

# PRELIMINARY PROGRAM

## ISHLT2024

44th Annual Meeting & Scientific Sessions

**9 April** | Preconference  
**10-13 April** | Annual Meeting

Prague Congress Centre  
**PRAGUE, CZECH REPUBLIC**



**International Society for  
Heart and Lung Transplantation**

A society that includes basic science,  
the failing heart, and advanced lung disease



[ishlt.org/ishlt2024](https://ishlt.org/ishlt2024)

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### **3:00 - 4:15 p.m.**

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### **4:30 - 5:30 p.m.**

MINI ORAL ABSTRACT SESSIONS 01-07 (Details will be available in January 2024)

POSTER SESSION 2 (Non-CME, Details will be available in January 2024)

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### **10:00 - 11:15 a.m.**

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### **1:15 - 2:30 p.m.**

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### **3:00 - 4:15 p.m.**

ORAL ABSTRACT SESSIONS 29-35 (Details will be available in January 2024)

**4:30 - 5:30 p.m.**

MINI ORAL ABSTRACT SESSIONS 08-14 (Details will be available in January 2024)

POSTER SESSION 3 (Non-CME, Details will be available in January 2024)

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**1:00 - 2:15 p.m.**

ORAL ABSTRACT SESSIONS 41-46 (Details will be available in January 2024)

## WEDNESDAY, 10 APRIL, 2024

8:00 - 9:30 a.m.

**PLENARY 1: Opening General Session**

**Core Therapies:** ALL (HEART, LUNG, MCS, PVD)

**Practice Areas:** ALL (Anesthesiology and Critical Care, Cardiology, Cardiothoracic Surgery, Infectious Diseases, Nursing and Allied Health, Pathology, Pediatrics, Pharmacy, Pulmonology, Research and Immunology)

**Moderators:** Jason Christie, MD, MS, University of Pennsylvania, Philadelphia, PA, USA  
Goran Dellgren, MD, PhD, Sahlgrenska University Hospital, Goteborg, Sweden

8:00 a.m. **Moderator Introductions**

8:01 a.m. ***Early Career Featured Video***

8:02 a.m. ***ISHLT Scientific Program Chair Report***  
Goran Dellgren, MD, PhD, Sahlgrenska University Hospital, Göteborg, Sweden

*The Program Chair will provide an overview report of the ISHLT2023 Scientific Program.*

8:13 a.m. ***ISHLT President's Report***  
Jason Christie, MD, MS, University of Pennsylvania, Philadelphia, PA, USA

*The President of the ISHLT will address the members and meeting delegates.*

8:33 a.m. ***Featured Abstract (TBD)***

8:50 a.m. ***Transplantation in the Time of War***  
B. Todurov, G. Kovtun, S. Chaikovska, S. Sudakevych, M. Melnyk. Heart Institute of the Ministry of Health, Kiev, Ukraine

*The speaker will discuss overcoming obstacles to continue to provide heart and lung transplantation in Ukraine during war and what can be done going forward to continue to support transplantation efforts worldwide.*

## WEDNESDAY, 10 APRIL, 2024

10:00 - 11:15 a.m.

### SYMPOSIUM 01: Novel MCS Technologies: Where Are We Heading?

**Core Therapies:** MCS, HEART

**Practice Areas:** **Cardiothoracic Surgery**, Anesthesiology and Critical Care, Cardiology, Infectious Diseases, Nursing and Allied Health, Pediatrics, Pharmacy

**Summary:** There is an explosion of novel MCS devices in development and early stage clinical trials for advanced heart failure patients requiring intermediate or durable MCS support. This session will highlight novel MCS technologies and discuss what the future of MCS therapy holds for our patients with cardiogenic shock and recalcitrant heart failure. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Thomas Schloeglhofer, MSc, Medical University of Vienna, Vienna, Austria  
Barbara Wilkey, BSN, MPAS, MD, University of Colorado, Denver, CO, USA

10:00 a.m. ***Forging the Future: Engineering Novel Durable Mechanical Circulatory Support Devices***  
Mandeep Mehra, MBBS, MSc, FRCP, Harvard Medical School, Boston, MA, USA

*The talk will showcase groundbreaking MCS advances, including devices without external cables and with biocompatible surfaces that are bacteriostatic. The challenges of "bio-VADs" will be addressed as well as other novel devices that will revolutionize MCS and minimize infections.*

10:12 a.m. ***Pump Up the Jam, Pump It Up: Eliminating the Gap between Temporary and Durable MCS***  
Jane Wilcox, MD, MSc, Northwestern Univ Feinberg SoM, Chicago, IL, USA

*The speaker will discuss contemporary data regarding the development and use of temporary microaxial pumps for intermediate-term patient support as bridge to heart transplant or myocardial recovery, including indications, contraindications, access options, duration of support and complications.*

10:24 a.m. ***When Replacing One Ventricle is Insufficient***  
Anna Meyer, MD, Universitätsklinikum Heidelberg, Heidelberg, Germany

*This talk aims to explore the unmet needs of total artificial heart (TAH) support and provide a comprehensive review of the devices currently under development, shedding light on the innovations and challenges in the realm of TAH technology.*

10:36 a.m. ***Let's Bring the Pulse Back: Novel Wave Membrane Durable LVADs***  
Pascal Leprince, MD, PhD, Hopital de La Pitie Salpetriere, Sorbonne University, Paris, France

*Describe new durable LVAD technologies that include enhanced preload/afterload sensitivity and pulsatility as well as the potential of this technology to enhance outcomes for patients requiring durable MCS therapy.*

10:48 a.m. ***What Do the Next Generation Centrifugal-Flow LVADs Promise?***  
Francis Pagani, MD, PhD, University of Michigan, Ann Arbor, MI, USA

*Describe new centrifugal-flow LVAD technologies and its potential benefits over current generation LVADs.*

11:00 a.m. ***Panel Discussion***

## WEDNESDAY, 10 APRIL, 2024

10:00 - 11:15 a.m.

### **SYMPOSIUM 02: Looking Forward: The Evolving Landscape of Heart Allocation and Donor Selection Strategies**

**Core Therapies:** HEART, LUNG, MCS

**Practice Areas:** **Cardiology**, Anesthesiology and Critical Care, Cardiothoracic Surgery, Nursing and Allied Health, Pediatrics, Pharmacy

**Summary:** This session will explore the current landscape of donor allocation and utilization. This will encompass discussion of the global challenges in increasing donor use as well as the ethical allocation of donor organs with attention to multiorgan transplantation. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Kyung-Hee Kim, MD, PhD, Incheon Sejong Hospital, Seoul Korea, Republic of  
Matthew Lander, MD, Allegheny Health Network, Pittsburgh, PA, USA

10:00 a.m. ***Learning From Our Worldly Neighbors: Heart Allocation Strategies From Around the Globe***  
Carine Jasseron, Agence de la Biomédecine, Paris, France

*This talk will review heart allocation systems across the globe identifying the successes and challenges to creating an ideal system.*

10:12 a.m. ***Climate Changes in Multiorgan Allocation***  
Maryjane Farr, MD MSc, University of Texas Southwestern Medical Center, Dallas, TX, USA

*Increase in multiorgan transplant has led to the re-evaluation of allocation strategies given the implicit ethical considerations. This talk will serve to highlight allocation approaches to multiorgan transplant, implications for waiting list and transplant outcomes, and future policy development.*

10:24 a.m. ***The Heat is On: Challenges with Donor Availability and Acceptance in Heart Transplantation***  
Ivan Knezevic, MD, PhD, University Medical Centre Ljubljana, Ljubljana Slovenia

*This talk will highlight the global state of organ availability and acceptance rates for heart transplantation and discuss challenges and strategies to help increase the donor pool and donor utilization.*

10:36 a.m. ***Tiny Hearts, Big Mountains: Unraveling the Complexity of Donor Selection for Pediatric Heart Transplantation***  
Kae Watanabe, MD. Texas Children's Hospital, Houston, TX, USA

*This talk will discuss the challenges in donor selection for pediatric heart transplantation and factors that impact donor utilization.*

10:48 a.m. ***Is the Future Here?: Beyond the Horizon with Xenotransplantation***  
Muhammad Mohiuddin, MBBS, UMB Cardiac Xenotransplantation, Baltimore, MD, USA

*This talk will discuss the advances in xenotransplantation and present a roadmap for its future use in meeting the growing need for organs.*

11:00 a.m. ***Panel Discussion***

## WEDNESDAY, 10 APRIL, 2024

10:00 - 11:15 a.m.

**SYMPOSIUM 03: Respiratory Viruses in Lung Transplantation: With or Without SARS-COV-2**

**Core Therapies:** LUNG, PVD

**Practice Areas:** Infectious Diseases, Cardiothoracic Surgery, Pediatrics, Pharmacy, Pulmonology

**Summary:** Respiratory viruses' infections have negative impact in lung transplant recipient outcome and donor pool. This session will review the epidemiology, new approaches to prevent and treat these RVI and understanding key complications, including post-viral Aspergillus, acute rejection and CLAD. Data about lifesaving lung transplant for SARS-CoV-2 PCR positive pre-lung transplant candidates and donors will also be discussed. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Rayid Abdulqawi, MD, PhD, King Faisal Specialist Hosp. and Research Centre, Riyadh Saudi Arabia  
Olivia Kates, MD, MA, Johns Hopkins University, Baltimore, MD, USA

10:00 a.m. ***Prevention of RSV and Influenza in Lung Transplantation***  
Karen Doucette, MD, MSc. University of Alberta, Edmonton, AB, Canada

*This talk will summarize the new prevention strategies for respiratory syncytial virus and influenza in lung transplantation. Vaccines will be discussed.*

10:10 a.m. ***Respiratory Virus Positive Recipients: How Long Should We Wait?***  
Letizia Corinna Morlacchi, MD, Università degli Studi di Milano, Milano, Italy

*The speaker will discuss whether and when to proceed a lifesaving lung transplant for SARS-CoV-2 PCR positive pre-lung transplant candidates.*

10:20 a.m. ***The Lung Donor With a History of a Respiratory Viral Illness: How Long Should We Wait?***  
Ricardo La Hoz, MD, UT Southwestern MC, Dallas, TX, USA

*The COVID-19 pandemic taught us many important lessons, including the use of NAT+ donor organs for non-lung, then lung transplant candidates. The lessons learned could be applied to other viruses to safely expand the donor pool*

10:30 a.m. ***Fungal Infections after RVI: Epidemiology, Prevention, and Treatment Options***  
Me-Linh Luong, MD, Centre Hospitalier de l'Université de Montréal, Montréal, QC, Canada

*This talk will focus on the incidence of fungal infections after RVI, with focus on risk factors, prevention, and outcomes.*

10:40 a.m. ***Impact of RVI on Acute Rejection and CLAD in Lung Transplantation***  
Michael Perch, MD, Rigshospitalet, Copenhagen Denmark

*This talk will review available data on epidemiology of acute rejection and CLAD after RVI with a focus on the basic science data to understand pathogenesis.*

10:50 a.m. ***Panel Discussion***



## WEDNESDAY, 10 APRIL, 2024

10:00 - 11:15 a.m.

### **SYMPOSIUM 04: Come Together: Improving Survival in Pulmonary Arterial Hypertension**

**Core Therapies:** PVD, HEART, LUNG

**Practice Areas:** Pulmonology, Cardiology, Nursing and Allied Health, Pharmacy, Research and Immunology

**Summary:** This session will highlight the areas of unmet need in PAH which are responsible for poor survival. It will review the progress made through clinical trials and drug development and ongoing paucities in treatment of PH. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Rachel Crackett, MSc, Freeman Hospital, Newcastle Upon Tyne, UK  
Ioana Preston, MD, Tufts Medical Center, Boston, MA, USA

10:00 a.m. ***The Long and Winding Road: Factors Contributing to Poor Survival in PAH***  
Sandeep Sahay, MD, MSc, Houston Methodist Hospital, Houston, TX, USA

*This talk will focus on the variety of factors which are implicated in poor survival of patients with PAH. The speaker will start with the factors affecting delayed diagnosis, and then discuss variability in the treatment approaches affecting survival in PAH.*

10:12 a.m. ***Something: Novel Therapies and New Directions***  
Patricia Uber, PharmD, Thomas Jefferson University Hospital, Philadelphia, PA, USA

*This talk will focus on novel therapies for PAH that target vascular remodeling pathways. Aside from sotatercept, several medications are being evaluated for use against new treatment targets. The speaker will include information on the pathophysiology of metabolic dysfunction, inflammation, and other neurohormonal changes in PAH and then discuss the role of medications targeting these specific pathways. Will ultimately discuss the use of upfront triple combination treatment and the possible expansion to quadruple therapies based on these new pharmacologic developments.*

10:24 a.m. ***Don't Let Me Down: Underrepresentation of Patients with Comorbidities, How Do We Treat Them?***  
Stephan Rosenkranz, MD, University of Cologne, Cologne, Germany

*PAH therapies are offered to patients with comorbidities, who are underrepresented in randomized controlled trials. There are minimal data to help guide the use of PAH therapies in these patient populations. This talk will focus on the inclusion of these patients in trials and how to approach treatment with limited supporting data.*

10:36 a.m. ***Help! Risk Stratification in Adults to Improve Survival***  
Sophia Airhart, MD, Saint Alphonsus Medical Center, Boise, ID, USA

*Guidelines have recommended performing objective risk assessment and goal-oriented therapy as standard of care. Achieving low risk status is recommended as goal of treatment, but is achieving low risk status a surrogate for long term survival?*

10:48 a.m. ***Here Comes the Sun: Developments in Risk Stratification in Pediatrics***  
Allen Everett, MD, Johns Hopkins University School of Medicine, Baltimore, MD, USA

*To ensure appropriate initial treatment of pediatric patients with PAH, a useful risk assessment must be used. This talk will discuss developments in risk assessment in pediatric patients and the use of stratification tools in clinical practice to improve management and hopefully survival in this patient population.*

11:00 a.m. ***Panel Discussion***

## WEDNESDAY, 10 APRIL, 2024

10:00 - 11:15 a.m.

### SYMPOSIUM 05: The Computer will See you Now: AI and Machine Learning in Heart Transplantation

Core Therapies: HEART, LUNG

Practice Areas: **Cardiology**, Nursing and Allied Health, Pathology, Research and Immunology

**Summary:** The explosion (and hype) around artificial intelligence has been enormous, particularly with the advent of ChatGPT and other publicly available large language models that simulate human intelligence. Advances in other areas such as machine vision and machine learning are also finding applications in medicine and medical research. This session will explore the basics of AI, and machine learning, and then focus on transplant related applications that are in evolution. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Francesca Lunardi, MD, ScD, PhD, University of Padova, Padova, Italy  
Sudhir Kushwaha, MD. Mayo Clinic, Rochester, MN, USA

10:00 a.m. **Overview: Deep Learning, Large Language Models, AI Oh My!**  
Eileen Hsich, MD, Cleveland Clinic Foundation, Cleveland, OH, USA

*Introductory talk to discuss the breadth of AI, Machine learning, large language models and dispel myths and misconceptions. Details about the 30,000 foot view is provided and subsequent talks will hone in on specifics.*

10:15 a.m. **Through New Eyes: Computer Vision Applied to Heart and Lung Biopsies**  
Eliot Peyster, MD, MSc, Penn Medicine, Philadelphia, PA, USA

*This talk will review the value of computer vision / machine learning as applied to endomyocardial and lung biopsy slides. The opportunities and challenges of applying machine learning image-based tools to clinical practice will be covered.*

10:30 a.m. **Application of Classical Machine Learning in Thoracic Transplantation: Rationale, Best Use, and Challenges**  
Kevin Clerkin, MD, MSc, Columbia University Irving MC, New York, NY, USA

*Machine learning techniques can generate new insights in large data sets which are not apparent with usual analytic techniques. The talk will focus on use of supervised and unsupervised approaches to analysis with a discussion of potential utility of this approach.*

10:45 a.m. **Where Are We Going? Machine Learning to Predict Post-Transplant Trajectory**  
Johan Nilsson, MD, PhD, Skanes University Hospital, Lund, Sweden

*Recent work has identified ways to predict long term development of cardiac allograft vasculopathy and segment patients into trajectories. The utilization of machine learning to find patterns in data which lead to actionable insights is reviewed.*

11:00 a.m. **Panel Discussion**

**WEDNESDAY, 10 APRIL, 2024**

**10:00 - 11:15 a.m.**

**SYMPOSIUM 06: Surviving and Thriving After Cardiothoracic Transplantation**

**Core Therapies:** LUNG, HEART

**Practice Areas:** Nursing and Allied Health, Cardiology, Pediatrics, Pulmonology, Research and Immunology

**Summary:** The goal of cardiothoracic transplantation is to improve patient survival and quality of life. Quality of life reflects the impact of long-term physical and psychological sequelae. This session will discuss the psychological challenges experienced by patients and their caregivers after cardiothoracic transplantation and explore strategies to optimize wellbeing and overall quality of life after transplantation. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Meg Fregoso, MSN, NP-BC CCTC, Inova Fairfax Hospital, Falls Church, VA, USA  
Christiane Kugler, PhD, Albert-Ludwigs University Freiburg, Freiburg, Germany

10:00 a.m. ***Surviving But Not Thriving: Psychological Challenges After Cardiothoracic Transplantation***  
Melissa Sanchez, BSc Hons, PGDip, DClinPsy, MSc, Central and North West London NHS Foundation Trust, London, UK

*Psychological well-being and adaptation to transplantation contribute to overall quality of life. This talk will include a video recording of a patient's experience after cardiothoracic transplantation followed by a summary of the state of the science of the most pressing psychological challenges experienced by patients after cardiothoracic transplantation including mental health, organ integration, and suicidal ideation concerns.*

10:12 a.m. ***Caring for the Caregiver***  
Michael Petty, PhD, RN, APRN, CNS, CCNS, Minnesota Health Fairview, Univ of Minnesota MC, Minneapolis, MN, USA

*Lay-caregivers are integral to transplant care and outcomes but their transplant knowledge, mental health, and their potential to benefit from targeted support and intervention can be under-recognized. This talk will include a video recording of a caregiver's perspective on transplant caregiving followed by a summary of the state of the science of transplant caregiving including the physical, emotional, and economic impact of caregiving on the transplant caregiver, and the caregivers' impact on transplant patient outcomes.*

10:24 a.m. ***Ease Your Mind: Mindfulness-Based Interventions for Cardiothoracic Transplant***  
Stephanie Hsiao, MD, Stanford Health Care/Palo Alto VA, Palo Alto, CA, USA

*Cardiothoracic transplant recipients are at risk for psychological distress. This talk will focus on novel mindfulness-based interventions to improve psychological symptoms and wellbeing after cardiothoracic transplant.*

10:36 a.m. ***Developing a Support Network Through the Use of Peer Support***  
Samantha Anthony, PhD, MSW, Hospital for Sick Children, Toronto, ON, Canada

*Peer-to-peer support can increase connectedness, reduce isolation, facilitate knowledge acquisition and promote self-empowerment. This talk will consider the role of peer support and peer mentorship for informational and emotional support pre and post-transplant in both the adult and pediatric populations.*

10:48 a.m. ***Integrating Palliative Care Into Cardiothoracic Transplantation***  
Rebecca Colman, MD, MSc, FRCPC. University Health Network, Toronto, ON, Canada

*This talk will discuss integration of palliative care into pre- and post-cardiothoracic transplant care in children and adults and also those determined to be unsuitable for cardiothoracic transplantation and when transplant fails. Palliative care needs in cardiothoracic transplantation include managing symptoms, facilitating advanced care planning, and end of life decision-making, and supporting families.*

11:00 a.m. ***Panel Discussion***

## WEDNESDAY, 10 APRIL, 2024

11:45 a.m. - 12:45 p.m.

### SPECIAL SESSION: ISHLT en Español: Why is Heart Transplant Behind All Other Organs in Latin America? (Non-CME)

**Core Therapies:** HEART

**Practice Areas:** Cardiology, Cardiothoracic Surgery, Nursing and Allied Health

**Summary:** Heart failure prevalence is higher in Latin America in comparison to other continents. Paradoxically, heart transplant centers are underdeveloped, even in countries with established non-heart transplant programs. Latin American culture and economy pose unique challenges requiring tailored solutions. This session will address these issues with five 10-minute presentations followed by 25 minutes of Q&A/Panel Discussion with all speakers at the end of the session, led by the moderators. **This session will be conducted entirely in Spanish. CME is not offered for this session.**

**Moderators:** María Renedo, MD, Hospital Universitario Fundación Favaloro, Buenos Aires, Argentina  
Ana Alba, MD, PhD, Toronto General Hospital, Toronto, ON, Canada

11:45 a.m. ***Heart Transplant in Latin America? Burden of Heart Failure and Heart Transplant Activity in Latin America***

Viviana Navas, MD, NCH Heart Institute, Naples, FL, USA

*This talk will describe current status of heart transplant centers in Latin America and describe their reported challenges from patient selection to post-transplant care based on results from a recent survey.*

11:55 a.m. ***Choosing the Right Recipient at the Right Time: Is It Too Complicated? Is It Too Late?***

Lorena Montes, MD, Fundacion Cardiovascular de Colombia, Floridablanca, Colombia

*This presentation will describe challenges related to recipient selection and limitations of therapeutic options in patients with advanced heart failure in Latin America.*

12:05 p.m. ***Donor Selection: Too Many Candidates and Few Donors***

Alejandro Bertolotti, MD, Azienda Provinciale di Caltanissetta, Sicily, Italy

*This presentation will describe challenges related to donor availability and management in Latin America and propose creative ways to deal with them.*

12:15 p.m. ***Post-Transplant Outcomes and Care: Hope for the Best But Prepare for the Worst***

Douglas Greig, MD, MSc, P. Universidad Catolica de Chile, Santiago Chile

*This presentation will describe challenges in the post-transplant care imposed by Latin American culture, societal and economic factors.*

12:25 p.m. ***How to Develop a Successful Transplant Center***

Juan Ivey-Miranda, MD, Instituto Mexicano del Seguro Social, Mexico City Mexico

*This presentation will discuss potential solutions to the unique challenges imposed by the Latin American special circumstances, highlighting the key requirements to build and maintain a successful transplant program while ensuring optimal patient outcomes.*

12:35 p.m. ***Panel Discussion***

## WEDNESDAY, 10 APRIL, 2024

1:15 - 2:30 p.m.

### SYMPOSIUM 07: JHLT Year in Review

**Core Therapies:** ALL (HEART, LUNG, MCS, PVD)

**Practice Areas:** ALL (Anesthesiology and Critical Care, Cardiology, Cardiothoracic Surgery, Infectious Diseases, Nursing and Allied Health, Pathology, Pediatrics, Pharmacy, Pulmonology, Research and Immunology)

**Summary:** Editors will introduce some of the most influential papers published in JHLT from 2023. The Top 6 original research papers, one from each area of adult HTX, adult LTX, pediatric, adult MCS, PH, and ID, will be presented by Early Career Editors or Members followed by a brief Q&A discussion after each presentation, led by the Senior Editor. After each speaker's presentation, the session moderators will lead a brief audience Q&A segment.

**Moderators:** Heart: Yael Peled, MD, Sheba Medical Center, Tel Aviv, Israel  
Lung: Christine Lau, MD, MBA, University of Maryland, Baltimore, MD, USA  
MCS/PVD: Manreet Kanwar, MD, Allegheny General Hospital, Pittsburgh, PA, USA  
Peds: Joseph Rossano, MD, The Children's Hospital, Philadelphia, PA, USA

1:15 p.m. **Presentation of the JHLT and the Selection of the Presented Papers**

Yael Peled, MD, Sheba Medical Center, Tel Aviv, Israel

*The presenter will go over some brief data on JHLT metrics and will describe the process of how these JHLT papers were selected.*

1:25 p.m. **An Influential JHLT Adult MCS Paper in 2023**

Elian Giordanino, MD, Fundacion Favalaro, Buenos Aires, Argentina

*This presentation will describe one of the most influential JHLT papers in the adult MCS space. The presenter will go over the rationale for the study, the key findings, and how it moves the field forward.*

1:30 p.m. **Q&A Led by Moderators**

1:35 p.m. **An Influential JHLT Adult Lung Transplant Paper in 2023**

Anna Niroomand, BA, Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ, USA

*This presentation will describe one of the most influential JHLT papers in the adult lung transplant space. The presenter will go over the rationale for the study, the key findings, and how it moves the field forward.*

1:40 p.m. **Q&A Led by Moderators**

1:45 p.m. **An Influential JHLT Adult Pulmonary Arterial Hypertension Paper in 2023**

Thomas Cascino, MD, MSc, University of Michigan, Ann Arbor, MI, USA

*This presentation will describe one of the most influential JHLT papers in the area of adult Pulmonary Arterial Hypertension. The presenter will go over the rationale for the study, the key findings, and how it moves the field forward.*

1:50 p.m. **Q&A Led by Moderators**

1:55 p.m. **An Influential JHLT Infectious Diseases Paper in 2023**

Emily Eichenberger, MD, MHS, Emory University School of Medicine, Atlanta, GA, USA

*This presentation will describe one of the most influential JHLT papers in the area of Infectious Diseases. The presenter will go over the rationale for the study, the key findings, and how it moves the field forward.*

2:05 p.m.

***An Influential JHLT Adult Heart Transplant Paper in 2023***

Livia Goldraich, MD, MSc, Hospital de Clínicas, Porto Alegre, Brazil

*This presentation will describe one of the most influential JHLT papers in the adult heart transplant space. The presenter will go over the rationale for the study, the key findings, and how it moves the field forward.*

2:10 p.m.

***Q&A Led by Moderators***

2:15 p.m.

***An Influential JHLT Pediatric Transplant Paper in 2023***

Jack Luxford, BA, MD, Children's Hospital at Westmead, Sydney, Australia

*This presentation will describe one of the most influential JHLT papers in the pediatric heart transplant space. The presenter will go over the rationale for the study, the key findings, and how it moves the field forward.*

2:20 p.m.

***Q&A Led by Moderators***

2:25 p.m.

***Closing Remarks***

## WEDNESDAY, 10 APRIL, 2024

1:15 - 2:30 p.m.

**SYMPOSIUM 08: Till Explant Do Us Part: Patient Optimization and Transitioning Out of Temporary Mechanical Circulatory Support**

**Core Therapies:** MCS, HEART

**Practice Areas:** Cardiology, Anesthesiology and Critical Care, Cardiothoracic Surgery, Nursing and Allied Health

**Summary:** A large percentage of patients receiving a durable LVAD or transplant are being transitioned from a temporary support device (VA-ECMO or IABP or Impella). This session focuses on best practices surrounding the transitions. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Angela Lorts, MD, MBA, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA  
Christopher Allen, MBBS, FRACP, Fiona Stanley Hospital, Perth, Australia

1:15 p.m. ***Patient Selection, Surgical Techniques, Procedural Considerations for Temporary MCS Devices***

Jonathan Nattiv, USC, Keck Medical Center, Los Angeles, CA, USA

*This presentation will review options for tMCS device therapy and review appropriate patient selection. The speaker will cover anatomic considerations, patient characteristics, surgical implant/and explant techniques and clinical scenarios that guide referral for tMCS cannulation.*

1:27 p.m. ***Stress Test for RV Pre LVAD: Lessons From a Trans-Valvular Pump***

Marta Farrero Torres, MD, PhD, Hospital Clinic de Barcelona, Barcelona, Spain

*This talk will focus on when and how to optimize the RV pre LVAD using MCS support and how to apply that information on post op pump speed management.*

1:39 p.m. ***Mobilizing Patients on Temporary MCS: How to Empower Your ICUs***

Katrine Rolid, MSc, PhD, The Research Council of, Norway, Oslo, Norway

*This talk will focus on practical approach to mobilize pre LVAD patients cannulated with tMCS.*

1:51 p.m. ***Extra-Cardiac Care for Patients Supported on Temporary MCS Pre LVAD***

Sern Lim, MD, University Hospitals Birmingham NHS Trust, Birmingham, UK

*This talk will focus on the non-cardiac care aspects of patients supported on tMCS including pulmonary, nutrition, vascular and renal optimization.*

2:03 p.m. ***Anticoagulation Strategies for tMCS: Drugs, Therapeutic Targets, and Monitoring Strategies***

Sara Strout, PharmD, Johns Hopkins Medicine, Baltimore, MD, USA

*This talk will review current practices and evidence for anticoagulation in patients receiving tMCS.*

2:15 p.m. ***Panel Discussion***

## WEDNESDAY, 10 APRIL, 2024

1:15 - 2:30 p.m.

**SYMPOSIUM 09: Durable LVAD: Full Circle from Pre-Op Optimization to Long-Term Outcomes**

**Core Therapies: MCS**

**Practice Areas: Cardiology, Cardiothoracic Surgery**

**Summary:**

Durable LVAD therapy can dramatically improve the quality of life and outcomes of patients with advanced heart failure. However, significant challenges remain that limit more widespread use of this therapy. In this session we will focus on pre-op optimization with short-term mechanical circulatory support before durable LVAD implant. After LVAD implant, complications can still limit long-term outcomes. . The long term outcomes of durable VAD therapy will also be discussed - predictors of successful longevity and a good quality of life with a durable LVAD. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:**

Linda Van Laake, MD, PhD, University Medical Center, Utrecht Netherlands  
Arvind Bhimaraj, MD, Houston Methodist Hospital, Houston, TX, USA

1:15 p.m.

***DEBATE: Pre-op Optimization with Temporary MCS Enhances Outcomes for Patients Receiving a Durable LVAD (PRO)***

Carles Diez-Lopez, MD, PhD Student, Bellvitge University Hospital, Barcelona, Spain

*Pro discussion for the role of pre-op optimization of patients undergoing durable LVAD, using temporary MCS. The presentation will start with a brief case supporting the PRO position.*

1:27 p.m.

***DEBATE: Pre-op Optimization with Temporary MCS Enhances Outcomes for Patients Receiving a Durable LVAD (CON)***

Peter Ivak, M.D., Ph.D., IKEM, Prague, Prague Czech Republic

*Con discussion for the role of pre-op optimization of patients undergoing durable LVAD, using temporary MCS. The presentation will start with a brief case supporting the CON position.*

1:39 p.m.

***A Bloody Mess: How to Prevent and Manage Gastrointestinal Bleeding***

Ulrich Jorde, MD, Montefiore Medical Center, New York, NY, USA

*As the time on durable VAD progresses, complications may develop and the most common hemocompatibility-related adverse event is GI bleeding. The speaker will focus on what's new in the physiopathology behind GI bleeding, how to prevent, and how to treat it.*

1:54 p.m.

***Predictors of Longevity on an LVAD***

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

*There is a subset of patients who do extremely well on LVAD, some live on device support for > 10 years. This talk will discuss what defines those patients, what can we learn from these cases, and can we predict which patients will do well for a at least 5 years or longer?*

2:09 p.m.

***Panel Discussion***



## WEDNESDAY, 10 APRIL, 2024

1:15 - 2:30 p.m.

**SYMPOSIUM 10: Small Candidates in a Big World: The Impact of Organ Allocation Systems in Adult and Pediatric Lung Transplantation**

**Core Therapies: LUNG**

**Practice Areas: Cardiothoracic Surgery, Pediatrics, Pulmonology**

**Summary:** In 2023 the Composite allocation score was implemented in the US to allocate donor lungs did it improve access in all age groups? Donor lungs for small recipients are scarce. The current session places in issue in perspective and debates how well the CAS improves the organ-matching process with a special focus on pediatric patients. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Selim Arcasoy, MD, MPH, Columbia University, New York, NY, USA  
Brigitte Willemse, MD, PhD, University Medical Center Groningen, Groningen Netherlands

1:15 p.m.

***How to Find the Perfect Fit for Small Candidates?***

Rossa Brugh, BMBCh MA(Oxon) MRCPCH PhD, Great Ormond Street Hospital, London, UK

*This talk will describe the different lung allocation systems throughout the world focusing on allocation for infants/children and small adults. What is the better and more ethically correct approach?*

1:30 p.m.

***Composite Allocation Score: Moving Lung Allocation in the Right Direction?***

Erika Lease, MD, University of Washington, Seattle, WA, USA

*This talk will review the state of lung transplantation globally and provide an international perspective and will describe the critical elements of the current lung allocation system in the US and detail preliminary data on how it has achieved its goals.*

1:45 p.m.

***DEBATE: Composite Allocation Score - We've Never Been Better, CAS is the Best! (PRO)***

Edward Cantu, MD, MSCE, University of Pennsylvania, Philadelphia, PA, USA

*The speaker will argue in favor of the newly implemented composite allocation score (CAS) in lung transplantation, focusing on the improvements over the LAS system, particularly in relation to reducing waiting list mortality and describing how the composite score structure is well suited to continuing improvement.*

2:00 p.m.

***DEBATE: Composite Allocation Score - We've Never Been Better, CAS is the Best! (CON)***

Stuart Sweet, MD, PhD, Washington University, St. Louis, MO, USA

*The speaker will argue that although the newly implemented composite allocation score (CAS) has significant merit, it comes with both unintended consequences and unexplored methods to improve the underlying survival models.*

2:15 p.m.

***Panel Discussion***

## WEDNESDAY, 10 APRIL, 2024

1:15 - 2:30 p.m.

### **SYMPOSIUM 11: A Touch of Grey: Aging Biology and Holistic Clinical Care in Cardiothoracic Transplantation**

**Core Therapies:** LUNG, HEART

**Practice Areas:** **Pulmonology**, Cardiology, Infectious Diseases, Nursing and Allied Health, Pathology, Pharmacy, Research and Immunology

**Summary:** The average age of cardiothoracic transplant recipients is on the rise, but we continue to learn that age is more than a number. This session will focus on the clinical, translational, and basic research highlighting the unique challenges relevant to older cardiothoracic transplant candidates, recipients, and their caregivers. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Bart Vanaudenaerde, PhD, KU Leuven, Leuven, Belgium  
Joshua Diamond, MD. Univ of Pennsylvania, Philadelphia, PA, USA

1:15 p.m. ***Immunosenescence, Telomere Dysfunction, and Epigenetics in Aging: Effects on Transplant***  
Mark Snyder, MD, University of Pittsburgh MC, Pittsburgh, PA, USA

*Immunosenescence refers to the aging-related changes in the immune response contributing to many age-related disorders. The primary goal of this talk will discuss the impact of telomere dysfunction and epigenetic changes on the immune response with age, and discuss how this may impact rejection and infection risk, as well as tolerance of post-transplant medications.*

1:27 p.m. ***The Molecular Underpinnings of Frailty in Transplant Candidates and Recipients***  
John Greenland, MD, PhD, University of California, San Francisco, CA, USA

*While frailty is an age-associated clinical syndrome linked to poor cardiothoracic transplant outcomes, it also reflects aging-associated biologic processes. This talk will explore mitochondrial dysfunction, cytokine dysregulation, and cellular senescence that may lead to sarcopenia, fatigue, disability, and even rejection.*

1:39 p.m. ***Heaven Can Wait: Evaluation of Older Cardiothoracic Transplant Candidates***  
Osnat Shtraichman, MD, Rabin Medical Center, Petah Tiqva, Israel

*This talk will discuss the multidimensional nature of evaluating older adults for cardiothoracic transplantation including the impact of frailty, comorbidity burden, and other geriatric conditions on candidate selection. This talk will also consider the ethical challenges related to allocating organs to older individuals.*

1:51 p.m. ***Post-Transplant Self-Care Considerations for the Older Patient-Caregiver Dyad***  
Brittany Koons, PhD, Villanova University M. Louise Fitzpatrick College of Nursing, Philadelphia, PA, USA

*Robust caregiver support is critical for transplant listing, adherence to a complex post-transplant self-care regimen, and overall success in cardiothoracic transplantation. This talk will focus on the role of the patient-caregiver dyad in cardiothoracic transplant self-care and unique factors to consider among older patient-caregiver dyads.*

2:03 p.m. ***Quality of Life Following Cardiothoracic Transplantation: Does Recipient Age Matter?***  
Lianne Singer, MD, FRCPC, University Health Network, Toronto, ON, Canada

*Do older recipients achieve similar or different outcomes compared to younger recipients? This talk will review the impact of recipient age on clinical and quality of life outcomes post-cardiothoracic transplantation.*

2:15 p.m. ***Panel Discussion***

## WEDNESDAY, 10 APRIL, 2024

1:15 - 2:30 p.m.

### **SYMPOSIUM 12: Fragile - Handle with Care: Organ Management and Transportation**

**Core Therapies:** HEART, LUNG, MCS

**Practice Areas:** **Cardiothoracic Surgery**, Anesthesiology and Critical Care, Cardiology, Nursing and Allied Health

**Summary:** Over time, we have expanded selection criteria and adopted new preservation techniques for cardiac allografts. Nevertheless, many geographical disparities in the access and implementation of these preservation technologies still exist. After each speaker's presentation, the session moderators will lead a brief audience Q&A segment.

**Moderators:** Marisa Cevasco, MD, MPH, Hospital of the University of Pennsylvania, Philadelphia, PA, USA  
Yee Weng Wong, MBBS, MHS, FRACP, FCSANZ. Mayo Clinic, Rochester, MN, USA

1:15 p.m.

#### ***Risky Business: How Novel Risk Scores Will Affect Donation***

Kiran Khush, MD, MAS, Stanford University, Stanford, CA, USA

*This talk will focus on donor risk factors and donor management strategies as they affect recipient outcomes including primary graft dysfunction. Novel donor risk scores will be reviewed.*

1:25 p.m.

#### ***Q&A Led by Moderators***

1:30 p.m.

#### ***Carrier Beware: Cellular Biology and Molecular Changes of an Ex-Vivo Donor Heart***

Filio Billia, MD, PhD, University Health Network, Toronto, ON, Canada

*This talk will feature discussion of the molecular changes that occur in donor heart after procurement. Cell-based and novel treatment strategies to enhance graft and recipient outcomes will be highlighted.*

1:40 p.m.

#### ***Q&A Led by Moderators***

1:45 p.m.

#### ***A Secure Delivery: Strategies for Procurement, Preservation and Transport***

David McGiffin, MB,BS, FRACS, DmedHS, Alfred Health, Melbourne, Australia

*This talk will discuss and briefly compare current strategies for procurement, preservation and transport of cardiac allografts, and how these may improve organ function and expand the donor pool. Highlights of future challenges and opportunities will be addressed.*

1:55 p.m.

#### ***Q&A Led by Moderators***

2:00 p.m.

#### ***DEBATE: Cold Storage is Best in DBD and DCD Preservation and Transportation (PRO)***

Elena Sandoval, MD FEBCTS, Hospital Clinic, Barcelona, Spain

*Two speakers will debate the optimal approaches to DBD and DCD donor organ preservation and transportation. Speaker 1 will present in favor of cold storage. Speaker 2 will present in favor of ex-vivo. Each speaker will present for 10 minutes followed by 10 minutes for rebuttal and discussion among debaters.*

2:10 p.m.

#### ***DEBATE: Cold Storage is Best in DBD and DCD Preservation and Transportation (CON)***

Hassiba Smail, MD, Royal Papworth Hospital, NHS Trust, Cambridge, UK

*Two speakers will debate the optimal approaches to DBD and DCD donor organ preservation and transportation. Speaker 1 will present in favor of cold storage. Speaker 2 will present in favor of ex-vivo. Each speaker will present for 10 minutes followed by 10 minutes for rebuttal and discussion among debaters.*

2:20 p.m.

#### ***Q&A Led by Moderators***

## WEDNESDAY, 10 APRIL, 2024

1:15 - 2:30 p.m.

### SYMPOSIUM 13: Unraveling Cardiac Allograft Vasculopathy (CAV): Pathogenesis to Prevention

Core Therapies: HEART, MCS

Practice Areas: Cardiology, Research and Immunology

**Summary:** This symposium seeks to illuminate the complex world of CAV, from its pathogenesis to prevention strategies. It will feature state-of-the-art discussions on diagnostic biomarkers, multimodality imaging, and strategic planning for disease management. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Howard Eisen, MD, Thomas Jefferson University, Philadelphia, PA, USA  
Anique Ducharme, MD, MSc, Université de Montréal, Montreal, QC, Canada

1:15 p.m.

#### ***Defining the Landscape: CAV Pathogenesis***

Tor Clemmensen, MD, PhD, DMSc. Aarhus University Hospital, Denmark

*This talk will review and provide insights on key novel concepts of pathogenesis surrounding cardiac allograft vasculopathy, pointing to potential innovative therapeutic avenues.*

1:25 p.m.

#### ***Cutting Edge: Biomarkers for Detection and Prognostication***

Maxime Tremblay-Gravel, MD, MSc, Montreal Heart Institute, Montreal, QC, Canada

*Since there is a lack of validated biomarkers for CAV diagnosis or prognostication, this talk will explore roles of latest biomarkers within this inflammatory milieu.*

1:35 p.m.

#### ***Weeding Out the Competition: CAV Toolbox of Multimodality Imaging***

Sharon Chih, MBBS, University of Ottawa Heart Institute, Ottawa, ON, Canada

*This talk will focus on the multimodality imaging approach including noninvasive and invasive tests to detect early CAV.*

1:45 p.m.

#### ***The Forest and the Trees: CAV Prevention and Goals***

Lindsey Aurora, MD, Henry Ford Hospital, Detroit, MI, USA

*Main strategies for CAV prevention and treatment will be discussed. Assays to monitor immune response and potential for individualized methods for immune modulation will be presented.*

1:55 p.m.

#### ***The Road to Perdition: Defining Trajectories for the Development of CAV***

Guillaume Coutance, MD, PhD, Pitié-Salpêtrière Hospital, Paris, France

*This talk will discuss novel approaches for defining the natural history of developing CAV in patients.*

2:05 p.m.

#### ***Panel Discussion***

## THURSDAY, 11 APRIL, 2024

8:00 - 9:15 a.m.

### **SYMPOSIUM 14: AMR in Cardiothoracic Transplantation: View from the Heart Side with Lessons for the Lung**

**Core Therapies:** HEART, LUNG

**Practice Areas:** ALL (Anesthesiology and Critical Care, Cardiology, Cardiothoracic Surgery, Infectious Diseases, Nursing and Allied Health, Pathology, Pediatrics, Pharmacy, Pulmonology, Research and Immunology)

**Summary:** This session aims to help clinicians identify and manage the risk of transplantation in highly sensitized patients as well as manage short-and long-term immunologic issues. This session will focus on understanding of HLA and non-HLA antibodies in transplant recipients, learning about innovative research in transplantation tolerance, exploring the use of non-invasive tools for evaluation of AMR, discussion of transplant options across a positive crossmatch and contemporary use of photopheresis in acute rejection. Speakers will highlight similarities and differences between heart and lung AMR throughout the talks. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Erik Henriksen, PharmD, Stanford Healthcare, Stanford, CA, USA  
Deepa Mokshagundam, MD, Washington University, St. Louis, MO, USA

8:00 a.m. ***Two Sides of the Same Coin: Significance of HLA and Non-HLA Antibodies***  
Adriana Zeevi, PhD, University of Pittsburgh, Pittsburgh, PA, USA

*Most centers can test for HLA antibodies, but few look for non-HLA antibodies. The speaker will review the significance of both HLA and non-HLA antibodies and describe the clinical scenarios in heart and lung transplantation when non-HLA antibodies should be assessed.*

8:10 a.m. ***The Holy Grail of (B cell) Tolerance: Current Status and Novel Approaches***  
Joren Madsen, MD, DPhil, Massachusetts General Hospital, Boston, MA, USA

*The induction of donor specific tolerance would effectively eliminate the need for chronic immunosuppression and significantly improve long term outcome after cardiothoracic transplantation. In this talk, the audience can expect an overview about innovative research in this field: aiming for the holy grail of tolerance (or to be more realistic, tolerance favouring protocols that allow reduction of immunosuppressive burden) but with focus on humoral tolerance as there are numerous new approaches in preclinical development and entering clinical trials. e.g. the mixed chimerism approach, Treg therapy, graft modulation (MHC downregulation), low dose IL-2 therapy and many more.*

8:20 a.m. ***Cardiothoracic Transplant Across a Positive Crossmatch: International Perspectives on Donors, Management, and Outcomes***  
Claire Irving, MBChB, MRCPCH, MD, Children's Hospital Westmead, Sydney, Australia

*The purpose of this talk is to offer an international perspective on the consideration of highly sensitized patients for heart transplantation in regions where donor availability may be limited. Does this lead to more acceptance of positive crossmatch heart transplantation? What are the differences in the treatment? Are the outcomes including overall survival, development of CAV, risks and incidence of AMR, and retransplantation effected? Experience from lung transplantation across positive crossmatch will be outlined.*

8:30 a.m. ***Time to Change: Non-Invasive Biomarkers for Antibody-Mediated Rejection in Heart and Lung Transplants***  
Sean Agbor-Enoh, MD, PhD, National Institutes of Health, Bethesda, MD, USA

*Non-invasive tools have remarkable advantages over the traditional methods. The speaker will review if non-invasive monitoring can be used for those with higher immunological risks and if non-invasive tools could aid in treatment decisions for de novo DSA formation and during episodes of antibody-mediated rejection in heart and lung transplantation.*

8:40 a.m.

***Come to the Light: Use of Extracorporeal Photopheresis in the Management of Antibody-Mediated Rejection in Heart Transplantation***

Andreas Zuckermann, MD, Medical University of Vienna, Vienna, Austria

*Photopheresis is more commonly used for chronic rejection, with recent use in acute rejection and as induction in high-risk patients. The speaker will address contemporary clinical practice, research, and logistics in the use of photopheresis for the treatment of antibody-mediated rejection as additive therapy to intensified immunosuppression.*

8:50 a.m.

***Panel Discussion***

## THURSDAY, 11 APRIL, 2024

8:00 - 9:15 a.m.

**SYMPOSIUM 15: Don't Leave Us Behind: Heart Failure Management Outside of Guidelines, Trials, and Transplant Centers**

**Core Therapies:** HEART, PVD

**Practice Areas:** Cardiology, Infectious Diseases, Nursing and Allied Health, Pediatrics, Pharmacy

**Summary:** This session aims to share best practices for the medical management of certain heart failure and cardiomyopathy populations where current guidelines are lacking, clinical trials have not adequately been conducted, and/or care is being provided outside of VAD/Transplant Centers. After each speaker's presentation, the session moderators will lead a brief audience Q&A segment.

**Moderators:** Dylan Miller, MD, Intermountain Central Lab, Murray, UT, USA  
Shelley Zieroth, MD, St Boniface General Hosp, Winnipeg, MB, Canada

8:00 a.m. ***How Small is Too Small? Pushing Boundaries with Reverse Remodeling in Small Children***  
David Newland, PharmD, MS, Seattle Children's Hospital, Seattle, WA, USA

*This talk will cover the use of reverse remodeling heart failure therapies in small children down to infants with Heart Failure with Reduced Ejection Fraction. Pediatric experience on which medications have been used, dosing, monitoring, and adverse effects will be shared.*

8:12 a.m. **Q&A Led by Moderators**

8:15 a.m. ***The Right Medications for the Failing Right Heart***  
Jean-Luc Vachier, MD, HUB Hôpital Erasme, Anderlecht, Belgium

*Important differences between chronic sub-pulmonary right heart failure and chronic left heart failure will be discussed. Medical management options for chronic right heart failure will be reviewed.*

8:27 a.m. **Q&A Led by Moderators**

8:30 a.m. ***A Heart Bitten by a Bug***  
Rebecca Kumar, MD, Georgetown University Hospital Center, Washington, DC, USA

*This talk will review the current burden and management of parasitic cardiomyopathies focusing on Chagas disease, strongyloides and other relevant parasites.*

8:42 a.m. **Q&A Led by Moderators**

8:45 a.m. ***So Far Away: Managing Stage D Heart Failure Patients Outside of LVAD/Transplant Centers***  
Dipanjan Banerjee, MD MS, University of Hawai'i, Honolulu, HI, USA

*This talk will focus on practices to enhance care of the increasing end stage heart failure patients being managed outside of centers which perform LVAD implants and heart transplants. Discussion points will include delineating responsibility for care, how to best implement remote monitoring, standardize handoffs between institutions and triage emergent situations such as patient transfers.*

8:57 a.m. **Q&A Led by Moderators**

9:00 a.m. ***The Latest and Greatest for Specific Cardiomyopathies***  
Benjamin Wang, PharmD, Kaiser Santa Clara Medical Center, Santa Clara, CA, USA

*This talk will cover medical treatment advances for hypertrophic cardiomyopathy and other relevant specific cardiomyopathies such as sarcoidosis, arrhythmogenic cardiomyopathy and Duchenne muscular dystrophy.*

9:12 a.m. **Q&A Led by Moderators**

## THURSDAY, 11 APRIL, 2024

8:00 - 9:15 a.m.

### **SYMPOSIUM 16: Controversies in Management of End-Stage Pulmonary Hypertension**

**Core Therapies:** PVD, LUNG, MCS

**Practice Areas:** Pulmonology, Cardiology, Cardiothoracic Surgery, Pediatrics

**Summary:** This session will focus on controversies in management of end-stage pulmonary hypertension, with a focus on comparing and contrasting adult and pediatric care topics. This will include pros and cons of interventional interatrial and Potts shunts versus surgical Potts shunt procedures.

**Moderators:** Rachel Hopper, MD, Stanford University, Palo Alto, CA, USA  
Sebastien Hascoet, MD, PhD, Hopital Marie Lannelongue, Le Plessis-Robinson, France

8:00 a.m. ***Mechanical Support Strategies as Bridge to Transplant in Adults with Pulmonary Hypertension***

John Granton, MD, University of Toronto, Toronto, ON, Canada

*A review of mechanical support strategies in adults as a bridge to transplantation in patients with severe pulmonary hypertension and right heart failure, with a focus on the different surgical approaches and support options.*

8:15 a.m. ***Q&A Led by Moderators***

8:20 a.m. ***Why Technical Support Bridging Strategies Don't Work Well in Children With Severe Pulmonary Hypertension***

Sabrina Law, MD, Columbia University, New York, NY, USA

*An overview of limitations to mechanical support strategies (MCS) as bridge to transplant in children, with specific focus on risks and complications of MCS as well as diagnoses and clinical factors that preclude MCS.*

8:35 a.m. ***Q&A Led by Moderators***

8:40 a.m. ***DEBATE: Transcatheter Inter-atrial and Potts Shunt Procedures are the Best Approach (PRO)***

Damien Bonnet, MD, Hôpital Necker-Enfants Malades, Paris, France

*The speaker will argue in favor of percutaneous inter-atrial and Potts shunt technique with a focus on potential advantages over surgical approach.*

8:55 a.m. ***DEBATE: Transcatheter Inter-atrial and Potts Shunt Procedures are the Best Approach (CON)***

David Morales, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA

*The speaker will argue against percutaneous inter-atrial and Potts shunt procedures with a focus on the global experience and on potential advantages over interventional procedures. Will provide perspective of lung transplantation after Potts Shunt.*

9:10 a.m. ***Q&A Led by Moderators***



## THURSDAY, 11 APRIL, 2024

8:00 - 9:15 a.m.

### SYMPOSIUM 17: Take My Breath Away: Lung Transplants Using Smaller Grafts and Shorter Incisions

Core Therapies: LUNG, PVD

Practice Areas: Cardiothoracic Surgery, Pulmonology

**Summary:** This session focuses on surgical innovations in the field of lung transplantation, exploring new sizing approaches for donor organs in donor-recipient matching followed by a debate discussing the pros and cons for robotic assisted lung transplantations. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Jasleen Kukreja, MD, MPH, University of California San Francisco, San Francisco, CA, USA  
Edouard Sage, MD, PhD, Hôpital Foch, Suresnes, France

8:00 a.m. ***Lung Dimensions in Harmony: Strategies in Measuring Donor and Recipient Lung Size***  
Sahar Saddoughi, MD, PhD, Mayo Clinic, Rochester, MN, USA

*This talk will primarily focus on various strategies to size match organs such as pTLC vs height vs BMI including use of CT vs CXRs, sex, and pediatric donors to adult recipients etc.*

8:12 a.m. ***Outcomes of Size Matching versus Mismatching in Lung Transplantation***  
Deborah Levine, MD, Stanford University, Stanford, CA, USA

*The speaker will review the available literature, experience for outcomes of under vs oversized matching for different metrics including pTLC, height, weight etc.*

8:24 a.m. ***Measure Twice Cut Once: Surgical Innovations in Lung Re-sizing***  
Dirk Van Raemdonck, MD, PhD, University Hospitals Leuven, Leuven, Belgium

*This talk will cover surgical techniques for volume reducing lungs such as lobar, non anatomic resection, which lobes to take out, how to decide between anatomic vs non-anatomic, living donors, techniques to match vasculature and airways.*

8:36 a.m. ***DEBATE: Robotically-Assisted Lung Transplant - We Are Ready! (PRO)***  
Albert Jauregui, MD, PHD, Vall d'Hebron University Hospital, Barcelona, Spain

*The speaker will defend the use of robotic-assisted surgery for lung transplantation. The benefit of having a magnified view provide enhanced depth perception and improves accuracy. The initial experiences with this new approach is discussed.*

8:48 a.m. ***DEBATE: Robotically-Assisted Lung Transplant - We Are Ready! (CON)***  
Konrad Hoetzenecker, MD, Medical University of Vienna, Vienna, Austria

*The talk will question that robotic surgery is applicable in lung transplantation, discuss the feasibility especially for small centers, mention the surgical training required to perform a robotic lung transplant and will also ask how big is the benefit for the individual patient?*

9:00 a.m. ***Panel Discussion***

## THURSDAY, 11 APRIL, 2024

8:00 - 9:15 a.m.

### SYMPOSIUM 18: LVAD on the Margins

Core Therapies: MCS, HEART

Practice Areas: Cardiology, Anesthesiology and Critical Care, Cardiothoracic Surgery, Nursing and Allied Health

**Summary:** This session will explore LVAD candidacy among special patient populations. The first session will discuss women of childbearing age. The rest of the session will be a series of two debates: the first focusing on extreme age and the second on marginal renal function. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Chonyang Albert, MD, Robert Wood Johnson University Hospital, New Brunswick, NJ, USA  
Juliane Vierecke, MD, UC Health - University of Cincinnati, Cincinnati, OH, USA

8:00 a.m.

#### **Unique Challenges for Women with LVADs**

Juliane Vierecke, MD, UC Health - University of Cincinnati, Cincinnati, OH, USA

*This presenter will highlight unique challenges experienced by female patients and LVAD therapies. Focus on sizing, outcomes, as well as the complicated issue of pregnancy in VAD patients.*

8:12 a.m.

#### **DEBATE: LVAD in the Elderly Should Be Considered Standard of Care (PRO)**

Dominic Emerson, MD, Cedars-Sinai Medical Center, Los Angeles, CA, USA

*Review data supporting the use of LVAD therapy in the elderly. Highlight outcomes after LVAD implant.*

8:24 a.m.

#### **DEBATE: LVAD in the Elderly Should Be Considered Standard of Care (CON)**

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

*Review evidence against the use of LVAD therapy in the elderly. Highlight frailty, sarcopenia and impact on clinical outcomes.*

8:36 a.m.

#### **DEBATE: Patients with Chronic Kidney Disease Should Be Considered for LVAD Therapy (PRO)**

Jeffrey Teuteberg, MD, Stanford University SoM, Stanford, CA, USA

*This talk will review chronic kidney disease in heart failure and argue that patients should be considered for LVAD. Should venture into the feasibility of dialysis.*

8:48 a.m.

#### **DEBATE: Patients with Chronic Kidney Disease Should Be Considered for LVAD Therapy (CON)**

Finn Gustafsson, MD, PhD, Rigshospitalet, Copenhagen Denmark

*This talk will argue the counterpoint that patients with chronic kidney disease should not receive LVAD due to risk of dialysis. Should explore impact of CKD and dialysis on LVAD outcomes.*

9:00 a.m.

**Q&A Led by Moderators**

## THURSDAY, 11 APRIL, 2024

8:00 - 9:15 a.m.

### **SYMPOSIUM 19: Tiny Bugs versus Mighty Machines: Navigating MCS Infections**

**Core Therapies:** MCS, HEART

**Practice Areas:** **Infectious Diseases**, Cardiology, Cardiothoracic Surgery, Nursing and Allied Health, Pathology, Pediatrics, Pharmacy, Research and Immunology

**Summary:** This session will explore infectious considerations of MCS. Topics will include LVAD-associated infections and unique prevention and treatment approaches. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Mirnela Byku, MD, University of North Carolina, Chapel Hill, NC, USA  
Adrian daSilva-deAbreu, MD, MSc, PhD(c), Mayo Clinic-Rochester, Rochester, MN, USA

8:00 a.m. ***Spotless and Fortified, No Pests Inside: VAD Driveline Management Strategies***  
Sophie Smith, University Hospitals Birmingham, Birmingham, UK

*This talk will focus on best strategies to manage the driveline – cleaning, showering, trauma, anchoring etc. -in order to prevent infections.*

8:12 a.m. ***Combatting Infections in LVAD Patients: Unique Strategies for Prevention, Diagnosis, and Amelioration***  
Ann Woolley, MD, MPH, Brigham & Women's Hospital, Boston, MA, USA

*This talk will focus on innovative approaches to prevent and treat LVAD infections, including cold atmospheric plasma therapy and phage treatment, as well as the role of PET/CT and tagged WBC scans to diagnose VAD infections. The updated ISHLT infection definitions for MCS-supported patients will be covered.*

8:24 a.m. ***Like Soap to Bugs: Will This Problem Stick Around?***  
Stephanie Pouch, MD, MS, Emory University, Atlanta, GA, USA

*This talk will discuss various antibiotic management strategies in MCS patients, with special focus on early aggressive versus no treatment (more specifically on oral versus IV antibiotics, duration of treatment, long term prophylaxis, and surveillance strategies).*

8:36 a.m. ***Surgical Rescue: Treating Refractory LVAD Infections When Transplant is Not an Option***  
Julia Riebandt, MD, PhD, Medical University Vienna, Vienna, Austria

*The talk will delve into surgical strategies for refractory LVAD infections, focusing on the critical role for device explantation vs driveline repositioning vs debridement vs urgent transplant. Multiple cases and studies will be presented to illustrate innovative surgical techniques to treat LVAD infections.*

8:48 a.m. ***The Bridging Dilemma: Transplanting Patients with VAD Infections***  
Maria Avila, MD, Northwell Health, West Islip, NY, USA

*The talk will discuss strategies to bridge patients with VAD infections to transplant and their outcomes after transplant.*

9:00 a.m. ***Panel Discussion***

## THURSDAY, 11 APRIL, 2024

9:45 - 11:15 a.m.

**PLENARY 2: General Session II**

**Core Therapies:** ALL (HEART, LUNG, MCS, PVD)

**Practice Areas:** ALL (Anesthesiology and Critical Care, Cardiology, Cardiothoracic Surgery, Infectious Diseases, Nursing and Allied Health, Pathology, Pediatrics, Pharmacy, Pulmonology, Research and Immunology)

**Moderators:** Hermann Reichenspurner, MD, PhD, University Hospital Hamburg-Eppendorf, Hamburg, Germany  
Jon Kobashigawa, MD, Cedars-Sinai Heart Institute, Los Angeles, CA, USA

9:45 a.m. **Moderator Introductions**

9:46 a.m. **Early Career Featured Video**

9:47 a.m. **Featured Abstract (TBD)**

10:03 a.m. **Humanitarian Crisis - in General**

Jill John-Kall, MD, MSc, International Medical Corps, Los Angeles, CA, USA

*The Humanitarian Crisis talk will be given by two speakers. The first speaker will outline the general pattern and characteristics of a humanitarian crisis, its development and dynamics, its issues, and consequences, and how it is managed by a government funded non-profit organization. The second speaker will focus more of the humanitarian crisis occurring in Ukraine during the Russo-Ukrainian war.*

10:18 a.m. **Humanitarian Crisis - in Ukraine**

Yana Martyshyna, International Medical Corps, Kiev Ukraine

*The Humanitarian Crisis talk will be given by two speakers. The first speaker will outline the general pattern and characteristics of a humanitarian crisis, its development and dynamics, its issues, and consequences, and how it is managed by a government funded non-profit organization. The second speaker will focus more of the humanitarian crisis occurring in Ukraine during the Russo-Ukrainian war.*

10:30 a.m. **The HeArt of the Possible – My Patient Journey**

Glen Kelley, The Mended Hearts, Minneapolis, MN, USA

*Follow Glen's remarkable journey from a cornfield in the Midwestern United States to around the world. A life's journey marked by relentless battles with cancer, advanced heart failure, renal failure; while undergoing therapies of bone marrow transplantation, heart transplantation, dialysis, and eventual kidney transplantation. Through facing these adversities, he discovered his call to patient advocacy and support and will share thoughts and perspectives on disease and treatments with the purpose of increasing understanding among all professions of how such a life is lived.*

10:45 a.m.

**2024 ISHLT Lifetime Achievement Award Introduction and Lecture (To Be Announced in January!)**

10:45 a.m.

**Introduction to 2024 ISHLT Lifetime Achievement Award Recipient**

Simon Urschel, MD, University of Alberta, Edmonton, AB, Canada

10:50 a.m.

**2024 ISHLT Lifetime Achievement Award Recipient Lecture**

Lori West, MD, DPhil, University of Alberta, Edmonton, AB, Canada

## THURSDAY, 11 APRIL, 2024

1:15 - 2:30 p.m.

**SYMPOSIUM 20: I'll Tell You What I Want, What I Really Really Want: Advice for Early Career Professionals**

**Core Therapies:** ALL (HEART, LUNG, MCS, PVD)

**Practice Areas:** ALL (Anesthesiology and Critical Care, Cardiology, Cardiothoracic Surgery, Infectious Diseases, Nursing and Allied Health, Pathology, Pediatrics, Pharmacy, Pulmonology, Research and Immunology)

**Summary:** This session, designed by the ECTC, will provide an overview of advice for early career professionals as they start their careers, take on leadership roles (locally or within the society), become teachers/mentors, and navigate work-life balance including parenthood, while avoiding burnout. This "Pecha Kucha" style symposium is designed to keep presentations concise and fast-paced. The session will begin with a brief description of the **Unifying Theme**, followed by five speakers who will each have 8 minutes to discuss the theme, spending 20 seconds per slide and using 20 slides total. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Tara Veasey, PharmD, BCTXP, Allegheny General Hospital, Pittsburgh, PA, USA  
Edith Boyes, MSN, FNP-BC, CHFN, Ascension IL Alexian Brothers, Chicago, IL, USA

1:15 p.m. ***I Want to Work in Transplantation: Positioning for a Successful Clinical and Research Career***  
Julien Fessler, MD, Foch Lung Transplant Group, Paris, France

*This speaker will provide advice for the early career professional seeking a clinical and/or research career in thoracic transplant.*

1:23 p.m. ***I Want a Family: How Parenthood and Career are Totally Compatible***  
Hannah Copeland, MD, Lutheran Medical Group, Fort Wayne, IN, USA

*This speaker will discuss the balance of parenthood with career, with emphasis on the different challenges in different geographic locations (ex. maternity leave in Europe vs USA vs elsewhere).*

1:31 p.m. ***I Want to Educate: What Makes a Great Teacher and How to Get Results***  
Daniel Chambers, MBBS, MRCP, FRACP, MD, The Prince Charles Hospital, Brisbane, Australia

*This speaker will pull from their experience as a successful program director and will provide advice for teaching learners. They will discuss both how to teach and how to train others to teach.*

1:39 p.m. ***You Don't Need To Do Basic Science as an Early Career To Be Successful in Academia!***  
Shahnawaz Amdani, MD, Cleveland Clinic, Cleveland, OH, USA

*This talk will focus on highlighting how clinical research using large scale databases or designing and running clinical trials can be leveraged to position yourself as a clinician scientist.*

1:47 p.m. ***I Really Really Want to Survive: Self-Care and Avoiding Burnout***  
Melissa Cousino, PhD, University of Michigan, Ann Arbor, MI, USA

*This speaker will discuss the cultures that push professionals to take on too much, especially early in their career. They will describe risk factors for burnout and give advice on how to successfully build your career while avoiding burnout.*

1:55 p.m. ***Panel Discussion***

## THURSDAY, 11 APRIL, 2024

1:15 - 2:30 p.m.

### **SYMPOSIUM 21: A New Formula 1 Team: The Drive Ahead in DCD**

**Core Therapies:** HEART, LUNG

**Practice Areas:** **Cardiology**, Anesthesiology and Critical Care, Cardiothoracic Surgery

**Summary:** Transplant volumes have surged across the globe with the advent of Donation after Circulatory Death (DCD). The short-term post-transplant outcomes are on par with DBD heart transplants. With more programs embarking on the DCD journey - is this the holy grail to mitigate organ shortage? A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Clive Lewis, MA, MB, BChir, PhD, FFICM, FRCP, Royal Papworth Hospital, Cambridge, UK  
Katherine Clark, MD MBA, Yale University School of Medicine, New Haven, CT, USA

1:15 p.m.

#### ***G-Force: DCD Expansion***

Steven Tsui, MD, FRCS, Royal Papworth Hospital, Cambridge, UK

*This talk will focus on the current limitations of further expansion of the use of DCD, from the technology itself to programmatic and economic considerations. Include a beginner's guide for developing a DCD program from scratch.*

1:27 p.m.

#### ***Downforce: Normothermic Regional Perfusion or Pulsatile Perfusion in 2024?***

Jamila Kremer, MD, St. Vincent's Hospital Sydney, Darlinghurst, Australia

*This talk will review the benefits and discuss technical pitfalls, patient characteristics favorable for TA NRP, and success rate of organ utilization from DCD heart donation using TA NRP. It should include up to date evidence in pathophysiology of brain death in context of circulatory arrest, with emphasis on reversibility of brain function. Are there different donor phenotypes that would be suitable for a certain organ procurement strategy and how this might impact donor selection in clinical practice.*

1:39 p.m.

#### ***Pedal to Metal: Ex-Vivo Heart Perfusion in DCD***

John Um, MD, Nebraska Medicine, Omaha, NE, USA

*This talk will discuss the nuances of donor selection for DCD including factors that predict donor progression to allow successful organ procurement given strict limits for fWIT and indicators of the agonal phase. Include use of ex-vivo perfusion for transportation, benefits and technical pitfalls, patient characteristics, and success rate of organ utilization. Consider TA NRP followed by cold storage.*

1:51 p.m.

#### ***Torque: Maneuvering the Ethical Edge***

Nader Moazami, MD. NYU Langone Health, New York, NY, USA

*In this session, the speaker will explore the ethical considerations of DCD, including a discussion about the determination of death and timely organ retrieval. Discuss ethics around TA NRP and brain blood flow. Discuss controversies around TA NRP followed by cold storage. Consider both countries/jurisdictions where DCD heart transplantation is being done and those without a DCD program.*

2:03 p.m.

#### ***Safety Car: Long-term Outcomes of DCD Heart Transplantation***

Niels van der Kaaij, MD, PhD, UMC Utrecht, Utrecht, Netherlands

*This presentation will discuss current outcomes of patients transplanted at pioneer centers, who have over 3-5 years of experience with DCD Heart donation, comparing outcomes with standard death brain donors. Include outcomes from TA NRP vs DPP and machine perfusion vs cold storage.*

2:15 p.m.

#### ***Panel Discussion***

## THURSDAY, 11 APRIL, 2024

1:15 - 2:30 p.m.

**SYMPOSIUM 22: Breaking New Ground in AMR Science: Lung Perspective with Insights for the Heart**

**Core Therapies:** LUNG, HEART

**Practice Areas:** **Research and Immunology**, Cardiothoracic Surgery, Nursing and Allied Health, Pathology, Pediatrics, Pharmacy, Pulmonology

**Summary:** This session will review novel insights into the pathophysiology of cardiothoracic antibody-mediated rejection (AMR) that are paving the way for new translational approaches. Recent progress in AMR science raises hope for mechanism-targeted diagnostics and therapeutics. After each speaker's presentation, the session moderators will lead a brief audience Q&A segment.

**Moderators:** Christine Falk, PhD, Hannover Medical School, MHH, Hannover, Germany  
Jan Havlin, MD, University Hospital Motol, Prague Czech Republic

1:15 p.m.

***Lymphocytes in Pulmonary AMR: NK and T cells as Novel Predictors of Graft Failure and Treatment Targets***

Daniel Calabrese, MD, University of California, San Francisco, San Francisco, CA, USA

*This talk will describe how T cells and NK cells participate in AMR, including follicular helper cells priming B cells, and NK cell-mediated antibody dependent cell cytotoxicity. This talk will discuss T and NK cells as predictors of CLAD, the interaction between NK cell responses to CMV and AMR, and the lymphocytes as diagnostic and therapeutic targets.*

1:27 p.m.

***Q&A Led by Moderators***

1:30 p.m.

***Complement Activation: What Does It Mean in AMR?***

Hrishikesh Kulkarni, MD, MSCI, Washington University School of Medicine, St. Louis, MO, USA

*Complement activation is considered a major mediator in AMR but is it required? Typically measured by C4d staining, challenges in this marker limit its reliability. This talk will explore complement activation biomarkers, including C1q and S6-phosphorylation, and related treatment approaches.*

1:42 p.m.

***Q&A Led by Moderators***

1:45 p.m.

***Not Just Victims: The Active Role of Endothelial Cells in Thoracic AMR Pathogenesis***

Elaine Reed, PhD, UCLA Immunogenetics Center, Los Angeles, CA, USA

*While the endothelium is the physical barrier between donor and recipient, evidence suggests that the endothelium may participate in propagation of graft inflammation. This talk will review mechanisms of interactions between endothelial cells and innate and adaptive immune responses during AMR. This talk will also describe how donor specific antibody binding to HLA molecules can exert damaging effects on the endothelium and explore strategies to target HLA-antibody interactions.*

1:57 p.m.

***Q&A Led by Moderators***

2:00 p.m.

***AMR Tissue Molecular Diagnostics: Are Endotypes Hidden in the Transcriptional Oracle Bones?***

Ondrej Viklicky, IKEM Hospital, Prague Czech Republic

*This talk will review genomic signatures of AMR across solid organ transplantation and describe areas in which pulmonary and cardiac AMR differs from other organs. This talk will review potential endotypes of graft inflammation in AMR and their molecular correlates of airway brushing or biopsy tissue. This talk will also examine emerging AMR diagnostics, including S6 phosphorylation.*

2:12 p.m.

***Q&A Led by Moderators***

2:15 p.m.

***HLA Eplet Matching: Time to Move Beyond Epitopes?***

Lucy Sullivan, PhD, Australian Red Cross Lifeblood, Women's and Children's Hospital, North Adelaide, Australia

*This talk will provide the audience with an overview of what an HLA eplet is and how it is distinct from an HLA epitope, what constitutes a high-risk HLA eplet, and how HLA eplet matching can integrate with clinical practice, including the potential benefits and risk of this approach.*

2:27 p.m.

***Q&A Led by Moderators***



## THURSDAY, 11 APRIL, 2024

1:15 - 2:30 p.m.

### SYMPOSIUM 23: The Next Frontier In Pediatric Mechanical Circulatory Support

**Core Therapies:** MCS, HEART

**Practice Areas:** Pediatrics, Cardiology, Cardiothoracic Surgery, Nursing and Allied Health

**Summary:** This session will explore hot topics in pediatric mechanical circulatory support (MCS) that are clinically challenging with controversial therapeutic options. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Lucas Eastaugh, MBBS FRACP FCSANZ, Royal Children's Hospital, Melbourne, Australia  
Oliver Miera, MD, Deutsches Herzzentrum der Charité, Berlin, Germany

1:15 p.m.

#### ***Take Tour Time or Full Steam Ahead? Recovery in Pediatric MCS***

Matthew Fenton, MD, Great Ormond Street Hospital, London, UK

*The speaker will explore the controversy of whether to immediately list for heart transplant after VAD or delay listing to allow for possible recovery in pediatric patients with durable VADs.*

1:27 p.m.

#### ***It Might Be Shocking: Should We Be Implanting ICDs in Children With VADs?***

Martin Schweiger, MBA, FABS, FEBS, Children's Hospital Zurich, Zurich, Switzerland

*This speaker will discuss the evidence for placement of ICDs in children with VAD and other risk factors, such as severely decreased function and/or tachyarrhythmias.*

1:39 p.m.

#### ***Is There Ever a Right Time? Right Ventricular Assist Device versus Medical Therapy for Right Heart Failure After LVAD***

Jennifer Conway, MD, Stollery Children's Hospital, Edmonton, AB, Canada

*This speaker will discuss the outcomes and treatment of right ventricular failure in children with LVAD, including initial biventricular VAD support strategy as well as medical management versus subsequent RVAD.*

1:51 p.m.

#### ***Does Size Really Matter? Consideration for Bariatric Surgery in Children with Obesity and a VAD***

Steven Kindel, MD, Medical College of Wisconsin, Milwaukee, WI, USA

*This speaker will discuss the affect obesity on outcomes of pediatric VAD and whether bariatric surgery or medical intervention are viable options to improve outcomes in obese pediatric patients on VAD support.*

2:03 p.m.

#### ***Paracorporeal VADs in Children: Can We Overcome the Barriers to Discharge?***

Oliver Dewald, MD, University Hospital of Erlangen, Erlangen, Germany

*The speaker will discuss requirements and barriers to discharge of small children on paracorporeal VADs supported with the novel drive unit.*

2:15 p.m.

#### ***Panel Discussion***

## THURSDAY, 11 APRIL, 2024

1:15 - 2:30 p.m.

**SYMPOSIUM 24: To ECMO or Not to ECMO, That is the Question: A Noble Bridge for the Unlisted Lung Transplant Candidate?**

**Core Therapies:** LUNG, MCS, PVD

**Practice Areas:** Pulmonology, Anesthesiology and Critical Care, Cardiothoracic Surgery, Infectious Disease, Nursing and Allied Health, Pediatrics, Pharmacy, Research and Immunology

**Summary:** This session will provide highlights of the ISHLT consensus statement on the perioperative utilization of ECLS in lung transplantation. After an overview of ECMO bridging to lung transplantation, we will dive into molecular and morphological changes for patients on ECMO, and conclude with a pro/con debate on bridge to listing decision in lung transplantation for pediatric candidates. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Brandi Bottiger, MD, Duke University Hospital, Durham, NC, USA  
Arne Neyrinck, MD, PhD. Leuven University Hospitals, Leuven, Belgium

1:15 p.m. **Highlights from the Utilization of ECLS in Lung Transplantation Consensus Statement**  
Anna Reed, FRCP, PhD, Harefield Hospital, Harefield, UK

*Leads for the ISHLT perioperative use of ECLS consensus statement, will discuss preoperative, intraoperative, and postoperative highlights from the recent publication.*

1:27 p.m. **Back to the Future: Histological and Molecular Studies to Improve ECMO Treatment**  
Martin Goddard, FRCS, FRCPath, Papworth Hospital, Cambridge, UK

*There is little evidence of pathological/molecular findings for patients on ECMO. Pathology experts in the field will discuss recent morphological and molecular data whose knowledge represents an important step in the development and improvement of ECMO devices.*

1:39 p.m. **When the Pink Flags are Raised: Candidate Selection for ECMO Bridge to Lung Transplantation**  
Sandra Lindstedt, MD, PhD, Wallenberg Centre for Molecular Medicine, Lund Univ, Lund, Sweden

*The speaker will review specific controversial topics, such as likelihood of support to ambulation in specific candidates, including underlying disease physiology, candidate age, physical therapy potential, HLA sensitization status, candidate size and other challenges when making a decision*

1:51 p.m. **DEBATE: We Can Do This! Pediatric ECMO Bridge to Decision for Listing is Acceptable (PRO)**  
Don Hayes, MD, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

*In this debate, the speaker will make a case for ECMO bridging critically ill patients to decision for listing. ICU resources, candidate age, underlying disease, transfer to transplant center, evaluation testing and psychosocial assessment, consenting as well as other challenges will be reviewed. Case Stem: An awake 16 y.o. post-COVID ARDS presents for evaluation of ECMO bridging and potential lung transplantation. Challenges include non-CF bronchiectasis with multidrug resistant organisms, lack of social support, adherence to medical therapy and follow-up.*

2:03 p.m. **DEBATE: We Can Do This! Pediatric ECMO Bridge to Decision for Listing is Acceptable (CON)**  
Nicolaus Schwerk, MD, Hannover Medical School, Hannover, Germany

*Responding to the previous debate talk, the speaker will make a case against ECMO bridge to decision for lung transplantation. ICU resources, candidate age, underlying disease, transfer to transplant center, evaluation testing and psychosocial assessment, consenting as well as other challenges will be reviewed as obstacles. Case Stem: An awake 16 y.o. post-COVID ARDS presents for evaluation of ECMO bridging and potential lung transplantation. Challenges include non-CF bronchiectasis with multidrug resistant organisms, lack of social support, adherence to medical therapy and follow-up.*

2:15 p.m. **Panel Discussion**

## THURSDAY, 11 APRIL, 2024

1:15 - 2:30 p.m.

### **SYMPOSIUM 25: It's a Wonderful Life: Strategies to Live Better and Longer**

**Core Therapies:** HEART, LUNG, MCS

**Practice Areas:** **Cardiology**, Cardiothoracic Surgery, Infectious Diseases, Nursing and Allied Health, Pediatrics, Pharmacy

**Summary:** This session will focus on behavioral and psychosocial strategies to ensure both adult and pediatric transplant patients can reach the best health and quality of life possible. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Maricar Malinis, MD, Yale School of Medicine, New Haven, CT, USA  
Donna Guadiz, R.N., BSN, CCTC, Children's Hospital of Los Angeles, Los Angeles, CA, USA

1:15 p.m.

### ***Gonna Make you Sweat: Physical Activity Recommendations for Thoracic Transplant Recipients***

Louise Fuller, PhD, BApp Sc (Physio), Alfred Hospital, Melbourne, Australia

*From pumping iron to 5ks to HIIT workouts, physical activity plays a major role in overall health and wellness. This talk will focus on the current data surrounding physical activity for thoracic transplant patients, unique physiologic characteristics, as well as counseling for patients - especially those who were very athletic pre-transplant.*

1:27 p.m.

### ***Let's App-ly Ourselves: Tools for Medication Adherence***

Fay Burrows, BPharm, St Vincent's Hospital, Sydney, Australia

*Managing medication adherence post-transplant can be a challenge for both pediatric and adult patients. Digital tools and strategies for medication education and adherence will be explored in this presentation, as well as tests for early detection of medication non-adherence.*

1:39 p.m.

### ***You Are the Sunshine of My Life ... But Stay Out of the Sun!***

Angela Velleca, MHDS, BSN, RN, CCTC, Cedars-Sinai Smidt Heart Institute, Los Angeles, CA, USA

*This speaker will focus on skin cancer in the thoracic transplant recipient. Epidemiology of skin cancer types, diagnostic evaluation, and unique challenges faced by transplant patients will be discussed.*

1:51 p.m.

### ***Be Our Guest: What is Safe to Eat After Transplantation?***

Sonya Trinh, MD, Ochsner Health, New Orleans, LA, USA

*This speaker will discuss epidemiology of food-borne infections and the appropriate measures to mitigate risk for food borne infections.*

2:03 p.m.

### ***Let's Talk About Sex, Baby! Safe Sex Practices After Transplantation***

Jessica Lum, MD, Cleveland Clinic Foundation, Cleveland, OH, USA

*Good clinical practice to assess for STI risk will be discussed. Preventive and treatment strategies for STIs, with focus on Mpox, HIV, HPV, will be reviewed.*

2:15 p.m.

### ***Panel Discussion***

## THURSDAY, 11 APRIL, 2024

1:15 - 2:30 p.m.

**SYMPOSIUM 26: I Get By With a Little Help From My Friends: Multidisciplinary Care in Durable MCS**

**Core Therapies:** MCS, HEART

**Practice Areas:** Nursing and Allied Health, Cardiology

**Summary:** The purpose of this symposium is to discuss the clinical use and understanding of the QoLVAD questionnaire, discuss nutritional outcomes, psychological changes, changes in activity, rehabilitative strategies, and holistic care of the LVAD patient. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Yu Wu, DNP, UCSF Health, San Francisco, CA, USA  
Sarah Schettle, PA-C, MS, MBA, Mayo Clinic, Rochester, MN, USA

1:15 p.m.

***Don't Stop Believing in Quality of Life After LVAD Implantation***

Sarah Schroeder, PhD, ACNP-BC, MSN RN, Bryan Heart, Lincoln, NE, USA

*Quality of life is an important post-VAD factor to assess the success of VAD therapy. Heart failure should be resolved post-implant, leaving a gap of a multi-dimensional assessment options for QOL. This speaker will discuss in depth the domains of the QoLVAD questionnaire post-implant.*

1:27 p.m.

***Hungry Like the Wolf: Nutritional Outcomes Post LVAD Implant***

Desiree Robson, RN, BSc (Hons), St. Vincent's Hospital, Sydney, Australia

*Nutritional efforts after any surgery can be challenging due to lack of appetite, persistent cachexia, and changes in taste as well as weight management post-LVAD. The purpose of this talk is to describe nutritional changes post-LVAD implantation and challenges with cachexia as well as obesity post-LVAD.*

1:39 p.m.

***Somebody That I Used to Know: Patient-Reported Emotional Health Changes Post-LVAD***

Lindsay May, MD, University of Utah, Salt Lake City, UT, USA

*Patients go through a whole world of emotions when facing distress due to a medical illness, let alone having an LVAD placed. The purpose of this talk is to walk the audience through some of the most common psychological changes that patients experience post-LVAD.*

1:51 p.m.

***I Like to Move It, Move It: Post-Rehabilitation and Activity Following LVAD Implantation***

Andrew Woods, BSc, Newcastle Upon Tyne NHS Foundation Trust, Newcastle upon Tyne, UK

*Being active post-LVAD is a measure of success. Programs have unique ways of empowering LVAD patients to be active. This speaker will describe the importance of post-LVAD rehab and increased activity, including the description of the "Electric Cranks" (electric bikes) for rehabilitation.*

2:03 p.m.

***Heart and Soul: Dignity and Holistic Care at End of Life***

Savitri Fedson, MD, MA, Michael E. DeBakey VA Medical Center, Houston, TX, USA

*The speaker will discuss the approach to provide holistic care for patients at end of life on LVAD support.*

2:15 p.m.

***Panel Discussion***

## FRIDAY, 12 APRIL, 2024

8:15 - 9:30 a.m.

### **SYMPOSIUM 27: One Size Does Not Fit All: Obesity in End-Stage Heart and Lung Disease**

**Core Therapies:** ALL (HEART, LUNG, MCS, PVD)

**Practice Areas:** ALL (Anesthesiology and Critical Care, Cardiology, Cardiothoracic Surgery, Infectious Diseases, Nursing and Allied Health, Pathology, Pediatrics, Pharmacy, Pulmonology, Research and Immunology)

**Summary:** The worldwide prevalence of obesity nearly tripled between 1975 and 2016 and has now reached pandemic dimensions. People with obesity are less likely to be candidates for advanced heart and lung therapies, and have a higher incidence of complications after MCS and transplantation. With highly effective treatments for obesity, we finally have the tools to address this problem in our practices. But where do we start? This symposium will address (1) the effects of obesity on outcomes across all of our fields and (2) strategies for weight management in our clinical practices, including new medications and surgical approaches. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Colin Church, BSC(Hons), PhD, FRCP, Golden Jubilee National Hospital, Glasgow, UK  
Lenka Hoskova, MD, PhD, IKEM, Prague Czech Republic

8:15 a.m.

#### ***Two Birds With One Stone? Treating Obesity to Improve Outcomes in Heart Failure and Transplantation***

Peter MacDonald, MD, PhD, St. Vincent's Hospital, Sydney, Australia

*Obesity both increases the risk of developing heart failure and decreases survival after heart transplantation. We will review the association between obesity and outcomes in heart failure and heart transplantation, and the potential for anti-obesity therapies to improve outcomes.*

8:27 a.m.

#### ***Managing Obese Patients on Mechanical Circulatory Support***

Jonathan Rich, MD, Northwestern Feinberg School of Medicine, Chicago, IL, USA

*Obesity presents unique anatomic and logistical challenges to MCS while also influencing candidacy for subsequent transplantation. We will review outcomes for obese patients on MCS, challenges of MCS in obesity, and ways to overcome these challenges.*

8:39 a.m.

#### ***Quantifying Body Composition in Lung Transplantation: Is BMI the Best We Can Do?***

Michaela Anderson, MD, MS, University of Pennsylvania, Philadelphia, PA, USA

*Obesity increases the risk of PGD and death after lung transplantation, while weight loss may improve post-transplant survival. Speaker will review the data supporting use of BMI in candidate selection, and discuss alternative measures of body composition-related risk in lung transplant candidates. Speaker will also discuss some of the physiology/biological mechanisms of obesity and how it links to inflammation.*

8:51 a.m.

#### ***The Past, Present, and Future of Anti-Obesity Treatments***

Haifa Lyster, PhD, FRPharmS, FFRPS, Royal Brompton, Harefield, UK

*The world of anti-obesity medications is rapidly evolving. In this talk, we will review the physiology behind recently developed anti-obesity medications, the data for their use in our patient populations, and the future of obesity pharmacotherapy.*

9:03 a.m.

#### ***Innovative Approaches: Bariatric Surgery as Bridge to Heart and Lung Transplantation***

Nicolas Brozzi, MD, Cleveland Clinic Florida, Weston, FL, USA

*This presentation will discuss experience performing bariatric surgery (including use of Impella support), on morbidly obese patients with advanced heart and lung failure with respect to patient selection, technical pitfalls, and early and mid-term outcomes.*

9:15 a.m.

#### ***Panel Discussion***

## FRIDAY, 12 APRIL, 2024

8:15 - 9:30 a.m.

**SYMPOSIUM 28: What Should Come First: Flow or Preservation? The Role of NRP in DCD Lung Procurement and Preservation (Non-CME)**

**Core Therapies:** LUNG, HEART

**Practice Areas:** Cardiothoracic Surgery, Anesthesiology and Critical Care, Pulmonology

**Summary:** Two talks will describe the technical aspects of A-NRP and TA-NRP, and the options for lung procurement with each. Then there will be a PRO-CON debate + rebuttal on whether NRP will increase DCD lung utilization or not. The debate will be followed by panel discussion led by the session moderators. **No CME offered for this session.**

**Moderators:** Stephanie Chang, MD, NYU Langone Health, New York, NY, USA  
Anne Olland, MD PhD, University Hospital Strasbourg, Strasbourg, France

8:15 a.m. ***DCD Lung Procurement with Abdominal Normothermic Regional Perfusion (NRP)***  
David Gómez-de-Antonio, PhD, Hospital Universitario Puerta de Hierro Majadahonda., Madrid, Spain

*The speaker will present the context and rationale for Abdominal NRP and discuss technique of direct lung procurement and preservation when combined with abdominal NRP; do's and don'ts; How these affect lung procurement strategies; bleeding risk during abdominal NRP? Temperatures?*

8:25 a.m. ***DCD Lung Procurement with Thoracoabdominal Normothermic Regional Perfusion (NRP)***  
Marius Berman, MD, FRCS (CTh), Royal Papworth Hospital, Cambridge, UK

*The speaker will present the context and rationale for Thoracoabdominal-NRP and discuss technique of lung preservation and procurement in the setting of TA-NRP; do's and don'ts; How these affect lung procurement strategies; How to protect lungs from edema during TA-NRP?*

8:35 a.m. ***DEBATE: NRP Will Increase Utilization of DCD Lungs (PRO)***  
Pedro Catarino, MD, Cedars-Sinai, Los Angeles, CA, USA

*The speaker will argue that DCD lungs during TA-NRP can be safely preserved, recovered and transplanted. Does NRP injure or allow evaluation of the lungs? Utilization data and outcome data will be discussed. Is technique important, especially A-NRP vs TA-NRP? Agonal period?*

8:45 a.m. ***DEBATE: NRP Will Increase Utilization of DCD Lungs (CON)***  
Shaf Keshavjee, MD, MSc, FRCSC, FACS, UHN, Toronto, ON, Canada

*The speaker will argue that TA-NRP may damage good lungs so these may become no longer transplantable. Moreover, as all attention is focused on recovering and retrieving the DCD heart, DCD lungs may be forgotten and lower utilization is to be expected compared to direct procurement and preservation as with A-NRP. Does NRP injure or allow evaluation of the lungs? Utilization data as well as outcome data will be presented by the speaker. Is technique important, especially A-NRP vs TA-NRP? Impact of the agonal period on donor lung utilization will be discussed.*

8:55 a.m. ***Rebuttals***

9:05 a.m. ***Panel Discussion***

## FRIDAY, 12 APRIL, 2024

8:15 - 9:30 a.m.

### **SYMPOSIUM 29: Too Much! Debating Infectious Burdens of the (Pre-Transplant) Heart**

**Core Therapies:** HEART, MCS

**Practice Areas:** Infectious Diseases, Cardiology, Cardiothoracic Surgery, Pediatrics, Pharmacy

**Summary:** This session will present pros and cons of proceeding to heart transplantation in high-risk candidates with infection. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Jonathan Hand, MD, Ochsner Medical Center, New Orleans, LA, USA  
Javier Carbone, MD, PhD, Hospital General Universitario Gregorio Marañón, Madrid, Spain

8:15 a.m. **DEBATE; It's Now or Never: Transplant Adult Patients Despite Infection (PRO)**

Marta Hernandez Meneses, MD, PhD, Hospital Clínic de Barcelona, Barcelona, Spain

*This speaker will introduce two case scenarios and then argue for proceeding with transplantation in Scenarios 1 and 2. Speaker will address antimicrobial treatment and prophylaxis and considerations regarding induction immunosuppression in these scenarios. Will speak 7 minutes/scenario. Scenario 1: 40 y/o male or female with well controlled HIV admitted with cardiogenic shock requires temporary percutaneous pump support. Listed for transplant but develops fever and blood culture grows Candida albicans. Scenario 2: 35 y/o male or female LVAD patient with driveline discharge and fever presents with cardiogenic shock requiring IABP. Blood culture growing MRSA.*

8:30 a.m. **DEBATE: It's Now or Never: Transplant Adult Patients Despite Infection (CON)**

Cristiano Amarelli, MD, Monaldi Hospital, Napoli, Italy

*Speaker will argue for delaying transplantation in Scenarios 1 and 2 initially presented by PRO speaker and include how to address risks, antimicrobial treatment and prophylaxis, and considerations regarding induction immunosuppression in these scenarios. Will speak 7 minutes/scenario. Scenario 1: 40 y/o male or female with well controlled HIV admitted with cardiogenic shock requires temporary percutaneous pump support. Listed for transplant but develops fever and blood culture grows Candida albicans. Scenario 2: 35 y/o male or female LVAD patient with driveline discharge and fever presents with cardiogenic shock requiring IABP. Blood culture growing MRSA.*

8:45 a.m. **DEBATE: Suspicious Minds: Delay Transplant in Pediatric Patients with Infection (PRO)**

Jonathan Edelson, MD, Children's Hospital of Philadelphia, Philadelphia, PA, USA

*Speaker will introduce the two case scenarios and then argue for delaying transplantation in Scenarios 3 and 4 and include how to address risks, antimicrobial treatment and prophylaxis and considerations regarding induction immunosuppression in these scenarios. Will speak 7 minutes/scenario. Scenario 3: 5 y/o male or female with congenital CM called in for potential OHT and pre-operative RVP swab returns + for RSV (patient is asymptomatic). Scenario 4: 18 month old male or female on a durable ventricular assist device with Mycobacterium abscessus cannula infection.*

9:00 a.m. **DEBATE: Suspicious Minds: Delay Transplant in Pediatric Patients with Infection (CON)**

Lara Danziger-Isakov, MD, MPH, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

*This speaker will argue against delaying transplant and proceeding with transplantation in Scenarios 3 and 4 previously presented by PRO speaker. Speaker will address antimicrobial treatment and prophylaxis and considerations regarding induction immunosuppression in these scenarios. Will speak 7 minutes/scenario. Scenario 3: 5 y/o male or female with congenital CM called in for potential OHT and pre-operative RVP swab returns + for RSV (patient is asymptomatic). Scenario 4: 18 month old male or female on a durable ventricular assist device with Mycobacterium abscessus cannula infection.*

9:15 a.m. **Panel Discussion**

## FRIDAY, 12 APRIL, 2024

8:15 - 9:30 a.m.

**SYMPOSIUM 30: It's All About the Clots: Advancements in Chronic Thromboembolic Pulmonary Hypertension (CTEPH)**

**Core Therapies:** PVD, LUNG

**Practice Areas:** Cardiothoracic Surgery, Anesthesiology and Critical Care, Cardiology, Pathology, Pulmonology

**Summary:** The treatment options for chronic thromboembolic pulmonary hypertension (CTEPH) and chronic thromboembolic disease (CTED) are evolving. This session will focus on: choice of anticoagulation, medical therapy insights from French Registries, multimodal treatment approaches with PEA, BPA, and the follow-up of patients with CTEPH and CTED, providing new insights for the practicing clinician. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Michael Madani, MD, UC San Diego Health, Cardiovascular Institute, San Diego, CA, USA  
Marion Delcroix, MD, PhD, University Hospital of Leuven, Leuven, Belgium

8:15 a.m.

***What Do We Really Know About Anticoagulants in CTEPH and CTED?***

Tara Veasey, PharmD, BCTXP, Allegheny General Hospital, Pittsburgh, PA, USA

*This presentation will discuss choice of anticoagulation (DOAC versus KVA), potential complications of anticoagulant treatment in CTEPH, CTED and post-BPA/PEA, and management of therapy failure in acute on chronic pulmonary embolism.*

8:30 a.m.

***Medical Therapy for CTEPH: New Insights From Randomized Trials, Center Experience and Global Registries***

Marc Humbert, MD, PhD, University Paris-Saclay, Le Kremlin-Bicetre, France

*This presentation will focus on medical therapy options for CTEPH - before and after BPA/PEA - and timing considerations for initiating medical therapy to include novel management treatment patterns from global registries and expert centers, as well as available clinical randomized trials.*

8:45 a.m.

***Multimodal Interventions for CTEPH: Where Do We Start and Where Do We End?***

Marc De Perrot, MD, MSc, FRCSC, Toronto General Hospital, Toronto, ON, Canada

*Timing and combination of BPA and PEA, with focus on distal CTEPH; which of these methods should be the treatment of choice and how to manage different cases by different approaches.*

9:00 a.m.

***What Happens After? Long-Term Follow-up of Patients with CTEPH and CTED***

Isabelle Opitz, MD, University Hospital Zürich, Zurich, Switzerland

*This is an overview of long-term follow-up of CTEPH and CTED patients, and the role of medical treatment post PEA, including discussion on contributing pathophysiological factors in long term management.*

9:15 a.m.

***Panel Discussion***



## FRIDAY, 12 APRIL, 2024

8:15 - 9:30 a.m.

### **SYMPOSIUM 31: How Can Our Patients Successfully Cross the ECMO Bridge?**

**Core Therapies:** MCS, HEART

**Practice Areas:** **Cardiology**, Anesthesiology and Critical Care, Cardiothoracic Surgery

**Summary:** Discuss best ventilator support practices, anticoagulation management, patient mobility, use and titration of vasoactive agents while on VA-ECMO support. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Aniket Rali, MD, Vanderbilt University Medical Center, Nashville, TN, USA  
Kavitha Muthiah, MBChB, PhD, St. Vincent's Hospital, Sydney, Australia

8:15 a.m. ***ECMO Cannulation Techniques, Left Ventricular Unloading Approaches, and Hemodynamic Management During VA-ECMO Support***  
Ezequiel Molina, MD, Piedmont Heart Institute - Samsky AHF Center, Atlanta, GA, USA

*Review VA-ECMO cannulation alternatives and the evidence behind venting strategies for more favorable outcomes.*

8:27 a.m. ***Extra-Cardiac Care During VA-ECMO Support***  
Alastair Proudfoot, PhD, Barts Health NHS Trust, London, UK

*Focus on strategies to minimize extra cardiac complications while on VA-ECMO including infection prevention, nutritional optimization, volume status management, etc.*

8:39 a.m. ***Pushing Boundaries: Rehabilitation and Physical Therapy in Patients on VA-ECMO Support***  
Antonio Loforte, MD, PhD, University of Turin, Turin, Italy

*Analyze specific considerations for early mobilization, safe ambulation and rehabilitation in patients supported with VA-ECMO.*

8:51 a.m. ***The Final Frontier in ECMO: ECPR and Mobile ECMO, Rescuing Patients from the Dead***  
Guillaume Lebreton, MD, Hosp La Pitie, Paris, France

*Discuss recent advancements on ECPR initiation techniques and post procedure care. Highlight the capabilities of modern mobile ECMO units.*

9:03 a.m. ***ECMO Exit Strategies***  
Christopher Salerno, MD, University of Chicago, Chicago, IL, USA

*Discuss different VA-ECMO exit strategies including heart recovery, bridge to bridge, durable LVAD, heart transplantation, and withdrawal of care.*

9:15 a.m. ***Panel Discussion***

## FRIDAY, 12 APRIL, 2024

8:15 - 9:30 a.m.

### **SYMPOSIUM 32: Sunday Bloody Sunday: Managing Anticoagulation in Durable MCS**

**Core Therapies:** MCS, HEART

**Practice Areas:** Cardiology, Anesthesiology and Critical Care, Cardiothoracic Surgery

**Summary:** This session will highlight the recently published ISHLT guidelines, ARIES clinical trial and debate the use of direct oral anticoagulants in LVAD patients. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Kirandeep Sidhu, MD, Hospital of the Univ of Pennsylvania, Philadelphia, PA, USA  
TBD

8:15 a.m. ***Come Together, Right Now, Over AC: Clinical Pearls from the ISHLT Consensus Document on Durable MCS Anticoagulation***

Ian Hollis, PharmD, BCPS-AQ, University of North Carolina Medical Center, Chapel Hill, NC, USA

*This talk will review the newly published ISHLT antithrombotic recommendations for patients with continuous flow LVADs.*

8:27 a.m. ***Should It Stay or Should It Go? Antiplatelet Therapy in Durable MCS***

Paul Christian Schulze, MD, PhD, University Hospital Jena, Jena, Germany

*Antiplatelet agents are a recommended part of the antithrombotic protocol for CF-LVAD patients but the optimal drugs, doses, monitoring, and durations are in question. The speaker will tackle the question of when and where antiplatelet agents are helpful and when they may be able to be omitted. Additionally, the speaker will provide an update on the ARIES clinical trial in HM3 patients.*

8:39 a.m. ***Bad Blood: Managing Anticoagulation in Durable MCS***

Daryl Nnani, PharmD, Montefiore Medical Center, Bronx, NY, USA

*The speaker will highlight advances in managing outpatient anticoagulation therapy in durable MCS, including point of care testing, novel management strategies, and optimal INR targets for durable devices.*

8:51 a.m. ***DEBATE: Blood, Sweat and Tears: DOACs Should Be Used in LVAD Patients (PRO)***

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

*The presenter will discuss emerging data and practice patterns regarding the use of DOACs in durable MCS, reviewing patient selection criteria and optimal agents for use.*

9:03 a.m. ***DEBATE: Blood, Sweat and Tears: DOACs Should Be Used in LVAD Patients (CON)***

Maya Guglin, MD, Indiana Univ Health, Indianapolis, IN, USA

*This speaker will argue against using DOACs in durable MCS patients.*

9:15 a.m. ***Panel Discussion***

## FRIDAY, 12 APRIL, 2024

8:15 - 9:30 a.m.

### **SYMPOSIUM 33: You Want a Piece of Me? Pushing the Boundaries with Non-Invasive Heart Transplant Surveillance**

**Core Therapies:** HEART

**Practice Areas:** Cardiology, Anesthesiology and Critical Care, Cardiothoracic Surgery, Nursing and Allied Health, Pathology, Pediatrics, Pharmacy, Research and Immunology

**Summary:** This session will discuss advances in non-invasive heart transplant surveillance starting with the interplay of de-novo DSA and donor derived cell free DNA (dd-cfDNA), the evolving role of micro-RNA for rejection screening followed by debated topics on patient selection and individual nuances. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Anju Bhardwaj, MD, University of Texas/McGovern Med Sch, Houston, TX, USA  
Eugene DePasquale, MD, University of Southern California, Los Angeles, CA, USA

8:15 a.m. **DEBATE: Forget the Biopsy: Screen All with Blood Testing (PRO)**  
Shelley Hall, MD, Baylor University Medical Center, Dallas, TX, USA

*This debate-style talk will focus in justify why all heart transplant recipients can be safely monitored with non-invasive surveillance.*

8:25 a.m. **DEBATE: Forget the Biopsy: Screen All with Blood Testing (CON)**  
Debra Isaac, MD, University of Calgary, Calgary, AB, Canada

*This debate-style talk will Argue that only select heart transplant recipients are candidates for non-invasive rejection surveillance.*

8:35 a.m. **Rebuttals**

8:45 a.m. **Get a Piece of the Rock: What Only Biopsy Can Provide**  
Annalisa Angelini, MD, University of Padua, Padua, Italy

*There is a movement in the field to minimize biopsies, and move to mostly noninvasive screening. This potentially ignores the valuable insights that can only be obtained through analysis of cardiac tissue on a serial basis. This talk will review the role of techniques such as Molecular Microscope, impact of Quilty lesions, microvascular coronary artery disease, and lipofuscin deposits.*

8:55 a.m. **New Kids on the Block: Novel Biomarkers for Detection of Allograft Rejection and Function**  
Palak Shah, MD, MS, Inova Heart and Vascular Institute, Falls Church, VA, USA

*This talk will focus on novel biomarkers in allograft rejection and allograft function surveillance (like MMDX, exosomes).*

9:05 a.m. **Molecular Diagnostic Cost vs Utility**  
Mario Deng, MD, FACC, FESC, UCLA Medical Center, Los Angeles, CA, USA

*This talk will focus on reviewing the costs and utility of cell free DNA, biomarkers, MMDx, gene expression profiling, in the care of post-transplant patients.*

9:15 a.m. **Panel Discussion**

## FRIDAY, 12 APRIL, 2024

1:15 - 2:30 p.m.

### **SYMPOSIUM 34: Let's Get Critical: RV Failure in the Setting of Pulmonary Hypertension**

**Core Therapies:** PVD, MCS

**Practice Areas:** **Cardiology**, Anesthesiology and Critical Care, Cardiothoracic Surgery, Pathology, Pediatrics, Pharmacy, Pulmonology

**Summary:** Treatment and assessment of acute RV failure in the setting of pulmonary hypertension presents complex challenges, especially for early career specialists. Five expert speakers from around the globe will address these issues. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Mads Andersen, MD, PhD, Aarhus University Hospital, Aarhus Denmark  
Rebecca Klingbeil, DNP, CRNA, ARNP, Mayo Clinic, Jacksonville, FL, USA

1:15 p.m. ***Acute RV Failure Presentation and Epidemiology Across the Life Span***  
Maria Giovanna Trivieri, MD, PhD, Mount Sinai, New York, NY, USA

*This presentation will discuss the overall presentation and causes of acute and chronic RV failure, in infants, children, adults.*

1:27 p.m. ***Beyond Numbers: What Can the Waveforms Teach Us?***  
Sergio Caravita, MD, PhD, University of Bergamo, Bergamo; and Ospedale S Luca IRCCS Istituto Auxologico Italiano, Milano, Italy

*Focus on interpretation of hemodynamic waveforms in PH and their implications on diagnosis and prognosis.*

1:39 p.m. ***State-of-the-Art Echocardiography, Including Provocative Maneuvers and CMR Evaluation of the RV: The New Standard?***  
Katherine Kearney, MD, St Vincent's Hospital, Sydney, Australia

*This presentation will discuss echocardiographic assessment of the RV including 4D, deformation analysis, and stress echocardiographic (both exercise and pharmacologic). This presentation will discuss the CMR assessment of the RV, including invasive CMR.*

1:51 p.m. ***Beat It: How Do I Manage Hypoxemia, RHF, and Arrhythmias in PH?***  
Ryan Tedford, MD, Medical University of South Carolina, Charleston, SC, USA

*This talk focuses on critical care aspects of acute RV failure in the context of infection in the patient with PH; emerging pharmacological treatments in RV failure.*

2:03 p.m. ***We Didn't Start the Fire: Timing, Approach and Management of ECMO Bridge for the PH Patient***  
Archer Martin, MD, Mayo Clinic, Jacksonville, FL, USA

*This talk will discuss the nuances of optimal deployment of ECMO support as a bridge to transplantation in the pulmonary hypertension patient and the evidence and clinical strategy behind designing a successful intraoperative hemodynamic management of a PH patient on ECMO.*

2:15 p.m. ***Panel Discussion***

## FRIDAY, 12 APRIL, 2024

1:15 - 2:30 p.m.

### **SYMPOSIUM 35: No Guts No Glory: Fearless Expansions of the Lung Transplant Donor Pool**

**Core Therapies:** LUNG, PVD

**Practice Areas:** Cardiothoracic Surgery, Anesthesiology and Critical Care, Infectious Disease

**Summary:** Each speaker will present a brief clinical vignette followed by a presentation focusing on expanding the donor pool with the respective emerging donor populations. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Fabio Ius, MD, Hannover Medical School, Hannover, Germany  
Erin Lowery, MD, MS, Univ of Wisconsin School of Medicine and Public Health, Madison, WI, USA

1:15 p.m. ***The Lung Donor with Multidrug Resistant Gram-Negative Bacteremia or Candidemia***  
Orla Morrissey, MD, PhD, Alfred Health, Melbourne, Australia

*Donors, including lung donors, are at risk for MDR GNR infections and their proportion is predicted to increase, thus we need to adapt the use of novel beta lactams to safely expand the lung donor pool.*

1:25 p.m. ***Make It Go Away: Donor Malignancy***  
Brian Keller, MD, PhD, Massachusetts General Hospital, Boston, MA, USA

*Malignancy in the organ donor raises the possibility of disease transmission to the organ recipient. The speaker will discuss data on donor to recipient malignancy transmission and considerations when evaluating the donor with known or suspected malignancy as well as cancer at time of procurement.*

1:35 p.m. ***How Long is Too Long? Mechanical Ventilation in Donors***  
Jesper Magnusson, MD, PhD, Sahlgrenska University Hospital, Gothenburg, Sweden

*Prolonged mechanical ventilation can lead to infection, barotrauma and ventilator-induced lung injury. Some donors may require prolonged mechanical ventilation prior to death despite having no apparent injuries to the lungs. How long is too long on mechanical ventilation prior to donation?*

1:45 p.m. ***Take My Breath Away: Drowning and Asphyxiation in Donors***  
Sarah Tsou, University of California, San Francisco, San Francisco, CA, USA

*Variability exists in acceptance practices surrounding donor hanging, asphyxiation or drowning. Direct lung hypoxia, infection and aspiration risks are considerations in these controversial donors. Anecdotal experiences prevail despite emerging evidence that these donors may be safe for transplant.*

1:55 p.m. ***Good Lungs for Bad Recipients and Bad Lungs for Good Recipients: Balancing the Risk in Lung Transplantation***  
Wiebke Sommer, MD, University of Kiel, Kiel, Germany

*This talk will focus on the overall risk of lung transplantation, focusing on donor and recipient derived risk factors and what organ is suitable for recipients in different stages of end-stage lung disease. The talk will approach the utilization of extended criteria donor lungs and discuss what recipient cohort benefits when receiving marginal.*

2:05 p.m. ***Panel Discussion***

**FRIDAY, 12 APRIL, 2024**

**1:15 - 2:30 p.m.**

**SYMPOSIUM 36: It's All Relative: How Much is Too Much for Heart and Lung Transplantation**

**Core Therapies: HEART, LUNG**

**Practice Areas: Cardiology, Cardiothoracic Surgery, Nursing and Allied Health, Pediatrics, Pharmacy, Pulmonology**

**Summary:**

We regularly evaluate patients with relative risks to transplant. Clearly defined and adhered to contraindications can vary between centers, teams, and clinicians. Certain patient factors, such as adolescent/young adult age and health disparity/equity considerations, further murky the waters. This session will review various relative contraindications and challenge the speakers to discuss whether a patient should or should not be considered for transplant in different scenarios per the existing (or non-existing) literature. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:**

Julia Dumfarth, MD, PhD, University Clinic Innsbruck, Innsbruck, Austria  
Edward Horn, PharmD, University of Pittsburgh MC, Pittsburgh, PA, USA

**1:15 p.m.**

***It Was Just One Time: Prior Illicit Substance Use or Abuse***

Kristine McKenna, PhD. Seattle Children's Hospital, Seattle, WA, USA

*Abstinence from substances is a common pre-transplant requirement, but what if it was just 1 time use? What if the abstinence period has been 2 months instead of 3 or 6 and the patient is becoming sicker? The speaker will review data regarding substance use and transplant outcomes with consideration of relative risks vs contraindications. Case Question: Should we transplant a 17 year old male with CHD who is not a VAD candidate in shock with cocaine use 2 months ago with negative toxicology screen at admit?.*

**1:27 p.m.**

***Cry Me a Liver: Heart Transplant in the Setting of Liver Disease***

Andrew Morley-Smith, MRCP, PhD, Harefield Hospital, Harefield, UK

*A patient may have liver disease but not qualify for dual organ transplant. Will heart transplant be beneficial? What management approaches or medications need to be considered? Case Question: Should we transplant a 55 year old male patient with stage 3 bridging fibrosis?*

**1:39 p.m.**

***Are We There Yet? Transplantation From VA-ECMO***

Pierre-Emmanuel Noly, MD, PhD, Montreal Heart Institute, Montreal, QC, Canada

*A comprehensive overview of risk assessment of the candidate on VA-ECMO will be provided including review of current literature scores, challenges, assessment limitations (i.e., pulmonary vascular resistance) and optimization strategies. Case Question: Should we transplant a 45-year-old female patient on VA-ECMO post cardiac arrest and cardiogenic shock secondary to anterior STEMI with severe left ventricular systolic dysfunction, moderate-size apical thrombus, and underlying nonrevascularizable multivessel disease?*

**1:51 p.m.**

***How Do We Stack Up? Patients With Multiple Relative Contraindications***

Maria Crespo-Leiro, MD, Hospital Universitario A Coruña, A Coruña, Spain

*Is it 3 strikes and you're out? This speaker will discuss how to decide when the combination of multiple risk factors ultimately tip the balance to risk over benefit. The speaker will pull from experience and describe when patients have proven them wrong (or right) following transplant. Case Question: Should we transplant a 24-year-old single mother presenting for re-transplant in setting of failed graft following non-adherence in adolescent years with current (legal/medical) marijuana use with moderate renal dysfunction and a BMI of 35.*

**2:03 p.m.**

***Don't Let Me Down: Under-representation of Patients with Comorbidities, How Do We Treat Them?***

Kelly Bryce, PhD, Henry Ford Hospital, Detroit, MI, USA

*Ethical challenges and moral conundrums are common to our everyday work in pediatric and adult transplant/MCS medicine. At times, our roles as responsible organ stewards can be complicated by caring relationships with our own patients and their families, group decision making and personal biases, and the necessity to ensure equitable access to organ transplantation across racial and socioeconomic strata. This speaker will focus on ethical frameworks for transplant candidacy decision making while highlighting the interplays with moral distress for transplant clinicians.*

**2:15 p.m.**

***Panel Discussion***

## FRIDAY, 12 APRIL, 2024

1:15 - 2:30 p.m.

### **SYMPOSIUM 37: The Secret Sauce: Maximizing Patient Longevity with Durable LVAD Therapy**

**Core Therapies:** MCS, HEART

**Practice Areas:** **Cardiology**, Cardiothoracic Surgery, Nursing and Allied Health, Pharmacy

**Summary:** Optimization of durable VADs is a complex process that requires the expertise of a VAD team. This symposium will have multidisciplinary experts discussing key aspects of VAD patient care to enhance long term survival in our patients. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Jennifer Cook, MD, University of Cincinnati, Cincinnati, OH, USA  
Scott Silvestry, MD, Orlando, FL, USA

1:15 p.m. ***Planning Out Long-Term Success After LVAD: Lessons From the 2023 Durable MCS Guidelines***

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

*Discuss the top 10 clinical practice recommendations from the updated 2023 ISHLT guidelines for the management of mechanical circulatory support patients that highlight enhancements/best practices for long term survival.*

1:27 p.m. ***Medical Optimization with GDMT: When, How, Who?***

Bailey Colvin, PharmD, WVU Medicine Ruby Memorial Hospital, Morgantown, WV, USA

*Discuss timing and order of initiation of heart failure GDMT, "preferred" GDMT classes in LVAD patients, their role in promoting myocardial recovery, mitigating GI bleeding, and address gaps in research and highlight the need for future studies.*

1:39 p.m. ***It's All in the Numbers: Hemodynamic Monitoring for Optimization in Durable MCS***

Emil Najjar, MD, PhD, Karolinska University Hospital, Stockholm, Sweden

*Speaker will discuss strategies for hemodynamic optimization of durable MCS patients, including right heart catheterization and remote hemodynamic monitoring devices.*

1:51 p.m. ***A Picture is Worth 1000 RPMS: Echocardiographic Optimization in Durable MCS***

Nir Uriel, MD, New York Presbyterian, New York, NY, USA

*Speaker will review key parameters to assess during routine echocardiographic studies and the role of echocardiographic optimization in durable MCS.*

2:03 p.m. ***Holding the Line: Best Practices for Driveline Management in Contemporary Devices***

Kerk Ka Lee, BN, RN, National Heart Centre, Singapore Singapore

*Speaker will discuss best practices for driveline management, highlighting findings from the 2023 ISHLT MCS guidelines and the upcoming ICCAC workforce recommendations.*

2:15 p.m. ***Panel Discussion***

## FRIDAY, 12 APRIL, 2024

1:15 - 2:30 p.m.

### **SYMPOSIUM 38: Traversing the Age Continuum: Hot Topics Bridging Pediatric and Adult Transplant**

**Core Therapies:** HEART

**Practice Areas:** Pediatrics, Cardiology, Cardiothoracic Surgery, Nursing and Allied Health, Pharmacy

**Summary:** This session will bridge the worlds of pediatric and adult heart transplantation to discuss novel therapies and approaches across the age continuum. This will include discussion of ABO incompatible transplantation beyond infancy, desensitization in the setting of multiple cardiac surgeries, and multi-organ transplant in adults with Fontan physiology.

**Moderators:** Madeleine Townsend, MD, Cleveland Clinic Children's, Cleveland, OH, USA  
David Peng, MD, University of Michigan, Ann Arbor, MI, USA

1:15 p.m. **"This Had Better Work!" A History of ABO Incompatible Heart Transplantation**  
Lori West, MD, DPhil, University of Alberta, Edmonton, AB, Canada

*ABO incompatible heart transplantation stems from research demonstrating infants are born without isohemagglutinin titers. The first ABOi heart transplant was performed at the Hospital for Sick Children in 1996. The speaker will review the growing worldwide experience and impact of ABOi transplant on efficient allocation of organs.*

1:27 p.m. **Q&A Led by Moderators**

1:30 p.m. **ABOi Heart Transplant: Where Do We Go From Here?**  
Jacob Simmonds, Great Ormond Street Hospital for Children, London, UK

*ABOi heart transplant has had successful results in young children. Utilizing recent advances in anti-B-cell therapy as well as antibody removal techniques may make ABOi transplantation accessible to a wider and older population of transplant candidates in the future. This talk will highlight the potential opportunities and limits of ABO incompatibility in older patients with higher titers.*

1:42 p.m. **Q&A Led by Moderators**

1:45 p.m. **What About the (Sensitized) Elephant in the Room?**  
Chesney Castleberry, MD, Dell Medical School at the University of Texas in Austin, Austin, TX, USA

*This talk will feature a review of available desensitization therapies, including newer agents such as IL-6 blockers, co-stimulator blockade, anti-CD38 antibodies as well as management strategies of sensitized patients with positive virtual crossmatches in the era of decreased utilization of cytotoxic T cell crossmatch.*

1:57 p.m. **Q&A Led by Moderators**

2:00 p.m. **DEBATE: The Failing Fontan - Lily Livered? Heart-Only Transplant is the Best Plan (PRO)**  
Leigh Reardon, MD, UCLA, Los Angeles, CA, USA

*This debate talk will focus on ACHD patients with end-stage HF and Fontan. There were 2 recent JACC papers on this topic, one with risk assessment for adverse outcomes and the other on combined heart-liver transplant. The case debated will be a 20-year-old with banded varices and mild splenomegaly on ultrasound. No portal hypertension, stage 3 bridging fibrosis on biopsy. Mild chronic ascites but no paracenteses. Mild liver nodules, no hepatocellular carcinoma. The first speaker will take the vantage point that heart-only transplant is indicated.*

2:12 p.m. **DEBATE: The Failing Fontan - Lily Livered? Heart-Only Transplant is the Best Plan (CON)**  
Kathleen Simpson, MD, University of Colorado Denver, Denver, CO, USA



*This talk will be focused on ACHD patients with end-stage HF and Fontan. There were 2 recent JACC papers on this topic, one with risk assessment for adverse outcomes and the other on combined heart-liver transplant. The case debated will be a 20-year-old with banded varices and mild splenomegaly on ultrasound. No portal hypertension, stage 3 bridging fibrosis on biopsy. Mild chronic ascites but no paracenteses. Mild liver nodules, no hepatocellular carcinoma. The second speaker will take the vantage point of heart-liver transplant is indicated.*

2:24 p.m.

**Q&A Led by Moderators**

## FRIDAY, 12 APRIL, 2024

1:15 - 2:30 p.m.

### **SYMPOSIUM 39: Getting Creative with Immunosuppression After Lung Transplantation**

**Core Therapies:** LUNG, HEART

**Practice Areas:** Pulmonology, Cardiology, Cardiothoracic Surgery, Pharmacy, Research and Immunology

**Summary:** Many patients continue to suffer undesirable effects of immunosuppression. This session will address the possibilities of individualized immunosuppression after lung transplantation. In addition, the session will look at "novel" immunosuppression for lung transplant, though with standard commercially available immunosuppressants. After each speaker's presentation, the session moderators will lead a brief audience Q&A segment.

**Moderators:** Are Holm, MD, PhD, Oslo University Hospital, Oslo, Norway  
Alice Gray, MD, University of Colorado, Aurora, CO, USA

1:15 p.m. ***Functional Monitoring of Immunosuppression Post Lung Transplant***  
Laurie Snyder, MD, MHS, Duke University, Durham, NC, USA

*The speaker will outline how current immunosuppressive regimens work, and what data has been published to demonstrate functional monitoring of immunosuppression post solid organ transplant, with particular focus on lung transplant. In addition, the speaker will also outline how future studies can be designed towards tailored immunosuppression to have an impact on clinical practice.*

1:27 p.m. ***Q&A Led by Moderators***

1:30 p.m. ***Viral Load Guided Immunosuppression***  
Mark Greer, MB, Bch, Hannover Medical School, Hannover, Germany

*The speaker will present current knowledge about using viral load (EBV, TTV etc.) to monitor immunosuppression in solid organ transplant.*

1:42 p.m. ***Q&A Led by Moderators***

1:45 p.m. ***Induction: If Not For Everyone, For Who?***  
Madeline Morrison, PharmD, BCTXP, Vanderbilt University Medical Center, Nashville, TN, USA

*Induction therapy is used in about 1/2 of lung transplants. Is there potential to increase the use of induction without increasing the concern for rejection? Is there an advantage of one induction agent over another?*

1:57 p.m. ***Q&A Led by Moderators***

2:00 p.m. ***Minimizing of Immunosuppression After Lung Transplant: Current Evidence for Reducing or Replacing Standard Immunosuppression***  
Asbjørn Lunnan, PharmD, Oslo University Hosp, Oslo, Norway

*The speaker will outline the risks associated with current immunosuppressive regimens and the current evidence for reducing the dose of CNI, MMF or steroids. The focus should be on which patients should be considered for reducing or replacing standard immunosuppression.*

2:12 p.m. ***Q&A Led by Moderators***

2:15 p.m. ***Novel Therapeutic Options to Reduce Standard Maintenance Immunosuppression After Lung Transplant***  
Steven Ivulich, B.Pharm, PhD, Alfred Hospital, Melbourne, Australia

*The speaker will outline the current available evidence for alternative immunosuppressants that can be utilized as therapeutic options when standard immunosuppression cannot be tolerated. These include everolimus, belatacept and potentially others. These options are not likely to replace any*

*other agent, but on a patient-by-patient basis there may be some benefit. This talk will address who, when, and why we could consider these agents.*

2:27 p.m.

**Q&A Led by Moderators**

## FRIDAY, 12 APRIL, 2024

1:15 - 2:30 p.m.

### SYMPOSIUM 40: How Can You Mend a Broken New Heart

Core Therapies: HEART

Practice Areas: **Cardiology**, Anesthesiology and Critical Care, Cardiothoracic Surgery, Nursing and Allied Health, Pediatrics, Pharmacy, Research and Immunology

**Summary:** A review of the evidence on how to effectively treat PGF with an emphasis on the timely use of ECMO, and showing the similarities and differences of the same in DCD donors. The review also covers the effective recognition, prevention and treatment of vasoplegia in transplant patients after durable MCS support. Re-transplantation of the heart in the first year after primary transplantation due to poor results leads to unnecessary loss of the organ and deepens the disparity between donors and recipients. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Marco Masetti, MD, PhD, IRCCS S. Orsola Malpighi, University of Bologna, Bologna, Italy  
Bojan Vrtovec, MD, PhD, UMC Ljubljana, Ljubljana Slovenia

1:15 p.m. ***Post-Transplant PGD: Do We Need ECMO and When?***  
Yasbanoo Moayed, MD, UHN, Toronto, ON, Canada

*This talk will discuss the challenges of patients with post-transplant PGD, with an emphasis on the timely use of ECMO.*

1:27 p.m. ***DCD Heart - Post Transplant PGD: Is Everything the Same?***  
Filip Rega, MD, PhD, University Hospitals Leuven, Leuven, Belgium

*This lecture presents the similarities, but especially the differences, in the appearance and recognition of PGF after heart transplantation from DCD donors. The emphasis is on prevention, recognition and treatment with timely use of ECMO.*

1:39 p.m. ***Is Pre-Transplant MCS Killing My New Heart? Vasoplegia After Transplantation in Patients on Durable Mechanical Heart Support***  
Lauren Truby, MD, MS, UT Southwestern Medical Center, Dallas, TX, USA

*This talk will focus on the vasoplegia after transplantation in patients on durable mechanical heart support. Tips and tricks to better medical management.*

1:51 p.m. ***Tell Me What To Do for Successful MCS in Heart Transplant Recipients: Transplanted Heart Dysfunction in the First Year After Primary Transplantation***  
Holger Buchholz, MD, University of Alberta Hospital, Edmonton, AB, Canada

*This talk will focus on MCS use in heart tx recipients with late allograft dysfunction (in the first year). Tips and tricks to better selection and practical use of durable MCS (LVAD, RVAD, BiVAD, TAH) as a bridge to retransplantation, to avoid retransplantation in the first year after primary transplantation.*

2:03 p.m. ***Panel Discussion***

## SATURDAY, 13 APRIL, 2024

9:30 - 11:00 a.m.

**PLENARY 3: General Session III**

**Core Therapies:** ALL (HEART, LUNG, MCS, PVD)

**Practice Areas:** ALL (Anesthesiology and Critical Care, Cardiology, Cardiothoracic Surgery, Infectious Diseases, Nursing and Allied Health, Pathology, Pediatrics, Pharmacy, Pulmonology, Research and Immunology)

**Moderators:** Christian Benden, MD, MBA, FCCP, University of Zürich, Zurich, Switzerland  
Kiran Khush, MD, MAS, Stanford University, Palo Alto, CA, USA

9:30 a.m. **Moderator Introductions**

9:31 a.m. **Early Career Featured Video**

9:32 a.m. **Awards Presentations**

Kathleen Grady, PhD, RN, MS, FAAN, Northwestern University, Chicago, IL, USA

10:03 a.m. **Featured Abstract (TBD)**

10:20 a.m. **PRESIDENT'S DEBATE: The Future of Transplantation is Centralized Organ Donor Management (PRO)**

Dirk Van Raemdonck, MD, PhD, University Hospitals Leuven, Leuven, Belgium

*The pro-con debaters will illustrate how centralization of donor management may impact transplantation activity versus maintaining these activities "in-house" at donor hospitals as most institutions have managed this historically. Both speakers may from different sides discuss and illustrate how centralization (or not) may impact donor management to optimize donor procurement outcomes and increase viable organs, spur innovations in technologies such as NRP, and streamline the use of machines to optimize organs. The economic, legal, and ethical concerns for different donor approaches will be considered, including in the light of commercialization of organ optimization. Each speaker will have 15 minutes for their argument followed by 5 minutes for rebuttal.*

10:35 a.m. **PRESIDENT'S DEBATE: The Future of Transplantation is Centralized Organ Donor Management (CON)**

Daniel Goldstein, MD, Montefiore, Bronx, NY, USA

*The pro-con debaters will illustrate how centralization of donor management may impact transplantation activity versus maintaining these activities "in-house" at donor hospitals as most institutions have managed this historically. Both speakers may from different sides discuss and illustrate how centralization (or not) may impact donor management to optimize donor procurement outcomes and increase viable organs, spur innovations in technologies such as NRP, and streamline the use of machines to optimize organs. The economic, legal, and ethical concerns for different donor approaches will be considered, including in the light of commercialization of organ optimization. Each speaker will have 15 minutes for their argument followed by 5 minutes for rebuttal.*

10:50 a.m. **Rebuttals**

## SATURDAY, 13 APRIL, 2024

11:30 a.m. - 12:45 p.m.

### SYMPOSIUM 41: Live Long and Prosper: Improving Survival in Cardiogenic Shock

**Core Therapies:** MCS, HEART

**Practice Areas:** **Cardiology**, Anesthesiology and Critical Care, Cardiothoracic Surgery, Nursing, Allied Health, Pulmonology

**Summary:** Expert speakers will discuss the current gaps in diagnosis, prognostication and treatment. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Gerin Stevens, MD, PhD, Northwell, Manhasset, NY, USA  
Maria Renedo, MD, FUNDACION FAVALORO, Buenos Aires, Argentina

11:30 a.m. ***Captain's Log - Hour 24: What Should Occur in the First "Golden Day" of Shock Treatment?***  
Van-Khue Ton, MD, PhD, Massachusetts General Hospital, Boston, MA, USA

*Discuss timely diagnosis of shock, placement of invasive hemodynamic monitoring, medical management, inotropic therapy and timing of escalation of care to ECMO vs temporary MCS.*

11:40 a.m. ***Boggles the Mind: Under-utilization of Temporary MCS in Women and Under-represented Populations***  
Alanna Morris, MD, MSc, Emory University, Atlanta, GA, USA

*Women are more likely to be diagnosed with cardiogenic shock at a later stage when they are sicker and less likely to benefit from MCS. This talk will focus on highlighting the underutilization of temporary MCS in women and minorities and reviewing options of care for hub and spoke models.*

11:50 a.m. ***The Game of Life: Cardiogenic Shock Resource Utilization***  
Alexander Bernhardt, MD, University Heart and Vascular Center Hamburg, Hamburg, Germany

*Discuss factors that should be considered when managing patients with cardiogenic shock in resource rich and resource limited centers.*

12:00 p.m. ***Managing Risk: Rapid Transfer or Stabilize First?***  
Leonardo Salazar, MD, Fundacion Cardiovascular de, Colombia, Floridablanca, Colombia

*Discuss factors that should be considered when deciding when to hold a patient at a satellite center versus transfer to a tertiary center.*

12:10 p.m. ***Engage, Mr. Data! Artificial Intelligence's Role in Shock Diagnosis and Treatment***  
Elric Zweck, MD, University Hospital Düsseldorf, Düsseldorf, Germany

*Talk Description: Discuss how AI can help aide the diagnosis and treatment strategies in cardiogenic shock*

12:20 p.m. ***Panel Discussion***

## SATURDAY, 13 APRIL, 2024

11:30 a.m. - 12:45 p.m.

### **SYMPOSIUM 42: Against All Odds: Medical Management of Multiorgan Heart Transplant Recipients**

**Core Therapies:** HEART

**Practice Areas:** **Cardiology**, Anesthesiology and Critical Care, Cardiothoracic Surgery, Infectious Diseases, Nursing and Allied Health, Pediatrics, Pharmacy, Research and Immunology

**Summary:** This session will focus on the current evidence on when to refer patients with multiorgan failure for simultaneous cardiac transplantation and secondary organ, how these patients are bridged with mechanical circulatory support, discuss intraoperative/perioperative management of multiorgan heart transplant recipients, and their outcomes. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Jill Krisl, PharmD, Houston Methodist Hospital, Houston, TX, USA  
Nhue Do, MD, Vanderbilt University, Nashville, TN, USA

11:30 a.m. ***Why Stop At The Heart? Multiorgan Transplantation: Who and When?***  
Heather Ross, MD, MHSc, FRCPC, UHN Toronto General Hospital, Toronto, ON, Canada

*This talk will discuss the challenges of patients with multiorgan failure, when to refer them for multiorgan cardiac transplantation, and how best to minimize poor outcomes in these patients – how soon is too soon, and how late is too late.*

11:45 a.m. ***Bridging Patients Listed for Multiorgan Cardiac Transplantation With MCS***  
Ivan Netuka, MD, PhD, IKEM Institute for Clinical and Experimental Medicine, Prague, Czech Republic

*This talk will discuss how patients with multiorgan failure listed for simultaneous cardiac transplantation and secondary organ are bridged with MCS and impact on post-transplant survival.*

12:00 p.m. ***Intraoperative And Postoperative Management of Patients Undergoing Combined Heart-Liver Transplantation***  
Theresa Gelzinis, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

*This talk will focus on the perioperative aspects of combined heart-liver transplantation, including accurate and precise hemodynamic monitoring, better understanding and management of hemodynamic profiles, fluid management, prolonged vasoplegia and surgical considerations.*

12:15 p.m. ***Outcomes of Multiorgan Cardiac Transplantation***  
Hrvoje Gasparovic, MD, PhD, University Hospital Center, Zagreb, Croatia

*This talk will focus on early and late outcomes in multiorgan cardiac transplantation recipients, including current evidence for perioperative immunosuppressive strategies to minimize adverse outcomes.*

12:30 p.m. ***Panel Discussion***

## SATURDAY, 13 APRIL, 2024

11:30 a.m. - 12:45 p.m.

### SYMPOSIUM 43: A Hard Day's Night: Challenges in Managing Group 2 and Group 3 PH

**Core Therapies:** PVD

**Secondary Core Therapies:** LUNG

**Practice Areas:** Cardiology

**Secondary Practice Areas:** Anesthesiology and Critical Care, Cardiothoracic Surgery, Nursing and Allied Health, Pathology, Pediatrics, Pharmacy, Pulmonology

**Summary:** This session will focus on the unique challenges of management of patients with group 2 and group 3 pulmonary hypertension. It will cover challenges of diagnosis, surgical considerations, medical therapies, and advanced surgical therapies. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** John Aubert, MD, Centre Hosp Univ Vaudois et Univ de Lausanne, Lausanne, Switzerland  
Raymond Benza, MD, Mount Sinai Icahn School of Medicine, New York, NY, USA

11:30 a.m. ***I've Got a Feeling: Diagnosis and risk assessment in Group 2 and Group 3 PH***  
Clara Hjalmarsson, MD, PhD, Sahlgrenska University Hospital, Gothenburg, Sweden

*This talk will discuss the current challenges of diagnosing and assessing risk for group 2 and group 3 PH adult and pediatric patients. Diagnosis is complicated by the presence of co-morbid disease states and hemodynamic assessment is fraught with challenges in both populations. This talk provides an overview of diagnostic and assessment challenges in this group, and reviews strategies used to overcome diagnostic dilemmas.*

11:42 a.m. ***Back in the OR: Perioperative Considerations in Patients with Group 2 and Group 3 PH***  
Katherine Kozarek, MD. University of Wisconsin, Madison, WI, USA

*The speaker will focus on the unique risk assessment in preparation for non-transplant surgery and procedures in adult and pediatric patients with group 2 and group 3 pulmonary hypertension. The talk will cover anesthesia risk stratification, unique perioperative management, and post-operative pitfalls common in patients with Group 2 and Group 3 PH.*

11:54 a.m. ***Sgt Pepper's Not-So-Lonely Hearts: Medical and Interventional Therapies for Group 2 PH***  
Celine Dewachter, MD PhD, Erasme Hospital, Brussels, Belgium

*The speaker will discuss the current evidence for medical and interventional therapies in Group 2 adult and pediatric patients. They will discuss considerations for utilizing certain medical therapies (e.g., concomitant disease state, drug interactions) as well as practical application for selecting advanced interventional and surgical therapies.*

12:06 p.m. ***Here Comes the Drugs: Medical Therapies for Group 3***  
Amy Kiskaddon, PharmD, MBA, Johns Hopkins All Children's Hospital, St. Petersburg, FL, USA

*The speaker will discuss the current evidence for medical therapies in Group 3 adult and pediatric patients, considerations for utilizing certain medical therapies (e.g., concomitant disease state, drug interactions) as well as practical application for selecting therapies.*

12:18 p.m. ***Don't Let Me Down: What We Learned From Failed Trials in Group 2 and Group 3 PH***  
Nicholas Kolaitis, MD MAS, UCSF, San Francisco, CA, USA

*The speaker will discuss the multiple failed clinical trials in Group 2 and Group 3 PH. The talk will discuss why some trials have been unsuccessful, how to select the correct patient population for clinical trials, and how future Group 2 and Group 3 PH trials should be designed.*

12:30 p.m. ***Panel Discussion***



## SATURDAY, 13 APRIL, 2024

11:30 a.m. - 12:45 p.m.

### SYMPOSIUM 44: Dream or Reality? Durable LVADs for Myocardial Recovery

**Core Therapies:** MCS, HEART

**Practice Areas:** Cardiology, Cardiothoracic Surgery, Pediatrics

**Summary:** Registry data suggests myocardial recovery remains exceedingly rare with durable LVAD support. This session is intended to summarize real-world outcomes and clinical trial data, share best practices on developing a recovery program, and debate strategies for managing younger patients with a high potential for myocardial recovery. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Daniel Silverman, MD, Medical University of South Carolina, Charleston, SC, USA  
Gillian Grafton, DO, Henry Ford Hospital, Detroit, MI, USA

11:30 a.m. ***How to Implement a Systematic Strategy to Promote and Assess Myocardial Recovery***  
Cesar Guerrero-Miranda, MD, FACC, Baylor University MC, Baylor Scott and White, Dallas, TX, USA

*Myocardial recovery with or without an LVAD needs an organized effort in identifying patients, promoting recovery, and appropriately assessing the timing of readiness for explant.*

11:42 a.m. ***What Can Pediatric Hearts Teach Us About Recovery?***  
Shelley Miyamoto, MD, Children's Hospital Colorado, Aurora, CO, USA

*Studies of pediatric hearts suggest greater myocardial plasticity and the ability to reverse remodel more readily than adults. What can the adult community learn from children with heart failure.*

11:54 a.m. ***Case Presentation: 36-year-old Male with NICM and Cardiogenic Shock***  
Thomas Hanff, MD, MSCE, MPH, University of Utah, Salt Lake City, UT, USA

*Case Presentation to introduce the debate.*

12:06 p.m. ***DEBATE: Young Patients with a NICM Should Receive an LVAD First and Delay Transplant (PRO)***  
Stephan Schueler, MD, PhD, FRCS, Newcastle upon Tyne Hospitals, Freeman Hospital, Newcastle upon Tyne Hospitals, UK

*Speaker will highlight how LVAD therapy may lead to recovery and prolong patient longevity in young patients with a non-ischemic cardiomyopathy.*

12:18 p.m. ***DEBATE: Young Patients with a NICM Should Receive an LVAD First and Delay Transplant (CON)***  
Michael Zakliczynski, MD, Jan Mikulicz-Radecki University Teaching Hospital, Wroclaw, Poland

*This talk will argue that patients should be expedited to heart transplant when young, avoiding an LVAD and going straight to transplant.*

12:30 p.m. ***Panel Discussion***

## SATURDAY, 13 APRIL, 2024

11:30 a.m. - 12:45 p.m.

**SYMPOSIUM 45: Flattening the Survival Curve: Improving First Year Post-Transplant Survival for Kids and Adults**

**Core Therapies:** HEART, MCS

**Practice Areas:** Pediatrics, Anesthesiology and Critical Care, Cardiology, Cardiothoracic Surgery, Nursing, Pharmacy, Research and Immunology

**Summary:** This session will discuss how to improve survival in the perioperative period. The main topics will focus on the risk factors, management of recipients pre-transplant, nutrition, fragility, drugs, and how to improve the survival during the first year post-heart transplantation in pediatric and adult populations. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** David Baran, MD, Cleveland Clinic Heart, Vascular and Thoracic Institute, Weston, FL, USA  
Daphne Hsu, MD, Children's Hospital at Montefiore, Bronx, NY, USA

11:30 a.m. ***What are the Limiting Factors to the Early Survival Post-Transplant, and Have We Improved Over Time?***

Anne Dipchand, MD, The Hospital for Sick Children, Toronto, ON, Canada

*This talk will focus on the factors that impact early survival post-transplant (ie: diagnosis, patient selection etc) in pediatric and adult populations, and the trends in early outcomes over time.*

11:42 a.m. ***How Do We Optimize the Pre-Transplant Period to Improve Early Post-Transplant Survival?***

Estela Azeka, MD, University of Sao Paulo, Sao Paulo, Brazil

*This talk will focus on the role of medical and device management in the pre-transplant period and the impact on early outcomes in pediatric and adult populations. This may include the role of nutrition; role of heart failure management including special consideration in congenital patients; role of VADs.*

11:54 a.m. ***What Can We Do in the ICU to Improve Post-Transplant Survival?***

Annemarie Krauss, German Heart Center Berlin, Berlin, Germany

*This talk will focus on management of the patient post-transplant: topics may recognizing and treating RV failure, approach to primary graft dysfunction and vasoplegia.*

12:06 p.m. ***Do the Other Organs Matter: Managing Co-Morbidities for Early Success***

Kevin Daly, MD, Boston Children's Hospital, Boston, MA, USA

*This talk will focus on topics such as approaches to acute kidney injury/renal failure (and balance with immunosuppression), navigating infection risks and managing residual issues in in pediatric and adult patients with congenital heart disease (cyanosis, PLE, etc).*

12:18 p.m. ***Panel Discussion***

## SATURDAY, 13 APRIL, 2024

11:30 a.m. - 12:45 p.m.

### SYMPOSIUM 46: **Acute Lung Allograft Dysfunction (ALAD): From Bench to Bedside**

**Core Therapies:** LUNG, HEART, MCS, PVD

**Practice Areas:** **Pulmonology**, Anesthesiology and Critical Care, Infectious Diseases, Pediatrics, Pharmacy, Research and Immunology

**Summary:** Lung transplant recipients experience acute declines in lung allograft function, ranging from mild to life-threatening. This symposium will address acute lung allograft dysfunction (ALAD) as an entity and identify urgent priorities for diagnosis, therapy, and research. A panel discussion with all speakers including audience Q&A, led by the session moderators, will conclude this session.

**Moderators:** Ciara Shaver, MD, PhD, Vanderbilt University Medical Center, Nashville, TN, USA  
Angela Koutsokera, MD, PhD, Lausanne University Hospital, Lausanne, Switzerland

11:30 a.m. ***What is ALAD? Definitions, Uncertainties, Pathogenesis, and Research Priorities***

Stephen Juvet, MD, PhD, University Health Network, Toronto, ON, Canada

*This talk will introduce competing definitions for ALAD from the literature and describe the immunology and physiology that drive acute airway rejection pathology. This presentation will also develop a framework for defining ALAD in research studies and identify key priorities for future research.*

11:42 a.m. ***Pathologic Findings and Molecular Diagnostics in ALAD***

Fiorella Calabrese, MD, University of Padova, Padova, Italy

*Pathologic correlates of ALAD have been a particular challenge. While acute cellular rejection and lymphocytic bronchiolitis may cause ALAD, these findings are typically absent. Recent data suggest that organizing pneumonia and acute lung injury may be important pathologic features in ALAD. Further, molecular diagnostics may offer insights even when histology is bland.*

11:54 a.m. ***Animal Models of ALAD***

Tereza Martinu, MD, MHS, Toronto General Hospital/UHN, Toronto, ON, Canada

*This talk will describe approaches to studying ALAD and the onset of fibrotic airway rejection. This models, including animal orthotopic lung transplantation, heterotopic tracheal transplant, genetic and pharmacological approaches, variably reflect our understanding of human ALAD and have important limitations. Analytic strategies including histology, flow cytometry, lung function, and protein-based assays will be reviewed in the context of developing therapeutics.*

12:06 p.m. ***ALAD in Pediatric Lung Transplant Recipients***

Christian Benden, MD, MBA, FCCP, University of Zürich, Zürich, Switzerland

*This presentation will cover diagnosis and management of ALAD in pediatric patients, with a focus on specific challenges to detecting ALAD in pediatric patients and emerging diagnostic approaches. Insights from the pediatric population may inform the adult population.*

12:18 p.m. ***Clinical Management of ALAD: Outpatient to ICU***

Robin Vos, MD, PhD, UZ Leuven, Leuven, Belgium

*This talk will describe the spectrum of presentations and management strategies for ALAD, including emerging diagnostic and immune suppression strategies to manage transplant recipients ranging from outpatient to critically ill and prevent progression to CLAD.*

12:30 p.m. ***Panel Discussion***