

ISHLT 2022

42nd Annual Meeting & Scientific Sessions

John B. Hynes Memorial Convention Center
Boston, Massachusetts, USA

Wednesday, 27 April –
Saturday, 30 April

Final Program

International Society for Heart and Lung Transplantation
A society that includes basic science, the failing heart, and
advanced lung disease

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#ISHLT2022



ANNUAL MEETING GENERAL INFORMATION

Meeting Location

The ISHLT 42nd Annual Meeting and Scientific Sessions will be held in person at the John B. Hynes Veterans Memorial Convention Center in Boston, MA, USA. Full details about the meeting are available at ishlt.org/ishlt2022.

CONTINUING EDUCATION INFORMATION

The International Society for Heart and Lung Transplantation (ISHLT) expects that all of its CME programs will adhere to the Accreditation Council for Continuing Medical Education's (ACCME) content validation value statements: "Specifically, all the recommendations involving clinical medicine in a CME activity must be based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in the care of patients. All scientific research referred to, reported, or used in CME in support or justification of a patient care recommendation must conform to the generally accepted standards of experimental design, data collection, and analysis." The ISHLT expects that the content or format of CME activities and related materials will promote improvements or quality in healthcare and not a specific proprietary business interest of a commercial interest. The ISHLT must collect financial disclosure information from all planners, faculty, and others in control of educational content about all their financial relationships with ineligible companies within the prior 24 months. There is no minimum financial threshold; individuals must disclose all financial relationships, regardless of the amount, with ineligible companies. Individuals must disclose regardless of their view of the relevance of the relationship to the education.

Target Audience

The International Society for Heart and Lung Transplantation is a leading organization providing education for medical professionals involved in the care and treatment of patients with advanced heart or lung disease.

The audience for this program includes physicians, surgeons, scientists, pharmacists, nurses, transplant coordinators and other allied health and social science professionals engaged in the management and treatment of patients with advanced heart or lung disease, basic science or clinical research related to these fields, or other specialties which cause them to become involved in the treatment of patients with advanced heart or lung disease.

Learning Objectives

At the conclusion of this meeting, participants will have improved competence and professional performance in the areas of understanding:

- the latest information and approaches regarding transplant research, surgical techniques, medical therapies, donor management, and patient management for the treatment of patients suffering from advanced heart and lung disease.
- the state-of-the-art treatment approaches, risk factors, risk management approaches, patient selection criteria, disease prevention strategies, outcome implications, and psychosocial management strategies for patients with advanced heart and lung failure.
- emerging technologies, medical advances, and the clinical applications of basic science models of advanced heart and lung disease management and prevention.

ACCME Accreditation Information



Physicians

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

Credit Designation Statement – ISHLT designates this live activity for a maximum of 29.25 *AMA PRA Category 1 Credits*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.



Transplant Coordinators

As a designated Approved Provider by the American Board for Transplant Certification (ABTC), the International Society for Heart and Lung Transplantation grants up to 29.25 Category 1 Continuing Education Points for Transplant Coordinators (CEPTCs) for this offering. CEPTC Approval Number: 221-26.



Nurses and Pharmacists

In support of improving patient care, this activity has been planned and implemented by Amedco LLC and International Society for Heart & Lung Transplantation (ISHLT). Amedco LLC is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Nurses (ANCC) – Credit Designation Statement – Amedco LLC designates this activity for a maximum of 29.25 ANCC contact hours.

Pharmacists (ACPE) – Credit Designation Statement – Amedco LLC designates this activity for a maximum of 29.25 knowledge-based CPE contact hours.

NOTE to Pharmacists: The only official Statement of Credit is the one you pull from CPE Monitor. You must request your certificate within 30 days of the activity to meet the deadline for submission to CPE Monitor.

Physicians Assistant

AAPA accepts AMA PRA Category 1 Credit(s)[™] for the PRA from organizations accredited by ACCME.

Nurse Practitioners

The American Association of Nurse Practitioners (AANP) recognizes the Accreditation Council for Continuing Medical Education (ACCME) and the American Nurses Credentialing Center (ANCC) as approved accreditors and allow reciprocity for AANPCP continuing education credit.



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Final Program

Scientific Content



WEDNESDAY, 27 APRIL, 2022

7:00 a.m. – 7:50 a.m.

Non-CME Symposium: Global Best Practices Consensus: Ongoing Management of HeartWare Ventricular Assist Device Patients

Location: Room 210

Primary Core Therapy: MULTI

Primary Audience: ALL

Chairs: Christopher Hayward, MD and Francis Pagani, MD, PhD

Session Summary: After withdrawal of the HeartWare ventricular assist device system, approximately 4000 patients remain on active support. In light of the diminishing experience, this symposium will provide best practice recommendations specific to HVAD patients, as well as significant differences to the HeartMate 3 pump. A panel discussion with all speakers will conclude this session.

7:00 a.m.

Welcome and Introduction

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

7:05 a.m.

HM3-HVAD Exchange Considerations

Francis Pagani, MD, PhD, University of Michigan, Ann Arbor, MI, USA

7:12 a.m.

Medical Imperatives in HVAD Management

Claudius Mahr, DO, University of Washington, Seattle, WA, USA

Pre-recorded Presentation

7:19 a.m.

HVAD Waveforms / Logfiles

Thomas Schloegelhofer, MSc, Medical Univ of Vienna, Vienna, Austria

7:26 a.m.

HVAD Alarms – Controller Xchange

Liviu Klein, MD, MS, University of California, San Francisco, CA, USA

7:33 a.m.

Pediatrics and HM3 / HVAD Differences

Angela Lorts, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA

7:40 a.m.

Panel Discussion



8:00 a.m. – 9:45 a.m.

PLENARY 1: Opening Plenary Session

Location: Hall D

Primary Core Therapy: ALL

Primary Audience: ALL

Chairs: Laurie D Snyder, MD, MHS, and Lara Danziger-Isakov, MD, MPH

8:00 a.m.

ISHLT2022 Scientific Program Chair Report

Laurie D. Snyder, MD, MHS, Duke University Med Ctr, Durham, NC, USA.

8:10 a.m.

President's Report

Lara Danziger-Isakov, MD, MPH, Children's Hosp Med Ctr, Cincinnati, OH, USA.

8:25 a.m.

ISHLT Announcement

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

8:35 a.m.

(1) Impact of Sex on Outcome After Pulmonary Endarterectomy (PEA) for Chronic Thromboembolic Pulmonary Hypertension (CTEPH)

Justin C. Y. Chan, MD, Univ Health Network, Toronto, Canada

8:47 a.m.

Q&A with Interactive Discussant

David P. Jenkins, FRCS. Papworth Hospital, Cambridge, United Kingdom

8:50 a.m.

Going from Opt-In to Opt-Out: Lessons Learned from the UK

John Forsythe, MD, Organ Donation and Transplantation, NHS Blood and Transplant, Edinburgh, Scotland, United Kingdom

Pre-recorded Presentation

9:15 a.m.

(2) Using Machine Learning to Develop a Contemporary Primary Graft Dysfunction Prediction Model: The International Consortium on PGD

Yasbanoo Moayed, MD MHS, Univ Health Network, Toronto, Canada

Pre-recorded Presentation

9:27 a.m.

Q&A with Interactive Discussant

Joseph G. Rogers, MD. Texas Heart Institute, Houston, TX, USA

Pre-recorded Presentation

9:30 a.m.

How We Got Here: A Conversation About Xenotransplantation

Richard N. Pierson, III, MD, Massachusetts General Hospital, Boston, MA, USA
and

Muhammad Mohiuddin, MD, University of Maryland, Baltimore, MD, USA



10:15 a.m. – 11:45 a.m.

SESSION 01 (Oral): Early Career and Trainees Clinical Case Dilemmas: The Best of the Best

Location: Hall D

Primary Core Therapy: ALL

Primary Audience: ALL

Chairs: Marie M Budev, DO, MPH, and Chet Villa, MD

Session Summary: This award recognizes excellence by early career and trainees from top abstracts submitted in the Early Career Clinical Case Reports category. Four early career clinical case report finalists will present their work in this session. Expert senior clinicians will discuss the intricacies of these cases and share clinical pearls. At the conclusion of the session, the best case presentation will be selected by a panel of judges and the winner will be recognized during the Awards Presentations in the Plenary Session on Saturday, 30 April.

- 10:15 a.m.** **(456) First US DCD Pediatric Heart Transplant Using Ex-Vivo Perfusion: Is It Time for a Clinical Trial?**
Nicholas D. Andersen, M.D., Duke Univ Medical Ctr, Durham, NC, USA
- 10:22 a.m.** **Expert Discussant in Advanced Heart Failure and Transplantation**
Jacob Mathew, MD. Royal Children's Hospital, Melbourne, Australia
Pre-recorded Presentation
- 10:29 a.m.** **Q&A Discussion**
- 10:37 a.m.** **(1074) Persistent Subclinical SARS-CoV-2 Isolation After Redo Lung Transplant for COVID-19-Induced Lung Injury**
Deepika Razia, MBBS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- 10:44 a.m.** **Expert Discussant in Advanced Lung Failure and Transplantation**
Peter M. Hopkins, FRACP. The Prince Charles Hospital, Brisbane, Australia
Pre-recorded Presentation
- 10:51 a.m.** **Q&A Discussion**
- 10:59 a.m.** **(458) Systemic Right Ventricle Mechanical Support with Impella 5.5 as a Bridge to Cardiac Transplantation**
Krishan Patel, MD, Emory Univ, Atlanta, GA, USA
- 11:06 a.m.** **Expert Discussant in Mechanical Circulatory Support**
Jerry Estep, MD, The Cleveland Clinic, Cleveland, OH, USA
- 11:13 a.m.** **Q&A Discussion**
- 11:21 a.m.** **(459) Management of Pulmonary Hypertension Secondary to Valvular Heart Disease with Angiotensin-Receptor Neprilysin Inhibitor**
Hyeon-Ju R. Ali, MD, Houston Methodist Hosp, Houston, TX, USA
- 11:28 a.m.** **Expert Discussant in Pulmonary Vascular Disease**
Mardi Gomberg-Maitland, MD, MSc. GW Heart and Vascular Institute, Washington, DC, USA
- 11:35 a.m.** **Q&A Discussion**



10:15 a.m. – 11:45 a.m.

SESSION 02 (Symposium): Shock in a Box: What We Need to Learn About Heart Failure Cardiogenic Shock (HF-CS)

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Alejandro Bertolotti, MD, and Maria Dolores Garcia Cosio, MD

Session Summary: Cardiogenic shock is a complex hemodynamic, metabolic and multiorgan failure with high in-hospital mortality. Evidence based guidelines for treatment approaches are limited around the world. The management of this critical setting is challenging and multidisciplinary. This session addresses topics of paramount importance regarding advanced heart failure cardiogenic shock phenotypes and strategies to improve outcomes. A panel discussion with all speakers will conclude this session.

10:15 a.m.

The Standard of Care Across HF-CS Continuum: When Time is Myocardium

Maria F. Renedo, MD, Favalaro Foundation Univ Hosp, Buenos Aires, Argentina

10:27 a.m.

Tackling the Shock Circle: Implementing an Algorithm for Mechanical Circulatory Support in HF-CS

Daniel Kim, MD, University of Alberta, Edmonton, AB, Canada

Pre-recorded Presentation

10:39 a.m.

When Right is Wrong: Right Ventricular Failure Cardiogenic Shock: Tips and Tricks When the Guilty is Not the Left Side

Ioana R. Preston, MD, Tufts Medical Center, Boston, MA, USA

10:51 a.m.

Best Ways to Monitor HF-CS Patients: Invasive and Non-Invasive Monitoring

Fernando Bacal, MD, PhD, Heart Institute, University of Sao Paulo, Sao Paulo, Brazil

11:03 a.m.

Rolling in the Deep: A Little Kid Does Not Mean a Little Shock

Michal Odermarsky, MD, Skåne University Hosp, Children Heart Center, Lund, Sweden

11:15 a.m.

Working Together to Improve CS Outcome All Around the World: Ongoing Registries, Trials and Future Challenges from an International Perspective

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

Pre-recorded Presentation

11:27 a.m.

Panel Discussion



10:15 a.m. – 11:45 a.m.

SESSION 03 (Oral): Through the Looking Glass: Advanced Lung Assessment During EVLP

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Cardiothoracic Surgery

Chairs: Sandra Lindstedt, MD, PhD, and Matthew Hartwig, MD

Session Summary: This session will discuss the use of biochemical, physical, radiological, and machine-learning-derived parameters to assess the quality of procured lungs during EVLP and predict transplant outcomes.

- 10:15 a.m.** **(6) *cfDNA Levels in Ex Vivo Lung Perfusate Are Associated with the Prognosis of Donor Lungs***
Haruchika Yamamoto, MD, Ph.D., Toronto Lung Transplant Program and Latner Thoracic Res Labs,
Toronto General Hosp Res Inst, Univ Health Network, Univ of Toronto, Toronto, Canada
- 10:25 a.m.** **Q&A**
- 10:30 a.m.** **(7) *Standardized Radiographic Evaluation of Human Donor Lungs During Ex Vivo Lung Perfusion Predicts Lung Injury and Lung Transplant Outcomes***
Bonnie T. Chao, BSc, Univ Health Network, Toronto, Canada
- 10:40 a.m.** **Q&A**
- 10:45 a.m.** **(8) *Real-Time Lung Weight Measurement to Assess Pulmonary Function During Cellular Ex Vivo Lung Perfusion***
Ryo Kosaka, PhD, Natl Inst of Advanced Industrial Science and Technology (AIST), Tsukuba,
Ibaraki, Japan
Pre-recorded Presentation
- 11:00 a.m.** **(9) *Pulmonary Dead Space Fraction: A Predictive Factor for Transplant Suitability in Clinical Ex Vivo Lung Perfusion***
Ichiro Sakanoue, MD, Cleveland Clinic, Cleveland, OH, USA
Pre-recorded Presentation
- 11:15 a.m.** **(10) *Donor Airway Bile Acid as a Biomarker of Aspiration and Predictor of Post Lung Transplant Outcomes***
Rayoun Ramendra, BSc, Ajmera Transplant Ctr, Toronto, Canada
- 11:25 a.m.** **Q&A**
- 11:30 a.m.** **(11) *InsighTx: A Machine-Learning Model That Accurately Predicts Transplant Outcomes During Ex Vivo Lung Perfusion***
Andrew T. Sage, Ph.D., Toronto General Hosp Res Inst, Toronto, Canada
- 11:40 a.m.** **Q&A**



10:15 a.m. – 11:45 a.m.

SESSION 04 (Oral): Should We or Not? Patient Selection for MCS and Transplantation

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiology

Chairs: Maryl R Johnson, MD, and Archer Martin, MD

Session Summary: In this session, new evidence on patient selection for heart transplantation and MCS will be discussed. Prediction of survival and problems encountered while on short and long-term mechanical support and when bridging to transplantation will be presented.

- 10:15 a.m.** **(12) *Effects of the New Heart Allocation System on Choice of Mechanical Circulatory Support as a Bridge to Transplant***
Selena S. Li, M.D., Massachusetts General Hosp, Boston, MA, USA
- 10:25 a.m.** **Q&A**
- 10:30 a.m.** **(13) *Time to Reconsider Bridging Older Children on Outpatient Inotrope in an Era of Outpatient VADs***
David L. S. Morales, MD, Cincinnati Children's Hosp, Cincinnati, OH, USA
- 10:40 a.m.** **Q&A**
- 10:45 a.m.** **(14) *Patients Receiving Durable LVADs at Centers without Transplant Are Less Likely to Undergo Transplant: An Analysis of the STS Intermacs Database***
Thomas Cascino, MD, MSc, Univ of Michigan, Ann Arbor, MI, USA
- 10:55 a.m.** **Q&A**
- 11:00 a.m.** **(15) *Ventricular Assist Devices Are a Viable Method to Support Patients to Multi-Organ Transplant***
Jonathan B. Edelson, MD, Children's Hosp of Philadelphia, Philadelphia, PA, USA
- 11:10 a.m.** **Q&A**
- 11:15 a.m.** **(16) *The Sarcopenia Index Correlates with Computed Tomography Quantified Muscle Measures in Patients with Advanced Heart Failure***
Zeina Jedeon, MD, Univ of Minnesota, Minneapolis, MN, USA
- 11:25 a.m.** **Q&A**
- 11:30 a.m.** **(17) *Predicting Survival of End Stage Heart Failure Patients Receiving HeartMate-3 LVAD with Machine Learning. An STS-INTERMACS Analysis***
Renzo Loyaga-Rendon, MD, PhD, Spectrum Health, Grand Rapids, MI, USA
- 11:40 a.m.** **Q&A**



10:15 a.m. – 11:45 a.m.

SESSION 05 (Symposium): Controversial Debates in Pulmonary Hypertension

Location: Ballroom A

Primary Core Therapy: PVD

Primary Audience: Pulmonology

Chairs: Erika B Rosenzweig, MD, and Jean-Luc Vachiery, MD

Session Summary: This session will address issues on the diagnosis and management of pulmonary hypertension. Risk stratification is critical in management decision-making and the role of invasive hemodynamics has been challenged by the increased use of imaging techniques. Should we avoid right heart catheterization (RHC)? Heart failure is the most common cause of PH. Some pulmonary arterial hypertension (PAH) approved drugs are often used off-label without strong evidence. Is it really indicated? Are patients really improved? A 10-minute pro/con discussion, led by the co-chairs, will be conducted after each debate.

- 10:15 a.m.** ***DEBATE: Invasive Hemodynamics are Essential for Risk Stratification in PAH (PRO)***
Sophia Airhart, MD, Providence Heart and Vascular Institute, Providence, RI, USA
- 10:25 a.m.** ***DEBATE: Invasive Hemodynamics are Essential for Risk Stratification in PAH (CON)***
Marc A. Simon, MD, UCSF Medical Center, San Francisco, CA, USA
- 10:35 a.m.** **Pro/Con Discussion**
- 10:45 a.m.** ***DEBATE: PH Due to Interstitial Lung Disease (ILD) Should Be Treated with PAH Approved Therapies (PRO)***
Colin Church, PhD, Golden Jubilee Hospital, Glasgow, United Kingdom
- 10:55 a.m.** ***DEBATE: PH Due to Interstitial Lung Disease (ILD) Should Be Treated with PAH Approved Therapies (CON)***
Helen M. Whitford, MBBS, FRACP, Alfred Hospital, Melbourne, Australia
- 11:05 a.m.** **Pro/Con Discussion**
- 11:15 a.m.** ***DEBATE: Symptomatic Chronic Thromboembolic Disease (CTED) Should Be Treated with PEA or BPA (PRO)***
David P. Jenkins, FRCS, Papworth Hospital, Cambridge, United Kingdom
- 11:25 a.m.** ***DEBATE: Symptomatic Chronic Thromboembolic Disease (CTED) Should Be Treated with PEA or BPA (CON)***
Isabelle Opitz, MD, University Hospital Zurich, Zurich, Switzerland
- 11:35 a.m.** **Pro/Con Discussion**



10:15 a.m. – 11:45 a.m.

SESSION 06 (Oral): Translational Insights Into Lung Transplant Complications and Care

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Research and Immunology

Chairs: Edward Cantu, MD, MSCE, and John McDyer, MD

Session Summary: This session will present novel translational research which advances our understanding of acute lung injury and Chronic Lung Allograft Dysfunction (CLAD), and highlights potential interventions for the salvage of un-transplantable donor lungs.

- 10:15 a.m.** **(18) Immune Characterization of a Xenogeneic Cross Circulation System for Ex Vivo Human Lung Support**
Wei K. Wu, MD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA
- 10:25 a.m.** **Q&A**
- 10:30 a.m.** **(19) Mesenchymal Stromal Cell Therapy Regenerates Rejected Donor Lungs and Reduces Primary Graft Dysfunction Following Lung Transplantation**
Anna Niroomand, BS, Rutgers Robert Wood Johnson Medical Sch, Piscataway, NJ, USA
- 10:40 a.m.** **Q&A**
- 10:45 a.m.** **(20) Anti-S100A8/A9 Neutralizing Monoclonal Antibody Ameliorates Lung Injury Induced by Lung Ischemia Reperfusion Injury**
Kentaro Nakata, MD, Okayama Univ, Okayama, Japan
Pre-recorded Presentation
- 11:00 a.m.** **(21) Characterization of B Cells in Lungs of Chronic Lung Allograft Dysfunction Patients by Single-Cell RNA Sequencing**
Ankita Burman, PhD, Univ Health Network, Toronto, Canada
Pre-recorded Presentation
- 11:15 a.m.** **(22) Single-Cell RNA Sequencing Identifies Unique Pulmonary Macrophage Subsets Associated with Chronic Lung Allograft Dysfunction**
Allen Duong, HBSc, Univ Health Network, Toronto, Canada
- 11:25 a.m.** **Q&A**
- 11:30 a.m.** **(23) Restrictive Allograft Syndrome Patients Have Higher Cell-Free DNA Assessed Allograft Injury Prior to Diagnosis**
Ananth Charya, MD, Natl Heart, Lung, and Blood Inst, Bethesda, MD, USA
- 11:40 a.m.** **Q&A**



10:15 a.m. – 11:45 a.m.

SESSION 07 (Symposium): Developments in CAV Imaging and Diagnosis: Time for an Update to the Guidelines?

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Livia Goldraich, MD, and Steven Kindel, MD

Session Summary: In Cardiology, there are major developments in invasive as well as non-invasive imaging modalities to detect coronary artery disease. However, up until now, the transplant community does not use the full potential of these imaging modalities in the detection of Cardiac Allograft Vasculopathy (CAV). Should non-invasive imaging become a gatekeeper for invasive imaging and can it help to study disease progression? Is it time for a new guideline for CAV definitions as well as CAV surveillance? In this symposium, these questions will be explored and debated followed by a discussion with all speakers at the end of the session, with the first 10 minutes reserved for debate rebuttals.

- 10:15 a.m.** ***Stress Echocardiography versus CT for CAV Surveillance: Time to Switch?***
Stefan Roest, MD, Erasmus MC, UMC Rotterdam, Rotterdam, Netherlands
- 10:30 a.m.** ***Microvascular Assessment of CAV: PET versus CMR versus Cath-IMR***
Robert J.H. Miller, MD, FRCPC, University of Calgary, Calgary, AB, Canada
- 10:45 a.m.** ***Non-Imaging Based Evaluation for CAV Progression Risk***
Guillaume Coutance, MD, PhD, Groupe Hospitalier Pitié-Salpêtrière, Paris, France
- 11:00 a.m.** ***DEBATE: Intracoronary Imaging Should Be the New Gold Standard for Defining CAV (PRO)***
Sharon Chih, MD, MBBS, PhD, FRACP, University of Ottawa Heart Institute, Ottawa, ON, Canada
- 11:10 a.m.** ***DEBATE: Intracoronary Imaging Should Be the New Gold Standard for Defining CAV (CON)***
Marco Masetti, MD, PhD, University of Bologna, Bologna, Italy
- 11:20 a.m.** **Debate Rebuttals**
- 11:30 a.m.** **Panel Discussion**



1:15 p.m. – 2:45 p.m.

SESSION 08 (Symposium): The Cardiogenic Shock Journey: Shock Therapy

Location: Hall D

Primary Core Therapy: MCS

Primary Audience: Cardiology

Chairs: Chris Barnett, MD, and Edith Boyes, APN

Session Summary: This symposium will address emerging concepts in the acute management of cardiogenic shock (CS). Through a series of short talks, speakers will highlight various cardiogenic shock phenotypes, device selection/timing, optimizing ICU care, etiological considerations to first pass management principles, and temporary mechanical circulatory support device-tailoring, weaning and explant considerations including rehabilitation and end-of-life considerations. A panel discussion with all speakers will conclude this session.

1:15 p.m.

Etiology Doesn't Matter, It's All In The Phenotype

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

1:25 p.m.

Right Support, Right Time

Pascal N. Leprince, MD, PhD, La Pitie Salpetriere, Paris, France

1:35 p.m.

Patient is on Temporary Circulatory Support: ICU Considerations on Optimizing Physiology

Hannah Copeland, MD, Lutheran Hospital/Indiana University School of Medicine, Fort Wayne, IN, USA

1:45 p.m.

Temporary MCS Weaning and Explant: Can One Size Fit All?

Jerry D. Estep, MD, Cleveland Clinic, Cleveland, OH, USA

1:55 p.m.

When "Shockingly Breathless" to Vent and Bundle Care Even in Critically Ill Cardiac Patients?

Varinder Kaur Randhawa, MD PhD, Cleveland Clinic, Cleveland, OH, USA

2:05 p.m.

To Somewhere Over the Rainbow: Role of the Post-Shock and Rehab Clinics

Jose Gonzalez-Costello, MD, Belvitge Hospital, Barcelona, Spain

2:15 p.m.

When All Else Fails: Dignifying End-of-Life Considerations

Michael McDonald, MD, Toronto General Hospital, Toronto, ON, Canada

Pre-recorded Presentation

2:25 p.m.

Panel Discussion



1:15 p.m. – 2:45 p.m.

SESSION 09 (Oral): Rethinking Biomarkers in Heart Transplantation: From Bench to Bedside

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Research and Immunology

Chairs: Maria G Crespo-Leiro, MD, and Gregory Fishbein, MD

Session Summary: The actual utility of standard and novel biomarkers and/or parameters used to assess quality of procured hearts will be reviewed in this session.

- 1:15 p.m.** **(24) Relationship Between Lactate Trend and Cardiac Power Output During Ex Vivo Heart Perfusion**
Simon Dang Van, MD MSc, Marie Lannelongue Hosp, Paris Saclay Univ, Le Plessis Robinson, France
- 1:25 p.m.** **Q&A**
- 1:30 p.m.** **(29) Transcriptional Changes of Left Ventricle Biopsy During Reperfusion Predict the Outcome of Heart Transplants**
Joel Ristikankare, M.D., Univ of Helsinki, Helsinki, Finland
- 1:40 p.m.** **Q&A**
- 1:45 p.m.** **(26) Lactic Acid and Metabolic Analysis of Human Donor Hearts Preserved with Organ Care System**
Prashant N. Mohite, FRCS, Royal Brompton and Harefield NHS Trust, London, United Kingdom
Pre-recorded Presentation
- 2:00 p.m.** **(27) Metabolomic Profiling of Cardiac Allografts After Controlled Circulatory Death**
Julien Guihaire, MD PhD, Marie Lannelongue Hosp, Paris Saclay Univ, Le Plessis-Robinson, France
- 2:10 p.m.** **Q&A**
- 2:15 p.m.** **(28) Proteomic Profiling of Cold Storage Preservation Solution to Identify Signatures of Primary Graft Dysfunction Following Heart Transplantation**
Lauren K. Truby, MD, Duke Univ Medical Ctr, Durham, NC, USA
Pre-recorded Presentation
- 2:30 p.m.** **(25) Myocardial Work Index Correlates with Cardiac Performance During Ex Vivo Heart Perfusion**
Dorothee Brunet, MD MSc, Marie Lannelongue Hosp, Paris Saclay Univ, Le Plessis Robinson, France
- 2:40 p.m.** **Q&A**



1:15 p.m. – 2:45 p.m.

SESSION 10 (Symposium): Equity and Equality in Cardiothoracic Transplantation: Access to Care

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Pulmonology

Chairs: Jasleen Kukreja, MD, MPH, and Lynn Punnoose, MD

Session Summary: This session will explore socioeconomic/racial, gender, geography and health insurance factors and their influence on access to /outcomes of advanced therapies (MCS, transplant) in patients with advanced heart and lung disease. It will include perspectives both from the US and international settings. Strategies to help overcome barriers, such as improving patient self-care and health literacy will be reviewed. A panel discussion with all speakers will conclude this session.

- 1:15 p.m.** ***Let's Look at Geography: Challenges in Delivering Cardiothoracic Transplant Care in Rural and Remote Settings***
Aman Sidhu, MD, University Health Network, Toronto General Hospital, Toronto, ON, Canada
- 1:25 p.m.** ***Gender Differences: Do Women Get a Fair Shot in Cardiothoracic Transplant? Are the Rules Stacked Against Them?***
Miriam Aguilar Pérez, MD, Univ Puerta de Hierro Majadahonda Hosp, Madrid, Spain
- 1:35 p.m.** ***Socioeconomic and Racial Challenges to the Delivery of Advance Therapies and Transplant in the Setting of Universal Healthcare: Inequalities Beyond Sex***
Paola Morejon Barragan, MD, Hospital Clínica, Guayaquil, Ecuador
- 1:50 p.m.** ***Effect of Health Insurance Status on Pre- and Post-Cardiothoracic Transplant Access to Care and Outcomes***
Khadijah Breathett, MD, MS, University of Arizona, Tucson, AZ, USA
- 2:05 p.m.** ***The Unique Aspects of Pediatric Cardiothoracic Transplant Limiting Access to Care***
Brigitte W. Willems, MD, PhD, Univ Med Ctr Groningen, Groningen, Netherlands
- 2:15 p.m.** ***Show Me Your Dirty Laundry: the Unintended Negative Consequences of Public Performance Reporting and Impact on Access to Cardiothoracic Transplantation***
Jesse Schold, PhD, Cleveland Clinic, Cleveland, OH, USA
Pre-recorded Presentation
- 2:30 p.m.** **Panel Discussion**



1:15 p.m. – 2:45 p.m.

SESSION 11 (Oral): Getting Your MCS Up to Date: Late Breaking Clinical Science

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiothoracic Surgery

Chairs: Daniel J Goldstein, MD, and Evgenij V Potapov, MD, PhD

Session Summary: This session will explore the new clinical science on MCS therapy. Data on pre-operative risk stratification, pre-operative management and post-operative complications will be discussed.

- 1:15 p.m.** **(30) *Development and Validation of a Personalized Risk Score for Prediction of Patient-Specific Clinical Experiences with HeartMate 3 LVAD Implantation: An Analysis from the MOMENTUM 3 Trial Portfolio***
Mandeep R. Mehra, MD, FRCP, FACC, FESC, Brigham and Women's Hosp, Boston, MA, USA
- 1:25 p.m.** **Q&A**
- 1:30 p.m.** **(31) *Concomitant Valvular Procedures During LVAD Implantation and Outcomes: An Analysis of the MOMENTUM 3 Trial Portfolio***
Ranjit John, MD, Univ of Minnesota Medical Ctr, Minneapolis, MN, USA
- 1:40 p.m.** **Q&A**
- 1:45 p.m.** **(32) *A Multi-Center Evaluation of Outflow Graft Obstruction with a Fully Magnetically Levitated Left Ventricular Assist Device***
Leonhard Wert, M.D., German Heart Ctr Berlin, Berlin, Germany
- 1:55 p.m.** **Q&A**
- 2:00 p.m.** **(33) *The COMPETENCE Trial: Prospective Multi-Center Randomized Study for Evaluating the EVAHEART®2 Left Ventricular Assist System***
Mark Slaughter, MD, Univ of Louisville, Louisville, KY, USA
- 2:10 p.m.** **Q&A**
- 2:15 p.m.** **(35) *The Use of Levosimendan in Patients Undergoing Left Ventricular Assist Device Implantation to Mitigate the Risk of Early Postoperative Right Heart Failure (Euro LEVO-LVAD Study): An Analysis of the EUROMACS Registry***
Mahmoud Abdelshafy, MD, Galway Univ Hosp, Health Service Executive and CORRIB Core Lab, Natl Univ of Ireland Galway (NUIG), Galway, Ireland
- 2:25 p.m.** **Q&A**



1:15 p.m. – 2:45 p.m.

SESSION 12 (Oral): Bench to Bedside: CTEPH and PAH

Location: Ballroom A

Primary Core Therapy: PVD

Primary Audience: Cardiology

Chairs: Marc De Perrot, MD, and William Auger, MD

Session Summary: This session will present new data on PH from experimental models to patient reported outcomes, with a focus on CTEPH.

- 1:15 p.m.** **(36) Distinct Endothelial Cell Populations Characterize the Pulmonary Endarterectomy Specimen in Chronic Thromboembolic Pulmonary Hypertension**
H.S. Jeffrey Man, M.D., Ph.D., Univ of Toronto, Toronto, Canada
Pre-recorded Presentation
- 1:30 p.m.** **(37) Left Ventricular Diastolic Dysfunction in Chronic Thromboembolic Pulmonary Hypertension**
Dorothee Brunet, MD MSc, Marie Lannelongue Hosp, Le Plessis Robinson, France
- 1:40 p.m.** **Q&A**
- 1:45 p.m.** **(38) Balloon Pulmonary Angioplasty Results in Anatomically Operable CTEPH Patients**
Justin Issard, MD, MSc, Marie Lannelongue Hosp, Le Plessis Robinson, France
- 1:55 p.m.** **Q&A**
- 2:00 p.m.** **(39) Pirfenidon Prevents Experimental Flow-Associated PAH by Suppression of the NLRP3 Inflammasome**
Emmanouil Mavrogiannis, BSc, Univ Medical Ctr Groningen, Univ of Groningen, Groningen, Netherlands
- 2:10 p.m.** **Q&A**
- 2:15 p.m.** **(40) Impact of Initial Therapeutic Strategy on Long-Term Outcomes in Pulmonary Arterial Hypertension: An Analysis of the PHSANZ Registry**
Katherine Kearney, MBBS, St Vincents Hosp, Darlinghurst, Australia
- 2:25 p.m.** **Q&A**
- 2:30 p.m.** **(41) Clinical Utility of Patient-Reported Outcome Instruments for Pulmonary Hypertension**
Scott W. Rose, M.D., Atrium Health Wake Forest Baptist, Winston Salem, NC, USA
- 2:40 p.m.** **Q&A**



1:15 p.m. – 2:45 p.m.

SESSION 13 (Symposium): Outside-of-the-Box Immunosuppression for Lung Transplantation

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Pharmacy and Pharmacology

Chairs: Fay Burrows, BPharm, and Jamie L. Todd, MD

Session Summary: This symposium will include evidence behind a spectrum of therapies, when and how to use, as well as benefits and risks associated with treatment. The session will include novel methods of monitoring immunosuppression, the use of belatacept in lung transplantation, basiliximab in non-induction setting, as well as photopheresis, total lymphoid irradiation (TLI), inhaled immunosuppression, and highlight prospective new therapies. A panel discussion with all speakers will conclude this session.

- 1:15 p.m.** ***Targeting Personalized Immunosuppression via Novel Monitoring Strategies***
Peter Jaksch, MD, Medical University of Vienna, Vienna, Austria
- 1:30 p.m.** ***Belatacept Use Following Lung Transplantation***
Cody A. Moore, PharmD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA
- 1:40 p.m.** ***Non-Induction Basiliximab for a Calcineurin Inhibitor (CNI) Holiday***
Georgina Waldman, PharmD, Massachusetts General Hospital, Boston, MA, USA
- 1:50 p.m.** ***Extracorporeal Photopheresis and Total Lymphoid Irradiation***
Anna Reed, MBChB, MRCP, PhD, Royal Brompton & Harefield, Harefield, United Kingdom
- 2:05 p.m.** ***Is it Time to Reconsider Inhaled Immunosuppression?***
Irina L. Timofte, MD, University of Maryland, Baltimore, MD, USA
- 2:15 p.m.** ***Future Frontiers in Lung Transplant Immunosuppression***
Patricia Ging, PharmD, Mater Misericordiae University Hospital, Dublin, Ireland
- 2:30 p.m.** **Panel Discussion**



1:15 p.m. – 2:45 p.m.

SESSION 14 (Symposium): Surviving and Thriving After Heart Transplantation: In It for the Long Run!

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Luise Holzhauser, MD, and Cecilia Folgero, NP

Session Summary: Prevention and management of long-term post-heart transplant (HT) complications and psychosocial health aspects are critical to achieve durable survival and maintain quality of life (QOL). This session will review and debate predictors of pediatric and adult HT survival, discuss potential new therapies to protect kidneys and prevent cardiac allograft vasculopathy (CAV), explore learning lessons from pediatrics to improve adult outcomes, and individualize risk modification, mental health and QOL throughout the HT journey. A panel discussion with all speakers will conclude this session.

1:15 p.m.

Defining the Goalposts: Threats to Survival and Quality of Life

Josef Stehlik, MD, University of Utah SoM, Salt Lake City, UT, USA

1:30 p.m.

Old Problems, New Solutions: The Potential for New Therapies to Protect Kidneys and Prevent CAV

Amanda R. Vest, MBBS MPH, Tufts Medical Center, Boston, MA, USA

1:45 p.m.

Learning from the Kids: What Pediatric HT Can Teach Us About Long-Term Survival

Joseph W. Rossano, MD, The Children's Hospital, Philadelphia, PA, USA

2:00 p.m.

Navigating Crossroads: Managing Critical Transition Points with Focus on Psychosocial Stressors and Quality of Life

Mary Amanda Dew, PhD, Univ of Pittsburgh Sch Med, Pittsburgh, PA, USA

Pre-recorded Presentation

2:15 p.m.

DEBATE: Protocols, Patient Selection or Pure Luck: We Can Predict Long-term Success Post-Transplant (PRO)

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

2:25 p.m.

DEBATE: Protocols, Patient Selection or Pure Luck: We Can Predict Long-Term Success Post-Transplant (CON)

Friederike Danne, MD, Deutsches Herzzentrum, Berlin, Germany

Pre-recorded Presentation

2:35 p.m.

Panel Discussion



3:15 p.m. – 4:45 p.m.

SESSION 15 (Symposium): Don't Lose Heart, as Better Times are Ahead: COVID-19 from Bench to Bedside
Location: Hall D

Primary Core Therapy: HEART
Primary Audience: Cardiology

Chairs: Yael Peled, MD, and Jon A Kobashigawa, MD

Session Summary: This symposium, focusing on the current pandemic caused by the SARS-CoV-2 virus, will target specific issues in patients with chronic heart/lung disease, cardiothoracic transplant, mechanical circulatory support or pulmonary vascular disease. A panel discussion with all speakers will conclude this session.

- 3:15 p.m.** ***Risk Factors and Severity of COVID-19, Reducing the Risk of Infection and SARS-CoV-2 Testing***
Marta Farrero, MD PhD, Hospital Clinic, Barcelona, Spain
- 3:27 p.m.** ***Management of COVID-19 Patients with Chronic Heart/Lung Disease, Cardiothoracic Transplants, Mechanical Circulatory Support or Pulmonary Vascular Disease***
Luciano Potena, MD, PhD, University of Bologna, Bologna, Italy
- 3:39 p.m.** ***SARS-CoV-2 Vaccination in Heart Transplantation***
Jonathan Hand, MD, Ochsner Medical Center, New Orleans, LA, USA
- 3:51 p.m.** ***Deceased Donor and Recipient Selection for Cardiothoracic Transplantation During the COVID-19 Pandemic***
Kim Anderson, MD, Dalhousie University, Halifax, NS, Canada
- 4:03 p.m.** ***Transplantation and VAD Implantation During the COVID-19 Pandemic***
Jignesh K. Patel, MD, PhD, Cedars Sinai Heart Institute, Los Angeles, CA, USA
- 4:15 p.m.** ***ECMO Support During the COVID-19 Pandemic: Challenges and Recommendations***
Diyar Saeed, MD, PhD, Leipzig Heart Center, Leipzig, Germany
- 4:27 p.m.** **Panel Discussion**



3:15 p.m. – 4:45 p.m.

SESSION 16 (Oral): Take a Chance With Me: Extended Criteria Transplants and Risk Modeling in Heart Transplant

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Cardiothoracic Surgery

Chairs: Aleem Siddique, MBBS, and Scott C Silvestry, MD

Session Summary: This session will examine clinical data helping to provide risk stratification for patients undergoing heart transplantation, including risk scores as well as the use of extended criteria donors.

- 3:15 p.m.** **(42) Donor Metabolic Risk Score Predicts Graft-Related Outcome After Heart Transplantation**
Kishor U. Dhaygude, Ph.D, Transplantation Lab, Univ of Helsinki, Helsinki, Finland
- 3:25 p.m.** **Q&A**
- 3:30 p.m.** **(43) Machine Learning Outperforms Existing Methods to Predict Post-Operative Mortality in Patients Bridged to Heart Transplantation with Temporary Mechanical Circulatory Support**
Benjamin L. Shou, BS, Johns Hopkins Univ Sch of Med, Baltimore, MD, USA
Pre-recorded Presentation
- 3:45 p.m.** **(44) Plasma Proteome of Brain-Dead Organ Donors as a Predictor of Graft-Related Outcomes After Heart Transplantation**
Kishor Dhaygude, PhD, Univ of Helsinki, Helsinki, Finland
- 3:55 p.m.** **Q&A**
- 4:00 p.m.** **(45) An Objective Risk Score Predicts Waitlist Mortality with Higher Accuracy Than 6-Status Ranking at Listing**
Kenley M. Pelzer, Ph.D., Univ of Chicago, Chicago, IL, USA
- 4:10 p.m.** **Q&A**
- 4:15 p.m.** **(46) Heart-Kidney Transplantation and Hepatitis C Virus Positive Donors**
Sandip Zalawadiya, MBBS, Vanderbilt Univ Medical Ctr, Nashville, TN, USA
- 4:25 p.m.** **Q&A**
- 4:30 p.m.** **(47) US Multi-Center Analysis of the Global Utilization and Registry Database for Improved Heart Preservation (GUARDIAN) Registry: 1-Year Transplant Survival Analysis**
Marzia Leacche, MD, Spectrum Health, Grand Rapids, MI, USA
- 4:40 p.m.** **Q&A**



3:15 p.m. – 4:45 p.m.

SESSION 17 (Symposium): Lung Transplant Biomarkers Now

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Research and Immunology

Chairs: Christine S. Falk, PhD, and Daniel Calabrese, MD

Session Summary: Long term survival following solid organ transplantation requires the early detection of rejection pathology that will guide the administration of anti-rejection therapies. This session will discuss novel technologies that promise substantial improvements over current standard of care approaches. A panel discussion with all speakers will conclude this session.

3:15 p.m.

Donor-Specific T Cell Responses

John McDyer, MD, UPMC, Pittsburgh, PA, USA

3:27 p.m.

Micro-RNA Dysregulation in Lung Transplant Rejection

Alessandro Palleschi, MD, Fondazione IRCCS Ca' Granda - Ospedale Maggiore Policlinico, Milan, Italy

3:39 p.m.

Cell-Free DNA in Lung Transplantation

Mark Nicolls, MD, Stanford University, Stanford, CA, USA

3:51 p.m.

Molecular Pathways of Allograft Rejection

Kieran Halloran, MD, University of Alberta, Edmonton, AB, Canada

4:03 p.m.

Small Airway Rejection: Diagnosis by Cytology Brush

John R. Greenland, MD, PhD, U. California SF, San Francisco, CA, USA

4:15 p.m.

Artificial Intelligence Imaging Analysis to Detect Allograft Dysfunction

Vibha N. Lama, MD, MS, University of Michigan, Ann Arbor, MI, USA

4:27 p.m.

Panel Discussion



3:15 p.m. – 4:45 p.m.

SESSION 18 (Oral): Know Your Enemies: Cardiac and Other Complications During LVAD Support

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiology

Chairs: Jeffrey Teuteberg, MD, and Annalisa Angelini, MD

Session Summary: In order to achieve optimal results with MCS, it is necessary to recognize the most common adverse events at an early stage and to prevent them if possible! This session will help to identify these adverse events to improve MCS patient management.

- 3:15 p.m.** **(48) Improved Clinical Outcomes Associated with the Impella 5.5 Compared to the Impella 5.0 in Contemporary Cardiogenic Shock and Heart Failure Patients**
Danny Ramzy, MD, PhD, Cedars-Sinai Med Ctr, Los Angeles, CA, USA
- 3:25 p.m.** **Q&A**
- 3:30 p.m.** **(49) Right Ventricular Failure Following Left Ventricular Assist Device Implant: An Intermacs Analysis**
Themistokles Chamogeorgakis, MD, Henry Ford Health System/Transplant Inst, Detroit, MI, USA
- 3:40 p.m.** **Q&A**
- 3:45 p.m.** **(50) Interventricular Interactions and Right Ventricular Function in LVAD Recipients: Insights from Pressure Volume Analyses**
Michael I. Brener, MD, Columbia Univ Medical Ctr, New York, NY, USA
- 3:55 p.m.** **Q&A**
- 4:00 p.m.** **(51) Interventricular Septal Output While Supported on LVAD Therapy**
Sara Inglis, MB BCh BAO, Mayo Clinic, Rochester, MN, USA
- 4:10 p.m.** **Q&A**
- 4:15 p.m.** **(52) A Computational Study of Aortic Insufficiency in Patients Supported with Left Ventricular Assist Devices**
Jonathan Grinstein, MD, Univ of Chicago, Chicago, IL, USA
Pre-recorded Presentation
- 4:30 p.m.** **(53) Association of Outflow Cannula Angulation with Adverse Neurological Events in Patients with CF-LVAD**
Mahwash Kassi, MD, Houston Methodist Hosp, Houston, TX, USA
- 4:40 p.m.** **Q&A**



3:15 p.m. – 4:45 p.m.

SESSION 19 (Oral): Risky Business in Pulmonary Hypertension

Location: Ballroom A

Primary Core Therapy: PVD

Primary Audience: Pulmonology

Chairs: Mardi Gomberg-Maitland, MD, MSc, and Marc A Simon, MD

Session Summary: This session will focus on risk assessment and survival prediction in PH.

- 3:15 p.m.** **(54) *Imaging of Improved Right Ventricular Coupling, Risk Status and Survival in Pulmonary Arterial Hypertension***
Roberto Badagliacca, MD, PhD, Sapienza Univ of Rome, ROME, Italy
- 3:25 p.m.** **Q&A**
- 3:30 p.m.** **(55) *Risk Assessment in Pulmonary Arterial Hypertension (PAH): Insights from the Inspire Study with LIQ861***
Sandeep Sahay, MD, FCCP, Houston Methodist Hosp, Houston, TX, USA
Pre-recorded Presentation
- 3:45 p.m.** **(56) *Clinical Variables in Predicting Survival and Hospitalization for Pulmonary Arterial Hypertension Using Harmonized Data***
Zilu Liu, PhD student, The Ohio State Univ, Columbus, OH, USA
Pre-recorded Presentation
- 4:00 p.m.** **(57) *Atrial Fibrillation- A Risk Factor for In-Hospital Mortality of Patient with Pulmonary Hypertension***
Javier Jimenez, MD PhD, MCVI Baptist Health South, South Miami, FL, USA
Pre-recorded Presentation
- 4:15 p.m.** **(58) *Risk Stratification in Patients with Pulmonary Arterial Hypertension and Candidates for Lung or Heart-Lung Transplantation***
Laurent Savale, MD, PhD, CHU Bicêtre, Le Kremlin Bicetre, France
- 4:25 p.m.** **Q&A**
- 4:30 p.m.** **(59) *Validation of the New Pediatric Pulmonary Hypertension Risk Score by Cardiac Magnetic Resonance Imaging and Speckle Tracking Echocardiography. The European Pediatric Pulmonary Vascular Disease Network (EPPVDN)***
Georg Hansmann, MD, PhD, Hannover Medical Sch, Hannover, Germany
Pre-recorded Presentation



3:15 p.m. – 4:45 p.m.

SESSION 20 (Oral): Coming to a Bedside Near You: Translational Studies in Lung Organ Perfusion

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Research and Immunology

Chairs: Ilker Iskender, and Gabriel Loor, MD

Session Summary: This session will share translational research focused on extending the limits of donor lung preservation using novel organ perfusion strategies.

- 3:15 p.m.** **(60) *Time to Try Something New: Establishing Rat Models of Lung Transplantation Under ECMO Support***
Xiucheng Yang, Doctor of Medicine, Wuxi People's Hosp Affiliated to Nanjing Medical Univ, Wuxi, China
Pre-recorded Presentation
- 3:30 p.m.** **(61) *Lung Function and Inflammatory Profiling of Damaged Rat Donor Lungs Following EVLP Heat Stress with Different Temperatures***
Anne Debonneville, master, Lausanne Univ Hosp, CHUV, Lausanne, Switzerland
- 3:40 p.m.** **Q&A**
- 3:45 p.m.** **(62) *Transient Heat Stress During Ex-Vivo Lung Perfusion Induces the Heat Shock Response and Preserves Lung Function in Pig Model***
Thorsten Krueger, MD, PhD, CHUV, Ctr Hospier Univire Vaudois, Lausanne, Switzerland
- 3:55 p.m.** **Q&A**
- 4:00 p.m.** **(63) *The Combination of Post-Mortem Sevoflurane Ventilation and In Situ Topical Cooling Provides Improved 6h Lung Preservation in an Uncontrolled DCD Porcine Model***
Edson Brambate, MD, UHN, Toronto, Canada
- 4:10 p.m.** **Q&A**
- 4:15 p.m.** **(64) *Report of the GUARDIAN-LUNG Registry: An Analysis of Advanced Hypothermic Preservation on Lung Transplantation***
Matthew Hartwig, MD, Duke Univ, Durham, NC, USA
- 4:25 p.m.** **Q&A**
- 4:30 p.m.** **(65) *Sequential Ex Vivo Lung Perfusion for Prolonged Lung Preservation: Does the Second EVLP Reset the Lung Conditions?***
Ichiro Sakanoue, MD, Cleveland Clinic, Cleveland, OH, USA
Pre-recorded Presentation



3:15 p.m. – 4:45 p.m.

SESSION 21 (Symposium): The Future is Multimodal: Imaging the Transplanted Heart for Rejection, Dysfunction and Vasculopathy

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Jerry Estep, MD, and Fatima I Lunze, MD, PhD

Session Summary: Heart transplant is a definitive therapy in end-stage heart failure. Rejection and coronary allograft vasculopathy limit survival. Endomyocardial biopsy and coronary angiography are the gold standard for diagnosis and surveillance but limited in value by sampling error, interobserver variability, and differ in use among centers. Multimodality imaging lacks the inherent risks of invasive tests but the ideal test should be highly sensitive and specific, reproducible and cost efficient. This symposium will help disseminate fundamentals of these techniques, introduce the advanced platforms, outline research priorities, and promote efficient allocation of resources. A panel discussion with all speakers will conclude this session.

3:15 p.m. ***Niche to Mainstream- Contemporary Strain Imaging and Deformation Analysis in Post-transplant Surveillance***

Nadia Fida, MD, Houston Methodist Hospital, Houston, TX, USA

3:30 p.m. ***Precision and Accuracy of T1 Mapping in Allograft Rejection: Ready for Prime Time?***

Shinichi Nunoda, MD, PhD, Tokyo Women's Med Univ, Tokyo, Japan

Pre-recorded Presentation

3:45 p.m. ***PET Myocardial Blood Flow: Revolutionizing the Detection and Prognostication of Allograft Vasculopathy***

Lisa Mielniczuk, MD, University of Ottawa Heart Institute, Ottawa, ON, Canada

Pre-recorded Presentation

4:00 p.m. ***IVUS vs OCT for Allograft Vasculopathy: Which Can Brave the Achilles Heel of Heart Transplant!***

Anna Kydd, BMedSci, MBChB, MD, Papworth Hospital, Cambridge, United Kingdom

4:15 p.m. ***Breaking from Tradition: Post-Transplant Surveillance Made Simple with AI (Artificial Intelligence)***

W. H. Wilson Tang, MD, Cleveland Clinic Foundation, Cleveland, OH, USA

Pre-recorded Presentation

4:30 p.m. **Panel Discussion**



5:00 p.m. – 6:00 p.m.

MINI ORAL 01: Heart Transplant Rejection, Vasculopathy, and the Drugs They Live With!

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Haifa Lyster, MSc, and Ryan J Tedford, MD

Session Summary: This session will feature abstracts from multiple disciplines highlighting technological advances in monitoring for complications post-transplant and complications of medications heart transplant recipients may encounter during their transplants.

- 5:00 p.m.** (276) ***Tissue Engineering Scaffolds for Minimally-Invasive Immunosurveillance of Acute Cellular Graft Rejection***
Russell R. Urie, Ph.D., Univ of Michigan, Ann Arbor, MI, USA
- 5:04 p.m.** **Q&A**
- 5:06 p.m.** (277) ***PET Scan for CAV Screening in Heart Transplant Patients: A Real World Experience***
Assi Milwidsky, MD, Montefiore Medical Ctr, New York, NY, USA
- 5:10 p.m.** **Q&A**
- 5:12 p.m.** (278) ***Long-Term Changes in the Coronary Artery Structure After Heart Transplantation: A Prospective Optical Coherence Tomography Study***
Kamilla P. Bjerre, MD, PhD, Aarhus Univ Hosp, Aarhus N, Denmark
- 5:16 p.m.** **Q&A**
- 5:18 p.m.** (279) ***Impact of Donor-Transmitted Hepatitis C Virus on Development of Early Cardiac Allograft Vasculopathy in the Current Era***
Andrew Cluckey, MD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA
Pre-recorded Presentation
- 5:24 p.m.** (280) ***Poke Not Prod: First Canadian Experience Using Donor-Derived Cell Free DNA to Replace Endomyocardial Biopsy During COVID-19***
Eduard Rodenas-Alesina, MD, Peter Munk Cardiac Ctr. Ted Rogers Ctr for Heart Res. Ajmera Transplant Ctr, Toronto, Canada
- 5:28 p.m.** **Q&A**
- 5:30 p.m.** (281) ***Incidence of mTORi Associated BOOP in Cardiac Transplant Recipients – A Single Center Perspective***
Ronald Zolty, MD, Univ of Nebraska Medical Ctr, Omaha, NE, USA
- 5:34 p.m.** **Q&A**
- 5:36 p.m.** (282) ***Panel-Reactive Antibody Associated with Acute Rejection Episodes After Heart Transplantation: An Analysis of the UNOS Database***
Umar A. Siddiqi, N/A, Univ of Chicago Med, Chicago, IL, USA
Pre-recorded Presentation
- 5:42 p.m.** (283) ***Efficacy of Plasmapheresis and Intravenous Immunoglobulin on the Reduction of Donor Specific Antibodies in Heart Transplant Recipients***
Olivia Huber, PharmD, Tampa General Hosp, Tampa, FL, USA
Pre-recorded Presentation
- 5:48 p.m.** (284) ***Effect of Hydroxocobalamin Compared to Methylene Blue for Management of Vasoplegia***
Amanda I. Ingemi, PharmD, MPH, BCIDP, Sentara Norfolk General Hosp, Norfolk, VA, USA
- 5:52 p.m.** **Q&A**
- 5:54 p.m.** (285) ***Safety and Efficacy of SGLT2i Post Orthotopic Heart Transplantation***
Swethika Sundaravel, MD, Univ of Nebraska Medical Ctr, Omaha, NE, USA
- 5:58 p.m.** **Q&A**



5:00 p.m. – 6:00 p.m.

MINI ORAL 02: COVID-19 Disease and Vaccination Issues Relevant to Lung Transplantation

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Infectious Diseases

Chairs: Jesper Magnusson, MD, and Fernanda P Silveira, MD

Session Summary: This session will consider the impact of COVID-19 disease on potential lung transplant candidates and lung transplant recipients, including a review of the immunogenic effects of infection and vaccination.

- 5:00 p.m. **(286) Lung Transplantation for Post COVID19 End Stage Lung Failure: A Case Series from 3 Latin American Countries**
Pedro F. Undurraga, MD, Clinica Las Condes, Santiago, Chile
- 5:04 p.m. **Q&A**
- 5:06 p.m. **(287) Racial Disparities in Death Due to SARS-CoV-2 in the United States: An Analysis of the OPTN Database**
Stanley B. Wolfe, MD, Massachusetts General Hosp, Boston, MA, USA
- 5:10 p.m. **Q&A**
- 5:12 p.m. **(288) Comparing Outcomes of COVID-19 vs NonCOVID-19 Lung Transplant Recipients on ECMO as a Bridge to Transplant**
Shravani Pasupneti, MD, Stanford Univ Hosp, Stanford, CA, USA
Pre-recorded Presentation
- 5:18 p.m. **(289) A Comparison of Short-Term Morbidity and Mortality Among Inpatient Lung Transplant Recipients Transplanted for COVID-19 and Other Restrictive Lung Diseases**
Deepika Razia, MBBS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- 5:22 p.m. **Q&A**
- 5:24 p.m. **(290) Airway Complications After Lung Transplant for Post Coronaviral Disease (COVID-19) Acute Respiratory Distress Syndrome (ARDS) Related End Stage Lung Disease: Single Centre Experience**
Sharanya Kumar, MD, KIMS, Hyderabad, India
Pre-recorded Presentation
- 5:30 p.m. **(291) CARE Score on Chest Radiograph at Diagnosis Predicts Early and Late Outcomes Among Lung Transplant Patients with COVID-19**
Adrian Lawrence, MD, Univ of Texas Southwestern, Dallas, TX, USA
- 5:34 p.m. **Q&A**
- 5:36 p.m. **(292) Autoantibodies and Severity of COVID-19 in Lung Transplant Recipients**
Vaidehi Kaza, MD, UT SW Med Ctr 5353 Harry Hines Blvd, Coppell, TX, USA
- 5:40 p.m. **Q&A**
- 5:42 p.m. **(293) Lung Transplant Recipients with SARS-CoV-2 Infection Induce Circulating Exosomes with SARS-CoV-2 Spike Protein S2 Which Are Immunogenic in Mice**
Sandhya Bansal, PhD, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
Pre-recorded Presentation
- 5:48 p.m. **(294) Analysis of Humoral and Cellular Immunity of Lung Transplant Recipients Following SARS-CoV-2 Infection and BNT162b2 mRNA Vaccination**
Sandhya Bansal, PhD, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
Pre-recorded Presentation
- 5:54 p.m. **(295) Immunogenicity of Two Doses of ChAdOx1 nCoV-19 Vaccine in Lung Transplant Recipients**
François M. Carrier, MD PhD, CHU UCL Namur, Yvoir, Belgium
Pre-recorded Presentation



5:00 p.m. – 6:00 p.m.

MINI ORAL 03: How to Do It: Influence of Surgical Techniques and Other Factors on Successful MCS Outcomes

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiothoracic Surgery

Chairs: James K. Kirklin, MD, and Anna L Meyer, MD

Session Summary: This session will explore the impact of new surgical MCS implantation techniques and other modifiable risk factors to consider for optimal outcomes.

- 5:00 p.m.** **(296) *Less Invasive Left Ventricular Assist Device Implantation is Safe and Feasible in Patients with Smaller Body Surface Area***
Katherine L. Wood, MD, Univ of Rochester Medical Ctr, Rochester, NY, USA
- 5:04 p.m.** **Q&A**
- 5:06 p.m.** **(297) *Exploring the Benefit of Thoracotomy LVAD Implant on Subsequent Sternal Entry for Heart Transplantation***
Sam Emmanuel, MBBS, BHSc (Hons), St Vincent's Hosp (Sydney), Darlinghurst, Australia
- 5:10 p.m.** **Q&A**
- 5:12 p.m.** **(299) *Optimization of Flow Dynamics During the HeartWare HVAD to HeartMate 3 Exchange: A Computational Study Assessing Differential Surgical Techniques***
Jonathan Grinstein, MD, Univ of Chicago, Chicago, IL, USA
Pre-recorded Presentation
- 5:18 p.m.** **(300) *Hemodynamic Response and Periprocedural Right Ventricular Function During a Lateral Thoracotomy versus Median Sternotomy Surgical Approach to Implantation of a Left Ventricular Assist Device - A Pilot Study***
Jay D. Pal, MD, PhD, Univ of Washington, Seattle, WA, USA
Pre-recorded Presentation
- 5:24 p.m.** **(301) *Impact of Concomitant Cardiac Valvular Surgery During Implantation of Continuous-Flow Left Ventricular Assist Devices: A European Registry for Patients with Mechanical Circulatory Support (EUROMACS) Analysis***
Antonio Loforte, MD, PhD, S. Orsola Univ Hosp, IRCCS Bologna, Bologna, Italy
Pre-recorded Presentation
- 5:30 p.m.** **(302) *Bridging to Transplant with HeartMate 3 Left Ventricular Assist Device in the 2018 Heart Allocation System***
Matan H. Uriel, MD, Columbia Univ Irving Medical Ctr, New York, NY, USA
- 5:34 p.m.** **Q&A**
- 5:36 p.m.** **(303) *Predictors of Failure to Rescue After Left Ventricular Assist Device Implantation***
James W. Stewart II, MD, Univ of Michigan, Ann Arbor, MI, USA
- 5:40 p.m.** **Q&A**
- 5:42 p.m.** **(304) *Characterizing Outflow Graft Narrowing over Time***
Sean McCarthy, MD, Wayne State, Detroit, MI, USA
- 5:46 p.m.** **Q&A**
- 5:48 p.m.** **(305) *Evaluation of the Stanford Integrated Psychosocial Assessment for Transplantation on Clinical Outcomes Following Left Ventricular Assist Device Implantation***
Dongbo Yu, MD PhD, Univ of Chicago, Chicago, IL, USA
- 5:52 p.m.** **Q&A**



5:00 p.m. – 6:00 p.m.

MINI ORAL 04: Pulmonary Vascular Disease

Location: Ballroom A

Primary Core Therapy: PVD

Primary Audience: Cardiology

Chairs: Kevin M Chan, MD, and Maria Crespo, MD

Session Summary: This session will explore new evidence and physiology in all groups of the PH classification including pediatrics.

- 5:00 p.m.** **(306) Pulmonary Artery Wave Intensity Analysis in Pulmonary Hypertension Due to Left Heart Disease**
Ivan Yim, M.B.B.S., Univ Hosp Birmingham, Birmingham, United Kingdom
- 5:04 p.m.** **Q&A**
- 5:06 p.m.** **(307) Reservoir Pressure Analysis in Group 2 Pulmonary Hypertension**
Ivan Yim, M.B.B.S., Univ Hosp Birmingham, Birmingham, United Kingdom
- 5:10 p.m.** **Q&A**
- 5:12 p.m.** **(308) International Practice Heterogeneity in Pediatric Left Heart Disease Related Pulmonary Hypertension**
Rachel K. Hopper, MD, Stanford Univ Sch of Med, Palo Alto, CA, USA
Pre-recorded Presentation
- 5:18 p.m.** **(309) Long Term Safety and Outcomes Utilizing the CardioMEMS Device in Patients with Pulmonary Arterial Hypertension**
Sarumathi Thangavel, MD, Allegheny General Hosp, Pittsburgh, PA, USA
- 5:22 p.m.** **Q&A**
- 5:24 p.m.** **(310) Severe Postoperative Acute Kidney Injury Linked to Worse Two-Year Survival in Pulmonary Thromboendarterectomy Patients**
Amy S. Wang, BS, Columbia Univ, New York, NY, USA
Pre-recorded Presentation
- 5:30 p.m.** **(311) Role of Pulmonary Hypertension in Acute Exacerbation of Chronic Obstructive Pulmonary Disease; Outcomes and Healthcare Utilization**
Rezwan Munshi, MD, Nassau Univ Medical Ctr, East Meadow, NY, USA
Pre-recorded Presentation
- 5:36 p.m.** **(312) Scimitar Syndrome Outcomes in Patients with Pulmonary Hypertension: A Single Center Experience**
Emma Seymour, Master of Science in Physician Assistant Studies, Baylor Coll of Med, Houston, TX, USA
- 5:40 p.m.** **Q&A**
- 5:42 p.m.** **(313) Prognostic Significance of Pulmonary Hypertension in Patients with Hypertrophic Obstructive Cardiomyopathy Undergoing Septal Myectomy**
Aaron Lee, MD, Tufts Medical Ctr, Boston, MA, USA
- 5:46 p.m.** **Q&A**
- 5:48 p.m.** **(314) Right Heart Reverse Remodeling Correlates with NT-proBNP Outcomes Among Pulmonary Arterial Hypertension Patients on Combination Therapy**
Jennifer M. McLeod, MD, Montefiore Medical Ctr, Bronx, NY, USA
Pre-recorded Presentation
- 5:54 p.m.** **(315) Pulmonary Hypertension in the Setting of Hemodialysis Arteriovenous Fistulas: Natural History and Outcomes**
Aaron M. Bae, AB (Anticipated Graduation: May 2022), Minneapolis Heart Inst Fndn, Minneapolis, MN, USA
- 5:58 p.m.** **Q&A**



5:00 p.m. – 6:00 p.m.

MINI ORAL 05: Recipient Risk Factors and Outcomes in Lung Transplantation

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Pulmonology

Chairs: Selim M. Arcasoy, MD, MPH, and Kelly Bryce, PhD

Session Summary: This session will consider lung transplant recipient factors impacting waiting list mortality, risk of PGD, airway complications and long-term outcomes for adult and pediatric cohorts.

- 5:00 p.m. **(316) A Simple Scoring System for Lung Transplant Waitlist Mortality Risk Factors**
Jarrod E. Dalton, PhD, Cleveland Clinic, Cleveland, OH, USA
- 5:04 p.m. **Q&A**
- 5:06 p.m. **(317) The LAS and Novel Models Poorly Predict Post-Transplant Survival**
Jay M. Brahmhatt, MD, Univ of Washington, Seattle, WA, USA
Pre-recorded Presentation
- 5:12 p.m. **(318) The Lung Allocation Score Remains Inequitable for Patients with PAH, Even After the 2015 Revision**
Nicholas A. Kolaitis, MD, Univ of California, San Francisco, San Francisco, CA, USA
- 5:16 p.m. **Q&A**
- 5:18 p.m. **(319) Composite Lung Transplant Suitability Score (CLaSS): A Novel Predictor of Survival Following Lung Transplantation**
Glen P. Westall, FRACP, PhD, Alfred Hosp, Melbourne, Australia
Pre-recorded Presentation
- 5:24 p.m. **(320) Utilization of Distressed Communities Index to Examine the Impact of Socioeconomic Status on Lung Transplant Outcomes**
Brandon E. Ferrell, M.D., Montefiore Medical Ctr, Bronx, NY, USA
- 5:28 p.m. **Q&A**
- 5:30 p.m. **(321) Validation of a Simple to Use PGD Prediction Algorithm**
Joshua M. Diamond, MD, Univ of Pennsylvania, Philadelphia, PA, USA
- 5:34 p.m. **Q&A**
- 5:36 p.m. **(322) Primary Graft Dysfunction (PGD) After Lung Transplantation in the UK: Incidence, Risk Factors and Patient Outcome**
Gillian Hardman, BSc MBBS MSc FRCSEd(CTh), NHS Blood and Transplant, Bristol, United Kingdom
Pre-recorded Presentation
- 5:42 p.m. **(323) Proposal for Simplified Endoscopic Standardized Grading of Central Airway Complications After Lung Transplantation According to the Long-Term Prognosis Value of the Current MDS Classification**
Alban Todesco, Docteur, Hop Nord APHM, Marseille, France
Pre-recorded Presentation
- 5:48 p.m. **(324) Lower-than-Standard Cutoff Number of Reflux Episodes is Associated with Worse Lung Transplant Outcomes**
Juan Fernandez-Castillo, MD, Univ Health Network, Univ of Toronto, Toronto, Canada
- 5:52 p.m. **Q&A**
- 5:54 p.m. **(325) Long Term Outcome After Pediatric Lung Transplantation**
Nicole Strasser, MD, Medical Univ of Vienna, Vienna, Austria
Pre-recorded Presentation



5:00 p.m. – 6:00 p.m.

MINI ORAL 06: Basic Research: Innovative Cardioprotective Therapies

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Research and Immunology

Chairs: Maria N Sanz, PhD, and Carmela D. Tan, MD

Session Summary: This session will depict novel cardioprotective therapies and/or strategies that are still on incipient stages of development but bring new valuable knowledge to heart failure and heart transplantation fields.

- 5:00 p.m.** **(326) Donor Simvastatin Treatment is More Effective in Donors with Low Plasma Levels of Arginine**
Kishor U. Dhaygude, PhD, Transplantation Lab, Univ of Helsinki, Helsinki, Finland
- 5:04 p.m.** **Q&A**
- 5:06 p.m.** **(327) TNX-1500, an Fc-Modified Anti-CD154 Antibody, Prolongs Nonhuman Primate Cardiac Allograft Survival**
Shuhei Miura, M.D., Massachusetts General Hosp, Boston, MA, USA
Pre-recorded Presentation
- 5:12 p.m.** **(328) Successful Use of Anti-IL-6R Therapy to Achieve Cardiac Allograft Tolerance in Non-Human Primates**
Cynthia L. Miller, MD, Massachusetts General Hosp, Boston, MA, USA
- 5:16 p.m.** **Q&A**
- 5:18 p.m.** **(329) Using mTOR Inhibitor Nanoimmunotherapy to Induce Cardiac Allograft Tolerance in Non-Human Primates**
Jane M. O, MD, Massachusetts General Hosp, Boston, MA, USA
- 5:22 p.m.** **Q&A**
- 5:24 p.m.** **(330) Tacrolimus for Prevention of Right and Left Ventriculo-Arterial Coupling Changes in Experimental Brain Death**
Asmae Belhaj, MD, PhD, CHU UCL Namur, Yvoir, Belgium
- 5:28 p.m.** **Q&A**
- 5:30 p.m.** **(331) Macrophage-Derived Extracellular Vesicles (EVs) Have Functional and Metabolic Effects on Cardiac Grafts in a Preclinical Model of Donation After Circulatory Death (DCD)**
Selianne Graf, MSC, Dept of Cardiovascular Surgery, Inselspital, Bern Univ Hosp, Bern, Switzerland
- 5:34 p.m.** **Q&A**
- 5:36 p.m.** **(332) Low Dose IL-2 Therapy Induces T Regulatory Cell Derived Circulatory Exosomes Containing PDL1 and CD73 and Abrogates Development of Chronic Cardiac Allograft Rejection**
Ranjithkumar Ravichandran, PhD, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
Pre-recorded Presentation
- 5:42 p.m.** **(333) Stem Cell Mobilization by Plerixafor Has an Affirmatory Effect on the Development of Transplant Vasculopathy in a Murine Aortic Allograft Model**
Frank Theil, Univ of Erlangen, Erlangen, Germany
- 5:46 p.m.** **Q&A**
- 5:48 p.m.** **(334) Single-Nuclear RNA-Sequencing Identifies Cell-Specific Transcriptional Programs in Cardiac Allograft Vasculopathy**
Kaushik Amancherla, MD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA
- 5:52 p.m.** **Q&A**
- 5:54 p.m.** **(335) Unsupervised Machine Learning to Identify and Target Myofilament Mechanisms of Clinical RV Dysfunction in HFrEF**
Vivek Jani, BS, MS, Johns Hopkins Univ, Sch of Med, Baltimore, MD, USA
- 5:58 p.m.** **Q&A**



6:15 p.m. – 7:15 p.m.

POSTER SESSIONION 1

Poster Auditorium

Some posters are on-demand only (check Mobile App for status)

CARDIOLOGY (HEART)

(460) Next-Generation Sequencing in Genetic Testing of Kazakhstani Sudden Cardiac Death Cases; Ainur R. Akilzhanova, PhD, DMSci, Professor, Ctr for Life Sciences, Natl Lab Astana, Nazarbayev Univ, Nur-Sultan, Kazakhstan

(461) Keep Your Cool! One Year Outcomes with Use of a Hypothermic Preservation System Compared to Standard Storage with Ice During Heart Procurement; Jeffrey Teuteberg, MD, Stanford Univ, Palo Alto, CA, USA

(462) Relationship Between Cardiac Autonomic Markers and Degree of Cardiac Reinnervation in Heart Transplant Patients: Insights from a Mathematical Model; Max Haberbusch, MSc, BSc, Medical Univ of Vienna, Vienna, Austria

(463) What is the Meaning of Culture Negative Leukocytosis Immediately After Heart Transplantation?; Gina Jamero, MSN, ACNP-BC, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA

(464) Sex Differences in Desensitization for Patients Awaiting Heart Transplantation: Is There a Difference?; Nikhil Patel, B.S., Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA

(465) Desensitization Therapy Among Highly Sensitized LVAD Patients; Sandip Zalawadiya, MD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA

(466) Influence of Probiotic Supplementation in Inflammatory Profile of Patients with Heart Failure - Study PROBHF: A Clinical Trial, Randomized, Double-Blind, Placebo-Controlled; Fernando Bacal, MD, PhD, Heart Inst, São Paulo, Brazil

(467) Association Between Oral Microbiome, Inflammation, Endotoxemia, and Heart Failure Severity; Bruno Bohn, MPH, Univ of Minnesota Sch of Public Health, Minneapolis, MN, USA

(468) Effect of Temporary versus Durable Support Devices as Bridge to Transplant on HLA Antibody Production in Heart Transplant Recipients; Darren Brow, MD, Mayo Clinic, Jacksonville, FL, USA

(469) Intermittent Levosimendan for Late Right Ventricular Failure in Patients with Left Ventricular Assist Devices; Jesse R. Kimman, M.D., Erasmus Univ Medical Ctr, Rotterdam, Netherlands

(470) Long Term Hematologic and Graft Outcomes After Cardiac Transplant in AI Amyloidosis; Vivek Patel, MD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA

(471) Drug Levels After Proliferation Signal Inhibitors Initiation and Short-Term Outcomes in Ambulatory Heart Transplant Recipients; Mihail Kancharla, M.D Candidate, Toronto General Hosp, Toronto, Canada

(472) Heart Transplant Outcomes and Trends in Pre-Transplant Impella Use; David Valdivia, MD, MS, Univ of Southern California, Los Angeles, CA, USA

(473) Outcomes Following Heart Transplant for Patients with Cardiac Amyloidosis; Evan Kransdorf, MD, PhD, Smidt Heart Institute at Cedars-Sinai Medical Ctr, Los Angeles, CA, USA

(474) Outcomes of Heart Transplantation versus Left Ventricular Assist Device Implantation in Septuagenarians; Andrew Lin, MD, Univ of California San Diego, San Diego, CA, USA

(475) Cognitive Function in Iron Deficient Heart Transplant Recipients Receiving Intravenous Iron Supplement: A Prespecified Secondary Endpoint in the Randomized Ironic Trial; Kaspar Broch, MD, PhD, Oslo Univ Hosp, Rikshospitalet, Oslo, Norway



(476) Influence of Tricuspid Regurgitation After Heart Transplantation: A 10-Year Single Center Experience; Rebecca Krey, MD, Univ of Heidelberg, Heidelberg, Germany

(477) Association Between Frailty and 30-day Unplanned Readmission After Hospitalization for Heart Failure: Results from Nationwide Readmissions Database; Javier Jimenez, MD PhD FACC, MCVI Baptist Health South Florida, Miami, FL, USA

(478) Heart Transplantation in Systemic Diseases: How Far Can We Go?; Concetta Di Nora, MD, Azienda Sanitaria Univria Integrata di Udine, Udine, Italy

(479) Prognostic Significance of Early Leukopenia in Heart Transplant Recipients; Gregor Poglajen, MD, PhD, Univ Medical Ctr Ljubljana, Ljubljana, Slovenia

(480) Outcomes Associated with Early Post-Heart Transplant Restrictive Hemodynamics; Peter Marogil, DO, Franciscan Health, Olympia Fields, IL, USA

(481) Effect of VT Ablation on Time Between VT Storm and Heart Transplant; Emily A. Margolin, MD, UC San Diego, San Diego, CA, USA

(482) Interleukin - 2 Receptor Antagonists Induction Therapy in Simultaneous Heart - Kidney Transplantation; Abraham Samra, MD, NYU Langone Health, New York, NY, USA

(483) Characteristics and Outcomes of Patients with Cardiac Amyloidosis Requiring Orthotopic Heart Transplantation; Masihullah Barat, MD, Univ of California, San Diego, San Diego, CA, USA

(484) Varying Phenotypes and Outcomes in LMNA Cardiomyopathy; Anjali Kumar, MD, UCSD, San Diego, CA, USA

(485) The Clinical Outcomes of Marginal Donor Hearts: A Single Center Experience the 'Margins' Are Only in Our Mind?; Soo Yong Lee, MD, PhD, Pusan Natl Univ Yangsan H., Yangsan, South Korea

(486) Long-Term Outcomes for Pediatric HT Patients Transitioning to Adult Care; Elena Donald, MD, Columbia Univ Irving Medical Ctr, New York, NY, USA

(487) Outcomes of Patients Supported with Heartmate Three Left Ventricular Assist Device for More Than Two Years; Alejandro Maldonado, MD, Columbia Univ Irving Medical Ctr, New York, NY, USA

(488) Gender-Based Differences in Heart Transplantation Rates; Nakeya Dewaswala, MD, Univ of Kentucky, Lexington, KY, USA

(489) Outcomes in Cardiac Transplantation in Patients with a History of Methamphetamine Use: A Single Center Experience; Matthew Brown, MD, Univ of California San Diego Medical Ctr, La Jolla, CA, USA

(490) Predictors of One-Year Outcome in Patients Undergoing Cardiac Re-Transplantation: Machine Learning Analysis; Atsushi Kainuma, MD, Columbia Univ Medical Ctr, New York, NY, USA

(491) Identification and Characterization of Trajectories of Renal Function Decline After Heart Transplantation; Yael Peled, MD, Sheba Medical Ctr and Tel Aviv Univ, Ramat Gan, Israel

(492) Artificial Intelligence 12 Lead ECG Based Heart Age Estimation and 1-year Outcomes After Heart Transplantation; Jose Ruiz Morales, MD, Mayo Clinic, Jacksonville, FL, USA

(493) The Impact of Preoperative Weight Loss on Survival Following Cardiac Transplantation; Elissa Driggin, MD, NewYork-Presbyterian/Columbia Univ Irving Medical Ctr, New York, NY, USA

(494) Development and Internal Validation of a Model to Predict Malignancy within a Year After Heart Transplantation in Adults; William L. Baker, Pharm.D., Univ of Connecticut Sch of Pharmacy, Storrs Mansfield, CT, USA



- (495) Circulatory Power is Superior to Peak Oxygen Consumption in Predicting Adverse Outcomes in Ambulatory Patients Assessed for Heart Transplantation;** Luis-Alberto Martinez, MD, Royal Papworth Hosp, Cambridge, United Kingdom
- (496) Normal Geriatric Nutritional Risk Index is Associated with Rehospitalization After Orthotopic Heart Transplant;** Jerry Lipinski, MD, Univ of California San Diego, San Diego, CA, USA
- (497) Lymphopenia at Time of Index Hospital Discharge Predicts 1-Year Mortality Post Left Ventricular Device Implant;** Kristin Stawiariski, MD, Johns Hopkins Univ Sch of Med, Baltimore, MD, USA
- (498) Value of Renal Histology for Predicting Cardiorenal Outcomes in Patients Listed for Cardiac Transplantation;** Sumita Barua, MBBS, St Vincent's Hosp Sydney, Darlinghurst, Australia
- (499) Galectin-3 in Patients from 2012-2020: A Prognostic Biomarker of Left Ventricular Assist Device Post Implantation Outcomes;** Ryan J. Hoang, University of Chicago Medicine, Chicago, IL, USA
- (500) Racial and Gender Disparities in the Prognostic Value of Galectin-3 in Post Left Ventricular Assist Device Outcomes;** Ryan J. Hoang, University of Chicago Medicine, Chicago, IL, USA
- (501) Variability in Donor-Derived Cell-Free DNA Levels Predicts Mortality Risk in Heart Transplant Recipients;** Megan Kamath, MD, Ronald Reagan UCLA Medical Ctr, Los Angeles, CA, USA
- (502) Contemporary Evaluation of Gender, Race, and Socioeconomics with Outcomes in Heart Failure;** Isaac Mizrahi, MD, Univ of Hawaii, Honolulu, HI, USA
- (503) High Sensitivity Troponin I as a Predictor of Survival in Heart Transplant Patients;** Krishan Patel, MD, Emory Univ, Atlanta, GA, USA
- (505) Predictive Accuracy of Hemodynamic Surrogate Indices in Patients with Advanced Heart Failure;** Vinh Chau, MD, Advocate Christ Medical Ctr/Univ of Illinois-Chicago, Chicago, IL, USA
- (506) Hemodynamic Modeling for Mitral Regurgitation;** Mia Bonini, B.S., Univ of Michigan, Ann Arbor, MI, USA
- (507) Risk Factors Associated with One Year Mortality from the Time of Cardiac Amyloid Diagnosis;** Fan Ye, MD, Wake Forest Baptist Medical Ctr, Section on Cardiovascular Med, Winston-Salem, NC, USA
- (508) Are Body Mass Index, Quantitative Whole Body Fat Mass, and Whole Body Fat Free Mass Predictors of Post Heart Transplantation Outcomes?;** Linda Lee, MD, Univ of Chicago Med, Chicago, IL, USA
- (509) Artificial Intelligence for the Prognostication and Management of Heart Transplant: A Scoping Review;** Sarah Giacobbo, MMI, Univ Health Network, Toronto, Canada
- (510) Evaluation of Donor Glomerular Filtration Rate on Survival Outcomes among Simultaneous Heart and Kidney Transplant Recipients;** Carolyn K. Kan, MD, LAC+USC, Los Angeles, CA, USA
- (511) Transplant Outcomes in Hearts with Moderate to Severe Left Ventricular Hypertrophy After the 2018 OPTN/UNOS Allocation Changes;** Abhinay Ramachandran, MD, NYU Langone Medical Ctr, New York, NY, USA
- (512) Hypophosphatemia After Intravenous Ferric Carboxymaltose in Heart Transplant Patients;** José González-Costello, MD, Bellvitge Univ Hosp, Barcelona, Spain
- (513) ACEi Use in Select Patients Awaiting Heart Transplant May Be a Risk Factor for the Development of Primary Graft Dysfunction and Vasoplegia;** Seong Kim, B.S., Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (514) Donor Alkalemia is Associated with Severe Primary Graft Dysfunction;** Evan Kransdorf, MD, PhD, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA



- (515) Critical Illness Immunosuppression: Ultra-Rapid Taper to Monotherapy;** David A. Baran, MD, Sentara Heart Hosp, Norfolk, VA, USA
- (516) Derivation and Accuracy of "Pocket-Sized" Criteria for Primary Graft Dysfunction After Heart Transplant;** Brian Wayda, MD, MPH, Stanford Univ Sch of Med, Palo Alto, CA, USA
- (517) Late Cytomegalovirus Primoinfection in a Heart Transplant Recipient After COVID-19 Vaccine;** Javier Castrodeza, MD, Hosp General Univrio Gregorio Marañón, Madrid, Spain
- (518) Vaccine-Induced Coronay Antibodie-Mediated Rejection and Thrombosis in a Heart Transplant Patient: A Case Report;** Natália Duarte. Barroso, MD, Heart Inst / Univ of Sao Paulo, Sao Paulo, Brazil
- (519) Too Much Too Soon? The Catch-22 of Catching COVID-19;** Phillip K. Lo, MD, St Vincent's Hosp, Sydney, Australia
- (520) Analysis Paralysis: Transition to HeartMate 3 Left Ventricular Assist Device Despite Multiple Complications from COVID-19;** Sanjana BhatiaPatel, DO, Emory Univ Hosp, Atlanta, GA, USA
- (521) Severe Isolated Cardiomyopathy Requiring Heart Transplant Following COVID-19 Infection and Subsequent Vaccination;** Hayley Mitchel, BS, Univ of Arizona, Phoenix, AZ, USA
- (522) An Unusual Cause of Superior Vena Cava Stenosis;** Ayisha Mehtab. Khan-Kheil, MBChB MRCP (UK), Queen Elizabeth Hosp Birmingham, Birmingham, United Kingdom
- (523) Noonan Syndrome-Associated Post-Transplant Capillary Leak Syndrome;** Oscar Gonzalez Fernandez, MD, Hosp La Paz, Madrid, Spain
- (524) The Heart Awakens;** Pei Jun Zhao, MD MPH, London Health Sciences Ctr, Western Univ, London, Canada
- (525) Isoproterenol to Terbutaline Transition for Chronotropic Support in Heart Transplantation to Avoid Pacemaker Implantation;** Dmitry Yaranov, MD, Baptist Memorial Healthcare, Memphis, TN, USA
- (526) The Sleeping Giant Awakes: A Case of Recurrent Post-Transplant Giant Cell Myocarditis;** Mark N. Belkin, MD, Univ of Chicago, Chicago, IL, USA
- (527) Simultaneous Hyperammonemia Syndrome in Multiple Organ Recipients from a Single Donor;** Dipen M. Sankhesara, MBBS, MHA, FRACP, Fiona Stanley Hosp, Perth, Australia
- (528) Pulmonary Amyloidoma: A Rare Entity Complicating a Post-Heart Transplant Course;** Mark Dela Cruz, MD, Univ of Chicago, Chicago, IL, USA
- (529) Intermittent WPW Pattern in a Heart Transplant Recipient with Normal Donor Electrocardiogram;** Rachna Kataria, MD, Massachusetts General Hosp, Boston, MA, USA
- (530) Understanding Dyspnea in a Patient with Pulmonary Vein Stenosis;** Ahmed S. Sadek, M.D., Univ of Michigan, Ann Arbor, MI, USA

CARDIOLOGY (MCS)

- (531) Trans-Valvular Unloading Reduces Anaerobic Glycolysis Before Reperfusion and Preserves Energy Substrate Utilization After Reperfusion in Models of Acute Myocardial Infarction;** Lija Swain, PhD, Tufts Medical Ctr, Boston, MA, USA
- (532) Determination of Left Ventricular Preload and Contractility Using Waveform Analysis in Continuous-Flow Left Ventricular Assist Device Patients;** Anju Ramanayake, BMed (Hons) MD, Univ of New South Wales, Sydney, Australia



- (533) Optimisation of the Imaging of the HVAD Monitor Using Smartphone Application, WaveApp;** Anju Ramanayake, BMed (Hons) MD, Univ of New South Wales, Sydney, Australia
- (534) Estimation of Left Ventricular Preload Using Left Ventricular Assist Device Flow Waveform Analysis in a Mock Circulatory Loop;** Anju Ramanayake, BMed (Hons) MD, Univ of New South Wales, Sydney, Australia
- (535) Integrating Personalized Risk Scores in Decision Making About Left Ventricular Assist Device (LVAD) Therapy: Clinician and Patient Perspectives;** Mandeep Mehra, MD, FRCP, FACC, FESC, Brigham and Women's Hospital, Boston, MA, USA
- (536) Outcomes of COVID-19 Infection in Patients with Left Ventricular Assist Device;** Gurjaspreet Kaur. Bhattal, MD, The Heart Hosp Baylor Scott and White, Plano, TX, USA
- (537) COVID-19 in LVAD Patients Not Associated with Increased Risk of Thrombotic Complications: A Single-Center Experience;** Denny T. Joseph, MD, Houston Methodist Hosp, Houston, TX, USA
- (538) Baseline Ventricular Assist Device (VAD) Flow as a Potential Marker of Increased Morbidity and Mortality Risk During Blood Stream Infection (BSIs) in Patients with Fixed Pump Speed;** Phillip K. Lo, MD, St Vincent's Hosp, Sydney, Australia
- (539) Polymicrobial and Multiple Blood Stream Infection Episodes as Risk Factors for On-Pump Mortality in Mechanical Circulatory Support Patients;** Phillip K. Lo, MD, St Vincent's Hosp, Sydney, Australia
- (540) Three-Dimensional CT Reconstruction for Diagnosis of LVAD Outflow Graft Twist;** Boaz Elad, MD, Rambam Health Care Campus, Haifa, Israel
- (541) Acute Left Subclavian Artery - Aortic Arch Approach Angle Increases the Risk of Axillary Intra-Aortic Balloon Pump Complication: A Word of Caution;** Hassan M. Ashraf, MD, Univ of Florida Coll of Med, Gainesville, FL, USA
- (542) Cardiac Tamponade Totalis: Unique Phenomenon of Biventricular Tamponade After LVAD Implant;** Tarun Kadaru, M.D., ; Univ of Texas Southwestern Medical Ctr, Dallas, TX, USA
- (543) A Rare Case of COVID-19 Induced Multisystem Inflammatory Syndrome in Adult (MIS-A) Requiring Venoarterial Extracorporeal Membrane Oxygenation (VA-ECMO);** Andre Gabriel, MD, West Virginia Univ, Morgantown, WV, USA
- (544) Coronavirus 2019 in a Morbidly Obese Patient: ECMO or No ECMO?;** Amar Shere, Medical Doctor, St. Louis Univ Hosp, St. Louis, MO, USA
- (545) Right Ventricle Pressure-Volume Analysis During LVAD Explant Evaluation;** Paul J. Scheel III, MD, Johns Hopkins Sch of Med, Baltimore, MD, USA
- (546) Flow Pattern of Artificial Pulse in Outflow Graft of the HeartMate 3 Left Ventricular Assist Device;** Satoshi Miyashita, MD, Tufts Medical Ctr, Boston, MA, USA
- (547) Hemodynamic and Echocardiographic Assessment of Left Ventricle Recovery with Left Ventricular Assist Devices: Do We Explant?;** Waleed Al-Darzi, MBBCh, Henry Ford Hosp, Detroit, MI, USA
- (548) Successful HeartMate 3 Decommissioning Following Myocardial Recovery from Chronic Heart Failure;** Josue Villegas-Galaviz, MD, Univ of Kentucky, Lexington, KY, USA
- (549) Cardiogenic Shock Following Successful CTO Revascularization;** Sanjana BhatiaPatel, DO, Emory Univ, Atlanta, GA, USA
- (550) Assessing Cardiac Recovery for Decommissioning of LVAD Support: Structure versus Function;** Ramy S. Gabarin, BHSc, Univ of Toronto, Toronto, Canada



(551) Idiopathic Central Diabetes Insipidus as an Etiology of Left Ventricular Suction and Ventricular Arrhythmias; Ellen Liu, MD, The Ohio State Univ, Columbus, OH, USA

(552) Successful Recovery from Refractory Hypoxia Due to Right-to-Left Shunting Associated with Iatrogenic Atrial Septal Defect After Catheter Ablation in a Patient with a Left Ventricular Assist Device; Shotaro Komeyama, MD, Natl Cerebral and Cardiovascular Ctr, Suita, Japan

(553) Successful Recovery with Venovenous ECMO for ARDS After LVAD HeartMate 3 Implantation: A Case Report; Sara Westfall, Physician Assistant, Lutheran Hosp, Fort Wayne, IN, USA

(554) Translocation of LVAD Pump and Driveline Causing Bowel Perforation; Alejandro Plana, MD, Univ of Chicago, Chicago, IL, USA

(555) Successful Robotic Sleeve Gastrectomy in a Patient with Left Ventricular Assist Device; Michel Ibrahim, MD, Temple Univ Hosp, Philadelphia, PA, USA

(556) Axillary IABP Migration into SMA; Jagpreet Grewal, MD, Newark Beth Israel Medical Ctr, Newark, NJ, USA

(557) Pulse Contour Analysis: A Useful Tool for Decision Making During Temporary Mechanical Circulatory Support; Waseem Nosair, M.D., M.P.H, Univ of Texas Southwestern Medical Ctr, Dallas, TX, USA

(558) Carotid Endarterectomy Prior to Ventricular Assist Device Placement in a Patient with Cardiogenic Shock; Maria Tereza Sampaio de Sousa. Lira, MD, Insto do Coração do Hosp das Clínicas da Faculdade de Medicina da Univ de São Paulo, São Paulo, Brazil

(559) Development of Aortic Regurgitation After LVAD Implantation with Descending Thoracic Aorta Anastomosis Technique; Javier Castrodeza, MD, Hosp General Univrio Gregorio Marañón, Madrid, Spain

CARDIOTHORACIC SURGERY (HEART)

(560) Normothermic Regional Perfusion of Circulatory Dead Donor Hearts: Quick and Dirty or Slow and Steady?; Hans Eiskjaer, DMsc, Professor, Consultant Cardiologist, Aarhus Univ Hosp, Aarhus, Denmark

(561) Whole-Genome Sequencing Reveals Genetic Variant at the HLA Locus Associated with Graft Failure After Heart Transplantation; Gustav Zar, MD, Lund Univ and Skane Univ Hosp, Lund, Sweden

(562) RNA Sequencing Reveals Differentially Expressed Genes in Left Ventricular Biopsies from Ischemic and Dilated Cardiomyopathy Patients; Fabian Emrich, MD, Univ Hosp Frankfurt, Heartcenter, Frankfurt, Germany

(563) A Novel Intraventricular Balloon Technique for Functional Assessment of Hearts from Donation After Circulatory Death; Sachiko Kadowaki, MD, PhD, The Hosp for Sick Children, Toronto, Canada

(564) Development and Evaluation of a Novel Combined Perfusion Decellularization Heart-Lung Model for Tissue Engineering of Bioartificial Heart-Lung Scaffolds; Alina Zubarevich, MD, West German Heart and Vascular Ctr, Essen, Germany

(565) Heart Transplantation After Infection of Left Ventricular Assist Devices: Effects of IGM-Enriched Human Immunoglobulin as Adjuvant Therapy; Moritz B. Immohr, M.D., Heinrich-Heine-Univ Düsseldorf, Düsseldorf, Germany

(566) Heart Transplant Challenges and Long-Term Outcome in Saudi Arabia: Single High-Volume Center; Feras Khaliel, MD, Ph.D., King Faisal Specialist Hosp & RC, Riyadh, Saudi Arabia

(567) Early and Long-Term Outcomes of the Prophylactic Tricuspid Annuloplasty in Heart Transplantation; Hidefumi Nishida, MD, Univ of Chicago, Chicago, IL, USA

(568) Combined Heart-Lung Transplantation: A Single-Center Experience of 50 Patients over 30 Years; Tom Verbelen, MD, PhD, Univ Hosp Leuven, Leuven, Belgium



- (569) Implications of Initiating DCD Heart Transplantation at a Single U.S. Center;** Stanley B. Wolfe, MD, Massachusetts General Hosp, Boston, MA, USA
- (570) Does Post-Heart Transplantation Placement of Permanent Pacemakers Affect Survival?;** Sheev Zaver, BS, Univ of Tennessee Health Science Ctr Coll of Med, Memphis, TN, USA
- (571) Hospital Administration Considerations for Implementation of Normothermic Regional Perfusion DCD Heart Transplant Program;** Kathleen Cawelti, RN, BSN, UC San Diego Health, La Jolla, CA, USA
- (573) Very Short Stature Predicts Morbidity and Mortality After Heart Transplant;** Noah Weingarten, MD, Univ of Pennsylvania, Philadelphia, PA, USA
- (574) Can Malnutrition at the Time of Heart Transplantation Affect Early and Late Mortality?;** Nicola Pradegan, MD, Padova Univ Hosp, Padova, Italy
- (575) Orthotopic Heart Transplantation in Different Categories of Patients. Does It Matter?;** Mehmet H. Akay, MD, The Univ of Texas Health Science Ctr at Houston, Houston, TX, USA
- (576) Isolated Durable LVAD Bridge to Transplant: Institutional Review Following 2018 Allocation Changes;** Nicholas R. Hess, MD, Univ of Pittsburgh Medical Ctr, Pittsburgh, PA, USA
- (577) Renal Outcomes Following Simultaneous Heart-Kidney Transplant Compared with Heart Transplant Alone;** Moses Demehin, PharmD, Univ of Maryland Medical Ctr, Baltimore, MD, USA
- (578) Education and Its Impact on Post-Heart Transplant Survival?;** Sheev Zaver, Bachelor of Science, Univ of Tennessee Health Science Ctr Coll of Med, Memphis, TN, USA
- (579) Normothermic Regional Perfusion in Cardiac Transplantation: Developing a Program;** Brandon Jackson, CTP, UC San Diego Health, La Jolla, CA, USA
- (580) The Impact of Utilizing DCD Donor Hearts on Heart Transplant Activity and Waitlist Time;** Victor Pretorius, MD, UCSD Medical Ctr, La Jolla, CA, USA
- (581) Impact of Recipients Pre-Operative Right Ventricular Dysfunction on Heart Transplantation Outcomes;** Antonio Loforte, MD, PhD, S. Orsola Univ Hosp, IRCCS Bologna, Bologna, Italy
- (582) Relationship Between Left Ventricular Ejection Fraction and Ischemic Time on Heart Transplantation Survival Outcome;** Ahad Firoz, BS, Lewis Katz Sch of Med at Temple Univ, Philadelphia, PA, USA
- (583) Effects of Ischemic Time on Survival After Cardiac Transplantation in a Contemporary Cohort;** Zhaozhi Li, Univ of Chicago, Chicago, IL, USA
- (584) Risk Factors for Failure to Recover Normal Left Ventricular Function in Transplanted Donor Hearts with Low Ejection Fraction;** Ross Mudgway, MD, Loma Linda Univ Medical Ctr, Loma Linda, CA, USA
- (585) Heart Transplant Volume is Positively Affected by Lung Transplant Programs and is Associated with Better SRTTR One-Year Survival Rating;** Jake Lawrence. Rosen, BA, Thomas Jefferson Univ, Philadelphia, PA, USA
- (586) Does Overnight Heart Transplantation Lead to Worse Outcomes? Results from a High Volume Transplant Center;** Quidong Chen, MD, Cedars-Sinai Medical Ctr, Los Angeles, CA, USA
- (587) Outcomes of Combined Heart-Kidney Transplantation in Older Recipients;** Jennie H. Kwon, MD, Medical Univ of South Carolina, Charleston, SC, USA
- (588) Chylothorax After Orthotopic Heart Transplant - A Rare Complication;** Geevarghese K. Mathew, MS,MCH(CTVS), Auckland City Hosp, Auckland, New Zealand



(589) Recurrent Necrotizing Myocarditis Treated with Ventricular Assist Device Bridge to Heart Transplantation - A Case Report; John A. Treffalls, BS, Univ of Maryland Sch of Med, Baltimore, MD, USA

(590) Successful Management of a Septic Shock Caused by Acinetobacter baumannii XDR in a Young Heart Transplant Patient; Antonio D'Errico Ramirez, MD, Policlinico of Bari, Bari, Italy

(591) Use of Polymyxin B Hemoperfusion in Heart Transplant Patient for Septic Shock; Lorenzo Giovannico, Medical Doctor, Univ of Bari, Bari, Italy

(592) Vital Necessity of Total Pacemaker Lead Extraction Following Heart Transplantation; Daniel Maldonado Gaekel, Dr., Univ Heart and Vascular Ctr Hamburg, Hamburg, Germany

(593) A New Modification for Anastomosing HeartMate 3 Apical Cuff for a Small Left Ventricle; Tomoki Ushijima, MD, PhD, Kyushu Univ Hosp, Fukuoka, Japan

(594) Aortocoronary Bypass for a Patient with Achondroplasia Using the Son's Saphenous Vein Homograft; Uoc Huu. Nguyen, MD, PhD, Viet Duc Univ Hosp, Ha Noi, Viet Nam

CARDIOTHORACIC SURGERY (LUNG)

(595) Moderate Flow is Superior to Low Flow Perfusion in a Juvenile Porcine Transplantation Model of Ex-Situ Lung Perfusion; Keir A. Forgie, M.D., Univ of Alberta, Edmonton, Canada

(596) Lung Donation and Transplantation Following Thoraco-Abdominal Normothermic Regional Perfusion: A Case Series; Caroline Boelhouwer, Bachelor in Medicine, Univ Hosp Leuven, Leuven, Belgium

(597) Initial Case Series with a Novel Cold Storage System for Lung Transplantation; Alfred J. Casillan, MD, PhD, Johns Hopkins Hosp, Baltimore, MD, USA

(598) A Novel Controlled Cold Storage System for Optimal Lung Preservation; Mohammad Alayyar, MD, Specialist in Cardiothoracic Surgery(Facharzt), Harefield Hosp, Harefield, United Kingdom

(599) Thermographic Imaging of Lungs Procured and Transported on Ice; Hesham H. Ahmed, M.D, Harefield Hosp, London, United Kingdom

(600) Differential Response of Right Ventricular Contractility to Lung Ischemia-Reperfusion Injury: Large Animal Model to Study Sequential Single Lung Transplantation; Michaela Orlitová, MD, KU Leuven, Leuven, Belgium

(601) Physiological, Radiological and Morphological Characterization of Large Animal Pulmonary Ischemia-Reperfusion Injury; Michaela Orlitová, MD, KU Leuven, Leuven, Belgium

(602) Identification of Single-Nucleotide Polymorphisms Associated with Renal Dysfunction After Lung Transplantation Using Ethnic-Specific SNP Array; Yasuaki Tomioka, Dr, Okayama Univ Hosp, Okayama, Japan

(603) Normothermic Perfusion is Superior to Subnormothermic Perfusion in a Juvenile Porcine Transplantation Model of Ex-Situ Lung Perfusion; Keir A. Forgie, M.D., Univ of Alberta, Edmonton, Canada

(604) Ex-Vivo Pulmonary Artery Angioscopy: A Novel Technique for Management of Donor Lung Pulmonary Embolism; Kamal S. Ayyat, MD, PhD, Cleveland Clinic, Cleveland, OH, USA

(605) Kinetic Modeling of Ex Vivo Lung Perfusion Biomarkers for the Prediction of Lung Transplant Outcomes; Xuanzi Zhou, MHSc, Toronto General Hosp Res Inst, Univ Health Network, Univ of Toronto, Toronto, Canada

(606) How to Assess EVLP Lungs in Standard Clinical Use?; Michaela Orlitová, MD, KU Leuven, Leuven, Belgium



- (607) Rapid Donor-Specific Single Nucleotide Variation Detection by Nanopore Sequencing of Ex Vivo Lung Perfusate;** Haruchika Yamamoto, MD, Ph.D., Toronto Lung Transplant Program and Latner Thoracic Res Labs, Toronto General Hosp Res Inst, Univ Health Network, Univ of Toronto, Toronto, Canada
- (608) Comparing the Paragonix LUNGguard Donor Lung Preservation System to Traditional Ice Storage;** Arya Pontula, BSPH, Univ of Manchester Medical Sch, Manchester, United Kingdom
- (609) A Novel National Program to Maximize Utilization of Heart and Lung Allografts from Donors After Brain Death (DBD) and Donors After Circulatory Death (DCD) for Transplantation;** Waleed H. Hassanein, MD, MD, TransMedics, Inc., Andover, MA, USA
- (610) The Inclusion of Biomarker Scoring During Ex-Vivo Lung Perfusion Can Improve Organ Utilization and Patient Outcomes - A Retrospective, Single Center Study;** Laura Donahoe, MD, Toronto General Hosp, Toronto, Canada
- (611) Eight-Year Results of an IgA- and IgM-Enriched Human Immunoglobulin-Based Therapy for Early Detectable Anti-HLA Donor Specific Antibodies After Lung Transplantation;** Fabio Ius, MD, Hannover Medical Sch, Hannover, Germany
- (612) Perioperative Desensitization with IgA- and IgM-Enriched Human Immunoglobulins Allows Safe Lung Transplantation in Patients with Preformed Donor Specific Antibodies;** Fabio Ius, MD, Hannover Medical Sch, Hannover, Germany
- (613) Risk Factors for the Development of Early Anti-HLA Donor Specific Antibodies After Lung Transplantation: The Role of Primary Graft Dysfunction;** Fabio Ius, MD, Hannover Medical Sch, Hannover, Germany
- (614) Bronchial Suturing Techniques After Lung Transplant: A Single Surgeon Analysis;** Kelly Montgomery, Bachelor of Science, Temple Univ Hosp, Philadelphia, PA, USA
- (615) Thromboembolism After Lung Transplantation - Prolonged Anticoagulation Prophylaxis Depending on Age and Body Weight?;** Isabelle Moneke, Dr. med., Univ of Freiburg-Medical Ctr, Freiburg, Germany
- (616) Comparative Analyses of Donor-Recipient Racial and Ethnic Disparities in Cardiothoracic Transplantation: A Study of the UNOS/OPTN Database;** Hari K. Rajagopal, NONE, Carnegie Vanguard High Sch, Houston, TX, USA
- (617) Clinical Predictors of Lung Transplant Outcomes in Patients with Scleroderma Compared with Pulmonary Fibrosis;** Syed Faaz Ashraf, MD, Univ of Pittsburgh Medical Ctr, Pittsburgh, PA, USA
- (618) Post-Reperfusion Pulmonary Artery Pressure is a Clinical Marker of Primary Graft Dysfunction Risk Following Lung Transplant;** Emily Cerier, MD, Northwestern Memorial Hosp, Chicago, IL, USA
- (619) Lung Transplantation and Concomitant Coronary Artery Bypass Grafting Does Not Impair Patient Outcomes: Insights from a Single-Center Experience;** Fabio Ius, MD, Hannover Medical Sch, Hannover, Germany
- (620) Survival Benefit of Lung Transplant in Septuagenarians: A United Network of Organ Sharing Database Analysis;** Amy Roach, MD, Smidt Heart Inst, Cedars-Sinai Medical Ctr, Los Angeles, CA, USA
- (621) Evaluating the Use of CT-Derived Lung Volumes in Donor-Recipient Lung Size Matching for Lung Transplantation;** Maysoon Hussain, BS in Biomedical Sciences, MD-in progress, UT Southwestern Medical Ctr, Dallas, TX, USA
- (622) Orthotopic Lung Transplantation in Patients over Seventy Years of Age;** Amy Roach, MD, Smidt Heart Inst, Cedars-Sinai Medical Ctr, Los Angeles, CA, USA
- (623) Mid-Term Outcome of Lobar Lung Transplantation: Hamburg Experience;** Shiho Naito, M.D., PhD, Univ Heart and Vascular Ctr Hamburg, Hamburg, Germany



- (624) Mechanical Circulatory Support During Lung Transplantation: Choices, Outcomes and Impact of Duration;** Kamal S. Ayyat, MD, PhD, Cleveland Clinic, Cleveland, OH, USA
- (625) Bronchial Complications and Survival Outcomes in Post-Lung Transplant;** Gabriel Masters, BA, Temple Univ Hosp, Philadelphia, PA, USA
- (626) Complications of Intraoperative ECMO During Lung Transplantation;** Alessandro Bertani, MD, IRCCS ISMETT - UPMC ITALY, Palermo, Italy
- (627) Impact of Minimally Invasive Lung Transplantation on Early Outcomes and Analgesia Use: A Matched Cohort Study;** Jason Thomas, BS, Smidt Heart Inst, Cedars-Sinai Medical Ctr, Los Angeles, CA, USA
- (629) Interrupted versus Continuous Suture for Bronchial Anastomosis in Lung Transplantation: Does It Matter?;** Mariana Gil Barturen, Medicine, Hosp Univ rio Puerta de Hierro Majadahonda, Madrid, Spain
- (630) Long Term Outcomes of Minimally Invasive Lung Transplantation Compared to Clamshell Approach;** Hesham H. Ahmed, M.D, Harefield Hosp, London, United Kingdom
- (631) Impact of Surgical Approach for Lung Transplantation on Clinical Outcomes Regarding Patient Recovery;** Harry Griffiths, BMBS, Royal Papworth Hosp, Cambridge, United Kingdom
- (632) Bilateral Lung Transplantation in Severe Chest Asymmetry: Case Series from a Single Center;** Lorenzo Rosso, Associate Professor, Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico and Univ of Milan, Milan, Italy
- (633) Postoperative Atrial Fibrillation in Lung Transplant Recipients with and without Concomitant Modified Maze;** Yu Xia, MD, MS, Univ of California Los Angeles, Los Angeles, CA, USA
- (634) Association Between FEV₁ Time Course and Mortality in Lung Transplant Patients Treated with Liposomal Aerosolized Cyclosporine for BOS;** Aldo Iacono, MD, Northwell Health Systems, Manhasset, NY, USA
- (635) The Impact of HLA Mismatch Level in COPD Lung Transplantation Patients;** Hiromu Kehara, MD PhD, Temple Univ Lewis Katz Sch of Med, Philadelphia, PA, USA
- (636) Lung Transplantation in the Elderly: How Old is Too Old?;** Jacob Reich, BA, Lewis Katz Sch of Med at Temple Univ, Philadelphia, PA, USA
- (637) Survival After Lung Transplantation is Conditional to Bronchial Complications;** Ram Duvuru, MCh (Cardiothoracic and Vascular Surgery), Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry, India
- (638) Prior and Perioperative Revascularization Impact on Survival in Lung Transplant Patients;** Theresa Tran, B.S., Temple Univ, Philadelphia, PA, USA
- (639) Comparative Influence of Primary Healthcare Payer Types on Patient Outcomes After Lung Transplantation;** Nabeel Rasheed, None, Univ of Chicago, Chicago, IL, USA
- (640) Impact of Gender and Age at Lung Transplantation on Long-Term Survival of Patients with Cystic Fibrosis;** Deepika Razia, MBBS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (641) Survival Outcomes of Lung Recipients with Body Mass Index ≥ 35 kg/m²;** Deepika Razia, MBBS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (642) Long-Term Persisting Donor-Derived Anti-Human Leukocyte Antigen (HLA) Antibody as a Possible Passenger Lymphocyte Syndrome Following Lung Transplantation;** Ryo Fujimoto, MD, Kyoto Univ, Kyoto, Japan



CARDIOTHORACIC SURGERY (MCS)

- (643) Predictive Role of Soluble ST2 in Patients on Left Ventricular Assist Device Support;** Lieke Numan, MCs, Univ Medical Ctr Utrecht, Utrecht, Netherlands
- (644) Prognostic Impact of Implantable Cardioverter Defibrillators in Patients with Continuous Flow Left Ventricular Assist Devices;** Jonas Pausch, Dr. med., Univ Heart and Vascular Ctr Hamburg, Hamburg, Germany
- (645) Independent and Combined Effects of Age and COVID on Patient Outcomes;** Thomas Isaac. Raines, BS, Univ of Tennessee Health Science Ctr, Memphis, TN, USA
- (646) Outcomes of Pediatric Patients Supported with Ventricular Assist Devices;** Hsun Yi Fu, MD, Natl Taiwan Univ Hosp Hsin-Chu Branch, Hsin-Chu, Taiwan
- (647) Pediatric Implantable Ventricular Assist Devices in the State of Texas: A 14 Year Review;** Sruthi Ilangovan, N/A, Texas Ctr for Pediatric and Congenital Heart Disease, Austin, TX, USA
- (648) Contemporary Single-Center Experience with Axillary Intra-Aortic Balloon Pumps;** Ana K. Velez, MD, Johns Hopkins Univ Sch of Med, Baltimore, MD, USA
- (649) Multicenter Italian Study on Radial Mechanically Assisted Circulatory Support (MIRAMACS): Ongoing Analyses;** Antonio Loforte, MD, PhD, S. Orsola Univ Hosp, IRCCS Bologna, Bologna, Italy
- (650) Stroke and Pump Thrombosis Following LVAD Implantation: The Impact of the Implantation Approach;** Michal Nozdrzykowski, MD, Heart Ctr Leipzig, Leipzig, Germany
- (651) Long-Term Complications After Support with Impella 5.0 and 5.5;** Daniel Lewin, None, German Heart Ctr Berlin, Berlin, Germany
- (652) Outcomes in Patients with Commercial HeartMate 3 LVAD: A Comparative Analysis of Non-Trial versus Trial Like Cohorts;** Laura Coyle, MSN, ACNP-BC, Advocate Christ Medical Ctr, Oak Lawn, IL, USA
- (653) Impact of Obstructive Sleep Apnea on Clinical Outcomes Following Left Ventricular Assist Device Implantation;** Nabeel Rasheed, None, Univ of Chicago, Chicago, IL, USA
- (654) Results After Left Ventricular Assist Device Implantation in Patients with Status Post Transcatheter Edge-to-Edge Repair;** Jonas Pausch, Dr. med., Univ Heart & Vascular Ctr Hamburg, 20251, Germany
- (655) Comparison of LVAD as BTT with Direct Heart Transplantation;** Arib Hussain, BS, Temple Univ, Philadelphia, PA, USA
- (656) A Novel Paradigm: Application of Extracorporeal Transvalvular Axial-Flow Pumps to Support Advanced Heart Failure Patients Undergoing Abdominal Surgery;** Rene Aleman, MD, Cleveland Clinic Florida, Weston, FL, USA
- (657) Intra-Aortic Balloon Pump or Impella 5.0/5.5 as a Bridge to Heart Transplantation?**
; Qiudong Chen, MD, Cedars-Sinai Medical Ctr, Los Angeles, CA, USA
- (658) Cardiogenic Shock in COVID 19 Fulminant Myocarditis Treated with V-A ECMO;** Antonio D'Errico Ramirez, MD, Policlinico of Bari, Bari, Italy
- (659) Combined Heart Transplantation and Latissimus Dorsi Myo-Cutaneous Flap as Ultima Ratio Due to Severe Osteomyelitis Following LVAD Implantation and Total Sternectomy;** Daniel Maldonado Gaekel, Dr., Univ Heart and Vascular Ctr Hamburg, Hamburg, Germany

INFECTIOUS DISEASES

- (660) Humoral Response to SARS-CoV-2 mRNA Vaccine in Heart Transplant Recipients up to 4 Months After the Third Vaccine Injection;** Richard Dorent, MD, AP-HP, Hôpital Bichat-Claude Bernard, Cardiologie, Paris, France



- (661) Long COVID-19 in Heart Transplant Recipients;** Rachel Sigler, DO, MPH, Univ of California, San Diego, San Diego, CA, USA
- (662) Do VAD Infections Predict Post-Heart Transplant Infections or Mortality?;** Ansh Goyal, B. Sc, Northwestern Univ Feinberg Sch of Med, Chicago, IL, USA
- (663) Incidence and Severity of Cytomegalovirus Infection in Seropositive Heart Transplant Recipients;** Bradley J. Gardiner, MBBS, MS, Alfred Health, Melbourne, Australia
- (664) CMV Prophylaxis in the Optimization of Heart Transplant Recipients - A Single Center Open-Label Observational Study;** Agnieszka Kuczaj, MD, PhD, Silesian Ctr for Heart Diseases, Zabrze, Poland
- (665) Is There a Role for Targeted Antibiotic Prophylaxis in Carbapenem Resistant or Extended Spectrum Betalactamase Producers (ESBL) Enterobacterales to Reduce Bloodstream Infection in Colonized Patients at Transplant?;** Elena Seminari, MD, Fondazione IRCCS Policlinico San Matteo, Pavia, Italy
- (666) Relationships Between Invasive Fungal Infection and Rejection Post Heart Transplantation;** Fabio Luciano, MD, Univ of Campania "L. Vanvitelli", Naples, Italy
- (667) Absolute Lymphocyte Count as a Prognostic Factor for Cytomegalovirus Infection After Heart Transplantation;** Andreas O. Zuckermann, MD, Medical Univ of Vienna, Vienna, Austria
- (668) Persistent Viral Detection After Resolution of COVID-19 in Lung Transplant Recipients;** Michael T. Olson, BS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (669) Progressive Multifocal Leukoencephalopathy Presenting as Expressive Aphasia in a Lung Transplant Recipient;** Luis F. Meza, MD, Creighton Univ Sch of Med - Phoenix Regional Campus, Phoenix, AZ, USA
- (670) A Fatal Case of Nocardia Bacteremia in a Lung Transplant Recipient;** Michael T. Olson, BS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (671) The Diagnostic Dilemma of a Nodule Appearing as a Mass;** Michael T. Olson, BS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (672) Invasive Aspergillosis Resistant to Double-Coverage of Antifungal Therapy in a Very Immunosuppressed Lung Transplant Recipient;** Michael T. Olson, BS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (673) Infections During Short-Term Mechanical Circulatory Support;** Marta Hernandez-Meneses, MD, Hosp Clinic, Barcelona, Spain
- (674) The Impact of Left Ventricular Assist Device Infections on Clinical Outcomes;** Courtney E. Harris, MD, Brigham & Women's Hosp, Boston, MA, USA
- (675) A Case of Cardiogenic Shock in a Young Adult with COVID-19-Induced Multisystem Inflammatory Syndrome;** Oliver J. Mithoefer, MD, Medical Univ of South Carolina, Charleston, SC, USA
- (677) Acute Circulatory Collapse and Advanced Therapies in Patients with COVID-19 Infection;** Aayush Shah, M.D., Houston Methodist Hosp, Houston, TX, USA
- (678) From 13% to 60%: A Rare Case of Multisystem Inflammatory Syndrome in Adults 4 Weeks Following COVID-19 Infection;** Eiad Habib, MBBS, Mayo Clinic, Phoenix, AZ, USA
- (679) Pseudomonas aeruginosa LVAD Driveline Infection Acquired from the Bathroom at Home;** Laura Dix, MD PhD, Erasmus MC, Rotterdam, Netherlands
- (680) Managing Infectious Complications in the Immunocompromised Stage D Heart Failure Patient: A Case of Left Ventricular Assist Device Placement in a Patient with Chronic Lymphocytic Leukemia;** Siin Park, B.A.&Sc, Texas A&M Coll of Med, Dallas, TX, USA



PULMONOLOGY

- (681) Extracorporeal Photopheresis in Lung Transplantation - New Frontiers in Infection Immunomodulation - A Case Series;** Roopam Sehajpal, MRCP, Royal Brompton and Harefield NHS, London, United Kingdom
- (682) Survival After Lung Transplantation in Europe - Clad as Major Cause of Death;** Emilie Hofstetter, MBA, Healthstrat Consulting, Munich, Germany
- (683) The Lung Microbiome is Similar Across CLAD Phenotypes;** Michael P. Combs, MD MS, Univ of Michigan, Ann Arbor, MI, USA
- (684) Feeling the Burn: Esophageal PH and CLAD;** Fahim Pyarali, MD, MPH, Cedars Sinai Medical Ctr, Los Angeles, CA, USA
- (685) Characteristics of AMR Predicts Prognosis and Phenotype of CLAD;** Laurent Godinas, MD, PhD, Univ Hosp Leuven, Leuven, Belgium
- (686) Electronic Nose for Distinguishing Chronic Lung Allograft Dysfunction Phenotypes;** Nynke Wijbenga, MSc, Erasmus Univ Medical Ctr, Rotterdam, Netherlands
- (687) Chronic Lung Allograft Dysfunction: More Than Meets the Eye?;** Hanne Beeckmans, MD, KULeuven, Leuven, Belgium
- (688) De Novo Donor Specific Antibody Expression in Lung Transplant Recipients with EVLP-Conditioned Allografts;** Anil J. Trindade, MD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA
- (689) Mobile Ex Vivo Perfusion of Donor Lungs Alters Early Lung Gene Expression Profiles;** Aleem Siddique, MBBS, Univ of Nebraska Medical Ctr, Omaha, NE, USA
- (690) Change in Panel Reactive Antibodies in Patients Bridged to Lung Transplantation with Extracorporeal Membrane Oxygenation;** Lydia E. Federico, MPhil, Perelman Sch of Med at the Univ of Pennsylvania, Philadelphia, PA, USA
- (691) Validation of Systematic Histologic Reporting of Transbronchial Biopsy Eosinophils for Sensitivity of Detection and Associations with Early Outcomes After Lung Transplant;** David R. Darley, BSc (Hons), MBBS, FRACP, St Vincent's Hosp Sydney, Univ of New South Wales, Sydney, Australia
- (692) Effects of Azithromycin in Lung Transplant Recipients;** Letizia Corinna Morlacchi, MD, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico di Milano, Univ degli Studi di Milano, Milano, Italy
- (693) Outcomes of Flow Cytometry Crossmatch-Positive Lung Transplants Using Peri-Operative Desensitization;** Meghan Aversa, MD MSc, Univ Health Network, Toronto, Canada
- (694) Specific IgG Antibodies to Aspergillus Fumigatus Are Associated with Fungal Isolation from Respiratory Samples and CLAD Occurrence After Lung Transplantation;** Hanne Beeckmans, MD, KULeuven, Leuven, Belgium
- (695) Post-Transplantation Anemia and Risk of Death Following Lung Transplantation;** Hans-Henrik Schultz, MD, PhD, Rigshospitalet, Copenhagen, Denmark
- (697) Antiphospholipid Antibodies and Outcomes Following Lung Transplantation**
; Fatima Anjum, MD, Univ of Pennsylvania, Philadelphia, PA, USA
- (699) Pretransplant Medications and Primary Graft Dysfunction Risk in Lung Transplant Recipients;** Amanda Stanton, MD, Univ of Alberta, Edmonton, Canada
- (700) Recipient, Surgical, and Donor Factors Leading to Primary Graft Dysfunction Following Lung Transplantation;** Takahide Toyoda, MD, Northwestern Univ Feinberg Sch of Med, Chicago, IL, USA



- (701) Predictors of Grade 3 Primary Graft Dysfunction in Lung Transplant Recipients;** Yu Xia, MD, MS, Univ of California Los Angeles, Los Angeles, CA, USA
- (702) Delayed Opening of Patent Foramen Ovale in Recipients of Left Single Lung Transplant for Idiopathic Pulmonary Fibrosis;** Katherine L. Richards, M.D., Baylor Coll of Med, Houston, TX, USA
- (703) Tales of the Unexpected: Donor Lung with CTEPH, a Unique Case Report;** Caroline M. Patterson, MD, Royal Papworth Hosp, Cambridge, United Kingdom
- (704) Lobar Anastomosis in Marginal Lung Donors;** Irfan U. Haq, MBBS,MRCP, CABIM, Hamad Medical Corp, Doha, Qatar
- (705) Mycotic Aortic Pseudoaneurysm Following ECMO Cannulation;** Susanna M. Leonard, DO, Duke Univ Hosp, Durham, NC, USA
- (706) Successful Use of Belatacept in Three Lung Transplant Recipients for Unique Indications;** Alan Sohrab. Nyquist, M.D., Inova Fairfax Hosp, Falls Church, VA, USA
- (707) Fulminant Antibody-Mediated Rejection in a Stable Lung Transplant Recipient Post COVID-19 Vaccination;** Matthew Nunn, MD, Dalhousie Univ, Halifax, Canada
- (708) Acute Pericarditis Presenting Concurrently with Acute Cellular Rejection in a Lung Transplant Recipient;** Joshua B. Smith, MD, Univ of Colorado Sch of Med, Aurora, CO, USA
- (709) Progressive Pulmonary Venous Stenosis and Recurrent Hypoxemic Respiratory Failure in a Lung Transplant Recipient;** Abdul R. Halawa, MBBCh, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (710) Small Anastomotic Dehiscence Identified Late After Lung Transplant;** Michael T. Olson, BS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (711) Donor-Derived Bactrim Allergy in a Lung Transplant Recipient;** Michael T. Olson, BS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (712) Esophageal Cancer Requiring Multiple Biopsies in a Lung Transplant Recipient with Previously Normal Objective Studies;** Michael T. Olson, BS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (713) Unexpected High-Grade Neuroendocrine Carcinoma in Lung Explant;** Michael T. Olson, BS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (714) Never Say Never: A 3D Anatomic Model Creates a Surgical Roadmap for Ultra-Complex Lung Transplant Recipient;** Jessica Jacob, DO, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (715) Hyperammonemia Post Lung Transplant: A Rare and Fatal Complication;** Jorge A. Villalpando, M.D., UT Health San Antonio, San Antonio, TX, USA
- (716) Immunosuppression-Induced Pulmonary Alveolar Proteinosis Following Bilateral Lung Transplantation;** Julia Maheshwari, MD, Univ of California, San Francisco, San Francisco, CA, USA
- (717) Relapse of Sarcoidosis After Lung Transplantation;** Mario Pinto, Medical Doctor, Ctr Hosparr Universitário Lisboa Central, Lisboa, Portugal
- (718) Transplantation of Occult Signet Ring Cell Carcinoma Mimicking Pulmonary Veno-Occlusive Disease;** Alan Sohrab. Nyquist, M.D., Inova Fairfax Hosp, Falls Church, VA, USA
- (719) The Mystery of Inappropriate Hypoxia After Single Lung Transplant;** Grant Turner, MD, MHA, Univ of California at Los Angeles, Los Angeles, CA, USA



(720) Conservative Management of Right Middle Lobe Torsion Post Lung Transplantation; Bilal Haider. Lashari, MD, MScPH, Temple Univ Hosp, Philadelphia, PA, USA

(721) Atypical HUS Unmasked by Infection and Calcineurin Inhibitors Post Lung Transplant; Sammar Alsunaid, MD, Montefiore Medical Ctr, Bronx, NY, USA

(1347) Donor Derived Coccidioides in a Lung Transplant Recipient; Fahim Pyarali, MD, MPH, Cedars Sinai Medical Ctr, Los Angeles, CA, USA

RESEARCH AND IMMUNOLOGY (HEART AND MCS)

(722) New Methods to Extend Perfusion Duration of Rat Cardiac Grafts; Manuela Lopera Higueta, PhD, Harvard Medical Sch and Massachusetts General Hosp, Boston, MA, USA

(723) Bone Morphogenetic Protein-9 (BMP9) is Required for Survival and Limits Left Ventricular Matrix Metalloproteinase Activity After Acute Myocardial Infarction; Shreyas Bhave, PhD, Tufts Medical Ctr, Boston, MA, USA

(724) Genome-Wide Cell-Free DNA Methylation Analysis Reveals Significant Recipient Tissue Injury in Allograft Rejection; Temesgen E. Andargie, MSc, Natl Heart, Lung and Blood Inst (NHLBI), NIH, Bethesda, MD, USA

(725) Spatial Transcriptomic Analysis of Acute Heart Rejection Model; Olli Henrik. Ainasoja, MSc, Univ of Helsinki, Helsinki, Finland

(726) Gene Expression Transcriptome Profile Validation: A Critical Appraisal of Methods and Signature Analyses; Alessia Giarraputo, MSc, Cardiovascular Pathology, Dept of Cardiac, Thoracic and Vascular Science and Public Health, Univ of Padova, Padova, Italy

(727) Transcriptome Analysis in Infections Post Heart-Transplantation; Ilaria Barison, MSc, Univ of Padua, Padova, Italy

(728) Ischemia Minimization Reduces Cardiac Xenograft Injury; Anthony Calhoun, MS, Massachusetts General Hosp, Boston, MA, USA

(729) Cell-Free DNA in the Early Course After Heart TransplantationJens Boehmer, MD, Sahlgrenska Univ Hosp, Gothenburg, Sweden

(730) Use of Induction Therapy Post Heart Transplantation: A Heart Transplant Rapid RecommendationsFarid Foroutan, PhD, Toronto General Hosp, Toronto, Canada

(731) Donor-Derived Cell-Free DNA for the Detection of Heart Allograft Injury: Impact of Timing of the Liquid Biopsy; Olivier Manintveld, MD, PhD, Erasmus Univ Medical Ctr, Rotterdam, Netherlands

(732) Risk of Infection, Endoplasmic Reticular Stress and Systemic Activation of NLRP3 Inflammasome in Patients Supported by Continuous Flow Left Ventricular Assist Devices; Nandan K. Mondal, M.Sc., M.Phil, Ph.D., Baylor Coll of Med, Houston, TX, USA

(733) Comparison of Robotic CABG with Conventional CABG: Impact on Homocysteine, Oxidative Stress and Inflammation; Nandan K. Mondal, MSc, MPhil, PhD, Baylor Coll of Med, Houston, TX, USA

(734) HLA Sensitization within One-Year of VAD Implantation: Prospective Study in Adults and Pediatrics; Madeleine Townsend, MD, Stollery Children's Hosp, Edmonton, Canada

RESEARCH AND IMMUNOLOGY (LUNG)

(735) Mapping the Diversity of the Innate Immune System over Time After Left Lung Transplantation in Mice; Janne Kaes, MSc, KU Leuven, Leuven, Belgium



(736) Primary Graft Dysfunction Following Lung Transplantation is Associated with Increased In Vivo T Cell Alloreactivity: Evidence from a Humanized Mouse Model; Ann-Kathrin Knoefel, PhD, MHH, Hannover, Germany

(737) Significant Upregulation of BAL-f IL-1 β in Lung Transplant Recipients During Stability and CLAD; Federica Meloni, Professor, IRCCS policlinico San Matteo, Pavia, Italy

(738) Short-Time Effect of Alemtuzumab Induction Therapy on B- and T-cell Subsets After Lung Transplantation; Sophia Auner, Medical Univ of Vienna, Vienna, Austria

(739) Reduction of Donor Mononuclear Phagocytes During Ex Vivo Lung Perfusion Attenuates Ischemia-Reperfusion Injury in a Rat Lung Transplantation Model; Keiji Yamanashi, M.D., Graduate Sch of Med, Kyoto Univ, Kyoto, Japan

(740) Effects of Tacrolimus on Mechanical and Humoral Determinants of Brain Death-Induced Lung Injury; Asmae Belhaj, MD, PhD, CHU UCL Namur, Yvoir, Belgium

(741) Cytosolic DNA Sensors as a New Pharmacological Target in EVLP; Jérôme Lugin, PhD, Lausanne Univ Hosp, Lausanne, Switzerland

(742) Argon Inhalation Reduces Pulmonary Ischemia-Reperfusion Injury in MHC-inbred CLAWN Miniature Swine; Hisashi Sahara, MD, PhD, Kagoshima Univ, Kagoshima, Japan

(743) Comparative Performance Analysis of Donor-Derived Cell-Free DNA to Detect Acute Rejection in Single and Double Lung Transplant Recipients; Rohan Meda, BS, Div of Intramural Res, Natl Heart, Lung, and Blood Inst (NHLBI), Bethesda, MD, USA

(744) Effect of Thoraco-Abdominal Normothermic Regional Perfusion on Pulmonary Grafts in a Porcine Model of Warm Ischemic Injury; Katrien Vandendriessche, MD, KU Leuven, Leuven, Belgium

(745) Analysis of T Cell Populations in Clinically Stable ISHLT Grade A1 Lesions; Samuel A. Beber, BSc, Univ Health Network, Toronto, Canada

(746) Google Trend's Perspective: Lung Transplant Following COVID-19; Rene Aleman, MD, Cleveland Clinic Florida, Weston, FL, USA

(747) The ISHLT CLAD Consensus is Broadly Applicable in Stem Cell Transplant; Yifan Pang, MD, Natl Insts of Health, Bethesda, MD, USA

(748) Decreased Lymphocytic Bronchitis Severity in the Era of Azithromycin Prophylaxis; Jesse Santos, MD, Univ of California San Francisco, San Francisco, CA, USA

(749) Prolonged Cold Ischemia and Indirect Alloimmunity Are Fundamental for the Development of Chronic Lung Allograft Dysfunction; Hengshuo Liu, Ph.D, Ludwig Maximilian Univ of Munich, Munich, Germany

(750) Mitochondrial Dysfunction and Alloimmunity in Accelerated Bronchiolitis Obliterans After Lung Transplantation; Marlene Cano, MD. PhD., Washington Univ, Saint Louis, MO, USA

(751) Proof of Concept Design of an Ex-Vivo Lung Perfusion (EVLP) Device to Evaluate Optimal Ex Vivo Hemodynamic Environments for Donation After Cardiac Death (DCD) Lungs; Neil Luo, BS BME, Texas Heart Inst, Houston, TX, USA

(753) Impact of the New French Lung Allocation System on Geographic Disparities: The 3-month Results; Richard Dorent, MD, Agence de la Biomédecine, La Plaine Saint Denis, France

(754) Pleuroparenchymal Fibroelastosis in Chronic Graft-versus-Host-Disease; Yifan Pang, MD, Natl Insts of Health, Bethesda, MD, USA



(755) Neutropenia and Outcomes in Lung Transplant Recipients; Giovanni M. Perottino, B.S., Northwestern Univ Feinberg Sch of Med, Chicago, IL, USA

(756) Successful Treatment of COVID-19 Patient on ECMO Using Mesenchymal Stromal Cells (MSC)-Derived Exosomes: A Case Report; Sinal Patel, MD, Cleveland Clinic Florida, Weston, FL, USA

(757) Benralizumab Used for Eosinophilic Inflammation in a Lung Transplant Patient; Ashley Reiland, MS, APRN, FNP-C, Texas Children's Hosp, Houston, TX, USA

(758) Diagnostic and Therapeutic Challenges in Treating an Esophago-Pleural Fistula Following Lung Transplantation; Cedric Vanluyten, BSc, Univ Hosp Leuven, Leuven, Belgium

(759) Hyperammonemia Refractory to Continuous Renal Replacement Therapy, a Fatal Complication Post-Lung Transplant; Karun Shrestha, MBBS, Mayo Clinic, Jacksonville, FL, USA

(995) IgM Antibodies to Tropoelastin in Serum Prior to the Onset of Chronic Allograft Dysfunction; Ambily Ulahannan, RN, Univ Health Network, Toronto, Canada



THURSDAY, 28 APRIL, 2022

7:00 a.m. – 8:00 a.m.

SUNRISE 01: Survival of the Best Prepared: Strategies to Prevent Frailty and Deconditioning Before and After Cardiothoracic Transplantation

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Nursing and Allied Health

Chairs: Christiane Kugler, NA, and Maria Florencia Renedo, MD

Session Summary: Maximizing physical functioning both before and early after cardiothoracic transplant is crucial for better long-term survival and quality of life. This session will focus on prehabilitation and postsurgical rehabilitation for the heart or lung transplant candidates and recipients from a multidisciplinary point of view. It will review and evaluate evidence on strategies to prepare and optimize all elements of the prehabilitation and rehabilitation experience including physical strength and exercise capacity and lessening of frailty parameters. Evidence of impact of such strategies on posttransplant outcomes will be reviewed. Critical questions such as the optimal timing and intensity of these intervention strategies will be considered. Implications of the evidence for clinical practice and referrals for prehabilitation and rehabilitation will be discussed. A panel discussion with all speakers will conclude this session.

7:00 a.m.

Assessments and Interventions to Reduce Frailty: an Overview

Bruno Schnegg, MD, St. Vincent's Hospital, Sydney, Australia

7:15 a.m.

Stay Ahead: The Importance of Moving on the Waitlist

Maria-Angeles Castel, MD, PhD, Hospital Clinic, Barcelona, Spain

7:25 a.m.

Healthy at Home: Home-Based Rehabilitation After Lung Transplantation

Sarah Wright, PT, Massachusetts General Hospital, Boston, MA, USA

7:35 a.m.

HIT with a New Heart: High-Intensity Interval Training After Heart Transplantation

Katrine Rolid, PhD, Oslo University Hospital, Oslo, Norway

7:45 a.m.

Panel Discussion

7:00 a.m. – 8:00 a.m.

SUNRISE 02: The Path Forward in Developing Novel Therapies in Lung Transplantation

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Pulmonology

Chairs: Adam Cochrane, PharmD, MPH and Kieran Halloran, MD

Session Summary: Advances in immunosuppression have contributed to improved post-transplant survival. Immunosuppression agents in current use have been approved in kidney or liver before being studied and approved for cardiothoracic transplantation. This symposium will discuss clinical trials for immunosuppression, including novel endpoints such as biomarkers. In addition, regulatory considerations and a proposed path forward will be considered. A panel discussion with all speakers will conclude this session.

7:00 a.m.

Improving Clinical Trial Design in Lung Transplantation

Ramsey Hachem, MD, Washington University SoM, St. Louis, MO, USA

7:12 a.m.

Is Rejection the Best Endpoint? Where Do We Stand on Biomarkers as Endpoints?

Stijn Verleden, PhD, University of Antwerp, Leuven, Belgium

Pre-recorded Presentation

7:24 a.m.

Removing Impediments to Clinical Trial Success: A Regulatory Body View

Yuan-Di Halvorsen, PhD, Massachusetts General Hospital, Boston, MA, USA

7:36 a.m.

Where Does This Leave Us? Where Do We Go From Here?

Paul A. Corris, MB FRCP, Freeman Hospital, Newcastle Upon Tyne, United Kingdom

Pre-recorded Presentation

7:48 a.m.

Panel Discussion



7:00 a.m. – 8:00 a.m.

SUNRISE 03: How to Heal a Broken Heart: Using Durable VADs to Promote Myocardial Recovery

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiology

Chairs: Matthew Lander, MD and Jacob Schroder, MD

Session Summary: Heart failure remission is the pinnacle of cardiovascular care for end-stage cardiomyopathy in adult and pediatric patients. The cohort of VAD patients that achieve myocardial recovery generates immense interest. All aspects of the VAD patient's journey from decompensated heart failure to recovery will be discussed. Unique challenges exist in care delivery for these patients. Understanding and recognition of the potential for myocardial recovery can improve patient outcomes and potentially avoid cardiac transplantation. A panel discussion with all speakers will conclude this session.

7:00 a.m.

Physiologic Underpinnings of Myocardial Recovery Across All Ages

Filio Billia, MD, PhD., Toronto General Research Institute, Toronto, ON, Canada

7:10 a.m.

Pushing the Boundaries with Medical Therapy in Durable VADs: Promoting Myocardial Recovery?

Caitlin Dadhania, PharmD, Tufts Medical Center, Boston, MA, USA

7:20 a.m.

Tapping Into the Fountain of Youth: Myocardial Recovery in Children

Martin Schweiger, MD, PhD, Children's Hospital Zurich, Zurich, Switzerland

7:30 a.m.

Purge the Device or Keep It In? Handling the Question of LVAD Explant

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

7:40 a.m.

Post-Recovery: Now What?

Stavros G. Drakos, MD, PhD, FACC, University of Utah SoM, Salt Lake City, UT, USA

Pre-recorded Presentation

7:50 a.m.

Panel Discussion



7:00 a.m. – 8:00 a.m.

SUNRISE 04: Challenges in Pediatric Lung Transplant: What Learning Can We Impart to Our Adult Colleagues?

Location: Ballroom A

Primary Core Therapy: LUNG

Primary Audience: Pediatrics

Chairs: Nicholas Avdimiretz, MD, FRCPC, and Christian Benden, MD FCCP

Session Summary: Lung transplantation is seldom performed in children, and there are only few “high”-volume centers. This symposium will discuss challenges of providing longitudinal care for pediatric lung transplant patients and explore novel tools available for assessment of pediatric lung allograft function, with a goal to highlight concepts that are also applicable to adult lung transplantation. A panel discussion with all speakers will conclude this session.

- 7:00 a.m.** ***Assessing Kids for Transplantation: When is the Right Time and How Do We Know?***
Helen Spencer, MD, Great Ormond Street Hospital, London, United Kingdom
Pre-recorded Presentation
- 7:10 a.m.** ***Novel Methods for Assessing Lung Disease: from PFTs to Imaging Modalities***
Marc G. Schechter, MD, University of Florida, Gainesville, FL, USA
- 7:20 a.m.** ***CLAD in Pediatrics versus Adult Populations: What To Do When PFTs Aren’t an Option***
Christian Benden, MD, MBA, FCCP, University of Zurich, Zurich, Switzerland
- 7:30 a.m.** ***Challenges in Rejection Diagnostics in Pediatric Transplant and How to Overcome Them***
Kathryn Wikenheiser-Brokamp, MD, PhD, Cincinnati Children's Hospital, Cincinnati, OH, USA
- 7:40 a.m.** ***Transitioning to Adult Services: How the Patient-Centered Multidisciplinary Team Approach in Pediatric Transplant May Benefit Adult Centers***
Ernestina Melicoff-Portillo, MD, Baylor College of Medicine, Houston, TX, USA
- 7:50 a.m.** **Panel Discussion**

7:00 a.m. – 8:00 a.m.

SUNRISE 05: Keep it Less Complicated: Minimizing and Treating Complications in LVAD Patients - From Bleeding to Infection

Location: Room 312

Primary Core Therapy: MCS

Primary Audience: Pharmacy and Pharmacology

Chairs: Valentina Stosor, MD, and Amanda Ingemi, PharmD

Session Summary: This symposium will review commonly encountered complications in LVAD patients, including the pathophysiology and management of gastrointestinal (GI) bleeding and intracranial hemorrhage after LVAD implantation. This session will explore the pathophysiology of VAD bleeding and the association between infection and coagulopathy. This session will also discuss prevention and management of bleeding and infections in LVAD recipients. A panel discussion with all speakers will conclude this session.

7:00 a.m.

AVMs and Other Mechanisms Associated With GI Bleed After LVAD Implantation

Oksana Volod, MD, Cedars Sinai Medical Center, Los Angeles, CA, USA

Pre-recorded Presentation

7:10 a.m.

Stop the Bleeding: Pharmacologic Interventions for GI Bleed After LVAD

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

7:20 a.m.

Mitigating Strategies to Prevent Infections in Durable VADs

Stephanie Pouch, MD, Emory University SoM, Atlanta, GA, USA

7:30 a.m.

From Early Treatment of Driveline Infections to Late Treatment Considerations to Manage Central LVAD Infections: What Do VAD Centers Need to Know?

Alexander M. Bernhardt, MD, University Heart Center Hamburg, Hamburg, Germany

7:40 a.m.

The Domino Effect: Risk Factors and Risk Mitigation Strategies for Hemorrhagic Strokes in LVAD Recipients

Sern Lim, MD, Queen Elizabeth Hospital, Birmingham, United Kingdom

7:50 a.m.

Panel Discussion



7:00 a.m. – 8:00 a.m.

SUNRISE 06: Pregnancy After Cardiothoracic Transplantation

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Sonia Mirabet, MD, PhD, and David A Baran, MD

Session Summary: This session aims to address pregnancy consideration after solid organ transplantation. The session will provide case presentations and discussions focused on contraceptive use, pre-conception counseling, management of immunosuppression, surveillance of rejection, treatment of rejection, and post-partum complications. A panel discussion with all speakers will conclude this session.

7:00 a.m.

Evaluating Patients in a Cardio Obstetrics Program: Case Presentations

Patricia Chavez, MD, Montefiore Medical Center, New York, NY, USA

Pre-recorded Presentation

7:05 a.m.

Pharmacologic Considerations with Pregnancy: Effects on Immunosuppression

Lilibeth Carlos, PharmD, St. Vincent's Hospital, Sydney, Australia

Pre-recorded Presentation

7:15 a.m.

Prenatal Counseling: Aiming for a Successful Pregnancy

Tara Miller, NP, Duke University, Durham, NC, USA

7:25 a.m.

Surveillance and Management of Rejection During Pregnancy

Ersilia DeFilippis, MD, Columbia University Irving MC, New York, NY, USA

7:35 a.m.

Outcomes of Pregnancies involving a solid organ recipient

Francesca Macera, MD, Hôpital Erasme, Brussels, Belgium

7:45 a.m.

Panel Discussion



8:15 a.m. – 10:00 a.m.
PLENARY 2: Plenary Session
Location: Hall D

Primary Core Therapy: ALL
Primary Audience: ALL

Chairs: Maryl R Johnson, MD, and Andrew J Fisher, PhD FRCP

- 8:15 a.m.** ***The Boston Marathon: What is So Special About It?***
Tom Grilk, President & CEO, Boston Athletic Association, Boston, MA, USA
- 8:45 a.m.** ***ISHLT International Thoracic Organ Transplant Registry Report***
Josef Stehlik, MD, MPH, University of Utah School of Medicine, Salt Lake City, UT, USA
- 9:00 a.m.** ***(3) Evaluation of 10°C as the Optimal Storage Temperature for Injured Donor Lungs in a Large Animal Transplant Model***
Aadil Ali, PhD, Latner Thoracic Surgery Research Labs, University Health Network, Toronto, Canada
- 9:12 a.m.** ***Q&A with Interactive Discussant***
Daniel Chambers, MBBS, MRCP, FRACP, MD, The Prince Charles Hospital, Brisbane, Australia
Pre-recorded Presentation
- 9:15 a.m.** ***Introduction to 2022 Lifetime Achievement Award Recipient***
Kiran Khush, MD, MAS, Stanford University, Stanford, CA, USA
- 9:20 a.m.** ***2022 ISHLT Lifetime Achievement Award Recipient Lecture***
Hannah Valantine, MD, MRCP, Stanford University, Stanford, CA, USA
- 9:45 a.m.** ***(4) Characteristics and Outcomes of Patients Supported with Impella Percutaneous VAD Device at Pediatric Institutions: Action Collaborative Experience***
Sebastian C. Tume, MD, Texas Children's Hosp, Houston, TX, USA
- 9:57 a.m.** ***Q&A with Interactive Discussant***
David Peng, MD, Univ of Michigan, Ann Arbor, MI, USA



10:30 a.m. – 12:00 p.m.

SESSION 22 (Oral): Philip K. Caves Award Candidate Presentations

Location: Hall D

Primary Core Therapy: ALL

Primary Audience: ALL

Chairs: Hermann Reichenspurner, MD, PhD, and Stuart Sweet, MD

Session Summary: Established in 1982, the Philip K. Caves Award encourages and rewards original high-quality research performed by residents, fellows, trainees, and graduate students. Six candidates have been selected to present their high-scoring research in this session. At the conclusion of the session, the best research presentation will be selected by a panel of judges and the winner will be recognized during the Awards Presentations in the Plenary Session on Saturday, 30 April.

10:30 a.m. (66) *Outcomes of over 1,000 Heart Transplants Using Hepatitis C Positive Donors in the Modern Era*

Jennie H. Kwon, MD, Medical Univ of South Carolina, Charleston, SC, USA

10:40 a.m. Q&A

10:45 a.m. (67) *Intra-Tracheal Adeno-Associated Virus Mediates Gene Transduction During Static Cold Storage in Rodent Lung Transplantation*

Samuel J. Kesseli, MD, Duke Univ Hosp, Durham, NC, USA

Pre-recorded Presentation

11:00 a.m. (68) *Genome-Wide DNA Methylation Analysis to Define Pulmonary Antibody-Mediated Rejection (AMR) Treatment Response*

Moon Kyoo Jang, PhD, Div of Intramural Res, Natl Heart, Lung, and Blood Inst, Bethesda, MD, USA

11:10 a.m. Q&A

11:15 a.m. (69) *Machine Learning Algorithms Identify Distinct Phenotypes of Right Heart Failure After Left Ventricular Assist Device Implant*

Aditi Nayak, MD, Emory Univ, Atlanta, GA, USA

11:25 a.m. Q&A

11:30 a.m. (70) *Transcriptomic Analysis of Right Ventricular Adaptation and Failure in a Novel Ovine Model of Pulmonary Hypertension*

Rei Ukita, PhD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA

11:40 a.m. Q&A

11:45 a.m. (71) *Sex Differences in Endothelial-to-Mesenchymal Transition in Chronic Thromboembolic Pulmonary Hypertension*

Usman Asghar, MD, Toronto General Hosp Res Inst, Toronto, Canada

Pre-recorded Presentation



10:30 a.m. – 12:00 p.m.

SESSION 23 (Symposium): Single, Dual, or Multiorgan Transplant: How Many is Too Much?

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Imo A. Ebong, MD, MS, and Johanna P. Contreras, MD, MSC

Session Summary: This session will focus on candidate selection, procurement strategies, surgical techniques, perioperative management, and immunosuppression regimens unique to dual and multiorgan transplant. A comparison of outcomes with respect to survival, rejection, graft function, cardiac allograft vasculopathy and causes of death for patients with single, dual or multiorgan transplant will be provided. Ethical considerations will also be discussed. A panel discussion with all speakers will conclude this session.

- 10:30 a.m.** ***Epidemiology, Candidate Selection and Listing Criteria in Dual and Multiorgan Transplant***
Donna Mancini, MD, Mount Sinai Med Ctr, New York, NY, USA
- 10:45 a.m.** ***Multiorgan Transplant: Procurement Strategies, Surgical Techniques and Perioperative Management***
Abbas Ardehali, MD, UCLA School of Medicine, Los Angeles, CA, USA
- 11:00 a.m.** ***Immunosuppression Management and Rejection in Heart Transplant with Other Organs: What is Different from Isolated/Single Heart Transplant***
Jacqueline Clark, PharmD, Massachusetts General Hospital, Boston, MA, USA
- 11:15 a.m.** ***A Comparison of Outcomes: Single, Dual and Multiorgan Transplant***
Juan Duero Posada, MD, MSc, University Health Network, Toronto, ON, Canada
Pre-recorded Presentation
- 11:30 a.m.** ***Ethical Considerations in Dual and Multiorgan Transplant: How Many is Too Much?***
Maria Papathanasiou, MD, University Hospital, Essen, Germany
- 11:45 a.m.** **Panel Discussion**



10:30 a.m. – 12:00 p.m.

SESSION 24 (Oral): EVLP: Thinking Inside the Box to Improve Patient Outcomes

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Cardiothoracic Surgery

Chairs: Laurens J Ceulemans, MD, PhD, and Shaf Keshavjee, MD, FRCSC

Session Summary: This session will present international clinical experience using EVLP to support donor lung procurement, assessment, and management.

- 10:30 a.m.** **(72) Normothermic Ex Vivo Lung Perfusion (Novel) as an Assessment of Extended Criteria Donor Lungs: A Prospective Multi-Center Clinical Trial**
Pablo G. Sanchez, MD, Univ of Pittsburgh, Pittsburgh, PA, USA
- 10:40 a.m.** **Q&A**
- 10:45 a.m.** **(73) Increasing Lung Transplant Availability with Normothermic Ex Vivo Lung Perfusion (EVLP) at a Dedicated Facility and a Centralized Lung Evaluation System (CLES): 3-Year Outcomes**
Jorge M. Mallea, MD, Mayo Clinic Florida, Jacksonville, FL, USA
- 10:55 a.m.** **Q&A**
- 11:00 a.m.** **(74) Characteristics and Outcomes of Lung Transplants Performed with Ex-Vivo Lung Perfusion**
Yu Xia, MD, MS, Univ of California Los Angeles, Los Angeles, CA, USA
- 11:10 a.m.** **Q&A**
- 11:15 a.m.** **(75) Outcomes After Transplantation of Lungs Subjected to Prolonged Cold Ischaemic Time Following Ex-Vivo Lung Perfusion**
Muhammad I. Mohamed Mydin, MBChB, Univ Health Network, Toronto, Canada
- 11:25 a.m.** **Q&A**
- 11:30 a.m.** **(76) Extended Cold Preservation Times Are Not Associated with Increased Post-Transplant Mortality After Ex Vivo Lung Perfusion (EVLP) at a Dedicated Facility Using a Centralized Lung Evaluation System (CLES)**
Jorge M. Mallea, MD, Mayo Clinic Florida, Jacksonville, FL, USA
- 11:40 a.m.** **Q&A**
- 11:45 a.m.** **(77) Long-Term Results of the OCS Lung Expand International Trial Using Organ Care System Lung Perfusion System (OCS) in Extended-Criteria Donor (ECD) and Donation After Circulatory Death (DCD) Donor Lungs**
Gabriel Loor, MD, Texas Heart Inst at Baylor Coll of Med, Houston, TX, USA
- 11:55 a.m.** **Q&A**



10:30 a.m. – 12:00 p.m.

SESSION 25 (Symposium): The Risky Arrhythmia: Matching Risks and Benefits of Cardiac Devices in LVAD Patients

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiothoracic Surgery

Chairs: Jennifer A. Cowger, MD, MS and Diyar Saeed, MD, PhD

Session Summary: Cardiac implantable electric devices (CIED) are a mainstay of current heart failure therapy, mostly before heart transplantation or LVAD implantation are considered. Up to 89% of patients have an implantable cardioverter defibrillator (ICD) at the time of LVAD implantation. However, the role of CIED like ICD, CRT-P and CRT-D in LVAD patients remains a matter of debate. This session will give an overview on the role of arrhythmias and their therapy in LVAD patients while discussing current approaches towards CIEDs in LVAD patients. The co-chairs will lead a 3-minute Q&A after the first lecture, and a 6-minute Q&A after each debate.

10:30 a.m.

Arrhythmias in LVAD Patients: From the Atrium to the Ventricle

Natasha Aleksova, MD, Toronto General Hospital, Toronto, ON, Canada

10:42 a.m.

Q&A

10:45 a.m.

DEBATE: Cardiac Devices in LVAD Patients: the More the Merrier? All LVAD Patients Should Have an ICD (PRO)

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

10:57 a.m.

DEBATE: Cardiac Devices in LVAD Patients: the More the Merrier? All LVAD Patients Should Have an ICD (CON)

Jason N. Katz, MD, MHS, University of North Carolina, Chapel Hill, NC, USA

11:09 a.m.

Q&A

11:15 a.m.

DEBATE: CRT Should Be Turned On in LVAD Patients (PRO)

Brian Houston, MD, Medical University of South Carolina, Charleston, SC, USA

11:27 a.m.

DEBATE: CRT Should Be Turned On in LVAD Patients (CON)

Evan P. Kransdorf, MD, PhD, Cedars-Sinai Heart Institute, Los Angeles, CA, USA

11:39 a.m.

Q&A

11:45 a.m.

ICD and CRT-D Battery Depletion in an LVAD Patient: Change? Downgrade?

Jaime-Juergen Eulert-Grehn, MD, German Heart Institute, Berlin, Germany

Pre-recorded Presentation



10:30 a.m. – 12:00 p.m.

SESSION 26 (Oral): Rejection Revelations: Novel Insights into Lung Transplant Rejection

Location: Ballroom A

Primary Core Therapy: LUNG

Primary Audience: Research and Immunology

Chairs: Stephen C Juvet, MD, PhD, FRCPC, and Deborah Levine, MD

Session Summary: This session will offer new insights into the pathophysiology of acute rejection and biomarkers for rejection surveillance. Factors affecting paediatric rates of acute rejection and treatment outcomes will also be considered

- 10:30 a.m.** **(78) *Is Acute Rejection Truly Acute or an Exacerbation of an Underlying Disease?***
Sean Agbor-Enoh, MD, PhD, Natl Heart, Lung, and Blood Inst, Bethesda, MD, USA
- 10:40 a.m.** **Q&A**
- 10:45 a.m.** **(79) *The Relationship Between Soluble PD-L1 and Viral Infection, ACR, and CLAD***
Eric Morrell, MD, Univ of Washington, Seattle, WA, USA
- 10:55 a.m.** **Q&A**
- 11:00 a.m.** **(80) *Molecular Insights into the Role of BAL-EVs in Lung Transplant Rejection***
Alessandro Palleschi, MD, Univ of Milan and Fondazione IRCCS Ca' Granda - Ospedale Maggiore Policlinico, Milan, Italy
- 11:10 a.m.** **Q&A**
- 11:15 a.m.** **(81) *Detection of Directly Alloreactive Graft Antigen-Specific CD4+ T Cells in Peripheral Blood***
Stephen J. Huddleston, MD, Univ of Minnesota, Minneapolis, MN, USA
- 11:25 a.m.** **Q&A**
- 11:30 a.m.** **(82) *High Volume Centers Have Lower Incidence of Acute Cellular Rejection in Pediatric Lung Transplant Recipients and Better Survival After Treatment***
Alia Dani, MD MPH, Cincinnati Children's Hosp Medical Ctr, Cincinnati, OH, USA
- 11:40 a.m.** **Q&A**
- 11:45 a.m.** **(83) *Higher Levels of Donor-Derived Cell-Free DNA Are Associated with Acute Cellular Rejection but Not with Severe PGD After Lung Transplantation***
Kentaro Noda, Ph.D, Univ of Pittsburgh, Pittsburgh, PA, USA
- 11:55 a.m.** **Q&A**

10:30 a.m. – 12:00 p.m.

SESSION 27 (Symposium): Pets, Plants, & Palatables: When Living Life After Transplant Comes at a Cost
Location: Room 312

Primary Core Therapy: HEART

Primary Audience: Infectious Diseases

Chairs: Tomoko Kato, MD, PhD, and Tamara Claridge, PharmD, BCPS

Session Summary: This session will highlight numerous lifestyle associated factors with infectious risks for immunosuppressed patients after thoracic transplant. This will include infection risks, prophylaxis, and management related to certain pets, gardening, and dietary considerations. A panel discussion with all speakers will conclude this session.

- 10:30 a.m.** ***Cat's in the Cradle: Prevention, Diagnosis, and Treatment of Toxoplasma and Bartonella***
Tara Veasey, PharmD, BCPS, Allegheny General Hospital, Pittsburgh, PA, USA
- 10:42 a.m.** ***Just Fly Away: Management of Bird-Related Pathogens***
Cedric Spak, MD, Baylor University Medical Center, Dallas, TX, USA
- 10:54 a.m.** ***Old McDonald Had a Farm: Overview of Farm Animal-Related Infectious Risks***
Elena Seminari, MD, Fondazione IRCCS Policlinico San Matteo, Pavia, Italy
- 11:06 a.m.** ***Slither: Creepy Crawly Concerns Carried by Reptiles***
Orla Morrissey, MD, The Alfred Hospital, Melbourne, Australia
Pre-recorded Presentation
- 11:18 a.m.** ***Every Rose Has Its Thorn: Uncommon Fungal Pathogens Associated with Plants and Soil***
Maricar Malinis, MD, Yale University School of Medicine, New Haven, CT, USA
- 11:30 a.m.** ***Forbidden Fruit: Food-Borne Illnesses Following Transplant***
Nicolas Mueller, MD, University Hospital Zurich, Zurich, Switzerland
Pre-recorded Presentation
- 11:42 a.m.** **Panel Discussion**



10:30 a.m. – 12:00 p.m.

SESSION 28 (Oral): The Heart Will Go On: Cold, Warm, or Assisted?

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Jacinthe Boulet, MD, and Mónica D Gilbert, MD

Session Summary: The disconnect between available organs and the increasing number of eligible recipients makes re-evaluation of allocation policies necessary especially as new technologies, such as Donation after Cardiac Death (DCD), push the boundaries of organ donation. This session highlights research on the impact of new allocation policies, addressing some specific areas such as DCD.

- 10:30 a.m.** **(84) Impact of the 2018 UNOS Heart Allocation Policy Change on Post-Transplant Outcomes: Intermediate Term Analysis**
Eugene C. DePasquale, MD, Univ of Southern California, Los Angeles, CA, USA
- 10:40 a.m.** **Q&A**
- 10:45 a.m.** **(85) Influence of the 2018 Allocation System Change on Patients with a Durable Left Ventricular Assist Device as a Bridge to Transplantation: A UNOS Registry Analysis**
Nicholas R. Hess, MD, Univ of Pittsburgh Medical Ctr, Pittsburgh, PA, USA
- 10:55 a.m.** **Q&A**
- 11:00 a.m.** **(86) Impact of Donation After Circulatory Death Heart Transplantation on Waitlist Outcomes and Transplantation Activity**
Marian Urban, MD, Univ of Nebraska Medical Ctr, Omaha, NE, USA
- 11:10 a.m.** **Q&A**
- 11:15 a.m.** **(87) Heart Transplant Outcomes with Donation After Cardiac Death: UNOS Registry Analysis**
Eugene C. DePasquale, MD, Univ of Southern California, Los Angeles, CA, USA
- 11:25 a.m.** **Q&A**
- 11:30 a.m.** **(88) Results of Heart Transplants from Donation After Circulatory Death (DCD) Donors Using Thoraco-Abdominal Normothermic Regional Perfusion (TA-NRP) Compared to Donation After Brain Death (DBD)**
Claudia G. Gidea, MD, NYU Langone Medical Ctr, New York, NY, USA
- 11:40 a.m.** **Q&A**
- 11:45 a.m.** **(89) Outcomes of Mechanical Circulatory Support for Severe Primary Graft Dysfunction After DBD versus DCD Heart Transplantation**
Vasudev B. Pai, MCh Thoracic Surgery, FRCSEd CTh, Royal Papworth Hosp NHS Fndn Trust, Cambridge, United Kingdom
- 11:55 a.m.** **Q&A**



12:00 p.m. – 1:15 p.m.

Non-CME Session: ISHLT Innovation Challenge Award Selection

Location: Room 210

Session Summary: Five finalists for the ISHLT Innovation Challenge Award will present their research proposals to a panel of experts during this session. The winner of the grant will be announced in the Awards Presentation during Plenary 3 on Saturday, 30 April, 2022.

12:00 p.m. ***The Use of dd-cfDNA in Lung Transplant Recipients to Assess Acute Cellular Rejection Treatment Efficacy: A Pilot Study***

Anil Trindade, MD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA

12:10 p.m. **Q&A**

12:15 p.m. ***Investigating the relationship between donor-derived mitochondrial stress and development of Primary Graft Dysfunction***

Marcelo Cypel, MD, Toronto General Hospital, Toronto, ON, Canada

12:25 p.m. **Q&A**

12:30 p.m. ***Dd-cfDNA to monitor CLAD treatment***

Berta Saez Gimenez, MD, PhD, Hospital Universitari Vall Hebron, Barcelona, Spain

12:40 p.m. **Q&A**

12:45 p.m. ***Non-invasive biomarkers for acute rejection in pediatric heart transplant recipients***

Rabia Khan, MD, University of Iowa Stead Family Children's Hospital, Iowa City, IA, USA

12:55 p.m. **Q&A**

1:00 p.m. ***Cell-Free DNA as an Assessment Tool for Potential Donor Lungs***

Alfred Casillan, MD, PhD, Johns Hopkins University, Baltimore, MD, USA

1:10 p.m. **Q&A**



1:30 p.m. – 3:00 p.m.

SESSION 29 (Oral): Survival of the Fittest: BMI and the Frailty Construct as Risk Factors for Lung Transplantation

Location: Hall D

Primary Core Therapy: LUNG

Primary Audience: Pulmonology

Chairs: Cynthia Gries, MD, MSc, and Jonathan P Singer, MD, MS

Session Summary: Body mass index has limitations as a surrogate of body composition and nutritional status. This session will consider ongoing research efforts to better risk stratify lung transplant candidates based on measures of nutritional status and frailty.

- 1:30 p.m.** **(90) Preliminary Development of the Lung Transplant Frailty Index**
Jonathan P. Singer, MD, MS, Univ of California, San Francisco, San Francisco, CA, USA
- 1:40 p.m.** **Q&A**
- 1:45 p.m.** **(91) Molecular Phenotypes of Frailty in Lung Transplant Candidates**
Jonathan P. Singer, MD, MS, Univ of California, San Francisco, San Francisco, CA, USA
- 1:55 p.m.** **Q&A**
- 2:00 p.m.** **(92) Impact of Prognostic Nutrition Index on the Waitlist Mortality of Lung Transplantation**
Kei Matsubara, MD, Okayama Univ Graduate Sch of Med, Dentistry and Pharmaceutical Sciences, Okayama, Japan
Pre-recorded Presentation
- 2:15 p.m.** **(93) Body Mass Index and Cause-Specific Mortality After Lung Transplantation in the United States**
Michaela R. Anderson, MD, Univ of Pennsylvania, Philadelphia, PA, USA
Pre-recorded Presentation
- 2:30 p.m.** **(94) Morbid Obesity is Associated with Significantly Higher Risk of Death After Lung Transplant in Recipients Bridged on Extra-Corporeal Support**
Noah Weingarten, MD, Cleveland Clinic, Cleveland, OH, USA
- 2:40 p.m.** **Q&A**
- 2:45 p.m.** **(95) Post-Transplant Metabolomics Profiles in Patients Undergoing Lung Transplantation**
Irina Timofte, MD, MS, UT Southwestern, Dallas, TX, USA
- 2:55 p.m.** **Q&A**



1:30 p.m. – 3:00 p.m.

SESSION 30 (Oral): Donor Availability, Size Matching and Outcome in Heart Transplantation

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Cardiothoracic Surgery

Chairs: Kyung-Hee Kim, MD, PhD, and Scott Silvestry, MD

Session Summary: This session will discuss unique challenges in safely expanding the donor organ pool including use of donors after circulatory death and tools for donor-recipient size matching.

- 1:30 p.m.** **(96) Austrian Analysis of the GUARDIAN Registry: Heart Transplant Effects in Europe from the Global Pandemic**
Roxana Moayedifar, MD, Medical Univ of Vienna, Vienna, Austria
- 1:40 p.m.** **Q&A**
- 1:45 p.m.** **(97) UK National DCD Heart Transplant Program - First Year Experience**
Marius Berman, MD, FRCS (CTh), NHS Blood and Transplant, Bristol, United Kingdom
- 1:55 p.m.** **Q&A**
- 2:00 p.m.** **(98) Longitudinal Echocardiographic Assessment of Donor Hearts in DCD Donors Using Thoracoabdominal Normothermic Regional Perfusion**
Claudia G. Gidea, MD, NYU Langone Medical Ctr, New York, NY, USA
- 2:10 p.m.** **Q&A**
- 2:15 p.m.** **(99) Indexed Donor Cardiac Output for Improved Size Matching in Heart Transplantation**
Chetan Pasrija, MD, Univ of Maryland Sch of Med, Baltimore, MD, USA
- 2:25 p.m.** **Q&A**
- 2:30 p.m.** **(100) Size Matching by Height, Body Surface Area, and Body Mass Index in Infant Heart Transplantation**
Sumanth Kidambi, MD, Stanford Univ, Stanford, CA, USA
- 2:40 p.m.** **Q&A**
- 2:45 p.m.** **(101) Impact of Size Matching on Survival Post Heart Transplant in Infants: Estimated Total Cardiac Volume Ratio is Better Than Donor-Recipient Weight Ratio**
Alia Dani, MD MPH, Cincinnati Children's Hosp Medical Ctr, Cincinnati, OH, USA
- 2:55 p.m.** **Q&A**



1:30 p.m. – 3:00 p.m.

SESSION 31 (Oral): Forgotten Infections: What's Happening in Lung Transplant ID Besides COVID

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Infectious Diseases

Chairs: Shahid Husain, MD, MS, and Cameron R Wolfe, MBBS MPH

Session Summary: This session will highlight the forgotten infectious diseases of the COVID-19 pandemic, focussing on the impact of these micro-organisms on lung transplant outcomes

- 1:30 p.m.** **(1324) HCV-Viremic Lung Transplantation Does Not Confer Higher Rejection Rates Compared to HCV-Negative Transplant**
Aarya Kafi, MD, Univ of California, San Diego, San Diego, CA, USA
Pre-recorded Presentation
- 1:45 p.m.** **(103) Elevated Cell Free DNA in Respiratory Viral Infection and Associated Lung Allograft Dysfunction**
Katrina Bazemore, MPH, Johns Hopkins Hosp, Baltimore, MD, USA
- 1:55 p.m.** **Q&A**
- 2:00 p.m.** **(104) Broad Decline in Viral Infections During COVID-19 Lockdown: Association with Lung Function in Lung Transplant Recipients**
Auke E.S. de Zwart, BSc, Univ of Groningen, Univ Medical Ctr Groningen, Groningen, Netherlands
- 2:10 p.m.** **Q&A**
- 2:15 p.m.** **(105) Prolonged Fungal Colonization is Associated with Increased Risk of Chronic Lung Allograft Dysfunction**
Audrey Le Mahajan, MD, Univ of Pennsylvania, Philadelphia, PA, USA
- 2:25 p.m.** **Q&A**
- 2:30 p.m.** **(106) Utility of Turbidimetric Beta-D-Glucan in Lung Transplant Recipients**
Breda L. Lynch, MB BCh MRCPi MSc FRCPath, Mater Misericordiae Univ Hosp, Dublin 7, Ireland
Pre-recorded Presentation
- 2:45 p.m.** **(107) Pseudomonas aeruginosa Elicits Sustained IL-1 β Upregulation in Alveolar Macrophages from Lung Transplant Recipients**
Noel Britton, MPH, PhD, Johns Hopkins Univ, Baltimore, MD, USA
- 2:55 p.m.** **Q&A**



1:30 p.m. – 3:00 p.m.

SESSION 32 (Symposium): Unique Challenges for Women and Children Supported with MCS

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiology

Chairs: Mirnela Byku, M.D., and Rachna Kataria, MD

Session Summary: The prevalence of heart failure is equal in men and women. However, women admitted for heart failure are younger, sicker and have higher heart failure related mortality. Regardless, only about 20% of LVAD recipients are women, a fraction that has remained unchanged over the last decade even with increasing device use. It is of great importance to raise awareness and better understand sex-specific differences which affect candidacy and outcomes in women on LVAD therapy aiming to increase utilization of this life saving therapy. Specific research priorities addressing sex disparities in MCS will be proposed. Similarly, MCS options, strategies and experience for supporting smaller patients in the pediatric population will be discussed. A panel discussion with all speakers will conclude this session.

1:30 p.m.

The Heart of a Woman

Mary Norine Walsh, MD, MACC, St Vincent Heart Center, Indianapolis, IN, USA

1:42 p.m.

Cardiogenic Shock in Pregnancy

Anique Ducharme, MD, MSC, Montreal Heart Institute, Montreal, QC, Canada

1:54 p.m.

Temporary Circulatory Support (TCS) Options in Women and Children

Jamila Kremer, MD, University Hospital Heidelberg, Heidelberg, Germany

2:06 p.m.

How Low Can You Go: Durable LVAD Considerations for Smaller Patients

Ryan Davies, MD, UT Southwestern, Dallas, TX, USA

2:18 p.m.

Hello Estrogen!

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

2:30 p.m.

Equal Opportunity: Why are Women Less Likely To Be Referred for LVAD and How Can We Overcome These Barriers?

Heike Spaderna, PhD, University of Trier, Trier, Germany

2:42 p.m.

Panel Discussion



1:30 p.m. – 3:00 p.m.

SESSION 33 (Symposium): Between a Rock and a Hard Place: Pulmonary Vascular Disease and Solid Organ Transplantation

Location: Ballroom A

Primary Core Therapy: PVD

Primary Audience: Pulmonology

Chairs: Arun Jose, MD, and Elie Fadel, MD

Session Summary: This session will focus on the impact of pulmonary vascular disease on solid organ transplantation (heart, lung, and liver) outcomes including mortality and graft failure, prognostic tools to identify adult and pediatric patients with pulmonary hypertension (PH) at high risk of adverse outcomes, and potential strategies (mechanical circulatory support, targeted pulmonary vasodilator therapy) to mitigate those risks. The co-chairs will lead a brief Q&A with each speaker following their presentation.

- 1:30 p.m.** ***Take a Deep Breath: Pulmonary Hypertension and Lung Transplantation***
Nicholas A. Kolaitis, MD, UCSF, San Francisco, CA, USA
- 1:48 p.m.** **Q&A**
- 1:54 p.m.** ***Getting to the "Heart" of the Matter: PH and Heart Transplantation***
Peter J. Bergin, MBBS, FRACP, Alfred Hospital, Melbourne, Australia
- 2:12 p.m.** **Q&A**
- 2:18 p.m.** ***Gut Feeling: Pulmonary Hypertension and Liver Transplantation***
Sonja Bartolome, MD, UT Southwestern Medical Center, Dallas, TX, USA
- 2:36 p.m.** **Q&A**
- 2:42 p.m.** ***More is Better: Pulmonary Hypertension and Multi-Organ Transplantation***
Thirugnanasambandan Sunder, MD, Apollo Hospitals, Chennai, Chennai, India
Pre-recorded Presentation



1:30 p.m. – 3:00 p.m.

SESSION 34 (Symposium): Real Options in Pediatric Heart Transplant: Small Infants, HLA Sensitization, and Non-invasive Rejection Screening

Location: Room 312

Primary Core Therapy: HEART

Primary Audience: Pediatrics

Chairs: Carmel Bogle, MD, FAAP, and Kevin P Daly, MD

Session Summary: This symposium explores clinical scenarios which pose important clinical and ethical dilemmas to pediatric heart failure/transplant specialists. Treatment of patients in these high-risk situations places a significant burden on health resources, creates a high intensity clinical commitment, is associated with a degree of uncertainty and unpredictability, and can cause moral distress. A panel discussion with all speakers will conclude this session.

1:30 p.m. ***A Tough Calculation: Determining the Optimal Transplant Listing Window for Patients with Fontan Physiology***

Laura Delaney, PhD, Kings College London, London, United Kingdom

1:45 p.m. ***DCM in Small Infants: Medical Heart Failure Management***

Aamir Jeewa, MD, Hospital for Sick Children, Toronto, ON, Canada

2:00 p.m. ***DCM in Small Infants: PA Band or LVAD Therapy***

Emma Simpson, BMBS MMedSci MRCPCH, Freeman Hospital, Newcastle upon Tyne, United Kingdom

2:15 p.m. ***Heart Acceptance Strategies for the Highly Sensitized Candidate: Wait for the Ideal Match or Accept a Positive Crossmatch and Deal with the Consequences***

Brian Feingold, MD, MS, Children's Hospital of Pittsburgh, Pittsburgh, PA, USA

2:30 p.m. ***Don't Go Breaking My Heart: Cell-Free DNA, MRI, and Non-Invasive Imaging as Alternatives to Endomyocardial Biopsy after Pediatric Heart Transplant***

Justin Godown, MD, Vanderbilt University Medical Center, Nashville, TN, USA

2:45 p.m. **Panel Discussion**



1:30 p.m. – 3:00 p.m.

SESSION 35 (Oral): Where Have We Been and Where are We Going? Improving Heart Transplant Outcomes

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Marco Masetti, MD, PhD, and Angela W. Velleca, RN, BSN, MHDS, CCTC

Session Summary: This session will highlight approaches for improving outcomes post heart transplantation, focusing both on pre- and post-transplant assessment and management.

- 1:30 p.m.** **(108) *Improving Heart Transplant Outcomes in the African American Population? Are We There Yet?***
Sheev Zaver, BS, Univ of Tennessee Health Science Ctr Coll of Med, Memphis, TN, USA
- 1:40 p.m.** **Q&A**
- 1:45 p.m.** **(109) *Prehabilitation in Patients on the Waiting List for Heart Transplant Improves Postoperative Outcomes***
María A. Castel, MD, PhD, Hosp Clinic Barcelona, Barcelona, Spain
- 1:55 p.m.** **Q&A**
- 2:00 p.m.** **(110) *Are Two Better Than One? Survival, Rejection, Complications and Length of Stay with Multiorgan Transplants Compared to Heart Alone***
Stephanie Hsiao, MD, Stanford Univ, Stanford, CA, USA
- 2:10 p.m.** **Q&A**
- 2:15 p.m.** **(111) *Platelet Transcriptome as a Liquid Biopsy for Rejection After Heart Transplantation***
Rainer Krebs, MSc, PhD, Univ of Helsinki, Helsinki, Finland
- 2:25 p.m.** **Q&A**
- 2:30 p.m.** **(112) *Early Post Heart Transplant Coronary Anatomic-Physiologic Characterization: ECAV Study***
Sharon Chih, MBBS, PhD, Univ of Ottawa Heart Inst, Ottawa, Canada
- 2:40 p.m.** **Q&A**
- 2:45 p.m.** **(113) *Body Composition After Cardiac Transplantation via Bioimpedance Spectroscopy***
Jeanette Hasse, PhD, RD, Baylor Scott & White Health, Dallas, TX, USA
- 2:55 p.m.** **Q&A**



3:30 p.m. – 5:00 p.m.

SESSION 36 (Oral): Blood Creeps Where it Cannot Flow, When it Stops...You Know: Drug Support for MCS Therapy

Location: Hall D

Primary Core Therapy: MCS

Primary Audience: Cardiology

Chairs: Edward Horn, PharmD, and Ivan Netuka, MD, PhD

Session Summary: The achilles heel of durable LVAD devices is anticoagulation. How can the complication of bleeding and clots be minimized and how can we extend the life of VAD patients? This session will include input on new strategies to prevent gastrointestinal bleeding, strokes, and medication management to improve life expectancy.

- 3:30 p.m.** **(114) *Gastrointestinal Bleeding After LVAD Implantation: Is It Predictable?***
Kristin Klaeske, Mrs, Heart Ctr Leipzig, Leipzig, Germany
Pre-recorded Presentation
- 3:45 p.m.** **(115) *Protein Biomarkers Predict Risk of Gastrointestinal Bleeding in Left Ventricular Assist Device Patients***
Kathryn Cavallo, BS, Inova Heart and Vascular Inst, Falls Church, VA, USA
- 3:55 p.m.** **Q&A**
- 4:00 p.m.** **(116) *Octreotide for Recurrent Gastrointestinal Bleeding in Patients with Left Ventricular Assist Device: A Systematic Review and Meta-Analysis***
Amanda D. F. Fernandes, MD, Boston Medical Ctr, Boston, MA, USA
- 4:10 p.m.** **Q&A**
- 4:15 p.m.** **(117) *Omega-3 Therapy is Not Associated with Reduced Gastrointestinal Bleeding in HeartMate 3 Left Ventricular Assist Device Patients***
Zhaozhi Li, Univ of Chicago, Chicago, IL, USA
- 4:25 p.m.** **Q&A**
- 4:30 p.m.** **(118) *Single Acute Mechanical Circulatory Support Device Use is Associated with Reduced Mortality Compared to Multi-Agent Drug Therapy Alone for Cardiogenic Shock: An Analysis of the Cardiogenic Shock Working Group Registry***
Navin K. Kapur, MD, Tufts Medical Ctr, Boston, MA, USA
- 4:40 p.m.** **Q&A**
- 4:45 p.m.** **(119) *Stroke Risk in the Contemporary Era of Left Ventricular Assist Device Support***
John Leonard, MD, Univ of Minnesota, Minneapolis, MN, USA
- 4:55 p.m.** **Q&A**



3:30 p.m. – 5:00 p.m.

SESSION 37 (Oral): New Insights in Patients with Advanced Heart Failure and Cardiogenic Shock

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Mandeep R Mehra, MD, FRCP, FACC, FESC, and Simon Pecha, MD

Session Summary: This session presents strategies to bridge patients to heart transplantation, investigational surgical techniques, and new parameters to evaluate in patients with advanced heart failure and cardiogenic shock.

- 3:30 p.m.** **(120) Outcomes of Patients Bridged to Heart Transplantation with ECMO Following the UNOS Allocation Policy Change**
Sagar Patel, MD, Univ of Southern California, Los Angeles, CA, USA
Pre-recorded Presentation
- 3:45 p.m.** **(121) UNOS Listing Status-Related Changes in Mechanical Circulatory Support Utilization and Outcomes in Adult Congenital Heart Disease Patients**
Alice L. Zhou, BA, MS, Johns Hopkins Univ Sch of Med, Baltimore, MD, USA
- 3:55 p.m.** **Q&A**
- 4:00 p.m.** **(122) Cystatin C- versus Creatinine-Based Assessment of Kidney Function in Advanced Heart Failure: Insights from REVIVAL**
Alberto Pinsino, MD, Columbia Univ Medical Ctr, New York, NY, USA
- 4:10 p.m.** **Q&A**
- 4:15 p.m.** **(123) Circulating Proteomic Analysis Identifies Reduced Inflammation After Initiation of Hemodynamic Support with Either Venous-Arterial Extracorporeal Membrane Oxygenation or Impella in Patients with Cardiogenic Shock**
Nikolaos Diakos, MD, PhD, Tufts Medical Ctr, Boston, MA, USA
- 4:25 p.m.** **Q&A**
- 4:30 p.m.** **(124) Five-Year Outcome of Hybrid Transcatheter and Minimally Invasive Left Ventricular Reconstruction for the Treatment of Ischemic Heart Failure**
Romy R.m.j.j. Hegeman, MD, St. Antonius Hosp, Nieuwegein, Netherlands
- 4:40 p.m.** **Q&A**
- 4:45 p.m.** **(125) Clonal Hematopoiesis is Common within the Advanced Heart Failure Population and is Associated with Improved Heart Transplant Outcomes**
Lakshmi Raval. Gokanapudy Hahn, MD, Washington Univ in St. Louis, St. Louis, MO, USA
- 4:55 p.m.** **Q&A**



3:30 p.m. – 5:00 p.m.

SESSION 38 (Symposium): Vaccination in Cardiothoracic Transplant Candidates and Recipients: the Time is Now?

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Infectious Diseases

Chairs: Emily A Blumberg, MD, and Patricia Ging, PharmD

Session Summary: This session will review the recommended vaccines for cardiothoracic transplant patients, discuss the consequences of immunosuppression on vaccine responses, review new data about specific vaccines in transplant patients, and debate whether completion of recommended vaccines should be required prior to transplantation. A panel discussion with all speakers will conclude this session.

- 3:30 p.m.** ***Vaxxed and Transplanted – Not Just for COVID***
Haifa Lyster, MSc, Royal Brompton Specialist Transplant Pharmacist, Middlesex, United Kingdom
- 3:40 p.m.** ***From Cow Pox to COVID: A Brief Overview of Vaccination and the Immunocompromised Host***
Joanna M. Schaenman, MD, PhD, UCLA School of Medicine, Los Angeles, CA, USA
Pre-recorded Presentation
- 3:55 p.m.** ***New Advances in Transplant Vaccinology: Current and Emerging Vaccines for Transplantation***
Robin Avery, MD, Johns Hopkins, Baltimore, MD, USA
- 4:10 p.m.** ***Case Study: Should This Patient’s Listing Require Completion of Recommended Vaccination?***
Michelle Murray, MD, MSc, MRCPI, Mater Misericordiae, Dublin, Ireland
- 4:15 p.m.** ***DEBATE: Transplant Programs Should Mandate Candidates Be Fully Vaccinated Prior to Activation on a Transplant List (PRO)***
Osnat Shtraichman, M.D, Rabin Medical Center Belinson Campus, Petach Tikva, Israel
- 4:30 p.m.** ***DEBATE: Transplant Programs Should Mandate Candidates Be Fully Vaccinated Prior to Activation on a Transplant List (CON)***
Olivia S. Kates, MD, Johns Hopkins, Baltimore, MD, USA
- 4:45 p.m.** **Panel Discussion**



3:30 p.m. – 5:00 p.m.

SESSION 39 (Oral): Exercise Capacity and Possible Determinants of Intolerance After LVAD Implantation

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiology

Chairs: Ulrich Jorde, MD, and Manreet Kanwar, MD

Session Summary: Multiple studies have documented exercise intolerance in patients with durable LVADs. This session addresses post-implant functional capacity and possible modifiable factors in the adult and pediatric population.

- 3:30 p.m.** **(126) Mobilized Pediatric Patients on Venous-Arterial ECMO Have Improved Outcomes**
Jonathan B. Edelson, MD, Children's Hosp of Philadelphia, Philadelphia, PA, USA
- 3:40 p.m.** **Q&A**
- 3:45 p.m.** **(127) Multicenter-Derived Clinical Score Predicts Structural and Functional Cardiac Improvement in Chronic Heart Failure Patients Undergoing Mechanical Circulatory Support**
Christos P. Kyriakopoulos, MD, U.T.A.H. Cardiac Transplant Program (Univ of Utah Health & Sch of Med, Intermountain Medical Ctr, George E. Wahlen VA Medical Ctr), Salt Lake City, UT, USA
- 3:55 p.m.** **Q&A**
- 4:00 p.m.** **(128) The Value of Physiotherapeutic Tests Next to Cardiopulmonary Exercise Test to Assess Exercise Capacity in Left Ventricular Assist Device Patients**
Steven A. Muller, MD, Univ Medical Ctr Utrecht, Utrecht, Netherlands
- 4:10 p.m.** **Q&A**
- 4:15 p.m.** **(129) Metabolic and Hemodynamic Determinants of Exercise with the HeartMate 3 LVAD**
Afsana Rahman, MD, Northshore Univ Hosp, Manhasset, NY, USA
- 4:25 p.m.** **Q&A**
- 4:30 p.m.** **(130) Exercise Performance and Quality of Life of Left Ventricular Assist Device Patients After Long-Term Phase 3 Cardiac Rehabilitation**
Thomas Schloeglhofer, MSc, Medical Univ of Vienna, Vienna, Austria
- 4:40 p.m.** **Q&A**
- 4:45 p.m.** **(131) Safety and Efficacy of Home-Based Exercise Rehabilitation Using Remote Monitoring in New Left Ventricular Assist Device Recipients**
Himabindu Vidula, MD, Univ of Rochester, Rochester, NY, USA
- 4:55 p.m.** **Q&A**



3:30 p.m. – 5:00 p.m.

SESSION 40 (Symposium): Take a Chance on Me: Updates in Lung Transplant Candidate Selection

Location: Ballroom A

Primary Core Therapy: LUNG

Primary Audience: Pulmonology

Chairs: Kathleen J Ramos, MD, MSc, and Caroline M Patterson, MD

Session Summary: This session will review the key aspects of the updated ISHLT Consensus document for the selection of lung transplant candidates. Particular emphasis will be placed on the ethical implications, the assessment of risk factors that have now been incorporated into the updated consensus statement, and disease specific updates for referral and listing. A panel discussion with all speakers will conclude this session.

3:30 p.m. ***Updated Recommendations for Lung Transplant Candidate Selection: Assessment of Risk Factors***

Lorriana E. Leard, MD, UCSF Medical Center, San Francisco, CA, USA

3:45 p.m. ***Psychosocial Considerations in the Selection of Lung Transplant Candidates***

Patrick J. Smith, PhD, MPH, Duke University Medical Center, Durham, NC, USA

4:00 p.m. ***Pediatric Specific Considerations for Lung Transplant Candidate Selection***

Melinda Solomon, MD, FRCPC, Hospital for Sick Children, Toronto, ON, Canada

4:15 p.m. ***Infectious Disease Risk Factors in Lung Transplant Candidates***

Silvia V. Campos, MD, Heart Institute of Sao Paulo Medical School, Sao Paulo, Brazil

Pre-recorded Presentation

4:30 p.m. ***Ethical Principles to Guide the Selection of Lung Transplant Candidates and Allocation of Lungs***

Are Holm, MD, PhD, Oslo University Hospital, Oslo, Norway

4:45 p.m. **Panel Discussion**



3:30 p.m. – 5:00 p.m.

SESSION 41 (Oral): Selecting the Right Heart for the Right Kid: Patient and Donor Selection in Pediatric Heart Transplant

Location: Room 312

Primary Core Therapy: HEART

Primary Audience: Pediatrics

Chairs: Lori J West, MD, DPhil, and Antonio Amodeo, MD

Session Summary: Heart transplant candidate and donor selection are key decision points in pediatric heart transplant care. This session will present new information on recipient risk factors and donor selection practices in order to improve clinical care.

- 3:30 p.m.** **(132) *There's More to the Story - Not All Durations of Mechanical Ventilation Are Associated with Worse Post-Transplant Survival in Children***
Jason W. Greenberg, MD, The Heart Inst, Cincinnati Children's Hosp Medical Ctr, Cincinnati, OH, USA
- 3:40 p.m.** **Q&A**
- 3:45 p.m.** **(133) *Graft Survival in Pediatric Heart Retransplantation Can Rival Primary Heart Transplantation***
John Thomas. Kennedy, III, MD, Univ of Cincinnati Medical Ctr, Cincinnati, OH, USA
- 3:55 p.m.** **Q&A**
- 4:00 p.m.** **(134) *Inclusive ABO-Incompatible Listing for Pediatric Heart Transplantation Results in Comparable Post-Transplant Rejection-Free Survival***
Emily A. Downs, MD, Univ of Virginia, Charlottesville, VA, USA
- 4:10 p.m.** **Q&A**
- 4:15 p.m.** **(135) *Increasing Donor-Recipient Weight Mismatch is Associated with Shorter Waitlist Duration and No Increased Morbidity or Mortality***
Bahaaldin Alsoufi, MD, Univ of Louisville, Louisville, KY, USA
- 4:25 p.m.** **Q&A**
- 4:30 p.m.** **(136) *Use of Donor Hearts with Low Ejection Fraction in Pediatric Heart Transplantation: A PHTS Analysis***
Dipankar Gupta, MD, Univ of Florida Coll of Med, Gainesville, FL, USA
- 4:40 p.m.** **Q&A**
- 4:45 p.m.** **(137) *How High is Too High? Analysis of Donor Inotrope Support in Pediatric Heart Transplantation***
Muhammad Aanish Raees, MBBS, Cincinnati Children's Hosp Medical Ctr, Cincinnati, OH, USA
- 4:55 p.m.** **Q&A**



3:30 p.m. – 5:00 p.m.

SESSION 42 (Oral): Donor Utilization and Heart Allocation System in the Current Era: For Better or For Worse

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Sanjeeb Bhattacharya, MD, and María A Castel, MD, PhD

Session Summary: This session will address waitlist survival and transplant outcomes in association with expanded donor pool and revised heart allocation system.

- 3:30 p.m.** **(138) Donor Utilization in the Recent Era: Effect of Sex, Drugs and Increased Risk**
David A. Baran, MD, Sentara Heart Hosp, Norfolk, VA, USA
- 3:40 p.m.** **Q&A**
- 3:45 p.m.** **(139) Heart Transplant Outcomes by Donor HCV NAT Status: Intermediate Analysis**
Meghana Yanamandra, MD, MSc, Univ of Southern California, Los Angeles, CA, USA
Pre-recorded Presentation
- 4:00 p.m.** **(140) The Regional Impact of the 2018 United States Heart Allocation System Change**
Amit Iyengar, MD, MS, Univ of Pennsylvania, Philadelphia, PA, USA
- 4:10 p.m.** **Q&A**
- 4:15 p.m.** **(141) Adaptive Changes and Estimated Long-Term Survival After Updated Donor Heart Allocation Policy: A UNOS Database Analysis**
Takuma Miyamoto, MD, PhD, Thomas Jefferson Univ Hosp, Philadelphia, PA, USA
- 4:25 p.m.** **Q&A**
- 4:30 p.m.** **(142) Improved Survival Benefit After Implementation of the New Heart Allocation System amongst Highest Priority Candidates Undergoing Heart Transplant**
Stratton Tolmie, B.A., Univ of Chicago, Chicago, IL, USA
- 4:40 p.m.** **Q&A**
- 4:45 p.m.** **(143) Waitlist Outcomes in Candidates with Hypertrophic or Restrictive Cardiomyopathy and Congenital Heart Disease After Implementation of the New French Heart Allocation System**
Guillaume Coutance, MD, Hop Pitie-Salpetriere, Paris, France
- 4:55 p.m.** **Q&A**



5:15 p.m. – 6:15 p.m.

MINI ORAL 07: What's the Score? Modeling Outcomes in Heart Transplantation

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Fabiana G Marcondes-Braga, MD, PhD, and Sanem Nalbantgil, MD

Session Summary: Multiple factors are associated with how well a patient does post heart transplant. This session will highlight research exploring factors associated with heart transplant outcomes as well as their predictive value.

- 5:15 p.m. **(336) Outcomes of Heart Re-Transplantation with Combined Kidney Transplant**
Qidong Chen, MD, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- 5:19 p.m. **Q&A**
- 5:21 p.m. **(337) Induction Therapy in Heart Transplantation: A Systematic Review and Network Meta-Analysis**
Lakshmi Kugathasan, PhD, Toronto General Hosp, Toronto, Canada
Pre-recorded Presentation
- 5:27 p.m. **(338) Cross-Organ Survival in Patients Undergoing Multi-Organ Cardiac Transplantation**
Umar A. Siddiqi, N/A, Univ of Chicago Med, Chicago, IL, USA
Pre-recorded Presentation
- 5:33 p.m. **(339) Predicting One Year Mortality Using Machine Learning After Pediatric Heart Transplantation: Analysis of the United Network of Organ Sharing (UNOS) Database**
Awaiz Ashfaq, MD, Johns Hopkins All Children's Hosp, St. Petersburg, FL, USA
Pre-recorded Presentation
- 5:39 p.m. **(340) Sex Differences in Clinical Characteristics and Outcomes in Patients Undergoing Heart Transplantation**
Christoph Kondziella, MD, Univ Heart & Vascular Ctr Hamburg, Hamburg, Germany
Pre-recorded Presentation
- 5:45 p.m. **(341) The New UNOS Heart Transplant Statuses: Upgrades, Transplant Rate and Survival**
Jaimin R. Trivedi, MBBS, MPH, FACC, Univ of Louisville, Louisville, KY, USA
- 5:49 p.m. **Q&A**
- 5:51 p.m. **(342) Instrumental Variable Estimation of the Effect of Increased Donor Heart Ischemic Time on Post-Transplant Survival**
Gege Ran, BA, Univ of Chicago Pritzker Sch of Med, Chicago, IL, USA
- 5:55 p.m. **Q&A**
- 5:57 p.m. **(343) Mitigation of Post-Transplant Mortality Risk by Appropriate Donor-to-Recipient Size Matching Using Predicted Heart Mass**
Ran Tao, MD, Univ of Wisconsin Hosp and Clinics, Madison, WI, USA
- 6:01 p.m. **Q&A**
- 6:03 p.m. **(344) Models with Weight and Height Better Predict Mortality versus BMI After Adult Heart Transplantation**
William L. Baker, Pharm.D., Univ of Connecticut Sch of Pharmacy, Storrs Mansfield, CT, USA
- 6:07 p.m. **Q&A**
- 6:09 p.m. **(345) Donor and Recipient Cytokine Profiles Predict Acute Rejection and Graft-Related Survival After Heart Transplantation**
Emil Holmström, MD, Univ of Helsinki, Helsinki, Finland
Pre-recorded Presentation



5:15 p.m. – 6:15 p.m.

MINI ORAL 08: Diagnostics and Pathology in Lung Transplantation

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Pulmonology

Chairs: Martin J Goddard, FRCS MRCPa, and Sam S. Weigt, MD

Session Summary: This session will discuss approaches to evaluate donor lung preservation and to predict and diagnose allograft dysfunction, including after COVID-19 infection and vaccination.

- 5:15 p.m. **(355) SARS-CoV-2 RNA in Explant Lung Tissue from Patients with COVID-19 ARDS**
Jan Van Slambrouck, MD, Univ Hosp Leuven, Leuven, Belgium
- 5:19 p.m. **Q&A**
- 5:21 p.m. **(346) Lung Function and Inflammatory Profiling of Damaged Rat Donor Lungs Following EVLP Thermal Preconditioning**
Anne Debonneville, Master, Lausanne Univ Hosp, CHUV, Lausanne, Switzerland
- 5:25 p.m. **Q&A**
- 5:27 p.m. **(347) Donor Extracellular Vesicle Transcriptomic Profile Predicts the Risk for Acute Rejection After Lung Transplantation**
SeoJeong Joo, M.Sc., Univ of Helsinki, Helsinki, Finland
- 5:31 p.m. **Q&A**
- 5:33 p.m. **(348) Bronchoalveolar Lavage Fluid (BALF) as a Compartment for Donor-Derived Cell-Free DNA (dd-cfDNA) Assessment in Lung Recipients**
Jamie L. Todd, MD, MHS, Duke Univ Medical Ctr, Durham, NC, USA
- 5:37 p.m. **Q&A**
- 5:39 p.m. **(349) dd-cfDNA Levels Are Independent of Allograft Longevity in Stable Lung Transplant Recipients**
Anil J. Trindade, MD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA
- 5:43 p.m. **Q&A**
- 5:45 p.m. **(350) Absolute versus Percent of Donor-Derived Cell-Free DNA to Detect Lung Transplantation Rejection**
Hyesik Kong, PhD, Div of Intramural Res, Natl Heart, Lung, and Blood Inst (NHLBI), Bethesda, MD, USA
- 5:49 p.m. **Q&A**
- 5:51 p.m. **(351) A Cost Effective Liquid Biopsy Technology Using Donor Derived Cell Free Dnato Diagnose Rejection in Thoracic Organ Transplant Recipients**
Vijil Rahulan, MD, FACP, FCCP, AB(IM, Pulmonary Critical Care), Krishna Inst of Medical Sciences, Hyderabad, Telangana, India
Pre-recorded Presentation
- 5:57 p.m. **(352) Contrary to Persisting De-Novo DSA, Transient De-Novo DSAs After Lung Transplantation Do Not Constitute a Risk Factor for Patient and Graft Survival**
Alberto Benazzo, MD, Medical Univ of Vienna, Vienna, Austria
- 6:01 p.m. **Q&A**
- 6:03 p.m. **(353) Effect of SARS-CoV-2 Infection on Anti-HLA Antibodies and De Novo DSA Incidence in Lung Transplant Recipients**
Andrea Zajacova, MD, Motol Univ Hosp and 2nd Faculty of Med, Charles Univ in Prague, Prague, Czech Republic
- 6:07 p.m. **Q&A**
- 6:09 p.m. **(354) Is COVID Vaccine Associated with Development of De Novo Donor Specific Antibodies in Lung Transplant Recipients?**
Sravanthi Nandavaram, MD, FCCP, Univ Of Kentucky, Lexington, KY, USA
- 6:13 p.m. **Q&A**



5:15 p.m. – 6:15 p.m.

MINI ORAL 09: The Realities of Living with LVADs: Sociodemographic Factors and Quality of Life outcomes

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiothoracic Surgery

Chairs: Jesus Casida, PhD, RN, and Kiran K. Mirza, MD

Session Summary: This session explores the impact of socio-demographic variables on LVAD outcomes including quality of life, and highlights emerging, contemporary topics such as social determinants of health and health inequities.

- 5:15 p.m.** **(356) *Racial Disparity Exists in the Utilization of and Post-Transplant Survival Benefit from Ventricular Assist Device Support in Children***
Jason W. Greenberg, MD, The Heart Inst, Cincinnati Children's Hosp Medical Ctr, Cincinnati, OH, USA
- 5:19 p.m.** **Q&A**
- 5:21 p.m.** **(357) *Overcoming Racial Disparities: Towards Equitable Care in Left Ventricular Assist Device Patients***
Zhaozhi Li, None, Univ of Chicago, Chicago, IL, USA
- 5:25 p.m.** **Q&A**
- 5:27 p.m.** **(358) *Sex-Based Differences in Clinical Outcomes of Stroke Related to LVAD***
Mahwash Kassi, MD, Houston Methodist Hosp, Houston, TX, USA
- 5:31 p.m.** **Q&A**
- 5:33 p.m.** **(359) *Sex-Based Differences in Survival and Readmissions After Insertion of HeartMate3 (HM3) Left Ventricular Assist Device***
Giulio M. Mondellini, Medical Doctor, Columbia Univ Medical Ctr, New York, NY, USA
Pre-recorded Presentation
- 5:39 p.m.** **(360) *Does Patients with Higher Education Have Better Postoperative Results After LVAD Implantation?***
Aditya Bansal, MD, Ochsner Clinic Fndn, New Orleans, LA, USA
- 5:43 p.m.** **Q&A**
- 5:45 p.m.** **(361) *Living at Distance from the Implanting Center: Any Impact on LVAD Patients Outcome?***
Andrea Lechiancole, Medical Doctor, Azienda Sanitaria Univria Friuli Centrale, Udine, Italy
- 5:49 p.m.** **Q&A**
- 5:51 p.m.** **(362) *Can Household Income Predict Postoperative Outcomes After LVAD Implantation?***
Aditya Bansal, MD, Ochsner Clinic Fndn, New Orleans, LA, USA
- 5:55 p.m.** **Q&A**
- 5:57 p.m.** **(363) *Professional Employment in Patients on Ventricular Assist Device Support - A Multi-Center Prevalence Study***
Christiane Kugler, Prof. Dr., Inst of Nursing Science, Freiburg, Germany
- 6:01 p.m.** **Q&A**
- 6:03 p.m.** **(364) *Clinically Important Differences Are Useful for Interpreting Patient-Reported Outcomes Measurement Information System (PROMIS) Measures After Left Ventricular Assist Device (LVAD) Implantation: Findings from the Mechanical Circulatory Support: Measures of Adjustment and Quality of Life (MCS A-QOL) Study***
Kathleen L. Grady, PhD, APN, FAAN, Northwestern Univ Feinberg Sch of Med, Chicago, IL, USA
- 6:07 p.m.** **Q&A**
- 6:09 p.m.** **(365) *Measuring Quality of Life in Patients with Ventricular Assist Device - Psychometric Evaluation of the German Version of the Disease Specific QoLVAD-Questionnaire***
Hannah Spielmann, M. Sc., Inst of Nursing Science, Freiburg, Germany
- 6:13 p.m.** **Q&A**



5:15 p.m. – 6:15 p.m.

MINI ORAL 10: Lung Potpourri: Procedures, Pain, Pathogens, and Pediatrics

Location: Ballroom A

Primary Core Therapy: LUNG

Primary Audience: Cardiothoracic Surgery

Chairs: Carol K Conrad, MD, and Dirk E Van Raemdonck, MD, PhD

Session Summary: This session will feature abstracts from multiple disciplines, highlighting innovative surgical and anaesthetic techniques and exploring medical, microbiological, and psychosocial factors impacting lung transplant outcomes.

- 5:15 p.m.** **(366) *Out of the Frying-Pan and into the Fire: Transplant Candidate Selection in Acute Lung Failure Due to SARS-CoV-2 Infection***
Mark Greer, MB Bch, Hanover Medical Sch, Hannover, Germany
Pre-recorded Presentation
- 5:21 p.m.** **(367) *The Impact of Nutritional Status and Sarcopenia on the Outcomes of Lung Transplantation***
Eleonora Faccioli, Medical Doctor, Dept of Cardio-Thoracic and Vascular Sciences and Public Health - Padova Univ Hosp, Thoracic Surgery and Lung Transplantation Unit, Padova, Italy
- 5:25 p.m.** **Q&A**
- 5:27 p.m.** **(368) *The Impact of Recipient Age on Outcomes of Simultaneous Heart-Lung Transplantation***
Jennie H. Kwon, MD, Medical Univ of South Carolina, Charleston, SC, USA
- 5:31 p.m.** **Q&A**
- 5:33 p.m.** **(369) *Liver-First Strategy for Combined Lung and Liver Transplantation: 15-Year Single-Center Experience***
Fabio Ius, MD, Hannover Medical Sch, Hannover, Germany
- 5:37 p.m.** **Q&A**
- 5:39 p.m.** **(370) *Intercostal Nerve Cryoablation as Part of an Opioid-Sparing Protocol Reduces Narcotic and Epidural Use After Lung Transplant***
Daniel P. McCarthy, MD, Univ of Wisconsin-Madison Sch of Med and Public Health, Madison, WI, USA
- 5:43 p.m.** **Q&A**
- 5:45 p.m.** **(371) *Full Recovery of Right Ventricular Systolic Function in Children Undergoing Bilateral Lung Transplantation for Severe PAH***
Georg Hansmann, MD, PhD, Hannover Medical Sch, Hannover, Germany
Pre-recorded Presentation
- 5:51 p.m.** **(372) *Perioperative Diabetes Mellitus and Chronic Lung Allograft Dysfunction After Lung Transplantation***
Yoshito Yamada, MD, PhD, Kyoto Univ Hosp, Kyoto, Japan
Pre-recorded Presentation
- 5:57 p.m.** **(373) *The Lung Microbiome in CLAD is Characterized by Higher Bacterial Burden and Increased Abundance of Oral Flora***
Michael P. Combs, MD MS, Univ of Michigan, Ann Arbor, MI, USA
- 6:01 p.m.** **Q&A**
- 6:03 p.m.** **(374) *Prevalence and Impact of Preoperative Peripheral Arterial Disease on Outcomes Following Geriatric Lung Transplantation***
Hiromu Kehara, MD, PhD, Temple Univ, Philadelphia, PA, USA
- 6:07 p.m.** **Q&A**
- 6:09 p.m.** **(375) *Youth Perspectives on Life and Healthcare After Lung Transplant***
Simone West, BOT, BA (Hons), Post Grad Cert Wound Care, The Alfred Hosp, Melbourne, Australia
Pre-recorded Presentation



5:15 p.m. – 6:15 p.m.

MINI ORAL 11: Moving in the Right Direction: A Quick Jaunt Through Pediatric Heart Failure and Transplant

Location: Room 312

Primary Core Therapy: HEART

Primary Audience: Pediatrics

Chairs: Ann R Punnoose, MD, and Neha Bansal, MD

Session Summary: The research in this session will highlight the spectrum of management in pediatric patients with heart failure to the ultimate therapy of transplantation and its outcomes.

5:15 p.m. **(376) Pediatric Heart-Lung Transplantation Through the Decades: A Single-Center Analysis**

Horacio G. Carvajal, MD, Washington Univ in St. Louis, Saint Louis, MO, USA

5:19 p.m. **Q&A**

5:21 p.m. **(377) Iron Deficiency in Pediatric Dilated Cardiomyopathy is Associated with Clinical, Biochemical and Hematological Markers of Severe Disease and Adverse Outcomes**

Jack C. Luxford, BA, MD, The Children's Hosp at Westmead, Sydney, Australia

Pre-recorded Presentation

5:27 p.m. **(378) A Novel Approach to Pediatric Heart Failure Quality Improvement within the ACTION Network**

Justin Godown, MD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA

5:31 p.m. **Q&A**

5:33 p.m. **(379) Contemporary Care and Outcomes of Critically Ill Children with Myocarditis**

David M. Peng, MD, Univ of Michigan, Ann Arbor, MI, USA

5:37 p.m. **Q&A**

5:39 p.m. **(380) Cardiogenic Shock in Children: Clinical Presentation and Outcomes**

Kriti Puri, MBBS, Texas Children's Hosp, Baylor Coll of Med, Houston, TX, USA

5:43 p.m. **Q&A**

5:45 p.m. **(381) Paralytics and Total Parenteral Nutrition Predict Post-Heart Transplant Mortality in Infants**

Jason W. Greenberg, MD, The Heart Inst, Cincinnati Children's Hosp Medical Ctr, Cincinnati, OH, USA

5:49 p.m. **Q&A**

5:51 p.m. **(382) Repeat Pediatric Heart Transplantation in the United States: United Network for Organ Sharing Database Analysis**

Georgina Rowe, MD, Smidt Heart Inst, Cedars-Sinai Medical Ctr, Los Angeles, CA, USA

5:55 p.m. **Q&A**

5:57 p.m. **(383) Predicted Heart Mass is Not the Optimal Metric for Size Matching in Pediatric Heart Transplantation**

Zhaozhi Li, Univ of Chicago, Chicago, IL, USA

6:01 p.m. **Q&A**

6:03 p.m. **(384) Sudden Cardiac Arrest After Pediatric Heart Transplantation**

Lynsey M. Barkoff, Nurse Practitioner, Lucile Packard Children's Hosp, Palo Alto, CA, USA

6:07 p.m. **Q&A**

6:09 p.m. **(385) Long-Term Survivors Following Pediatric Heart Transplantation: A PHTS Database Analysis**

Emily A. Hayes, MD, Nationwide Children's Hosp, Columbus, OH, USA

6:13 p.m. **Q&A**



5:15 p.m. – 6:15 p.m.

MINI ORAL 12: Heart Transplant Waitlists, Donor Selection, and Allocation

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Cardiothoracic Surgery

Chairs: Kiran Khush, MD, MAS, and Clive Lewis, MB BChir PhD FRCP

Session Summary: This session will discuss access to transplant waitlist, impact of heart allocation policies, and opportunities to expand the donor pool.

- 5:15 p.m. **(386) *The Impact of the New UNOS Allocation System on Heart Kidney Recipients***
Hannah Foote, Bensimhon, MD, UNC, Chapel Hill, NC, USA
- 5:20 p.m. **Q&A**
- 5:22 p.m. **(388) *Equity in Access to Deceased Donor Transplant for Candidates on the Heart Waitlist***
Keighly Bradbrook, PhD, United Network for Organ Sharing, Richmond, VA, USA
- 5:27 p.m. **Q&A**
- 5:29 p.m. **(389) *The New French Heart Allocation System Has Improved Access to Transplantation in Adolescents***
Carine Jasseron, PhD, Agence de la Biomédecine, Saint Denis La Plaine, France
Pre-recorded Presentation
- 5:36 p.m. **(391) *Donor Positive Blood Cultures Do Not Impact Adult Heart Transplant Survival***
Umar A. Siddiqi, N/A, Univ of Chicago Med, Chicago, IL, USA
Pre-recorded Presentation
- 5:43 p.m. **(392) *Demographics and Utilization of Hepatitis C Hearts: A Single Center Experience***
Arrush Choudhary, MD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA
- 5:48 p.m. **Q&A**
- 5:50 p.m. **(393) *Predicted Heart Mass (PHM) Ratio for Size Matching in Heart Transplant Post LVAD***
Bhavana Siddegowda Bangalore, MBBS, Indiana Univ, Indianapolis, IN, USA
Pre-recorded Presentation
- 5:57 p.m. **(394) *Medium-Long Term Results of Cardiac Transplantation from Donors Assessed with the "Aged Donor Heart Rescue by Stress Echo" (ADONHERS) Protocol***
Sofia Martin Suarez, MD, PhD, IRCCS Sant'Orsola Malpighi Hosp, Bologna, Italy
- 6:02 p.m. **Q&A**
- 6:04 p.m. **(395) *Heart Transplantation Utilizing Organs Following Donation After Circulatory Death (DCD)***
Kabeer Umakumar, FRCS, Royal Brompton and Harefield NHS Trust, London, United Kingdom
Pre-recorded Presentation



5:15 p.m. – 6:15 p.m.

POSTER SESSIONION 2

Poster Auditorium

Some posters are on-demand only (check Mobile App for status)

CARDIOLOGY (HEART)

(760) *Is Donor/Recipient Cytomegalovirus Mismatch Truly Associated with Increased Risk for Cardiac Allograft Vasculopathy in the Current Era?*; David Chang, MD, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA

(761) *Institutional Practice and Opinion on Cardiac Allograft Vasculopathy Surveillance*; Sharon Chih, MBBS, PhD, Univ of Ottawa Heart Inst, Ottawa, Canada

(762) *Multicenter Evaluation of Volumetric Intravascular Ultrasound Early After Heart Transplantation and Long-Term Prognosis*; Satish Arora, MD, PhD, Oslo Univ Hosp, Rikshospitalet, Oslo, Norway

(763) *Utility of High Sensitivity Troponin I to Monitor Cardiac Allograft Vasculopathy Progression*; Krishan Patel, MD, Emory Univ, Atlanta, GA, USA

(764) *Outcomes After Percutaneous Coronary Intervention in Coronary Allograft Vasculopathy After Heart Transplantation: A Single Center Review*; Wojciech Rzechorzek, MD, Westchester Medical Ctr / NY Medical Coll, Valhalla, NY, USA

(765) *Clinical Utility of the SCAI Classification in Cardiogenic Shock Patients of Any Etiology Treated by a Multidisciplinary Team*; Sara Lozano Jiménez, Miss, Puerta de Hierro, Majadahonda (Madrid), Spain

(766) *Clinical Outcome of Current Treatment with ECMO in Cardiogenic Shock: Analysis of Korea National Insurance Data 2009-2018*; Hye Won Lee, PhD, Pusan Natl Univ Hosp, Busan, South Korea

(767) *Accuracy of Estimated versus Calculated Mean Pulmonary Arterial Pressure*; Mark N. Belkin, MD, Univ of Chicago, Chicago, IL, USA

(768) *Improved Hemodynamic Response Following Intra-Aortic Balloon Pump Support in Patients with Heart Failure Related Cardiogenic Shock and Severe Right Ventricle Dysfunction*; George Kalapurakal, DO, Advocate Christ Medical Ctr/Univ of Illinois at Chicago, Oak Lawn, IL, USA

(769) *Predictors of Mechanical Circulatory Support in Fulminant Acute Myocarditis*; José González-Costello, MD, Hosp Univrio de Bellvitge, Barcelona, Spain

(770) *Trends in Substance Use in Patients Requiring Advanced Heart Failure Therapies*; Amanda C. Coniglio, MD, Duke Univ, Durham, NC, USA

(771) *Neuropsychiatric Symptoms and Executive Functioning Impairment in Patients with Advanced Heart Failure: A Pilot Study*; Tyler Richins, Bachelor's of Science, Univ of Utah, Salt Lake City, UT, USA

(772) *Ethnicities of Patients Presenting with Methamphetamine Associated Cardiomyopathy at a Tertiary Hospital System in Hawaii*; Ricky Huang, MD, Univ of Hawaii, Honolulu, HI

(773) *Does the Degree of Diastolic Dysfunction in the First Year After Heart Transplant Affect Subsequent Outcomes?*; Tahli Singer-Englar, MS, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA

(774) *The Effects of Hypomagnesemia Post Heart Transplantation*; Tahli Singer-Englar, MS, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA

(775) *Acute Abdomen Complications Immediately Following Heart Transplantation: What Are the Odds?*; David Chang, MD, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA



- (776) Who is at Risk for Seizures After Heart Transplantation?**; Seong Kim, B.S., Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA
- (777) A Logistic Regression Model for Post Transplant Lymphoproliferative Disorder Using the UNOS Database;** Nandini Nair, MD, PhD, Texas Tech Health Sciences Ctr, Lubbock, TX, USA
- (778) A Machine Learning Model for Post-Transplant Lymphoproliferative Disorder Using the UNOS Database;** Nandini Nair, MD, PhD, Texas Tech Health Sciences Ctr, Lubbock, TX, USA
- (779) New-Onset Diabetes in Patients Post-Heart Transplantation; the Role of Hypertension and Novel Diabetic Medications;** Heidi S. Lumish, MD, Columbia Univ Irving Medical Ctr, New York, NY, USA
- (780) Incidence and Treatment of Arterial Hypertension After Heart Transplantation;** Heidi S. Lumish, MD, Columbia Univ Irving Medical Ctr, New York, NY, USA
- (781) Impact of Pre-Heart Transplant Pulmonary Function Tests on Post-Transplant Pulmonary Outcomes;** Kevin J. Clerkin, MD, MSc, Columbia Univ Medical Ctr, New York, NY, USA
- (782) Development of De Novo Donor Specific Antibodies Following COVID-19 Vaccination in Cardiac Transplant;** Afsana Rahman, MD, Northshore Univ Hosp, Manhasset, NY, USA
- (783) Regional Variation in COVID Vaccination Requirements for Potential Heart Transplant Recipients;** Mustafa M. Ahmed, MD, Univ of Florida, Gainesville, FL, USA
- (784) Breakthrough Infections and Low Mortality Observed in Heart Transplant Recipients Infected with COVID-19 at UC San Diego;** Masihullah Barat, MD, Univ of California San Diego, La Jolla, CA, USA
- (785) Characteristics and Outcome of COVID-19 Infection in Heart Transplantation Recipients in the Netherlands;** Steven A. Muller, MD, Univ Medical Ctr Utrecht, Utrecht, Netherlands
- (786) Efficacy and Safety of mRNA SARS-CoV2 Vaccination in Heart Transplant Recipients;** Gregor Poglajen, MD; PhD, Univ Medical Ctr Ljubljana, Ljubljana, Slovenia
- (787) Impact of COVID-19 Vaccination After Orthotopic Heart Transplantation;** Nakeya Dewaswala, MD, Univ of Kentucky, Lexington, KY, USA
- (788) Hemodynamic Effects of COVID-19 Vaccination in Hospitalized Patients Awaiting Heart Transplantation;** Rachel E. Ohman, MD, UCLA Health, Los Angeles, CA, USA
- (789) Breakthrough COVID-19 Infections in Heart Transplant Recipients: A Case Series;** Daniel J. Miklin, MD, Univ of Southern California, Los Angeles, CA, USA
- (790) Racial and/or Ethnic Disparity in Multisystem Inflammatory Syndrome in Children (MIS-C) in the State of Mississippi, USA, July 2020 to June 2021;** Bibhuti B. Das, MD, Univ of Mississippi Medical Ctr, Children's Hosp of Mississippi, Jackson, MS, USA
- (791) Is There Heterogeneity on Outcome of Hospitalized Heart Transplant Patients with COVID-19 Infection Across the US?;** Nikhil Patel, B.S., Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (792) Impact of COVID19 Infection Among Heart Transplanted Recipients: The Experience of a Latin American Center;** Fernando L. Scolari Sr., MD, PhD, Hosp de Clínicas de Porto Alegre, Porto Alegre, Brazil
- (793) Outcomes of COVID-19 in Heart Transplant Recipients;** Gregor Poglajen, MD, PhD, Univ Medical Ctr Ljubljana, Ljubljana, Slovenia
- (794) Challenges in Heart Transplantation in COVID 19 Pandemic New Biopsy Protocol a Single Center Experience;** Justyna Malyszek Tumidajewicz, MD PhD, Silesian Ctr for Heart Diseases, Zabrze, Poland



- (795) COVID Infection in Heart Transplant Recipients: Experiences from an Epicenter;** Daniel J. Miklin, MD, Univ of Southern California, Los Angeles, CA, USA
- (796) Challenges in Heart Transplantation During COVID-19 Pandemic in Brazil;** Natália Duarte. Barroso, MD, Heart Inst / Univ of Sao Paulo, Sao Paulo, Brazil
- (797) Association of Race/Ethnicity, Inactivation on Waitlist for Socioeconomic Reasons, and Outcomes in Heart-Transplantation (HT);** Shivank Madan, MD, MHA, Montefiore Medical Ctr/Albert Einstein Coll of Med, New York, NY, USA
- (798) The Outcome of West Nile Virus Infection After Heart Transplantation;** Nikhil Patel, B.S., Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (799) Anatomopathological Consequences of the Change in the Clinical-Demographic Profile of Chagasic Patients Who Are Candidates for Heart Transplantation in Recent Years;** Carlos Aurelio. Aragao, MD. MSc, Heart Inst, Sao Paulo, Brazil
- (800) 8 versus 12 Week Complete Viral Suppression After Heart Transplantation from Hepatitis C Positive Donors in Hepatitis C Negative Recipients;** Ji-Min Jang, BS, Mayo Clinic, Jacksonville, FL, USA
- (801) Use of Letermovir for Cytomegalovirus (CMV) Prophylaxis in Orthotopic Heart Transplant Recipients;** Stephanie Golob, MD, Columbia Univ, New York Presbyterian, New York, NY, USA
- (802) Comparative Survival Analysis Between Azathioprine and Mykophenolate in Chagasic Patients Undergoing Heart Transplantation;** Silas Furquim, MD. MSc, Heart Inst, Sao Paulo, Brazil
- (803) Intra-Aortic Balloon Placement without Inotropes: A Shift in Practice for Higher Urgency Status for Patients Awaiting Heart Transplant?;** Carmelita Runyan, MSN, CCRN, RN-BC, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (804) Sex Disparities in Heart Transplant Waitlist Status After the Donor Heart Allocation Policy Change;** Lawrence Czer, MD, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (805) Are Markedly Oversized Donor Hearts Associated with Poor Outcome After Heart Transplantation?;** Nena Musto, RN, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (806) Patients Listed for Heart Transplant and Bridged on EMO in the New Allocation System Are Less Ill Than Those in the Old Allocation System: An ELSO Data Base Analysis;** Deepak Acharya, MD., MSPH, Univ of Arizona, Tucson, AZ, USA
- (807) Association of Predicted Heart Mass from Mesa and Left Ventricular Mass from Dallas Heart Study with Heart Transplant Outcomes in the New Allocation System;** Sonia Garg, MD, MEng, UT Southwestern Medical Ctr, Dallas, TX, USA
- (808) Is Temporary Here to Stay? Excellent Outcomes and Shorter Wait Times with Increased Use of Temporary Mechanical Support Since the 2018 Revision to Heart Transplant Allocation Policy;** Brian Wayda, MD, MPH, Stanford Univ Sch of Med, Palo Alto, CA, USA
- (809) Impact of SGLT2i Use on Functional Capacity in Heart Failure;** Rohan Goswami, MD, Mayo Clinic, Jacksonville, FL, USA
- (810) Do Women Truly Have Less Than Optimal Outcome Post-Heart Transplantation Compared to Men;** David Chang, MD, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (811) Cardiac Amyloidosis with a Dilated Phenotype: Participant or Bystander?;** Evan Kransdorf, MD, PhD, Cedars-Sinai Medical Ctr, Los Angeles, CA, USA
- (812) Theophylline Post Heart Transplantation to Prevent Permanent Pacing: The Rotterdam Experience;** Claudette Kooij, BSc, Erasmus MC, Rotterdam, Netherlands



- (813) Survival in Orthotopic Heart Transplant Recipients: Influence of Neighborhood Income, Education, and Employment;** Carlos Manuel. Romero, M.D., Temple Univ Hosp, Philadelphia, PA, USA
- (814) Psychiatric Comorbidities in Pediatric HT Patients Transitioning to Adult Care;** Elena M. Donald, M.D., Columbia Univ Irving Medical Ctr, New York, NY, USA
- (815) Association of Fried's Frailty Score and Sarcopenia with Outcomes After Heart Transplantation;** Gourisree Dharmavaram, MD, Univ of California, San Diego, San Diego, CA, USA
- (816) Donor-Transmitted Coronary Artery Disease in Heart Transplantation: Prevalence and Characteristics in the Real World. Results from the Multicentric Donor Coronary Artery Disease (DONOR-CAD) Study;** David Couto-Mallón, MD, Hosp Univrio de A Coruña, La Coruña, Spain
- (817) Sympathetic Reinnervation After Heart Transplantation Assessed by Iodine-123 Metaiodobenzylguanidine (¹²³I-MIBG) Imaging and Heart Rate Response to Exercise;** Tomoko S. Kato, MD, PhD, Intl Univ of Health and Welfare, Narita, Japan
- (818) Update on Association of Fried's Frailty Score and Sarcopenia After Left Ventricular Assist Device Implantation;** Gourisree Dharmavaram, MD, Univ of California, San Diego, San Diego, CA, USA
- (819) Impact of Donor Characteristics on AlloSure Scores;** Amit Alam, MD, Baylor Univ Medical Ctr, Dallas, TX, USA
- (820) Time Will Tell: An Updated Analysis of Brain Death and Adult Cardiac Transplantation Outcomes After a Change to the UNOS Allocation System;** Craig Grosshuesch, MD, Univ of North Carolina, Chapel Hill, NC, USA
- (821) The Efficacy and Safety of Belatacept in Heart Transplant Recipients;** Matan Uriel, MD, Columbia Univ Irving Medical Ctr, New York, NY, USA
- (822) Characteristics and Outcomes of Recipients of Heart Transplant with Coronarvirus Disease 2019 Who Received Casirivimab Plus Imdevimab Infusion;** Maureen Gaine, MD, Columbia Univ Irving Medical Ctr, New York, NY, USA
- (823) Efficacy of Tocilizumab for Refractory Sensitized Patients Awaiting Heart Transplantation;** James Deen, MD, Cedars-Sinai Medical Ctr, Los Angeles, CA, USA
- (824) Anti-Thymocyte Globulin Protects Against Ischemia Reperfusion Injury in the Immediate Post Heart Transplant Period;** Nikhil Patel, B.S., Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (825) Are Calcineurin Inhibitor-Free Protocols Safe and Effective in the Long-Term After Heart Transplant?;** Jignesh Patel, MD, PhD, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (826) Change in Diuretic Dose After Initiation of a SGLT2 Inhibitor in Patients with Heart Failure with Reduced Ejection Fraction;** Riley Wildemann, PharmD, Thomas Jefferson Univ Hosp, Philadelphia, PA, USA
- (827) Institution of a Bone Health Protocol Using an Intravenous Bisphosphonate During Index Heart Transplant Hospitalization;** Jacqueline E. Clark, PharmD, Massachusetts General Hosp, Boston, MA, USA
- (828) External Evaluation of a Single Center Precision Tacrolimus Dosing Model for Pediatric Heart Transplant;** Joseph E. Rower, PhD, Univ of Utah, Salt Lake City, UT, USA
- (829) Amyloid-Targeted Immunosuppression After Orthotopic Heart Transplantation;** Masihullah Barat, MD, Univ of California San Diego, San Diego, CA, USA
- (830) Physical Activity After Heart Transplantation: Characteristics, Motifs, Barriers, and Influence of COVID-19 Pandemic;** Fabian Spahiu, BA, German Sports Univ Cologne, Cologne, Germany



- (831) *Poke Not Prod: Improving Quality of Life Through Non-Invasive Rejection Surveillance for Heart Transplant Recipients***; Jennifer Marie. Amadio, MD, MEHP, FRCPC, Univ Health Network, Toronto, Canada
- (832) *COVID Pandemic and Social Mitigations Decrease Hospitalizations for Heart Transplant Patients***; Angela Velleca, MHDS, BSN, RN, CCTC, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (833) *Artificial Intelligence-Enhanced Smartwatch ECG for Heart Failure Detection by Generating 12-Lead ECG***; Kyung-Hee Kim, MD, PhD, Sejong General Hosp, Incheon, South Korea
- (834) *Achy Breaky Heart: A Case of Lymphocytic Myocarditis Mimicking Takotsubo Cardiomyopathy***; Jennifer Irene. Forbes, DO, Broward Health Medical Ctr, Fort Lauderdale, FL, USA
- (835) *The Devil is in the Details: A Case of Fulminant Giant Cell Myocarditis***; Teresa Wang, MD, Hosp of Univ of Pennsylvania, Philadelphia, PA, USA
- (836) *Gentle Giant: An Unusual Cause of Heart Block***; Jennifer Marie. Amadio, MD, MEHP, FRCPC, Univ of Toronto, Toronto, Canada
- (837) *The Use of a Left Ventricular Assist Device and Pulmonary Artery Pressure Monitor in a Case of Restrictive Cardiomyopathy***; Robbie Garvin, MD, Nebraska Medical Ctr, Omaha, NE, USA
- (838) *An Unusual Clinical Presentation of Danon Disease in a Female***; Akanksha Agrawal, MBBS, MD, Emory Univ Sch of Med, Atlanta, GA, USA
- (839) *A Real Circuit Breaker: Hyperhemolysis Syndrome Related to the VA-ECMO Circuit?***; Lebei Pi, MD, Western Univ, London, Canada
- (840) *Cardiogenic Shock with an Unsuspecting Etiology***; Mahwash Kassi, MD, Houston Methodist Hosp, Houston, TX, USA
- (841) *Association of ANK2 Mutation and Massive Myocardial Calcification: A Case Report***; Raiza Pontes. Rodrigues, MD, Hosp de Messejana Dr. Carlos Alberto Studart, Fortaleza, Brazil
- (842) *Sarcoidosis: Hiding in Plain Sight***; Andrew Boshara, MD, Henry Ford Hosp, Detroit, MI, USA
- (844) *Successful Pregnancy with HeartMate 3 (Abbott) Left Ventricular Assist Device***; Adithya Yadalam, MD, Emory Univ, Atlanta, GA, USA
- (845) *Acute Cholecystitis Masking Right-Sided Heart Failure: A Near-Miss Event***; Joshua Furtney, MD, Univ of Florida, Gainesville, FL, USA
- (846) *Use of Mitraclip in Management of Severe Mitral Regurgitation Due to Cardiac Amyloidosis***; Dureshahwar Ali, D.O, Advocate Lutheran General Hosp, Park Ridge, IL, USA
- (847) *LVAD Outflow Graft Stenosis***; Raj Nagappan, Doctor of Medicine, OHSU, Portland, OR, USA
- (848) *Two Cases of BK Polyoma Virus Nephropathy in Patients with Isolated Heart Transplantation: Clinical Usefulness of Urinary Cytology***; Yoichi Iwasaki, Dr, Natl Cerebral and Cardiovascular Ctr, Suita, Osaka, Japan
- (849) *Abnormal Surveillance Echo Parameters Following Orthotopic Heart Transplantation***; James Michael. Blair, MD, Baylor Univ Medical Ctr, Dallas, TX, USA
- (850) *Giant Left Atrial Thrombus in a Heart Transplant Recipient - Risk Factors and Diagnostic Approach***; Alexander Fardman, MD, Chaim Sheba Medical Ctr, Ramat Gan, Israel
- (851) *Granulomatous Myocarditis After Cardiac Transplantation for Giant Cell Myocarditis***; Hilda M. Gonzalez Bonilla, MD, Mayo Clinic, Rochester, MN, USA



(852) Use of Donor Derived Cell Free DNA for Long Term Rejection Surveillance in OHT Recipients; Swethika Sundaravel, MD, Univ of Nebraska Medical Ctr, Omaha, NE, USA

(853) Incorporating Palliative Care as Standard Practice in Heart Transplant Rejection Therapy; Elizabeth Marie. Brown, APRN, Baylor Univ Medical Ctr Dallas, Dallas, TX, USA

CARDIOLOGY (MCS)

(854) Right Ventricular Optimization with Impella Support Prior to Left Ventricular Assist Device Implantation; Modar Alom, M.D., Baylor Univ Medical Ctr/The Heart Hosp Plano, Plano, TX, USA

(855) Left Ventricular Assist Device-Mediated Cardiac Recovery: Impact of Diabetes Mellitus and Glycemic Control; Christos P. Kyriakopoulos, MD, U.T.A.H. Cardiac Transplant Program (Univ of Utah Health & Sch of Med, Intermountain Medical Ctr, George E. Wahlen VA Medical Ctr), Salt Lake City, UT, USA

(856) Using Pulsatility Responses to Breath-Hold Maneuvers to Predict Readmission Rates in Left Ventricular Assist Device Patients; Rohan Joshua. Krishnaswamy, BMed/MD, BSc (Med) (Hons), St Vincent's Hosp, Sydney, Australia

(857) Defining Metrics for Short Term Success After LVAD Implant: An Analysis of the Society of Thoracic Surgeons Intermacs Registry; Jennifer A. Cowger, MD, MS, Henry Ford Health System, Detroit, MI, USA

(858) Single-Center Analysis of Patients with HeartMate 3 LVAD External Outflow Graft Obstruction; Jessica Schultz, MD, Univ of Utah, Salt Lake City, UT, USA

(859) LVADs: The Western Australian Experience; Benjamin Silbert, MBBS(Hons) MCLinRes(Dist) FCICM, Fiona Stanley Hosp, Perth, Australia

(860) A Comparison of the LVAD Population 1-Year Clinical Outcomes Before and After the Transplant Allocation System Change; Aditya Achanta, BBA, BS, MD, Massachusetts General Hosp, Boston, MA, USA

(861) Prognostic Value of Pro-Brain Natriuretic Peptide Ratio Post/Pre-Left Ventricular Assist Device; Brittany Tsou, BS, Johns Hopkins Univ Sch of Med, Baltimore, MD, USA

(862) Sacubitril/Valsartan Improves Outcomes in Left Ventricular Assist Device Recipients; Stephen Roberts, DO, UNMC, Omaha, NE, USA

(863) De Novo Aortic Insufficiency in Patients with Continuous-Flow Left Ventricular Assist Devices: An Updated Systematic Review and Meta-Analysis; Amanda D.F. Fernandes, MD, Boston Medical Ctr, Boston, MA, USA

(864) Changes in Mitral Valve Apparatus with Continuous Flow LVAD; Sakthi K. Sundararajan, MD, Medical Coll of Wisconsin and Affiliated Hosp, Milwaukee, WI, USA

(865) Impact of Race and Ethnicity on Readmissions After HeartMate 3 (HM3) Implantation; Giulio M. Mondellini, Medical Doctor, Columbia Univ Medical Ctr, New York, NY, USA

(866) Comparison of Early and Late Postoperative Outcomes Between INTERMACS 1/2 vs. 3/4; Milica Bjelic, MD, Univ of Rochester Medical Ctr, Rochester, NY, USA

(867) Comparison of LVAD Admissions Before and During the Era of COVID-19; Ahmed M. El Banayosy, MD, INTEGRIS Baptist Medical Ctr, Oklahoma City, OK, USA

(868) Frequency of Unplanned Hospital Readmissions and Impact on Survival in HeartMate3 (HM3) Patients; Hueyjong Shih, BS, Columbia Univ Medical Ctr, New York, NY, USA



- (869) Outcomes of Patients with SCAD Complicated by Cardiogenic Shock Bridged with Temporary Mechanical Circulatory Support to Heart Transplant and Durable LVAD;** Waseem Nosair, M.D., M.P.H, Univ of Texas Southwestern Medical Ctr, Dallas, TX, USA
- (870) Utility of Routine Serum LDH After HeartMate 3 Left Ventricular Assist Device Implantation;** Vivek N. Singh, DO, Deborah Heart and Lung Ctr, Browns Mills, NJ, USA
- (871) Comparing Velocity and Mean Arterial Pressure to Assess Pulsatility in Patients with Continuous Flow Left Ventricular Assist Devices;** Sam Emmanuel, MBBS, BHSc (Hons), St Vincent's Hosp (Sydney), Sydney, Australia
- (872) Ventricular Arrhythmias and Implantable Cardioverter-Defibrillator Use in Patients with Left-Ventricular Assist Device: Validation of the VT-LVAD Prediction Score;** Emmanuelle Massie, MD, Montreal Heart Inst, Montreal, Canada
- (873) Shared Care Program for Left Ventricular Assist Device (LVAD) Patients: Clinical Experience and Interim Report;** Dor Lotan, MD, Columbia Univ Medical Ctr, New York City, NY, USA
- (874) Sodium Glucose Co-Transporter 2 Inhibitor Use in Patients with Left Ventricular Assist Devices;** Mary E. Acosta, MD, Univ of Chicago, Chicago, IL, USA
- (875) Reduced Anticoagulation Strategy with HeartMate 3;** Christina Marie Silva, RN, Hackensack Univ Medical Ctr, Hackensack, NJ, USA
- (1006) Ethical Dilemma of Elective VAD Deactivation: A Case Report;** Christina Marie Silva, BSN, Hackensack Univ Medical Ctr, Hackensack, NJ, USA
- (876) Value of Computed Tomography and Fluorodeoxyglucose-Positron Emission Tomography Imaging for Preoperative Screening in Advanced Heart Failure Therapies Candidates;** Xavier Rabbath, Montreal Heart Inst, Montreal, Canada
- (877) The Association Between Pre-Transplant PVR and Post-Transplant Outcomes Differs by LVAD Status;** Gaurav Gulati, MD, Tufts Medical Ctr, Boston, MA, USA
- (878) Clinical Outcomes in Patients Who Live Alone After Undergoing HeartMate III Implantation;** Michael Sobieraj*, MD, Sidney Kimmel Medical Coll at Thomas Jefferson Univ/Deborah Heart and Lung Ctr, Browns Mills, NJ, USA
- (879) The LVAD Risk Matrix: A Scoring Tool for Patient Selection;** Christopher Salmon, MD, Prisma Health-Univ of South Carolina Sch of Med, Columbia, SC, USA
- (880) Renal Replacement Therapy at the Time of Left Ventricular Assist Device: A Single Center 9-Year Experience;** Chris Salmon, MD, Prisma/USC Sch of Med, Columbia, SC, USA
- (881) A Novel Frailty Score And Outcomes in Patients Supported with a Left Ventricular Assist Device;** Sangjin Lee, MD, Spectrum Health, Grand Rapids, MI, USA
- (882) The Effect of Center Transplant Rate and the Use of Temporary Mechanical Circulatory Support on Heart Transplant Outcomes;** Vidang Nguyen, MD, Providence Heart Inst, Portland, OR, USA
- (883) RAAS Inhibition & 1 Year Mortality Post LVAD Implantation: A Meta-Analysis;** Mustafa M. Ahmed, MD, Univ of Florida, Gainesville, FL, USA

CARDIOLOGY (PVD)

- (885) Pulmonary Hypertension Reversibility Testing: Time for Reappraisal;** Javier Jimenez, MD PhD, MCVI Baptist Health South, South Miami, FL, USA



- (886) Pulmonary Hypertension in Rural Minnesota**; Aaron M. Bae, AB (Anticipated Graduation: May 2022), Minneapolis Heart Inst Fndn, Minneapolis, MN, USA
- (887) Decoupling Between Pulmonary Artery Diastolic and Wedge Pressure Following TAVR**; Teruhiko Imamura, MD, PhD, Univ of Toyama, Toyama, Japan
- (888) The Road Less Traveled: Evaluating Hypoxemia in Pulmonary Hypertension**; Emily R. Cedarbaum, MD, MPH, UCSF, San Francisco, CA, USA

CARDIOTHORACIC SURGERY (HEART)

- (889) Risk of Deep Venous Thrombosis in Perioperative Heart Transplantation Patients**; Cristina Alysa. Ricco, BS, Robert Wood Johnson Rutgers Medical Sch, Piscataway, NJ, USA
- (890) Use of SherpaPak™ CTS for Organ Transportation During Heart Transplantation: National Outcomes from United Kingdom**; Vipin Mehta, FRCS CTh, Manchester Univ NHS Fndn Trust, Manchester, United Kingdom
- (891) Organ Care System Heart Perfusion Registry (OHP Registry) - Overview of a National Data Repository of Ex-Vivo Perfusion in DBD and DCD Heart Transplantation**; Sean Pinney, MD, Univ of Chicago, Chicago, IL, USA
- (892) Coronary Sinus Integrated Lactate Decreases After Ischemia and Reperfusion with GGA Induced hsp70**; Barbara Robinson, MD, Children's Hosp Boston, Boston, MA, USA
- (894) Extracorporeal Cytokine Hemoadsorption During Orthotopic Heart Transplantation: A Comparative Study**; Alexander Gebauer, Physician, Univ Heart & Vascular Ctr Hamburg, Hamburg, Germany
- (895) Longitudinal Risk Factors for Driveline Infection in Destination Therapy Patients with Left Ventricular Assist Device Support**; Nadia H. Bakir, BS, Washington Univ Sch of Med, Barnes-Jewish Hosp, St. Louis, MO, USA
- (896) The Utilization of Marginal Donors for Cardiac Re-Transplantation**; Atsushi Kainuma, MD, PhD, Columbia Univ Medical Ctr, New York, NY, USA
- (897) Direct Procurement of Thoracic Organs Along with Abdominal Normothermic Regional Perfusion in Donation After Circulatory Death**; Mubassher Husain, MRCS, Royal Brompton and Harefield Hosp as part of Guys and St Thomas NHS Fndn Trust, London, United Kingdom
- (898) Heart Transplant Recipients of Donors with Intracranial Hemorrhage Have Worse Survival**; Erin M. Schumer, MD, MPH, Mayo Clinic, Rochester, MN, USA
- (899) Cardiac Transplantation Italian Allocation System Analysis: Single Center Results**; Sofia Martin Suarez, MD, PhD, IRCCS Sant'Orsola Malpighi Hosp, Bologna, Italy
- (900) Higher Utilization of ECMO as a Bridge to OHT Has Not Led to Regional Variations**; Jason J. Han, MD, Hosp of the Univ of Pennsylvania, Philadelphia, PA, USA
- (901) Impact of a Modified Bicaval Anastomoses Technique on Outcome After Orthotopic Heart Transplantation**; Moritz B. Immohr, M.D., Heinrich-Heine-Univ Düsseldorf, Düsseldorf, Germany
- (902) Marginal Cardiac Donors and Transplant Outcomes: An 11-Year Experience**; Sam Emmanuel, MBBS, BHSc (Hons), St Vincent's Hosp (Sydney), Darlinghurst, Australia
- (903) Treatment Results of LVAD Implantation and Heart Transplantation for Oncotherapy Induced Cardiomyopathy in Women and Men**; Sandra Eifert, MD, PhD, Leipzig Heart Ctr, Leipzig, Germany
- (904) Ratio of Pulmonary Artery to Ascending Aortic Diameter Predicts Primary Graft Dysfunction After Cardiac Transplantation**; Karl Bounader, MD, Rennes Univ Hosp, Rennes, France



(905) Primary Graft Dysfunction After Heart Transplantation: Incidence and Current Risk Factors; Stacey Chen, MD, NYU Langone Health, New York, NY, USA

(906) Impact of Vasoplegic Syndrome on Early Clinical Outcome After Orthotopic Heart Transplantation; Constanze Volgmann, Univ Heart and Vascular Ctr Hamburg, Hamburg, Germany

(907) Risk of Prolonged Intubation Post-Pediatric Heart Transplantation; Alia Dani, MD MPH, Cincinnati Children's Hosp Medical Ctr, Cincinnati, OH, USA

(908) Missingness of Quality of Life Assessments Before Left Ventricular Assist Device Implant: A Novel Hospital Quality Metric; Guangyu Yang, MS, Univ of Michigan, Ann Arbor, MI, USA

(909) Improvement in Heart Transplant Outcomes: From Medicare Flagging to Best in the World; Umar A. Siddiqi, N/A, Univ of Chicago Med, Chicago, IL, USA

(910) Health-Related Quality of Life Analysis Supports the Recommendation for HeartMate3 Implantation without Concomitant Mitral Valve Surgery; Maja-Theresa Dieterlen, Dr, Heart Ctr Leipzig, Leipzig, Germany

CARDIOTHORACIC SURGERY (LUNG)

(911) Central VA-ECMO Support without Full Anticoagulation is Feasible During Lung Transplant; Yuriko Yagi, M.D., Northwestern Memorial Hosp, Chicago, IL, USA

(922) Mechanical Circulatory Support in Lung Transplant Recipients: Early and Long-Term Survival; Marco Sachse, Physician, Cardiovascular Surgery, Hamburg, Germany

(913) Early Initiation of Physical Therapy While on Extracorporeal Life Support Improves Patients' Functional Activity on Discharge; Emily Cerier, MD, Northwestern Memorial Hosp, Chicago, IL, USA

(914) Extracorporeal Life Support (ECLS) in Sequential Single-Lung Transplantation: Single-Center Retrospective Analysis of ECLS-Related Complications; Michaela Orlitová, MD, KU Leuven, Leuven, Belgium

(915) Comparison of Tacrolimus Serum Levels During First Month After Lung Transplant in Patients with and without Gastroparesis; Mujtaba Mubashir, MD, Cleveland Clinic, Cleveland, OH, USA

(916) Is Pre-Lung Transplant Evaluation of Physical Performance and Frailty Correlated with Post-Transplantation Lung Function?; Noah Free, BA, Univ of Nebraska Medical Ctr, Omaha, NE, USA

(917) Does Pre-Lung Transplant Grip Strength Correlate with Post-Transplant Lung Function in the First Year?; Noah Free, BA, Univ of Nebraska Medical Ctr, Omaha, NE, USA

(918) Lung Transplantation in COVID-19 Induced End Stage Lung Disease; Erik Scott, MD MS, Univ of Virginia, Charlottesville, VA, USA

(919) Single Lung Transplantation for Pulmonary Fibrosis Secondary to COVID-19; Yuncen A. He, MD, Houston Methodist Hosp, Houston, TX, USA

(920) Lung Transplant from a DCD Donor with a Previous Symptomatic COVID Infection; Hesham H. Ahmed, MD, Harefield Hosp, London, United Kingdom

(921) Successful Percutaneous Mechanical Suction Thrombectomy of Extracorporeal Filtration System Following Bilateral Lung Transplantation Secondary to COVID-Pneumonia; Ryan J. Vela, MD, UT Southwestern Medical Ctr, Dallas, TX, USA

(912) Feasibility of Single Lung Transplant for Post-COVID Fibrosis: A Case Report; Emily J. Cerier, MD, Northwestern Memorial Hosp, Chicago, IL, USA



(924) Direct Lung Procurement with Ongoing Abdominal Normothermic Regional Perfusion; Anand Jothidasan, MBBS MRCS, Harefield Hosp, London, United Kingdom

(926) Sequential Redo Bilateral Lung Transplantation in a Patient with a Prior Heart-Lung Transplantation with Tracheal Anastomosis; Jenalee Nicole. Coster, MD, Univ of Pittsburgh Medical Ctr, Pittsburgh, PA, USA

(927) A Challenging Case of PTLN-Related Broncho-Esophageal Fistula After Lung Transplantation; Jan Van Slambrouck, MD, Univ Hosp Leuven, Leuven, Belgium

(928) Relapsed Nocardiosis Presenting as Acute Vision Loss; Deepika Razia, MBBS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA

(929) Combined Lung-Liver Transplantation Can Be Safely Performed in Patients with Hypokalemic Periodic Paralysis; Alfred J. Casillan, MD, PhD, Johns Hopkins Hosp, Baltimore, MD, USA

(930) Sequential Double-Lung Transplantation in Kartagener Syndrome: A Case Report; Catarina Nunes. Figueiredo, Medical Resident, Hosp de Santa Marta - Ctr Hosp de Lisboa Central, Lisboa, Portugal

(931) Acute Unilateral Lung Edema Following Reperfusion in a Lung Transplant Recipient: A Case Report Discussing the Role of Double Chambered Right Ventricle; Michaela Orlitová, MD, KU Leuven, Leuven, Belgium

(932) A Case Report of ECMO Patient with Cerebrovascular Complication Caused by a Broken Dual Lumen Cannula; Takahide Toyoda, MD, Northwestern Univ Feinberg Sch of Med, Chicago, IL, USA

(933) Pulmonary Alveolar Proteinosis After Lung Transplantation; Shin-ichi Kawana, MD, Okayama Univ Hosp, Okayama, Japan

CARDIOTHORACIC SURGERY (MCS)

(934) Deployment, Configuration and Complications of Percutaneous Right Ventricular Assist Device - The Birmingham Experience; David W. Quinn, MBBS MD, Univ Hosp Birmingham NHS Fndn Trust, Birmingham, United Kingdom

(935) In Search for the Right Partner. First Multicenter Results of the Hybrid VAD Procedure cLVAD and Durable Paracorporeal RVAD; Bastian Schmack, MD, PhD, West-German Heart and Vascular Ctr Essen, Essen, Germany

(936) The Protek-Duo Cannula for Temporary Percutaneous Right Ventricular Support: An Early Single-Centre Experience; Massimiliano Carrozzini, MD, PhD, Niguarda Hosp, Milano, Italy

(937) Should We Touch Tricuspid Valve at the Time of LVAD; Umit Kervan, MD, Univ of Health Sciences, Ankara City Hosp, Ankara, Turkey

(938) Computational Modeling for Preprocedural Planning of a Complex LVAD Exchange Case; Amanda N. DeVos, BS, Univ of Minnesota, Minneapolis, MN, USA

(939) Clinical Strategy for Sudden Mechanical Failure of EVAHEART 1; Satoshi Saito, MD, PhD, Tokyo Women's Medical Univ, Tokyo, Japan

(940) Design of a Patient Specific Mock Circulatory Loop Using an Elastance Function to Simulate the Frank-Starling Mechanism; Preston Peak, B.S., Texas Heart Inst, Houston, TX, USA

(941) The Effect of Mechanical Circulatory Support on Thrombocytopenia; Henry Dwaah, BSc, Tufts Medical Ctr, Boston, MA, USA

(942) Age Does Not Matter: Utilization of Venous-Arterial Extracorporeal Membrane Oxygenation for Massive Pulmonary Embolism in the Elderly Population; Samantha Kegel, BS, Univ of Maryland, Baltimore, MD, USA



(943) Use of Venous Arterial Extracorporeal Membrane Oxygenation in the Management of Massive Pulmonary Embolism; George Makdisi, MD, MPH, MS, Albany Coll of Med, Albany, NY, USA

(944) Partial Flow Extracorporeal Life Support Strategy for Refractory Cardiogenic Shock; Yuji Kaku, MD, Columbia Irving Medical Ctr, New York, NY, USA

(945) Reference Estimates of Inpatient Mortality, Cost of Hospitalization, and Length of Stay Associated with Temporary Mechanical Circulatory Support in Patients Undergoing Heart Transplantation; Aasim Afzal, MD, Baylor Univ Medical Ctr, Dallas, TX, USA

(946) Use of Venous-Arterial Extracorporeal Life Support (VA ECLS) in Awake Patients in Refractory Cardiogenic Shock; Serge Kobsa, MD, PhD, Columbia Univ Medical Ctr, New York, NY, USA

(947) Acute Kidney Injury During Extracorporeal Life Support in Cardiogenic Shock: Does Flow Matter?; Anna Vaynrub, BA, Columbia Univ Irving Medical Ctr, New York, NY, USA

(948) Post-Market Approval Experience with Impella 5.5 Trans-Aortic Valve Axial Flow Pump; Nicolas Brozzi, MD, Cleveland Clinic Florida, Weston, FL, USA

(949) Use of Extracorporeal Membrane Oxygenation Support in Adult Aortic Surgery; Alex D'Angelo, MD, Columbia Univ Medical Ctr, New York, NY, USA

(950) Primary Hemostasis Defect Due to Acquired Von Willebrand Disease and Platelet Activation During Extracorporeal Life Support. In Vitro Correction by Purified VWF; Elena Sandoval, MD FEBCTS, Hosp Clinic, Barcelona, Spain

(951) The Utility of Concomitant ECMO and IABP as a Bridge to Heart Transplant; Jason J. Han, MD, Hosp of the Univ of Pennsylvania, Philadelphia, PA, USA

(952) Utilization of Extracorporeal Life Support: A 6-Year Single-Centre Experience; Oluwatobiloba Oyebanji, MSc, Queen Mary Univ of London, London, United Kingdom

(953) Results of Temporary Right Heart Assist Device Implantation Following Right Heart Failure; Ana J. Holler, student, Univ Hosp Heidelberg, Heidelberg, Germany

(954) Causes and Management of Extracorporeal Membrane Oxygenation Circuit Failure; George Makdisi, MD, MPH, MS, Albany Coll of Med, Albany, NY, USA

(955) Status 2 Listing Strategies for Heart Transplantation: IABP or Impella?; Siddharth Pahwa, MD, Univ of Louisville, Louisville, KY, USA

(956) Surgical Specialization and Standardization of Care Improves Outcomes in Mechanical Circulatory Support: A Single Center Experience; Aditya Bansal, MD, Ochsner Clinic Fndn, New Orleans, LA, USA

(957) Impact of Adverse Events on Health-Related Quality of Life After Left Ventricular Assist Device Implantation - An STS INTERMACS Analysis; Jennie H. Kwon, MD, Medical Univ of South Carolina, Charleston, SC, USA

(958) Sexual Function, Quality of Life and Depression in Left Ventricular Assist Device Supported Patients; Aiste Monika Jakstaite, MD, Univ Hosp Essen, Essen, Germany

(959) Complexities of Explanting Durable LVADs (Done at Outside Facilities) at the Time of Heart Transplant Surgery; Dominic Emerson, MD, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA

(960) LVAD Explantation Using a Double Patch Technique; Oliver D. Bhadra, Dr. med., Univ Heart & Vascular Ctr Hamburg, Hamburg, Germany



(961) Off-Pump Implantation of Left Ventricular Assist Devices - A Single Center Experience; Franziska Wittmann, MD, Medical Univ of Vienna, Vienna, Austria

(962) Impact of Surgical Approach on Outcome in Patients with History of Previous Sternotomy Underwent LVAD Implantation; Khalil Jawad, MD, Leipzig, Heart Ctr, Leipzig, Germany

(963) Off-Pump HeartMate 3 Left Ventricular Assist Device Implantation is Safe and Feasible for High Risk Patients; Katherine L. Wood, MD, Univ of Rochester Medical Ctr, Rochester, NY, USA

CARDIOTHORACIC SURGERY (PVD)

(964) Obesity Does Not Significantly Impact Operative and Long-Term Outcomes After Pulmonary Thromboendarrectomy; Jenna L. Armstrong, Bachelor of Science, Duke Univ Sch of Med, Durham, NC, USA

(965) Carbon Dioxide and Alveolar Dead Space as a Prognostic Marker for Patients Undergoing Pulmonary Endarterectomy; Isabelle Opitz, MD, Univ Hosp Zurich, Zurich, Switzerland

(966) Functional Outcomes of Pulmonary Endarterectomy for Chronic Thromboembolic Pulmonary Hypertension; Hyohyun Kim, MD, Severance Cardiovascular Hosp, Yonsei Univ Coll of Med, Seoul, South Korea

INFECTIOUS DISEASES (HEART AND LUNG)

(967) Short and Intermediate Term Effects of COVID-19 Infection on Lung Transplant Recipients; Aarya Kafi, MD, Univ of California, San Diego, La Jolla, CA, USA

(968) Outcomes of Critically Ill Lung Transplant Recipients with COVID-19; Deepika Razia, MBBS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA

(969) Early Outcomes of Lung Transplantation for COVID-19 Related Lung Disease. Single Center Experience; Domingo J. Franco-Palacios, M.D, Henry Ford Hosp, DETROIT, MI, USA

(970) Characterization of Lung Transplant COVID19+ Patients and Mortality Outcomes; Angela T. Logan, PharmD, Tampa General Hosp, Tampa, FL, USA

(971) Donor and Peri-Transplant Hospitalization Risk Factors for Invasive Fungal Infection in Lung Transplant Recipients; Audrey Le Mahajan, MD, Univ of Pennsylvania, Philadelphia, PA, USA

(972) Risks and Outcomes Associated with Pleural Space Infections After Lung Transplantation; Jane Simanovski, MScN; PhD (c); NP-C, Henry Ford Health System, Detroit, MI, USA

(973) Pneumonia in the Early Post-Lung Transplant Period: A Prospective Study; Laura Naemi. Walti, MD, Univ Health Network, Univ of Toronto, Toronto, Canada

(974) Cytomegalovirus Infection After Lung Transplantation; Hidenao Kayawake, MD, PhD, Kyoto Univ, Kyoto, Japan

(975) Description and Characterization of Intraoperative Bacterial Cultures During Lung Transplant Surgery; Darina Barnes, Pharm.D, Cedars Sinai Medical Ctr, Los Angeles, CA, USA

(976) Outcomes in Post Lung Transplant Patients Diagnosed with COVID 19; Paulo Manuel Pêgo-Fernandes, MD, PhD, Insto do Coracao, Hosp das Clinicas HCFMUSP, Faculdade de Medicina, Univ de Sao Paulo, Sao Paulo, Brazil

(977) A Machine Learning Classifier to Identify Lung Transplant Recipients (LTRs) Likely to Develop Invasive Aspergillosis (IA) One Year After Transplantation; Laura Naemi. Walti, MD, Univ Health Network, Univ of Toronto, Toronto, Canada



- (978) Donor to Recipient Transmission of Bacterial Pathogens in Relation to Cold Ischemic Time in Lung Transplantation;** Maria Piotrowska, MD, PhD, Pomeranian Medical Univ in Szczecin, SPWSZ, Szczecin, Poland
- (979) Secondary Bacterial and Fungal Pneumonia Complicating SARS-CoV-2 and Influenza Infections in Lung Transplant Recipients;** Nitipong Permpalung, MD, MPH, Johns Hopkins Univ Sch of Med, Baltimore, MD, USA
- (980) Inhalation Alone versus Inhalation Plus Intravenous Colistin for Multidrug-Resistant Gram-Negative Bacterial Infection After Lung Transplantation;** Ha Eun Kim, Master's degree, Yonsei Univ Coll of Med, Seoul, South Korea
- (981) Delphi-panel on Antimicrobial Stewardship and Management of Clinical Syndromes in Thoracic Organ Transplants and Mechanical Circulatory Device Recipients;** Me Linh Luong, MD, CHUM, Montreal, Canada
- (982) Reduction of Immunosuppression Based on Whole Blood EBV-Viral Loads in Lung Transplant Recipients;** Edmund J. Gore, MSc, Univ of Groningen, Univ Medical Ctr Groningen, Groningen, Netherlands
- (983) Incidence of Post-Transplant Cytomegalovirus Viremia in Patients Receiving Lungs After Ex Vivo Lung Perfusion;** Rafaela VP Ribeiro, MD, Latner Thoracic Surgery Labs, Univ Health Network, Univ of Toronto, Toronto, Canada
- (984) Immunologic Monitoring of a Breakthrough Infection in a Heart and Kidney Transplant Recipient;** Jennifer M. Dan, M.D., Ph.D., Univ of California, San Diego, La Jolla, CA, USA
- (985) TB or Non-TB, How to Treat These Infections in a Heart Transplant Patient (That is the Question!);** Ushma V. Majmudar, MD, Montefiore Medical Ctr, Bronx, NY, USA
- (986) BK Virus Nephropathy in HIV-Positive Heart-Kidney Transplant Recipient;** Kathryn S. Smith, M.S., Northwestern Univ Feinberg Sch of Med, Chicago, IL, USA

NURSING AND ALLIED HEALTH

- (987) Nursing Staff at Transplant Centre Increase Their Oncall Responsibilities to Ensure National DCD Heart Pilot Can Continue;** Richard Quigley, .Health and Social Care, Royal Papworth Hosp, Cambridge, United Kingdom
- (988) Continuing to Extend the Nurses Role in Novel Technologies;** Jennifer Baxter, nursing, Royal Papworth Hosp, Cambridge, United Kingdom
- (990) The Impact of Malnutrition and Body Mass Index on Heart Transplant Outcomes;** Emma L. Whitmore, Bachelor of Nutrition and Dietetics, The Prince Charles Hosp, Brisbane, Australia
- (991) Web-Based Knowledge Translation Tools for Parents of Children with Heart Failure: An Environmental Scan;** Chentel Cunningham, MN, PhD Student, Univ of Alberta, Edmonton, Canada
- (992) Lived Experiences of Patients Implanted with Left Ventricular Assist Devices;** Charity Inyom, MD, Msc, German Heart Ctr Berlin, Berlin, Germany
- (993) NP Telehealth Blood Pressure Management in Heart Transplant Patients - A Single Center Experience;** Gina Jamero, MSN, ACNP, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (994) Use of Tele-Rehabilitation Through the Pediatric Heart and Lung Transplant Journey;** Anne Dipchand, MD, Hosp for Sick Children, Toronto, Canada
- (996) Symptom-Illness Severity Profiles and Healthcare Use Among Lung Transplant Candidates;** Brittany Koons, PhD, Villanova Univ, Villanova, PA, USA
- (997) Relationship Between Reported Psychological Distress, Physical Symptom Burden, and Sleep Quality After Lung Transplantation;** Megan Kazakoff, BSN, Univ of Pittsburgh, Pittsburgh, PA, USA



(998) Feasibility of Smartphone-Based Physical Activity Tele-Coaching in Lung Transplant Recipients; an Interim Analysis; Emily Hume, MSc Clinical Exercise Physiology, Northumbria Univ, Newcastle upon Tyne, United Kingdom

(999) Malnutrition in Lung Transplant Recipients: Weighing the Outcomes; Anne O'Boye, RN, Northwestern Memorial Hosp, Chicago, IL, USA

(1000) BMI Change and Outcomes in Lung Transplant Recipients; Anne O'Boye, RN, Northwestern Memorial Hosp, Chicago, IL, USA

(1001) Fecal Transplant for Recurrent Clostridium difficile Colitis in CF-LVAD Supported Patients; Sarah Schettle, PA-C, Mayo Clinic, Rochester, MN, USA

(1002) Factors Associated with Change in Health-Related Quality of Life from Before to 24 Months After Surgery; Kathleen L. Grady, PhD, RN, MS, Northwestern Univ, Chicago, IL, USA

(1003) Delayed Neutropenia in Heart Transplant Recipients Following COVID-19 Diagnosis; Daniel A. Zlotoff, MPH, MD, Massachusetts General Hosp, Boston, MA, USA

(1005) LVAD Outflow Graft Compression Presenting as Pump Thrombosis; Kelsey Rae. Barrett, Kelsey Barrett, MSN,RN,CCRN, Lehigh Valley Hosp, Allentown, PA, USA

PHARMACY AND PHARMACOLOGY

(1007) PCSK9 Inhibitors Safely and Effectively Lower LDL After Heart Transplantation: A Systematic Review and Meta-Analysis; Douglas L. Jennings, PharmD, New York-Presbyterian Hosp, New York, NY, USA

(1008) Neutropenia Following Heart Transplantation: More Than a Nuisance?; Tara M. Veasey, PharmD, BCPS, Allegheny General Hosp, Pittsburgh, PA, USA

(1009) Basiliximab versus Methylprednisolone for Induction in Adult Heart Transplantation; Katelyn Rudzik, Pharm.D., Univ of Pittsburgh Medical Ctr, Pittsburgh, PA, USA

(1010) Pharmacokinetic Impact of Posaconazole Discontinuation on Tacrolimus Levels in Heart Transplant Recipients; Georgina Waldman, PharmD, Massachusetts General Hosp, Boston, MA, USA

(1011) Effect of Redosing Basiliximab in the Setting of Blood Loss in Heart Transplant Recipients on Infection and Rejection; Lisa Fuller, PharmD, Baylor Univ Medical Ctr, Dallas, TX, USA

(1012) Significant Reduction of Donor Specific Antibodies in Heart Transplant Recipients Treated with Proteasome Inhibitors for Antibody Mediated Rejection; Edward T. Horn, PharmD, Univ of Pittsburgh Sch of Pharmacy, Pittsburgh, PA, USA

(1013) Impact of mTOR Inhibitor Conversion Protocol on Renal Function in Cardiac Transplant Recipients; Heidi Brink, PharmD, BCPS, BCCP, Nebraska Med, Omaha, NE, USA

(1014) Clinical Outcomes of 32 Heart Transplant Recipients Following Treatment of Antibody-Mediated Rejection Treatment: A Single-Center, Descriptive Study; Jill C. Krisl, PharmD, Houston Methodist Hosp, Houston, TX, USA

(1015) Managing Contemporary AMR with a 4-Tiered Treatment Protocol: A Single-Center Experience; Doug Jennings, PharmD, New York-Presbyterian Hospital, New York, NY, USA

(1016) Impact of Asymptomatic Rejection Steroid Treatment Choice on Subsequent Biopsy Result; Jacqueline E. Clark, PharmD, Massachusetts General Hosp, Boston, MA, USA



(1017) Characterization of Letemovir Use and Pharmacokinetic Interaction with Immunosuppression in Lung Transplant Recipients; Tamara Claridge, PharmD, Hosp of the Univ of Pennsylvania, Philadelphia, PA, USA

(1018) Genotype-Guided Voriconazole Prescribing in Lung Transplant Recipients; Cindy Y. Luo, PharmD, Vancouver General Hosp, Vancouver, Canada

(1019) Detectable Serum Concentration with Prophylactic Inhaled Tobramycin in Lung Transplant Recipients; Jacqueline E. Clark, PharmD, Massachusetts General Hosp, Boston, MA, USA

(1020) Tolerability of Extended Multi-Drug Fungal Prophylaxis After Lung Transplant; Georgina Waldman, PharmD, Massachusetts General Hosp, Boston, MA, USA

(1021) A Single Center Experience of Concomitant Administration of Sofosbuvir/Velpatasvir and Amiodarone After Heart or Lung Transplantation; Ryan M. Rivosecchi, PharmD, BCCCP, UPMC Presbyterian, Pittsburgh, PA, USA

(1023) Impact of Pre-Transplant Immunosuppression in CT-ILD Recipients; Linda J. Fitzgerald, PharmD, Michigan Med, Ann Arbor, MI, USA

(1024) Evaluation of Mycophenolate Dose Reductions within the First Year After Lung Transplantation and Outcomes; Eliana Buchholz, BS, Tampa General Hosp, Tampa, FL, USA

(1025) Use of a Medication Questionnaire to Identify Lung Transplant Recipients Benefiting from Pharmacist Prioritization in Clinic; Christine Pham, PharmD, Houston Methodist Hosp, Houston, TX, USA

(1026) Reviewing Sildenafil Rates: An Evaluation of Sildenafil Prescribing Trends in LVAD Patients; Kiera Roubal, PharmD, Medical Univ of South Carolina, Charleston, SC, USA

(1027) Pancreatitis as a Potential Trigger for Early, Severe Accelerated Cardiac Allograft Vasculopathy: A Case Report; Livia A. Goldraich, MD, Hosp de Clinicas de Porto Alegre, Porto Alegre, Brazil

(1028) Utility of Cardiovascular Magnetic Resonance Imaging in Non-HLA Mediated Cardiac Allograft Dysfunction; Maxwell Norris, PharmD, Hosp of the Univ of Pennsylvania, Philadelphia, PA, USA

(1029) Therapeutic Drug Monitoring-Guided Combination Alemtuzumab and Plasmapheresis for Refractory Acute Lung Allograft Dysfunction Rescue Therapy; Robert C. Wright, BScPharm, PharmD, ACPR, Vancouver General Hosp, Vancouver, Canada

(1030) CMV Pneumonitis After Discontinuation of Prophylaxis Therapy Guided by CMV T-cell Immunity Panel; Christine Pham, PharmD, Houston Methodist Hosp, Houston, TX, USA

(1031) Recurrent Pump Thromboses in an LVAD Patient with Chronic Lymphocytic Leukemia; Laura Straw, PharmD, Prisma Health, Columbia, SC, USA

PULMONOLOGY (LUNG)

(1004) Selective Loss of Donor Specific HLA Antibodies in a Highly Sensitized Patient After Lung Transplantation; Ambily Ulahannan, RN, The Latner Thoracic Res Program, Toronto, Canada

(1032) Predictors of Pediatric Donor Lungs Non-Utilization: A 10-Year Nationwide Cohort Study; Gaele Santin, MD, Agence de la Biomedecine, La Plaine Saint-Denis, France

(1033) Donor-Recipient Size Mismatch, Donor Age and Interstitial Lung Disease Are Associated with Abnormal Reactance, Resistance and Airway Closure After Bilateral Lung Transplantation; Kris C. Nilsen, PhD, The Alfred Hosp, Melbourne, Australia

(1034) There is No Smoking Gun: LongTerm Lung Transplant (LTx) Outcomes Using Smoking Donors; Jacqui L. Kleiner, BHSc, Alfred Hosp, Melbourne, Australia



- (1035) Access to Lung Transplantation for Candidates with Lung Fibrosis: «Anti-HLA Antibodies Also Matter». Usefulness of a Perioperative Desensitization Protocol in Sensitized Candidates;** Olivier Brugiere, MD, PhD, Hop Foch, Suresnes, Paris, France
- (1036) Effects of Blood Group and ABO Compatibility on Lung Transplant Waitlist and Post-Transplant Outcomes;** Shravani Pasupneti, MD, Stanford Univ Hosp, Stanford, CA, USA
- (1037) Long-Term Renal Outcome in Patients Bridged on ICU for Lung Transplantation;** Heleen Grootjans, MD, Univ Medical Ctr Groningen, Groningen, Netherlands
- (1038) Association Between Transient Post-Transplantation Hyperglycemia and Long-Term Post-Transplantation Diabetes Mellitus in Lung Transplant Recipients;** Joseph M. Leung, MD, FRCPC, Univ of British Columbia, Vancouver, Canada
- (1039) Gastroparesis Following Lung Transplant: A Single Center's Experience;** Susanna M. Leonard, DO, Duke Univ Hosp, Durham, NC, USA
- (1040) Feasibility of Prolonged Calcineurin-Inhibitor Free Immunosuppression After Lung Transplantation - A Retrospective Single Center Analysis;** Jens Gottlieb X, MD, Hannover Medical Sch /German Ctr of Lung Res (DZL), Hannover, Germany
- (1041) The Impact of Induction Immunosuppression Agent on Retransplant-Free and Bronchiolitis Obliterans-Free Survival in Sensitized Lung Transplant Recipients;** Andrew Courtwright, MD, PhD, Univ of Pennsylvania, Philadelphia, PA, USA
- (1042) Regadenoson is Safe and Reduces Systemic Inflammation Post Lung Transplantation;** Yunge Zhao, PhD, Univ of Maryland, Baltimore, Baltimore, MD, USA
- (1043) Evaluation of Pre-Transplant Antifibrotic Agents on Post-Transplant Outcomes;** Linda J. Fitzgerald, PharmD, Michigan Med, Ann Arbor, MI, USA
- (1044) Rabbit Anti-Thymocyte Globulin for Treatment of Corticosteroid Refractory Acute Cellular Rejection After Lung Transplantation;** Katelyn N. Rudzik, PharmD, UPMC Presbyterian Hosp, Pittsburgh, PA, USA
- (1045) CFTR Modulators and Lung Transplantation: Factors to Consider - A UK Transplant Centre Experience;** Kavita Dave, MBBS, Harefield Hosp, London, United Kingdom
- (1046) The Role of Anti-Thymocyte Globulin in Peri-Operative Desensitization for Donor Specific Antibody Positive Lung Transplants;** Eun Ho Choe, MBChB, Univ Health Network, Toronto, Canada
- (1047) Association of Chronic Proton Pump Inhibitor Use in Lung Transplant Recipients with Long-Term Outcomes: A Retrospective Cohort Study;** Chen Yang Kevin Zhang, MD, Toronto Lung Transplant Program, Univ Health Network, Toronto, Canada
- (1048) Fertility Considerations and Lung Transplantation, a Scoping Review;** Alannah M. Smith, MD, Univ of Alberta, Edmonton, Canada
- (1049) Telemonitoring: An Opportunity to Improve Multidisciplinary Care in Lung Transplanted Patients;** Letizia Corinna Morlacchi, MD, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico di Milano, Univ degli Studi di Milano, Milano, Italy
- (1050) Improving Bronchoscopy Safety and Diagnostic Yield in Lung Transplant Recipients;** Katherine Malcolm, MD, MPH, Univ of California, San Francisco, San Francisco, CA, USA
- (1051) Implementation of In-Clinic SARS-CoV-2 Vaccination in Advanced Heart Failure, Lung Disease, and Transplant Clinic;** Susan K. Mathai, MD, Baylor Univ Medical Ctr, Dallas, TX, USA



(1052) Patients Living with Chronic Lung Allograft Dysfunction (CLAD) Provide Essential Insights for Drug Development; Sidra M. Hoffman, Altavant Sciences, Cary, NC

(1053) Implementing Standard Physical Therapy Guidelines with Patients Acutely Post Single or Bilateral Lung Transplant: A Quality Initiative; Catherine Connors, PT, DPT, UT Southwestern Medical Ctr, Dallas, TX, USA

(1054) Secondary Pulmonary Alveolar Proteinosis Due to Sirolimus; Megan Calzia, MD, Univ of Colorado, Aurora, CO, USA

(1055) Where is All This Air Coming from? A Rare Case of Pneumatosis Intestinalis with Extensive Pneumoperitoneum and Pneumomediastinum in Lung Transplant Patient Secondary to Mycophenolate Therapy; Uchechukwu Uneze, MD/MPH, Newark Beth Israel Medical Ctr, Newark, NJ, USA

PULMONOLOGY (PVD)

(1056) Oral Selexipag versus Inhaled Treprostinil Effect on Pulmonary Arterial Hypertension; Jonathan Q. Nguyen, BA Pharmaceutical Chemistry, PharmD, Univ of California, San Francisco, San Francisco, CA, USA

(1058) Pulmonary Capillary Hemangiomatosis and Refractory Hypoxemia During PH Therapy; Jonathan Rees, MD, Kaiser Permanente, Los Angeles, CA, USA

(1059) Diagnosis of Pulmonary Veno-Occlusive Disease in the Absence of Hemodynamic Abnormalities; Martin Y. Rofael, MD, Univ of California San Francisco, San Francisco, CA, USA

FRIDAY, 29 APRIL, 2022

7:00 a.m. – 8:00 a.m.

SUNRISE 07: DCD Heart Transplantation and Ex Vivo Repair: Gift Box or Pandora's Box?

Location: Hall D

Primary Core Therapy: HEART

Primary Audience: Cardiothoracic Surgery

Chairs: Julia Riebandt, MD, and Marian Urban, MD

Session Summary: DCD (donation after circulatory death) heart transplant is emerging as a novel method with great potential to expand the donor pool. However, specific techniques are required and long term results are currently unavailable. Furthermore, ex vivo heart perfusion can be used as a research model for therapies including gene therapy and regeneration/repair. A panel discussion with all speakers will conclude this session.

7:00 a.m.

Technical Aspects of DCD Heart Transplantation

Stephen R. Large, MB MA MS F, Papworth Hospital, Cambridge, United Kingdom

Pre-recorded Presentation

7:12 a.m.

Comparison of Outcomes After DCD and DBD Heart Transplantation

Sarah E. Scheuer, MD, St Vincent's Hospital, Sydney, Australia

7:24 a.m.

Tips and Tricks to Set Up a DCD Heart Transplantation Program

Kumud K. Dhital, BM.BCh, FRCS-CTh, FRACS, PhD, Sparsh Hospital, Bangalore, India

Pre-recorded Presentation

7:36 a.m.

Heart in a Box as a Platform for Molecular and Cellular Research

Linda Van Laake, MD PhD, University Medical Center Utrecht, Utrecht, Netherlands

Pre-recorded Presentation

7:48 a.m.

Panel Discussion



7:00 a.m. – 8:00 a.m.

SUNRISE 08: What's New? Updates to the ISHLT Guidelines for the Care of Heart Transplant Recipients

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Eugene DePasquale, MD, and Marta Farrero, MD

Session Summary: The 2010 ISHLT Heart Transplant Guidelines were a landmark achievement. These guidelines recently underwent revision to incorporate the changing landscape. New topics include but are not limited to pre-transplant optimization for rejection surveillance and treatment updates in multiorgan transplant. This session will highlight this guideline update and changes and additions. A panel discussion with all speakers will conclude this session.

7:00 a.m.

Overview of the Guideline Process

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

7:10 a.m.

Task Force 1 - Peri-Operative Care of the Heart Transplant Recipient: What's New?

Estela Azeka, MD, University of Sao Paulo, Sao Paulo, Brazil

7:20 a.m.

Task Force 2 - Immunosuppression and Rejection: What's New?

Michael Shullo, PharmD, University of West Virginia, Morgantown, WV, USA

7:30 a.m.

Task Force 3 - Heart Transplant Long-Term Care Complication Management: What's New?

Kyung-Hee Kim, MD, PhD, Sejong General Hospital, Seoul, South Korea

7:40 a.m.

Task Force 4 - Heart Transplant Long-Term Care Prevention and Prophylaxis: What's New?

Howard Eisen, MD, Penn State Hershey Medical Center, Hershey, PA, USA

7:50 a.m.

Panel Discussion



7:00 a.m. – 8:00 a.m.

SUNRISE 09: Gastrointestinal Issues in the Lung Transplant Recipient

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Pulmonology

Chairs: Angela Koutsokera, MD, PhD, and Sameep Sehgal, MD

Session Summary: This symposium will discuss the diagnosis and management of gastrointestinal diseases in lung transplant recipients specifically discussing gastroesophageal reflux disease (GERD), liver disease, nutrition, and cystic fibrosis (CF) modulator therapy for extrapulmonary disease including gastrointestinal disease. A panel discussion with all speakers will conclude this session.

7:00 a.m. *CFTR Modulator therapy for Gastrointestinal (GIT) Disease Post-Lung Transplant*

Alice L. Gray, MD, University of Colorado, Aurora, CO, USA

7:12 a.m. *The Burning Question of Reflux*

Matthew G. Hartwig, MD, Duke University Medical Center, Durham, NC, USA

7:24 a.m. *When Not to Go It Alone: When is Liver Replacement Necessary?*

Fabio Ius, MD, Hannover Medical School, Hannover, Germany

7:36 a.m. *Beyond BMI: the Assessment and Management of Nutritional Status Post-Lung Transplant*

Donna Hickling, B.Health Sc (Nutrition & Dietetics), Grad Cert, The Prince Charles Hospital, Brisbane, Australia

Pre-recorded Presentation

7:48 a.m. **Panel Discussion**



7:00 a.m. – 8:00 a.m.

SUNRISE 10: Partners in Crime: The Right Ventricle and Pulmonary Hypertension in MCS

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiology

Chairs: Gaurav Gulati, MD, and Archer Martin, MD

Session Summary: Right heart failure (RHF) remains frustratingly common after LVAD implant. Understanding the complex interplay between the right ventricle (RV) and the pulmonary circulation, particularly in the presence of pulmonary hypertension (PH) is critical to understanding RHF. This session will feature the latest research on right ventricular hemodynamics and physiology, the interactions between the RV and pulmonary circulation with LVAD support, and the impact of PH on outcomes for patients with LVADs. Experience with MCS for the systemic right ventricle in Fontan circulation will also be reviewed. The co-chairs will lead a brief Q&A with each speaker following their presentation.

7:00 a.m. ***Right Ventricular Reserve in Advanced Heart Failure and Pulmonary Hypertension***

Olaf Mercier, MD, PhD, Marie Lannelongue Hospital, Paris, France

Pre-recorded Presentation

7:15 a.m. ***Lessons Learned: Early versus Late RV Failure After LVAD Implantation***

J. Eduardo Rame, MD, M.Phil, Thomas Jefferson University Hospital, Philadelphia, PA, USA

7:27 a.m. **Q&A**

7:30 a.m. ***Wrong or Right Ventricle? Lessons from the Growing Experience with VADs in the Fontan Circulation***

David Peng, MD, University of Michigan, Ann Arbor, MI, USA

7:42 a.m. **Q&A**

7:45 a.m. ***Treating Pulmonary Hypertension on MCS***

Maja Cikes, MD, PhD, University of Zagreb School of Medicine, Zagreb, Croatia

7:57 a.m. **Q&A**



7:00 a.m. – 8:00 a.m.

SUNRISE 11: Rookies and Sages: The International Pulmonary Hypertension Challenge

Location: Ballroom A

Primary Core Therapy: PVD

Primary Audience: Pulmonology

Chairs: Oksana Shlobin, MD, and William Auger, MD

Session Summary: Pulmonary hypertension is a complex condition with challenges in differential diagnosis and management. It is often difficult to confirm the diagnosis of pulmonary arterial hypertension (a rare disease) in patients who present cardiac and/or respiratory comorbidities. Assessment of severity is mandatory to determine the therapeutic strategy. The art of risk stratification is complex. This case-based interactive session will put junior faculty and experts under the spotlight: live challenge ahead! Four cases will be presented by junior faculty, followed by comments from experts in the field. Each case presenter will prepare questions for their paired expert discussant to address. The co-chairs will lead a brief Q&A following each paired case presenter/discussant segment.

- 7:00 a.m.** ***Is This Really Idiopathic Pulmonary Arterial Hypertension?***
Julie Wacker, MD, University Hospital of Geneva, Geneva, Switzerland.
- 7:05 a.m.** ***Expert Discussant***
Erika B. Rosenzweig, MD, Columbia University Medical Center, New York, NY, USA.
- 7:10 a.m.** **Q&A**
- 7:15 a.m.** ***BPA for Residual Pulmonary Hypertension Post PEA for CTEPH***
Julien Guihaire, MD, PhD, Marie Lannelongue Hospital, Le Plessis-Robinson, France.
- 7:20 a.m.** ***Expert Discussant***
Joanna Pepke-Zaba, MD, Royal Papworth Hospital, Cambridge, United Kingdom.
Pre-recorded Presentation
- 7:25 a.m.** **Q&A**
- 7:30 a.m.** ***Telehealth and Remote Monitoring in Pulmonary Arterial Hypertension***
Sandeep Sahay, MD, Houston Methodist Hospital, Houston, TX, USA.
Pre-recorded Presentation
- 7:35 a.m.** ***Expert Discussant***
Raymond L. Benza, MD, The Ohio State University, Columbus, OH, USA.
- 7:40 a.m.** **Q&A**
- 7:45 a.m.** ***Pulmonary Arterial Hypertension and COVID-19***
Nichole Sisserson, MMS, PA-C, Inova Advanced Lung Disease and Transplant Program, Falls Church, VA, USA.
- 7:50 a.m.** ***Expert Discussant***
John Granton, MD, University of Toronto, Toronto, ON, Canada.
- 7:55 a.m.** **Q&A**



7:00 a.m. – 8:00 a.m.

SUNRISE 12: COVID-19 Lessons Learned: Immunology and Pathology in Cardiothoracic Transplant Recipients

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Research and Immunology

Chairs: David Hwang, MD, PhD, and Saima Aslam, MD, MS

Session Summary: In response to the COVID19 pandemic, research institutions focused heavily on coronavirus biology leading to insights with important implications for solid organ transplantation. This bench to bedside symposium will describe the spectrum of morphologic findings and recent advances in our understanding of testing, lung fibrosis, complement activation, immunity, and myocarditis in the context of COVID-19, as they apply to heart and lung transplant recipients. A panel discussion with all speakers will conclude this session.

7:00 a.m.

Advanced COVID-19 Diagnostics

Margaret M. Hannan, MD, Mater Hospital, Dublin, Ireland

Pre-recorded Presentation

7:10 a.m.

COVID-19 Lung Pathology

Anja C. Roden, MD, Mayo Clinic, Rochester, NY, USA

7:20 a.m.

COVID-19 Cardiac Pathology

Carolyn Glass, MD PhD, Duke University Medical Center, Durham, NC, USA

7:30 a.m.

Complement Activation in COVID-19 and Transplant

Hrishikesh S. Kulkarni, MD, MSCI, Washington University, St. Louis, MO, USA

7:40 a.m.

Collateral Damage: Autoimmunity and Heterologous Immunity in COVID-19

Mark Snyder, MD, University of Pittsburgh, Pittsburgh, PA, USA

7:50 a.m.

Panel Discussion



7:00 a.m. – 8:00 a.m.

SUNRISE 13: Poised for Success: Tips and Pearls on Manuscript Submission and Effective Peer Review

Location: Room 210

Primary Core Therapy: ALL

Primary Audience: Cardiology

Chairs: Daniel R. Goldstein, MD, and Martin Schweiger, MD, PhD

Session Summary: This session is designed to help early career and trainee members understand how to turn an idea into effective manuscript, how the submission process works at JHLT, and how early career/trainee members can become more involved in the JHLT publishing and peer review process. In this joint session, members of the JHLT Editorial Board and Early Career and Trainee Committee will discuss tips and pearls for manuscript submission and effective peer review. A panel discussion with all speakers will conclude this session.

- 7:00 a.m.** ***Case Presentation: Taking an Idea to Manuscript and JHLT Submission***
Kiran Mirza, MD, Rigshospitalet, Copenhagen, Denmark
- 7:05 a.m.** ***Great Ideas to Great Manuscripts: Pearls for Early Career Investigators***
Michelle M. Kittleson, MD, PhD, Cedars Sinai Heart Institute, Los Angeles, CA, USA
Pre-recorded Presentation
- 7:15 a.m.** ***What We Look for at JHLT: Manuscript Workflow and Review Process***
Daniel R. Goldstein, MD, University of Michigan, Ann Arbor, MI, USA
- 7:25 a.m.** ***Case Presentation UPDATE***
Kiran Mirza, MD, Rigshospitalet, Copenhagen, Denmark
- 7:30 a.m.** ***The Peer Review Process: How to Shine***
Yael Peled, MD, Sheba Medical Center, Kiryat Ono, Israel
- 7:40 a.m.** ***Give Us Your Top Do's and Don'ts at JHLT***
Christine Lau, MD, MS, University of Maryland, Baltimore, MD, USA
Pre-recorded Presentation
- 7:50 a.m.** **Panel Discussion**



8:15 a.m. – 9:45 a.m.

SESSION 43 (Oral): ABC, 123, DCD, NRP: Expanding Donor Availability in Heart Transplantation

Location: Hall D

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Ashish S Shah, MD, and David A D'Alessandro, MD

Session Summary: This session will highlight research focusing on expanding donor availability, including donation after circulatory death (DCD) and implications of COVID.

- 8:15 a.m.** **(144) Heart Transplantation from Donation After Circulatory Death Donors: An Update on the Australian Experience**
Yashutosh Joshi, MBBS, St Vincent's Hosp, Sydney, Australia
Pre-recorded Presentation
- 8:30 a.m.** **(145) Expanding Heart Transplants from Donors After Circulatory Death (DCD) - Results of the First Randomized Controlled Trial Using the Organ Care System (OCS™) Heart - (OCS DCD Heart Trial)**
Jacob Niall. Schroder, MD, Duke, Durham, NC, USA
- 8:40 a.m.** **Q&A**
- 8:45 a.m.** **(146) Early Outcomes of Donation After Circulatory Death Heart Transplantation with Thoracoabdominal Normothermic Regional Perfusion**
Marian Urban, MD, Univ of Nebraska Medical Ctr, Omaha, NE, USA
- 8:55 a.m.** **Q&A**
- 9:00 a.m.** **(147) Increasing Utilization of Extended Criteria Donor After Brain Death (DBD) Hearts Seldomly Used for Transplantation in the U.S. Due to Limitation of Ischemic Cold Storage - 2-Year Results of the OCS Heart EXPAND Prospective Multi-Center Trial (OCS Heart EXPAND)**
Jacob Niall. Schroder, MD, Duke Univ Sch of Med, Durham, NC, USA
- 9:10 a.m.** **Q&A**
- 9:15 a.m.** **(149) Early Single Center Experience of Heart Transplantation from Donation After Circulatory Death Donors in the United States**
Mark J. Kearns, MD, UC San Diego, San Diego, CA, USA
- 9:25 a.m.** **Q&A**
- 9:30 a.m.** **(148) Transplanting Thoracic COVID-19 Positive Donors: Overcoming the Pandemic**
Emily M. Eichenberger, MD, Duke Univ Medical Ctr, Durham, NC, USA
- 9:40 a.m.** **Q&A**



8:15 a.m. – 9:45 a.m.

SESSION 44 (Symposium): Cancer, Advanced Heart Failure, and Heart Transplant: Do Any of My Cells Work Properly?

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Richard K Cheng, MD, and Carmela Tan, MD

Session Summary: In recent years, cardio-oncology has emerged as a clinically relevant topic in day-to-day practice for the heart failure community. This session will highlight key issues including the management of acute LV dysfunction, understanding the risk of myocarditis from immune checkpoint inhibitors (ICIs), balancing risk/benefit of ICIs in heart transplant (HTX) patients, and considerations for MCS. The interplay between cancer and HTX in the candidate selection phase and after transplant will be discussed. A panel discussion with all speakers will conclude this session.

8:15 a.m. ***Curing Cancer, Causing Heart Disease: Acute Cardiac Dysfunction From Cancer Treatment***

Anju Nohria, MD, MSc, Brigham & Women's Hospital, Boston, MA, USA

8:30 a.m. ***Developing Cardiomyopathy After Cancer Treatment: A New Journey Begins***

Kirsten Rose-Felker, MD, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA, USA

8:42 a.m. ***Leveraging Pathology and Molecular Tools to Aid in Heart Donor and Recipient Cancer Risk Assessment***

Jan von der Thüsen, MD, PhD, Erasmus MC, Rotterdam, Netherlands

8:54 a.m. ***Immunotherapy: What Do Transplant Providers Need to Know?***

Jayant Raikhelkar, MD, Columbia University Medical Center, New York, NY, USA

9:06 a.m. ***Heart Transplantation and Cancer: What is the Risk?***

Neha Bansal, MD, Children's Hospital at Montefiore, Bronx, NY, USA

9:18 a.m. ***A Balancing Act: Unique Challenges of Cancer in MCS Patients***

Farooq H. Sheikh, Medical Doctor, MedStar Heart and Vascular Institute, Washington, DC, USA

9:30 a.m. **Panel Discussion**



8:15 a.m. – 9:45 a.m.

SESSION 45 (Oral): Molecular Assessment of Lung Allograft Injury

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Pulmonology

Chairs: Sean Agbor-Enoh, MD, PhD, and Pali Shah, MD

Session Summary: This session will consider the role of biomarkers in the assessment of lung allograft injury, with reference to donor-derived cell-free DNA, the non-HLA antigen MICB, and pulmonary endotoxin.

8:15 a.m. **(150) Performance of Donor-Derived Cell-Free DNA (dd-cfDNA) for Discriminating Acute Lung Allograft Injury in a Multicenter Cohort**
Jamie L. Todd, MD, MHS, Duke Univ Medical Ctr, Durham, NC, USA

8:25 a.m. **Q&A**

8:30 a.m. **(151) Quantitative Donor-Derived Cell-Free DNA Levels Reflect the Variability in Lung Allograft Cellular Injury**
Justin Rosenheck, DO, The Ohio State Univ, Columbus, OH, USA

8:40 a.m. **Q&A**

8:45 a.m. **(152) Donor-Derived Cell-Free DNA Plus Tissue Gene Expression Profiling of Lung Allograft Injury**
Mena Botros, MD, The Ohio State Univ, Columbus, OH, USA

8:55 a.m. **Q&A**

9:00 a.m. **(153) Metagenomic Next Generation Sequencing (mNGS) Can Complement Fractional Donor-Derived Cell-Free DNA in Lung Allograft Assessment: Pilot Data**
Justin Rosenheck, MD, The Ohio State Univ, Columbus, OH, USA

9:10 a.m. **Q&A**

9:15 a.m. **(154) Bronchoalveolar Lavage MICB is Associated with Severe Primary Graft Dysfunction, Prolonged Mechanical Ventilation, and Low Post-Transplant FEV1 in Lung Transplant Recipients**
Daniel R. Calabrese, MD, Univ of California San Francisco, San Francisco, CA, USA

9:25 a.m. **Q&A**

9:30 a.m. **(155) Pulmonary Endotoxin is Associated with Reflux, Inflammation, and Adverse Outcomes in Lung Transplant Recipients**
Rayoun Ramendra, BSc, Ajmera Transplant Ctr, Toronto, Canada

9:40 a.m. **Q&A**



8:15 a.m. – 9:45 a.m.

SESSION 46 (Oral): Next Exit (Site): Infections in MCS

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Infectious Diseases

Chairs: Caron Burch, RN, MSN, FNP, CCTC, and Rebecca N Kumar, MD

Session Summary: Infections remain one of the most common complications of MCS. This session will review infection-related outcomes in adult and pediatric MCS patients and address strategies to mitigate infectious risk and optimize infection-related outcomes.

- 8:15 a.m.** **(158) *The Initial Analysis of Infectious Adverse Events in Pediatric Ventricular Assist Devices Reported to the ACTION Registry***
Neha Bansal, MD, Children's Hosp at Montefiore, Bronx, NY, USA
- 8:25 a.m.** **Q&A**
- 8:30 a.m.** **(1216) *Successful Cold Atmospheric Plasma Therapy of Driveline Infections in Patients with Left Ventricular Assist Devices***
Lutz Hilker, MD, Klinikum Karlsburg, Karlsburg, Germany
- 8:40 a.m.** **Q&A**
- 8:45 a.m.** **(157) *Antibody Responses to COVID-19 Vaccination in Left Ventricular Assist Devices***
Ann E. Woolley, MD, MPH, Brigham and Women's Hosp, Boston, MA, USA
- 8:55 a.m.** **Q&A**
- 9:00 a.m.** **(159) *Incidence of Blood Stream Infection and Impact on Survival in Patients on Left Ventricular Assist Device Support***
Alisson Estrada-Roman, MD, Univ of Minnesota, Minneapolis, MN, USA
- 9:10 a.m.** **Q&A**
- 9:15 a.m.** **(160) *Impact of HIV Infection on Outcomes After Left Ventricular Assist Device Implantation: An INTERMACS Analysis***
Zeina Jedeon, MD, Univ of Minnesota, Minneapolis, MN, USA
- 9:25 a.m.** **Q&A**
- 9:30 a.m.** **(161) *Impact of Surgical Debridement with or without Omental Wrap on Deep LVAD Infections***
James W. Long, MD, INTEGRIS Baptist Medical Ctr, Oklahoma City, OK, USA
- 9:40 a.m.** **Q&A**

8:15 a.m. – 9:45 a.m.

SESSION 47 (Symposium): Updates in Pulmonary Arterial Hypertension (PAH) Research: What is On the Horizon?

Location: Ballroom A

Primary Core Therapy: PVD

Primary Audience: Pulmonology

Chairs: Amy Kiskaddon, and John Granton, MD

Session Summary: PAH is a complex disease with even more complex management. Despite advances in the understanding and treatment of PAH, survival has remained poor. This has encouraged an active area of research in this particular disease with the goal of finding cure. This symposium will discuss some of the recent advances in the diagnosis and management of the disease, covering important changes including the impact of the new hemodynamic definition, clinical trial design and newer treatment pathways. A panel discussion with all speakers will conclude this session.

8:15 a.m. ***Pulmonary Hypertension at the Extremes of Life (Pediatric)***
Rolf Berger, MD, PhD, University Medical Center, Groningen, Netherlands

8:25 a.m. ***Pulmonary Hypertension at the Extremes of Life (Geriatric)***
Hassan Alnuaimat, MD, University of Florida, Gainesville, FL, USA
Pre-recorded Presentation

8:35 a.m. ***Novel Imaging Approaches in PAH and CTEPH***
Micheal McInnis, MD, Toronto General Hospital, Toronto, ON, Canada

8:45 a.m. ***Pulmonary to Systemic Shunts in PAH: Who, When, and How***
Maurice Beghetti, HUG, Children's University Hospital, Geneva, Switzerland
Pre-recorded Presentation

9:00 a.m. ***What the Future of Clinical Trials in PAH Should Be: Trial End Points, Design, and Treatment Strategies***
Jean-Luc Vachiery, MD, Erasme University Hospital, Brussels, Belgium

9:15 a.m. ***Novel Treatment Pathways in PAH: What's in the Pipeline?***
Bradley Maron, MD, Brigham and Women's Hospital, Boston, MA, USA

9:30 a.m. **Panel Discussion**



8:15 a.m. – 9:45 a.m.

SESSION 48 (Symposium): Cut to the Chase: Lung Transplantation from the Operating Room to the ICU

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Cardiothoracic Surgery

Chairs: Basil Nasir, MBBCh, and Yaron D. Barac, MD, PhD

Session Summary: A range of incisional techniques are available to lung transplant surgeons. The techniques differ in the degree of exposure they afford, flexibility for ECMO cannulation or concomitant cardiac procedures, post-operative analgesic requirements, and subsequent respiratory mechanics. This session will discuss the 3 main approaches (clamshell, median sternotomy, and minimal access approaches), their operative characteristics, anesthesia perspective as well as post operative respiratory mechanics of each approach. A panel discussion with all speakers will conclude this session.

8:15 a.m. ***Clamshell Incision for Lung Transplantation***

Mani Daneshmand, MD, Emory, Atlanta, GA, USA

8:27 a.m. ***Median Sternotomy for Lung Transplantation***

John Dark, MB, FRCS, Newcastle University, Newcastle Upon Tyne, United Kingdom

8:39 a.m. ***Minimally Invasive Lung Transplantation***

Pedro Catarino, MD, Cedars Sinai, Los Angeles, CA, USA

8:51 a.m. ***Finding the Way In: Transplant After Previous Thoracic Surgery***

Goran Dellgren, MD, PhD, Sahlgrenska Univ Hospital, Goteborg, Sweden

9:03 a.m. ***Post-Operative Pain and Analgesic Strategies***

Theresa Gelzinis, MD, Presbyterian Hospital, Pittsburgh, PA, USA

9:15 a.m. ***Respiratory Mechanics After Lung Transplantation***

Monique Malouf, MD, St Vincent's Hospital, Sydney, Australia

9:27 a.m. **Panel Discussion**



8:15 a.m. – 9:45 a.m.

SESSION 49 (Symposium): It's Complicated! Psychosocial and Ethical Issues in Pediatric MCS and Transplantation

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Pediatrics

Chairs: Simon Urschel, MD, and Estela Azeka, MD

Session Summary: This session will focus on the unique role of ethical and psychosocial challenges in pediatric MCS and transplantation along with their impact on the post-transplant course. Emerging psychosocial risk factors are associated with worse post-transplant outcomes. Review of such factors will occur along with emerging strategies for intervention. This symposium highlights common challenging decisions faced by providers and discusses the impact of multi-disciplinary involvement in difficult medical decision making. A panel discussion with all speakers will conclude this session.

8:15 a.m. ***What To Do When the Parents of the VAD/Transplant Candidate are "High Risk"? Ethics of Supporting Families Facing Structural Vulnerabilities***
Samantha J. Anthony, PhD, MSW, Hospital for Sick Children, Toronto, ON, Canada
Pre-recorded Presentation

8:27 a.m. ***Don't Throw Away Your Shot: Vaccine Refusal in Pediatric Transplantation***
Lara Danziger-Isakov, MD, MPH, Children's Hosp Med Ctr, Cincinnati, OH, USA

8:39 a.m. ***You Are What You Eat: BMI Considerations in Pediatric Transplant and VAD Patients***
Carmel Bogle, MD, University of Maryland Medical Center, Baltimore, MD, USA

8:51 a.m. ***Delays Shouldn't Leave Me Behind: Transplantation in Patients with Neuro-Cognitive Impairment***
Matthew Fenton, MRCPCH, Great Ormond St Hosp Children, London, United Kingdom
Pre-recorded Presentation

9:03 a.m. ***"The Green Revolution": What To Do When Your Teenage Patient Smokes Pot?***
Robert Page, PharmD, MS, University of Colorado School of Pharmacy, Aurora, CO, USA
Pre-recorded Presentation

9:15 a.m. ***When the Team is at Odds: Decision Making Distress and Conflict Among the Advanced Heart and Lung Failure Teams***
Melissa Cousino, PhD, C.S. Mott Children's Hospital, Ann Arbor, MI, USA

9:27 a.m. **Panel Discussion**



10:15 a.m. – 11:45 a.m.

SESSION 50 (Symposium): Double Trouble: End-Stage Renal Failure in End-Stage Heart Failure

Location: Hall D

Primary Core Therapy: MCS

Primary Audience: Cardiology

Chairs: Michael S Kiernan, MD, and Sanem Nalbantgil, MD

Session Summary: This symposium will review kidney disease in the heart failure population, including patient selection for advanced therapies. Evolving management strategies to combat diuretic resistance will be addressed. Renal replacement therapy in heart failure patients and the potential deleterious hemodynamic effect of arteriovenous fistulas as well as optimal renal replacement therapy options for patients on long-term LVAD support will be discussed. A panel discussion with all speakers will conclude this session.

10:15 a.m. ***Leading With Electrolytes: Urinary Sodium to Empower Nursing Algorithms for Decongestion in the Unresponsive Patient***

Michelle M. Kittleson, MD, PhD, Cedars Sinai Hrt Insti, Los Angeles, CA, USA

Pre-recorded Presentation

10:27 a.m. ***LVAD Therapy and Kidney Function: Chicken, Egg, or Cystatin C?***

Paolo C. Colombo, MD, Columbia University Medical Center, New York, NY, USA

10:39 a.m. ***Assessing Thresholds for MCS and Transplantation: Whose Kidneys Will Improve?***

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

10:51 a.m. ***Assessment of Combined Transplants: To Do or Not To Do?***

Satoshi Saito, MD, PhD, Tokyo Women's Med Univ, Tokyo, Japan

Pre-recorded Presentation

11:03 a.m. ***Pumped and Distended: Assessing Optimal Dialysis Modalities in Patients With Pumps***

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

11:15 a.m. ***A Technical View on Immunosuppressive Therapies for Renal Protection After Cardiac Transplantation***

Amanda Ingemi, PharmD, Sentara Norfolk General Hospital, Norfolk, VA, USA

11:27 a.m. **Panel Discussion**



10:15 a.m. – 11:45 a.m.

SESSION 51 (Oral): Will You Be Mine? Choosing Donors and Recipients for Heart Transplantation

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Chetan B Patel, MD, and David S. Feldman, MD, PhD

Session Summary: This session will focus on clinical research designed to examine factors influencing donor and recipient selection as well the associated outcomes in heart transplantation.

10:15 a.m. **(163) *Should Age-Based Eligibility Thresholds Differ for Repeat Heart Transplantation? Analysis of the United Network of Organ Sharing Database***
Qjudong Chen, MD, Cedars-Sinai Medical Ctr, Los Angeles, CA, USA

10:25 a.m. **Q&A**

10:30 a.m. **(164) *The Effect of Race on Heart Transplant Outcomes by Age***
Alejandro Plana, MD, Univ of Chicago, Chicago, IL, USA

10:40 a.m. **Q&A**

10:45 a.m. **(165) *Survival After Heart Transplant is Poor with High Venous Pressures and Low Arterial Elastance***
Komarakshi Balakrishnan, MD, MGM Hosp, Chennai, India

10:55 a.m. **Q&A**

11:00 a.m. **(166) *Comparative Analyses of Donor-Recipient Age Differences in Adult Cardiothoracic Transplantation: An Analysis of the UNOS/OPTN Database***
Hari K. Rajagopal, Carnegie Vanguard High Sch, Houston, TX, USA

11:10 a.m. **Q&A**

11:15 a.m. **(167) *Using Hemodynamics to Define Graft Function: Do We Need It?***
Marco Masetti, MD, PhD, Heart Failure and Heart Transplant Unit, Bologna, Italy

11:25 a.m. **Q&A**



10:15 a.m. – 11:45 a.m.

SESSION 52 (Oral): Back to the Basic(s) Science: Mechanistic Insights to Facilitate Lung Transplant Success

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Research and Immunology

Chairs: Mark R. Nicolls, MD, and Scott M Palmer, MD, MHS

Session Summary: This session will present innovative pre-clinical research to help address knowledge gaps in ischaemia reperfusion injury, airway obstruction, and pulmonary fibrosis post-lung transplant.

- 10:15 a.m.** **(168) Endothelial Cell Injury and Activation in a Murine Model of Left Lung Transplantation**
Janne Kaes, MSc, KU Leuven, Leuven, Belgium
- 10:25 a.m.** **Q&A**
- 10:30 a.m.** **(169) Endothelial Protection via Heparanase Inhibition Attenuates Ischemia-Reperfusion Injury in Mice**
Kentaro Noda, Ph.D, Univ of Pittsburgh, Pittsburgh, PA, USA
- 10:40 a.m.** **Q&A**
- 10:45 a.m.** **(170) Metformin Attenuates Ischemia-Reperfusion Injury in a Rat Lung Transplantation Model**
Dong Tian, Ph.D., Affiliated Hosp of North Sichuan Medical Coll, Nanchong, China
Pre-recorded Presentation
- 11:00 a.m.** **(171) Inhibiting S100A8/A9 Attenuates Airway Obstruction in a Mouse Heterotopic Tracheal Transplantation Model**
Dai Shimizu, MD, Okayama Univ Hosp, Okayama, Japan
Pre-recorded Presentation
- 11:15 a.m.** **(172) MNK/eIF4E Ser209 Inhibitor eFT-508 Prevents and Therapeutically Treats Fibrosis in a Murine Model of Restrictive Chronic Lung Allograft Rejection**
Natalie M. Walker, BS, Univ of Michigan, Ann Arbor, MI, USA
Pre-recorded Presentation
- 11:25 a.m.** **Q&A**
- 11:30 a.m.** **(173) Nintedanib as an Anti-Fibrotic Therapy in a Mouse Model of Chronic Lung Allograft Dysfunction**
Jillian Oliver, MSc, Toronto General Hosp Res Inst, Toronto, Canada
- 11:40 a.m.** **Q&A**



10:15 a.m. – 11:45 a.m.

SESSION 53 (Symposium): Structural Heart, Mitral and Tricuspid Valve Disease in LVAD Patients: Current Insight and Controversies

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiothoracic Surgery

Chairs: Mrudula R Munagala, MD, and Julia Riebandt, MD

Session Summary: At the time of VAD implant, structural heart diseases are commonly present. While some of them require prompt correction like aortic regurgitation or atrial/ventricular septal defect, large discussions and different approaches are available for 'forgiving' pathologies which might play a pivotal role in long term outcomes, especially for destination therapy patients. Concomitant mitral valve repair at the time of LVAD implantation continues to be debated and available literature is limited in providing a definitive guidance. Approximately half of LVAD candidates have moderate-to-severe tricuspid regurgitation (TR), associated with RV failure and impaired survival after LVAD surgery. Usual thoughts are that concomitant TR surgery should be considered. However, spontaneous reduction of TR after LVAD implantation is common, making it controversial whether TR should be surgically corrected. Current insights and controversies of mitral and tricuspid valve disease in LVAD patients will be presented as well as coronary pathologies. A panel discussion with all speakers will conclude this session.

- 10:15 a.m.** ***Pathophysiology and "Natural History" of Tricuspid Regurgitation in LVAD Patients***
Kadir Caliskan, MD, PhD, Erasmus Medical Center, Rotterdam, Netherlands
- 10:25 a.m.** ***Concomitant TR Surgery in LVAD Implantation: Yes or No?***
Ivan Netuka, MD, PhD, Institute for Clinical and Experimental Medicine, Prague, Czech Republic
- 10:35 a.m.** ***Alternate Therapies and Future Perspectives for Tricuspid Valve Pathologies in LVAD Patients***
Daniel Zimpfer, MD, MBA, Medical University of Vienna, Vienna, Austria
- 10:45 a.m.** ***Take It or Leave It: Is There a Benefit of Concomitant Mitral Valve Repair at the Time of LVAD Implantation or Should We Leave the Valve Alone?***
Jan D. Schmitto, MD, PhD, MBA, FCCP, FRCS, Hannover Medical School, Hannover, Germany
- 10:55 a.m.** ***Mitra Clip Prior to LVAD Implantation: a Viable Option of Mitral Repair?***
Dina De Bock, MD, Antwerp University Hospital, Edegem, Belgium
Pre-recorded Presentation
- 11:05 a.m.** ***Preexisting Mitra Clip in Patients Undergoing LVAD Implantation: Boon or a Bane***
Paul C. Tang, MD, PhD, University of Michigan, Ann Arbor, MI, USA
- 11:15 a.m.** ***Revascularize or Not a Critical Coronary at the Time of LVAD Implant***
John M. Stulak, MD, Mayo Clinic, Rochester, MN, USA
- 11:25 a.m.** **Panel Discussion**



10:15 a.m. – 11:45 a.m.

SESSION 54 (Oral): A Heart Partnership: When is Two Better Than One?

Location: Ballroom A

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Jennifer Conway, MD, and Eyal Nachum, MD

Session Summary: With the increasing medical complexity of heart failure patients, such as in those with congenital heart disease, multi organ involvement is becoming more prevalent, creating more decision-making and care challenges. This session highlights research addressing some of the aspects of multi-organ transplantation, including outcomes.

10:15 a.m. (174) Outcomes Following Heart Transplantation in Adults with Congenital Heart Disease

Pierre-Emmanuel Noly, MD PhD, Univ of Michigan, Ann Arbor, MI, USA

10:25 a.m. Q&A

10:30 a.m. (175) Predicting Survival in Combined Heart-Liver Transplantation Compared to Heart Transplantation Alone

Maria E. Currie, MD PhD, Stanford Univ, Stanford, CA, USA

10:40 a.m. Q&A

10:45 a.m. (176) Outcomes Following Simultaneous Heart-Liver Transplantation: An Analysis of Donor and Recipient Characteristics

Pierre-Emmanuel Noly, MD PhD, Univ of Michigan, Ann Arbor, MI, USA

10:55 a.m. Q&A

11:00 a.m. (177) Simultaneous Heart-Kidney Transplant Outcomes Pre- and Post-Heart Allocation System Change: Impact of Temporary Mechanical Circulatory Support

Arianne Clare Agdamag, MD, Univ of Minnesota, Minneapolis, MN, USA

11:10 a.m. Q&A

11:15 a.m. (178) Outcomes of Patients Undergoing Combined Heart-Kidney Transplantation with or without Prior Ventricular Assist Device

Maria E. Currie, MD PhD, Stanford Univ, Stanford, CA, USA

11:25 a.m. Q&A

11:30 a.m. (179) Graft Rejection and Survival in Patients Undergoing Multi-Organ Heart Transplantation

Umar A. Siddiqi, N/A, Univ of Chicago Med, Chicago, IL, USA

Pre-recorded Presentation



10:15 a.m. – 11:45 a.m.

SESSION 55 (Symposium): Improving Quality of Lung Transplant Care: Survival is Only the Beginning

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Nursing and Allied Health

Chairs: Aida Venado, MD, and Meg M Fregoso, MSN, NP-BC

Session Summary: Survival is the outcome most commonly used to assess the performance of lung transplant centers. In focusing on short-term effectiveness outcomes, other components of quality assessment can be missed and performance improvement efforts can be limited. More than 300 healthcare quality metrics have been described to date in solid organ transplantation. This session will discuss metrics beyond survival which impact on, or define, transplant success including adherence and engagement, frailty and nutritional status. A panel discussion with all speakers will conclude this session.

- 10:15 a.m.** ***What is a Relevant Survival Metric After Lung Transplant?***
Jasvir Parmar, PhD, FRCP, Royal Papworth Hospital, Cambridge, United Kingdom
- 10:27 a.m.** ***How to Define Benefit and Success from Lung Transplant Beyond Survival Tools***
Joshua Diamond, MD, University of Pennsylvania, Philadelphia, PA, USA
- 10:39 a.m.** ***Assessing Physical Functioning Post-Lung Transplant: How, When and Who Benefits?***
James Walsh, PhD BPhy, The Prince Charles Hospital, Brisbane, Australia
Pre-recorded Presentation
- 10:51 a.m.** ***The Impact of Nutritional State on Post-Transplant Success***
Marion Seabaugh, MPH, RD, Stanford Health Care, Stanford, CA, USA
Pre-recorded Presentation
- 11:03 a.m.** ***Post-Transplant Medication Adherence as an Outcome and a Risk Factor***
Fabienne Dobbels, MSc, PhD, Univ Hospital Leuven, Leuven, Belgium
Pre-recorded Presentation
- 11:15 a.m.** ***How to Analyze Psychosocial Benefit for Patients and Caregivers Post-Transplant***
Melissa Sanchez, BScHons, PGDip, DClinPsy, MSc, Harefield Hospital, Harefield, Middlesex, United Kingdom
- 11:27 a.m.** **Panel Discussion**



10:15 a.m. – 11:45 a.m.

SESSION 56 (Oral): Don't Go Breaking My Heart: The Influence of Antibodies, Drugs, and Diagnostics on Pediatric Heart Transplant Outcomes

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Pediatrics

Chairs: Daphne T Hsu, MD, and Adriana Zeevi, PhD

Session Summary: This session will explore the impact on anti-HLA sensitization, the donor specific crossmatch, and eplet matching on pediatric heart transplant outcomes. This session will also explore how immunosuppression medications and diagnostic imaging are being used in pediatric heart transplant care.

10:15 a.m. (180) No Association Between Early Donor Specific Antibody and Subsequent Allograft Function at 3 Years Post-Pediatric Heart Transplantation. First Results of a Prospective Multi-Institutional Study

Steven A. Webber, MBChB, Vanderbilt Univ Sch of Med, Nashville, TN, USA

Pre-recorded Presentation

10:30 a.m. (181) A Positive CDC T-cell Crossmatch is Strongly Associated with Allograft Loss and Early Rejection in Pediatric Heart Transplant Recipients

Ryan J. Williams, MD, UCLA Mattel Children's Hosp, Los Angeles, CA, USA

10:40 a.m. Q&A

10:45 a.m. (182) Eplet Matching in Pediatric Heart Transplantation

Barbara Cardoso, MD, Freeman Hosp, Newcastle-upon-Tyne, United Kingdom

10:55 a.m. Q&A

11:00 a.m. (183) Immunosuppressant Drug Level Monitoring in Pediatric Heart Transplant Recipients: A Report from the TEAMMATE Trial

Matthew J. Bock, M.D., Rady Children's Hosp, UC San Diego, San Diego, CA, USA

11:10 a.m. Q&A

11:15 a.m. (184) Utility of Intravascular Ultrasound Early After Pediatric Heart Transplantation

Michael A. Kuhn, MD, Loma Linda Univ, Loma Linda, CA, USA

11:25 a.m. Q&A

11:30 a.m. (185) Clinical Practice Variation of Statin Use in Pediatric Heart Transplantation

Justin H. Berger, MD, PhD, Children's Hosp of Philadelphia, Philadelphia, PA, USA

11:40 a.m. Q&A



1:15 p.m. – 2:45 p.m.

SESSION 57 (Symposium): Optimization of Management of Patients on LVAD Support: 2022 and Beyond
Location: Hall D

Primary Core Therapy: MCS
Primary Audience: Cardiology

Chairs: Stephan M. Ensminger, MD, DPhil and Finn Gustafsson, MD, PhD

Session Summary: Objectives of this symposium include describing patient-centered definitions of optimal outcomes during LVAD support, strategies and goals for optimization of LVAD speed and medical therapy, and innovations in virtual care including remote patient monitoring and telerehabilitation in the management of patients supported by an LVAD. A panel discussion with all speakers will conclude this session.

- 1:15 p.m.** ***Defining Optimal Outcomes on LVAD Support: Patient Perspective***
Maria G. Crespo-Leiro, MD, Hospital University A Coruna, La Coruna, Spain
- 1:30 p.m.** ***Medical Optimization During LVAD Support***
Christopher S. Hayward, MD, St. Vincent's Hospital, Sydney, Australia
- 1:45 p.m.** ***Avoiding the "Set It and Forget It Mentality": Reassessing Patients with an LVAD Post Implant***
Palak Shah, MD, MS, Inova Fairfax Hospital, Falls Church, VA, USA
- 2:00 p.m.** ***Remote Optimization of Patients with an LVAD: Blood Pressure, Telerehabilitation, and More!***
Himabindu Vidula, MD, University of Rochester, Rochester, NY, USA
- 2:15 p.m.** ***Machine Learning, Artificial Intelligence, and MCS: Learning From Big Data to Build a Smarter Pump***
Manreet Kanwar, MD, Allegheny General Hospital, Pittsburgh, PA, USA
- 2:30 p.m.** **Panel Discussion**

1:15 p.m. – 2:45 p.m.

SESSION 58 (Symposium): Relative Contraindications to Heart Transplantation: Where is the Line?

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Inna Tchoukina, MD, and Andreas Zuckermann, MD

Session Summary: This session will review essential relative contraindications for heart transplant candidacy based on ISHLT 2016 guidelines. Controversial subjects such as vaping, cannabis and HIV will be discussed with lessons learned from all of transplantation. How much does age and weight really matter? Recipient risk factors and the role of donor selection will be reviewed. Finally, we will discuss sensitized patients with focus on international differences and improved outcomes. A panel discussion with all speakers will conclude this session.

1:15 p.m.

VAPING, NICOTINE and CANNABIS: Going Up in Smoke?

Eileen M. Hsich, MD, Cleveland Clinic Foundation, Cleveland, OH, USA

1:30 p.m.

WEIGHT: Balancing the Scales

Johan Nilsson, MD, PhD, Skanes University Hospital, Lund, Sweden

1:45 p.m.

AGE: Happy 70th Birthday! Off You Go

Richard Dorent, MD, Agence de la Biomédecine, Saint-Denis, France

Pre-recorded Presentation

2:00 p.m.

HIV: Is It Time To HOPE?

Julie Doberne, MD, PhD, Duke University Medical Center, Durham, NC, USA

2:15 p.m.

SENSITIZATION: Is There a Sensible Solution?

Monica M. Colvin, MD, University of Michigan, Ann Arbor, MI, USA

Pre-recorded Presentation

2:30 p.m.

Panel Discussion



1:15 p.m. – 2:45 p.m.

SESSION 59 (Oral): Age, Size, Location: Studies in Survival after Lung Transplant

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Cardiothoracic Surgery

Chairs: Maryam Valapour, MD, MPP, and Bryan A Whitson, MD

Session Summary: This session will consider donor, recipient, peri-operative and logistical factors that influence outcomes in adult and paediatric lung transplantation

- 1:15 p.m.** **(186) *Are the LAS Models Accurate Predictors of Mortality?***
Carli J. Lehr, MD, MS, Cleveland Clinic, Cleveland, OH, USA
- 1:25 p.m.** **Q&A**
- 1:30 p.m.** **(187) *The Impact of Geographical Distance on Survival in Adult Cystic Fibrosis Lung Transplant Recipients***
Shivani U. Patel, Bachelors of Science, Johns Hopkins Univ, Baltimore, MD, USA
- 1:40 p.m.** **Q&A**
- 1:45 p.m.** **(188) *Recipient Outcome After Lung Transplantation from Older Donors (≥70 Years) Equals Younger Donors (<70 Years): A Propensity-Matched Analysis***
Cedric Vanluyten, BSc, Univ Hosp Leuven, Leuven, Belgium
- 1:55 p.m.** **Q&A**
- 2:00 p.m.** **(189) *Actual Size Mismatch in Lung Transplantation for Restrictive Lung Disease***
George Gill, MD, Smidt Heart Inst, Cedars-Sinai Medical Ctr, Los Angeles, CA, USA
- 2:10 p.m.** **Q&A**
- 2:15 p.m.** **(190) *Long-Term Weaning of Mechanical Ventilation After Lung Transplantation: Patient Characteristics and Impact on Survival***
Lucille Hu, MPH, Case Western Reserve Univ, Cleveland, OH, USA
- 2:25 p.m.** **Q&A**
- 2:30 p.m.** **(191) *Long-Term Outcome and the Radiological Evaluation of Lung Growth After Living-Donor Lobar Lung Transplantation in Pediatric Patients***
Satona Tanaka, MD, Kyoto Univ Hosp, Kyoto, Japan
Pre-recorded Presentation



1:15 p.m. – 2:45 p.m.

SESSION 60 (Symposium): Train the Trainer and Trainer Best Practices: What MCS Clinicians Can Learn From Their Patients

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Nursing and Allied Health

Chairs: Thomas Schlöghofer, MSc, and Jennifer Hajj, MHDS, BSN, RN, CCRN-K

Session Summary: Providers hear "please tell the next patient this", or are asked "do you know what it's like being me?" As providers we face many challenges in the MCS field: Alarms. Pre-surgery need-to-knows. Lack of social support. Facing death. Nurses and allied health professionals gain insight and empathy from their patients. The focus of this session is to provide education through case scenarios, incorporating lessons taught, and what we learn from the ones we care for every day. A panel discussion with all speakers will conclude this session.

1:15 p.m.

My LVAD is Alarming, Now What?

Sarah Schettle, PA-C, Mayo Clinic, Rochester, MN, USA

1:30 p.m.

Patient-Centered Approaches to Infection Prevention and Management

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

1:45 p.m.

Tough Discussions Aren't For the Faint Hearted: What Patients Want to Know But Are Afraid to Ask

Michael Scala, MSN, AGACNP-BC, Ascension Saint Thomas, Nashville, TN, USA

2:00 p.m.

Game Changer or Status Quo: The Real Life Effects of Social Support in MCS

Andrew Woods, BSc, Newcastle upon Tyne NHS Foundations Trust, Newcastle upon Tyne, United Kingdom

2:15 p.m.

Walking that Walk Alone: Helping the Dying MCS Patient

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

2:30 p.m.

Panel Discussion



1:15 p.m. – 2:45 p.m.

SESSION 61 (Oral): Can't Stop the Beat: Impact of Novel Heart Transplant Practice on Rejection

Location: Ballroom A

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Rachna Kataria, MD, and Jacob Lavee, MD

Session Summary: This session will highlight innovation around monitoring and preventing rejection in heart transplant patients from the time of transplantation and beyond.

- 1:15 p.m.** **(196) *Circulating microRNA Biomarkers in Cellular and Antibody-Mediated Heart Transplant Rejection***
Palak Shah, MD, MS, Inova Heart and Vascular Inst, Falls Church, VA, USA
- 1:25 p.m.** **Q&A**
- 1:30 p.m.** **(192) *A Transplant Center Experience with Basiliximab Induction Strategies - A Double Edged Sword?***
Luise Holzhauser, MD, Univ of Pennsylvania, Philadelphia, PA, USA
- 1:40 p.m.** **Q&A**
- 1:45 p.m.** **(193) *Experience with Eculizumab in Highly Sensitized Patients Undergoing Heart Transplantation***
Manvir Dhillon, MD, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- 1:55 p.m.** **Q&A**
- 2:00 p.m.** **(194) *Impact of Donor Hepatitis C Viremia on Acute Rejection in Heart Transplant Recipients***
Yu Xia, MD, MS, Univ of California Los Angeles, Los Angeles, CA, USA
- 2:10 p.m.** **Q&A**
- 2:15 p.m.** **(195) *Cardiac Allograft Vasculopathy in Heart Transplant Recipients from Hepatitis C Viremic Donors, Data from Two Large Academic Transplant Centers***
Antoinette S. Birs, MD, Div of Cardiology, Dept of Med, Univ of California San Diego Health, San Diego, CA, USA
- 2:25 p.m.** **Q&A**
- 2:30 p.m.** **(197) *Low AlloSure® in HeartCare® Associated with Low Risk of Significant Allograft Rejection: An Analysis of SHORE***
Ju H. Kim, MD, Houston Methodist Hosp, Houston, TX, USA
- 2:40 p.m.** **Q&A**



1:15 p.m. – 2:45 p.m.

SESSION 62 (Symposium): Save the Beans: Recognition and Protection of Renal Function in Lung Transplantation

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Pulmonology

Chairs: Hannah C Mannem, MD, and Brian C. Keller, MD, PhD

Session Summary: The kidneys are one of the most commonly affected organs after lung transplantation. This symposium highlights how to better select lung transplant recipients in regards to renal function, protective strategies peri and post-op to decrease the incidence of acute kidney injury, pharmacologic strategies for renal protection, risk factors and management of chronic kidney disease, and the role of renal transplantation in this population. Preserving the lung allograft is of utmost importance, but we must not forget to also "Save the Beans". A panel discussion with all speakers will conclude this session.

1:15 p.m.

Into the Looking Glass: Evaluating Renal Function in Pre-Transplant Candidates

Timothy Whelan, MD, Med Univ of SC, Charleston, SC, USA

1:27 p.m.

Putting Up a Shield: Protective Peri- and Post-Operative Strategies to Prevent Acute Kidney Injury

Alberto Benazzo, MD, Medical University of Vienna, Vienna, Austria

1:39 p.m.

Clinical and Molecular Epidemiology of AKI and CKD Post-Transplant

Michael Shashaty, MD, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA

1:51 p.m.

Diving Deep: Maintenance Immunosuppression Strategies for Renal Protection

Jens Gottlieb, MD, Hannover Medical School, Hannover, Germany

Pre-recorded Presentation

2:03 p.m.

Tricks of the Chronic Kidney Disease Trade

Anil Chandraker, MD, MBChB, Brigham & Women's Hospital, Boston, MA, USA

2:15 p.m.

To Transplant or Not to Transplant?

Miranda Paraskeva, MBBS, FRACP, MD, Alfred Hospital, Melbourne, Australia

Pre-recorded Presentation

2:27 p.m.

Panel Discussion



1:15 p.m. – 2:45 p.m.

SESSION 63 (Oral): Improving Pediatric Heart Failure Care and Understanding Racial and Socioeconomic Bias in Pediatric Heart Transplant

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Pediatrics

Chairs: Kyle D Hope, MD, and Matthew J O'Connor, MD

Session Summary: This session will explore how socioeconomic and racial disparities impact pediatric heart transplant candidates and recipients as well as contemporary trends in pediatric heart failure management.

- 1:15 p.m.** **(198) Outcomes of Children with Hypoplastic Left Heart Syndrome and Systemic Ventricular Dysfunction on Guideline Directed Medical Therapy**
Aine Lynch, MD, The Hosp for Sick Children, Toronto, Canada
- 1:25 p.m.** **Q&A**
- 1:30 p.m.** **(199) Outcomes After Initial Heart Failure Consultation in Fontan Patients**
Sharon Chen, MD MPH, Lucile Packard Children's Hosp at Stanford, Palo Alto, CA, USA
- 1:40 p.m.** **Q&A**
- 1:45 p.m.** **(200) Major Adverse Dystrophinopathy Event Score as Marker of Cumulative Morbidity and Risk for Mortality in Boys with Duchenne Muscular Dystrophy**
Beth D. Kaufman, MD, Stanford Univ Sch of Med, Palo Alto, CA, USA
- 1:55 p.m.** **Q&A**
- 2:00 p.m.** **(201) Status Exceptions and Racial Disparities in Pediatric Heart Transplant Waitlist Outcomes**
Lydia K. Wright, M.D, M.Sc., Nationwide Children's Hosp, Columbus, OH, USA
- 2:10 p.m.** **Q&A**
- 2:15 p.m.** **(202) Socioeconomic Disadvantage and Race/Ethnicity Are Associated with Mortality After Pediatric Heart Transplantation**
Andres A. Fuentes-Baldemar, MD, MMSc, Texas Children's Hosp/Baylor Coll of Med, Houston, TX, USA
Pre-recorded Presentation
- 2:30 p.m.** **(203) Racial and Socioeconomic Disparities in Pediatric Heart Transplant Outcomes in the Era of Anti-Thymocyte Globulin Induction**
Waldemar F. Carlo, MD, Univ of Alabama Birmingham, Birmingham, AL, USA
- 2:40 p.m.** **Q&A**



3:15 p.m. – 4:45 p.m.

SESSION 64 (Oral): Novel Approaches to Better Preserve Cardiac Grafts

Location: Hall D

Primary Core Therapy: HEART

Primary Audience: Research and Immunology

Chairs: Brent C Lampert, DO, and Darren H. Freed, MD, PhD, FRCSC

Session Summary: New ways of preserving hearts to permit expanding the use of organs procured from marginal donors are needed and will be explored in this session.

3:15 p.m. **(204) Novel Portable Hypothermic Cardiac Preservation Device Extends Cardiac Viability and Function Beyond the Standard of Care Using Isolated Porcine Hearts**
Rafael J. Veraza, PhD, MPH, Vascular Perfusion Solutions, Inc., San Antonio, TX, USA

3:25 p.m. **Q&A**

3:30 p.m. **(205) Crystalloid Machine Perfusion with the Novel HTK-N Preservation Solution Reduces Microvascular Dysfunction in Circulatory Death Hearts**
Lars Saemann, MSc, Univ Hosp Halle (Saale), Halle (Saale), Germany

3:40 p.m. **Q&A**

3:45 p.m. **(206) The Pleiotropic Effects of Oxygen-Derived Free-Radical Scavengers on the Graft During Normothermic Ex Situ Heart Perfusion**
Xiao Qi, Ph.D, Univ of Alberta, Edmonton, Canada
Pre-recorded Presentation

4:00 p.m. **(207) Preservation of Nitric Oxide Synthase Activity Required for Beneficial Effects of Hypothermic Oxygenated Perfusion in Cardiac Grafts Obtained with DCD**
Manuel Ulrich. Egle, MD, Inselspital, Bern Univ Hosp and Univ of Bern, Bern, Switzerland

4:10 p.m. **Q&A**

4:15 p.m. **(208) Left Ventricular Assist Device Mode: Co-Pulse Left Ventricular Unloading in Working Mode of Ex Vivo Heart Perfusion**
Daisuke Sakota, Ph.D, Natl Inst of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki, Japan
Pre-recorded Presentation

4:30 p.m. **(209) Significant Reduction of Myocardial Injury Markers After Ischemia Minimization in the First Hour of an Ex Vivo Xeno Working Heart Model**
Franziska Pollok, M.D., Massachusetts General Hosp, Boston, MA, USA
Pre-recorded Presentation



3:15 p.m. – 4:45 p.m.

SESSION 65 (Oral): Predictors of Graft Dysfunction in Heart Transplantation

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Duane Davis, MD, MBA, and Tomoko Kato, MD, PhD

Session Summary: Graft dysfunction is a leading cause of early mortality after heart transplantation. The presentations in this session will focus on identifying donor, recipient, and procedural risk factors and predictors of early graft dysfunction.

3:15 p.m. (210) Incidence, Predictors, and Reversibility of Left Ventricular Dysfunction After Brain Death: The Donor Heart Study

Kiran K. Khush, MD, MAS, Stanford Univ, Stanford, CA, USA

3:25 p.m. Q&A

3:30 p.m. (211) Bridge to Transplant with Durable Left Ventricular Assist Device is Associated with Primary Graft Dysfunction Following Heart Transplantation: A Report from the International Consortium on Primary Graft Dysfunction

Lauren K. Truby, MD, Duke Univ Medical Ctr, Durham, NC, USA

Pre-recorded Presentation

3:45 p.m. (212) Sensitization is Independently Associated with Increased Risk of Primary Graft Dysfunction After Heart Transplantation

Jiho Han, MD, Univ of Chicago, Chicago, IL, USA

3:55 p.m. Q&A

4:00 p.m. (213) Spontaneous Donor Hypothermia is Independently Associated with Increased Risk of Primary Graft Dysfunction After Heart Transplant

Jiho Han, MD, Univ of Chicago, Chicago, IL, USA

4:10 p.m. Q&A

4:15 p.m. (214) Is Sacubitril/Valsartan a Risk Factor for Vasoplegia/Primary Graft Dysfunction After Heart Transplantation?

Nikhil Patel, B.S., Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA

4:25 p.m. Q&A

4:30 p.m. (215) Is Delayed Graft Function Worse in Simultaneous Heart-Kidney Transplant vs Kidney Transplant Alone?

Zev Allison, MD, Cedars-Sinai Medical Ctr, Los Angeles, CA, USA

4:40 p.m. Q&A



3:15 p.m. – 4:45 p.m.

SESSION 66 (Symposium): Navigating the COVID Pandemic: Clambering into the Lung Transplant Life Raft

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Infectious Diseases

Chairs: Erik Verschuuren, MD, PhD, and Are M. Holm, MD, PhD

Session Summary: This symposium will present contemporaneous data on the full spectrum of clinical impact COVID19 has had on thoracic transplantation. A panel discussion with all speakers will conclude this session.

3:15 p.m.

COVID-19 Vaccination and Prevention Strategies

Kathleen Murphy, MD, Penn Medicine, Philadelphia, PA, USA

3:30 p.m.

It's Not Just the Lungs: Extrapulmonary Manifestations of COVID-19

Olivier Manintveld, MD, Erasmus MC, Rotterdam, Netherlands

3:45 p.m.

Recipients with COVID-19: When Can/Should We Transplant?

Konrad Hoetzenecker, MD, PhD, Medical University of Vienna, Vienna, Austria

4:00 p.m.

Optimization of the COVID-19 Infected Lung Transplant Candidate

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

4:15 p.m.

Management of the COVID-19 Infected Lung Transplant Recipient

Cameron R. Wolfe, MBBS MPH, Duke University Medical Center, Durham, NC, USA

4:30 p.m.

Panel Discussion



3:15 p.m. – 4:45 p.m.

SESSION 67 (Oral): Everything Gets Better: Novel Technology for Unmet Needs and Improved Outcomes in MCS

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiothoracic Surgery

Chairs: Kewal Krishan, MD, and Karen May-Newman, PhD

Session Summary: This session will present new methods and devices to address new requirements not previously covered in the MCS field and further reduce adverse event profiles.

- 3:15 p.m.** **(216) Large Animal Investigation of Cardiopulmonary Support for Acute-on-Chronic Right Ventricular Failure: Physiologic and Hemodynamic Consequences of Circuit Configuration**
Rei Ukita, PhD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA
- 3:25 p.m.** **Q&A**
- 3:30 p.m.** **(217) Preclinical Assessment of a Rapid Anastomotic Device for HeartMate 3 Apical Cuff Implantation**
Max B. Mitchell, MD, Univ of Colorado, Aurora, CO, USA
- 3:40 p.m.** **Q&A**
- 3:45 p.m.** **(218) Soft Robotic Dynamic Cardiomyoplasty with Electrically Contractile Artificial Muscle (AHM)**
Arjang Ruhparwar, MD, PhD, Univ Hosp Essen, West-German Heart and Vascular Ctr, Essen, Germany
- 3:55 p.m.** **Q&A**
- 4:00 p.m.** **(219) The CorWave LVAD - Synchronized Pulsatility with Improved Hemodynamics**
Trevor A. Snyder, PhD, Corwave, Clichy, France
- 4:10 p.m.** **Q&A**
- 4:15 p.m.** **(220) Prognostic Value of Pressure-Volume Measures in Hemocompatibility-Related Clinical Adverse Events**
Aaron Gunawan, BMed (Hons)/MD, St Vincent's Hosp, Darlinghurst, Australia
Pre-recorded Presentation
- 4:30 p.m.** **(221) Modular Physiological Control for Left Ventricular Assist Devices: A Clinical Pilot Trial**
Martin Maw, MSc, Medical Univ of Vienna, Vienna, Austria
- 4:40 p.m.** **Q&A**



3:15 p.m. – 4:45 p.m.

SESSION 68 (Symposium): HLA and Non-HLA Donor Specific Antibodies in Heart Transplantation: It is Time to Look for The Forest Beyond The Trees

Location: Ballroom A

Primary Core Therapy: HEART

Primary Audience: Research and Immunology

Chairs: Georgina Waldman, PharmD, and María F Renedo, MD

Session Summary: Patients with preformed or de novo donor-specific antibodies (DSA) are frequently identified as high-risk patients. There is increasing interest in patients with non-HLA DSA but their significance, optimal management, and prognostic implications is unclear. This symposium will describe recent advances in monitoring, diagnosis, and emerging treatment options for patients with HLA and non-HLA DSA in a variety of clinical settings. A panel discussion with all speakers will conclude this session.

3:15 p.m.

Nuts and Bolts of HLA Donor-Specific and Non-HLA Antibodies—Past, Present and Future: from No Problem to Nightmare

Maria-Nieves Sanz, PhD, University Hospital of Bern, Bern, Switzerland

3:30 p.m.

Is it Time to Start Testing for Non-HLA Antibodies in Heart Transplantation?

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

Pre-recorded Presentation

3:45 p.m.

Main Considerations for Clinical Practice: Antibody Characteristics and Clinical Relevance

Javier Carbone, MD, PhD, Hospital General Universitario Gregorio Marañón, Madrid, Spain

Pre-recorded Presentation

4:00 p.m.

What's New in Immunologic Therapies for Highly Sensitized Candidates for Heart Transplant: The Who, When and How

Jill Krisl, PharmD, Houston Methodist, Houston, TX, USA

4:15 p.m.

Deep Dive on Current Concepts and Future Challenges: New Approaches to Management of HLA and Non-HLA DSA In Special Populations

Christine S. Falk, PhD, Hannover Medical School, Hannover, Germany

4:30 p.m.

Panel Discussion



3:15 p.m. – 4:45 p.m.

SESSION 69 (Oral): The Canary in the Coal Mine: Novel Indicators of CLAD Development

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Pulmonology

Chairs: Adrien Tissot, PhD, and Osnat Shtraichman, M.D

Session Summary: There is a need for novel approaches to predict, understand, and identify Chronic Lung Allograft Dysfunction (CLAD) at an early stage. This session will provide an update regarding potential indicators of Chronic Lung Allograft Dysfunction (CLAD) development in the lung transplant recipient.

3:15 p.m. **(222) Prediction of Chronic Lung Allograft Dysfunction by Monitoring Serum KL-6 Levels**
Berta Saez-Gimenez, PhD, Vall d'Hebron Hosp, Barcelona, Spain

3:25 p.m. **Q&A**

3:30 p.m. **(223) Large Airway Bronchial Wash Lipidomics as Novel Biomarkers for Chronic Lung Allograft Dysfunction**
Miguel M. Leiva-Juarez, MD, MSE, Columbia Univ Irving Medical Ctr, New York City, NY, USA

3:40 p.m. **Q&A**

3:45 p.m. **(224) Upper Tract Microbiome Modifications After Lung Transplantation and Its Impact in CLAD**
Manuel López-Meseguer, MD, PhD, Hosp Univri Vall d'Hebron (HUVH), Univ Autònoma de Barcelona (UAB), Barcelona, Spain

3:55 p.m. **Q&A**

4:00 p.m. **(225) Imaging Mass Cytometry for Detailed Cellular and Spatial Characterization of Chronic Lung Allograft Dysfunction (CLAD)**
Benjamin Renaud-Picard, MD, Toronto Lung Transplant Program, Univ Health Network, Toronto, Canada
Pre-recorded Presentation

4:15 p.m. **(226) The Percentage of Low Attenuation Area on Computed Tomography to Detect Chronic Lung Allograft Dysfunction After Bilateral Lung Transplantation**
Yujiro Kubo, M.D., Okayama Univ Hosp, Okayama, Japan
Pre-recorded Presentation

4:30 p.m. **(227) Chronic Lung Allograft Dysfunction with Expiratory Flow Limitation: A Novel Sub-Phenotype Associated with Increasing Small Airway Resistance and CLAD Severity**
David R. Darley, MBBS, BSc (Hons), FRACP, St Vincent's Hosp Sydney, Univ of New South Wales, Sydney, Australia

4:40 p.m. **Q&A**



3:15 p.m. – 4:45 p.m.

SESSION 70 (Oral): Little Patients with Big Hearts Need Our Support: MCS in Pediatrics

Location: Room 210

Primary Core Therapy: MCS

Primary Audience: Pediatrics

Chairs: David Peng, MD and Jodie Lantz, MSN, RN, PCNS-BC

Session Summary: This wide-ranging session will cover timely and important issues in pediatric MCS including health equity, paracorporeal continuous flow outcomes, remote monitoring, allocation policy, ECMO to VAD outcomes, and end-of-life care.

- 3:15 p.m.** **(228) *Impact of the 2016 Organ Procurement and Transplantation Network (OPTN) Pediatric Heart Allocation Policy Change on Use of Durable Ventricular Assist Devices and Heart Transplantation Rates in Children with Congenital Heart Disease versus Cardiomyopathy***
Bibhuti B. Das, MD, Children's Hosp of Mississippi, Univ of Mississippi Medical Ctr, Jackson, MS, USA
Pre-recorded Presentation
- 3:30 p.m.** **(229) *Perioperative Morbidity and Outcomes of Transitioning from ECMO to VAD Support in Pediatric Patients: A STS Study***
Shriprasad R. Deshpande, MD, MS, Children's Natl Hosp, Washington, DC, USA
- 3:40 p.m.** **Q&A**
- 3:45 p.m.** **(230) *Continuous Flow Paracorporeal Support in Children: A Single Center Experience***
David L. Sutcliffe, Medical Doctor, Children's Mercy Hosp, Kansas City, MO, USA
- 3:55 p.m.** **Q&A**
- 4:00 p.m.** **(231) *Ventricular Assist Devices Are Underutilized in Female Children***
Tanya Perry, MD, Cincinnati Children's Hosp, Cincinnati, OH, USA
- 4:10 p.m.** **Q&A**
- 4:15 p.m.** **(232) *Remote Monitoring of Pediatric VAD Patients: Early Recognition for Improved Management***
Sydney Carrington, RN, BSN, Children's Health Dallas, Dallas, TX, USA
- 4:25 p.m.** **Q&A**
- 4:30 p.m.** **(233) *End of Life in Children on Mechanical Circulatory Support***
Desiree Machado, MD, Shands Hosp, Univ of Florida, Gainesville, FL, USA
Pre-recorded Presentation
- 4:40 p.m.** **Q&A**



5:00 p.m. – 6:00 p.m.

MINI ORAL 13: Mystifying Mini Microbes in Heart Transplantation

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Infectious Diseases

Chairs: Nancy Law, DO, MPH, and Jonathan Hand, MD

Session Summary: This session features abstracts covering bacterial, fungal, and viral infections, including SARS-CoV-2, in patients with heart failure and after heart transplantation.

- 5:00 p.m.** **(396) *Effect of COVID-19 Infection on HeartCare, Data from the SHORE Multicenter Registry***
Megan Kamath, MD, Ronald Reagan UCLA Medical Ctr, Los Angeles, CA, USA
Pre-recorded Presentation
- 5:06 p.m.** **(397) *Outcomes of COVID-19 in an Advanced Heart Failure Practice: A Single Center Study***
Luke C. Cunningham, MD, INTEGRIS Baptist Medical Ctr, Oklahoma City, OK, USA
- 5:10 p.m.** **Q&A**
- 5:12 p.m.** **(398) *Role of Immunosuppression on Efficacy of Anti-SARS-CoV-2 Vaccines in Heart Transplanted (HT) Patients***
Marco Masetti, MD, PhD, Heart Failure and Heart Transplant Unit, IRCCS Policlinico S.Orsola-Malpighi, Bologna, Italy
- 5:16 p.m.** **Q&A**
- 5:18 p.m.** **(399) *Large Variation in Heart Transplant Selection Practices During the COVID-19 Pandemic***
Ben Sadeh, MD, Univ of Utah Sch of Med, Salt Lake City, UT, USA
- 5:22 p.m.** **Q&A**
- 5:24 p.m.** **(400) *Mucormycosis After Heart Transplantation: A Single Center Experience***
Sara Hockney, MD, Northwestern Univ Feinberg Sch of Med, Chicago, IL, USA
Pre-recorded Presentation
- 5:30 p.m.** **(401) *COVID-19 Vaccination Motivation and Hesitancy in Heart Transplant Recipients During a Global Health Crisis***
Kari L. Mohney, BSN, RN, CCTC, Allegheny Health Network, Pittsburgh, PA, USA
- 5:34 p.m.** **Q&A**
- 5:36 p.m.** **(402) *Transplant Recipient Characteristics in COVID vs Non COVID Cause of Death***
Daniel Aldea, MD, Univ of Southern California, Los Angeles, CA, USA
Pre-recorded Presentation
- 5:42 p.m.** **(403) *6 vs 12 Month CMV Prophylaxis in CMV-Mismatched Heart Transplants***
Roy Lee, PharmD, Stanford Health Care, Stanford, CA, USA
Pre-recorded Presentation
- 5:48 p.m.** **(404) *Intravenous Immunoglobulin is Associated with Lower Rates of Reinfection in Solid Organ Recipients with Infection and Secondary Antibody Deficiency: A Multicenter Randomized Clinical Trial***
Javier Carbone Prof., PhD, Hosp General Univrio Gregorio Marañon, Madrid, Spain
Pre-recorded Presentation
- 5:54 p.m.** **(405) *Risk Factors for Invasive Fungal Infections in Heart Transplant Recipients***
Leana Frankul, Master of Clinical Research, UC San Diego, La Jolla, CA, USA
Pre-recorded Presentation



5:00 p.m. – 6:00 p.m.

MINI ORAL 14: Translational Science, Immunology, and Inflammation in Lung Transplantation

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Research and Immunology

Chairs: Daniel Kreisel, MD, PhD, and Daniel Calabrese, MD

Session Summary: This session will present novel translational research to advance understanding of the mechanisms of lung injury, Chronic Lung Allograft Dysfunction (CLAD), and acute kidney injury after lung transplantation.

- 5:00 p.m.** (406) *Donor B Cells Alter Donor Neutrophil Behaviour and Protect from Lethality During Lung Allograft Reperfusion in Mice*
Mitsuaki Kawashima, MD, PhD, Toronto General Hosp Res Inst, Toronto, Canada
- 5:04 p.m.** Q&A
- 5:06 p.m.** (407) *miRNA and mRNA Interaction in Circulating Exosomes from Patients with Primary Graft Dysfunction After Lung Transplantation*
Lourdes Chacon Alberty, MD, Texas Heart Inst, Houston, TX, USA
Pre-recorded Presentation
- 5:12 p.m.** (408) *Mechanisms of Action of Extracorporeal Photopheresis in the Control of BOS: Involvement of Circulating miRNAs*
Sara Bozzini, PhD, IRCCS Policlinico San Matteo, Pavia, Italy
Pre-recorded Presentation
- 5:18 p.m.** (409) *Lung Transplant Recipients Developing Early DSAs within the First Month Are Characterized by a Higher Frequency of Naïve and a Lower Frequency of Memory B Cells*
Louisa Ruhl, M. Sc., Hannover Medical Sch, Hannover, Germany
- 5:22 p.m.** Q&A
- 5:24 p.m.** (410) *Fibrosis of Chronic Lung Allograft Dysfunction After Orthotopic Lung Transplantation is Prevented in the Absence of Secondary Lymphoid Organs in a Mouse Model*
Katsutaka Mineura, MD, Kyoto Univ Graduate Sch of Med, Kyoto, Japan
Pre-recorded Presentation
- 5:30 p.m.** (411) *Impaired CD8+ T Cell Proliferation to Alloantigens in Lung Transplant Recipients with Idiopathic Pulmonary Fibrosis is Associated with P53 Upregulation*
John R. Greenland, MD, PhD, U. California SF, San Francisco, CA, USA
- 5:34 p.m.** Q&A
- 5:36 p.m.** (412) *LKB1 Knockdown Triggered PDGFR β Signaling Leading to Fibrosis and Development of Chronic Lung Allograft Dysfunction*
Mohammad Rahman, PhD, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
Pre-recorded Presentation
- 5:42 p.m.** (413) *Transcriptional Landscape of Chronic Lung Allograft Rejection in Humans*
Gregory Berra, MD, Univ Health Network, Toronto, Canada
Pre-recorded Presentation
- 5:48 p.m.** (414) *Circulating Coagulation Regulator Levels After Lung Transplantation Are Associated with Acute Kidney Injury*
Katie Manrique, MS, Perelman Sch of Med, Univ of Pennsylvania, Philadelphia, PA, USA
- 5:52 p.m.** Q&A
- 5:54 p.m.** (415) *Plasma Neutrophil Gelatinase-Associated Lipocalin to Predict Acute Kidney Injury After Lung Transplantation: A Multicenter Cohort Study*
Stephen Griffiths, BS, Perelman Sch of Med, Univ of Pennsylvania, Philadelphia, PA, USA
Pre-recorded Presentation



5:00 p.m. – 6:00 p.m.

MINI ORAL 15: A Little Trouble, A Little Support? Short Term MCS to The Rescue

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiothoracic Surgery

Chairs: Ashley Fritz, DO, and Leslie Miller, MD

Session Summary: Never underestimate short-term extracorporeal life support! From salvage, to rescue, to stabilization, to optimization, these devices may lack the sophistication of the latest artificial heart but they always punch above their weight. This session will cover the broad uses of temporary MCS and challenge you to consider more!

- 5:00 p.m.** **(416) Ambulation in Veno-Arterial-Venous (VAV) Cannulation for ECMO Support in COVID-19 Related ARDS with Right Ventricular Failure**
Sinal Patel, M.D., Cleveland Clinic Florida, Weston, FL, USA
- 5:04 p.m.** **Q&A**
- 5:06 p.m.** **(418) Outcomes by Severity of Obesity During Extracorporeal Membrane Oxygenation Support for COVID-19**
Muhammad Farooq, MD, Montefiore Medical Ctr, Albert Einstein Coll of Med, Bronx, NY, USA
- 5:10 p.m.** **Q&A**
- 5:12 p.m.** **(419) Intermediate (One-Year) Outcomes of Cardiogenic Shock Patients Supported by ECMO Due to Decompensated Heart Failure and Acute Myocardial Infarction**
Milena Jani, MD, Spectrum Health, Grand Rapids, MI, USA
Pre-recorded Presentation
- 5:18 p.m.** **(420) Multicenter Study on Sex-Based Differences in Patients Placed on Extracorporeal Life Support for Cardiogenic Shock**
Amy S. Wang, BS, Columbia Univ, New York, NY, USA
Pre-recorded Presentation
- 5:24 p.m.** **(421) Combining VA-ECMO and Impella (EC-Pella) Before Reperfusion Mitigates Left Ventricular Injury Due to VA-ECMO in Acute Myocardial Infarction**
Kay D. Everett, MD, PhD, Tufts Medical Ctr, Boston, MA, USA
- 5:28 p.m.** **Q&A**
- 5:30 p.m.** **(422) Cost and Effects of Left Atrial Venous Drainage Cannula Placement in Veno-Arterial ExtraCorporeal Membrane Oxygenation (LAVA ECMO) via Transeptal Puncture for Left Heart Decompression**
Aurelie Merlo, MD, Univ of North Carolina, Chapel Hill, NC, USA
- 5:34 p.m.** **Q&A**
- 5:36 p.m.** **(423) How Does a Protocolized Therapeutic Framework Improve Survival in Cardiogenic Shock Due to End-Stage Heart Failure?**
Sern Lim, MD, Univ Hosp Birmingham NHS Fndn Trust, Birmingham, United Kingdom
- 5:40 p.m.** **Q&A**
- 5:42 p.m.** **(424) 'Long-Term' Use of Impella - Safe to Do?**
Charlotte Zeschky, MD, Royal Brompton and Harefield Hosp as part of Guys and St Thomas Fndn Trust, London, United Kingdom
Pre-recorded Presentation
- 5:48 p.m.** **(425) Extracorporeal Membrane Oxygenation as a Bridge to Total Artificial Hearts**
Akbarshakh Akhmerov, M.D., Cedars-Sinai Medical Ctr, Los Angeles, CA, USA
Pre-recorded Presentation



5:00 p.m. – 6:00 p.m.

MINI ORAL 16: Good, Better, Best - Never Let it Rest: MCS Patient Optimization and Myocardial Recovery
Location: Ballroom A

Primary Core Therapy: MCS
Primary Audience: Cardiology

Chairs: Michael G. Petty, PhD, RN, CNS, and Cumara C Sivathasan, MBBS, FRCS

Session Summary: This session will focus on how MCS patients can be optimized (hemodynamically) in the long term and potentially achieve myocardial recovery.

- 5:00 p.m. **(426) Sternal Precautions After LVAD Implantation: Are We Overdoing It?**
Aditya Bansal, MD, Ochsner Clinic Fndn, New Orleans, LA, USA
- 5:04 p.m. **Q&A**
- 5:06 p.m. **(427) Persistent Iron Deficiency and Dysregulated Hcpidin Levels After LVAD Therapy**
Van-Khue Ton, MD, PhD, Massachusetts General Hosp, Boston, MA, USA
- 5:10 p.m. **Q&A**
- 5:12 p.m. **(428) Does Hemoglobin A1c Accurately Depict Diabetic Control in LVAD Patients?**
Sarah Schettle, PA-C, Mayo Clinic, Rochester, MN, USA
- 5:16 p.m. **Q&A**
- 5:18 p.m. **(429) Pre-Transplant Mechanical Ventilation Impacts Post-Transplant Survival in Infants at the Same Rate, with or without Ventricular Assist Devices**
Alia Dani, MD MPH, Cincinnati Children's Hosp Medical Ctr, Cincinnati, OH, USA
- 5:22 p.m. **Q&A**
- 5:24 p.m. **(430) Impact of Left Ventricular Unloading Under Circulatory Support with Venoarterial ECMO in Heart Failure Animal Model**
Masahiko Fujii, M.D, Natl Cerebral and Cardiovascular Ctr, Osaka, Japan
- 5:28 p.m. **Q&A**
- 5:30 p.m. **(431) Excellent Long-Term Survival After Weaning from Durable Ventricular Assist Device**
Minoru Ono, MD, PhD, The Univ of Tokyo Hosp, Tokyo, Japan
- 5:34 p.m. **Q&A**
- 5:36 p.m. **(432) Evidence of Inotropic Improvement in LVAD Patients with High I-CARS Score**
Aaron Gunawan, BMed (Hons)/MD, St Vincent's Hosp, Darlinghurst, Australia
Pre-recorded Presentation
- 5:42 p.m. **(433) LVAD OPTIMIZE Clinic Improves Medication Use and Reduces Hospitalizations Post-Implant**
Scott Lundgren, DO MS, Univ of Nebraska Medical Ctr, Omaha, NE, USA
- 5:46 p.m. **Q&A**
- 5:48 p.m. **(434) Unique Findings of Myocardial Improvement with Lower Left Ventricular Assist Device Pump Speed**
Aaron Gunawan, BMed (Hons)/MD, St Vincent's Hosp, Darlinghurst, Australia
Pre-recorded Presentation
- 5:54 p.m. **(435) Use of Left Ventricular Assist Device Hemodynamic Ramp Studies to Assess Heart Recovery and Device Complications**
Alexander Hajduczuk, MD, Thomas Jefferson Univ, Philadelphia, PA, USA
- 5:58 p.m. **Q&A**



5:00 p.m. – 6:00 p.m.

MINI ORAL 17: Lung Donor Selection, Management, and Allocation

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Cardiothoracic Surgery

Chairs: Yaron D. Barac, MD, PhD, and Daniel F Dilling, MD

Session Summary: This session will consider innovations in donor lung procurement, assessment and allocation, and will review options to expand the use of lungs historically considered unsuitable for transplantation.

- 5:00 p.m.** **(436) Adult Lung Transplantation from Donation After Circulatory Death Donors: Safety and Outcomes Utilizing the UNOS / OPTN Registry**
John P. Skendelas, MD, Montefiore Medical Ctr, Bronx, NY, USA
- 5:04 p.m.** **Q&A**
- 5:06 p.m.** **(437) A 20-Year Retrospective Analysis Shows Differential Predictors in Lung Procurement Between DCD and DBD Donors**
J. Sam S. Meyer, BA, MSc., Rabin Medical Ctr and Tel Aviv Univ, Petah Tikva, Israel
- 5:10 p.m.** **Q&A**
- 5:12 p.m.** **(438) The Complete Score for Comprehensive Evaluation of Donor Lungs in Ex-Vivo Lung Perfusion: An Approach for Optimizing the Outcomes of Transplantation**
Kamal S. Ayyat, MD., PhD., Cleveland Clinic, Cleveland, OH, USA
- 5:16 p.m.** **Q&A**
- 5:18 p.m.** **(439) Lung Thermography as an Early Predictor of Pulmonary Function in Cellular Ex Vivo Lung Perfusion**
Ryo Kosaka, PhD, Natl Inst of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki, Japan
Pre-recorded Presentation
- 5:24 p.m.** **(440) Randomized Trial of Protective Lung Ventilation in Organ Donors**
Lorraine B. Ware, MD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA
- 5:28 p.m.** **Q&A**
- 5:30 p.m.** **(441) First North American Experience with Lung Transplantation from Donation After Medical Assistance in Dying**
Tatsuaki Watanabe, MD. PhD., Toronto Lung Transplant Program, Univ Health Network, Toronto, ON, Canada., Toronto, Canada
Pre-recorded Presentation
- 5:36 p.m.** **(442) Lung Transplantation from Donors with a History of Substance Use**
David Li, BSc, Univ of Alberta, Edmonton, Canada
- 5:40 p.m.** **Q&A**
- 5:42 p.m.** **(443) Using Donor Lungs ≥ 70 Years of Age for Transplantation - Do Long-Term Outcomes Justify the Use?**
Wiebke Sommer, MD, Heidelberg Univ, Heidelberg, Germany
- 5:46 p.m.** **Q&A**
- 5:48 p.m.** **(444) Donor Age and Recipient-Donor Sex and Height Mismatch Are Associated with Abnormal Pulmonary Reactance (X_5) in Stable Recipients After Bilateral Lung Transplantation**
David R. Darley, MBBS, BSc (Hons), FRACP, St Vincent's Hosp Sydney, Univ of New South Wales, Sydney, Australia
- 5:52 p.m.** **Q&A**
- 5:54 p.m.** **(445) A Conceptual Model for Sources of Selection Bias in Lung Transplant Allocation**
Erin Schnellinger, MS, Univ of Pennsylvania Perelman Sch of Med, Philadelphia, PA, USA
- 5:58 p.m.** **Q&A**



5:00 p.m. – 6:00 p.m.

MINI ORAL 18: Heart and Beyond: Home, Jobs, Waitlists, and More

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Maxime Tremblay-Gravel, MD, MSc, and Daniel Zimpfer, MD

Session Summary: The varied day-to-day aspects of advanced heart failure and its therapies are diverse. The research highlighted in this session addresses the real life, daily impact and management challenges of advanced heart failure and transplantation.

5:00 p.m. (446) **Status Exception Use in the New Heart Allocation System: Identifying Inequalities in Allocation**; Alejandro Plana, MD, Univ of Chicago, Chicago, IL, USA

5:04 p.m. Q&A

5:06 p.m. (448) **Prognostic Implications of Delirium After Left Ventricular Assist Device (LVAD) Implantation: A Retrospective Study**

Yasmine White, Medical student, Georgetown Univ, Washington, DC, USA

Pre-recorded Presentation

5:10 p.m. Q&A

(Co-author Paul Noufi will answer questions live)

5:12 p.m. (449) **Palliative Outcomes in Patients with Left Ventricular Assist Devices and Active Malignancies**

Huzaifa Ahmad, MBBS, Georgetown Univ/MedStar Washington Hosp Ctr, Washington, DC, USA

Pre-recorded Presentation

5:18 p.m. (450) **Reduction in 90 Day Readmission Rates with Ambulatory Pulmonary Artery Pressure Monitoring**

Ali A. Valika, MD, Advocate Good Samaritan Hosp, Downers Grove, IL, USA

5:22 p.m. Q&A

5:24 p.m. (451) **Pulmonary Artery Pressures During Cardiopulmonary Exercise Testing Using Cardiomems**

Heidi Lumish, MD, Columbia Univ Medical Ctr, New York, NY, USA

5:28 p.m. Q&A

5:30 p.m. (452) **Acceptability of Mobile Directly Observed Therapy for Immunosuppression Medication Adherence in Adolescent Heart Transplant Recipients**

Dipankar Gupta, MD, Univ of Florida, Gainesville, FL, USA

5:34 p.m. Q&A

5:36 p.m. (453) **Pharmacist Expansion to Tele-Health Visits in Heart Transplant Clinic**

Erin Supko, PharmD Candidate, Massachusetts General Hosp, Boston, MA, USA

5:40 p.m. Q&A

5:42 p.m. (454) **Post-Heart Transplant Employment: Rates, Predictors, and Interventions**

Milena Casciato, BSc, Univ of Toronto, Toronto, Canada

Pre-recorded Presentation

5:48 p.m. (455) **Trends in Emergency Department Use and Hospital Mortality Among Heart Transplant Recipients in the United States**

Luise Holzhauser, MD, Univ of Pennsylvania, Philadelphia, PA, USA

5:52 p.m. Q&A



5:00 p.m. – 6:00 p.m.

POSTER SESSIONION 3

Poster Auditorium

Some posters are on-demand only (check Mobile App for status)

ANESTHESIOLOGY AND CRITICAL CARE

(1060) *The Ventilatory Equivalent for Carbon Dioxide Slope Independently Predicts Perioperative Outcomes in Patients Undergoing Heart Transplantation*; Dilip Jayasimhan, MBChB, Auckland District Health Board, Auckland, New Zealand

(1061) *A Prospective Randomized Trial Comparing Stroke Volume Measurements by Esophageal Doppler and Pulse-Contour Analysis During a Fluid Resuscitation Protocol in Brain-Dead Organ Donors*; Gary F. Marklin, MD, Mid-America Transplant, St Louis, MO, USA

(1062) *Volume Replacement Strategy with Albumin 5% and Bedside Coagulopathy Management Improves Cardiopulmonary Stability by Decreasing Norepinephrine Dosage and by Increasing P/F Ratio in Patients Undergoing Lung Transplantation (Preliminary Results)*; Jaromir Vajter, Dr., MD, Charles Univ, Prague, Czech Republic

(1063) *Mesenchymal Stem Cell Therapy for Patients with Post COVID ARDS on ECMO Referred for Lung Transplantation - Single Center Experience from India*; Vijil Rahulan, MD, FACP, FCCP, AB(IM, Pulmonary Critical Care), Krishna Inst of Medical Sciences, Hyderabad, Telangana, India

(1064) *Incidence, Outcomes and Predictors of Early Postoperative Vasoplegia in Lung Transplantation: Experience from a 6-Year Period*; Alessandra Verzelloni Sef, MD, Harefield Hosp, Royal Brompton & Harefield Hosp, London, United Kingdom

(1065) *Evaluation of Diaphragmatic Function After Lung Transplantation (DIATRIBE)*; Francois Stephan, MD, PhD, Hop Marie Lannelongue, Le Plessis Robinson, France

(1066) *The Effects of Early Postoperative Nutrition Support on Enhanced Recovery After Lung Transplantation*; Masaki Ikeda, MD, Kyoto Univ Graduate Sch of Med, Kyoto, Japan

(1067) *Outcome of Redo Transplantation Compared to First Lung Transplantation in a Cystic Fibrosis Cohort*; Julien Fessler, M.D., Foch Lung Transplant Team, Suresnes, France

(1068) *Addressing Diaphragm Dysfunction in Lung Transplant Recipients: The Expanding Role of Diaphragm Pacing*; Raymond Onders, MD, Univ Hosp Cleveland Medical Ctr, Cleveland, OH, USA

(1069) *Forty-Four Oxygenator Exchanges in Patients Under ECMO: Experience of a Single Center*; Francois Stephan, MD, PhD, Hop Marie Lannelongue, Le Plessis Robinson, France

(1070) *Bivalirudin Anticoagulation in Extracorporeal Membrane Oxygenation (ECMO) for Severe Coronaviral Disease (COVID-19) Related Acute Respiratory Distress Syndrome (ARDS)*; Sharanya Kumar, MD, KIMS, Hyderabad, India

(1071) *Upgrade to Central Extracorporeal Life Support for Salvage of Left Main Occlusion-Induced Cardiogenic Shock*; Naoki Tadokoro, Dr, Natl Cerebral and Cardiovascular Ctr, Suita, Japan

(1072) *Prone Positioning Under ECMO: A Retrospective Cohort of 34 Patients*; Francois Stephan, MD, PhD, Hop Marie Lannelongue, Le Plessis-Robinson, France

(1073) *VAD Support of High-Risk Infants with HLHS: Comparison of Rescue VAD After Prior Palliation versus Primary VAD Insertion*; Joseph Philip, MD, Univ of Florida, Gainesville, FL, USA

(1075) *Parvovirus B19: A Potential Cause of Refractory Leukopenia in Lung Transplant Recipients*; Deepika Razia, MBBS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA



(1076) Atypical HUS in a Lung Transplant Recipient with Salmonellosis; Tarek Amoun, MD, Robert Wood Johnson Barnabas Health System, Newark, NJ, USA

(1077) Rare Immune Dysregulatory Disorder Leading to Lung Transplantation; Esther Neukomm. Hope, Dr. med, Oslo Univ Hosp, Rikshospitalet, Oslo, Norway

(1078) It's a Long Road to Transplant: A Case of Prolonged ECLS Use as a Bridge to HLT; Sean Hickey, MD, Univ of California Los Angeles, Los Angeles, CA, USA

CARDIOLOGY (HEART)

(1079) Short Term Outcomes in Case Series of 21 Congenital Heart Disease Recipients of Heart or Dual-Solid Organ Transplants; Quan M. Bui, MD, UCSD, San Diego, CA, USA

(1080) Hypogammaglobinemia in Patients Palliated with the Fontan Circulation: Implications for Cardiac Transplantation; Emily A. Margolin, MD, UC San Diego, San Diego, CA, USA

(1081) Prediction of 1-Year Mortality After Heart Transplantation in Adults with Congenital Heart Disease with Machine Learning Models; Polydoros Kampaltsis, MD, Columbia Univ Irving Medical Ctr, New York, NY, USA

(1082) Single Ventricle Assist Device: A Viable Option in Fontan Circulatory Failure; Sarah E. Fahnhorst, DO, Cincinnati Children's Hosp Medical Ctr, Cincinnati, OH, USA

(1083) Heart Transplantation in Adult Congenital Patients Performed at a Pediatric Center: An Institutional Experience; Sabena Hussain, MD, Riley Hosp for Children, Indianapolis, IN, USA

(1084) Is ATG Induction with Delayed Initiation of CNI Protective of Renal Function in Patients with Mild Renal Insufficiency?; Nikhil Patel, B.S., Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA

(1085) Impact of Treatment Strategies and Hemodynamics on Kidney Function After Heart Transplantation; Hanno Grahn, PHD, Univ Heart and Vascular Ctr Hamburg, Hamburg, Germany

(1086) Vasoplegia Scoring System: Classifying a Poorly Defined Syndrome Following Heart Transplantation; Madeleine Pearman, B.N, St Vincent's Hosp, Sydney, Australia

(1087) Implication of Mineralocorticoid Receptor Antagonist Esaxerenone in Patients with HFpEF; Teruhiko Imamura, MD, PhD, Univ of Toyama, Toyama, Japan

(1088) Treatment and Outcome of AL Amyloid After Heart Transplantation: Is It Viable?; Seong Kim, B.S., Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA

(1089) Triglyceride-Glucose Index as a Potential Marker for the Development of Heart Failure in Healthy Adults; Yael Peled, MD, Sheba Medical Ctr and Tel Aviv Univ, Ramat Gan, Israel

(1090) Progression Trajectories of Glomerular Filtration Rate Are Associated with Heart Transplantation Outcomes; Yael Peled, MD, Sheba Medical Ctr and Tel Aviv Univ, Ramat Gan, Israel

(1091) Prevalence of Clinical Events Following High Donor Derived Cell Free DNA in the Absence of Rejection in Heart Transplant Recipients; Andrew Kao, MD, St Lukes Hosp, Kansas City, MO, USA

(1092) Don't Take Another Piece of My Heart: Substantial Reduction in Biopsies with Initiation of Non-Invasive Rejection Surveillance at One Month Post-Transplant; Erik Henriksen, PharmD, Stanford Health Care, Stanford, CA, USA

(1093) Dose Response Relationship of RAS Blockers and Beta-Blockers in Patients with Acute Heart Failure Syndrome: A Nationwide Prospective Cohort Study, on Behalf of KorAHF Investigators; Kyung An Kim, MD, Seoul St. Mary's Hosp, The Catholic Univ of Korea, Seoul, South Korea



- (1094) Predicting 1-Year Mortality in Ambulatory Heart Failure Patients: Empiric Models Outperform Physician Intuitive Estimates;** Ana Carolina Alba, MD, Toronto General Hosp, Toronto, Canada
- (1095) Interpretation of Hemodynamic Catheterization Data by Years of Experience: An International Survey of Cardiologists;** Rohan Goswami, MD, Mayo Clinic, Jacksonville, FL, USA
- (1096) Hemodynamic Implications of Sildenafil in Candidates for Heart Transplantation with Group 2 Pulmonary Hypertension: A Single Latin-American Center Registry;** Elian Giordanino, MD, Favaloro Fndn Univ Hosp, Buenos Aires, Argentina
- (1097) Is Absolute Change in AlloMap More Informative Than Absolute Value?;** Sean Pinney, MD, Univ of Chicago, Chicago, IL, USA
- (1098) Bedside Ultrasound of Internal Jugular Vein for Right Ventricular Function Assessment;** Benjamin Stoner, MD, Univ of Kentucky, Lexington, KY, USA
- (1099) Right Ventricular Free Wall Strain RVFWS as a Predictor of Outcome in Heart Transplantation Patients with COVID19 Disease;** Justyna Malyszczek Tumidajewicz, MD PhD, Silesian Ctr for Heart Diseases, Zabrze, Poland
- (1100) Does Anticholinergic Effect of Heart Failure Medications Contribute to Cognitive Dysfunction?;** Catherine Murks, PhD, APN, Univ of Chicago, Chicago, IL, USA
- (1101) Clinical Decision Support to Identify Care Gaps and Improve Efficiency of Health Maintenance Documentation for Heart Transplant Recipients;** Anita Kelkar, MD, MPH, Wake Forest Univ Baptist Medical Ctr/Atrium Health, Winston Salem, NC, USA
- (1102) Multimodality Approach for Surveillance of Cardiac Sarcoidosis After Heart Transplantation Based on a Case Series;** Luana Campoli Galbiati, MD, Heart Inst / Univ of Sao Paulo, Sao Paulo, Brazil
- (1103) Early Use of Donor Derived Cell-Free DNA (dd-cfDNA) in Heart Transplantation;** Daniel J. Miklin, MD, Univ of Southern California, Los Angeles, CA, USA
- (1104) Characteristics of Methamphetamine Associated Cardiomyopathy at a Tertiary Clinical Center in Hawaii;** Todd Nagamine, MD, Univ of Hawaii, Honolulu, HI, USA
- (1105) Is Donor Smoking Truly a Risk Factor for the Development of Cardiac Allograft Vasculopathy?;** Angela Velleca, MHDS, BSN, RN, CCTC, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (1106) When is Significant Left Ventricular Hypertrophy Acceptable for Donor Heart Selection;** Nikhil Patel, B.S., Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- (1107) Lower Incidence of Postoperative Atrial Arrhythmia After Prophylactic Donor Heart Tricuspid Annuloplasty in Orthotopic Heart Transplantation;** Supanee Siphurmsukskul, MD, Hartford Healthcare Heart and Vascular Inst, Hartford, CT, USA
- (1108) Increased Drug Intoxications Seen in Heart Transplant Donors During COVID-19 Pandemic;** Vidang Nguyen, MD, Providence Heart Inst, Portland, OR, USA
- (1109) Expanding the Diagnosis of Familial Dilated Cardiomyopathy among Heart Transplant Recipients with a Screening Instrument;** Laura Hastenteufel, MD, Hosp de Clinicas de Porto Alegre, Porto Alegre, Brazil
- (1110) LIVE Procedure - A Bespoke Technique for Ischemic Heart Failure;** Thorsten Hanke, MD, Asklepios Klinikum Harburg, Hamburg, Germany
- (1111) Impact of Length of Diabetes in Donor Hearts on Post-Transplant Survival;** Emily S. Lee, MD, USC Keck Medical Ctr, Los Angeles, CA, USA



- (1112) Rethinking the Impact of Donor eGFR on Heart Transplant Outcomes;** Vivek Singh, MD, Keck Med of USC, Los Angeles, CA, USA
- (1113) Evolution of Kidney Disease in Single Ventricle Patients After Cardiac Transplantation;** Regina Lam, Bachelor of Arts, Mayo Clinic Sch of Med, Scottsdale, AZ, USA
- (1114) Relationship of NT-proBNP to All-Cause Death and Heart Transplant in Children with Ventricular Dysfunction and Compared to Adults with Heart Failure;** Joseph W. Rossano, MD, The Children's Hosp, Philadelphia, PA, USA
- (1115) Elevated Aortic Stiffness After Pediatric Heart Transplantation;** John Anthony Coppola, MD, Univ of Florida, Gainesville, FL, USA
- (1116) Utility of AlloMap® Scores in Younger Pediatric Heart Transplant Recipients;** Laura D'Addese, MD, Joe DiMaggio Children's Hosp, Hollywood, FL, USA
- (1117) Non-Invasive Surveillance for Cardiac Allograft Rejection Using an Echocardiographic Rejection Score in Pediatric Heart Transplant Recipients;** Laura D'Addese, MD, Joe DiMaggio Children's Hosp, Hollywood, FL, USA
- (1118) Nutritional Status and Risk of Obesity and Metabolic Syndrome in Pediatric Patients After Heart Transplantation;** Jordan Sill, MD, Cincinnati Children's Hosp Medical Ctr, Cincinnati, OH, USA
- (1119) Effect of Donor Age on Posttransplant Mortality in Pediatric Heart Transplant Recipients: A 10-Year Nationwide Cohort Study;** Richard Dorent, MD, Agence de la Biomédecine, Saint Denis La Plaine, France
- (1120) Can Heart Allografts Protect Simultaneous Kidney Allografts from Antibody Injury?;** Xiaohai Zhang, PHD, Cedars-Sinai Medical Ctr, Los Angeles, CA, USA
- (1121) Donor Specific Allo-Antibody is Significantly Associated with Variability in Donor-Derived Cell-Free DNA Scores in Adult Heart Transplant Recipients;** Michelle J. Hickey, PhD, David Geffen Sch of Med at UCLA, Los Angeles, CA, USA
- (1122) Antibody Mediated Rejection in Pediatric Heart Transplantation: Should We Re-Biopsy Sooner or Later?;** Jessie Yester, MD, PhD, Texas Children's Hosp, Houston, TX, USA
- (1123) Photopheresis in Antibody Mediated Rejection: A Single Center Experience;** Christopher B. Link, MD, Allegheny Health Network, Pittsburgh, PA, USA
- (1124) Assessment of Acute Cellular Rejection by Global Longitudinal Strain and Cardiac Biomarkers in Heart-Transplanted Patients;** Tor Skibsted. Clemmensen, MD, PhD, Aarhus Univ Hosp, Aarhus, Denmark
- (1125) Defining the Normal Values for Left Ventricular Global Longitudinal Strain in Adult Heart Transplanted Patients;** Nikhil V. Sikand, MD, NYU Langone Health, New York, NY, USA
- (1126) Acute Cellular Rejection at Long-Term Follow-Up After Heart Transplantation: A Single Center Experience in Japan;** Yasumasa Tsukamoto, MD, PhD, Natl Cerebral and Cardiovascular Ctr, Suita, Japan
- (1127) Yield of Routine First Week Biopsy After Heart Transplantation;** Assi Milwidsky, MD, Montefiore Medical Ctr, New York, NY, USA
- (1128) Early Mammalian Target of Rapamycin Inhibitor Utilization After Heart Transplantation: Analysis of the UNOS Database;** Ernesto Anibal Ruiz Duque, MD, Univ of Iowa, Iowa City, IA, USA
- (1129) Acute 2R Cellular Rejection on Routine Surveillance Endomyocardial Biopsy is Not Associated with Significant Hemodynamic Changes on Right Heart Catheterization;** Adil Yunis, MD, Corrigan Minehan Heart Ctr, Massachusetts General Hosp, Boston, MA, USA



(1130) A Case of Muscular Dystrophy with Dilated Cardiomyopathy: Do Not Forget Your Basics; Waleed Al-Darzi, MBBCh, Henry Ford Hosp, Detroit, MI, USA

(1132) A Closer Evaluation for Refractory Atrial Fibrillation with Heart Failure, a Case Report; Rozana Sadraldin, MBBS, Prince Sultan Cardiac Ctr, Riyadh, Saudi Arabia

(1133) The Role of 3D-Printing in a Case of Complex Congenital Heart Disease Undergoing Heart Transplantation; Alba Maestro Benedicto, MD, Inst de Recerca IIB Sant Pau, Barcelona, Spain

(1134) Combined Heart Kidney Transplantation in a Previous Heart Transplant Recipient with Pheochromocytoma and Monoclonal Gammopathy of Uncertain Significance; Lorenzo Rakesh. Sewanan, MD, PhD, Columbia Univ, New York, NY, USA

(1135) Utility of Intracardiac Echocardiography to Biopsy Cardiac Tumors; Mahwash Kassi, M.D., Houston Methodist Hosp, Houston, TX, USA

(1136) A Rare Case of ACE Inhibitor-Induced Intestinal Angioedema Presenting as a Delayed Complication in a Heart Transplant Recipient; Eiad Habib, MBBS, Mayo Clinic, Phoenix, AZ, USA

(1137) Heart and Lung Transplant for Mixed Connective Tissue Disease: Implications for Pre-Transplant Testing; Lucas K. Keyt, MD, Univ of California San Diego, San Diego, CA, USA

(1138) Improvement in Coronary Allograft Vasculopathy Following Treatment with a Regimen Including Extracorporeal Photophoresis in a Heart Transplant Recipient; Ersilia M. DeFilippis, MD, Columbia Univ Irving Medical Ctr, New York, NY, USA

(1139) Challenges of Treating Late Onset Severe Antibody Mediated Rejection Post Orthotopic Heart Transplant; Neasa Starr, MD, Mater Misericordiae Univ Hosp, Dublin, Ireland

(1140) Understanding the Limitations of Novel Artificial Intelligence: False Negative Molecular Microscope Diagnosis in Setting of Acute Rejection; Staci Michelle. McKean, Master of Science in Nursing, Baylor Scott & White Health, Dallas, TX, USA

(1141) Left Ventricular Assist Device Outflow Graft Obstruction Caused by Extrinsic Compression; Zackary Tushak, DO, Univ of Pittsburgh Medical Ctr, Pittsburgh, PA, USA

CARDIOLOGY (MCS)

(1142) Optimization of Left Ventricle Size After VAD Implantation Prevents Incidence of Cerebral Infarction; Ryo Ikeda, M.D., Tokyo Women's Medical Univ, Tokyo, Japan

(1143) Warfarin Discontinuation in Patients with HeartMate3 Left Ventricular Assist Device; Pujan Patel, MD, Emory Univ Sch of Med, Atlanta, GA, USA

(1144) Comparison of Outcomes Following Physician Directed Bolus vs. Strict Infusion Protocol of Tissue Plasminogen Activator for Thrombolytic Treatment of Pump Thrombosis; Julia Fattore, MBBS MD, St Vincent's Hosp Sydney, Darlinghurst, Australia

(1145) Safety of Once Daily Enoxaparin for Anticoagulation Bridging in Patients with HeartMate III Left Ventricular Assisted Device; Modar Alom, M.D., Baylor Univ Medical Ctr/The Heart Hosp Plano, Plano, TX, USA

(1146) Peri-Operative Warfarin Protocol to Decrease Length of Stay After Left Ventricular Assist Device Implantation; Laura Hencken, PharmD, Henry Ford Hosp, Detroit, MI, USA

(1147) Impact of Statins on the Incidence of Gastrointestinal Bleeding Events Among Patients with Continuous Flow Left Ventricular Assist Devices; Hala Halawi, PharmD, Houston Methodist Hosp, Houston, TX, USA



(1148) Increased Nocturnal Arterial Stiffness is Associated with a Higher Risk of Stroke in LVAD Patients; Francesco Castagna, MD, Columbia Univ Medical Ctr, New York, NY, USA

(1149) Determining Cause for Activated Partial Thromboplastin Time and Anti-Factor Xa Discordance in Mechanical Circulatory Support Patients on Heparin; Can Thromboelastogram Help?; Oksana Volod, MD, Cedars Sinai Medical Ctr, Los Angeles, CA, USA

(1150) Investigation of D-dimer as an Alternative Biomarker of Thrombosis in HeartMate 3 Recipients; Jessica Schultz, MD, Univ of Utah, Salt Lake City, UT, USA

(1151) Right Ventricular Failure and Left Ventricular Transmural Pressure as Predictors of Successful Left Ventricular Unloading in Patients with HM 3 CF-LVAD; Syed A. Ahsan, MD, Houston Methodist Hosp, Houston, TX, USA

(1152) Does Hemodynamic Response to Inotropes Predict Early Right Heart Failure After LVAD Implantation?; Nicole Hristakos, DO, Advocate Christ Medical Ctr, Oak Lawn, IL, USA

(1153) Machine Learning Defines Distinct Phenotypes of Patients Developing Post-LVAD RVF in a Multi-Institutional Retrospective Cohort; Salil Kumar, M.D., Houston Methodist Hosp, Houston, TX, USA

(1154) Adverse Events of Temporary Extracorporeal Right Ventricular Assist Devices Placed with Durable Left Ventricular Assist Devices; Vinay Raju, DO, Advocate Christ Medical Ctr, Oak Lawn, IL, USA

(1155) Outcomes of Impella RP in Cardiogenic Shock; Kanika P. Mody, MD, Hackensack Univ Medical Ctr, Hackensack, NJ, USA

(1156) Proportional Pulmonary Artery Pulse Pressure Identifies Hemodynamic Response to Impella: Conceptualization and Clinical Validation; Sern Lim, MD, Univ Hosp Birmingham NHS Fndn Trust, Birmingham, United Kingdom

(1157) Pulsatile Pressure Delivery of Continuous Flow LVAD is Speed Dependent and Markedly Reduced Relative to Heart Failure Patients; Andrew Rosenbaum, MD, Mayo Clinic, Rochester, MN, USA

(1158) Technical and Mechanical Problems and Failures of HeartMate II versus HeartMate 3: The Rotterdam Experience; Cornelis W. van der Heiden, B Eng, ErasmusMC, Rotterdam, Netherlands

(1159) Long-Term Safety and Durability of Novel Intra-Aortic Percutaneous Mechanical Circulatory Support Device; Jace Heuring, PhD, Procyron, Inc, Houston, TX, USA

(1160) Magnetic Static Force Evaluation of Active Magnetic Bearing for a Hemocompatibility Assessment Device: Numerical and Experimental Approach; Victor E. Tedesco V, M.S., Texas Heart Inst, Houston, TX, USA

(1161) Computational Investigation of Outflow Graft Variation Impact on Hemocompatibility Profile in LVADs; Mahwash Kassi, MD, Houston Methodist, Houston, TX, USA

(1162) Intravascular Volume Derangement and Value of Blood Volume Analysis in Stable Ambulatory Patients with Advanced Heart Failure Supported with Left Ventricular Assist Device; Dmitry Yaranov, MD, Baptist Memorial Hosp, Memphis, TN, USA

(1163) Do Temporary Mechanical Circulatory Support Devices Activate Sensitization Pathways in Patients Awaiting Heart Transplantation?; Tahli Singer-Englar, MS, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA

(1164) Clinical Impact of Computed Tomography Lung Density in Patients with Peripheral Extracorporeal Life Support Receiving Escalation of Mechanical Circulatory Support; Tasuku Hada, MD, Natl Cerebral and Cardiovascular Ctr, Osaka, Japan

(1165) Outcomes of Mobilization of Patients on Venous-Arterial Extracorporeal Membrane Oxygenation; Jerry Lipinski, MD, Univ of California San Diego, San Diego, CA, USA



(1166) Impella for Optimization in Patients with Renal Failure Requiring Left Ventricular Assisted Device Implantation; Mohammed Salih, M.D., Baylor Univ Medical Ctr/The Heart Hosp Plano, Plano, TX, USA

(1167) Microaxial Circulatory Support for Percutaneous Coronary Intervention: A Systematic Review and Meta-Analysis; Sophie A. Leon, B.A., Thomas Jefferson Univ, Philadelphia, PA, USA

(1168) Predicting Short-Term Mortality in ECMO-Supported Patients Secondary to Decompensated Heart Failure and Acute Myocardial Infarction Using Machine Learning; Renzo Y. Loyaga-Rendon, MD., PhD., Spectrum Health, Grand Rapids, MI, USA

(1169) Development of De-Novo Aortic Insufficiency in Patients with Durable Left Ventricular Assist Device Who Were Bridged from Impella Device; Scott M. Stewart, DNP, Hackensack Univ Medical Ctr, Hackensack, NJ, USA

(1170) Bridging INTERMACS Profile 1 Patients to Left Ventricular Assist Device: The Right Device, the Right Time, and the Best Surgical Approach; Milica Bjelic, MD, Univ of Rochester Medical Ctr, Rochester, NY, USA

(1171) Successful Thrombolytic Therapy in a Suspected Case of HeartMate 3 LVAD Thrombosis; Nurilign Bulcha, MD, MPH, Univ of Pennsylvania, Philadelphia, PA, USA

(1172) Heart Mate 3 Pump Thrombosis After Ventricular Tachycardia Ablation: Pushing the Boundaries of Hemocompatibility; Anthony J. Kanelidis, MD, Univ of Chicago, Chicago, IL, USA

(1173) Successful HeartMate III LVAD Implantation Despite Large Intra-Atrial Thrombus; Dominic Pinciotti, DO, Deborah Heart and Lung Ctr, Browns Mills, NJ, USA

(1174) Intractable Gastrointestinal Bleeding Events After Left Ventricular Assist Device Implantation; Tímea Teszák, MD, Semmelweis Univ Heart and Vascular Ctr, Budapest, Hungary

(1175) Intramural Great Vessel Lymphoma in a Patient with Left Ventricular Assist Device; Ayesha Azmeen, M.D, Univ of Nebraska Medical Ctr, Omaha, NE, USA

(1176) Aortic Root Thrombus Complicating Left Ventricular Assist Device Implantation; Rees Adomako, DO, MHS, Univ Of Nebraska Medical Ctr, Omaha, NE, USA

(1177) Hemolysis with a Ventricular Assist Device; Sometimes It is Not the Pump's Fault; Alexander Raskin, M.D., Children's Wisconsin, Milwaukee, WI, USA

(1178) Ventricular Assist Device (VAD) Implantation in a Patient with Complex Congenital Heart Disease (CHD); Edwin A. Homan, MD, PhD, New York-Presbyterian/Weill Cornell Medical Ctr, New York, NY, USA

CARDIOTHORACIC SURGERY (HEART)

(1179) Immune Response in Heart Transplant Patients Following COVID-19 Vaccination; Alexander Wisniewski, MD, Univ of Virginia, Charlottesville, VA, USA

(1181) Incidence of BK Viremia in Simultaneous Heart-Kidney Transplant Recipients: A Single-Center Experience; Moses Demehin, PharmD, Univ of Maryland Medical Ctr, Baltimore, MD, USA

(1182) Evaluation of Safety and Effectiveness of the Paragonix™ SherpaPak Cardiac Transport System in Donation After Circulatory Death Heart Transplantation (clinicaltrials.gov Identifier: Nct05038943); Marian Urban, MD, PhD, Univ of Nebraska Medical Ctr, Omaha, NE, USA

(1183) Real World Use of Extracorporeal Photopheresis After Heart Transplantation - Clinical Outcomes from a Seven Centre European Study; Markus Johannes Barten, Dr., Univ Heart and Vascular Ctr, Hamburg, Germany



- (1184) Second Report of the GUARDIAN Registry: An International Consortium Examining the Effect of Controlled Hypothermic Preservation in Heart Transplantation;** Andreas Zuckermann, MD, Medical Univ of Vienna, Vienna, Austria
- (1185) First Report of Pediatric Outcomes from the GUARDIAN Registry: Multi-Center Analysis of Advanced Organ Preservation for Pediatric Recipients;** Jeffrey Jacobs, MD, Univ of Florida, Gainesville, FL, USA
- (1186) Quality of Life Post-Sternotomy: Reassessing the Utility of Standard-of-Care Sternal Precautions;** Aashka Patel, BA, Univ of Chicago, Chicago, IL, USA
- (1187) Outcome of Paediatric Cardiac Re-Transplantation in the Mechanical Support Era;** Fani Fanoula. Papadopoulou, MD, MSc, Freeman Hosp, Newcastle upon Tyne, United Kingdom
- (1189) Cell-Free DNA to Distinguish High Risk Donor Specific Antibodies in Heart Transplantation;** Ann Mary. Bon, BA, Natl Heart, Lung, and Blood Inst, Bethesda, MD, USA
- (1190) Reducing Morbidity in High Panel Reactive Antibody Heart Transplant Recipients Through Human Leukocyte Antigen Matching;** David Alan. Herbst, MD, Univ of Pennsylvania, Philadelphia, PA, USA
- (1191) Donor-Derived Cell-Free DNA in Cardiac Allograft Rejection Detection;** Simo Syrjälä, MD, PhD, Helsinki Univ Hosp, Helsinki, Finland
- (1192) AMR After Transplant in a Child with Complex CHD and Ruptured LV Aneurysm;** Claude A. Beaty Jr, MD, Nemours Children's Health, Wilmington, DE, USA

CARDIOTHORACIC SURGERY (LUNG)

- (923) A Case of Prolonged Hospital Acquired COVID-19 Pneumonia in a Lung Transplant Recipient: Management and Outcome;** Eleonora Faccioli, MD, Thoracic Surgery and Lung Transplant Unit, Univ Hosp of Padua, Padua, Italy
- (1193) Lung Transplant for Patients with COVID-19 Bridged with VV ECMO: Initial Experience;** Athanasios Tsiouris, MD, PhD, Cleveland Clinic, Cleveland, OH, USA
- (1194) Shifting Paradigms in ECMO Support for Severe COVID-19 Respiratory Failure Result in over 80% Hospital Survival in 2021;** Nicolas Brozzi, MD, Cleveland Clinic Florida, Weston, FL, USA
- (1195) Lung Transplantation for COVID-19-Induced Respiratory Failure: Single-Center Case Series;** Deepika Razia, MBBS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (1196) COVID-19 Has a High Mortality Rate in Lung Transplant Recipients: A Large Single-Center Experience;** Deepika Razia, MBBS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (1197) Short-Term Outcomes of Lung Transplantation for COVID-19 ARDS: A Single Center Experience;** Anh Nguyen, MD, PhD, Univ of California San Francisco, San Francisco, CA, USA
- (1198) Gamma-Glutamyltransferase at the Time of Listing May Predict Irreversible Severe Cholangiopathy After Lung Transplantation for COVID19-ARDS;** Stefan Schwarz, MD, Medical Univ of Vienna, Vienna, Austria
- (1199) Obese Lung Recipients May Be Susceptible to Severe COVID-19 Outcomes Compared to Controls;** Deepika Razia, MBBS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- (1200) Introduction of Thromboelastography (TEG®) Shortens the Hemostatic Time in Lung Transplantation Under Veno-Arterial Extracorporeal Membrane Oxygenation;** Nobuyuki Yoshiyasu, MD, The Univ of Tokyo Hosp, Bunkyo-ku, Tokyo, Japan



(1201) Clinical Impact of the Lung Allocation Policy: A Nationwide Study; Alessandro Bertani, MD, IRCCS ISMETT - UPMC ITALY, Palermo, Italy

(1202) Selective Pneumoplegia Delivery System Facilitating Procurement in Donors After Circulatory Death; Mubassher Husain, MBBS, Royal Brompton and Harefield Hosp as part of Guys and St Thomas NHS Fndn Trust, London, United Kingdom

(1203) Comparing Outcomes of Single versus Double Lung Transplantation for COPD Patients in a Single-Center Setting; Labiba Siddique, BS, Lewis Katz Sch of Med, Philadelphia, PA, USA

(1204) Double Trouble: Ischemic Time is Associated with Worse Outcomes After Double Lung but Not Single Lung Transplantation; Zhaozhi Li, None, Univ of Chicago, Chicago, IL, USA

(1205) Safety of Single Lung Transplantation Post Donation Service Area-Specific Organ Distribution; Chetan Pasrija, MD, Univ of Maryland, Baltimore, MD, USA

(1206) Lung Allocation Revisions Removing the DSA as First Zone of Offering Correlated with Decreased Wait List Mortality; Chadrick E. Denlinger, MD, Indiana Univ, Indianapolis, IN, USA

(1207) Strategy for Pre- and Post-Transplant Management of Pulmonary Nontuberculous Mycobacterial Infection; Akihiro Ohsumi, MD, PhD, Kyoto Univ Hosp, Kyoto, Japan

(1208) Safety and Effectiveness of Low-Dose Cytomegalovirus Valganciclovir Prophylaxis in CMV Seropositive Lung Transplant Recipients; Rasmus A j. Lehtikoinen, MD, Univ of Helsinki, Helsinki, Finland

(1209) Altered Lipid Metabolism in the Follow Up of Cystic Fibrosis Lung Transplant Patients; Lorenzo Rosso, MD, PhD, Fondazione IRCCS Ca Granda, Milan, Italy

CARDIOTHORACIC SURGERY (MCS)

(1210) Systematic Evaluation of HeartMate 3 Inflow Cannula at Transplant and the Association with Reduced Anticoagulation; Zuzana Tucanova, MD, Inst for Clinical and Experimental Med, Prague, Czech Republic

(1211) Does Open Chest After LVAD Surgery Affect Blood Transfusion Rates and PRA; Aditya Bansal, MD, Ochsner Clinic Fndn, New Orleans, LA, USA

(1212) Outcomes in Patients with a Centrifugal Flow with Full Magnetic Levitation Left Ventricular Assist Device (CF-FML LVAD) Who Did Not Receive Bridging with a Continuous Heparin Infusion (CHI) After Implantation; Tara Logan, BSN, Massachusetts General Hosp, Boston, MA, USA

(1213) Adverse Events in HVAD vs. HM3 Patients under Outpatient Bridging with Low-Molecular Weight Heparin for Subtherapeutic Anticoagulation; Peter Rose, Dr. med., Univ Hosp Heidelberg, Heidelberg, Germany

(1214) Independent and Combined Effects of Obesity and COVID on Patient Outcomes; Thomas Isaac. Raines, BS, Univ of Tennessee Health Science Ctr, Memphis, TN, USA

(1215) Impact of an Improved Standardized Strategy and Individually Tailored Protocol for Heartmate II and Heartmate 3 Left Ventricular Assist Devices on the Incidence of Driveline Infections; Masato Mutsuga, MD PhD, Nagoya Univ, Graduate Sch of Med, Nagoya, Japan

(1217) A Single Institutional Experience with 66 Children Supported with the Berlin Heart Ventricular Assist Device over 16 Years: Comparison of Patients with Congenital versus Acquired Heart Disease; Mark S. Bleiweis, MD, Univ of Florida, Gainesville, FL, USA

(1219) Interdisciplinary Patient Management Following a Controller Fault Alarm in Heartware HVAD; Johanna Mulzer, M.D., German Heart Inst, Berlin, Germany



(1220) A Novel Technique for Temporary Right Ventricular Support Using the Existing Cardiopulmonary Bypass Circuit During LVAD Implantation; Brandon Michael. Wojcik, MD, Univ of Colorado Hosp, Aurora, CO, USA

(1221) A HeartMate 3 Implantation without Anticoagulation; Hristo Kirov, MD, Univ Clinic Jena, Jena, Germany

(1222) Cases of Surgical Intervention for Outflow Graft Obstruction Due to Accumulation of Biodebris Following HeartMate 3 Implantation; Farooq Mirza, MD, Columbia Univ Medical Ctr, New York, NY, USA

(1223) A Case of Myocardial Recovery and Relapse Following Left Ventricular Assist Device Implantation; Zhaozhi Li, None, Univ of Chicago, Chicago, IL, USA

(1224) Novel Use of Pulmonary Artery Pressure Monitoring After a Total Artificial Heart Implantation; Katherine M. Klein, MD, Virginia Commonwealth Univ, Richmond, VA, USA

(1225) The Effect of Multiple Outflow Graft Stenting on Hemodynamics in the Treatment of Left Ventricular Assist Device Outflow Graft Stenosis; Sarah Eapen, MD, Tufts Medical Ctr, Boston, MA, USA

(1226) Single Site Arterial Impella 5.5/ECMO (Ecpella) Cannulation for Refractory Shock; Aaron Sparks, DO, Tufts Medical Ctr, Boston, MA, USA

(1227) Iatrogenic Tracheal Rupture After Successful LVAD-Explantation; Fabian Emrich, MD, Univ Hosp Frankfurt, Heartcenter, Frankfurt, Germany

(1228) Is the Patient Full of It? A Case of Extreme Constipation Causing Left Ventricular Assist Device-Associated Chest Pain; Audrey Khoury, MD MPH, UNC Sch of Med, Chapel Hill, NC, USA

(1229) Bridge Using the Hemolung System for Re-Do Double Lung Transplant In Situs Inversus Patient; Masashi Furukawa, MD PhD, UPMC, Pittsburgh, PA, USA

(1230) Combining Repeated VT Ablations with Axillary Transaortic Microaxial Left Ventricular Assist Device Support to Successfully Bridge to Heart Transplantation in a Patient with Recurrent Electrical Storm - A Case Report; Constanze Volgmann, Univ Heart and Vascular Ctr Hamburg, Hamburg, Germany

(1231) Impella 5.5 Support Prior to Heart and Kidney Transplantation; Aldrin C. Alpuerto, MD, Univ of Washington, Seattle, WA, USA

(1232) Minimally Invasive Left Ventricular Assist Device Insertion with Concomitant Aortic Valve Replacement Despite Prior Sternotomy; Nicholas R. Hess, MD, Univ of Pittsburgh Medical Ctr, Pittsburgh, PA, USA

(1233) Transcatheter Edge-to-Edge Repair in Patients with Left Ventricular Assist Device Support; Pia Lanmueller, MD, German Heart Ctr Berlin, Berlin, Germany

(1234) How to Heal a Broken Heart with Time and a Hybrid Mechanical Circulatory Support Armada; Jamila Kremer, MD, Univ Hosp Heidelberg, Heidelberg, Germany

(1235) CT Derived Three Dimensional Modeling to Facilitate Minimally Invasive HVAD to HeartMate3 Left Ventricular Assist Device Exchange; Andrew Shaffer, MD, Univ of Minnesota, Minneapolis, MN, USA

PATHOLOGY

(1236) Lipic Acid F127@lpp Nanoparticles as a New Therapeutic Tool for Delivering Active Molecules; Annalisa Angelini, MD, Univ of Padua, Padova, Italy

(1237) Genetic Pathways Activated in Heart Allograft Quilty Lesions; Jose Ramon. Torrealba, MD, UTSW Medical Ctr, Dallas, TX, USA

(1238) Alloimmune Response After SARS-CoV-2 Vaccination in Lung Transplant; Teena Sam, PharmD, Baylor Univ Medical Ctr, Dallas, TX, USA



PEDIATRICS (HEART)

- (1239) *Kidney Transplantation in Single Ventricle Palliated Patients: A Pediatric Cardiac Care Consortium Study***; Shriprasad R. Deshpande, MD, MS, Children's Natl Hosp, Washington, DC, USA
- (1240) *Use of REGEN-COV in Pediatric Patients After Heart Transplantation for Treatment and Post-Exposure Prophylaxis of COVID-19***; Dipankar Gupta, MD, Univ of Florida, Gainesville, FL, USA
- (1241) *Oh to Be Young at Heart - Patterns and Implications of Extreme Age Mismatch in Heart Transplantation***; Jesus Leyva, BS, Univ of Arizona Coll of Med, Phoenix, AZ, USA
- (1242) *Cardiac Atrophy and ACE Inhibitors in Duchenne Cardiomyopathy: 10 Years is the Right Age to Start Therapy?***; Rachele Adorisio, MD, Bambino Gesù Hosp & Res Inst, Rome, Italy
- (1243) *Intravenous Immunoglobulin G (IVIg) and Ganciclovir or Valganciclovir for the Treatment of Epstein Barr Virus (EBV) Viremia and Prevention of Post-Transplant Lymphoproliferative Disease (PTLD) in Pediatric Heart Transplant Recipients***; Micheal A. Kuhn, MD, Loma Linda Univ Children's Hosp, Loma Linda, CA, USA
- (1244) *Risk Factors for Acute Kidney Injury and Chronic Kidney Disease in Pediatric Heart Transplant Population***; Ruchi Gupta Mahajan, MBBS, MD, Columbia Univ Irving Medical Ctr, New York, NY, USA
- (1245) *Antibody Mediated Rejection in Pediatric Heart Transplant Recipients***; Erik L. Frandsen, MD, Loma Linda Children's Hosp, Loma Linda, CA, USA
- (1246) *AMR or CAV without HLA-DSA: Could MICA-DSA Be the Culprit?***; Mariska Kemna, MD, Seattle Children's Hosp, Seattle, WA, USA
- (1247) *Challenges in Using ICD-10 Codes for Case Ascertainment in Pediatric Heart Failure***; Lindsay J. May, MD, Univ of Utah, Cottonwood Heights, UT, USA
- (1248) *Bereaved Caregiver Perspectives on Implantation and End of Life in Pediatric Ventricular Assist Device Patients***; Christine M. Bui, MD, Stanford Univ, Palo Alto, CA, USA
- (1249) *Care Close to Home: Justification for a Second Paediatric Heart Transplant Centre in Australia***; Shreerupa Basu, MBBS, B Sc (Med) Hons, MBioeth, FRACP, The Children's Hosp at Westmead, Sydney, Australia
- (1250) *Hypertension: An Important but Reversible Cause of Systolic Dysfunction in Pediatrics***; Alicia M. Kamsheh, MD, Children's Hosp of Philadelphia, Philadelphia, PA, USA
- (1251) *Feasibility of Implementation of a Heart Failure Communication Checklist in the Multi-Center Action Network***; Kathleen E. Simpson, MD, Children's Hosp Colorado, Aurora, CO, USA
- (1252) *Health-Related Quality of Life in Adolescents and Young Adults with Heart Failure***; Amanda D. McCormick, MD, Univ of Michigan, Ann Arbor, MI, USA
- (1253) *Heart Rate and Left Ventricular Ejection Fraction in Dilated Cardiomyopathy: How Much We Have to Low?***; Rachele Adorisio, MD, Bambino Gesù Hosp & Res Inst, Rome, Italy
- (1254) *Cardiomyopathy Due to Propionic Acidemia: Clinical Features and Therapeutic Implication***; Rachele Adorisio, MD, Bambino Gesù Hosp & Res Inst, Rome, Italy
- (1255) *End-of-life Decision Making In Pediatric Heart Transplant Families: A Study Analyzing The Parental Perspective***; Hanna J. Tadros, MBBCh, Texas Children's Hosp/ Baylor Coll of Med, Houston, TX, USA
- (1256) *Worsening Mental Health in Adolescent Heart Failure and Transplant Patients During the COVID-19 Pandemic***; Maria Bano, MD, UT Southwestern, Dallas, TX, USA



(1257) Analysis of Platelet Function Testing in Children Receiving Aspirin for Antiplatelet Effects; David M. Newland, PharmD, MS, Seattle Children's Hosp, Seattle, WA, USA

(1258) Surveillance of Chronic Graft Failure Utilizing Cardiac Magnetic Resonance Imaging in Pediatric Heart Transplantation; Kae Watanabe, MD, Ann & Robert H. Lurie Children's Hosp of Chicago, Chicago, IL, USA

(1259) Heart Transplantation in Infants with Congenital Heart Disease: Outcomes Stratified by Prior Surgery; Matthew J. Bock, M.D., Rady Children's Hosp of San Diego, San Diego, CA, USA

(1260) Long-Term Outcomes of ECMO Post-Heart Transplant; Mehreen S. Iqbal, MD, Stanford Univ, Palo Alto, CA, USA

(1261) Contemporary Outcomes of Pediatric Patients with Acute Fulminant Myocarditis Supported with Extracorporeal Membrane Oxygenation; Ryan L. Kobayashi, MD, MS, Boston Children's Hosp, Boston, MA, USA

(1262) Monotherapy Immunosuppression in Pediatric Heart Transplant Recipients; Elizabeth L. Profita, MD, Stanford Univ, Palo Alto, CA, USA

(1263) Oral Aversion and Its Risks in Pediatric Heart Transplant Recipients; Nina Zook, MD, Lucile Packard Children's Hosp at Stanford, Palo Alto, CA, USA

(1264) A Single Center Look at Pediatric Heart Re-Transplantation; Kari Wujcik, MSN, APRN, CPNP-AC, Lucile Packard Children's Hosp at Stanford, Palo Alto, CA, USA

(1265) Facilitators and Barriers of Ex Situ Heart Perfusion (ESHP) in Pediatric Donation; Jennifer Conway, MD, MSc, Stollery Children's Hosp, Edmonton, Canada

(1266) Assessing the Relationship Between Pediatric Donors' Terminal Hospitalizations and Heart Acceptance Practices; Michael A. McCulloch, MD, Univ of Virginia Children's Hosp, Charlottesville, VA, USA

(1267) Reducing Donor Acceptance Practice Variation- Learnings from a Discussion Forum; Neha Bansal, MD, Children's Hosp at Montefiore, Bronx, NY, USA

(1268) Inter-Rater Reliability of Total Cardiac Volume Measurement for Heart Transplantation: An ACTION Collaborative Study; John C. Dykes, M.D., Stanford Univ, Palo Alto, CA, USA

(1269) Impact of the 2018 Adult Heart Allocation Change on Pediatric Donor Offers and Waitlist Outcomes; Kurt R. Sweat, MA, Stanford Univ, Stanford, CA, USA

(1270) Tacrolimus Dosing Between Races in Pediatric Patients Following Heart Transplant; Jordan Mangum, PharmD, Children's Natl Hosp, Washington, DC, USA

(1271) Early Complication of Monomorphic B-cell Lymphoma Post Pediatric Cardiac Transplantation; Priya Nigam, MD, Nemours Children's Health, Wilmington, DE, USA

(1272) Initial Experience of Home Milrinone Therapy in Indian Setup: Case Series; Shatabdi Giri, M.D Paediatrics, Kokilaben Dhirubhai Ambani Hosp, Mumbai, India

(1273) Bacteriophage Therapy for Treatment of a Multi-Drug Resistant VAD-Specific Infection in a Pediatric Patient; Kyle D. Hope, MD, Texas Children's Hosp, Houston, TX, USA

(1274) An Uncommon Case of Ischemic Heart Disease; Anisha Contractor, DO, MHS, Univ of Massachusetts-Baystate, Springfield, MA, USA

(1275) Pulmonary Hypertension and Diastolic Heart Failure in an Adolescent African-American Cantú Syndrome Patient; Kevin Goslen, BS, Wake Forest Sch of Med, Winston-Salem, NC, USA



(1276) Memory B Cell Deficiency and Disseminated Nocardiosis in a Pediatric Patient with Congenital Single Ventricle Physiology and Heart Transplantation; Jennifer Sedler, MD, Stanford Children's Health, Palo Alto, CA, USA

(1277) New Heart, Old Problems: Aortopulmonary Collaterals Cause Diastolic Heart Failure in a Pediatric Heart Transplant Recipient; Hanna J. Tadros, MBBCh, Texas Children's Hosp/ Baylor Coll of Med, Houston, TX, USA

(1278) Giant Coronary Aneurysms After Pediatric Heart Transplant: Giant Problem; Melodie Minter. Lynn, DO, MS, Baylor Coll of Med/Texas Children's Hosp, Houston, TX, USA

(1279) Orthotopic Heart Transplant in Toddler with Histiocytoid Cardiomyopathy and Left Ventricular Non-Compaction; Mehreen S. Iqbal, MD, Stanford Univ, Palo Alto, CA, USA

(1280) Ivabradine Use in a Pediatric Heart Transplant Recipient with Refractory Atrial Tachycardia; Svetlana Shugh, MD, Joe DiMaggio Children's Hosp, Hollywood, FL, USA

(1281) I Got It from My Mamma: Sensitization by Transplacental Transfer of Maternal HLA Antibodies Managed with Manual Exchange Transfusion; Megan Wilde, M.D., Indiana Univ, Indianapolis, IN, USA

(1282) A Rush of Blood to the Head: Tacrolimus Related Reversible Cerebral Vasoconstriction Syndrome After Pediatric Heart Transplantation; Sarah E. Blonsky, MD, Univ of Michigan, Ann Arbor, MI, USA

(1283) Obesity in Pediatric Transplant and the Use of Liraglutide; Daphney Kernizan, DO, Nemours Children's Health, Wilmington, DE, USA

(1284) One Heart, Two Problems: Cardiomyopathy and CPVT Secondary to RYR2 Mutation; Sonia Kaushal, MD, Baylor Coll of Med/Texas Children's Hosp, Houston, TX, USA

(1285) Successful Heart Transplantation in a Patient with Neonatal Marfan Syndrome; Sabena Hussain, MD, Riley Hosp for Children, Indianapolis, IN, USA

PEDIATRICS (LUNG)

(1286) Role of Open Lung Biopsy After Pediatric Lung Transplant in Current Era; Horacio G. Carvajal, MD, Washington Univ in St. Louis, Saint Louis, MO, USA

(1287) Anti-HLA DQ Antibodies Are Associated with Chronic Lung Allograft Dysfunction in a Pediatric Lung Transplant Population; Xin (Cissy) Si, MD, Stanford Univ Sch of Med, Palo Alto, CA, USA

(1288) Pediatric Lung Transplantation: A 10-Year Nationwide Cohort Study; Richard Dorent, MD, Agence de la Biomédecine, Saint Denis La Plaine, France

(1289) Novel Bridge to Recovery: Right Ventricular Assist Device for Primary Graft Dysfunction in Pediatric Lung Transplantation; Nicholas Avdimiretz, MD FRCPC, Stollery Children's Hosp, Univ of Alberta, Edmonton, Canada

PEDIATRICS (MCS)

(1290) Use of ICD in Children on VAD Support - An Euromacs Database Analysis; Martin Schweiger, MD, PD, Children's Hosp Zurich, Zurich, Switzerland

(1291) Nutritional Status and Cannula Infections in Pediatric VAD Patients; Mostafa Abbasi Dezfouly, BSc, Univ of Alberta, Edmonton, Canada

(1292) Ventricular Assist Device Use in Pediatric Restrictive and Hypertrophic Cardiomyopathy: An Advanced Cardiac Therapies Improving Outcomes Network (ACTION) Analysis; Deepa Mokshagundam, MD, Washington Univ in St Louis, St Louis, MO, USA



(1293) Outcomes of Intracorporeal Continuous, Paracorporeal Continuous, and Paracorporeal Pulsatile Ventricular Assist Devices in Pediatric Patients 10-30 kg; Jacqueline Lee, MD, Children's Wisconsin, Milwaukee, WI, USA

(1294) Ventricular Assist Device Implantation for Infant End-Stage Heart Failure - A Single-Center Experience; Yu Rim Shin, M.D., Yonsei Univ Sch of Med, Seoul, South Korea

(1295) Impact of Cangrelor Use in Children Supported on Paracorporeal Ventricular Assist Devices; Mohammed Absi, MD, Le Bonheur Children's Hosp/UTHSC, Memphis, TN, USA

(1296) Pediatric Single Ventricle VADs: A Single Center Review; Jodie Lantz, MSN, APRN, PCNS-BC, UT Southwestern, Dallas, TX, USA

(1297) When a Single Choice Impacts a Single Ventricle: Paracorporeal Pediatric VAD Support at 544 Days; Sydney Carrington, RN, BSN, Children's Health Dallas, Dallas, TX, USA

(1298) Pediatric VAD Growth in the US: What Factors May Be Driving Growth Jumps?; Mehreen S. Iqbal, MD, Stanford Univ, Palo Alto, CA, USA

(1299) Successful Treatment of Fulminant Myocarditis with Intracardiac Thrombus in COVID-19; Erika Joanna. Mejia, MD, Children's Hosp of Philadelphia, Philadelphia, PA, USA

(1300) Use of Isolated Right Ventricular Assist Device for Refractory Graft Failure Following a Pediatric Orthotopic Heart Transplantation; Laura Radel, MD, Le Bonheur Children's Hosp, Memphis, TN, USA

(1301) VAD as Bridge to Transplant Decision in Nine-Year-Old Child with Duchenne Muscular Dystrophy; Rachel Harris, D.O., Nationwide Children's Hosp, Columbus, OH, USA

(1302) Jumping and Pumping: Balancing Physical Activity and Anticoagulation in Ventricular Assist Devices; Erika Joanna. Mejia, MD, Children's Hosp of Philadelphia, Philadelphia, PA, USA

(1303) Temporary Right Ventricular Assist Device Support with a 29-French Protek Duo Cannula to CentriMag Pump in a 12-Year-Old After Left Ventricular Assist Device Placement; Brian A. Madden, MD, Ann and Robert H. Lurie Children's Hosp of Chicago, Chicago, IL, USA

(1304) Pre-Operative Planning to Mitigate Risk in Complex Single Ventricular Assist Devices; Alyssa Power, MD, UT Southwestern Medical Ctr Dallas, Dallas, TX, USA

PULMONOLOGY

(1305) Outcomes of SARS-CoV-2 Infection in Lung Transplant Recipients: A Single Center Experience; Domingo J. Franco-Palacios, M.D, Henry Ford Hosp, Detroit, MI, USA

(1306) Changes in Therapy Outcome of Venovenous Extracorporeal Membrane Oxygenation for Therapy-Refractory COVID-19 Infections Throughout the Pandemic; Moritz B. Immohr, M.D., Heinrich-Heine-Univ Düsseldorf, Düsseldorf, Germany

(1307) Cytomegalovirus Infection Following Vaccination for COVID-19 in Thoracic Organ Transplant Recipients; Shambhu Aryal, MD, Inova Fairfax Hosp, Falls Church, VA, USA

(1308) Long Term Outcomes Following Double Lung Transplantation for Severe COVID-19 Infection; Chitaru Kurihara, MD, Northwestern Univ Feinberg Sch of Med, Chicago, IL, USA

(1309) COVID19 in Lung Transplanted Patients: Chronicles from an Italian Epicenter; Letizia Corinna Morlacchi, MD, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico di Milano, Univ degli Studi di Milano, Milano, Italy



- (1310) Epidemiologic Analysis of Delta Variant SARS-CoV-2 in a Cohort of Lung Transplant Recipients;** Ciara M. Shaver, MD, PhD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA
- (1311) Post Lung Transplant Rehabilitation Program During the COVID Era;** Louise Fuller, PhD BApp Sc (Physio), The Alfred Hosp, Melbourne, Australia
- (1312) Effectiveness of Messenger Ribonucleic Acid Vaccine in Lung Transplant Recipients;** Robert J. Vender, M.D., Temple Univ Hosp, Philadelphia, PA, USA
- (1313) SARS-CoV-2 Vaccination Efficacy & Safety in Lung Transplantation Recipients: A Single Centre Study;** Unmil Shah, MD, KIMS, Hyderabad, India
- (1314) COVID-19 in Lung Transplant Recipients: Outcomes and Long-Term Follow Up;** Rami Hassan. Hallak, MD, MSc, Duke Univ Hosp, Durham, NC, USA
- (1315) Short Term Outcomes of Patients Who Underwent Lung Transplant for COVID-19 ARDS;** Sravanthi Nandavaram, MD, Univ Of Kentucky, Lexington, KY, USA
- (1316) Safety, Reactogenicity and Patient Perceptions of COVID-19 Vaccination in Solid Organ Transplant Recipients at a Quaternary Referral Center;** Ritika Singh, MD, Baylor Coll of Med, Houston, TX, USA
- (1317) Cardiac Disease Increased Risk of Death and Early Comorbidities Impacting Prognosis of Lung Transplant Recipients with Extreme Ages;** Jing-Yu Chen, MD, Wuxi Lung Transplant Ctr, Wuxi, China
- (1318) Use of Basiliximab in Recipients Who Required Dose Reduction or Discontinuation of Calcineurin Inhibitors Early After Lung Transplantation;** Yuki Morimura, MD, Kyoto Univ Hosp, Kyoto, Japan
- (1319) Management of Severe Non-Infectious Acute Respiratory Failure in Lung Transplant Recipients;** Anil J. Trindade, MD, Vanderbilt Univ Medical Ctr, Nashville, TN, USA
- (1320) Prognostic Value of First Post-Transplant Lung Function;** David Li, BSc, Univ of Alberta, Edmonton, Canada
- (1321) Longitudinal Monitoring of Donor Derived Cell Free DNA in Lung Transplant Recipients;** Alice L. Gray, MD, Univ of Colorado, Denver, CO, USA
- (1322) Transbronchial Cryobiopsy vs Conventional Forceps Biopsy in Lung Transplant Recipients Multicenter Study;** Monika Svorcova, MD, Prague Lung Transplant Program, 1st Faculty of Med, Charles Univ in Prague and Motol Univ Hosp, Prague, Czech Republic
- (1323) Worsening in the Lung Transplant-Valued Life Activities Scale is Associated with Mortality in Lung Transplant Recipients;** Leslie Libeth. Seijo, MD, Univ of California, San Francisco, San Francisco, CA, USA
- (1325) Assessment of Cardiac Contribution to Exercise Intolerance in Pediatric Bilateral Lung Transplant Recipients;** Christina M. Mangano, BS, Boston Children's Hosp, Boston, MA, USA
- (1326) Association Between Donor Age and Posttransplant Mortality in Pediatric Lung Recipients: A 10-Year Nationwide Cohort Study;** Richard Dorent, MD, Agence de la Biomédecine, Saint Denis La Plaine, France
- (1328) Lung Transplantation in HIV Patients;** Claire Rouzaud, MD, Hôpital Necker, Paris, France
- (1329) Outcomes After Lung or Combined Heart Lung Transplantation for PAH and CTEPH According to Baseline Kidney Function;** Laurent Godinas, MD, PhD, UZ Leuven, Leuven, Belgium
- (1330) A Survey of Referral Rates for Lung Transplant Assessment in Patients with Interstitial Lung Disease Meeting Pulmonary Function Criteria;** Liran Levy, MD, Sheba Medical Ctr, Tel-Hashomer, Ramat Gan, Israel



- (1331) COVID-19 Vaccine Triggered Rejection in Lung Transplant Recipients: A Case Series;** Sammar Alsunaid, MD, Montefiore Medical Ctr, Bronx, NY, USA
- (1332) First Report of Daratumumab in Clinical Lung Transplantation;** Peter Jaksch, MD, Medical Univ Vienna, Vienna, Austria
- (1333) The Normalised Acute Rejection Score in the First Year Post Transplant and Its Association with CLAD;** Natalia Belousova, BSc, MBBS, FRACP, Univ Health Network, Toronto, Canada
- (1335) Trend in Lung Transplantation in Europe 2015 - 2019, Type of Transplant and Organ Source;** Emilie Hofstetter, MBA, Healthstrat Consulting, Munich, Germany
- (1336) Chronic Obstructive Pulmonary Disease on Clinical Outcomes of Left Ventricular Assist Device Patients;** Aashka Patel, BA, Univ of Chicago, Chicago, IL, USA
- (1337) Acute Lung Injury in Interstitial Lung Disease is Not Associated with Post Transplant Survival;** Heidi Joyce, BHSc, Univ of Alberta, Edmonton, Canada
- (1338) Comparing Bronchoalveolar Lavage Microbiological Culture Positivity Between Right versus Left Single Lung Transplants;** Chen Yang Kevin Zhang, MD, Toronto Lung Transplant Program, Univ Health Network, Toronto, Canada
- (1339) Lung Transplant Outcomes in Patients with Pulmonary Veno-Occlusive Disease;** Prangthip Charoenpong, MD, MPH, Ochsner LSU Health Shreveport, Shreveport, LA, USA
- (1340) Esophageal Disorders in Lung Transplant Recipients: Association with Chronic Lung Allograft Dysfunction and Survival;** Rayoun Ramendra, BSc, Ajmera Transplant Ctr, Toronto, Canada
- (1341) Case Report of Donor Transmitted SARS-CoV-2 Infection During Lung Transplantation;** Alexander R. Graham, MD, Duke Univ, Durham, NC, USA
- (1342) Use of High Dose Corticosteroids Reversed COVID-19 Associated ARDS in a Patient Listed for Lung Transplantation;** Veronique Verplancke, MD, Univ Hosp Antwerp (UZA), Antwerp, Belgium
- (1343) Chronic COVID 19 Related Disease Requiring Lung Transplantation with Calcified Cavitory Lesions in Explanted Lungs;** Tarek Amoun, MD, Newark Beth Israel Medical Ctr, Newark, NJ, USA
- (1344) Peri-Operative Desensitization for Highly Sensitized Lung Transplant Recipients Following COVID-19 Acute Respiratory Distress Syndrome (ARDS) - Report of Two Cases;** Olivia Meira. Dias, MD, PhD, Hosp Israelita Albert Einstein, São Paulo, Brazil
- (1345) Varicella-Zoster Virus Meningoencephalitis in a Lung Transplant Recipient;** Lara Jones, DO, Univ of Texas Health, San Antonio, TX, USA
- (1346) Phaeohyphomycoses in Lung Transplant Recipient;** Susanna M. Leonard, DO, Duke Univ Hosp, Durham, NC, USA
- (1348) Donor-Derived Disseminated Mycobacterium Tuberculosis Infection in a Lung Transplant Recipient Three Months After Transplant;** Kara M. Calhoun, MD, MPH, Univ of Colorado, Aurora, CO, USA
- (1349) Primary Cytomegalovirus Infection in a Low-Risk Lung Transplant Recipient Manifesting as a Pleural Effusion;** Darya Rudym, MD, New York Univ Medical Ctr, New York, NY, USA
- (1350) Invasive Cytomegalovirus Disease in a Low Risk CMV Serostatus, D-/R- Lung Transplant Recipient;** Shweta P. Kukrety, MD, Univ of Florida, Gainesville, FL, USA
- (1351) Westerdykella Reniformis Masking as Histoplasmosis;** Shweta P. Kukrety, MD, Univ of Florida, Gainesville, FL



(1352) Disseminated Pulmonary Kaposi Sarcoma After Lung Transplantation: The Increased Risk Donor; Johanna P. van Gemert, MD, Univ Medical Ctr Groningen, Univ of Groningen, Groningen, Netherlands

(1353) Herpes Simplex Virus Hepatitis as a Manifestation of Disseminated Infection in Patient After Lung Transplantation; Andrea Zajacova, MD, Motol Univ Hosp and 2nd Faculty of Med, Charles Univ in Prague, Prague, Czech Republic

SATURDAY, 30 APRIL, 2022

7:00 a.m. – 8:00 a.m.

SUNRISE 14: The Long and Short of It: Telomeres in Lung Transplantation

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Pulmonology

Chairs: Hilary J Goldberg, MD, and Andrew Courtwright, MD, PhD

Session Summary: This symposium will detail the relevance of short-telomere syndromes pre- and post-lung transplant, with a focus on patients with pulmonary fibrosis. A panel discussion with all speakers will conclude this session.

7:00 a.m.

Short Telomere Length as a Marker of Biological Aging

Bart M. Vanaudenaerde, PhD, KU Leuven, Leuven, Belgium

7:10 a.m.

Assessment and Management of Patients with Short Telomeres Being Considered for Lung Transplantation

Daniel Chambers, MBBS, MRCP, FRACP, MD, The Prince Charles Hospital, Brisbane, Australia

Pre-recorded Presentation

7:20 a.m.

Is Donor Telomere Length Relevant to the Recipient?

Andrew Courtwright, MD, PhD, University of Pennsylvania, Philadelphia, PA, USA

7:30 a.m.

Management and Outcomes of Patients with Short Telomeres After Lung Transplantation

Sofya Tokman, MD, Norton Thoracic Institute, Phoenix, AZ, USA

7:40 a.m.

Telomeres and Cytomegalovirus Risk in Lung Transplant Recipients

Paolo A. Grossi, MD, PhD, University of Insubria, Varese, Italy

7:50 a.m.

Panel Discussion



7:00 a.m. – 8:00 a.m.

SUNRISE 15: The Right to MCS: Are We Still Allowed To Say NO?

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiothoracic Surgery

Chairs: George Makdisi, MD, MPH, MS, and Jodie Lantz, MSN, APRN, PCNS-BC

Session Summary: Short-term mechanical circulatory support (MCS) has become a routine approach for acute heart failure. Based on improved MCS techniques, extended survival has led to many patients in need of heart transplantation or left ventricle assist device (LVAD) implantation. However, the referring system for transition from temporary MCS to LVAD is burdened with a reduced LVAD availability. This symposium will focus on current patients' access to short-term MCS and LVADs and solutions to overcome disparities. A panel discussion with all speakers will conclude this session.

7:00 a.m.

A Life After ECMO Is (Not) Possible: When Nobody Wants Your Patient

Silvia Mariani, MD, Hannover Medical School, Hannover, Germany

Pre-recorded Presentation

7:10 a.m.

A Life After ECMO Only As Destination Therapy

Alessandro Barbone, MD, PhD, Humanitas Research Hospital, Rozzano, Italy

Pre-recorded Presentation

7:20 a.m.

A Life After ECMO Is (Always) Possible: The Perspective of an LVAD and Transplant Center

Udo Boeken, MD, University of Düsseldorf, Düsseldorf, Germany

7:30 a.m.

When the Doctor Says NO: Ethical Implications of a Difficult Choice

Shunichi Nakagawa, MD, Columbia University Medical Center, New York, NY, USA

7:40 a.m.

Panel Discussion



7:00 a.m. – 8:00 a.m.

SUNRISE 16: The Human Microbiome: Hopes, Threats and Promises

Location: Ballroom A

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Stephanie Pouch, MD and Paolo C. Colombo, MD

Session Summary: It is now understood that the human body is home to a multitude of niche environments, each with their own unique microbiome, which may modulate functioning of the associated organ system. The most researched of these is the gut microbiome. Although our initial understanding of the symbiotic relationship between the microbiome and the human body has stemmed from gut-based research, microbiome research has developed to include the reciprocal relationships between the microbiome and other organs including the heart and lung. A panel discussion with all speakers will conclude this session.

7:00 a.m. ***Send In Your Samples: What Can Be Learned From Analyzing Your Microbiome?***

Tereza Martinu, MD, University of Toronto, Toronto, ON, Canada

7:12 a.m. ***Gut Microbiota and Metabolism of Immunosuppressive Drugs: One Size Does Not Fit All***

Douglas L. Jennings, PharmD, New York-Presbyterian Hospital, New York, NY, USA

7:24 a.m. ***Can Transplantation or LVAD Change My Microbiome ?***

Melana Yuzefpolskaya, MD, Columbia University, New York, NY, USA

7:36 a.m. ***The Gut Microbiome and Heart Failure: Are We Ready for Therapeutic Trials Targeting Microbiome?***

David Kaye, MD, PhD, The Alfred Hospital, Melbourne, Australia

Pre-recorded Presentation

7:48 a.m. **Panel Discussion**



7:00 a.m. – 8:00 a.m.

SUNRISE 17: From the Ground Up: Developing Lung Transplant Programs When Resources are Limited

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Cardiothoracic Surgery

Chairs: Unmil Shah, MD and Levente Bogyo

Session Summary: This symposium will focus on establishing and delivering lung transplant services in resource-limited settings and developing countries. We will present an overview of challenges, solutions, and outcomes of programs in these settings. Examples will be presented from Turkey, Brazil, Korea, and southeast Europe. A panel discussion with all speakers will conclude this session.

7:00 a.m.

An Overview of Lung Transplant Programs in Developing Countries

Anh Nguyen, MD, PhD, Vietnam National Lung Hospital, Hanoi, Viet Nam

7:04 a.m.

The Future of Lung Transplantation in Turkey: Addressing the Factors Limiting Progress

Erdal Yekeler, MD, University of Health Science, Ankara, Turkey

Pre-recorded Presentation

7:16 a.m.

Building a Lung Transplant Program in Brazil: Challenges in Resource-Limited Settings

Paulo Pego Fernandes, MD, Hospital das Clinicas da Faculdade de Medicina da Universidade de Sao Paulo, Sao Paulo, Brazil

7:28 a.m.

Lung Transplantation in Korea: Developing a New Collaborative Registry as a Way Forward

Jin Gu Lee, MD, PhD, Yonsei University College of Medicine, Seoul, South Korea

7:40 a.m.

Launching Lung Transplantation Programs in Southeast Europe: the Benefit of Trans-National Cooperation

Walter Klepetko, MD, Medical University of Vienna, Vienna, Austria

Pre-recorded Presentation

7:52 a.m.

Panel Discussion



7:00 a.m. – 8:00 a.m.

SUNRISE 18: Who's Keeping Score? Risk Scoring Systems and Contemporary Risk Factors for Primary Graft Dysfunction in Heart Transplantation

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Luciano Potena, MD PhD, and Asvin Ganapathi, MD

Session Summary: Despite recent advances in heart transplantation, Primary Graft Dysfunction (PGD) is the leading cause of mortality early after transplant. Identifying patients at high risk for PGD remains a clinical challenge. While several risk scoring systems have been introduced, there remains significant debate about the most clinically meaningful risk factors. Multiple risk scores will be presented and there will be discussion of the pros and cons of each unique PGD risk scoring systems. The need to include specific risk factors as part of future risk scores will also be discussed. A panel discussion with all speakers will conclude this session.

7:00 a.m.

Risky Business: Primary Graft Dysfunction and Risk Modeling

Javier Segovia, MD, PhD, Hosp Puerta De Hierro, Madrid, Spain

7:10 a.m.

The Rise of the Machines: PGD Risk Scoring Systems in the MCS Bridge to Transplant Population

Lauren K. Truby, MD, Duke University Medical Center, Durham, NC, USA

Pre-recorded Presentation

7:20 a.m.

Danger Zone: How to Risk Stratify DCD Donors for Primary Graft Dysfunction

Simon Messer, MD, Papworth Hospital, Cambridge, United Kingdom

7:30 a.m.

Demystifying Vasoplegia after Heart Transplant: Predictor or Consequence of Primary Graft Dysfunction?

Fabiana Marcondes-Braga, MD, PhD, Heart Institute Hospital, Sao Paulo, Brazil

7:40 a.m.

The Age of Artificial Intelligence (AI): Novel Primary Graft Dysfunction Risk Scores Using Machine Learning

Yas Moayedi, MD, University Health Network, Toronto, ON, Canada

Pre-recorded Presentation

7:50 a.m.

Panel Discussion



8:15 a.m. – 10:00 a.m.

PLENARY 3: Plenary Session

Location: Ballroom B

Primary Core Therapy: ALL

Primary Audience: ALL

Chairs: Howard Eisen, MD, and Andreas Zuckermann, MD

8:15 a.m.

ISHLT Awards Presentations

Kathleen L. Grady, PhD, APN, FAAN, Northwestern Memorial Hospital, Chicago, IL, USA

8:30 a.m.

The Limitless Future for RNA Therapeutics: Its Application in Heart and Lung Diseases

John Cooke, MD, PhD, Houston Methodist Academic Institute, Houston, TX, USA

9:00 a.m.

(5) The Impact of Evolocumab in Cardiac Transplant Patients with Coronary Allograft Vasculopathy

Douglas Stoller, MD, PhD, Univ of Nebraska, Omaha, NE, USA

9:12 a.m.

Q&A with Interactive Discussant

Georgina Waldman, PharmD, Massachusetts General Hospital, Boston, MA, USA

9:15 a.m.

PRESIDENT'S DEBATE: We Don't Need to "See" Patients Anymore: Virtual Care Should Become Business as Usual (PRO)

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

9:30 a.m.

PRESIDENT'S DEBATE: We Don't Need to "See" Patients Anymore: Virtual Care Should Become Business as Usual (CON)

Glen P. Westall, FRACP, PhD, Alfred Hospital, Melbourne, Australia

9:45 a.m.

Debate Rebuttals



10:15 a.m. – 11:45 a.m.

SESSION 71 (Symposium): Transformative Care: Literature Year in Review

Location: Ballroom B

Primary Core Therapy: ALL

Primary Audience: ALL

Chairs: Jason D. Christie, MD, MSCE and Alexander M. Bernhardt, MD

Session Summary: This session will review the high impacts papers published in over the past year and will include a broad field of interest: advanced lung disease and lung transplantation, advanced heart disease and cardiac transplantation, mechanical circulatory support and pulmonary vascular disease. Each presentation will include a junior faculty presenting key notes for the paper with an expert senior ISHLT member commenting on how the literature contributed to change the current knowledge and practice.

- 10:15 a.m.** ***Highlights of Advanced Heart Disease and Cardiac Transplantation***
Advin Ganapathi MD, The Ohio State University Wexner Medical Center, Columbus, OH, USA
- 10:26 a.m.** ***Expert Discussant in Advanced Heart Disease and Cardiac Transplantation***
Hermann Reichenspurner, MD, PhD, University Heart Centre Hamburg, Hamburg, Germany
- 10:37 a.m.** ***Highlights of Advanced Lung Disease and Cardiac Transplantation***
Erin Lowery MD, University of Wisconsin-Madison, Madison, WI, USA
- 10:48 a.m.** ***Expert Discussant in Advanced Lung Disease and Cardiac Transplantation***
Allan R. Glanville, MBBS, MD, FRACP, St. Vincent's Hospital, Sydney, Australia
Pre-recorded Presentation
- 10:59 a.m.** ***Highlights of Mechanical Circulatory Support***
Jamila Kremer, MD, University Hospital Heidelberg, Heidelberg, Germany
- 11:10 a.m.** ***Expert Discussant in Mechanical Circulatory Support***
Stephan M. Ensminger, MD, DPhil, University of Lubeck, Lubeck, Germany
- 11:21 a.m.** ***Highlights of Pulmonary Vascular Disease (PAH & CTEPH)***
Edith Boyes, APN, Amita Health, Chicago, IL, USA
- 11:32 a.m.** ***Expert Discussant in Pulmonary Vascular Disease (PAH & CTEPH)***
Christopher King, MD, FACP, FCCP, Inova Fairfax Hospital, Falls Church, VA, USA



10:15 a.m. – 11:45 a.m.

SESSION 72 (Oral): COVID Consequences: Can We Protect the Lung?

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Infectious Diseases

Chairs: Michael G Ison, MD MS, and Antoine Roux, MD, PhD

Session Summary: This session will present national data from the USA regarding lung transplantation for COVID-19, and will explore morbidity and mortality in patients acquiring the infection post-transplant. Factors affecting vaccine responses will also be considered

- 10:15 a.m.** **(234) *The United States Experience of Lung Transplantation in Recipients with COVID-19 Fibrosis: A UNOS/OPTN Analysis***
Donna K. Phan, MD, MPH, Montefiore Medical Ctr, Albert Einstein Sch of Med, Bronx, NY, USA
- 10:25 a.m.** **Q&A**
- 10:30 a.m.** **(235) *Radiographic and Histopathologic Lessons from COVID-19 Explants***
Sruvanthi Nandavaram, MD, Univ Of Kentucky, Lexington, KY, USA
- 10:40 a.m.** **Q&A**
- 10:45 a.m.** **(236) *The Effect of COVID-19 Infection on Transplant Function and Development of CLAD in Lung Transplant Patients: A Multicenter Experience***
Elizabeth Roosma, MD, Martini Ziekenhuis, Groningen, Netherlands
- 10:55 a.m.** **Q&A**
- 11:00 a.m.** **(237) *SARS-CoV-2 Vaccine Response in Lung Transplant Recipients: A French Multicenter Study***
Gaelle Dauriat, MD, Marie Lannelongue Hosp, Le Plessis Robinson, France
Pre-recorded Presentation
- 11:15 a.m.** **(238) *TTV Load is Associated with SARS-CoV-2 Vaccination Response in Lung Transplant Recipients***
Erik A.M. Verschuuren, MD, PhD, UMC Groningen Transplant Ctr, Univ of Groningen, Groningen, Netherlands
- 11:25 a.m.** **Q&A**
- 11:30 a.m.** **(239) *Variances in Humoral Responses to Different Spike Protein Domains After SARS-CoV-2 Vaccination in Lung and Heart Transplant Recipients***
Jasper Sauer, Medical Sch Hannover, Hannover, Germany
- 11:40 a.m.** **Q&A**



10:15 a.m. – 11:45 a.m.

SESSION 73 (Symposium): Body Composition and Durable MCS: Too Obese, Too Cachectic or Just Right - the Goldilocks Dilemma

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiothoracic Surgery

Chairs: Eman A Hamad, MD, and Stephan Schueler, MD, PhD, FRCS

Session Summary: Patient selection is a key determinant of outcomes for LVAD support. Extremes of patient BMI, and frailty/ sarcopenia need appropriate assessment, and consideration for best management strategy to improve post LVAD outcomes. This session will discuss the emerging tools in diagnosis of sarcopenia/ frailty in patients being evaluated for LVAD, the impact of extremes of BMI on post LVAD outcomes and the optimal management strategy - both in adult and pediatric patients - with didactic lectures, an engaging debate, and panel discussion.

10:15 a.m. ***Optimizing Nutritional Assessments and Rehabilitation in Pediatric VAD Recipients***

Amy Kiskaddon, PharmD, Johns Hopkins All Children's Hospital, St. Petersburg, FL, USA

10:30 a.m. ***How High is Too High? LVAD Outcomes in High BMI Patients***

Norihide Fukushima, MD, PhD, National Cerebral and Cardiovascular Center, Suita, Japan

Pre-recorded Presentation

10:45 a.m. ***Changes in Weight Post LVAD: Ups and Downs, and How Do We Manage? Bariatric Surgery in LVAD Recipients***

Amy E. Hackmann, MD, UT Southwestern Medical Center, Dallas, TX, USA

11:00 a.m. ***DEBATE: Too Cachectic for LVAD: Address Cachexia First, VAD Next! (PRO)***

Emily K. Granger, MBBS, St Vincent's Hospital, Sydney, Australia

Pre-recorded Presentation

11:15 a.m. ***DEBATE: Too Cachectic for LVAD: Address Cachexia First, VAD Next! (CON)***

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

11:30 a.m. **Panel Discussion**



10:15 a.m. – 11:45 a.m.

SESSION 74 (Symposium): Heart, Liver, MCS, Oh My! Walking Down the Yellow Brick Road with Adult Congenital Heart Disease Patients

Location: Ballroom A

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Arvind Bhimaraj, MD, and Hikaru Matsuda, MD

Session Summary: Adult congenital heart disease patients are a growing population that are a higher surgical risk group for heart and or heart/lung or heart-multiorgan transplants. In addition, the timing and ability to provide mechanical support to be able to bridge to transplant has many unknowns. This session will review some of the challenges in adult congenital patients, including prognostication in advanced heart failure, surgical considerations and mechanical support to successfully bridge patients to a transplant. A panel discussion with all speakers will conclude this session.

10:15 a.m. ***Changing Landscape of Adult Congenital Heart Disease: Need for Advanced Therapies***

Ari M. Cedars, MD, Johns Hopkins, Baltimore, MD, USA

10:30 a.m. ***How to Identify Advanced Heart Failure in Adult Congenital Heart Patients***

Rose Tompkins, MD, Cedars-Sinai Medical Center, Los Angeles, CA, USA

10:45 a.m. ***Surgical Complexities and Consideration for Transplant in Adult Congenital Heart Patients***

Francis Fynn-Thompson, MD, Boston Children's Hospital, Boston, MA, USA

11:00 a.m. ***When to Consider Heart/Liver Transplant in Fontan Patients***

Sharon Chen, MD, MPH, Stanford University, Stanford, CA, USA

11:15 a.m. ***Durable Mechanical Circulatory Support for Adult Congenital Heart Disease***

Fabrizio De Rita, FRCS, Freeman Hospital, Newcastle Upon Tyne, United Kingdom

11:30 a.m. **Panel Discussion**



10:15 a.m. – 11:45 a.m.

SESSION 75 (Oral): A Cure for CLAD? Update on CLAD Therapeutics

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Pulmonology

Chairs: Jennifer McDermott, PharmD, BCPS, and Linda J Fitzgerald, PharmD

Session Summary: This session will present investigational data and clinical outcomes of novel therapeutic strategies to mitigate Chronic Lung Allograft Dysfunction (CLAD).

- 10:15 a.m.** **(240) Treatment of De Novo DSA with IVIG Monotherapy After Lung Transplantation**
Skye J. Castaneda, PharmD, Spectrum Health, Grand Rapids, MI, USA
- 10:25 a.m.** **Q&A**
- 10:30 a.m.** **(241) Carfilzomib versus Rituximab for Treatment of De Novo Donor Specific Antibodies in Lung Transplant Recipients**
Deepika Razia, MBBS, Norton Thoracic Inst, St. Joseph's Hosp and Medical Ctr, Phoenix, AZ, USA
- 10:40 a.m.** **Q&A**
- 10:45 a.m.** **(242) Efficacy and Safety of the Janus Kinase 1 Inhibitor Itacitinib (ITA) in Patients with Bronchiolitis Obliterans (BOS) Syndrome Following Double Lung Transplant**
Joshua M. Diamond, MD, MSCE, Univ of Pennsylvania, Philadelphia, PA, USA
- 10:55 a.m.** **Q&A**
- 11:00 a.m.** **(243) An Investigational Inhaled rhIL-1Ra (ALTA-2530) Demonstrates Distribution to Distal Regions of Lung and High Affinity IL-1 Receptor Blockade Supporting Development as a Treatment for Bronchiolitis Obliterans Syndrome**
Michelle Palacios, PhD, Altavant Sciences, Cary, NC, USA
- 11:10 a.m.** **Q&A**
- 11:15 a.m.** **(244) Long-Term Pirfenidone for Restrictive Allograft Syndrome: A Case Series**
Hanne Beeckmans, MD, KU Leuven, Leuven, Belgium
- 11:25 a.m.** **Q&A**
- 11:30 a.m.** **(245) Extracorporeal Photopheresis in CLAD: A 15-Year Single Centre Experience**
Mark Greer, MB Bch, Hanover Medical Sch, Hannover, Germany
Pre-recorded Presentation



10:15 a.m. – 11:45 a.m.

SESSION 76 (Oral): Everything You Wanted to Know About ddCF-DNA in Heart Transplant Recipients and Never Dared to Ask

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Anique Ducharme, MD, MSC, and Sophia Airhart, MD

Session Summary: Cell-free donor-derived DNA (cfDNA) has become a powerful marker of myocardial damage with a high negative predictive value for the detection of rejection. This session provides new insights into the use and implications of cell-free donor-derived DNA (cfDNA) in heart transplant recipients.

10:15 a.m. (246) Rationale and Design of a Randomized Controlled Trial of Donor-Derived Cell-Free DNA to Detect Rejection in Cardiac Transplantation (DETECT)

Josef Stehlik, MD, MPH, Univ of Utah Sch of Med, Salt Lake City, UT, USA

10:25 a.m. Q&A

10:30 a.m. (247) Should We Be Comforted by a "Negative" Endomyocardial Biopsy? Risk of Future Events with Donor Derived Cell Free DNA in the Setting of Histologic Quiescence

Jeffrey Teuteberg, MD, Stanford Univ, Stanford, CA, USA

10:40 a.m. Q&A

10:45 a.m. (248) Prognostic Implications and Characteristics of Low dd-cfDNA Results in Heart Transplant Patients with Biopsy Proven Rejection

Roopa Rao, MD, Indiana Univ, Indianapolis, IN, USA

Pre-recorded Presentation

11:00 a.m. (249) Absolute Quantification of Donor Derived Cell Free DNA in Heart Transplant Patients

Paul J. Kim, MD, UC San Diego Health, San Diego, CA, USA

11:10 a.m. Q&A

11:15 a.m. (250) Impact on Donor Derived Cell Free DNA (dd-cfDNA) of Procurement Using Paragonix SherpaPak™ (SP) Cardiac Transport System versus ICE Transportation

Johanna van Zyl, PhD, Baylor Scott & White Res Inst, Dallas, TX, USA

11:25 a.m. Q&A

11:30 a.m. (251) Relationship of Noninvasive Detection of Allograft Rejection and Injury (Donor-Derived Cell Free DNA and Gene Expression Profiling) and Tissue-Based Molecular Microscopic Diagnosis After Heart Transplantation

Dae Hyun Lee, MD, Univ of South Florida, Tampa, FL, USA

11:40 a.m. Q&A



12:00 p.m. – 1:30 p.m.

SESSION 77 (Oral): Infections at the Heart of the Matter

Location: Ballroom B

Primary Core Therapy: HEART

Primary Audience: Infectious Diseases

Chairs: Stephanie M Pouch, MD, and Elena Seminari, MD

Session Summary: This session will explore the impact of Hepatitis C, SARS-CoV-2, CMV, and Chagas in patients before and after heart transplantation.

- 12:00 p.m.** **(252) *Hepatitis C Donors Are Not Associated with Higher Rates of Rejection After Cardiac Transplantation***
Snehal Patel, MD, Montefiore Medical Ctr, New York, NY, USA
- 12:10 p.m.** **Q&A**
- 12:15 p.m.** **(253) *Global and Country-Level Impact of COVID-19 on Heart Transplant Volumes***
Yosef Manla, MD, Cleveland Clinic Abu Dhabi, Abu Dhabi, United Arab Emirates
- 12:25 p.m.** **Q&A**
- 12:30 p.m.** **(254) *Predictors of Humoral Response to COVID-19 Vaccination in Heart Transplant Recipients***
Simon Kueppers, MD, Univ Heart & Vascular Ctr, Hamburg, Germany
- 12:40 p.m.** **Q&A**
- 12:45 p.m.** **(255) *Effect of CMV Viremia on HeartCare***
Nir Uriel, MD, MSc, Columbia Univ Irving Medical Ctr, Weill Cornell Med, New York, NY, USA
- 12:55 p.m.** **Q&A**
- 1:00 p.m.** **(256) *Using Donor-Derived Cell-Free DNA for Assessment of Myocardial Injury in Heart Transplant Recipients After SARS-CoV2 Infection***
Megan Kamath, MD, Ronald Reagan UCLA Medical Ctr, Los Angeles, CA, USA
Pre-recorded Presentation
- 1:15 p.m.** **(257) *Heart Transplantation in Chagas Cardiomyopathy: Long-Term Follow-Up in a Referral Center***
Rosario della Cella Figueredo, MD, Hosp Univrio Fundación Favaloro, Buenos Aires, Argentina
Pre-recorded Presentation



12:00 p.m. – 1:30 p.m.

SESSION 78 (Symposium): Human versus Beast: Advances in Translational Models of Lung Transplant

Location: Ballroom C

Primary Core Therapy: LUNG

Primary Audience: Cardiothoracic Surgery

Chairs: Tereza Martinu, MD, MHS, and Tiago Machuca, MD, PhD

Session Summary: Many fundamental questions of lung transplant disease pathogenesis and optimal donor assessment remain unanswered. Animal models could be used to mimic these processes and investigate underlying mechanisms and therapeutic interventions. Recently, EVOP models have emerged which challenge this assumption. In this session, we aim to critically examine the variety of lung transplant models and discuss how they can be used to improve our mechanistic understanding of lung transplant pathology. A panel discussion with all speakers will conclude this session.

12:00 p.m.

Rat Models: A Window of Opportunity

Dong Tian, MD, The University of Tokyo Graduate School of Medicine, Tokyo, Japan

Pre-recorded Presentation

12:12 p.m.

Mouse Models: the Golden Standard?

Andrew E. Gelman, PhD, Washington University School of Medicine, St. Louis, MO, USA

12:24 p.m.

Xenotransplantation and Beyond

Megan Sykes, III, MD, Columbia Center for Translational Immunology, Columbia, NY, USA

Pre-recorded Presentation

12:36 p.m.

The Ex-Vivo Lung as an Experimental Mechanistic Model of Transplant

Ciara Shaver, MD, PhD, Vanderbilt University Medical Center, Nashville, TN, USA

12:48 p.m.

Clinical Interventions with Ex-Vivo Perfused Lungs

Marcelo Cypel, MD, Toronto General Hospital, Toronto, ON, Canada

1:00 p.m.

How Well Do Animal Models Mimic the Human Condition?

Fiorella Calabrese, MD, Univ of Padova, Padova, Italy

1:12 p.m.

Panel Discussion



12:00 p.m. – 1:30 p.m.

SESSION 79 (Oral): All the Same - All Different! Uneven Burden in LVAD Patients

Location: Room 302/304

Primary Core Therapy: MCS

Primary Audience: Cardiology

Chairs: Valluvan Jeevanandam, MD and Jesus Casida, PhD, RN

Session Summary: Advancements in LVAD technology have led to lower risk of adverse events (AEs) in the implanted patients; however, current data suggests that some patients are more susceptible to AEs than others. This session addresses possible determinants of high AE load.

- 12:00 p.m.** **(258) *The Widening Care Gap in VAD Therapy: An Analysis of the STS Intermacs and Pedimacs Database***
Jennifer Conway, MD, Stollery Children's Hosp, Edmonton, Canada
- 12:10 p.m.** **Q&A**
- 12:15 p.m.** **(259) *Variability Across Implanting Centers in Short and Long-Term Mortality and Adverse Events in Patients on HeartMate 3 Support: A Momentum 3 Secondary Analysis***
Jennifer A. Cowger, MD, MS, Henry Ford Health System, Detroit, MI, USA
- 12:25 p.m.** **Q&A**
- 12:30 p.m.** **(260) *Sex-Based Outcomes After Implantation of a Fully Magnetically Levitated Left Ventricular Assist Device***
Bhavadharini Ramu, MD FACC, Medical Univ of South Carolina, Charleston, SC, USA
- 12:40 p.m.** **Q&A**
- 12:45 p.m.** **(261) *Adverse Events (AEs) After Left Ventricular Assist Device (LVAD) Implantation and Associated Psychosocial Risk Factors in Women***
Lisa-Marie Maukel, M.Sc., Trier Univ, Trier, Germany
- 12:55 p.m.** **Q&A**
- 1:00 p.m.** **(262) *Clinical Outcomes and Survival of HIV Positive and Negative Patients on LVAD Support***
Amin Yehya, MD, MS, Sentara Norfolk General Hosp, Norfolk, VA, USA
- 1:10 p.m.** **Q&A**
- 1:15 p.m.** **(263) *Thyroid Function at Left Ventricular Assist Device (LVAD) Implantation Predicts Prognosis During LVAD Support***
Agnieszka A. Bielka, MD, PhD, Silesian Ctr for Heart Diseases, Zabrze, Poland
- 1:25 p.m.** **Q&A**



12:00 p.m. – 1:30 p.m.

SESSION 80 (Oral): More Than Meets the Gut: Nutrition and the Microbiome in Heart Transplantation

Location: Ballroom A

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Savitri Fedson, MD, and Arne Neyrinck, MD, PhD

Session Summary: New research highlighting the importance of the microbiome and nutritional status to heart transplant patients will be presented for adult and pediatric groups.

- 12:00 p.m.** **(264) *The Gut Microbiome as a Marker of Early Cardiac Allograft Injury***
Mark Dela Cruz, MD, Univ of Chicago, Chicago, IL, USA
- 12:10 p.m.** **Q&A**
- 12:15 p.m.** **(265) *The Gut Microbiome and Tacrolimus Dosing in the Peri-Heart Transplant Period***
Mark Dela Cruz, MD, Univ of Chicago, Chicago, IL, USA
- 12:25 p.m.** **Q&A**
- 12:30 p.m.** **(266) *Association of Gut Bacterial Beta Glucuronidase Activity with Mycophenolate Mofetil Induced Cytopenia***
Lorenzo Braghieri, MD, Columbia Univ Medical Ctr, New York, NY, USA
Pre-recorded Presentation
- 12:45 p.m.** **(267) *Alterations to the Intestinal Microbiome Are Associated with Post-Heart Transplant Outcomes in Children***
Joseph A. Spinner, MD, Baylor Coll of Med, Houston, TX, USA
- 12:55 p.m.** **Q&A**
- 1:00 p.m.** **(268) *Metabolic Syndrome in Heart Transplantation: An Underestimated Risk Factor?***
Veronica Ferrara, MS, Univ of Udine, Udine, Italy
- 1:10 p.m.** **Q&A**
- 1:15 p.m.** **(269) *Severely Underweight: Is It a Risk Factor for Poor Outcomes in Post-Heart Transplant Patients?***
Jignesh Patel, MD, PhD, Smidt Heart Inst at Cedars-Sinai, Los Angeles, CA, USA
- 1:25 p.m.** **Q&A**



12:00 p.m. – 1:30 p.m.

SESSION 81 (Oral): Immune Manipulation to Keep CLAD Away

Location: Room 312

Primary Core Therapy: LUNG

Primary Audience: Research and Immunology

Chairs: Alberto Benazzo, MD, and Daniel Calabrese, MD

Session Summary: This session will explore novel therapeutic strategies to optimize immunosuppression and target the holy grail of immune tolerance in lung transplantation.

- 12:00 p.m.** **(270) Five-Year Outcome of an Early Everolimus-Based Quadruple Immunosuppression in Lung Transplant Recipients: Follow-Up of the 4EVERLUNG Study**
Jens Gottlieb, MD, MHH, Hannover, Germany
Pre-recorded Presentation
- 12:15 p.m.** **(271) Outcomes in Single versus Standard Dose Basiliximab After Lung Transplant**
Shruti Shankar, MD, Univ of South Florida, Tampa, FL, USA
- 12:25 p.m.** **Q&A**
- 12:30 p.m.** **(272) Lung Transplantation and Extracorporeal Photopheresis as Induction Therapy in Cystic Fibrosis Patients: Immune System Profile Changes**
Ilaria Righi, MD, Fondazione IRCCS Cà Granda Ospedale Maggiore Policlinico, Milano, Italy
- 12:40 p.m.** **Q&A**
- 12:45 p.m.** **(273) Derepression of the IL-10 Gene by CRISPR-Cas Genome Editing as a Therapeutic Strategy for Persistent Immunomodulation of Donor Lungs for Transplantation**
Kumi Mesaki, MD, Toronto General Hosp Res Inst, Univ Health Network, Toronto, Canada
- 12:55 p.m.** **Q&A**
- 1:00 p.m.** **(274) Donor T and NK Cells with a Special Tissue-Resident Memory Phenotype Migrate into the Periphery of Lung Transplant Recipients - A Potential Feature for Tolerance Development**
Jenny F. Kuehne, PhD, Hannover Medical Sch, Hannover, Germany
Pre-recorded Presentation
- 1:15 p.m.** **(275) CD26-Inhibition Correlates with the Absence of Chronic Lung Allograft Dysfunction and Decreases Fibroblast Activity In Vitro**
Isabelle Moneke, Dr. med., Univ of Freiburg-Medical Ctr, Freiburg, Germany
- 1:25 p.m.** **Q&A**

12:00 p.m. – 1:30 p.m.

SESSION 82 (Symposium): Revisiting the Status Quo: Changing Paradigms in Routine Heart Transplant Rejection Surveillance

Location: Room 210

Primary Core Therapy: HEART

Primary Audience: Cardiology

Chairs: Jill C Krisl, PharmD, and Finn Gustafsson, MD PhD

Session Summary: Endomyocardial biopsy has been the standard for rejection surveillance. In recent years, noninvasive monitoring technologies have gained momentum. These technologies, including gene expression profiling and cell free DNA, continue to advance in development and use. This session serves to increase understanding of the benefits and limitations to both biopsy and noninvasive monitoring in providing a nuanced and personalized approach for heart transplant recipients. A panel discussion with all speakers will conclude this session.

12:00 p.m.

Beyond the Surface: Non-Invasive Diagnostics for Rejection Surveillance

Shelley Hall, MD, Baylor University Medical Center, Dallas, TX, USA

12:15 p.m.

Do Non-Invasive Diagnostic Results Correlate with Histopathological Diagnoses Based on Endomyocardial Biopsy Interpretation?

Katharina Wassilew, MD Dr.med. DScmed MHBA, Rigshospitalet, Copenhagen, Denmark

12:30 p.m.

Diagnosis and Clinical Implication of HLA and Non-HLA DSA in Daily Practice

Emanuele Cozzi, MD PhD, Padua University, Padova, Italy

12:45 p.m.

Say Cheese: Use of Imaging in Rejection Surveillance

Angeline S. Leet, MD, Alfred Hospital, Melbourne, USA

1:00 p.m.

Putting It All Together: Integrating Approaches for Rejection Assessment

Eugene DePasquale, MD, USC, Los Angeles, CA, USA

1:15 p.m.

Panel Discussion