

STS MEETING BULLETIN

THE SOCIETY OF THORACIC SURGEONS
53RD ANNUAL MEETING | HOUSTON, TEXAS
January 21–25, 2017 | sts.org

PREVIEW | REGISTER TODAY AT STS.ORG

STS Members Show Off Hometown Houston

Two STS members and Houston residents, Mara B. Antonoff, MD and Ara A. Vaporciyan, MD, share a fondness for their city, the destination for the 2017 STS Annual Meeting, January 21–25.

“Houston is a Texas town by geographic location only,” said Dr. Vaporciyan, who

has lived there since 1989. “You can find Texas in Houston, but I don’t feel like I live in the south. I feel like I live in a cosmopolitan city.”

With 2.2 million residents, this fourth-largest US city beckons tourists and transplants with its eclectic cuisines, 19 museums in one district, a range of shopping, vast park spaces, diverse cultures, Texas Medical Center with its 21 hospitals, and NASA’s Johnson Space Center.



Mara B. Antonoff, MD



Ara A. Vaporciyan, MD

Travel gurus finally have caught on to what Houstonians have known for years; Houston was the only US destination in the *Boston Globe’s* recent list of six places to visit, *Travel + Leisure* ranked it third among America’s Most Cultured Cities, and *Condé Nast Traveler* placed it among the Top 15 Places to Go.

A FIND FOR FOODIES

It’s no surprise Anthony Bourdain of CNN’s *Parts Unknown* explored Houston’s foodie scene last summer for an October episode. What Bourdain discovered is what both physicians have long known.

“There is a lot of fusion here, so you’ll find plenty of French-American and French food,” Dr. Vaporciyan said.

Drs. Antonoff and Vaporciyan, who are with The University of Texas MD Anderson Cancer Center, said every type of quality cuisine at every price point is available.

“If you want a \$300 per person meal, I can give you a laundry list of places,” said Dr. Antonoff, who moved to Houston 2 years ago. “On the other hand, if you want

see **HOUSTON**, page 4



Members of the Program Task Force met in August to plan the educational sessions for the STS 53rd Annual Meeting, January 21–25 in Houston.

See the Present, Future of CT Surgery

For the first time since 1973, the STS Annual Meeting will be held in Houston, home to award-winning restaurants, nightlife, museums, and NASA’s Johnson Space Center.

The meeting will be held January 21-25, 2017, at the George R. Brown Convention Center. It kicks off with a full day of new and exciting technology at STS/AATS Tech-Con on Saturday, followed by Annual Meeting programming from Sunday through Wednesday.

“The STS Annual Meeting is the epicenter of cardiothoracic surgery,” said STS President Joseph E. Bavaria, MD. “The meeting will be packed with interactive learning on hot topics, such as *Mycobacterium chimaera* infections related to heater-cooler devices. We’ll also explore practice management, work-life balance, and quality improvement issues that impact STS members on a daily basis.”

All members of the cardiothoracic surgery team will find educational programming relevant to everyday practice. Invited speakers and debates will be woven among scientific abstracts and surgical videos.

The offerings for adult cardiac surgery include sessions on arrhythmias, mechanical circulatory support devices, the thoracic aorta, coronary artery disease, and mitral valve and aortic valve diseases.

“We have multiple abstracts on catheter-based therapy for aortic valve and mitral valve surgery, open and endovascular management of the aortic arch, and the descending as well as the ascending aorta,”

“The STS Annual Meeting is the epicenter of cardiothoracic surgery.”

JOSEPH E. BAVARIA, MD

said Workforce on Annual Meeting Chair Wilson Y. Szeto, MD. “New technology on rapid deployment aortic valve replacement platforms also is on the program.”

For general thoracic surgeons, expect several presentations about minimally invasive surgery, long-term outcomes for cancer patients, and real-world tips that you can take home and apply in your practice.

“Something that’s going to be a major focus at the meeting is the question of robotic surgery versus other types of minimally invasive surgery—does it really provide any benefits, or is it just another way of doing things through small incisions?” said Joseph B. Shrager, MD, Co-Chair of the Surgical Symposia Task Force. “Sublobar resection for very small lung nodules also is going to be an important topic.”

For the pediatric congenital heart surgery sessions, three loosely based themes have emerged. “We have a session focusing on issues around newborns and neonatal surgery, one on how patient risk factors, such as chromosomal abnormalities, affect outcomes after surgery, and one on advanced issues facing older children and teenagers,” said Jonathan M. Chen, MD, Co-Chair of the Surgical Symposia Task Force.

Late-breaking abstracts have returned to the

meeting program this year, and the Monday morning session will feature exciting clinical trials, clinical registry research, innovative clinical and basic science investigations, and quality improvement projects.

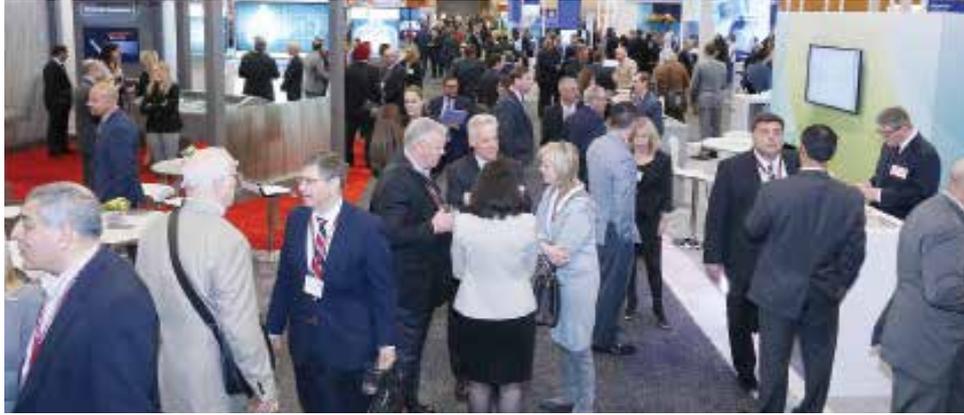
Tuesday morning’s Early Riser Health Policy Forum will focus on the Merit-Based Incentive Payment System—the revised fee-for-service payment model that will affect most physicians, including STS members. It also will cover alternative payment models, bundled payments for coronary artery bypass grafting procedures, and data collection efforts that could impact surgical payments in the future.

The Patient Safety Symposium, also on Tuesday, will look at the causes, prevalence, and consequences of work-related stress and professional burnout among health care providers, along with implementable strategies to recognize burnout and mitigate its impact. (See related article on page 11.)

There’s much more on the agenda. View the *Advance Program* and register for the meeting at sts.org/annualmeeting. ■

REGISTER TODAY
sts.org/annualmeeting

STS 53rd Annual Meeting Program



Attendees have opportunities to learn about new products and services in the STS Exhibit Hall.

FRIDAY, JANUARY 20, 2017

3:00 p.m. – 6:00 p.m.

Registration

SATURDAY, JANUARY 21, 2017

7:00 a.m. – 6:00 p.m.

Registration

7:00 a.m. – 6:30 p.m.

Tech-Con Exhibits

7:00 a.m. – 8:00 a.m.

Breakfast

8:00 a.m. – 9:30 a.m.

Tech-Con Adult Cardiac Track I: Innovations in Mitral Valve Disease and Atrial Fibrillation Management

Tech-Con General Thoracic Track I: Precision Thoracic Surgery

9:30 a.m. – 10:15 a.m.

BREAK—Visit Tech-Con Exhibits

10:15 a.m. – 12:00 p.m.

Tech-Con Adult Cardiac Track II: Aortic/Endovascular

Tech-Con General Thoracic Track II: Advanced Thoracic Surgery

12:00 p.m. – 1:00 p.m.

LUNCH—Visit Tech-Con Exhibits

1:00 p.m. – 2:45 p.m.

Tech-Con Adult Cardiac Track III: Ventricular Assist Devices/Heart Failure

Tech-Con General Thoracic Track III: Health Care in the 21st Century

2:45 p.m. – 3:15 p.m.

BREAK—Visit Tech-Con Exhibits

3:15 p.m. – 5:00 p.m.

Tech-Con Joint Session: "Shark Tank"—Rapid-Fire Elevator Pitches of Revolutionary Technology

5:00 p.m. – 6:30 p.m.

Tech-Con Reception

SUNDAY, JANUARY 22, 2017

7:00 a.m. – 6:30 p.m.

Registration

7:00 a.m. – 8:00 a.m.

Heater-Cooler-Induced Infections: Practices, Protocols, and Mitigation Strategies

8:00 a.m. – 12:00 p.m.

Adult Congenital Heart Disease Symposium: Evaluating Approaches to the Aortic Valve and End-Stage Problems

in Young Adults—What Pediatric and Adult Cardiac Surgeons Can Learn From Each Other

Practice Management Summit: Working in an Employment Model Environment

STS/AATS Critical Care Symposium: Challenges in the Management of Mechanical Cardiopulmonary Support in the Cardiothoracic Intensive Care Unit

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

10:00 a.m. – 4:30 p.m.

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

12:00 p.m. – 1:00 p.m.

BREAK

1:00 p.m. – 4:00 p.m.

Residents Symposium: Transitioning From Residency to a Successful Practice

1:00 p.m. – 4:30 p.m.

Resuscitation of Patients Who Arrest After Cardiac Surgery

Surgical Symposium: Congenital Cardiac Surgery M \acute{e} lange

Surgical Symposium: "How To" Video Session—Tips and Tricks in General Thoracic Surgery

2:00 p.m. – 6:30 p.m.

Scientific Posters

2:30 p.m. – 4:30 p.m.

Multidisciplinary Response to Emergencies: Strategies for Team Members

4:30 p.m. – 6:30 p.m.

Opening Reception in STS Exhibit Hall

MONDAY, JANUARY 23, 2017

6:30 a.m. – 5:00 p.m.

Registration

9:00 a.m. – 4:30 p.m.

Exhibit Hall

Scientific Posters

7:00 a.m. – 7:15 a.m.

Opening Remarks

7:15 a.m. – 8:15 a.m.

J. Maxwell Chamberlain Memorial Papers

8:15 a.m. – 9:00 a.m.

Richard E. Clark Memorial Papers

9:00 a.m. – 9:40 a.m.

BREAK—Visit Exhibits and Scientific Posters

9:40 a.m. – 9:50 a.m.

Introduction of the President: Richard L. Prager

9:50 a.m. – 10:50 a.m.

Presidential Address: Joseph E. Bavaria

10:50 a.m. – 11:30 a.m.

BREAK—Visit Exhibits and Scientific Posters

11:30 a.m. – 12:30 p.m.

Adult Cardiac: Arrhythmia

Basic Science Research: Adult Cardiac

Basic Science Research: General Thoracic

Congenital: Adult Congenital

Critical Care

Ethics Debate: When a Child's Heart Is Failing

General Thoracic: New Technology

Late-Breaking Abstracts

NEW! STS Key Contacts: How to Become an Advocate for Cardiothoracic Surgery

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

12:30 p.m. – 1:30 p.m.

BREAK—Visit Exhibits and Scientific Posters

1:15 p.m. – 5:15 p.m.

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

Redefining Practice Through Quality and Evidence: What's New

1:30 p.m. – 3:30 p.m.

Adult Cardiac: Aorta I

Adult Cardiac: Ischemic

Congenital: Pediatric Congenital I

General Thoracic: Lung Cancer I

General Thoracic: Lung Transplantation

International Symposium: The Quality vs. Access Dilemma in Cardiothoracic Surgery—Regionalization, Building Sustainable Cardiothoracic Surgery Programs, and Humanitarian Crises

SVS @ STS: Sharing Common Ground for Cardiovascular Problems

3:30 p.m. – 4:15 p.m.

BREAK—Visit Exhibits and Scientific Posters

4:15 p.m. – 5:15 p.m.

Surgical Motion Picture Matinees: Adult Cardiac, Congenital, and General Thoracic

The Annals Academy: Propensity Score Matching

5:15 p.m. – 6:30 p.m.

Scientific Posters and Wine

5:30 p.m. – 6:30 p.m.

Business Meeting (STS Members Only)

7:30 p.m. – 10:30 p.m.

STS Social Event: Space Center Houston 

TUESDAY, JANUARY 24, 2017

6:30 a.m. – 4:30 p.m.

Registration

9:00 a.m. – 3:30 p.m.

Exhibit Hall

9:00 a.m. – 5:00 p.m.

Scientific Posters

7:30 a.m. – 8:30 a.m.

Early Riser Sessions

Early Riser Health Policy Forum: Ready or Not: Implementing the New Merit-Based Incentive Payment System in Your Practice Today

8:45 a.m. – 9:00 a.m.

Results of the STS TAVR Survey

9:00 a.m. – 10:00 a.m.

Thomas B. Ferguson Lecture: Ralph W. Muller

10:00 a.m. – 10:45 a.m.

BREAK—Visit Exhibits and Scientific Posters

10:45 a.m. – 11:00 a.m.

Award Presentations

11:00 a.m. – 12:00 p.m.

C. Walton Lillehei Lecture: Samer Nashef

12:00 p.m. – 1:00 p.m.

BREAK—Visit Exhibits and Scientific Posters

Residents Luncheon

1:00 p.m. – 3:00 p.m.

Adult Cardiac: General

Adult Cardiac: Mitral and Tricuspid Valves

Congenital: Pediatric Congenital II

ECTS @ STS: Management of Distal Type B Aortic Dissection

NEW! Electronic Learning and Innovation in Education

General Thoracic: Esophageal

General Thoracic: Lung Cancer II

1:00 p.m. – 5:30 p.m.

Advanced Therapies for End-Stage Heart Disease

Patient Safety Symposium: Resilience or Burnout—Do We Have a Choice?

3:00 p.m. – 3:30 p.m.

BREAK—Visit Exhibits and Scientific Posters

3:30 p.m. – 4:30 p.m.

Cardiothoracic Surgical Education

3:30 p.m. – 5:30 p.m.

Adult Cardiac: Aorta II

Adult Cardiac: Aortic Valve

Congenital: Pediatric Congenital III

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

General Thoracic: Mediastinal/Pulmonary

WEDNESDAY, JANUARY 25, 2017

6:30 a.m. – 9:30 a.m.

Registration & Breakfast

7:00 a.m. – 9:00 a.m.

STS University 

9:30 a.m. – 11:30 a.m.

STS University (courses repeated) 

 Indicates that a ticket is required to attend.

CONTINUED DEDICATION TO THE HEART TEAM AND THE LONG-TERM CARE OF PATIENTS



Visit us at the upcoming
STS 2017 Annual Meeting!

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STS ANNUAL MEETING NEWS AND NOTES

ANNUAL MEETING ONLINE INCLUDED WITH MEETING REGISTRATION

Access to the STS 53rd Annual Meeting Online is included with Annual Meeting registration. With such a full meeting schedule, it's impossible to attend every presentation of interest. This web-based video presentation will let you earn CME credit for sessions you were unable to attend—or review sessions of special interest—in the comfort of your home or office. This activity also provides self-assessment credits toward Part 2 of the American Board of Surgery Maintenance of Certification Program. The Online product will be available approximately 1 month after the conclusion of the Annual Meeting and will be accessible for up to a year.

REGISTER FOR THE STS/CTSNET CAREER FAIR

Take advantage of the opportunity to meet face-to-face with top employers at the STS 53rd Annual Meeting. At the STS/CTSNet Career Fair, recruiters will be available to talk with you about career opportunities.

Maximize your exposure by posting your CV to the candidate database prior to the meeting. Participating employers will be able to view your CV in advance of the event and may schedule an appointment with you for an in-person interview to take place during the meeting. You can find more information about how to register at sts.org/careerfair.

The Career Fair will be held from 4:30 p.m. to 6:30 p.m. on Sunday, January 22, from 9:00 a.m. to 4:30 p.m. on Monday, January 23,

and from 9:00 a.m. to 3:30 p.m. on Tuesday, January 24, near the Exhibit Hall.

INTERNATIONAL ATTENDEES: REQUEST A LETTER OF INVITATION

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

APPLY TODAY TO BECOME AN STS MEMBER

STS membership comes with a wide range of benefits, including complimentary subscriptions to *The Annals of Thoracic Surgery*, the quarterly newsletter *STS News*, and more. Additionally, STS members receive reduced registration for the STS Annual Meeting and many other educational events throughout the year, and surgeon members may qualify for discounted participation fees in the STS National Database.

Anyone with an interest in cardiothoracic surgery can become a member. Visit sts.org/ apply and fill out the application that best fits your role. If you are a member and know someone who has not yet joined, encourage him or her to apply. By promoting membership in STS, you'll help your colleagues, the Society, and the specialty. ■



Hear about new, cutting-edge technologies that will change your practice at Tech-Con 2017.

Preview Technology Before It's FDA Approved

After an extremely positive response in 2016, STS/AATS Tech-Con 2017 is again focusing on cutting-edge technologies and new developments in cardiothoracic surgery. The schedule has been changed for 2017 so as not to compete with Annual Meeting sessions.

"There are a lot of things flying under the radar in terms of development, and you're not going to hear about them anywhere else," said Tech-Con Task Force Co-Chair Mark F. Berry, MD. "Attending Tech-Con is the most efficient way for every cardiothoracic surgeon to know what their practice is going to look like in a couple of years."

Two different tracks are planned for adult cardiac surgery and general thoracic surgery.

The adult cardiac sessions will look at innovations in mitral valve disease and atrial fibrillation management, aortic valve disease and endovascular techniques, and ventricular assist devices. The general thoracic sessions will discuss precision thoracic surgery, endoscopic and robotic techniques, and what health care looks like in the 21st century.

A highlight of the day will be the *Shark Tank* session, during which entrepreneurs pitch their innovative cardiothoracic surgery products to the audience, as well as a panel of experts in medical device development.

Register today at sts.org/annualmeeting. Continuing medical education credit will not be offered for Tech-Con programming. ■

**STS/AATS
TECH-CON 2017**
Saturday, January 21
8:00 a.m. – 5:00 p.m.
Grand Ballroom AB
and Room 310ABC

HOUSTON

continued from page 1

good food in a family-style setting, I can find that for you as well. We have the whole gamut here."

If you like barbecue, Houston has no shortage of delicious options.

"It's all about beef in Houston. Even the ribs are beef. You can get a pulled pork sandwich, but it's not as common as a brisket sandwich here, and the sauce is usually sweet, not vinegary," said Dr. Vaporciyan, pointing to the city's iconic and nationally recognized Goode Co.

DIVE INTO THE MUSEUM DISTRICT

With so many museums in four walkable zones, the Houston Museum District, located near downtown, gives you a glimpse of the world's treasures and history. Among its museums are the Children's Museum Houston, Contemporary Art Museum Houston, Holocaust Museum Houston, Houston Zoo, and Menil Collection. The Menil Collection's nearby 445-acre Hermann Park attracts adults and children seeking relaxation after enjoying lunch at Bistro Menil, said Dr. Vaporciyan.

Dr. Antonoff pointed to the offerings at the Children's Museum and Houston Zoo.

"I've been to a lot of children's museums around the country, and the one here is considerably larger and has a lot more attractive features compared to those

elsewhere," said Dr. Antonoff, adding that the zoo offers a Japanese garden, train rides, outdoor theater, evening events, and a recently added western lowland gorilla exhibit.

Admission to the Menil is free, while other museums in the district have specified free times and days.

FROM THE SPACE CENTER TO SHOPPING

Houston's most famed sight, Space Center Houston, embodies its "Prepare to be Thrust Into an Amazing Adventure" tagline. Located about 25 miles south of the city, the visitor's center to NASA's Johnson Space Center is chock-full of NASA artifacts of interest to all ages, but it also gives visitors several ways to interact with the exhibits. Dr. Antonoff offered one insider's tip.

"It can be deceptive when you arrive because it's so big, but look for where you can take two tram tours that go all around the facility," Dr. Antonoff advised. Both tours go to Rocket Park, while one also takes you to Mission Control and the other also takes you to the Astronaut Training Facility.

The STS Social Event will be held at Space Center Houston on Monday, January 23. See page 8 for more details on this exclusive event.

Houston is among many cities with a fascination for brewing beer, and Saint Arnold Brewing Co., about 10 minutes by car from the George R. Brown Convention Center, offers tastings and tours.

If your desire is to see the beach, Galveston Island is just 1 hour south of



The Hall of Paleontology at the Houston Museum of Natural Science has more than 450 fossils and fossil replicas on display. (Photo: Visit Houston)

Houston. Dr. Vaporciyan suggested taking in the Moody Gardens for its pyramids and indoor garden, the Galveston Seawall, which was built after the 1900 hurricane, and the great seafood straight from the Gulf.

If the drive to Galveston is too off the beaten track, Dr. Antonoff recommends visiting Kemah. About 30 miles southeast of Houston, Kemah Boardwalk is a cool little place right on the water with an amusement park, shops, restaurants, and bars, she said.

No visit to Houston is complete without taking time to shop the Galleria.

"The Galleria is a Texas-sized mall," Dr. Vaporciyan said. "It's four malls stuffed together." Indeed, this megamall spans 2.4 million square feet of space and houses 400 shops and restaurants.

When it's time to take a break during the Annual Meeting, walk across the street from the convention center to Discovery Green. With January high temperatures of 62 degrees and lows of 41 degrees, Houston will bring comfortable days and cool evenings to your STS Annual Meeting experience. ■

Session Added on Heater-Cooler-Related Infections

In light of recent findings tracing *Mycobacterium chimaera* infections to heater-cooler devices used in cardiac surgery, a special symposium has been added to the program to help attendees better understand the cause of these infections and develop measures to lower the risk of occurrence. To date, *M. chimaera* infections have been reported in six European and North American countries.

“Although these infections are rare, it is extremely important for all cardiac surgeons and their health care teams to take

the necessary steps related to heater-cooler devices,” said STS President Joseph E. Bavaria, MD. “Cardiothoracic surgeons are committed to offering a safe environment for their patients, and this symposium will offer the latest information and strategies necessary to mitigate the risks.”

The session will include a scientific abstract presentation and a panel discussion featuring

HEATER-COOLER-INDUCED INFECTIONS: PRACTICES, PROTOCOLS, AND MITIGATION STRATEGIES

Sunday, January 22

7:00 a.m. – 8:00 a.m.

Room 350DEF

cardiothoracic surgeons and infectious disease experts. In November, STS and several other societies issued a joint statement to the worldwide cardiothoracic community offering resources and other information from government entities and health care providers. To learn more about the heater-cooler situation, go to sts.org/heater-cooler. ■

“Although these infections are rare, it is extremely important for all cardiac surgeons and their health care teams to take the necessary steps related to heater-cooler devices.”

JOSEPH E. BAVARIA, MD

Register Today

Registration and housing for the STS 53rd Annual Meeting are available at sts.org/annualmeeting. Register by Thursday, January 19, to save \$100 off onsite pricing.

STS/AATS Tech-Con 2017 and the STS 53rd Annual Meeting require separate registration. Tech-Con registration provides access only to the educational sessions on Saturday, January 21.

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

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

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



STS MEETING BULLETIN

JANUARY 21–25, 2017

THE OFFICIAL NEWSPAPER OF THE STS 53RD ANNUAL MEETING

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2017 STS Annual Meeting Booth #1210

Identify and Manage Patients at Risk for AKI

Precise, Automated UO Monitoring When You Need It



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Now, UO can be monitored as a true vital sign for managing patient care.

Adaptec Medical introduces the SensicaTM UO System – the only way to obtain automated, ongoing, accurate urine output (UO) data – using any standard Foley catheter and drainage system.

OR

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SYSTEM ICU



Uncover Tips for Adult Cardiac, General Thoracic Surgery

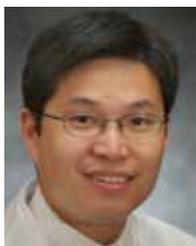


Last year's adult cardiac how-to video session was extremely popular; the 2017 session has been expanded with more space and new topics.

After the enormous success of the 2016 Annual Meeting's how-to video session featuring tips and tricks for adult cardiac surgery procedures, STS has brought the concept back for the 2017 meeting. In addition to expanding the adult cardiac surgery symposium with more topic categories and presentations, a separate general thoracic surgery how-to video session has been added.

ADULT CARDIAC SURGERY

Expert surgeons will share their most-favored tricks, as well as pitfalls to avoid, in 30 presentations focused on six adult cardiac surgery areas—coronary artery bypass grafting (CABG) surgery, mitral valve surgery, atrial fibrillation, aortic valve surgery, thoracic aortic surgery, and heart failure.



Wilson Y. Szeto, MD



Gorav Ailawadi, MD



Joseph B. Shrager, MD

The presentations will cover routine to more complex procedures that will appeal to both private practice and academic surgeons.

"Last year's session was packed wall-to-wall. Because of the overwhelming support, we wanted to respond by expanding the program," said Workforce on Annual Meeting Chair and co-moderator of the session Wilson Y. Szeto, MD, of the University of Pennsylvania in Philadelphia. "We'll have a bigger space, more talks, and wider breadth of technical procedures, from the everyday routine to those that are more complex and nuanced."

One addition for the 2017 session is in response to recent investigations showing surgical ablation of atrial fibrillation during mitral valve surgery is effective. The atrial fibrillation section also will cover how to perform a Maze procedure, along with how to employ newer techniques in a minimally invasive fashion.

By adding a section on heart failure and weaning catastrophe, co-moderator Gorav Ailawadi, MD sought to give surgeons approaches for dealing with challenging high-risk patients.

"There are times when we have complications from the heart-lung machine or where the heart is very sick, regardless of the operation," said Dr. Ailawadi, of the University of Virginia Health System in Charlottesville. "We want to help the audience get the patient out of the operating room and provide other options."

In particular, presenters will offer guidance on how to perform techniques that should be part of any busy surgeon's armamentarium: weaning from a subclavian intra-aortic balloon pump, the Impella 5.0,

a temporary left ventricular assist device (LVAD), and a right VAD.

With more surgeons and centers performing permanent LVAD procedures, this section also will cover elective LVAD insertion and the minimally invasive HeartWare VAD. Dr. Ailawadi noted that patients with the latter tend to have less blood loss and quicker recoveries.

Presentations also will highlight challenging CABG cases, new approaches to mitral valve surgery, and transcatheter aortic valve replacement.

"The how-to sessions give attendees tips

and tricks to make their jobs easier and still provide excellent outcomes," Dr. Ailawadi said. "We'll allow more time for audience questions so that attendees can gain a deeper understanding of the technical aspects of each operation."

GENERAL THORACIC SURGERY

The technical tips and tricks session incorporated into the General Thoracic Surgical Symposium is tailored to help participants conduct more difficult operations and the challenging portions of operations in a safe and effective manner.

"We selected areas that we think are challenging for surgeons, especially those who may not work every day in a subspecialty of our field. They also may be called on to do any of these procedures in a minimally invasive fashion, which is often more difficult, because patients have come to expect that," said Joseph B. Shrager, MD, Co-Chair of the Surgical Symposia Task Force.

The session is divided into four sections, and the first will cover esophageal techniques. The anastomosis seems to be the Achilles heel of minimally invasive esophagectomy. Dr. Shrager pointed to two predominant minimally invasive techniques for esophagogastric anastomosis. One expert surgeon will therefore discuss the stapled, functional end-to-end, minimally invasive anastomosis, and another will describe his use of the OrVil EEA end-to-end anastomoser. Then the focus will move to the emerging use of ischemic preconditioning and SPY technology to create better blood flow in the gastric conduit.

"Leaking from an esophageal anastomosis is a big problem that everyone is interested in trying to reduce," said Dr. Shrager, from Stanford University School of Medicine in California.

Three talks in the second section cover difficult pulmonary cases, with how-to advice on post-induction dissections via thoracotomy or minimally invasive surgery.

"This is useful for cases where there's been preoperative treatment and a lot of scarring due to preoperative chemotherapy or radiation," said Dr. Shrager, adding that an expert will share his perspective on how to manage unexpected intraoperative bleeding during minimally invasive lung surgery.

The third section is the mediastinal section, with speakers sharing their expertise on intraoperative decision making for difficult germ cell tumors, tricks for minimally invasively removing large thymomas, and a simple approach to video-assisted diaphragm plication.

"Decision making for mediastinal germ cell tumors is very complex," Dr. Shrager said. "It's always hard to know how aggressive we need to be to get out every little bit of these tumors, which are often benign, but may involve major structures. Taking out every last fragment can substantially increase the scope of the surgery—but when is that okay?"

"We'll have probably the world's highest-volume robotic thymoma surgeon talking about how to remove larger thymomas safely without the risk of intraoperative spilling, which would be a disaster."

Dr. Shrager will then describe his technique and results using a simplified

method he has adopted to allow easy performance of diaphragm plication via video-assisted thoracic surgery.

"A lot of people have been hesitant to use minimally invasive approaches for diaphragm plication because it has been dogma that you need to use multiple interrupted sutures, which is pretty clumsy and takes a long time to do minimally invasively. I've adopted a technique that uses a running suture, and I have data showing that it's very effective and reliable," he said.

The fourth and final section will offer help on transitioning to minimally invasive

approaches and understanding the learning curve. "This will include a talk from one of the earliest adopters of thoracoscopic lobectomy describing how he made that transition, even when no one else was doing it," Dr. Shrager said.

With all the presentations, the goal for planners was to have experts in each area describe with technical detail how they manage certain critical problems or get through difficult procedures.

"We know our surgeons want to hear from people they can trust and who have the experience to be able to say, 'I've tried this 10 ways, and this is the best way to do it,'" Dr. Shrager said. ■

"HOW TO" VIDEO SESSIONS

Sunday, January 22

TECHNICAL TRICKS AND PITFALLS TO SIMPLIFY CARDIAC SURGERY PROCEDURES

10:00 a.m. – 4:30 p.m.

Room 320ABC

TIPS AND TRICKS IN GENERAL THORACIC SURGERY

1:00 p.m. – 4:30 p.m.

Room 351DEF



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- Do not apply **COSEAL** over any devices or objects that will need to be removed. **COSEAL** must not be used as a mechanism of adherence, even temporarily, for any object.
- Do not inject **COSEAL** into vessels.
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- Rx Only. For safe and proper use of these devices, refer to the appropriate full device Instructions for Use.

1. Wallace DG, Cruise GM, Rhee WM, et al. A tissue sealant based on reactive multifunctional polyethylene glycol. *J Biomed.* 2001;58:545-555. 2. Hill A, Estridge TD, Maroney M, et al. Treatment of suture line bleeding with a novel synthetic surgical sealant in a canine iliac PTFE graft model. *J Biomed.* 2001;58:308-312. 3. COSEAL Surgical Sealant Instructions for Use.

Journey Into Space at the STS Social Event

Join your colleagues on Monday, January 23, at the Space Center Houston, the official visitor's center of NASA's Johnson Space Center. In addition to enjoying an extensive buffet and open bar, you'll be able to check out artifacts documenting the history of space travel, including a collection of spacesuits worn by NASA astronauts, the Apollo 17 Command Module, the giant Skylab Trainer, and more. Don't miss this opportunity. Purchase a ticket when registering for the Annual Meeting. Shuttle buses depart all official STS hotels at 6:45 p.m., and the event will be held from 7:30 p.m. to 10:30 p.m.



Walk through the Skylab Trainer, the actual trainer that was used to prepare astronauts for America's first space station.

Caregivers Debate Treatment Options for Dying Down's Syndrome Patient

The prognosis for 8-year-old Angela Downing is bleak. Born with trisomy 21, her severe heart disease has run the gamut with an atrioventricular canal defect, moderate mitral insufficiency, and a failing left ventricle. Seven days after her valve replacement, she failed to wean from extracorporeal membrane oxygenation (ECMO) due to her poor left ventricular function. She underwent re-exploration for bleeding, difficulty gaining adequate heparinization, and thromboemboli in several fingers and toes.

Her situation is tenuous, and her parents want "everything done." Her surgeon must meet with the parents about whether to embark on a ventricular assist device (VAD)-transplant pathway or remove the child from life-sustaining therapy.



Minoo N. Kavarana, MD



Jessica M. Turnbull, MD

Minoo N. Kavarana, MD and Jessica M. Turnbull, MD will take opposing views during the Ethics Debate: When a Child's Heart Is Failing. Dr. Turnbull, an ethicist and pediatric intensivist at Vanderbilt University in Nashville, will advocate for withdrawing ECMO, and Dr. Kavarana, a pediatric cardiac surgeon at the Medical University of South Carolina in Charleston, will argue to replace ECMO with a VAD as a bridge to heart transplantation.

"This is a horribly unfortunate situation," Dr. Turnbull said. "Complicating the whole matter is that there is still equipoise in the

transplant community about whether transplanting kids with chromosomal abnormalities is the right thing to do, given their limited life expectancies. They will be dependent on caregivers for probably the entirety of their lives."

Dr. Turnbull speculated that the child would be left with a poor quality of life post-transplant.

"We sometimes don't have time to consider when a kid's not doing well, so we hedge our bets, and we put them on ECMO," Dr. Turnbull said. "We try to do the right things for these kids, but that leads to a lot of harm without the potential of appreciable benefits. Instead of going to a VAD and a transplant, her course should be transitioning to one of comfort and then likely withdrawal of life-sustaining therapy."

"We try to do the right things for these kids, but that leads to a lot of harm without the potential of appreciable benefits."

JESSICA M. TURNBULL, MD

Dr. Kavarana noted that children with Down's syndrome live to be 50 to 60 years old and often have good support from family at home.

"You have to decide if you withhold the same therapy that you would offer a non-Down's syndrome 8-year-old," said Dr. Kavarana, noting that the child's size merits the use of an implantable intracorporeal VAD. "Until we determine futility, we would not withhold a heart transplant. We clearly have not demonstrated futility. She's just 7 days from her surgery on ECMO, which would be a perfect time for a VAD transition."

However, it is difficult for Angela to be compliant. She often removes the CPAP mask she was prescribed at age 4 to ameliorate her

ETHICS DEBATE: WHEN A CHILD'S HEART IS FAILING

Monday, January 23

11:30 a.m. – 12:30 p.m.

Room 362A

obstructive sleep apnea.

"I know her caregivers are doing the best they can, but when we're talking about a VAD and a heart transplant, we're asking our families to take on increasingly complicated levels of care at home," Dr. Turnbull said.

"I think it does a disservice to our kids and our families when we offer therapies that are arduous to carry out at home and then will not yield the best outcome possible. It's a heart-breaking situation to have a patient like this.

"Despite the fact that she has lovely, amazing parents who love her very much, and despite the best efforts of the medical team, we've unfortunately run out of options. I think withdrawing life-sustaining therapy isn't

killing. I think it's transitioning to comfort. Her path was set when she had a mitral valve that couldn't sustain her for as long as we needed it to sustain her. Unfortunately, that's the process that's killing her, not our withdrawal of life-sustaining therapy."

For Dr. Kavarana, doing nothing would be wrong.

"I think you can improve this child's heart failure symptoms and ease her suffering. It would be withholding care for a child who potentially could be resuscitated or weaned off ECMO," Dr. Kavarana said. "Clearly, there is an ethical dilemma when it comes to solid organ transplantation and patients with disabilities. There is no doubt about that." ■

Put Knowledge Into Practice at STS University

Cap off your Annual Meeting experience by attending STS University, which will be held on Wednesday, January 25. These hands-on courses allow attendees to gain experience with a wide variety of cardiothoracic surgical procedures. Expert instructors will work closely with small groups, providing the opportunity for ample questions and individual instruction.

STS U courses will be offered from 7:00 a.m. to 9:00 a.m. and again from 9:30 a.m. to 11:30 a.m. Pick two when you register for the Annual Meeting at sts.org/annualmeeting. STS University features *only* hands-on learning, and attendees are strongly encouraged to review the didactic lectures in advance. View course materials at sts.org/stsuniversity. ■

- Course 1:** Essentials of TAVR
- Course 2:** TEVAR and Aortic Arch Debranching Procedures
- Course 3:** Mitral Valve Repair
- Course 4:** Valve-Sparing Aortic Root Replacement
- Course 5:** Aortic Root Enlarging Procedures and Aortic Valve Leaflet Reconstruction
- Course 6:** VATS Lobectomy
- Course 7:** Advanced Open Esophageal and Tracheal Procedures
- Course 8:** Chest Wall Resection and Pectus Surgery
- Course 9:** Atrial Fibrillation (Maze Procedure)
- Course 10:** Mechanical Circulatory Support



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Symposium Explores the Quality Versus Access Dilemma

Bringing quality cardiothoracic surgical care to underserved regions is rife with challenges. Managing costs, staffing, training, equipment needs, and follow-up care are overwhelming concerns. These are compounded when a lack of access hinders patients from getting treatment. Quality, access, financial, and ethical considerations also are paramount issues when providing cardiothoracic surgical care in the midst of a humanitarian crisis.



A. Pieter Kappetein, MD, PhD

The International Symposium will examine the quality versus access debate for underserved regions and for countries responding to refugees who have fled en masse.

In two talks, presenters will compare the costs and benefits of regionalized cardiothoracic surgical care and localized care in lower-volume centers.

“Speakers will discuss centers of excellence

for very difficult procedures, but people in some areas of the world have a great distance between where they live and where they can access care,” said moderator A. Pieter Kappetein, MD, PhD, of Erasmus Medical Center in Rotterdam, the Netherlands. “This is not limited to developing countries. It is also true for the Western world. You can strive for the best and the most excellent center of excellence, but that’s not always possible.”

Although some argue that low-volume centers have good outcomes, others say highly specialized centers are needed because cardiac surgery patients are complex, Dr. Kappetein said. The speakers will share their experiences setting up sustainable specialized centers in Nepal and South Africa.

Another speaker will give his take on the quality, access, financial, and ethical challenges involved in the Syrian refugee crisis. “About 65 million people have been displaced from their homes; 21.3 million of them are refugees for whom flight is virtually necessary—

INTERNATIONAL SYMPOSIUM

Monday, January 23

1:30 p.m. – 3:30 p.m.

Room 360A

involuntary victims of politics, war, or natural catastrophe. We will discuss potential challenges that we face in how we as surgeons can help,” Dr. Kappetein said.

The session will conclude with a presentation on the global challenge of treating noncommunicable diseases, including cardiothoracic diseases.

“The speaker will explain how cardiac disease is becoming a very relevant issue in Africa and in developing countries,” Dr. Kappetein said. ■

“About 65 million people have been displaced from their homes; 21.3 million of them are refugees for whom flight is virtually necessary.”

A. PIETER KAPPETEIN, MD, PHD

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Joseph E. Bavaria, MD will lead a session on treatment of thoracic aortic disease.

TEVAR Device Indications Expanded for All Type B Aortic Dissections

The US Food and Drug Administration recently expanded indications for two thoracic endovascular

aortic repair (TEVAR) devices for the treatment of all classifications of type B aortic dissections, even though TEVAR’s efficacy had been studied only for type B acute complicated dissections. A session developed by STS and the European Association for Cardio-Thoracic Surgery will examine how this ruling has created a seismic shift in the distal treatment of thoracic aortic disease.

“The FDA usually studies safety and efficacy before approval. In this particular case, it went with safety only and did not have data showing efficacy, which is usually the European model,” explained STS President and session

co-moderator Joseph E. Bavaria, MD. “This is a different strategy by the FDA. That is why this session was designed.”

Outcomes from TEVAR on patients with type A and other type B dissections will be collected to determine when it is the best treatment option.

“The FDA probably did the right thing. It is reasonable to have the community of cardiothoracic surgeons see these patients and perform

these procedures to develop the evidence one way or the other,” said Dr. Bavaria, who is with the University of Pennsylvania School of Medicine in Philadelphia.

The EACTS @ STS session will explore this hot topic via invited lectures and presentation of research results from Europe, Asia, and the United States. ■

EACTS @ STS: MANAGEMENT OF DISTAL TYPE B AORTIC DISSECTION

Tuesday, January 24

1:00 p.m. – 3:00 p.m.

Room 330AB

Speakers Offer Strategies for Extinguishing Physician Burnout

Surgeons are known for their attention to detail, work ethic, and commitment to patients, but these traits can lead to feelings of failure and result in burnout.

The ramifications are far-reaching. A 2008 American College of Surgeons survey found 40% of surgeons fit the diagnostic criteria for burnout, 30% screened positive for depression, 28% had a mental quality of life score more than half a standard deviation below the US population norm, and 15% had thoughts of taking their own lives.



Susan D. Moffatt-Bruce, MD, PhD, MBA

Beyond these personal burdens, a 2010 ACS survey on burnout and self-

reported medical errors found 9% of surgeons reported that they made a major medical error in the past 3 months, with the greatest contributing factor being a lapse in judgment.

“We have to focus on our own wellness as surgeons, so we can continue providing the highest level of care possible for our patients.”

SUSAN D. MOFFATT-BRUCE, MD, PHD, MBA

Speakers at the Patient Safety Symposium on “Resilience or Burnout—Do We Have a Choice?” will explore the causes and consequences of burnout, as well as methods to mitigate its impact.

“We all recognize as surgeons, particularly cardiothoracic surgeons, that a lot of external forces influence how we have to perform and are portrayed. It’s exhausting,” said session moderator Susan D. Moffatt-Bruce, MD, PhD, MBA. “We’ll look at how we can help make our surgeons healthier. To do that, they need to have the right amount of resilience and mindfulness.”

A co-author of both ACS studies, Charles M. Balch, MD, PhD, of the University of Texas MD Anderson Cancer Center in Houston, is one of four symposium presenters. Dr. Balch is a surgical oncologist and will discuss work-related stress and burnout in surgery.

“He understands the pressures and stresses that lead to burnout for surgeons,” said Dr. Moffatt-Bruce, of The Ohio State University Wexner Medical Center in Columbus.

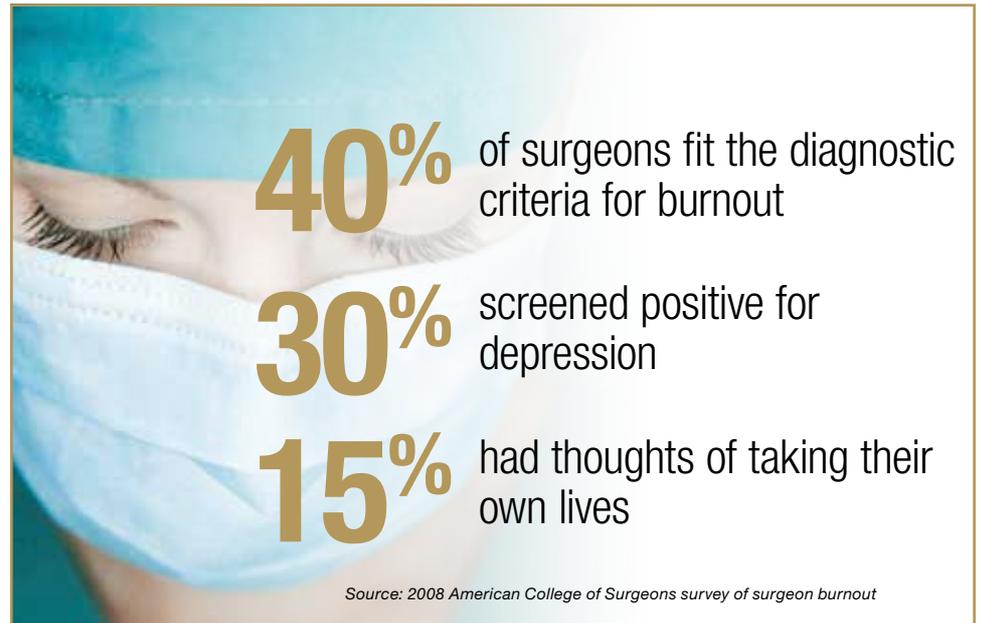
Wayne M. Sotile, PhD will provide techniques to help attendees improve their resilience. A physician life coach, he runs the Sotile Center for Resilience in

PATIENT SAFETY SYMPOSIUM

Tuesday, January 24

1:00 p.m. – 5:30 p.m.

Room 360A



Davidson, N.C., which provides clinical and counseling services to physicians and medical organizations.

After a question-and-answer period, the next speaker will explain how institutions can address physician burnout. “Many people in the room will be leaders, and we will explain how they can support their physicians to help them be successful,” said Dr. Moffatt-Bruce, a member of the STS Workforce on Patient Safety.

Maryanna Klatt, PhD, a professor of clinical family medicine at Wexner, will share her expertise. She currently leads a course on workplace mindfulness-based interventions

to reduce stress levels in the medical center’s surgical intensive care units. A yoga expert, Dr. Klatt employs stretching, meditation, yoga, and other activities to improve resilience in stressful situations.

“Surgeons are not alone, and this is a real problem. However, there are some techniques and tools that address burnout and can improve resilience and mindfulness,” Dr. Moffatt-Bruce said. “We all went into health care, and particularly surgery, because we wanted to help patients. Now, I think we have to focus on our own wellness as surgeons, so we can continue providing the highest level of care possible for our patients.” ■

STS Annual Meeting Brings Strong International Presence

Top 5 Countries With the Most Attendees

1. United States
2. Japan
3. Canada
4. South Korea
5. United Kingdom

The STS Annual Meeting attracts a global audience—cardiothoracic surgeons and their team members who want to share knowledge and foster connections. The meeting includes collaborative sessions with several international organizations, such as the European Association for Cardio-Thoracic Surgery, the European Society of Thoracic Surgeons, the Canadian Association of Thoracic Surgeons, and the Canadian Society of Cardiac Surgeons. Attendees at the 2016 STS Annual Meeting hailed from 60 countries, as highlighted on the map.

Source: 2016 STS Annual Meeting registration data



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