



STS 54th Annual Meeting

Advance Program

Greater Fort Lauderdale/
Broward County Convention Center
Florida

January 27-31, 2018



**The Society
of Thoracic
Surgeons**



President's Message

I invite you to join me and thousands of our colleagues from around the world at the STS 54th Annual Meeting, January 27–31, 2018, in Fort Lauderdale, Florida.

The STS Annual Meeting is the epicenter of the latest technology, research, and clinical practice in cardiothoracic surgery. This year's meeting will have new formats, lively discussions, and interactions in every discipline of our specialty. It also will fit all learning styles. Educational sessions will mix debates and surgical videos with the very best scientific research abstracts.

On Sunday, three "How To" sessions will feature video presentations on common cardiothoracic surgical procedures, with speakers offering unique insights. The Opening Reception will highlight approximately 130 exhibiting companies demonstrating their latest products and services. Following the Opening Reception, I invite, welcome, and encourage ALL to attend my President's Reception at the Marriott Harbor Beach Resort & Spa.



After my Presidential Address on Monday, an important new session will tackle the topic of diversity and inclusion in cardiothoracic surgery. Speakers will discuss how a diverse cardiothoracic surgery workforce can improve patient outcomes by increasing cultural competency and mitigating unconscious provider bias.

On Tuesday, don't miss the exciting keynotes; details are forthcoming. And don't forget to register for the popular hands-on STS University courses on Wednesday; new courses have been added on peroral endoscopic myotomy and minimally invasive aortic and mitral valve surgery.

Access to the STS 54th Annual Meeting Online will once again be included with Annual Meeting registration—a bonus that will let you review the outstanding educational content from your home or office throughout the next year. See page 41 for more details.

There's so much more to the 54th Annual Meeting, and in this *Advance Program*, you'll find a program outline, course descriptions, and agendas to help you plan your schedule. You'll also find registration instructions and information on travel and housing accommodations.

Please make plans now to join your colleagues in cardiothoracic surgery this January. You can register at www.sts.org/annualmeeting.

I look forward to seeing you in Fort Lauderdale!

Richard L. Prager, MD

President, The Society of Thoracic Surgeons

Don't Miss Tech-Con

Prior to the Annual Meeting, STS/AATS Tech-Con will focus on new devices and procedures that have yet to be FDA-approved but could be available within 1-3 years from the time of presentation. A highlight of the day will be the *Shark Tank* session, in which entrepreneurs will pitch their innovative cardiothoracic surgery products. Separate registration is required. See page 6 for details.

Register for the STS/CTSNet Career Fair

Take advantage of the opportunity to meet face-to-face with top employers at the STS/CTSNet Career Fair, held during the STS 54th Annual Meeting. Maximize your exposure by posting your CV to the candidate database prior to the meeting. You can find more information at sts.org/careerfair.

WHAT'S NEW

- The President's Reception on Sunday evening will be open to all meeting attendees; there will not be an STS Social Event on Monday.
- Surgical videos will be included in several parallel sessions, rather than in designated surgical motion picture matinees.
- New sessions will explore the role of diversity and inclusion in the cardiothoracic surgery workforce, how physician documentation drives reimbursement, and the experience with left ventricular assist device therapy around the globe.
- Two new STS University courses on peroral endoscopic myotomy and minimally invasive aortic and mitral valve surgery will be offered.

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As a sponsor of continuing medical education accredited by the Accreditation Council for Continuing Medical Education (ACCME), The Society of Thoracic Surgeons requires that any individual who is in a position to control the content of an educational activity must disclose all relationships with commercial interests (including known relationships of his or her immediate family, department, and partners). The ACCME defines a commercial interest as "any entity producing, marketing, reselling, or distributing health care goods or services consumed by, or used on, patients. The ACCME does not consider providers of clinical service directly to patients to be commercial interests." The question of whether a disclosed conflict situation could represent undue influence on the educational activity by a commercial interest or whether the disclosed information is sufficient to consider an abstract, presentation, or other educational enduring material to represent potentially biased information must be resolved prior to an individual's involvement in STS educational programming.

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Additionally, the fact that the presentation, paper, or other educational product describes (a) the use of a device, product, or drug that is not FDA approved or (b) an off-label use of an approved device, product, or drug must also be disclosed. This requirement has been adopted in response to FDA policy and case law involving medical societies, and is not intended to prohibit or inhibit independent presentation or discussion regarding the uses of devices, products, and drugs as described in (a) or (b) above.

For live presentations, all disclosures must be stated orally and on a slide at the beginning of the presentation and will be noted in published material related to the activity. Slides, handouts, and other materials utilized as part of an educational activity cannot contain any advertising, trade names or a product group message. Speakers are required to disclose that they have nothing to disclose if this is the case.

Amended by the STS Executive Committee: April 11, 2012

STS 54TH ANNUAL MEETING

The Society of Thoracic Surgeons is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The Society of Thoracic Surgeons designates this live activity for a maximum of 26.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The Society of Thoracic Surgeons has been approved by the American Board of Cardiovascular Perfusion to award 31.7 Category I CEUs for this activity.





Program at a Glance

Friday, January 26, 2018

3:00 PM – 6:00 PM

Registration

Saturday, January 27, 2018

6:30 AM – 6:00 PM

Registration

7:00 AM – 6:30 PM

Tech-Con Exhibits

7:00 AM – 8:00 AM

BREAKFAST – Visit Tech-Con Exhibits

8:00 AM – 9:30 AM

Tech-Con Adult Cardiac Track I:
Innovations in Aortic Valve and Aortic Aneurysm Management

Tech-Con General Thoracic Track I:
Emerging and/or Game-Changing Technologies in the Management of Lung Cancer

9:30 AM – 10:15 AM

BREAK – Visit Tech-Con Exhibits

10:15 AM – 12:00 PM

Tech-Con Adult Cardiac Track II: Cutting-Edge Surgery for Heart Failure and Coronary Artery Disease

Tech-Con General Thoracic Track II:
Emerging and/or Game-Changing Technologies in the Management of Esophageal Diseases

12:00 PM – 1:00 PM

LUNCH – Visit Tech-Con Exhibits

1:00 PM – 2:30 PM

Tech-Con Adult Cardiac Track III:
Contemporary and Future Mitral Valve and Atrial Fibrillation Practice

Tech-Con General Thoracic Track III:
Emerging and/or Game-Changing Minimally Invasive Surgery and Other Technologies

2:30 PM – 3:00 PM

BREAK – Visit Tech-Con Exhibits

3:00 PM – 5:00 PM

Tech-Con Joint Session: Robotic Cardiothoracic Innovations and “Shark Tank” – Rapid-Fire Pitches of Revolutionary Technology

5:00 PM – 6:30 PM

Tech-Con Reception

Sunday, January 28, 2018

7:00 AM – 6:30 PM

Registration

8:00 AM – 12:00 PM

Adult Congenital Heart Disease Symposium: Surgical Management of Hypertrophic Cardiomyopathy and Anomalous Aortic Origin of a Coronary Artery in Children and Adults

Practice Management Summit

STS/AATS Critical Care Symposium:
When Things Go Wrong in the CTICU and What to Do About It

CHEST @ STS: Advanced Bronchoscopy and Surgical Airway Symposium

SCA @ STS: Integrating Perioperative Echocardiography Into Cardiac Surgical Clinical Decision Making

8:00 AM – 4:00 PM

Multidisciplinary Innovations in Cardiothoracic Patient Care

10:00 AM – 4:30 PM

“MyTube” Adult Cardiac How-To Video Session

12:00 PM – 1:00 PM

BREAK

1:00 PM – 4:00 PM

Residents Symposium: Transitioning From Residency to a Successful Practice

1:00 PM – 4:30 PM

How-To Video Session: Technical Tips to Avoid Pitfalls and Simplify Congenital and Pediatric Cardiac Surgical Procedures

How-To Video Session: Tips and Tricks to Maximize Efficiency in Minimally Invasive General Thoracic Surgery

2:00 PM – 6:30 PM

Scientific Posters

4:30 PM – 6:30 PM

Opening Reception in STS Exhibit Hall

7:00 PM – 10:00 PM

 **President’s Reception**

Monday, January 29, 2018

6:30 AM – 5:00 PM

Registration

9:00 AM – 4:30 PM

Exhibit Hall

Scientific Posters

7:00 AM – 7:15 AM

Opening Remarks

7:15 AM – 8:15 AM

J. Maxwell Chamberlain Memorial Papers

8:15 AM – 9:00 AM

Abstract Presentations

9:00 AM – 9:40 AM

BREAK – Visit Exhibits and Scientific Posters

9:40 AM – 9:50 AM

Introduction of the President:
Keith S. Naunheim

9:50 AM – 10:50 AM

Presidential Address: Richard L. Prager

10:50 AM – 11:30 AM

BREAK – Visit Exhibits and Scientific Posters





Program at a Glance

11:30 AM – 12:30 PM

Adult Cardiac: Arrhythmia/Atrial Fibrillation

Basic Science Research: Adult Cardiac

Basic Science Research: General Thoracic

Congenital: Adult Congenital Critical Care

NEW! Diversity and Inclusion in Cardiothoracic Surgery: What's In It for Me?

General Thoracic: New Technology
STS/CATS/CSCS: Difficult Decisions in Thoracic Surgery—Advice From Canadian and American Experts

12:30 PM – 1:30 PM

BREAK—Visit Exhibits and Scientific Posters

1:15 PM – 5:15 PM

Clinical Scenarios: Cardiologists and Surgeons Working Together

1:30 PM – 3:30 PM

Adult Cardiac: Aorta I

Adult Cardiac: Ischemic

Congenital: Pediatric Congenital I

General Thoracic: Lung Cancer I

General Thoracic: Lung Transplantation

International Symposium: Confronting Infectious Diseases in Young Adults Undergoing Cardiac Surgery

SVS @ STS: Sharing Common Ground for Cardiovascular Problems

3:30 PM – 4:15 PM

BREAK—Visit Exhibits and Scientific Posters

4:15 PM – 5:15 PM

Adult Cardiac: VAD Transplant/ECMO

Ethics Debate: Neighborly Help or Itinerant Surgery?

Research Using the STS National Database

STS Key Contacts: Advocates for Cardiothoracic Surgery

The Annals Academy: Preparation and Interpretation of National Database Research

NEW! The Importance of Physician Documentation in Reimbursement

Women in Thoracic Surgery: How to Successfully Implement Surgical Innovations and New Technologies Into Practice

5:15 PM – 6:30 PM

Scientific Posters and Wine

5:30 PM – 6:30 PM

Business Meeting (STS Members Only)

Tuesday, January 30, 2018

6:30 AM – 4:30 PM

Registration

9:00 AM – 3:30 PM

Exhibit Hall

9:00 AM – 5:00 PM

Scientific Posters

7:30 AM – 8:30 AM

Meet the Experts

7:30 AM – 8:30 AM

Health Policy Forum

9:00 AM – 10:00 AM

Thomas B. Ferguson Lecture

10:00 AM – 10:45 AM

BREAK—Visit Exhibits and Scientific Posters

10:45 AM – 11:00 AM

Award Presentations

11:00 AM – 12:00 PM

C. Walton Lillehei Lecture

12:00 PM – 1:00 PM

BREAK—Visit Exhibits and Scientific Posters

12:00 PM – 1:00 PM

Residents Luncheon

1:00 PM – 3:00 PM

Adult Cardiac: General

Adult Cardiac: Mitral and Tricuspid Valves

Congenital: Pediatric Congenital II

EACTS @ STS: Bicuspid Aortic Valve Repair With Aortic Valve Insufficiency and Proximal Aortic Aneurysm Repair

NEW! STS/ISHLT Joint Symposium: LVAD Therapy in 2018—Worldwide Perspectives

General Thoracic: Lung Cancer II

General Thoracic: Mediastinal/Pulmonary

1:00 PM – 5:30 PM

Patient Safety Symposium: Biases and Errors—Why We Do What We Do

3:00 PM – 3:30 PM

BREAK—Visit Exhibits and Scientific Posters

3:30 PM – 4:30 PM

Cardiothoracic Surgical Education

3:30 PM – 5:30 PM

Adult Cardiac: Aorta II

Adult Cardiac: Aortic Valve/Novel Technologies

Advanced Therapies for End-Stage Cardiopulmonary Disease

Congenital: Pediatric Congenital III

ESTS @ STS: Controversial Issues in General Thoracic Surgery—Perspectives From Europe and North America

General Thoracic: Esophageal

4:30 PM – 5:30 PM

Quality Improvement

Wednesday, January 31, 2018

6:30 AM – 9:30 AM

Registration & Breakfast

7:00 AM – 9:00 AM

 STS University

9:30 AM – 11:30 AM

 STS University (courses repeated)



STS/AATS Tech-Con 2018

Saturday

JANUARY 27, 2018

PLEASE NOTE: CME WILL NOT BE OFFERED FOR TECH-CON.

6:30 AM – 6:00 PM

Registration

7:00 AM – 6:30 PM

Tech-Con Exhibits

7:00 AM – 8:00 AM

BREAKFAST – Visit Tech-Con Exhibits

8:00 AM – 9:30 AM

Adult Cardiac Track I: Innovations in Aortic Valve and Aortic Aneurysm Management

MODERATORS: Edward P. Chen, Atlanta, GA, and Nimesh D. Desai, Philadelphia, PA

- 8:00 AM **Overview: Current Challenges in Aortic and Endovascular Surgery**
Nimesh Desai, Philadelphia, PA
- 8:04 AM **A Practical Approach to Aortic Valve Repair**
Emmanuel Lansac, Paris, France
- 8:12 AM **Sutureless Aortic Valve Replacement: Prosthesis Selection and Challenging Scenarios**
*Malak Shrestha, Hanover, Germany**
- 8:20 AM **Submitted Presentation: Bioprosthetic Valve Fracture to Facilitate Valve-in-Valve Transcatheter Aortic Valve Replacement (TAVR)**
Keith B. Allen, Kansas City, MO
- 8:28 AM **Navigating Complex TAVR Scenarios: Managing Left Ventricular Outflow Tract Calcium, Isolated Aortic Insufficiency, Bicuspid Valve, and Others**
Arash Salemi, New York, NY
- 8:36 AM **Panel Discussion**
- 8:47 AM **Submitted Presentation: Advanced Aortic Root Surgery Techniques via Right Minithoracotomy**
Joseph Lamelas, Miami Beach, FL
- 8:55 AM **Endovascular Repair in the Ascending Aorta: Is Endo Bentall a Reality?**
Ali Khoynzhad, Los Angeles, CA
- 9:03 AM **Frozen Elephant Trunk and Evolving Arch Surgery Techniques**
Eric E. Roselli, Cleveland, OH
- 9:11 AM **Branched Endografting Techniques in the Aortic Arch**
Himanshu J. Patel, Ann Arbor, MI
- 9:19 AM **Panel Discussion**

8:00 AM – 9:30 AM

General Thoracic Track I: Emerging and/or Game-Changing Technologies in the Management of Lung Cancer

MODERATORS: Lisa M. Brown, Sacramento, CA, and Brendon M. Stiles, New York, NY

- 8:00 AM **Submitted Presentation: Electromagnetic Navigational Video-Assisted Thoracoscopic Surgery (N-VATS) for Precision-Guided Resection of Intrathoracic Lesions**
Wissam Raad, New York, NY
- 8:12 AM **Submitted Presentation: 3D Computed Tomography Reconstruction and Mix Reality for Sublobar Resection**
Xinghua Cheng, Shanghai, China
- 8:24 AM **Submitted Presentation: Robotic Bronchoscopy**
Kazuhiro Yasufuku, Toronto, Canada
- 8:36 AM **Use of Ultrasound Imaging for Localizing Nodules Robotically**
John F. Lazar, Mechanicsburg, PA
- 8:48 AM **Radiofrequency Ablation of Lung Tumors**
Katie S. Nason, Pittsburgh, PA
- 9:00 AM **Cryoablation: Update on SOLSTICE Study—Is It Applicable to Primary Lung Cancer?**
Matthew R. Callstrom, Rochester, MN
- 9:12 AM **Energy Sources for Pulmonary Resection**
Moishe A. Liberman, Montreal, Canada

9:30 AM – 10:15 AM

BREAK – Visit Tech-Con Exhibits

10:15 AM – 12:00 PM

Adult Cardiac Track II: Cutting-Edge Surgery for Heart Failure and Coronary Artery Disease

MODERATORS: Arash Salemi, New York, NY, and John M. Stulak, Rochester, MN

- 10:15 AM **Overview: Current Challenges in Heart Failure and Coronary Artery Disease (CAD)**
Arash Salemi, New York, NY
- 10:19 AM **HeartMate 3 Clinical Trial Update**
Chris T. Salerno, Carmel, IN
- 10:27 AM **PREVENT II: Rationale and Trial Study Design**
*Robert Adamson, San Diego, CA**
- 10:35 AM **Thoracotomy Implant of HeartWare HVAD: HVAD LATERAL Study**
Simon Maltais, Rochester, MN



- 10:43 AM Total Artificial Heart Clinical Trial Update
Francisco A. Arabia, Los Angeles, CA
- 10:51 AM Hemocompatibility of Fully Magnetically Levitated Pumps
Nir Uriel, Chicago, IL
- 10:59 AM Panel Discussion
- 11:07 AM **Submitted Presentation:** EpicHeart™ Soft Robotic Device to Support Heart Function
William C. Altman, Houston, TX
- 11:15 AM **Submitted Presentation:** First-in-Human Clinical Trial of a Minimally Invasive Left Ventricular Assist Device
Valluvan Jeevanandam, Chicago, IL
- 11:23 AM Coronary Artery Bypass Grafting (CABG) or Percutaneous Coronary Intervention for Ischemic Cardiomyopathy
David P. Taggart, Oxford, United Kingdom
- 11:31 AM External Stent for Saphenous Vein Grafts in CABG
David P. Taggart, Oxford, United Kingdom
- 11:39 AM Robotic-Assisted Totally Endoscopic Coronary Artery Bypass for Multivessel CAD: Beyond Most Surgeons' Reach?
Husam H. Balkhy, Chicago, IL
- 11:47 AM Panel Discussion

10:15 AM – 12:00 PM

General Thoracic Track II: Emerging and/or Game-Changing Technologies in the Management of Esophageal Diseases

MODERATORS: *Melanie A. Edwards, St Louis, MO, and James D. Luketich, Pittsburgh, PA*

- 10:15 AM Endoscopic Approach to Zenker's Diverticulum
Ryan M. Levy, Pittsburgh, PA
- 10:30 AM Update on Advances in Antireflux Surgery
Brian E. Louie, Seattle, WA
- 10:45 AM Endoluminal Management of Esophageal Leaks
David C. Rice, Houston, TX
- 11:00 AM Advances in Peroral Endoscopic Myotomy Technology and Endoscopic Mucosal Closure
Shanda H. Blackmon, Rochester, MN
- 11:15 AM Robotic Esophagectomy
Inderpal S. Sarkaria, Pittsburgh, PA
- 11:30 AM Endoscopic Techniques in Esophageal Cancer
Wayne L. Hofstetter, Houston, TX
- 11:45 AM **Submitted Presentation:** A Bioengineered Implant for Esophageal Replacement
Saverio La Francesca, Holliston, MA

12:00 PM – 1:00 PM

LUNCH—Visit Tech-Con Exhibits

1:00 PM – 2:30 PM

Adult Cardiac Track III: Contemporary and Future Mitral Valve and Atrial Fibrillation Practice

MODERATORS: *Vinay Badhwar, Morgantown, WV, and Tom C. Nguyen, Houston, TX*

- 1:00 PM Overview: Advances in Surgical Therapy for Mitral Valve Disease and Atrial Fibrillation
Vinay Badhwar, Morgantown, WV
- 1:04 PM Defining the Mitral Valve Surgeon of the Future: Time for an Honest Appraisal
T. Sloane Guy, New York, NY
- 1:12 PM MitraClip, Transcatheter Mitral Valve Repair (TMVR), Robotics, Port Access, and Open Surgery: Can We Do It All?
Robert L. Smith, Plano, TX
- 1:20 PM Robotic Reconstruction for Complex Primary Mitral Regurgitation: No Limits
Vinay Badhwar, Morgantown, WV
- 1:28 PM Robotic/Minimally Invasive Cardiac Surgery Treatment Options for Atrial Fibrillation: Better Than Catheter Ablation?
Evelio Rodriguez, Nashville, TN
- 1:36 PM Panel Discussion
- 1:46 PM Are Apically Delivered Chords Really the Answer?
Tirone E. David, Toronto, Canada
- 1:54 PM Transcatheter Mitral Valve Replacement: Global and Early US Experience
Gilbert H. L. Tang, New York, NY
- 2:02 PM Pipeline of TMVR: The Train Has Left the Station!
Michael J. Mack, Plano, TX
- 2:10 PM Pipeline of Tricuspid Devices: Fumbling In the Dark or Zeroing In on an Indication?
Steven F. Bolling, Ann Arbor, MI
- 2:18 PM Panel Discussion



1:00 PM – 2:30 PM

General Thoracic Track III: Emerging and/or Game-Changing Minimally Invasive Surgery and Other Technologies

MODERATORS: Michael F. Reed, Hershey, PA, and Inderpal S. Sarkaria, New York, NY

- 1:00 PM **Novel Suture Technologies**
Michael F. Reed, Hershey, PA
- 1:12 PM **Chest Wall Reconstruction Technologies**
Shanda H. Blackmon, Rochester, MN
- 1:24 PM **Advanced Imaging Technologies**
Yolonda L. Colson, Boston, MA
- 1:36 PM **Submitted Presentation:** Articulated Minimally Invasive Surgery Instrumentation
Joel Dunning, Middlesbrough, United Kingdom
- 1:48 PM **Submitted Presentation:** Immersive Video Operating Room Training
Douglas R. Johnston, Cleveland, OH
- 2:00 PM **Submitted Presentation:** Autonomous Camera System
Traves Crabtree, St Louis, MO*
- 2:12 PM **Submitted Presentation:** Alternate New Device for Chest Access
Daniel L. Miller, Marietta, GA

2:30 PM – 3:00 PM

BREAK—Visit Tech-Con Exhibits

3:00 PM – 5:00 PM

Joint Session: Robotic Cardiothoracic Innovations and “Shark Tank” —Rapid-Fire Pitches of Revolutionary Technology

MODERATORS: Richard Lee, St Louis, MO, and James D. Luketich, Pittsburgh, PA

“SHARK TANK” JUDGES: Rick Anderson, Austin, TX*, Steven F. Bolling, Ann Arbor, MI, and William E. Cohn, Houston, TX*

- 3:00 PM **Debate: Robotic Mitral Valve Repair Is a Critical Part of the Future of Our Specialty**
CON: David H. Adams, New York, NY
PRO: T. Sloane Guy, New York, NY
- 3:30 PM **Debate: Robotic Thoracic Surgery Is a Critical Part of the Future of Our Specialty**
CON: Mark S. Allen, Rochester, MN
PRO: Robert J. Cerfolio, New York, NY
- 3:50 PM **What’s New in Robotic Cardiothoracic Surgical Technology: Updates From Robotic Companies That Are Leading the Way—Intuitive Surgical**
Catherine Mohr, Sunnyvale, CA*
- 4:00 PM **What’s New in Robotic Cardiothoracic Surgical Technology: Updates From Robotic Companies That Are Leading the Way—Medtronic**
Paul Hermes, North Haven, CT
- 4:10 PM **What’s New in Robotic Cardiothoracic Surgical Technology: Updates From Robotic Companies That Are Leading the Way—Verb Surgical**
Scott Huennekens, San Diego, CA*
- 4:20 PM **Submitted Presentation:** Novel Nanoparticle for Enhanced Pulmonary Nodule Identification
Jeffrey Port, New York, NY
- 4:30 PM **Submitted Presentation:** Left Ventricular Inflow Stent Reduces Suction Events and Improves Mechanical Circulatory Support
James H. Mehaffey, Charlottesville, VA
- 4:40 PM **Submitted Presentation:** Videoscope Cleaning Trocar for Minimally Invasive Surgery
Bryan M. Burt, Houston, TX

5:00 PM – 6:30 PM

RECEPTION—Visit Tech-Con Exhibits



Sunday

JANUARY 28, 2018

7:00 AM – 6:30 PM

Registration

8:00 AM – 12:00 PM

Adult Congenital Heart Disease Symposium: Surgical Management of Hypertrophic Cardiomyopathy and Anomalous Aortic Origin of a Coronary Artery in Children and Adults

Hypertrophic cardiomyopathy (HCM) and anomalous aortic origin of a coronary artery (AAOCA) can lead to sudden death in children and adults. Only a few centers perform a high volume of septal myectomy operations each year, and even fewer have experience treating mid-cavitary obstruction and non-obstructive HCM through the transventricular approach. Adult and pediatric cardiac surgeons may find it difficult to begin doing these types of cases and even more difficult to master a reproducible technique that maximizes benefits and minimizes risks. Also, cardiologists may not know when to refer patients. In this session, pediatric and adult cardiac surgeons, as well as cardiologists, will discuss age-related differences in surgical technique, indications for surgery, and how to encourage bidirectional communication between surgeons and cardiologists about the referral timing of these patients.

Learning Objectives

Upon completion of this activity, participants should be able to:

- List the indications for surgery for HCM and AAOCA
- Describe a transventricular approach to septal myectomy for mid-cavitary obstruction in hypertrophic obstructive cardiomyopathy (HOCM)
- Summarize a combined aortic/transventricular approach to septal myectomy for difficult-to-reach obstruction in HOCM
- Explain the risks associated with a variety of coronary anomalies
- List two methods for surgical management of coronary anomalies

MODERATORS: Stephanie M. Fuller, Philadelphia, PA, Charles B. Huddleston, St Louis, MO, Frank G. Scholl, Hollywood, FL, and James S. Tweddell, Cincinnati, OH

8:00 AM **Basal Septal Myectomy for HOCM: Technical Tips**

Francis D. Pagani, Ann Arbor, MI

8:20 AM **HOCM With Midventricular Obstruction: The Transventricular Approach**

Joseph A. Dearani, Rochester, MN

8:40 AM **Nonobstructive HCM: LV Cavity Enlargement Using an Apical Approach**

Hartzell V. Schaff, Rochester, MN

9:00 AM **What to Do With the Mitral Valve in HOCM**

Nicholas G. Smedira, Cleveland, OH

9:20 AM **Risk Stratification in HOCM: When to Refer and ETOH Ablation vs Surgery**

Steve Ommen, Rochester, MN

9:40 AM **Panel Discussion/Q&A**

9:55 AM **Break**

10:10 AM **Imaging and Nomenclature for AAOCA**

Carlos M. Mery, Houston, TX

10:30 AM **How I Approach AAOCA: Children vs Adults**

Vaughn A. Starnes, Los Angeles, CA

10:50 AM **How I Approach AAOCA: Options Other Than Unroofing**

Frank L. Hanley, Stanford, CA

11:10 AM **What Is the Role for Coronary Artery Bypass Grafting in AAOCA, and When Do You Operate on the Anomalous Right Coronary Artery?**

James Jagers, Aurora, CO

11:30 AM **Risk Stratification in AAOCA: When to Offer Surgery**

Julie Brothers, Philadelphia, PA

11:45 AM **Panel Discussion/Q&A**

8:00 AM – 12:00 PM

Practice Management Summit

The business of health care is evolving and being reshaped by payers, who are demanding value for their dollars. This paradigm shift away from volume of services delivered has many physicians questioning their current practice patterns. Gaining a better understanding of these fundamental changes, as well as hearing first-hand accounts of surgeons who have successfully navigated this new arena, will provide attendees with viable countermeasure options.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe how to negotiate a contract from a position of strength
- Explain the value proposition of individual practice types
- Discuss the direction of health care and cardiothoracic surgery
- List the practice transition options available to cardiothoracic surgeons
- Describe how to leverage the cardiovascular service line structure to promote value
- Explain the dangers associated with variability in health care delivery

MODERATORS: Frank L. Fazzalari, Ann Arbor, MI, and Paul S. Levy, Jonesboro, AR

8:00 AM **Introduction**

Frank L. Fazzalari, Ann Arbor, MI

8:10 AM **Compensation and Participation: Contracting Challenges and Choices**

Mark Kopson, Bloomfield Hills, MI

8:35 AM **Annual Update in Economic Survey Data, Trends, and Use**

Michael N. Heaton, Indianapolis, IN

- 9:00 AM Partnering for Excellence in Today's Health Care Environment: HCA Healthcare's Cardiovascular Service Line 2018 Update
Steven V. Manoukian, Nashville, TN
- 9:25 AM Panel Discussion
- 9:50 AM Break
- 10:10 AM Roles and Responsibilities of a Medical Device Company Chief Medical Officer
Thomas A. Vassiliades, Mounds View, MN
- 10:30 AM Built for Growth: Designing an Arrhythmia Center to Harvest Untapped Potential
Aaron Robinson, Cocoa Beach, FL
- 10:50 AM Update From the STS Council on Health Policy and Relationships
Alan M. Speir, Falls Church, VA
- 11:10 AM The Next Wave of Innovation to Make Patients Safer
Kathleen Sutcliffe, Baltimore, MD
- 11:30 AM Panel Discussion

8:00 AM – 12:00 PM

STS/AATS Critical Care Symposium: When Things Go Wrong in the CTICU and What to Do About It

It is increasingly apparent that there is a rapidly evolving demographic of the "typical" cardiothoracic surgery patient. Increasing use of technology in an older and more frail population requires the health care team to be well versed in patient optimization, maintenance of safety and quality, and ethical decision making for high-cost interventions. This joint session by STS and the American Association for Thoracic Surgery will provide attendees with a comprehensive review of the roles and responsibilities of interdisciplinary team members and potential pitfalls in the context of increasingly complex patients.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Discuss the pearls and pitfalls of implementing an ERATS/ERACS program
- Describe the rationale behind handoff checklists
- Identify that failure to rescue from postoperative morbidity is a proposed metric of program quality
- Discern and discuss beneficence vs social justice and how to approach this tenuous balance as it impacts clinical and patient-centered decision making

MODERATORS: *Rakesh C. Arora, Winnipeg, Canada, Michael S. Firstenberg, Akron, OH, Jay G. Shake, Jackson, MS, and Glenn J. R. Whitman, Baltimore, MD*

- 8:00 AM Introduction and Welcome
Jay G. Shake, Jackson, MS

Session 1: How to Make Things Go Right

- 8:10 AM Evolution of Critical Care and Quality Improvement in the CTICU
Richard L. Prager, Ann Arbor, MI
- 8:30 AM Enhanced Recovery After Cardiothoracic Surgery
Jacob Moremen, Jackson, MS
- 8:50 AM Checklists in the CTICU
Subhasis Chatterjee, Houston, TX
- 9:10 AM Break and Networking

Session 2: When Things Go Wrong Again

- 9:25 AM Failure to Rescue in Cardiothoracic Surgery
Gorav Ailawadi, Charlottesville, VA
- 9:45 AM Long-Term Fate After Discharge Following Cardiac Surgery
Michael J. Mack, Plano, TX
- 10:05 AM Difficult Cases
Rita Milewski, Philadelphia, PA
- 10:25 AM Break and Networking

Session 3: When Is Enough, Enough? End-of-Life Discussions vs Continued Aggressive Therapy

- 10:40 AM Ethics 101
Rakesh C. Arora, Winnipeg, Canada
- 11:05 AM **DEBATE:** Should E-CPR Be Included as Part of Every Cardiopulmonary Arrest Protocol?
Yes: Susan D. Moffatt-Bruce, Columbus, OH
No: Ashish Shah, Nashville, TN
- 11:45 AM Audience Q&A and Panel Discussion

8:00 AM – 12:00 PM

CHEST @ STS: Advanced Bronchoscopy and Surgical Airway Symposium

Cardiothoracic surgeons are essential in the diagnosis and treatment of lung nodules and lung cancer. New technology, such as endobronchial ultrasound (EBUS), navigational bronchoscopy, and cutting-edge endobronchial therapeutics, have changed the approach of lung cancer staging and should be learned by cardiothoracic surgeons. Additional training in therapeutic bronchoscopy is needed to help patients with newly diagnosed lung nodules, as well as palliation of malignant airway obstruction. This joint session by STS and the American College of Chest Physicians will provide attendees with the knowledge they need to navigate this evolving field.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Identify indications, yield, and complications of EBUS and navigational bronchoscopy
- Recognize the benefits and limitations of airway ablative modalities
- State the benefits and limitations of various airway stents

MODERATORS: *Momen M. Wahidi, Durham, NC, and Richard I. Whyte, Boston, MA*

- 8:00 AM Introduction and Welcome
- 8:10 AM EBUS and Transbronchial Needle Aspiration
Momen M. Wahidi, Durham, NC
- 8:30 AM Navigational Bronchoscopy
Alex Chen, St Louis, MO
- 8:50 AM EBUS Case Scenarios
Momen M. Wahidi, Durham, NC, and Richard I. Whyte, Boston, MA
- 9:20 AM Panel Discussion
- 9:45 AM Break
- 10:00 AM Therapeutic Bronchoscopy
Moishe A. Liberman, Montreal, Canada
- 10:20 AM Tracheal Resection for Benign and Malignant Disease
Matthew G. Hartwig, Durham, NC
- 10:40 AM Tracheobronchoplasty
Sidharta P. Gangadharan, Boston, MA
- 11:00 AM Airway Carcinoids – Endoscopic Management
Adnan Majid, Boston, MA
- 11:20 AM Airway Carcinoids – Surgical Management
Richard I. Whyte, Boston, MA
- 11:40 AM Panel Discussion



8:00 AM – 12:00 PM

SCA @ STS: Integrating Perioperative Echocardiography Into Cardiac Surgical Clinical Decision Making

This joint session by STS and the Society of Cardiovascular Anesthesiologists will address recent advances in the field of echocardiography, continuously changing technology for the treatment of valvular disease, and new evidence regarding the appropriateness of established procedures. New guidelines for assessment of native valvular regurgitation, updated guidelines on the treatment of ischemic mitral regurgitation, catheter-based procedures for mitral valve regurgitation, and procedural complications diagnosed by intraprocedural echocardiography will be reviewed.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Recognize the utility of echo anatomy and intraoperative echocardiographic analysis in surgical decision making for open and percutaneous procedures
- Discuss the integration of echocardiographic measurements with new clinical evidence in certain patient populations
- Identify and apply echocardiographic findings to case studies

MODERATORS: Alina Nicoara, Durham, NC, and Stanton K. Shernan, Boston, MA

PANELISTS: Vinay Badhwar, Morgantown, WV, John V. Conte, Hershey, PA, Tsuyoshi K. Kaneko, Boston, MA, and Vinod H. Thourani, Washington, DC

8:00 AM	Introduction
8:10 AM	Case 1: Ischemic Mitral Regurgitation—Impact of New Guideline Recommendations Stanton K. Shernan, Boston, MA
8:30 AM	Panel Discussion
8:50 AM	Case 2: MitraClip—A Complex Case Charles B. Nyman, Boston, MA
9:10 AM	Panel Discussion
9:30 AM	Case 3: Left Ventricular Outflow Tract Obstruction After Mitral Valve Replacement Stanton K. Shernan, Boston, MA
9:50 AM	Panel Discussion
10:10 AM	Break
10:30 AM	Case 4: Right Ventricular Dysfunction After Tricuspid Valve Surgery Alina Nicoara, Durham, NC
10:50 AM	Panel Discussion
11:10 AM	Case 5: High Pressure Gradient After Aortic Valve Replacement Alina Nicoara, Durham, NC
11:30 AM	Panel Discussion
11:50 AM	Concluding Remarks

8:00 AM – 4:00 PM

Multidisciplinary Innovations in Cardiothoracic Patient Care

Allied health professionals are critical members of the cardiothoracic surgical team who enhance patient safety through multidisciplinary performance improvement and research activities, yet forums for the discussion and dissemination of these findings are limited. This session will update attendees on recent practice innovations while providing an opportunity to discuss and debate important practice issues with a broad audience. This focus on the surgical team will lead to enhanced communication and improve patient care across the continuum of care delivery.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Discuss recent innovations in cardiothoracic management that improve patient care
- Identify important areas of clinical research that impact the cardiothoracic patient
- Develop strategies for implementing care improvements locally

MODERATORS: Tara Bartley, Birmingham, United Kingdom*, and Sandra J. Ley, Greenbrae, CA

8:00 AM	Welcome
8:15 AM	Percutaneous Valve Innovations: Impact for Non-Surgeons Patricia A. Keegan, Atlanta, GA
8:45 AM	Extracorporeal Membrane Oxygenation (ECMO) Innovations: Strategies That Make a Difference Michael Colligan, Houston, TX
9:15 AM	Designing a Comprehensive Ventricular Assist Device Program Sarah D. Schettle, Rochester, MN
9:45 AM	Break
10:15 AM	Caregiver Burnout Mary Zellinger, Atlanta, GA
10:30 AM	Bundled Payments in Cardiac Surgery Jill R. Engel, Durham, NC
10:45 AM	Heart Service Line Approach to Safe Culture Brittany A. Zwischenberger, Lexington, KY
11:00 AM	Negative Pressure Wound Therapy on Closed Wounds Richard Van Valen, Rotterdam, The Netherlands
11:15 AM	Implementation of the STS Cardiac Surgical Resuscitation Protocol Richard S. Bell, Baltimore, MD
11:30 AM	Break
12:45 PM	Innovations in Nursing: International Perspective Tara Bartley, Birmingham, United Kingdom
1:30 PM	Current Thoughts on Medical Innovations Joel Dunning, Middlesbrough, United Kingdom
2:15 PM	Break
2:30 PM	A Nurse-Driven Protocol Is Safe and Cost-Effective for Extracorporeal Membrane Oxygenator Support: A Cohort Study Z. J. Kwapnoski, A. S. Siddique, T. R. Ryan, E. R. Lyden, M. J. Moulton, J. Y. Um, H. Merritt University of Nebraska Medical Center, Omaha

- 2:45 PM **Total Artificial Heart Using Bilateral Paracorporeal Pulsatile Ventricular Assist Devices in an 8.2 kg Child**
R. K. Woods, R. A. Niebler, S. Kindel
Children's Hospital of Wisconsin, Milwaukee
- 3:00 PM **Dedicated Thoracic Enhanced Recovery Program Reduces Postoperative Narcotic Consumption**
E. Podgaetz², J. J. Berger¹, M. Cohen², R. S. Andrade², M. Larson², J. A. Wahr²
¹University of Minnesota, Maple Grove, ²University of Minnesota, Minneapolis
- 3:15 PM **The Effect of Frailty on Outcomes in Adult Cardiac Surgery Varies by Age**
C. S. Bergquist¹, E. A. Jackson¹, L. M. Cabrera¹, G. Paone², A. Delucia³, C. N. He¹, R. L. Prager⁴, D. S. Likosky¹
¹University of Michigan, Ann Arbor, ²Henry Ford Hospital, Detroit, MI, ³Bronson Methodist Hospital, Kalamazoo, MI, ⁴University of Michigan Health System, Ann Arbor
- 3:30 PM **Evolution of a Mechanical Circulatory Support Program at a Freestanding Children's Hospital**
C. Fraser, I. Adachi, M. A. Chacon-Portillo, R. A. Zea-Vera, J. Heinle, C. M. Mery, L. C. Kane, A. G. Cabrera, A. M. Qureshi
Texas Children's Hospital/Baylor College of Medicine, Houston
- 3:45 PM **Closing Remarks**
Sondra J. Ley, Greenbrae, CA

10:00 AM – 4:30 PM

“MyTube” Adult Cardiac How-To Video Session

This session is designed for all practicing adult cardiac surgeons—experienced and novice, academic and private practice. This video-based session will emphasize technical tips to help surgeons improve their practice and outcomes immediately. Topics will include heart failure surgery, coronary disease, valvular disease, and aortic/great vessel disease.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe the technical aspects of complex operations commonly performed in adult cardiac surgery
- Discuss the pitfalls of critical steps in complex cardiac surgery
- Identify novel tricks to make cardiac operations easier, safer, and more reproducible

MODERATORS: Gorav Ailawadi, Charlottesville, VA, and Wilson Y. Szeto, Philadelphia, PA

Mitral/Atrial Fibrillation Surgery

- 10:00 AM **Mitral Repair With Mitral Annular Calcification**
Tirone E. David, Toronto, Canada
- 10:12 AM **Simple Robotic Mitral Repair**
Robert L. Smith, Plano, TX
- 10:24 AM **Rheumatic Mitral Repair**
Vinay Badhwar, Morgantown, WV
- 10:36 AM **Mitral Repair With Hypertrophic Obstructive Cardiomyopathy**
Michael Chu, London, Canada
- 10:48 AM **Mitral Repair With Papillary Muscle Repositioning**
Joseph Lamelas, Miami Beach, FL
- 11:00 AM **Surgical Left Atrial Appendage (LAA) Closure via Left Atrium and Epicardial**
A. Marc Gillinov, Cleveland, OH
- 11:12 AM **Video-Assisted Thoracic Surgery and Subxiphoid LAA Closure**
TBD
- 11:24 AM **Maze During Non-Mitral Surgery**
Jonathan Philpott, Norfolk, VA
- 11:36 AM **Question the Experts**
- 12:00 PM **Break**

Coronary Artery Disease

- 12:50 PM **Coronary Endarterectomy**
Silvana Marasco, Melbourne, Australia
- 1:02 PM **Combined Carotid-Coronary Artery Bypass Grafting (CABG)**
*George L. Zorn, Kansas City, KS**
- 1:14 PM **Minimally Invasive CABG**
Joseph McGinn, Charlotte, NC
- 1:26 PM **Hybrid Coronary Revascularization (Robotic)**
Francis P. Sutter, Wynnewood, PA
- 1:38 PM **Question the Experts**

Aortic Valve/Aortic Surgery

- 1:50 PM **Sutureless Aortic Valve Replacement**
David Heimansohn, Indianapolis, IN
- 2:02 PM **Rare Alternative Access Transcatheter Aortic Valve Replacement (TAVR) – Carotid, Transcaval**
Vinod H. Thourani, Washington, DC
- 2:14 PM **Surgical Removal of TAVR (Late Failure)**
Michael A. Borger, New York, NY
- 2:26 PM **Redo Arch Reconstruction**
John A. Kern, Charlottesville, VA
- 2:38 PM **Redo Root (Root Abscess)**
Wilson Y. Szeto, Philadelphia, PA
- 2:50 PM **Dissection – Antegrade Stenting**
Derek Brinster, New York, NY
- 3:02 PM **Bicuspid Aortic Valve Repair**
Thomas G. Gleason, Pittsburgh, PA
- 3:14 PM **Question the Experts**

Heart Failure Surgery

- 3:26 PM **Extracorporeal Membrane Oxygenation (ECMO) – Arterial Access (Femoral) With Distal Femoral Perfusion**
*David A. Dean, Atlanta, GA**
- 3:38 PM **ECMO – Left Ventricle Venting Strategies**
Jay K. Bhama, Iowa City, IA
- 3:50 PM **Temporary Left Ventricular Assist Device – Minimally Invasive**
Hiroo Takayama, New York, NY
- 4:02 PM **Pump Exchange – Subcostal Approach**
Behzad Soleimani, Hershey, PA
- 4:14 PM **Minimally Invasive HVAD**
Jan Schmitto, Hanover, Germany
- 4:26 PM **Question the Experts**

12:00 PM – 1:00 PM

BREAK

1:00 PM – 4:00 PM

Residents Symposium: Transitioning From Residency to a Successful Practice

This symposium will help cardiothoracic surgery residents navigate the challenges of completing training and beginning practice. The first session will explain the process of finding a position: reasons for choosing private or academic practice, logistics and best practices for the job search, and considerations in contract negotiation. The second session will cover essential aspects of growing a new practice: building a clinical practice, benchmarks to set during the beginning of one's career, health care/individual surgeon finances, and achieving work-life balance. Each session will be followed by small group table discussions led by experienced surgeons and a larger group discussion with the speakers.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Outline the elements of a successful job search
- Explain the decision making behind choosing academic or private practice
- Describe the basic elements of contract negotiation
- Delineate benchmarks for early career development and clinical program development
- Discuss how cardiothoracic surgeons' individual finances relate to health care financing
- Identify aspects of work-life balance that are important to consider in career planning

MODERATOR: *Craig J. Baker, Los Angeles, CA*

1:00 PM **Introduction**

Session I: Finding a Job

1:05 PM **Why I Chose Private Practice**

Asad A. Shah, Raleigh, NC

1:18 PM **Why I Chose Academics**

Mara B. Antonoff, Houston, TX

1:31 PM **Mechanics of Finding a Job**

Ravi Ghanta, Houston, TX

1:44 PM **Negotiating a Contract**

Michael P. Robich, Portland, ME

1:57 PM **Discussion**

Session II: Transition to Practice

2:30 PM **Building a Successful Clinical Practice: Challenges and Solutions**

Edward P. Chen, Atlanta, GA

2:43 PM **Early Career Development**

Neel R. Sodha, Baltimore, MD

2:56 PM **What You Need to Know About Finances: Coding, Billing, Reimbursement, and Margins**

Frederick Y. Chen, Boston, MA

3:09 PM **Achieving a Successful Work-Life Balance**

Sidharta P. Gangadharan, Boston, MA

3:22 PM **Discussion**

1:00 PM – 4:30 PM

How-To Video Session: Technical Tips to Avoid Pitfalls and Simplify Congenital and Pediatric Cardiac Surgical Procedures

Textbooks and peer-reviewed publications are not ideal formats for showing the technical nuances of challenging operations. This video session will help congenital, pediatric, and adult congenital surgeons master difficult operative scenarios, such as complex atrioventricular valve disease and complex biventricular repairs. In addition, attendees will be exposed to emerging technology and unique strategies for improved surgical management of heart failure, mechanical support, and cardiac transplantation.

Learning Objectives

Upon completion of this activity, participants should be able to:

- List the technical aspects of complex operations performed in congenital and pediatric cardiac surgery
- Discuss pitfalls of critical steps in complex congenital and pediatric cardiac surgery
- Identify novel surgical approaches to make congenital and pediatric cardiac operations safer and more reproducible
- Describe the technical nuances for operative interventions that are not commonly seen in clinical practice

MODERATORS: *S. Adil Husain, San Antonio, TX, and James S. Tweddell, Cincinnati, OH*

Session I: Ebstein Anomaly

1:00 PM **Starnes Procedure**

Vaughn A. Starnes, Los Angeles, CA

1:15 PM **Neonatal Ebstein Repair**

TBD

1:30 PM **Cone Procedure**

Joseph A. Dearani, Rochester, MN

Session II: Systemic Atrioventricular (AV) Valve Disease

1:45 PM **Use of CorMatrix for Mitral Valve Surgery**

Richard G. Ohye, Ann Arbor, MI

2:00 PM **Melody Valve Use in the Mitral Position**

Sitaram M. Emani, Boston, MA

2:15 PM **Complex AV Valve Repair Associated Stage II or III Palliation for Single Ventricle Disease**

*Glen S. Van Arsdell, Ontario, Canada**

2:30 PM **Break**

Session III: Complex Biventricular Repairs

3:00 PM **Nikaido Procedure**

Victor Morell, Pittsburgh, PA

3:15 PM **Biventricular Repairs in Complex Heterotaxy Patients**

Pedro J. del Nido, Boston, MA

3:30 PM **Double Switch Operation**

James S. Tweddell, Cincinnati, OH

Session IV: Mechanical Surgical Support

3:45 PM **Extracorporeal Membrane Oxygenation Simulation Program**

David M. McMullan, Seattle, WA

4:00 PM **HeartWare Total Artificial Heart**

David L. Morales, Cincinnati, OH

4:15 PM **Transplant Techniques in Complex Fontan Patients**

Kirk R. Kanter, Atlanta, GA



1:00 PM – 4:30 PM

How-To Video Session: Tips and Tricks to Maximize Efficiency in Minimally Invasive General Thoracic Surgery

This video session will focus on technical tips and tricks to make difficult, minimally invasive general thoracic surgeries more efficient. Topics include maximizing efficiency in robotic and thoracoscopic segmentectomy and lobectomy, as well as esophagectomy. Speakers also will discuss systems-based approaches to efficiency in the perioperative and postoperative periods, advice on nodule localization, and endoscopic approaches to esophageal cancer.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe techniques to improve efficiency in the conduct of minimally invasive lobectomy, segmentectomy, and esophagectomy
- Discuss methods for identifying lung nodules amenable to segmentectomy and for nodule localization
- Explain endoscopic approaches to esophageal cancer, including selection criteria and potential complications
- Describe systems-based methods to improve efficiency in the operative and postoperative setting

MODERATORS: Robert J. Cerfolio, New York, NY, and Janet P. Edwards, Calgary, Canada

1:00 PM **Introduction**

1:05 PM **Robotic Lobectomy**
Michael S. Kent, Boston, MA

1:20 PM **Thoracoscopic Lobectomy**
Michael J. Weyant, Aurora, CO

1:35 PM **Lean and Efficient Surgery and Recovery: A Systems Approach**
Mara B. Antonoff, Houston, TX

1:50 PM **Panel Discussion**

2:05 PM **Break**

2:15 PM **Robotic Segmentectomy**
Robert J. Cerfolio, New York, NY

2:30 PM **Thoracoscopic Segmentectomy**
Janet P. Edwards, Calgary, Canada

2:45 PM **How Do I Find the Nodule? Tips, Tricks, and Novel Techniques**
Yolonda L. Colson, Boston, MA

3:00 PM **Panel Discussion**

3:15 PM **Break**

3:30 PM **Robotic Ivor Lewis**
Inderpal S. Sarkaria, Pittsburgh, PA

3:45 PM **Transhiatal Esophagectomy**
Jules Lin, Ann Arbor, MI

4:00 PM **Endoscopic Approaches to Esophageal Cancer**
Virginia R. Litle, Boston, MA

4:15 PM **Panel Discussion**

2:00 PM – 6:30 PM

Scientific Posters

4:30 PM – 6:30 PM

Opening Reception in STS Exhibit Hall

7:00 PM – 10:00 PM

President's Reception

Network with STS surgeon leaders and fellow meeting attendees at the President's Reception. This high-profile event will be held on an oceanfront terrace at the luxurious Fort Lauderdale Marriott Harbor Beach Resort & Spa. While a tropical-themed band plays in the background, enjoy gourmet food stations and an open bar. Colorful tropical birds will be on hand to help set the mood. This reception takes the place of the STS Social Event, which previously had been held on Monday evening, leaving the night open for industry-sponsored events or socializing with your colleagues. Tickets can be purchased for \$95. Don't miss this opportunity to connect with leaders in cardiothoracic surgery in a picturesque, informal setting.



Monday

JANUARY 29, 2018

6:30 AM – 5:00 PM

Registration

9:00 AM – 4:30 PM

Exhibit Hall

Scientific Posters

7:00 AM – 10:50 AM

General Session I

MODERATORS: Richard L. Prager, Ann Arbor, MI, and Joseph F. Sabik III, Cleveland, OH

7:00 AM Opening Remarks

7:15 AM **ABSTRACT:** J. Maxwell Chamberlain Memorial Paper for Adult Cardiac Surgery: Does Surgical Atrial Fibrillation Ablation Improve Long-Term Survival? A Multicenter Analysis

A. Iribarne¹, A. W. Discipio¹, J. N. McCullough¹, R. Quinn², B. J. Leavitt³, B. M. Westbrook⁴, M. P. Robich⁵, R. S. Kramer⁵, E. M. Olmstead¹, D. J. Malenka¹

¹Dartmouth-Hitchcock Medical Center, Lebanon, NH, ²Maine Medical Center Cardiovascular Institute, Portland, ³University of Vermont Medical Center, Burlington, ⁴Catholic Medical Center, Manchester, NH, ⁵Maine Medical Center, Portland

DISCUSSANT: A. Marc Gillinov, Cleveland, OH

7:35 AM **ABSTRACT:** J. Maxwell Chamberlain Memorial Paper for General Thoracic Surgery: Enhanced Recovery Protocol Decreases Pulmonary and Cardiac Complications Following Thoracotomy for Primary Lung Cancer

R. M. Van Haren, R. Mehran, A. M. Correa, M. B. Antonoff, C. M. Baker, W. L. Hofstetter, G. E. Mena, J. A. Roth, B. Sepesi, S. G. Swisher, A. A. Vaporciyan, G. L. Walsh, D. C. Rice

The University of Texas MD Anderson Cancer Center, Houston

DISCUSSANT: Farhood Farjah, Seattle, WA

7:55 AM **ABSTRACT:** J. Maxwell Chamberlain Memorial Paper for Congenital Heart Surgery: Where Are Patients From and Where Are They Going? Congenital Heart Surgery Referral Patterns in the US

T. Karamlou¹, S. K. Pasquali², C. L. Backer³, D. M. Overman⁴, J. C. Romano⁵, J. P. Jacobs⁶, K. F. Welke⁷

¹Phoenix Children's Hospital, AZ, ²University of Michigan, Ann Arbor, ³Ann & Robert H. Lurie Children's Hospital of Chicago, IL, ⁴Children's Heart Clinic at Children's Hospitals and Clinics of Minnesota, Minneapolis, ⁵Michigan Congenital Heart Center, Ann Arbor, ⁶Johns Hopkins All Children's Hospital, St Petersburg, FL, ⁷Children's Hospital of Illinois, Peoria

DISCUSSANT: James S. Tweddell, Cincinnati, OH

8:15 AM

ABSTRACT: Richard E. Clark Memorial Paper for Adult Cardiac Surgery: National Outcomes of Elective Hybrid Arch Debranching With Endograft Exclusion vs Total Arch Replacement Procedures: Analysis of the STS Adult Cardiac Surgery Database

P. Vallabhajosyula¹, T. Wallen¹, T. X. Carter¹, A. Habetheruer², V. Badhwar³, J. P. Jacobs⁴, V. H. Thourani⁵, B. A. Yerokun⁶, D. Thibault⁶, A. Wallace⁷, R. Milewski¹, W. Y. Szeto¹, J. E. Bavaria¹

¹University of Pennsylvania, Philadelphia, ²Hospital of the University of Pennsylvania, Philadelphia, ³West Virginia University, Morgantown, ⁴Johns Hopkins All Children's Hospital, St Petersburg, FL, ⁵Emory University, Atlanta, GA, ⁶Duke University, Durham, NC, ⁷Duke Clinical Research Institute, Durham, NC

DISCUSSANT: Himanshu J. Patel, Ann Arbor, MI

8:30 AM

ABSTRACT: Penetration, Completeness, and Representativeness of the STS General Thoracic Surgery Database for Lobectomy

B. C. Tong¹, S. Kim², A. S. Kosinski², M. W. Onaitis³, D. J. Boffa⁴, R. H. Habib⁵, J. B. Putnam⁶, P. A. Cowper⁷, C. D. Wright⁸, J. P. Jacobs⁹, F. G. Fernandez¹⁰

¹Duke University Medical Center, Durham, NC, ²Duke Clinical Research Institute, Durham, NC, ³University of California, San Diego, La Jolla, ⁴Yale University School of Medicine, New Haven, CT, ⁵The Society of Thoracic Surgeons, Chicago, IL, ⁶Baptist MD Anderson Cancer Center, Jacksonville, FL, ⁷Duke University, Durham, NC, ⁸Massachusetts General Hospital, Boston, ⁹Johns Hopkins All Children's Hospital, St Petersburg, FL, ¹⁰Emory University, Atlanta, GA

8:45 AM

Abstract Presentation

9:00 AM

BREAK—Visit Exhibits and Scientific Posters

9:40 AM

Introduction of the President

Keith S. Naunheim, St Louis, MO

9:50 AM

Presidential Address: Eye of the Beholder:

The Reinvention of Seeing

Richard L. Prager, Ann Arbor, MI

10:50 AM – 11:30 AM

BREAK—Visit Exhibits and Scientific Posters

11:30 AM – 12:30 PM

Adult Cardiac: Arrhythmia/Atrial Fibrillation

MODERATORS: T. Sloane Guy, New York, NY, and Patrick M. McCarthy, Chicago, IL

11:30 AM **Concomitant Atrial Fibrillation Made Simple: What Is the Right Lesion Set in Each Operation and What Is the Right Energy Source?**

A. Marc Gillinov, Cleveland, OH

11:40 AM **ABSTRACT:** Outcomes of Robotic-Assisted Surgical Ablation of Atrial Fibrillation Combined With Mitral Valve Surgery

M. Ju, J. Kim, J. Lee

Asan Medical Center, Seoul, South Korea

11:50 AM **Left Atrial Appendage: How Should I Treat and In What Setting?**

Richard Lee, St Louis, MO

12:00 PM **ABSTRACT:** Hybrid Thoracoscopic Approach Is Effective for the Treatment of Long-Standing Persistent Lone Atrial Fibrillation: 3-Year Clinical Update of the HISTORIC-AF Trial

C. C. Muneretto¹, G. Bisleri², F. Rosati¹, L. Giroletti¹, L. L. Di Bacco³, A. A. Repossini¹, A. A. Curnis¹, M. Cerini¹, G. G. Polvani⁴

¹University of Brescia Medical School, Italy, ²Queen's University, Kingston, Canada, ³Paracelsus Medical University Nuremberg, Germany, ⁴University of Milan, Italy

12:10 PM **ABSTRACT:** Robotic Bialtrial Cryo-Maze Ablation for Persistent Lone Atrial Fibrillation

V. Badhwar, T. Murashita, J. S. Rankin, L. M. Wei

West Virginia University, Morgantown

12:20 PM **Discussion**

11:30 AM – 12:30 PM

Basic Science Research: Adult Cardiac

MODERATORS: Arnar O. Geirsson, New Haven, CT, and Bo Yang, Ann Arbor, MI

11:30 AM **ABSTRACT:** Targeted Metabolomic Profiling Identifies Novel Circulating Biomarkers in Peripheral Blood in Nonsyndromic Thoracic Aortic Aneurysm

H. N. Wang¹, M. A. Wagner², C. N. Haynes², O. R. Ilkayeva², S. H. Shah¹, G. C. Hughes¹

¹Duke University Medical Center, Durham, NC, ²Duke University School of Medicine, Durham, NC

11:40 AM **ABSTRACT:** Diazoxide Attenuates Spinal Cord Ischemia-Reperfusion Injury Through STAT3 Pathway

K. J. Yamanaka¹, M. A. Eldeiry², M. Aftab², X. S. Meng¹, M. J. Weyant³, J. C. Cleveland Jr¹, D. A. Fullerton³, T. B. Reece¹

¹University of Colorado, Aurora, ²University of Colorado Anschutz Medical Campus, Aurora, ³University of Colorado School of Medicine, Aurora

11:50 AM **ABSTRACT:** Microvesicles Induce Reduction in Inflammatory and Increase in Angiogenic Signaling in Chronically Ischemic Myocardium

L. A. Scrimgeour¹, B. A. Potz¹, V. I. Pavlov¹, B. A. Colantuono¹, R. M. Abid², N. Sodha², F. W. Sellke³

¹Brown University, Providence, RI, ²Brown University Alpert Medical School, Providence, RI, ³Brown Medical School/Rhode Island Hospital, Providence

12:00 PM **ABSTRACT:** Tissue-Engineered Cardiac Patches Seeded With Human-Induced Pluripotent Stem Cell-Derived Cardiac Progenitor Cells Promote Short-Term Cardiac Function in Rat Left Ventricle Model

S. Miyamoto¹, T. T. Sugiura², H. H. Miyachi¹, C. K. Breuer¹,

T. T. Shinoka¹

¹Nationwide Children's Hospital, Columbus, OH, ²Texas Heart Institute/Baylor College of Medicine, Houston

12:10 PM **ABSTRACT:** Decreased PGC-1 α Post-Cardiopulmonary Bypass Leads to Impaired Oxidative Stress Response in Diabetic Patients

M. S. Saraf¹, J. Jeganathan¹, F. Mahmood¹, K. R. Khabbaz¹, Z. Knio¹, V. Senthilnathan², D. Liu¹, L. M. Chu¹, R. N. Feng¹, R. Matyal¹

¹Beth Israel Deaconess Medical Center, Boston, MA, ²Harvard Medical School, Boston, MA

12:20 PM **ABSTRACT:** Development of a Porcine Beating Heart Model of Self-Myocardial Retroperfusion: Evaluation of Hemodynamic and Cardiac Responses to Ischemia and Potential Clinical Applications

D. Grandmougin, J. Casse, A. Chalon, Y. Luo, F. Groubatch-Joineau, B. Mourer, M. Grandmougin, D. Grandmougin, G. Gauchotte, J. Maureira, N. Tran

University of Lorraine

11:30 AM – 12:30 PM

Basic Science Research: General Thoracic

MODERATORS: Jonathan D'Cunha, Pittsburgh, PA, and Arun K. Singhal, Longview, TX*

11:30 AM **ABSTRACT:** PorphyrinHDL: A Novel Photosensitizing Nanoparticle for Lung Cancer Therapy

H. Ujiie¹, R. Fan², L. Ding³, T. Kato¹, D. Lee¹, K. Fujino¹, T. Kinoshita¹, C. Lee¹, J. Chen³, H. H. Chan³, R. Weersink³, B. C. Wilson³, T. K. Waddell², S. Keshavjee¹, G. Zheng³, K. Yasufuku¹

¹Toronto General Hospital, Canada, ²University Health Network, Toronto, Canada, ³TECHNA Institute, University Health Network, Toronto, Canada

11:45 AM **ABSTRACT:** Povidone Iodine Results in Rapid Killing of Thymic Epithelial Tumor Cells Through Cellular Fixation

H. Lee¹, H. Jang¹, S. Groth¹, J. S. Friedberg², D. J. Sugarbaker¹, B. Burt¹

¹Baylor College of Medicine, Houston, TX, ²University of Maryland, Baltimore

12:00 PM **ABSTRACT:** Dynamic Changes of Circulating Tumor DNA in Surgical Lung Cancer Patients: A Prospective Cohort Study

K. Chen¹, H. Zhao¹, F. Yang¹, T. Wang², L. Wang², J. Wang¹

¹Peking University People's Hospital, Beijing, China, ²Berry Genomics Corp, Beijing, China

12:15 PM **ABSTRACT:** Mesenchymal Stem Cells Regulate Granulation Tissue Formation of Bioengineered Tracheal Grafts

A. M. Al-Ayoubi¹, S. S. Rehmani², E. E. Lewis³, W. Raad⁴, R. M. Flores⁴, F. Bhora⁴

¹University of Iowa, Iowa City, ²Mount Sinai St Luke's Hospital, New

York, NY.³Mount Sinai West and St Luke's Hospitals, New York, NY,
⁴Mount Sinai Health System, New York, NY

11:30 AM – 12:30 PM

Congenital: Adult Congenital

MODERATORS: Joseph A. Dearani, Rochester, MN, and Kristine Guleserian, Miami, FL*

- 11:30 AM **ABSTRACT:** Long-Term Growth of the Neo-aortic Root After the Arterial Switch Operation
S. Oda, T. Nakano, S. Fujita, S. Sakaguchi, H. H. Kado
 Fukuoka Children's Hospital, Japan
- 11:45 AM **ABSTRACT:** Surgery for Anomalous Aortic Origin of the Coronary Arteries – Not Just for Kids!
A. Vinnakota¹, R. D. Stewart², H. K. Najm²,
 G. B. Pettersson²
¹Case Western Reserve University School of Medicine, Cleveland, OH,
²Cleveland Clinic, OH
- 12:00 PM **ABSTRACT:** 360° Cone Reconstruction for Ebstein Anomaly
M. E. Mitchell¹, P. Kouretas²
¹Children's Hospital of Wisconsin, Milwaukee, ²University of California San Francisco
- 12:15 PM **ABSTRACT:** Aortic Dissection Following the Ross Procedure
S. R. Richey¹, A. C. Fiore², C. B. Huddleston²
¹Southern Illinois University School of Medicine, Carbondale, ²Cardinal Glennon Children's Hospital, St Louis, MO

11:30 AM – 12:30 PM

Critical Care

MODERATORS: Rainer G. H. Moosdorf, Marburg, Germany, and Joseph Rabin, Baltimore, MD

- 11:30 AM **ABSTRACT:** Even Mild Acute Kidney Injury Adversely Affects Early Survival After Thoracoabdominal Aortic Aneurysm Repair
S. Chatterjee¹, S. A. LeMaire², H. Amarasekara²,
 S. Y. Green², M. Price², Q. Zhang², O. Preventza²,
 R. Raghavan², K. I. de la Cruz², J. S. Coselli²
¹Baylor/Texas Heart Institute, Houston, ²Baylor College of Medicine, Houston, TX
- 11:45 AM **ABSTRACT:** Variation in Platelet Transfusion Practices During Cardiac Operations Among Centers in Maryland: Results From a State Quality Improvement Collaborative
X. N. Zhou¹, C. Fraser², A. Suarez-Pierre¹, T. C. Crawford³,
 C. N. Lui¹, D. E. Alejo³, J. V. Conte³, J. Lawton¹,
 C. E. Fonner⁴, B. S. Taylor⁵, G. J. Whitman³, R. Salenger⁶
¹The Johns Hopkins University School of Medicine, Baltimore, MD,
²Texas Children's Hospital, Houston, ³The Johns Hopkins Hospital, Baltimore, MD, ⁴Virginia Cardiac Services Quality Initiative, Virginia Beach, ⁵University of Maryland Medical Center, Baltimore, ⁶University of Maryland, Baltimore
- 12:00 PM **ABSTRACT:** Pretreatment With Glucose-Insulin-Potassium Improves Ventricular Performance After Valve Replacement in Patients With Severe Aortic Valve Stenosis: A Randomized Controlled Trial
M. Licker, T. Sologashvili, J. Diaper, C. Ellenberger
 Geneva University Hospital, Switzerland
- 12:15 PM **ABSTRACT:** Nutrition Support After Cardiac Surgery: A Prospective Study Resulting in Evident Lessons to Improve Its Delivery
C. Ong¹, P. M. Brown¹, R. Ohkuma¹, P. X. Yesantherao²,
 A. Young¹, J. K. Canner³, T. A. Brown⁶, T. C. Crawford¹,
 M. S. Sussman¹, G. J. Whitman¹
¹The Johns Hopkins Hospital, Baltimore, MD, ²The Johns Hopkins

Medical Institutions, Baltimore, MD, ³The Johns Hopkins University School of Medicine, Baltimore, MD

11:30 AM – 12:30 PM

NEW! Diversity and Inclusion in Cardiothoracic Surgery: What's In It for Me?

At this new session, organized by the STS Task Force on Diversity and Inclusion, attendees will learn how diversity and inclusion can be valuable to their practice and service lines, training efforts, and relationships in the communities in which they practice. Speakers will address the role of diversity and inclusion in the cardiothoracic surgery workforce and explore why physicians who are underrepresented in medicine are important for the optimal delivery of cardiothoracic surgery specialty care without cultural bias.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Define diversity as it relates to the health care workforce and the care of diverse patient populations
- Define inclusion as it relates to the health care workforce, health care leadership, and the care of diverse patient populations
- Define underrepresented minority (URM)
- Discuss how a diverse cardiothoracic surgery workforce can improve patient outcomes through increasing cultural competency and mitigating implicit provider bias
- Explain how the inclusion of URM trainees and junior faculty and staff helps increase URM pipeline to the clinical workforce and make successful diversification efforts

MODERATOR: David T. Cooke, Sacramento, CA

PANELISTS: Joanna Chikwe, New York, NY*, Christopher M. Draft, Atlanta, GA, Luis Godoy, Sacramento, CA, Keith S. Naunheim, St Louis, MO, Jackie Olive, Houston, TX, and Africa F. Wallace, Atlanta, GA*

- 11:30 AM **Introduction**
 David T. Cooke, Sacramento, CA, and Richard L. Prager, Ann Arbor, MI
- 11:35 AM **Bridging the Cultural Divide in Cardiothoracic Surgery: The Value Proposition of Diversity and Inclusion Excellence**
 David A. Acosta, Washington, DC
- 12:05 PM **Introduction of Panelists**
 David T. Cooke, Sacramento, CA
- 12:10 PM **Panel Discussion**

11:30 AM – 12:30 PM

General Thoracic: New Technology

MODERATORS: Mara B. Antonoff, Houston, TX, and Kazuhiro Yasufuku, Toronto, Canada

- 11:30 AM **ABSTRACT:** Novel Thoracoscopic Surgical Navigation System Provides Augmented Real-Time Imaging for Minimally Invasive Resection of Chest Wall Tumors
C. Lee¹, H. H. Chan², H. Ujii¹, K. Fujino², T. Kinoshita¹,
 K. Yasufuku¹
¹Toronto General Hospital, Canada, ²TECHNA Institute, University Health Network, Toronto, Canada
- 11:45 AM **ABSTRACT:** Digital Air Leak Monitoring for Patients Undergoing Lung Resection: A Randomized Controlled Clinical Trial
M. M. Plourde¹, **A. I. Jad**¹, A. A. Mujoondar¹,
 H. J. Henteleff¹, D. C. Bethune²
¹Dalhousie University, Halifax, Canada, ²Victoria General Hospital, Halifax, Canada
- 12:00 PM **ABSTRACT:** Decreased Length of Stay Associated With Minimally Invasive Pulmonary Resection Does Not Translate to Functional Recovery Advantage
S. J. Kaplan¹, P. A. Trottman¹, G. H. Porteous¹,
 R. A. Prusynski¹, A. J. Morris², E. A. Kauer², D. E. Low¹,
 M. Hubka¹
¹Virginia Mason Medical Center, Seattle, WA, ²University of Washington, Seattle



12:15 PM Health Informatics in the Thoracic Surgery Arena
Susan D. Moffatt-Bruce, Columbus, OH

11:30 AM – 12:30 PM

STS/CATS/CSCS: Difficult Decisions in Thoracic Surgery—Advice From Canadian and American Experts

This session represents the collaborative efforts of STS, the Canadian Association of Thoracic Surgeons, and the Canadian Society of Cardiac Surgeons and will provide current perspectives from the United States and Canada on difficult problems in general thoracic surgery. Expert thoracic surgeons from each country will discuss management of airway injuries post-esophagectomy, management of N2 disease in non-small cell lung cancer (NSCLC), and more.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Discuss intraoperative measures to reduce the chance of airway injury during esophagectomy
- Review the options for management of airway-conduit fistulae and airway injuries post-esophagectomy
- Explain the potential role of extracorporeal membrane oxygenation in the repair of complex airway injuries post-esophagectomy
- Discuss inclusion and exclusion criteria for the surgical management of N2 disease in NSCLC
- List the potential neoadjuvant options in N2 disease

MODERATORS: Robert J. Cerfolio, New York, NY, and Janet P. Edwards, Calgary, Canada

11:30 AM Case Presentation: Difficult Decisions Involving N2 Disease in NSCLC

11:36 AM N2 Disease – US Perspective
Thomas A. D'Amico, Durham, NC

11:43 AM N2 Disease – Canadian Perspective
Sean C. Grondin, Calgary, Canada

11:50 AM Discussion

12:00 PM Case Presentation: Airway Injuries and Fistulae in Esophageal Cancer Surgery

12:06 PM Post Esophagectomy Airway Injuries/Fistulae – US Perspective
Cameron D. Wright, Boston, MA

12:13 PM Post Esophagectomy Airway Injuries/Fistulae – Canadian Perspective
Moishe A. Liberman, Montreal, Canada

12:20 PM Discussion

12:30 PM – 1:30 PM

BREAK—Visit Exhibits and Scientific Posters

1:15 PM – 5:15 PM

Clinical Scenarios: Cardiologists and Surgeons Working Together

This session will concentrate on a true collaborative “heart team” approach to treating complex issues facing the practicing physician or affiliate provider. Using a unique and innovative format highlighting the spectrum of adult cardiac diseases, speakers will discuss the multidisciplinary approach to mitral stenosis and regurgitation, tricuspid regurgitation, aortic stenosis and regurgitation, and surgical management of heart failure. Session components include invited technical videos, a critical review of the literature, case-based presentations describing difficult clinical scenarios, and an interactive panel discussion.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Discuss the controversies surrounding the management of tricuspid valve disease
- Describe the indications and contraindications for the treatment of mitral regurgitation
- Describe the construction and makeup of the multidisciplinary “heart team” and its influence in improving patient outcomes and fostering communication between specialties
- Explain the optimal management of patients with specific case scenarios who are evaluated for aortic stenosis, congestive heart failure, mitral regurgitation, and tricuspid regurgitation

MODERATORS: Pavan Atluri, Philadelphia, PA, Vinay Badhwar, Morgantown, WV, Steven W. Boyce, Washington, DC, James S. Gammie, Baltimore, MD, Michael J. Mack, Plano, TX, Patrick T. O’Gara, Boston, MA, Paul Sorajja, Minneapolis, MN, and Vinod H. Thourani, Washington, DC

1:15 PM Introduction

Vinod H. Thourani, Washington, DC

Heart Team Approach (Aortic Valve)

1:15 PM Case Presentation

Christian Shults, Atlanta, GA

1:20 PM Optimal Timing for Replacement of the Aortic Valve (SAVR or TAVR) for Severe, Asymptomatic Aortic Stenosis
Patrick T. O’Gara, Boston, MA

1:30 PM Lessons Learned From the STS/ACCTVT Registry™
Vinod H. Thourani, Washington, DC

1:38 PM The Rationale and Need for a National System of Valve Centers
Michael J. Mack, Plano, TX

1:48 PM When to Replace the Root in Patients With Trileaflet and Bileaflet Aortic Valve Disease
Joseph E. Bavaria, Philadelphia, PA

1:58 PM Discussion and Case Wrap-Up

Heart Team Approach (Tricuspid Valve)

2:15 PM Case Presentation

Steven F. Bolling, Ann Arbor, MI

2:23 PM **How I Decide When to Operate on Patients With Isolated Tricuspid Regurgitation and Those With Concomitant Mitral Valve Disease**
James S. Gammie, Baltimore, MD

2:33 PM **New Interventional Technology for Tricuspid Regurgitation**
Paul Sorajja, Minneapolis, MN

2:43 PM **Discussion and Case Wrap-Up**

3:00 PM **Break**

Heart Team Approach (Mitral Valve Disease)

3:15 PM **Case Presentation**
Tom C. Nguyen, Houston, TX

3:20 PM **When Should an Asymptomatic Patient With Severe Mitral Regurgitation Undergo Intervention?**
Patrick T. O'Gara, Boston, MA

3:30 PM **Current Trials for Transcatheter Mitral Valve Replacement**
Gorav Ailawadi, Charlottesville, VA

3:40 PM **Current Trials for Transcatheter Mitral Valve Repair**
Paul Sorajja, Minneapolis, MN

3:50 PM **My Worst Surgical Mitral Valve Case and How I Got Out of It**
Tirone E. David, Toronto, Canada

4:00 PM **Discussion and Case Wrap-Up**

Heart Team Approach (Congestive Heart Failure)

4:15 PM **Preferred Device for Post-Cardiotomy Temporary Support When IABP Is Not Effective: ECMO, Impella, or Tandem Heart**
Pavan Atluri, Philadelphia, PA

4:25 PM **Preoperative Optimization for Right Ventricular Severe Dysfunction Prior to Cardiac Surgery**
Patrick T. O'Gara, Boston, MA

4:35 PM **My Worst LVAD Case and How I Got Out of It**
Francis D. Pagani, Ann Arbor, MI

4:45 PM **Case-Based Scenarios for Choice of Durable Mechanical Support in Heart Failure**
Nir Uriel, Chicago, IL

4:55 PM **Discussion and Concluding Remarks**

1:30 PM – 3:30 PM

Adult Cardiac: Aorta I

MODERATORS: Thomas G. Gleason, Pittsburgh, PA, and T. Brett Reece, Aurora, CO

1:30 PM **ABSTRACT: Outcomes of Elective Aortic Root Replacement Procedure in the United States: Analysis of the STS Adult Cardiac Surgery Database**
P. Vallabhajosyula¹, T. Wallen¹, A. Habrath², G. C. Hughes³, L. G. Svensson⁴, V. Badhwar⁴, J. P. Jacobs⁵, B. A. Yerokun⁶, D. Thibault⁶, R. Milewski¹, N. Desai¹, W. Y. Szeto¹, J. E. Bavaria¹

¹University of Pennsylvania, Philadelphia, ²Hospital of the University of Pennsylvania, Philadelphia, ³Duke University Medical Center, Durham, NC, ⁴Cleveland Clinic, OH, ⁵West Virginia University, Morgantown, ⁶Johns Hopkins All Children's Hospital, St Petersburg, FL, ⁷Duke University, Durham, NC

1:45 PM **ABSTRACT: Redo Aortic Valve Replacement in a Patient With Previous Aortic Root Replacement: Avoidance of Full Root Re-replacement on a Routine Basis**
I. E. Wenger¹, S. Y. Fukuhara², M. A. Siki¹, J. E. Bavaria¹

¹University of Pennsylvania, Philadelphia, ²Hospital of the University of Pennsylvania, Philadelphia

2:00 PM **DEBATE: Optimal Therapy for Failed Bioprosthetic Root Replacement in a 55-Year-Old Man: Redo Root/AVR vs Valve-in-Valve TAVR**
Redo Root: Edward P. Chen, Atlanta, GA
Valve-in-Valve TAVR: Keith B. Allen, Kansas City, MO

2:30 PM **ABSTRACT: Long-Term Results of Valve-Sparing Aortic Root Replacement: A Comparison Between Middle-Aged and Elderly Patients**
F. F. Settepani, A. H. Piloizzi, M. M. Villano, A. B. Basciu,

L. L. Torracca

Humanitas Clinical and Research Center, Milan, Italy

2:45 PM **ABSTRACT: Preoperative Sarcopenia Portends Worse Outcomes After Descending Thoracic Aortic Aneurysm Repair**

A. K. Tanaka¹, H. K. Sandhu¹, Z. A. Al Rstum¹, K. M. Charlton-Ouw¹, C. C. Miller¹, H. J. Safi¹, A. L. Estrera²
¹McGovern Medical School at UT Health, Houston, TX, ²The University of Texas Health Science Center, Houston

3:00 PM **ABSTRACT: Distal Stent Graft-Induced New Entry After Endovascular Repair of Type B Aortic Dissection: Management Strategy, Recurrence, and Long-Term Outcomes**

Q. Q. Li¹, W. G. Ma², J. Zheng³, S. S. Xu¹, J. Zhu³, L. L. Huang⁴, L. Sun³
¹Beijing Anzhen Hospital, China, ²Beijing Anzhen Hospital Capital Medical University, China, ³Beijing Anzhen Hospital, Capital Medical University, and Beijing Institute of Heart, Lung and Blood Vessel Diseases, China

3:15 PM **ABSTRACT: Outcome of Stentless Thoracic Endovascular Aortic Repair in Chronic DeBakey IIb Aneurysm**

T. T. Kim¹, S. S. Song¹, K. N. Lee¹, W. Heo¹, M. N. Baek¹, K. Yoo¹, B. N. Cho²
¹Gangnam Severance Hospital, Yonsei University College of Medicine, Seoul, South Korea, ²Korea Heart Foundation, Seoul

1:30 PM – 3:30 PM

Adult Cardiac: Ischemic

MODERATORS: Richard Lee, St Louis, MO, and Brett C. Sheridan, San Francisco, CA

1:30 PM **ABSTRACT: Long-Term Patency of Individual Segments of Different Internal Thoracic Artery Graft Configurations**
S. Raza¹, J. F. Sabik², F. Bakaeen¹, K. Ravichandren¹, B. Tappuni¹, M. A. Ahmad¹, F. A. Ahmed¹, P. L. Houghtaling¹, L. G. Svensson¹, E. Blackstone¹
¹Cleveland Clinic, OH, ²University Hospitals Cleveland Medical Center, OH

1:45 PM **ABSTRACT: One Is Never Enough: Incremental Value of Three or More Arterial Grafts in Coronary Artery Bypass Grafting—The Effect of Native Coronary Disease**
T. A. Schwann¹, K. Sleiman², M. B. Yammine³, R. F. Tranbaugh⁴, M. C. Engoren⁵, M. R. Bonnell¹, K. M. Klein¹, R. H. Habib⁶

¹University of Toledo Medical Center, OH, ²American University of Beirut, Lebanon, ³Mount Sinai Hospital, New York, ⁴Cornell School of Medicine, New York, ⁵University of Michigan, Ann Arbor, ⁶The Society of Thoracic Surgeons, Chicago, IL

2:00 PM **ABSTRACT: Bilateral Internal Mammary Artery Utilization in Diabetics: Friend or Foe?**
T. C. Crawford¹, X. N. Zhou², C. Fraser³, A. Suarez-Pierre¹, D. E. Alejo⁴, C. E. Fonner⁵, J. Bobbitt¹¹, R. Salenger⁶, K. E. Wehberg⁷, C. C. Kwon⁸, B. S. Taylor⁹, M. Fiocco¹⁰, J. V. Conte¹, G. J. Whitman¹

¹The Johns Hopkins Hospital, Baltimore, MD, ²The Johns Hopkins University School of Medicine, Baltimore, MD, ³Texas Children's Hospital, Houston, ⁴Johns Hopkins Cardiac Surgery, Baltimore, MD, ⁵Virginia Cardiac Services Quality Initiative, Virginia Beach, ⁶University of Maryland, Baltimore, ⁷Peninsula Regional Medical Center, Salisbury, MD, ⁸Sinai Hospital of Baltimore, MD, ⁹University of Maryland Medical Center, Baltimore, ¹⁰MedStar Union Memorial Hospital, Baltimore, MD, ¹¹Washington Adventist Hospital, Takoma Park, MD

2:15 PM **Which Diabetics Should Have Bilateral Internal Mammary Artery Grafting?**
Joseph F. Sabik III, Cleveland, OH

2:30 PM **ABSTRACT: A Multi-Institutional Analysis of Patients Undergoing Hybrid Coronary Revascularization for Multivessel Coronary Artery Disease**
N. M. Ndubisi¹, M. C. Werten², F. P. Sutter², J. J. DeRose³, P. Teefy⁴, B. Kiai⁵, J. McGinn⁵, T. A. Vassiliades⁶, H. A. Liberman⁷, J. D. Puskas⁸, W. A. Jaber¹, M. E. Halkos⁷
¹Emory University School of Medicine, Atlanta, GA, ²Lankenau Medical Center, Wynnewood, PA, ³Montefiore Medical Center, Bronx, NY, ⁴Western University, London Health Sciences Centre, Canada,

⁵Carolinas HealthCare System, Charlotte, NC, ⁶Medtronic Inc., Mounds View, MN, ⁷Emory University, Atlanta, GA, ⁸Mount Sinai Saint Luke's, New York

- 2:45 PM **ABSTRACT:** Del Nido Cardioplegia in Adult Coronary Artery Bypass Grafting Surgery
T. Timek¹, C. L. Willekes¹, T. A. Beute¹, D. R. Ziazadeh², R. N. Matar², J. L. Parker¹, M. R. Goehler¹, F. S. Fanning¹, T. Boeve¹, E. T. Murphy¹, J. C. Heiser¹
¹Spectrum Health, Grand Rapids, MI, ²Michigan State University College of Human Medicine, Grand Rapids
- 3:00 PM **ABSTRACT:** Coronary Artery Bypass Surgery Compared to Percutaneous Coronary Intervention in Patients Younger Than 50 Years of Age: Long-Term Outcomes
A. M. Shafi¹, A. A. Dhanji¹, A. Habib², W. I. Awad³
¹Barts Health NHS Trust, London, United Kingdom, ²Castle Hill Hospital, Bradford, United Kingdom, ³St Bartholomew's Hospital, London, United Kingdom
- 3:15 PM Updates on Trials of Percutaneous Coronary Intervention vs Coronary Artery Bypass Grafting Surgery
Stuart Head, Rotterdam, Netherlands*

1:30 PM – 3:30 PM

Congenital: Pediatric Congenital I

MODERATORS: Carl L. Backer, Chicago, IL, and James S. Tweddell, Cincinnati, OH

- 1:30 PM **ABSTRACT:** Richard E. Clark Memorial Paper for Congenital Heart Surgery: Development of a Congenital Heart Surgery Composite Quality Measure: An Analysis of the STS Congenital Heart Surgery Database
S. K. Pasquali¹, D. M. Shahian², S. O'Brien³, M. L. Jacobs⁴, J. W. Gaynor⁵, J. E. Mayer⁶, J. C. Romano⁷, K. Hill⁸, M. Gaies¹, J. P. Jacobs⁹
¹University of Michigan, Ann Arbor, ²Massachusetts General Hospital, Boston, ³Duke University Medical Center, Durham, NC, ⁴The Johns Hopkins University School of Medicine, Newtown Square, PA, ⁵The Children's Hospital of Philadelphia, PA, ⁶Boston Children's Hospital, MA, ⁷Michigan Congenital Heart Center, Ann Arbor, ⁸Duke Clinical Research Institute, Durham, NC, ⁹Johns Hopkins All Children's Hospital, St Petersburg, FL
- DISCUSSANT: Charles Fraser, Houston, TX
- 1:45 PM **ABSTRACT:** Listing Low Weight Infants for Heart Transplantation: Is It Prudent?
R. Rizwan, F. Zafar, C. Chin, J. S. Tweddell, R. O. Bryant III, D. L. Morales
Cincinnati Children's Hospital Medical Center, OH
- 2:00 PM **ABSTRACT:** Complex Orthotopic Heart Transplantation in a Neonate With Cardiomyopathy, Dextrocardia, and Heterotaxy Syndrome
U. S. Boston, C. J. Knott-Craig
Le Bonheur Children's Hospital, Memphis, TN
- 2:15 PM **ABSTRACT:** Long-Term Results Comparing the Use of Artificial Chordae to Other Chordal Procedures for Mitral Valve Repair in Children
S. Sivalingam, M. A. Yakub, P. S. Krishna Moorthy, J. J. Dillon, P. K. Kiew Kong, I. B. Gaaffar
National Heart Institute Malaysia, Kuala Lumpur
- 2:30 PM **ABSTRACT:** Impact of Total Anomalous Pulmonary Venous Connection Repair on Left Ventricular Function
Y. N. Nakamura, T. Hoashi, T. N. Nakata, M. S. Shimada, H. Ichikawa
National Cerebral and Cardiovascular Center, Suita, Japan
- 2:45 PM **ABSTRACT:** One-Stage Unifocalization for Pulmonary Atresia/Ventricular Septal Defect (VSD)/Major Aortopulmonary Collaterals: Is Concomitant VSD Closure Associated With a Better Outcome Compared to Delayed Repair?
M. Trezzi, C. D'Anna, G. Rinelli, G. Brancaccio, E. E. Cetrano, S. B. Albanese, A. Carotti
Bambino Gesù Children's Hospital, Rome, Italy
- 3:00 PM **DEBATE:** Vascular Ring Surgery
Open Technique: Carl L. Backer, Chicago, IL
Thoracoscopic Technique: Kristine Guleserian, Miami, FL

3:20 PM Discussion

1:30 PM – 3:30 PM

General Thoracic: Lung Cancer I

MODERATORS: Robert E. Merritt, Columbus, OH, and Betty C. Tong, Durham, NC

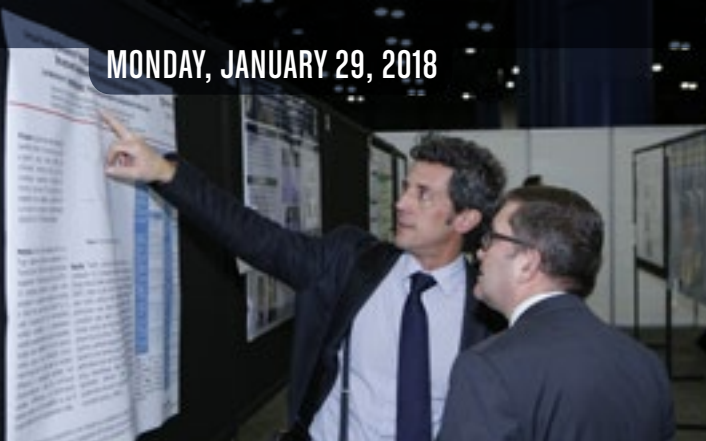
- 1:30 PM **ABSTRACT:** Factors Associated With New Persistent Opioid Use After Lung Resection
A. A. Brescia¹, C. A. Harrington², A. Mazurek¹, S. Ward¹, J. Lee¹, H. Hu¹, P. A. Lagisetty¹, C. M. Brummett¹, J. F. Waljee¹, K. H. Lagisetty¹
¹University of Michigan, Ann Arbor, ²Oregon Health & Science University, Portland
- 1:45 PM The Thoracic Surgeon's Role in the Opioid Epidemic
David T. Cooke, Sacramento, CA
- 2:00 PM **ABSTRACT:** Segmentectomy Is Equivalent to Lobectomy in Hypermetabolic C-Stage IA Lung Adenocarcinomas
M. K. Kamel, M. Rahouma, P. J. Kneuert, J. E. Jurado, B. E. Lee, S. W. Harrison, A. Nasar, B. M. Stiles, N. K. Altorki, J. Port
NewYork-Presbyterian Hospital, Weill Cornell Medical College, NY
- 2:15 PM **ABSTRACT:** Does the Use of Incentive Spirometry in Addition to Physiotherapy Reduce Postoperative Pulmonary Complications in the Thoracic Population? A Randomized Controlled Trial
P. R. Malik¹, C. Fahim¹, J. Vernon², P. Thomas¹, C. J. Finley¹, C. Schieman³, Y. D. Shargall¹, F. Farrokhvar¹, W. C. Hanna¹
¹McMaster University, Hamilton, Canada, ²University of Toronto, Canada, ³University of Calgary, Canada
- 2:30 PM **ABSTRACT:** Prognostic Impact of the Extent of Lymph Nodal Dissection in Clinical Stage I Radiological Part-Solid Lung Adenocarcinoma: Propensity Score-Matched Analysis
A. A. Hattori, T. Y. Matsunaga, K. K. Takamochi, S. O. Oh, K. Suzuki
Juntendo University, Tokyo, Japan
- 2:45 PM **ABSTRACT:** Spread Through Air Spaces Is a Prognostic Factor in Sublobar Resection of Non-Small-Cell Lung Cancer
S. S. Shiono, N. Yanagawa, M. M. Endo, K. K. Suzuki, K. K. Yarimizu, K. K. Hayasaka
Yamagata Prefectural Central Hospital, Japan
- 3:00 PM **ABSTRACT:** Synchronous Multiple Lung Adenocarcinomas: Surgery Yields Favorable Outcomes for Select Patients
Y. N. Zhang, H. I. Chen
Fudan University Shanghai Cancer Center, China
- 3:15 PM **ABSTRACT:** Thoracoscopic Management of a Major Vascular Injury During Uniportal Video-Assisted Lingulectomy
R. Oliveira, A. Vieira, P. A. Ugalde
Institut Universitaire de Cardiologie et de Pneumologie de Québec, Canada

1:30 PM – 3:30 PM

General Thoracic: Lung Transplantation

MODERATORS: Marcelo Cypel, Toronto, Canada, and Daniel Kreisel, St Louis, MO

- 1:30 PM Health Disparities in Lung Transplantation
Errol L. Bush, Baltimore, MD
- 1:45 PM **ABSTRACT:** Lung Transplantation From Donors After Circulatory Death: Single Center and United States Experience
M. A. Villavicencio, A. A. Osho, N. Roy, M. I. Funamoto, A. L. Todd, N. M. DalPozzal, S. E. Kilmarx, S. I. Melnitchouk, D. D'Alessandro, G. Tolis, Y. Raz, I. P. Neuringer, T. M. Sundt III
Massachusetts General Hospital, Boston
- 2:00 PM **ABSTRACT:** Predictors of Vocal Cord Dysfunction in Lung Transplantation Recipients
K. D. Joubert¹, L. W. Schaheen², R. C. Baird², M. Tuft², J. W. Hayanga², J. D. Luketich², J. D'Cunha², N. Shigemura²
¹University of Arkansas, Little Rock, ²University of Pittsburgh Medical Center



- Center, PA
- 2:15 PM **ABSTRACT:** The Impact of Donor-Recipient Age Mismatch on Lung Transplantation Outcomes
D. J. Hall, E. I. Jeng, J. A. Gregg, A. F. Pelaez, M. E. Pipkin, T. M. Beaver, T. N. Machuca
University of Florida, Gainesville
- 2:30 PM **ABSTRACT:** Physical Health-Related Quality of Life Decreases Significantly Over Time in Single Lung Transplant Recipients as Compared With Double Lung Transplant Recipients
D. M. Gilmore¹, E. L. Grogan¹, I. D. Feurer¹, H. M. Hoy¹, J. M. Barnes¹, R. M. Park¹, M. M. Via¹, M. B. Staykov¹, C. M. Shaver¹, E. S. Lambright²
¹Vanderbilt University Medical Center, Nashville, TN, ²Vanderbilt University, Nashville, TN
- 2:45 PM **ABSTRACT:** Prevalence and Natural History of Barrett's Esophagus in Lung Transplant Recipients: A Single-Center Experience
S. Biswas Roy¹, P. N. Banks², T. N. Masuda¹, M. N. Kunz¹, T. R. Ipsen³, S. K. Mittal¹, M. A. Smith¹, R. M. Bremner¹
¹Norton Thoracic Institute, St Joseph's Hospital and Medical Center, Phoenix, AZ, ²Midwestern University, Glendale, AZ, ³St Joseph's Hospital and Medical Center, Phoenix, AZ
- 3:00 PM **ABSTRACT:** Traumatologically Brain-Injured Donors and the Impact on Lung Transplant Survival: We Can Breathe a Sigh of Relief
T. C. Crawford¹, X. N. Zhou², J. T. Magruder¹, C. N. Lui², Y. N. Terasaki², R. S. Higgins³, S. R. Broderick², E. L. Bush¹
¹The Johns Hopkins Hospital, Baltimore, MD, ²The Johns Hopkins University School of Medicine, Baltimore, MD, ³The Johns Hopkins University School of Public Health, Baltimore, MD
- 3:15 PM **Ex-Vivo Lung Perfusion: Current Status**
Pablo Sanchez, Seattle, WA

1:30 PM – 3:30 PM

International Symposium: Confronting Infectious Diseases in Young Adults Undergoing Cardiac Surgery

As increasing numbers of young adults are treated for infectious heart disease (especially as a result of the current opioid epidemic), there are practice gaps in relation to both the ethics of repetitively operating on opioid addicts for infectious heart disease, as well as the optimal approaches for carrying out cardiac surgical procedures on young adults afflicted with such disease. By providing an international perspective on the surgical treatment of infectious heart disease, the symposium will give learners valuable insights into related cardiac surgical strategies utilized in a range of different countries and different scenarios.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe optimal approaches for conducting a variety of cardiac surgery procedures on young adults
- Explain central challenges involved in treating infectious heart disease in the young adult population
- Discuss ethical and disease management dilemmas implicated in the treatment of infectious heart disease in young adults

MODERATOR: Juan P. Umaña, Bogotá, Colombia*

- 1:30 PM **Introduction**
- 1:40 PM **The Scope of Repairing Infective Mitral Valves in the Current Era**
Taweesak Chotivatapanong, Nonthaburi, Thailand
- 1:55 PM **The Impact of Mechanical Support in Infectious Diseases**
Enrico R. Ferrari, Lugano, Switzerland*
- 2:10 PM **Repairs of the Bicuspid Aortic Valve on the Prognosis of Infected Young Adults**
Joseph E. Bavaria, Philadelphia, PA
- 2:25 PM **A Case of Endocarditis With Neurological Complications**
Michele De Bonis, Milan, Italy
- 2:45 PM **Redo Transcatheter Interventions for Failing Repairs**
Enrico R. Ferrari, Lugano, Switzerland
- 3:00 PM **Diagnosis and Treatment of Thrombosis Affecting the Left and Right Side Valves**
Darshan Reddy, Izinga Ridge, South Africa
- 3:15 PM **Diagnosis and Treatment of Aortic Infection Prostheses**
Joseph S. Coselli, Houston, TX

1:30 PM – 3:30 PM

SVS @ STS: Sharing Common Ground for Cardiovascular Problems

Many cardiac surgeons continue to incorporate the care of patients with vascular disease into their practices, while many vascular surgeons are now treating pathology that previously was purely in the domain of cardiovascular surgeons. This session from STS and the Society for Vascular Surgery will offer topics relevant to both fields and provide each perspective.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Formulate a plan based on published data and expert recommendations for the management of malperfusion in the setting of type A dissection
- Describe the current state of open and endovascular repair of thoracoabdominal aneurysms

MODERATORS: Keith R. Allen, Sioux City, IA, and Ali Azizzadeh, Houston, TX

PANELISTS: Joseph E. Bavaria, Philadelphia, PA, Richard Cambria, Boston, MA, Joseph S. Coselli, Houston, TX, Matthew J. Eagleton, Cleveland, OH, Anthony L. Estrera, Houston, TX, Joseph V. Lombardi, Camden, NJ, Michel S. Makaroun, Pittsburgh, PA, Gustavo S. Oderich, Rochester, MN, Eric E. Roselli, Cleveland, OH, Hazim J. Safi, Houston, TX, Wilson Y. Szeto, Philadelphia, PA, and Y. Joseph Woo, Stanford, CA

- 1:30 PM **Introduction**
- 1:35 PM **What Cardiac Surgeons Can Learn From Vascular Surgeons**
Alan B. Lumsden, Houston, TX*
- 2:20 PM **Discussion**
- 2:30 PM **Type A Aortic Dissection With Malperfusion: Initial Management From a Cardiac Surgeon's Perspective**
Wilson Y. Szeto, Philadelphia, PA
- 2:40 PM **Type A Aortic Dissection With Persistent Malperfusion Following Repair: Vascular Surgery Options**
Joseph V. Lombardi, Camden, NJ
- 2:50 PM **Discussion**

- 3:00 PM Thoracoabdominal Aneurysm: Pearls for Successful Open Repair
Hazim J. Safi, Houston, TX
- 3:10 PM Discussion
- 3:20 PM Branched Endografting Techniques in the Arch and Thoracoabdominal Aorta
Adam W. Beck, Birmingham, AL

3:30 PM – 4:15 PM

BREAK—Visit Exhibits and Scientific Posters

4:15 PM – 5:15 PM

Adult Cardiac: VAD Transplant/ECMO

MODERATORS: Brett C. Sheridan, San Francisco, CA, and Ibrahim Sultan, Pittsburgh, PA

- 4:15 PM **ABSTRACT:** Risk Factors for All-Cause Mortality Following Post-Cardiotomy Venoarterial Extracorporeal Membrane Oxygenation: Analysis of the STS Adult Cardiac Surgery Database

C. L. Tarola¹, M. Hamidi¹, B. A. Yerokun², S. N. Zhang², M. Brennan², M. Ruel³, D. Nagpal¹

¹London Health Sciences Center, Canada, ²Duke University, Durham, NC, ³University of Ottawa Heart Institute, Canada

- 4:27 PM **ABSTRACT:** Predictors of Early and Mid-Term Outcomes After Bridge to Left Ventricular Assist Device by Extracorporeal Life Support

D. A. Tsyganenko, E. V. Potapov, F. C. Kaufmann, V. Falk, T. N. Krabatsch, F. Schönrrath
Heart Institute Berlin, Germany

- 4:39 PM Mini-Access Central Extracorporeal Membrane Oxygenation Cannulation

Ashok S. Babu, Nashville, TN

- 4:51 PM **ABSTRACT:** Severe Tricuspid Valve Regurgitation in Patients Who Undergo Continuous-Flow Left Ventricular Assist Device Implantation: Concomitant Tricuspid Valve Procedures Do Not Reduce Recurrence of Regurgitation or Improve the Rate of Survival

A. C. Critsinelis, C. Kurihara, M. Kawabori, T. T. Sugiura, G. N. Loo, M. Ono, A. B. Civitello, R. M. Delgado III, L. N. Simpson, J. K. George, S. B. Oberton, A. P. Nair, H. O. Frazier, J. A. Morgan

Texas Heart Institute/Baylor College of Medicine, Houston

- 5:03 PM **ABSTRACT:** Combined Heart-Kidney and Heart-Liver Transplantation Provide Improved Immunoprotection of the Cardiac Allograft

A. S. Chou¹, A. Habrheuer², A. A. Chin¹, I. Sultan³, M. A. Acker⁴, M. L. Williams¹, C. A. Bermudez¹, P. Vallabhajosyula¹

¹University of Pennsylvania, Philadelphia, ²Hospital of the University of Pennsylvania, Perelman School of Medicine, Philadelphia, ³University of Pittsburgh, PA, ⁴University of Pennsylvania Medical Center, Philadelphia

4:15 PM – 5:15 PM

Ethics Debate: Neighborly Help or Itinerant Surgery?

There is a growing trend of cardiothoracic surgeons operating at remote hospitals. However, postoperatively, these patients are sometimes left in the care of surgeons who are not trained in cardiothoracic surgery. According to the American College of Surgeons, this is unethical. The central question of this Ethics Debate is whether any level of training other than completed cardiothoracic surgical training is acceptable for providing postoperative care when the operating surgeon is not available.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe the requirements for postoperative care when the operating surgeon is not available
- Structure outreach cardiac surgical programs in a way that is ethically acceptable
- Discuss the ethical boundaries for surgery in remote locations

FACILITATOR: Robert M. Sade, Charleston, SC

Pro – General Surgeon Postoperative Coverage Is Acceptable:
James Allen, Marblehead, MA

Con – Only Thoracic Surgeon Postoperative Coverage Is Acceptable:
Alberto Ferreres, Buenos Aires, Argentina

4:15 PM – 5:15 PM

Research Using the STS National Database

The STS National Database is a valuable tool for both quality improvement and research, and research utilizing the Database has grown exponentially in recent years. Still, many researchers may not be familiar with the different methods available for performing such research. This session will cover several Database-related research programs, including the new Participant User File (PUF) Research Program. In addition, speakers will discuss opportunities to pursue funded research using STS National Database data.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe the process for creating a data request to access data from the STS National Database for research
- Discuss the differences between major data requests and minor data requests
- Explain the process of developing a hypothesis, specific aims, and a research plan
- Discuss research options for longitudinal follow-up or linking to other registries
- List available options, rules, and policies for obtaining investigator access to de-identified patient-level data for analysis at their own institutions

MODERATOR: Felix G. Fernandez, Atlanta, GA

- 4:15 PM Introduction to STS Research
Felix G. Fernandez, Atlanta, GA

- 4:20 PM PUF Research Program: Policies and Procedures
Kevin W. Lobdell, Charlotte, NC

- 4:28 PM PUF Research Program: Early Experience
Robert H. Habib, Chicago, IL

- 4:36 PM Investigator Experience With the PUF Research Program
Malcolm M. DeCamp, Chicago, IL

- 4:43 PM Access and Publications Research Program
Jeffrey P. Jacobs, St Petersburg, FL

- 4:51 PM Longitudinal Follow-Up and Linked Registries Research Program
Matthew L. Williams, Philadelphia, PA

- 5:01 PM Panel Discussion

4:15 PM – 5:15 PM

STS Key Contacts: Advocates for Cardiothoracic Surgery

One way that cardiothoracic surgeons can have a direct impact on federal policy affecting the specialty is by participating in the STS Key Contact program, which offers grassroots advocacy opportunities. This session will explain how the program works, discuss the current health care debate, and describe how STS-PAC enhances these advocacy efforts. In addition, experienced Key Contacts will role-play a meeting with a member of Congress, the Key Contact of the Year and other awards will be announced, and attendees will be able to socialize and network.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe how to meet or speak with their members of Congress
- Discuss the Society's legislative priorities
- Explain how to utilize their peer Key Contacts as resources

MODERATOR: Madeleine Stirling, Washington, DC

- 4:15 PM Key Contacts Overview
Madeleine Stirling, Washington, DC

- 4:25 PM STS-PAC Overview
Frederick L. Grover, Aurora, CO

- 4:35 PM **Health Care Debate**
John H. Calhoon, San Antonio, TX, and Stephen J. Lahey, Ipswich, MA
- 4:50 PM **Mock Congressional Meeting**
Malini P. Daniel, Philadelphia, PA, and Keith A. Horvath, Washington, DC
- 5:05 PM **Awards and Networking**

4:15 PM – 5:15 PM

The Annals Academy: Preparation and Interpretation of National Database Research

The publication of research using national databases has risen exponentially over the past decade. Unfortunately, common methodological mistakes are made when preparing manuscripts and interpreting the results from published manuscripts. This session will address common limitations and errors made with national database research.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Explain the difference between association and causality in observational research
- Explain the difference between statistical and clinical significance in large databases
- Describe common performance metrics for multivariable modeling
- Discuss options for merging STS National Database data with other longitudinal databases to obtain long-term outcomes

MODERATOR: *Benjamin D. Kozower, St Louis, MO*

- 4:15 PM **Introduction**
Benjamin D. Kozower, St Louis, MO
- 4:20 PM **Using the STS National Database in Longitudinal Follow-Up**
Mark W. Onaitis, La Jolla, CA
- 4:35 PM **Common Pitfalls of Observational Database Research**
Graham A. Colditz, St Louis, MO
- 4:50 PM **Incorporating Long-Term Outcomes and Patient-Reported Outcomes into the STS National Database**
Benjamin D. Kozower, St Louis, MO
- 5:05 PM **Panel Discussion**

4:15 PM – 5:15 PM

NEW! The Importance of Physician Documentation in Reimbursement

This session will address how physician documentation drives reimbursement. Attendees will learn how to efficiently and effectively capture the key aspects of patient encounters to accurately communicate why a service was provided, define the services rendered, support the medical necessity, and capture relevant quality elements for an encounter. The session also will highlight the increasing importance of creating an active partnership between cardiothoracic surgeons and hospitals to enable maximal reimbursement for both.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Identify the documentation necessary to support relevant diagnoses, services rendered, medical necessity, and quality measures for a patient encounter
- Describe how hospitals utilize physician documentation for reimbursement
- Explain the role that diagnosis coding plays in hospital reimbursement (CC and MCC)
- Recognize the importance of specificity and identification of services provided in a patient encounter
- Identify coding and reimbursement criteria so that they can identify and capture relevant documentation elements efficiently
- List the global periods relevant to cardiothoracic surgical procedures and the implications those global periods have on reimbursement

MODERATORS: *Francis C. Nichols, Rochester, MN, and Scott C. Silvestry, Orlando, FL*

- 4:15 PM **Reimbursement Overview**
Scott C. Silvestry, Orlando, FL
- 4:30 PM **Documentation for Medical Necessity and Diagnoses**
V. Seenu Reddy, Nashville, TN
- 4:45 PM **Documentation for Services Rendered**
Sanjay A. Samy, Albany, NY
- 4:55 PM **Summary: Putting It All Together**
Francis C. Nichols, Rochester, MN
- 5:05 PM **Q&A**

4:15 PM – 5:15 PM

Women in Thoracic Surgery: How to Successfully Implement Surgical Innovations and New Technologies Into Practice

A growing number of new technologies are becoming available in cardiothoracic surgery to improve quality of care, reduce costs, and/or improve treatment. The introduction of innovations and cutting-edge technologies by established surgeons or recent trainees can pose problems in institutions not familiar with these newer surgical techniques. This session will cover the important aspects relevant to the successful introduction and use of surgical innovations in a health system and practice.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe the framework of privileging and credentialing as it pertains to new technology
- Discuss the importance of monitoring outcomes
- State strategies to identify multidisciplinary partners in developing or augmenting service lines that would benefit from new technology
- Recognize their need for new technology acquisition

MODERATOR: *Shanda H. Blackmon, Rochester, MN*

- 4:15 PM **Introduction**
Shanda H. Blackmon, Rochester, MN
- 4:20 PM **Privileging, Credentialing, and Monitoring of New Technology**
Shanda H. Blackmon, Rochester, MN
- 4:40 PM **Developing Multidisciplinary Partnerships to Facilitate Approval for New Technology**
David T. Cooke, Sacramento, CA
- 5:00 PM **Q&A**

5:15 PM – 6:30 PM

Scientific Posters and Wine

5:30 PM – 6:30 PM

Business Meeting (STS Members Only)



Tuesday

JANUARY 30, 2018

6:30 AM – 4:30 PM

Registration

9:00 AM – 3:30 PM

Exhibit Hall

9:00 AM – 5:00 PM

Scientific Posters

7:30 AM – 8:30 AM

MEET THE EXPERTS SESSION 1

Management of Esophageal Leaks

FACULTY: Mark S. Allen, Rochester, MN, Ross M. Bremner, Phoenix, AZ, Donald E. Low, Seattle, WA, Mark B. Orringer, Ann Arbor, MI, and Michael J. Weyant, Aurora, CO

This session will explore the diagnosis and management of esophageal leaks following surgical procedures. Through case examples and a panel discussion, attendees will be shown when conservative measures are appropriate and when reoperation is indicated.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe current data on the incidence of anastomotic leaks associated with esophagogastric resection
- Assess diagnostic modalities for identifying anastomotic leak or focal conduit necrosis
- Discuss the evolving pattern of treatment options for leaks and regional conduit necrosis
- Outline the short- and long-term ramifications of anastomotic leak following esophageal resection
- Discuss the presentation, diagnosis, and outcomes of esophageal leaks and fistula following surgical procedures

MEET THE EXPERTS SESSION 2

Minimally Invasive and Robotic Mitral Valve Repair

FACULTY: David H. Adams, New York, NY, Joseph A. Dearani, Rochester, MN, James S. Gammie, Baltimore, MD, A. Marc Gillinov, Cleveland, OH, and Joseph Lamelas, Houston, TX

Learning Objectives

Upon completion of this activity, participants should be able to:

- Discuss patient selection issues for different minimally invasive approaches
- Outline different circulatory management and myocardial protection strategies
- Describe when and how to convert to an open procedure

- Review postoperative care pathways to facilitate shorter length of hospital stay
- Discuss early and late outcomes for different minimally invasive approaches

MEET THE EXPERTS SESSION 3

Universal Conundrums in ECMO: Tips and Tricks for Veno-Arterial ECMO in Cardiogenic Shock

FACULTY: Robert H. Bartlett, Ann Arbor, MI, Christian A. Bermudez, Philadelphia, PA, David A. D'Alessandro, Boston, MA, David M. McMullan, Seattle, WA, and Jeffrey A. Morgan, Houston, TX

Venoarterial extracorporeal membrane oxygenation (ECMO) is an established platform that provides mechanical pulmonary and circulatory support for patients with cardiogenic shock from multiple etiologies refractory to standard medical therapy. ECMO, unlike definitive mechanical support systems, presents myriad unique therapeutic challenges that require optimization to advance the patient to the next management platform.

This session will focus on the major problems associated with ECMO through four clinical scenarios. An expert panel will delineate how the clinical challenges demonstrated by patients on ECMO are addressed regionally and internationally, and therapeutic tips will be presented for each management platform.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Identify methods of weaning a patient recovering from ventricular function off ECMO to recovery
- Describe methods for transitioning a patient from ECMO to a stable temporary or permanent platform
- Outline new technologies that can be utilized as adjuncts to the ECMO platform
- Discuss futility in the ECMO platform

MEET THE EXPERTS SESSION 4

Advanced Surgical Techniques in Ischemic Heart Disease

FACULTY: Richard L. Prager, Ann Arbor, MI, John D. Puskas, New York, NY, and Joseph F. Sabik III, Cleveland, OH

This session will focus on advanced techniques in the surgical treatment of ischemic heart disease that routinely can be applied by practicing adult cardiac surgeons. Speakers will present their techniques and tips in a video-rich format, followed by a Q&A with the audience. Best practices in the management of diffuse coronary artery disease, arterial grafting, and off-pump coronary artery bypass grafting (CABG) surgery will be discussed in detail, with a focus on providing attendees with useful skills and technical tips that they can take home to their practices.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Identify the alternative techniques to revascularize a diffusely diseased coronary artery, including full metal jacket
- Recall surgical techniques of all-arterial grafting, including bilateral internal thoracic artery and radial artery combinations
- Explain how to do off-pump CABG safely, reliably, and precisely

MEET THE EXPERTS SESSION 5**How to Be Successful in a Small-to-Mid Size Congenital Heart Program**

FACULTY: Petros V. Anagnostopoulos, Madison, WI, S. Adil Husain, San Antonio, TX, Jack L. Myers, Hershey, PA, James S. Tweddell, Cincinnati, OH, and Joseph W. Turek, Iowa City, IA

Small-to-moderate sized congenital heart programs can be successful in achieving optimal outcomes for their patients, but their resources may be limited. This session will provide expert opinion from successful practitioners at small-to-moderate programs that will help attendees learn how to manage limited resources.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Compare patient complexity with program resources
- Identify the complex, high-risk patient that may overutilize scarce resources or require additional expertise not available
- Manage limited resources, including human resources, in order to maximize performance

MEET THE EXPERTS SESSION 6**End-Stage Heart Failure**

FACULTY: Jack G. Copeland, Redlands, CA, Marzia Leacche, Grand Rapids, MI, Yoshimura Naka, New York, NY, Francis D. Pagani, Ann Arbor, MI, Jay D. Pal, Aurora, CO, Martin Strueber, Newark, NJ, and John M. Stulak, Rochester, MN

Mechanical circulatory support is a complex and evolving field. There are certain clinical scenarios for which diverging approaches exist within the ventricular assist device community. Examples include biventricular heart failure in destination therapy populations, left ventricular thrombus, recurrent ventricular dysrhythmias, patients with multiple prior sternotomies, existing mechanical aortic valves, and patients with a history of thrombophilia.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe the best approaches for right ventricular performance assessment and the different options in managing right ventricular dysfunction following durable left ventricular assist device implantation
- Recall the implications, severity, and approaches to left ventricular thrombus in patients undergoing left ventricular assist device implantation, highlighting the limitations and merits of each
- Explain evidence suggesting adverse events associated with in situ mechanical aortic valves in patients undergoing left ventricular assist device implantation and different strategies that can be employed in this setting
- Describe the preoperative, intraoperative, and postoperative strategies to mitigate recurring arrhythmias in patients with refractory ventricular dysrhythmia
- Identify the different strategies employed in implantation procedures for patients with multiple sternotomies

MEET THE EXPERTS SESSION 7**Management of the Small Aortic Root**

FACULTY: Kevin D. Accola, Orlando, FL, Michael J. Mack, Plano, TX, Robert K. Salley, Lexington, KY, Paul Stelzer, New York, NY, and Vinod H. Thourani, Washington, DC

Standard practice for aortic valve replacement (AVR) aims to use the largest possible valve without enlarging or replacing the root. The literature documents that small valves reduce life expectancy, but measures to alter or replace the aortic root have been underused and actively discouraged because of perceived (and actual) increase in risk. This session aims to identify patients who could benefit from more aggressive surgery and encourage development of the skills to do this safely.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Identify patients at risk for poor outcomes because of small aortic roots
- Explain when aortic root enlargement should be considered and its limitations
- Choose appropriate patients for aortic root replacement to avoid hemodynamic mismatch
- Discuss the importance of surgical valve size for future valve-in-valve options
- Select patients who might be best served by primary transcatheter AVR for hemodynamic reasons
- Describe the principles of sutureless AVR implantation and how to choose appropriate patients for this procedure

MEET THE EXPERTS SESSION 8**Minimally Invasive Esophageal and Pulmonary Procedures, Including Robotics and POEM**

FACULTY: Robert J. Cerfolio, New York, NY, and James D. Luketich, Pittsburgh, PA

This session will present novel ways to perform minimally invasive lung surgery robotically, posterior to anterior.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Choose ideal candidates for minimally invasive lung surgery
- Describe optimal methods to perform the posterior approach to minimally invasive surgery, anterior approach to minimally invasive surgery, minimally invasive esophagectomy, and esophageal-gastric anastomosis

7:30 AM – 8:30 AM

HEALTH POLICY FORUM**The Changing Medicare Quality Reporting and Payment Landscape**

The Medicare Access and CHIP Reauthorization Act changed the way physicians are paid under the Medicare program. As the Centers for Medicare & Medicaid Services (CMS) works to implement provisions of the new policy over the next few years, cardiothoracic surgeons will need to stay apprised of changes in reporting requirements and performance benchmarks. At this session, attendees will learn how they can be successful under either aspect of the Medicare Quality Payment Program: the Merit-Based Incentive Payment System (MIPS) or Alternative Payment Models (APMs).

Learning Objectives

Upon completion of this activity, participants should be able to:

- List new quality reporting requirements under MIPS
- State new advancing care information reporting requirements under MIPS
- Describe new clinical practice improvement reporting requirements under MIPS
- Recognize how to successfully participate in an APM that prioritizes value over volume of services
- Discuss what STS is doing to advocate for cardiothoracic surgeons participating in these programs



9:00 AM – 12:00 PM

General Session II

MODERATORS: Richard L. Prager, Ann Arbor, MI, and Joseph F. Sabik III, Cleveland, OH

9:00 AM Thomas B. Ferguson Lecture

10:00 AM **BREAK—Visit Exhibits and Scientific Posters**

10:45 AM Award Presentations

11:00 AM C. Walton Lillehei Lecture

12:00 PM – 1:00 PM

BREAK—Visit Exhibits and Scientific Posters

12:00 PM – 1:00 PM

Residents Luncheon

1:00 PM – 3:00 PM

Adult Cardiac: General

MODERATORS: Kendra J. Grubb, Louisville, KY, and Jennifer S. Lawton, Baltimore, MD

1:00 PM **ABSTRACT:** Tricuspid Valve Reconstruction for Infective Endocarditis

F. Bakaeen, J. L. Navia, E. G. Soltesz, D. R. Johnston, S. L. Mick, K. R. McCurry, N. G. Smedira, A. M. Gillinov, M. Z. Tong, L. G. Svensson, G. B. Pettersson
Cleveland Clinic, OH

1:15 PM **ABSTRACT:** Contemporary Surgical Management of Hypertrophic Cardiomyopathy in the United States
L. M. Wei¹, J. S. Rankin¹, M. Alkhoul¹, D. Thibault⁷, B. A. Yerokun², N. Ad¹, H. V. Schaff³, N. G. Smedira⁴, H. Takayama⁵, T. Murashita¹, P. M. McCarthy⁶, S. Vemulapalli⁷, V. H. Thourani⁸, G. Ailawadi⁹, J. P. Jacobs¹⁰, V. Badhwar¹

¹West Virginia University, Morgantown, ²Duke University, Durham, NC, ³Mayo Clinic, Rochester, MN, ⁴Cleveland Clinic, OH, ⁵Columbia University, New York, NY, ⁶Northwestern University, Chicago, IL, ⁷Duke Clinical Research Institute, Durham, NC, ⁸Emory University, Atlanta, GA, ⁹University of Virginia, Charlottesville, ¹⁰Johns Hopkins All Children's Hospital, St Petersburg, FL

1:30 PM **ABSTRACT:** Model for End-Stage Liver Disease Score Independently Predicts Mortality in Cardiac Surgery
B. Young⁶, R. B. Hawkins¹, J. H. Mehaffey², C. E. Fonner³, A. M. Speir⁴, M. A. Quader⁵, J. B. Rich³, G. Ailawadi¹

¹University of Virginia, Charlottesville, ²University of Virginia Health System, Charlottesville, ³Virginia Cardiac Services Quality Initiative, Virginia Beach, ⁴Cardiac, Vascular & Thoracic Surgery Associates, Falls Church, ⁵Virginia Commonwealth University, Richmond, ⁶Eastern Virginia Medical School, Norfolk

1:45 PM **ABSTRACT:** Ideal Therapeutic Approach for Mitral Valve Prolapse in Patients With Previous Cardiac Surgery: Open vs MitraClip Repair

S. Maltais¹, L. A. Anwer¹, R. C. Daly¹, J. A. Dearani¹, J. M. Stulak¹, H. D. Toeg², H. Akbayrak¹, H. V. Schaff¹, S. Said¹, K. L. Greason¹, M. Cicek¹, H. I. Michelena¹, C. S. Rihal¹, M. F. Eleid¹

¹Mayo Clinic, Rochester, MN, ²University of Ottawa Heart Institute, Canada

2:00 PM

ABSTRACT: Evolving Technique for Pericardiectomy: Safety, On-Pump Surgery, and Complete Resection

D. R. Johnston¹, K. N. Gopal², E. G. Soltesz¹, N. G. Smedira¹, G. B. Pettersson¹, F. Bakaeen¹, M. Y. Desai¹, A. L. Klein¹, P. L. Houghtaling¹, E. Blackstone¹

¹Cleveland Clinic, OH, ²Amrita Institute of Medical Sciences, Kochi, India

2:15 PM

Image-Guided Mitral Valve Surgery

Daniel Drake, Traverse City, MI

2:30 PM

TBD

1:00 PM – 3:00 PM

Adult Cardiac: Mitral and Tricuspid Valves

MODERATORS: Gorav Ailawadi, Charlottesville, VA, and T. Sloane Guy, New York, NY

1:00 PM

ABSTRACT: National Outcome Benchmarks for Mitral Valve Reoperations in the United States

A. Kilic¹, M. A. Acker², S. Vemulapalli³, D. Thibault⁴, G. Ailawadi⁵, V. Badhwar⁶, V. H. Thourani⁷, A. Kilic⁸

¹University of Pennsylvania, Philadelphia, ²University of Pennsylvania Medical Center, Philadelphia, ³Duke Clinical Research Institute, Durham, NC, ⁴Duke University, Durham, NC, ⁵University of Virginia, Charlottesville, ⁶West Virginia University, Morgantown, ⁷Emory University, Atlanta, GA, ⁸The Ohio State University Wexner Medical Center, Columbus

1:15 PM

ABSTRACT: Mitral Valve Repair vs Replacement With Complete Preservation of the Subvalvular Apparatus in the Elderly With Degenerative Disease: An Analysis of the STS Adult Cardiac Surgery Database

C. M. Vassileva¹, R. A. Bello¹, N. N. Kakouros¹, G. P. Aurigemma¹, J. F. Keaney¹, W. D. Hoffman¹, J. D. Walker²

¹University of Massachusetts, Worcester, ²UMass Memorial Medical Center, Worcester

1:30 PM

ABSTRACT: Robotic Mitral Valve Repair: Does Indication for Surgery Affect Outcomes?

S. Maltais, L. A. Anwer, A. Taggarse, H. Akbayrak, R. C. Daly, M. Sarano, H. I. Michelena, J. A. Dearani
Mayo Clinic, Rochester, MN

1:45 PM

ABSTRACT: A Comparison of Early Postoperative Results Between Conventional Mitral Valve Repair and Transapical NeoChord Implantation

A. Lipnevicius¹, **K. Rucinskas**¹, V. Janusauskas¹, A. A. Zorinas¹, G. Speziali², A. A. Drasutiene¹, D. Zakarkaite¹, A. S. Aidietis¹

¹Vilnius University, Lithuania, ²Pittsburgh, PA

2:00 PM

Update on World Experience With Transapical NeoChords and Predictions for the Future

Gilbert H. L. Tang, New York, NY

2:15 PM

ABSTRACT: Transcatheter Mitral Valve Replacement With LAMPOON Procedure

J. J. Kelly¹, V. C. Babaliaros¹, J. M. Iturbe¹, J. Forcillo¹, S. Lerakis¹, F. E. Corrigan¹, K. O. Mavromatis¹, A. Greenbaum², J. M. Khan³, R. J. Lederman³, V. H. Thourani¹

¹Emory University, Atlanta, GA, ²Henry Ford Hospital, Detroit, MI, ³National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD



2:30 PM **DEBATE:** Transcatheter vs Minimally Invasive Mitral Valve Procedures

Transcatheter Mitral Valve Repair and Replacement Is Our Future:

Michael A. Borger, New York, NY

Minimally Invasive Mitral Valve Procedures Will Prevail Over Transcatheter Techniques:

James S. Gammie, Baltimore, MD

1:00 PM – 3:00 PM

Congenital: Pediatric Congenital II

MODERATORS: Michael E. Mitchell, Milwaukee, WI, and Christian Pizarro, Wilmington, DE

1:00 PM **ABSTRACT:** Outcomes After Bidirectional Cavopulmonary Shunt in Infants Less Than 120 Days Old
N. Ota, T. A. Asou, Y. Takeda, M. Kobayashi, H. Okada, Y. Onakatomi
Yokohama Kanagawa Children's Medical Center, Japan

1:15 PM **Optimal Timing of Stage 2 Palliation for Hypoplastic Left Heart Syndrome**
Robert B. Jaquiss, Dallas, TX

1:30 PM **ABSTRACT:** External Stenting for Vascular Compression Syndrome
M. Ando
Sakakibara Heart Institute, Tokyo, Japan

1:45 PM **ABSTRACT:** Characterizing Outcomes of Isolated and Complex Complete Atrioventricular Septal Defect Repair: An All-Encompassing Experience
C. M. Mery, R. A. Zea-Vera, M. A. Chacon-Portillo, H. Zhu, W. B. Kyle, I. Adachi, L. C. Kane, J. Heinle, C. Fraser
Texas Children's Hospital/Baylor College of Medicine, Houston

2:00 PM **ABSTRACT:** Detachment of the Tricuspid Valve in Perimembranous Ventricular Septal Defect Closure Does Not Impact Tricuspid Valve Function at Long-Term Follow-Up
C. Fraser¹, S. Palepu², A. Suarez-Pierre³, X. N. Zhou³, T. C. Crawford², J. T. Magruder², C. N. Lui³, M. L. Jacobs⁴, D. E. Cameron², N. Hibino³, L. A. Vricella³
¹Texas Children's Hospital, Houston, ²The Johns Hopkins Hospital, Baltimore, MD, ³The Johns Hopkins University School of Medicine, Baltimore, MD, ⁴The Johns Hopkins University School of Medicine, Newtown Square, PA

2:15 PM **ABSTRACT:** Mid-Term Outcomes of Common Atrioventricular Valve Repair in Patients With Single Ventricular Physiology
H. F. Fengpu, S. A. Li, M. Kai, Z. Sen, Q. Lei, Q. Chen
National Center for Cardiovascular Diseases, Beijing Fuwai Hospital, Chinese Academy of Medical Sciences, and Peking Union Medical College

2:30 PM **ABSTRACT:** Near-Normothermic Goal-Directed Innominate and Femoral Perfusion for Norwood Palliation of Hypoplastic Left Heart Syndrome
G. M. Hoffman, V. Hraska, J. P. Scott, M. E. Mitchell, R. K. Woods, E. E. Stuth
Children's Hospital and Medical College of Wisconsin, Milwaukee

2:45 PM **ABSTRACT:** Surgical Management and Outcomes of Ebstein Anomaly in Neonates and Infants: An Analysis of the STS Congenital Heart Surgery Database
K. A. Holst¹, J. A. Dearani¹, S. Said¹, R. R. Davies², C. Pizarro³, C. J. Knott-Craig⁴, V. A. Starnes⁵, S. Kumar⁶, S. K. Pasquali⁶, D. Thibault⁷, J. M. Meza⁸, K. Hill⁹, K. E. Chiswell⁹, J. P. Jacobs¹⁰, M. L. Jacobs¹¹

¹Mayo Clinic, Rochester, MN, ²University of Texas Southwestern Medical Center/Children's Medical Center Dallas, ³Nemours/Alfred I. duPont Hospital for Children, Wilmington, DE, ⁴Le Bonheur Children's Hospital, Memphis, TN, ⁵University of Southern California, Los Angeles, ⁶University of Michigan, Ann Arbor, ⁷Duke University, Durham, NC, ⁸Duke University Medical Center, Durham, NC, ⁹Duke Clinical Research Institute, Durham, NC, ¹⁰Johns Hopkins All Children's Hospital, St Petersburg, FL, ¹¹The Johns Hopkins University School of Medicine, Newtown Square, PA

1:00 PM – 3:00 PM

EACTS @ STS: Bicuspid Aortic Valve Repair With Aortic Valve Insufficiency and Proximal Aortic Aneurysm Repair

In this session, presented by STS and the European Association for Cardio-Thoracic Surgery (EACTS Vascular Domain), international experts will examine the treatment options available for bicuspid aortic valve (BAV) disease associated with pure aortic valve insufficiency (AI) and root dilation. Technical considerations, conduct of operation, surgical decision making, and the most up-to-date data will be presented.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe the reconstructive options available for repair of bicuspid aortic valve insufficiency with aortic root aneurysm
- Identify all bicuspid aortic valve phenotypes and consider which surgical treatment should be utilized

MODERATORS: Joseph E. Bavaria, Philadelphia, PA, and Ruggero De Paulis, Rome, Italy*

1:00 PM **Introduction: BAV Repair With Proximal Aortic Aneurysm: Essential Controversies Revealed**
Joseph E. Bavaria, Philadelphia, PA

1:12 PM **ABSTRACT:** David V Valve-Sparing Aortic Root Replacement Provides Equivalent Long-Term Outcomes in Patients With Bicuspid and Trileaflet Aortic Valves
M. O. Kayatta, B. G. Leshnower, L. McPherson, J. Binongo, C. Zhang, Y. Q. Lasanajak, E. P. Chen
Emory University, Atlanta, GA

1:24 PM **DEBATE:** What Is the Best Operation for BAV AI With Root Aneurysm?
Remodeling with External Subannular Ring:
Emmanuel Lansac, Paris, France
Reimplantation Root Procedure:
Michael P. Fischbein, Stanford, CA

1:54 PM **ABSTRACT:** Predictors of Long-Term Functional Outcomes in Type I Bicuspid Aortic Valve Repair
A. Habberthuer¹, C. Komlo², J. E. Bavaria², M. A. Siki², M. Freas¹, R. C. Milewski¹, N. Desai², W. Y. Szeto², P. Vallabhajosyula²
¹Hospital of the University of Pennsylvania, Philadelphia, ²University of Pennsylvania, Philadelphia

2:06 PM **Reimplantation and Valve Repair in BAV AI With Dilated Root: Evolution of the Procedure and Decision Making**
Gebrine El-Khoury, Brussels, Belgium

2:26 PM **Fundamental Controversies in BAV Repair With Root Aneurysm**
Joseph E. Bavaria, Philadelphia, PA

2:46 PM **ABSTRACT: Association Between Symmetric BAV Phenotypes and the Pattern of Valvular Dysfunction and Bicuspid Aortopathy**
Z. Z. Huang
Peking Union Medical College, Beijing, China

1:00 PM – 3:00 PM

NEW! STS/ISHLT Joint Symposium: LVAD Therapy in 2018—Worldwide Perspectives

This joint symposium between STS and the International Society for Heart and Lung Transplantation will feature contemporary experience with left ventricular assist device (LVAD) therapy around the globe. The latest clinical trials and registry data will be presented, and areas of ongoing advanced research will be highlighted. This session also will cover innovative approaches to LVAD therapy, including minimally invasive implantation and LVAD decommissioning.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Explain the results of recent multicenter clinical trials of LVAD therapy, including survival and expected complications of the most commonly used pumps
- Describe the data provided by international LVAD registries and further questions that may be addressed through registry data
- Discuss the advantages and disadvantages of minimally invasive LVAD implantation and minimally invasive LVAD decommissioning
- Identify differences and commonalities among European, Asian, and American experiences with LVAD therapy

MODERATORS: *Jiri Maly, Prague, Czech Republic, and Gabriel Sayer, Chicago, IL*

1:00 PM **On the Horizon: Recent LVAD Clinical Trial Results and Emerging Data**
Nir Uriel, Chicago, IL

1:15 PM **The HeartMate 3 LVAD in Europe: CE Mark and the ELEVATE Registry**
Finn Gustafsson, Copenhagen, Denmark

1:30 PM **IMACS: What Can Registries Teach Us About LVADs?**
James K. Kirklin, Birmingham, AL

1:45 PM **Panel Discussion**

2:00 PM **Minimally Invasive Approach to LVAD Implantation**
Nahush A. Mokadam, Seattle, WA

2:15 PM **Alternative Anticoagulation Strategies in LVAD Patients**
Ivan Netuka, Prague, Czech Republic

2:30 PM **Durable Biventricular Support Options in 2018**
Gert D. Pretorius, San Diego, CA

2:45 PM **Panel Discussion**

1:00 PM – 3:00 PM

General Thoracic: Lung Cancer II

MODERATORS: *Lisa M. Brown, Sacramento, CA, and Robert A. Meguid, Aurora, CO*

1:00 PM **Database Studies: Are They Worth the Paper They're Printed On?**
Felix G. Fernandez, Atlanta, GA

1:15 PM **ABSTRACT: Richard E. Clark Memorial Paper for General Thoracic Surgery: Use of Invasive Mediastinal Staging for Lung Cancer by STS National Database Participants**
S. B. Krantz¹, J. A. Howington², D. E. Wood³, K. Kim¹, A. S. Kosinski⁴, M. Cox⁵, S. Kim⁴, M. S. Mulligan⁶, F. Farjah⁶
¹NorthShore University Health System, Evanston, IL, ²Saint Thomas Healthcare, Nashville, TN, ³University of Washington, Seattle, ⁴Duke Clinical Research Institute, Durham, NC, ⁵Duke University Medical Center, Durham, NC, ⁶University of Washington Medical Center, Seattle
DISCUSSANT: *Mark S. Allen, Rochester, MN*

1:30 PM **ABSTRACT: Significant Variation in Compliance With Lung Cancer Quality Measures Exists Across US Hospitals**
D. D. Odell¹, J. Feinglass¹, K. E. Engelhardt¹, A. Bharat¹, S. Meyerson¹, K. Y. Bilimoria¹, M. M. DeCamp²
¹Northwestern University, Chicago, IL, ²Northwestern Memorial Hospital, Chicago, IL

1:45 PM **ABSTRACT: Defining Proficiency for STS National Database Participants Performing Thoracoscopic Lobectomy**
V. Puri¹, F. Farjah², C. W. Seder³, D. W. Wormuth⁴, H. A. Gaissert⁵, L. M. Brown⁶, M. Magee⁷, M. A. Edwards⁸, R. Welsh⁹, S. R. Broderick¹⁰, A. C. Chang¹¹, E. L. Grogan¹², F. G. Fernandez¹³, D. P. Raymond¹⁴, A. S. Kosinski¹⁵, B. Kozower¹
¹Washington University, St Louis, ²University of Washington Medical Center, Seattle, ³Rush University Medical Center, Chicago, IL, ⁴CNY Thoracic Surgery, PC, Jamesville, NY, ⁵Massachusetts General Hospital, Boston, ⁶University of California, Davis Medical Center, Sacramento, ⁷Medical City Dallas, TX, ⁸St Louis University, MO, ⁹Beaumont, Auburn Hills, MI, ¹⁰The Johns Hopkins University, Baltimore, MD, ¹¹University of Michigan, Ann Arbor, ¹²Vanderbilt University Medical Center, Nashville, TN, ¹³Emory University, Atlanta, GA, ¹⁴Cleveland Clinic, OH, ¹⁵Duke Clinical Research Institute, Durham, NC

2:00 PM **ABSTRACT: Postoperative Radiation Therapy Does Not Improve Survival When Added to Chemotherapy in Patients With Clinical N0, Pathological N2 Non-Small-Cell Lung Cancer After Resection**
J. A. Drake¹, D. C. Portnoy², B. Weksler²
¹University of Tennessee Health Science Center, Memphis, ²University of Tennessee/West Cancer Center, Memphis

2:15 PM **ABSTRACT: The Role of Lymph Node Dissection in Carcinoids: A National Cancer Database Analysis**
P. J. Kneuert¹, M. K. Kamel¹, B. E. Lee¹, M. Rahouma¹, J. E. Jurado¹, S. W. Harrison¹, B. M. Stiles¹, N. K. Altorki¹, J. Port
NewYork-Presbyterian Hospital, Weill Cornell Medical College, NY

2:30 PM **ABSTRACT: Is There a Role for Surgical Resection in Early Stage Sarcomatoid or Biphasic Mesothelioma? Result of a Propensity-Matched Analysis**
S. S. Kim¹, L. L. Garland¹, C. C. Hsu¹
University of Arizona, Tucson

2:45 PM **ABSTRACT: Differences and Quality Indicators in Low- and High-Performing STS General Thoracic Surgery Database Participants**
B. C. Tong¹, S. Kim², A. S. Kosinski², S. Vemulapalli², T. D'Amico¹, M. G. Hartwig¹, D. Harpole¹, J. A. Klapper¹, M. A. Daneshmand¹, M. W. Onaitis³
¹Duke University Medical Center, Durham, NC, ²Duke Clinical Research Institute, Durham, NC, ³University of California, San Diego



1:00 PM – 3:00 PM

General Thoracic: Mediastinal/Pulmonary

MODERATORS: Usman Ahmad, Cleveland, OH, and Christopher R. Morse, Boston, MA

1:00 PM **ABSTRACT:** Short-Term Outcomes of Tracheal Resection in the STS General Thoracic Surgery Database
B. P. Stanifer¹, A. C. Andrei², S. Meyerson², D. D. Odell², A. Bharat², M. Liu¹, M. M. DeCamp¹

¹Northwestern Memorial Hospital, Chicago, IL, ²Northwestern University, Chicago, IL

1:15 PM **ABSTRACT:** Comparison of Neoadjuvant Chemotherapy Followed by Surgery to Surgery Alone for Advanced Thymic Malignancies: A Propensity Score-Matching Analysis Based on a Multicenter Database

S. Park¹, K. Hyun¹, Y. Hwang¹, H. Lee¹, I. Park¹, Y. T. Kim¹, S. S. Hwang², G. Lee³, S. Choi³, H. Kim³, Y. Kim³, D. Kim³, S. Park³, J. H. Cho⁴, H. Kim⁴, Y. Y. Choi⁴, J. Kim⁴, J. Zo⁴, Y. M. Shim⁴, G. Byun⁵, C. Lee⁵, J. Lee⁵, D. Kim⁵, H. C. Paik⁵, K. Y. Chung⁵, C. Kang¹

¹Seoul National University Hospital, South Korea, ²Ulsan University Hospital, South Korea, ³Asan Medical Center, Seoul, South Korea, ⁴Samsung Medical Center, Seoul, South Korea, ⁵Yonsei University College of Medicine, Seoul, South Korea

1:30 PM **ABSTRACT:** Induction Therapy Does Not Improve Survival in Patients With Large Thymomas

D. Z. Liou¹, N. S. Lui², D. Ramakrishnan¹, J. B. Shrager¹, L. M. Backhus¹, M. F. Berry¹

¹Stanford University, CA, ²Stanford University Medical Center, Palo Alto, CA

1:45 PM **ABSTRACT:** Accumulated Frailty Characteristics Predict Postoperative Respiratory Failure in Patients With Severe Tracheobronchomalacia Undergoing Tracheobronchoplasty

D. H. Buitrago¹, D. E. Alape¹, J. L. Wilson¹, M. Parikh¹, A. Majid¹, D. H. Kim¹, S. P. Gangadharan²

¹Beth Israel Deaconess Medical Center, Boston, ²Harvard Medical School, Boston, MA

2:00 PM **ABSTRACT:** Left Cardiac Sympathetic Denervation for Management of Long QT Syndrome: Single-Center 7-Year Experience

A. C. Antonopoulos, D. Patrini, S. A. Mitsos, M. M. Scarci, M. P. Hayward, R. George, D. R. Lawrence, N. T. Panagiotopoulos

University College London Hospitals NHS Foundation Trust, United Kingdom

2:15 PM **ABSTRACT:** Nerve-Sparing Surgery in Advanced Stage Thymomas

V. Aprile¹, P. P. Bertoglio², S. S. Korasidis¹, D. D. Bacchin³, M. Lucchi¹, A. A. Mussi¹

¹University of Pisa, Italy, ²Sacro Cuore Don Calabria Research Hospital Cancer Care Centre, Verona, Italy, ³AOUP, Pisa, Italy

2:30 PM **Robotic Thymectomy: How I Do It**
 Inderpal S. Sarkaria, New York, NY

2:45 PM **Surgery for Myasthenia Gravis**
 Joshua R. Sonett, New York, NY

1:00 PM – 5:30 PM

Patient Safety Symposium: Biases and Errors—Why We Do What We Do

Cognitive biases have been implicated as a cause of errors in diagnosis and treatment. Thus, physicians who become familiar with common cognitive biases should be able to better recognize biases in their clinical practice. In spite of research evidence and clinical guidelines, there are variances in surgical diagnosis and treatment (eg, blood transfusion practices and antibiotic usage). The aim of this symposium is to better understand the ways by which cognitive biases and heuristics (general rules of thumb) impact how we practice cardiothoracic surgery and how we identify and learn from errors (eg, root cause analysis).

Learning Objectives

Upon completion of this activity, participants should be able to:

- Discuss cognitive biases and heuristics in health care delivery
- Recognize how these biases impact medical decision making
- Conduct more effective error analysis, such as root cause analysis
- Demonstrate how to communicate with others regarding variances in medical judgment and practice

MODERATORS: W. Chance Conner, San Antonio, TX, and Michael S. Kent, Boston, MA

1:00 PM **Introduction**

W. Chance Conner, San Antonio, TX, and Michael S. Kent, Boston, MA

1:15 PM **Surgical Practice and Evidence-Based Medicine: Why the Incongruity?**

Kevin W. Lobdell, Charlotte, NC

1:45 PM **How Do We Make the Diagnosis? Biases and Heuristics in Medicine**

Geoffrey Norman, Hamilton, Canada

2:15 PM **Cognition in the Wild (of the Operating Room)**

David Woods, Columbus, OH*

2:45 PM **Panel Discussion/Q&A**

3:00 PM **Break**

3:30 PM **Break Root Cause Analysis: Is There a Right Way?**

Juan A. Sanchez, Baltimore, MD

4:00 PM **Errors and How We Can Learn From Them**

James Bagian, Ann Arbor, MI*

4:30 PM **Panel Discussion/Q&A**

3:00 PM – 3:30 PM

BREAK—Visit Exhibits and Scientific Posters

3:30 PM – 4:30 PM

Cardiothoracic Surgical Education

MODERATORS: David D. Odell, Chicago, IL, and Rishindra M. Reddy, Ann Arbor, MI

3:30 PM

ABSTRACT: Lessons Learned From a Multicenter Prospective Randomized Study of Skill Acquisition in Cardiovascular Surgery Using a Low-Fidelity Simulation PlatformJ. R. Spratt¹, M. E. Brunsvold¹, D. Joyce², T. C. Nguyen³, M. B. Antonoff⁴, G. N. Loo⁵¹University of Minnesota, Minneapolis, ²Mayo Clinic, Rochester, MN, ³Memorial Hermann-Texas Medical Center, Houston, ⁴The University of Texas MD Anderson Cancer Center, Houston, ⁵Texas Heart Institute/Baylor College of Medicine, Houston

3:42 PM

ABSTRACT: The Current State of Mentorship in Cardiothoracic Surgery Training: Results of the TSDA/TSRA In-Training Exam SurveyE. H. Stephens¹, A. B. Goldstone², A. G. Fiedler³, P. N. Vardas⁴, G. S. Pattakos⁵, X. Lou⁶, P. Chen⁷, V. Tchanchaleishvili⁸¹Columbia University Medical Center, New York, NY, ²University of Pennsylvania, Philadelphia, ³Massachusetts General Hospital and Harvard Medical School, Boston, ⁴Indiana University School of Medicine, Indianapolis, ⁵Texas Heart Institute/Baylor College of Medicine, Houston, ⁶Emory University, Atlanta, GA, ⁷Baylor College of Medicine, Houston, TX, ⁸Mayo Clinic, Rochester, MN

3:54 PM

ABSTRACT: Role of Social Media in Mentorship: A Comparative Analysis of Cardiothoracic Surgery and Other Surgical SpecialtiesJ. Luc¹, N. L. Stamp², M. B. Antonoff³¹University of Alberta, Edmonton, Canada, ²Fiona Stanley Hospital, Murdoch, Australia, ³The University of Texas MD Anderson Cancer Center, Houston

4:06 PM

ABSTRACT: Systematic Development, Implementation and Evaluation of an Annual Hands-on Educational Program for Minimally Invasive Cardiac Surgery

E. O. Ebunlomo, M. M. Lazarus, T. E. MacGillivray, C. S. Green McClennon, K. F. Stein, B. A. Peace, M. K. Ramchandani

Houston Methodist Hospital, TX

4:18 PM

ABSTRACT: Development and Initial Validation of a Cervical Esophagogastric Anastomosis SimulatorM. Orringer¹, D. R. Hennigar², J. Lin¹, D. M. Rooney¹¹University of Michigan, Ann Arbor, ²DRH Consulting, Ann Arbor, MI

3:30 PM – 5:30 PM

Adult Cardiac: Aorta II

MODERATORS: Jehangir J. Appoo, Calgary, Canada, and Edward P. Chen, Atlanta, GA

3:30 PM

ABSTRACT: Early Clinical Outcomes of Hybrid Aortic Arch and Frozen Elephant Trunk Reconstruction With the Thoraflex Hybrid Graft: A Multicenter Experience From the Canadian Thoracic Aortic CollaborativeM. Chu¹, L. A. Dubois², K. L. Losenno³, P. M. Jones¹, M. Ouzounian³, R. Whitlock⁴, F. Dagenais⁵, M. Boodhwani⁶, G. N. Bhatnagar³, A. A. Poostizadeh⁷, Z. I. Pozeg⁸, M. C. Moon⁹, B. Kiai¹, M. D. Peterson¹⁰¹Western University, London Health Sciences Centre, Canada,²Western University, London, Canada, ³University of Toronto, Canada,⁴Population Health Research Institute, Hamilton, Canada, ⁵Institut

Universitaire de Cardiologie et Pneumologie de Québec, Canada,

⁶University of Ottawa Heart Institute, Canada, ⁷KGH, Kelowna,Canada, ⁸St Boniface Hospital, University of Manitoba, Winnipeg,Canada, ⁹University of Alberta, Edmonton, Canada, ¹⁰St Michael's

Hospital, Toronto, Canada

3:45 PM

ABSTRACT: Salvage Coronary Artery Bypass Predicts Increased Mortality During Aortic Root Surgery

W. B. Keeling, B. G. Leshnower, C. W. Stouffer, J. Binongo, E. P. Chen

Emory University, Atlanta, GA

4:00 PM

ABSTRACT: Clinical Value of Computational Fluid Dynamics in the Management of Aortic Pathologies: Looking Beyond the Experimental ApplicationD. Calcaterra², L. A. Shrestha¹, K. M. Harris², S. C. Vigmostad¹, J. J. Manunga², K. R. Parekh³, M. Ricci⁴¹University of Iowa, Iowa City, ²Minneapolis Heart Foundation at Abbott Northwestern Hospital, MN, ³University of Iowa Hospital & Clinics, Iowa City, ⁴University of New Mexico, Albuquerque

4:15 PM

ABSTRACT: Residual Tears in the Arch Vessel Is a Potential Risk Factor for Major Adverse Aortic Events After Acute DeBakey Type I Aortic Dissection RepairW. Heo¹, S. Song¹, K. Lee¹, T. Kim¹, M. Baek¹, K. Yoo¹, B. Cho²¹Yonsei University, Gangnam Severance Hospital, Seoul, South Korea,²Korea Heart Foundation, Seoul, South Korea

4:30 PM

DEBATE: 55-Year-Old Patient Presenting With Acute Type A Aortic Dissection With Hemiplegia**Aggressive Immediate Intervention:**

Thomas G. Gleason, Pittsburgh, PA

Expectant Management and Delayed Intervention:

Anthony L. Estrera, Houston, TX

5:00 PM

ABSTRACT: The Role of Multilayer Flow Modulator Stents in the Endovascular Treatment of Aortic Dissection: A Single-Center ExperienceV. Costache¹, D. M. Dorobantu², A. D. Costache³, C. M. Goia³, O. I. Stiru², R. A. White⁴¹Polisano European Hospital, Sibiu, Romania, ²Institute for Cardiovascular Diseases CC Iliescu, Bucharest, Romania, ³Lucian Blaga University, Sibiu, Romania, ⁴MemorialCare Heart & Vascular Institute, Long Beach, CA

5:15 PM

ABSTRACT: Axillary vs Femoral Cannulation in Acute Type A Aortic Dissection: An International Consortium ReportO. Preventza¹, D. Tian², T. D. Yan³, S. A. LeMaire¹, J. S. Coselli¹¹Baylor College of Medicine, Houston, TX, ²International Aortic Arch Surgery Study Group, Macquarie Park, Australia, ³Royal Prince Alfred Hospital, Sydney, Australia

3:30 PM – 5:30 PM

Adult Cardiac: Aortic Valve/Novel Technologies

MODERATORS: Ibrahim Sultan, Pittsburgh, PA, and Wilson Y. Szeto, Philadelphia, PA

3:30 PM

ABSTRACT: Need for Permanent Pacemaker After Aortic Valve Replacement Reduces Long-Term Survival: Implications for Transcatheter Aortic Valve Replacement
J. H. Mehaffey, R. B. Hawkins, E. J. Charles, J. A. Kern, N. R. Teman, I. L. Kron, L. T. Yarbboro, G. Allawadi
University of Virginia Health System, Charlottesville

3:45 PM

ABSTRACT: Transcatheter Aortic Valve Replacement After Previous Mitral Valve Repair or Replacement Surgery: Results From the STS/ACC Transcatheter Valve Therapy (TVT) Registry
D. G. Cervantes¹, J. J. Kelly¹, S. Vemulapalli², P. Manandhar³, J. Forcillo¹, M. J. Mack⁴, D. R. Holmes⁵, D. Cohen⁶, A. J. Kirtane⁷, S. K. Kodali⁸, M. B. Leon⁹, V. C. Babaliaros¹, S. C. Malaisrie⁹, S. R. Kapadia¹⁰, M. Reardon¹¹, T. G. Gleason¹², E. Holper⁵, J. E. Bavaria¹³, H. C. Herrmann¹³, W. Y. Szeto¹³, J. D. Carroll¹⁴, V. H. Thourani¹

¹Emory University, Atlanta, GA, ²Duke Clinical Research Institute, Durham, NC, ³Duke University, Durham, NC, ⁴The Heart Hospital Baylor Plano, TX, ⁵Mayo Clinic, Rochester, MN, ⁶Saint Luke's Mid America Heart Institute, Kansas City, MO, ⁷Columbia University, New York, NY, ⁸Columbia University College of Physicians and Surgeons, New York, NY, ⁹Northwestern Medicine, Chicago, IL, ¹⁰Cleveland Clinic, OH, ¹¹Houston Methodist Hospital, TX, ¹²University of Pittsburgh, PA, ¹³University of Pennsylvania, Philadelphia, ¹⁴University of Colorado Denver, Aurora

4:00 PM

ABSTRACT: Evolving Trends in Aortic Valve Replacement: A Statewide Experience
K. M. Kim¹, F. L. Shannon², G. Paone³, S. C. Lall⁴, S. N. Batra⁵, T. Boeve⁶, A. Delucia⁷, H. J. Patel⁸, P. F. Theurer⁸, G. Deeb¹, R. L. Prager⁸

¹University of Michigan, Ann Arbor, ²Beaumont Cardiovascular Surgery, Royal Oak, MI, ³Henry Ford Hospital, Detroit, MI, ⁴Munson Medical Center, Traverse City, MI, ⁵St John Hospital, Detroit, MI, ⁶Spectrum Health, Grand Rapids, MI, ⁷Bronson Methodist Hospital, Kalamazoo, MI, ⁸University of Michigan Health System, Ann Arbor

4:15 PM

ABSTRACT: Sutureless Aortic Valves in Elderly Patients With Aortic Stenosis and Intermediate Risk Profile: Early and Long-Term Outcomes

C. C. Muneretto¹, M. M. Solinas², T. A. Folliquet³, G. Concistré⁴, L. L. Di Bacco⁵, F. Rosati¹, L. Giroletti¹, A. A. Repossini¹, C. Savini⁶, S. S. Pfeiffer⁵, G. G. Santarpino⁵, R. Di Bartolomeo⁶, T. J. Fischlein⁵

¹University of Brescia Medical School, Italy, ²Heart Hospital Monasterio Foundation, Massa, Italy, ³Institut Lorrain du Cœur & des Vaisseaux Louis Mathieu, Vandoeuvre Les Nancy, France, ⁴Ospedale del Cuore, G. Pasquucci, Massa, Italy, ⁵Paracelsus Medical University Nuremberg, Germany, ⁶S. Orsola Malpighi Hospital, Bologna, Italy

4:30 PM

ABSTRACT: Transcaval Transcatheter Aortic Valve Replacement for the Treatment of Subaortic Stenosis
J. J. Kelly, J. Forcillo, V. C. Babaliaros, S. Lerakis, F. E. Corrigan, V. H. Thourani
Emory University, Atlanta, GA

4:45 PM

ABSTRACT: Geometric Changes in the Aortic Root Complex With Annular Stabilization Techniques in Type I Bicuspid Aortic Valve Repair: Valve-Sparing Root Reimplantation vs Subcommissural Annuloplasty/ External Subannular Aortic Ring
H. A. Ko¹, J. E. Bavaria¹, R. N. Shah¹, L. F. Al Ghofaily¹, C. Komlo¹, J. G. Augoustides¹, M. A. Siki¹, N. Desai¹, A. Habertheuer², R. C. Milewski¹, M. Freas¹, W. Y. Szeto¹, P. Vallabhajosyula¹
¹University of Pennsylvania, Philadelphia, ²Hospital of the University of Pennsylvania, Philadelphia

5:00 PM

DEBATE: Severe Symptomatic Aortic Insufficiency in a 50-Year-Old Patient With Non-Aneurysmal Bicuspid Aortic Valve

Isolated Valve Repair:

Munir Boodhwani, Ottawa, Canada

Mechanical Aortic Valve Replacement:

Ibrahim Sultan, Pittsburgh, PA

Bioprosthetic Aortic Valve Replacement:

Michael J. Reardon, Houston, TX*

3:30 PM – 5:30 PM

Advanced Therapies for End-Stage Cardiopulmonary Disease

The successful use of durable mechanical circulatory support (MCS) requires careful patient selection, infrastructure with specialized knowledge, and an institutional commitment. This course is an interactive and didactic session presented by leading authorities on practice recommendations regarding patient selection, infrastructure building, and surgical techniques in the field of durable MCS. Clinical practice guidelines from major societies and regulatory agencies will be covered, along with results of recent large-scale clinical trials. There will be ample time for audience questions on this complex and rapidly evolving field.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe the impact of preoperative variables on durable ventricular assist device (VAD) outcomes, including the use of temporary MCS, vasoconstrictors, mechanical ventilation, and evidence of end organ injury
- Explain the roles of various MCS team members, including VAD coordinators, data collection personnel, occupational and physical therapists, social workers, clinical psychologists, financial specialists, heart failure cardiologists, and surgeons
- Discuss the essentials of maintaining and documenting competence of each of these individuals with respect to MCS, including the certification requirements of various regulatory agencies
- Explain the economics of MCS programs, including potential revenue streams and estimated operational costs
- Recognize the various surgical techniques employed in the MOMENTUM 3 clinical trial with an emphasis on measures that were associated with improved quality

MODERATORS: Jonathan W. Haft, Ann Arbor, MI, and Bryan A. Whitson, Columbus, OH

3:30 PM

Introduction

3:35 PM

DEBATE: A Robust Shock/Temporary MCS System Can Successfully Augment a Growing VAD Program

Pro: Pavan Atluri, Philadelphia, PA

Con: Ashish Shah, Nashville, TN

3:55 PM

Discussion

4:05 PM

VAD Team Roles and Responsibilities

Simon Maltais, Rochester, MN

4:20 PM

VAD Economics

Michael A. Acker, Philadelphia, PA

4:35 PM

VAD Compliance and Certification

Michael F. McGrath, Norfolk, VA

4:50 PM

How to Grow a VAD Program

Scott C. Silvestry, St Louis, MO

5:05 PM

Momentum 3: Surgical Techniques in HeartMate 3 That Can Impact Quality

Chris T. Salerno, Carmel, IN

5:20 PM

Discussion

3:30 PM – 5:30 PM

Congenital: Pediatric Congenital III

MODERATORS: S. Adil Husain, San Antonio, TX, and Kirk R. Kanter, Atlanta, GA*

3:30 PM

ABSTRACT: Beating Heart Root Harvesting for En Bloc Rotation of the ConotruncusT. Sologashvili¹, M. Beghetti¹, Y. Aggoun¹, R. Pretre², P. Myers¹¹Geneva University Hospitals, Switzerland, ²CHUV, Lausanne, Switzerland

3:45 PM

ABSTRACT: Late Results of Half-Turned Truncal Switch Operation for Transposition of the Great Arteries With Left Ventricular Outflow ObstructionH. Hongu, M. M. Yamagishi, T. D. Miyazaki, Y. Y. Maeda, S. Taniguchi, S. Fujita, H. Nakatsuji, H. Yaku
Kyoto Prefectural University of Medicine, Japan

4:00 PM

ABSTRACT: Senning With Aortic Translocation, Anatomic Repair for Congenitally Corrected Transposition With Ventricular Septal Defect, and Pulmonic Stenosis

V. K. Tam, E. A. Erez, V. A. Sebastian, L. M. Rothen, H. Nikaidoh

Cook Children's Medical Center, Fort Worth, TX

4:15 PM

ABSTRACT: Long-Term Outcomes of Coarctation Repair via Left ThoracotomyM. R. Gropler¹, B. S. Marino², M. R. Carr², O. Eltayeb², M. C. Monge², C. L. Backer²¹Washington University in St Louis College of Medicine, MO,²Ann & Robert H. Lurie Children's Hospital of Chicago, IL

4:30 PM

ABSTRACT: Extra-Anatomic Bypass for Complex Adult Coarctation With Distal Arch Aneurysm and Anomalous Left Subclavian Artery

E. N. Feins, A. S. Jassar, L. F. Tapias, E. M. Isselbacher, T. M. Sundt III

Massachusetts General Hospital, Boston

4:45 PM

ABSTRACT: Posterior Leaflet Augmentation for Mitral Valve Regurgitation in Children: A Standardized Approach

G. Brancaccio, M. Chinali, M. Trezzi, C. D'Anna, C. Esposito, E. E. Cetrano, S. B. Albanese, G. Rinelli, A. Carotti

Bambino Gesù Children's Hospital, Rome, Italy

5:00 PM

ABSTRACT: Tetralogy of Fallot Repair in Developing Countries: Results From the International Quality Improvement CollaborativeN. F. Sandoval¹, M. Carreño¹, W. M. Novick², R. Agarwal³, A. Iftikhar⁴, R. Balachandran⁵, M. Ballestrini⁶, K. M. Cherian⁷, U. Crotti⁸, X. Du⁹, K. Gauvreau¹⁰, D. Giang¹¹, R. Shastri¹², K. J. Jenkins¹⁰¹Fundacion Cardio-Infantil, Bogota, Colombia, ²William Novick Global Cardiac Alliance, University of Tennessee Health Science Center, Memphis, ³Madras Medical Mission, Chennai, India, ⁴Armed Forces Institute of Cardiology, National Institute of Heart Disease, Rawalpindi, Pakistan, ⁵Amrita Institute of Medical Science, Kerala, India, ⁶Hospital Garrahan, Buenos Aires, Argentina, ⁷Frontier Lifeline & Dr.K.M.Cherien Heart Foundation, Chennai, India, ⁸Hospital da Criança e Maternidade, Sao Jose do Rio Preto, Brazil, ⁹Shanghai Children's Medical Center, China, ¹⁰Boston Children's Hospital, MA, ¹¹Children's Hospital, Ho Chi Minh City, Vietnam, ¹²Star Hospital, Hyderabad, India

5:15 PM

ABSTRACT: Symptomatic Tetralogy of Fallot in the First 2 Months of Life: Comparison Between Repair vs ShuntY. M. Menaissy
Cairo University, Mohandesseen, Egypt

3:30 PM – 5:30 PM

ESTS @ STS: Controversial Issues in General Thoracic Surgery—Perspectives From Europe and North America

Level 1 evidence is often missing in thoracic surgical practice due to a lack of randomized controlled trials. Standard treatment, therefore, may vary between continents, and controversies in management persist. The aim of this session is to compare the current practice in four areas of general thoracic surgery between Europe and North America. The actual outcomes in these domains may not fit the ideal patient outcomes on each continent.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Identify the tumor types for which pulmonary metastectomy is a reasonable option
- Recognize that mesothelioma patients are best treated within the context of a clinical trial at a high-volume center
- Discuss the role of surgery in patients with very limited extent small cell lung cancer
- Describe the management of chest wall malignancies and options for reconstruction

MODERATORS: Janet P. Edwards, Calgary, Canada, and Kostas Papagiannopoulos, Leeds, United Kingdom

3:30 PM

Surgical Management of Pulmonary Metastases: The European Perspective

Tom Treasure, London, United Kingdom

3:40 PM

Surgical Management of Pulmonary Metastases: The North American Perspective

Mark W. Onaitis, La Jolla, CA

3:50 PM

Panel Discussion/Questions

4:00 PM

Management of Malignant Pleural Mesothelioma: The European Perspective

Philippe Nafteux, Leuven, Belgium*

4:10 PM

Management of Malignant Pleural Mesothelioma: The North American Perspective

David J. Sugarbaker, Houston, TX

4:20 PM

Panel Discussion/Questions

4:30 PM

Surgery in Small Cell Lung Cancer: The European Perspective

Andreas Granetzny, Dusseldorf, Germany*

4:40 PM

Surgery in Small Cell Lung Cancer: The North American Perspective

David Harpole, Durham, NC

4:50 PM

Panel Discussion/Questions

5:00 PM

Chest Wall Tumors From Diagnosis to Reconstruction: The European Perspective

Kostas Papagiannopoulos, Leeds, United Kingdom

5:10 PM

Chest Wall Tumors From Diagnosis to Reconstruction: The North American Perspective

Stephen D. Cassivi, Rochester, MN

5:20 PM

Panel Discussion/Questions

3:30 PM – 5:30 PM

General Thoracic: Esophageal

MODERATOR: James D. Luketich, Pittsburgh, PA

- 3:30 PM **ABSTRACT:** Complications After Esophagectomy Are Associated With Extremes of Body Mass Index: An STS National Database Study
B. A. Mitzman¹, P. H. Schipper², M. A. Edwards³, S. Kim⁴, M. K. Ferguson¹
¹The University of Chicago, IL, ²Oregon Health & Science University, Portland, ³St Louis University, MO, ⁴Duke Clinical Research Institute, Durham, NC
- 3:45 PM **ABSTRACT:** Detection of Tumor-Specific Mutations in Plasma DNA: A Potential Esophageal Adenocarcinoma Biomarker
M. R. Egyud¹, J. B. Jackson², E. R. Yamada¹, A. Ståhlberg³, S. Filges³, P. M. Krzyzanowski⁴, G. Nielsen⁵, P. Sridhar⁶, A. Pennathur⁷, J. D. Luketich⁷, M. A. Tejani⁵, Z. Zhou⁵, V. R. Little¹, L. Stein⁴, T. E. Godfrey⁶
¹Boston Medical Center, MA, ²Bio-Rad Laboratories, Billerica, MA, ³Sahlgrenska Cancer Center, University of Gothenburg, Sweden, ⁴Ontario Institute for Cancer Research, Toronto, Canada, ⁵University of Rochester, NY, ⁶Boston University, MA, ⁷University of Pittsburgh Medical Center, PA
- 4:00 PM **ABSTRACT:** Consequences of Refusing Surgery for Esophageal Cancer: A National Cancer Database Analysis
M. Rahouma, M. K. Kamel, A. Nasar, B. E. Lee, S. W. Harrison, J. Port, N. K. Altorki, B. M. Stiles
 Weill Cornell Medical College, New York, NY
- 4:15 PM **ABSTRACT:** Racial Disparity in Utilization of High-Volume Hospitals for Surgical Treatment of Esophageal Cancer Patients
S. S. Rehmani¹, B. Liu², A. M. Al-Ayoubi³, E. E. Lewis⁴, W. Raad⁵, R. M. Flores³, F. Bhora³, E. A. Taioli²
¹Mount Sinai St Luke's Hospital, New York, NY, ²Icahn School of Medicine at Mount Sinai, New York, NY, ³Mount Sinai Health System, New York, NY, ⁴Mount Sinai West and St Luke's Hospitals, New York, NY, ⁵Mount Sinai Health System, Icahn School of Medicine at Mount Sinai, New York, NY
- 4:30 PM **ABSTRACT:** Choice of Neoadjuvant Therapy for Locally Advanced Esophageal Cancer Should Be Targeted to Tumor Histology
B. M. Stiles, M. K. Kamel, M. Rahouma, B. E. Lee, S. W. Harrison, A. B. Nguyen, A. Nasar, J. Port, N. K. Altorki
 Weill Cornell Medicine, New York, NY
- 4:45 PM **ABSTRACT:** Does the Approach Matter? An Analysis of 9353 Patients in the National Cancer Database Comparing Survival and Outcomes of Robotic, Minimally Invasive, and Open Esophagectomies
F. E. Espinoza-Mercado¹, T. Imai¹, J. D. Borgella¹, R. F. Alban¹, D. Serna-Gallegos¹, D. Z. Liou², H. J. Soukiasian¹
¹Cedars-Sinai Medical Center, Los Angeles, CA, ²Stanford University, CA
- 5:00 PM **ABSTRACT:** Volume-Outcome Relationship in Minimally Invasive Esophagectomy
H. V. Salfity, L. R. Timsina, D. P. Ceppa, T. J. Birdas
 Indiana University School of Medicine, Indianapolis
- 5:15 PM **ABSTRACT:** Outcomes of Octogenarians With Esophageal Cancer: An Analysis of the National Cancer Database
A. C. Salami¹, A. E. Abbas², R. V. Petrov², C. T. Bakhos²
¹Albert Einstein Medical Center, Philadelphia, PA, ²Temple University, Philadelphia, PA

4:30 PM – 5:30 PM

Quality Improvement

MODERATOR: Vinay Badhwar, Morgantown, WV

- 4:30 PM **ABSTRACT:** Development and Validation of a Risk Prediction Model for In-Hospital Stroke After Transcatheter Aortic Valve Replacement From the STS/ACCTVT Registry
V. H. Thourani¹, J. J. Kelly¹, S. O'Brien², D. Cohen³, E. D. Peterson⁴, M. J. Mack⁵, D. M. Shahian⁶, F. L. Grover⁷, J. D. Carroll⁷, M. Brennan², J. Forcillo¹, S. V. Arnold³, S. Vemulapalli⁴, S. Fitzgerald⁸, D. R. Holmes⁹, J. E. Bavaria¹⁰, F. H. Edwards¹¹
¹Emory University, Atlanta, GA, ²Duke University, Durham, NC, ³Saint Luke's Mid America Heart Institute, Kansas City, MO, ⁴Duke Clinical Research Institute, Durham, NC, ⁵The Heart Hospital Baylor Plano, TX, ⁶Massachusetts General Hospital, Boston, ⁷University of Colorado Denver, Aurora, ⁸American College of Cardiology, Washington, DC, ⁹Mayo Clinic, Rochester, MN, ¹⁰University of Pennsylvania, PA, ¹¹University of Florida, Jacksonville
- 4:45 PM **ABSTRACT:** Socioeconomic "Distressed Communities Index" Predicts Risk-Adjusted Operative Mortality After Coronary Artery Bypass Grafting
E. J. Charles¹, J. H. Mehaffey¹, R. B. Hawkins², C. E. Fonner³, L. T. Yarboro⁴, M. A. Quader⁵, J. T. Efid⁶, A. C. Kiser⁶, J. B. Rich³, A. M. Speir⁸, I. L. Kron⁵, M. C. Tracci¹, G. Ailawadi¹
¹University of Virginia Health System, Charlottesville, ²University of Virginia, Charlottesville, ³Virginia Cardiac Services Quality Initiative, Virginia Beach, ⁴University of Virginia Medical Center, Charlottesville, ⁵Virginia Commonwealth University, Richmond, ⁶East Carolina Heart Institute, Greenville, NC, ⁸Cardiac, Vascular & Thoracic Surgery Associates, Falls Church, VA
- 5:00 PM **ABSTRACT:** Comparison of the Efficacy and Cost of Awake Thoracoscopy and VATS in Undiagnosed Pleural Effusion
C. M. McDonald¹, C. Pierre¹, G. E. Darling¹, A. F. Pierre², M. Cypel¹, S. Keshavjee³, M. E. De Perrot¹, T. K. Waddell¹, K. Yasufuku³, K. Zarnecka¹
¹University Health Network, Toronto, Canada, ²University of Toronto, Canada, ³Toronto General Hospital, Canada
- 5:15 PM **ABSTRACT:** Successful Strategies to Reduce 30-Day Readmission After Coronary Artery Bypass Graft Surgery
J. Benuzillo¹, B. J. Bowles², J. H. Mitchell³, D. R. Goff⁴, W. T. Caine¹, J. R. Doty⁵, J. D. Buckway⁶, C. A. Roberts⁶, L. L. Krantz Hsieh⁶, D. L. Lappe¹
¹Intermountain Heart Institute, Salt Lake City, UT, ²St George Cardiovascular and Thoracic Surgery, UT, ³Utah Valley Regional Medical Center, Provo, ⁴Intermountain Healthcare, Ogden, UT, ⁵Intermountain Medical Center, Salt Lake City, UT, ⁶Intermountain Healthcare, Salt Lake City, UT



Wednesday

JANUARY 31, 2018

6:30 AM – 9:30 AM

Registration & Breakfast

7:00 AM – 9:00 AM and repeated 9:30 AM – 11:30 AM

STS University

STS University courses feature only hands-on learning. No didactic lectures will be given during the activity, so attendees are encouraged to access the lectures online prior to Wednesday morning. More information will be provided when the lectures are available.

Course 1: Essentials of TAVR

COURSE DIRECTORS: Basel Ramlawi, Winchester, VA, and George Zorn, Kansas City, KS

FACULTY: William T. Brinkman, Plano, TX, Kevin L. Greason, Rochester, MN, Jefferson Lyons, Columbus, OH, S. Chris Malaisrie, Chicago, IL, Hersh S. Maniar, St Louis, MO, Himanshu J. Patel, Ann Arbor, MI, Liam Ryan, Alexandria, VA, and Eric L. Sarin, Atlanta, GA*

Proficiency in transcatheter aortic valve replacement (TAVR) requires the acquisition of multiple endovascular principles and techniques. This course will introduce attendees to balloon-expandable and self-expanding TAVR platforms, as well as the various sheaths, guidewires, and catheters relevant to TAVR. Basics of alternative TAVR access will be discussed, and all participants will gain operational knowledge of the various delivery systems.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe the decision-making process for choosing a TAVR access point (transfemoral, direct aortic, subclavian artery, and transapical)
- State the salient differences in the deployment of balloon-expanded vs self-expanded devices
- Describe the various types of sheaths and guidewires used during the TAVR procedure and understand reasons for their use

Course 2: TEVAR and Aortic Arch Debranching Procedures

COURSE DIRECTORS: Ali Khojinezhad, Los Angeles, CA, and Ourania A. Preventza, Houston, TX

FACULTY: Derek R. Brinster, New York, NY, Ankur Gupta, Long Beach, CA*, Sepehre Naficy, New York, NY*, and Rodney White, Long Beach, CA

This course will review basic catheter and wire skills for thoracic endovascular aortic repair (TEVAR). Participants will have hands-on experience with thoracic stent grafts and intravascular ultrasound (IVUS), as well as using vascular plugs from the brachial or femoral approach. Surgical techniques for zone 0-2 aortic arch debranching procedures will be discussed.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Identify the most common catheters and wires for TEVAR
- Describe the deployment of commercially available stent grafts
- Explain the use of IVUS and vascular plugs for subclavian artery occlusion
- Describe the surgical techniques used in aortic arch debranching

Course 3: Mitral Valve Repair

COURSE DIRECTORS: Steven F. Bolling, Ann Arbor, MI, and Evelio Rodriguez, Nashville, TN

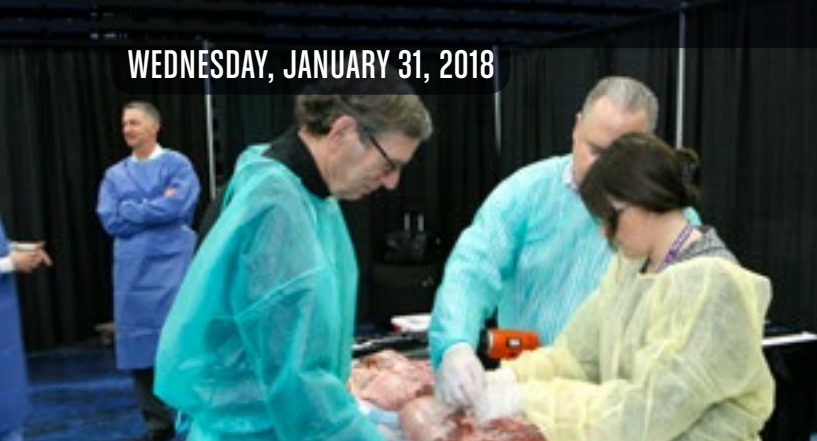
FACULTY: A. Marc Gillinov, Cleveland, OH, and Matthew A. Romano, Ann Arbor, MI

In this course, participants will be able to practice different mitral valve repair strategies for both anterior and posterior leaflet pathologies. These will include leaflet resection and non-resection techniques, commissural repair strategies, and different chordal approaches. In addition, different surgical therapies for secondary mitral regurgitation, including ring selection, leaflet extension techniques, and mitral valve replacement, will be reviewed.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe different leaflet resection and non-resection approaches, in addition to different chordal techniques required for successful mitral valve repair
- Identify advance repair techniques for both primary and secondary mitral regurgitation
- Demonstrate proper mitral valve replacement techniques



Course 4: Valve-Sparing Aortic Root Replacement

COURSE DIRECTORS: Duke E. Cameron, Baltimore, MD, Edward P. Chen, Atlanta, GA, and Bo Yang, Ann Arbor, MI

FACULTY: Jeffrey Brawn, Baltimore, MD, Ruggero De Paulis, Rome, Italy, Michael Deeb, Ann Arbor, MI, Philip J. Hess Jr, Indianapolis, IN*, Melissa Jones, Baltimore, MD, Bradley G. Leshnowar, Atlanta, GA, and Luca A. Vricella, Baltimore, MD

This course will provide interactive, hands-on instruction of the surgical techniques and critical steps necessary for performing a successful valve-sparing aortic root replacement (VSRR).

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe the anatomy of the aortic root
- Summarize the technical steps necessary for a successful VSRR
- List different methods in choosing a graft size
- Discuss leaflet repair and annuloplasty methods

Course 5: Aortic Root Enlargement Procedures and Aortic Valve Leaflet Reconstruction

COURSE DIRECTORS: S. Adil Husain, San Antonio, TX, and Prashanth Vallabhajosyula, Philadelphia, PA

FACULTY: Armin Singh Jassar, Boston, MA, Alberto Pochettino, Rochester, MN, Edward Y. Sako, San Antonio, TX, and Ibrahim Sultan, Pittsburgh, PA

This course will review two specialized subareas of technical expertise required to perform complex aortic root surgery. Participants will learn the anatomic approaches and surgical techniques employed in performing aortic root enlarging procedures, as well as aortic valve leaflet reconstructive techniques and the importance of providing annular stabilization in the context of a repaired aortic valve. Surgical strategies for root enlargement will include Nicks, Manouagian, and Ross Konno. Surgical techniques involving aortic valve leaflet reconstruction will include primary simple cusp plication techniques, patch augmentation technique, Gore-Tex free margin shortening technique, and orienting the repaired bicuspid aortic valve into its aortic neoroot.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Identify the anatomy and appropriate surgical landmarks in the left ventricular outflow tract and aortic valve apparatus
- Describe the incision sites and overall surgical techniques for a variety of root enlargement strategies
- Discuss surgical pitfalls associated with each strategy and mechanisms by which to delineate options based upon patient and anatomic substrate
- Describe how to set up and expose the aortic root for primary valve repair and identify the risk factors for repair failure based on the anatomy of the aortic valve
- Recall the different aortic annular stabilization techniques and recognize the impact of each technique on valve repair – subcommissural annuloplasty, external aortic ring, and root reimplantation

- Identify different bicuspid aortic valve types and explain the implications for valve repair and the choice of annular stabilization
- Demonstrate how to implant a type I bicuspid aortic valve in the context of its neoroot and explain what the different bicuspid subtypes mean for orienting the repaired valve when performing a root reimplantation

Course 6: VATS Lobectomy

COURSE DIRECTORS: DuyKhanh P. Ceppa, Indianapolis, IN, and Betty C. Tong, Durham, NC

FACULTY: Mara B. Antonoff, Houston, TX, Mark F. Berry, Stanford, CA, William R. Burfeind, Bethlehem, PA, Todd L. Demmy, New Brunswick, NJ, Eric L. Grogan, Nashville, TN, John A. Howington, Nashville, TN, Sandeep Jitendra Khandhar, Falls Church, VA, Jeremiah Martin, Portsmouth, OH, and Scott I. Reznik, Dallas, TX

This course will review the indications, patient selection, technical steps, and recent advances for performance of lobectomy using video-assisted thoracic surgery (VATS). Participants will be able to perform a VATS left upper lobectomy on porcine heart-lung blocks.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Describe the indications and steps to perform VATS
- Discuss potential pitfalls and strategies for intraoperative troubleshooting to successfully achieve minimally invasive lobectomy
- Identify instruments and other technologies available to perform minimally invasive lobectomy

Course 7: Advanced Open Esophageal and Tracheal Procedures

COURSE DIRECTORS: Sidharta P. Gangadharan, Boston, MA, and Sandra L. Starnes, Cincinnati, OH

FACULTY: Rafael S. Andrade, Minneapolis, MN, Scott M. Atay, Los Angeles, CA, Andrew Chang, Ann Arbor, MI, James Huang, New York, NY*, Robert E. Merritt, Columbus, OH, John D. Mitchell, Aurora, CO, K. Robert Shen, Rochester, MN*, John Wain, Boston, MA*, and Jennifer L. Wilson, Boston, MA

This course will provide hands-on training for several esophageal anastomosis techniques, as well as airway anastomosis and repair. These advanced operative techniques are not frequently utilized in most general thoracic surgery practices, but competence in these techniques is important. Participants will be introduced to several techniques for airway and esophageal reconstruction with emphasis in the different technical aspects ("pearls") of the anastomosis from content experts.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Identify and perform the appropriate esophageal anastomosis technique depending on anatomic or other considerations
- Perform airway anastomoses and recognize technical pitfalls associated with the various techniques
- Identify the key steps of tracheobronchoplasty



Course 8: Chest Wall Resection, Reconstruction, and Pectus Surgery

COURSE DIRECTORS: Dawn E. Jaroszewski, Phoenix, AZ, Daniel L. Miller, Marietta, GA, and Mathew Thomas, Jacksonville, FL

FACULTY: Staci Beamer, Phoenix, AZ

In this hands-on course, participants will learn the various techniques for reconstruction of large chest wall defects after resection. Other highlights of the course include stabilization of rib and sternal fractures using the most current reconstruction systems and minimally invasive repair of adult pectus excavatum defects. At the end of this course, participants should be able to independently design and perform reconstruction of the chest wall for various indications.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Perform rigid and semi-rigid reconstruction of chest wall defects after resection, including the ribs and sternum
- Demonstrate how to stabilize single and multiple rib fractures using rib fixation devices
- Use sternal fixation devices to stabilize the sternum
- Perform minimally invasive repair of adult pectus excavatum defects

NEW! Course 9: Minimally Invasive Aortic and Mitral Valve Surgery

COURSE DIRECTORS: Tom C. Nguyen, Houston, TX, and Vinod H. Thourani, Washington, DC

FACULTY: Kevin D. Accola, Orlando, FL, Glenn Barnhart, Seattle, WA, Kuan-Ming Chiu, Taipei, Taiwan, Borut Gersak, Ljubljana, Slovenia, Peter A. Knight, Rochester, NY, Eric Lehr, Seattle, WA*, S. Chris Malaisrie, Chicago, IL, Carmelo Mignosa, Catania, Italy, Kazuma Okamoto, Akashi, Japan, Konstadinos Plestis, Wynnewood, PA, and Juan P. Umana, Bogota, Colombia*

Cardiothoracic surgeons face an increased demand to adopt minimally invasive valve techniques. Unfortunately, acquiring this skillset can be difficult in real-world practice. The objective of this course is to provide hands-on experience with the newest techniques in minimally invasive aortic and mitral valve surgery. Participants will work in alternating pairs at each station to learn critical exposure and cannulation techniques for minimally invasive aortic (right anterior thoracotomy and hemi-sternotomy) and mitral (lateral thoracotomy) surgery. Participants will then have an opportunity to perform aortic and mitral valve repair/replacement using simulators under both direct vision and via thoroscopic guidance. For aortic valve replacements, participants will gain exposure to sutureless and rapid-deployment technologies. At the conclusion of the course, a handout will be distributed with a list of key instruments for minimally invasive valve surgery and suggested steps for building a minimally invasive valve program.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Explain exposure (right anterior thoracotomy, hemisternotomy, and lateral thoracotomy), cannulation, and cardioprotection techniques for minimally invasive valve surgery
- Identify key operative steps for successful minimally invasive aortic and mitral valve surgery, including sutureless and rapid deployment technologies
- Describe the indications and contraindications for minimally invasive valve surgery

NEW! Course 10: POEM Skills

COURSE DIRECTORS: Ralph W. Aye, Seattle, WA, and Inderpal S. Sarkaria, Pittsburgh, PA

FACULTY: Francisco A. Arabia, Los Angeles, CA, David A. D'Alessandro, Bronx, NY, Richard H. Feins, Chapel Hill, NC, Akinobu Itoh, St Louis, MO, Duc Thinh Pham, Boston, MA, Pablo Sanchez, Baltimore, MD, Jacob N. Schroder, Durham, NC, and Hiroo Takayama, New York, NY

This is a practical, hands-on course for learning peroral endoscopic myotomy (POEM) using an explant model. Participants will learn how to plan landmarks for the procedure, how to access the submucosal space and create a long submucosal tunnel extending through the gastroesophageal junction, how to perform myotomy, and how to close the mucosotomy. The standard tools and electrothermy instruments for performing the procedure will be explored in detail.

Learning Objectives

Upon completion of this activity, participants should be able to:

- Determine the proper landmarks for beginning and completing the procedure
- Create a submucosal tunnel
- Perform an endoscopic myotomy within the tunnel
- Close the mucosotomy



Scientific Posters

Adult Cardiac Surgery

Risk Model for In-Hospital Mortality in Aortic Surgery for Ascending Aortic Aneurysm in the United States Using the STS National Database

A. O. Geirsson, Yale University, New Haven, CT

Spinal Cord Deficit After 1109 Extent II Open Thoracoabdominal Aortic Aneurysm Repairs

J. S. Coselli, Baylor College of Medicine, Houston, TX

STS-PROM, Sarcopenia, and Frailty Markers Are Not Predictive of 1-Year Mortality After Transcatheter Aortic Valve Replacement

J. J. Squiers, The Heart Hospital Baylor Plano, TX

Targeting the Hexosamine Biosynthetic Pathway in Chronic Myocardial Ischemia and Hyperglycemia

L. A. Scrimgeour, Brown University, Providence, RI

Bileaflet Repair vs Isolated Posterior Repair for Bileaflet Mitral Valve Prolapse

M. A. Khosravi, Cleveland Clinic, OH

Impact of Sharing Adult Blood Type O Donor Hearts With Non-O Recipients: Survival Simulation by Blood Type Using the United Network for Organ Sharing Registry and Markov Modeling

M. A. Ando, Columbia University Medical Center, New York, NY

Development and Utility of a Preoperative Biomarker Panel to Improve Prediction of Readmission After Cardiac Surgery

J. R. Brown, Dartmouth College, Lebanon, NH

Surgical Repair of Anteroapical Left Ventricular Aneurysms Guided with Multislice Computed Tomography: Survival Determinants and Improvement of Heart Failure Symptoms

N. V. Solovjova, German Heart Institute, Berlin

Early and Mid-Term Clinical and Hemodynamic Outcomes of Rapid Deployment Aortic Bioprostheses: Results From a National Registry

A. D'Onofrio, University of Padua, Italy

Valve-in-Valve Transcatheter vs Redo Surgical Aortic Valve Replacement

J. J. Kelly, Emory University, Atlanta, GA

Transcatheter Aortic Valve Replacement: A Comparison of Outcomes via Transfemoral, Transcarotid, and Transcaval Valve Delivery

G. Paone, Henry Ford Hospital, Detroit, MI

Frozen Elephant Trunk Reduced Stroke

K. K. Yamana, IMS Katsushika Heart Center, Tokyo, Japan

Endoscopy in Aortic Valve Repair: A Helpful Tool?

F. A. Mourad, West German Heart Center Essen

Despite No Influence on Short-Term Mortality, Intensity of Glycemic Control Affects Long-Term Survival After Coronary Artery Bypass Grafting

M. P. Robich, Maine Medical Center, Portland

Biological vs Mechanical Valve in Patients With Aortic Prosthesis-Patient Mismatch

S. Maltais, Mayo Clinic, Rochester, MN

Impact of Redo Sternotomy on Proximal Aortic Repair: Does Previous Aortic Repair Affect Outcomes?

H. K. Sandhu, McGovern Medical School at UT Health, Houston, TX

Impact of Baseline Mitral Regurgitation on Postoperative Outcomes in Left Ventricular Assist Device Implantation as Destination Therapy Patients

A. K. Okoh, Newark Beth Israel Medical Center, NJ

The Impact of Preoperative Atrial Fibrillation on Patients Undergoing Surgical and Transcatheter Aortic Valve Replacement

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Outcomes of Papillary Muscle Realignment at the Time of Septal Myectomy for Treatment of Hypertrophic Obstructive Cardiomyopathy

H. Song, Oregon Health & Science University, Portland

Reversibility of Pulmonary Vascular Remodeling and Prognostic Role in Outcome After Restrictive Mitral Annuloplasty in Patients With Preexisting Pulmonary Hypertension

S. Kainuma, Osaka University, Suita, Japan

Bioprosthetic Valve Fracture to Facilitate Valve-in-Valve Transcatheter Aortic Valve Replacement in Small Surgical Bioprostheses: Early Hemodynamic and Echocardiographic Results

K. B. Allen, Saint Luke's Mid America Heart Institute, Kansas City, MO

Propensity Score-Matched Analysis of Coronary Artery Bypass Grafting vs Second Generation Drug-Eluting Stents for Triple-Vessel Disease

K. Nishigawa, Sakakibara Heart Institute, Tokyo, Japan

Twenty-Year Experience With Off-Pump Coronary Artery Bypass Surgery: Lessons Learned From Early Postoperative Angiography

K. Kim, Seoul National University Hospital, South Korea

Impact of Frailty on Outcomes in Acute Type A Aortic Dissection

T. Gomibuchi, Shinshu University, Matsumoto, Japan

Cost Effectiveness of Self-Expandable Transcatheter Aortic Valve Replacement vs Surgery for Aortic Stenosis in the Intermediate Surgical Risk Population

D. Y. Tam, Sunnybrook Health Sciences Centre, University of Toronto, Canada

Morbidity and Mortality Associated With Right Heart Failure After Continuous-Flow Left Ventricular Assist Device Implantation: A Single-Institutional 13-Year Experience of More Than 500 Devices

C. Kurihara, Texas Heart Institute/Baylor College of Medicine, Houston

Off-Pump Coronary Artery Bypass in Octogenarians: Results of a Statewide, Matched Comparison

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Safety and Rhythm Control Efficacy of En Bloc Isolation of the Left Pulmonary Veins and Appendage in Port Access Thoracoscopic Surgery for Standalone Atrial Fibrillation

T. Ohtsuka, Tokyo Metropolitan Tama Medical Center, Japan

Wall Stress of Early Remodeled Pulmonary Autograft

E. E. Tseng, University of California, San Francisco Medical Center and San Francisco VA Medical Center

Are Internal Mammary Artery Grafts Beneficial in Emergent Coronary Artery Bypass Surgery? An STS National Database Analysis

M. S. Slaughter, University of Louisville, KY

Episode Payments of Transcatheter Aortic Valve Replacement vs Surgical Aortic Valve Replacement and Relationship to Case Volume

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Characterization of Permanent Pacemaker Implantation Following Rapid Deployment Aortic Valve Replacement

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Acute Kidney Injury in Acute Type B Aortic Dissection: Incidence, Risk Factors, and Outcomes Over 20 Years

R. C. Hoogmoed, University of Michigan Medical School, Ann Arbor

Redo Surgical Aortic Valve Replacement vs TAV/SAV for Failed Surgical Aortic Prosthetic Valves

S. Ward, University of Michigan Health System, Ann Arbor

Novel Pulmonary-Systemic Pressure Ratio Correlates With Morbidity in Cardiac Valve Surgery More Than Pulmonary Arterial Pressure Alone

S. Schubert, University of Virginia, Charlottesville

Clinical and Echocardiographic Outcomes in Aortic Valve Replacement for Mixed Aortic Valve Disease

J. L. Philip, University of Wisconsin, Madison

Open Repair of Descending and Thoracoabdominal Aortic Aneurysms in Octogenarians

L. N. Girardi, New York-Presbyterian/Weill Cornell Medical Center, NY

Longitudinal Outcomes of Robotic Mitral Valve Repair in Older Individuals: An Analysis of the STS Adult Cardiac Surgery Database

A. Wang, Duke University, Durham, NC

Aortic Valve-Sparing Root Replacement (David Procedure): Comparison Between Straight Tube Graft (David I) and Valsalva Graft

E. Beckmann, Hanover Medical School, Germany

Cardiothoracic Surgical Education

Preferences in Pathway to Becoming a Cardiothoracic Surgeon: A Survey of Current Cardiothoracic Surgery Residents

T. A. Davis, The Johns Hopkins Medical Institutions, Baltimore, MD

Where Do We Begin: Building Blocks to Establish a Cardiothoracic Surgery Interest Group

T. A. Davis, The Johns Hopkins Medical Institutions, Baltimore, MD

Resident Perspective of a Novel Simulation Curriculum in Cardiac Surgery

M. A. Archer, Vanderbilt University Medical Center, Nashville, TN

Tobacco Education in Adolescents: The Role of the Thoracic Surgeon

K. D. Mortman, George Washington University School of Medicine & Health Sciences, Washington, DC

Risks and Rewards for the Expanding Role of Physician Extenders in Cardiothoracic Surgery: A National Survey

D. Blitzer, Indiana University School of Medicine, Indianapolis

Recruiting the Best and Brightest Medical Students into Cardiothoracic Surgery: A 5-Year Follow-Up

S. D. Moffatt-Bruce, The Ohio State University, Columbus

Cardiac Surgery in Africa: How Do Outcome Measures Fare?

B. M. Till, Harvard Medical School, Boston, MA

Congenital Heart Surgery

Graft Replacement and In-Situ Reconstruction of Kommerell's Diverticulum and Aberrant Subclavian Artery in Adults

Y. F. Ikeno, Kobe University, Hyogo, Japan

Maximizing Survival in Hypoplastic Left Heart Syndrome: Evolution of a Balanced Institutional Strategy

T. Karamlou, Phoenix Children's Hospital, AZ

Patients With a Systemic Right Ventricle Are at Higher Risk of Chylothorax After Cavopulmonary Connections

J. Soquet, Royal Children's Hospital Melbourne, Parkville, Australia

Is a Decellularized Porcine Small Intestine Submucosa Patch Suitable for Aortic Arch Repair?

A. F. Corno, University Hospitals of Leicester, United Kingdom

Extracardiac vs Lateral Tunnel Fontan: A Meta-Analysis of Long-Term Results With Special Focus on Arrhythmias

W. Ben Ali, Montreal Heart Institute, Canada

A Novel Bio-Chemo-Mechanical Model of Tissue-Engineered Vascular Graft Development

R. Khosravi, Yale University, New Haven, CT

Intra/Extracardiac vs Extracardiac Fontan Modifications: Comparison of Early Outcomes

L. M. Sinha, Children's National Medical Center, Washington, DC

Surgical Repair of Pulmonary Atresia With a Ductus Arteriosus or Hemi-Truncus to One Lung and Major Aortopulmonary Collaterals to the Contralateral Lung

R. D. Mainwaring, Stanford University School of Medicine, CA

Remote Ischemic Preconditioning Does Not Prevent White Matter Injury During Cardiac Surgery in Neonates

J. W. Gaynor, The Children's Hospital of Philadelphia, PA

Aortic Extension to Relieve Pulmonary Artery Compression Following Norwood Palliation

L. M. Wiggins, University of Southern California, Los Angeles

Impact of Passive Peritoneal Drainage on Achieving Negative Fluid Balance and Decreasing Inflammatory Mediators: A Randomized Prospective Trial

S. N. Suguna Narasimhulu, The Heart Center at Arnold Palmer Hospital for Children, Orlando, FL

Electroencephalogram Activity During Deep Hypothermia and Circulatory Arrest in Neonatal Swine and Humans: A Comparative Study

C. D. Mavroudis, University of Pennsylvania, PA

Methemoglobin as a Potential Marker of Inadequate Tissue Oxygenation Following Palliation for Complex Congenital Heart Disease

M. F. Swartz, University of Rochester - Strong Memorial Hospital, NY

Glial Fibrillary Acidic Protein Plasma Levels During Congenital Heart Disease Surgery Inversely Correlate With Vineland Adaptive Behavior Scales Communication Score

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Clinical Characteristics of Patients Requiring Prolonged Stays in the Intensive Care Unit Following Total Cavopulmonary Connection

M. M. Ono, German Heart Center Munich

Quantitative Assessment of Vascular Ring in Children Using Multislice Computed Tomography Imaging

Y. F. Ikeno, Kobe University, Hyogo, Japan

Perioperative Outcome of Stage 1 Norwood Palliation With Dual Arterial Cannulation

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National Benchmarks for Proportions of Patients Receiving Blood Transfusions During Pediatric and Congenital Heart Surgery: An Analysis of the STS Congenital Heart Surgery Database

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Selective Placement of Temporary Epicardial Pacing Leads and Determinants of Postoperative Use in Early Infancy After Cardiac Surgery

A. C. Polimenakos, Children's Hospital of Georgia, Augusta

Critical Care

Addressing Diaphragm Dysfunction in Cardiac Surgery Patients: Successful Therapeutic Use With Current Technology and Future Prophylactic Use of Temporary Diaphragm Pacing Utilizing Intramuscular Electrodes

R. P. Onders, University Hospitals Cleveland Medical Center, OH

The Role of an Artificial Pancreas in Glucose Management During Aortic Surgery

Y. Hoshino, The University of Tokyo Hospital, Japan

Outcome Analysis of Extracorporeal Cardiopulmonary Resuscitation in Cardiac Arrest Patients After Cardiac Surgery

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General Thoracic Surgery

Fast Tracking in Video-Assisted Lobectomy: A Prospective, Historically Controlled, Case-Matched Clinical Trial

M. H. Tahiri, CHUM Endoscopic Tracheobronchial and Oesophageal Center, University of Montreal, Canada

The Role of Thoracoscopic Pneumonectomy in the Management of Non-Small-Cell Lung Cancer: A Multi-Institutional Analysis

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Patterns of Recurrence and Methods of Surveillance in Low- and Intermediate-Grade Neuroendocrine Tumors

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Treatment Approaches and Outcomes for Primary Mediastinal Sarcoma

K. E. Engelhardt, Northwestern University, Chicago, IL

Is Esophagectomy for Benign Conditions Benign?

K. M. Masabni, Henry Ford Hospital/Wayne State University School of Medicine, Detroit, MI

Sublobar Resection and Video-Assisted Thoracic Surgery Approach Are Associated With Decreased Postoperative Atrial Fibrillation/Flutter After Lung Cancer Surgery—A Nationwide Inpatient Sample Analysis

E. A. Bent Robinson, University of California, Davis Medical Center, Sacramento

Fabrication of a 3-Dimensional Bioprinted Tracheal Scaffold With Fibrous Cover and Cartilaginous Regeneration

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TLR-4 Is a Mediator of Proliferation in Esophageal Cancer Cells

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PD-L1 Expression <1% Is Associated With Improved Antineoplastic Response to Metformin in Resected, Early Stage Non-Small-Cell Lung Cancer

C. W. Seder, Rush University Medical Center, Chicago, IL

DNA Methylation Profiling of Squamous Cell Lung Cancer With Idiopathic Pulmonary Fibrosis

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Patterns of Recurrence, Recurrence Rate, and Overall Survival in Incidental Lung Cancer in Explanated Lungs

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A Propensity Score-Matched Study of Lung Transplant Recipients Aged <70 and ≥70 Years

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Socioeconomic Status and Its Impact on Access to Lung Transplantation in the United States: An Unequal Playing Field Exposed

E. G. Chan, University of Pittsburgh Medical Center, PA

Redo Bilateral Lung Transplants: Triumph of Technique Over Judgment?

J. W. Sui, University of Texas Health Science Center, San Antonio

Pathologic Treatment Response Is Associated With Increased Overall Survival in Patients Undergoing Neoadjuvant Chemotherapy Followed by Pneumonectomy

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Better Survival With Video-Assisted Thoracic Surgery and Early Initiation of Adjuvant Chemotherapy in the National Cancer Database

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Role of Wedge Resection in Bronchial Carcinoid Tumors

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Impact of EGFR Mutation Status on Prognosis of Recurrent Adenocarcinoma of the Lung After Curative Surgery

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Intrathoracic Phrenic Nerve Reconstruction for Successful Reversal of Chronic Diaphragmatic Paralysis: A Functional Alternative to Plication

T. Bauer, Jersey Shore University Medical Center, Neptune, NJ

Financial Analysis of a Free Lung Cancer Screening Program Shows Profitability Within 3 Years Despite Applying Broader National Comprehensive Cancer Network Criteria

J. M. Chung, Augusta University Medical Center, GA

The True Incidence of Thoracic Lymph Node Metastases in Patients With Pulmonary Neuroendocrine (Carcinoid) Tumors

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Superior Vena Cava Replacement for Thymic Malignancies

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Minimum Number of Lymph Nodes to Examine and Survival

Prediction in Esophageal Carcinomas With Nodal Staging Score and Nomogram

D. Zheng, Fudan University Shanghai Cancer Center, China

Gastrointestinal Function After Esophagectomy: Which Type of Resection and Perioperative Treatment Has Better Outcomes?

Y. Y. Perry, University Hospitals Cleveland Medical Center, OH

All Patients With Giant Hiatal Hernias Require Referral to a Surgeon

A. C. Ednie, Dalhousie University, Halifax, Canada

Surgical Management of Post-Esophagectomy Tracheobronchial-Esophageal Fistula

A. Balakrishnan, Massachusetts General Hospital, San Francisco, CA

Disparities in Optimal Esophageal Cancer Treatment

J. D. Rice, The University of Louisville, KY

Admission for Advanced Esophageal Cancer: A Dedicated Team Approach Benefits Patients and Reduces Costs

N. D. Tingquist, University of Arkansas for Medical Sciences, Little Rock

The Impact of Cytomegalovirus Serology on Survival Following Lung Transplantation

D. J. Hall, University of Florida, Gainesville

Endosonographic Lymph Node Staging for Early Stage Inoperable Non-Small-Cell Lung Cancer Treated by Stereotactic Body Radiation Therapy

T. I. Lenet, CHUM Endoscopic Tracheobronchial and Oesophageal Center, University of Montreal, Canada

Quality Improvement

The STS 30-Day Predicted Risk of Mortality Score Is a Reliable Predictor of Long-Term Survival in Israeli Patients Undergoing Cardiac Surgery

E. I. Ben-David, St George's, University of London, United Kingdom

Risk Aversion in Cardiac Surgery Is Associated With Worse Outcomes

R. B. Hawkins, University of Virginia, Charlottesville

Patient-Reported Experience After Cardiac Surgery: Identifying Areas for Improvement

M. R. Helder, Mayo Clinic, Rochester, MN

Registration Instructions

Registration and housing are available online at www.sts.org/annualmeeting.

Please note: Registration is required in order to reserve Annual Meeting housing.

Deadline: Early bird registration will end November 19, 2017; registration fees will increase after this date. Additionally, you must register by Thursday, January 4, 2018, to reserve housing at the special Annual Meeting rates.

Questions about registration? Contact the Society's official registration partner, Experient, at (800) 424-5249 (toll free), 00-1-847-996-5829 (for international callers), or sts@experient-inc.com.

Registration Categories

Annual Meeting registration is open to everyone with an interest in cardiothoracic surgery. Please note that STS members are NOT automatically registered for the Annual Meeting.

STS SURGEON MEMBERS: STS Active, International, and Senior Members.

STS ASSOCIATE MEMBER PHYSICIANS (NON-CT SURGEONS): STS member physicians with an interest in cardiothoracic surgery who are not eligible to become Active, International, Candidate, or Pre-Candidate Members.

STS ASSOCIATE MEMBER NON-PHYSICIANS: STS members who are PhD research scientists, physician assistants, perfusionists, nurses, nurse practitioners, practice administrators, data managers, and others with an interest in cardiothoracic surgery.

STS PRE-CANDIDATE AND CANDIDATE MEMBERS:
Pre-Candidate: Medical students and general surgery residents who are STS members. **Candidate:** Cardiothoracic surgery residents/fellows/trainees who are STS members.

NON-MEMBER PHYSICIANS: Non-member cardiothoracic surgeons and other physicians with an interest in cardiothoracic surgery.

NON-MEMBER NON-PHYSICIANS: Non-member PhD research scientists, physician assistants, perfusionists, nurses, nurse practitioners, practice administrators, data managers, and others with an interest in cardiothoracic surgery.

NON-MEMBER RESIDENTS, FELLOWS, AND MEDICAL STUDENTS: In order to register for the STS 54th Annual Meeting, non-member general surgery residents and cardiothoracic surgery residents/fellows must complete a registration certification form during the online registration process. Non-member medical students must upload a copy of their current student identification card to the registration website.

Separate Registrations

STS/AATS Tech-Con 2018 and the STS 54th Annual Meeting require **separate registration**.

Tech-Con registration provides access only to the educational sessions on Saturday, January 27.

Annual Meeting registration provides access only to the educational sessions on Sunday, January 28, Monday, January 29, and Tuesday, January 30. You also will receive complimentary access to Annual Meeting Online.

Separate ticket purchases are required to attend the President's Reception (Sunday, January 28) and STS University courses (Wednesday, January 31).

Become an STS Member!

Non-members interested in attending the STS 54th Annual Meeting can gain numerous benefits by applying for STS membership.

Applications for Associate, Candidate, or Pre-Candidate Membership must be submitted by Monday, January 8, 2018, to allow time for processing. Those approved for membership can attend the STS 54th Annual Meeting as members and immediately begin enjoying member benefits, such as discounted registration fees.

For membership information and an application, visit www.sts.org/membership or contact Sarah Foreman, Senior Coordinator, Member Services, at sforeman@sts.org.

Cancellation Policy

All cancellation requests must be made in writing and e-mailed to meetings@sts.org by January 19, 2018. Requests for refunds will not be honored if submitted after that date. A processing fee of \$100 will be charged for all cancellations.

Onsite Registration Information

Onsite registration will be located on the first floor of the Greater Fort Lauderdale/Broward County Convention Center.

Friday, January 26	3:00 PM – 6:00 PM
Saturday, January 27	6:30 AM – 6:00 PM
Sunday, January 28	7:00 AM – 6:30 PM
Monday, January 29	6:30 AM – 5:00 PM
Tuesday, January 30	6:30 AM – 4:30 PM
Wednesday, January 31	6:30 AM – 9:30 AM

Pricing

	STS MEMBERS				NON-MEMBERS		
	Surgeon Members	Associate Member Physicians (Non-CT Surgeons)	Associate Member Non-Physicians	Candidate and Pre-Candidate Members	Non-Member Physicians	Non-Member Non-Physicians	Non-Member Residents, Fellows, and Medical Students
STS 54TH ANNUAL MEETING (INCLUDES ANNUAL MEETING ONLINE)							
Early Bird (through November 19)	\$375	\$375	\$175	\$0	\$975	\$400	\$175
Standard (November 20 – January 25)	\$475	\$475	\$275	\$0	\$1,100	\$550	\$275
Onsite (January 26 – January 31)	\$575	\$575	\$375	\$0	\$1,200	\$650	\$375
STS/AATS TECH-CON 2018							
Early Bird (through November 19)	\$400	\$400	\$400	\$0	\$625	\$625	\$0
Standard (November 20 – January 25)	\$500	\$500	\$500	\$0	\$725	\$725	\$0
Onsite (January 26 – January 31)	\$600	\$600	\$600	\$0	\$825	\$825	\$0
TICKETED EVENTS (MUST BE REGISTERED FOR THE STS ANNUAL MEETING)							
President's Reception	\$95	\$95	\$95	\$95	\$95	\$95	\$95
STS University Course (each)	\$175	\$175	\$175	\$175	\$175	\$175	\$175

STS 54TH ANNUAL MEETING

ONLINE

Access to the STS 54th Annual Meeting Online is **included** with Annual Meeting registration. With such a full meeting schedule, it's impossible to attend every presentation of interest. This web-based video presentation will let you earn CME credit for sessions you were unable to attend—or review sessions of special interest—in the comfort of your home or office. The Online product will be available approximately 1 month after the conclusion of the Annual Meeting and will be accessible for up to a year.



Accreditation Statement: The Society of Thoracic Surgeons is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

STS 54th Annual Meeting Online: The Society of Thoracic Surgeons designates this enduring material for a maximum of 107.75 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.



Housing and Travel Information

Meeting Location

All educational programming for the STS 54th Annual Meeting and STS/AATS Tech-Con 2018 will take place at the Greater Fort Lauderdale/Broward County Convention Center.

★ Greater Fort Lauderdale/Broward County Convention Center

1950 Eisenhower Blvd
Fort Lauderdale, FL 33316
(954) 765-5900
www.ftlauderdalecc.com

STS HOTELS

	Room rate (per night)
1 B Ocean Fort Lauderdale	\$319
2 Courtyard by Marriott Fort Lauderdale Beach	\$289
3 Embassy Suites by Hilton Fort Lauderdale 17th Street	\$289
4 Fort Lauderdale Marriott Harbor Beach Resort & Spa	\$333
5 Hilton Fort Lauderdale Marina	\$299
6 Hyatt Place Fort Lauderdale 17th Street Convention Center	\$210
7 Pier Sixty-Six Hotel & Marina	\$299
8 Lago Mar Beach Resort & Club	\$295
9 Renaissance Fort Lauderdale Cruise Port Hotel	\$325
10 Westin Fort Lauderdale Beach Resort	\$307





Housing and Travel Information

Housing Information

You can reserve housing while you are registering for the Annual Meeting at www.sts.org/annualmeeting. The housing deadline is Thursday, January 4, 2018.

Complimentary shuttle service will be provided between all official STS hotels and the convention center beginning Friday, January 26, 2018. Schedules will be posted in the lobby of each hotel.

Questions about housing? Contact the Society's official housing partner, Experient, at (800) 424-5249 (toll free), 00-1-847-996-5829 (for international callers), or sts@experient-inc.com.

Air Travel

The Fort Lauderdale–Hollywood International Airport (FLL) is located approximately 3 miles from the Greater Fort Lauderdale/Broward County Convention Center.

Ground Transportation

Car Rental

STS has negotiated special car rental rates from Hertz Rent a Car. Reservations may be placed at www.hertz.com or at (800) 654-2240 from within the United States and Canada; from international locations, call 00-1-405-749-4434. To receive the special STS rate, reference convention number (CV#) 04R50005 when making your car rental reservations. Parking at the Greater Fort Lauderdale/Broward County Convention Center is \$15 per day.

Taxi Service

Approximate taxi fare from the airport to official STS hotels is \$20 one way.

Shuttle Service / Private Car

Discounted airport shuttle and private car services are available to STS attendees through GO Airport Shuttle. Shuttle service to official STS hotels is \$11.50 per person one way. Private car service is \$41.40 per person one way. For reservations, visit www.sunny.org/sts and select "Airport Transportation."

Information for International Attendees

Visa Information

If you are not a US citizen and plan to attend the STS Annual Meeting, advance planning is critical! Attendees from outside the United States may need to apply for a visa at the American embassy, consulate, or other visa-issuing office in their country of origin. Please begin your visa application process as soon as possible. The application and interview process varies from country to country and can take up to 90 days to complete. Learn more about the visa process at www.travel.state.gov.

The Visa Waiver Program allows citizens of participating countries travel to the United States for 90 days or less without a visa, provided that they meet all program requirements and have a valid Electronic System for Travel Authorization (ESTA) approval from the US government. For more information about the Visa Waiver Program, visit www.travel.state.gov/content/visas/en/visit/visa-waiver-program.html.

Letters of Invitation

If you need a personalized letter of invitation, visit www.sts.org/annualmeeting and complete the Letter of Invitation Request Form. Once you have completed the request form, STS will e-mail a personalized letter of invitation to you within 1 business week. Please note: STS cannot promise that you or your colleagues will receive a visa, nor can it change the decision of any governmental agency should your application be denied.

About Fort Lauderdale and the United States

Even for the seasoned traveler, a trip may require some advance planning. Learn more about essential information, helpful travel tips, and answers to common questions at these websites:

www.sunny.org (Greater Fort Lauderdale Convention & Visitors Bureau)

www.fll.net (Fort Lauderdale–Hollywood International Airport)

www.travel.state.gov (US State Department)

www.cbp.gov (US Customs and Border Protection)

www.dhs.gov/how-do-i/visit-united-states (US Department of Homeland Security)



Annual Meeting Task Forces and Abstract Reviewers



As Chair of the Workforce on Annual Meeting, I would like to thank the members of the Annual Meeting Task Forces and all abstract reviewers who volunteered their time, energy, and expertise in developing the STS 54th Annual Meeting program.

Himanshu J. Patel

Chair, Workforce on Annual Meeting

Workforce on Annual Meeting

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The Society also would like to thank the following individuals for their assistance in planning the Tech-Con program:

Vinay Badhwar (Morgantown, WV), Brendon M. Stiles (New York, NY), Arash Salemi (New York, NY), and Inderpal S. Sarkaria (Pittsburgh, PA)



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