

ISHLT
MECHANICAL CIRCULATORY SUPPORT ACADEMY – NORTH AMERICA
PRELIMINARY SCIENTIFIC PROGRAM
4 NOVEMBER, 2022
CHICAGO, IL USA

Scientific Program Committee

Chair: Jennifer Cook, MD, University of Cincinnati, Cincinnati, OH USA
Co-Chair: Shashank Sinha, MD, MSc, Inova Heart and Vascular Institute, Falls Church, VA USA
Co-Chair: Ezequiel Molina, MD, Piedmont Heart Institute, Atlanta, GA USA

Faculty

Rebecca Cogswell, University of Minnesota, Minneapolis, MN USA
Jennifer Cowger, MD, MS, Henry Ford Hospitals, Detroit, MI USA
Jennifer Cook, MD, University of Cincinnati, Cincinnati, OH USA
Stavros Drakos, MD, PhD, FACC, University of Utah, Salt Lake City, UT USA
Jonathan Grinstein, MD, University of Chicago, Chicago, IL USA
Jaime Hernandez-Montfort, MD, MPH, MSc Baylor Scott and White Health, Austin, TX USA
Douglas Horstmanshof, MD, Integris Baptist Medical Center, Oklahoma City, OK USA
Manreet Kanwar, MD, Allegheny General Hospital, Pittsburgh, Pennsylvania
Ezequiel Molina, MD, Piedmont Heart Institute, Atlanta, GA USA
Varinder Randhawa, MD, PhD, University of Toronto, Toronto, ON Canada
Palak Shah, MD, MS, Inova Heart and Vascular Institute, Falls Church, VA USA
Farooq Sheikh, MD, MedStar Heart and Vascular Institute, Washington, DC USA
Shashank S. Sinha, MD, MSc, Inova Heart & Vascular Institute, Falls Church, VA USA
Ryan Tedford, MD, Medical University of South Carolina, Charleston, SC USA

Educational Goals

This course is designed to provide essential clinical knowledge and professional skills to facilitate patient identification, selection, and pre and post-operative management of temporary and 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. Recognize indications and contraindications for temporary and durable mechanical circulatory support (MCS) implantation.
2. Assess the impact of medical and social factors that influence patient outcomes during short- and long-term MCS.
3. Recognize options for MCS support and the physiological and technological differences that may influence patient/device selection and management.
4. Identify problems and early complications that impact immediate post implant management in the intensive care unit.
5. Manage complications of MCS patients during long-term support.
6. Diagnose and manage common clinical scenarios, adverse events, and life-threatening emergencies encountered after MCS implantation

ISHLT
MECHANICAL CIRCULATORY SUPPORT ACADEMY – NORTH a.m. ERICA
PRELIMINARY SCIENTIFIC PROGRAM SCHEDULE

7:00 – 7:30 a.m.

REGISTRATION & MORNING COFFEE

7:30 – 7:45 a.m.

WELCOME AND OVERVIEW

Jennifer Cook, MD, University of Cincinnati, Cincinnati, OH USA

7:45 – 9:05 a.m.

SESSION 1

Chair: Jennifer Cook, MD, University of Cincinnati, Cincinnati, OH USA

7:45 – 8:00 a.m. (15 Minutes)

Introduction to Mechanical Circulatory Support: Current Trends and Outcomes

Shashank Sinha, MD, MSc, Inova Heart & Vascular Institute, Falls Church, VA USA

Teaching/Discussion Points

- a. Review current trends of temporary and durable MCS utilization
- b. Review clinical outcomes, including survival and adverse events

8:00 – 8:15 a.m. (15 Minutes)

Matching the Right Device to the Right Patient at the Right Time

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

Teaching/Discussion Points

- a. Patient selection in durable MCS: indications and contraindications
- b. Lessons learned in timely evaluation

8:15 – 8:25 a.m. (10 Minutes)

Q&A with Panel

8:25 – 8:40 a.m. (15 Minutes)

Surgical Implantation Overview

Ezequiel Molina, MD, Piedmont Heart Institute, Atlanta, GA USA

Teaching/Discussion Points

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

8:40 - 8:55 a.m. (15 Minutes)

Valvular Disease and VAD: How Much is Too Much?

Ezequiel Molina, MD, Piedmont Heart Institute, Atlanta, GA USA

Teaching/Discussion Points

- a) Management of aortic valve insufficiency
- b) Approach to tricuspid and mitral valve insufficiency
- c) Other concomitant interventions

8:55 – 9:05 a.m. (10 Minutes)

Q&A with Panel

9:05 – 9:25 a.m.

COFFEE BREAK

9:25 – 11:20 a.m.

SESSION 2

Chair: Shashank Sinha, MD, MSc, Inova Heart and Vascular Institute, Falls Church, Virginia

9:25 – 9:45 a.m. (20 Minutes)

Session Overview

Shashank Sinha, MD, MSc, Inova Heart and Vascular Institute, Falls Church, Virginia

9:45 – 10:00 a.m. (15 minutes)

The Approach to IMACS 1: Short-Term Mechanical Circulatory Support for Cardiogenic Shock

Manreet Kanwar, MD, Allegheny General Hospital, Pittsburgh, PA USA

Teaching/Discussion Points

- a. Early recognition and phenotyping patients in cardiogenic shock
- b. Decision making for temporary MCS: bridge to durable VAD, bridge to recovery or bridge to decision

10:00 – 10:15 a.m. (15 Minutes)

Percutaneous MCS Escalation and De-escalation Strategies for Cardiogenic Shock

Jaime Hernandez-Montfort, MD, MPH, MSc Baylor Scott and White Health, Austin, TX USA

Teaching/Discussion Points

- a. Identifying appropriate strategies for escalation in a.m.I vs ADHF shock
- b. Utilizing congestive hemodynamic profiles to determine optimal short-term MCS device selection

10:15 – 10:30 a.m. (15 minutes)

Optimal Critical Care Management of the MCS Patient

Varinder Randhawa, MD, PhD, University of Toronto, Toronto, ON Canada

Teaching/Discussion Points

- a. Recognizing readiness to wean and de-escalation strategies
- b. Complications of percutaneous MCS

10:30 – 10:45 a.m. (15 minutes)

Assessing and Optimizing RV Function Pre-Operatively

Ryan Tedford, MD, Medical University of South Carolina, Charleston, SC USA

Teaching/Discussion Points

- a. Non-invasive and Invasive assessment of right ventricular function
- b. Optimization of RV prior to MCS

10:45 – 11:00 a.m. (15 minutes)

Managing the RV Post-Operatively

Jonathan Grinstein, MD, University of Chicago, Chicago, IL USA

Teaching/Discussion Points

- a. Assessment of RV failure in postoperative ICU patients
- b. Strategies to manage RV failure postoperatively

11:00 – 11:20 a.m. (20 Minutes)

Q&A with Panel

11:20 a.m. – 1:20 p.m.

LUNCH BREAK /HANDS ON LEARNING OPPORTUNITY

1:20 – 3:15 p.m.

SESSION 3

Chair: Ezequiel Molina, MD, Piedmont Heart Institute, Atlanta, GA USA

1:20 – 1:35 p.m. (15 Minutes)

Session Overview

Ezequiel Molina, MD, Piedmont Heart Institute, Atlanta, GA USA

1:35 – 1:50 p.m. (15 Minutes)

Aortic Insufficiency in LVAD Recipients: Incidence, Screening, and Management

Jennifer Cowger, MD, MS, Henry Ford Hospitals, Detroit, MI USA

Teaching/Discussion Points

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

1:50 – 2:05 p.m. (15 Minutes)

Arrhythmias and Pacemaker/Defibrillator Therapy in MCS

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

Teaching/Discussion Points

- a. Assessment of arrhythmia in MCS patients
- b. Management of arrhythmia post MCS
- c. Indications for ICD and CRT-D in MCS patients

2:05 – 2:20 p.m. (15 Minutes)

Interpreting and Troubleshooting Pump Parameters

Jennifer Cook, MD, University of Cincinnati, Cincinnati, OH USA

Teaching/Discussion Points

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

2:20 – 2:35 p.m. (15 Minutes)

Q&A with Panel (Ezequiel Molina, MD, Jennifer Cowger, MD, Rebecca Cogswell, MD Jennifer Cook, MD,)

2:35 – 2:50 p.m. (15 Minutes)

Pump Speed Optimization: The Role of Imaging, Biomarkers, 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 studies
- c. How to prevent readmissions?

2:50 – 3:05 p.m. (15 Minutes)

LVAD Infections: Prevention, Diagnosis, and Management

Jennifer Cowger, MD, MS, Henry Ford Hospitals, Detroit, MI USA

Teaching/Discussion Points

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

3:05 – 3:15 p.m. (10 minutes)

Q&A with Panel (Ezequiel Molina, MD, Palak Shah, MD, MS, Jennifer Cowger, MD, MS)

3:15 p.m. – 3:30 p.m.

COFFEE BREAK

3:30 p.m. – 5:35 p.m.

SESSION 4

Chair: Jennifer Cook, MD, University of Cincinnati, Cincinnati, OH USA

3:30 – 3:50 p.m. (20 Minutes)

Session Overview

Jennifer Cook, MD, University of Cincinnati, Cincinnati, OH USA

3:50 – 4:05 p.m. (15 Minutes)

GI Bleeding

Jennifer Cook, MD, University of Cincinnati, Cincinnati, OH USA

Teaching/Discussion Points

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

4:05 – 4:20 p.m. (15 Minutes)

Antithrombotic Therapy and Thromboembolic Complications of MCS

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
- c. Anticoagulation strategies and bridging

4:20 – 4:30 p.m. (10 Minutes)

Q&A with Panel

4:30 – 4:45 p.m. (15 minutes)

Optimal Outpatient Management and Remote Monitoring of VAD Recipients

Farooq Sheikh, MD, MedStar Heart and Vascular Institute, Washington, DC USA

Teaching/Discussion Points

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

4:45 – 5:00 p.m. (15 Minutes)

The Impact of Frailty on VAD Success

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

Teaching/Discussion Points

- a. Assessment of frailty in MCS

5:00 – 5:15 p.m. (15 Minutes)

Promoting and Achieving Recovery with MCS

Stavros Drakos, MD, PhD, FACC, University of Utah

Teaching/Discussion Points

- A. Recognize characteristics that portend favorable prognosis for recovery
- B. Protocols and procedures to promote recovery
- C. Recognition of remission vs. recovery

5:15 – 5:25 p.m. (10 Minutes)

Q&A with Panel

5:25 – 5:35 p.m. (10 Minutes)

SUMMARY / EVALUATION

Jennifer Cook, MD, University of Cincinnati, Cincinnati, OH USA

5:35 p.m.

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