophy and outflow obstruction.
2. Describe post-surgical regression of left ventricular hypertrophy.
3. Explain acute treatment options for left ventricular diastolic dysfunction.

TEE for the hypertrophic left ventricle – Bonnie L. Milas, MD
At the conclusion of this lecture, the participants should be able to:
1. Explain TEE anatomic characterization of left ventricular hypertrophy.
2. Describe methods to detect and quantify diastolic dysfunction.
3. Explain the various etiologies of left ventricular outflow obstruction.
4. Learn techniques to optimize grading severity of outflow obstruction using Doppler technology.

Surgical treatment of left ventricular hypertrophy and outflow obstruction – Pavan Atluri, MD
At the conclusion of this lecture, the participants should be able to:
1. Explain LVH and outflow obstruction considerations for aortic and mitral valve surgery.
2. Discuss options for surgical left ventricular cavity remodeling.
3. Describe surgical septal myomectomy techniques, approaches, and precautions.
4. Recognize indications for non-operative management of hypertrophic outflow tract obstruction.

Pro-Mitral valve replacement and septal myomectomy for hypertrophic obstructive cardiomyopathy – Abe DeAnda, MD
At the conclusion of this lecture, the participants should be able to:
1. Describe ventricular septal hypertrophy and hypertrophic cardiomyopathy.
2. Understand the physiologic consequences of septal hypertrophy.
3. Debate the surgical approaches to ASH and the need to address septal hypertrophy to treat outflow obstruction.

Con-Mitral valve replacement alone for hypertrophic obstructive cardiomyopathy – Pavan Atluri, MD
At the conclusion of this lecture, the participants should be able to:
1. Describe the mechanism of outflow tract obstruction in hypertrophic cardiomyopathy.
2. Describe the physiologic significance of mitral valve replacement on managing hypertrophic obstructive cardiomyopathy.
3. Debate the primary importance of addressing the mitral valve in the surgical treatment to alleviate outflow obstruction.

4:00 – 6:30 pm STS Database
Moderators: Steven N. Konstadt, MD; Frederick L. Grover, MD

History and Development of the STS Database - Frederick L. Grover, MD
At the conclusion of this lecture, the participants should be able to explain the history and purpose of the STS database.

Financial Justifications for Participating in the STS Database - Richard L. Prager, MD
At the conclusion of this lecture, the participants should be able to:
1. Discuss the clinical benefits of the STS database both institutionally as well as for patients in general.
2. Explain the financial return for investing in STS Database

How can the STS database be implemented to improve anesthetic care? - Solomon Aronson, MD, MBA
At the conclusion of this lecture, the participants should be able to:
1. Discuss specific applications of the STS Database to resolving patient care issues.
2. Review the need for a clinical database for cardiac anesthesia.
3. Consider the roadblocks and pitfalls of implementing the STS database for anesthetic practice.
4. Discuss the steps and future of implementation from the SCA point of view.

_How has the STS database improved surgical care? - Richard L. Prager, MD_
At the conclusion of this lecture, the participants should be able to:
1. Identify the improvements in surgical care from database analysis.
2. Discuss outcome studies which have come out of the STS database.
3. Discuss how such studies have led to changes in practice and improvement in surgical care.
4. Consider future studies, and how the addition of anesthetic data might further improve patient care.

**WEDNESDAY, FEBRUARY 13, 2013**

**6:55 – 9:30 Intraoperative Problems and Their Treatment**

_Modulators: Albert T. Cheung, MD; Alexander Mittnacht, MD; David Fitzgerald, CCP_
At the conclusion of this session, the participants should be able to:
1. Detect and understand the causes of common life-threatening problems encountered in the perioperative care of cardiac surgical patients.
2. Identify the risks and effectiveness of therapeutic interventions to treat common life-threatening problems encountered in the perioperative care of cardiac surgical patients.

_Cerebral Air Embolism - Burkhard Mackensen, MD_
At the conclusion of this lecture, the participants should be able to:
1. Recognize the potential sources for arterial air embolism in cardiac surgical patients.
2. Explain the pathophysiology of arterial and cerebral air embolism.
3. Discuss the therapeutic options available for the treatment of cerebral air embolism.

_Massive Transfusion and Coagulopathy – Nathaen S. Weitzel, MD_
At the conclusion of this lecture, the participants should be able to:
1. Discuss the complications associated with massive transfusion for hemorrhage.
2. Explain how to treat complications associated with massive transfusion.

_Impact of Perioperative Blood Pressure Management on Postoperative Outcomes – Solomon Aronson, MD_
At the conclusion of this lecture, the participants should be able to:
1. Explain the clinical consequences of perioperative hypertension on outcomes in cardiac surgical patients.
2. Explain the clinical consequences of antihypertensive therapy on outcomes in cardiac surgical patients.
3. Apply techniques for establishing and maintaining an optimal perioperative blood pressure in cardiac surgical patients.

_Vasoplegia - Pascal Colson, MD_
At the conclusion of this lecture, the participants should be able to:
1. Characterize the clinical syndrome of vasoplegia.
2. Discuss the potential causes and contributors to vasoplegia.
3. Explain the treatment options and clinical consequences of vasoplegia in cardiac surgical patients.

_Pulmonary Hypertension - Alexander Mittnacht, MD_
At the conclusion of this lecture, the participants should be able to:
1. Define pulmonary hypertension and its clinical consequences in the cardiac surgical patient.
2. Explain the effect of pulmonary hypertension on right ventricular function in the cardiac surgery patient.
3. Consider current treatment options for pulmonary hypertension in the cardiac surgical patient.

**Metabolic Acidosis - Albert T. Cheung, MD**

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

1. Explain the differential diagnosis of metabolic acidosis in the cardiac surgical patient.
2. Explain the clinical workup and of metabolic acidosis in the cardiac surgery patient.
3. Consider the treatment options and the potential adverse effects of treatment for managing perioperative metabolic acidosis in the cardiac surgical patient.

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**4:00 – 6:30 pm   Making Cardiac Surgery Safer for Our Patients: An International Mission**

*Moderators: Gregory M. Janelle, MD; Steven N. Konstadt, MD*

This session was developed to fulfill a gap in knowledge and competency identified with respect to the understanding of ongoing international efforts aimed at improving patient safety for cardiac surgical patients.

Overall learning objectives:

1. Explain what ongoing efforts are being made on several different continents to improve cardiac surgical patient outcomes
2. Discuss the contribution that human error can make toward undesirable patient outcomes.
3. Identify tools aimed at improving teamwork and reducing human error in order to achieve improved patient outcomes

**European Approaches to Patient Safety:**

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

1. Identify approaches that the European medical community has made to improve teamwork in the perioperative environment
2. Identify approaches that the European medical community has made to reduce human error in the perioperative environment
3. Utilize appropriate methods to identify how the above efforts have translated to improvements in European cardiac surgical patient outcomes

**Australian Efforts to Improve Patient Safety:**

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

1. Identify approaches that the Australian medical community has made to improve teamwork in the perioperative environment
2. Identify approaches that the Australian medical community has made to reduce human error in the perioperative environment
3. Utilize methods to identify how the above efforts have translated to improvements in Australian cardiac surgical patient outcomes

**FOCUS in the US: Advances generated by the collaborative**

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

1. Discuss the FOCUS effort in the United States
2. Explain why process improvements are pertinent to everyone in the operating room
3. Identify objective areas where process improvements have let to improved clinical outcomes

**Safe Perfusion by Implementing Checklists and Simulation**

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

1. Recognize the need for enhanced communication in and out of the operating room
2. Recognize the value of simulation in learning to deal with uncommon but life-threatening situations and to identify human error
3. Utilize checklists in the operating room
4. Discuss the impact that simulation and checklists have had in the perioperative environment

THURSDAY, FEBRUARY 14, 2013

6:55 – 9:30 am Heart Failure: Strategies for Mending the Broken Heart
Moderators: Nathaen S. Weitzel, MD; Michael P. Fanshawe, MD

At the conclusion of this session, the participant should be able to:
1. Consider the use of medical therapy versus mechanical support in patients with class III heart failure.
2. Discuss the problems associated with VAD’s and learn strategies to deal with these problems.
3. Deal with mechanical support in the non-cardiac surgical setting.
4. Assess and manage the patient with right and left ventricular dysfunction.
5. Explain the utility, benefit and normal imaging of TEE in the setting of a patient with a VAD.

Medical Therapy for the Treatment of Heart Failure - Michael P. Fanshawe, MD
At the conclusion of this lecture, the participant should be able to:
1. Understand the options for medical treatment of class III heart failure.
2. Appreciate the success and prognosis of medical therapy for class III heart failure.
3. Appreciate the cost benefit ratio of medical therapy in class III heart failure.
4. Understand why some countries choose to treat class III heart failure medically.

Mechanical Support for the Treatment of Heart Failure - T. Brett Reece, MD
At the conclusion of this lecture, the participant should be able to:
1. Understand the options for mechanical support in treating class III heart failure.
2. Appreciate the success and prognosis of mechanical support for class III heart failure.
3. Appreciate the cost benefit ratio of mechanical support for class III heart failure.
4. Understand why some countries choose to treat class III heart failure mechanically.

Managing the Problems associated with VAD’s - Charles T. Klodell, Jr., MD
At the conclusion of this lecture, the participant should be able to:
1. Differentiate between the various mechanical support devices available for left and right heart failure therapy.
2. Appreciate the pitfalls associated with each of these devices.
3. Understand the key perioperative hemodynamic challenges in patients with mechanical support devices.
4. Describe the principle complications patients experience once outside the immediate implantation / operative period.
5. List methods for treating the problems associated with each device.

Mechanical Support in non-cardiac surgical settings - Eugene A. Hessel II, MD
At the conclusion of this lecture, the participant should be able to:
1. List the key issues associated with management of these patients throughout the perioperative course in non-cardiac surgery.
2. Understand the benefits of TEE monitoring in this situation.
3. Describe the pitfalls that clinicians can have when managing patients with implantable ventricular support devices
4. Identify the key management strategies to deal with common problems that may be encountered.

Intraoperative assessment and management of Right and Left Ventricular Dysfunction - Jack S. Shanewise, MD
At the conclusion of this lecture, the participant should be able to:
1. Identify the key imaging modalities during mechanical device placement. Understand the various device parameters at implantation and how to use this for hemodynamic management intraoperatively.
2. Appreciate non-echo means of assessing right and left ventricular dysfunction.
3. Differentiate among critical factors used to predict right heart failure in patients presenting for surgery.
4. Select appropriate anesthetic strategies for patients with right heart failure.
5. Identify methods to evaluate both right and left ventricular dysfunction using TEE in the perioperative setting.
6. Appreciate how to assess with TEE the placement and functioning of the various mechanical assist devices.

4:00 – 6:30 pm  Blood Management

Moderators: Michael P. Fanshawe, MD; Linda Shore-Lesserson, MD

At the conclusion of this session, the participant should be able to:
   1. Explain the issues and controversies surrounding the use of old blood compared with new blood.
   2. Know when, how and why to use fibrinogen in hemorrhage after CPB.
   3. Identify the types, use and risks of pharmacological coagulation factor therapy.
   4. Recognize the risks of anemia in cardiac surgical patients and how to best mitigate these risks.

Old Blood versus New Blood - Linda Shore-Lesserson, MD

At the conclusion of this lecture, the participant should be able to:
   1. Explain the changes in blood as it is stored over a period of time.
   2. Develop a definition for what constitutes old blood.
   3. Consider the pros and cons of old blood versus new blood.
   4. Discuss the evidence for the assertion that new blood provides better clinical outcomes than old blood.

Role of Fibrinogen in Hemorrhage After CPB – Michael P. Fanshawe, MD

At the conclusion of this lecture, the participant should be able to:
   1. Discuss the role of fibrinogen in bleeding after CPB.
   2. Identify options available for fibrinogen replacement and what doses to give.
   3. Explain the evidence for the benefit of fibrinogen in CPB related bleeding.
   4. Know when to use fibrinogen after CPB.
   5. Identify the risk and side effects of fibrinogen therapy.

Pharmacological Coagulation Factor Therapy - Jacob Raphael, MD

At the conclusion of this lecture, the participant should be able to:
   1. List the names and classes of the pharmacological coagulation factor therapies available.
   2. Recognize when to use pharmacological coagulation factors.
   3. Utilize these agents, the doses required, and monitor their effectiveness.
   4. Explain the risks and side effects of these agents.

The Risk of Anemia in Cardiac Surgical Patients - Nathaen S. Weitzel, MD

At the conclusion of this lecture, the participant should be able to:
   1. Outline the risks of anemia in cardiac surgical patients.
   2. Discuss whether anemia is an independent risk factor for cardiac surgery.
   3. Consider when and why to transfuse in cardiac surgical patients.
   4. Discuss whether transfusion changes the risk profile and improves the outcome of the anemic patient.
   5. Discuss how to mitigate the risk of anemia in cardiac surgical patients.

Case Presentation - Jacob Raphael, MD; Michael P. Fanshawe, MD

A case will be presented to gain a practical, clinically relevant appreciation of the following blood management issues in cardiac surgery: old blood versus new blood, the role of fibrinogen, the role of pharmacologic factor therapy, and the risks of anemia.
FRIDAY, FEBRUARY 15, 2013

6:55 – 9:30 am  Aortic Arch Operations

Moderators: Nathaen S. Weitzel, MD; Gregory M. Janelle, MD

At the conclusion of this session, the participant should be able to:
1. Recognize aortic pathology and the surgical approaches possible based on anatomic variants
2. Consider the complexities and challenges involved in perfusion strategies for Aortic Arch surgery
3. Identify the key tools available for cerebral monitoring and how to apply this for cerebral protection
4. Explain the surgical and anesthetic challenges present in open compared to hybrid arch procedures.

Anatomy and Surgical Pathology of the Aortic Arch - T. Brett Reece MD

At the conclusion of this lecture, the participant should be able to:
1. Discuss the implications of surgical approach to aortic arch management.
2. Identify the critical differences between hemi-arch replacement vs full arch replacement and the strategies involved in each.
3. Describe how the availability of endovascular devices has altered the decision making process in aortic arch repair.
4. Identify key communication issues between operative team members including anesthesiology, perfusion and surgery.

Perfusion Strategies for Aortic Arch Operations - Kenneth Shann, CCP

At the conclusion of this lecture, the participant should be able to:
1. Identify the ideal perfusion management for covering multiple end organs during major aortic replacement surgery
2. Describe techniques used to provide cerebral blood flow during arch replacement procedures
3. Outline the challenges for the perfusionist in circulatory arrest cases
4. Discuss major advances in perfusion management for Hybrid arch repairs.

Brain Protection for Aortic Arch procedures - Burkhard Mackensen MD, PhD

At the conclusion of this lecture, the participant should be able to:
1. List the available monitoring modalities used during aortic arch surgery
2. Identify how the different monitoring techniques alter the anesthetic management.
3. Describe the current evidence supporting modern approaches to brain protection.
4. Differentiate between strategies used by the surgeon, anesthesiologist and perfusionist.

Open vs Hybrid Aortic Arch Reconstruction: Surgical Perspective - Chuck T. Klodell, Jr., MD

At the conclusion of this lecture, the participant should be able to:
1. Identify the major surgical challenges to using hybrid repair for the aortic arch.
2. Discuss how pre-operative imaging guides planning for the procedure (3D imaging, Xray, Ultrasound)
3. Describe the utility of real time imaging as used intraoperatively (TEE, CT, 2D-XRAY).
4. Describe the patient specific factors that allow for success using either approach

Open vs Hybrid Aortic Arch Reconstruction: Anesthesiologist’s perspective - Gregory M. Janelle, MD

At the conclusion of this lecture, the participant should be able to:
1. Identify the major anesthetic challenges in hybrid approaches to aortic surgery.
2. Describe use of TEE for guidance of intraoperative cannula / catheters / device placement.
3. Discuss practical guidelines in managing open arch vs hybrid arch repair.
4:00 – 6:30 pm  Guidelines in Cardiothoracic Surgery: Consensus or Controversies?

Moderators: Abe DeAnda, MD; Albert T. Cheung, MD; Kenneth Shann, CCP

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

1. Discuss the need for evidence-based guidelines in routine practice.
2. Review how guidelines are created.
3. Consider where guidelines may breakdown or elicit controversy.

ACCF/AHA CABG Guidelines – Frederick L. Grover, MD

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

1. Discuss the evolution of CABG guidelines over the years and how changing practice, techniques, and patient population has changed the guidelines.
2. Discuss potential reasons why guidelines are ignored – how do the guidelines impact the interventionalist practice.
3. Discuss evidence-based and prospective randomized trials that led to the creation of the current ACCF/AHA guidelines.

ACCF/AHA Thoracic Aortic Disease Guidelines- Albert T. Cheung, MD

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

1. Discuss the level of evidence used to justify recommendations in the guidelines.
2. Explain the recommended criteria for operations on the thoracic aorta.
3. Discuss how the writing committee addressed controversial topics in the perioperative management of thoracic aortic surgical patients.

Expert Consensus Document on Transcatheter Aortic Valve Replacement- Jack S. Shanewise, MD

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

1. Recognize which patients are eligible for TAVR.
2. Determine whether the guidelines dictate how these procedures should be performed.
3. Discuss the guideline recommendations for medical imaging to determine aortic annular dimensions, proper positioning of the prosthetic valve, and the detection of complications.

STS/SCA Perioperative Blood Transfusion and Conservation- Linda Shore-Lesserson, MD

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

1. Determine if implementation of the guidelines have reduced the risk of bleeding and the need for transfusion in cardiac surgical patients.
2. Implement the guidelines in his/her practice.
3. Recognize what the barriers are to implementing the guidelines in his/her practice.