



## **ISHLT ACADEMY: CORE COMPETENCIES IN MECHANICAL CIRCULATORY SUPPORT**

**Monday, April 7-Tuesday, April 8, 2014  
Loews Coronado Bay Resort, Coronado, CA, USA**

### **CONTINUING MEDICAL EDUCATION INFORMATION**

#### **Accreditation Statement**

The International Society for Heart and Lung Transplantation (ISHLT) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

#### **Credit Designation Statement**

ISHLT designates this live activity for a maximum of 11.25 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

#### **Disclosure**

Current guidelines state that participants in CME activities must be made aware of any affiliation or financial interest that may affect the program content or a speaker's presentation. Planners, Faculty and Chairs participating in this meeting are required to disclose to the program audience any real or apparent conflict(s) of interest related to the content of their presentations or service as Chair/Planner. These disclosures will be distributed at the meeting. Additionally, all speakers have been asked to verbally disclose at the start of their presentation if a product they are discussing is not labeled for the use under discussion or is still investigational.

#### **Learning Objectives**

At the conclusion of this meeting, participants will have improved competence and professional performance in their ability to:

- 1) Recognize the various types of mechanical circulatory support, their outcomes, and rates of adverse events.
- 2) Identify the clinical signs and risk factors of advanced heart failure in order to optimally time implantation.
- 3) Recognize the medical and social factors which impact patient outcomes on MCS.
- 4) Optimize implantation techniques and device selection.
- 5) Manage patients after MCS in the intensive care unit, as an inpatient and as an outpatient.
- 6) Diagnose and manage common clinical dilemmas and adverse events in patients after MCS.

#### **Educational Goals**

The educational goals of this activity are to provide a concise review of clinical knowledge and essential professional skills to facilitate best practice of surgical and medical aspects involved in the care of patients during assessment as candidates and as recipients of mechanical circulatory support.

#### **Target Audience**

While all members are invited to enroll, this course is primarily designed to be of benefit for clinicians and allied professionals who are in the early stages of their careers or who are in training, are part of a new program or desire an update on the current state of the field. The information presented covers core competencies and is intended to provide a strong foundation of the overarching principles of mechanical support, rather than as a detailed update for those who are already proficient in the field.

## **SCIENTIFIC PROGRAM COMMITTEE**

Daniel J. Goldstein, MD, Montefiore Medical Center, Bronx, New York, USA

Ulrich P. Jorde, MD, Columbia University, New York, NY, USA

Jeffrey J. Teuteberg, MD, University of Pittsburgh, Pittsburgh, PA, USA

## **SCIENTIFIC PROGRAM SCHEDULE**

### **MONDAY, APRIL 7, 2014**

**1:00 PM – 2:00 PM**

#### **PLENARY SESSION 1 – REVIEW OF THE CURRENT STATE OF MCS (Commodore E)**

**Chair:** Daniel J. Goldstein, MD

**1:00 PM Introduction, Welcome, and Brief Overview,** Daniel J. Goldstein, MD, Montefiore Medical Center, Bronx, New York, USA

**1:05 PM Technology 101,** Francis D. Pagani, MD, PhD, University of Michigan, Ann Arbor, MI, USA  
Review of current technologies, types of flow, pump parameters

**1:20 PM BTT and DT Outcomes,** Andreas O. Zuckermann, MD, PhD, Medical University of Vienna, Vienna, Austria  
Review state of outcomes and adverse events with current technologies

**1:35 PM Short-term Support and Shock,** Pascal N. Leprince, MD, PhD, Pitie Salpetriere, Paris, France  
Overview of percutaneous technologies, biventricular support, TAH, and ECMO

**1:50 PM Q&A**

**2:00 PM – 3:15 PM**

#### **PLENARY SESSION 2 – PATIENT SELECTION (Commodore E)**

**Chair:** Jeffrey J. Teuteberg, MD

**2:00 PM When Should Patients be Referred: Warning Signs,** Nicholas R. Banner, FRCP, Harefield NHS Foundation, Harefield, United Kingdom  
Risk factors which presage patient decline: renal function, intolerance of medications, hospitalizations, etc

**2:15 PM Assessing and Optimizing RV Function,** Jeffrey J. Teuteberg, MD, University of Pittsburgh, Pittsburgh, PA, USA  
Brief overview of impact of RV failure, pre-operative assessment and management of the RV, risk prediction

**2:30 PM End-organ Assessment,** Lee R. Goldberg, MD, MPH, University of Pennsylvania, Philadelphia, PA, USA  
Review of organ recoverability: renal, hepatic, vascular, overall medical candidacy

**2:45 PM Timing of Implantation,** Andrew J. Boyle, MD, Cleveland Clinic Florida, Weston, FL, USA  
When is the patient “sick enough” to implant MCS; case studies.

**3:00 PM Q&A**

**3:15 PM – 3:45 PM**

**COFFEE BREAK**

**3:45 PM – 4:45 PM**

#### **PLENARY SESSION 3 – SURGICAL CONSIDERATIONS (Commodore E)**

**Chair:** Mark S. Slaughter, MD

**3:45 PM Key Surgical Aspects of Implantation,** Nader Moazami, MD, Cleveland Clinic, Cleveland, OH, USA  
Overview of the most crucial surgical considerations: inflow cannula/pump placement, driveline, etc.

**4:00 PM How Much Else is Too Much?** Stephan Schueler, MD, PhD, FRCS, Newcastle Upon Tyne, United Kingdom

Concomitant operative procedures: TV, Aortic valve, prior Dor, congenitals

**4:15 PM Tailoring Pumps to Patients**, Mark S. Slaughter, MD, University of Louisville, Louisville, KY, USA

Considerations for device type, type of flow based upon patient factors

**4:30 PM Q&A**

**4:45 PM – 5:45 PM**

**CONCURRENT SMALL GROUP BREAK OUT SESSIONS**

**A. Approach to the Patient in Shock**, Vivek Rao, MD, PhD, Toronto General Hospital, Toronto, Canada  
(Commodore E)

4:45 pm *Overview/summary*

5:00 pm *Case #1 and Discussion*

5:20 pm *Case #2 and Discussion*

**B. Managing Device Infections**, Evgenij V. Potapov, MD, PhD, German Heart Institute, Berlin, Germany  
(Commodore A)

4:45 pm *Overview/summary*

5:00 pm *Case #1 and Discussion*

5:20 pm *Case #2 and Discussion*

**C. Building a VAD Program**, Shashank S. Desai, MD, Inova Fairfax Hospital, Falls Church, VA, USA  
(Commodore B)

4:45 pm *Working With a Program/Needs Assessment*

5:00 pm *Working With Administration to Meet Programmatic Needs/Goals*

5:20 pm *Building a Referral Base*

**D. Setting the Pump: Intra-op, ICU, at Discharge, and Long Term**, Joseph G. Rogers, MD, Duke University, Durham, NC, USA  
(Brittania)

4:00 pm *Intra-op Approach: Case Study and Discussion*

4:15 pm *Post-op Case Study and Discussion*

4:35 pm *Long Term Case Study and Discussion*

**E. Approach to Thrombosis**, Ulrich P. Jorde, MD, Columbia University, New York, NY, USA  
(Cambria)

4:45 pm *Overview/summary*

5:00 pm *Case #1 and Discussion*

5:20 pm *Case #2 and Discussion*

**5:45 PM – 6:30 PM**

**RECEPTION**

**TUESDAY, APRIL 8, 2014**

**7:30 AM – 8:00 AM**

**MORNING COFFEE**

**8:00 AM – 9:00 AM**

**PLENARY SESSION 4 – POST-OP (Commodore E)**

**Chair:** David Feldman, MD

**8:00 AM It's All About the RV**, David Feldman, MD, Abbott Northwestern Hospital, Minneapolis, MN, USA  
Post-operative approach to the RV: surgical considerations, pump speed, iNO, inotropes, etc.

**8:15 AM Initiation and Monitoring of Anticoagulation**, Vivek Rao, MD, PhD, Toronto General Hospital, Toronto, Canada

Overview of the timing and type of anticoagulation, means to monitor state of anticoagulation, anticoagulation management for elective procedures

**8:30 AM Role of Imaging**, Shashank S. Desai, MD, Inova Fairfax Hospital, Falls Church, VA, USA

Echo (basic views, how to assess functionality, set speed, how often, case presentations); CT (when it is useful, what can really be assessed, cases presentation)

**8:45 AM Q&A**

**9:00 AM – 10:00 AM**

**CONCURRENT SMALL GROUP BREAK OUT SESSIONS**

**A. Approach to the Patient in Shock**, Vivek Rao, MD, PhD, Toronto General Hospital, Toronto, Canada  
**(Commodore E)**

9:00 am *Overview/summary*

9:15 am *Case #1 and Discussion*

9:35 am *Case #2 and Discussion*

**B. Surgical Roundtable: Tips and Tricks**

**(Commodore A)**

9:00 am *HeartMate II*: Benjamin C. Sun, MD, Abbot Northwestern Hospital, Minneapolis, MN, USA

9:15 am *Discussion*

9:30 am *HeartWare*, Mark S. Slaughter, MD, University of Louisville, Louisville, KY, USA

9:45 am *Discussion*

**C. Managing the RV**, Jeffrey J. Teuteberg, MD, University of Pittsburgh, Pittsburgh, PA, USA  
**(Commodore B)**

9:00 am *Overview/summary*

9:15 am *Pre-Op RV Assessment: Case Presentation and Discussion*

9:35 am *Post-Op RV Failure: Case Presentation and Discussion*

**D. Setting the Pump: Intra-op, ICU, at Discharge, and Long Term**, Scott C. Silvestry, MD, Washington University School of Medicine, St. Louis, MO, USA

**(Brittania)**

9:00 am *Intra-op Approach: Case Study and Discussion*

9:15 am *Post-op Case Study and Discussion*

9:35 am *Long Term Case Study and Discussion*

**E. Approach to Thrombosis**, Ulrich P. Jorde, MD, Columbia University, New York, NY, USA  
**(Cambria)**

9:00 am *Overview/summary*

9:15 am *Case #1 and Discussion*

9:35 am *Case #2 and Discussion*

**10:00 AM – 10:30 AM**

**COFFEE BREAK**

**10:30 AM – 11:30 AM**

**PLENARY SESSION 5 – TRANSITION TO HOME (Commodore E)**

**Chair:** Salpy V. Pamboukian, MD, MSPH

**10:30 AM Educating the Patient and Caregiver**, Michael G. Petty, PhD, RN, University of Minnesota Medical Center, Minneapolis, MN, USA

Outline of approach to teaching patient and their family and community

**10:45 AM Quality of Life and Functional Capacity**, Salpy V. Pamboukian, MD, MSPH, University of Alabama at Birmingham, AL, USA  
The need for, timing of, and measures to assess

**11:00 AM Transition to Outpatient Care**, Joseph G. Rogers, MD, Duke University, Durham, NC, USA  
Clinic structure, typical items addressed, focused medical management (BP, rhythms, etc), rehab

**11:15 PM Q&A**

**11:30 AM – 12:30 PM**

**PLENARY SESSION 6 – LONG-TERM MANAGEMENT #1 (Commodore E)**

**Chair:** Daniel J. Goldstein, MD

**11:30 AM Infections**, Evgenij V. Potapov, MD, PhD, German Heart Institute, Berlin, Germany  
Prevention, diagnosis, medical and surgical management

**11:45 AM GI Bleeding**, Benjamin C. Sun, MD, Abbot Northwestern Hospital, Minneapolis, MN, USA  
Review of pathophysiology, incidence, and diagnostic/therapeutic approach

**12:00 PM Suspected Pump Thrombosis**, Daniel J. Goldstein, MD, Montefiore Medical Center, Bronx, New York, USA  
Mechanism, incidence, screening/diagnosis, management

**12:15 PM Q&A**

**12:30 PM – 1:30 PM**

**BOX LUNCH AND NETWORKING**

**1:30 PM – 2:30 PM**

**PLENARY SESSION 7 – LONG-TERM MANAGEMENT #2 (Commodore E)**

**Chair:** Ulrich P. Jorde, MD

**1:30 PM De novo Aortic Insufficiency**, Ulrich P. Jorde, MD, Columbia University, New York, NY, USA  
Incidence, screening, management

**1:45 PM Late RV Failure**, Martin Strueber, MD, University Heart Center Leipzig, Germany  
Definition, prediction, management

**2:00 PM End of Life**, Michael G. Petty, PhD, RN, University of Minnesota Medical Center, Minneapolis, MN, USA  
Approaches, role of Palliative Care

**2:15 PM Q&A**

**2:30 PM – 3:00 PM**

**COFFEE BREAK**

**3:00 PM – 4:00 PM**

**PLENARY SESSION 8 – CASE PRESENTATIONS (Commodore E)**

**Chair:** David Feldman, MD

**3:00 PM Case #1: Patient Selection**, Asif Hasan, MD, Freeman Hospital, Newcastle Upon Tyne, United Kingdom

**3:10 PM Discussion**

**3:15 PM Case #2: Operative Approach**, Mark S. Slaughter, MD, University of Louisville, Louisville, KY, USA

**3: 25 PM Discussion**

**3:30 PM Case #3: Post-op Complication (RV failure),** David Feldman, MD, Abbott Northwestern Hospital, Minneapolis, MN, USA

**3:40 PM Discussion**

**3:45 PM Case #4: Long-term Complication (GI bleed),** Benjamin C. Sun, MD, Abbot Northwestern Hospital, Minneapolis, MN, USA

**3:55 PM Discussion**

**4:00 PM – 5:00 PM**

**CONCURRENT SMALL GROUP BREAK OUT SESSIONS**

- A. **Coordinator Roundtable,** Michael G. Petty, PhD, RN, University of Minnesota Medical Center, Minneapolis, MN, USA  
**(Commodore E)**
  - 4:00 pm** *Defining the Role of the VAD Coordinator*
  - 4:15 pm** *Planning for and Dealing With Programmatic Growth*
  - 4:35 pm** *Challenges for the Future*
  
- B. **Managing Device Infections,** Evgenij V. Potapov, MD, PhD, German Heart Institute, Berlin, Germany  
**(Commodore A)**
  - 4:00 pm** *Overview/summary*
  - 4:15 pm** *Case #1 and Discussion*
  - 4:35 pm** *Case #2 and Discussion*
  
- C. **Managing the RV,** Andreas Zuckermann, MD, PhD, Medical University of Vienna, Vienna, Austria  
**(Commodore B)**
  - 4:00 pm** *Overview/summary*
  - 4:15 pm** *Pre-Op RV Assessment: Case Presentation and Discussion*
  - 4:35 pm** *Post-Op RV Failure: Case Presentation and Discussion*
  
- D. **Setting the Pump: Intra-op, ICU, at Discharge, and Long Term,** Martin Strueber, MD, University Heart Center Leipzig, Germany  
**(Brittania)**
  - 4:00 pm** *Intra-op Approach: Case Study and Discussion*
  - 4:15 pm** *Post-op Case Study and Discussion*
  - 4:35 pm** *Long Term Case Study and Discussion*
  
- E. **Approach to Thrombosis,** Lee R. Goldberg, MD, MPH, University of Pennsylvania, Philadelphia, PA, USA  
**(Cambria)**
  - 4:00 pm** *Overview/summary*
  - 4:15 pm** *Case #1 and Discussion*
  - 4:35 pm** *Case #2 and Discussion*

**5:00 PM ADJOURN**