

**ISHLT ACADEMY**  
**CORE COMPETENCIES IN MECHANICAL CIRCULATORY SUPPORT**  
**APRIL 21, 2020**  
**MONTRÉAL, CANADA**

**Scientific Program Committee**

Chair: Jennifer Cook, MD, Arizona Sarver Heart Center, Tucson, AZ, USA  
Co-Chair: Christopher Hayward, MD, St. Vincent's Hospital, Sydney, Australia  
Co-Chair: Andre Simon, PhD, MD, Harefield Hospital, London, UK

**Faculty**

Saima Aslam, MD, MS, University of California San Diego Medical Center, San Diego, CA, USA  
Rebecca Cogswell, University of Minnesota, Minneapolis, MN, USA  
Jennifer Cook, MD, Arizona Sarver Heart Center, Tucson, AZ, USA  
Jens Garbade, MD, University of Leipzig, Leipzig, Germany  
Finn Gustafsson, MD, PhD, Rigshospitalet, Copenhagen, Denmark  
Jonathan Haft, MD, University of Michigan, Ann Arbor, MI, USA  
Christopher Hayward, MD, St. Vincent's Hospital, Sydney, Australia  
Douglas Horstmanshof, MD, Integris Baptist Medical Center, Oklahoma City, OK, USA  
Susan M. Joseph, MD, Baylor University Medical Center, Dallas, TX, USA  
Antonio Loforte, MD, PhD, S. Orsola Hospital, Bologna, Italy  
Kavitha Muthiah, MBChB, PhD, St. Vincent's Hospital, Sydney, Australia  
Evgenij Potapov, MD, PhD, Medtronic German Heart Institute, Berlin, Germany  
Diyar Saeed, MD, PhD, Leipzig Heart Center, Leipzig, Germany  
Christopher T. Salerno, MD, St. Vincent's Heart Center, Indianapolis, IN, USA  
Palak Shah, MD, MS, Inova Heart & Vascular Institute, Falls Church, VA, USA  
Andre Simon, PhD, MD, Harefield Hospital, London, UK

**Educational Goals**

This course is designed to provide essential clinical knowledge and professional skills to facilitate patient identification, selection, pre and post management of surgical and medical aspects involved in durable mechanical circulatory support.

**Target Audience**

This course is designed at the level of clinicians and allied health professionals who are in the early stages of their careers. This course would also benefit to those who are part of a new program or desire a comprehensive foundational review. The information presented covers core competencies and is intended to provide a strong foundation of the overarching principles of mechanical circulatory support.

**Learning Objectives**

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

1. Assess suitability for durable mechanical circulatory support (MCS) implantation.
2. Assess the impact the medical and social factors which influence patient outcomes during short and long-term MCS.
3. Recognize options for MCS support and the technological differences that may impact pump selection and patient/device management.
4. Identify appropriate implantation techniques.
5. Identify issues that impact immediate post implant management in the intensive care unit.
6. Manage MCS patients during long-term support.
7. Diagnose and manage common clinical scenarios, adverse events and extreme situations encountered after MCS.

## **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.

## **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 6.75 *AMA PRA Category 1 Credits*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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**ISHLT ACADEMY  
CORE COMPETENCIES IN MECHANICAL CIRCULATORY SUPPORT  
PRELIMINARY SCIENTIFIC PROGRAM SCHEDULE**

**7:00 AM – 7:45 AM**

**REGISTRATION & MORNING COFFEE**

**7:45 AM – 8:05 AM**

**WELCOME AND OVERVIEW**

Jennifer Cook, MD, Arizona Sarver Heart Center, Tucson, AZ, USA

**8:05 AM – 9:30 AM**

**SESSION 1 – PREPARE FOR SUCCESS**

**Chair:** Jennifer Cook, MD, Arizona Sarver Heart Center, Tucson, AZ, USA

**8:05 AM *MCS Technology 101***

Evgenij Potapov, MD, PhD, Medtronic German Heart Institute, Berlin, Germany

**Teaching/Discussion Points**

- a. Devices currently utilized in clinical practice

**8:20 AM *Outcomes in MCS***

Andre Simon, PhD, MD, Harefield Hospital, London, UK

**Teaching/Discussion Points**

- a. Review current trends of MCS utilization
- b. Reported outcomes: survival and adverse events

**8:35 AM Q&A with Panel**

**8:45 AM *When Should Patients be Referred: Warning Signs***

Douglas Horstmanshof, MD, Integris Baptist Medical Center, Oklahoma City, OK, USA

**Teaching/Discussion Points**

- a. Risk stratification in advanced heart failure
- b. Lessons learned in timely evaluation

**9:00 AM *Quality of Life after VAD and the Impact of Frailty and Social Behaviors on VAD Success***

Susan M. Joseph, MD, Baylor University Medical Center, Dallas, TX, USA

**Teaching/Discussion Points**

- a. Assessment of frailty in MCS
- b. Opportunities to improve outcomes related to social behaviors

**9:15 AM Q&A with Panel**

**9:30 AM – 10:00 AM**

**COFFEE BREAK**

**10:00 AM – 12:00 PM**

**SESSION 2 – STARTING RIGHT**

**Chair:** Christopher Hayward, MD, St. Vincent's Hospital, Sydney, Australia

**10:00 AM *Session Overview***

Christopher Hayward, MD, St. Vincent's Hospital, Sydney, Australia

**10:15 AM *IMACS 1: Short-Term Support***

Jonathan Haft, MD, University of Michigan, Ann Arbor, MI, USA

**Teaching/Discussion Points**

- a. IMACS definition in patient assessment
- b. Mechanical support as bridge

**10:30 AM *Assessing and Optimizing RV Function Pre-Operatively***

Finn Gustafsson, MD, PhD, Rigshospitalet, Copenhagen, Denmark

**Teaching/Discussion Points**

- a. Assessment of right ventricular function
- b. Optimization of RV prior to MCS

**10:45 AM *Surgical Implantation Overview***

Jens Garbade, MD, University of Leipzig, Leipzig, Germany

**Teaching/Discussion Points**

- a. Key aspects of implantation techniques
- b. Assessment of proper VAD positioning
- c. Alternative approaches

**11:00 AM *Q&A with Panel***

**11:15 AM *How Much is Too Much?***

Diyar Saeed, MD, PhD, University of Leipzig, Leipzig, Germany

**Teaching/Discussion Points**

- a) Management of aortic valve insufficiency
- b) Approach to tricuspid and mitral valve insufficiency
- c) Challenges like prior Dor procedures and Congenitals
- d) Concomitant interventions

**11:30 AM *Managing the RV Post-Op***

Christopher T. Salerno, MD, St. Vincent's Heart Center, Indianapolis, IN, USA

**Teaching/Discussion Points**

- a. Assessment of RV failure in ICU patient
- b. Methods of managing RV failure post op

**11:45 AM *Q&A with Panel***

**12:00 PM – 1:15 PM**

**LUNCH BREAK** (a box lunch is included in the registration fee)

**1:15 PM – 3:00 PM**

**SESSION 3 – PUMP IT UP**

**Chair:** Andre Simon, PhD, MD, Harefield Hospital, London, UK

**1:15 PM *Session Overview***

Andre Simon, PhD, MD, Harefield Hospital, London, UK

**1:25 PM *Optimal Outpatient Management of VAD Recipients***

Antonio Loforte, MD, PhD, S. Orsola Hospital, Bologna, Italy

**Teaching/Discussion Points**

- a. Overview of essential programmatic infrastructure
- b. Outline of patient assessment in ambulatory setting

**1:45 PM *Aortic Insufficiency in LVAD Recipients: Incidence, Screening, and Management***

Jennifer Cook, MD, Arizona Sarver Heart Center, Tucson, AZ, USA

**Teaching/Discussion Points**

- a. Identification of AI in MCS patient
- b. Management of AI in MCS patient

**1:55 PM *Arrhythmia in MCS***

Rebecca Cogswell, MD, University of Minnesota, Minneapolis, MN, USA

**Teaching/Discussion Points**

- a. Assessment of arrhythmia in MCS
- b. Management of arrhythmia post MCS

**2:10 PM *Q&A with Panel***

**2:25 PM *Alarms and Hardware Troubleshooting, Waveforms***

Christopher Hayward, MD, St. Vincent's Hospital, Sydney, Australia

**Teaching/Discussion Points**

- a. Review of abnormal waveforms
- b. Techniques for triage of ambulatory alarms

**2:30 PM *Pump Speed Optimization: The Role of Imaging and Hemodynamics***

Palak Shah, MD, MS, Inova Heart & Vascular Institute, Falls Church, VA, USA

**Teaching/Discussion Points**

- a. Review of commonly used MCS parameters
- b. Technical aspects of ramp study

**2:45 PM *Q&A with Panel***

**3:00 PM – 3:30 PM**

**COFFEE BREAK**

**3:30 PM – 4:30 PM**

**SESSION 4 – CLOTS AND BUGS**

**Chair:** Jennifer Cook, MD, Arizona Sarver Heart Center, Tucson, AZ, USA

**3:30 PM *Session Overview***

Jennifer Cook, MD, Arizona Sarver Heart Center, Tucson, AZ, USA

**3:40 PM *GI Bleeding***

Kavitha Muthiah, MBChB, PhD, St. Vincent's Hospital, Sydney, Australia

**Teaching/Discussion Points**

- a. Assessment of GI bleeding in MCS patient
- b. Management of GI bleeding in MCS patient

**3:55 PM *Antiplatelet Therapy, Anticoagulation and Bridging Strategies***

Diyar Saeed, MD, PhD, Leipzig Heart Center, Leipzig, Germany

**Teaching/Discussion Points**

- a. Strategy for anti-coagulation post MCS
- b. Bridging strategy for procedures and surgeries post MCS

**4:10 PM *Pump Thrombosis, Embolic Complications and Hemorrhagic Stroke***

Palak Shah, MD, MS, Inova Heart & Vascular Institute, Falls Church, VA, USA

**Teaching/Discussion Points**

- a. Identification and management of pump thrombosis
- b. Management of stroke in the MCS patient

**4:25 PM *LVAD Infections: Prevention, Diagnosis, and Management***

Saima Alsam, MD, MS, University of California San Diego Medical Center, San Diego, CA, USA

**Teaching/Discussion Points**

- a. Classification of infection in MCS patient
- b. Approach to drive line care and infection management

**4:40 PM *Q&A with Panel***

**4:45 PM *SUMMARY / EVALUATION***

Jennifer Cook, MD, Arizona Sarver Heart Center, Tucson, AZ, USA

**4:55 PM**

**ADJOURN**