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Inova Schar Cancer Institute
Falls Church, Virginia

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Baltimore, Maryland

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Cedars-Sinai Medical Center
Los Angeles, California

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Temple University Health System
Philadelphia, Pennsylvania

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Lifebridge Health System
Baltimore, Maryland

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Thoracic Surgeon
Massachusetts General Hospital
Boston, Massachusetts

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Philadelphia, Pennsylvania

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Mayo Clinic of Florida
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Robert S. Poston, MD, FACS
Chief, Division of Cardiothoracic Surgery
SUNY Downstate Medical Center
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Rawn Salenger, MD
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Jeffrey E. Sell, MD
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Chief, Division of Thoracic Surgery
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Cameron T. Stock, MD
Assistant Professor
University of Massachusetts Medical Center
Worcester, Massachusetts

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Director of Coronary Surgery, Director of Quality, Division of Cardiac Surgery, Director of Thoracic Aortic Surgery
Co-Director, Aortic Center
University of Maryland Medical Center
Vice-Chief, Department of Surgery,
Division of Cardiac Surgery
University of Maryland School of Medicine
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Duke University Medical Center
Durham, North Carolina

Africa F. Wallace, MD
Cardiothoracic Surgeon
Piedmont Heart Institute
Atlanta, Georgia

Fred Weber, MD, JD
Associate Professor of Surgery Emeritus
Drexel University
Philadelphia Pennsylvania

Bryan A. Whitson, MD, PhD
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Director, Thoracic Transplantation and Mechanical Circulatory Support, Co-Director, COPPER Laboratory
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Columbus, Ohio

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Director of Thoracic Aortic Surgery
Maimonides Medical Center
Brooklyn, New York

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Associate Professor of Surgery
Johns Hopkins Medical Institutions
Baltimore, Maryland

David Zeltsman, MD
Professor of Cardiovascular and Thoracic Surgery
Chief of Thoracic Surgery
Directory, Minimally Invasive Thoracic Surgery
North Shore-Long Island Jewish Health System
New Hyde Park, New York
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Carlos J. Anciano, MD
Sharon Ben-Or, MD
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Benjamin A. Youdelman, MD
Kenton J. Zehr, MD
David Zeltsman, MD
The following faculty have disclosed relevant financial relationships:

Abbas E. Abbas, MD, MS, FACS
Disclosure: Speaker – Boston Scientific, Inc. and Intuitive Surgical, Inc.

Igor Brichkov, MD, FACS
Disclosure: Tracheostomy Course Instructor Fee – Cook Medical Inc.

William T. Brinkman, MD
Disclosure: Cardiac Surgery Advisory Board – Medtronic, Inc. TAVR Proctor – Edwards Lifesciences Corp.

Ralph J. Damiano Jr., MD
Disclosure – Consultant – Medtronic, Inc. Speaker and Research Grant – AtriCure, Inc. Speaker – Edwards Lifesciences Corp. and LivaNova

Jessica S. Donington, MD
Disclosure – Speaker Honorarium – AstraZeneca

Hiran C. Fernando, MD
Disclosure – Medical Monitor – Galil Medical Ltd.

Anthony W. Kim, MD
Disclosure – Advisory Board – Medtronic, Inc. Steering Committee – Roche-Genetech

Daniel L. Miller, MD
Disclosure – Advisory Board – Ethicon EndoSurgery, Inc. Speakers Bureau – Acute Innovations, Inc. and Medtronic, Inc.

Bradley S. Taylor, MD, MPH

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The David Campbell Scholarship for Residents and Fred Weber Scholarship for Medical Students were created in 2016 to support the interests of general surgery residents and medical students in cardiothoracic surgery. Both Dr. Campbell and Dr. Weber became involved in this society when it was still known as the Pennsylvania Association of Thoracic Surgeons. Dr. Campbell served as president in 1995 and Dr. Weber served in 2011. Both of them have proven to be leaders in cardiothoracic surgery. They have fostered and continue to foster resident and medical student involvement in the society so that these residents and medical students are now becoming leaders in this field.

**David Campbell Scholarship for Residents**

2016 – Rami E. Michael, MD, *Greenville Memorial Hospital*
2017 – Kanika Kalra, MD, *Emory University*
2018 – Alejandro Suarez-Pierre, MD, *The Johns Hopkins Hospital*

**Fred Weber Scholarship for Medical Students**

2016 – Corbin Earl Muetterties, BS, *Temple University School of Medicine*
2017 – Megan L. Schultz, *Albert Einstein College of Medicine*
2018 – Edgar Aranda-Michel, *University of Pittsburgh*

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2012 – William E. Cohn, MD
2013 – Jonathan B. Clark, MD
2014 – W. Randolph Chitwood, Jr., MD
2015 – Shaf Keshavjee, MD, MSc, FRCSC
2016 – John A. Elefteriades, MD
2017 – Douglas E. Wood, MD, FACS, FRCSED
2018 – Larry R. Kaiser, MD, FACS
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PROGRAM DESCRIPTION
This three-day program is the 56th in a series of annual programs offering a realistic view of current clinical topics in cardiovascular and thoracic surgery, customary and prevailing, controversial and/or investigational, including basic and clinical research. A faculty of leaders are invited to share their knowledge and experience of complex cases of new technology relevant to surgeons practicing this specialty. The format consists of faculty and resident didactic oral presentations with moderated discussion periods, poster presentations and surgical videos focusing on basic research, quality assurance, ischemic heart disease, valvular heart disease, congestive heart failure and treatment, treatment of thoracic aneurysms, lung cancer, esophageal cancer, and thoracic trauma. Physicians will have an enhanced understanding of the latest techniques and current research specifically related to adult cardiovascular surgery and general thoracic surgery. Physicians will be able to utilize the results presented to select appropriate surgical procedures for their own patients and integrate state-of-the-art knowledge into their practice.

TARGET AUDIENCE
The 56th Annual Meeting of the Eastern Cardiothoracic Surgical Society™ is designed for surgeons practicing cardiothoracic surgery, including physicians, residents, physician assistants, fellows and others.

ACTIVITY GOAL
This activity is designed to address the following core and team competencies: Patient Care, Medical Knowledge, Practice-based Learning, Professionalism, Employ Evidence-based practice, Apply Quality Improvement, Value /Ethics and Team / Teamwork.

LEARNING OBJECTIVES
At the conclusion of the 56th Annual Meeting, the participants will be able to:

- Access the effectiveness of existing and evolving treatment options.
- Identify key factors in selecting appropriate treatment for patients.
- Discuss the technical challenges in the use of new technologies and techniques.
- Demonstrate improved competency in cardiothoracic techniques.
- Identify the relevant challenges facing the field of cardiothoracic surgery and the possible solutions to those challenges.

DISCLOSURE
Ciné-Med adheres to accreditation requirements regarding industry support of continuing medical education. Disclosure of the planning committee and faculty’s commercial relationships will be made known at the activity. Speakers are required to openly disclose any limitations of data and/or discussion of any off-label, experimental, or investigational uses of drugs or devices in their presentations.

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Ciné-Med verifies that sound education principles have been demonstrated in the development of this educational offering as evidenced by the review of its objectives, teaching plan, faculty, and activity evaluation process. Cine-Med does not endorse or support the actual opinions or material content as presented by the speaker(s) and/or sponsoring organization.

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ACCREDITATION
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Ciné-Med designates this live activity for a maximum of 16 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>4:00 p.m.</td>
<td>Check-In and Registration</td>
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<tr>
<td>4:00 p.m.</td>
<td>Executive Session</td>
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<tr>
<td>6:00 p.m.</td>
<td>Welcome Reception</td>
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**THURSDAY, OCTOBER 18, 2018**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>6:00 a.m.</td>
<td>Morning Run</td>
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<tr>
<td>6:30 a.m. – 1:00 p.m.</td>
<td>Registration</td>
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<tr>
<td>7:00 a.m. - 8:00 a.m.</td>
<td>Breakfast Buffet</td>
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<tr>
<td>8:00 a.m. - 8:15 a.m.</td>
<td>Opening Remarks</td>
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<tr>
<td>Abbas E. Abbas, MD, MS, FACS</td>
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<tr>
<td>Temple University School of Medicine, Philadelphia, PA</td>
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<tr>
<td>8:15 a.m. - 9:20 a.m.</td>
<td>Expert Session I</td>
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<tr>
<td>Moderators:</td>
<td>Harmik J. Soukiasian, MD</td>
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<td>Cedars-Sinai Medical Center, Los Angeles, CA</td>
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<td>Kenton J. Zehr, MD</td>
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<td>John Hopkins Medical Institutions, Baltimore, MD</td>
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<tr>
<td>8:15 a.m. - 9:30 a.m.</td>
<td>Surgery for Atrial Fibrillation: Current Status in 2018</td>
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<td>Ralph J. Damiano, Jr., MD</td>
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<td>Washington University School of Medicine, St. Louis, MO</td>
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<tr>
<td>8:30 a.m. - 8:45 a.m.</td>
<td>Evolution of Esophageal Surgery</td>
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<td>Stephen C. Yang, MD</td>
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<td>John Hopkins Medical Institutions, Baltimore, MD</td>
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<tr>
<td>8:45 a.m. - 9:00 a.m.</td>
<td>Discussion</td>
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<tr>
<td>9:00 a.m. - 9:20 a.m.</td>
<td>The Opioid Epidemic in CT Surgery</td>
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<tr>
<td>David T. Cooke, MD, FACS</td>
<td></td>
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<tr>
<td>University of California, Davis Medical Center, Sacramento, CA</td>
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<tr>
<td>9:20 a.m. - 9:30 a.m.</td>
<td>Adjourn to Expert Session II</td>
</tr>
</tbody>
</table>
9:30 a.m. - 10:30 a.m. **Expert Session II – “How I Do It”**

**Moderators:**

Benjamin A. Youdelman, MD  
Maimonides Medical Center  
Brooklyn, NY  

Cameron T. Stock, MD  
Lahey Clinic & Medical Center  
Burlington, MA  

Robert J. Moraca, MD  
Allegheny Health Network  
Pittsburgh, Pennsylvania  

Carlos J. Anciano, MD  
East Carolina University  
Greenville, NC  

**Cardiovascular**

**Thoracic**

9:30 a.m. - 9:37 a.m.  **The MAZE Procedure Simplified**

Spencer J. Melby, MD  
Washington University School of Medicine, St. Louis, MO  

Mark R. Katlic, MD  
Lifebridge Health System  
Baltimore, MD  

9:38 a.m. - 9:45 a.m.  **Percutaneous Tricuspid Valve Repair**

Eric J. Lehr, MD, PhD, FRCSC  
Swedish Heart & Vascular Institute  
Seattle, WA  

Ryan M. Levy, MD  
University of Pittsburgh Medical Center, Pittsburgh, PA  

9:46 a.m. - 9:53 a.m.  **Management of Type B Aortic Dissection**

Robert S. Crawford, MD  
Emory University School of Medicine, Atlanta, GA  

Roman Petrov, MD  
Temple University School of Medicine  
Philadelphia, PA  

9:54 a.m. - 10:00 a.m.  **Hybrid Arch Debranching**

Muhammad Aftab, MD, FACS, FACC  
University of Colorado, Anschutz Medical Center, Aurora, CO  

Igor Brichkov, MD, FACS  
Maimonides Medical Center  
Brooklyn, NY  

10:00 a.m. - 10:30 a.m.  **Discussion**

10:30 a.m. - 11:00 a.m.  **Refreshments**

11:00 a.m. - 12:15 p.m. **Scientific Session**

**Moderators:**

Taryne Imai, MD  
Cedars-Sinai Medical Center, Los Angeles, CA  

Zachary Kon, MD  
New York University Langone Health, New York, NY  

**Scientific Session**

**SA01 – Short and Long-term Outcomes After Total Arch Replacement by Using the Trifurcated Graft Technique, Antegrade Cerebral Perfusion and Deep Hypothermia Circulatory Arrest**

Cinthia P. Orlov, Manabu Takebe, Oleg I. Orlov, Matthew Thomas, Vishal N. Shah, Sophia Strine, Konstadinos A. Piestis  
Lankenau Medical Center, Wynnewood, PA, USA  

**SA02 – The Scan, the Needle or the Knife? National Trends in Diagnosing Stage I Lung Cancer**

John F. Lazar, Charles Bakhos¹, Naomi Alpert², Abbas Abbas¹, Faiz Y. Bhora², Emanuela Taioli²  
Temple University Health System, Philadelphia, PA, USA¹, Mount Sinai Medical Center, New York, NY, USA²
SA03 – Transfusion in Elective Proximal Reconstruction: Where Do We Currently Stand?
Stevan S. Pupovac1, Jonathan Hemli2, S. J. Scheinerman2, Alan Hartman1, Derek Brinster1
1North Shore University Hospital / Northwell Health, Manhasset, NY, USA,
2Lenox Hill Hospital / Northwell Health, New York, NY, USA

SA04 – Safety and Feasibility of Thorascoscopic Lung Resection for Non-small Cell Lung Cancer in Octogenarians
Xiaoying Lou, Andrew Sanders, Manu Sancheti, Jeffrey Javidfar, Allan Pickens, Seth Force, Felix Fernandez, Onkar Khullar
Emory University, Atlanta, GA, USA

SA05 – Association Between Centers for Disease Control "High-risk" Donor Characteristics and Recipient Outcomes After Heart Transplantation: Insights from the UNOS Database
Alexis K. Okoh1, Molly Schultheis1, Kamrani K. Kambiz1, Setri Fugar2,
Biruk K. Almaz1, Nikhil K. Shah1, Nicolette Stelter1, Ravindra K. Karanam1,
Margarita T. Camacho1, Mark Russo1
1RWJ Barnabas Health, Newark, NJ, USA, 2Rush University Medical Center, Chicago, IL, USA

SA06 – Trends in Surgical Approach to Thymectomy: An Analysis of the National Cancer Database
Ariella Sarkissian, Heidi Reich, Taryne A. Imai, Fernando Espinoza-Mercado,
Jerald D. Borgella, Harmik J. Soukiasian
Cedars-Sinai Medical Center, Los Angeles, CA, USA

SA07 – Sternal Wound Complications in Patients Undergoing Orthotopic Heart Transplantation
Tyler J. Wallen, Andreas Habertheuer, Jean Paul Gottret, Matthew Kramer,
Zara Abbas, Mary A. Siki, Reilly Hobbs, Charlie Vasquez, Suhail Kanchwala,
David Lo, Michael Acker, Prashanth Vallabhajosyula
The University of Pennsylvania, Philadelphia, PA, USA

SA08 – 10568 - Robotic Segmentectomy Versus Thorascoscopic Segmentectomy: Comparing Intraoperative Results
Philip A. Erwin, Sharon Ben-Or, William D. Bolton, James E. Stephenson
Greenville Health System, Greenville, SC, USA

12:30 p.m. - 1:30 p.m.
David B. Campbell / Fred Weber Scholarship Lecture

Training of Thoracic Surgeons: A Historical Perspective
Joel D. Cooper, MD
University of Pennsylvania School of Medicine, Philadelphia, PA

5:00 p.m. - 6:00 p.m.
Movie Night

Moderators:
Shamus Carr, MD, FACS
University of Maryland School of Medicine, Baltimore, MD

Eric J. Lehr, MD, PhD, FRCSC
Swedish Heart & Vascular Institute, Seattle WA

M01 – Robotic-Assisted Approach to Redo-fundoplication and Epiphrenic Diverticulectomy
Elliot L. Servais
Lahey Hospital & Medical Center, Burlington, MA, USA

M02 – Simplified Double-Layer Left Atrial Appendage Closure Technique
Ahmed Alnajar, Corinne Aberle, Joseph Lamelas
Baylor College of Medicine, Houston, TX, USA
M03 – Robotic Assisted Right Superior Sulcus Tumor and Chest Wall Resection  
Michael Hanna, Lana Y. Schumacher  
Allegheny General Hospital, Pittsburgh, PA, USA

M04 – Simultaneous Type II Thoracoabdominal Aortic Aneurysm Repair and Coronary Artery Bypass Grafting  
Oleg I. Orlov, Vishal N. Shah, Cinthia P. Orlov, Manabu Takebe, Matthew Thomas, Constantine Baltzis, Konstadinos A. Plestis  
Lankenau Medical Center, Wynnewood, PA, USA

M05 – Robotic Repair of Chest Wall Hernia—A Case Series  
John Tranqucci, Kurtis Childers, Nathaniel Melton, Troy Moritz  
UPMC Pinnacle, Harrisburg, PA, USA

M06 – Management of Complicated Arch-Endograft Pseudoaneurysm and Subsequent Arch Graft Endograft Pseudoaneurysm  
Michael Hanna, Stephanie Cerrone, Robert J. Moraca  
Allegheny General Hospital, Pittsburgh, PA, USA

6:15 p.m. - 7:45 p.m.  
Case Bowl  
Moderators:  
Sharon Ben-Or, MD  
University of South Carolina at Greenville, Greenville, SC  
David B. Campbell, MD  
Hershey Medical Center, Hershey, PA  
Fred Weber, MD, JD  
Drexel University, Philadelphia, PA

FRIDAY, OCTOBER 19, 2018

6:00 a.m.  
Morning Run

7:00 a.m. - 3:00 p.m.  
Registration

7:00 a.m. - 8:00 a.m.  
Resident & Medical Student Breakfast / Meet & Greet with Members

7:00 a.m. - 8:00 a.m.  
Breakfast Buffet

8:00 a.m. - 8:40 a.m.  
Expert Session I  
Moderators:  
David Zeltsman, MD  
North Shore-Long Island Jewish Health System  
New Hyde Park, NY  
Roman Petrov, MD  
Temple University School of Medicine  
Philadelphia, PA

8:00 a.m. - 8:20 a.m.  
Robotic Thoracic Surgery: An Unexpected Journey  
Abbas E. Abbas, MD, MS, FACS  
Temple University School of Medicine, Philadelphia, PA

8:20 a.m. - 8:40 a.m.  
Your Value to the Enterprise: More Than Just RVU’s  
Anthony W. Kim, MD, MS, FACS, FCCP  
University of Southern California, Los Angeles, CA

8:40 a.m. - 9:00 a.m.  
Adjourn to Expert Session II
9:00 a.m. - 10:45 a.m.  **Expert Session I**

**Moderators:**

Bradley S. Taylor, MD  
University of Maryland Medical Center,  
Baltimore, MD

Si Pham, MD  
Mayo Clinic of Florida,  
Jacksonville, FL

Faiz Y. Bhora, MD, FACS  
Mount Sinai Roosevelt and Mount Sinai St. Luke's Hospital,  
New York, NY

Eric Sceusi, MD  
Piedmont Heart Institute, Atlanta, GA

**Cardiovascular**

9:00 a.m. - 9:45 a.m. **Debate: SAVR Low Risk Versus TAVR Low risk**

**Pro:** William T. Brinkman, MD  
The Heart Hospital Baylor, Plano, TX

**Con:** John V. Conte, Jr., MD  
Penn State University School of Medicine, Hershey, PA

9:45 a.m. - 10:05 a.m. **Assist Devices for the Right Ventricle: Current Status**

Christian A. Bermudez, MD  
Hospital of the University of Pennsylvania, Philadelphia, PA

**Thoracic**

9:00 a.m. - 9:45 a.m. **Debate: Full Dose Radiation Should Always be Given for IIA Disease**

**Pro:** Jessica S. Donington, MD, MSCR  
University of Chicago, Chicago, IL

**Con:** Daniel L. Miller, MD  
WellStar Health System / Mayo Clinic Care Network, Marietta, GA

9:45 a.m. - 10:05 a.m. **Esophagectomy for Benign Disease: When, How, and Why?**

M. Blair Marshall, MD, FACS  
Washington, DC

10:05 a.m. - 10:25 a.m. **Should CABG Be a Specialization?**

Hersh S. Maniar, MD  
Washington University School of Medicine, St. Louis, MO

**Management of Post Esophageal Surgery Complications**

Thomas Fabian, MD  
Albany Medical College, Albany, NY

10:25 a.m. - 10:45 a.m. **Hospital Response to Robotic Cardiac Surgery**

Robert S. Poston, MD, FACS  
SUNY Downstate Medical Center, Brooklyn NY

**Endoscopic Treatment of Esophageal Cancer**

Wayne L. Hofstetter, MD  
The University of Texas MD Anderson Cancer Center, Houston, TX

10:30 a.m. - 11:00 a.m. **Refreshments**

11:00 a.m. - 11:55 a.m. **Scientific Session**

**Moderators:**  
Benjamin Haithcock, MD  
University of North Carolina, Chapel Hill, NC

Spencer J. Melby, MD  
Washington University in St. Louis, St. Louis, MO

**SA09 – Hospitalization Prior to Index Admission for Ventricular Assist Device Implantation Decreases Mortality and Cost**

Brandon S. Hendriksen, Eric W. Schaefer, Christopher S. Hollenbeak,  
John V. Conte, Behzad Soleimani  
Penn State Medical Center, Hershey, PA, USA

**SA10 – Risk Factors and Outcomes Associated with Early Airway Dehiscence Following Lung Transplantation**

Neel Ranganath, Jad Malas, Katherine G. Phillips, Gregory J. Bittle,  
Melissa B. Lesko, Luis F. Angel, Bonnie E. Lonze, Zachary N. Kon  
1New York University Langone Health, New York NY, USA, 2University of Maryland School of Medicine, Baltimore, MD, USA
SA11 – Clinical and Functional Outcomes Associated with Age After Non-Transfemoral Transcatheter Aortic Valve Replacement
Alexis K. Okoh, Molly Schultheis, Sari Kaplon, Ravindra K. Karanam, Margarita T. Camacho, Mark Russo
RWJ Barnabas Health, Newark, New Jersey, USA

SA12 – Therapeutic Mediastinoscopy: Extended Indications Beyond the Staging and Diagnosis of the Mediastinum
Pierre de Delva
University of Mississippi Medical Center, Jackson, MS, USA

SA13 – Left Ventricular Function Recovery after Transapical Transcatheter Aortic Valve Replacement in Patients with Previous Coronary Artery Bypass Graft Surgery
Alexis K. Okoh, Molly Schultheis, Margarita T. Camacho, Sari Kaplon, Mark Russo
RWJ Barnabas Health, Newark, New Jersey, USA

SA14 – Readmissions After Lobectomy in an Era of Increasing Minimally Invasive Surgery: A Statewide Analysis
Brandon S. Hendriksen, Michael F. Reed, Matthew D. Taylor, Christopher S. Hollenbeak
Penn State Milton S. Hershey Medical Center, Hershey, PA, USA

11:55 a.m. - 12:15 p.m. Adjourn to Luncheon
12:15 p.m. - 1:15 p.m. James A. Magovern, MD Memorial Lectureship Luncheon
Leadership in Medicine
Larry R. Kaiser, MD, FACS
Temple University Health System, Philadelphia, PA

1:20 p.m. - 2:30 p.m. Membership Business Meeting
6:00 p.m. - 7:00 p.m. Scientific Poster Presentations
7:00 p.m. – 9:00 p.m. President’s Dinner

SATURDAY, OCTOBER 20, 2018

7:30 a.m. - 12:00 p.m. Registration
7:30 a.m. - 8:30 a.m. Breakfast Buffet
8:00 a.m. - 9:40 a.m. Expert Session I
Moderators:
Jeffrey E. Sell, MD
Sarasota Memorial Hospital
Sarasota, FL

Benjamin Haithcock, MD
University of North Carolina
Chapel Hill, NC

John V. Conte, Jr., MD
Penn State Medical Center,
Hershey, PA

Doraid Jarrar
University of Pennsylvania
Philadelphia, PA
<table>
<thead>
<tr>
<th>Time</th>
<th>Cardiovascular</th>
<th>Thoracic</th>
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<tr>
<td>8:00 a.m. - 8:20 a.m.</td>
<td><strong>ERACS: A Manual for Optimization of Perioperative Care</strong>&lt;br&gt;Rawn Salenger, MD&lt;br&gt;University of Maryland Townson, MD</td>
<td><strong>Management of Advanced Thymoma</strong>&lt;br&gt;Daniel J. Boffa, MD&lt;br&gt;Yale School of Medicine New Haven, CT</td>
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<tr>
<td>8:20 a.m. - 8:40 a.m.</td>
<td><strong>Repair Principles of Type A Dissection for the Contemporary Heart Surgeon</strong>&lt;br&gt;Jennifer S. Lawton, MD&lt;br&gt;John Hopkins Hospital Baltimore, MD</td>
<td><strong>Surgery for Small Cell Lung Cancer</strong>&lt;br&gt;Sharon Ben-Or, MD&lt;br&gt;University of South Carolina at Greenville, Greenville, SC</td>
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<td>8:40 a.m. - 9:00 a.m.</td>
<td><strong>Lung Preservation for Transplantation</strong>&lt;br&gt;Bryan A. Whitson, MD, PhD&lt;br&gt;The Ohio State University Columbus, OH</td>
<td><strong>Adjuvant Therapy: Emerging Strategies for Early-stage NSCLC</strong>&lt;br&gt;Christine A. Ciunci, MD, MSCE&lt;br&gt;The Hospital of the University of Philadelphia, PA</td>
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<td>9:00 a.m. - 9:20 a.m.</td>
<td><strong>Setting Up an ECMO Program</strong>&lt;br&gt;Zachary Kon, MD&lt;br&gt;New York University Langone Health New York, NY</td>
<td><strong>Lung Cancer Screening: Where Do We Stand</strong>&lt;br&gt;Betty C. Tong, MD, MHS, MS&lt;br&gt;Duke University Medical Center Durham, NC</td>
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<td>9:20 a.m. - 9:40 a.m.</td>
<td><strong>Predicting Outcomes in Type A Dissection</strong>&lt;br&gt;Mehrdad Ghoreishi, MD&lt;br&gt;University of Maryland School of Medicine, Baltimore, MD</td>
<td><strong>Management of Tracheobronchial Disease in Granulomatosis with Polyangitis</strong>&lt;br&gt;Ashok Muniappan, MD&lt;br&gt;Massachusetts General Hospital Boston, MA</td>
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<tr>
<td>9:40 a.m. - 10:00 a.m.</td>
<td><strong>Adjourn to Expert Session II</strong>&lt;br&gt;</td>
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<td>10:00 a.m. - 11:40 a.m.</td>
<td><strong>Expert Session II</strong>&lt;br&gt;Moderators: Jennifer S. Lawton, MD&lt;br&gt;Johns Hopkins Medical Institutions, Baltimore, MD&lt;br&gt;John F. Lazar, MD&lt;br&gt;MedStar Washington Hospital Center, Washington, DC</td>
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<td>10:00 a.m. - 10:20 a.m.</td>
<td><strong>An ERAS Program for Thoracic Surgery (T-ERAS)</strong>&lt;br&gt;Hiran C. Fernando, MD, Inova Fairfax Cancer Institute, Falls Church, VA</td>
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<td>10:20 a.m. - 11:00 a.m.</td>
<td><strong>Scientific Session</strong>&lt;br&gt;<strong>SA15 – Preoperative CT Scans Reduce the Risk of Stroke in Minimally Invasive Mitral Valve Surgery: A Meta-Analysis</strong>&lt;br&gt;Faiza M. Khan, Jeremy R. Leonard, Matthew Henry, Mohamed Rahouma, T. Sloane Guy, Leonard N. Girardi, Mario Gaudino&lt;br&gt;Weill Cornell Medicine/New York-Presbyterian Hospital, New York, NY, USA</td>
<td><strong>SA16 – Risk Factors for Recurrence After Thymectomy</strong>&lt;br&gt;Sudharsan Madhavan¹, Hannah Ng Jia Hui¹, Chan Yiong Huak², Aneez Dokev Basheer Ahmed³, Atasha Asmat³&lt;br&gt;Ministry of Health Holdings, Singapore¹, National University of Singapore, Singapore², Tan Tock Seng Hospital, Singapore³</td>
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SA17 – Racial Disparities and Outcomes After Left Ventricular Assist Device Implantation as Bridge to Transplantation or Destination Therapy
Alexis K. Okoh¹, Molly Schultheis¹, Setri Fugar², Biruk K. Almaz¹, Olivia Chan¹, Nikhil K. Shah¹, Nicolette Stelter¹, Ravindra K. Karanam¹, Mark Russo¹, Margarita T. Camacho¹
¹RWJ Barnabas Health, Newark, NJ, USA, ²Rush University Medical Center, Chicago, IL, USA

SA18 – Improving Lung Cancer Diagnosis and Treatment in a Community Hospital Setting
Joseph D. Whitlark, Tyler Singer, Ava M. Whitlark, Ben Steward
Mount Nittany Medical Center, State College, PA, USA

11:00 a.m. - 11:40 a.m.  Crazy Case Session

CC01 – Modified Cabrol Patch Repair for Right Atrial Rupture Secondary to Permeating Angiosarcoma
Neel Ranganath, Heidi Schubmehl, Deane E. Smith, Mathew R. Williams, Kazuhiro Hisamoto
New York University Langone Health, New York, NY, USA

CC02 – Successful Management of Atrial-Eosophageal Fistula after Ablation
Lily k. Fatula, James E. Stephenson, William D. Bolton, Sharon Ben-Or
Greenville Health System, Greenville, SC, USA

11:40 a.m. - 12:00 p.m.  Awards / Closing Remarks
Abbas E. Abbas, MD, MS, FACS
President, Eastern Cardiothoracic Surgical Society
Temple University School of Medicine, Philadelphia, PA
Objective: To evaluate short and long-term outcomes of total arch replacement using the trifurcated graft technique, antegrade cerebral perfusion and deep hypothermic circulatory arrest.

Methods: We reviewed 77 patients (42 males, 54%) who underwent total arch replacement with antegrade cerebral perfusion and deep hypothermia circulatory arrest from January 2005 to December 2017. Deep hypothermic circulatory arrest was achieved between 18-22°C. All patients had antegrade cerebral perfusion either immediately after circulatory arrest (perfusion first) or after completion of the distal anastomosis (surgery first). Trifurcation grafts were utilized in 44 (57%) patients and bifurcation grafts were utilized in 33 (43%) patients. Indications for surgical repair included degenerative aneurysms in thirty (38%) patients, chronic dissection in 25 (32%), acute dissection in 15 (19%) and atherosclerotic aneurysms in 10 (13%). Thirty-one (40%) patients had undergone previous cardiac surgery.

Results: Hospital mortality was 5% (4 patients). Postoperative stroke and transient ischemic attack occurred in 3 (4%) patients. Renal insufficiency occurred in 10 (13%) patients. Mean circulatory arrest time was 18±15 minutes and mean antegrade cerebral perfusion time was 60±21 minutes. The median duration of intensive care and hospital length of stay was 6 and 15 days respectively. Ninety percent of patients were alive at 1 year, 76% at 5 years and 68% at 10 years.

Conclusions: In the era of hybrid and endovascular repair, open total arch replacement utilizing the trifurcated graft technique, antegrade cerebral perfusion and deep hypothermic circulatory arrest offers outstanding short-term outcomes in addition to good long-term survival rates.
SA02. The Scan, the Needle or the Knife? National Trends in Diagnosing Stage I Lung Cancer

John F. Lazar¹, Charles Bakhos¹, Naomi Alpert², Abbas Abbas¹, Faiz Y. Bhora², Emanuela Taioli²
Temple University Health System, Philadelphia, PA, USA¹, Mount Sinai Medical Center, New York, NY, USA²

Objective: Indeterminate lung nodules are increasingly discovered thanks to the widespread use of chest imaging for screening and other indications. The process to diagnosing which of these nodules is malignant varies based on protocols and preferences. The aim of this study is to analyze the factors associated with the different modalities used for diagnosing stage I non-small cell lung cancer (NSCLC).

Methods: The National Cancer Data Base (NCDB) was queried for all patients with stage I NSCLC from 2004-2015. Four diagnostic modalities were identified; clinical radiographic alone (CRA), bronchial cytology (BC), needle biopsy (NB), or surgical biopsy (SB). A multivariate multinomial logistic regression estimating Odds Ratios (OR) and 95% Confidence intervals (CI) was used to assess the associations of patient demographics, cancer characteristics, and facility characteristics with these diagnostic modalities.

Results: Of 250,614 patients; 4,233 (1.7%) had CRA, 5,226 (2.1%) had BC, 147,621 (59.9%) had NB and 93,534 (37.3%) had SB. Older patients were significantly more likely to receive a CRA and significantly less likely to have SB compared to those <50 years old (ORadj: 5.3 for 70-79 years). Patients more than 50 miles from facility were significantly more likely to undergo SB (ORadj: 1.25 vs NB; 1.30 vs CRA; 1.38 vs BC). Patients receiving SB had significantly shorter days from diagnosis to treatment (mean=23.0, vs. 53.5-64.7 for other modalities, p<0001).

Conclusions: Diagnostic surgery to confirm early NSCLC was significantly associated with younger patients, greater travel distance, and shorter time to treatment compared to radiology, cytology or needle biopsy.
**Objective:** Aortic procedures are associated with higher inherent risks of bleeding, yet data regarding perioperative transfusion requirements in this population is lacking. We evaluated transfusion patterns in patients undergoing proximal aortic surgery in order to provide a benchmark against which future quality metrics can be assessed.

**Methods:** Between June 2014 and July 2017, 247 patients underwent elective aortic reconstruction for aneurysm. Patients with acute aortic syndrome, endocarditis, and/or prior cardiac surgery were excluded from analysis. Transfusion data was analyzed by type of operation: Group 1, ascending aorta replacement ± aortic valve procedure (n=122, 49.39%); Group 2, ascending aorta + root replacement with a valve-graft conduit (n=93, 37.65%); Group 3, ascending aorta + valve-sparing root replacement (n=32, 12.96%). Circulatory arrest was utilized in all patients.

**Results:** Total operative mortality was 2.02% (5 deaths). Overall, 72 patients (29.15%) did not require transfusion of blood or other products. Patients in Groups 1 (n=44, 36.07%) and 3 (n=10, 31.25%) were significantly more likely to avoid transfusion of blood and/or blood products than those in Group 2 (n=18, 19.35%) (p=0.0095, p=0.0005, respectively) (Figure 1). Group 2 patients received more clotting factors intraoperatively (n=23, 24.73%) than those in Groups 1 (n=9, 7.38%, p=0.0005) and 3 (n=2, 6.35%, p=0.023).

**Conclusions:** Root replacement with a valve-graft conduit is associated with greater need for transfusion than either valve-sparing root replacement or isolated replacement of the supra-coronary aorta.

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**Proportion of Patients Who Did Not Require Transfusion of Blood and/or Other Blood Products During Their Hospital Stay**

![Proportion of Patients Who Did Not Require Transfusion of Blood and/or Other Blood Products During Their Hospital Stay](image)

*Significant differences between groups indicated by brackets.

RBC = red blood cells.

* other blood products: fresh frozen plasma, platelets and/or cryoprecipitate.
SA04. Safety and Feasibility of Thoracoscopic Lung Resection for Non-Small Cell Lung Cancer in Octogenarians

Xiaoying Lou, Andrew Sanders, Manu Sancheti, Jeffrey Javidfar, Allan Pickens, Seth Force, Felix Fernandez, Onkar Khullar
Emory University, Atlanta, GA, USA

Objective: Octogenarians comprise an increasing proportion of patients presenting with non-small cell lung cancer (NSCLC). This study examines post-operative morbidity and mortality, and long term survival in octogenarians undergoing thoracoscopic anatomic lung resection for NSCLC, compared with a younger cohort.

Methods: We conducted a retrospective review of our institutional Society of Thoracic Surgeons-General Thoracic Surgery Database of all patients >60 years old undergoing elective lobectomy or segmentectomy for pathologic stage I or II NSCLC between 2009-2018. Results were compared between patients aged 60-79 (n=668) and 80-89 (n=71). Long-term survival among octogenarians was further assessed using Kaplan-Meier analysis.

Results: The mean age of each cohort was 82.6±2.5 and 69.1±5.1 years. There were no significant differences in baseline co-morbidities, although the younger cohort was more likely to have T3/T4 cancer (p=0.01). Post-operative length of stay was not significantly different. However, a greater proportion of octogenarians required intensive care unit admission and discharge to extended care facilities. Among post-operative complications, only renal failure was more likely in the older cohort (Table 1). While in-hospital mortality was equivalent in both groups, thirty-day mortality was significantly higher among octogenarians (5.6% versus 1.5%, p=0.04). Overall survival among octogenarians at 1, 3, and 5 years were 86.8%, 50.3%, and 37.8%, respectively (Figure 1). On univariate analysis of baseline demographic variables, only the presence of coronary artery disease was a significant predictor of mortality (HR 2.98).

Conclusions: In a carefully selected cohort of octogenarians, thoracoscopic anatomic resection can be performed with favorable early post-operative outcomes. The factors impacting long-term survival warrant further investigation.

Table 1 - Comparison of Post-operative Outcomes after Thoracoscopic Anatomic Lung Resection

<table>
<thead>
<tr>
<th>Variable</th>
<th>ALL (n)</th>
<th>60-79 yr old (n)</th>
<th>&gt;80 yr old (n)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumonia</td>
<td>3.8% (28/733)</td>
<td>4.0% (27/668)</td>
<td>1.5% (1/65)</td>
<td>0.50</td>
</tr>
<tr>
<td>Respiratory failure</td>
<td>2.6% (19/732)</td>
<td>2.7% (18/668)</td>
<td>1.6% (1/64)</td>
<td>0.72</td>
</tr>
<tr>
<td>Myocardial infarction</td>
<td>0.1% (1/734)</td>
<td>0.1% (1/668)</td>
<td>0.0% (0/66)</td>
<td>1.00</td>
</tr>
<tr>
<td>Stroke</td>
<td>0.1% (1/734)</td>
<td>0.0% (0/668)</td>
<td>1.5% (1/66)</td>
<td>0.09</td>
</tr>
<tr>
<td>Renal failure</td>
<td>1.4% (10/733)</td>
<td>0.9% (6/668)</td>
<td>6.2% (4/65)</td>
<td>0.01</td>
</tr>
<tr>
<td>Required ICU stay</td>
<td>9.8% (72/737)</td>
<td>9.0% (60/667)</td>
<td>17.1% (12/70)</td>
<td>0.03</td>
</tr>
<tr>
<td>In-hospital mortality</td>
<td>1.4% (10/739)</td>
<td>1.0% (7/668)</td>
<td>4.2% (3/71)</td>
<td>0.06</td>
</tr>
<tr>
<td>30-day mortality</td>
<td>1.9% (14/736)</td>
<td>1.5% (10/665)</td>
<td>5.6% (4/71)</td>
<td>0.04</td>
</tr>
<tr>
<td>Post-operative length of stay</td>
<td>5.1 ± 4.7</td>
<td>5.1 ± 4.8</td>
<td>5.5 ± 3.3</td>
<td>0.39</td>
</tr>
<tr>
<td>Discharge to extended care facility</td>
<td>3.2% (23/728)</td>
<td>2.6% (17/660)</td>
<td>8.8% (6/68)</td>
<td>0.01</td>
</tr>
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</table>
Figure 1 - Overall Survival Among Octogenarians at 1, 3, and 5 Years

<table>
<thead>
<tr>
<th></th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
<th>7 Years</th>
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<tr>
<td>Total (N = 71)</td>
<td>86.8 (54)</td>
<td>50.3 (16)</td>
<td>37.8 (11)</td>
<td>28.0 (5)</td>
</tr>
</tbody>
</table>
SA05. Association between Centers for Disease Control “High-risk” Donor Characteristics and Recipient Outcomes after Heart Transplantation: Insights from the UNOS database

Alexis KL. Okoh¹, Molly Schultheis¹, Kamrani K. Kambiz¹, Setri Fugar², Biruk K. Almaz¹, Nikhil K. Shah¹, Nicolette Stelter¹, Ravindra K. Karanam¹, Margarita T. Camacho¹, Mark Russo¹  
RWJ Barnabas Health, Newark, NJ, USA¹, Rush University Medical Center, Chicago, IL, USA²

Objective: The aim of this study is to investigate the association between clinical characteristics of high-risk heart donors (HRD) and recipient outcomes after heart transplantation.

Methods: The UNOS database was queried to identify all patients who had a heart transplant between 2004 and 2015. Recipients aged 18 and older were grouped into two based on donors risk status (HRD vs standard risk donor (SRD)). Post-transplant outcomes including episodes of acute rejection, length of stay (LOS) after transplantation and graft survival were compared between both groups. Baseline clinical characteristics including social history and viral screen findings of HRD were used for a Cox regression analysis that identified factors associated with recipient and graft survival.

Results: Out of 22,333 heart transplantations performed during the study period, 2,769 (12%) patients received a HRD graft. Acute rejection episodes, LOS and graft and recipient survival were similar between both groups. HRD had the following social histories: Unprofessional tattoos or piercings (n=1722)(63%), cocaine use (n=916)(33%), heavy smoking (n=437)(16%), heavy alcohol abuse (n=610)(22%). Viral screens detected 72(3%) hepatitis B virus (HBV) positive, 12(0.4%) hepatitis C virus (HCV) positive, and no HIV positive donors at the time of donation. Incidence of ABO donor-recipient mismatch was 404 (15%). Cox regression analysis found only donor HCV infection and donor-recipient ABO mismatch to be associated with poorer recipient survival.

Conclusions: Cardiac allografts from HRD who are serologically negative for viruses can be safely used without compromising recipient outcomes. A positive HCV and donor-recipient ABO mismatch are associated with worse recipient survival.
SA06. Trends in Surgical Approach to Thymectomy: An Analysis of the National Cancer Database

Ariella Sarkissian, Heidi Reich, Taryne A. Imai, Fernando Espinoza-Mercado, Jerald D. Borgella, Harmik J. Soukiasian
Cedars-Sinai Medical Center, Los Angeles, CA, USA

Objective: Recent paradigm shifts from open thymectomy to minimally invasive approaches has been demonstrated as more thoracic surgeons adopt video-assisted thoracoscopic surgery (VATS) and robotic-assisted thoracoscopic surgery (RATS). This study evaluated trends in surgical approaches to thymectomy with a chronologic analysis of the National Cancer Database (NCDB).

Methods: The NCDB was queried to identify all patients that underwent thymectomy from 2010-2015 for thymoma, thymic carcinoma and other less frequent thymic neoplasias. The chronologic trends from open thymectomy to minimally invasive thymectomy were analyzed using Cochran-Armitage trend analysis. The relationships between surgical approach and tumor size, as well as length of stay (LOS), were analyzed using Kruskal-Wallis tests.

Results: A total of 3,147 patients underwent thymectomy. The frequency of RATS and VATS increased from 6.4% to 17.1% and 8.6% to 16.4%, respectively, whereas open thymectomy declined from 85.0% to 66.5% (p<0.001) (Figure 1A). Open thymectomy was the most common approach for all tumor sizes and was performed at increasing frequency relative to RATS or VATS for thymomas >7 cm (85.6%, p<0.001) (Figure 1B). The median LOS for RATS, VATS, and open approaches were 2.5 days (IQR 1-4 days), 3.0 days (IQR 2-4 days), and 4.0 days (IQR 3-6 days), respectively (p<0.001).

Conclusions: From 2010-2015, there was a significant increase in the adoption of VATS and RATS, corresponding with a decline in open thymectomy. The adoption rate of minimally invasive approaches was slowest for large tumors. RATS had the shortest LOS and open thymectomy had the longest LOS.

Figure 1A and 1B

Thymectomy Approach by Year and Tumor Size

A. Thymectomy Approach Trends by Year: Graph demonstrates percentage of thymectomy cases by approach from 2010-2015.
B. Thymectomy Approach by Tumor Size: Graph illustrates percentage of thymectomy approach adopted based on tumor size.
SA07. Sternal Wound Complications in Patients Undergoing Orthotopic Heart Transplantation

Tyler J. Wallen, Andreas Habertheuer, Jean Paul Gottret, Matthew Kramer, Zara Abbas, Mary A. Siki, Reilly Hobbs, Charlie Vasquez, Suhail Kanchwala, David Lo, Michael Acker, Prashanth Vallabhajosyula
The University of Pennsylvania, Philadelphia, PA, USA

Objective: The incidence and management of sternal wound complications in patients undergoing orthotopic heart transplantation (OHT) is not well studied. We report outcomes in OHT patients who developed sternal infections requiring reoperations in the perioperative period.

Methods: From 2004 to 2013, 437 patients underwent OHT at a single institution. In a retrospective review, patients who developed sternal infections post-OHT (Infection group, n=27) were compared to OHT patients without sternal complications (Control group, n=410).

Results: Sternal infection rate was 6.2% (n=27). Demographics were similar. Infection group had higher rates of COPD 25% vs. 13%, p=0.03, and previous cardiac surgery via sternotomy 28% vs. 15%, p=0.03. Infection group had a greater incidence of ventilation >24 hours, 44% vs. 31%, p=0.2, renal failure 56% vs. 24%, p=0.001, dialysis requirement 30% vs. 10%, p=0.006, permanent stroke 11% vs. 2%, p=0.02, perioperative MI 4% vs. 0.2%, p=0.09. The infection group had a longer ICU stay (524±410 vs. 187±355 hours, p=0.001) and hospitalization (59±28 vs. 29±43 days, p=0.001). In-hospital/30-day mortality was 30% vs. 19%, p=0.2. 52% of the Infection Group were readmitted after discharge for sternal complications. Mean time to sternal reoperation was 44±50 days. Deep wound infection (41%) and sternal dehiscence (22%) were the most common presentations. Causative organisms were Enterobacter (22%), Klebsiella (15%), and Pseudomonas (15%). Surgical treatment included sternal debridement with pectoralis muscle flap (52%), primary closure (18%) and omental flap (11%). (Table 1).

Conclusions: Sternal wound infections impart a significant comorbid burden on OHT patients. Causative organisms are predominantly virulent gram negative bacteria. Therefore, a high index of suspicion must be maintained for early detection and treatment.

Table 1

Demographics and Preoperative Characteristics of Patients with and without Postoperative Sternal Wound Infections

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control Group (n=410)</th>
<th>Infection Group (n=27)</th>
<th>O.R. (95% C.I.)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
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<tr>
<td>Age, years</td>
<td>54±9.4</td>
<td>53.4±12.35</td>
<td>1.25 (0.46-3.4)</td>
<td>0.75</td>
</tr>
<tr>
<td>Male</td>
<td>319 (77.8%)</td>
<td>22 (81.4%)</td>
<td></td>
<td>0.8</td>
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<tr>
<td>Cardiac comorbidity</td>
<td></td>
<td></td>
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<tr>
<td>Prior MI</td>
<td>162 (40%)</td>
<td>12 (37.5%)</td>
<td>1.23 (0.56-3.66)</td>
<td>0.7</td>
</tr>
<tr>
<td>Prior cardiac surgery</td>
<td>199 (49.1%)</td>
<td>19 (59.4%)</td>
<td>2.38 (1.07-5.88)</td>
<td>0.03</td>
</tr>
<tr>
<td>Prior Cardiac operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAD</td>
<td>68 (17%)</td>
<td>9 (28.1%)</td>
<td>1.76 (1.08-5.08)</td>
<td>0.03</td>
</tr>
<tr>
<td>CABG</td>
<td>86 (21.2%)</td>
<td>10 (31.2%)</td>
<td>2.21 (0.97-5.01)</td>
<td>0.06</td>
</tr>
<tr>
<td>Valve</td>
<td>52 (12.8%)</td>
<td>6 (18.8%)</td>
<td>1.96 (0.75-5.1)</td>
<td>0.15</td>
</tr>
<tr>
<td>Congenital defect</td>
<td>25 (6.2%)</td>
<td>4 (12.5%)</td>
<td>2.67 (0.85-8.35)</td>
<td>0.09</td>
</tr>
<tr>
<td>OHT</td>
<td>15 (3.7%)</td>
<td>2 (6.3%)</td>
<td>1.97 (0.45-9.72)</td>
<td>0.2</td>
</tr>
<tr>
<td>Root/ascending Aorta</td>
<td>3 (0.7%)</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Other*</td>
<td>14 (3.4%)</td>
<td>1 (3.1%)</td>
<td>0.8 (0.1-6.1)</td>
<td>1</td>
</tr>
<tr>
<td>Multiple</td>
<td>45 (11.1%)</td>
<td>8 (25%)</td>
<td>3.05 (1.4-8.25)</td>
<td>0.009</td>
</tr>
<tr>
<td>Noncardiac comorbidity</td>
<td>Control (n=403)</td>
<td>Case (n=36)</td>
<td>Odds Ratio (95% CI)</td>
<td>p-value</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>-----------------</td>
<td>-------------</td>
<td>---------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Peripheral arterial disease</td>
<td>37 (9.1%)</td>
<td>4 (12%)</td>
<td>1.67 (0.57-5.34)</td>
<td>0.3</td>
</tr>
<tr>
<td>Hypertension</td>
<td>360 (87.8%)</td>
<td>25 (78.1%)</td>
<td>1.73 (0.39-7.55)</td>
<td>0.75</td>
</tr>
<tr>
<td>Diabetes</td>
<td>139 (34.3%)</td>
<td>10 (31.2%)</td>
<td>1.13 (0.51-2.57)</td>
<td>0.83</td>
</tr>
<tr>
<td>Smoking</td>
<td>140 (34.6%)</td>
<td>13 (40.6%)</td>
<td>1.72 (0.81-3.91)</td>
<td>0.15</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
<td>53 (13.1)</td>
<td>8 (25%)</td>
<td>2.83 (1.18-6.8)</td>
<td>0.03</td>
</tr>
<tr>
<td>Preoperative renal failure</td>
<td>64 (15.8%)</td>
<td>2 (6.2%)</td>
<td>0.44 (0.1-1.87)</td>
<td>0.4</td>
</tr>
<tr>
<td>Preoperative renal dialysis</td>
<td>17 (4.2%)</td>
<td>1 (3.1%)</td>
<td>0.89 (0.1-6.95)</td>
<td>1</td>
</tr>
<tr>
<td>Prior stroke</td>
<td>39 (9.6%)</td>
<td>2 (6.2%)</td>
<td>0.77 (0.17-3.33)</td>
<td>1</td>
</tr>
<tr>
<td>Preoperative laboratory values</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creatinin</td>
<td>1.49±1.1</td>
<td>1.58±0.94</td>
<td></td>
<td>0.67</td>
</tr>
<tr>
<td>Hematocrit, %</td>
<td>34.5±5.7</td>
<td>35±4.8</td>
<td></td>
<td>0.65</td>
</tr>
</tbody>
</table>

*Lv aneurysm repair, Subaortic membrane myomectomy, pericardiectomy, clot removal, traumatic ventricular perforation repair.
SA08. Robotic Segmentectomy versus Thoracoscopic Segmentectomy: Comparing Intraoperative Results

Philip A. Erwin, Sharon Ben-Or, William D. Bolton, James E. Stephenson
Greenville Health System, Greenville, SC, USA

Objective: Recent studies have shown robotic-assisted thoracoscopic surgery segmentectomy to be safe in select patients with pulmonary lesions. The purpose of this study was to compare intra-operative and postoperative outcomes of robotic segmentectomy with video-assisted thoracoscopic surgery (VATS) segmentectomy. This is the largest series reported in the literature comparing robotic with VATS for segmentectomies.

Methods: A retrospective review was undertaken for consecutive patients who underwent a robotic segmentectomy (n=147) or VATS segmentectomy (n=33) between January 2007 and July 2018. Our primary endpoints included operative time and estimated blood loss (EBL). We also compared the first 100 robotic segmentectomies to the second 47 cases to determine if there was a difference in outcomes with increased experience. Data was analyzed using the Chi-square tests.

Results: There was a significant difference between groups in operative time (robotic=224 min, VATS=212 min; P<0.001), EBL (robotic=108 mL, VATS=250 mL; P<0.001). A 64 minute reduction in operative time was observed between the early and late robotic groups (244 min vs. 180 min; P< 0.01).

Conclusions: We found robotic segmentectomy to be a safe procedure with similar postoperative outcomes when compared to VATS segmentectomy. Robotic segmentectomy also allows for a quicker operation with less blood loss.

SA09. Hospitalizations Prior to Index Admission for Ventricular Assist Device Implantation Decrease Mortality and Cost

Brandon S. Hendriksen, Eric W. Schaefer, Christopher S. Hollenbeak, John V. Conte, Behzad Soleimani
Penn State Medical Center, Hershey, PA, USA

Objective: Implantation of ventricular assist devices (VADs) for patients with advanced heart failure is increasing in prevalence. VADs are used as bridges to transplantation, support from reversible cardiomyopathy, or as destination therapy. Optimal timing and medical preparation necessary for placement of VADs has not been fully elucidated. We hypothesized that earlier VAD implantation, indicated by fewer hospitalizations in the 6-months prior to surgery, would decrease mortality and costs.

Methods: The Truven MarketScan database identified VAD placements from 2005-2014. Patients whose index admission included extra-corporeal membrane oxygenation (ECMO) treatment were analyzed separately. Mortality and costs were analyzed according to the number of hospitalizations 6-months prior to VAD implantation with multivariate modeling. Bootstrapping provided confidence intervals for costs.

Results: The data contained 1,390 VAD implantations; 3% (46/1,390) required ECMO during the index surgical admission. 71% (953/1,344) of the non-ECMO group had hospitalizations 6-months prior to surgical admission while only 39% (18/46) of ECMO patients had prior hospitalization. Mortality rates were 14% (non-ECMO) and 52% (ECMO). Hospitalizations prior to VAD placement were associated with decreased mortality in the non-ECMO group (p<0.001) but not significant in the ECMO group (p=0.393). Mean costs of surgical admission decreased from $519,000 to $454,000 for 0 to ≥3 prior hospitalizations (p<0.001) in the non-ECMO group. Differences in cost were not statistically significant in the ECMO group.

Conclusions: Hospitalizations prior to VAD implantation were associated with decreased mortality and cost until patients required ECMO. Medical optimization prior to VAD implantation plays an important role in outcomes but delays may cause significant increases in mortality.
SA10. Risk Factors and Outcomes Associated with Early Airway Dehiscence Following Lung Transplantation

Neel Ranganath¹, Jad Malas¹, Katherine G. Phillips¹, Gregory J. Bittle², Melissa B. Lesko¹, Luis F. Angel¹, Bonnie E. Lonze¹, Zachary N. Kon¹
¹New York University Langone Health, New York NY, USA, ²University of Maryland School of Medicine, Baltimore, MD, USA

Objective: Anastomotic complications occur in 7-18% of lung transplants, but no large multi-institutional analyses to determine risk factors for airway dehiscence (AD) exist. Using national registry data, we compared pre-operative recipient/donor risk factors and post-operative outcomes in patients with and without AD.

Methods: Data on adult lung transplants between 2007-2017 were provided by the Scientific Registry of Transplant Recipients. Recipient/donor demographics were compared with regards to AD, and multivariable logistic regression identified independent risk factors for AD. Kaplan-Meier curves and log-rank tests described mortality and graft survival.

Results: 275/18122 recipients (1.5%) experienced AD. These recipients were more often male (71.6% vs 59.6%, \( p<0.001 \)), obese (20.1% vs 15.6%, \( p=0.041 \)), transplanted from ICU (17.5% vs 11.0%, \( p=0.001 \)), and mechanically ventilated (11.6% vs 6.9%, \( p=0.002 \)). AD was not associated with recipient steroid use (51.9% vs 47.7%, \( p=0.194 \)) or lung disease diagnosis group. Donor diabetes (8.0% vs 7.0%, \( p=0.482 \)) and donor smoking (7.4% vs 9.0%, \( p=0.449 \)) were also not associated with AD. Patients with AD were more likely to have received bilateral lungs (78.5% vs 68.3%, \( p<0.001 \)) and less likely to have received a single left lung (6.5% vs 17.3%, \( p<0.001 \)). Cold ischemia time between 2-4 hours was less common in the AD group (17.2% vs 23.7%, \( p=0.013 \)). Multivariable analysis revealed recipient obesity and donor gunshot death as independent predictive factors for AD, while donor age>40 and single left lung transplant were negative predictive factors (Table 1). Mortality and graft failure were both significantly higher in the AD group (Figure 1).

Conclusions: We identified independent risk factors for AD and confirmed poor post-operative outcomes. However, many known impediments to wound healing such as chronic steroid use, diabetes, and smoking did not appear to be associated with AD.

Table 1 - Independent Predictors of Airway Dehiscence by Multivariable Regression

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval</th>
<th>( p )-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recipient body mass index (BMI) &gt; 30</td>
<td>1.407</td>
<td>1.043-1.898</td>
<td>0.815-2.149</td>
</tr>
<tr>
<td>Recipient transplanted from intensive care unit</td>
<td>1.321</td>
<td>0.766-2.278</td>
<td>0.317</td>
</tr>
<tr>
<td>Recipient non-hospitalized prior to transplant</td>
<td>0.949</td>
<td>0.623-1.445</td>
<td>0.806</td>
</tr>
<tr>
<td>Recipient supported with mechanical ventilation prior to transplant</td>
<td>1.323</td>
<td>0.815-2.149</td>
<td>0.257</td>
</tr>
<tr>
<td>Donor age &gt; 40 years</td>
<td>0.701</td>
<td>0.518-0.948</td>
<td>0.021</td>
</tr>
<tr>
<td>Donor male gender</td>
<td>1.053</td>
<td>0.808-1.373</td>
<td>0.702</td>
</tr>
<tr>
<td>Donor mechanism of death, stroke</td>
<td>0.970</td>
<td>0.709-1.328</td>
<td>0.849</td>
</tr>
<tr>
<td>Donor mechanism of death, gunshot wound</td>
<td>1.405</td>
<td>1.038-1.900</td>
<td>0.028</td>
</tr>
<tr>
<td>Cold ischemia time 2-4 hours</td>
<td>0.801</td>
<td>0.577-1.113</td>
<td>0.186</td>
</tr>
<tr>
<td>Single left lung transplant</td>
<td>0.358</td>
<td>0.205-0.625</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Received bilateral lung transplant</td>
<td>1.002</td>
<td>0.708-1.419</td>
<td>0.990</td>
</tr>
</tbody>
</table>
Figure 1: Overall Patient Survival and Graft Survival in Airway Dehiscence vs. Non-Airway Dehiscence

Lung Transplants

<table>
<thead>
<tr>
<th></th>
<th>AD</th>
<th>Non-AD</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. at risk</td>
<td>271</td>
<td>17510</td>
</tr>
<tr>
<td>0</td>
<td>149</td>
<td>13436</td>
</tr>
<tr>
<td>1</td>
<td>100</td>
<td>10350</td>
</tr>
<tr>
<td>2</td>
<td>76</td>
<td>7971</td>
</tr>
<tr>
<td>3</td>
<td>61</td>
<td>6096</td>
</tr>
<tr>
<td>4</td>
<td>46</td>
<td>4492</td>
</tr>
<tr>
<td>5</td>
<td>272</td>
<td>17579</td>
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<td></td>
<td>142</td>
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<tr>
<td></td>
<td>94</td>
<td>10226</td>
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<tr>
<td></td>
<td>59</td>
<td>7799</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>5893</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>4284</td>
</tr>
</tbody>
</table>

Overall Survival

Graft Survival

p < 0.0001

p < 0.0001
SA11. Clinical and Functional Outcomes Associated with Age After Non-Transfemoral Transcatheter Aortic Valve Replacement

Alexis K. Okoh, Molly Schultheis, Sari Kaplon, Ravindra K. Karanam, Margarita T. Camacho, Mark Russo
RWJ Barnabas Health, Newark, New Jersey, USA

Objective: Transcatheter aortic valve replacement (TAVR) via a non-transfemoral (TF) approach is associated with high morbidity in advanced age patients. The aim of this study is to investigate the association of age and clinical and functional outcomes after non-TF TAVR.

Methods: Non-TF TAVR patients were divided into three age groups: <75 years (Group I), 75-85 years (Group II), and >85 years (Group III). Pre-and post-operative clinical, functional status and procedure-related outcomes were compared among patient groups. A multivariable Cox proportional hazards model was used to assess the impact of age on overall all-cause mortality.

Results: A total of 154 patients including 21 aged <75 (Group I), 69 aged 75-85 (Group II) and 64 aged >85 years (Group III) were studied. Short term (30-day) clinical and functional status improved significantly for all age groups. The incidence of acute kidney injury (AKI), access site complications (ASC) and the requirement for permanent pacemaker (PPM) were similar for all age groups at 30-days. After a median follow-up of 17 months, overall all-cause mortality rates were 14% for group I, 26% for group II and 36% for group III (p=0.135). A Cox proportional hazards model showed frailty status (HR:1.84 95% Confidence Interval (1.23, 2.69); p=0.003) but not age as an independent predictor of overall all-cause mortality.

Conclusions: Both older and younger patients benefit from non-TF TAVR with comparable outcomes. Postoperative morbidity and mortality rates are similar across different non-TF TAVR age groups. Age should not be an exclusion criterion for non-TF TAVR.

SA12. Therapeutic Mediastinoscopy: Extended Indications Beyond the Staging and Diagnosis of the Mediastinum

Pierre de Delva
University of Mississippi Medical Center, Jackson, MS, USA

Objective: To highlight and define the role of mediastinoscopy as a minimally invasive therapeutic procedure for mediastinal disease.

Methods: Retrospective cohort review of a single institution experience with therapeutic mediastinoscopy.

Results: Between 2012 and 2018, 15 patients underwent therapeutic mediastinoscopy. Indications included mobilization of substernal goiter, drainage of descending mediastinitis, bronchogenic cyst removal and removal of a mediastinal parathyroid adenoma. No conversions to sternotomy or thoracotomy were required. One patient reported hoarseness following removal of a substernal goiter. There was no mortality or disease recurrence.

Conclusions: Mediastinoscopy is a useful tool for access to the mediastinum. Although mostly used for the purpose of staging, mediastinoscopy in the hands of thoracic surgeons can be used to treat several mediastinal conditions. In the era of increasing use of endobronchial ultrasound for mediastinal staging, thoracic surgeons should maintain a high level of competency and skill with this procedure as it provides minimally invasive access for therapeutic interventions in the mediastinum.
SA13. Left Ventricular Function Recovery after Transapical Transcatheter Aortic Valve Replacement in Patients with Previous Coronary Artery Bypass Graft Surgery

Alexis K. Okoh, Molly Schultheis, Margarita T. Camacho, Sari Kaplon, Mark Russo
RWJ Barnabas Health, Newark, New Jersey, USA

Objective: To describe outcomes after transapical transcatheter aortic valve replacement (TA-TAVR) in patients with previous coronary artery bypass graft (CABG) surgery and assess left ventricular (LV) function recovery post-TAVR in CABG/TA-TAVR patients with LV dysfunction.

Methods: Patients who had TAVR via a TA approach at a single center were divided into two groups based on their previous history of CABG surgery. Post-operative outcomes were compared between groups and Cox proportional hazard regression analysis was used to identify predictors of all-cause mortality. CABG/TA-TAVR patients were sub-divided into two per baseline LVEF <50%. The changes in LVEF and valve-function at follow-up (1-12 months) were analyzed using paired t-tests.

Results: Of 133 TA-TAVR patients, 39 (29%) had a surgical history of CABG. Overall all-cause mortality rates at 30-days, 1-year and 2-years were similar for both groups (p=0.59, p=0.64, p=0.78). Higher STS scores (p=0.013) and a previous history of atrial fibrillation (p=0.0001) were independent predictors of overall all-cause mortality. Sub-grouping of CABG-TAVR patients (n=39) identified 22 patients (56%) with LV EF ≥ 50% vs. 17 (44%) with LVEF <50%. At 1-year follow up, significant improvements in LVEF (low LVEF group) and valve function for both groups were observed. LV EF ≥ 50% group (LVEF; ∆:-3 % p=0.878, AVA; ∆: 1.3cm² p=0.0004, MG; ∆ -31mmHg, p<0.0001); LVEF < 50% group (LVEF; ∆: 10% p=0.01, AVA; ∆:1.3cm², p=0.0004, MG; ∆ -31mmHg, p=0.0001).

Conclusions: TA-TAVR has acceptable outcomes in CABG patients. Significant improvements in LV and valve functions are seen in mid-term follow-up.
SA14. Readmissions after Lobectomy in an Era of Increasing Minimally Invasive Surgery: A Statewide Analysis

Brandon S. Hendriksen, Michael F. Reed, Matthew D. Taylor, Christopher S. Hollenbeak
Penn State Milton S. Hershey Medical Center, Hershey, PA, USA

Objective: Utilization of minimally invasive surgical modalities for lobectomy is increasing. Lobectomy can be associated with high rates of readmission. As use of these modalities increases, evaluation of the impact on readmission is warranted. We hypothesized that minimally invasive lobectomy would be associated with lower rates of readmission.

Methods: Data from the Pennsylvania Health Care Cost Containment Council (PHC4) were used to identify lobectomy operations performed in Pennsylvania from 2011 through 2014. Each operation was categorized by approach: open, video-assisted thoracoscopic surgery (VATS), or robotic. Differences in patient characteristics were assessed with t-tests and ANOVA. Logistic regression modeled risk of 30-day readmission and linear regression modeled length of stay (LOS) after controlling for confounders.

Results: We evaluated 4,939 lobectomy operations (2,501 open, 1,944 VATS, 494 robotic) with 583 readmissions (11.8%). Robotic cases increased 333% over 4 years. VATS and open cases increased 38% and 22%, respectively. Surgical approach did not affect hospital readmission (VATS Odds Ratio (OR) = 0.95 p=0.6320 and robotic OR=1.02 p=0.9160). Longer LOS was associated with a greater likelihood of readmission (OR=1.58 p=0.0020). LOS was 1 day less for VATS (p<0.0001) and 1.5 days less for robotic lobectomy (p<0.0001) when compared to an open approach. The most common reasons for readmission were respiratory disease and non-respiratory infection and are illustrated in Figure 1.

Conclusions: Surgical approach does not directly affect readmission. Indeed, the greater utilization of minimally invasive lobectomy, and the resultant decreased LOS, is not causing higher rates of readmission.

Figure 1 - Reasons for Readmission after Lobectomy
**SA15. Preoperative CT Scans Reduce the Risk of Stroke in Minimally Invasive Mitral Valve Surgery: A Meta-Analysis**

Faiza M. Khan, Jeremy R. Leonard, Matthew Henry, Mohamed Rahouma, T. Sloane Guy, Leonard N. Girardi, Mario Gaudino  
*Weill Cornell Medicine/New York-Presbyterian Hospital, New York, NY, USA*

**Objective:** Minimally invasive mitral valve surgery (MIMVS) is performed with increasing frequency. Recent evidence suggests that patients undergoing MIMVS have an increased risk of perioperative stroke, mainly due to retrograde aortic embolization during femoral cardio-pulmonary bypass. Systematic pre-operative CT screening allows visualization of the aorta and femoro-iliac vessels and individualization of the surgical approach to the anatomic and pathologic characteristics of the single patient. In this meta-analysis, we aim to determine if systematic pre-operative CT screening decreases the incidence of perioperative stroke and other complications following MIMVS.

**Methods:** A comprehensive online review was performed in PubMed from inception to May 2018. Eligible studies reported MIMVS with retrograde arterial perfusion. Studies were separated into two subgroups: systematic pre-operative CT screening (CT group) and no CT screening (Non-CT). Pooled event rates (PER) for operative mortality, perioperative stroke, perioperative myocardial infarction (MI), and new onset renal failure requiring dialysis were estimated and inter-group comparisons were performed.

**Results:** 57 studies (13,602 patients) were analyzed (19 CT group and 38 Non-CT). The PER for perioperative stroke was 1.98% (CT group: 1.46% vs Non-CT 2.21%, \( p = 0.03 \)). The PER for new dialysis was 1.87%, significantly lower in the CT group (0.83% vs 2.33%, \( p = 0.02 \)) (Table 1). The PER for operative mortality was 1.36% with a trend towards better outcomes in the CT group (0.80% vs. 1.60%, \( p = 0.052 \)).

**Conclusions:** Systematic pre-operative CT screening is associated with significantly lower risk of perioperative stroke, need for dialysis, and a trend toward lower operative mortality after MIMVS.

**Table 1- Meta-Analysis Outcome Summary**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Studies</th>
<th>Pooled Event Rate (95% CI)</th>
<th>( p ) value (^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stroke (All)</strong></td>
<td>57</td>
<td><strong>1.98% (1.62-2.43)</strong></td>
<td></td>
</tr>
<tr>
<td>Stroke (CT group)</td>
<td>19</td>
<td>1.46% (1.09-1.95)</td>
<td>0.03</td>
</tr>
<tr>
<td>Stroke (Non-CT)</td>
<td>38</td>
<td>2.21% (1.72-2.82)</td>
<td></td>
</tr>
<tr>
<td><strong>Operative mortality (All)</strong></td>
<td>56</td>
<td><strong>1.36% (1.03-1.81)</strong></td>
<td></td>
</tr>
<tr>
<td>Operative mortality (CT group)</td>
<td>18</td>
<td>0.80% (0.43-1.49)</td>
<td>0.052</td>
</tr>
<tr>
<td>Operative mortality (Non-CT)</td>
<td>38</td>
<td>1.60% (1.16-2.19)</td>
<td></td>
</tr>
<tr>
<td><strong>New dialysis (All)</strong></td>
<td>36</td>
<td><strong>1.87% (1.36-2.56)</strong></td>
<td></td>
</tr>
<tr>
<td>New dialysis (CT group)</td>
<td>11</td>
<td>0.83% (0.36-1.90)</td>
<td>0.02</td>
</tr>
<tr>
<td>New dialysis (Non-CT)</td>
<td>25</td>
<td>2.33% (1.68-3.23)</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)p-value comparing CT vs. Non-CT groups
SA16. Risk Factors for Recurrence after Thymectomy

Sudharsan Madhavan1, Hannah Ng Jia Hui1, Chan Yiong Huak2, Aneez Dokev Basheer Ahmed3, Atasha Asmat3
Ministry of Health Holdings, Singapore1 National University of Singapore, Singapore2 Tan Tock Seng Hospital, Singapore3

Objective: Surgical resection is the mainstay of treatment for thymomas and provides the best survival and opportunity for cure. Despite complete resection, some patients will have recurrent disease during the course of follow-up. The aim of this study was to review intermediate and long-term recurrence and identify risk factors.

Methods: This is a retrospective review of patients who underwent surgical resection of thymoma with curative intent at a single institution between 2013 and 2017. Univariate analysis using Chi-square tests or T-tests were performed. Five-year recurrence was estimated using the Kaplan-Meier method. Log-rank tests were used to determine significance of factors against time to recurrence.

Results: There were 51 patients with a mean age of 58 years. 60.8% were females, nearly half of the patients had myasthenia gravis and 9.8% had a previous history of cancer. Surgical approaches used were robotic-assisted (58.8%), sternotomy (33%) and hemiclamshell (5.9%). Masaoka-Koga stages were as follows: Stage I (11.8%), Stage II (60.8%), Stage III (21.6%), Stage IV (5.9%). The median follow-up duration was 24.5 months. During course of follow up, three patients had recurrence (5.9%). Univariate analysis and log-rank tests revealed male gender, thymic carcinoma (WHO Type C), Masaoka-Koga stage, TNM stage, adjacent organ involvement (phrenic nerve and great vessels), CD5 immunohistochemistry positivity and incompletion of adjuvant therapy were factors associated with shorter time to recurrence ($p$ value<0.05).

Conclusions: In our patient population, greater attention needs to be given to the identified risk factors for recurrence of thymoma following surgical resection.

SA17. Racial Disparities and Outcomes after Left Ventricular Assist Device Implantation as Bridge to Transplantation or Destination Therapy

Alexis K. Okoh1, Molly Schultheis1, Setri Fugar2, Biruk K. Almaz1, Olivia Chan1, Nikhil K. Shah1, Nicolette Stelter1, Ravindra K. Karanam1, Mark Russo1, Margarita T. Camacho1
RWJ Barnabas Health, Newark, NJ, USA1, Rush University Medical Center, Chicago, IL, USA2

Objective: We sought to investigate outcomes after left ventricular assist device (LVAD) implantation in advanced heart failure patients stratified by race.

Methods: Patients who had LVADs inserted at a single center as a bridge to transplant (BTT) or destination therapy (DT) were divided into 3 groups based on race. Caucasian, African American (AA), Hispanic. Post-operative outcomes including complications, discharge disposition and survival at defined time points were compared. Cox proportional hazards were used to identify factors associated with 1-year all-cause survival.

Results: A total of 158 patients who had LVADs as BTT (n=63) and DT (n=95) were studied. Of these, 56% (n=89) were Caucasians, 35% (n=55) were AA and 9% (n=14) were Hispanics. AA patients had higher BMI, lower socioeconomic status and educational level and were more likely to be single or divorced. Operative outcomes were similar among all 3 groups. Unadjusted 30-day, 6-month, 1-year and 2 year survival rates for Caucasians vs. AA vs Hispanics were, 30-day (82% vs. 89% vs. 93%, $p=0.339$), 6-month (74% vs. 80% vs. 71%, $p=0.596$), 1-year (67% vs. 76% vs. 71%, $p=0.511$), 2-years (56% vs. 62% vs. 68%, $p=0.797$). On multivariate analysis, device related infection was the only factor associated with 1-year survival.

Conclusions: AA patients who undergo LVAD implantation as BTT or DT have lower socioeconomic status and educational level compared to their Caucasian or Hispanic counterparts. These differences however do not translate into post-implant survival outcomes.
SA18. Improving Lung Cancer Diagnosis and Treatment in a Community Hospital Setting

Joseph D. Whitlark, Tyler Singer, Ava M. Whitlark, Ben Steward
Mount Nittany Medical Center, State College, PA, USA

Objective: Lung cancer is the leading cause of cancer-related death in the United States. The earlier lung cancer is detected, the higher the average 5-year survival rate. This difference in survival is the impetus behind lung cancer screening programs. In a community hospital setting, several changes were implemented to address this problem. A lung cancer screening program was instituted and newer interventional diagnostic capabilities were introduced with surgical oversight. In particular, dedicated thoracic surgical participation in multidisciplinary cancer conferences and the work up of potential surgical patients allowed earlier surgical involvement with these patients.

Methods: We compared the 18-month period before the implementation of these changes to the 30-month period after these changes were instituted.

Results: The incidence of stage I disease increased from 23% to 37% of all lung cancer patients seen, stage II patients increased from 6% to 9%, stage III patients decreased from 22% to 12%, and stage IV patients decreased from 44% to 28%. The percentage of lung cancer patients undergoing surgery increased from 23% to 44%. The overall number of lung cancer patients also increased.

Conclusions: Improving lung cancer diagnoses and treatment at earlier stages can be effected by implementing changes such as we have noted. Instituting a lung cancer screening program, up-to-date interventional diagnostic capabilities, and especially thoracic surgical involvement in the work-up and management of these patients may lead to earlier diagnoses and treatment with improved survival.
MOVIE – M01

M01. Robotic-Assisted Approach to Redo Fundoplication and Epiphrenic Diverticulectomy

Elliot L. Servais
Lahey Hospital & Medical Center, Burlington, MA, USA

Objective: Redo esophageal hiatal surgery is technically challenging and often approached via open thoracotomy and/or laparotomy. Herein we present a case of an enlarging epiphrenic diverticulum with dysphagia occurring 10 years after open transabdominal Nissen fundoplication. The repair was performed using a robotic-assisted minimally-invasive transabdominal approach.

Methods: Redo fundoplication and stapled epiphrenic diverticulectomy was performed using a transabdominal, 4-arm, robotic approach

Results: Robotic assistance allowed for successful minimally-invasive diverticulectomy and revision fundoplication with hiatal repair. The patient was discharged on post-operative day 4 and remained free from dysphagia and reflux at the 6 month follow-up visit.

Conclusions: Redo esophageal hiatal surgery can be successfully performed using a minimally-invasive robotic approach. Robotic assistance may minimize the morbidity of open surgery for this difficult surgical disease. Further study is warranted to evaluate long-term patient outcomes following robotic-assisted esophageal hiatal surgery.

MOVIE – M02

M02. Simplified Double-Layer Left Atrial Appendage Closure Technique

Ahmed Alnajar, Corinne Aberle, Joseph Lamelas
Baylor College of Medicine, Houston, TX, USA

Objective: The left atrial appendage (LAA) is the anatomical site of thrombus formation. Excision or exclusion of the LAA is important to prevent strokes in patients with atrial fibrillation. We describe and provide a video demonstration of our simple and effective approach for LAA ligation during a concomitant mitral valve operation.

Methods: The LAA is first identified, inverted, and inspected for clots. It is then oversewn from within the left atrium with a double-layer running 4-0 Prolene suture. Thereafter, the LAA can be identified through the transverse sinus. A left atriotomy is subsequently performed in Waterson’s groove and is extended toward the oblique sinus for wide exposure. Finally, an Endoloop ligature is placed around the LAA and tightened at its base.

Results: The double-layer technique described provides both external and internal ligation.

Conclusions: We believe this technique is safe and ensures complete closure of the LAA. Further studies with long-term follow-up will be required to ultimately determine the durability of this closure technique.
**MOBILE – M03**

**M03. Robotic Assisted Right Superior Sulcus Tumor & Chest Wall Resection**

Michael Hanna, Lana Y. Schumacher  
Allegheny General Hospital, Pittsburgh, PA, USA

**Objective:** A case presentation of a 69 year old male with a superior sulcus squamous cell carcinoma of the right upper lobe with chest wall involvement.

**Methods:** Patient underwent robotic assisted resection of the right upper lobe with chest wall following neoadjuvant chemo and radiotherapy.

**Results:** Successful resection without reconstruction. Patient had a 5 day hospital stay and was able to return to normal activities.

**Conclusions:** Robotic surgery is a feasible option for complex and advanced thoracic surgery including chest wall resections.

**MOBILE – M04**

**M04. Simultaneous Type II Thoracoabdominal Aortic Aneurysm Repair & Coronary Artery Bypass Grafting**

Oleg I. Orlov, Vishal N. Shah, Cinthia P. Orlov, Manabu Takebe, Matthew Thomas, Constantine Baltzis, Konstadinos A. Plestis  
Lankenau Medical Center, Wynnewood, PA, USA

**Objective:** We present a patient with severe coronary artery disease (CAD) and a prior aortobifemoral bypass who successfully underwent simultaneous Type II Thoracoabdominal Aortic Aneurysm (TAA) repair and coronary artery bypass grafting.

**Methods:** A 72-year-old male presented with chest and back pain. Computed tomography angiography demonstrated aneurysmal dilatation of the descending and abdominal aorta secondary to a chronic Type B dissection and contained rupture of the descending thoracic aorta. Catheterization showed severe right CAD.

**Results:** A left thoracoabdominal incision was performed. The infradiaphragmatic aorta was exposed through a retroperitoneal approach. The left common femoral artery and vein were cannulated for cardiopulmonary bypass. The diaphragm was divided. The posterior descending artery was bypassed using a vein graft. Under DHCA, the distal aspect of the arch was transected and the proximal anastomosis was completed with a 28 mm graft. Next, antegrade cerebral perfusion was established and distal perfusion was achieved by clamping the previous graft. Cold blood perfusion was delivered to the celiac, superior mesenteric (SMA) and right renal arteries. The limbs of a trifurcation graft (TG) were then serially anastomosed to the celiac, SMA and right renal arteries. The distal aortic graft was anastomosed to the aortobifemoral graft. The proximal end of the TG was sewn to the abdominal portion in an end-to-side fashion. The patient had an uncomplicated hospital course.

**Conclusions:** A complex Type II TAA repair can be successfully performed using a TG, DHCA and selective visceral perfusion.
M05. Robotic Repair of Chest Wall Hernia – A Case Series

John Trangucci, Kurtis Childers, Nathaniel Melton, Troy Moritz
UPMC Pinnacle, Harrisburg, PA, USA

Objective: Chest wall herniation is a rare condition that has been described after a thoracotomy, trauma, or severe coughing. Very few studies exist describing this entity, let alone repair by robotic technology. This article describes the pathophysiology of lung herniation, as well as describing how to successfully repair using solely robotic technology in two separate patients.

Methods: Retrospective analysis of patients in a community hospital setting. Two patients were identified to have chest wall hernias repaired robotically.

Results: Both patients had developed chest wall hernias following cardiac surgery, one after a mini-left thoracotomy off-pump coronary artery bypass graft (CABG) and the other after a mini-right thoracotomy Aortic valve replacement. Repair of both hernias were performed by the Da Vinci XI robot with biologic mesh implantation. There were no intraoperative complications as the patients tolerated the procedure. There post-operative courses were uneventful with follow-up demonstrating no recurrence at six months.

Conclusions: Chest wall hernia presents itself as an unusual post-operative complication after thoracic surgery. The use of robotic surgery continues to gain wide spread acceptance with ability to perform operations while minimizing surgical morbidities associated with open surgery. This article demonstrates the versatile use of robot technology in treating a rare condition.

M06. Management of Complicated Arch-Endograft Pseudoaneurysm and Subsequent Arch Graft-Engograft Pseudoane

Michael Hanna, Stephanie Cerrone, Robert J. Moraca
Allegheny General Hospital, Pittsburgh, PA, USA

Objective: Case presentation of a 67 year old female presenting a descending thoracic aneurysm who underwent endovascular repair and returns with an ascending aortic aneurysm with subsequent pseudoaneurysm of the aortic arch.

Methods: Patient undergoes endovascular and open surgical treatment modalities to repair pseudoaneurysms of the aortic arch.

Results: Successful exclusion of complicated arch-endograft & subsequent arch graft-engograft pseudoaneurysms however with associated complications.

Conclusions: Multi-modality treatment of complicated ascending, descending and arch aneurysms and pseudoaneurysms is feasible however being aware of pitfalls and potential complications is essential.
Objective: Cardiac angiosarcomas often present as multi-centric right atrial masses that sometimes manifest as atrial rupture. We present a modified Cabrol patch repair in a patient with right atrial rupture on imaging who was diagnosed intraoperatively with permeating angiosarcoma.

Methods: A previously healthy 60-year-old man presented with dyspnea and was found to have subsegmental pulmonary emboli and a pericardial effusion with negative cytology. Three months later, his symptoms recurred and cardiac MRI demonstrated right atrial destruction and thrombus compressing the right ventricle. Given the lack of diagnosis and potential progression to tamponade, he was taken to the operating room for right atrial repair. Prior to opening the pericardium, femoral cardiopulmonary bypass was initiated. The right atrium, atrioventricular groove, and anterior right ventricular wall were occupied by bleeding, friable tissue (Figure 1a). Frozen section revealed a spindle-cell neoplasm. Given the impossibility of performing an oncologic resection, the right atrium was contained with a modified Cabrol patch, mimicking the function previously provided by the pericardium. Additional patches covered the surface of the actively bleeding tumor (Figure 1b).

Results: The patient recovered well and was discharged home one week later. Final pathology diagnosed angiosarcoma. He is seven months post-discharge and completed fourteen rounds of paclitaxel-based chemotherapy with moderate radiological improvement.

Conclusions: As oncologic resection was impossible, a modified Cabrol patch repair to mimic the function previously provided by pericardium and to control tumor-associated bleeding was the best decision. While this patient may not have received hemodynamic benefit, we provided a definitive diagnosis allowing for targeted chemotherapy treatment.
CC02. **Successful Management of Atrial-Esophageal Fistula after Ablation**

Lily K. Fatula, James E. Stephenson, William D. Bolton, Sharon Ben-Or  
*Greenville Health System, Greenville, SC, USA*

**Objective:** Signs and symptoms of atrial-esophageal fistula. Diagnosis an atrial esophageal fistula. Treatment of atrial esophageal fistula.

**Methods:** This case describes a 46-year-old female with past medical history of atrial fibrillation status post ablation who presented with hematemesis on post-procedure day 14.

**Results:** An emergent esophagogastroduodenoscopy (EGD) was performed showing an esophageal perforation. She underwent a right thoracotomy, revealing a left atrial esophageal fistula, requiring a right lower lobe lobectomy, patch repair of the atrial perforation, and intercostal muscle/pleural flap of the esophagus. Post-operative course was complicated by cerebral infarcts, tracheostomy, and esophageal leak. She underwent an additional right thoracotomy, with cervical esophagostomy, esophagectomy, gastrostomy and jejunostomy placement. While advancing tube feeds, high chest tube output was observed with high triglyceride level, concerning for a chyle leak. Nuclear studies on POD 17, localized the chyle leak to the thoracic duct. Coiling of the thoracic duct by Interventional radiology was unsuccessful. On POD 25, chest tube output had decreased, tube feeds were restarted. She was transferred to a rehab facility on POD 30 after tube removal. Approximately, 6 months later she underwent esophageal reconstruction with a gastric conduit. Her post-operative course was uncomplicated and was discharged on POD 7. Unfortunately she re-presented 11 days after her reconstruction with symptoms concerning for an anastomotic leak which was confirmed on esophagram. She was taken for EGD and neck abscess incision and drainage. She was placed in IV antibiotics and twice daily wet to dry dressings.

**Conclusions:** The patient was discharged home on POD 6. This case discusses the complex care of a patient with an atrial-esophageal fistula.
P01. A Community-Based Pulmonary Nodule Clinic: Improving Lung Cancer Stage at Diagnosis  
Nathaniel Melton², John Lazar¹, Troy Moritz². MedStar Washington Hospital Center, Washington, DC, USA¹, University of Pittsburgh Medical Center Pinnacle, Pittsburgh, PA, USA²

P02. AngioVac for Extraction of Venous Thromboses and Endocardial Vegetations: A Meta-Analysis  
Irbaiz Hameed, Christopher Lau, Faiza M. Khan, Matthew E. Wingo, Mohamed Rahouma, Jeremy R. Leonard, Antonino Di Franco, Berhane Worku, Arash Salemi, Leonard N. Girardi, Mario Gaudino, Weill Cornell Medicine/New York-Presbyterian Hospital, New York, NY, USA

P03. Aortic Valve Replacement and Right Coronary Artery Bypass using an Upper Ministernotomy  
Oleg I. Orlov, Cinthia P. Orlov, Vishal N. Shah, Serge Sicouri, Catherine Nguyen, Konstadinos A. Plestis, Lankenau Medical Center, Wynnewood, PA, USA

P04. A Simplified Solution: Reoperative Aortic Valve Replacement Following Previous Composite Valve Graft Surgery – Operative Results and Short-Term Follow-Up  
Jeremy R. Leonard, Alice Chung, Paolo de Angelis, Christopher Lau, Mario Gaudino, Leonard N. Girardi, Weill Cornell Medicine/New York-Presbyterian Hospital, New York, NY, USA

P05. Bilateral Lung Transplantation for Pulmonary Fibrosis in a Patient with Hermansky-Pudlak Syndrome and a History of Severe Bleeding  
Neel Ranganath, Alison Ward, Katherine G. Phillips, Jad Malas, Kazuhiro Hisamoto, Deane E. Smith, Zachary N. Kon, New York University Langone Health, New York, NY, USA

P06. Cleaning the Endo-Mess after Failed Endovascular Treatment of Residual Type B Dissection  
Daniel Kaufman, Benjamin A. Youdelman, Robert Y. Rhee, Maimonides Medical Center, Brooklyn, NY, USA

P07. Comparison of Robotic and Video-Assisted Thoracoscopic Resection of Anterior Mediastinal Masses  
Kathleen E. Doyle¹, Ray Chiara², Allan Pickens¹, Emory University School of Medicine, Atlanta, GA, USA¹, Houston Methodist Hospital, Houston, TX, USA²

P08. Concomitant Transapical Transcatheter Aortic Valve and Mitral Valve Replacements: A Reasonable Alternative in High-risk Patients  
Candice Y. Lee, Michael Hanna, Stephen H. Bailey, Robert J. Moraca, Allegheny General Hospital, Pittsburgh, PA, USA

P09. Delayed Gastric Emptying Post Esophagectomy: A Single Institution Experience  
Allison B. Frederick¹, William R. Lorenz¹, Stella Self², Christine Schamme³, William D. Bolton³, James E. Stephenson³, Sharon Ben-Or⁴, University School of Medicine-Greenville, Greenville, SC, USA¹, Clemson University, Clemson, SC, USA², Greenville Health System, Greenville, SC, USA³

P10. Esophagotomy for Removal of Dental Bridge  
Carlos O. Encarnacion, Eric Krause, Joseph Friedberg, University of Maryland, College Park, MD, USA

P11. Expectant Management of Type A Aortic Dissection Following Coronary Artery Bypass Grafting  
Nathaniel Melton, Joseph Cahill, Nikhil Jaik, Mubashir Mumtaz, David Loran, University of Pittsburgh Medical Center Pinnacle, Pittsburgh, PA, USA

P12. Gastric Emptying after Esophagectomy: Comparing Dual Therapy Method vs Single Therapy for Pyloric Drainage  
Christopher Decker, Thomas Fabian, Albany Medical Center, Albany, NY, USA
P13. Heparineless Off Pump Coronary Artery Bypass In A Patient With Gunshot Wound To Chest and Heart
Nicolas A. Brozzi, Isabela Saba, Renzo O. Cifuentes, Edward Lineen, Tomas A. Salerno, University of Miami Miller School of Medicine and Jackson Memorial Hospital, Miami, FL, USA

P14. Hyperammonemia Following Lung Transplantation: A Diagnostic and Therapeutic Challenge
Akshay Kumar, Pablo Sanchez, Harano Takashi, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

P15. Impact of Adjuvant Radiation Therapy on Outcomes of Thymectomy for Thymic Carcinoma and Thymic Neuroendocrine Tumors
Aitua Salami1, Charles Bakhos2, Roman Petrov2, Larry R. Kaiser2, Abbas Abbas2, Albert Einstein Medical Center, Philadelphia, PA, USA1, Temple University Hospital, Philadelphia, PA, USA2

P16. Intraoperative Abdominal Compartment Syndrome During Reoperative Sternotomy with Mitral Valve Repair Following Partial Dehiscence of a Bioprosthetic Valve
Davida Robinson, Fabio Sagebin, Carl Johnson, Jr., Julie A. Wyrobek, Janine Shapiro, Peter Knight University of Rochester, Rochester, NY, USA

P17. Lactate Trends in Veno-Arterial Extracorporeal Membrane Oxygenation Patients Presenting with Sepsis
Kennedy Gallagher, Michael Healy, Niharika Bionpally, James Wu, Lehigh Valley Health Network, Allentown, PA, USA

P18. Left Pulmonary Artery Patch Augmentation for Lung Transplantation in Situs Inversus
Ahmed Alnajar, Peter C. Chen, Bryan Burt, Gabriel Loor, Baylor College of Medicine, Houston, TX, USA

P19. Management of Incomplete Thoracic Endograft Deployment During A Stage II Hybrid Arch Reconstruction
Andrew G. Marthy, R. Clement Darling, Jeffrey Hnath, Sanjay Samy, Albany Medical Center, Albany, NY, USA

P20. Mitral Valve Leaflet Escape Requiring Mechanical Circulatory Support as a Bridge-to-Surgery
Oleg I. Orlov, Vishal N. Shah, Cinthia P. Orlov, Serge Sicouri, Manabu Takebe, Catherin Nguyen, Konstadinos A. Plestis, Lankenau Medical Center, Wynnewood, PA, USA

Eric Krause1, Carlos Encarnacion2, Bradley Taylor2, Shamus Carr2, University of Maryland, College Park, MD, USA1, University of Maryland Medical Center, Baltimore, MD, USA2

P22. Percutaneous Device Closure of Pseudoaneurysm Following Reconstruction of Infected Prosthetic Aorta Using Cryopreserved Cadaveric Allograft
Davida Robinson, Clauden Louis, Katherine L. Wood, Carl Johnson, Jr., Frederick S. Ling, Peter Knight University of Rochester, Rochester, NY, USA

P23. Perforated Duodenal Ulcer Following Coronary Artery Bypass Grafting: Unintended Consequences of Postoperative Antacid Avoidance
Kathleen C. Clement, Jie Dong, Alejandro Suarez-Pierre, Glenn J. Whitman, Jennifer S. Lawton Johns Hopkins University School of Medicine, Baltimore, MD, USA

P24. Perioperative Transfusion in Acute Type A Dissection: Is There A Difference For Those Patients Treated After-Hours?
Stevan S. Pupovac, Jonathan Hemi1, Jacob Scheinerman1, Alan Hartman2, Derek Brinster1 Lenox Hill Hospital, New York, NY, USA1, North Shore University Hospital, Manhasset, NY, USA2
P25. Persistent Left Superior Vena Cava with Absent Right Superior Vena Cava in a Patient with a Secundum Atrial Septal Defect
Renzo O. Cifuentes1, Clauden Louis2, Boris Barreno3, David Maldonado3, Mark Gelatt4, Marcelo Cardarelli5, The William Novick Global Cardiac Alliance, Memphis, TN, USA1, University of Rochester Medical Center, Rochester, NY, USA2, Hospital de Niño Dr. Francisco Icaza Bustamante, Guayaquil, Ecuador3, Children’s Mercy Hospital, Kansas City, MO, USA4, Inova Fairfax Hospital, Annandale, VA, USA5

P26. Placement of a Sutureless Aortic Valve in a Patient with Severely Calcified Aortic Root Homograft
Lindsay Volk, Justin Elkhechen, Anna Olds, Leonard Y. Lee, Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ, USA

P27. Rare Case of Congenital Pulmonary Airway Malformation (CPAM) in an Adult Female with Mediastinal Shift
Lindsay Volk, Siavash Saadat, John Langenfeld, Leonard Y. Lee, Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ, USA

Clauden Louis, Christopher Allphin, Wendy Bernstein, Sunil Prasad, University of Rochester, Rochester, NY, USA

Danielle J. Kinsey, Christopher Zambrano, Alejandro Suarez-Pierre, Aruna Kumar, Jennifer S. Lawton, Michael P. Siegenthaler, Johns Hopkins University, Baltimore, MD, USA

P30. Repair of Ruptured Sinus of Valsalva Aneurysm via a Right Anterior Mini-thoracotomy
Davida Robinson, Amber Melvin, Brandon F. Lebow, Carl A. Johnson, Jr., Peter Knight, University of Rochester, Rochester, NY, USA

P31. Robotic-Assisted Left Pneumonectomy with Intercostal Muscle Flap Harvest
Candice Y. Lee, Michael Hanna, Lana Y. Schumacher, Allegheny General Hospital, Pittsburgh, PA, USA

P32. Robotic Excision of Intralobar Pulmonary Sequestration
William R. Lorenz1, Allison B. Frederick1, Christine Schammel2, William D. Bolton2, James E. Stephenson3, Sharon Ben-Or4, University School of Medicine-Greenville, Greenville, SC, USA1, Greenville Health System, Greenville, SC, USA2

P33. Robotic Lung Carcinoid Tumor Resection with Bronchoplay
Joseph S. Tingen, Greenville Health System, Greenville, SC, USA

P34. Robotic Resection of a Distal Esophageal Leiomyoma
Summer N. Rochester, Greenville Health System, Greenville, SC, USA

P35. Stenting of Thoracic Aorta False Lumen to Provide High-Pressure Retrograde Flow to Left Brachiocephalic Artery-Venous Fistula: Novel Utilization of Chimney Technique
Emily Grimsley, Mehrdad Ghoreishi, Aakash Shah, Shahab Toursavadkohi, Bradley Taylor University of Maryland School of Medicine, Baltimore, MD, USA

P36. Successful Treatment of 6 Giant Pulmonary Artery Aneurysms
Matthew E. Wingo, Paolo de Angelis, Faiza M. Khan, Irbaz Hameed, Katherine Krieger, Christopher Lau, Mario Gaudino, Leonard N. Girardi, Weill Cornell Medicine/New York-Presbyterian Hospital, New York, NY, USA
P37. Superior Vena Cava Bypass Using a Synthetic CardioCel Tube Via a Minimally Invasive Thoracotomy Approach
Lauren Gray, Ahmed Alnajar, Joseph Lamelas, Baylor College of Medicine, Houston, TX, USA

P38. Surgical Management of Pulmonary Artery Aneurysms
Raina Sinha, University of Minnesota, Minneapolis, MN, USA

P39. Surgical Therapy of Stage IVA Thymoma
Carlos O. Encarnacion¹, Eric Krause¹, Warren Naselsky², Joseph Friedberg², University of Maryland, Baltimore, MD, USA¹, University of Maryland Medical Center, Baltimore, MD, USA²

P40. The ‘One-Stop Aortic Shop:‘ Single-Stage Repair of Coarctation of the Aorta with Concomitant Root Aneurysm and Bicuspid Aortic Valve
Jonathan Hemli, Paley G. Arnone, Kush R. Dholakia, Jui-Chuan Tseng, S. Jacob Scheinerman, Derek Brinster, Lenox Hill Hospital, New York, NY, USA

P41. Transabdominal Robotic Repair of Diaphragmatic Hernias
Joseph D. Whitlark, Tyler Singer, Ava M. Whitlark, Mount Nittany Medical Center, State College, PA, USA

P42. Transcatheter Aortic Valve Replacement for Alkaptonuria-Associated Aortic Stenosis Following Surgical Attempt
Jacqueline Olive, Ahmed Alnajar, Swaminadhan Gnanashanmugam, Joseph Lamelas, Baylor College of Medicine, Houston, TX, USA

P43. Ventricular Aneurysm Surgical Repair Approach for Anterior and Inferior Aneurysms
Ahmed Alnajar, Gabriel Loor, George V. Letsou, Baylor College of Medicine, Houston, TX, USA
FIRST, The Eastern Cardiothoracic Surgical Society, founded and also known as The Pennsylvania Association for Thoracic Surgery (Association) is organized exclusively for charitable, educational, and scientific purposes, including for such purposes, the making of distributions to organizations under Section 501(c)(3) of the Internal Revenue Code (or the corresponding section of any future Federal tax code).

SECOND, no part of the net earnings of the Association shall insure the benefit of or be distributed to its members, trustees, directors, officers, or other private persons, except that the Association shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of Section 501(c)(3) purposes. No substantial part of the activities of the Association shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the Association shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of, or in opposition to, any candidate for public office.

Notwithstanding any other provision of these articles, the Association shall not carry on any other activities not permitted to be carried on (a) by an organization exempt from Federal income tax under Section 501(c)(3) of the Internal Revenue Code (or corresponding section of any future Federal tax code) or (b) by an organization, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code (or corresponding section of any future Federal tax code).

THIRD, upon the dissolution of this Association assets shall be distributed for one or more exempt purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code (or corresponding section of any future Federal tax code), or shall be distributed to the Federal government, or to a state or local government, for a public purpose.

ARTICLE I. NAME
SECTION 1.

This Association shall be known as The Eastern Cardiothoracic Surgical Society, founded and also known as the Pennsylvania Association for Thoracic Surgery.

ARTICLE II. OBJECT
SECTION 1.

The object of the Association shall be to encourage and stimulate investigation and study that will increase the knowledge of intrathoracic physiology, pathology, and therapy, to correlate such knowledge and disseminate it, and to act as a common bond for physicians practicing this specialty and represent them in problems related thereto.

SECTION 2.

To attain this object, the Association shall hold at least one scientific meeting each year and shall undertake such other activities as the Council or Association as a whole may decide.
ARTICLE III. MEMBERSHIP

SECTION 1.

There shall be four classes of membership: Active, Senior, Candidate and Honorary. Senior membership requires no annual dues to be paid, but full payment for the annual meeting will be expected. Members can apply for Senior membership status once he or she has retired from clinical practice. Candidate members are defined as those physicians on a pathway towards a career in cardiothoracic surgery. Honorary membership will be given at the discretion of the membership committee. Admission to membership in the Association shall be by election. The qualifications for membership shall be determined by the Bylaws. Only Active and Senior members have the privilege of voting. Only Active and Senior members may hold elective office.

SECTION 2.

Election of Active, Senior and Honorary members shall be for life, subject to the provisions of Section 3, following.

SECTION 3.

Members in good standing may voluntarily terminate Membership at any time. The Council, acting as a Board of Censors, may recommend the expulsion of a member on the grounds of moral or professional delinquency, and submit his name, together with the grounds of complaint, to the Association as a whole at any of the regularly convened meetings, after giving the member so accused ample opportunity to appear in his own behalf. Expulsion shall be by a 2/3 vote of members present and voting at the regularly scheduled annual meeting.

ARTICLE IV. OFFICERS AND GOVERNMENT

SECTION 1.

The officers of the Association, also known as the Executive Committee, shall be the President, a Vice President, a Secretary, a Treasurer, a Program committee chair, two Program committee members, a Membership committee chair, two Membership committee members, Immediate Past-President to serve as a Councilor, and four Councilors at large. These fifteen officers and councilors shall be the governing body of the Association, and shall have full power to act on all matters, except as follows:

1) They may not alter annual dues, nor levy and general assessments against the membership, except that they may, in individual cases, remit annual dues or assessments.

2) They may in no ways change the Constitution or the Bylaws.

3) They may neither elect new members nor alter the status or existing members, other than to apply the provisions of Article III, Section 3.

SECTION 2.

Officers and Councilors shall be elected at the annual meeting of the Association a year or two in advance, and shall take office upon the conclusion of the meeting the following year. The President and Vice President shall be elected for a one-year term of office and neither may be re-elected to succeed himself in the same office. The Treasurer shall be elected for a one-year term of office and may be re-elected. The Secretary shall be elected for a one-year term of office and may be re-elected.

The outgoing President shall automatically become a Councilor for a one-year term of office.

The four Councilors-at-Large shall be selected by the nominating committee each year, for a two-year term of office. Councilors may be re-elected.
SECTION 3.

Vacancies occurring among the officers and committees during the year shall be filled by nomination of the President (or VP if the Presidency is vacated) with approval from the Executive Committee. This person shall finish out the term of the vacated position but WILL be eligible for re-election with the exception of the office of the Vice President or President (in keeping with Article IV, Section 2.)

ARTICLE V. COMMITTEES

SECTION 1.

At the conclusion of the business meeting at the annual meeting, the incoming President shall appoint a Nominating Committee.

This Nominating Committee shall select a slate of officers to be voted on in the Business Meeting of the Membership at the regularly scheduled annual meeting.

SECTION 2.

The Council is empowered to appoint a Membership Committee, a Finance Committee, and a Program Committee. All committees shall render their report at the executive session of the Association.

SECTION 3.

An Ad-Hoc Committee may be assembled by the President to address an issue that benefits the organization.

ARTICLE VI. FINANCES

SECTION 1.

The fiscal year of the Association shall run from the end of one annual meeting to the end of the next annual meeting. The books of the Association shall be kept and audited on this basis.

SECTION 2.

The membership shall contribute to the financial maintenance of the Association through the medium of annual dues and special assessments. The amount of annual dues shall be determined by the Bylaws.

SECTION 3.

To meet the current expenses of the Association, there shall be available all revenue derived from annual dues, special assessments, and any other income to the Association.

SECTION 4.

The Finance Committee will be composed of the President, Vice President, Program Chairman, Treasurer, and an Ex-Officio member appointed by the Executive Committee. The Treasurer will Chair this committee of five members. The Finance Committee shall be responsible for setting a budget for the coming year and will specifically outline a budget for the annual meeting within the annual budget. All expenditures over $1,000 that are outside of the accepted budget set forth by the Finance Committee need to be approved by a majority of the members of the Finance Committee.

SECTION 5.

The Eastern Cardiothoracic Surgical Society, founded and also known as The Pennsylvania Association for Thoracic Surgery is organized exclusively for charitable, educational, and scientific purposes, including for such purposes, the making of distributions to organizations under Section 501(c)(3) of the Internal Revenue Code (or the corresponding section of any future Federal tax code).
SECTION 6.

No part of the net earnings of the Association shall insure the benefit of or be distributed to its members, trustees, directors, officers, or other private persons, except that the Association shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of Section 501(c)(3) purposes. No substantial part of the activities of the Association shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the Association shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of, or in opposition to, any candidate for public office.

SECTION 7.

Notwithstanding any other provision of these articles, the Association shall not carry on any other activities not permitted to be carried on (a) by an organization exempt from Federal income tax under Section 501(c)(3) of the Internal Revenue Code (or corresponding section of any future Federal tax code) or (b) by an organization, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code (or corresponding section of any future Federal tax code).

SECTION 8.

Upon the dissolution of this Association assets shall be distributed for one or more exempt purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code (or corresponding section of any future Federal tax code), or shall be distributed to the Federal government, or to a state or local government, for a public purpose.

ARTICLE VII. MEETINGS

SECTION 1.

The Council and the provisions of the Bylaws shall determine the time, place, duration, and procedure of the annual meeting of the Association two to three years in advance.

SECTION 2.

A special meeting of the Association may be called on three months’ notice to the entire membership with a clearly stated purpose to allow members time to prepare for the meeting. The specific purposes of the meeting must be stated in the request and in the official call for the meeting.

ARTICLE VIII. AMENDMENTS

SECTION 1.

This Constitution shall in no ways be changed except by a three-fourths vote of the members present at an annual meeting, and further provided that the proposed alteration or amendment shall have been moved and seconded at a previous annual or special meeting of the association (in keeping with Article VII, Section 2.), and that a reasonable effort has been made to circulate copies of the suggested alterations or amendments to the entire membership. The members shall have been specifically advised that such alteration or amendment will be voted upon during the business meeting of the membership at the annual meeting of the Association.
BY-LAWS OF

THE EASTERN CARDIOTHORACIC SURGICAL SOCIETY

(Founded and also known as The Pennsylvania Association for Thoracic Surgery)

ARTICLE I.

SECTION 1.

These Bylaws shall merely interpret the Constitution and specifically apply its principles. They shall set forth no principles not included in the Constitution.

ARTICLE II.

SECTION 1.

The Council may set the length of time for the presentation and discussion of scientific papers.

SECTION 2.

Members are urged to cooperate with all committees of the Association.

SECTION 3.

Attendance at annual meetings is expected.

SECTION 4.

While the scientific session of the annual meeting is held primarily for the benefit of the members of the Association, it may be thrown open to non-members who are able to submit satisfactory credentials, who register in a specific manner, and who pay such registration fee as may be determined by the Council from year to year.

ARTICLE III.

SECTION 1.

Applicants for membership in this Association must have completed a formal thoracic surgical training program recognized by The American Board of Thoracic Surgery or equivalent training if the applicant is from another country. Applicants must be formally nominated and seconded, in an approved manner, by at least two Active or Senior Members. The Membership Committee must approve the application for membership and final action can take place two times a year. The names can be presented to the Membership at the end of the six months following the annual meeting for final action, or presented to those present at a regularly convened annual meeting for final action.

SECTION 2.

There is no limit to the number of Active Members.

SECTION 3.

Active Members may become Senior Members upon specific request after retiring from clinical practice, or incapacitated by illness. Senior membership requires no annual dues to be paid, but full payment for the annual meeting will be expected.
SECTION 4.

Candidate members are defined as those physicians on a pathway towards a career in cardiothoracic surgery. They are encouraged to attend and participate in the Annual meetings. They are exempt from annual dues and voting. Candidate members will progress to Active Membership status upon completion of their training.

SECTION 5.

Honorary Membership shall be reserved for such distinguished persons as may be deemed worthy of this honor by the Council with concurrence of the Association.

SECTION 6.

The report of the Membership Committee shall be rendered at the annual executive session of the Association.

ARTICLE IV.

SECTION 1.

The President of the Association shall perform all duties customarily pertaining to the office of the President. He shall preside at meetings of the Association and Council. The President shall be elected from the Active Members of the Association.

SECTION 2.

The Vice President of the Association shall perform all duties customarily pertaining to the office of Vice President. The Vice President shall be elected from the Active Members of the Association.

SECTION 3.

The Secretary of the Association shall perform all duties customarily pertaining to the office of Secretary. The Secretary shall be elected from the Active Members of the Association.

SECTION 4.

The Treasurer of the Association shall perform all duties customarily pertaining to the office of Treasurer. The Treasurer shall be elected from the Active Members of the Association.

SECTION 5.

There will be five Councilors of the Association who shall hold office as specified in the Constitution. One will be the Immediate Past-President who will serve for one year. The four Councilors-at-Large shall be selected by the nominating committee, for a two-year term of office. Councilors may be re-elected.

SECTION 6.

In the event of a vacancy occurring in the office of President, the Council shall advance the Vice President to the Presidency and appoint a new Vice President under the provisions of Article IV, Section 3 of the Constitution.

ARTICLE V.

SECTION 1.

The Membership Committee shall consist of three Active Members appointed in accordance with the provisions of Article V, Section 2, of the Constitution. One will serve as Chair. The duty of the Membership Committee is to investigate all candidates for membership in the Association and to report their findings to the Council.
SECTION 2.

The Program Committee shall consist of three members, chosen by the Nominating committee. One will serve as chair. This may be for a period of up to three years.

ARTICLE VI.

SECTION 1.

Honorary Members of the Association are exempt from all dues, but must pay to attend the annual meeting.

SECTION 2.

Annual dues for Active Members shall be set as recommended by the Council.

SECTION 3.

The Council shall recommend that any Active Members whose dues are in arrears for three years shall have his membership terminated, provided that prior notification has been forwarded to the member by the Secretary of the Association.

SECTION 4.

Senior Members are exempt from all dues, but must pay to attend the annual meeting.

SECTION 5.

Membership fees and Meeting registration will be free to all active military personnel.

ARTICLE VII.

SECTION 1.

When the Association convenes for its annual meeting, the Executive Session must be attended by all officers present at the meeting. The business meeting of all members present at the annual meeting will be scheduled thereafter or on a subsequent day.

SECTION 2.

The business meeting of the entire membership will involve:
(1.) Report of the Treasurer for the last fiscal year
(2.) Action on amendments to the Constitution and Bylaws
(3.) Action on recommendations emanating from the Council
(4.) Unfinished business
(5.) New Business
(6.) Report of the Membership Committee
(7.) Election of new members
(8.) Report of the Nominating Committee
(9.) Election of officers

ARTICLE VIII

SECTION 1.

These Bylaws shall in no ways be changed, except by a two-thirds vote of the members present at the annual meeting of a properly convened meeting of the Association, and further provided that the proposed action or amendment shall have been moved and seconded by not less than seven of the members in a properly convened annual or special meeting of the Association (in keeping with Article VIII, Section 1 of the Constitution.)
1963 - Pocono Manor, Pocono, PA  
   Edward M. Kent, MD

1964 - Bedford Springs, Bedford, PA  
   John H. Gibbon, Jr., MD

1965 - Buckhill Falls Inn, Buckhill Falls, PA  
   Julian Johnson, MD

1966 - The Hotel Hershey, Hershey, PA  
   Henry T. Bahnson, MD

1967 - Bedford Springs Hotel, Bedford Springs, PA  
   Wilbur E. Burnett, MD

1968 - Shawnee-on-the-Delaware, PA  
   George Willauer, MD

1969 - The Hotel Hershey, Hershey, PA  
   John M. Snyder, MD

1970 - Seven Springs Resort, Champion, PA  
   Thomas C. Ryan, MD

1971 - Host Farm Motel, Lancaster, PA  
   Paul Nemir, Jr., MD

1972 - Fernwood, Bushkill, PA  
   George J. Magovern, Sr., MD

1973 - Buckhill Falls Inn, Buckhill, PA  
   William R. DeMuth, MD

1974 - The Hotel Hershey, Hershey, PA  
   George P. Rosemond, MD

1975 - Seven Springs Resort, Champion, PA  
   George J. Haupt, MD

1976 - Buckhill Falls Inn, Buckhill Falls, PA  
   William A. Atlee, MD

1977 - Bedford Springs Hotel, Bedford Springs, PA  
   R. Robert Tyson, MD

1978 - The Hotel Hershey, Hershey, PA  
   John A. Waldhausen, MD

1979 – Seven Springs Resort, Champion, PA  
   James L. Harrison, MD

1980 - Buckhill Falls Inn, Buckhill Falls, PA  
   John Y. Templeton, Ill, MD

1981 - Bellevue Stratford, Philadelphia, PA  
   W. Winster Kunkel, Jr., MD

1982 - The Hotel Hershey, Hershey, PA  
   Joseph C. Donnelly, Jr., MD

1983 - Inn at the Peak, Clymer, NY  
   George J. Deangelo, MD

1984 - Skytop Lodge, Skytop, PA  
   Horace Mac Vaugh, Ill, MD

1985 - Sheraton at Station Square, Pittsburgh, PA  
   Benjamin G. Musser, MD

1986 - The Hotel Hershey, Hershey, PA  
   Robert G. Trout, MD

1987 - Hamilton Princess Hotel, Bermuda  
   Vincent D. Cuddy, MD

1988 - Seven Springs Resort, Champion, PA  
   Vincent W. Lauby, MD

1989 - Toftrees Resort, State College, PA  
   William S. Pierce, MD

1990 - Split Rock Resort, Pocono, PA  
   Pascal Spagna, MD

1991 - Marco Island Resort, Marco Island, FL  
   George A. Liebler, MD

1992 - Nemacolin Woodlands Resort, Farmington, PA  
   John L. Pennock, MD

1993 - The Hotel Hershey, Hershey, PA  
   Sang B. Park, MD

1994 - The Resort at Longboat Key, Longboat Key, FL  
   Ronald V. Pellegrini, MD

1995 - The Four Seasons Hotel, Philadelphia, PA  
   David B. Campbell, MD

1996 - Nemacolin Woodlands Resort, Farmington, PA  
   Rohinton K. Balsara, MD

1997 - Le Chateau Frontenac, Quebec, Canada  
   Jacob Koff, MD

1998 - Penn State Conference Ctr., State College, PA  
   Thomas Maher, MD

1999 - Skytop Lodge, Skytop, PA  
   Manucher Fallahnejad, MD

2000 - Southampton Princess, Bermuda  
   James A. Magovern, MD

2001 - Sheraton Station Square, Pittsburgh, PA  
   Francis Sutter, DO

2002 - Loews Miami Beach Hotel, Miami, FL  
   Edward L. Woods, MD

2003 - Geisinger Medical Center & Pine Barn Inn, Danville, PA  
   Craig B. Wisman, MD

2004 - Lankenaun Hospital, Wynnewood, PA & Sheraton Hotel Society Hill, Philadelphia, PA  
   Scott M. Goldman, MD

2005 - Elbow Beach Resort, Bermuda  
   Joseph E. Bavaria, MD

2006 - Lehigh Valley Hospital & Glasbern Inn, Allentown, PA  
   Raymond L. Singer, MD

2007 - Marriott Sea View Resort & Spa, Galloway, NJ  
   Rohinton J. Morris, MD

2008 - Amelia Island Plantation, Amelia Island, FL  
   James B. McClurken, MD

2009 - Ritz-Carlton, Amelia Island, FL  
   Ron D. Nutting, MD

2010 - Disney’s Boardwalk Inn, Lake Buena Vista, FL  
   Sanjay Mehta, MD

2011 - Gaylord National, National Harbor, MD  
   Fred Weber, MD, JD

2012 - Ritz-Carlton, Naples, FL  
   Michael Szwerc, MD

2013 - Sandpearl Resort, Clearwater Beach, FL  
   Benjamin A. Youdelman, MD

2014 - Four Season’s Resort, Palm Beach, FL  
   Evelio Rodriguez, MD

2015 - Four Season’s Resort, Palm Beach, FL  
   Benny Weksler, MD

2016 – Loews Don CeSar Hotel, St. Pete Beach, FL  
   Robert J. Moraca, MD

2017 – Omni Amelia Island Plantation Resort, Amelia Island, FL  
   Michael J. Walker, MD
IN MEMORIAM

* Founding Member  ♥ Honorary Member

Alberto Adam, MD  Amas S. Kyllonen, MD
William Atlee, MD  Vincent W. Lauby, MD
Henry T. Bahnson, MD  William M. Lemmon, MD
Rohinton K. Balsara, MD  George Liebler, MD
Francis X. Bauer, MD  C. Walton Lillehei, MD♥
Donald E. Bowes, MD  John B. Lovette, MD
Stanley Brockman, MD  George Magovern, Sr., MD*
Richard S. Brown, MD  James A. Magovern, MD
James L. Buchanan, MD  Albert Marrangoni, MD*
Wilbur E. Burnett, MD*  John Joseph McKeown, Jr., MD
Rudolph C. Camishion, MD  John Mitchell, MD
Michael G. Christy, MD*  Clarence E. Moore, MD
William P. Coghill, MD*  Benjamin Musser, MD
William J. Cushing, MD  Hunter S. Neal, MD
Frederick W. Dasch, MD*  David V. Pecora, MD
John J. DeTuerk, MD*  Robert G. Pontius, MD
Joseph C. Donnelly, Jr., MD  Paul Reis, MD
Joseph C. Donnelly, Jr., MD  George Rosemond, MD
Javier Fernandez, MD  Thomas C. Ryan, MD*
Charles Fineberg, MD*  Charles L. Sacks, MD*
James O. Finnegan, MD  Gilmore Sanes, MD*
William B. Ford, MD*  Victor P. Satinsky, MD*
Alfred Frobese, MD*  David M. Sensenig, MD
John H. Gibbon, Jr., MD*  William H. Sewell, MD
James L. Harrison, MD*  John M. Snyder, MD*
Brack Hattler, Jr., MD  George N. J. Sommer, MD*
George J. Haupt, MD*  Paschal M. Spagna, MD
H.R. Hawthorne, MD*  Joseph Stayman, MD
Stephen L. Hudacek, MD*  John T. Szypulski, MD*
Bartolomeo D. Iaia, MD  John Templeton, III, MD*
Julian Johnson, MD*  William D. Todhunter, MD
Robert G. Johnson, MD*  Louis J. Wagner, MD
Eugene H. Kain, MD  John A. Waldhausen, MD
N. Peter Kamilowicz, MD  Herbert W. Wallace, MD
Edward M. Kent, MD*  Donald R. Watkins, MD*
Charles K. Kirby, MD*  George J. Willauer, MD*
Melvin L. Knupp, MD  Robert H. Witmer, MD*