53RD ANNUAL MEETING

George R. Brown Convention Center • Houston, Texas
January 21-25, 2017

ADVANCE PROGRAM
There’s something for every interest at the Annual Meeting. The Ferguson Lecture will be delivered by Ralph W. Muller, MA, CEO of the University of Pennsylvania Health System, who will explain the role of cardiothoracic surgery in a major health care system. The Patient Safety Symposium will focus on the important topics of physician burnout and work-life balance.

I’m particularly excited about the “How To” surgical video sessions on Sunday that will explore all subtypes of cardiac and general thoracic surgery. In addition, we’re partnering with a number of our sister organizations across specialties and around the globe. Tuesday’s EACTS @ STS session will be themed around type B aortic dissection, looking at uncomplicated dissections and chronic dissection.

We’re also continuing the success of STS/AATS Tech-Con’s retooled format, which focuses 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. This exciting format will show you cutting-edge technology before it’s available to the public—giving you time to prepare your practice.

And finally, access to the STS 53rd Annual Meeting Online will 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 42 for more details.

There’s so much more to the 53rd Annual Meeting, and in this edition of the Advance Program, you’ll find a program outline and course descriptions 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 Houston!

Joseph E. Bavaria, MD
President, The Society of Thoracic Surgeons
THE SOCIETY OF THORACIC SURGEONS
EDUCATION DISCLOSURE POLICY

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.

Required disclosures include (1) a financial interest of any amount (e.g., through ownership of stock, stock options, or bonds) (2) the receipt of any amount of cash, goods or services within the current 12-month period (e.g., through research grants, employment, consulting fees, royalties, travel, or gifts) or (3) a nonremunerative position of influence (e.g., as officer, director, trustee or public spokesperson). EXCLUDED from this disclosure requirement are blind trusts or other passive investments such as mutual funds. In the case of a financial or other relationship disclosure, the company, product/service, and specific nature of the relationship must be noted. Disclosure is mandatory for any person involved in the planning, management, presentation, and/or evaluation of STS educational activities.

Failure to disclose all relationships with commercial interests disqualifies the individual from being a planning committee member, a teacher, or an author of educational materials, and this individual cannot have any responsibility for the development, management, presentation, or evaluation of STS educational activities. This requirement is intended neither to imply any impropriety of such relationships nor to prejudice any individual planner, presenter or author. It is merely to identify such relationships through full disclosure, and to allow STS to assess and resolve potential influences on the educational activity prior to the planning and implementation of an educational activity. If no relationships with commercial interests exist, the individual must indicate this on the disclosure form.

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 53rd 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 27.25 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The American Board of Cardiovascular Perfusion designates this activity for 31.4 Category I CEUs.

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PROGRAM AT A GLANCE

General Thoracic: New Technology
Late-Breaking Abstracts
NEW! STS Key Contacts: How to Become an Advocate for Cardiothoracic Surgery
STS/CATS/CSCS: Quality Improvement in Cardiothoracic Surgery—Real-Life Methods to Improve Surgical Performance Within Yourself, Your Division, and Your Specialty
12:30 pm – 1:30 pm
BREAK—Visit Exhibits and Scientific Posters
1:15 pm – 5:15 pm
ACC @ STS: Cardiologists and Surgeons Tackling Complex Clinical Scenarios as a Heart Team
Redefining Practice Through Quality and Evidence: What’s New
1:30 pm – 3:30 pm
Adult Cardiac: Aorta I
Adult Cardiac: Ischemic
Congenital: Pediatric Congenital I
General Thoracic: Lung Cancer I
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
Surgical Motion Picture Matinees: Adult Cardiac, Congenital, and General Thoracic
The Annals Academy: Propensity Score Matching
5:15 pm – 6:30 pm
Scientific Posters and Wine
5:30 pm – 6:30 pm
Business Meeting (STS Members Only)
7:30 pm – 10:30 pm
STS Social Event: Space Center Houston (Shuttle buses start at 6:45 PM)
TUESDAY, JANUARY 24, 2017
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
Early Riser Sessions
7:30 am – 8:30 am
Early Riser Health Policy Forum: Ready or Not: Implementing the New Merit-Based Incentive Payment System in Your Practice Today
8:45 am - 9:00 am
Results of the STS TAVR Survey
9:00 am – 10:00 am
Thomas B. Ferguson Lecture: Ralph W. Muller
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
1:00 pm – 3:00 pm
Adult Cardiac: General
Adult Cardiac: Mitral and Tricuspid Valves
Congenital: Pediatric Congenital II
EACTS @ STS: Management of Distal Type B Aortic Dissection
NEW! Electronic Learning and Innovation in Education
General Thoracic: Esophageal
General Thoracic: Lung Cancer II
1:00 pm – 5:30 pm
Advanced Therapies for End-Stage Heart Disease
Patient Safety Symposium: Resilience or Burnout—Do We Have a Choice?
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
Congenital: Pediatric Congenital III
ESTS @ STS: Controversial Issues in General Thoracic Surgery—Perspectives From Europe and North America
General Thoracic: Mediastinal/Pulmonary
WEDNESDAY, JANUARY 25, 2017
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)
**SATURDAY**

**JANUARY 21, 2017**

**STS/AATS TECH-CON**

**7:00 AM – 6:00 PM**

*Registration*

**7:00 AM – 6:30 PM**

*Tech-Con Exhibits*

**7:00 AM – 8:00 AM**

*Breakfast*

**8:00 AM – 9:30 AM**

**Adult Cardiac Track I: Innovations in Mitral Valve Disease and Atrial Fibrillation Management**

**Moderators:** T. Sloane Guy, New York, NY, and Rakesh M. Suri, Cleveland, OH*

8:00 AM  Mitral Valve Replacement Will Dominate the Transcatheter Space: Update on Devices and World Experience
Vinay K. Bapat, London, United Kingdom

8:08 AM  Preclinical Experience With the Direct Flow Transcatheter Mitral Valve
W. Douglas Boyd, Sacramento, CA

8:16 AM  Transcatheter Mitral Valve Replacement With the Medtronic Twelve Valve
Michael J. Reardon, Houston, TX

8:24 AM  Update on Transcatheter Mitral Valve Repair
Mathew R. Williams, New York, NY

8:32 AM  Panel Discussion

8:45 AM  Genomic Tools for Lung Cancer Diagnosis and Treatment
Daniel J. Boffa, New Haven, CT

8:58 AM  Lung Cancer Breath Test
Michael Bousamra II, Louisville, KY

9:10 AM  Intelligent Chest Tube Systems for Cardiothoracic Surgery
Randy Preston, Omaha, NE

9:22 AM  Panel Discussion

**9:30 AM – 10:15 AM**

**BREAK—Visit Tech-Con Exhibits**

**10:15 AM – 12:00 PM**

**Adult Cardiac Track II: Aortic/Endovascular**

**Moderators:** Michael A. Borger, New York, NY, and Ali Khoynezhad, Los Angeles, CA

10:15 AM  Debate: TAVR Will Be Performed in 95% of Isolated Aortic Stenosis Patients in 5 Years
*Pro:* Himanshu J. Patel, Ann Arbor, MI  
*Con:* Saibal Kar, Los Angeles, CA

10:30 AM  Aortic Valve Repair 101
Gebrine El Khoury, Brussels, Belgium

10:38 AM  Edwards INTUITY Elite Rapid Deployment Aortic Valve Replacement Insertions: Technique Video
Kevin D. Accola, Orlando, FL

10:46 AM  Percival Sutureless Aortic Prosthesis in the Bicuspid Aortic Valve: Technical Tips and Results From the US Investigational Device Exemption Study
Eric E. Roselli, Cleveland, OH

10:54 AM  Prospective European Multicenter Trial Evaluating Decellularized Homografts for Aortic Valve Replacement—The ARISE Study
Samir Sankouch, Hanover, Germany

11:02 AM  Panel Discussion

11:12 AM  Outcomes of On- and Off-Label Ascending Thoracic Endovascular Aortic Repair (TEVAR)
Rodney White, Torrance, CA

11:20 AM  Current Endovascular Technologies in Thoracoabdominal Aortic Aneurysm Repair
Matthew Eagleton, Cleveland, OH

11:28 AM  Aortic Wall Strengthening by Endovascular “Net” Prosthesis for Aortic Aneurysm Prevention in Marfan Syndrome and Other Genetic Disorders
Stefano Nazari, Pavia, Italy

8:36 AM  Panel Discussion

8:46 AM  Genomic Tools for Lung Cancer Diagnosis and Treatment
Daniel J. Boffa, New Haven, CT

8:58 AM  Lung Cancer Breath Test
Michael Bousamra II, Louisville, KY

9:10 AM  Intelligent Chest Tube Systems for Cardiothoracic Surgery
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9:22 AM  Panel Discussion

*Invited. Please note: Speakers and presentation titles are subject to change. Additionally, CME will not be offered for Tech-Con.*

[Image: www.sts.org/annualmeeting]
11:36 AM Debate: Branched TEVAR Will Be Performed in 95% of All Arch Pathologies in 5 Years
Pro: Leonard N. Girardi, New York, NY
Con: Nimesh Desai, Philadelphia, PA
11:50 AM Panel Discussion

10:15 AM – 12:00 PM
General Thoracic Track II: Advanced Thoracic Surgery
Moderators: DuyKhanh P. Ceppa, Indianapolis, IN, and Michael F. Reed, Hershey, PA
10:15 AM Training Models and Simulators
Shari L. Meyerson, Chicago, IL
10:27 AM Advanced Endoscopic Gastrointestinal Techniques: What’s New and What’s Coming
Lee Swanstrom, Portland, OR*
10:39 AM Advanced Bronchoscopic Techniques
Ali I. Musani, Milwaukee, WI*
10:51 AM Cryobiopsy for Diagnosing Interstitial Lung Disease: What Is It and Should Surgeons Be Doing It?
Sadia Benzaquen, Cincinnati, OH*
11:03 AM Panel Discussion
11:13 AM Robotic Stapling/Advances
Michael Zervos, New York, NY*
11:25 AM Smart Tissue Autonomous Robot (STAR)
Peter Y. Kim, Washington DC
11:37 AM Subxiphoid and Subcostal Uniportal Lobectomy
Joel Dunning, Middlesbrough, United Kingdom
11:49 AM Panel Discussion

12:00 PM – 1:00 PM
LUNCH—Visit Tech-Con Exhibits

1:00 PM – 2:45 PM
General Thoracic Track III: Health Care in the 21st Century
Moderators: Lisa M. Brown, Sacramento, CA, and Jeremiah T. Martin, Portsmouth, OH
1:00 PM Apps to Improve Efficiency/Operating Room Throughput:
Core Mobile
Chandra S. Tekwani, San Francisco, CA
1:12 PM Patient Engagement Apps: HealthLoop
Todd Johnson, Mountain View, CA*
1:24 PM Social Media and Thoracic Surgery
Thomas K. Varghese, Salt Lake City, UT*
1:36 PM Marketing CT Surgeons in the Year 2017: Why and How
Fernando Lamounier, Denver, CO
1:48 PM Panel Discussion
1:58 PM Automated Lung Cancer Screening/Aspen Lung
Julian Guirton, Loveland, OH
2:10 PM Lessons Learned in Implementing a Lung Cancer Screening Program
Betty C. Tong, Durham, NC
2:22 PM Big Data and Thoracic Surgery: Clinical Models
Eric L. Grogan, Nashville, TN
2:34 PM Panel Discussion

2:45 PM – 3:15 PM
BREAK—Visit Tech-Con Exhibits

3:15 PM – 5:00 PM
Joint Session: “Shark Tank”—Rapid-Fire Elevator Pitches of Revolutionary Technology
Moderators: Mark F. Berry, Stanford, CA, and Richard Lee, St Louis, MO
“Shark Tank” Judges: Richard A. Chalfetz, St Louis, MO, and Ross Chalfetz, Chicago, IL
Early Stage Lung Cancer—Thoracic Surgeons Need to Do More Than Just Cut
James D. Luketich, Pittsburgh, PA*
Early Stage Lung Cancer Patients Don’t Need a Thoracic Surgeon
Robert D. Timmerman, Dallas, TX
3:35 PM Zero Leak Project
Shanda H. Blackmon, Rochester, MN
3:50 PM Flexdex™: A Minimally Invasive Surgical Technology With Enhanced Dexterity and Intuitive Control
James Geiger, Ann Arbor, MI
4:05 PM Expandable Devices For Easier, Quicker, and More Efficient Anastomosis in Aortic Prosthetic Substitution
Stefano Nazari, Milan, Italy
4:20 PM How to Go Through the FDA Process
John C. Laschinger, Silver Spring, MD
4:30 PM How to Avoid Getting in Trouble With the FDA: The MitraClip Example
Patrick M. McCarthy, Chicago, IL
4:40 PM Debate: New Technology Is The Birth/Death of Cardiac Surgery
Death: Raj Makkar, Los Angeles, CA
Birth: Joseph E. Bavaria, Philadelphia, PA

5:00 PM – 6:30 PM
Tech-Con Reception

*Invited. Please note: Speakers and presentation titles are subject to change. Additionally, CME will not be offered for Tech-Con.
Adult Congenital Heart Disease Symposium: Evaluating Approaches to the Aortic Valve and End-Stage Problems in Young Adults—What Pediatric and Adult Cardiac Surgeons Can Learn From Each Other

The surgical treatment of young adults with aortic valve disease is controversial, and there is substantial practice-pattern variation among centers. In this session, experts in pediatric and adult cardiac surgery will discuss strategies for management of the aortic valve and aortic root. Considerations regarding mechanical circulatory support and transplantation for single ventricle patients also will be reviewed.

**Learning Objectives**

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

- Explain different approaches to the aortic valve in young adults and the risks and benefits of each approach
- Describe advanced techniques for repair of the aortic valve in teens and young adults
- Demonstrate an increased awareness of different surgical and mechanical support options for congenital heart patients
- Describe the criteria that contribute to a decision about timing of transplantation for the failing Fontan

**Moderators:** Joshua L. Hermsen, Seattle, WA, Robert B. Jaquiss, Durham, NC, Jennifer S. Nelson, Chapel Hill, NC, and Frank G. Scholl, Hollywood, FL

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**Practice Management Summit: Working in an Employment Model Environment**

Following the massive changes in health care financing from the Centers for Medicare & Medicaid Services (CMS) and other payers, there has been a major shift from individual physician-owned practices to an employment model, which influences the value of cardiothoracic surgery services delivered to patients. The Summit will address how cardiothoracic surgeons can best function in this new health care delivery environment. Speakers also will explain how to utilize patient outcomes data and effectively align with hospital administrators in a service line co-management situation.

**Learning Objectives**

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

- Describe how to effectively use survey data in negotiations
- Explain the relationship between outcomes data and practice patterns
- Articulate how to approach compensation mythology negotiations with a health care organization
- Discuss how to administrate a co-management relationship with a health care organization
- Explain the current reimbursement changes being proposed by CMS
- Demonstrate a greater understanding of the management of a cardiac service line at a large nationwide hospital system and the various ethical theories relating to the doctor and patient relationship

**Moderators:** Frank L. Fazzalari, Ann Arbor, MI, and Paul S. Levy, Jonesboro, AR
9:10 AM Partnering for Excellence in Today’s Health Care Environment: Health Corporation of America’s Cardiovascular Service Line
Steven V. Manoukian, Nashville, TN

9:30 AM Panel Discussion

10:00 AM Break

10:20 AM Experience in Dealing With Employed Physicians
Mark Kopson, Bloomfield Hills, MI

10:40 AM Ethical Issues in an Employment Model
Richard I. Whyte, Boston, MA

11:00 AM Update From the STS/AATS Workforce on Health Policy, Reform, and Advocacy
Alan M. Speir, Falls Church, VA*

11:20 AM How to Take Your Idea From a Napkin to a Company
Steven F. Bolling, Ann Arbor, MI

11:40 AM Panel Discussion

8:00 AM – 12:00 PM
STS/AATS Critical Care Symposium: Challenges in the Management of Mechanical Cardiopulmonary Support in the Cardiothoracic Intensive Care Unit

With the rapidly increasing utilization of mechanical circulatory support (MCS) in cardiothoracic surgery patients, health care teams must be well-versed in patient selection and periprocedural management of these complex patients. This session will provide attendees with a comprehensive review of the roles and responsibilities of interdisciplinary team members and potential pitfalls in challenging clinical scenarios.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Describe the revolution and evolution in therapy represented by mechanical assist devices for heart failure
• Identify methods to optimize hemodynamics during MCS support
• Describe the interaction and pharmacologic strategies of pulmonary hypertension and new right heart failure in the CT ICU
• Discuss the use of invasive and noninvasive monitoring strategies to identify and manage the failing right ventricle (RV) in the CT ICU
• Propose a management strategy to deal with RV failure after left ventricular assist device (LVAD) implantation
• Demonstrate recognition of important risks in advanced heart failure/MCS patients through the various phases of care (preoperative, critical care, post-ICU, and post-acute care)
• Describe the components of an ICU Liberation Campaign (daily Awakening, spontaneous Breathing trials, Coordination of sedation, Delirium screening, Early mobilization and exercise, and Family engagement and empowerment)

Moderators:
Rakesh C. Arora, Winnipeg, Canada, Aaron M. Cheng, Seattle, WA, Vassyl A. Lonchyna, Hinsdale, IL, and Glenn J. R. Whitman, Baltimore, MD

8:00 AM Introduction
Vassyl A. Lonchyna, Hinsdale, IL

MCS Management for the Cardiac Intensivist

8:05 AM State of the Art of LVAD Therapy
Mark S. Slaughter, Louisville, KY

8:25 AM Hemodynamics of MCS: Bedside Interpretation and Overinterpretation
Nir Uriel, Chicago, IL

8:40 AM Veno-Arterial, Veno-Arterial-Venous, and Veno-Venous Extracorporeal Membrane Oxygenation: How to Choose, How to Start, and How to Stop
Valluvan Jeevanandam, Chicago, IL

8:55 AM Panel Discussion and Difficult Cases
Joseph Rabin, Baltimore, MD

9:15 AM Break and Networking

RV Dysfunction in the Postoperative Period

9:30 AM Pulmonary Hypertension and the RV in the CT ICU
David A. Fulkerton, Aurora, CO

9:50 AM Use of Invasive and Noninvasive Monitoring Strategies to Identify the Failing RV in the CT ICU
Andre Denault, Montreal, Canada

10:05 AM RV Failure After MCS: Preoperative Recognition, Perioperative Physiology, and Therapeutic Approaches
Ryan J. Tedford, Baltimore, MD

10:20 AM Panel Discussion and Difficult Cases
Michael S. Firstenberg, Akron, OH

10:35 AM Break and Networking

Multisystem Issues in the MCS Patient

10:50 AM High-Risk and Complex Problems in MCS
Sanjeev K. Gulati, Charlotte, NC*

11:10 AM ICU Liberation Bundle: What Does It Look Like for the CT ICU?
Rakesh C. Arora, Winnipeg, Canada

11:30 AM Panel Discussion
Jay G. Shake, Jackson, MS

*Invited
STS/SCA: Integrating Perioperative Echocardiography Into Cardiac Surgical Clinical Decision Making

New technology is being used in the operating room to improve clinical decision making. This joint session by STS and the Society of Cardiovascular Anesthesiologists will provide physicians with information on the appropriate use of intraoperative echocardiography in surgical clinical decision making. New clinical evidence, along with data obtained through echocardiographic analysis, will be presented in case-based scenarios, which mimic real-life situations and decision making. The process will be followed by expert interpretation and critical analysis by a multidisciplinary team (cardiothoracic surgeons and anesthesiologists).

Learning Objectives

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

- Describe the utility of echo anatomy and intraoperative echocardiographic analysis in surgical decision making in the pre-bypass period
- Summarize the utility of intraoperative echocardiography in diagnosing complications in the immediate post-cardiopulmonary bypass period
- Discuss the integration of echocardiographic measurements with new clinical evidence in certain patient populations

Moderator: Alina Nicoara, Durham, NC

8:00 AM – 12:00 PM

SUNDAY, JANUARY 22, 2017

“How To” Video Session: Technical Tricks and Pitfalls to Simplify Cardiac Surgery Procedures

Cardiothoracic surgery is a highly technical specialty. Every successful surgeon has useful tips and tricks that can help colleagues improve techniques, become more efficient, and optimize outcomes. Many educational sessions focus on short- and long-term outcomes, debating optimal approaches, postoperative care, and evaluation of new technologies; however, until now, there has been little focus on how to refine and improve technique.

In this “how to” session, world-renowned faculty will share high-quality videos that focus on the technical aspects of adult cardiac operations. The 2017 session will focus on more complex operations than at the 2016 meeting and will benefit both private practice and academic surgeons.

Learning Objectives

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

- Detail 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

8:00 AM – 4:30 PM

Coronary Artery Bypass Grafting (CABG)

10:00 AM Coronary Endarterectomy
   John A. Kern, Charlottesville, VA*
10:10 AM Sequencing Grafts: Getting the Angles/Lengths Perfect
   Joseph F. Sabik, Cleveland, OH
10:20 AM No-Touch Aorta CABG
   Marc Ruel, Ottawa, Canada
10:30 AM Combined Carotid-CABG Step-by-Step
   TBD
10:40 AM C-Port Anastomosis
   Husam H. Balkhy, Chicago, IL

Mitral Valve Surgery

11:00 AM Transseptal Exposure of Mitral Valve (Surgical and Transcatheter)
   Steven F. Bolling, Ann Arbor, MI
11:10 AM Measuring Neochords: Getting the Length Perfect
   Evelio Rodriguez, Nashville, TN
11:20 AM Minimally Invasive Mitral Valve Surgery
   Gorav Ailawadi, Charlottesville, VA

*Invited
SUNDAY, JANUARY 22, 2017

11:30 AM  Decalcifying Mitral Annular Calcification (MAC): How Much and When to Stop
            Michael A. Acker, Philadelphia, PA

11:40 AM  Balloon-Expandable Valve to Treat MAC
            Robert L. Smith, Plano, TX

11:50 AM  MitraClip Procedure
            Gilbert H. Tang, New York, NY

12:00 PM  Break

Atrial Fibrillation Surgery

1:00 PM  Biatrial Maze: Efficient Lesions
            Hersh S. Maniar, St Louis, MO

1:10 PM  Thoracoscopic Epicardial Maze/Left Atrial Appendage Ligation
            Gansevoort H. Dunnington, St Helena, CA

1:20 PM  Subxiphoid Epicardial Maze
            William M. Boedefeld, Baton Rouge, LA*

Aortic Valve Surgery

1:30 PM  Aortic Valve Replacement: Running Suture
            Thomas G. Gleason, Pittsburgh, PA

1:40 PM  Percutaneous Femoral Access/Closure Devices/Iliac Complications
            T. Brett Reece, Aurora, CO

1:50 PM  Rapid Deployment Valve
            Michael A. Borger, New York, NY

2:00 PM  Root Enlargement Simplified
            Kevin D. Accola, Orlando, FL

2:10 PM  Transcatheter Aortic Valve Replacement (TAVR) Complications: Paravalvular Leak/Valve Malposition
            Vinod H. Thourani, Atlanta, GA

2:20 PM  TAVR Complication: Annular Rupture
            Thomas Walther, Leipzig, Germany*

Aortic Surgery

2:30 PM  Homograft Insertion/Root Abscess
            Jose Luis Navia, Cleveland, OH

2:40 PM  David Procedure: Simplified
            Wilson Y. Szeto, Philadelphia, PA

2:50 PM  TEVAR for Chronic Type B Dissection With Aneurysm
            G. Chad Hughes, Durham, NC

3:00 PM  Hybrid/Arch
            Eric E. Rosell, Cleveland, OH

Heart Failure/Weaning Catastrophe

3:10 PM  Trouble Weaning: Subclavian Intra-Aortic Balloon Pump
            Valluvan Jeevanandam, Chicago, IL

3:20 PM  Trouble Weaning: Impella 5.0
            Vinay Badhwar, Morgantown, WV

3:30 PM  Trouble Weaning: Temporary Left Ventricular Assist Device (LVAD)
            Simon Maltais, Nashville, TN*

3:40 PM  Trouble Weaning: Right Ventricular Assist Device
            Igor Gregoric, Houston, TX*

3:50 PM  Elective LVAD Insertion
            Lecia T. Yarbrough, Charlottesville, VA

4:00 PM  Minimally Invasive HVAD
            Anson Cheung, Vancouver, Canada

4:10 PM  Pulmonary Thromboendarterectomy: Acute Pulmonary Embolism
            W. Brent Keeling, Atlanta, GA

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 explains the process of finding a position: reasons for choosing private or academic practice, the logistics and schedule of searching for a position, interviewing successfully, and understanding health care financing with regard to one’s practice. The second session covers essential aspects of growing a new practice: building a clinical practice, milestones and benchmarks to set during the beginning of one’s career, 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:
• Summarize the steps of a successful job search
• Identify the important elements of a contract
• Explain the keys to building a successful clinical practice
• Identify the important aspects of early career development

Moderator: Ara A. Vaporciyan, Houston, TX

Session I: Finding a Job
1:00 PM  Introduction
            Edward P. Chen, Atlanta, GA, and Sidharta P. Gangadharan, Boston, MA*

1:05 PM  Why I Chose Private Practice
            Asad A. Shah, Durham, NC

1:15 PM  Why I Chose Academics
            Shanda H. Blackmon, Rochester, MN

1:25 PM  The Mechanics of Finding a Job
            Ravi K. Ghanta, Charlottesville, VA

1:40 PM  What You Need to Know About Finances
            Frederick Y. Chen, Boston, MA

1:55 PM  Breakout Sessions

Session II: Transition to Practice
2:30 PM  Building a Successful Clinical Practice
            Edward P. Chen, Atlanta, GA

2:45 PM  Early Career Development
            Elizabeth A. David, Sacramento, CA

3:00 PM  Achieving a Successful Work-Life Balance
            Sidharta P. Gangadharan, Boston, MA*

3:15 PM  Breakout Sessions

1:00 PM – 4:30 PM

Surgical Symposium: Congenital Cardiac Surgery Mélange

This symposium will focus on three modes of presentation (video, clinical scenario, and lecture) to address challenges in the surgical management of children with congenital heart disease. Topics will include contemporary approaches to old problems (eg, pulmonary vein stenosis), new techniques (eg, pulmonary artery banding for dilated cardiomyopathy, novel operative use of percutaneous valves, and aortic leaflet reconstruction with autologous pericardium), and challenges in perioperative decision making (eg, the child with trisomy 13/18). Back by popular demand will be case presentations of patients with complex management issues, with commentary from leading experts.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Identify current indications for surgical intervention in patients with trisomy 13/18
• Describe current outcomes and patient selection for application of pulmonary artery banding for children with isolated dilated cardiomyopathy

1:00 PM – 1:00 PM

BREAK
• Identify the best initial surgical management and later reoperative strategies for pulmonary vein stenosis and recurrent pulmonary vein stenosis
• Explain the inclusion/exclusion criteria for utilizing transcatheter valves for left-sided atrioventricular valve replacement in children
• Describe several operative techniques for repair of atrioventricular valves in single ventricle patients
• Identify indications and limitations for aortopexy in the management of childhood airway obstruction
• Assess potential candidacy for aortic valve reconstruction with autologous pericardium

Moderators: Jonathan M. Chen, Seattle, WA, Christopher E. Mascio, Philadelphia, PA, and Glen S. Van Arsdell, Toronto, Canada

1:00 PM Introduction
Jonathan M. Chen, Seattle, WA

1:05 PM Clinical Scenario #1

1:20 PM Video: Novel Use of Expandable Valves
Sitaram M. Emani, Boston, MA

1:28 PM Should We Offer Operations to Patients With Trisomy 13 or 18?
Aarti Bhat, Seattle, WA

1:48 PM Clinical Scenario #2

2:03 PM Video: Repair of Atroventricular Valves in Single Ventricle Patients
Scott M. Bradley, Charleston, SC

2:11 PM Pulmonary Artery Banding for Dilated Cardiomyopathy: North American Experience
Iki Adachi, Houston, TX

2:31 PM Break

2:46 PM Clinical Scenario #3

3:01 PM Video: Advanced HeartWare Techniques
Christopher E. Mascio, Philadelphia, PA

3:09 PM Aortic Reconstruction With Autologous Pericardial “Neo-Cusps”
Shigeyuki Ozaki, Tokyo, Japan

3:29 PM Clinical Scenario #4

3:44 PM Video: Aortopexy in Complex Airway Disease
Michael E. Mitchell, Milwaukee, WI

3:52 PM What’s New in the Management of Pulmonary Vein Stenosis
Christopher A. Caldarone, Toronto, Canada

4:12 PM Discussion

1:00 PM – 4:30 PM
Resuscitation of Patients Who Arrest After Cardiac Surgery
Cardiac arrest is a dreaded postoperative complication with a wide range of occurrence and outcomes, confirming large variations in current practice. This session will provide participants with the essential information to improve clinical outcomes after postoperative cardiac arrest. Using a format similar to Advanced Cardiac Life Support, this session will include brief lectures combined with hands-on practice with emergency pacing, internal and external defibrillation, and open chest resuscitation techniques. This course will allow all participants to become Cardiac Surgical Unit Advanced Life Support (CSU-ALS)-approved providers and able to provide arrest care for post-cardiac surgery patients.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Identify unique features of the cardiac surgery patient that warrant modifications to standard resuscitation techniques
• Describe the protocol for management of a cardiac surgical arrest

Moderator: Joel Dunning, Middlesbrough, United Kingdom

1:00 PM Introduction
Joel Dunning, Middlesbrough, United Kingdom

1:05 PM Arrest Practical 1: Group Simulation of Cardiac Arrest After Cardiac Surgery

1:30 PM The Protocol for the Resuscitation of Patients Who Arrest After Cardiac Surgery
Joel Dunning, Middlesbrough, United Kingdom

2:15 PM Arrest Practical 2: Manikin Simulation of the Arrest Protocol

3:00 PM Cardiac Arrest Skills Stations

3:45 PM How to Implement Resuscitation Protocols for Arrest After Cardiac Surgery in Your Own Hospital and How to Become a Trainer
Joel Dunning, Middlesbrough, United Kingdom
**Surgical Symposium: “How To” Video Session: Tips and Tricks in General Thoracic Surgery**

This session will focus on the technical tips and tricks that make more difficult operations achievable in a safe and effective manner. Topics include difficult aspects of minimally invasive procedures (eg, esophagogastric anastomosis during minimally invasive esophagectomy, video-assisted anatomic dissections after induction therapy, video-assisted or robotic thymectomy for larger thymomas) and less commonly performed procedures (eg, resection of invasive germ cell tumors, video-assisted diaphragm plication); videos will be used to clearly demonstrate these technical approaches. Tips on how surgeons can safely transition to minimally invasive approaches will be offered from an expert on managing the learning curve and early adopters of robotic and video-assisted lung resection.

**Learning Objectives**

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

- Describe the available methods of minimally invasive esophagectomy, including their technical performance and pros and cons of each
- Explain the goals and application method of both ischemic preconditioning and SPY technology to patients undergoing esophagectomy
- Describe and demonstrate techniques that allow difficult minimally invasive anatomic lung dissections to be completed safely and effectively, as well as safe management of bleeding that may occur during these dissections
- Discuss the approach to difficult mediastinal germ cell tumors, including when and how far to carry resection of major adherent structures
- Explain the potential difficulties in resecting larger thymomas minimally invasively, how to overcome those difficulties, and the potential benefits of using open techniques for these larger tumors
- Describe the benefits and techniques of video-assisted diaphragm plication using a running, to-and-fro suture
- Discuss the learning curve for adoption of minimally invasive approaches and make a plan for the safe, stepwise adoption of one minimally invasive technique

**Moderators:** Melanie A. Edwards, St Louis, MO, and Shari L. Meyerson, Chicago, IL

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**Multidisciplinary Response to Emergencies: Strategies for Team Members**

This session will focus on the team-based approach to cardiac surgical emergencies, including acute aortic dissection, initiation of extracorporeal membrane oxygenation (ECMO), and decompensation related to transcatheter aortic valve replacement (TAVR). Experts will discuss evidence-based approaches to recognizing these conditions and ensuring optimal patient outcomes. Panelists will include STS Associate Members and others who will review emergency management from a multidisciplinary perspective, focusing on clinical care and the common “human factors” that impact teamwork, communication, and collaboration.

**Learning Objectives**

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

- Identify hallmark features of acute aortic dissection, cardiopulmonary compromise warranting ECMO support, and catastrophic complications of TAVR, which signal the need for emergent intervention
- Explain evidence-based approaches to these conditions that contribute to optimal patient outcomes
- Discuss effective strategies for communication and collaboration during management of acute surgical emergencies

**Moderators:** Sondra J. Ley, Greenbrae, CA, and Edward A. Ranzenbach, Sacramento, CA

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**Scientific Posters**

**2:30 PM – 4:30 PM**

**Multidisciplinary Response to Emergencies: Strategies for Team Members**

**Moderators:** Sondra J. Ley, Greenbrae, CA, and Edward A. Ranzenbach, Sacramento, CA

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**Opening Reception in STS Exhibit Hall**
MONDAY
JANUARY 23, 2017

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: Joseph E. Bavaria, Philadelphia, PA, and Keith S. Naunheim, St Louis, MO

7:00 AM
Opening Remarks

7:15 AM
J. Maxwell Chamberlain Memorial Paper for Adult Cardiac Surgery: Natural History of Moderate Coronary Artery Stenosis After Surgical Revascularization
Cleveland Clinic, OH
Discussant: Gregg W. Stone, New York, NY

7:35 AM
J. Maxwell Chamberlain Memorial Paper for Congenital Heart Surgery: The Optimal Timing of Stage-2 Palliation After the Norwood Operation: A Multi-Institutional Analysis From the Congenital Heart Surgeons' Society

8:15 AM
Richard E. Clark Memorial Paper for Adult Cardiac Surgery: Mortality Is Reduced When Surgical Ablation for Atrial Fibrillation Is Performed Concomitantly With Mitral Operations
West Virginia University, Morgantown, WV, *Duke Clinical Research Institute, Durham, NC, *Inova Heart and Vascular Institute, Falls Church, VA, *Barnes-Jewish Hospital, Washington University in St Louis, MO, *Northwestern University, Chicago, IL, *Cleveland Clinic, OH, *Emory University, Atlanta, GA, *Johns Hopkins All Children's Heart Institute, St Petersburg, FL, *Massachusetts General Hospital, Boston
Discussant: Richard Lee, St Louis, MO

8:30 AM
Richard E. Clark Memorial Paper for Congenital Heart Surgery: Early Shunt Failure, Prevalence, Risk Factors, and Outcomes: An Analysis of The Society of Thoracic Surgeons Congenital Heart Surgery Database
The Johns Hopkins Hospital, Baltimore, MD, *Duke Clinical Research Institute, Durham, NC, *The Johns Hopkins University, Baltimore, MD, *All Children's Hospital, St Petersburg, FL, *Johns Hopkins All Children's Hospital, St Petersburg, FL, *Florida Hospital for Children, Orlando, FL, *University of Michigan, Ann Arbor, *Johns Hopkins All Children's Heart Institute, St Petersburg, FL, *The Johns Hopkins University School of Medicine, Newtowrn Square, PA
Discussant: Emmett D. McKenzie, Houston, TX

8:45 AM
Discussant: Katie S. Nason, Pittsburgh, PA

*Invited

www.sts.org/annualmeeting
11:00 AM  BREAK—Visit Exhibits and Scientific Posters

11:10 AM – 11:30 AM

Basic Science Research: Adult Cardiac
Moderators: Pavan Atluri, Philadelphia, PA, and Jennifer S. Lawton, St Louis, MO

11:30 AM
Prevention of Aortic Aneurysm Formation and Rupture by Using Clari thromycin
W. Uchida, A. Yamawaki-Ogata, H. Oshima, A. Usui, Y. Narita
Nagoya University Graduate School of Medicine, Japan

11:40 AM
Risk of Spinal Ischemia in Thoracic Aortic Procedures: The Influence of Number and Distribution of Anterior Radiculomedullary Arteries on Cord Perfusion
F. Kari1, K. Wittmann1, S. Krause1, B. E. Saravi3, L. Puttfarcken1, K. Foerster1, B. Ryelski1, S. Maiers1, U. Goebel2, M. Siepe1, M. Czarny1, F. Beyersdorf1
1Heart Center Freiburg, Germany, 2University Medical Center Freiburg, Germany

11:50 AM
A TNF-α and Hypoxia-Induced Secretome Therapy for Myocardial Repair
K. Selvasadan1, G. Makhoul1, R. Jurakhan1, P. Jaiswal2, L. Li1, K. Richwani1, R. Cecere1
1McGill University, Montreal, Canada, 2Montreal General Hospital, Canada

12:00 PM
Pulsatile Characteristics of the Mechanically Actuated Fibrillating Heart Are Similar to the Native Beating Heart
B. Schmitt, N. V. Wright, Y. Zhou, D. B. Reynolds, M. P. Anstadt
Wright State University, Dayton, OH

12:10 PM
Ex-Vivo Assessment of Material Characteristics in Ascending Aortic Aneurysm Tissue for Bicuspid and Trileaflet Valve Groups
R. Beddoes1, E. S. Di Martino1, J. J. Appoo2
1University of Calgary, Canada, 2Labin Cardiovascular Institute, University of Calgary, Canada

11:30 AM – 12:30 PM

Basic Science Research: General Thoracic
Moderators: Prasad S. Adusumilli, New York, NY*, and Joseph B. Shrager, Stanford, CA

11:30 AM
A Phase I Clinical Trial of Targeted Intraoperative Molecular Imaging for Pulmonary Adenocarcinomas
1University of Pennsylvania School of Medicine, Philadelphia, PA, 2University of Pennsylvania, Philadelphia, PA, 3University of Pennsylvania Health System, Lancaster, PA, 4Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA, 5Purdue University, West Lafayette, IN, 6Hospital of the University of Pennsylvania, Philadelphia

11:42 AM
HER2 Amplification Confers Resistance to Targeted Therapy in Esophageal Adenocarcinoma Cells With Concomitant Amplification of MET
A. Goltsov1, B. Fang2, T. K. Pandit3, D. Maru4, S. G. Swisher5, W. L. Hofstetter6
1The University of Texas MD Anderson Cancer Center, Houston, TX, 2Houston Methodist Research Institute, Houston, TX

1:00 PM
18F-FDG PET Intensity Correlates with a Hypoxic Gene Signature and Other Oncogenic Abnormalities in Early Stage Non–Small-Cell Lung Cancer
University of Michigan, Ann Arbor

12:00 PM
Ozone Therapy Protects Against Chronic Rejection in an Orthotopic Lung Transplantation Model: A New Potential Treatment?
N. Santanta-Rodriguez1, B. Clavo2, R. Lontop2, W. Raad4, K. Alshehri5, A. Ayub6, M. D. Fiuza7, F. Boras8
1Mount Sinai Health System, New York, NY, 2Instituto Universitario de Investigaciones Biomedicas y Sanitarias and Dr. Negrin University Hospital, Las Palmas de Gran Canaria, Spain, 3Instituto Universitario de Investigaciones Biomedicas y Sanitarias, Las Palmas de Gran Canaria, Spain, 4ahn School of Medicine at Mount Sinai, New York, NY, 5Mount Sinai St Luke’s West Hospital, New York, NY, 6Mount Sinai Roosevelt and Mount Sinai St Luke’s Hospitals, New York, NY

12:18 PM
The Effect of Chemotherapy and Autophagy Modulation on PD-L1 Expression in Esophageal Adenocarcinoma
L. Van Der Kraai1, J. D. Luketch2, M. J. Schuchert3, K. S. Nason1, A. Pennathur4, H. J. Zei5, M. T. Lota6, R. Dhupar7
1University of Pittsburgh, PA, 2University of Pittsburgh Medical Center, PA

11:30 AM – 12:30 PM

Congenital: Adult Congenital
Moderator: Brian E. Kogon, Atlanta, GA*

11:30 AM
High Prevalence of Late Hypertension After Coarctation Repair: The Impact of Arch Reobstruction and Early Postoperative Hypertension
M. Lee1, J. Brink2, I. E. Konstantinov2, C. P. Brizard2, Y. d’Udekem2
1Murdock Childrens Research Institute, Melbourne, Australia, 2The Royal Children’s Hospital, Melbourne, Australia

11:45 AM
Long-Term Outcome of Mustard/Senning Procedure for Patients With Complete Transposition of the Great Arteries: 50 Years’ Experience
T. Sakamoto, M. Nagashima, G. Matsumura, K. Yamazaki
Tokyo Women’s Medical University, Shinjuku-ku, Japan
11:30 AM – 12:30 PM

Critical Care

Moderators: Aaron M. Cheng, Seattle, WA, and Jay G. Shake, Jackson, MS

11:30 AM

What Is the Optimal Blood Pressure on Extracorporeal Membrane Oxygenation? Impact of Mean Arterial Pressure on Survival

D. Tanaka, S. Shimada, N. Cavarocchi, H. Hirose
Thomas Jefferson University Hospital, Philadelphia, PA

11:45 AM

Infections Occurring During Extracorporeal Membrane Oxygenation Use in Adult Patients for Postcardiotomy Heart Failure

H. A. Welp, M. Scherer, S. Martens, J. Sindermann
University Hospital Münster, Germany

12:00 PM

Cumulative Fluid Balance Is an Independent Predictor of In-Hospital Mortality in Patients Supported With Veno-Arterial Extracorporeal Membrane Oxygenation Use in Adult Patients for Postcardiotomy

A. Proudfoot1, T. Boeve1, A. Borgman2, G. Marco3, S. Fitch4, M. G. Dickinson1, T. Timek1, A. Khaghanli1, P. Wiltfon1, M. Strueber1, S. Jovinge1
1Spectrum Health, Grand Rapids, MI, 2Frederick Meijer Heart & Vascular Institute, Grand Rapids, MI, 3Spectrum Health, Ada, MI, 4Spectrum Health - Richard DeVos Heart & Lung Transplant Program, Grand Rapids, MI

12:15 PM

Single Caregiver Nurse Model for Extracorporeal Membrane Oxygenation Can Lead to Significant Cost Savings

F. Najam, R. Melody, S. Newman, B. V. Sambuco, E. S. Pocock, J. Horig
The George Washington University Hospital, Washington, DC

11:30 AM – 12:30 PM

Ethics Debate: When a Child’s Heart Is Failing

Surgeons face a difficult choice in deciding what to do for a child with a heart malformation and a very bleak outlook—move forward with complex, expensive treatment or offer palliative care only. This debate between two passionate advocates with opposing positions will focus on a young girl with trisomy 21 who has severe heart disease (atrioventricular canal, mitral insufficiency, and a failing left ventricle). A pediatric intensivist will argue for withdrawing extracorporeal membrane oxygenation (ECMO) life support, while a pediatric cardiac surgeon will argue for replacing ECMO with a ventricular assist device while listing the patient for a heart transplant. All physicians, nurses, technologists, and others who are involved with patient care will benefit from this session; its utility is not limited to those who care for children, as the issues are present in all age groups.

Learning Objectives

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

• Describe the decision-making process in complex cases of futile care
• Discuss the arguments in favor of withdrawing life support and in favor of proceeding with further surgery
• State how to correctly use a ventricular assist device as a bridge to heart transplant

Facilitator: Robert M. Sade, Charleston, SC
Pro: Minoo N. Kavarana, Charleston, SC
Con: Jessica M. Turnbull, Nashville, TN

12:00 PM

Robotic First Rib Resection for Paget-Schroetter Disease

F. Gharagzloo
Celebration Health/Florida Hospital System, University of Central Florida

12:15 PM

Phase 1 Clinical Trial Evaluating the Safety of Pulmonary Artery Branch Sealing Using an Ultrasonic Energy Vessel-Sealing Device in Video-Assisted Thoracoscopic Lobectomy

E. Goudie1, R. L. Oliveira1, E. Bell2, D. Bonnet2, D. Kalfa2
1Laboratoire de Psychopathologie et Neuropsychologie, Université Paris 6, Saint Denis, France, 2Harvard Medical School and Boston Children’s Hospital, MA, 3Hôpital Universitaire Bicêtre, Le Kremlin-Bicêtre, France, 4Institut Hospitalier Jacques Cartier, Massy, France

11:30 AM – 12:30 PM

Late-Breaking Abstracts
NEW! STS Key Contacts: How to Become an Advocate 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. However, many surgeons may not know how to get involved. This session will benefit anyone who would like to become more active in government advocacy. Surgeon leaders will share their experiences participating in advocacy activities, and STS staff will review the Society’s advocacy priorities. Experienced and novice Key Contacts will role-play a meeting with a member of Congress and have time to network.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Explain how to meet or speak with their members of Congress
• Discuss the Society’s legislative priorities
• Describe how to use peer Key Contacts as a resource

Moderators: Joshua Krantz, Washington, DC, and Madeleine Stirling, Washington, DC

11:30 AM – 12:30 PM

STS/CATS/CSCS: Quality Improvement in Cardiothoracic Surgery—Real-Life Methods to Improve Surgical Performance Within Yourself, Your Division, and Your Specialty

Cardiothoracic surgeons perform complex, high-risk procedures as part of normal practice. Professional societies, patients, and providers increasingly are scrutinizing not only surgeons, but also programs of care and institutional practices. This session from STS, the Canadian Association of Thoracic Surgeons, and the Canadian Society of Cardiac Surgeons will focus on implementing quality improvement by starting with describing how surgeons and institutions perceive their practice vs true data-based performance.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Describe key concepts in local morbidity and mortality performance rounds
• Define strategies for personal performance improvement
• Identify the components to and benefits of participation in societal databases
• Describe broader efforts aimed at specialty-wide quality improvement and public reporting of outcomes

Moderators: Sean C. Grondin, Calgary, Canada, and Colin Schieman, Hamilton, Canada*

11:30 AM  Panel Discussion / Q&A
Mark S. Allen, Rochester, MN, Leslie J. Kohman, Syracuse, NY, and Douglas J. Mathisen, Boston, MA,

11:50 AM  Legislative Presentation
Joshua Krantz, Washington, DC, and Madeleine Stirling, Washington, DC

12:00 PM  Mock Congressional Meeting
Richard Lee, St Louis, MO, and Jess L. Thompson, Oklahoma City, OK

12:15 PM  Awards & Networking

11:30 AM – 12:30 PM

HEART TEAM APPROACH (ATRIAL FIBRILLATION)

1:15 PM – 5:15 PM

ACC @ STS: Cardiologists and Surgeons Tackling Complex Clinical Scenarios as a Heart Team

This session by STS and the American College of Cardiology will focus on the truly 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 coronary artery disease (CAD), mitral regurgitation, aortic stenosis (AS), and atrial fibrillation. Session components include invited technical videos featuring procedural expertise in these disease processes, a critical review of the literature, lectures regarding the STS/ACC TVT Registry™, 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 CAD management
• 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 among specialties
• Identify and explain the optimal management of patients who are evaluated for aortic stenosis, coronary artery bypass grafting (CABG), mitral regurgitation, and atrial fibrillation

Moderators: Niv Ad, Falls Church, VA, Jodie Hurwitz, Dallas, TX, Roxana Mehran, New York, NY*, Patrick T. O’Gara, Boston, MA*, Joseph F. Sabik, Cleveland, OH, and Vinod H. Thourani, Atlanta, GA

1:15 PM  Case Presentation 1
Mathew R. Williams, New York, NY

1:20 PM  Lessons Learned From the STS/ACC TVT Registry™
Vinod H. Thourani, Atlanta, GA

1:30 PM  In the Era of Transcatheter Aortic Valve Replacement (TAVR), Who Is Low-Risk for Surgical AVR and Predictions for Management of AS in 2020
Michael J. Mack, Dallas, TX

1:40 PM  Are We Ready for Asymptomatic Patients or Those With Moderate AS and Heart Failure to Have SAVR or TAVR?
Patrick T. O’Gara, Boston, MA

1:50 PM  What I Have Learned About TAVR in Failed Surgical Bioprosthetic Valves
Richard W. Smalling, Houston, TX

2:00 PM  Panel Discussion and Case Presentation Wrap-Up
Tom C. Nguyen, Houston, TX

1:15 PM – 5:15 PM

HEART TEAM APPROACH (AORTIC VALVE)

2:16 PM  Case Presentation 2
Niv Ad, Falls Church, VA

2:21 PM  Which Patients Are Optimal for Transcatheter Atrial Fibrillation Management?
Jodie Hurwitz, Dallas, TX

2:31 PM  How I Decide Between Biliary or Left Atrial-Only Surgical Ablation Surgery
Vinay Badhwar, Morgantown, WV

2:41 PM  How to Do It: Bialtrial Ablation
Marc R. Moon, St Louis, MO

2:51 PM  Panel Discussion and Case Presentation Wrap-Up

3:05 PM  Break
Heart Team Approach (Coronary Artery Disease)
3:25 PM  Case Presentation 3
Russell S. Ronson, Birmingham, AL
3:30 PM  Which Patients With Multivessel Disease Are Best Treated Percutaneously?
Roxana Mehran, New York, NY*
3:40 PM  How to Do It: Options for Non-Sternotomy Multivessel CABG
Marc Ruel, Ottawa, Canada
3:50 PM  My Worst CABG Case and How I Got Out of It
David A. Fullerton, Aurora, CO
4:00 PM  Panel Discussion and Case Presentation Wrap-Up
Heart Team Approach (Mitral Regurgitation)
4:15 PM  What Surgeons Should Know About the ACC/AHA Valve Guidelines
Patrick T. O’Gara, Boston, MA
4:25 PM  How I Decide Management of the Patient With Functional Mitral Regurgitation
Tirone E. David, Toronto, Canada
4:35 PM  Update on Transcatheter Mitral Valve Devices
Gorav Ailawadi, Charlottesville, VA
4:45 PM  My Worst Transcatheter MV Case and How I Got Out of It
Vinod H. Thourani, Atlanta, GA
5:00 PM  Panel Discussion and Case Presentation Wrap-Up

1:15 PM – 5:15 PM
Redefining Practice Through Quality and Evidence: What’s New
The STS National Database is the most valuable tool in cardiothoracic surgery for outcomes assessment, evidence-based practice, and clinical practice guideline development. Founded in 1989, the Database has evolved to meet the changing needs of physicians in a complex health care delivery system. This session will address Database initiatives, including the latest updates in clinical practice guideline development, risk modeling, public reporting, and quality measurement.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Describe the methodology for risk adjustment
• Outline the rationale for use of composite measures and mitral measures
• Discuss implications of and strategies for physician-level reporting
• Identify strategies for long-term follow-up of patient outcomes
• Discuss the importance of cost and resource utilization in care delivery
• Define data transparency and describe its importance in improving quality
• Illustrate how to apply strategies for using the feedback report for quality improvement
• Explain the rationale for a multidisciplinary approach in quality improvement

Moderators: Vinay Badhwar, Morgantown, WV, and Jeffrey P. Jacobs, St Petersburg, FL
1:15 PM  Introduction
1:20 PM  STS Clinical Practice Guidelines: What’s New
Faisal G. Bakaeen, Houston, TX*
1:50 PM  Q&A

2:10 PM  Impact of Medicaid Expansion on Cardiac Surgery Volume and Outcomes
1University of Virginia Health System, Charlottesville, 2University of Virginia, Charlottesville, 3Southwest Data Consultants, Dallas, TX, 4University of Michigan Health System, Ann Arbor, 5Virginia Cardiac Services Quality Initiative, Charlottesville, 6Virginia Cardiac Services Quality Initiative, Virginia Beach, 7Cardiac, Vascular & Thoracic Surgery Associates, Falls Church, VA, 8University of Virginia Medical Center, Charlottesville

2:20 PM  Good at One, or Good at All? Correlation of Outcomes Between Coronary Artery Bypass Grafting and Valve Surgery Among Centers
1University of Virginia, Charlottesville, 2Virginia Commonwealth University, Richmond, 3Cardiac, Vascular & Thoracic Surgery Associates, Falls Church, VA, 4Virginia Cardiac Services Quality Initiative, Virginia Beach

2:30 PM  Economic Impact of an Enhanced Recovery Pathway for Lung Resection
A. Madani1, P. Paci2, L. Lai3, J. Mata4, D. S. Mulder5, J. Spencer1, L. E. Fern3, L. Feldman1
1McGill University, Montreal, Canada, 2Montreal General Hospital, Canada, 3Montreal General Hospital, Ontario, 4Montreal General Hospital, Canada, 5McGill University Health Centre, Montreal, Canada

2:40 PM  Patient Race Influences Risk Assessment and Recommendations for Lung Resection
M. K. Ferguson1, C. Demchuk1, K. Wroblewski1, J. M. Farnan1, M. Huisingsh-Scheetz2, K. Thompson1, J. Acevedo1
1The University of Chicago, IL, 2University of Illinois College of Medicine, Peoria, 3The University of Chicago Medicine, IL

2:50 PM  Quality Measurement: What’s New
David M. Shahian, Boston, MA

3:05 PM  STS National Database and National Quality Forum: What’s New
Jeffrey P. Jacobs, St Petersburg, FL

3:20 PM  Break

3:35 PM  Staphylococcus aureus Prevention Strategies in Cardiac Surgery: A Cost Effectiveness Analysis
J. Hong1, M. K. Saraswat2, T. Ellison3, J. T. Magruder2, J. M. Gardner2, W. V. Padula1, G. J. Whitman2
1The Johns Hopkins University School of Public Health, Baltimore, MD, 2The Johns Hopkins Hospital, Baltimore, MD, 3The Johns Hopkins Hospital, Baltimore, MD

3:45 PM  Multicenter Quality Improvement Project to Prevent Sternal Wound Infections in Pediatric Cardiac Surgery Patients
1The University of Texas Health Science Center, San Antonio, 2The Johns Hopkins Hospital University School of Medicine, Newtown Square, PA, 3University of Michigan, Ann Arbor, 4Texas Children's Hospital / Baylor College of Medicine, Houston, 5The Johns Hopkins All Children's Heart Institute, St Petersburg, FL

*Invited
A Prospective Multi-Institutional Cohort Study of Medialastinal Infection After Cardiac Surgery


1Montreal Heart Institute, Canada, 2Icahn School of Medicine at Mount Sinai, New York, NY, 3University of Alberta, Edmonton, Canada, 4National Heart, Lung, and Blood Institute, Bethesda, MD, 5Duke University, Durham, NC, 6Cleveland Clinic, OH, 7Columbia University College of Physicians and Surgeons, New York, NY, 8University of Virginia, Charlottesville, 9The Ohio State University Wexner Medical Center, Columbus, 10Baylor University Medical Center, Dallas, TX, 11Toronto General Hospital, Canada, 12Mount Sinai Health System, New York, NY, 13Mount Sinai Beth Israel, New York, NY, 14University of Southern California Keck School of Medicine, Los Angeles

The Use of Bacitracin for Preventing Sternal Wound Infections Following Cardiac Surgery

J. L. Chan 1, A. C. Diacocenasou, K. A. Horvath

National Heart, Lung, and Blood Institute, Bethesda, MD

Concomitant Antegrade Stent Grafting of the Descending Thoracic Aorta During Transverse Hemithorax Reconstruction for Acute Debakey I Aortic Dissection Repair Aortic Remodeling

I. Sultan 1, T. Wallen 2, M. A. Ski 3, A. Haberthuer 4, G. J. Arnaoutakis 5, R. S. Manori 6, W. Y. Szeto 5, J. E. Bavaria 5, P. Vaillabhaosyula 6

1University of Pittsburgh, PA, 2University of Pennsylvania, Philadelphia, 3University of Pennsylvania Health System, Philadelphia, 4Howard University College of Medicine, Washington, DC, 5University of Pennsylvania, Philadelphia

Aortic Valve-Sparing David I Procedure Has Excellent Long-Term Results in Elective Patients: A Single-Center Experience Over 20 Years

M. L. Shrestha 1, F. Abd Alhadi 2, E. Beckmann 1, H. Krueger 1, J. Umminger 1, T. Kaufeld 1, J. Schmittle 1, S. Cebotari 1, A. Hareinich 1, A. Martens 1

1Hannover Medical School, Germany, 2Clinic for Cardiothoracic, Transplantation and Vascular Surgery, Hannover, Germany

Valve-Sparing Root Replacement to Facilitate Aortic Valve Repair in Moderately Dilated Aortic Roots – Is It Justifiable?

F. Hage 1, S. Mohajeri 2, B. Sohmer 3, T. Coutinho 3, L. Beauchesne 3, R. Masters 1, M. Boodhwani

1University of Ottawa Heart Institute, Canada

The Florida Sleeve Procedure Is Durable and Improves Aortic Valve Function

S. Aalaee-Andabali 1, T. Martini 2, P. Hess 3, G. Janellé 1, Y. Peng 1, K. Berg 1, K. Kloeell 2, T. M. Beaver 1

1University of Florida, Gainesville, 2Florida Hospital Orlando, 3Indiana University, Indianapolis

Outcomes of Reoperation With Conventional and Frozen Elephant Trunk Procedures After Acute Type A Dissection Repair

J. J. Iredes 1, E. E. Roselli 1, D. R. Johnston 1, E. G. Soltész 1, C. C. Rosu 1, M. Tong 1, G. B. Pettersson 1, J. F. Sabik 1, L. G. Svensson 1

1Cleveland Clinic, OH, 2Hôpital du Sacré-Coeur de Montréal, Canada

Safety of Moderate Hypothermia in Total Aortic Arch Replacement With Antegrade Cerebral Perfusion: A Report of More Than 3,000 Patients From the ARCH Database

W. B. Keeling 1, D. Tian 2, B. G. Leshnower 3, E. P. Chen 4

1Emory University, Atlanta, GA, 2International Aortic Arch Surgery Study Group, Macquarie Park, Australia, 3Emory University School of Medicine, Atlanta, GA

Debate: Should a Moderately Dilated Ascending Aorta (4.6-5.4 cm) Be Replaced in a Patient With a Normally Functioning Bicuspid Aortic Valve?

Pro: Lars G. Svensson, Cleveland, OH
Con: Thomas G. Gleason, Pittsburgh, PA

MONDAY, JANUARY 23, 2017

1:30 PM – 3:30 PM
Adult Cardiac: Ischemic

Moderators: Richard L. Prager, Ann Arbor, MI, and Elaine E. Tseng, San Francisco, CA

Utilization of Multiarterial Grafting During Coronary Artery Bypass Grafting Across the Predicted Risk of Mortality Spectrum: Impact on Short- and Long-Term Survival

W. B. Keeling 1, X. DeGrauw 2, J. Hunting 3, E. M. Halkos 4, R. G. Leshnower 1, E. P. Chen 1, J. Miller 1, O. M. Lattouf 1, R. Guyton 1, V. H. Thourani 1

1Emory University, Atlanta, GA, 2Emory University School of Medicine, Atlanta, GA

Should Coronary Revascularization With Bilateral Internal Mammary Arteries Be the Default Approach?


1Dartmouth-Hitchcock Medical Center, Lebanon, NH, 2Central Maine Heart and Vascular Institute, Portland, 3University of Vermont Medical Center, Burlington, 4Maine Medical Partners Cardiothoracic Surgery, Portland, 5Catholic Medical Center, Manchester, NH, 6Eastern Maine Medical Center, Bangor, 7Concord Hospital, NH, 8Dartmouth College, Lebanon, NH

Should Diabetes Be a Contraindication to Bilateral Internal Mammary Artery Grafting? A Multicenter Analysis

A. Ibarrae 1, B. M. Westbrook 1, D. J. Malenka 1, J. D. Schmoker 1, J. N. McCullough 1, B. J. Leavitt 1, P. W. Weldner 1, J. DeSimone 1, R. S. Kramer 3, R. D. Quinn 2, E. Omlstead 3, J. D. Klemperer 3, G. L. Sardella 3, C. S. Ross 3, A. W. Discipico 3

1Dartmouth-Hitchcock Medical Center, Lebanon, NH, 2Catholic Medical Center, Manchester, NH, 3University of Vermont Medical Center, Burlington, 4Central Maine Heart and Vascular Institute, Portland, 5Maine Medical Center, Portland, 6Maine Medical Partners Cardiothoracic Surgery, Portland, 7Eastern Maine Medical Center, Bangor, 8Concord Hospital, NH, 9Dartmouth College, Lebanon, NH

Vimeo: How I Do Internal Mammarys
Faisal G. Bakaeen, Houston, TX

Hybrid Coronary Revascularization vs On-Pump Coronary Artery Bypass Grafting: Comparative Effectiveness Analysis With Long-Term Follow-Up

V. Giambruno 1, P. Jones 1, F. Khaliel 1, S. A. Fox 2, M. Chu 1, P. Teefy 1, K. Sridha 1, S. Lavi 1, R. Baguri 1, P. Diamantouros 1, I. Iglesias 1, D. Bainbridge 1, B. Kial 1

1Western University, London Health Sciences Centre, Canada, 2University of Western Ontario, London, Canada

How I Do Hybrid Coronary Revascularization
Michael E. Halkos, Atlanta, GA

How to Build a Coronary Artery Bypass Grafting Bundle
Alan M. Speir, Falls Church, VA

*Invited
1:30 PM – 3:30 PM

**Congenital: Pediatric Congenital I**

**Moderators:** Jonathan M. Chen, Seattle, WA, and Ralph S. Mosca, New York, NY

**1:30 PM**

**Left-Sided Operations After Arterial Switch Operation for D-TGA and DORV-TGA Type: A Multicenter European Congenital Heart Surgeons Association Study**


1. University of Padua, Italy
2. Athens Heart Surgery Institute, Greece
3. Athens Heart Institute, Greece
4. Nemours/Alfred I. duPont Hospital for Children, Wilmington, DE
5. Nemours Cardiac Center, Alfred I. duPont Hospital for Children, Wilmington, DE
6. The Queen Silvia Children’s Hospital, Gothenburg, Sweden
7. Great Ormond Street Hospital for Children, London, United Kingdom
8. German Pediatric Heart Center, Sankt Augustin, Germany
9. Center for Congenital Heart Disease, Children, London, United Kingdom
10. German Pediatric Heart Center, Sankt Augustin, Germany
11. Chacko at the Hospital, Gothenburg, Sweden
12. Great Ormond Street Hospital for Children, London, United Kingdom
13. University of Padua, Italy
14. Athens Heart Surgery Institute, Greece
15. Athens Heart Institute, Greece
16. Nemours/Alfred I. duPont Hospital for Children, Wilmington, DE
17. Nemours Cardiac Center, Alfred I. duPont Hospital for Children, Wilmington, DE
18. The Queen Silvia Children’s Hospital, Gothenburg, Sweden
19. Great Ormond Street Hospital for Children, London, United Kingdom
20. German Pediatric Heart Center, Sankt Augustin, Germany
21. Center for Congenital Heart Disease, Children, London, United Kingdom
22. German Pediatric Heart Center, Sankt Augustin, Germany
23. Chacko at the Hospital, Gothenburg, Sweden
24. Great Ormond Street Hospital for Children, London, United Kingdom
25. University of Padua, Italy
26. Athens Heart Surgery Institute, Greece

**Excision of Systemic Atrioventricular Valve Facilitates Placement of Continuous Flow Ventricular Assist Devices in Pediatric Patients With Congenital Heart Disease**


The Children's Hospital of Philadelphia, PA

**Liver Disease After the Fontan: Report From the ACC Consortium**

_Curt Daniels, Columbus, OH*

**2:45 PM**

**An Optimal Organ Acceptance Rate for Pediatric Heart Transplantation: Is There a “Sweet Spot?”**

_C. Park_1, C. Villa2, A. Lorts3, C. Chin4, J. S. Tweddell5, F. Zafar6, D. L. Morales7

1. Cincinnati Children’s Hospital Medical Center, OH
2. Heart Institute, Cincinnati Children’s Hospital Medical Center, OH

**3:00 PM**

**Long-Term Outcomes After Extracardiac Fontan Takedown to an Intermediate Palliative Circulation**

_M. Trezzi_, E. Cetrano, S. Giannico, F. Iorio, S. B. Albanese, A. Carotti

Bambino Gesù Children’s Hospital, Rome, Italy

**3:15 PM**


_B. Hobbes_1, Y. d’Udekem1, D. Zannino2, C. P. Brizard3, B. Hobbes1

1. The Royal Children’s Hospital, Melbourne, Australia
2. Murdoch Childrens Research Institute, Parkville, Australia
3. Royal Children’s Hospital, Melbourne, Parkville, Australia

**1:30 PM – 3:30 PM**

**General Thoracic: Lung Cancer I**

**Moderators:** David T. Cooke, Sacramento, CA, and Thomas K. Varghese Jr., Salt Lake City, UT

**2:15 PM**

**Neoadjuvant Chemotherapy and Radiation Shows No Survival Advantage Over Chemotherapy Alone in Stage IIIA Patients: A Propensity Score-Matched Analysis of the National Cancer Database**


1. NorthShore University Health System, Evanston, IL
2. The University of Chicago, IL
3. Saint Thomas Healthcare, Nashville, TN

**Concomitant Mediastinoscopy Increases the Risk of Postoperative Pneumonia After Thoracoscopic Lobectomy**

_S. Yendamuri_1, A. Battoo1, K. Attwood1, S. Dhillon1

1. NorthShore University Health System, Evanston, IL

**2:45 PM**

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Bambino Gesù Children’s Hospital, Rome, Italy

**3:15 PM**


_B. Hobbes_1, Y. d’Udekem1, D. Zannino2, C. P. Brizard3, B. Hobbes1

1. The Royal Children’s Hospital, Melbourne, Australia
2. Murdoch Childrens Research Institute, Parkville, Australia
3. Royal Children’s Hospital, Melbourne, Parkville, Australia
2:00 pm  
**Sleeve Pulmonary Resection in the United States: Analysis of National Trends, Practice Patterns, and Outcomes from the National Cancer Database**

*Z. Abdelsattar, M. S. Allen, S. H. Blackmon*

**Mayo Clinic, Rochester, MN**

2:15 pm  
**Timeliness of Care and Lung Cancer T-stage Progression: How Long Can We Wait?**

*A. Maiga1, S. A. Deppen1, R. Pinkerman2, C. Callaway-Lane2, P. P. Massion3, T. Speroff3, R. S. Dittus1, E. S. Lambright1, J. C. Neskitt1, D. Baker4, E. L. Grogan4*

1Vanderbilt University Medical Center, Nashville, TN, 2Tennessee Valley Healthcare System, Nashville, 3Vanderbilt University, Nashville, TN

2:30 pm  
**Radiological Classifications of Multiple Lung Cancers and the Prognostic Impacts Based on the Presence of Ground Glass Opacity Component on Thin-Section Computed Tomography**

*A. Hattori1, K. Suzuki2, T. Matsunaga1, K. Takamochi1, S. Oh1*

1Juntendo University, Tokyo, Japan, 2Juntendo University School of Medicine, Tokyo, Japan

2:45 pm  
**Caprini Risk Assessment Model Implementation Decreases Venous Thromboembolism Rates in High-Risk Thoracic Surgery Patients at a Safety Net Hospital**

*H. Sterbling1, A. K. Rosen1, K. Hachey2, N. S. Vellanki3, H. C. Fernando4, V. R. Little5*

1Boston University School of Medicine, MA, 2Brigham and Women's Hospital, Boston, MA, 3Boston Medical Center, MA

3:00 pm  
**Debate: A Lung Cancer Bundle Is Possible**

*Pro: Wayne L. Hofstetter, Houston, TX*

*Con: Daniel L. Miller, Marietta, GA*

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**Monday, January 23, 2017**

1:30 pm – 3:30 pm  
**International Symposium: The Quality vs Access Dilemma in Cardiothoracic Surgery—Regionalization, Building Sustainable Cardiothoracic Surgery Programs, and Humanitarian Crises**

The symposium will focus on the fascinating quality vs access debate in cardiothoracic surgery care. It will explore the costs and benefits of regionalized/specialized cardiothoracic surgery care (including attendant advantages in terms of outcomes quality) vs localized care in lower volume centers (where outcomes quality can be a concern). The session also will examine the challenges involved in establishing a sustainable cardiothoracic surgery program in an underserved country and consider the quality, access, financial, and ethical considerations in providing cardiothoracic surgery care in the midst of a humanitarian crisis.

**Learning Objectives**

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

- Define the key aspects of the quality vs access debate with respect to providing cardiothoracic surgery care
- State the key advantages and disadvantages of regionalized cardiothoracic surgery care as opposed to local cardiothoracic surgery care in lower volume centers
- Describe the critical steps involved in establishing a sustainable cardiothoracic surgery program in an underserved country

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2:00 pm  
**Extracorporeal Membrane Oxygenation for Acute Lung Injury**

*Jonathan W. Haft, Ann Arbor, MI*

2:15 pm  
**TBD**

2:30 pm  
**Young Recipients, Old Lungs: Does Double vs Single Lung Transplant Affect Overall Survival?**

*P. Henley, E. Schumer, J. Trivedi, V. H. van Berkel, M. Fox University of Louisville, KY*

2:45 pm  
**Lung Retransplantation for Chronic Rejection: A Single-Center Experience**

*S. Biswas Roy1, R. Panchanathan2, R. Wali3, K. Varsch4, P. Kang1, J. L. Huang3, S. Hashimi4, T. Mohanakumar4, R. M. Bremner1, M. Smith1*

1Norton Thoracic Institute, St Joseph’s Hospital and Medical Center, Phoenix, AZ, 2Norton Thoracic Institute, St Joseph’s Hospital and Medical Center & University of Arizona College of Medicine, Phoenix, 3University of Arizona, Phoenix, 4St Joseph’s Hospital and Medical Center, Phoenix, AZ

3:00 pm  
**Debate: Lung Retransplantation Is an Appropriate Option**

*Pro: Robert Duane Davis, Durham, NC*

*Con: Thomas K. Waddell, Toronto, Canada*
• Identify key challenges in providing cardiothoracic surgery care in a humanitarian crisis

**Moderator:** A. Pieter Kappetein, Rotterdam, The Netherlands

**1:30 PM** The Quality vs Access Issue
Juan P. Umana, Bogota, Colombia

**1:40 PM** Debate: Regionalization/Specialization
Pro: TBD
Con: TBD

**2:00 PM** Establishing Sustainable Cardiothoracic Surgery Programs in Underserved Countries
Kathleen N. Fenton, Memphis, TN

**2:15 PM** Creating a Cardiothoracic Surgery Program Where None Has Existed Before
Peter Zilla, Cape Town, South Africa

**2:30 PM** Quality, Access, Financial, and Ethical Challenges Involved in the Syrian Refugee Crisis: The Experience in Turkey
Adnan Cobanoglu, Portland, OR

**2:45 PM** Quality, Access, Financial, and Ethical Challenges Involved in the Syrian Refugee Crisis: The Experience in Germany
TBD

**3:00 PM** The Global Challenge of Treating Noncommunicable Diseases, Including Cardiothoracic Diseases
David A. Fullerton, Aurora, CO

**3:15 PM** Q&A

**1:30 PM – 3:30 PM**

**SVS @ STS: Sharing Common Ground for Cardiovascular Problems**

*Many cardiothoracic 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 cardiothoracic 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:

• Express a plan for the management of arch pathology
• Describe the current state of cell therapy in cardiac and vascular applications

**Moderators:** Keith B. Allen, Kansas City, MO, and Jason T. Lee, Stanford, CA

**1:30 PM** Introduction

**1:35 PM** Current Management Options for Arch Pathology
Wilson Y. Szeto, Philadelphia, PA

**1:50 PM** Management of the Left Subclavian Artery During Endovascular Repair of the Aorta
Jean Bismuth, Houston, TX

**2:05 PM** Discussion

**2:25 PM** Cell Therapy for “No Option” Patients With Critical Limb Ischemia: Current Status
Michael P. Murphy, Indianapolis, IN

**2:40 PM** Cell Therapy for “No Option” Patients With Medically Refractory Angina: Current Status
Todd K. Rosengart, Houston, TX

**2:55 PM** Cell Therapy for End-Stage Congestive Heart Failure: Current Status
Amit N. Patel, Salt Lake City, UT

**3:10 PM** Discussion

**3:30 PM – 4:15 PM**

**BREAK—Visit Exhibits and Scientific Posters**
Surgical Motion Picture Matinee: General Thoracic
Moderators: Melanie A. Edwards, St Louis, MO, and Shari L. Meyerson, Chicago, IL
4:15 PM – 5:15 PM

Staple-Free, Totally Energized Video-Assisted Thoracoscopic Lobectomy
R. L. Oliveira1, E. Goudie2, V. Thiffault2, A. Jouquan2, P. Ferraro2, M. Liberman2
1CHUM, Montreal, Canada, 2CHUM Endoscopic Tracheobronchial and Oesophageal Center, University of Montreal, Canada

Robot-Assisted Right Lower Lobe Sleeve Lobectomy
D. C. Rice, S. Atay
The University of Texas MD Anderson Cancer Center, Houston

A Novel Subxiphoid “Three-Hole” Approach for Cut of Thymoma Invasive Left Innominate Veins and Pericardium
J. Wang, Y. Zhou, Q. Lu, W. Wang
Tangdu Hospital of The Fourth Military Medical University, Xi’an, China

Fluorescent Thoracoscopic Right Upper Apicoposterior Segmentectomy for Early Lung Cancer: Real-Time Visualization of Lymphatic Flow and Segmental Anatomy
Using Indocyanine Green
K. Han1, H. Kim1, Y. Choi2
1Korea University Guro Hospital, Seoul, South Korea, 2Korea University Medical Center, Seoul, South Korea

Intercostal to Intercostal Nerve Reconstruction Surgery for Severe Compensatory Hyperhidrosis: The “Gebitekin Technique”
C. Gebitekin, H. Malek, G. Çetinkaya, M. M. Erol, A. S. Bayram
Uludag University, Bursa, Turkey

Identify when to select this type of statistical analysis
Demonstrate the ability to use this information in a manuscript
Moderators: Graham A. Colditz, St Louis, MO, and G. Alexander Patterson, St Louis, MO

Introduction
Graham A. Colditz

Rationale for Propensity Scores in Observational Data
Margaret Olsen, St Louis, MO

Theory of Propensity Scores
Margaret Olsen, St Louis, MO

Generating Propensity Scores
Varun Puri, St Louis, MO

Methods to Use Propensity Scores and Respective Analysis
Varun Puri, St Louis, MO

How to Report Findings for Publication
Graham A. Colditz, St Louis, MO

Alternative Methods When Propensity Scores Are Not Indicated
Graham A. Colditz, St Louis, MO

Q&A

Scientific Posters and Wine

Business Meeting (STS Members Only)

STS Social Event: Space Center Houston
Join your colleagues at the 2017 STS Social Event, to be held Monday, January 23, at the Space Center Houston, the official visitor’s center of NASA’s Johnson Space Center. In addition to enjoying an extensive buffet and open bar, you’ll be able to check out artifacts documenting the history of space travel, including a collection of spacesuits worn by NASA astronauts, the Apollo 17 Command Module, the giant Skylab Trainer, and more. Don’t miss this opportunity! Purchase a ticket when registering for the Annual Meeting. Shuttle buses depart from all official STS hotels beginning at 6:45 pm.
TUESDAY
JANUARY 24, 2017

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
EARLY RISER SESSION 1
Career Transitions: How to Prepare for Life After the OR
Several surgeons have moved on to new and exciting nonsurgical activities and careers, but life outside the operating room or after a surgical career doesn’t just happen. It takes planning, and many surgeons do not take this into consideration. This session, organized by Women in Thoracic Surgery, will address managing career decisions and transitions for life outside the operating room. In addition, issues related to the aging physician, such as knowing when to stop operating, will be discussed.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Identify ways to start preparing now for what they want to do later in life
• Discuss why a mandatory retirement age is not an answer to the problem of knowing when to stop operating
• Propose existing options for evaluating an aging surgeon

EARLY RISER SESSION 2
Research Using the STS National Database™
The STS National Database is a valuable tool for quality improvement and research. Speakers, including STS members who have directed multiple successful research projects using the Database, will share strategies and tips with attendees on how to perform research within the Database. The new Participant User File Program also will be discussed.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Describe the process for creating a data request to access 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
• State the available options, rules, and policies for obtaining investigator access to de-identified patient-level data for analysis at their own institutions

EARLY RISER SESSION 3
Clinical Trials in Cardiothoracic Surgery
This session will review the latest cardiothoracic surgery research trials. Inclusion and exclusion criteria, brief summaries, protocol details, overcoming barriers to enrollment, building a research team, funding trials, and strategically developing trials for the future will be discussed.

Learning Objectives
Upon completion of this activity, participants should be able to:
• List current cardiothoracic surgery clinical trials
• Outline inclusion and exclusion criteria for each trial
• Analyze brief summaries of each trial

EARLY RISER SESSION 4
SBRT vs Surgery: A Debate With a Twist
In this session, a surgeon and a radiation therapist will debate the role of surgery and stereotactic body radiation therapy (SBRT) in early stage lung cancer. Strategies to better understand reoccurrence, complications, and survival between the two modes of treatment will be discussed.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Describe the contemporary data on local reoccurrence and complications related to surgery and SBRT for early stage lung cancer
• Discuss the best treatment strategies for early stage lung cancer

EARLY RISER SESSION 5
Management of Functional Mitral Regurgitation in the Modern Era
The appropriate management of patients with severe functional mitral regurgitation (MR) has been a point of major controversy. There are debates over whether mitral repair or replacement is the appropriate strategy and how to approach patient selection. These debates have been fueled by recent data from the Cardiothoracic Surgical Trials Network, which is evaluating repair vs replacement of the mitral valve for functional MR.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Identify patients with severe functional MR for mitral valve surgery by utilizing current outcomes data
• Evaluate which patients are best for mitral repair vs replacement
• Describe the role of percutaneous therapies

View full agendas for the Early Riser Sessions at www.sts.org/annualmeeting.
TUESDAY, JANUARY 24, 2017

EARLY RISER SESSION 6
Robotic Lung Resection vs VATS for Lung Cancer
Currently, the majority of lung cancer operations in the US are performed with an open technique. This session will highlight minimally invasive techniques, video-assisted thoracoscopic surgery (VATS), and robotic-assisted thoracoscopic surgery (RATS) as the ideal approaches to the management of patients with non–small-cell lung cancer (NSCLC). Rather than focusing on standard VATS lobectomy for early stage lesions, this session will focus on the use of VATS and RATS for a lobectomy with chest wall resection, segmentectomy, and sleeve resections, all performed with minimally invasive approaches. The advantages and disadvantages of these minimally invasive approaches for the management of patients with NSCLC also will be covered.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Identify a stepwise plan to incorporate VATS and RATS into anatomic lung resection
• Discuss the advantages and limitations of VATS and RATS in the management of NSCLC, including chest wall involvement, segmentectomy, and sleeve resection

EARLY RISER SESSION 7
All-Arterial CABG vs Hybrid CABG vs Multivessel PCI: What Is the New Standard for Revascularization?
Every cardiac surgeon and cardiologist has patients with coronary artery disease. All possible methods of coronary revascularization—surgical, hybrid, and percutaneous—will be covered in this session, fostering interdisciplinary discussion. This session also will introduce the concept of hybrid coronary artery bypass grafting, emphasizing the need for adequate training and skills in minimally invasive approaches for harvesting the arterial conduit.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Discuss the different methods of coronary revascularization and explain how to tailor each to an individual patient
• Describe how arterial grafts compare to vein grafts for short-term complications, as well as mid- and long-term follow-up

EARLY RISER SESSION 8
Learning From My Mistakes: A Case I Wish I Could Do Over
Making a technical error or incorrect decision in patient management is never something a surgeon wants to experience, but it’s important to learn from these mistakes and share that knowledge with others. This session will look at actual—as opposed to ideal—outcomes with a critical look at errors committed throughout each case.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Explain the importance of self-critique as a method of reflective thinking after each case
• Discuss the challenges in complex case decision making
• Identify leaders in the field who may be future sources of reference when encountering a difficult case

EARLY RISER SESSION 9
Improving Combat Casualty Care: The Use of Golden Hour Offset Trauma (GHOST) Surgical Teams and Group O Low-Titer Whole Blood Transfusion in the Field
The knowledge and practice of modern trauma care is a neglected skillset for most cardiothoracic surgeons. The experiences of US military medical units in Iraq and Afghanistan have led to a number of advances in how the military approaches traumatic injuries, including point-of-injury treatment, resuscitation, and damage control surgical techniques. This session will address the knowledge gap many cardiothoracic surgeons have regarding trauma care.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Explain how whole blood is utilized in combat casualty care
• Explain the principles of damage control resuscitation and surgery
• Identify the risk factors for massive transfusion after trauma

EARLY RISER SESSION 10
Developing an Extracorporeal Life Support Program
Extracorporeal life support (ECLS) is recognized as effective therapy for many patients with life-threatening cardiopulmonary failure. The number of centers that offer ECLS has increased by more than 300% during the past decade. Although ECLS is a highly effective form of supportive therapy, infrequent utilization and the need for multidisciplinary team involvement underscore the importance of appropriate ECLS program management. Developing and implementing an ECLS program requires careful planning and significant investment in institutional resources, personnel, equipment, and education. This session will discuss best practices in ECLS management for centers that wish to establish or improve ECLS care.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Explain how clinical data can be used to improve ECLS program quality and outcomes
• Choose ECLS equipment that is appropriate for the unique needs of a program
• Manage an ECLS oversight program that improves multidisciplinary communication and engagement
• Describe the beneficial impact of medical simulation for staff training
• Identify opportunities for ECLS program growth based on local and regional health administrative data

7:30 AM – 8:30 AM
EARLY RISER HEALTH POLICY FORUM
Ready or Not: Implementing the New Merit-Based Incentive Payment System in Your Practice Today
In passing the Medicare Access and CHIP Reauthorization Act (MACRA), Congress changed how all physicians will be paid under the Medicare program. As the Centers for Medicare & Medicaid Services begins to implement the new law, a number of policies regarding cardiothoracic surgeons’ payments have come to light. This session will focus on the Merit-Based Incentive Payment System (MIPS)—the revised fee-for-service payment model that will affect most physicians, including STS members. It also will cover Alternative Payment Models (APMs), bundled payments for coronary artery bypass grafting (CABG) procedures, and data collection efforts that could impact surgical payments in the future.

Learning Objectives
Upon completion of this activity, participants should be able to:
• Outline the changes their practices must make to comply with MACRA requirements
• Describe the mandatory bundled payment model for CABG
• State the new data reporting requirements to document services provided under global surgical payments
• Explain how STS is working to ensure that MACRA policies are improving care delivery without posing undue burden
• Discuss the Society’s plans for an APM that STS members can opt into

Learning Objectives
Upon completion of this activity, participants should be able to:
• Describe the importance of early treatment for traumatic hemorrhage
• Identify the risk factors for massive transfusion after trauma
• Outline the important tools and methods of combat casualty care
• Explain how STS is working to ensure that MACRA policies are improving care delivery without posing undue burden
• Discuss the Society’s plans for an APM that STS members can opt into
TUESDAY, JANUARY 24, 2017

8:45 AM – 12:00 PM
General Session II

Moderators: Joseph E. Bavaria, Philadelphia, PA, and Keith S. Naunheim, St Louis, MO

8:45 AM  Results of the STS TAVR Survey
9:00 AM  Thomas B. Ferguson Lecture
         Ralph W. Muller, Philadelphia, PA
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: Francis D. Ferdinand, Albany, NY, and Thomas E. MacGillivray, Boston, MA

1:00 PM  In Elective Arch Surgery, Does the Site of Arterial Cannulation for Circulatory Arrest Really Matter?
         O. A. Preventza1, M. Price1, K. Spiliotopoulos2, L. Comwell2, S. Omer2, K. I. de la Cruz2, T. K. Rosengart3, Q. Zhang3, S. Y. Green1, S. A. LeMaire1, J. S. Coselli1
         1Baylor College of Medicine/Texas Heart Institute, Houston, 2Baylor College of Medicine, Houston, TX, 3Michael E. Debakey VA Medical Center, Houston, TX

1:15 PM  Nontuberculous Mycobacterium Infections Associated With Heater-Cooler Devices Used During Cardiothoracic Surgery: An Emerging Public Health Concern
         M. Petricevic1, B. Blicic1, M. Mikus1, L. Konesic1, M. Rasic1, M. Milosevic2, T. Madzar2, M. Mihaljić2, H. Gasparovic1, K. Goerlinger1
         1University Hospital Centre Zagreb, Croatia, 2University of Zagreb School of Medicine, Croatia, 3University Hospital Split, Croatia, 4Klinik für Anästhesiologie und Intensivmedizin, Universität Duisburg-Essen, Universitätsklinikum Essen, and TEM International GmbH, Munich, Germany

1:30 PM  Risk Evaluation System Based on Genetic Background (GenoSCORE) for Predicting Long-Term Prognosis After Coronary Artery Bypass Grafting
         H. Liu, Z. Zheng
         National Center for Cardiovascular Diseases, Fuwai Hospital, Chinese Academy of Medical Sciences, and Peking Union Medical College, Beijing

1:45 PM  Impact of Regional Collaboration on Quality Improvement and Associated Cost Savings in Coronary Artery Bypass Grafting Surgery
         1Virginia Cardiac Services Quality Initiative, Virginia Beach, 2Virginia Cardiac Services Quality Initiative, Charlottesville, 3Virginia Commonwealth University, Richmond, 4University of Virginia, Charlottesville, 5Cardiac, Vascular & Thoracic Surgery Associates, Falls Church, VA

2:00 PM  The Association Between Timing of Preoperative Clopidogrel Discontinuation, Platelet Reactivity, and Bleeding Complications in Patients Undergoing Coronary Artery Bypass Grafting Surgery
         1University Hospital of South Manchester NHS Foundation Trust, United Kingdom, 2Manchester Centre for Health Economics, United Kingdom, 3Institute of Inflammation and Repair, University of Manchester, United Kingdom, 4University Hospital of South Manchester, Wythenshawe Hospital, United Kingdom, 5University of Manchester School of Nursing, Midwifery, and Social Work, United Kingdom, 6The Transplant Centre, Manchester, United Kingdom, 7University of Manchester School of Health Economics, United Kingdom

1:15 PM  Nontuberculous Mycobacterium Infections Associated With Heater-Cooler Devices Used During Cardiothoracic Surgery: An Emerging Public Health Concern
         K. B. Allen1, S. B. Schwartz1, D. D. Yuh1, R. A. Hopkins1, R. Langer1, W. Bauer1, J. A. Maders1, J. Delgado Donayre1, N. Milligan1, C. P. Wentz2
         1St Luke’s Mid America Heart Institute, Kansas City, MO, 2Center for Devices and Radiological Health, US Food and Drug Administration, Silver Spring, MD, 3Furman University School of Medicine, New Haven, CT, 4Children’s Mercy Hospital, Kansas City, MO, 5Texas Tech University Health Sciences Center, El Paso, 6US Food and Drug Administration, Silver Spring, MD
Adult Cardiac: Mitral and Tricuspid Valves
Moderators: Richard Lee, St Louis, MO, and Brett C. Sheridan, San Francisco, CA

Cleveland Clinic, OH

1:15 PM  Long-Term Results of Annuloplasty in Trivial-to-Mild Functional Tricuspid Regurgitation During Mitral Valve Replacement: Should We Perform Annuloplasty on the Tricuspid Valve or Leave It Alone? J. Choi, S. Kim, S. Yeom, H. Hwang, K. Kim
Seoul National University Hospital, South Korea

2:00 PM  Early European Experience With Echo-Guided Transapical Off-Pump Mitral Valve Repair With NeoChord Implantation A. Colli1, L. Besola2, E. Bizzotto2, E. Manzan1, F. Zucchetta1, D. Patitelli2, A. Bistiroti2, K. Rucinskas2, V. Janusauskas2, D. Zakravski1, A. Drasutienė2, A. Lionevicius2, B. C. Danner1, H. Sievert1, S. Salzson2, M. Rinaldi1, D. Pacini1, C. Savini2, K. Wroble2, K. Kurnicka2, G. Gerosa1
1University of Padua, Italy; 2Vitus University, Lithuana; 3University Medical Center, Gottingen, Germany; 4CardioVasculàres Centrum Frankfurt, Germany; 5Mohielle Hospital, Turin, Italy; 6S. Orsola-Malpighi Hospital, Bologna, Italy; 7Medcover Hospital, Warsaw, Poland; 8Medical University of Warsaw, Poland

1New York-Presbyterian Hospital/Columbia University Medical Center, New York, NY; 2Columbia University Medical Center, New York, NY; 3Columbia University College of Physicians and Surgeons, New York, NY; 4Columbia University, New York, NY; 5The Heart Center at Arnold Palmer Hospital For Children, Orlando, FL; 6Arnold Palmer Hospital for Children, Orlando, FL

2:30 PM  Debate: Bioprosthetic Mitral Valve Replacement Is the Optimal Choice for the Young Patient Less than 60 Years Old Yes: Gorav Altwadi, Charlottesville, VA
No: TBD

2:45 PM  New Approaches to Bleeding in Congenital Heart Patients Erin A. Gottlieb, Houston, TX

1:00 PM – 3:00 PM  Congenital: Pediatric Congenital II
Moderators: Carlos M. Marry, Houston, TX, and Christian Pizarro, Wilmington, DE

1:00 PM  Incidence and Impact of Recurrent Laryngeal Nerve and Swallowing Dysfunction in Neonatal Aortic Arch Repair K. K. Pourmoghadam1, W. M. Decampii, J. Koski1, K. D. Piggott1, M. Ruzmetov1, A. Cowden1, M. C. O’Brien1, S. Kishawi1, H. Fakioglu1
1The Heart Center at Arnold Palmer Hospital For Children, Orlando, FL; 2Arnold Palmer Hospital for Children, Orlando, FL

1:15 PM  Aortic Stenosis of the Neonate: A 26-Year, Single-Center Experience M. Vergnat1, B. Asfour, B. Bierbach, P. Suchowiersky1, J. A. Fragata5, Z. Tobota1, B. Maruszewski1, G. E. Sarris13, T. Ebel14, L. Franciosi15
1Columbia University Medical Center, New York-Presbyterian/Morgan Stanley Children’s Hospital, New York, NY; 2Institut Hospitalier Jacques Cartier, Massy, France; 3Hôpital Universitaire Bicêtre, Le Kremlin-Bicêtre, France; 4Bambino Gesù Children’s Hospital, Rome, Italy; 5Great Ormond Street Hospital for Children, London, United Kingdom; 6Hospital for Children and Adolescents, Helsinki University Central Hospital, Finland; 7Children’s Heart Center, Bratislava, Slovakia; 8Hospital Marie Lannelongue, Les Plessis-Robinson, France; 9The Queen Silvia Children’s Hospital, Gothenburg, Sweden; 10Ukrainian Children’s Cardiac Center, Kiev; 11Leiden University Medical Center, Netherlands; 12Children’s Memorial Health Institute, Warsaw, Poland; 13Athens Heart Surgery Institute, Greece; 14University Hospital Groningen, Netherlands; 15Royal Hospital Heart Center, Muscat, Oman

1:30 PM  Hybrid Balloon Valvuloplasty Through the Ascending Aorta via Median Sternotomy in Infants With Severe Congenital Valvular Aortic Stenosis: Immediate Results and Mid-Term Follow-Up X. Pan, W. Ouyang, S. Wang, K. Pang, S. Li
National Center for Cardiovascular Diseases, Fuwai Hospital, Chinese Academy of Medical Sciences, and Peking Union Medical College, Beijing

1:45 PM  Primary Pulmonary Vein Stenosis: Outcomes, Prognostic Factors, and Severity Score in a Multicenter Study D. Kafka1, E. Beili2, E. A. Bacha1, V. Lambert3, D. di Carlo4, M. Kostolny5, J. Salminen6, M. Nosai7, J. Hörer8, H. Berggren9, I. Yemets10, M. Hazeckamp11, B. Maruszewski12, G. E. Sarris13, T. Ebel14, L. Franciosi15
1Columbia University Medical Center, New York-Presbyterian/Morgan Stanley Children’s Hospital, New York, NY; 2Institut Hospitalier Jacques Cartier, Massy, France; 3Hôpital Universitaire Bicêtre, Le Kremlin-Bicêtre, France; 4Bambino Gesù Children’s Hospital, Rome, Italy; 5Great Ormond Street Hospital for Children, London, United Kingdom; 6Hospital for Children and Adolescents, Helsinki University Central Hospital, Finland; 7Children’s Heart Center, Bratislava, Slovakia; 8Hospital Marie Lannelongue, Les Plessis-Robinson, France; 9The Queen Silvia Children’s Hospital, Gothenburg, Sweden; 10Ukrainian Children’s Cardiac Center, Kiev; 11Leiden University Medical Center, Netherlands; 12Children’s Memorial Health Institute, Warsaw, Poland; 13Athens Heart Surgery Institute, Greece; 14University Hospital Groningen, Netherlands; 15Royal Hospital Heart Center, Muscat, Oman

2:00 PM  Higher Programmatic Volume in Neonatal Heart Surgery Is Associated With Lower Early Mortality A. Kansy1, G. E. Sarris1, T. Ebel1, J. P. Jacobs1, J. I. Fragata2, Z. Tobota1, B. Maruszewski1
1Children’s Memorial Health Institute, Warsaw, Poland; 2Athens Heart Surgery Institute, Greece; 3University Hospital Groningen, Netherlands; 4Johns Hopkins All Children’s Heart Institute, St Petersburg, FL; 5Hospital de Santa Marta, Alges, Portugal

1Hospital of the University of Pennsylvania, Philadelphia, PA; 2The Children’s Hospital of Philadelphia, PA

2:30 PM  Effect of Antifibrinolytic Drugs on Pulmonary Function in Neonates Undergoing the Norwood Procedure G. Hoffman1, J. P. Scott1, R. A. Niebler1, E. E. Stuth1, M. E. Mitchell1, J. S. Tweddell2, N. S. Ghanayem3, K. A. Mussatto2
1Children’s Hospital and Medical College of Wisconsin, Milwaukee; 2Children’s Hospital of Wisconsin, Milwaukee; 3Heart Institute, Cincinnati Children’s Hospital Medical Center, OH; 4Medical College of Wisconsin, Milwaukee
**EACTS @ STS: Management of Distal Type B Aortic Dissection**

In this session, presented by STS and the European Association for Cardio-Thoracic Surgery (EACTS Vascular Domain), international experts will discuss the various treatment strategies and techniques for distal thoracic aortic dissection. Complex open reconstructive techniques, as well as endovascular approaches to both acute and chronic dissection, will be discussed. Additionally, hybrid approaches and the impact of distal endovascular adjunctive stent graft therapies on distal aortic remodeling and survival will be discussed.

**Learning Objectives**

Upon completion of this activity, participants should be able to:
- Explain various treatment strategies for distal aortic dissection, including open, endovascular, and hybrid approaches
- Discuss the results of open repair, endovascular stent grafting, and hybrid repairs and the long-term impact on aortic remodeling and survival
- Describe the nuanced anatomy and patient characteristics used to select the various treatment strategies available for distal aortic dissection

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

**1:00 PM**

Introduction to the Type B Dissection Treatment Conundrum

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

**1:15 PM**

The Impact of Thoracic Endovascular Aortic Repair on Long-Term Survival in Type B Aortic Dissection

X. Lou1, E. P. Chen2, R. Vaerwaswamy3, Y. Duwayri4, B. G. Leshnower5
1Emory University, Atlanta, GA; 2Emory University School of Medicine, Atlanta, GA

**1:30 PM**

Frozen Elephant Trunk Procedure for Type A and B Dissection

Heinz G. Jakob, Essen, Germany

**1:45 PM**

Twelve-Month Outcomes of Patients Treated for Chronic Symptomatic Aortic Dissection Using the Streamliner Multilayer Flow Modulator

S. Sherif1, N. Hynes2, E. P. Kavanagh3, V. S. Costache4, F. Stefano5, A. Elhelali6
1Galway University Hospitals, Ireland; 2Western Vascular Institute, Galway, Ireland; 3Galway Clinic, Ireland; 4University, Sibu, Romania; 5GLifeTech, Galway, Ireland

**2:00 PM**

Open Thoracoabdominal Aortic Aneurysm Surgery vs TEVAR for Chronic Type B Dissection

G. Chad Hughes, Durham, NC

**2:15 PM**

The Impact of Initial Aortic Diameter and the Larger Area Ratio of False Lumen on Stanford Type B Aortic Dissection Prognosis

A. Matsushita, Y. Tsunoda, T. Hattori, W. Mihara
Seikeikai Chiba Medical Center, Japan

**2:30 PM**

TEVAR vs Medical Management for Acute Uncomplicated Type B Dissection: Are There High-Risk Features Worth of Consideration?

Martin Czerny, Freiburg, Germany

**2:45 PM**

Predictors of Remodeling of the Distal Aorta in Patients Who Underwent TEVAR for Chronic Type B Aortic Dissection

I. Sultan1, M. A. Sink2, J. E. Bavaria3, T. Dibbler4, A. Kilic5, W. Y. Szeto6, N. Desai7
1University of Pittsburgh, PA; 2University of Pennsylvania, Philadelphia

**2:00 PM**

Adapting the New STS Learning Management System into Your Program

Ara A. Vapcovic, Houston, TX

**1:00 PM**

Revisional Surgery Following Esophagectomy: Straight Talk About the Conduit

E. G. Chan1, J. D. Lukstich2, B. W. Schaefer3, M. A. Villa Sanchez4, L. W. Schaefer5
1University of Pittsburgh Medical Center, PA; 2University of Virginia Health System, Charlottesville

**1:15 PM**

Induction Therapy Before Esophagectomy Improves Overall Survival in Patients With Clinical T3N0 Esophageal Cancer: A Nationwide Study in Taiwan

Y. Chao1, C. Chen1, T. Liu1
1Chang Gung Memorial Hospital, Kuweisn, Taiwan; 2Institute of Medicine, Chung Shan Medical University, and Chung Shan Medical University Hospital, Taichung, Taiwan; 3National Institute of Cancer Research, National Health Research Institute, Mioai, Taiwan

**1:30 PM**

Is Open Esophagectomy Still the Gold Standard in the Treatment of Esophageal Cancer? A National Cancer Database Study

B. Weksler, J. L. Sullivan
University of Tennessee Health Science Center, Memphis

**1:45 PM**

Patient Response to Neoadjuvant Chemoradiotherapy Predicts Overall and Disease-Free Survival in Locally Advanced Esophageal Cancer

A. Knight1, J. Reinersman2, M. S. Allen1, D. A. Wiggles3, S. D. Cassivi1, F. C. Nichols1, K. R. Shen1, S. H. Blackmon1
1Mayo Clinic, Rochester, MN; 2University of Oklahoma Health Sciences Center, Oklahoma City

**2:00 PM**

Local and Population-Level Analyses of Extent and Risk Factors of Readmission Within 1 Year of Esophagectomy

B. Kidane1, B. J. Jacob1, J. L. Sullivan2, Y. Shen1, R. Saks1, T. W. Waddell5, G. Darling6
1University of Toronto, Canada; 2Centre for Addiction and Mental Health, Toronto, Canada; 3Toronto General Hospital, Canada; 4Institute for Clinical Evaluative Sciences, Toronto, Canada; 5University Health Network, Toronto, Canada
2:15 pm  A Nationwide Rise in the Use of Stents to Manage Benign Esophageal Perforation
L. Thornblade1, A. Cheng2, D. E. Wood3, M. S. Mulligan4, M. Saunders5, H. He1, B. K. Oelschlager7, D. Flum8, F. Farjah9
1University of Washington, Seattle, 2University of Washington Medical Center, Seattle

2:30 pm  Predictors of Failure to Rescue After Esophagectomy
Cedars-Sinai Medical Center, Los Angeles, CA

2:45 pm  Postoperative Complications Drive Unplanned Readmissions After Esophagectomy
R. Bhagat1, E. Juarez-Colunga1, M. J. Weyant1, J. D. Mitchell2, N. O. Glebova1, W. G. Henderson1, D. A. Fullerton1, R. A. Meguid1
1University of Colorado School of Medicine, Aurora, 2University of Colorado, Aurora

1:00 pm – 3:00 pm  General Thoracic: Lung Cancer II
Moderators: Mara B. Antonoff, Houston, TX, and Farhood Farjah, Seattle, WA

1:00 pm  Defining Selection Bias: Development of a Surgical Selection Score for Advanced Stage Non–Small-Cell Lung Cancer Patients
E. A. David1, S. W. Andersen2, L. A. Beckett1, J. A. Melnikow1, K. Kelly1, D. T. Cooke1, L. M. Brown1, R. J. Canter1
1University of California, Davis Medical Center, Sacramento, 2University of California, Davis, Sacramento

1:15 pm  Early and Long-Term Results of Tracheal Sleeve Pneumonectomy for Lung Cancer After Induction Chemotherapy
D. Galetta, L. Spaggiari
European Institute of Oncology, Milan, Italy

1:30 pm  Lung Cancer Screening in the Community Setting: Challenges for Adoption
S. Randhawa1, G. Drizin2, T. Obeid1, T. Kane1, G. Y. Song2, T. J. Reilly1, D. Jarrar2
1Einstein Healthcare Network, Philadelphia, PA, 2Einstein Healthcare Network, East Norriton, PA, 3University of Pennsylvania, Philadelphia, 4Perelman School of Medicine at the University of Pennsylvania, Philadelphia

1:45 pm  Lymph Node Assessment Is Necessary for Surgical Treatment of Patients With Clinical Stage T1aN0M0 Typical Carcinoid Tumors
L. M. Brown, D. T. Cooke, E. A. David
University of California, Davis Medical Center, Sacramento

2:00 pm  Video-Assisted Thoracoscopic Surgery vs Thoracotomy — Differences in Outcomes Are Not Just Technique-Dependent: A Study of 9,787 Patients
A. S. Wolf1, B. Liu2, E. Leoncho1, D. G. Nicasiri1, D. D. Lee1, E. Taiol1, R. M. Flores1
1Mount Sinai Medical Center, New York, NY, 2Icahn School of Medicine at Mount Sinai, New York, NY

2:15 pm  Bacterial Colonization of Non-Operated Lung Increases Mortality in Patients Undergoing Lung Cancer Surgery
J. Iquille, F. De Dominicis, A. Fournidal, S. Lafitte, G. Merlusca, P. Berne
University Hospital of Amiens Picardy, France

2:30 pm  Geographic Variations Observed in Lung Cancer Lobectomy Procedural Outcomes: The Society of Thoracic Surgeons General Thoracic Surgery Database
A. W. Shroyer1, J. A. Quin2, J. Groff1, M. V. Grau-Sepulveda4, A. S. Kosinski4, B. Yerokun1, D. J. Mitchell1, T. V. Biltfinger3
1Stony Brook University, NY, 2VA Boston Healthcare System, West Roxbury, MA, 3Southampton Hospital, NY, 4Duke Clinical Research Institute, Durham, NC, 5Duke University Medical Center, Durham, NC, 6University of Colorado, Aurora, 7Stony Brook University Medical Center, NY

2:45 pm  Pulmonary Resection for Second Lung Cancer After Pneumonectomy: Is It Worth the Risk?
A. Ayub1, S. Rehman1, A. M. Al-Ayoubi1, N. Santana-Rodriguez1, W. Raad1, R. M. Flores2, F. Bhora2
1Icahn School of Medicine at Mount Sinai, New York, NY, 2Mount Sinai St Luke's Hospital, New York, NY, 3Mount Sinai Health System, New York, NY, 4Mount Sinai Roosevelt and Mount Sinai St Luke's Hospitals, New York, NY
1:00 PM – 5:30 PM

**Advanced Therapies for End-Stage Heart Disease**

The treatment of end-stage heart disease requires a multidisciplinary approach that selects the most appropriate therapy to optimize clinical outcomes. This session will cover the appropriate indications and optimal patient selection for use of mechanical circulatory support and heart transplantation, appropriate clinical indications for selecting alternative treatment strategies—other than mechanical circulatory support or heart transplantation—for treatment of advanced heart failure, and identifying the causes of and understanding treatment options for major adverse events in patients receiving mechanical circulatory support.

**Learning Objectives**

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

- Identify current and appropriate indications for end-stage heart disease treatment options, including mechanical circulatory support, heart transplantation, and newer alternative treatment options
- Identify alternative non-mechanical or non-transplant treatment strategies that can lead to improved patient outcomes
- Explain the results from recent major studies in the field that have had a significant impact on patient selection and patient care practices
- Discuss new trials and technology that will be or recently have been introduced into the field

**Moderators:** Pavan Atluri, Philadelphia, PA; Robert L. Kormos, Pittsburgh, PA; Francis D. Pugani, Ann Arbor, MI; and Jay D. Pal, Seattle, WA

### 1:00 PM

**Hemodynamic Support for Shock: Are All Devices Created Equal?**

Nir Uriel, Chicago, IL

### 1:15 PM

**Extracorporeal Cardiopulmonary Resuscitation: Is Broader Dissemination of Its Use Appropriate and Who Should Provide It?**

Robert Adamson, San Diego, CA

### 1:30 PM

**Extracorporeal Membrane Oxygenation (ECMO) Complications: Prevention and New Approaches for Management**

Jonathan W. Haft, Ann Arbor, MI

### 1:45 PM

**Short-Term Circulatory Support as a Bridge to Transplant or Recovery: Changing Techniques and Approaches**

Pavan Atluri, Philadelphia, PA

### 2:00 PM

**Increasing the Donor Pool in Thoracic Transplantation: Experience With Ex Vivo Perfusion**

Jason W. Smith, Seattle, WA

### 2:15 PM

**Case Presentation on ECMO and Panel Discussion**

Michael S. Firstenberg, Akron, OH

### 2:30 PM

**Does Duration of Continuous-Flow Left Ventricular Assist Devices Have an Impact on Postoperative Outcomes After Cardiac Transplantation? An Analysis of UNOS/OPTN Data**


1Rutgers New Jersey Medical School, Newark, NJ, 2Barnabas Heart Hospitals, Newark, NJ, 3Newark Beth Israel Medical Center, NJ, 4Rutgers/Barnabas Health, Newark, NJ

### 2:45 PM

**Clinical and In Vitro Evidence That Left Ventricular Assist Device (LVAD)-Associated Hemolysis Contributes to LVAD Thrombosis**

C. Bartoli1, D. Zhang1, J. Kang1, D. Restle1, G. Redline1, J. Howard2, C. A. Bermudez2, M. A. Acker2, P. Atluri3

1Hospital of the University of Pennsylvania, Philadelphia, 2University of Pennsylvania, Philadelphia, 3University of Pennsylvania Medical Center, Philadelphia

### 3:00 PM

**Break**

### 3:30 PM

**What Defines a Bad Right Ventricle? Perioperative Imaging and Hemodynamic Assessment of the Right Ventricle**

J. Eduardo Rame, Philadelphia, PA

### 3:45 PM

**The Right Ventricle Is Not Working and I’m in Trouble: What’s Next?**

Robert L. Kormos, Pittsburgh, PA

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**1:00 PM – 5:30 PM
Patient Safety Symposium: Resilience or Burnout—Do We Have a Choice?**

Recent reports have highlighted the problem of work-related stress and burnout among health care providers. The interventional strategies for managing burnout are not well-defined, particularly in cardiothoracic surgery, and much has been proposed in terms of methods to combat such a condition. Didactic lectures and case presentations will provide an understanding of the causes, prevalence, and consequences of work-related stress and professional burnout, along with interventional and implementable strategies to recognize burnout and mitigate its impact.

**Learning Objectives**

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

- State the definition of and contributors to professional burnout
- Identify work-related and personal stressors
- Discuss the personal and patient-related consequences of professional burnout
- Identify factors associated with physician resilience and mindfulness
- Describe different methods and tactics (personal and institutional) to mitigate professional burnout and enhance resilience

**Moderator:** Susan D. Moffatt-Bruce, Columbus, OH

### 1:00 PM

**Introduction**

Susan D. Moffatt-Bruce, Columbus, OH

### 1:15 PM

**Work-Related Stress and Burnout in Surgery**

Charles Balch, Dallas, TX

### 2:00 PM

**Developing Physician Resilience**

Wayne Sotile, Winston-Salem, NC

### 2:45 PM

**Q&A**

### 3:00 PM

**Break**

### 3:30 PM

**How Can the Institution Address Physician Burnout?**

Colin West, Rochester, MN

### 4:15 PM

**Mindfulness to Combat Work-Related Stress**

Maryanna Klatt, Columbus, OH

### 5:00 PM

**Panel Discussion**

J. Michael DiMaio, Dallas, TX, and Theolyn Price, Colorado Springs, CO

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*Invited*
TUESDAY, JANUARY 24, 2017

3:00 PM – 3:30 PM
BREAK—Visit Exhibits and Scientific Posters

3:30 PM – 4:30 PM
Cardiothoracic Surgical Education
Moderators: Ara A. Vapcovic, Houston, TX, and Edward D. Verrier, Seattle, WA

3:30 PM  Current Status of Endovascular Training for Cardiothoracic Surgery Residents in the United States
P. N. Vardas1, A. C. Stefanescu Schmidt1, A. B. Goldstone1, A. A. Shah1, D. LaPierre1, W. F. DeNardo2, E. A. Gillis3, A. G. Fiedler2, M. S. Haltbrenner1, A. L. Eilers1, D. M. Walters1, E. H. Stephens1, V. Tchamtchaleishvili1
1Indiana University School of Medicine, Indianapolis, 2Massachusetts General Hospital and Harvard Medical School, Boston, 3University of Pennsylvania, Philadelphia, 1Duke University Medical Center, Durham, NC, 1University of Virginia, Charlottesville, 2Medical University of South Carolina, Charleston, 3Mayo Clinic, Rochester, MN, 4Cleveland Clinic, OH, 1The University of Texas Health Science Center, San Antonio, 2University of Washington, Seattle, 1Colorado University Medical Center, New York, NY,

3:45 PM  Implementation of a Novel Debate-Style Cardiothoracic Surgery Journal Club for Trainee Acquisition and Application of Seminal Literature: Results of a Pilot Curriculum
M. B. Antonoff1, J. Luci2, T. C. Nguyen1, C. Fowler1, S. B. Eisenberg1, R. K. Wolf1, A. L. Estrella1, A. A. Vapcovic1
1The University of Texas MD Anderson Cancer Center, Houston, 3University of Alberta, Edmonton, Canada, 1Memorial Hermann-Texas Medical Center, Houston, 2The University of Texas Health Science Center, Houston, 3Mayo Clinic, Rochester, MN

4:00 PM  Resident Autonomy in the Operating Room: Expectations vs Reality
J. M. Sternbach1, E. M. Bender1, J. B. Zwischenberger3, S. L. Meyerson1
1Northwestern University, Chicago, IL, 2St Francis Medical Center, Cape Girardeau, MO, 3University of Kentucky, Lexington

3:30 PM – 5:30 PM
Adult Cardiac: Aortic Valve
Moderators: Joseph F. Sabik, Cleveland, OH, and Wilson Y. Szeto, Philadelphia, PA

4:30 PM  Operative Outcomes for Valve-Sparing Root Repair and Bentall Procedure in Marfan Patients: An International Collaboration From Johns Hopkins and UK Data (NICOR)
M. Bashir1, M. Fok2, J. Dunning3, J. T. Magruder4, M. Shaw5, D. E. Carriere1, A. Oo1
1Barts Heart Centre, London, United Kingdom, 2Liverpool Heart and Chest Hospital, United Kingdom, 3The Old Rectory, Kirkby Stephen, United Kingdom, 4The Johns Hopkins Hospital, Baltimore, MD

4:15 PM  Analysis of More Than 700 Type A Dissections Using the Penn Classification
N. Desai1, F. H. McCarthy2, T. Dibble1, D. Sprangan1, D. Savino1, K. A. Dufandach1, K. M. McDermott6, M. L. Williams1, P. Vallabhaicosyula1, W. Y. Szeto4, J. E. Bavaria1, J. Augoustides1
1University of Pennsylvania, Philadelphia, 2Hospital of the University of Pennsylvania, Philadelphia, 3Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA

4:30 PM  A Challenging Treatment for Aortic Arch Aneurysm With Fenestrated Stent Graft
K. Yuri1, N. Kimura, A. Yamaguchi, H. Adachi2
1Saitama Medical Center of Jichi Medical University, Japan, 2Saitama Medical Center of Jichi Medical University, Japan

5:00 PM  Debate: Management of the Aortic Arch in DeBakey Type I Dissection
Hemiarch Only: Marc R. Moon, St Louis, MO
Extended Arch Reconstruction: Jehangir J. Appoo, Calgary, Canada

3:30 PM – 5:30 PM
Adult Cardiac: Aortic Valve
Moderators: Joseph F. Sabik, Cleveland, OH, and Wilson Y. Szeto, Philadelphia, PA

4:30 PM  The Impact of Tricuspid Valve Regurgitation on Transcatheter Aortic Valve Replacement Outcomes: A Report From the STS/ACC TVT Registry
F. H. McCarthy1, S. Vernulapalli2, Z. LF, V. H. Thouarani1, R. A. Matsouaka1, N. Desai1, A. Kirtane1, S. Anwaruddin1, M. L. Williams1, J. Ger1, P. Vallabhacosyula1, R. Li1, J. E. Bavaria1, H. C. Herrmann1, W. Y. Szeto4
1Hospital of the University of Pennsylvania, Philadelphia, 2Duke University, Durham, NC, 3Emory University, Atlanta, GA, 4University of Pennsylvania, Philadelphia, 5Columbia University, New York, NY

5:00 PM  Cost and Outcomes of Surgical vs Transcatheter Aortic Valve Replacement: Analysis of the Post-Approval TAVR Experience in the United States
J. M. Burg1, N. F. Fino, F. A. Tibayan, J. S. Ramon, H. Song1
1Oregon Health & Science University, Portland

4:00 PM  The Ross Procedure: 21-Year Follow-Up
R. R. Favaloro1, M. Gilbert2, G. Giunta2, M. Candioti2, G. Ganum2
1Favaloro Foundation University Hospital, Buenos Aires, Argentina, 2Fundación Favaloro, Buenos Aires, Argentina

4:15 PM  Aortic Valve Replacement With Sutureless Perceval Bioprosthesis: Single-Center Experience With 617 Implants
G. Passquinci Heart Hospital, G. Monasterio Tuscany Foundation, Massa, Italy
Two-Year Echocardiographic and Clinical Outcomes in 937 Intermediate Patients Undergoing Surgical Aortic Valve Replacement From the PARTNER 2A Study


1Emory University, Atlanta, GA, 2University of Pennsylvania, Philadelphia, 3Columbia University College of Physicians and Surgeons, New York, NY, 4Cleveland Clinic, OH, 5Cedars-Sinai Medical Center, Los Angeles, CA, 6New York University Langone Medical Center, NY, 7Hospital of the University of Pennsylvania, Philadelphia, 8Washington University School of Medicine, St Louis, MO, 9Cardiovascular & Thoracic Surgery Associates, Washington, DC, 10Me dstar Washington Hospital Center, Washington, DC, 11Stanford University School of Medicine, CA, 12University of Virginia, Charlottesville, 13Mayo Clinic, Rochester, MN, 14Columbia University Medical Center, New York, NY, 15Columbia University, New York, NY, 16Baylor Scott & White Health, Plano, TX

Effect of Congenital Gastrointestinal Malformations on the Outcomes of Patients With Congenital Heart Disease

C. M. Mery1, L. E. De Leon2, J. R. Rodriguez3, R. M. Nieto1, W. Zhang2, I. Adachi2, J. Heinle4, L. C. Kane1, E. D. McKenney5, C. D. Fraser Jr.6

1Texas Children’s Hospital / Baylor College of Medicine, Houston, 2Texas Children's Hospital, Houston

Impact of Chromosomal Abnormalities on Outcomes After Congenital Heart Surgery

TBD

Can Pulsatility Be Eliminated Without a Careful Consideration During Bidirectional Glenn?

C. Park1, J. Park2, T. Yun2, J. Baek2, J. Yu2, Y. Kim2, J. Ko2

1Cincinnati Children’s Hospital Medical Center, OH, 2Asan Medical Center, Seoul, South Korea

Improving Clinical Outcomes of Right Atrial Isomerism Associated With Extracardiac Total Anomalous Pulmonary Venous Connection

T. Kakuta, T. Hoashi, K. Kagisaki, M. Shimada, H. Ichikawa

National Cerebral and Cardiovascular Center, Suita, Japan

Congenital: Pediatric Congenital III

Moderators: Joseph W. Turek, Iowa City, IA, and James S. Tweddell, Cincinnati, OH

Postoperative and Long-Term Outcomes in Children With Trisomy 21 Following Surgery for Congenital Heart Disease: A Study From the Pediatric Cardiac Care Consortium

J. K. Peterson1, K. Catton2, L. Kochilas3, S. P. Setty4

1Long Beach Memorial/Miller Children’s & Women’s Hospital, CA, 2Memorial Care Medical Group, Long Beach, CA, 3Emory University, Sibley Heart Center Cardiology, Atlanta, GA

Surgical Outcomes of Heterotaxy Syndrome With Functional Single Ventricle

T. Nakano, S. Oda, K. Hinokiyama, H. Kado

Fukuoka Children’s Hospital, Japan

Congenital: Pediatric Congenital III

Moderators: Joseph W. Turek, Iowa City, IA, and James S. Tweddell, Cincinnati, OH

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Surgical Outcomes of Heterotaxy Syndrome With Functional Single Ventricle

T. Nakano, S. Oda, K. Hinokiyama, H. Kado

Fukuoka Children’s Hospital, Japan
3:30 PM – 5:30 PM

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

This collaborative session by STS and the European Society of Thoracic Surgeons will provide European and North American perspectives on a variety of controversial issues in general thoracic surgery. Experts will discuss the adjuvant treatment for thymic malignancies, donors for lung transplantation, the role of lung volume reduction surgery for emphysema, and the surgical management of spontaneous esophageal perforations.

**Learning Objectives**

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

- Describe the adjuvant treatment for resected thymic malignancies
- Identify potential donors after cardiac death for lung transplantation
- Discuss the role of lung volume reduction surgery for emphysema in the modern era
- Describe the management of spontaneous esophageal perforations

**Moderators:** Janet P. Edwards, Calgary, Canada, and Jaroslaw Kuzdal, Krakow, Poland

3:30 PM  
**Introduction**

3:35 PM  
**Adjuvant Treatment After Completely Resected Thymic Malignancies: European Perspective**  
Enrico Ruffini, Turin, Italy

3:45 PM  
**Adjuvant Treatment After Completely Resected Thymic Malignancies: North American Perspective**  
Frank C. Detterbeck, New Haven, CT

3:55 PM  
**Panel Discussion**

4:05 PM  
**Donors After Circulatory Death for Lung Transplantation: European Perspective**  
Dirk E. Van Raemdonck, Leuven, Belgium

4:15 PM  
**Donors After Circulatory Death for Lung Transplantation: North American Perspective**  
Frank C. Detterbeck, New Haven, CT

4:25 PM  
**Panel Discussion**

4:35 PM  
**Lung Volume Reduction for Emphysema in 2017: European Perspective**  
David Waller, Leicester, United Kingdom

4:45 PM  
**Lung Volume Reduction for Emphysema in 2017: North American Perspective**  
Malcolm M. DeCamp, Chicago, IL

4:55 PM  
**Panel Discussion**

5:05 PM  
**Surgical Management of Spontaneous Esophageal Perforations: European Perspective**  
Hasan F. Batirel, Istanbul, Turkey

5:15 PM  
**Surgical Management of Spontaneous Esophageal Perforations: North American Perspective**  
M. Blair Marshall, Washington, DC

5:25 PM  
**Panel Discussion**
Course 1: Essentials of TAVR  
Course Directors: Basel Ramlawi, Winchester, VA, and Eric L. Sarin, Atlanta, GA  
Proficiency in transcatheter aortic valve replacement (TAVR) requires knowledge of multiple endovascular principles and techniques. In this course, attendees will get hands-on experience with 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 Khoynezhad, Los Angeles, CA, and Ourania A. Preventza, Houston, TX  
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. Furthermore, 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 the use of vascular plugs for subclavian artery occlusion  
• Describe the surgical techniques used in aortic arch debranching

Course 3: Mitral Valve Repair  
Course Directors: Evelo Rodriguez, Nashville, TN, and Robert L. Smith, Plano, TX  
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 the 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  
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 Enlarging Procedures and Aortic Valve Leaflet Reconstruction  
Course Directors: S. Adil Husain, San Antonio, TX, and Prashanth Vallabhajosyula, Philadelphia, 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, Manouglian, 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

Indicates that a ticket is required to attend.
• 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: Shari L. Meyerson, Chicago, IL, and Betty C. Tong, Durham, NC
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: David T. Cooke, Sacramento, CA, and Sidharta P. Gangadharan, 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.
Learning Objectives
Upon completion of this activity, participants should be able to:
• Describe 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 and Adult Pectus Surgery
Course Directors: Dawn E. Jaroszewski, Phoenix, AZ, Daniel L. Miller, Marietta, GA, and Mathew Thomas, Jacksonville, FL
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 will include stabilization of rib and sternal fractures using the most current reconstruction systems and minimally invasive repair of adult pectus excavatum defects.
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

Course 9: Atrial Fibrillation (Maze Procedure)
Course Directors: Matthew A. Romano, Ann Arbor, MI, and Edward G. Softesz, Cleveland, OH
Cardiac surgeons often encounter atrial fibrillation in patients referred for other cardiac surgical procedures. However, surgical ablation of atrial fibrillation continues to be underused at the time of cardiac surgery. Recent data have supported high rates of sinus rhythm restoration and a survival advantage for concomitant treatment of atrial fibrillation during cardiac surgery. Unfamiliarity with recommended lesion sets, energy sources, available devices, and techniques have resulted in an underutilization of the Maze procedure.
Learning Objectives
Upon completion of this activity, participants should be able to:
• Explain the different energy sources for performing the Maze procedure and their appropriate applications
• Perform the Maze IV procedure lesions based on different operative scenarios (mitral valve surgery, coronary artery bypass grafting, aortic valve replacement)
• Explain the technical aspects of a minimally invasive Maze procedure

Course 10: Mechanical Circulatory Support
Course Directors: Aaron M. Cheng, Seattle, WA, Mani A. Daneshmand, Durham, NC, and Nahush A. Mokadam, Seattle, WA
This hands-on course focuses primarily on operative considerations regarding implantation of mechanical circulatory support in adult patients with acute and chronic heart failure. Participants will learn key surgical points for successful implantation of commonly available long-term ventricular assist devices (VADs), as well as technical considerations for the implementation of temporary circulatory support devices, including the use of extracorporeal life support (ECLS)/extracorporeal membrane oxygenation.
Learning Objectives
Upon completion of this activity, participants should be able to:
• List the different VADs currently available to support the failing heart in both acute and chronic heart failure
• Identify the key operative steps for successful VAD implantation
• Explain the important technical considerations for successful insertion of temporary circulatory assist devices, including different cannula configurations for ECLS and different percutaneous devices
Adult Cardiac Surgery

The Impact of Aortic Clamping Strategy on Postoperative Stroke in Coronary Artery Bypass Grafting Operations: A Propensity-Matched Analysis of 52,611 Patients
M. Alaeddine, University of Pittsburgh, PA

Long-Term Risk of Ischemic Stroke After the Cox-Maze III Procedure for Atrial Fibrillation
A. Albage, University Hospital, Uppsala, Sweden

The STS Definition of Post-Coronary Artery Bypass Grafting Atrial Fibrillation (Limited to Events Requiring Treatment) Misses Patients at Increased Risk of Mortality
G. Filardo, Baylor Scott & White Health, Dallas, TX

Does Del Nido Cardioplegia Benefit Adult Cardiac Surgery Patients?
J. Goldberg, Westchester Medical Center, Valhalla, NY

Direct Aortic Access for Transcatheter Aortic Valve Replacement Using a Self-Expanding Device
D. O’Hair, Aurora St Luke’s, Milwaukee, WI

Is Retrograde Cerebral Perfusion an Effective Brain Protection Strategy for Prolonged Periods of Circulatory Arrest?
M. Gaudino, Weill Cornell Medicine, New York, NY

Renal Failure After Cardiac Surgery: Not All Acute Kidney Injury Is the Same
T. C. Crawford, The Johns Hopkins Hospital, Baltimore, MD

Effect of Anemia and Hemoglobin A1c on Coronary Artery Bypass Grafting Morbidity and Mortality
T. Boeve, Spectrum Health, Grand Rapids, MI

Should We Oversize Donor Selection for Recipients With Pulmonary Hypertension Undergoing Heart Transplantation? A Propensity-Matched Analysis of a National Registry
S. Deo, Case Western Reserve University, Cleveland, OH

Impact of Off-Pump Coronary Artery Bypass Grafting on Hospital Outcomes in 197,812 Octogenarians: US Nationwide Inpatient Database, 2003-2011
U. Benedetto, Bristol Heart Institute, United Kingdom

Surgical Treatment of Hypertrophic Obstructive Cardiomyopathy in Patients With Severe Hypertrophy, Septal Myocardial Fibrosis, and Ventricular Tachycardia
K. Borisov, German-Russian Cardiac Clinic, Moscow, Russia

Independent Assessment and Validation of a Long-Term Survival Probability Calculator for Isolated Coronary Artery Bypass Grafting T. S. Lancaster, Washington University School of Medicine, St Louis, MO

A Contemporary Strategy for Triage and Treating Patients With Massive Pulmonary Embolism Utilizing Venoarterial Extracorporeal Membrane Oxygenation
Z. N. Kori, University of Maryland School of Medicine, Baltimore

Re-Examining the Role of Standard Aortic Valve Replacement Following Mediastinal Radiation Therapy
A. Ghoneim, Montreal Heart Institute, Canada

Long-Term Success of the Concomitant Cox-Maze Procedure: Does Energy Source Have an Impact?
N. Ad, Inova Heart and Vascular Institute, Falls Church, VA

Cardiac Magnetic Resonance Assessment of Right Ventricular Function After Tricuspid Valve Repair for Moderate Functional Tricuspid Regurgitation: A Prospective Randomized Trial
M. Ghoreishi, University of Maryland School of Medicine, Baltimore

Should the Dilated Ascending Aorta Be Repaired at the Time of Bicuspid Aortic Valve Replacement?
T. Kaneko, Brigham and Women’s Hospital, Boston, MA

Impact of Diabetic Severity on Reverse Left Ventricular Remodeling, Renal Function, and Survival Following Surgical Revascularization for Ischemic Cardiomyopathy
S. Kainuma, Sakurabashi Watanabe Hospital, Osaka, Japan

Permanent Pacemaker Placement in Transcatheter Aortic Valve Replacement Patients Is Not Associated With Increased Mortality or Readmission
F. H. McCarthy, Hospital of the University of Pennsylvania, Philadelphia

The Influence of Ultrafiltration on Red Blood Cell Transfusion During Cardiopulmonary Bypass
A. P. Kypson, East Carolina Heart Institute at East Carolina University, Greenville, NC

Optimal Surgical Management of Coronary Artery Aneurysms
L. E. Greiten, Mayo Clinic, Rochester, MN

Is There Gender Discrimination in Coronary Revascularization? A Single-Center Retrospective Analysis of Multiple Arterial Coronary Grafting
H. Jabagi, Ottawa Heart Institute, Canada

Transcatheter Aortic Valve Replacement Outcomes in Nonagenarians Stratified by Transfemoral and Transapical Approach
C. McNeely, Washington University, St Louis, MO

National Trends and Geographic Variation in Bilateral Internal Mammary Artery Use in the United States
A. Inbar, Dartmouth-Hitchcock Medical Center, Lebanon, NH

Trends in Aortic Valve Replacement Procedures and Adverse Events Among Medicare Beneficiaries in US Hospitals From 2009-2014: Has Transcatheter Aortic Valve Replacement Made a Difference?
M. R. Katz, Bon Secours Heart & Vascular Institute and the University of Virginia, Richmond, VA

Altered ADAMTS5 Gene Expression and Versican Proteolysis: A Possible Etiology of Barlow’s Disease
T. S. Absi, Vanderbilt University Medical Center, Nashville, TN
Changing Etiologies of Pericardial Disease: 80-Year Experience With Pericardiectomy for Constrictive Pericarditis
T. Murashita, West Virginia University, Morgantown

An Interleukin-6-Induced Cell-Free Therapy for Myocardial Preservation
R. Jurakhan, McGill University, Montreal, Canada

Auxiliary Extracorporeal Membrane Oxygenation With Transapical Left Ventricular Vent in Refractory Cardiogenic Shock
K. Takeda, Columbia University Medical Center, New York, NY

No Survival Impact of Single vs Multiple Bypass Grafts to Each Diseased Coronary Territory
C. F. Branco, Center of Cardiothoracic Surgery, Coimbra, Portugal

Permanent Pacemaker Implantation After Surgical Aortic Valve Replacement Is Associated With an Increased Risk of Long-Term Mortality
K. L. Greason, Mayo Clinic, Rochester, MN

Reduced Ejection Fraction Aortic Stenosis: Is There an Improvement in Ejection Fraction? A Comparison Study of Transcatheter and Surgical Aortic Valve Replacement
M. Malik, The Ohio State University, Columbus

Hybrid Repair of Thoracoabdominal Aneurysm: The Two-Stage Approach
R. Di Bartolomeo, S. Orsola-Malpighi Hospital, Bologna, Italy

Evolution of Simplified Frozen Elephant Trunk Repair for Acute DeBakey Type I Dissection: Mid-Term Outcomes in 65 Patients
E. E. Roselli, Cleveland Clinic, OH

First Clinical Experience With Automated Suturing Technology for Minimally Invasive Aortic Valve Replacements
J. K. Wong, University of Rochester Medical Center, NY

Direct True Lumen Cannulation (“Samurai” Cannulation) for Acute Stanford Type A Aortic Dissection
T. Kitamura, Kitasato University School of Medicine, Sagamihara, Japan

Should the Sinuses of Valsalva Be Preserved in Patients With Bicuspid Aortic Valve Disease and Dilated Ascending Aorta?
Y. Lin, Zhongshan Hospital of Fudan University, Shanghai, China

Cardiothoracic Surgical Education
Creation of a Coronary Anastomotic Checklist Using a Delphi Technique Reveals Significant Variability Among Experts
A. A. Vaporciyan, The University of Texas MD Anderson Cancer Center, Houston

Virtual Reality Simulators Training Curriculum for Video-Assisted Thoracoscopic Lobectomy: An Objective Structured Assessment of Technical Skills Acquisition
L. Bertolaccini, Sacro Cuore Don Calabria Research Hospital - Cancer Care Center, Negrar Verona, Italy

Implementation of a Technology-Enhanced Surgical Simulation Curriculum Objectively Improves Resident Preparedness During the Transition to Cardiothoracic Training
P. Chan, University of Pittsburgh Medical Center, PA

Congenital Heart Surgery
Long-Term Transplant-Free Survival Following Repair of Total Anomalous Pulmonary Venous Connection: A Study From the Pediatric Cardiac Care Consortium
J. D. St. Louis, Children’s Mercy Hospital, Kansas City, MO

Technical Performance Score Is a Predictor for Post-Discharge Reinterventions Following Complete Atrioventricular Septal Defect Repair
R. Lisselhof, Boston Children’s Hospital, MA

Reinterventions on the Right Ventricular Outflow Tract After the Arterial Switch Operation: Incidence and Risk Factors
J. Clauziou, German Heart Center Munich

Significance of Intraoperative Revision During the Arterial Switch Operation in the Current Era
Y. Nakamura, Columbia University Medical Center, New York-Presbyterian/ Morgan Stanley Children’s Hospital

Del Nido Cardioplegia Provides Superior Left Ventricle Performance Compared to HTK After Long-Term Ischemia, as Evaluated by Phospholamban Activation
H. Carmo, Unicamp, Campinas, Brazil

Surgical Ligation of Patent Ductus Arteriosus in Preterm Infants: An Exceptionally Safe and Beneficial Approach to Management
D. Lankenauer, The Johns Hopkins Hospital, Baltimore, MD

Contemporary Outcomes of Combined Heart-Liver Transplantation in Patients With Congenital Heart Disease
R. Bryant, Cincinnati Children’s Hospital Medical Center, OH
Critical Care

Early Glycemic Variability Is Associated With Adverse Outcomes in Normoglycemic Patients Following Cardiac Surgery
L. E. Johnston, University of Virginia, Charlottesville

Outcomes From a Hub-and-Spoke Extracorporeal Membrane Oxygenation (ECMO) Program: Success, Failure, and Lessons Learned From 107 Consecutive Respiratory ECMO Patients
G. Schwartz, Baylor University Medical Center, Dallas, TX

The Survival Advantage of Intraoperative Extracorporeal Membrane Oxygenation Use During Complex General Thoracic Surgery
L. W. Schaheen, University of Pittsburgh Medical Center, PA

A Disciplined Approach to Standardized Management of Veno-Venous Extra Support Improves Survival: The Ohio State University Algorithm
B. A. Whitson, The Ohio State University Wexner Medical Center, Columbus

Methylene Blue for Vasoplegic Syndrome After Cardiopulmonary Bypass: Early Administration Improves Survival
J. H. Mehaffey, University of Virginia Health System, Charlottesville

A Novel Rotational Speed Modulation System Used With Venoarterial Extracorporeal Membrane Oxygenation Reduces Left Ventricular Afterload and Augments Coronary Arterial Flow in a Goat Model of Cardiogenic Shock
N. Naito, The University of Tokyo Hospital, Japan

General Thoracic Surgery

Bypass of the Superior Vena Cava With Spiral Saphenous Vein Graft: Operative Results and Long-Term Follow-Up
Y. M. Menaissy, Cairo University, Giza, Egypt

Clinical Significance of Maximum Standardized Uptake Value in Thymic Tumors: Characterization Using an Interactive, International, Prospective Database
R. J. Korst, Valley Health System, Paramus, NJ

Adjuvant Chemotherapy Does Not Improve Survival After R0 Resection for Pathologic Stage T3N0M0 Non–Small-Cell Lung Cancer With Chest Wall Invasion
L. M. Brown, University of California, Davis Medical Center, Sacramento

Long-Term Outcomes Following Surgical Management of Bronchopulmonary Carcinoid Tumors Using the National Cancer Database
C. Harrington Brown, Oregon Health & Science University, Portland

Quality of Life Is Preserved in High-Risk Patients After Pulmonary Lobectomy at Intermediate Follow-Up
S. Kotova, Portland Providence Medical Center, OR
Fate of Pneumonectomy Patients Variably Captured by Non–Small-Cell Lung Cancer Staging System
A. P. Dhanasopon, Yale University School of Medicine, New Haven, CT
Lung Transplantation for Chronic Obstructive Pulmonary Disease: What Predicts Success?
E. I. Jeng, University of Florida, Gainesville
Analytic Morphomics Predict Outcomes After Lung Transplantation
M. Pienta, University of Michigan Medical School, Ann Arbor
Electromagnetic Navigational Bronchoscopic Airway Recanalization in Patients With Vanishing Bronchus Following Lung Transplantation
D. M. Walters, University of Washington, Seattle
Risk Factor Analysis for Immediate Extracorporeal Membrane Oxygenation Weaning Failure Following Lung Transplantation
K. Narm, Yonsei University College of Medicine, Seoul, South Korea
Predictors of Post-Recurrence Survival After Definitive Treatment for Isolated Esophageal Cancer Recurrence Post-Esophagectomy
G. R. Ghaly, Weill Cornell Medical College, New York, NY
Surgical Treatment of Esophageal Epiphrenic Diverticula: 42 Years of Experience
L. F. Tapias, Massachusetts General Hospital, Boston
Depth of Muscularis Propria Invasion Does Not Predict Survival in T2 Esophageal Adenocarcinoma
C. W. Seder, Rush University Medical Center, Chicago, IL
Status of Lymphatic Metastasis After Neoadjuvant Chemoradiation According to Radiation Field Coverage in Esophageal Cancer
S. Kim, Seoul National University Hospital, South Korea
Subglottic Stenosis in Granulomatosis With Polyangiitis: 10 Patients Who Underwent Laryngotracheal Resection and Reconstruction
C. L. Costantino, Massachusetts General Hospital, Boston
Serial Airway Stenting Is a Safe and Durable Option for the Management of Benign Central Airway Obstruction
J. M. Karush, Rush University Medical Center, Chicago, IL
Efficacy of Surgical and Percutaneous Management of Chylothorax
J. Reisenauer, Mayo Clinic College of Medicine, Rochester, MN
Robotic Staged vs Simultaneous Bilateral Selective Postganglionic Thoracic Sympathectomy Is Associated With the Lowest Reported Rates of Compensatory Hyperhidrosis
F. Gharagozloo, Celebration Health/Florida Hospital System and University of Central Florida
Video-Assisted “Three-Hole” Subxiphoid Extended Thymectomy for Myasthenia Gravis: A Retrospective Study of 117 Cases
Q. Lu, Tangdu Hospital of The Fourth Military Medical University, Xi’an, China
Subxiphoid Approach for Tubeless Uniportal Video-Assisted Thoracoscopic Surgery Is Associated With Less Pain than Transthoracic Approach
W. Lin, Wanfang Hospital, Taipei Medical University, Taiwan
Integrated Analysis of Somatic Genetic Alterations and Immune Microenvironment in Malignant Pleural Mesothelioma
W. T. Vigneswaran, Loyola University Health System, Chicago, IL
H3K9 Histone Methyltransferase G9a Is a Potential Therapeutic Target for K-ras Mutated Lung Adenocarcinoma
K. Zhang, City of Hope National Medical Center, Duarte, CA
Increased Variance in Oral and Gastric Microbiome Flora Correlates With Post-Esophagectomy Anastomotic Leaks
R. M. Reddy, University of Michigan, Ann Arbor
Polytetrafluoroethylene or Collagen Matrix for Diaphragmatic Reconstruction?
J. Bassuner, The University of Texas MD Anderson Cancer Center, Houston
Sublobar Resection for Elderly Patients With Clinical Stage I Non–Small-Cell Lung Cancer
Y. Tsutani, Hiroshima University, Japan
Optimal Methods to Evaluate the Solid Component of Part-Solid Lung Cancer on Thin Section Computed Tomography
S. Hirayama, Juntendo University School of Medicine, Tokyo, Japan
Long-Term Results of Robotic Modified Belsey Fundoplication: Greater Reflux Control and Lower Rates of Dysphagia and Gas Bloat than Nissen Fundoplication
F. Gharagozloo, Celebration Health/Florida Hospital System and University of Central Florida
Gender Differences in Outcomes Following Neoadjuvant Chemoradiation and Esophagogastrectomy for Locally Advanced Esophageal Carcinoma
P. G. Rowse, Mayo Clinic, Rochester, MN

SCIENTIFIC POSTERS
PERSONALIZED ITINERARY

SATURDAY JANUARY 21, 2017

SUNDAY JANUARY 22, 2017

MONDAY JANUARY 23, 2017
PERSONALIZED ITINERARY

TUESDAY JANUARY 24, 2017

WEDNESDAY JANUARY 25, 2017
REGISTRATION INSTRUCTIONS

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

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

Deadline: Early bird registration will end Tuesday, November 15; registration fees will increase after this date. Additionally, you must register by Thursday, December 22, 2016, 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 53rd 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 2017 and the STS 53rd Annual Meeting require separate registration.

Tech-Con registration provides access only to the educational sessions on Saturday, January 21.

Annual Meeting registration provides access only to the educational sessions on Sunday, January 22, Monday, January 23, and Tuesday, January 24. You also will receive complimentary access to Annual Meeting Online.

You also may purchase separate tickets to attend the STS Social Event (Monday, January 23) and STS University courses (Wednesday, January 25).

Become an STS Member!

Non-members interested in attending the STS 53rd 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 9, 2017, to allow time for processing. Those approved for membership can attend the STS 53rd 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, Member Services Coordinator, at sforeman@sts.org.

Cancellation Policy

All cancellation requests must be made in writing and e-mailed to stsheadquarters@sts.org by Friday, January 13, 2017. 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 Level 3 of the George R. Brown Convention Center.

Friday, January 20 . . . . . . . . . . . 3:00 PM – 6:00 PM
Saturday, January 21 . . . . . . . . . . . 7:00 AM – 6:00 PM
Sunday, January 22 . . . . . . . . . . . 7:00 AM – 6:30 PM
Monday, January 23 . . . . . . . . . . . 6:30 AM – 5:00 PM
Tuesday, January 24 . . . . . . . . . . . 6:30 AM – 4:30 PM
Wednesday, January 25 . . . . . . . . . . 6:30 AM – 9:30 AM
## PRICING

### STS MEMBERS

<table>
<thead>
<tr>
<th></th>
<th>Surgeon Members</th>
<th>Associate Member Physicians (Non-CT Surgeons)</th>
<th>Associate Member Non-Physicians</th>
<th>Candidate and Pre-Candidate Members</th>
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<td><strong>STS 53RD ANNUAL MEETING</strong> (INCLUDES ANNUAL MEETING ONLINE)</td>
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### STS/AATS TECH-CON 2017

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### TICKETED EVENTS (MUST BE REGISTERED FOR THE STS ANNUAL MEETING)

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<th>Event</th>
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<td>Monday Night Social Event</td>
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<td>STS University Course (each)</td>
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### STS 53RD ANNUAL MEETING ONLINE

Access to the STS 53rd 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 53rd Annual Meeting Online:** The Society of Thoracic Surgeons designates this enduring material for a maximum of 105.25 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
Meeting Location
All educational programming for STS/AATS Tech-Con 2017 and the STS 53rd Annual Meeting will take place on Level 3 of the George R. Brown Convention Center.

George R. Brown Convention Center
1001 Avenida de las Americas
Houston, TX 77010
(713) 853-8000
www.houstonconventionctr.com

HOUSING AND TRAVEL INFORMATION

STS Hotels

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<td>Marriott Marquis Houston</td>
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<tr>
<td>Embassy Suites Houston Downtown</td>
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www.sts.org/annualmeeting
Housing Information

STS has secured discounted rates at the Embassy Suites Houston Downtown, Hilton Americas-Houston, Hyatt Regency Houston, and Marriott Marquis Houston. You can reserve housing while you are registering for the Annual Meeting at www.sts.org/annualmeeting. Reservations must be received by Thursday, December 22, 2016.

Shuttle service will be provided only between the Hyatt Regency Houston and the convention center. The Embassy Suites Houston Downtown is located within walking distance of the convention center, and the Hilton Americas-Houston and Marriott Marquis Houston are connected to the convention center via skybridges.

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

Houston’s largest airport, the George Bush Intercontinental Airport (IAH), is located approximately 20 miles from the George R. Brown Convention Center. A smaller airport, the William P. Hobby Airport (HOU), is located approximately 11 miles from the convention center.

Ground Transportation from Houston Airports

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#) 04XS0006 when making your car rental reservations.

Taxi Service

Approximate taxi fare to the official STS hotels is $52 from IAH and $26 from HOU.

Shuttle Service / Private Car

Airport shuttle and private car services are available from both IAH and HOU through SuperShuttle. Shuttle service to the official STS hotels is approximately $23 per person from IAH and $19 per person from HOU. Private car service is approximately $70 from either airport. For reservations, call (800) BLUE-VAN (258-3826) or visit supershuttle.com.

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 Houston 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.visithoustontexas.com (Houston Convention & Visitors Bureau)
- www.fly2houston.com (Houston Airport System)
- www.travel.state.gov (US State Department)
- www.cbp.gov (US Customs and Border Protection)
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 53rd Annual Meeting program.

—Wilson Y. Szeto, Chair, Workforce on Annual Meeting
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Marco A. Zenati
The Society of Thoracic Surgeons
633 N. Saint Clair St., Floor 23
Chicago, IL 60611-3658
(312) 202-5800 • sts@sts.org

53RD ANNUAL MEETING

George R. Brown Convention Center • Houston, Texas
January 21-25, 2017

ADVANCE PROGRAM