

PRELIMINARY PROGRAM



ISHLT

ORLANDO, FLORIDA • USA

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

ISHLT 2019

**39TH ANNUAL MEETING
AND SCIENTIFIC SESSIONS**

APRIL 3-6

LOEWS MEETING COMPLEX

ISHLT 2019

**39th ANNUAL MEETING
and SCIENTIFIC SESSIONS**
April 3-6, 2019

ISHLT ACADEMIES
April 2, 2019

CORE COMPETENCIES
in Pediatric Heart Failure and
Transplantation

CORE COMPETENCIES
in Nursing, Health Science, and
Allied Health Care of Patients
Requiring Mechanical Circulatory
Support and Transplantation

MASTER CLASS
in Heart Failure and Transplantation

MASTER CLASS
in Mechanical Circulatory Support

**Convening at the Loews
Meeting Complex
Orlando, Florida • USA**

Dear Colleague:

I'm honored to invite you to attend **ISHLT2019**, the 39th Annual Meeting and Scientific Sessions and the premier gathering of medical professionals dedicated to the treatment of advanced heart and lung disease. This event, the world's largest such gathering, is scheduled for April 3-6, 2019, at the Loews Meeting Complex in Orlando, Florida, USA. ISHLT President Jeffrey Teuteberg, MD, the ISHLT Board of Directors, and the 2019 Scientific Program Committee extend their heartfelt invitation to you to join us for this distinguished event.

ISHLT's annual meetings offer the most comprehensive review of research, including late-breaking advances, dedicated to advanced heart and lung disease, transplantation, mechanical support and related innovative therapies. From the Opening Plenary through the Symposia and Oral Abstract Sessions to the Presidential Address, **ISHLT2019** offers considerable opportunity to focus on content in your specialty area. We've taken special care to cluster content by specialty in order to make the best use of your time as a participant and ensure you return home equipped with increased knowledge.

You'll also find that **ISHLT2019** offers a unique opportunity to network with a wide range of medical professionals from across the globe. Attendees regularly cite the opportunity to meet peers from other institutions, specialties and countries as one of the meeting's highlights.

The plenary sessions will feature traditional content such as registry reports, the Presidential Address, and the Lifetime Achievement Award Address. In addition, research from the highest scoring abstracts will be selected for featured presentation to ensure the largest audience for our Annual Meeting's best scientific content. For our Friday plenary session, our highlighted speakers will motivate us to apply novel concepts to improve clinical care and research efforts. The final plenary session again promises to entertain and inform with the President's Debate.

We are excited to highlight several joint symposia planned for **ISHLT2019**: Novel and sophisticated imaging techniques will be explored in a joint symposium between the ISHLT and the Society of Cardiac MRI (SCMR): **Cardiac MRI and the World of Heart Failure: When Two Disciplines Harmonize**. A joint session with the Associação Brasileira de Transplante de Órgãos (ABTO) will provide an exclusive exchange of experiences between heart and lung transplant centers in Brazil and other centers around the world in **Combining Experiences to Enhance Thoracic Organ Transplantation Worldwide**. In the joint symposium with the International Consortium of Circulatory Assist Clinicians (ICCAC) entitled **Faster, Higher, Stronger: Monitoring Exercise in Cyberspace**, you will explore how your LVAD patients can get the most out of their heart assist device. And finally, a joint symposium with the International Pediatric Transplant Association (IPTA) will focus on EBV and CMV in pediatric thoracic transplantation in **EBV and CMV are Not as Easy as 1-2-3 When Caring for Pediatric Thoracic Transplant Recipients**.

In addition to the above, ISHLT has collaborated with the Pulmonary Vascular Research Institute (PVRI) to bring speakers that will offer world-class expertise on the topic of changes in the world of pulmonary hypertension.

We look forward to welcoming you to Orlando, Florida, USA for **ISHLT2019**!

See you in Orlando!



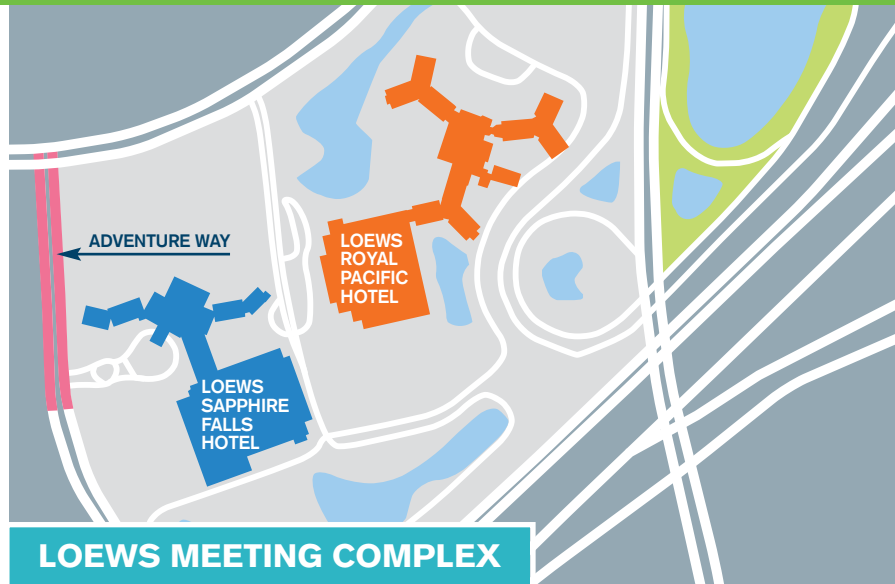
Lara Danziger-Isakov, MD, MPH
ISHLT 39th Annual Meeting Scientific Program Chair

GENERAL INFORMATION

Meeting Location

ISHLT2019 will be held at the Loews Meeting Complex

6601 Adventure Way
Orlando, Florida 32819 USA



Registration

Registration for the meeting can only be made by visiting the **ISHLT2019** website or by completing the Official **ISHLT2019** Registration Form. Online registration is strongly encouraged. A \$300 discount off the on-site registration fee is offered to those who register on or before February 22, 2019. A \$150 discount off the on-site registration fee is offered to those who register between February 22 and March 12, 2019. Individuals who have not registered on or before March 12, 2019 must register on-site at the meeting. A confirmation letter will be emailed to all individuals who register on or before March 12, 2019. The Official ISHLT Registration Form is included in this document and can also be found on our **ISHLT2019** website. The registration fee includes admission to all scientific sessions, the Exhibit Hall, all exhibit hall and Council networking receptions, and coffee breaks.

Hotel Reservations Discounted Rates Available Through March 1

Stay at the official ISHLT meeting hotels and be in the heart of all the action! ISHLT has negotiated discounted room rates at the Loews Royal Pacific Hotel and the Loews Sapphire Falls Hotel. The two hotels are connected, and the scientific sessions and other events will take place in both hotels. In order to take advantage of the discounted rates negotiated by ISHLT, you must make your reservations directly through the official ISHLT Housing Bureau. The rates at the two hotels are the same. Book your room early. The discounted room rates are only valid through March 1 and are subject to availability. After March 1, rooms can only be reserved based on availability and could be subject to a higher room rate.

ISHLT HOTEL RESERVATIONS

Group Hotel Reservations

Any request for a group of rooms for ten or more individuals must be submitted in writing to lisa.edwards@ishlt.org and be approved by ISHLT. A sub-block contract with ISHLT will be required for groups utilizing more than ten rooms.

Continuing Education Information

ACCME Accreditation Statement

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

CME Credit Designation Statement

ISHLT designates this live activity for a maximum of *33 AMA PRA Category 1 Credits*.™ Participants should claim only the credit commensurate with the extent of their participation in the activity.

ABTC Accreditation

Continuing Education Points for Transplant Certification (CEPTC) will be applied for.

ACPE Accreditation

Continuing Pharmacy Education Credits (CPE) will be applied for.

ANCC Accreditation

Amedco is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation. This course is co-provided by Amedco and the International Society for Heart and Lung Transplantation (ISHLT). Maximum of 33.00 contact hours.

GENERAL INFORMATION

Disclosure

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

Educational Need

Because of the rapid advances in patient health care in general and advanced heart and lung disease management in particular, professionals are in need of regular opportunities to update and maintain their knowledge of advances and changes in the field. This meeting is designed to address their needs.

Educational Goals

The educational goals of this activity are to enable participants to learn about current practices, emerging technologies, and medical advances related to mechanical circulatory support, heart and lung transplantation, and advanced heart and lung disease management and to provide a forum for participants to engage in discussion, debate, and examination regarding the efficacy and applicability of these current practices, emerging technologies, and medical advances.

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

1 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

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

3 At the conclusion of this meeting, participants will have improved competence and professional performance in the areas of understanding emerging technologies, medical advances, and the clinical applications of basic science models of advanced heart and lung disease management and prevention.

Acronyms

Each scientific session has been flagged with a code, tying it to the primary and secondary professional audiences for which it was developed. These acronyms will help you identify the symposia most likely to be of interest to you. The codes and associated acronyms for each professional audience are:

BSTR	Basic Science and Translational Research
CTEPH	Chronic Thromboembolic Pulmonary Hypertension
HF/HTX	Heart Failure/ Transplantation
ID	Infectious Diseases
LF/LTX	Lung Failure/ Transplantation
MCS	Mechanical Circulatory Support
NHSAH	Nursing, Health Science, Allied Health
PATH	Pathology
PEDS	Pediatrics
PHARM	Pharmacy and Pharmacology
PH	Pulmonary Hypertension



Highlights of the Annual Meeting Symposia

■ Basic Science and Translational Research

This year's fascinating basic science and translational research symposia are appealing to all ISHLT attendees. In ***Re-Focusing the Blurry Vision: Biomarkers of Thoracic Allograft Rejection***, different biomarkers in diagnosing and monitoring thoracic graft rejection will be discussed, some of which are already in clinical use and others are investigational. The sunrise session, ***Highways to Hell: Chronic Lung Allograft Dysfunction***, will bring exciting lectures about novel and interesting hypotheses involved in the pathophysiology of CLAD. In ***Seeing the Light: Antibodies in Thoracic Transplantation***, the aim is to acquire a deeper understanding of antibody-mediated mechanisms, treatments and potential downstream consequences of antibodies in transplantation. These sessions are innovating for both clinicians and researchers and will undoubtedly lead to novel insights.

■ Chronic Thromboembolic Pulmonary Hypertension

Interventional options for the treatment of CTEPH are expanding with BPA recently emerging as an option, in addition to PTE surgery. Yet, how can we compare the two therapies when there are differences in patient populations, procedures performed, and variability in reporting of risks and outcomes? ***A Fork in the Road: How Can We Compare Interventional Therapies in CTEPH?*** will address these issues and facilitate discussion on how we can move toward more uniform reporting of outcomes. The success of PTE has improved over the years due to better understanding of the pathophysiological mechanisms leading to major complications. This knowledge has translated into better ability to prevent them, recognize them early on and manage them more appropriately. ***Resilience in the Face of Calamity: The Art of Preventing Pulmonary Thromboendarterectomy (PTE) Disasters*** will review specific complications related to PTE and discuss how to manage them to achieve a successful outcome.



Symposia Highlights

■ Heart Failure and Transplantation

ISHLT2019 offers an exciting line-up of eight symposia that are of great interest to the contemporary advanced heart failure and transplant communities. The ***Great Debates in Cardiogenic Shock*** symposium will feature three lively debates between leading clinicians on approaches to manage patients with cardiogenic shock, ranging from hemodynamic management to temporary mechanical circulatory support.

Special heart failure populations require unique management approaches, and these will be highlighted in ***Heart Failure in Adult Congenital Heart Disease: Unique Problems Need Unique Solutions***, which will discuss controversial topics such as the timing of transplantation in ACHD patients, strategies for combined heart-liver transplantation, and use of mechanical circulatory support.

The management of patients with restrictive cardiomyopathies will be highlighted in the cutting-edge symposium entitled ***In the Thick of It: Hypertrophic and Amyloid Cardiomyopathies***.

Novel and sophisticated imaging techniques have been developed to better characterize and manage complex heart failure patients, and these will be explored in a joint symposium between the ISHLT and Society of Cardiac Magnetic Resonance (SCMR): ***Cardiac MRI and the World of Heart Failure: When Two Disciplines Harmonize***. Ultimately, many of these patients will require transplantation, but the donor organ shortage continues to restrict heart transplant activity worldwide. Innovative strategies to increase donor utilization, including use of marginal donors, hepatitis C positive donors, and donors from distant locations will be explored in ***All Talk, No Action? New Strategies and Best Practices to Maximize Donor Heart Utilization***, which will culminate in an animated debate about the pros and cons of Opt Out vs Opt In policies for organ donation.

Clinicians actively involved in the care of heart transplant recipients will benefit from cutting-edge talks on strategies to personalize and minimize immunosuppression in ***One Size Does Not Fit All: Personalized Medicine in Heart Transplantation***, while experts in coronary imaging and pharmacology will discuss the diagnosis, prevention, and treatment of cardiac allograft vasculopathy. This symposium, entitled ***Cardiac Allograft Vasculopathy: Have Hope, Ye Who Enter***, will end with a captivating debate on the role of revascularization and defibrillators for CAV treatment.

Provocative approaches to replace heart transplantation will be presented by outstanding international leaders in the fields of cardiac 3D printing, xenotransplantation, and stem cell therapy in ***Print, Replace, or Innovate: Alternative Strategies to Cardiac Transplantation***. Finally, numerous abstract presentations throughout the meeting will present the results of innovative, on-going research in the fields of advanced heart failure and cardiac transplantation.



Symposia Highlights

■ Infectious Diseases

Come join in the fun at ISHLT2019. In the ***Joint ISHLT/ ABTO Symposium: Combining Experiences to Enhance Thoracic Organ Transplantation Worldwide***, we are partnering with the Associação Brasileira de Transplante de Órgãos (ABTO) to highlight the similarities and differences in transplantation between South America and other areas across the globe. Talks on ***tuberculosis and Chagas' disease*** will be delivered by highly experienced experts. This will be of interest for ID and transplant physicians alike, especially in this age of global travel. Infections in MCS device recipients will be looked at from a new angle, with an update on the consequences of MCS device infection and a very interesting talk on the role of biofilms in MCS device infections.

In the ***Magic Kingdom of the Bronchoscopy***, experts will discuss the evidence related to the interpretation and treatment (or not!) of positive culture results from surveillance bronchoscopies post-lung transplantation. To round out the fun on this ID rollercoaster, we will have an update on fungal infections in ***FUN and Games with FUNgal Infections in Lung Transplantation***. We will hear cutting edge talks on diagnosis, drug-drug interactions, therapeutic drug monitoring, inhalational medications and in the increasing specter of antifungal resistance.

■ Lung Failure and Transplantation

Six pulmonary-focused symposia will present scientific data and expert opinions of high clinical relevance to everyone who works in the field of lung failure and lung transplantation. The ongoing scarcity of organs available for transplant remains a challenge in lung transplantation. ***Making Them Count: Enhancing Donor Utilization*** aims to review strategies to optimize organ utilization by improving donor management and using organs from DCD donors, Hepatitis C donors and older donors.

Location, Location and Allocation: World Wide Application of Broader Sharing in Lung Transplant covers an overview of the differences in international lung allocation practices, comparing the USA, European, Canadian and Australian experiences. ***Ex-Vivo Lung Perfusion (EVLP) in 2019 – From Research to Implementation*** looks at current practices and different models used as well as the ongoing clinical trials with EVLP and the rationale for using portable EVLP.

Immunobiology of the Older Lung Transplant Recipient will address why there are significant differences in this cohort of patients who are more at risk of infection and malignancy but experience decreased rates of rejection. ***Lung Transplant Candidate Selection: Challenging Cases*** addresses previous contraindications which are now potentially possible leading to increased lung candidate access.

Finally, the greatest challenge of all, ***Chronic Lung Allograft Dysfunction (CLAD): The End of the Beginning?*** aims to review how we can make a more accurate diagnosis of the different phenotypes, i.e. obstructive versus restrictive terminology, and will cover the major risk factors for the development of CLAD using the most up to date information on this topic.



Symposia Highlights

■ Mechanical Circulatory Support

If you are looking for inspiration, cutting edge scientific content, or simply a great ride, you will get it all during ISHLT2019. Begin with leaving planet earth in the ***Joint ISHLT/ICCAC Symposium: Faster, Higher, Stronger: Monitoring Exercise in Cyberspace*** and you can learn how your LVAD patients can get the most out of their heart assist device.

The exciting interplay of pacing technologies and durable VAD will be further explored in a symposium ***They Tell Me I Am Irregular: Why Do They Care? Arrhythmias in LVAD Recipients***. Exploring the ultimate goal of rebuilding the heart on LVAD, we provide the latest insights on recovery in the session ***Cardiac Reverse Remodeling in MCS: State of the Art***. Surgical approaches to LVAD implantations have evolved dramatically and the symposium ***Limiting the Invasiveness of the VAD Therapy: Alternative to Limited Surgical Approaches*** will update you on how the edges are cut in 2019.

Two special symposia, ***From Isolated to Mainstream: Evolving ECMO Strategies That Are Reshaping Outcomes*** and ***Short Term Mechanical Support: Taking the Next Leap Forward*** will give a comprehensive primer and expert opinion on the many developments we have witnessed over the past two years in the exciting acute support arena. Hemodynamic tailoring, hemocompatibility assessments, device and patient selection, and ECMO management strategies are just a few of the topics covered here. Lastly, before you leave, get a reality check in a symposium dedicated to serious adverse event currently (!) limiting our abilities to broaden MCS to earlier stages of heart failure ***Medical Management of LVAD Patients: Once the Chest is Closed, the Trouble Begins***. We hope to see you in Orlando for a great meeting!



Symposia Highlights

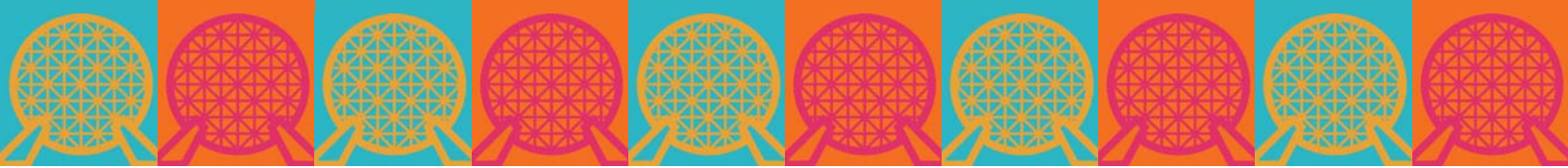
■ Nursing, Health Sciences, and Allied Health

This year's Nursing and Allied Health sessions bring together ISHLT's various disciplines – there is something for everyone in each session! Whether a mechanical circulatory support device or a continuous infusion pump, discharging home with a device can be fraught with challenges and fears. Preparing patients and families for a successful discharge home through self-management interventions and education will be covered in ***Part of (Their) World: Discharging Patients Home with a New Device***. This session will also address issues important to patient quality of life, like bathing, drinking, sex and traveling.

Matters of Life and Death: Palliative and End of Life Care in Transplant Medicine, aims to advance the ways in which we care for patients during another important transition: end of life. Physical, emotional and pharmacological interventions will be discussed, while also bringing attention to the importance of collaboration and cultural/religious considerations. Under recognized for much too long, the need for addressing provider burn-out in organ failure/transplant medicine will also be highlighted at the podium.

Sunrise Symposium: Fragility: Not Necessarily Failure will underscore the holistic approach needed to care for a fragile community of patients with frailty, nutritional, cognitive and mental health concerns.

Lastly, the advancements in organ failure/transplant medicine that we have witnessed over the years would not be possible without research. To encourage research across all disciplines in our field, ***Sunrise Symposium: The Mission IS Possible If You Choose to Accept it: The Processes of Performing Research***, will include accomplished researchers in the field who will provide guidance for both novice and expert investigators on the processes of research, from study design and funding to the dissemination of findings.



Symposia Highlights

■ Pathology

Clinical and pathologic definitions for chronic rejection in lung transplantation – antibody-mediated rejection (AMR) and chronic lung allograft dysfunction (CLAD) – have undergone rapid changes over the past decade. ***Nobody is CLAD to See AMR in Lung Transplantation*** will provide an update on these two major areas of discussion over the recent years and future development.

Bring Out Your Dead: The Postmortem Evaluation in the Thoracic Transplant Setting will highlight the postmortem examination (“autopsy”) which is underutilized in modern medicine but provides critical information to the clinicians, families and loved ones of the decedent to help them understand the decedent’s clinical course and how data obtained from autopsies may be used by hospital quality personnel, researchers, policy makers, registries and device manufacturers to improve the state of thoracic transplantation and mechanical circulatory support therapy.

■ Pediatrics

The pediatric symposia are designed to provide a potpourri of topics in order to capture the interest of a wide range of disciplines and sub specialties. The content will bring together clinicians and researchers to share their work and to present on high impact topics that are changing how we care for our patients.

The symposium ***Learning from the Children: Important Lessons from the Pediatric and Congenital Heart Disease Experience*** will focus on the pre-transplant support of children and how to improve waiting list survival. Hot topics in transplantation will be addressed in ***What Do We Do? Burning Platforms in Pediatric Thoracic Transplant***. A sunrise symposium will focus on lung transplant and is titled ***A Brand New Day: The New Normal in Pediatric Thoracic Transplantation***. And after they get an organ what do you do if they develop an infection? This question will be explored in the joint symposium with the International Pediatric Transplant Association (IPTA): ***EBV and CMV are Not as Easy as 1-2-3 When Caring for Pediatric Thoracic Recipients***.



Symposia Highlights

■ Pulmonary Hypertension

Take These Broken Lungs and Learn to Fly: Great Debates for Patients with PAH Awaiting Transplant will explore the complex decision making in the care of patients with end stage pulmonary hypertension awaiting lung transplantation.

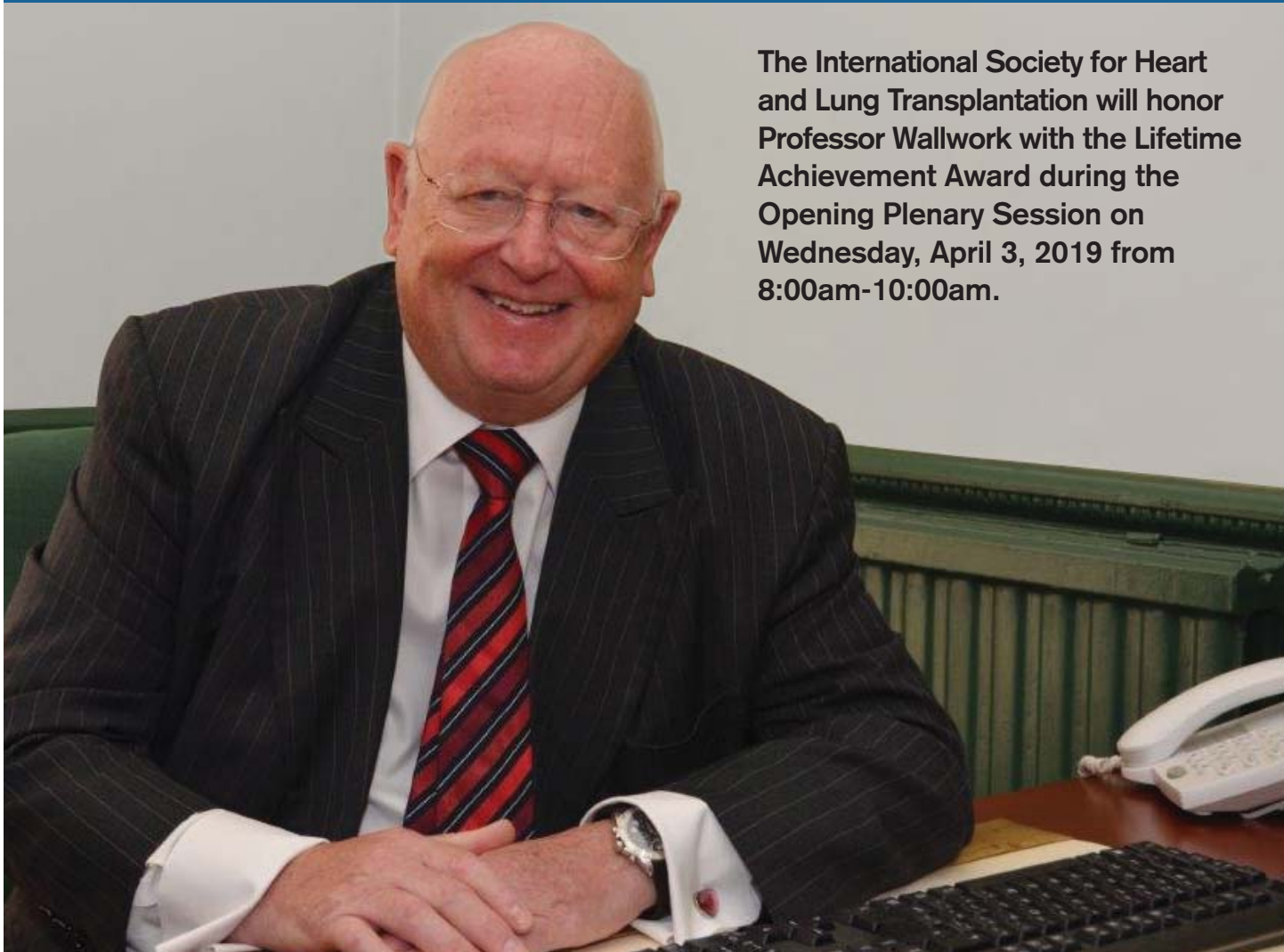
The Sunrise symposium, *I Want to Ride My Bicycle: Cardiopulmonary Exercise Testing (CPET) for PAH and CTEPH*, will review the various aspects of exercise testing from pathophysiology to outcome prediction. *Breaking Bad: The Right Ventricle and Exercise Hemodynamics Rediscovered* will provide an overview into the mechanisms, clinical diagnosis and management of chronic right heart failure in left heart disease, scleroderma, and pulmonary hypertension. In collaboration with the Pulmonary Vascular Research Institute (PVRI), *Changes in the World of Pulmonary Hypertension: Nice or Not Nice* will bring in experts to focus on controversies and new proposed developments under review since the recent World Symposium on Pulmonary Hypertension.

■ Pharmacy and Pharmacology

Pharmacy and pharmacology will appeal to all areas of the ISHLT membership with four symposia highlighting pharmacotherapy needs of our patients to ensure the best outcomes. We will be *Making Co-Morbidities Great Again: with Practical Updates in Co-Morbidity Management*. An expert panel will provide updates to the management of common co-morbidities pre- and post-transplant with a focus on the evidence base and novel medications. Diabetes, dyslipidemia, osteoporosis, psychiatric disorders, complimentary/alternative medicine, and immunizations/ travel medicine will all be reviewed.

How do we avoid *Making Deals with the Devil: Substances of Abuse from Pre- to Post-Transplant?* Our multidisciplinary panel will review substance use and abuse in transplant recipients, with a focus on the evidence showing adverse effects of narcotics, anxiolytics, nicotine, marijuana, and alcohol before and after transplant. Novel approaches to assessment and cessation interventions will be discussed.

We won't make *A Bloody Mess: Management of Hematologic Complications in Transplantation and MCS*; instead, we will offer insights into the management of neutropenia, thrombocytopenia, and hemoglobin optimization while also discussing direct acting oral anticoagulant use and pharmacologic management of bleeding reversal in both transplant and MCS patients. Lastly, *So Your Patient is on ECMO... Now What? Considerations for Drug Dosing and Anticoagulation in ECMO* will discuss the hot topics of optimal dosing of anti-infective medications and anticoagulation strategies in ECMO patients, especially as the boundaries of ECMO use are expanding.



The International Society for Heart and Lung Transplantation will honor Professor Wallwork with the Lifetime Achievement Award during the Opening Plenary Session on Wednesday, April 3, 2019 from 8:00am-10:00am.

Professor John Wallwork, FRCS served as President of ISHLT from 1994-1995. Royal Papworth Hospital, NHS Foundation Trust, Cambridge, United Kingdom.

PROFESSOR WALLWORK qualified at Edinburgh University and trained in cardiothoracic surgery in Edinburgh, Glasgow, London and Adelaide in South Australia. Prior to being appointed as Consultant Cardiothoracic Surgeon at Papworth Hospital in 1981, he spent two years as Chief Resident at Stanford University Hospital in California, training with Professor Norman Shumway's team, where he first became involved in heart and heart-lung transplantation. He subsequently played a major role in the development of heart-lung transplantation at Papworth Hospital. In 1984 Professor Wallwork performed Europe's first successful heart-lung transplant and, in 1986 together with Professor Sir Roy Calne, he performed the world's first heart-lung and liver transplant. Professor Wallwork was Director of the Transplant Service at Papworth Hospital from 1989 to 2006 and



Medical Director from 1997 to 2002. In October 2002 he was awarded an honorary Chair in Cardiothoracic Surgery by the University of Cambridge. He became Director of Research and Development at Papworth Hospital in 2007 and remained in that position until his retirement 2011. Throughout his 28 years in consultant practice Professor Wallwork has performed a wide spectrum of innovative adult cardiac surgery. He has had a major interest in the training of young cardiac surgeons from the UK and abroad. Professor Wallwork was appointed as Chairman of Papworth Hospital NHS Foundation Trust in February 2014. He returned to Papworth Hospital as Chairman after spending thirty years at the forefront of transplant surgery and research at the Trust. He currently serves as an Emeritus Professor of Cardiothoracic Surgery at Papworth Hospital in Cambridge.

*All meetings and activities will take place at the Loews Meeting Complex unless otherwise specified. All papers will be presented in English. Please check the **ISHLT2019** website for future updates. The **ISHLT2019** Mobile App, available for download in early spring, will reflect the most up-to-date session schedule and room assignments. Information on the website will also be updated regularly. Check back frequently for important updates.*

Schedule at a Glance

MONDAY / APRIL 1

8:00 AM – 12:00 PM
ISHLT Board of Directors Meeting
(Oceana 4)

1:00 PM – 5:00 PM
Strategic Planning Meeting
(Oceana 4)

5:00 PM – 8:00 PM
Academy Registration Open
(Registration South & China Sea)

5:00 PM – 8:00 PM
Speaker Ready Open
(Pacifica 8-9)


TUESDAY/APRIL 2

6:00 AM – 3:00 PM

Academy Registration Open
(Registration South & China Sea)

Speaker Ready Open
(Pacifica 8-9)

7:45 AM – 6:15 PM


 **ISHLT ACADEMY:**
Core Competencies in Nursing,
Health Sciences and Allied
Health Care of Patients Requiring
Mechanical Circulatory Support
and Transplantation
(Pacifica 3-5)

7:55 AM – 5:15 PM

 **ISHLT ACADEMY:**
Core Competencies in Pediatric
Heart Failure
(Pacifica 1-2)

8:00 AM – 1:00 PM

 **ISHLT ACADEMY:**
Master Class in Heart Failure
and Transplantation
(Coral Sea 1 & 2)

 **ISHLT ACADEMY:**
Master Class in Mechanical
Circulatory Support
(Java Sea 1 & 2)

8:00 AM – 5:00 PM

Strategic Planning Meeting
(Oceana 4)

11:30 AM – 1:00 PM


Core Academy Box Lunch Pick-Up
(Cayman Court)

2:00 PM – 6:00 PM

ISHLT Leadership Orientation Meeting
(Oceana 5)

2:00 PM – 7:00 PM

 **ISHLT ACADEMY:**
Master Class in Heart
Failure and Transplantation
(Coral Sea 1 & 2)

 **ISHLT ACADEMY:**
Master Class in Mechanical
Circulatory Support
(Java Sea 1 & 2)

4:00 PM – 8:00 PM

Annual Meeting Registration Open
(Registration South & China Sea)

6:00 PM – 7:00 PM

Standards & Guidelines
Committee Meeting
(Admiralty Boardroom)

International Engagement
Committee Meeting
(Oceana 4)

Transplant Registry
Committee Meeting
(Oceana 5)

Grants & Awards
Committee Meeting
(Turks 1)

WEDNESDAY/APRIL 3

6:00 AM – 7:00 PM

Registration Open
(Registration South & China Sea)

7:00 AM – 7:00 PM

Speaker Ready Open
(Pacifica 8-9)

8:00 AM – 10:00 AM

OPENING PLENARY SESSION
(Grand Caribbean 1-7)

Primary Audience: ALL

8:00 AM – 9:45 AM

Poster Mount Session 1
(Timor, Banda, Gardenia, Hibiscus)

9:00 AM – 7:00 PM

Press Office Open
(Philippine Sea)

9:30 AM – 7:15 PM

Exhibit Hall Open
(Oceana 6-12)

10:00 AM – 10:30 AM

Coffee Break
(Oceana 6-12)

10:00 AM – 7:15 PM

Industry Theater Open
(Oceana 2)

Poster Hall Open

(Timor, Banda, Gardenia, Hibiscus)

10:30 AM – 12:15 PM

SYMPOSIUM:
**Future Shock: Great Debates
in Cardiogenic Shock**
(Pacifica 7)

Primary Audience: HF/HTX

Secondary Audience: MCS

SYMPOSIUM:

**Limiting the Invasiveness of
the VAD Therapy: Alternative to
Limited Surgical Approaches**
(Grand Caribbean 1-7)

Primary Audience: MCS

SYMPOSIUM:

**Making Co-Morbidities Great
Again: Practical Updates in
Co-Morbidity Management**
(Coral Sea 1-2)

Primary Audience: PHARM

Secondary Audiences: HF/HTX, LF/LTX

ORAL SESSIONS

12:15 PM – 2:00 PM

LUNCH BREAK

COUNCIL MEETING:

**Basic Science and
Translational Research**
(Pacifica 1-2)

COUNCIL MEETING:

**Nursing, Health Sciences
and Allied Health**
(Pacifica 3-5)

COUNCIL MEETING:

Pharmacy and Pharmacology
(Coral Sea 1-2)

Junior Faculty Mentor Lunch

(Java Sea 1)

COMMITTEE MEETING:

IMACS Registry Steering Committee
(Admiralty Boardroom)

2:00 PM – 3:45 PM
SYMPOSIUM:
Re-Focusing the Blurry
Vision: Biomarkers of
Thoracic Allograft Rejection
(Pacifica 1-2)
Primary Audience: BSTR
Secondary Audiences: HF/HTX, LF/LTX

SYMPOSIUM:
They Tell Me I Am Irregular:
Why Do They Care?
Arrhythmias in LVAD Recipients
(Grand Caribbean 1-7)
Primary Audience: MCS

SYMPOSIUM:
Part of (Their) World:
Discharging Patients
Home with a New Device
(Pacifica 3-5)
Primary Audience: NHSAH
Secondary Audiences: MCS, PEDS

ORAL SESSIONS

3:45 PM – 4:15 PM
Coffee Break
(Oceana 6-12)

4:15 PM – 6:00 PM
SYMPOSIUM:
Chronic Lung Allograft
Dysfunction (CLAD): The
End of the Beginning?
(Pacifica 10-12)
Primary Audience: LF/LTX
Secondary Audiences: BSTR, PATH

SYMPOSIUM:
Short Term Mechanical
Support: Taking the Next
Leap Forward
(Grand Caribbean 1-7)
Primary Audience: MCS
Secondary Audience: HF/HTX

SYMPOSIUM:
What Do We Do? Burning
Platforms in Pediatric
Thoracic Transplant
(Pacifica 3-5)
Primary Audience: PEDS
Secondary Audiences: HF/HTX, NHSAH

ORAL SESSIONS

5:45 PM – 7:15 PM
EXHIBIT HALL
OPENING RECEPTION
(Oceana 6-12)

6:00 PM – 7:15 PM
Poster Session 1
(Timor, Banda, Gardenia, Hibiscus)

SCIENTIFIC COUNCIL NETWORKING RECEPTIONS

6:15 PM – 7:15 PM
MINI ORAL SESSIONS

7:15 PM – 8:15 PM
Poster Session 1 Removal
(Timor, Banda, Gardenia, Hibiscus)

THURSDAY/APRIL 4

6:00 AM – 6:30 PM

Registration Open
(Registration South & China Sea)

6:00 AM – 7:15 PM

Speaker Ready Open
(Pacifica 8-9)

7:00 AM – 9:45 AM

Poster Mount Session 2
(Timor, Banda, Gardenia, Hibiscus)

7:00 AM – 8:00 AM

COUNCIL MEETING:
Junior Faculty and Trainees
(Oceana 3-5)

SUNRISE SYMPOSIUM:

In the Thick of It: Hypertrophic
and Amyloid Cardiomyopathies
(Pacifica 7)

Primary Audience: HF/HTX

SUNRISE SYMPOSIUM:

Immunobiology of the Older
Lung Transplant Recipient
(Pacifica 10-12)

Primary Audience: LF/LTX

Secondary Audiences: BSTR, PHARM

SUNRISE SYMPOSIUM:

From Isolated to Mainstream:
Evolving ECMO Strategies
That Are Reshaping Outcomes
(Pacifica 6)

Primary Audience: MCS

Secondary Audience: HF/HTX

SUNRISE SYMPOSIUM:

Nobody is CLAD to See AMR
in Lung Transplantation
(Coral Sea 1-2)

Primary Audience: PATH

Secondary Audiences: BSTR, LF/LTX, PEDS

SUNRISE SYMPOSIUM:

I Want to Ride My Bicycle:
Cardiopulmonary Exercise Testing
(CPET) for PAH and CTEPH
(Pacifica 1-2)

Primary Audience: PH

Secondary Audience: CTEPH

SUNRISE SYMPOSIUM:

Making Deals with the Devil:
Substances of Abuse from
Pre- to Post-Transplant
(Pacifica 3-5)

Primary Audience: PHARM

Secondary Audiences: HF/HTX, LF/LTX, NHSAH

8:00 AM – 9:45 AM

SYMPOSIUM:

The Magic Kingdom of the
Bronchoscopy: Pathogens
with Real Implications and
Those to Disregard
(Pacifica 3-5)

Primary Audience: ID

Secondary Audiences: LF/LTX, PATH

SYMPOSIUM:

Medical Management of LVAD
Patients: Once the Chest is
Closed, the Trouble Begins
(Grand Caribbean 1-7)

Primary Audience: MCS

ORAL SESSIONS

9:00 AM – 7:00 PM

Press Office Open
(Philippine Sea)

9:30 AM – 7:00 PM

Exhibit Hall Open
(Oceana 6-12)

9:45 AM – 10:15 AM

Coffee Break
(Oceana 6-12)

9:45 AM – 7:00 PM

Industry Theater Open
(Oceana 2)

Poster Hall Open
(Timor, Banda, Gardenia, Hibiscus)

10:15 AM – 12:00 PM

SYMPOSIUM:
Ex-Vivo Lung Perfusion (EVLV)
in 2019: From Research to
Implementation
(Pacifica 10-12)

Primary Audience: LF/LTX
Secondary Audience: MCS

SYMPOSIUM:
Bring Out Your Dead: The
Postmortem Evaluation in
the Thoracic Transplant Setting
(Coral Sea 1-2)

Primary Audience: PATH
Secondary Audiences: HF/HTX, LF/LTX

SYMPOSIUM:
Learning from the Children:
Important Lessons from the
Pediatric and Congenital
Heart Disease VAD Experience
(Pacifica 3-5)

Primary Audience: PEDS
Secondary Audiences: HTX, MCS

ORAL SESSIONS

12:00 PM – 1:45 PM

LUNCH BREAK

COUNCIL MEETING:
Mechanical Circulatory Support
(Pacifica 6)

COUNCIL MEETING:
Pathology
(Coral Sea 1-2)

COUNCIL MEETING:
Pediatric Thoracic Transplantation
and Heart Failure
(Pacifica 3-5)

COUNCIL MEETING:
Pulmonary Hypertension
(Pacifica 1-2)

JHLT Editorial Board Lunch Meeting
(Java Sea 1)

1:45 PM – 3:30 PM

SYMPOSIUM:
Heart Failure in Adult Congenital
Heart Disease: Unique Problems
Need Unique Solutions
(Pacifica 7)

Primary Audience: HF/HTX
Secondary Audiences: MCS, PEDS

SYMPOSIUM:
JHLT at ISHLT: The Year
in a Capsule
(Pacifica 10-12)

Primary Audience: HF/HTX
Secondary Audiences: ID, LF/LTX, MCS, PEDS, PH

SYMPOSIUM:
Changes in the World of
Pulmonary Hypertension:
Nice or Not Nice
(Pacifica 1-2)

Primary Audience: PH
Secondary Audiences: CTEPH, PATH

ORAL SESSIONS

3:30 PM – 4:00 PM

Coffee Break
(Oceana 6-12)

**COMMITTEE MEETING:
2020 Symposium Planning
(Java Sea 1)**

4:00 PM – 5:45 PM

**SYMPOSIUM:
FUN and Games with
FUNgal Infections in Lung
Transplantation
(Pacifica 3-5)**

Primary Audience: ID

Secondary Audiences: LF/LTX, PATH, PHARM

ORAL SESSIONS

5:45 PM – 7:00 PM

**WINE AND CHEESE RECEPTION
(Oceana 6-12)**

SCIENTIFIC COUNCIL NETWORKING RECEPTIONS

**Poster Session 2
(Timor, Banda, Gardenia, Hibiscus)**

**5:45 PM – 6:45 PM
Past Presidents Meeting
(Admiralty Boardroom)**

**6:00 PM – 7:00 PM
MINI ORAL SESSIONS**

**7:00 PM – 8:00 PM
Poster Session 2 Removal
(Timor, Banda, Gardenia, Hibiscus)**

6:00 AM – 6:30 PM

Registration Open
(Registration South & China Sea)

6:00 AM – 7:15 PM

Speaker Ready Open
(Pacifica 8-9)

7:00 AM – 10:00 AM

**Poster Mount Session 3
(Timor, Banda, Gardenia, Hibiscus)**

7:00 AM – 8:00 AM

**COUNCIL MEETING:
Chronic Thromboembolic
Pulmonary Hypertension (CTEPH)
(Oceana 3-5)**

SUNRISE SYMPOSIUM:

**Highways to Hell: Chronic
Lung Allograft Dysfunction
(Pacifica 1-2)**

Primary Audience: BSTR

Secondary Audiences: LF/LTX, PATH

SUNRISE SYMPOSIUM:

**Print, Replace or Innovate:
Alternative Strategies to
Cardiac Transplantation
(Pacifica 7)**

Primary Audience: HF/HTX

Secondary Audience: MCS

SUNRISE SYMPOSIUM:

**MCS Infections: New Twists
in an Old Saga
(Pacifica 3-5)**

Primary Audience: ID

Secondary Audience: MCS

SUNRISE SYMPOSIUM:

**Cardiac Reverse Remodeling
in MCS: State of the Art
(Pacifica 6)**

Primary Audience: MCS

Secondary Audiences: BSTR, PATH

SUNRISE SYMPOSIUM:
The Mission IS Possible If
You Choose to Accept it:
The Processes of Performing
Research

(Pacifica 10-12)

Primary Audience: NHSAH

SUNRISE SYMPOSIUM:
A Bloody Mess: Management
of Hematologic Complications
in Transplantation and MCS

(Coral Sea 1-2)

Primary Audience: PHARM

Secondary Audience: MCS

8:00 AM – 10:00 AM

PLENARY SESSION

(Grand Caribbean 1-7)

Primary Audience: ALL

9:00 AM – 7:00 PM

Press Office Open

(Philippine Sea)

9:30 AM – 4:30 PM

Exhibit Hall Open

(Ocean 6-12)

10:00 AM – 10:30 AM

Coffee Break

(Oceana 6-12)

Annual Business Meeting

(Grand Caribbean 1-7)

10:00 AM – 4:30 PM

Industry Theater Open

(Oceana 2)

10:00 AM – 7:15 PM

Poster Hall Open

(Timor, Banda, Gardenia, Hibiscus)

10:30 AM – 12:15 PM

JOINT ISHLT/SCMR SYMPOSIUM:
Cardiac MRI and the World of
Heart Failure: When Two
Disciplines Harmonize

(Pacifica 7)

Primary Audience: HF/HTX

JOINT ISHLT/IPTA SYMPOSIUM:
EBV and CMV are Not as Easy
as 1-2-3 When Caring for Pediatric
Thoracic Transplant Recipients

(Pacifica 3-5)

Primary Audience: PEDS

Secondary Audiences: HTX, ID, LTX, NHSAH, PHARM

SYMPOSIUM:

Take These Broken Lungs and
Learn to Fly: Great Debates for
Patients with PAH Awaiting Transplant

(Coral Sea 1-2)

Primary Audience: PH

Secondary Audiences: CTEPH, LF/LTX

ORAL SESSIONS

12:15 PM – 2:00 PM

LUNCH BREAK

COUNCIL MEETING:

Heart Failure and
Transplantation

(Pacifica 7)

COUNCIL MEETING:

Infectious Diseases

(Pacifica 3-5)

COUNCIL MEETING:

Pulmonary Transplantation

(Pacifica 10-12)

COMMITTEE MEETING:

Registries and Databases

(Admiralty Boardroom)

2:00 PM – 3:45 PM

SYMPOSIUM:
Resilience in the Face of
Calamity: The Art of
Preventing PTE Disasters
(Coral Sea 1-2)

Primary Audience: CTEPH

Secondary Audience: PH

SYMPOSIUM:
Joint ISHLT/ABTO Symposium:
Combining Experiences to
Enhance Thoracic Organ
Transplantation Worldwide
(Pacifica 3-5)

Primary Audience: ID

Secondary Audiences: HF/HTX, LF/LTX

SYMPOSIUM:
Making Them Count: Enhancing
Lung Donor Utilization
(Pacifica 10-12)

Primary Audience: LF/LTX

Secondary Audience: ID

JOINT ISHLT/ICCAC SYMPOSIUM:
Faster, Higher, Stronger:
Monitoring Exercise in Cyberspace
(Pacifica 6)

Primary Audience: MCS

Secondary Audience: NHSAH

ORAL SESSIONS

3:45 PM – 4:15 PM

Coffee Break
(Oceana 6-12)

4:15 PM – 6:00 PM

SYMPOSIUM:
All Talk, No Action? New
Strategies and Best Practices
to Maximize Donor Heart Utilization
(Pacifica 7)

Primary Audience: HF/HTX

Secondary Audience: LF/LTX

SYMPOSIUM:
Matters of Life and Death:
Palliative and End of Life
Care in Transplant Medicine
(Pacifica 3-5)

Primary Audience: NHSAH

Secondary Audiences: PEDS, PH, PHARM

SYMPOSIUM:
Breaking Bad: The Right
Ventricle and Exercise
Hemodynamics Rediscovered
(Coral Sea 1-2)

Primary Audience: PH

Secondary Audiences: CTEPH, MCS

ORAL SESSIONS

6:00 PM – 7:15 PM

Poster Session 3
(Timor, Banda, Gardenia, Hibiscus)

SCIENTIFIC COUNCIL NETWORKING RECEPTIONS

6:15 PM – 7:15 PM

MINI ORAL SESSIONS

7:15 PM – 8:15 PM

Poster Session 3 Removal
(Timor, Banda, Gardenia, Hibiscus)

SATURDAY/APRIL 6

6:00 AM – 7:15 PM

Speaker Ready Open
(Pacifica 8-9)

7:00 AM – 12:15 PM

Registration Open
(Registration South & China Sea)

7:00 AM – 8:00 AM

**SUNRISE SYMPOSIUM:
A Fork in the Road: How
Can We Compare
Interventional Therapies
in CTEPH?**

(Coral Sea 1-2)

Primary Audience: CTEPH

Secondary Audience: PH

**SUNRISE SYMPOSIUM:
One Size Does Not Fit All:
Personalized Medicine in
Heart Transplantation**

(Pacifica 7)

Primary Audience: HF/HTX

Secondary Audience: PHARM

**SUNRISE SYMPOSIUM:
Lung Transplant Candidate
Selection: Challenging Cases**

(Pacifica 10-12)

Primary Audience: LF/LTX

Secondary Audiences: ID, NHSAH, PEDS

**SUNRISE SYMPOSIUM:
Fragility: Not Necessarily Failure**

(Pacifica 6)

Primary Audience: NHSAH

Secondary Audiences: HF/HTX, LF/LTX, MCS

**SUNRISE SYMPOSIUM:
A Brand-New Day: The New
Normal in Pediatric Thoracic
Transplantation**

(Pacifica 1-2)

Primary Audience: PEDS

Secondary Audiences: LF/LTX, PATH

**SUNRISE SYMPOSIUM:
So Your Patient is on ECMO...
Now What? Considerations
for Drug Dosing and
Anticoagulation in ECMO**

(Pacifica 3-5)

Primary Audience: PHARM

Secondary Audience: MCS

8:00 AM – 10:00 AM

PLENARY SESSION

(Pacifica 6)

Primary Audience: ALL

10:00 AM – 10:15 AM

Coffee Break

(Pacifica Foyer)

10:15 AM – 12:00 PM

**SYMPOSIUM:
Seeing the Light: Antibodies
in Thoracic Transplantation**

(Pacifica 3-5)

Primary Audience: BSTR

Secondary Audiences: HF/HTX, LF/LTX, PHARM

**SYMPOSIUM:
Cardiac Allograft
Vasculopathy: Have Hope,
Ye Who Enter**

(Pacifica 7)

Primary Audience: HF/HTX

SYMPOSIUM:
Location, Location, and
Allocation: Worldwide
Application of Broader
Sharing in Lung Transplant
(Pacifica 10-12)

Primary Audience: LF/LTX

Secondary Audience: PH

ORAL SESSIONS

12:15 PM – 2:00 PM

ORAL SESSIONS

2:00 PM

MEETING ADJOURNS

Be sure to join
us next Spring in

ORLANDO

April 2-6, 2019!

ISHLT 2019

39th Annual Meeting & Scientific Sessions

daily time table schedule

ISHLT ACADEMY:
CORE COMPETENCY
AND MASTER CLASSES

SYMPOSIUMS

PLENARY SESSIONS

ORALS and MINI ORALS

COUNCIL MEETINGS

and more!

DAILY TIME TABLE

TUESDAY / April 2, 2019

LOEWS ROYAL PACIFIC HOTEL						
ROOM	PACIFICA 1-2	PACIFICA 3-5	CORAL SEA 1	CORAL SEA 2	JAVA SEA 1	JAVA SEA 2
TIME						
7:45 AM		ISHLT ACADEMY 7:45am-6:15pm NHSAH CORE COMPETENCY COURSE				
8:00 AM	ISHLT ACADEMY 7:55am-5:45pm		ISHLT ACADEMY 8 am - 1 pm	ISHLT ACADEMY 8 am - 1 pm	ISHLT ACADEMY 8 am - 1 pm	ISHLT ACADEMY 8 am - 1 pm
9:00 AM						
10:00 AM	PEDS HF CORE COMPETENCY COURSE		HFTX MASTER CLASS	HFTX MASTER CLASS	MCS MASTER CLASS	MCS MASTER CLASS
11:00 AM						
NOON						
1:00 PM						
2:00 PM			ISHLT ACADEMY 2 pm - 7 pm HFTX MASTER CLASS	ISHLT ACADEMY 2 pm - 7 pm HFTX MASTER CLASS	ISHLT ACADEMY 2 pm - 7 pm MCS MASTER CLASS	ISHLT ACADEMY 2 pm - 7 pm MCS MASTER CLASS
3:00 PM						
4:00 PM						
5:00 PM						
5:30 PM						
6:00 PM						
6:30 PM						
7:00 PM						
7:30 PM						

DAILY TIME TABLE

WEDNESDAY / April 3, 2019

LOEWS SAPPHIRE FALLS HOTEL		LOEWS ROYAL PACIFIC HOTEL			
ROOM	GRAND CARIBBEAN 1-7	PACIFICA 6	PACIFICA 7	PACIFICA 10-12	PACIFICA 1-2
TIME					
7:00 AM					
8:00 AM	PLENARY SESSION 8-10 am				
9:00 AM					
10:00 AM	BREAK	BREAK	BREAK	BREAK	BREAK
10:30 AM	SYMPOSIUM: MCS THERAPY MCS	ORAL	SYMPOSIUM: SHOCK HF/HTX, MCS	ORAL	ORAL
11:00 AM					
NOON					
12:15	BREAK	BREAK	BREAK	BREAK	BSTR COUNCIL MEETING
1:00 PM					
2:00 PM	SYMPOSIUM: ARRHYTHMIAS MCS	ORAL	ORAL	ORAL	SYMPOSIUM: BIOMARKERS BSTR, HF/HTX LF/LTX
3:00 PM					
3:45	BREAK	BREAK	BREAK	BREAK	BREAK
4:00 PM					
4:15	SYMPOSIUM: SHORT-TERM MCS MCS, HF/HTX	ORAL	ORAL	SYMPOSIUM: CLAD LF/LTX, BSTR, PATH	ORAL
5:00 PM					
6:00 PM	BREAK	BREAK	BREAK	BREAK	BREAK
6:15		MINI ORAL	MINI ORAL	MINI ORAL	MINI ORAL
7:00 PM					
7:15					
8:00 PM					

DAILY TIME TABLE

WEDNESDAY / April 3, 2019

LOEWS ROYAL PACIFIC HOTEL					
ROOM	PACIFICA 3-5	CORAL SEA 1-2	OCEANA 6-12	OCEANA 2	TIMOR, BANDA GARDENIA HIBISCUS
TIME					
7:00 AM					
8:00 AM					
9:00 AM					
9:30			EXHIBIT HALL OPEN 9:30 am – 7:15 pm		
10:00 AM	BREAK	BREAK		INDUSTRY THEATER OPEN 10 am – 7:15 pm	POSTER HALL OPEN 10 am – 7:15 pm
10:30 AM	ORAL	SYMPOSIUM: COMORBIDITIES			
11:00 AM					
NOON		PHARM, HF/HTX LF/LTX			
12:15	NHSAH COUNCIL MEETING	PHARM COUNCIL MEETING			
1:00 PM					
2:00 PM	SYMPOSIUM: DISCHARGE PATIENTS	ORAL			
3:00 PM	NHSAH, MCS, PEDS				
3:45	BREAK	BREAK			
4:00 PM					
4:15	SYMPOSIUM: WHAT TO DO	ORAL			
5:00 PM					
5:45	PEDS, HTX, NHSAH				
6:00 PM	BREAK	BREAK	EXHIBIT HALL OPENING 5:45 pm – 7:15 pm		
6:15	MINI ORAL	MINI ORAL		POSTER SESSION 1 6 pm – 7:15 pm	
7:00 PM					
7:15					
8:00 PM					

DAILY TIME TABLE

THURSDAY/April 4, 2019

LOEWS SAPHIRE FALLS HOTEL		LOEWS ROYAL PACIFIC HOTEL			
ROOM	GRAND CARIBBEAN 1-7	PACIFICA 6	PACIFICA 7	PACIFICA 10-12	PACIFICA 1-2
TIME					
7:00 AM		SUNRISE SYMP: ECMO MCS, HF/HTX	SUNRISE SYMP: CARDIOMYOPATHY HF/HTX	SUNRISE SYMP: OLDER RECIPIENTS LF/LTX, BSTR, PHARM	SUNRISE SYMP: CPET PH, CTEPH
8:00 AM	SYMPOSIUM: LVAD MANAGEMENT 8-10 am MCS	ORAL	ORAL	ORAL	ORAL
9:00 AM					
9:45	BREAK				
10:00 AM					
10:15	ORAL	ORAL	ORAL	SYMPOSIUM: EVLP LF/LTX, MCS	ORAL
10:30 AM					
11:00 AM					
NOON	BREAK	MCS COUNCIL MEETING	BREAK	BREAK	PH COUNCIL MEETING
1:00 PM					
1:45	ORAL	ORAL	SYMPOSIUM: HF in ACHD HF/HTX, MCS, PEDS	SYMPOSIUM: JHLT at ISHLT HF/HTX, ID, LF/LTX MCS, PED	SYMPOSIUM: WORLD OF PH PH, CTEPH, PATH
2:00 PM					
3:00 PM					
3:30	BREAK				
4:00 PM		ORAL	ORAL	ORAL	ORAL
5:00 PM					
5:45	BREAK				
6:00 PM		MINI ORAL	MINI ORAL	MINI ORAL	MINI ORAL
7:00 PM					
8:00 PM					

DAILY TIME TABLE

THURSDAY/April 4, 2019

LOEWS ROYAL PACIFIC HOTEL					
ROOM	PACIFICA 3-5	CORAL SEA 1-2	OCEANA 6-12	OCEANA 2	TIMOR, BANDA GARDENIA HIBISCUS
TIME					
7:00 AM	SUNRISE SYMP: SUBSTANCE ABUSES <i>PHARM, HF/HTX, LF/LTX, NNSAH</i>	SUNRISE SYMP: CLAD & AMR <i>PATH, BSTR, LF/LTX PEDS</i>			
8:00 AM	SYMPOSIUM: BRONCH PATH	ORAL			
9:00 AM	<i>ID, LF/LTX, PATH</i>				
9:30			EXHIBIT HALL OPEN 9:30 am – 7:15 pm	INDUSTRY THEATER OPEN 9:45 am – 7 pm	POSTER HALL OPEN 9:45 am – 7 pm
9:45	BREAK	BREAK			
10:00 AM					
10:15	SYMPOSIUM: CHD VADs	SYMPOSIUM: POSTMORTEM			
10:30 AM					
11:00 AM	<i>PEDS, HTX, MCS</i>	<i>PATH, HF/HTX LF/LTX</i>			
NOON	PEDS COUNCIL MEETING	PATH COUNCIL MEETING			
1:00 PM					
1:45	ORAL	ORAL			
2:00 PM					
3:00 PM					
3:30	BREAK	BREAK			
4:00 PM	SYMPOSIUM: FUNGAL INFECTIONS	ORAL			
5:00 PM	<i>ID, LF/LTX, PATH PHARM</i>				
5:45	BREAK	BREAK	WINE AND CHEESE RECEPTION 5:45 pm – 7 pm		POSTER SESSION 2 5:45 pm – 7 pm
6:00 PM	MINI ORAL	MINI ORAL			
7:00 PM					
8:00 PM					

DAILY TIME TABLE

FRIDAY/April 5, 2019

LOEWS SAPPHIRE FALLS HOTEL		LOEWS ROYAL PACIFIC HOTEL			
ROOM	GRAND CARIBBEAN 1-7	PACIFICA 6	PACIFICA 7	PACIFICA 10-12	PACIFICA 1-2
TIME					
7:00 AM		SUNRISE SYMP: REV REMODEL MCS, BSTR PATH	SUNRISE SYMP: ALT STRATEGIES HF/HTX, MCS	SUNRISE SYMP: RESEARCH NNSAH	SUNRISE SYMP: CLAD BSTR, LF/LTX PATH
8:00 AM	PLENARY SESSION				
9:00 AM					
10:00 AM	BUSINESS MTG.	BREAK	BREAK	BREAK	BREAK
10:30 AM	ORAL	ORAL	SYMPOSIUM: ISHLT/SCMR HF/HTX	ORAL	ORAL
11:00 AM					
NOON	BREAK	BREAK	HFTX COUNCIL MEETING	LTX COUNCIL MEETING	BREAK
12:15					
1:00 PM					
2:00 PM	ORAL	SYMPOSIUM: ISHLT/ICCAC MCS, NNSAH	ORAL	SYMPOSIUM: DONOR LUNG LF/LTX, ID	ORAL
3:00 PM					
3:45	BREAK	BREAK	BREAK	BREAK	BREAK
4:00 PM	ORAL	ORAL	SYMPOSIUM: DONOR HEART HF/HTX	ORAL	ORAL
4:15					
5:00 PM					
6:00 PM		BREAK	BREAK	BREAK	BREAK
6:15		MINI ORAL	MINI ORAL	MINI ORAL	MINI ORAL
7:00 PM					
7:15					
8:00 PM					

DAILY TIME TABLE

FRIDAY/ April 5, 2019

LOEWS ROYAL PACIFIC HOTEL					
ROOM	PACIFICA 3-5	CORAL SEA 1-2	OCEANA 6-12	OCEANA 2	TIMOR, BANDA GARDENIA HIBISCUS
TIME					
7:00 AM	SUNRISE SYMP: MCS INFECTIONS <i>ID, MCS</i>	SUNRISE SYMP: BLOODY MESS <i>PHARM, MCS</i>			
8:00 AM					
9:00 AM					
9:30			EXHIBIT HALL OPEN 9:30 am – 4:30 pm		
10:00 AM	BREAK	BREAK		INDUSTRY THEATER OPEN 10 am – 4:30 pm	POSTER HALL OPEN 10 am – 7:15 pm
10:30 AM	SYMPOSIUM: ISHLT/IPTA	SYMPOSIUM: DEBATES			
11:00 AM	<i>PEDS, ID</i>	<i>PH, CTEPH, LF/LTX</i>			
NOON					
12:15	ID COUNCIL MEETING	BREAK			
1:00 PM					
2:00 PM	SYMPOSIUM: ISHLT/ABTO	SYMPOSIUM: PTE DISASTERS			
3:00 PM	<i>ID, HF/HTX, LF/LTX</i>	<i>CTEPH, PH</i>			
3:45	BREAK	BREAK			
4:00 PM					
4:15	SYMPOSIUM: PALLIATIVE CARE	SYMPOSIUM: RV EXERCISE			
4:30					
5:00 PM					
	<i>NHSAH, PEDS, PH PHARM</i>	<i>PH, CTEPH, MCS</i>			
6:00 PM	BREAK	BREAK			
6:15	MINI ORAL	MINI ORAL		POSTER SESSION 3 6 pm – 7:15 pm	
7:00 PM					
7:15					
8:00 PM					

DAILY TIME TABLE

SATURDAY/April 6, 2019

LOEWS ROYAL PACIFIC HOTEL						
ROOM	PACIFICA 6	PACIFICA 7	PACIFICA 10-12	PACIFICA 1-2	PACIFICA 3-5	CORAL SEA 1-2
TIME						
7:00 AM	SUNRISE SYMP: FRAGILITY <i>NHSAH, HF/HTX, LF/LTX, MCS</i>	SUNRISE SYMP: PERSONAL MED <i>HF/HTX</i>	SUNRISE SYMP: CANDIDATE SEL <i>LF/LTX, ID, NHSAH, PH</i>	SUNRISE SYMP: NEW NORMAL <i>PEDS, LF/LTX, PATH</i>	SUNRISE SYMP: DRUG DOSING <i>PHARM, MCS</i>	SUNRISE SYMP: INTERVENTION <i>CTEPH</i>
8:00 AM	PLENARY SESSION					
9:00 AM						
10:00 AM	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK
10:15 AM	ORAL	SYMPOSIUM: CAV <i>HF/HTX</i>	SYMPOSIUM: LUNG ALLOCATION <i>LF/LTX, PH</i>	ORAL	SYMPOSIUM: SEEING LIGHT <i>BSTR, HF/HTX, LF/LTX, PHARM</i>	ORAL
10:30 AM						
11:00 AM						
NOON	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK
12:15 PM	ORAL	ORAL	ORAL	ORAL	ORAL	ORAL
1:00 PM						
2:00 PM						

preliminary scientific program

WEDNESDAY / April 3, 2019

8:00 AM – 10:00 AM

OPENING PLENARY SESSION

(GRAND CARIBBEAN 1-7)

Primary Audience: ALL

CHAIRS: Jeffrey J. Teuteberg, MD and
Lara Danziger-Isakov, MD, MPH

8:00 AM **Welcome/Program Chair Report**
Lara Danziger-Isakov, MD, MPH,
Children's Hospital Medical
Center, Cincinnati, OH, USA

8:10 AM **Thoracic Registry Report**
Josef Stehlik, MD, MPH,
University of Utah School of
Medicine, Salt Lake City, UT, USA

8:20 AM **IMACS Registry Report**
Daniel J. Goldstein, MD,
Montefiore Medical Center,
Bronx, NY, USA

8:30 AM **Journal Editor's Report**
Mandeep R. Mehra, MD, FRCP,
FACC, FESC. Brigham and
Women's Hospital, Boston,
MA, USA

8:40 AM **President's Report**
Jeffrey J. Teuteberg, MD,
Stanford University School of
Medicine, Stanford, CA, USA

8:55 AM **Featured Abstract 1**

9:15 AM **Featured Abstract 2**

9:35 AM **Lifetime Achievement Award
Recipient Lecture**
John Wallwork, FRCS, Papworth
Hospital, Cambridge, UK

10:30 AM – 12:15 PM

SYMPOSIUM: Future Shock: Great Debates in Cardiogenic Shock

(PACIFICA 7)

Primary Audience: HF/HTX

Secondary Audience: MCS

SESSION SUMMARY: The incidence of cardiogenic shock is increasing, leading to an emerging focus on refining our approach to shock. This symposium will provide a framework for understanding goals of treatment, defining phenotypes and profiles of shock, exploring geographical differences in management, and reviewing trends in use of temporary MCS.

CHAIRS: Teresa De Marco, MD and Richard Cheng, MD

10:30 AM **CASE PRESENTATION: 'Gimme Gimme Shock Treatment': Acute Cardiogenic Shock Patient Transferred for Advanced Heart Failure Therapy**
Adriana Torres, MD, Fundacion Cardioinfantil, Bogota, Colombia

10:35 AM **DEBATE 1: 'Culture Shock': Tissue Perfusion is More Important than Hemodynamics in Managing Cardiogenic Shock (PRO)**
Daniel J. Goldstein, MD, Montefiore Medical Center, Bronx, NY, USA

10:50 AM **DEBATE 1: 'Culture Shock': Tissue Perfusion is More Important than Hemodynamics in Managing Cardiogenic Shock (CON)**
James C. Fang, MD, University of Utah Health Sciences Center, Salt Lake City, UT, USA

11:05 AM **DEBATE 2: 'Shock Rock': One Treatment Fits All in Cardiogenic Shock (PRO)**
Shelley Hall, MD, Baylor University Medical Center, Dallas, TX, USA

11:20 AM **DEBATE 2: 'Shock Rock': One Treatment Fits All in Cardiogenic Shock (CON)**
Rebecca Cogswell, MD, University of Minnesota, Minneapolis, MN, USA

11:35 AM **DEBATE 3: 'Shock Treatment': All Patients Should Receive Temporary MCS in Cardiogenic Shock to Maximize Survival (PRO)**
Pascal Leprince, MD, Hôpital de La Pitié Salpêtrière, Paris, France

11:50 AM **DEBATE 3: 'Shock Treatment': All Patients Should Receive Temporary MCS in Cardiogenic Shock to Maximize Survival (CON)**
David A. Baran, MD, Sentara Heart Hospital, Norfolk, VA, USA

12:05 PM **10-min Panel Discussion**

10:30 AM – 12:15 PM

SYMPOSIUM: Limiting the Invasiveness of the VAD Therapy: Alternative to Limited Surgical Approaches

(GRAND CARIBBEAN 1-7)

Primary Audience: MCS

SESSION SUMMARY: The ISHLT 2018 Annual Meeting included the highest number of abstracts on less invasive VAD implantation approach. This symposium will evaluate the potential advantages of minimal invasive approaches for VAD implantation, the usage of ECMO instead of CPB, and the feasibility and advantages of adding minimal invasive and off-pump techniques.

CHAIRS: George M. Wieselthaler, MD and Karen L. Booth, MBChB

10:30 AM *Influence of the Surgical Technique on Post-Operative Outcome: Is Minimal Invasive Approach the Way to Go?*
Simon Maltais, MD,
Mayo Clinic, Rochester, MN, USA

10:45 AM Q&A

10:50 AM *The Alternative Approach: Should We Be Using ECMO Instead of CPB?*
Julia Riebandt, MD, Medical University of Vienna, Vienna, Austria

11:05 AM Q&A

11:10 AM *Going 'Off-Pump': Does It Make a Difference?*
Diyar Saeed, MD, PhD,
Leipzig Heart Center,
Leipzig, Germany

11:25 AM Q&A

11:30 AM *Going 'BIVAD': Acute Pitfalls and Long-Term Threats*
Evgenij V. Potapov, MD, PhD,
Deutsches Herzzentrum,
Berlin, Germany

11:45 AM Q&A

11:50 AM *Out with the Old: Pump Replacement/Upgrade Decommissioning Explant*
Carmelo A. Milano, MD,
Duke University Medical Center, Durham, NC, USA

12:05 PM Q&A

10:30 AM – 12:15 PM

SYMPOSIUM: Making Co-Morbidities Great Again: Practical Updates in Co-Morbidity Management

(CORAL SEA 1-2)

Primary Audience: PHARM

Secondary Audience: HF/HTX

Secondary Audience: LF/LTX

SESSION SUMMARY: This symposium will review management of comorbidities and primary care needs that affect heart and lung transplant recipients before and after transplant including diabetes, dyslipidemia, osteoporosis, psychiatric disorders, complimentary/alternative medicine, and immunizations/travel. Best practices and recent guideline recommendations will be presented for each topic. New and novel medications available and any pros or cons for use in the transplant population will be discussed.

CHAIRS: Patricia Ging, PharmD and Nicole L. Casciello, PharmD, MBA

10:30 AM *What to Do When the A1C is 'BIGLY': An Update on the Management of Post-Transplant Diabetes*

Jennifer L. Day, PharmD, Baptist Health Heart Failure and Transplant Institute, Little Rock, AR, USA

10:45 AM *Good Lipoproteins on Both Sides: Optimizing Treatment of Dyslipidemia and Obesity*

Jill C. Krisl, PharmD, Houston Methodist Hospital, Houston, TX, USA

11:00 AM *'Skeletons in the Closet': Diagnosis, Prevention and Treatment of Osteoporosis*

David Iturbe, MD, Hospital Universitario Marques de Valdecilla, Santander, Spain

11:15 AM *'Stable Genius': Managing Mental Health After Transplant*
Zoey Malpus, BSc, Wythenshawe Hospital, Manchester, UK

11:30 AM *Combating 'Alternative Facts': Complementary and Alternative Medicine in Transplant*

Teena Sam, PharmD, Baylor University Medical Center, Dallas, TX, USA

11:45 AM *'Fake News': Immunization Practices and Travel Prophylaxis*
Michele Estabrook, MD, St. Louis Children's Hospital, St. Louis, MO, USA

12:00 PM 15-min Panel Discussion

2:00 PM – 3:45 PM

SYMPOSIUM: Part of (Their) World: Discharging Patients Home with a New Device

(PACIFICA 3-5)

Primary Audience: NNSAH

Secondary Audience: MCS

Secondary Audience: PEDS

SESSION SUMMARY: A successful discharge for patients with VAD or other supportive therapies (continuous infusions for pulmonary hypertension and heart failure patients) requires thoughtful planning and education. This symposium addresses topics geared toward helping patients successfully discharge to (and remain) home, including self-management/self-efficacy, discharge medications, avoiding readmission, preparing caregivers of patients with devices, and addressing the issues most important to patients: driving, showering, drinking, sex and traveling.

CHAIRS: Sarah E. Schroeder, ACNP-BC, MSN, RN, AACCC and Mark E. Puhlman, MSN

2:00 PM *I Can Go the Distance: Building Self Care and Self-Empowerment in Patients*

Jesus Casida, PhD, RN, University of Michigan, Ann Arbor, MI, USA

2:15 PM Q&A

2:20 PM *You've Got a Friend in Me: Preparing Caregivers*

Jodie Lantz, MSN, RN, PCNS-BC, Children's Health Dallas, Richardson, TX, USA

2:35 PM Q&A

2:40 PM *A Spoonful of Sugar Makes the Discharge Medications Go Down*

Cassandra Vale, PharmD, The Prince Charles Hospital, Queensland, Australia

2:55 PM Q&A

3:00 PM *How Far I'll Go: Preventing Returns to the Hospital*

Nicola Robinson Smith, RN, Freeman Hospital, Newcastle Upon Tyne, UK

3:15 PM Q&A

3:20 PM *The Bare Necessities: The Do's and Don'ts of Living with a New Device*

Wendy Gin-Sing, CNS, Hammersmith Hospital, London, UK

3:35 PM Q&A

2:00 PM – 3:45 PM

SYMPOSIUM: Re-Focusing the Blurry Vision: Biomarkers of Thoracic Allograft Rejection (PACIFICA 1-2)

- Primary Audience: BSTR
- Secondary Audience: HF/HTX
- Secondary Audience: LF/LTX

SESSION SUMMARY: The goal of this symposium is to review advances in molecular diagnostic assessments and novel biomarkers in thoracic (both heart and lung) organ transplantation. This will include approaches that are being applied clinically and others that are investigational but that can provide greater insight into the pathophysiology and immunology of allograft rejection.

CHAIRS: Daniel Kreisel, MD, PhD and Tereza Martinu, MD

- 2:00 PM *Donor-Derived Cell Free DNA as a Marker of Allograft Injury*
Hannah Valentine, MD, National Institutes of Health, Bethesda, MD, USA
- 2:15 PM Q&A
- 2:20 PM *Monitoring Immune Responses*
Glen Westall, MD, PhD, Alfred Hospital, Melbourne, Australia
- 2:35 PM Q&A
- 2:40 PM *MicroRNA and Exosomes*
Christian Schulze, PhD, University Hospital, Jena, Germany
- 2:55 PM Q&A
- 3:00 PM *Through the Looking Glass: Advances in Histology*
Martin Goddard, FRCS, MRCPa, Papworth Hospital, Cambridge, United Kingdom
- 3:15 PM Q&A
- 3:20 PM *Gene Expression Signatures to Monitor Graft Rejection*
Jean-Paul Duong Van Huyen, MD, Hospital Necker, Paris, France
- 3:35 PM Q&A

2:00 PM – 3:45 PM

SYMPOSIUM: They Tell Me I Am Irregular: Why Do They Care? Arrhythmias in LVAD Recipients (GRAND CARIBBEAN 1-7)

- Primary Audience: MCS

SESSION SUMMARY: CF-LVAD patients are living longer, and cardiac implantable electronic devices and arrhythmia management have assumed a significant role. More data is available to guide management, and expert speakers including MCS & EP specialists will discuss existing data and provide recommendations regarding appropriate management of ICD/CRT and arrhythmias in LVAD recipients.

CHAIRS: Michael M. Givertz, MD and Stephan Schueler, MD, PhD, FRCS

- 2:00 PM *Atrial Fibrillation and Flutter in LVAD Patients: Incidence, Significance and Management*
Sean P. Pinney, MD, Mount Sinai Medical Center, New York, NY, USA
- 2:15 PM Q&A
- 2:20 PM *Optimal Device Programming and Role of Catheter and Surgical Ablation in Arrhythmia Management Post-LVAD*
Joshua D. Moss, MD, UCSF Medical Center, San Francisco, CA, USA
- 2:35 PM Q&A
- 2:40 PM **DEBATE: All VAD Patients Should Have ICD and All VT Should Be Ablated (PRO)**
Anique Ducharme, MD, MSC, Montreal Heart Institute, Montreal, QC, Canada
- 2:55 PM **DEBATE: All VAD Patients Should Have ICD and All VT Should Be Ablated (CON)**
Shashank S. Desai, MD, Inova Fairfax Hospital, Falls Church, VA, USA
- 3:10 PM **DEBATE: BiV Pacing Improves Outcomes in LVAD Patients (PRO)**
Gabriel Sayer, MD, University of Chicago, Chicago, IL, USA
- 3:25 PM **DEBATE: BiV Pacing Improves Outcomes in LVAD Patients (CON)**
Jens Garbade, MD, University of Leipzig Medical Center, Leipzig, Germany

4:15 PM – 6:00 PM

SYMPOSIUM: Chronic Lung Allograft Dysfunction (CLAD): The End of the Beginning? (PACIFICA 10-12)

- Primary Audience: LF/LTX
- Secondary Audience: BSTR
- Secondary Audience: PATH

SESSION SUMMARY: The recognition that not all cases of lung allograft dysfunction could be described accurately within the bronchiolitis obliterans syndrome (BOS) terminology led to the development of a new overarching descriptor (CLAD) to embrace both obstructive and restrictive allograft dysfunction. How to detect, diagnose, and manage suspected cases is described based on sound physiological and radiological principles. Exclusion criteria are discussed as well as special circumstances.

CHAIRS: Christian Benden, MD and Sofya Tokman, MD

- 4:15 PM *CLAD: Definition and Beyond*
Geert Verleden, MD, Univ Hospital Gasthuisberg, Belgium, Belgium
- 4:30 PM *CLAD Phenotypes: Why Split?*
Jamie Todd, MD, Duke University, Durham, NC, USA
- 4:45 PM *Restrictive Allograft Syndrome: Definition and Diagnosis*
Masaaki Sato, MD, University of Tokyo, Tokyo, Japan
- 5:00 PM *Restrictive Allograft Syndrome: Pathology*
Jan H. von der Thüsen, MD PhD, Erasmus Medical Center, Rotterdam, Netherlands
- 5:15 PM *Risk Factors and Prognosis of Restrictive Allograft Syndrome*
Allan Glanville, MBBS, MD, FRACP, St Vincent's Hospital, Sydney, Australia
- 5:30 PM *CLAD Treatment: The Kingdom of the Near Dead?*
Lianne G. Singer, MD, FRCPC, Toronto General Hospital, Toronto, ON, Canada
- 5:45 PM 15-min Panel Discussion

4:15 PM – 6:00 PM

SYMPOSIUM: Short Term Mechanical Support: Taking the Next Leap Forward

(GRAND CARIBBEAN 1-7)

Primary Audience: MCS

Secondary Audience: HF/HTX

SESSION SUMMARY: This symposium will focus on short term mechanical support with a view to optimizing results, whether as a bridge to recovery, long term mechanical support or transplant. Current and future management trends will be discussed to identify best practices for these complex patients.

CHAIRS: Bart Meyns, MD, PhD and Luciano Potena, MD, PhD

4:15 PM *IABPs Work, But in Whom?*

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

4:30 PM Q&A

4:35 PM *In It for the Long Haul? What is the Role of ECMO in Short-Term Support?*

Martin Strueber, MD,
Newark Beth Israel Medical
Center, Newark, NJ, USA

4:50 PM Q&A

4:55 PM **DEBATE: Six Months After the Change in the US Allocation System: It Still Makes Sense to Transplant Patients Off ECMO (PRO)**

Danny Ramzy, MD, PhD,
Cedars-Sinai Med Ctr,
Los Angeles, CA, USA

5:10 PM **DEBATE: Six Months After the Change in the US Allocation System: It Still Makes Sense to Transplant Patients Off ECMO (CON)**

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

5:25 PM **Debate Rebuttal (PRO)**

Danny Ramzy, MD, PhD

5:30 PM **Debate Rebuttal (CON)**

Jose Gonzalez-Costello, MD

5:35 PM *Do All Roads Lead to Rome? Access Strategies for Temporary Percutaneous Mechanical Support*

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

5:50 PM Q&A

4:15 PM – 6:00 PM

SYMPOSIUM: What Do We Do? Burning Platforms in Pediatric Thoracic Transplant

(PACIFICA 3-5)

Primary Audience: PEDS

Secondary Audience: HF/HTX

Secondary Audience: NHSAH

SESSION SUMMARY: The goal of the symposium is to address the challenges we are currently facing within the field of pediatric thoracic transplant. From donor selection to indications for transplant in the failing Fontan population, a potpourri of topics will be covered.

CHAIRS: Melanie D. Everitt, MD and Tajinder P. Singh, MD, MSc

4:15 PM *Pediatric Heart Donors with Low Ejection Fraction – How Low Can You Go?*

Claire A. Irving, MBChB,
MRCPCH, MD, Children's
Hospital Westmead,
Sydney, Australia

4:30 PM *But It's Legal Here: Addressing Legalized Marijuana and Illicit Drug Use with Thoracic Transplant Patients*

Carol K. Conrad, MD,
Lucille Packard Children's
Hospital, Palo Alto, CA, USA

4:45 PM *How Low Should We Go? Outcomes of Infant VAD and Transplant*

Kathleen Simpson, MD,
Washington University/
St Louis Children's Hospital,
St. Louis, MO, USA

5:00 PM *Practical Strategies for Transitioning Our GenZ Patients*

Jo Wray, PhD, Great Ormond
Street Hospital, London, UK

5:15 PM *Routine Use of mTOR inhibitors in Pediatric Thoracic Transplant Recipients: Show Me the Evidence*

Kevin P. Daly, MD,
Boston Children's Hospital,
Boston, MA, USA

5:30 PM *When to Refer: Advanced Cardiac Support for the Failing Fontan*

Kurt R. Schumacher, MD,
CS Mott Children's Hospital,
Ann Arbor, MI, USA

5:45 PM 15-min Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: In the Thick of It: Hypertrophic and Amyloid Cardiomyopathies (PACIFICA 7)

Primary Audience: HF/HTX

SESSION SUMMARY: Hypertrophic and infiltrative cardiomyopathies are often underrecognized. There has been increasing understanding of HCM and cardiac amyloidosis with rapid development of diagnostic modalities and treatment strategies. This symposium will begin with a case and then review recent advances, highlighting key therapeutics that are available and being developed. The role of heart transplant and advanced therapies in these entities will be outlined.

CHAIRS: Jignesh K. Patel, MD, PhD and Marta Farrero Torres, MD

7:00 AM CASE PRESENTATION of HCM: *Gasping and Dizzy – Please Help!*
Imad Hussain, MD,
Houston Methodist Hosp,
Houston, TX, USA

7:05 AM *Veni, Vidi, Vici: Pathophysiology and Therapeutic Options in Hypertrophic Cardiomyopathy*
Eulalia Roig, MD,
Hospital Sant Pau,
Barcelona, Spain

7:25 AM CASE PRESENTATION of Cardiac Amyloidosis: *I Can't Breathe and My Tongue is Too Big!*
Song Li, MD,
University of Washington,
Seattle, WA, USA

7:30 AM *Double Double Toil and Trouble: Physiology and Therapeutic Options for Cardiac Amyloidosis*
Margot Davis, MD,
University of British Columbia,
Vancouver, BC, Canada

7:50 AM 10-min Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: Immunobiology of the Older Lung Transplant Recipient (PACIFICA 10-12)

Primary Audience: LF/LTX
Secondary Audience: BSTR
Secondary Audience: PHARM

SESSION SUMMARY: As the number of older transplant patients continues to grow, it becomes more important to understand age-associated immune changes, which may influence the impact of immunosuppression. Older lung transplant patients experience increased rates of infection, malignancy, and death, but decreased rates of rejection, suggesting over immune suppression. Yet at the same time, older transplant recipients experience increased levels of inflammation.

CHAIRS: Jonathan P. Singer, MD, MS and Hanneke Kwakkel-van Erp, MD, PhD

7:00 AM *Frailty and Pro-Inflammatory Cytokines: Potential Biomarkers for Poor Outcomes?*
Joshua Diamond, MD,
University of Pennsylvania,
Philadelphia, PA, USA

7:15 AM Q&A

7:20 AM *Immune Senescence and Transplantation: Balance Between Infection and Rejection*
Joanna M. Schaenman, MD, PhD,
UCLA School of Medicine,
Los Angeles, CA, USA

7:35 AM Q&A

7:40 AM *Challenges in Medication Administration in Older Transplant Patients*
Patricia Ging, PharmD,
Mater Misericordiae University
Hospital, Dublin, Ireland

7:55 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: From Isolated to Mainstream: Evolving ECMO Strategies That Are Reshaping Outcomes (PACIFICA 6)

Primary Audience: MCS
Secondary Audience: HF/HTX

SESSION SUMMARY: The aim of this symposium is to update attendees on cutting edge techniques and experiences in the realm of ECMO, related both to BTT and non-BTT populations. Therapies and strategies that used to seem very isolated (mobilizing on ECMO, etc.) are likely more mainstream than previously thought. An understanding of the data and outcomes may lead to expanded international adoption of some useful practices.

CHAIRS: Feras Khaliel, MD, PhD and Ivan Knezevic, MD

7:00 AM *Pressure Volume Loops: What Insight Can They Give Us on Device Strategy?*
Navin K. Kapur, MD,
Tufts Medical Center,
Boston, MA, USA

7:15 AM Q&A

7:20 AM *The Future of ECMO: It's All About Hemocompatibility*
Omar Saeed, MD, Montefiore
Medical Center, Bronx, NY, USA

7:35 AM Q&A

7:40 AM *When the Bridge Has Termites: The Impact of ECMO-Related Infections on Post-Transplant Outcomes in Bridged Patients*
Priya Nair, MD,
St Vincent's Hospital,
Sydney, Australia

7:55 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: Nobody is CLAD to See AMR in Lung Transplantation

(CORAL SEA 1-2)

- Primary Audience: PATH
- Secondary Audience: BSTR
- Secondary Audience: LF/LTX
- Secondary Audience: PEDS

SESSION SUMMARY: Clinical and pathologic definitions for chronic rejection in lung transplantation – antibody-mediated rejection (AMR) and chronic lung allograft dysfunction (CLAD) – have undergone rapid changes over the past decade. This session will provide an update on the two major areas of discussion and acquisition over the recent years (AMR, CLAD) and potential areas for future development.

CHAIRS: Monique Malouf, MD and
Desley Neil, FRCPath

7:00 AM *Clinical Review of Antibody Mediated Rejection and Chronic Lung Allograft Dysfunction*

Angela Koutsokera, MD, PhD,
Lausanne University Hospital,
Lausanne, Switzerland

7:15 AM *Pathology of Antibody Mediated Rejection*

Fiorella Calabrese, MD,
University of Padua, Padua, Italy

7:30 AM *Pathology of Chronic Lung Allograft Dysfunction*

David M. Hwang, MD, PhD,
Toronto General Hospital,
Toronto, ON, Canada

7:45 AM 15-min Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: I Want to Ride My Bicycle: Cardiopulmonary Exercise Testing (CPET) for PAH and CTEPH

(PACIFICA 1-2)

- Primary Audience: PH
- Secondary Audience: CTEPH

SESSION SUMMARY: Exercise testing plays a key role in the management of PAH and CTEPH, diseases with exercise-induced symptoms. In contrast with 6MWD, CPET provides unique insights in the pathophysiology of PAH and CTEPH. In addition, the role of key variables derived from CPET on outcome may be useful in assessing treatment efficacy in clinical practice and maybe clinical trials. This symposium will review the various aspects of this technique, from pathophysiology to outcome prediction.

CHAIRS: Marco Guazzi, MD and
Dana P. McGlothlin, MD

7:00 AM *Bicycle Race: Basic Principles of CPET*

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

7:15 AM *Under Pressure: CPET in PAH and CTEPH*

Ron Oudiz, MD,
UCLA Medical Center,
Los Angeles, CA, USA

7:30 AM *Don't Stop Me Now: CPET to Predict Outcome in PAH – Time for a Change!*

Jean-Luc Vachiery, MD,
Erasmus University Hospital,
Brussels, Belgium

7:45 AM 15-min Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: Making Deals with the Devil: Substances of Abuse from Pre- to Post-Transplant

(PACIFICA 3-5)

- Primary Audience: PHARM
- Secondary Audience: HF/HTX
- Secondary Audience: LF/LTX
- Secondary Audience: NHSAAH

SESSION SUMMARY: The purpose of this symposium is to review substances of abuse pre- and post-transplant. The symposium will focus on use of medications for pain and anxiety, smoking (nicotine and marijuana), and alcohol use. Speakers will present available evidence describing why these substances are harmful when used before and after transplant and offer guidance for cessation or therapeutic alternatives.

CHAIRS: Martin Zamora, MD and
Vincent G. Valentine, MD

7:00 AM *'Hurts So Good': Analgesia Beyond Opioids*

Amanda Ingemi, PharmD,
Sentara Norfolk General
Hospital, Norfolk, VA, USA

7:15 AM Q&A

7:20 AM *So, Light 'em if You've Got 'em – or Don't! Smoking Pre- and Post-Transplant*

Erik Verschuuren, MD, PhD,
University Medical Centre
Groningen, Groningen,
Netherlands

7:35 AM Q&A

7:40 AM *How Much is Too Much? Alcohol Use and Cessation Pre- and Post-Transplant*

Mary Amanda Dew, PhD,
University of Pittsburgh School
of Medicine, Pittsburgh, PA, USA

7:55 AM Q&A

8:00 AM – 9:45 AM

SYMPOSIUM: Medical Management of LVAD Patients: Once the Chest is Closed, the Trouble Begins

(GRAND CARIBBEAN 1-7)

Primary Audience: MCS

SESSION SUMMARY: This symposium will examine state-of-the-art knowledge on device programming and medical management of LVAD patients. Current controversies such as the utility of platelet function monitoring and invasive hemodynamic testing will be reviewed and debated.

CHAIRS: Marco Masetti, MD, PhD and Garrick C. Stewart, MD

8:00 AM *What are We Treating with Heart Failure Therapy after MCS: the LV, the RV, the Periphery or Ourselves?*

Maria Frigerio, MD, A.O.
Niguarda Ca 'Granda,
Milan, Italy

8:20 AM *Antiplatelet Therapy: Fixed Dose or Functional Assays?*

Jeffrey J. Teuteberg, MD,
Stanford University School of
Medicine, Stanford, CA, USA

8:35 AM *Time in Therapeutic Range: Is There an Optimal Way to Manage INR?*

Douglas L. Jennings, PharmD,
New York-Presbyterian Hospital,
New York, NY, USA

8:50 AM *Pump Data: Do We Need It to Decide Changes in Therapy?*

Francesco Moscato, PhD,
Medical University of Vienna,
Vienna, Austria

9:05 AM **DEBATE: You Need Information from Invasive Hemodynamics to Properly Manage an LVAD (PRO)**

Nir Uriel, MD, University of
Chicago, Chicago, IL, USA

9:20 AM **DEBATE: You Need Information from Invasive Hemodynamics to Properly Manage an LVAD (CON)**

Emma Birks, MD, PhD,
University of Louisville,
Louisville, KY, USA

9:35 AM 10-min Panel Discussion

8:00 AM – 9:45 AM

SYMPOSIUM: The Magic Kingdom of the Bronchoscopy: Pathogens with Real Implications and Those to Disregard

(PACIFICA 3-5)

Primary Audience: ID

Secondary Audience: LF/LTX

Secondary Audience: PATH

SESSION SUMMARY: This symposium will review the evidence and discuss the utility of detection of pathogens from surveillance bronchoscopies after lung transplantation. Evidence will be presented regarding the interpretation and treatment of positive culture results from surveillance bronchoscopy. We will review and analyze the management/treatment of bacteria, fungi, atypical mycobacteria and CMV in asymptomatic patients.

CHAIRS: Are Holm, MD and Stephanie M. Pouch, MD

8:00 AM *'Critter Country': Treatment and Eradication of Bacteria and Bacterial Biome*

Nicolas Mueller, MD,
University Hospital Zurich,
Zurich, Switzerland

8:15 AM Q&A

8:20 AM *'Fungal Frontierland': Pathogens or Colonizers?*

Me-Linh Luong, MD,
St. Luc Hospital,
Montréal, QC, Canada

8:35 AM Q&A

8:40 AM *'Off Main Street': Atypical Mycobacteria – What, When and How to Manage*

Fernanda Silveira, MD, University
of Pittsburgh, Pittsburgh, PA, USA

8:55 AM Q&A

9:00 AM *'CMV Square': Lung Transplant Recipients with CMV Positivity in a Bronchoscopy without CMV DNAemia*

Jutta K. Preiksaitis, MD, University
of Alberta, Edmonton, AB, Canada

9:15 AM Q&A

9:20 AM *'Tomorrowland': A Case-Based Approach to Managing Bronchoscopy Results*

Shalika B. Katugaha, MD,
Inova Fairfax Hospital,
Annandale, VA, USA

9:40 AM Q&A

10:15 AM – 12:00 PM

SYMPOSIUM: Bring Out Your Dead: The Postmortem Evaluation in the Thoracic Transplant Setting

(CORAL SEA 1-2)

Primary Audience: PATH

Secondary Audience: HF/HTX

Secondary Audience: LF/LTX

SESSION SUMMARY: The postmortem examination ("autopsy") is underutilized in modern medicine, but provides critical information to the clinicians, families and loved ones of the decedent to help them understand the decedent's clinical course. Data obtained from autopsies may be used by hospital quality personnel, researchers, policy makers, registries and device manufacturers to improve the state of thoracic transplantation and mechanical circulatory support therapy.

CHAIRS: Lorriana E. Leard, MD and Carmela Tan, MD

10:15 AM *The Autopsy in the Modern Era: What the Clinician Still Would Like to Gain from an Autopsy*

Stephen C. Clark, MD,
Freeman Hospital,
Newcastle Upon Tyne, UK

10:30 AM *What the Pathologist Can Tell: More Than Just Cause of Death*

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

10:45 AM *How is a Postmortem Examination Performed: Frequently Asked Questions*

Billie S. Fyfe-Kirschner, MD,
Robert Wood Johnson
School of Medicine,
New Brunswick, NJ, USA

11:00 AM *The Autopsy in the Mechanical Circulatory Support Patient*

Robert F. Padera, MD, PhD,
Brigham & Women's Hospital,
Boston, MA, USA

11:15 AM *The Autopsy in the Thoracic Transplant Patient*

Ornella Leone, MD,
S. Orsola Hospital, Bologna, Italy

11:30 AM *The 'Rapid Autopsy': A Tool for Scientific Inquiry*

Dylan V. Miller, MD,
Intermountain Central Lab,
Murray, UT, USA

11:45 AM 15-min Panel Discussion

10:15 AM – 12:00 PM

SYMPOSIUM: Ex-Vivo Lung Perfusion (EVLP) in 2019: From Research to Implementation
(PACIFICA 10-12)

Primary Audience: LF/LTX
Secondary Audience: MCS

SESSION SUMMARY: This symposium will bring experts in Ex-Vivo Lung Perfusion and donor lung management from all over the world. Current practices, different models, ongoing clinical trials with EVLP and added therapeutics will be discussed. The attendee will increase his or her understanding of the technique, its applications and future directions.

CHAIRS: John Dark, MB, FRCS and Tiago Machuca, MD, PhD

- 10:15 AM **Implementation of High Volume Clinical EVLP: The Toronto Model**
Shaf Keshavjee, MD, FRCSC, Toronto General Hospital, Toronto, ON, Canada
- 10:30 AM **Rationale for Portable EVLP**
Wiebke Sommer, MD, Hannover Medical School, Hannover, Germany
- 10:45 AM **Benefits and Barriers of a Do-It-Yourself EVLP Program**
Peter Hopkins, FRACP, The Prince Charles Hospital, Brisbane, Australia
- 11:00 AM **Organ Procurement Organization-based EVLP Program**
Duane Davis, MD, MBA, Florida Hospital, Orlando, FL, USA
- 11:15 AM **Experience with a Third-Party EVLP Program**
Kenneth R. McCurry, MD, FACS, Cleveland Clinic, Cleveland, OH, USA
- 11:30 AM **The Role of Biomarkers in EVLP**
Andrew J. Fisher, FRCP, PhD, Freeman Hospital, Newcastle Upon Tyne, UK
- 11:45 AM 15-min Panel Discussion

10:15 AM – 12:00 PM

SYMPOSIUM: Learning from the Children: Important Lessons from the Pediatric and Congenital Heart Disease VAD Experience
(PACIFICA 3-5)

Primary Audience: PEDS
Secondary Audience: HTX
Secondary Audience: MCS

SESSION SUMMARY: Pediatric and congenital heart disease VAD support is a challenge because the population is heterogenous, VADs were not designed for complex anatomy and physiology, and compared with adults, the numbers, data and collective experience are extremely limited. Despite these challenges, pediatric centers have successfully adapted and utilized VADs to improve outcomes. This symposium will provide an opportunity for the pediatric community to share their experience with the broader MCS community.

CHAIRS: Angela Lorts, MD and Ulrich Jorde, MD

- 10:15 AM **Not Just Small Adults: Outcomes of Pediatric Patients with Continuous Flow Devices**
Christina J. VanderPluym, MD, Boston Children's Hospital, Boston, MA, USA
- 10:30 AM **Not Just Small Adults: Novel Antithrombosis Strategies Used in Pediatric VADs**
Oliver Miera, MD, Deutsches Herzzentrum Berlin, Berlin, Germany
- 10:45 AM **Not-So-Temporary Circulatory Support**
Aamir Jeewa, MD, Hospital for Sick Children, Toronto, ON, Canada
- 11:00 AM **Optimizing Hemodynamics of Continuous Flow VADS for Small Patients**
Lucas Eastaugh, MBBS, Royal Children's Hospital, Melbourne, Australia
- 11:15 AM **One Size Fits All? Strategies for Using Implantable VADs in Small Patients**
Antonio Amodeo, MD, Bambino Gesù Pediatric Hospital, Rome, Italy
- 11:30 AM **Building Bridges: Collaborative Learning to Improve Outcomes in VAD Care**
David M. Peng, MD, University of Michigan, Ann Arbor, MI, USA
- 11:45 AM 15 min Panel Discussion

1:45 PM – 3:30 PM

SYMPOSIUM: Changes in the World of Pulmonary Hypertension: Nice or Not Nice

(PACIFICA 1-2)

- Primary Audience: PH
- Secondary Audience: CTEPH
- Secondary Audience: PATH

SESSION SUMMARY: This symposium, in collaboration with the Pulmonary Vascular Research Institute (PVRI), will focus on controversies and new proposed developments under review since the recent World Symposium on Pulmonary Hypertension, exploring the concept of changing the definition to mean pulmonary artery pressure of 20mmHg and the implications for future management of patients, risk stratification of patients with PAH and best approach, and which best clinical trial endpoint should be adopted.

CHAIRS: Colin Church, MD, PhD and Marc A. Simon, MD

- 1:45 PM** *Feeling the Pressure: New Hemodynamic Classification of Pulmonary Vascular Disease*
Robert P. Frantz, MD, Mayo Clinic, Rochester, MN, USA
- 2:00 PM** Q&A
- 2:05 PM** *The Drugs Don't (or might not) Work Anymore! Implications for Treatments in PAH with the New Hemodynamic Definition*
Mardi Gomberg-Maitland, MD, Inova Fairfax Hospital, Falls Church, VA, USA
- 2:20 PM** Q&A
- 2:25 PM** *Too Risky for PAH? Patient Stratification and Implications for Treatment*
Paul Hassoun, MD, Johns Hopkins University, Baltimore, MD, USA
- 2:40 PM** Q&A
- 2:45 PM** **DEBATE: Quality Over Quantity? Future Trial Primary Endpoints Should Be QOL Focused (PRO)**
Ioana R. Preston, MD, Tufts Medical Center, Boston, MA, USA
- 3:00 PM** **DEBATE: Quality over Quantity? Future Trial Primary Endpoints Should be QOL Focused (CON)**
Ardeschir Ghofrani, MD, University of Giessen, Giessen, Germany
- 3:15 PM** **Debate Rebuttal (PRO)**
Ioana R. Preston, MD
- 3:20 PM** **Debate Rebuttal (CON)**
Ardeschir Ghofrani, MD

1:45 PM – 3:30 PM

SYMPOSIUM: Heart Failure in Adult Congenital Heart Disease: Unique Problems Need Unique Solutions

(PACIFICA 7)

- Primary Audience: HF/HTX
- Secondary Audience: MCS
- Secondary Audience: PEDS

SESSION SUMMARY: The aim of this symposium is to describe the pathophysiology and management of heart failure syndromes that are unique to ACHD patients.

CHAIRS: Maryjane Farr, MD and David Crossland, MRCP

- 1:45 PM** *Too Sick to Live, Too Well to Die: When Do You Transplant A Failing ACHD Patient?*
Daphne Hsu, MD, Children's Hospital Montefiore, Bronx, NY, USA
- 2:00 PM** Q&A
- 2:05 PM** *Is Two Really Better Than One? Heart-Liver Transplantation in ACHD*
Clive J. Lewis, MB, BChir, PhD, FRCP, Papworth Hospital, Cambridge, United Kingdom
- 2:20 PM** Q&A
- 2:25 PM** *Under Pressure: Managing Pulmonary Hypertension in ACHD*
Robert Weintraub, MD, Royal Children's Hospital, Parkville, Australia
- 2:40 PM** Q&A
- 2:45 PM** *I've Got Options: VADs in Patients with ACHD*
David Morales, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA
- 3:00 PM** Q&A
- 3:05 PM** *The Failing Sub-Pulmonic RV in Congenital Heart Disease: Forgotten, But Not Gone*
Wendy M. Book, MD, Emory University, Atlanta, GA, USA
- 3:20 PM** Q&A

1:45 PM – 3:30 PM

SYMPOSIUM: JHLT at ISHLT: The Year in a Capsule

(PACIFICA 10-12)

- Primary Audience: HF/HTX
- Secondary Audience: ID
- Secondary Audience: LF/LTX
- Secondary Audience: MCS
- Secondary Audience: PEDS
- Secondary Audience: PH

SESSION SUMMARY: This symposium will highlight the most exciting publications in JHLT over the past year, each paper followed by a discussion by one of the senior editorial consultants of the journal to relate the presented articles to the greater body of published literature and discuss how they advance our understanding in the field.

CHAIRS: Manreet Kanwar, MD and Martin Schweiger, PhD, MD

- 1:45 PM** *JHLT Best Papers of 2018*
Patricia A. Uber, PharmD, Virginia Commonwealth University, Richmond, VA, USA
- 1:50 PM** *Highlights of Heart Transplantation and MCS*
Simon Pecha, MD, University Hospital Hamburg, Hamburg, Germany
- 2:05 PM** *Invited Discussant in Heart Transplantation and MCS*
Francis D. Pagani, MD, PhD, University of Michigan, Ann Arbor, MI, USA
- 2:15 PM** *Highlights of Lung Transplantation and Pulmonary Hypertension*
Peter Riddell, MBBS, Mater Misericordiae University Hospital, Dublin, Ireland
- 2:30 PM** *Invited Discussant in Lung Transplantation and Pulmonary Hypertension*
Jason D. Christie, MD, University of Pennsylvania, Philadelphia, PA, USA
- 2:40 PM** *Highlights of Pediatric Heart and Lung Transplantation*
Ann R. Punnoose, MD, Children's Hospital of Wisconsin, Milwaukee, WI, USA
- 2:55 PM** *Invited Discussant in Pediatric Heart and Lung Transplantation*
Stuart C. Sweet, MD, PhD, St. Louis Children's Hospital, St. Louis, MO, USA
- 3:05 PM** *Highlights of Infectious Disease*
Jonathan M. Hand, MD, Ochsner Medical Center, New Orleans, LA, USA
- 3:20 PM** *Invited Discussant in Infectious Diseases*
Emily A. Blumberg, MD, University of Pennsylvania, Philadelphia, PA, USA

4:00 PM – 5:45 PM

SYMPOSIUM: FUN and Games with FUNgal Infections in Lung Transplantation

(PACIFICA 3-5)

- Primary Audience: ID
- Secondary Audience: LF/LTX
- Secondary Audience: PATH
- Secondary Audience: PHARM

SESSION SUMMARY: Fungal infections after thoracic transplantation are associated with high mortality. Prophylaxis and treatment come with various complications including drug-drug interactions, toxicities, treatment failure and emerging resistance. This symposium will provide insights regarding the epidemiology, prevention, diagnosis and treatment approaches to take when faced with the challenges of fungal infections in thoracic transplantation.

CHAIRS: Orla Morrissey, MD and Gregory A. Fishbein, MD

- 4:00 PM** *Defining Fungal Infection: Not a TRIVIAL PURSUIT*
Erika D. Lease, MD, University of Washington, Seattle, WA, USA
- 4:15 PM** **DEBATE: Every Patient Should Receive Antifungal Prophylaxis After Lung Transplantation (PRO)**
John W. Baddley, MD, MSPH, University of Alabama at Birmingham, Birmingham, AL, USA
- 4:30 PM** **DEBATE: Every Patient Should Receive Antifungal Prophylaxis After Lung Transplantation (CON)**
Shahid Husain, MD, MS, University Health Network, Toronto, ON, Canada
- 4:45 PM** *Don't Be SORRY! Tips and Tricks for Managing Azole Antifungal Agents*
Tara Veasey, PharmD, BCPS, UF Health Shands Hospital, Gainesville, FL, USA
- 5:00 PM** *Not a MONOPOLY: Antifungal Drug Administration Via the Inhaled Route*
Antonio B. Roman, MD, PhD, Hospital General Vall D'Hebron, Barcelona, Spain
- 5:15 PM** *Are We in TROUBLE? Emergence of Azole-Resistant Molds*
Minh-Hong Nguyen, MD, University of Pittsburgh, Pittsburgh, PA, USA
- 5:30 PM** 15 min Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: Highways to Hell: Chronic Lung Allograft Dysfunction (PACIFICA 1-2)

Primary Audience: BSTR
Secondary Audience: LF/LTX
Secondary Audience: PATH

SESSION SUMMARY: The pathologies of Chronic Lung Allograft Dysfunction (CLAD) have been recognized since 1984, yet their mechanisms and definitive treatments remain enigmatic. Indeed, there are multiple rival hypotheses as to the cause of CLAD. Is CLAD a final common pathway, an integration of pathobiologies, or are some pathways overriding? This symposium will describe the scientific evidence for some of these pathways.

CHAIRS: Sangeeta M. Bhorade, MD and
Stijn E. Verleden, MD, PhD

7:00 AM *Immune Responses Cause CLAD*
Federica Meloni, MD,
University of Pavia,
Pavia, Italy

7:15 AM *CLAD is a Disease of Accelerated
Aging*
John R. Greenland, MD, PhD,
UCSF Medical Center,
San Francisco, CA, USA

7:30 AM *Mesenchymal Stem Cells are
the Cause of CLAD*
Vibha N. Lama, MD, MS,
University of Michigan,
Ann Arbor, MI, USA

7:45 AM 15-min Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: Print, Replace or Innovate: Alterna- tive Strategies to Cardiac Transplantation (PACIFICA 7)

Primary Audience: HF/HTX
Secondary Audience: MCS

SESSION SUMMARY: This symposium will provide an overview of the potential alternatives to and fresh ideas for organ transplantation. Each speaker will provide an overview of the “state of the art” in their respective area of organ repair, regeneration or replacement, and will give insight into successes, challenges and potential of their respective areas, incorporating discussion of the clinical feasibility, ethics and potential of the respective therapies.

CHAIRS: Mrinalini Krishnan, MD and
Ulrich Steinseifer, MD

7:00 AM *Copy and Paste vs. Renovate:
Cardiac 3D Printing and Its
Future Direction*
Doris A. Taylor, PhD, FAHA, FACC,
Texas Heart Institute,
Houston, TX, USA

7:15 AM *‘When Pigs Fly’: Where Are We
Now with Xenotransplantation?*
Richard Pierson, MD,
Massachusetts General
Hospital, Boston, MA, USA

7:30 AM *Hitting Reset: Utility of Stem
Cells to Regenerate the Heart*
Sonja Schrepfer, MD, PhD,
UCSF Medical Center,
San Francisco, CA, USA

7:45 AM 15-min Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: MCS Infections: New Twists in an Old Saga (PACIFICA 3-5)

Primary Audience: ID
Secondary Audience: MCS

SESSION SUMMARY: Infections are a leading cause of death in VAD recipients, and are associated with morbidity, readmissions and healthcare costs. This symposium will focus on state of the art updates on the prevalence of VAD infections and their consequences including neurologic complications. Infection control and quality practices can impact the rate of infections. The recent ISHLT consensus document discussing the prevention and management of MCS infections will be reviewed.

CHAIRS: Saima Aslam, MD, MS and
Jan D. Schmitto, MD, PhD, MBA

7:00 AM *What are the Consequences
of a VAD Infection?*
Palak Shah, MD, MS,
Inova Fairfax Hospital,
Falls Church, VA, USA

7:15 AM Q&A

7:20 AM *Infection Prevention for
Patients with Mechanical
Circulatory Support*
Margaret Hannan, MD,
Mater Hospital,
Dublin, Ireland

7:35 AM Q&A

7:40 AM *Molecular Pathogenesis
and Diagnostic Strategies
for MCS Infections*
Anton Peleg, MD, PhD, MPH,
The Alfred Hospital and
Monash University,
Melbourne, Australia

7:55 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: Cardiac Reverse Remodeling in MCS: State of the Art

(PACIFICA 6)

- Primary Audience: MCS
- Secondary Audience: BSTR
- Secondary Audience: PATH

SESSION SUMMARY: Mechanical unloading of the left ventricle is a potent platform through which to study reverse remodeling. While we now understand that sufficient “recovery” to allow for device explantation is realistic in only a select population, the concept of reverse remodeling during LVAD still has much broader application. This symposium will highlight reverse remodeling during MCS starting with basic physiology and moving through clinical topics and commencing with a view to the future.

CHAIRS: Ivan Netuka, MD, PhD and Joyce W. Wald, DO

7:00 AM *Cardiac Recovery on Acute Mechanical Support – When to Wean and When to Transition*

Anna L. Meyer, MD,
Leipzig Heart Center,
Leipzig, Germany

7:15 AM Q&A

7:20 AM *LVAD Explantation for Cardiac Recovery – Who, When, and How*

Snehal R. Patel, MD,
Montefiore Medical Center,
Bronx, NY, USA

7:35 AM Q&A

7:40 AM *Present and Future of Cardiac Recovery and Durable MCS*

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

7:55 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: The Mission IS Possible If You Choose to Accept it: The Processes of Performing Research

(PACIFICA 10-12)

- Primary Audience: NHSAH

SESSION SUMMARY: Research has led to incredible advancements in organ failure/transplant outcomes. Despite its significance, not all transplant professionals have training or experience in the conduct of research. Launching (or continuing) a program of research can be intimidating for many. Experts in the field will provide guidance on the conduct of research from study development to dissemination findings. Tips for funding one's research will also be shared.

CHAIRS: Annette DeVito Dabbs, PhD, RN and Sarah Schettle, PA-C

7:00 AM *Don't Go Rogue: Planning and Launching a Research Study*

Pamela Combs, PhD, RN,
University of Chicago,
Chicago, IL, USA

7:15 AM *The Fallout: Dissemination and Sharing your Results*

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

7:30 AM *The Ghost Hunt: Funding Your Research*

Kathleen L. Grady, PhD, APN,
FAAN, Northwestern Memorial
Hospital, Chicago, IL, USA

7:45 AM 15-min Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: A Bloody Mess: Management of Hematologic Complications in Transplantation and MCS

(CORAL SEA 1-2)

- Primary Audience: PHARM
- Secondary Audience: MCS

SESSION SUMMARY: This symposium will aim to review pharmacotherapy management of hematologic complications in transplant and MCS including neutropenia, thrombocytopenia, anticoagulation with direct oral anticoagulants (DOACs), hemoglobin optimization, and bleeding reversal.

CHAIRS: Ranny Goldwasser, MD and Kyle L. Dawson, PharmD, MBA, BCPS

7:00 AM *I've Got Friends with Low Platelets (and Neutrophils): Management of Cytopenias After Transplant*

Jennifer McDermott, PharmD,
Spectrum Health,
Grand Rapids, MI, USA

7:15 AM Q&A

7:20 AM *Thicker than Blood: Using DOACs in Transplantation and MCS*

Sara Strout, PharmD,
Johns Hopkins, MD, USA

7:35 AM Q&A

7:40 AM *Ain't No Hemoglobin High Enough: Approaches to Hemoglobin Optimization and Bleeding Reversal Pre- and Post-Surgery*

Ian B. Hollis, PharmD, BCPS,
University of North Carolina
Medical Center, Chapel Hill,
NC, USA

7:55 AM Q&A

8:00 AM – 10:00 AM

PLENARY SESSION

(GRAND CARIBBEAN 1-7)

Primary Audience: ALL

CHAIRS: David O. Taylor, MD and
Lori J. West, MD, DPhil

8:00 AM *New Perspectives on Tolerance*
Sing Sing Way, MD, PhD,
Cincinnati Children's Hospital,
Cincinnati, OH, USA

8:20 AM **Featured Abstract 3**

8:40 AM **Featured Abstract 4**

9:00 AM *Transplant from Every Angle*
Susan Hou, MD,
Loyola University Medical
Center, Maywood, IL, USA

9:20 AM *Countdown to Teamwork*
Colonel Mike Mullane,
Astronaut,
Albuquerque, NM, USA

10:30 AM – 12:15 PM

JOINT ISHLT/IPTA SYMPOSIUM: EBV and CMV are Not as Easy as 1-2-3 When Caring for Pediatric Thoracic Transplant Recipients

(PACIFICA 3-5)

Primary Audience: PEDS

Secondary Audience: HTX

Secondary Audience: ID

Secondary Audience: LTX

Secondary Audience: NHSAH

Secondary Audience: PHARM

SESSION SUMMARY: In collaboration with the International Pediatric Transplant Association (IPTA), this symposium will focus on EBV and CMV in pediatric thoracic transplantation. We will cover monitoring, prevention, current and emerging therapies for these entities in pediatric thoracic transplant candidates and recipients. The session will appeal to the following groups: pediatric heart and lung transplant physicians, advance practice nurses, nursing, transplant coordinators, infectious disease clinicians, pharmacists, and translational virologists.

CHAIRS: Brian Feingold, MD, MS and Marian Michaels, MD

10:30 AM *The A-B-C's of EBV Monitoring in Pediatric Thoracic Transplant Recipients*
Upton Allen, MBBS, MSc, FAAP, FRCPC, University of Toronto/ Sick Kids, Toronto, ON, Canada

10:45 AM *EBV Prevention in Pediatrics: Fantasy or Reality?*
Michael Green, MD, Children's Hospital of Pittsburgh, Pittsburgh, PA, USA

11:00 AM *First Line, Advanced, and Emerging Therapies for the Treatment of EBV Disease/PTLD in Pediatrics*
Steven A. Webber, MBChB, Vanderbilt University, Nashville, TN, USA

11:15 AM *Implications of EBV Disease on Long-Term Outcomes in Thoracic Transplant Recipients*
Richard Chinnock, MD, Loma Linda University, Loma Linda, CA, USA

11:30 AM *PCRs, Cellular Immunity and Immunogenetic Biomarkers: We've Got You Now CMV!*
Klara Posfay-Barbe, MD, MS, Hopitaux Universitaires de Genève, Genève, Switzerland

11:45 AM *CMV Prevention and Treatment: Do It Yourself?... or Current Guidelines*
Lara Danziger-Isakov, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA

12:00 PM 15-min Panel Discussion

10:30 AM – 12:15 PM

JOINT ISHLT/SCMR SYMPOSIUM: Cardiac MRI and the World of Heart Failure: When Two Disciplines Harmonize

(PACIFICA 7)

Primary Audience: HF/HTX

SESSION SUMMARY: In collaboration with the Society for Cardiovascular Magnetic Resonance (SCMR), this symposium will address how CMR advances in structural and functional imaging techniques have led to better cardiac tissue and anatomical characterization in complex patients. We will address its clinical role in the management of cardiomyopathies and heart transplant and explore pathological and imaging relationships while addressing standard and novel CMR based diagnostic approaches including contrast free imaging and imaging in patients with pacemakers.

CHAIRS: Daniel Kim, MD and TBD

- 10:30 AM** *MRI Sequences and Pathologic Correlates: The First Face of Janus*
Annalisa Angelini, MD, University of Padua, Padua, Italy
- 10:45 AM** *MRI Sequences and Pathologic Correlates: The Second Face of Janus*
Timothy C. Wong, MD, MS, University of Pittsburgh, Pittsburgh, PA, USA
- 11:00 AM** 5 min Q&A
- 11:05 AM** *CMR and Cardiomyopathies: A World Beyond Speckles*
Victor A. Ferrari, MD, Perelman School of Medicine, Philadelphia, PA, USA
- 11:20 AM** **CASE PRESENTATION: A Post-Transplant Patient with New Worsening of LV Function**
Mandar Aras, MD, UCSF Medical Center, San Francisco, CA, USA
- 11:25 AM** *CMR and Heart Transplantation: One Stop Shop?*
Sofia C. Masri, MD, University of Washington, Seattle, WA, USA
- 11:40 AM** **CASE PRESENTATION: Patient with CHD and New Echocardiographic Findings: What Next?**
Chesney Castleberry, MD, Washington University in St. Louis, St. Louis, MO, USA
- 11:45 AM** *CMR and Congenital Heart Disease: Not as Baffling as You Thought*
TBD
- 12:00 PM** 15-min Panel Discussion

10:30 AM – 12:15 PM

SYMPOSIUM: Take These Broken Lungs and Learn to Fly: Great Debates for Patients with PAH Awaiting Transplant

(CORAL SEA)

Primary Audience: PH

Secondary Audience: CTEPH

Secondary Audience: LF/LTX

SESSION SUMMARY: This symposium will explore the complex decision making in the care of patients with end stage pulmonary hypertension awaiting lung transplantation. Should patients with pulmonary hypertension ever be offered combined heart and lung transplantation? Should patients with Group 3 pulmonary hypertension be offered vasodilators as they become sicker before transplantation? Can urgency-based allocation systems be fair to patients with pulmonary hypertension?

CHAIRS: Paul A. Corris, MB, FRCP and Oksana A. Shlobin, MD

- 10:30 AM** **CASE PRESENTATION: PAH Patient with Severe RV Dysfunction Prior to Transplant**
Nicholas Kolaitis, MD, UCSF Medical Center, San Francisco, CA, USA
- 10:35 AM** **DEBATE: 'All You Need is Lungs': Combined Heart/Lung Transplant Should Be Offered in Patients with End Stage PAH (PRO)**
Jerome Le Pavec, Sr., MD, Hôpital Marie Lannelongue, Le Plessis Robinson, France
- 10:50 AM** **DEBATE: 'All You Need is Lungs': Combined Heart/Lung Transplant Should Be Offered in Patients with End Stage PAH (CON)**
Fernando Torres, MD, UT Southwestern Medical Center, Dallas, TX, USA
- 11:05 AM** **CASE PRESENTATION: Patient with Group 3 Disease and RV Dysfunction Awaiting Transplant**
Caroline M. Patterson, MD, Papworth Hospital, Cambridge, UK
- 11:10 AM** **DEBATE: Severe PH in Advanced Lung Disease (Group 3) Should Be Treated with Vasodilators (PRO)**
Steven D. Nathan, MD, Inova Fairfax Hospital, Falls Church, VA, USA
- 11:25 AM** **DEBATE: Severe PH in Advanced Lung Disease (Group 3) Should Be Treated with Vasodilators (CON)**
Adaani Frost, MD, Baylor College of Medicine, Houston, TX, USA
- 11:40 AM** **CASE PRESENTATION: Patient with PAH Listed for Lung Transplant Who is Getting Sicker**
Errol L. Bush, MD, Johns Hopkins University, Baltimore, MD, USA
- 11:45 AM** **DEBATE: Let It Be, Let It Be, Speaking of Urgency Allocation, Let It Be: Urgency-Based Allocation Can Be Fair for Patients with PAH (PRO)**
Thomas M. Egan, MD, MSC, University of North Carolina School of Medicine, Chapel Hill, NC, USA
- 12:00 PM** **DEBATE: Let It Be, Let It Be, Speaking of Urgency Allocation, Let It Be: Urgency-Based Allocation Can Be Fair for Patients with PAH (CON)**
Helen M. Whitford, MBBS, FRACP, Alfred Hospital, Melbourne, Australia

2:00 PM – 3:45 PM

JOINT ISHLT/ABTO SYMPOSIUM: Combining Experiences to Enhance Thoracic Organ Transplantation Worldwide

(PACIFICA 3-5)

- Primary Audience: ID
- Secondary Audience: HF/HTX
- Secondary Audience: LF/LTX

SESSION SUMMARY: This joint symposium with the Associação Brasileira de Transplante de Órgãos (ABTO: Brazilian Association of Organ Transplants) will provide the opportunity to exchange experiences between heart and lung transplant centers in Brazil and other centers around the world. Important topics regarding aspects of thoracic organ procurement in different countries and healthy systems as well as the regional variations in disease burden will be discussed.

CHAIRS: Fernanda Silveira, MD and Paulo M. Pego-Fernandes, MD, PhD

- 2:00 PM** *The Largest Public Kidney Transplant Program in the World: What Lessons Should We Learn to Improve Thoracic Organ Transplantation?*
Jose Osmar Medina Pestana, MD, Hospital do Rim e Hipertensão of Universidade Federal de São Paulo, São Paulo, Brazil
- 2:15 PM** *Few Potential Donors and One of the Largest (Lung) Transplant Systems of the World: How is it Possible?*
Jonathan Yeung, MD, Toronto General Hospital, Toronto, ON, Canada
- 2:30 PM** *Tuberculosis and Thoracic Organ Transplantation: Pre- and Post-Transplant Management in Endemic Areas*
Luis Fernando Aranha Camargo, MD, Hospital Israelita de Albert Einstein, São Paulo, Brazil
- 2:45 PM** *Tuberculosis and Thoracic Organ Transplantation: Pre- and Post-Transplant Management in Non-Endemic Areas*
Amparo Sole, MD, Hospital Universitario La Fe, Valencia, Spain
- 3:00 PM** *Heart Transplant and Chagas Disease: Lessons Learned After 30 Years of Experience*
Tania Mara Varejão Strabelli, MD, Heart Institute São Paulo Medical School, São Paulo, Brazil
- 3:15 PM** *Chagas Disease and Heart Failure Management in Non-Endemic Areas*
Ricardo La Hoz, MD, UT Southwestern Medical Center, Dallas, TX, USA
- 3:30 PM** 15-min Panel Discussion

2:00 PM – 3:45 PM

JOINT ISHLT/ICCAC SYMPOSIUM: Faster, Higher, Stronger: Monitoring Exercise in Cyberspace

(PACIFICA 6)

- Primary Audience: MCS
- Secondary Audience: NHSAH

SESSION SUMMARY: Patient and healthcare provider partnerships can enhance patient outcomes. Remote care support and monitoring of MCS patients can improve patient independence and positively impact patient care. This joint symposium with the International Consortium of Circulatory Assist Clinicians (ICCAC) will discuss integration of self-care strategies, educational preparation, new technologies maximizing MCS patient management, strategies to reduce morbidity and mortality, the future of MCS support, and challenges and opportunities that advancing technology poses to current practice.

CHAIRS: Peggy S. Blood, RN, MSN and Simon Maltais, MD, PhD

- 2:00 PM** *Under Pressure: Continuous Pulmonary Artery Monitoring and LVAD*
Finn Gustafsson, MD, PhD, Rigshospitalet, Copenhagen, Denmark
- 2:15 PM** Q&A
- 2:20 PM** *Care Anywhere: Remote Patient Monitoring*
Michele C. Kassemos, BSN, UCSF Medical Center, San Francisco, CA, USA
- 2:35 PM** Q&A
- 2:40 PM** *There's an App for That: Preparing the EMS*
Thomas Schloeglhofer, MSc, Medical University of Vienna, Vienna, Austria
- 2:55 PM** Q&A
- 3:00 PM** *Frailty and Exercise Tolerance: How Are They Related?*
Kavitha Muthiah, MBChB, PhD, St. Vincent's Hospital, Sydney, Australia
- 3:15 PM** Q&A
- 3:20 PM** *Let the Pacer Do the Work! Conduction Abnormalities in Heart Failure and Their Role in Exercise During VAD Support*
Van-Khue Ton, MD, PhD, University of Maryland School of Medicine, Baltimore, MD, USA
- 3:35 PM** Q&A

2:00 PM – 3:45 PM

SYMPOSIUM: Making Them Count: Enhancing Lung Donor Utilization

(PACIFICA 10-12)

Primary Audience: LF/LTX
Secondary Audience: ID

SESSION SUMMARY: Patients with end stage heart and lung disease outnumber the annual thoracic transplants. Maximizing donor utilization is a key factor to addressing this imbalance, but donor management varies greatly across regions leading to significant heterogeneity in donor utilization. This symposium will describe proven and developing strategies for donor management to increase organ utilization as well as identify future directions and opportunities for improvement.

CHAIRS: Aleem Siddique, MBBS and Sakhee Kotecha, MBBS (Hons)

2:00 PM *Yin and Yang? Goal Directed Thoracic Organ Optimization Does Not Compromise Abdominal Organs*
Arne Neyrinck, MD, PhD, University Hospitals Leuven, Leuven, Belgium

2:15 PM *Practical Steps to Optimize the Heart and Lungs: The UK Experience*
Rajamiyer Venkateswaran, FRCS, Wythenshawe Hospital, Manchester, UK

2:30 PM *Carpe Diem - On the Cusp of an Explosion? Research in Donor Management*
George B. Mallory, Jr., MD, Texas Children's Hospital, Houston, TX, USA

2:45 PM *Impact of Using Infection Risk Donors Including NAT +HCV*
Marcelo Cypel, MD, Toronto General Hospital, Toronto, ON, Canada

3:00 PM *Making the Most in DCD Lung Transplant*
Dirk Van Raemdonck, MD, PhD, University Hospitals, Leuven, Belgium

3:15 PM *Use of Older Donors for Lung Transplantation: How Old is Too Old?*
Jasleen Kukreja, MD, UCSF Medical Center, San Francisco, CA, USA

3:30 PM 15-min Panel Discussion

2:00 PM – 3:45 PM

SYMPOSIUM: Resilience in the Face of Calamity: The Art of Preventing PTE Disasters

(CORAL SEA 1-2)

Primary Audience: CTEPH
Secondary Audience: PH

SESSION SUMMARY: The success of Pulmonary Thromboendarterectomy (PTE) has improved over the years due to better understanding of the pathophysiological mechanisms leading to major complications. This knowledge has translated into better ability to prevent them, recognize them early on and manage them more appropriately. This symposium will review specific complications related to PTE and discuss how to manage them to achieve a successful outcome.

CHAIRS: Elie Fadel, MD and John Cannon, MD

2:00 PM *Diagnosed with CTEPH and Decompensated Right Heart Failure: What are the Options?*
Marc de Perrot, MD, Toronto General Hospital, Toronto, ON, Canada

2:15 PM *ECMO as a Rescue: When, Why and How?*
David P. Jenkins, FRCS, Papworth Hospital, Cambridge, UK

2:30 PM *Major Hemoptysis After PTE: How to Assess It and Treat It?*
David McGiffin, MD, The Alfred Hospital and Monash University, Melbourne, Australia

2:45 PM *Severe Reperfusion Pulmonary Edema After PTE: Can We Prevent It?*
Kim M. Kerr, MD, UCSD Medical Center, La Jolla, CA, USA

3:00 PM *Residual PH after PTE: When Should I Start to Worry and What Should I Do?*
Joanna Pepke-Zaba, MD, Papworth Hospital, Cambridge, UK

3:15 PM *Diagnosed with CTEPH and Heparin Induced Thrombocytopenia (HIT): How to Proceed?*
Olaf Mercier, MD, Centre Chirurgical Marie Lannelongue, Fontenay aux Roses, France

3:30 PM 15-min Panel Discussion

4:15 PM – 6:00 PM

SYMPOSIUM: All Talk, No Action? New Strategies and Best Practices to Maximize Donor Heart Utilization

(PACIFICA 7)

Primary Audience: HF/HTX
Secondary Audience: LF/LTX

SESSION SUMMARY: The paucity of donors is still the primary limitation for heart transplantation across the world. Too many donor hearts are not accepted for concerns over particular risk factors. This symposium will explore novel ways to expand the donor pool. In a time when the waiting lists grow exponentially, our field must find ways to maximize donor utilization.

CHAIRS: Kiran K. Khush, MD and Jacqueline Smits, PhD

4:15 PM *Perfect is the Enemy of Good: Using Marginal Donor Hearts*
David Rabkin, MD, Loma Linda University, Loma Linda, CA, USA

4:30 PM *Riding the Epidemic: Hepatitis C + Donors Should Become Standard of Care*
Kelly Schlendorf, MD, Vanderbilt University, Nashville, TN, USA

4:45 PM *Distance Makes the Heart Grow Fonder: Miles Should Not Limit Donor Acceptance*
Christopher Hayward, MD, St Vincent's Hospital, Sydney, Australia

5:00 PM *Love It or Lovophed It: High Dose Catecholamine Donor Support and Outcomes After Heart Transplantation*
Arezu Z. Aliabadi-Zuckermann, MD, Medical University of Vienna, Vienna, Austria

5:15 PM **DEBATE: All Nations Should Have an Opt Out System (PRO)**
Maria Dolores Cosio, MD, Hospital 12 Octubre, Madrid, Spain

5:30 PM **DEBATE: All Nations Should Have an Opt Out System (CON)**
Peter J. Bergin, MBBS, FRACP, Alfred Hospital, Melbourne, Australia

5:45 PM 15-min Panel Discussion

4:15 PM – 6:00 PM

SYMPOSIUM: Breaking Bad: The Right Ventricle and Exercise Hemodynamics Rediscovered

(CORAL SEA 1-2)

- Primary Audience: PH
- Secondary Audience: CTEPH
- Secondary Audience: MCS

SESSION SUMMARY: In collaboration with the Pulmonary Vascular Research Institute (PVRI), this symposium will provide an overview into the mechanisms, clinical diagnosis and management of chronic right heart failure in left heart disease, scleroderma, and pulmonary hypertension. There will be a focus on the identification of maladaptive remodeling with discussion of the mechanisms contributing to maladaptive remodeling in right heart failure. We will explore the relationship of right ventricular function to functional capacity and highlight a debate on exercise challenge during right heart catheterization.

CHAIRS: Arun Jose, MD and Thenappan Thenappan, MD

- 4:15 PM **Back to the Future 1: Mechanisms of Chronic RV Failure**
Ryan J. Tedford, MD,
Medical University of South Carolina, Charleston, NC, USA
- 4:30 PM **Back to the Future 2: Metabolic Changes in the Failing Right Heart**
Evangelos Michelakis, MD,
University of Alberta, Alberta, AB, Canada
- 4:45 PM **Don't Go Breaking My Heart: Scleroderma Related – a Specific Entity**
Steven Hsu, MD, Johns Hopkins University, Baltimore, MD, USA
- 5:00 PM **When the Going Gets Tough, the Tough Get Going: Management of Acute RV Failure**
John Granton, MD, University of Toronto, Toronto, ON, Canada
- 5:15 PM **DEBATE: We Should Exercise Our PH Patients During Right Heart Catheterization (PRO)**
Susanna Mak, MD, PhD,
Mount Sinai Hospital, Toronto, ON, Canada
- 5:30 PM **DEBATE: We Should Exercise Our PH Patients During Right Heart Catheterization (CON)**
Ivan Robbins, MD,
Vanderbilt University, Nashville, TN, USA
- 5:45 PM 15-min Panel Discussion

4:15 PM – 6:00 PM

SYMPOSIUM: Matters of Life and Death: Palliative and End of Life Care in Transplant Medicine

(PACIFICA 3-5)

- Primary Audience: NNSAH
- Secondary Audience: PEDS
- Secondary Audience: PH
- Secondary Audience: PHARM

SESSION SUMMARY: This symposium will include novel talks to advance the ways in which we care for organ failure/transplant patients at end of life (EOL). Covered topics will include: emotional support for patients at EOL, collaboration with ethics and palliative care teams, pharmacological management of patients at EOL, palliative care for the pediatric and adult congenital heart disease population, religious/cultural diversity in EOL, and addressing provider burn-out/self-care.

CHAIRS: Melissa Cousino, PhD, and Rachel M. Crackett, MSc

- 4:15 PM **Beyond Life Support: Emotional Support for Patients at End of Life**
Bronwyn J. Levvey, RN, Grad Dip Clin Ep, Alfred Hospital, Melbourne, Australia
- 4:30 PM **It's Complicated: Collaboration and Integration Between Palliative Care, Ethics and Transplant Teams**
Andrew Courtwright, MD, PhD, University of Pennsylvania, Philadelphia, PA, USA
- 4:45 PM **Pharmacological Management of the MCS/Transplant Patient at End of Life**
Steven P. Ivulich, BPharm, Alfred Hospital, Melbourne, Australia
- 5:00 PM **Bringing PC to PEDS: Palliative Care for Pediatric Transplant and MCS Patients**
Elizabeth Blume, MD, Children's Hospital, Boston, MA, USA
- 5:15 PM **Bridging the Gaps: Cultural and Regional Diversity and End of Life Care**
Maria McKenna, MBBS,
Freeman Hospital, Newcastle upon Tyne, UK
- 5:30 PM **Self-Care for Us! Provider Heartbreak in Organ Failure/Transplant Care**
Julie Bidwell, PhD, Emory University, Atlanta, GA, USA
- 5:45 PM 15-min Panel Discussion

SATURDAY/ April 6, 2019

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: A Fork in the Road: How Can We Compare Interventional Therapies in CTEPH?

(CORAL SEA 1-2)

Primary Audience: CTEPH
Secondary Audience: PH

SESSION SUMMARY: Interventional options for the treatment of CTEPH are expanding with BPA recently emerging as an option, in addition to PTE surgery. Yet, how can we compare the two therapies when there are differences in patient populations, procedures performed, and variability in reporting of risks and outcomes? This symposium will address these issues and facilitate discussion on how we can move toward more uniform reporting of outcomes.

CHAIRS: Isabelle Opitz, MD and Gustavo A. Heresi, MD

7:00 AM *Challenges in Risk Stratification of CTEPH Patients*

Raymond L. Benza, MD, Allegheny General Hospital, Pittsburgh, PA, USA

7:15 AM *Therapeutic Outcomes: Beyond Mortality, What Are the Other Important Endpoints?*

Marion Delcroix, MD, University Hospital Leuven, Leuven, Belgium

7:30 AM *Balloon Pulmonary Angioplasty: Defining Essential Differences in Procedure Technique and Uniform Definitions of Complications*

Aiko Ogawa, MD, Okayama Medical Center, Okayama, Japan

7:45 AM *Can We Compare Apples to Oranges? How Can We Design a Meaningful Trial to Compare PTE and BPA?*

William Auger, MD, UCSD Medical Center, La Jolla, CA, USA

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: One Size Does Not Fit All: Personalized Medicine in Heart Transplantation

(PACIFICA 7)

Primary Audience: HF/HTX
Secondary Audience: PHARM

SESSION SUMMARY: Immunosuppression management balances the risks of under-immunosuppression and allograft rejection with the risks of over-immunosuppression and infection. Recent studies have demonstrated the efficacy of tacrolimus monotherapy, the utility of gene-expression profiling and the T-cell immune monitoring assay for minimization of immunosuppression. This symposium will serve to review approaches to minimization of immunosuppression as well as the pros and cons.

CHAIRS: Christina Aquilante, PharmD and Douglas Greig, MD

7:00 AM *The ABCs of Immunosuppression: Patient Profiles and Personalized Therapy*

Eugene DePasquale, MD, UCLA Medical Center, Los Angeles, CA, USA

7:15 AM *The Nuts and Bolts of Tailoring Immunosuppression: Impact on Long-Term Issues in Heart Transplantation*

Marisa G. Crespo-Leiro, MD, Hospital University A Coruña, La Coruña, Spain

7:30 AM *Minimizing Immunosuppression: Do All Roads Lead Home?*

Satish Arora, MD, Oslo University Hospital, Oslo, Norway

7:45 AM 15 min Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: Lung Transplant Candidate Selection: Challenging Cases

(PACIFICA 10-12)

Primary Audience: LF/LTX
Secondary Audience: ID
Secondary Audience: NHSAA
Secondary Audience: PEDS

SESSION SUMMARY: Guidelines for lung transplant candidacy were last updated in 2014 and include significant numbers of absolute and strong relative contraindications. In the last 5 years there has been a dramatic increase in the willingness of transplant programs to push the boundaries of transplant candidacy and a concomitant increase in the published literature regarding extended criteria recipients. This symposium focuses on several potential avenues for increased lung transplant candidate access.

CHAIRS: Edward Cantu, III, MD and Mark Benzmira, MD

7:00 AM *Is HIV a Contra-Indication for Lung Transplant?*

Paolo Grossi, MD, PhD, University of Insubria, Varese, Italy

7:15 AM *Scleroderma: The Ability to Swallow is Optional*

Maria M. Crespo, MD, University of Pennsylvania, Philadelphia, PA, USA

7:30 AM *So Many Antibodies...*

Adriana Zeevi, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

7:45 AM 15-min Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: Fragility: Not Necessarily Failure

(PACIFICA 6)

- Primary Audience: NNSAH
- Secondary Audience: HF/HTX
- Secondary Audience: LF/LTX
- Secondary Audience: MCS

SESSION SUMMARY: A multi-disciplinary approach to the assessment and treatment of a complex frail patient will be highlighted. A case study describing a patient with end stage disease will be presented who is experiencing nutritional, cognitive, and mental health concerns. Individual talks addressing these issues will be from a physician, psychologist, and dietitian. The symposium will conclude by involving the audience in an open discussion on issues raised in one's clinical experience with frail patients.

CHAIRS: Louise M. Fuller, PT and
Rose DeRosa, PA-C

- 7:00 AM** *Dying, Not Necessarily Doomed*
Oscar Gonzalez Fernandez, MD,
Hospital Universitario La Paz,
Madrid, Spain
- 7:15 AM** *Cognitive Deficits, Not
Necessarily Crazy*
Patrick J. Smith, PhD, MPH,
Duke University Medical
Center, Durham, NC, USA
- 7:30 AM** *Withered, Not Necessarily
Wasted*
Kirsten Diegel, RD, LDN,
Temple University Hospital,
Philadelphia, PA, USA
- 7:45 AM** 15-min Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: A Brand-New Day: The New Normal in Pediatric Thoracic Transplantation

(PACIFICA 1-2)

- Primary Audience: PEDS
- Secondary Audience: LF/LTX
- Secondary Audience: PATH

SESSION SUMMARY: With improvements in the care of children with cystic fibrosis and pulmonary hypertension, the demographics of pediatric lung and heart lung transplantation are changing. This symposium will focus on the new demographics of pediatric lung and heart lung transplant recipients, the new challenges, and the impacts of these changes on pediatric transplant programs.

CHAIRS: Melinda P. Solomon, MD, FRCPC
and Marc G. Schechter, MD

- 7:00 AM** *The Changing Pediatric Lung
Transplant Recipient*
Samuel B. Goldfarb, MD,
Children's Hospital of
Philadelphia, Philadelphia,
PA, USA
- 7:15 AM** Q&A
- 7:20 AM** *Childhood Interstitial Lung
Disease (ChILD) and Transplant*
Nicolaus Schwerk, MD,
Hannover Medical School,
Hannover, Germany
- 7:35 AM** Q&A
- 7:40 AM** *When One is Not Enough –
Indications for Heart Lung
Transplant*
Maria C. Gazzaneo, MD,
Texas Children's Hospital,
Houston, TX, USA
- 7:55 AM** Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM: So Your Patient is on ECMO... Now What? Considerations for Drug Dosing and Antico- agulation in ECMO

(PACIFICA 3-5)

- Primary Audience: PHARM
- Secondary Audience: MCS

SESSION SUMMARY: ECMO presents unique drug dosing and medication management challenges. This symposium will discuss the approach to optimal pharmacotherapy management for ECMO patients with a focus on anti-infectives and anticoagulation. Anecdotes and clinical pearls for ECMO in special populations will also be discussed.

CHAIRS: Patricia Uber, PharmD and
Charles Hoopes, MD

- 7:00 AM** *Keeping Things Moving:
Anticoagulation on ECMO*
Christopher Michaud, PharmD,
BCPS, Spectrum Health,
Grand Rapids, MI, USA
- 7:15 AM** Q&A
- 7:20 AM** *What's My Vd Again? Drug
Dosing on ECMO with a Focus
on Anti-Infectives*
Haifa Lyster, MSc,
Royal Brompton, Middlesex, UK
- 7:35 AM** Q&A
- 7:40 AM** *ECMO and What Else? Approach
to Management of ECMO in
Special Populations*
Konrad Hoetzenecker, MD, PhD,
Medical University of Vienna,
Vienna, Austria
- 7:55 AM** Q&A

8:00 AM – 10:00 AM

PLENARY SESSION

(PACIFICA 6)

Primary Audience: ALL

CHAIRS: Stuart Sweet, MD, PhD and
Stephan M. Ensminger, MD, DPhil

8:00 AM Awards Presentations
Kathleen L. Grady, PhD, APN,
FAAN, Northwestern Memorial
Hospital, Chicago, IL, USA

**8:30 AM What's Hot, What's New:
Basic Science Overview**
Stijn E. Verleden, PhD, KU
Leuven, Leuven, Belgium

**8:50 AM What's Hot, What's New:
Clinical Science Overview**
Maria Rosa Costanzo, MD,
Midwest Heart Specialists-
Advocate Medical,
Naperville, IL, USA

**9:10 AM PRESIDENT'S DEBATE: Resource
Limits: It's Time to Abandon
Retransplantation (PRO)**
Josef Stehlik, MD, MPH,
University of Utah School of
Medicine, Salt Lake City, UT, USA

**9:30 AM PRESIDENT'S DEBATE: Resource
Limits: It's Time to Abandon
Retransplantation (CON)**
Andrew J. Fisher, FRCP, PhD,
Newcastle University,
Newcastle Upon Tyne, UK

9:50 AM Debate Rebuttal (PRO)
Josef Stehlik, MD, MPH

9:55 AM Debate Rebuttal (CON)
Andrew J. Fisher, FRCP, PhD

10:15 AM – 12:00 PM

SYMPOSIUM: Cardiac Allograft Vasculopathy: Have Hope, Ye Who Enter

(PACIFICA 7)

Primary Audience: HF/HTX

SESSION SUMMARY: This symposium will focus on changing disease epidemiology and outcomes; role of noninvasive surveillance, particularly novel approaches such as PET; advanced coronary imaging for early CAV including intracoronary imaging, plaque characterization and intracoronary haemodynamics; pharmacologic therapy including mTORi and non-immune based strategies such as antiplatelet and lipid lowering therapies, and end with a captivating debate on the role of revascularization and defibrillators for CAV treatment.

CHAIRS: Kyung-Hee Kim, MD, PhD and Stephan Ensminger, MD, DPhil

10:15 AM Shifting CAV Landscape: Definitions, Epidemiology, and Pathophysiology
Michael Pham, MD, California Pacific Medical Center, San Francisco, CA, USA

10:30 AM Resisting Invasion: Traditional and Novel Non-Invasive Imaging Surveillance for CAV
Sharon Chih, MBBS, PhD, University of Ottawa Heart Institute,
Ottawa, ON, Canada

10:45 AM New Tricks for an Old Dog: Intracoronary Imaging and Hemodynamics – A New Classification for CAV?
Tor S. Clemmensen, MD, Aarhus University Hospital, Skejby, Denmark

11:00 AM If I Knew Then What I Know Now: Old and New Drugs for CAV Prevention and Regression
Yael Peled, MD, Sheba Medical Center, Tel Hashomer, Israel

11:15 AM CASE PRESENTATION: Young Man s/p AMR Treatment Who Later Died Suddenly – What Should Have Been Done?
Livia Goldraich, MD, Hospital de Clínicas de Porto Alegre, Porto Alegre, Brazil

11:20 AM DEBATE: Preventing the Invasion of the Body Snatchers: All Patients with CAV Should Have Revascularization and Defibrillators (PRO)
Howard Eisen, MD, Pennsylvania College of Medicine, Hershey, PA, USA

11:35 AM DEBATE: Preventing the Invasion of the Body Snatchers: All Patients with CAV Should Have Revascularization and ICDs (CON)
Mandeep Mehra, MD, FRCP, FACC, FESC, Brigham and Women's Hospital,
Boston, MA, USA

11:50 AM 10-min Panel Discussion

10:15 AM – 12:00 PM

SYMPOSIUM: Location, Location, and Allocation: Worldwide Application of Broader Sharing in Lung Transplant

(PACIFICA 10-12)

Primary Audience: LF/LTX
Secondary Audience: PH

SESSION SUMMARY: Lung allocation in the United States recently moved to broader geographic sharing. This symposium will review lung allocation throughout the world as it relates to this concept. Topics will include an overview of international lung allocation, the US lung allocation system, review of modeled data on this principle, updated US data available since policy implementation, and a review of this concept as it affects allocation over greater distances in Canada and Australia.

CHAIRS: Duane M. Davis, MD and James L. Lordan, MB, FRCP

10:15 AM *Lung Allocation Systems: Similarities and Differences*
Jens Gottlieb, MD,
Hannover Medical School,
Hannover, Germany

10:30 AM Q&A

10:35 AM *Changes in US Lung Allocation: Support for Broader Sharing*
Marie Budev, DO, MPH,
Cleveland Clinic, Cleveland,
OH, USA

10:50 AM Q&A

10:55 AM *Implementation of 250 Nautical Miles as the First Region of Lung Allocation in the US: Early Results*
Kevin Chan, MD, University of Michigan, Ann Arbor, MI, USA

11:10 AM Q&A

11:15 AM *Effects of Distance on Lung Allocation in Australia/New Zealand*
Dan Chambers, MBBS, FRACP,
The Prince Charles Hospital,
Brisbane, Australia

11:30 AM Q&A

11:35 AM *Effects of Distance on Lung Allocation in Canada*
Alim Hirji, MD, University of Alberta, Edmonton, AB, Canada

11:50 AM Q&A

10:15 AM – 12:00 PM

SYMPOSIUM: Seeing the Light: Antibodies in Thoracic Transplantation

(PACIFICA 3-5)

Primary Audience: BSTR
Secondary Audience: HF/HTX
Secondary Audience: LF/LTX
Secondary Audience: PHARM

SESSION SUMMARY: The goal of this symposium is to provide the audience with a deeper understanding of antibody-mediated mechanisms and potential downstream consequences of antibodies in transplantation. Presentations will discuss the basic science of immunology, the role of donor specific antibodies and emerging management strategies.

CHAIRS: Laurie D. Snyder, MD and Edward Horn, PharmD, BCPS

10:15 AM *The Pre-Transplant Alphabet Soup – MFI, CIQ, HLA*
Christine Falk, MD, Hannover Medical School, Hannover, Germany

10:30 AM *Seeing Ghosts? The Role of Non-DSA and Non-HLA in the Transplant Recipient*
Antoine Roux, MD,
Hôpital Foch, Paris, France

10:45 AM *The Needles in the Haystack: Diagnostic Challenges in Antibody-Mediated Rejection*
Agnieszka Ciarka, MD, PhD,
Catholic University of Leuven,
Leuven, Belgium

11:00 AM *The Transplant Toolbox: Dealing with DSA Now and in the Future*
Tam Khuu, PharmD,
UCLA Medical Center,
Los Angeles, CA, USA

11:15 AM **DEBATE: Photopheresis is Useful for Rejection Management (PRO)**
Peter Jaksch, MD,
Medical University of Vienna,
Vienna, Austria

11:30 AM **DEBATE: Photopheresis is Useful for Rejection Management (CON)**
Michael Shullo, PharmD,
University of West Virginia,
Morgantown, WV, USA

11:45 AM 15-min Panel Discussion



ishlt
academy

The purpose of the ISHLT Academy is to develop an enduring resource of education in core and masters level competencies in the fields of cardiopulmonary transplantation, mechanical and biological support of the failing heart, advanced lung disease (including pulmonary vascular disease), infectious diseases and other related disciplines. Registration for the Academies can only be made by visiting the ISHLT Academy website or via the Official ISHLT2019 Registration Form. Registration for ISHLT2019 is NOT required to register for an Academy.

THE FOLLOWING ACADEMY COURSES WILL BE OFFERED ON APRIL 2, 2019 IN CONJUNCTION WITH ISHLT2019.

PEDS HF CORE COMPETENCIES IN PEDIATRIC HEART FAILURE

April 2, 2019 • 7:55 AM – 5:15 PM

NHSAH CORE COMPETENCIES IN NURSING, HEALTH SCIENCE, ALLIED HEALTH CARE OF PATIENTS REQUIRING MECHANICAL CIRCULATORY SUPPORT AND TRANSPLANTATION

April 2, 2019 • 7:45 AM – 6:15 PM

HF/HTX MASTER CLASS IN HEART FAILURE AND TRANSPLANTATION

April 2, 2019 • 8:00 AM – 1:00 PM

April 2, 2019 • 2:00 PM – 7:00 PM

(REPEAT OF THE MORNING CLASS)

MCS MASTER CLASS IN MECHANICAL CIRCULATORY SUPPORT

April 2, 2019 • 8:00 AM – 1:00 PM

April 2, 2019 • 2:00 PM – 7:00 PM

(REPEAT OF THE MORNING CLASS)



APRIL 2, 2019 • 7:55 AM – 5:15 PM

*Pacifica 1-2, Loews Royal Pacific Hotel
Orlando, FL, USA*

SCIENTIFIC PROGRAM CHAIRS

CHAIR: Ryan Butts, MD, University of Texas Southwestern, Dallas, TX, USA

CO-CHAIR: Heather Henderson, MD, Medical University of South Carolina, Charleston, SC, USA

SCIENTIFIC PROGRAM COMMITTEE

Rachel Andrews, FRCPCH, Great Ormond Street Hospital for Children, London, UK

Jennifer Conway, MD, University of Alberta/Stollery Children's Hospital, Edmonton, AB, Canada

Claire Irving, FRACP, MD, Children's Hospital West Mead, Sydney, Australia

Joseph Rossano, MD, Children's Hospital of Philadelphia, Philadelphia, PA, USA

FACULTY

Rachel Andrews, FRCPCH, Great Ormond Street Hospital for Children, London, UK

Michael P. Carboni, MD, Duke Children's Hospital, Durham, NC, USA

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

Anne Dipchand, MD, Hospital for Sick Children, Toronto, ON, Canada

Claire Irving, FRACP, MD, Children's Hospital Westmead, Sydney, Australia

Robert Jaquiss, MD, Duke Children's Heart Center, Durham, NC, USA

Paul F. Kantor, MBBCh, FRCP, Stollery Children's Hospital, University of Alberta, Edmonton, AB, Canada

Richard Kirk, FRCP, FRCPCH, University of Texas Southwestern Medical Center, Dallas, TX, USA

Jodie Lantz, MSN, RN, PCNSBC, Children's Health Dallas, Dallas, TX, USA

Jack F. Price, MD, Texas Children's Hospital, Houston, TX, USA

Joseph Rossano, MD, Children's Hospital of Philadelphia, Philadelphia, PA, USA

Leonardo Salazar, MD, Fundacion Cardiovascular de Colombia, Floridablanca, Colombia

Robert Shaddy, MD, Children's Hospital, Philadelphia PA, USA

Jeffrey Towbin, MD, Le Bonheur Children's Hospital, Memphis, TN, USA



COURSE SUMMARY

This course is designed for pediatric cardiologists, early career professionals and advance practice nurses with an interest in pediatric heart failure. Each section is designed with focused, didactic lectures followed by an interactive Q&A. The course will start by covering general topics of pediatric heart failure – epidemiology, pathophysiology and etiology of pediatric heart failure. The course will then move to the diagnostic approach and medical management of pediatric heart failure, including a section on acute decompensated heart failure. The course will then cover the topics of a multi-disciplinary approach to heart failure as well as activity restrictions, precautions and the management of co-morbidities. Next, the timing and outcomes of advanced heart failure therapies will be discussed. The course will conclude with a discussion on unique patient populations (including heart failure in congenital heart disease) as well as future directions of heart failure therapies and research topics to progress the field of pediatric heart failure.

Educational Goals

The educational goals of this activity are to provide a concise review of clinical knowledge and essential professional skills to facilitate the development of core skills, diagnostic approach and management interventions to provide comprehensive care to pediatric heart failure patients.

Target Audience

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

Learning Objectives

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

1. Discuss the different etiologies, natural history, pathophysiology and prognosis of pediatric heart failure.
2. Understand diagnostic approaches and therapies for acute and chronic heart failure.
3. Recognize challenges, co-morbidities, and complications in the multidisciplinary care of pediatric heart failure.

Accreditation Statement

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

Credit Designation Statement

ISHLT designates this live activity for a maximum of 7.50 *AMA PRA Category 1 Credits*.™ Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ANCC, ABTC, ACPE Credit

Credits in categories will be applied for as appropriate.

Disclosure

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



SCIENTIFIC PROGRAM

7:00 AM – 7:55 AM

REGISTRATION AND MORNING COFFEE

7:55 AM – 8:00 AM

WELCOME AND OVERVIEW

Ryan Butts, MD, University of Texas Southwestern, Dallas, TX, USA

8:00 AM – 9:00 AM

SESSION 1 – Defining The Problem: Pediatric Heart Failure

CHAIR: Rachel Andrews, FRCPC

8:00 AM *What is Heart Failure & Who Gets It? Definitions, Etiologies and Natural History*

Joseph Rossano, MD, Children's Hospital of Philadelphia, Philadelphia, PA, USA

Teaching/Discussion Points

1. Define heart failure.
2. Give an overview of conditions involving heart failure: primary & secondary cardiomyopathies, congenital & acquired forms of heart disease.
3. Review the incidence, presentation and natural history of pediatric heart failure.

8:15 AM *Symptoms, Signs & Staging of Pediatric Heart Failure*

Ryan Butts, MD, University of Texas Southwestern, Dallas, TX, USA

Teaching/Discussion Points

1. Describe the clinical symptoms of heart failure in different age groups.
2. Describe the clinical signs of heart failure in different age groups.
3. Review the scoring systems to assess disease severity.
4. Understand the implications for prognosis.

8:30 AM *Cellular and Genetic Basis of Pediatric Heart Failure*

Jeffrey Towbin, MD, Le Bonheur Children's Hospital, Memphis, TN, USA

Teaching/Discussion Points

1. Describe myocyte structure and contractility.
2. Describe cellular pathology in systolic and diastolic heart failure.
3. Review what we know of the genetic basis of different types of cardiomyopathy.
4. Discuss the limitations of current knowledge, including genotype/phenotype variability.

8:45 AM *Q&A with Panel*

9:00 AM – 10:00 AM

SESSION 2 – Diagnosis and Testing in Pediatric Heart Failure

CHAIR: Jennifer Conway, MD

9:00 AM *What Can Laboratory Values Tell Me about My Patient in Heart Failure?*

Claire Irving, FRACP, MD, Children's Hospital Westmead, Sydney, Australia

Teaching/Discussion Points

1. Review the role and implication of standard laboratory testing in heart failure (ex: hyponatremia, anemia).
2. Understand the various ways to monitor end organ function.
3. Review the role of B-type Natriuretic Peptide (chemistry, role in heart failure).
4. Discuss the laboratory testing that can be utilized at initial diagnosis and during follow-up.



9:15 AM *What Imaging Should I Do in My Patient with Heart Failure?*

Paul F. Kantor, MBBCh, FRCPC, Stollery Children's Hospital, University of Alberta, Edmonton, AB, Canada

Teaching/Discussion Points

1. Understand available modalities for the diagnostic evaluation of children with newly discovered heart failure and during follow-up.
2. Understand the prognostic implications of echo findings in heart failure.
3. Understand the prognostic implications of MRI findings in heart failure.

9:30 AM *What Testing is Useful in the Follow-up of Patients with Heart Failure?*

Heather T. Henderson, MD, Medical University of South Carolina, Charleston, SC, USA

Teaching/Discussion Points

1. Understand the monitoring of chronic heart failure and the role of diagnostic and functional testing in care of children with significant systolic and/or diastolic cardiac dysfunction including:
 - a. Exercise testing.
 - b. Cardiac catheterization.
 - c. Other ancillary testing (sleep studies, 6 minute walk test, holters/event monitors).

9:45 AM *Q&A with Panel*

10:00 AM – 10:30 AM

COFFEE BREAK

10:30 AM – 11:30 AM

SESSION 3 – Acute Heart Failure in Pediatrics

CHAIR: Ryan Butts, MD

10:30 AM *Diagnosing and Managing Acute Decompensated Heart Failure*

Joseph Rossano, MD, Children's Hospital of Philadelphia, Philadelphia, PA, USA

Teaching/Discussion Points

1. Identify key vasoactive medications, utilization and management in acute heart failure.
2. Discuss invasive and non-invasive mechanical ventilation strategies in acute decompensated heart failure.
3. Discuss co-morbidities including acute kidney injury and liver injury and their management in acute decompensated heart failure.

10:45 AM *Using Mechanical Circulatory Support in Acute Decompensated Heart Failure*

Robert Jaquiss, MD, Duke Children's Heart Center, Durham, NC, USA

Teaching/Discussion Points

1. Discuss patient selection and timing of mechanical circulatory support.
2. Discuss device selection including temporary VADs v. ECMO in acute decompensated heart failure.
3. Discuss management of mechanical circulatory support.
4. Discuss removal of mechanical circulatory support in acute heart failure for recovery or withdrawal of care.

11:00 AM *Myocarditis: More than just Whether or Not to Give IVIG – Case Presentation*

Leonardo Salazar, MD, Fundacion Cardiovascular de Colombia, Floridablanca, Colombia

Teaching/Discussion Points

1. Identify signs and symptoms of acute myocarditis in different age groups.
2. Discuss diagnostic modalities (strengths and weaknesses).
3. Discuss supportive strategies to address acute heart failure in acute myocarditis.
4. Discuss literature and utilization of IVIG and other immunomodulatory therapies in acute myocarditis.

11:15 AM *Q&A with Panel*

11:30 AM – 12:30 PM

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

12:30 PM – 1:45 PM

SESSION 4 – Chronic Heart Failure in Pediatrics

CHAIR: Claire Irving, FRACP, MD

12:30 PM *The Multidisciplinary Approach to Heart Failure Management*

Jodie Lantz, MSN, RN, PCNSBC, Children's Health Dallas, Dallas, TX, USA

Teaching/Discussion Points

1. Discuss the importance of a multidisciplinary team approach to the provision of comprehensive pediatric heart failure care.
2. Review the important members of the team caring for pediatric heart failure patients and discuss their roles.
3. Discuss transition from pediatric to adult care for patients with chronic heart failure.



12:45 PM *Medications for Chronic Heart Failure*

Rachel Andrews, FRCPCH, Great Ormond Street Hospital for Children, London, UK

Teaching/Discussion Points

1. Review current available medications for use in pediatric heart failure.
2. Discuss how these medications target the various steps in the pathogenesis of heart failure.
3. Discuss choice of medications and review how various combinations of medical therapies may be used.
4. Review significant adverse effects and possible contraindications of medications used in pediatric heart failure.
5. Discuss differences in metabolism and pharmacokinetics in children compared to adults.

1:00 PM *Recognizing and Managing Comorbidities*

Jack F. Price, MD, Texas Children's Hospital, Houston, TX, USA

Teaching/Discussion Points

1. Discuss the pathophysiology of the co-morbidities frequently found with pediatric heart failure.
2. Review the monitoring and investigations that should be carried out for early detection of co-morbidities.
3. Review the best treatment options for these medical co-morbidities to maximize outcomes.

1:15 PM *Promotion of Healthy Lifestyle*

Anne Dipchand, MD, Hospital for Sick Children, Toronto, ON, Canada

Teaching/Discussion Points

1. Discuss the importance of lifestyle factors in the management of chronic heart failure.
2. Review recommendations and potential restrictions with regard to exercise.
3. Review the role of nutrition in patients with chronic heart failure.

1:30 PM *Q&A with Panel*

1:45 PM – 2:45 PM

SESSION 5 – Advanced Heart Failure Therapies

CHAIR: Heather T. Henderson, MD

1:45 PM *Arrhythmia's, Pacers, ICD's and CRT*

Michael P. Carboni, MD, Duke Children's Hospital, Durham, NC, USA

Teaching/Discussion Points

1. Describe the most common arrhythmias encountered in pediatric heart failure patients and their treatments.
2. Review the role of pacemakers in pediatric heart failure including the use of resynchronization therapy.
3. Describe the use of implantable defibrillators in pediatric heart failure.

2:00 PM *Advanced Circulatory Support*

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

Teaching/Discussion Points

1. Understand the role for long term inotrope use both in the hospital and at home as bridge to transplant or in palliation.
2. Review the use of pulmonary artery banding in pediatric dilated cardiomyopathy to improve function/symptoms.
3. Discuss the use of durable ventricular assist devices as bridge to transplant vs destination therapy.

2:15 PM *When is it Time to Talk Transplant?*

Richard Kirk, FRCP, FRCPCH, University of Texas Southwestern Medical Center, Dallas, TX, USA

Teaching/Discussion Points

1. Review indications and evaluation for heart transplantation.
2. Discuss important contraindications, relative and absolute to transplantation.
3. Understand management of the heart failure patient on the wait-list.

2:30 PM *Q&A with Panel*

2:45 PM – 3:15 PM

COFFEE BREAK

2:45 PM – 3:15 PM**SESSION 6 – Unique Patient Populations****CHAIR:** Heather T. Henderson, MD**3:15 PM** *Managing Chemotherapy-Induced Cardiomyopathy***Rachel Andrews, FRCPCH**, Great Ormond Street Hospital for Children, London, UK**Teaching/Discussion Points**

1. Review risk factors for chemotherapy induced cardiomyopathy.
2. Describe treatment strategies and ways to possibly prevent chemotherapy induced cardiomyopathy.
3. Review barriers to long term survival and transplantation.

3:30 PM *Managing Neuromuscular Cardiomyopathy***Claire Irving, FRACP, MD**, Children's Hospital Westmead, Sydney, Australia**Teaching/Discussion Points**

1. Understand which neuromuscular disorders carry the highest risk for cardiomyopathy.
2. Review diagnostic evaluation and treatment strategies for neuromuscular patients.
3. Describe the role for advanced therapies in neuromuscular cardiomyopathy.

3:45 PM *Heart Failure in the Single Ventricle Patient***Jennifer Conway, MD**, Stollery Children's Hospital, University of Alberta, Edmonton, AB, Canada**Teaching/Discussion Points**

1. Review the limitations in traditional heart failure therapies in single ventricle patients.
2. Describe the challenges of long term circulatory support as bridge to transplant.
3. Understand failing Fontan physiology and transplant candidacy.

4:00 PM *Q&A with Panel***4:45 PM – 5:15 PM****SESSION 7 – DEBATE: Future Directions and Research in Pediatric Heart Failure: Registry vs Randomized Control Trials****CHAIR:** Joseph Rossano, MD**4:15 PM** *Randomized Trials in Pediatric Heart Failure and Why We Need Them***Robert Shaddy, MD**, Children's Hospital, Philadelphia, PA, USA**Teaching/Discussion Points**

1. Discuss rationale / importance of randomized trials.
2. Discuss limitations of observational studies.
3. Describe recent and ongoing randomized trials.

4:25 PM *Research from Registries in Heart Failure and Why We Need Them***Anne Dipchand, MD**, Hospital for Sick Children, Toronto, ON, Canada**Teaching/Discussion Points**

1. Discuss rationale / importance of observational and registries.
2. Discuss limitations of randomized trials.
3. Describe going registries for pediatric heart failure.

4:35 PM *Rebuttal***Robert Shaddy, MD**, Children's Hospital, Philadelphia, PA, USA**4:40 PM** *Rebuttal***Anne Dipchand, MD**, Hospital for Sick Children, Toronto, ON, Canada**4:45 PM** *Q&A with Panel***5:15 PM** *Summary/Evaluation***Heather T. Henderson, MD**, Medical University of South Carolina, Charleston, SC, USA**5:15 PM** *Adjourn*



APRIL 2, 2019 • 7:45 AM – 6:15 PM

*Pacifica 3-5, Loews Royal Pacific Hotel
Orlando, FL, USA*

SCIENTIFIC PROGRAM CHAIRS

CHAIR: Sarah Schettle, PA-C, Mayo Clinic College of Medicine, Rochester, MN, USA

CO-CHAIRS: Connie White-Williams PhD, RN, NE-BC, FAAN, University of Alabama at Birmingham Hospital, Birmingham, AL, USA

Patricia M. Leisfield, RN, The Prince Charles Hospital, Queensland, Australia

FACULTY

Nancy P. Blumenthal, DNP, CRNP, University of Pennsylvania Medical Center, Philadelphia, PA, USA

Caron Burch, RN, MSN, FNP, CCTC, UCSF Benioff Children's Hospital, Redwood City, CA, USA

Susan M. Chernenko, RN, MN, NP, Toronto General Hospital, Toronto, ON, Canada

Pamela S. Combs, PhD, RN, University of Chicago, Chicago, IL, USA

Margaret M. Fregoso, NP, Inova Transplant Center, Fairfax, VA, USA

Steven P. Ivulich, BPharm, Alfred Hospital, Melbourne, VC, Australia

Colleen J. Juricek-LaBuhn, University of Chicago, Chicago, IL, USA

Jane MacIver, RN, NP, PhD, Toronto General Hospital, Toronto, ON, Canada

Tara E. Miller, FNP, Duke University Medical Center, Durham, NC, USA

Linda Ohler, MSN, FAAN, FAST, New York University, New York, NY, USA

Michael G. Petty, PhD, RN, CNS, University of Minnesota Medical Center, Minneapolis, MN, USA

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

Nicola Robinson Smith, RN, Newcastle Upon Tyne Hospitals NHS, Newcastle Upon Tyne, UK

Thomas Schläglhofer, MSc, Medical University of Vienna, Vienna, Austria

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

Kathleen L. Town, BSN, RN, Stanford University and Clinics, San Jose, CA, USA

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

Jo Wray, PhD, Great Ormond Street Hospital, London, UK



Educational Goals

This Academy is intended to offer a concise synopsis of clinical knowledge to support mastery of the core competencies of the selection, pre-transplant, perioperative, and post-transplant management of the thoracic transplant organ recipient by Nursing, Health Sciences, and Allied Health professionals. In addition to basic knowledge, attention is also paid to patients with special needs who require transplantation and to the Nursing, Health Sciences, and Allied Health professionals caring for this unique population.

Target Audience

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

Learning Objectives

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

1. Understand the role of the Transplant and MCS Coordinator and how to evaluate, manage, and care for patients for the short term and long term within this role.
2. Recognize and appreciate challenges with patients with special needs and identify strategies to implement quality care for all patients.
3. Identify patient needs at the end of life, how to meet these needs and how to practice self-care.

Accreditation Statement

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

Credit Designation Statement

ISHLT designates this live activity for a maximum of 8.25 *AMA PRA Category 1 Credits*.™ Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ANCC Credit

AMEDCO is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

This course is co-provided by AMEDCO and ISHLT. Maximum of 8.25 contact hours.

Disclosure

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



SCIENTIFIC PROGRAM

7:00 AM – 7:45 AM

REGISTRATION AND MORNING COFFEE

7:45 AM – 8:00 AM

WELCOME AND OVERVIEW

Sarah Schettle, A-C, Mayo Clinic, Rochester, MN, USA

8:00 AM – 8:30 AM

**SESSION 1 – Role of the Transplant and MCS
Coordinator: Evolution and Current Practice**

CHAIR: Connie White-Williams, PhD, RN, NE-BC, FAAN

SUMMARY

- Establish context and historical background of the Coordinator role.
- Appreciate role differences and variations pending educational backgrounds and training of the provider.
- Understand how different roles are integrated in the multidisciplinary team.
- Learn international role variations.
- Understand opportunities and challenges the role poses.

8:00 AM *Evolution of the Heart and Lung Transplant and MCS Coordinator Role*

Linda Ohler, MSN, FAAN, FAST, New York University, New York, NY, USA

Teaching/Discussion Points

1. RNs and NP/PA/CNS providers.
2. Combined transplant/MCS role and separate roles.
3. Integration and role within the transplant and MCS team.
4. Opportunities, challenges, and limitations of the role.

8:15 AM *Global Role Variations*

Thomas Schlöglhofer, MSc, Medical University of Vienna, Vienna, Austria

Teaching/Discussion Points

1. Variation in provider training and degrees.
2. Understanding of Coordinator role and Transplant role.
3. Integration and collaboration.

8:30 AM – 9:30 AM

SESSION 2 – Evaluation and Management of the Advanced Thoracic Organ Failure Patient

CHAIR: Patricia Leisfield, RN

SUMMARY

- Understand when a provider should consider referring patients for advanced therapy.
- Establish elements for evaluation for heart and lung transplant candidates and mechanical circulatory support device candidates.
- Understand the various tests and imaging required as a part of the evaluation process.
- Learn the role of the coordinator throughout the evaluation of the patient.
- Understand components of a psychosocial evaluation prior to consideration for advanced therapy.
- Describe new metrics in the evaluation process and to appreciate recent changes in evaluation and management.

8:30 AM *When to Refer...and do They Meet Criteria?*

Colleen J. Juricek-LaBuhn, University of Chicago, Chicago, IL, USA

Teaching/Discussion Points

1. Referral and indications/contraindications for heart and lung transplantation and MCS placement.
2. Referral methods, timing, evaluation, and evaluation efficiencies.
3. Contraindications for MCS and differences with VAD and TAH.
4. Shared Care.

8:45 AM *Evaluation and Management*

Nancy P. Blumenthal, DNP, CRNP, University of Pennsylvania Medical Center, Philadelphia, PA, USA

Teaching/Discussion Points

1. Heart transplant candidacy
 - a. Elements of evaluation
 - i. Tests
 - ii. Imaging
 - iii. Transplant coordinator role
 - b. Decision-making
2. Lung transplant candidacy
 - a. Elements of evaluation
 - i. Tests
 - ii. Imaging
 - iii. Transplant coordinator role
 - b. Decision-making
3. MCS (LVAD and/or TAH) candidacy
 - a. Elements of evaluation
 - i. Tests
 - ii. Imaging
 - iii. Transplant coordinator role
 - b. Decision-making for BTT vs DT

9:00 AM *Psychosocial Issues pre-Transplant and pre-MCS*

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

Teaching/Discussion Points

1. Substance abuse.
2. Support systems and identification of caregivers.
3. Patient and family education.
4. Postop management.

9:15 AM *Hot Topics in Evaluation*

Jane MacIver, RN, NP, PhD, Toronto General Hospital, Toronto, ON, Canada

Teaching/Discussion Points

1. Frailty
2. Financial assessment (International) and coverage (US-Focused).
3. Upcoming changes to UNOS listings
 - a. New programs – how to share knowledge between.

9:30 AM – 10:00 AM

COFFEE BREAK

10:00 AM – 11:00 AM

SESSION 3 – Caring for the Listed Patient

CHAIR: **Connie White-Williams, PhD, RN, NE-BC, FAAN**

SUMMARY

- Understand the process of organ allocation and patient listing internationally.
- Increase knowledge about transplant immunology and key components of the immune system that influence transplantation.
- Establish risk factors of sensitization and mechanisms for desensitization.
- Learn appropriate monitoring strategies of antibodies pre- and post-transplant.
- Understand specific transplant challenges through case scenarios.

10:00 AM *Listing and Collaboration: Transplant/MCS Coordinators and Patients*

Linda Ohler, MSN, FAAN, FAST, New York University, New York, NY, USA

Teaching/Discussion Points

1. Listing criteria.
2. Changes to heart allocation.
3. Change to listing for MCS patients in North America and abroad.
4. US Lung Allocation System.
5. Global heart/lung allocation schema.
6. Living while waiting.

10:15 AM *Immunology 101*

Tara E. Miller, FNP, Duke University Medical Center, Durham, NC, USA

Teaching/Discussion Points

1. The concept of self and non-self.
2. The key components of the immune system.
3. What parts of this are important in transplantation?

10:30 AM *Managing Patients with anti HLA Antibodies and Desensitization Therapies*

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

Teaching/Discussion Points

1. Risk factors for development of anti HLA Ab.
2. Mechanism of action of desensitization strategies.
3. Monitoring of anti-HLA Ab pre-transplant.
4. Assessing for donor-specific Ab post-transplant.

10:45 AM *Case Scenario: Cannabis Legality and Patient Evaluation*

Nicola Robinson Smith, RN, Newcastle Upon Tyne Hospitals NHS, Newcastle Upon Tyne, UK

Teaching/Discussion Points

1. Components of high risk evaluation
2. Geographic differences
3. Long term management

11:00 AM – 11:30 AM

SESSION 4 – Transplant Management

CHAIR: Patricia Leisfield, RN

SUMMARY

- Describe the role of the coordinator in donor evaluation and management and procurement of cardiothoracic organs.
- Understand contraindications for organ procurement.
- Explore the use of OCS and EVLP in organ procurement.
- Learn about induction and maintenance in immunosuppression.
- Establish common side effects associated with immunosuppression.

11:00 AM *The Heart and Lung Donor*

Margaret M. Fregoso, NP, Inova Transplant Center, Fairfax, VA, USA

Teaching/Discussion Points

1. Multiple priorities of the procurement transplant coordinator.
2. Determining suitability of thoracic organs for transplantation.
3. Factors that determine donor-recipient matching.
4. How assessment and coordination of SCD and DCD donors differ.
5. Contraindications for heart transplant.
6. Contraindications for lung transplant.
7. Use of OCS and ex-vivo lung perfusion.

11:15 AM *Immunosuppression: Induction and Maintenance*

Steven P. Ivulich, BPharm, Alfred Hospital, Melbourne, VC, Australia

Teaching/Discussion Points

1. Induction - what is it and why are there differences between sites?
2. Which drugs are used to maintain the graft?
3. Common side-effects and what to do if your patient has them.

11:30 AM – 12:00 PM

SESSION 5 – MCS Management

CHAIR: Sarah Schettle, PA-C

SUMMARY

- Establish the different types of mechanical circulatory support options presently available.
- Appreciate the differences between long-term and short-term mechanical circulatory support.
- Understand complications that can result from mechanical circulatory support.
- Learn how to identify and address common complications resulting from mechanical circulatory support.

11:30 AM *Devices*

Nicola Robinson Smith, RN, Newcastle Upon Tyne Hospitals NHS, Newcastle Upon Tyne, UK

Teaching/Discussion Points

1. LVADs
2. TAHs
3. Centrimags, IABP, others
4. ECMO

11:45 AM *Complications Overview*

Thomas Schlöglhofer, MSc, Medical University of Vienna, Vienna, Austria

Teaching/Discussion Points

1. Bleeding
2. Clotting
3. Infection
4. Right heart failure

12:00 PM – 1:00 PM

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

1:00 PM – 1:45 PM

SESSION 6 – Immediate Post Transplant Care

CHAIR: Connie White-Williams, PhD, RN, NE-BC, FAAN

SUMMARY

- Understand Primary Graft Dysfunction: characteristics and treatment modalities.
- Describe the difference between acute cellular rejection and antibody mediated rejection and respective management strategies.
- Explore teaching strategies to promote patient and caregiver learning.
- Understand follow-up care after transplantation.

1:00 PM Primary Graft Dysfunction: Definitions and Treatment

Margaret M. Fregoso, NP, Inova Transplant Center, Fairfax, VA, USA

Teaching/Discussion Points

1. ICU management
2. Surgical and Medical Complications
3. Prophylactic Regimen
4. Immunosuppression therapy (covered in previous section)

1:15 PM Management of Acute Cellular Rejection and Antibody Mediated Rejection

Tara E. Miller, FNP, Duke University Medical Center, Durham, NC, USA

Teaching/Discussion Points

1. Definitions of acute cellular rejection and antibody mediated rejection.
2. Management strategies of acute cellular rejection.
3. Management strategies of antibody mediated rejection.

1:30 PM Post-Transplant Heart and Lung Recipient and Caregiver Education

Susan M. Chernenko, RN, MN, NP, Toronto General Hospital, Toronto, ON, Canada

Teaching/Discussion Points

1. Medication teaching.
2. Signs and symptoms of infection and rejection in the heart and lung.
3. Monitoring for infection, rejection and changes in medical status.
4. Follow up care post discharge.

1:45 PM – 2:45 PM

SESSION 7 – Care of the Patient With Special Needs

CHAIR: Sarah Schettle, PA-C

SUMMARY

- Understand the relevance of social support and socioeconomic status in patient care.
- Be able to determine health literacy and track patient adherence.
- Appreciate challenges resulting from low health literacy.
- Describe specific considerations in the management of the different age groups of transplant recipients.
- Learn about care of the older aged patient.
- Understand opportunities and challenges the role poses.

1:45 PM Poor Social Support and Low Socioeconomic Status

Caron Burch, RN, MSN, FNP, CCTC, UCSF Benioff Children's Hospital, Redwood City, CA, USA

Teaching/Discussion Points

1. Importance of social support.
2. Why is socioeconomic status important?
3. Key principles in caring for these patients.

2:00 PM Low Health Literacy and Adherence

Colleen J. Juricek-LaBuhn, University of Chicago, Chicago, IL, USA

Teaching/Discussion Points

1. Overview of health literacy and why it's important.
2. How to determine level of health literacy.
3. Strategies to improve and track adherence.

2:15 PM Care of the Very Young, School Age and Adolescent

Jo Wray, PhD, Great Ormond Street Hospital, London, UK

Teaching/Discussion Points

1. What's different about the 3 age groups?
2. What are some key concepts in managing each group?
3. A short discussion about transitions.

2:30 PM *Care of the Older Aged Patient*

Patricia Leisfield, RN, The Prince Charles Hospital, Queensland, Australia

Teaching/Discussion Points

1. What defines older age?
2. Outcomes in the elderly, comorbidities, and impact on care.
3. Long-term issues, death of caregiver, increasing medical needs.

2:45 PM – 3:15 PM

COFFEE BREAK

3:15 PM – 4:15 PM

SESSION 8 – Long Term Follow Up

CHAIR: Patricia Leisfield, RN

SUMMARY

- Establish recommendations for surveillance of the post-transplant patient.
- Identify strategies to allow for return to work and school.
- Learn how to help patient achieve an acceptable quality of life.
- Recognize common infections and malignancies as well as their treatment and prevention.
- Understand chronic rejection: symptoms and treatment, symptoms of rejection, and treatment.

3:15 PM *Chronic Rejection: BOS*

Michael G. Petty, PhD, RN, CNS, University of Minnesota Medical Center, Minneapolis, MN, USA

Teaching/Discussion Points

1. Signs and symptoms.
2. Current treatment strategies.

3:30 PM *Chronic Rejection: CAV*

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

Teaching/Discussion Points

1. Signs and symptoms.
2. Current treatment strategies.

3:45 PM *Infection and Malignancy*

Linda Ohler, MSN, FAAN, FAST, New York University, New York, NY, USA

Teaching/Discussion Points

1. Common infections and their timing in the post-transplant period and in MCS patients supported for long term.
2. Prevention and treatment of infections.
3. Malignancy Risk.
4. Prevention and treatment of malignancy.

4:00 PM *Return to Work, School and Quality of Life*

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

Teaching/Discussion Points

1. Barriers to return to normal activities.
2. Strategies to facilitate successful reintegration into the community.
3. Return to school issues.
4. Achieving acceptable quality of life.

4:15 PM – 4:45 PM

SESSION 9 – Quality

CHAIR: Connie White-Williams, PhD, RN, NE-BC, FAAN

SUMMARY

- Learn about the variety of regulatory agencies to assess hospital practices.
- Establish performance improvement recommendations.
- Identify program metrics to consider evaluating and how to plan for improvement.
- Understand the importance of readmissions and their impact on a program.
- Be the able to identify a multidisciplinary approach to patient care.

4:15 PM *Quality Assurance and Interprofessional Collaborative Practice*

Connie White-Williams, PhD, RN, NE-BC, FAAN, University of Alabama at Birmingham Hospital, Birmingham, AL, USA

Teaching/Discussion Points

1. Regulatory agencies.
2. Performance improvement and collaborative practice.
3. Evaluating outcomes and developing plan for improvement.
4. Rewards identified by caregivers for performing the role.

4:30 PM *Readmissions*

Sarah Schettle, PA-C, Mayo Clinic College of Medicine, Rochester, MN, USA

Teaching/Discussion Points

1. Tracking trends at your institution and benchmark against national and international trends.
2. How to strategically say “no” and role of delegation and education for other.
3. Engagement of consulting services and multidisciplinary approach.
4. Develop plan for improvement.

4:45 PM – 6:00 PM

SESSION 10 – Caring for Ourselves and Others

CHAIR: Patricia Leisfield, RN

SUMMARY

- Establish strategies to provide support for caregivers of patients.
- Appreciate ethical challenges and role of palliative care at the end of life.
- Understand strategies for career development.
- Identify work-life balance strategies and time management techniques.
- Learn about the importance of networking.

4:45 PM *Collaboration Strategies*

Pamela Combs, PhD, RN, University of Chicago, Chicago, IL, USA

Teaching/Discussion Points

1. Why should I network?
2. How do I network?
3. What can I gain from networking?

5:00 PM *Care for the Caregivers*

Caron Burch, RN, MSN, FNP, CCTC, UCSF Benioff Children’s Hospital, Redwood City, CA, USA

Teaching/Discussion Points

1. Demographics of those who provide care for MCS and transplant patients.
2. The caregiver experience pre-transplant and post-transplant.
3. Interventions for struggling caregivers.
4. Rewards identified by caregivers for performing the role.

5:15 PM *Caring at the End of Life*

Jane MacIver, RN, NP, PhD, Toronto General Hospital, Toronto, ON, Canada

Teaching/Discussion Points

1. Involvement of palliative care providers for transplant and MCS.
2. Ethical and practical challenges of offering hope while also helping patients and families to prepare for end of life.
3. Specific palliative interventions that can be of benefit to thoracic transplant patients.

5:30 PM *Career Development Strategies for MCS and Transplant Professionals*

Connie White-Williams, PhD, RN, NE-BC, FAAN, University of Alabama at Birmingham Hospital, Birmingham, AL, USA

Teaching/Discussion Points

1. Outline steps along a potential career path for a transplant professional.
2. Describe strategies to prepare for a career in transplantation.
3. How do we stimulate interest in others for a transplant career to provide for controlled succession planning?
4. Growing the network – helping others to become active in transplant organizations like ISHLT, ICCAC, NHSAA, ITNS, etc.

5:45 PM *Work-life Balance for the MCS and Transplant Professional – Making it all Work*

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

Teaching/Discussion Points

1. Strategies to define work-life balance for the individual.
2. How to strategically say “no” and role of delegation and education for others.
3. Time management.
4. Stress relief.

6:00 PM *Summary/Evaluation/Q & A*

Sarah Schettle, PA-C, Mayo Clinic College of Medicine, Rochester, MN, USA

Connie White-Williams, PhD, RN, NE-BC, FAAN, University of Alabama at Birmingham Hospital, Birmingham, AL, USA

Patricia Leisfield, RN, The Prince Charles Hospital, Queensland, Australia

6:15 PM *Adjourn*



APRIL 2, 2019 MORNING COURSE • 8:00 AM – 1:00 PM

*Coral Sea 1 & 2, Loews Royal Pacific Hotel
Orlando, FL, USA*

NOTE: The next four pages contain the schedule for the morning course.

The identical course will be offered in the afternoon from 2pm–7pm.

The detailed schedule for the afternoon course is available on the ISHLT Academy website.

SCIENTIFIC PROGRAM CHAIRS

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

CO-CHAIR: Lynn Punnoose, MD, Temple University, Philadelphia, PA, USA

CASE MODERATORS

Patricia Chang, MD, MHS, University of North Carolina, Chapel Hill, NC, USA

Hannah Copeland, MD, University of Mississippi Medical Center, Jackson, MS, USA

Heather Ross, MD, MHSc, FRCP (C), FACC, University of Toronto, Toronto, ON, Canada

Luciano Potena, MD, PhD, University of Bologna, Bologna, Italy

CASE DISCUSSANTS

Goran Dellgren, MD, PhD, Sahlgrenska University Hospital, Goteborg, Sweden

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

Luke Burchill, MBBS, PhD, FRACP, Oregon Health and Science University, Portland, Oregon, USA

Maria Crespo Leiro, MD, Hospital Universitario a Coruna, La Coruna, Spain

COURSE SUMMARY

The HFTX Master Class is designed for clinicians with higher levels of expertise in advanced heart failure and transplantation (completed the core curriculum course on HFTX and/or primary practice in advanced heart failure management (≥ 5 years)). The course format is intended to generate highly interactive discussion among experienced users of these technologies, in order to tackle the most complex nuances of managing these complex patients. Rather than didactic lectures, this course will employ the concept of “convergent discussion” composed of small groups. Faculty moderators and case discussants will engage the audience by focusing on areas with gaps in knowledge and absence of consensus in the field. The case-based format will allow moderators and discussants to use real-world complex situations in order to lead the group through active audience participation towards specific answers designed to address the practice gaps and learning objectives.



Practice Gaps

1. Transplant clinicians lack the immunology expertise required to effectively integrate the results of HLA antibody testing into patient management.
2. The diagnostic and therapeutic approaches to cardiac allograft rejection are evolving, and transplant clinicians face difficulties in incorporating newer diagnostic modalities such as MRI, molecular diagnostics, and newer immunosuppressive agents into current algorithms.
3. Specific approaches to optimize the matching of donor hearts to the most appropriate recipients are not well delineated for clinicians.
4. With the availability of multiple combinations of immunosuppressive agents, some transplant clinicians lack the expertise required to select the most effective agents for different subgroups of patients and to individualize immunosuppression to prevent or minimize long-term complications.

Target Audience

This course has been developed for cardiologists, cardiothoracic surgeons, nurses, advanced practice providers, and allied health professionals with at least 5 years of experience in the field of heart transplantation/advanced heart failure or who have attended a prior ISHLT core competency course in advanced heart failure and cardiac transplant medicine. While all members are invited to enroll, Master Classes are primarily designed to be of benefit for health care and allied professionals who are beyond the training stages of their careers. This may be professionals who are seeking additional proficiencies, who wish to understand current areas of controversy, or who desire an update on the current advanced topics of the field. The information presented is intended to provide insights beyond core competencies established in the specialty.

Learning Objectives

After completion of this Class, participants will have improved competence and professional performance in their ability to:

1. Identify the risk of HLA sensitization on cardiac rejection and outcomes, management strategies for sensitized patients pre-transplant and approach to heart transplant recipients with antibody-mediated rejection.
2. Understand perioperative strategies for (a) assessing extended-criteria (marginal) heart donors and optimizing outcomes after transplantation and (b) identifying type and severity of primary graft dysfunction (PGD), including donor, procedural and recipient risk factors for PGD; signs of PGD during reperfusion and challenges with weaning off cardiopulmonary bypass.

3. Evaluate the candidacy of adults with congenital heart disease for heart transplant, incorporating prognostic testing, and relative contraindications to transplant in this high-risk population. Develop insights into mechanisms of late graft dysfunction, including (a) role of CAV and rejection, (b) diagnostic strategies including IVUS, OCT and MRI, and (c) treatment strategies including modification in immunosuppression and decision for re-transplant.

Accreditation Statement

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

Credit Designation Statement

ISHLT designates this live activity for a maximum of 4.25 *AMA PRA Category 1 Credits*.™ Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ANCC, ABTC, and ACPE Credit

Credit for the above designations will be applied for as appropriate.

Disclosure

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



SCIENTIFIC PROGRAM

8:00 AM – 8:10 AM

WELCOME AND OVERVIEW

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

Lynn Punnoose, MD, Temple University, Philadelphia, PA, USA

8:10 AM – 9:10 AM

SMALL GROUP INTERACTIVE DISCUSSION A: Sensitization and Antibody Mediated Rejection (AMR)

MODERATOR:

Patricia Chang, MD, MHS

8:10 AM CASE SCENARIO A1: Sensitized LVAD Patient with Chronic Infection

Patricia Chang, MD, MHS, University of North Carolina, Chapel Hill, NC, USA

Teaching/Discussion Points

1. Thresholds for initiating desensitization strategies.
2. Desensitization treatments pre-transplant and perioperatively.
3. Special considerations for the sensitized LVAD patient.
4. Management of the sensitized LVAD patient with chronic infection.

8:40 AM CASE SCENARIO A2: Asymptomatic AMR Management

Maria G. Crespo-Leiro, MD, Hospital University A Coruna, La Coruna, Spain

Teaching/Discussion Points

1. Defining clinical vs subclinical AMR.
2. Asymptomatic AMR management: Evaluation vs Treatment.
3. Treatment options for Asymptomatic AMR: risk vs benefit.

9:15 AM – 10:15 AM

SMALL GROUP INTERACTIVE DISCUSSION B: Donor Selection and Primary Graft Dysfunction

MODERATOR:

Hannah Copeland, MD

9:15 AM CASE SCENARIO B1: Approach to the Extended Criteria (Marginal) Donor

Hannah Copeland, MD, University of Mississippi Medical Center, Jackson, MS, USA

Teaching/Discussion Points

1. Identify donor and graft characteristics concerning for poor post-transplant outcomes.
2. Review geographic differences in donor populations, selection and effects on outcomes.
3. Use of donor risk scores to improve decision making and post-transplant outcomes.
4. Review the approach to and outcomes of donation after cardiac death.

9:45 AM CASE SCENARIO B2: Identification and Diagnosis of Primary Graft Dysfunction

Goran Dellgren, MD, PhD, Sahlgrenska University Hospital, Goteborg, Sweden

Teaching/Discussion Points

1. Identify risk factors associated with PGD development.
2. Review types and severity of PGD, including clinical signs of graft dysfunction in the OR.
3. Review strategies for (a) weaning off cardiopulmonary bypass and decision for ECMO and other short term MCS in setting of PGD (b) management and weaning of short term MCS support during recovery.
4. Identify potential criteria for when to list a patient for acute re-transplant.

10:15 AM – 10:45 AM

COFFEE BREAK



10:45 AM – 11:45 AM

SMALL GROUP INTERACTIVE DISCUSSION C: Recipient Selection (Congenital Heart Disease, Restrictive/Amyloid Cardiomyopathies)

MODERATOR:

Heather Ross, MD, MHSc, FRCP (C), FACC

10:45 AM CASE SCENARIO C1: Timing of Transplantation in Adult Congenital Heart Disease

Heather Ross, MD, MHSc, FRCP (C), FACC, University of Toronto, Toronto, ON, Canada

Teaching/Discussion Points

1. Prognosis in ACHD.
2. Indications for heart transplant in ACHD.
3. Changing the strategy in the presence of pulmonary hypertension.
4. Contraindications for transplant in ACHD.

11:15 AM CASE SCENARIO C2: Transplant as a Strategy for the Failing Fontan Patient

Luke Burchill, MBBS, FRACP, Oregon Health and Science University, Portland, Oregon, USA

Teaching/Discussion Points

1. When to consider referral for transplant for the struggling Fontan patient.
2. Interpreting hemodynamics (including hepatic venous pressure gradient) for risk stratification.
3. Pathophysiology and diagnosis of hepatic disease in the Fontan patient.
4. How to assess transplant risk and outcomes in the Fontan patient.

11:50 AM – 12:50 PM

SMALL GROUP INTERACTIVE DISCUSSION D: Long Term Challenges in Transplant (Late Graft Dysfunction, Cancer)

MODERATOR:

Luciano Potena, MD, PhD

11:50 AM CASE SCENARIO D1: Late Graft Dysfunction

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

Luciano Potena, MD, PhD, University of Bologna, Bologna, Italy

Teaching/Discussion Points

1. Define and identify late graft dysfunction.
2. Discuss possible causes: CAV, rejection, hypertensive heart disease late hypertrophy.
3. Propose a diagnostic algorithm, ruling out most common causes by invasive/non-invasive techniques (echo, MRI, biopsy, right heart cath, left heart cath- IVUS. OCT, FFR).
4. Preventive strategies: consider role of donor management and graft dysfunction in setting of brain death, approach to graft preservation, immunosuppressive drugs.
5. Treatment: Discuss medical management of graft dysfunction and review criteria and timing for re-transplant versus palliation.

12:20 PM CASE SCENARIO D2: Malignancy in the Heart Transplant Patient

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

Luciano Potena, MD, PhD, University of Bologna, Bologna, Italy

Teaching/Discussion Points

1. Epidemiological overview of the most common malignancies after heart transplantation.
2. Risk factors for malignancy: age, viral infections, environmental exposure.
3. Screening recommendations: who, how, when.
4. Prevention.
5. Management of immunosuppression in the transplanted patient undergoing cancer treatment.
6. Cardio oncology: specificities in the transplant population.

12:50 PM – 1:00 PM

CLOSING REMARKS/EVALUATION

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

Lynn Punnoose, MD, Temple University, Philadelphia, PA, USA

1:00 PM Adjourn



APRIL 2, 2019 MORNING COURSE • 8:00 AM – 1:00 PM

*Java Sea 1 & 2, Loews Royal Pacific Hotel
Orlando, FL, USA*

NOTE: The next four pages contain the schedule for the morning course.

The identical course will be offered in the afternoon from 2pm–7pm.

The detailed schedule for the afternoon course is available on the ISHLT Academy website.

SCIENTIFIC PROGRAM CHAIRS

CHAIR: Susan Joseph, MD, Baylor University and Vascular Hospital, Dallas, TX, USA

CO-CHAIR: Daniel Zimpfer, MD, MBA, Medical University of Vienna, Vienna, Austria

CASE MODERATORS

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

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

Scott Silvestry, MD, Florida Hospital Transplant Network, Orlando, FL, USA

Melana Yuzepolskya, MD, New York-Presbyterian/Columbia University Medical Center, New York, NY, USA

CASE DISCUSSANTS

Peter Eckman, MD, Minneapolis Heart Institute, Minneapolis, MN, USA

Kelsey Flint, MD, University of Colorado, Aurora, CO, USA

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

Vivek Rao, MD, PhD, Toronto General Hospital, Toronto, ON, Canada

COURSE SUMMARY

The MCS Master Class is designed for clinicians with higher levels of expertise in MCS (completed the core curriculum course on MCS and/or primary practice in MCS (≥ 5 years)). The course format is intended to generate highly interactive discussion among experienced users of these technologies, in order to tackle the most complex nuances of managing these complex patients. Rather than didactic lectures, this course will employ the concept of “convergent discussion” composed of small groups. Faculty moderators and case discussants will engage the audience by focusing on areas with gaps in knowledge and absence of consensus in the field. The case-based format will allow moderators and discussants to use real-world complex situations in order to lead the group through active audience participation, towards specific answers designed to address the practice gaps and learning objectives.



Practice Gaps

1. The outcomes of cardiogenic shock have remained poor, large randomized trials are scarce and the management of these patients remains challenging. Comprehensive clinical expertise of advanced usage of evolving MCS options including patient and device selection and transition to next step therapies continue to constitute major limitations in the care of these critically ill patients. Knowledge in this area is rapidly evolving and frequent updates are necessary.
2. The diagnosis and management of complex and combined adverse events such as cerebrovascular hemorrhagic accidents, device thrombosis and gastrointestinal bleeding is challenging and practitioners often face difficulties in developing effective strategies to appropriately identify and treat these adverse events. Recent improvements in device technology have eliminated thrombosis and new anticoagulation strategies continue to evolve.
3. The diagnostic and therapeutic approaches for early and late right ventricular failure in MCS patients has been evolving with the introduction of new diagnostic criteria and new technologies/therapeutic options. Such practice gaps in specialist knowledge and clinical skills constitute major limitations in the care of MCS patients.
4. The implantation of results from large clinical studies such as MOMENTUM 3 and ENDURENCE supplement into clinical practice is still lagging. The Master Academy will review the information from those studies and discuss their use in daily practice.

Target Audience

This course has been developed for cardiac and mechanical circulatory support surgeons, advanced heart failure cardiologists, VAD Coordinators, and allied health professionals with at least 5 years of experience in the field of mechanical circulatory support or who have attended a prior ISHLT core competency course in mechanical circulatory support. While all members are invited to enroll, Master Classes are primarily designed to be of benefit for health care professionals who are beyond the training stages of their careers. This may be professionals who are seeking additional proficiencies, who wish to understand current areas of controversy, or who desire an update on the current advanced topics of the field. The information presented is intended to provide insights beyond core competencies established in the specialty.

Educational Need

Mechanical circulatory support is a rapidly growing and rapidly evolving therapy for advanced heart failure. There are now several options approved for use to support patients both acutely in the short term, as well as for durable support. Optimizing outcomes and survival in these complex patients requires mastery of the identification of cardiogenic shock phenotypes, knowledge of device choice and timing, as well as pre-operative optimization of these patients. Multidisciplinary

teams are an essential part of modern day mechanical circulatory support management. This Class is designed to meet the target audience's need for an advanced learning opportunity that explores and seeks to address the unique clinical challenges faced by specialists and developing experts in the field of MCS for treatment of heart failure patients.

Learning Objectives

After completion of this Class, participants will have improved competence and professional performance in their ability to:

1. Identify patients with cardiogenic shock, including complex presentation, appropriate devices for short-term mechanical circulatory support, and factors impacting transition to longer term support platforms.
2. Understand the management of durable MCS patients with complex hemo-compatibility related adverse events, including recurrent GI bleed, bleeding in the setting of thrombosis, or the patient with a history of confounding events (i.e. bleeding and thrombosis).
3. Review predictors of early and late right ventricular failure post LVAD implantation, understand the utility of presently available risk scores, and identify management strategies.
4. Understand the implications of the Momentum 3 and Endurance clinical trials for clinical practice.

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SCIENTIFIC PROGRAM

8:00 AM – 8:10 AM

WELCOME AND OVERVIEW

Susan Joseph, MD, Baylor University and Vascular Hospital, Dallas, TX, USA

Daniel Zimpfer, MD, MBA, Medical University of Vienna, Vienna, Austria

8:10 AM – 9:10 AM

SMALL GROUP INTERACTIVE DISCUSSION A: IABP, ECMO and Beyond – Short Term MCS for Profound Cardiogenic Shock / Intermacs 0-1 Profiles

MODERATOR:

Jens Garbade, MD, PhD, MHBA

8:10 AM CASE SCENARIO A1: Short-Term MCS for Cardiogenic Shock: Timing and Device Selection

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

Teaching/Discussion Points

1. Defining refractory cardiogenic shock and its prognosis. What parameters are essential, which predictors are reliable and when should the “shock team” evaluate a patient for short term MCS.
2. Proper timing of short term MCS implantation. Too early or too late. Can scores reliably predict outcomes or is it still a matter of trial and error?
3. Selection of short-term devices. IABP, ECMO percutaneous pumps and beyond. Should we use them in an escalating scenario starting with the least invasive or tailor specific device for specific patient phenotype.
4. Safeguards and pitfalls in short term device implantation. Problems solved and future challenges.

8:40 AM CASE SCENARIO A2: MCS Weaning and Transition to Permanent MCS

Paul Christian Schulze, MD, PhD, Columbia University Medical Center, New York, NY, USA

Teaching/Discussion Points

1. Avoiding complications during and promoting short term MCS weaning. Best practice management of short-term MCS devices. Which strategies to promote myocardial recovery work, which don't. What is the threshold for left ventricular venting, how should it be done and does it improve LV recovery? Discuss existing and novel approaches for left ventricular venting.
2. Can catheter interventions to coronary arteries and heart valves increase the likelihood of myocardial recovery and short-term MCS weaning?
3. When is the heart and patient ready for short-term MCS weaning. Should we rely on echo, invasive hemodynamics or scores and how-long should we wait for recovery? What is a reasonable inotropic support and when should weaning be abandoned?

4. Which patient is eligible for permanent MCS transition? Minimum criteria for end-organ function – kidneys can be replaced livers not. Anything else to look for, age limits, irreversible cachexia, poor RV function.
5. How to transition patients to permanent MCS. Should it impact the way we perform surgery. Can an ECMO safely replace cardiopulmonary bypass, do we need to close the transeptal puncture after a tandem heart, any evidence for increased aortic valve insufficiency after long-time Impella support.

9:15 AM – 10:15 AM

SMALL GROUP INTERACTIVE DISCUSSION B: To Pulse or Not to Pulse: Implications on Coagulation and Physiology

MODERATOR:

Scott Silvestry, MD

9:15 AM CASE SCENARIO B1: Bleeding and Clotting and Both, Oh My!

Scott Silvestry, MD, Florida Hospital Transplant Institute, Orlando, FL, USA

Teaching/Discussion Points

1. What is the definition of a pulse in humans? How much is enough? Does timing matter ie synchronous versus random? Discuss Lavare on versus off and latest data?
2. Why do they keep bleeding? It's not just von Willebrand Factor! Define the complexity of this conundrum at a master level, including definition, risk factors, and etiology. Discuss the role of pulselessness.
3. Pathophysiology of angioectasia and can we block vasculogenesis?
4. When to intensify or reduce antithrombotic therapy, and how to tailor to different patient characteristics.
5. Best surveillance strategies to detect early pump thrombosis in different devices, and how to diagnose.
6. When to pull the trigger for pump exchange versus medical treatment. Understanding risk and benefit trade-off.

9:45 AM CASE SCENARIO B2: Systemic Infection, Stroke and Secondary Bleeding – The Unhappy Triad of VAD Therapy

Vivek Rao, MD, PhD, Toronto General Hospital, Toronto, ON, Canada

Teaching/Discussion Points

1. Ischemic strokes in patients with positive blood cultures – disconnected coincidence or typical pattern? Do all germs behave the same?
2. How aggressive should we treat? Is it antibiotics only or should patients undergo complete device exchange? How should we modify anticoagulation? Appropriate imaging/workup to rule out infective thrombus formation in the VAD.



3. Infected thrombus embolization to the brain! Is secondary bleeding inevitable and can it be prevented?
4. Stroke with hemorrhagic transformation, should we immediately stop and reverse anticoagulation, how should we manage blood pressure what is the significance of neurosurgical interventions.
5. When is anticoagulation safe again and to which extent?

10:15 AM – 10:45 AM

COFFEE BREAK

10:45 AM – 11:45 AM

SMALL GROUP INTERACTIVE DISCUSSION C: Patient Selection and Pre-Operative Optimization

MODERATOR:

Melana Yuzefpolskya, MD

10:45 AM CASE SCENARIO C1: The RV Looks “Bad” – Strategies for Management

Melana Yuzefpolskya, MD, New York-Presbyterian/Columbia University Medical Center, New York, NY, USA

Teaching/Discussion Points

1. RV optimizing, does it work, is it just a myth and where is the evidence?
2. No sternotomy – no RV problem! Can surgical strategies reduce right ventricular failure. Have less invasive approaches have eliminated RV failure.
3. No need to walk on water! Novel surgical and percutaneous options for perioperative RV support are game changers and should be liberally applied.
4. Severe TR and poor RV function. No go, tricuspid reconstruction and temporary RVAD, primary BIVAD or TAH.
5. Poor RV and failure to thrive. When to add pulmonary vasodilators, adapt LVAD speed or upgrade to a BIVAD or TAH.

11:15 AM CASE SCENARIO C2: The Patient Looks Frail – Should We Move Forward?

Kelsey Flint, MD, University of Colorado, Aurora, CO, USA

Teaching/Discussion Points

1. Review available frailty assessment tools and impact on prognosis in heart failure.
2. Understand the differences and overlap between frailty and heart failure symptomatology.
3. Identify VAD-reversible vs irreversible frailty and describe the mechanisms involved, including inflammation and sarcopenia.
4. Understand when to “pre”-hab patient prior to LVAD vs when to not delay.

11:50 AM – 12:50 PM

SMALL GROUP INTERACTIVE DISCUSSION D: Long Term Management of the LVAD Recipient

MODERATOR:

Finn Gustafsson, MD, PhD

11:50 AM CASE SCENARIO D1: What to Do with ICD: Pacing Strategies and Minimizing Shocks

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

Teaching/Discussion Points

1. Should we keep LV lead on?
2. The patient doesn’t have an ICD; should we put one in?
3. Understand when and how to minimize shock therapy and for which patient.
4. The device is at end of life – should we change the generator? Understand nuances of bleeding risk in these patients and Exercise capacity-including biV and rhythm management.

12:20 PM CASE SCENARIO D2: Low Flow Alarms and Blood Pressure Management: Nuances Among Different Devices

Peter Eckman, MD, Minneapolis Heart Institute, Minneapolis, MN, USA

Teaching/Discussion Points

1. Describe the challenges associated with measuring blood pressure in patients with currently approved LVADs and relevant differences between the various pumps.
2. Discuss blood pressure goals and optimal management strategies in patients with CF-LVAD, and how to mitigate risks of RV failure and arrhythmia in these patients.
3. Master the evaluation and management of low flow alarms among device types, including asymptomatic low flow alarms.
4. How to approach the patient who is “weak and dizzy.”

12:50 PM – 1:00 PM

CLOSING REMARKS/EVALUATION

Susan Joseph, MD, Baylor University and Vascular Hospital, Dallas, TX, USA

Daniel Zimpfer, MD, MBA, Medical University of Vienna, Vienna, Austria

1:00 PM Adjourn



REGISTRATION POLICIES/INSTRUCTIONS

FOR COMPLETING THE REGISTRATION FORM

QUESTIONS?

CALL THE ISHLT

HEADQUARTERS

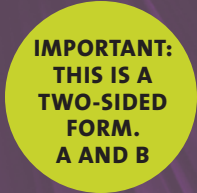
OFFICE AT

972-490-9495,

OR EMAIL US AT

MEETINGS@ISHLT.ORG

1. The Annual Meeting registration fee includes attendance at all scientific sessions, exhibit hall receptions, and coffee breaks.
2. The non-member registration fee includes membership in the Society from the date of registration through December 31, 2019. You will be required to complete a membership application, which will be emailed to you, in order to activate your membership. Please mark the box provided if you do NOT wish to accept the offer of membership. Declining the offer will not result in a reduction of the non-member registration fee.
3. **DO NOT** fax your registration form if you are paying by check or bank draft. Registration forms received without payment will not be processed.
4. **Individuals whose registration and payment are NOT RECEIVED by March 12, 2019 must register on-site.** Registration fees are determined by the date when **payment in full is received.** Registration forms sent without payment in full or with invalid credit card information are subject to the registration fee in effect at the time payment in full is received or when the correct credit card information is provided.
5. Cancellations must be submitted in writing in order to qualify for any refund and should be emailed to Justin Hickman: justin.hickman@ishlt.org. For written cancellation notices **RECEIVED by February 22, 2019**, a full refund of the scientific session fees paid will be given, less a \$75 handling fee. **For written cancellation notices received after February 22, 2019, no refund of any fees will be given. All cancellation refunds will be issued approximately 15 days after the meeting.**
6. **The Physician/Surgeon Rate** is available only to individuals who have achieved an MD degree or the equivalent.
7. **The Industry Rate** is available to anyone whose primary employer is a for profit commercial entity, excluding medical centers and healthcare providers. **Individuals who meet this definition MAY NOT register under any other category.**
8. **The Allied Health/Non-Physician rate** is available to Individuals who *have not* achieved an MD or the equivalent (e.g. PhDs, non-MD researchers, nurses, pharmacists, physical therapists, psychologists, social workers, etc.) *and are not* pharmaceutical or device company employees/consultants and qualifying individuals should select this rate. Non-member allied health registrants must include with their registration forms a letter signed by the chief/dean of their transplant program verifying their employment and allied health status. Forms submitted without this letter will not be processed. On-line registrants must email their verification letter to meetings@ishlt.org.
9. **The Student/Trainee rate** is available only to individuals who are actively participating in a formal training program (i.e. medical, graduate, and nursing students, residents, fellows, or the equivalent) and qualifying individuals should select this rate. Non-members choosing this rate must include with their registration forms, a letter signed by the chief/dean of their program verifying their training status. Forms submitted without this letter will not be processed. On-line registrants must email their verification letter to meetings@ishlt.org.
10. Full payment in **US funds only** must accompany your registration. Checks must be made payable to ISHLT and must be drawn on a US bank. All bank fees incurred for the processing of your payment will be billed to you.
11. **Wire Transfers must be received by March 12, 2019. There will be an additional fee for wire transfers in the amount of \$35 which must be paid by the sender.** Please request bank/wire transfer instructions by emailing Lee Ann Mills: leeann.mills@ishlt.org.
12. **Travel agencies/sponsoring agencies will not be allowed to pick up multiple registrants' name badges. Only the person registered for the meeting may pick up his/her name badge. No Exceptions.**
13. All registrant name changes/replacements are due by **March 12, 2019.** After this date, all name changes must be made on-site. There will be a \$25 fee for each name change/replacement.
14. **Age Restriction:** Children 12 and under are not permitted in sessions and must be accompanied by an adult at all times. Children under the age of 12 are not permitted in the Exhibit Hall at any time.



REGISTRATION FORM

LOEWS MEETING COMPLEX, ORLANDO, FL, USA

Please see page 83 for instructions, rate descriptions and refund/registration policies.
ON-LINE REGISTRATION IS ENCOURAGED AND IS AVAILABLE ON THE ISHLT WEBSITE: <http://www.isHLT.org>
(Forms that are faxed or mailed in must be legible in order for us to process.)

Name: _____
 Last First Middle Initial

Credential (MD, RN, FRCS, etc.): _____ Institution Name _____

Preferred Mailing Address: This **MUST** be the valid mailing address of the **individual** being registered.
 Travel agencies and sponsoring company addresses **will not** be accepted.

Please indicate if address is home or business: Home: Business: **(Mandatory to select one)**

Mailing Address: _____

City: _____ State: _____ Post Code: _____ Country: _____

Telephone: (____) _____ Fax: (____) _____ Email: _____

(Mandatory) Confirmation will be sent to this email only.)

DELEGATE BADGE:
(PLEASE PRINT CLEARLY BELOW THE DETAILS FOR YOUR BADGE)

FIRST NAME _____ LAST NAME _____

DEGREE _____

INSTITUTION / COMPANY / ORGANIZATION _____

CITY _____ STATE (if applicable) _____

COUNTRY _____

PROFESSIONAL CLASSIFICATION: (check one box only) Mandatory that you choose one

- | | | |
|---|---|--|
| <input type="checkbox"/> Anesthesiology | <input type="checkbox"/> Pathology | <input type="checkbox"/> Pulmonology |
| <input type="checkbox"/> Cardiac Surgery | <input type="checkbox"/> Pediatric Cardiology | <input type="checkbox"/> Research |
| <input type="checkbox"/> Cardiology | <input type="checkbox"/> Pediatric Pulmonology | <input type="checkbox"/> Social Science |
| <input type="checkbox"/> Cardio-Thoracic/
Vascular Surgery | <input type="checkbox"/> Pediatric Transplant Surgery | <input type="checkbox"/> Thoracic Surgery |
| <input type="checkbox"/> Immunology | <input type="checkbox"/> Perfusion | <input type="checkbox"/> Transplant Coordination |
| <input type="checkbox"/> Infectious Diseases | <input type="checkbox"/> Pharmacy/Pharmacology | <input type="checkbox"/> VAD Coordinator |
| <input type="checkbox"/> Nursing | <input type="checkbox"/> Physician Assistant | <input type="checkbox"/> Other: _____ |

ANNUAL MEETING SCIENTIFIC SESSIONS:

	Received on or before February 22	Received between February 23-March 12***	TOTAL
Industry Member**	\$ 1070	\$ 1220	\$ _____
Industry Non-Member**	\$ 1415	\$ 1565	\$ _____
**Industry is defined as anyone whose primary employer is a for profit commercial entity, excluding medical centers and health care provider. Individuals who meet this definition may not register under any other category.			
Physician/Surgeon Member	\$ 825	\$ 975	\$ _____
Physician/Surgeon Non-Member*	\$ 1170	\$ 1320	\$ _____
Allied Health/Non-Physician Member	\$ 460	\$ 610	\$ _____
Allied Health/Non-Physician Non-Member*	\$ 805	\$ 955	\$ _____
Student/Trainee Member	\$ 390	\$ 540	\$ _____
Student/Trainee Non-Member*	\$ 560	\$ 710	\$ _____

*Includes membership in the Society through December 31, 2019 with submission of completed membership application.

Please check here if you wish to decline this membership offer (no refund or reduction of fee if membership declined)

GUEST AND SOCIAL ACTIVITIES REGISTRATION:

Guest Registration****	\$ 100	\$ 125	\$ _____
Guest Name for Badge: _____			

****Guest registration includes access to the plenary sessions, exhibit hall, wine, and cheese receptions in exhibit hall. Guest **MUST** be accompanying a registrant in one of the other categories. Please see instruction #14 regarding age restrictions for children.

SUBTOTAL SIDE A \$ _____

ISHLT REGISTRATION FORM SIDE B

ISHLT ACADEMY COURSES (Tuesday, April 2, 2019):

Registration for the Annual Meeting is not required to register for an Academy.

(Please check box for the Academy you wish to register for; Core Competency Courses include a box lunch.)

- | | | |
|--|------------------|---|
| <input type="checkbox"/> Core Competencies in Pediatrics | Tuesday, April 2 | (full day) |
| <input type="checkbox"/> Core Competencies in Nursing, Health Science, Allied Health Science | Tuesday, April 2 | (full day) |
| <input type="checkbox"/> Master Class in Heart Failure and Transplantation | Tuesday, April 2 | (8 am – 1 pm) |
| <input type="checkbox"/> Master Class in Heart Failure and Transplantation | Tuesday, April 2 | (2 pm – 7 pm) (repeat of morning class) |
| <input type="checkbox"/> Master Class in Mechanical Circulatory Support | Tuesday, April 2 | (8 am – 1 pm) |
| <input type="checkbox"/> Master Class in Mechanical Circulatory Support | Tuesday, April 2 | (2 pm – 7 pm) (repeat of morning class) |

SUBTOTAL SIDE A: \$ _____

	Received on or before February 22	Received between February 23-March 12***	TOTAL
Core or Masters Academy Course (ISHLT Member):	\$ 250	\$ 300	\$ _____
Core or Masters Academy Course (Non-member):	\$ 390	\$ 440	\$ _____

JUNIOR FACULTY MENTOR LUNCH:

(Wednesday; Advance purchase only. Tickets will not be sold on-site.)

Registration is limited to the first 100 junior faculty members of ISHLT who are also registered for the meeting.

	\$ 15	\$ 15	\$ _____
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TOTAL DUE AND ENCLOSED (SIDE A and B): \$ _____

***Registrations received after March 12 will not be processed before the meeting and therefore these registrants must register at the Onsite Registration desk. Registration fees and forms received after March 12 will be considered on-site registrations and are subject to the on-site registration fees which are \$300 more (for the Annual Meeting) and \$100 more (for the Academies) than the registration fees with the February 22 deadline. On-site registration for Academy courses will only be offered for those courses which are not sold out during pre-registration, therefore on-site registration for Academies may not be available.

PAYMENT See instruction #11 for Wire Transfer Instructions:

If not registering online, full payment in US funds only must accompany your registration form by check or credit card. Checks must be made payable to ISHLT and must be drawn on a US bank. Credit card payments are accepted with this entire form completed including all credit card information below and may be mailed or faxed. (To avoid duplicate charges do not mail AND fax your form.)

CREDIT CARD: VISA Mastercard American Express

Card Number: _____ Expiration Date: _____

Card Holder Signature: _____ CSC Code:* _____

*CSC: Credit Card Security Code is the 3-digit code on the back of MC/VISA cards and the 4-digit code on front of AMEX card)

Card Holder Name: _____ Card Holder Billing Zip/Postal Code: _____

MANDATORY

MANDATORY

Card Holder Billing Street Address _____

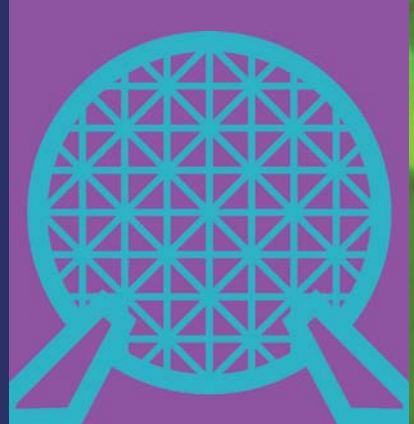
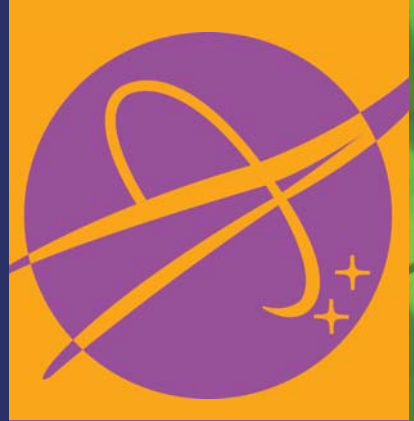
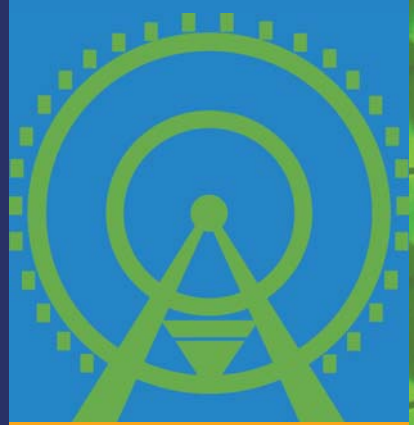
MANDATORY



ISHLT

SEND THIS FORM AND PAYMENT (US DOLLARS ONLY) IN FULL TO:

ISHLT Registration • 14673 Midway Road, Suite 200 • Addison, TX 75001 • or fax to 972-490-9499



SEE YOU THIS APRIL IN ORLANDO

Future ISHLT Annual Meetings

40th

Annual Meeting and Scientific Sessions

MONTREAL • CANADA

APRIL 22-25, 2020

41st

Annual Meeting and Scientific Sessions

SYDNEY • AUSTRALIA

APRIL 21-24, 2021

**ISHLT
2019**

**39TH ANNUAL
MEETING AND
SCIENTIFIC
SESSIONS
ORLANDO
FLORIDA, USA
APRIL 3-6, 2019**



**INTERNATIONAL SOCIETY FOR
HEART & LUNG TRANSPLANTATION**

14673 Midway Rd, Suite 200
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