

**15<sup>th</sup> Annual Update on Cardiopulmonary Bypass**  
**March 21-26, 2010**

**Learning Objectives**

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**Sunday, March 21, 2010**

**Workshop 1: Human Factors, Human Error Reduction and the Cardiac Operating Room Experience: A One Day Symposium**

*Moderators: A DeAnda, B Spiess, R Ungerleider*

At the conclusion of this session, the participant will:

1. The attendees will learn of the basics of human factors engineering as a discipline.
2. The attendee will collaborate in case discussions illustrating human error problems in cardiac operating rooms and from these discussions he/she will have introspection capability with regards to how their practice could change.
3. The attendees will have opportunities to participate in smaller group discussion of difficult personalities and situations or how to change practice in medicine.
4. The attendee at the conclusion of this activity will have a higher sensitivity to the problems of human error and patient safety in the cardiac operating rooms as well as the challenges ahead to study and implement findings as well as to change human behavior.

**Workshop 2: Echocardiography Workshop**

*Moderators: A Cheung, S Konstadt*

At the conclusion of this session, the participant will:

1. Learn the clinical applications for TEE in cardiac operations by studying case examples.
  2. Understand how TEE is used to diagnose valvular heart disease and guide surgical valve repairs.
  3. Understand how TEE is used to diagnose myocardial ischemia and assess ventricular function.
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**Monday, March 22, 2010**

**Pulmonary Hypertension and Right Heart Failure**

*Moderators: P Murphy, A Rosenberg*

At the conclusion of this session, the participant will:

1. Understand the pathophysiology of Pulmonary Arterial Hypertension and the spectrum of disease.
2. Identify factors that alter the pulmonary vascular resistance (PVR) and the emerging pharmacological therapies to modify PVR.
3. Understand the current echocardiographic criteria for diagnosis of right heart failure and role of echo in management.
4. Identify surgical therapies for right heart failure including atrial septostomy, heart-lung transplantation and pulmonary endarterectomy for chronic thromboembolic disease.
5. Understand the management of pulmonary hypertension and right heart failure in the clinical setting.

## **Left Ventricular Failure:**

*Moderators: A Cheung, G Janelle, A Rosenberg*

At the conclusion of this session, the participant will know:

1. Objective criteria for quantifying and classifying left ventricular failure.
  2. The evidence-based approach to the medical management of heart failure.
  3. The current options for surgical treatment of LV failure
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## **Tuesday, March 23, 2010**

### **The Thoracic and Thoracoabdominal Aorta**

*Moderators: A DeAnda, G Janelle*

At the conclusion of this session, the participant will:

1. Understand the surgical considerations of various approaches to the thoracic aorta, including open, stent graft, and hybrid procedures
2. Understand the major morbidities associated with open and closed procedures approaches to the thoracic aorta
3. Understand the pros and cons of specialized monitoring and adjuncts therapies involving surgical procedures on the thoracic aorta

### **Critical Care**

*Moderators: G Janelle, A Rosenberg*

At the conclusion of the session, the participant will:

1. Recognize the physiologic basis and clinical applications of non-invasive methods to assess intravascular fluid balance and cardiac output.
  2. Identify the role of statins in the care of the critically ill.
  3. Understand the various methods to improve oxygenation among patients with hypoxemic respiratory failure/Acute lung Injury/ ARDS while avoid further lung injury.
  4. Identify methods to detect, limit and treat mesenteric ischemia in post vascular surgical patients.
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## **Wednesday, March 24, 2010**

### **The Edge of Medicine**

*Moderators: A Cheung, B Milas*

At the conclusion of the session, the participant will:

1. Understand the economic, social, and ethical issues that have been created by advances in Cardiovascular Surgical Care.
2. Know the recent advances that have been made in mechanical ventricular assist and how to manage patients on mechanical ventricular assist.
3. Understand the role of extracorporeal support as a treatment option for respiratory failure.

## **Team Building to Reduce Human Error in the Cardiac Operating Rooms: FOCUS-sed Teaching Towards Collaboration and Outcomes**

*Moderators: A DeAnda, B Spiess, T Sundt*

At the conclusion of the session, the participant will:

1. The attendees will learn how a team works and the human requirements upon both individuals as well as the group to reduce human error.
2. The attendees will participate in a very insightful psychological exercise that will help to train them each in how they interact and participate with others.
3. The attendees will undergo a number of team building events which they will be able to take back to their institutions thereby forwarding human error reduction. The team building events will be both psychological as well as physical interactive events.

### **Perfusion**

*Moderators: R Groom, P Hessel, K Shann*

At the conclusion of the session, the participant will:

1. Recognize different contemporary perfusion strategies for the management of cardiopulmonary bypass in adult cardiac surgery patients.
  2. Understand the utility of a clinical registry to evaluate perfusion techniques and their association with patient outcome.
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## **Thursday, March 25, 2010**

### **Valve Surgery**

*Moderators: A DeAnda, B Milas*

At the conclusion of the session, the participant will:

1. To review the normal and abnormal anatomy of the aortic, mitral, and tricuspid valve.
2. To consider the various surgical options for each of these valves, including minimally invasive approaches, percutaneous treatment options, and standard open approaches.
3. To examine potential complications and contraindications (as well as indications) for surgery of the aortic, mitral, and tricuspid valves.
4. To review the value of pre- and intra-operative transesophageal echocardiography in assessing abnormal valves, planning intervention, and evaluating the success of the procedure.

### **Congenital Heart Disease**

*Moderators: L Davies, R Ungerleider*

At the conclusion of the session, the participant will:

1. Understand what the appropriate metrics are for evaluating outcome in congenital heart surgery.
  2. Understand the data concerning standards for pediatric perfusion and anesthesia.
  3. Gain an appreciation of the challenges involved in performing meaningful research in this population.
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**Friday, March 26, 2010**

**Analyzing Best Practice Guidelines**

*Moderators: E Hessel, K Shann*

At the conclusion of this session, the participant will:

1. Know the current best practice guidelines with regard to blood conservation, glucose management, use of perioperative TEE, and management of the patient who has recently received platelet inhibiting drugs.

**Hemostasis and Transfusion Management**

*Moderators: L Shore-Lesserson, B Spiess*

At the conclusion of the session, the participant will:

1. Have an understanding of the literature and data supporting the transfusion of young red blood cells. Studies that support the use of young blood cells will be reviewed.
2. Have learned about the scientific etiologies for adverse effects of blood transfusion. The contents of transfused products will be reviewed. The nature of the toxic products in old vs. new blood and in non-red blood cell products will also be discussed.
3. Know the prothrombotic agents that are approved for use in the bleeding patient. The participant will know which products are approved for which indications and will learn the body of evidence that supports off-label use of certain procoagulant agents in the bleeding cardiac surgical patient.
4. Have the opportunity to discuss as a part of the interactive team, the bleeding problems that are encountered after a prolonged cardiopulmonary bypass run and options for management of a patient with HIT requiring CPB.