

The STS Meeting Bulletin



STS 51ST ANNUAL MEETING • JANUARY 24-28, 2015 • SAN DIEGO, CALIFORNIA

Weekend Edition

Saturday

7:00 a.m. – 6:00 p.m.

Registration: STS/AATS Tech-Con 2015 and STS 51st Annual Meeting
Lobby D

8:00 a.m. – 12:30 p.m.

STS/SCA: The Utility of Perioperative Echocardiography for Surgical Decision Making
Room 32AB

8:00 a.m. – 3:00 p.m.

STS/CHEST: Primer on Advanced and Therapeutic Bronchoscopy – Theory and Hands-on Session
Room 30E

12:00 p.m. – 6:30 p.m.

Tech-Con 2015 Exhibits Open
Ballroom 20 Foyer

1:00 p.m. – 2:30 p.m.

Cardiopulmonary Bypass Simulation Course
Room 31ABC

1:00 p.m. – 2:45 p.m.

Tech-Con 2015: Joint Session
Ballroom 20D

3:15 p.m. – 5:00 p.m.

Tech-Con 2015: Adult Cardiac Track I
Ballroom 20D
Tech-Con 2015: General Thoracic Track I
Room 33ABC

5:00 p.m. – 6:30 p.m.

Tech-Con 2015 Reception
Ballroom 20 Foyer

Sunday

7:00 a.m. – 6:30 p.m.

Registration: STS/AATS Tech-Con 2015 and STS 51st Annual Meeting
Lobby D

7:00 a.m. – 3:00 p.m.

Tech-Con 2015 Exhibits Open
Ballroom 20 Foyer

7:50 a.m. – 12:00 p.m.

Acquired and Congenital Heart Surgery Symposium: Challenges and Management of the Aorta in Adults With Congenital Heart Disease
Room 30CD

Practice Management Summit

Room 32AB

STS/AATS Critical Care Symposium: Essential Cardiac Critical Care Topics

Room 30E

8:00 a.m. – 9:30 a.m.

Tech-Con 2015: Adult Cardiac Track II
Ballroom 20D

Tech-Con 2015: General Thoracic Track II
Room 33ABC

Continued on page 7

The STS 51st Annual Meeting Finally Begins

Welcome to the STS 51st Annual Meeting! I'm thrilled to welcome you to San Diego for this preeminent educational event in cardiothoracic surgery. The STS Workforce on Annual Meeting has put together an outstanding program that will provide you with knowledge and skills that you can take back home and put to use right away. Over the next 5 days, you'll



DAVID A. FULLERTON, MD

experience thought-provoking lectures from renowned faculty and guests, exciting hands-on learning, an abundance of networking opportunities, and the chance to view the latest products and services in the specialty.

New offerings at the 51st Annual Meeting include two parallel sessions on mechanical circulatory support, a session on how quality measurement is reshaping clinical

practice, and a session exploring the role of stereotactic body radiation therapy in lung cancer treatment.

This year's meeting also will expand your opportunities for interaction with colleagues across the globe. STS is partnering with a number of international societies on exciting new programs that will examine a wide range of perspectives on cardiothoracic surgery topics.

One new session on Monday, by STS, the Canadian Association of Thoracic Surgeons, and the Canadian Society of Cardiac Surgeons, will provide staff and resident perspectives on education and job opportunities in both countries.

Continued on page 6

Tech-Con 2015 Explores the Latest Technology

World-renowned experts will once again come together for STS/AATS Tech-Con 2015, which promises to provide attendees with a glimpse of the most cutting-edge technology in cardiothoracic surgery.

These experts will discuss the current and future management of acquired cardiothoracic surgical disease processes, according to Tech-Con Task Force Co-Chair Vinod H. Thourani, MD, of Emory University in Atlanta.

"One of the main benefits of attending Tech-Con is to enhance current practice by improving technical proficiency and knowledge of existing data, but more importantly, it is preparation for how practices will evolve over the next year or two. Tech-Con provides a glimpse into the future and a path for adjusting your practice to stay competitive and up-to-date on emerging technologies," Dr. Thourani said.

"Tech-Con 2015 will allow participants to partake in very cutting-edge new technology that we believe will be transformative in patient care and management for cardiothoracic surgeons," he said.

The event will begin Saturday

afternoon at 1:00 p.m. with a joint session focused on pathways – and barriers – to the adoption of new technology. Expert speakers, including inventors of new technology who have been successful in moving medical devices from laboratory to use in humans, will share the barriers they encountered and their successes.

Hospital administrators and representatives from governmental agencies will provide insight into the financial possibilities and pitfalls of incorporating new technologies into practice.

"Moreover, we will hear from industry representatives about the process of getting new medical devices into practice and about balancing innovation and patient safety. This will prove to be a very important and informative session," Dr. Thourani said.

Concurrent adult cardiac and general thoracic tracks will begin Saturday

afternoon at 3:15 p.m. and continue through Sunday. The cardiac sessions will cover numerous aspects of cardiac surgery beginning with Track I:

Mitral Valve, Atrial Fibrillation, and the Left Atrial Appendage on Saturday.

Transcatheter mitral valve surgery is a particularly hot topic right now, Dr. Thourani said, noting that this session will highlight one of the most exciting current aspects of adult cardiac surgery within the arena of valve surgery: the new transcatheter

mitral valve replacement and repair techniques.

Presenters will also cover topics such as new left atrial appendage (LAA) closure devices and the recently approved MitraClip system. The session will include a "How I Do It" talk on robotic mitral valve repair, as well as a debate on whether LAA should always be eliminated during open cardiac surgery.

Continued on page 6



VINOD H. THOURANI, MD

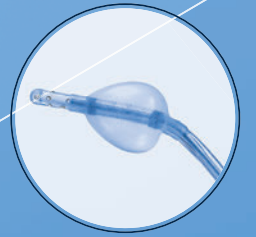


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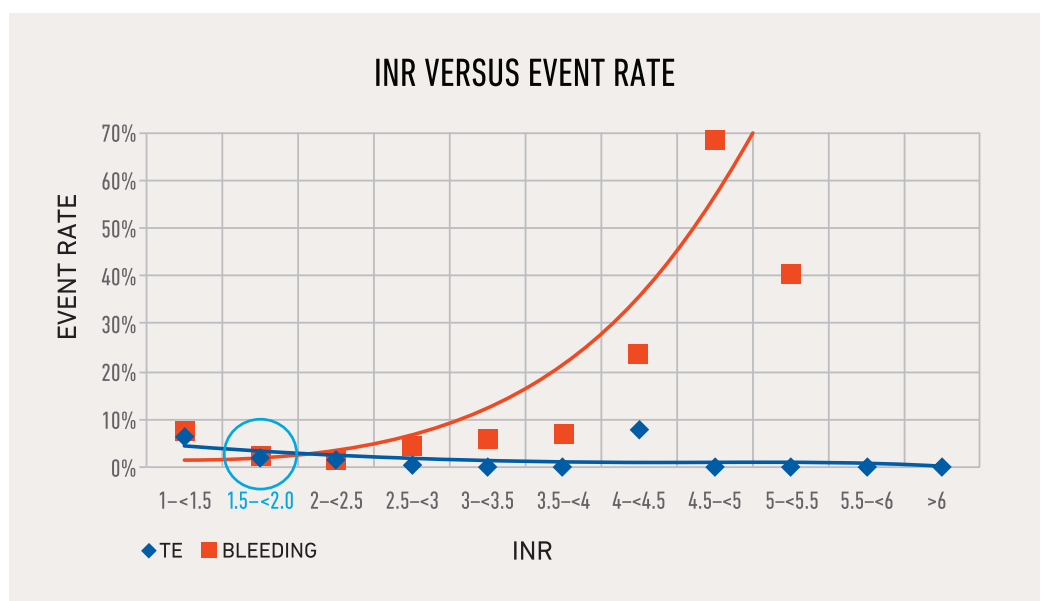
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1. Puskas J, Gerdisch M, Nichols D, et al. Reduced anticoagulation after mechanical aortic valve replacement: Interim results from the Prospective Randomized On-X® Valve Anticoagulation Clinical Trial randomized Food and Drug Administration investigational device exemption trial. *J Thorac Cardiovasc Surg.* 2014;147(4):1202-11.

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STS Staff Welcomes You to San Diego!

On behalf of the Society's staff, I join STS President Dave Fullerton in welcoming you to The Society of Thoracic Surgeons 51st Annual Meeting and Exhibition in San Diego, California. As in the past, the Annual Meeting will provide you with a wide range of educational, networking, and social offerings.

Because there is so much to experience between Saturday and Wednesday, this *STS Meeting Bulletin* will help you keep track of what's happening and provide up-to-date information about new sessions, meeting room locations, exhibitor descriptions, and much more.

Watch for the Monday and Tuesday/Wednesday editions of the *Bulletin*; the newspapers will be placed in bins throughout the San Diego Convention Center during the Annual Meeting. Check the front page left-hand column in each issue for a quick summary and update of the day's activities.

The *Bulletin* also provides a handy reference to the Exhibit Hall, which is an important component of the meeting experience. The Exhibit Hall is a great place to learn about new and improved technology and products, and it offers the perfect opportunity to see and meet with colleagues and friends. Surveys from past meetings show that the majority of attendees make a point of visiting with the exhibitors at least three times over the course of the meeting.

The STS Exhibit Hall opens its doors at 4:30 p.m. on Sunday, with a reception that runs through 6:30 p.m. Areas where snacks and refreshments will be served have been highlighted

in the Opening Reception flyer that was inserted in your meeting bag.

Take advantage of our new amenity, the TECHbar, which will be located in the Exhibit Hall. Stop by for answers to all of your technical questions. Experts can help you with both personal and professional tasks, such as downloading and using the STS Annual Meeting Mobile App, utilizing social media, improving your work productivity, troubleshooting issues with your smartphone or tablet, and more.



ROB WYNBRANDT

I hope you will also stop by the STS booth (#1111) in the Exhibit Hall. Staff members will be there, eager to talk with you about – and provide updates on – all things STS. Be sure to ask about our public reporting initiatives (both the STS/Consumer Reports collaboration and STS Public Reporting Online); exciting developments from the STS Research Center (now in its fourth year), including the STS/ACC TVT Registry™; STS National Database participation opportunities, domestically and internationally; and upcoming educational programs.

You also will want to take a moment and talk with the STS Government Relations staff, who can bring you up to date on the Society's many efforts on Capitol Hill. From coding and reimbursement issues to the implications of health care reform to important legislation relevant to cardiothoracic surgeons, STS continues to champion the specialty in Washington. Stop by and learn more. There's a lot going on – and you'll want to understand the implications for your practice.

If you are not already an STS member, please stop by the STS booth and learn about the many membership benefits we have to offer, including a complimentary subscription to *The Annals of Thoracic Surgery*, which is celebrating its 50th year in publication.

Those attendees who are not cardiothoracic surgeons – i.e., other physicians, CT surgery and general surgery residents, medical students, and all allied health care professionals – should especially note that our rolling admission process for Candidate, Pre-Candidate, and Associate Membership allows for the prompt disposition of their STS membership applications, typically within a week or two, so that they can start enjoying the benefits of STS membership almost immediately.

And if you are an STS member, please pick up a membership packet to take home to a colleague; you will be helping both your colleague and your Society.

All the scientific sessions at this 51st Annual Meeting, including the symposia, early riser sessions, breakout sessions, hands-on sessions, and invited talks, create a vast array of educational opportunities – more

than any one person could ever attend onsite. Fortunately, STS is again offering its "Online" meeting products. STS 51st Annual Meeting Online and STS/AATS Tech-Con 2015

Online are available for purchase today. These online products will allow you to catch those sessions you weren't able to attend – and review all the sessions you did attend – in the comfort of your home or office throughout the year ahead.

You can take advantage of a special reduced onsite rate if you purchase the online products while you're at the meeting. For more information and to place your

order, visit the STS booth or the online sales counter in the Ballroom 20A Foyer. Remember, once we leave San Diego, prices will be significantly higher.

In closing, please know that all of us on the staff are here to serve you. Look for the distinctive green STAFF ribbon on our name badges, and please don't hesitate to let us know if there's anything we can do to help.

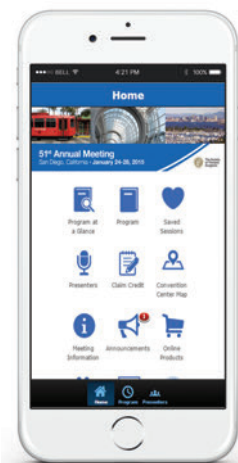
Thank you for attending, and enjoy the meeting!

Rob Wynbrandt
STS Executive Director
& General Counsel

Download the Annual Meeting Mobile App

Access the STS 51st Annual Meeting Mobile App by searching for "STS 2015" in the Apple App Store or Google Play.

You can also scan the QR code with your smartphone.



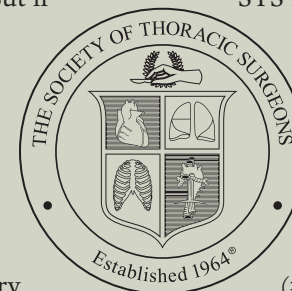
Apply Today to Become an STS Member

As an attendee of the STS 51st Annual Meeting, you are participating in the most exciting specialty in medicine. But if you are not yet an STS member, you may not be experiencing the cardiothoracic surgery specialty to the fullest.


STS membership comes with a wide range of benefits, including complimentary subscriptions to *The Annals of Thoracic Surgery*; the quarterly newsletter, *STS News*; the monthly e-newsletter, *STS Advocacy Monthly*; and more. Additionally, you'll receive reduced registration rates at future Annual Meetings and

many other educational events throughout the year, as well as discounted participation fees in the STS National Database.

Several categories of membership are offered to include anyone with an interest in cardiothoracic surgery. If you are not already a member, please stop by the STS booth (#1111) in the Exhibit Hall to talk with staff and pick up an application. If you are a member and know someone who has not yet joined, pick up an application for them! By encouraging membership in STS, you'll help your colleagues, the Society, and the specialty.



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Meeting Finally Begins

Continued from page 1

A joint session on Tuesday afternoon with the European Association for Cardio-Thoracic Surgery will highlight management of the aortic arch in aortic dissection.

Another Tuesday session with the European Society of Thoracic Surgeons will feature European and American perspectives on controversial issues, such as managing malignant mesothelioma, lung cancer screening, and credentialing.

And the STS Workforce on International Relationships is joining forces with the Joint Council on Thoracic Surgery Education on Tuesday to deliver a session exploring global surgical education.

Continuing the spirit of multi-society collaboration, STS will welcome two outstanding guest speakers at the General Session on Tuesday morning. Pedro J. del Nido, MD, President of the American Association for Thoracic Surgery, will present the Thomas B. Ferguson Lecture at 9:00 a.m.

Dr. del Nido is the Chief of Cardiac Surgery and William E.

Ladd Professor of Child Surgery at Harvard Medical School in Boston.

For the C. Walton Lillehei Lecture at 11:00 a.m., Patrick T. O’Gara, MD, President of the American College of Cardiology, will deliver a talk on “Clinical Trials at the Interface of Cardiology and Cardiac Surgery – What Would Dr. Lillehei Think?”

Dr. O’Gara is the Director of Clinical Cardiology and Executive Medical Director of the Shapiro Cardiovascular Center at Brigham and Women’s Hospital in Boston.

You can read about these sessions and more in your *Program Guide* and *Abstract Book* – two publications that you will find invaluable in planning your schedule in San Diego and also for reference when you’re back at home.

On behalf of the Society’s leadership and the 51st Annual Meeting Program Planning Committee, thank you for joining us here in San Diego. Welcome to the meeting!

David A. Fullerton, MD
STS President

Attend the STS Social Event at the USS Midway on Monday Night

Join us aboard a piece of American history – the USS Midway – for an evening of dancing, food, and cocktails. The 2015 STS Social Event will be held on Monday, January 26, from 7:00 p.m. to 10:00 p.m. Mingle with colleagues on the flight deck while admiring a 360-degree view of San Diego’s sparkling skyline, Coronado Island, and the Coronado Bridge over San Diego Bay.

Browse the meticulously restored airplanes and helicopters while savoring a renewed appreciation for courage, freedom, and service to the United States. It will be a night to remember as the evening ends with a breathtaking fireworks show over the bay.

Purchase your ticket now at Registration on the main level of the convention center.



PHOTO COURTESY USS MIDWAY MUSEUM.

The USS Midway was the longest-serving Navy aircraft carrier of the 20th century. Sixty historical exhibits and 29 restored aircraft are featured on board.

Tech-Con Explores Latest Technology

Continued from page 1

The adult cardiac sessions will continue on Sunday with a session on Coronary Artery Disease (Track II), Aortic Valve (Track III), Aortic Surgery and Endovascular Interventions (Track IV), and Ventricular Heart Devices (Track V).

New hybrid techniques in coronary artery disease surgery will be highlighted in the Coronary Artery Disease session, which will also include a thorough review of data and more “how-to” guidance, Dr. Thourani said.

The aortic valve session should also prove to be exciting. Transcatheter aortic valve replacement has transformed aortic valve surgery worldwide, and Sunday’s session will provide updates on not only new sutureless techniques, but also emerging technologies for transcatheter valve replacement, he noted.

The general thoracic tracks

include Novel Thoracoscopic Techniques & Tools, New Developments in Management of Lung Tumors (Track I) on Saturday, and Integrated Medical Records, 3D Printers for Surgical

Planning, Chest Wall Techniques, Artificial Organs, and Simulation (Track II), and New Techniques for Esophageal Disease, Diaphragm Disorders, and Nanotechnology (Track III) on Sunday.

“In general thoracic surgery, I think we really have put together a very exciting program

this year,” said Tech-Con Task Force Co-Chair K. Robert Shen, MD, of the Mayo Clinic in Rochester, Minn. “Nanotechnology, the use of 3D printing to make models for surgical planning, and decellularization of whole organs as a platform for bioengineered organs – these are technologies that aren’t science fiction anymore, but are entering clinical practice and are expected to be major forces going forward.”

Tech-Con provides a glimpse into the future and a path for adjusting your practice to stay competitive and up-to-date on emerging technologies.

Make Your Voice Heard

Several scientific sessions at this year’s meeting will feature an audience participation opportunity. STS has partnered with Poll Everywhere, a company that provides web-based audience response software, to create a process that will allow you to share your opinion via your cell phone, other mobile device, or laptop.

During those sessions that include this polling feature, moderators will display questions onscreen and provide multiple-choice answers from which to choose.

You’ll simply select the answer you support and send a text message or vote via the web with the corresponding number. Responses are displayed in real-time, giving you an instant view into what your colleagues are thinking.

The following sessions throughout the Annual Meeting will showcase this polling feature.

Additionally, these sessions are indicated with a checkmark icon in the *Program Guide* and *Abstract Book*.

Saturday, January 24

STS/CHEST: Primer on Advanced and Therapeutic Bronchoscopy—Theory and Hands-on Session

Sunday, January 25

Parallel Surgical Symposium: Congenital

Monday, January 26

ACC @ STS
Congenital Session: Pediatric Congenital I
Evidence and Quality Reshaping Practice

Tuesday, January 27

Adult Cardiac Session: Aortic Valve
Adult Cardiac Session: Mitral Valve
Congenital Session: Pediatric Congenital II
Ethics Debate: Must Surgeons in Training Programs Allow Residents to Operate on Their Patients to Satisfy Board Requirements?
General Thoracic Session: Lung Cancer II

More detailed instructions will be provided on slides at the sessions.

Demystifying Hybrid Coronary Revascularization

The hybrid approach to coronary revascularization has been around for a decade, but surgeons have been slow to adopt it, said Michael E. Halkos, MD, MSc, of Emory University Hospital in Atlanta, who has performed more than 450 hybrid procedures over the past 5 years.

The slow adoption is partially due to a steep learning curve. "The most critical part of the learning curve occurs during the first 100 cases, but is an ongoing and continuous process," Dr. Halkos acknowledged. Another factor, he said, is a misperception among surgeons that hybrid procedures are being recommended to patients who would be better treated with a traditional sternotomy.

Hybrid coronary revascularization generally consists of a minimally invasive left internal mammary artery (LIMA) bypass graft to the left anterior descending artery (LAD), combined with stenting to achieve complete revascularization. It can also involve multivessel grafting combined with stenting.

"I try to impress upon surgeons that I'm not doing cases that my partners would otherwise be doing – I'm doing cases that surgeons would otherwise never see. We're treating the LAD

with the LIMA in patients who would normally be treated with stents only," Dr. Halkos said. The hybrid part "is just the fact that you aim to achieve complete revascularization for patients with multivessel disease with a combination of surgery and stenting."

In his Sunday morning talk, "Hybrid Coronary Revascularization: Who's Eligible?," Dr. Halkos will draw on his extensive experience to help surgeons better understand how the hybrid revascularization approach works and how to select the patients best suited for it.

Dr. Halkos wants surgeons to understand that they're not locked into one narrow surgical approach when performing minimally invasive grafting. "My goal is to have more surgeons doing this with whatever approach they're most comfortable with," he said. "There are a lot of ways to do this – MIDCAB, MICS CABG, robotic-assisted CABG, TECAB."

The common factors of a hybrid coronary revascularization procedure involve a one- or two-stage sternal sparing LIMA-LAD graft combined with stenting of a non-LAD lesion for patients with multivessel coronary disease. Eligible patients should have non-LAD lesions that are relatively straightforward for a percutaneous approach. Also, coronary anatomy (SYNTAX score) and comorbidities such as diabetes need to be taken into consideration. Dr. Halkos said that at Emory, most procedures are now staged days or weeks apart.

Of the patients he sees at Emory with multivessel disease, Dr. Halkos said only 25%-30% are eligible for a hybrid revascularization approach. "Patients should have favorable LAD anatomy for a minimally invasive operation and favorable non-LAD anatomy for percutaneous intervention."

The goal "is not to offer this approach for patients with multivessel disease who would be best treated with multivessel grafting," but patients who would otherwise be treated with stents only. Patients with severe multivessel disease, those with complex disease and diabetes, "are not the target patients for a hybrid procedure," he said.

And all patients, whether seemingly suited for a hybrid procedure or not, "have to be well informed of all their other surgical, percutaneous, and

medical options," he said.

Dr. Halkos stressed that a successful hybrid revascularization procedure involves more than choosing the right patient. "Patient selection is critical, but other key factors for building a hybrid revascularization program include strong institutional support, a dedicated operative and anesthesia team facile with robotic or minimally invasive CABG procedures, and strong collaboration and buy-in from the cardiologist," he said.

"Building a minimally invasive CABG and hybrid revascularization program requires a multidisciplinary team approach."

Tech-Con Adult Cardiac Track II
SUNDAY, 8:00 a.m. – 9:30 a.m.
Ballroom 20D

Shuttle Bus Schedule

All official STS hotels are located within walking distance of the San Diego Convention Center; however, supplemental complimentary shuttle service will be provided between the hotels and convention center beginning Friday, January 23. The shuttles will operate every 25 minutes.

Friday, January 23	2:45 p.m. – 6:15 p.m.
Saturday, January 24	6:45 a.m. – 7:00 p.m.
Sunday, January 25	6:30 a.m. – 7:00 p.m.
Monday, January 26	6:00 a.m. – 7:00 p.m.
Tuesday, January 27	6:00 a.m. – 6:00 p.m.
Wednesday, January 28	6:00 a.m. – 12:00 p.m.

*Times subject to change. Please see the schedule in each hotel's lobby for the most up-to-date information.

Schedule from page 1

10:15 a.m. – 11:45 a.m.

Tech-Con 2015: Adult Cardiac Track III
Ballroom 20D

Tech-Con 2015: General Thoracic Track III
Room 33ABC

1:00 p.m. – 4:00 p.m.

Residents Symposium: Transitioning From Residency to a Successful Practice
Room 28CD

1:15 p.m. – 2:45 p.m.

Tech-Con 2015: Adult Cardiac Track IV
Ballroom 20D

1:15 p.m. – 4:30 p.m.

Parallel Surgical Symposium: Congenital
Room 32AB
Parallel Surgical Symposium: General Thoracic
Room 33ABC

2:00 p.m. – 6:30 p.m.

Scientific Posters Open
Rooms 29-32 Foyer

2:30 p.m. – 4:30 p.m.

CT Surgery Interprofessional Education Symposium: Multidisciplinary Team Approach to ECMO
Room 30E

3:10 p.m. – 4:30 p.m.

Tech-Con 2015: Adult Cardiac Track V
Ballroom 20D

4:30 p.m. – 6:30 p.m.

Opening Reception in STS Exhibit Hall
Exhibit Hall

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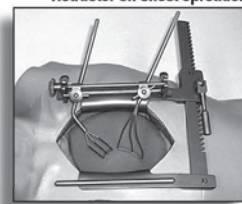
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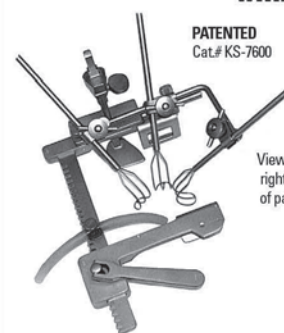
Gillinov™/Maze Self Retaining Retractor on Chest Spreader



Gillinov™/Maze Self Retaining Retractor Blades

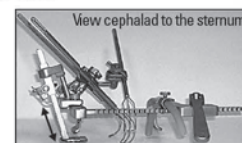
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View from right side of patient



View from left side of patient



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Booth #1032



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Nanotechnology: What's in It for the Cardiothoracic Surgeon?

Nanocrystals, nanofibers, nanoshells, and quantum dots may sound like terms from science fiction, but these tiny, hyper-engineered particles are real, and cardiothoracic surgeons would do well to get to know them, said Yolonda L. Colson, MD, PhD.

In her Sunday morning talk on nanotechnology, Dr. Colson, Associate Administrative Chief for the Thoracic Surgery Division and the Director of the Women's Lung Cancer Program at Brigham and Women's Hospital in Boston, Mass.,

will review the most promising platforms in nanotechnology and discuss their potential applications in cardiothoracic surgery.

All nanotechnology platforms amount to very small – often virus-size – delivery devices for anything from anticancer drugs to imaging chemicals and gene therapies. Some can do double duty, carrying more than one of these at a time. The particles are being investigated for a wide range of applications in medicine and surgery.

Dr. Colson is part of a research team working on microscopic polymer fibers that can be used to place chemotherapy drugs around

suture sites once a tumor is removed. While many nanotechnology applications are being developed for systematic use in metastatic disease, “ours is focused on preventing local recurrence, or treating locally advanced disease,” she said. “It's a very surgeon-centric approach.”



YOLONDA L. COLSON, MD, PHD

Placing anticancer therapies into a woven nanofiber mesh and then applying the material to the site of an excised tumor can allow a much higher concentration of a drug to reach the peritumoral tissues than with intravenous administration of the same drug. “You

can get much more drug to the tumor without reaching toxic levels systematically,” Dr. Colson said.

Some of the fibers Dr. Colson is working with allow for precise timing of drug delivery – starting to release, for example, only after a surgical site has had time to heal. Nanotechnology materials can also allow for stimuli-responsive delivery, using temperature or pH level to trigger drug release.

Dr. Colson said animal studies have revealed another potential benefit from this approach to drug delivery. Among mice whose lung tumors were injected with drug-infused nanoparticles, “we

dropped the rate of metastases to lymph nodes by 50% – and that was without surgery for the primary tumor. The nanoparticles killed the tumor and then, because they're so small, traveled down the lymphatic system and killed any cancer cells there,” she said.

In humans with lung cancer, “if we could put a woven nanofiber mesh containing chemotherapy on top of a suture line after a tumor is removed and deliver chemotherapy through the lymphatics to the lymph nodes, we might be able to prevent recurrence and not have to remove so much lung,” she said.

Dr. Colson also believes that nanotechnology platforms have potential as “theranostics” – combining diagnostic and therapeutic properties in a single entity. For example, in addition to carrying a therapeutic drug or siRNA, some nanodevices can also specifically target tumor cells and fluoresce or release an image signal indicating where tumor is encountered.

“Having a fluorescent signal mark tumor cells at the edge of a surgical specimen would offer a way of being able to check that your surgical margin is truly negative, whereas having a nanoparticle fluoresce to indicate how much tumor and deliver a drug to only those cells with a tumor-specific enzyme is where the next generation is going,” she said.

Furthermore, “being able to simultaneously label the location of the residual tumor cells, deliver a drug only to the cancer cells, and

then follow the nanoparticle signal to assess for therapeutic response would be a whole new level of care.”

Only a few nanotechnology platforms so far have met regulatory approval or entered phase I trials, but more are in the pipeline. Nanotechnology is continually evolving, and Dr. Colson said investigators and regulators want to make sure that the particles aren't toxic, have limited uptake by the immune system, and don't cause cancer or lead to organ impairment in the long term.

“The challenges are going to be assuring safety, proving better efficacy and delivery, and finding those applications that fundamentally improve patient outcomes,” she explained.

Nonetheless, “if we can show what these particles can do, how they're different from one another, their limitations, and what the risks are, surgeons will find new ways to use them for their patients and will see the potential for research collaborations,” Dr. Colson said.

“My goal is to update surgeons as to what the future of nanotechnology potentially looks like, so that surgeons can be active participants in testing and inventing new applications aimed at solving surgical problems.”

Tech-Con General Thoracic Track III

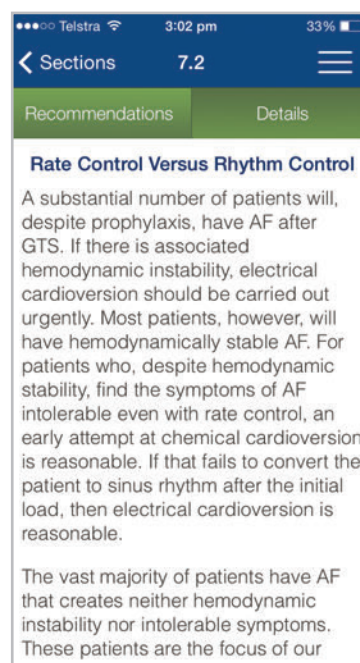
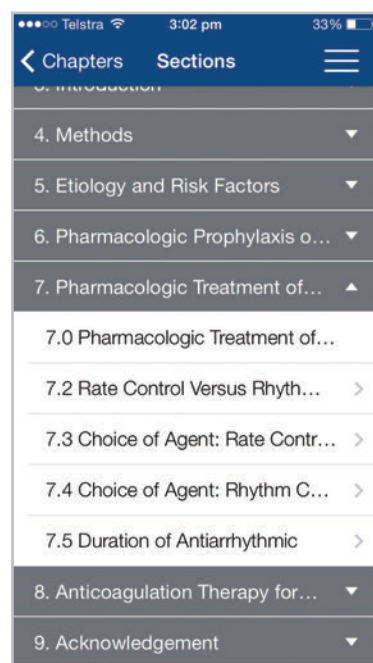
SUNDAY, 10:15 a.m. – 11:45 a.m.
Room 33ABC

Download the New STS Guidelines App

Have clinical decision-making aids at your fingertips – even when you're on the go – with the new STS Clinical Practice Guidelines App, now available in the Apple App Store for your iPhone or iPad.

Search for “STS Clinical Practice Guidelines App” in the App Store to download the free app, which provides all of the Society's clinical practice guidelines in a mobile-friendly format. The app features real-time updates, so whenever a new guideline is added to the library, your app will be up-to-date.

Browse through individual guidelines or search by keyword to easily find what you're looking for. Free registration is required (name and e-mail address) to access the full content.



Thank you!

The Society of Thoracic Surgeons gratefully acknowledges the following companies for providing educational grants for the STS 51st Annual Meeting. This list is accurate as of January 7, 2015.

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HeartWare
St. Jude Medical
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Join the Conversation Online!

Like the STS Facebook page at www.facebook.com/societyofthoracicsurgeons and follow STS on Twitter at [@STS_CTSurgery](https://twitter.com/STS_CTSurgery) for information about San Diego and the Annual Meeting.



If you tweet about the Annual Meeting, be sure to use the hashtag #STS2015.

After the Annual Meeting is over, the STS Facebook and Twitter pages will continue to deliver news on future STS events and CME credit opportunities.



Update Your STS Membership Information

Attention STS members: Be sure to stop by the STS booth (#1111) in the Exhibit Hall to update your contact information and pay your membership dues.

While you're there, take a moment to speak with STS staff about how you can take advantage of your member benefits.

Review STS University Lecture Material Online

Like last year, STS University wet labs will feature only hands-on learning. No didactic lectures will be given during the activity, so attendees are encouraged to access the lectures online prior to Wednesday morning.

You can access the lectures at the Computer Stations located in Lobby E and the Ballroom 20D Foyer. You can also access them from your own computer or mobile device by visiting www.sts.org/annualmeeting.

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New Mitral Valve Technology Should Involve Surgeons

New technology is making it easier to treat inoperable patients with mitral valve disease, and it's important that surgeons are involved in the process, according to Gorav Ailawadi, MD, from the University of Virginia, Charlottesville. He will discuss a mitral valve clip system and its use as part of the STS/AATS Tech-Con 2015 session "Mitral Valve, Atrial Fibrillation, and the Left Atrial Appendage" on Saturday afternoon.

The US Food and Drug Administration approved the first percutaneous mitral valve repair system in 2013 for the treatment of degenerative mitral valve regurgitation, but few US surgeons are using the system, said Dr. Ailawadi. "Most surgeons never see these patients because they aren't referred to us," he explained.

More than 18,000 patients have been

treated using the system worldwide, mainly in Europe, where the system is approved for both degenerative and functional mitral valve regurgitation.

Clinical trials, which began in 2006, demonstrated that the mitral valve clip system safely and effectively reduced the amount of mitral regurgitation. Those trials – the Endovascular Valve Edge-to-Edge Repair Study II and the Real World Expanded Multi-center Study of the MitraClip System – were both sponsored by MitraClip manufacturer Abbott.



GORAV AILAWADI, MD

"We are not saying that the mitral valve clip system is as good as surgery for correcting mitral valve regurgitation, but in patients who are not good candidates for surgery, the mitral valve clip is an excellent alternative," Dr. Ailawadi said, adding that "it is important that surgeons are at the table to perform this procedure."

The mitral valve clip system is used in the catheterization lab or hybrid operating room in about 60 centers throughout the United States. Since it doesn't require cutting, an operating room and surgical team are not required, but it is a challenging procedure in the sense that you need high-quality imaging, understanding of 3D anatomy, and understanding of echo. "I don't think all cardiologists have those skills, but a lot of surgeons do.

Yet, only about 10 US surgeons are performing the procedure in its

entirety," explained Dr. Ailawadi. "In most places, cardiologists are performing the procedures and surgeons are functioning primarily as gatekeepers. At the very least, surgeons should be dedicated to performing the procedure in heart teams."

He said he wants surgeons to embrace percutaneous mitral valve technology just as they have transcatheter aortic valve replacement (TAVR) technology. He admits, though, that TAVR is a little different in that both a cardiologist and surgeon are required during that procedure.

Dr. Ailawadi said he expects that these devices will be approved in the United States. Their use is being studied in the ongoing Clinical Outcomes Assessment of the MitraClip Percutaneous Therapy for Extremely High-Surgical-Risk Patients (COAPT trial) in the United States and Canada.

This is first of many technologies that are coming for percutaneous mitral valve repair or replacement. "I think this is a chance for surgeons to get involved," he said.

Tech-Con Adult Cardiac Track I
SATURDAY, 3:15 p.m. – 5:00 p.m.
Ballroom 20D

Reminder: No Photos or Recordings

Please keep in mind that the use of cameras and recording devices is prohibited during scientific sessions at

the STS 51st Annual Meeting, unless used by authorized personnel. Thank you for your cooperation.



The Society
of Thoracic
Surgeons

52ND ANNUAL MEETING & EXHIBITION

PHOENIX, ARIZONA

JANUARY 23–27, 2016

www.sts.org/annualmeeting

Abstract Book Updates

The following speakers have changed from the STS 51st Annual Meeting *Abstract Book* and/or their disclosures were not available at the time of publication:

Saturday, January 24

Tech-Con Joint Session

1:34 p.m., Perspective From Research and Development: General Thoracic Surgery

Christopher Papa, Cincinnati, OH

COMMERCIAL RELATIONSHIPS:

C. Papa: Employment, Ethicon, Inc.

2:08 p.m., Decision Making for Pathway of Reimbursement: Hospital and Physician
Louis B. Jacques, Washington, DC

Tech-Con General Thoracic Track I

3:35 p.m., Uniportal VATS Lobectomy in Non-Intubated Patients

Diego Gonzalez Rivas, Madrid, Spain

Sunday, January 25

Residents Symposium

1:25 p.m., Keys to a Successful Interview

Ravi K. Ghanta, Charlottesville, VA

Reception Being Held for STS-PAC Contributors on Monday Evening

Join us on Monday, January 26, for a special reception in support of STS-PAC, the only political action committee representing the interests of cardiothoracic surgery.

The STS-PAC reception will be held from 6:45 p.m. to 7:45 p.m. in the Presidio Room at the San

Diego Marriott Marquis.

Come learn about how STS-PAC is helping to support STS advocacy in Washington, D.C.

This event is open to all US members of STS who contribute to STS-PAC in 2015.

Contributions will be accepted at the door.

Consider Local Therapies for Pulmonary Metastatic Disease

As patients with pulmonary metastatic disease live longer and multimodal approaches to treatment become more important, cardiothoracic surgeons may want to consider local interventions in such patients, according to Jessica S. Donington, MD, MS, of New York University Medical Center.

Pulmonary metastatic disease is common, but use of local therapies in this setting has so far been relatively rare. "Pulmonary metastasectomies are now being done more frequently, not only because surgical techniques are better and less invasive, but also because chemotherapy for colon and breast cancer has gotten so much better. It may seem counterintuitive, but as systemic therapy improves, there are more indications for local interventions in patients with limited metastatic disease," she said.

A recent analysis of the National (Nationwide) Inpatient Sample demonstrated a 7.5% average annual increase in the rate of pulmonary metastasectomy done in the United States each year from 2001 to 2011. "Suddenly, local therapies make a lot more sense when one is dealing with a single slow-growing site," Dr. Donington added.

On Saturday afternoon during the STS/AATS Tech-Con 2015 "General Thoracic Track I: Novel Thoroscopic Techniques & Tools, New Developments in Management of Lung Tumors," she will discuss local approaches for the treatment of pulmonary metastatic disease.

Dr. Donington's talk will focus on the use of surgical metastasectomy and other local therapies that may be an option in such patients, including stereotactic body radiotherapy (SBRT), regional chemotherapy techniques, and percutaneous therapies like radiofrequency ablation (RFA), cryotherapy, and microwave ablation.

"As surgeons, we tend to think of surgery first for these patients, but pulmonary metastatic disease may actually be the ideal setting for CT-guided ablative therapies, and these technologies deserve increased attention. Ablative therapies might be better suited here than for the primary lung cancer treatment, since wide treatment margins and nodal staging are not as important," she said.

Surgery is considered by many as the first line in local control for pulmonary metastatic disease, but other,

noninvasive local therapies are being used with increasing frequency.

"I think the advantage of these therapies is that they are less invasive, and they are more easily done over and over again," she said, adding that there also can be a lot of "mixing and matching" of different approaches.

A patient who has undergone a surgical metastasectomy, but recurs



JESSICA S. DONINGTON, MD, MS

several years later with a lesion that is central or challenging to access due to scarring, or who may have limited pulmonary reserve, might be a patient who could benefit from SBRT or RFA, she noted.

"It's very individualized, and I think that just because someone might not be a surgical candidate anymore for metastasectomy doesn't mean there aren't local therapies that could benefit them. We need to think about using multiple local therapies, one after the other or in combination, in patients with limited metastatic disease and good quality of life," she said, adding that many of these patients are relatively young, with slow-growing disease. "I believe, in the correct setting, that pulmonary metastasectomies are valuable and prolong life, so I hope that I open up people's minds that this is something they should consider in their practice for well-selected patients with limited metastatic spread. My second goal would be to educate surgeons about less invasive interventions to obtain the same goal," she said, explaining that radiation oncology or interventional radiology can be very useful in patients for whom surgery is not the best option.

Tech-Con General Thoracic Track I
SATURDAY, 3:15 p.m. – 5:00 p.m.
Room 33ABC

PATIENT DAY 2015 AT EDWARDS LIFESCIENCES



A Celebration for the Heart Valve Community

Edwards Lifesciences is proud to present Patient Day 2015, a day-long event where recipients of Edwards' heart valve technology come together and connect with one another.

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MARCH 13, 2015
IRVINE, CA

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New Technologies Address Aortic Problems

Aortic surgery and endovascular interventions will be the focus of Sunday's "Adult Cardiac Track IV: Aortic Surgery and Endovascular Interventions," during STS/AATS Tech-Con 2015. The session will feature a key presentation by Bradley G. Leshnower, MD, on acute type B aortic dissection.

"My lecture will be a case-based presentation that will focus on technical tips regarding the endovascular treatment of acute type B aortic dissection complicated by malperfusion and rupture," said Dr. Leshnower, who is an Assistant Professor of Surgery at Emory University in Atlanta. "Emphasis will be placed on the use of intravascular ultrasound, branch vessel stenting, extended thoracic aortic endografting and dissection-specific devices."

Dr. Leshnower hopes that his presentation, "How I Do It: Thoracic Endovascular Aortic Repair (TEVAR) for Type B Aortic Dissection," will allow attendees to "[come] away with a basic algorithm on how to approach all variations of acute type B aortic dissection."

The session on aortic surgery



BRADLEY G. LESHNOWER, MD

and endovascular intervention will give attendees a peek at state-of-the-art open and endovascular techniques from experts in the field of treating commonly identified aortic pathology. Dr. Leshnower and eight other presenters will speak on several variations of thoracic aortic surgical procedures and how related outcomes can be improved through the use of new techniques and technology.

"The session's topics are intended

to be provocative and encourage discussion by addressing controversial issues and updating the audience on novel endovascular technology," Dr. Leshnower said.

The session begins with two lectures – one by Emmanuel Lansac, MD, PhD, of Paris, France, and the other by Joseph E. Bavaria, MD, of Philadelphia. The first will address the use of an expandable aortic ring and the other will speak on techniques for performing valve-sparing aortic root replacement on bicuspid aortic valves.

The discussion will then move into a timely debate on the optimal method of cerebral protection during aortic arch surgery, which will be followed by a discussion of hybrid techniques to address arch pathology, featuring presentations from Leonard N. Girardi, MD, of New York City, and Joseph S. Coselli, MD, of Houston, among others.

The discussion will then shift its focus onto the descending aorta and provide attendees with an update on the evolving branched thoracic aortic stent graft technology used to treat the distal arch and descending aorta. Subsequently,

there will be presentations on open and endovascular treatment of type B aortic dissection and, finally, the evolving topic of TEVAR for treatment of ascending aortic pathology using a transapical approach. Speakers for these topics include Himanshu J. Patel, MD, of Ann Arbor, Mich.; Michael P. Fischbein, MD, of Stanford, Calif.; Wilson Y. Szeto, MD, of Philadelphia; and Dr. Leshnower.

"The overall take-home message is that thoracic aortic surgical outcomes continue to improve with evolving techniques," said Dr. Leshnower. "Thoracic aortic pathology, which historically has been associated with high morbidity and mortality, can now be safely treated with excellent outcomes due to advancements in open and endovascular techniques, and novel cerebral perfusion strategies."

The session will be moderated by Joseph D. Schmoker, MD, of Burlington, Vt., and Dr. Patel, who also will be presenting.

Tech-Con Adult Cardiac Track IV

SUNDAY, 1:15 p.m. – 2:45 p.m.
Ballroom 20D



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Save 50% when you purchase STS 51st Annual Meeting Online and/or STS/AATS Tech-Con 2015 Online before the end of the meeting!

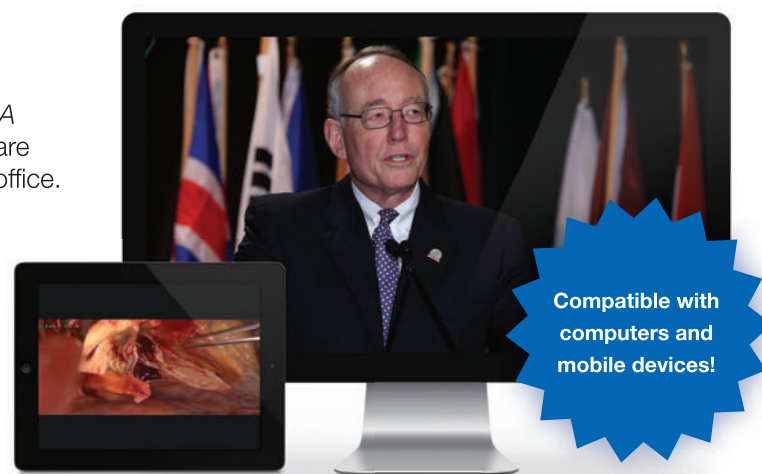
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- Registration in Lobby D
- STS Booth 1111 in the Exhibit Hall
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You can also order online at www.sts.org/amonline.

Savings expire after January 28, 2015!



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

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STS/AATS Tech-Con 2015 Online

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Attend Industry Satellite Activities

Satellite activities are programs offered by industry and held in conjunction with the STS 51st Annual Meeting. They are not developed or sponsored by STS.

Saturday, January 24

Abbott Vascular

Emerging Transcatheter Mitral Valve Technologies: Where Does the Surgeon Fit into this Paradigm?
7:00 p.m. – 10:00 p.m.
Manchester Grand Hyatt San Diego – Seaport FG

AtriCure, Inc.

The Left Atrial Appendage: A New Surgical Frontier
7:00 p.m. – 10:00 p.m.
Hard Rock Hotel San Diego – The Edge Ballroom

Baxter Healthcare Corporation/CMEology

Preventing Bleeding-Related Complications: Controversies, Consensus, and Costs
7:00 p.m. – 10:00 p.m.
Marriott Marquis & Marina San Diego – Marina Ballroom D, E, F

Sunday, January 25

Ethicon

Tricks of the Trade: An Advanced VATS Video Review + Panel Discussion
7:00 p.m. – 10:00 p.m.
Marriott Marquis & Marina San Diego – San Diego Ballroom C

On-X Life Technologies, Inc.

New Technology in Mitral Chordal Replacement
7:00 p.m. – 10:00 p.m.
Marriott Marquis & Marina San Diego – Marina Ballroom G

Tuesday, January 27

ConvaTec

Advances in Cardiothoracic Surgery
6:00 a.m. – 7:15 a.m.
Manchester Grand Hyatt San Diego Harbor Ballroom AB

JOMDD/Admedus

Wet Lab Training: Aortic Valve Reconstruction Using CardioCell Directed by Dr. Ozaki
6:30 p.m. – 10:00 p.m.
Manchester Grand Hyatt San Diego Cityview AB

Sign Up for Sunday's Parallel Surgical Symposia

General thoracic and congenital heart surgeons have their pick of two outstanding educational programs on Sunday from 1:15 p.m. to 4:30 p.m.

The General Thoracic Parallel Surgical Symposium will help attendees address gaps in knowledge on current treatments. "The General Thoracic Parallel Surgical Symposium will cover a wide range of topics and provide solutions that are very practical so that any practicing thoracic surgeon can immediately benefit," explained Jules Lin, MD, Co-Chair of the Surgical Symposia Task Force.

Congenital heart surgeons will need to be on their toes during the Congenital Heart Parallel Surgical Symposium. This year, the Symposium will be conducted like Monday morning rounds.

The agenda will alternate between the presentation of "Tough Problems" and "Clinical Scenarios." Tough Problems will feature presentations from experts on how they've treated difficult clinical situations.

For the Clinical Scenarios,

volunteers will present a real clinical scenario and at least three reasonable courses of action.

Ad hoc panelists, who will not have advance knowledge of the case, will be called upon to select a course of action. Audience members will then be able to share their opinions via electronic polling. Finally, the staff surgeon involved in the clinical scenario will describe the actual course of action taken.

"In Monday rounds, you never know what's coming at you, and there are no clear answers. That's exactly what we are trying to recreate," said Christopher A. Caldarone, MD, Co-Chair of the Surgical Symposia Task Force. "Sign up for these ticketed sessions today at Registration in Lobby D on the main level of the convention center."

Parallel Surgical Symposium: Congenital

SUNDAY, 1:15 p.m. – 4:30 p.m.
Room 32AB

General Thoracic

SUNDAY, 1:15 p.m. – 4:30 p.m.
Room 33ABC

Practice Management Summit to Focus on the Evolving Health Care Marketplace

The passage of the Affordable Care Act and activation of the insurance coverage mandate have led to changes in the health care marketplace that affect cardiothoracic surgeons' practice patterns. Hospital-based employment continues to grow, and the focus is slowly but surely shifting toward outcomes-based performance measurement tied to compensation. As the "employed" physician trend becomes more popular, a physician's work value and contribution to the health system are being measured in novel ways. In addition, new proposals from payers for unbundling services may represent new challenges or opportunities.

The 2015 Practice Management Summit at the STS 51st Annual Meeting will address many of these changes. During the first half of the Summit, speakers will outline the underpinnings of the Affordable Care Act and its intersection with the marketplace as it is happening today. In addition, speakers will address whether work Relative Value Units are really the best model for cardiothoracic surgery, as opposed to a more comprehensive valuation of the surgeon's contribution to the entire cardiothoracic service line for a hospital or hospital system. This discussion will segue into how to best utilize these measures of value when contracts are negotiated. The ways in which cardiothoracic surgeons can provide leadership will be explored,

followed by an open panel discussion covering these topics in more detail and addressing specific participant concerns.

The second half of the Summit will look at health policy in the final years of the Obama presidency and beyond. Presentations will focus on the specifics of how health care reform will continue to impact cardiothoracic surgeons. Physician-led governance and practice management will be discussed. In addition, speakers will address the opportunities available for surgeon leaders outside of the OR, whether within industry, government, or health care systems.

As change continues to sweep through the health care landscape, STS and the Workforce on Practice Management continue to seek out experts who can bring focus and information to our membership that will be useful and current. The Summit's program has been constructed to provide broad policy updates and information, while also providing specifics on practical topics, such as contracts and compensation.

The Summit will be held on Sunday from 7:50 a.m. to 12:00 p.m. Sign up to attend this ticketed session at Registration in Lobby D on the main level of the convention center.

Practice Management Summit

SUNDAY, 7:50 a.m. – 12:00 p.m.
Room 32AB

How to Claim CME Credit

The STS 51st Annual Meeting utilizes an entirely electronic evaluation and CME/Perfusion CEU credit claim process. Both physicians and perfusionists can use this system to claim credit, complete evaluations, and print CME/Perfusion CEU certificates. Certificates of Attendance are also available for other attendees and international physicians not wishing to claim CME credit. Attendees will not be able to evaluate and claim CME/Perfusion CEU credit for ticketed sessions unless they have registered for those sessions. Please note that CME credit is not available for the Cardiopulmonary Bypass Simulation Course, Residents Symposium, or Residents Luncheon. Attendees can complete the overall meeting evaluations and all individual

session evaluations onsite at CME Stations located in Lobby E and the Ballroom 20D Foyer. Certificate printing is available. Attendees can also access evaluations and CME/Perfusion CEU credit by going to the online evaluation site on personal computers or handheld devices at www.sts.org/2015evaluation. You can also access the site through the STS Mobile App. To make this process more convenient for attendees, the meeting evaluations will be available online through February 11, 2015. Attendees can log in to the website with the following information:

Username: 6-digit member ID number located at the lower left-hand side of the meeting badge.
Password: First initial and last name.

Don't Miss Sunday's Opening Reception in the Exhibit Hall

Help kick off the STS 51st Annual Meeting by attending the Exhibit Hall Opening Reception on Sunday from

4:30 p.m. to 6:30 p.m. Check your STS meeting bag for a flyer showing which exhibitors will be providing refreshments.

Visit the Tech-Con Exhibits



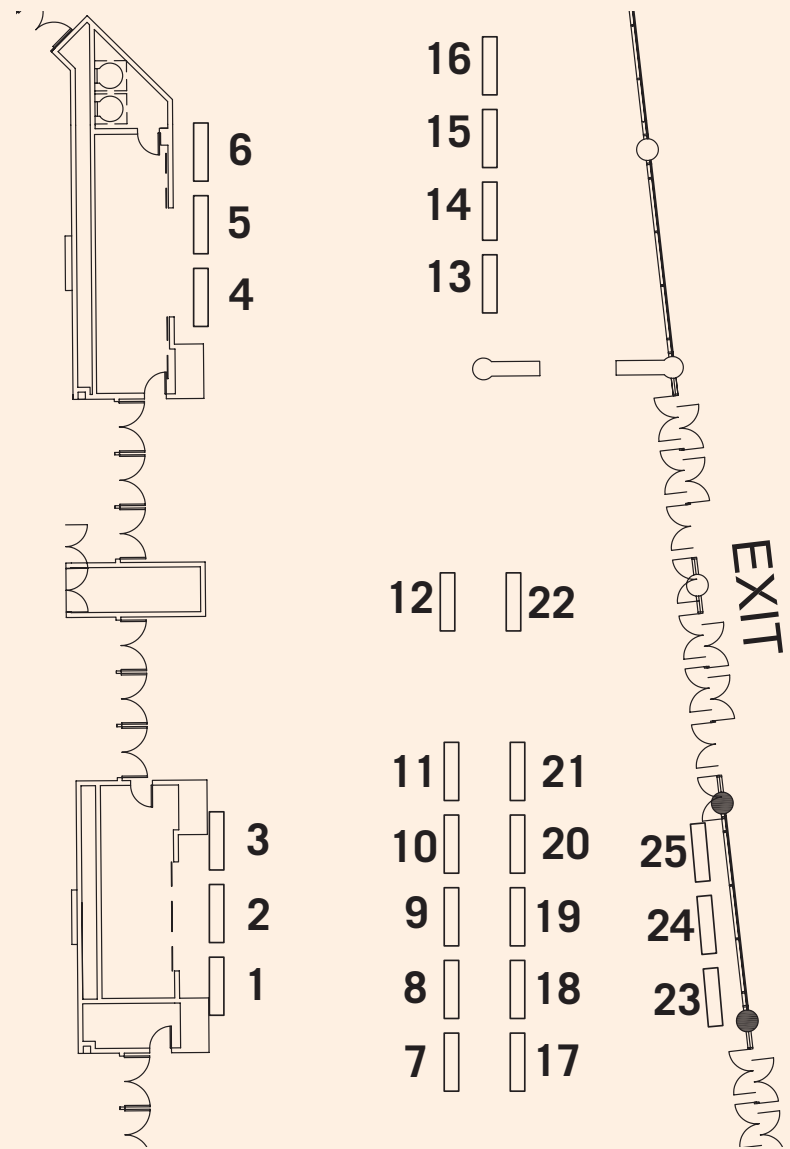
MARTIN ALLRED

As in previous years, Tech-Con attendees will have the opportunity to learn about new products and services in cardiothoracic surgery at the exhibits.

STS/AATS Tech-Con 2015 Exhibits

JANUARY 24-25, 2015
BALLROOM 20 FOYER

Exhibit Hours
Saturday, 12:00 p.m. – 6:30 p.m.
Sunday, 7:00 a.m. – 3:00 p.m.



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CryoLife.....	4
Edwards Lifesciences	11
HeartWare.....	15
Kapp Surgical.....	9
MAQUET	8
Medistim	1
Medtronic.....	2
Rultract/Pemco	14
Scanlan International.....	3
Sorin Group	22
SynCardia Systems, Inc.....	7
Thoratec Corporation	10
Vitalitec Geister.....	6
Wexler	12

(as of January 7, 2015)



Looking for a new opportunity?

Visit the 2015 STS/CTSNet Career Fair in the 200 aisle of the Exhibit Hall!

Monday, January 26 9:00 a.m. – 4:30 p.m.
Tuesday, January 27 9:00 a.m. – 3:00 p.m.

www.sts.org/careerfair



STS 51st Annual Meeting Exhibitors

3si Surgical Safety Solutions 634

Burlington, MA
3si markets a speech recognition-driven software solution that resides in the OR to track the surgical team's procedural workflow. It has an embedded electronic checklist that extends from preoperative to postoperative phases and alerts the team when activities are missed. Use of the 3si HUB improves situational awareness, promotes effective communication, and encourages better teamwork.

A&E Medical Corporation 922

Durham, NC
A&E Medical's products include MYO/Wire® temporary pacing wires, MYO/Wire II sternum wires, MYO/Punch rotating surgical punch, MYO/Lead disposable patient cable, and DoubleWire high-strength sternal closure system.

STS Exhibit Hall Hours

Sunday, January 25
4:30 p.m. – 6:30 p.m.

Monday, January 26
9:00 a.m. – 4:30 p.m.

Tuesday, January 27
9:00 a.m. – 3:00 p.m.

Abbott Vascular 427

Santa Clara, CA
Abbott (NYSE: ABT) is a global health care company devoted to improving life through the development of products and technologies that span the breadth of health care. With a portfolio of leading, science-based offerings in diagnostics, medical devices, nutritionals, and branded generic pharmaceuticals, Abbott serves people in more than 150 countries and employs approximately 70,000 people.

ACUTE Innovations 221

Hillsboro, OR
Furthering its reputation as a leader in the thoracic industry, ACUTE Innovations® continues to make advancements in chest wall stabilization technology. Stop by booth 221 to learn about ACUTE's cutting-edge products: RibLoc® U Plus Chest Wall Plating System and AcuTie® II Sternum Closure System.

Admedus 433

Minneapolis, MN
Admedus, a global health care group, is working with renowned medical leaders to bring new medical technologies to market. CardioCel®, a cardiovascular scaffold, is the first of its ADAPT® tissue-engineered bioimplants and is being used by surgeons to repair simple and complex cardiac defects.

Aesculap 926

Center Valley, PA
Aesculap Inc., a member of the B. Braun family of health care companies, is the world's largest manufacturer of surgical instrumentation. For more than 138 years, Aesculap has provided customers with surgical instrumentation for ENT, plastic and reconstructive, thoracic, microvascular, cardiovascular, and laparoscopic surgery.

American Association for Thoracic Surgery 414

Beverly, MA
Founded in 1917, the American Association for Thoracic Surgery is dedicated to excellence in research, education, and innovation in cardiothoracic surgery and has become an international professional organization of more than 1,300 of the world's foremost cardiothoracic surgeons. www.aats.org

ATMOS 735

Allentown, PA
ATMOS offers the finest quality, patient-friendly devices that empower medical professionals to provide the best possible quality of care. The ATMOS philosophy, combined with ambitious and team-oriented employees, continues to facilitate the company's continued success. "For a better life."

AtriCure Inc. 815

West Chester, OH
AtriCure is intent on reducing the global Afib epidemic and healing the lives of those affected through clinical science, education, and innovation. The company is a leading Afib solutions partner, with the only FDA-approved surgical treatment for Afib and the most widely implanted occlusion device for left atrial appendage management.

B. Braun Interventional Systems Inc. 1604

Bethlehem, PA
Braun Medical Inc. is a \$3 billion international health care provider. B. Braun Interventional Systems Inc. is a worldwide leader in interventional accessories. In the United States, B. Braun offers a full line of innovative vascular access, interventional accessory, and angioplasty and valvuloplasty balloon products.

Baxter Healthcare 1227

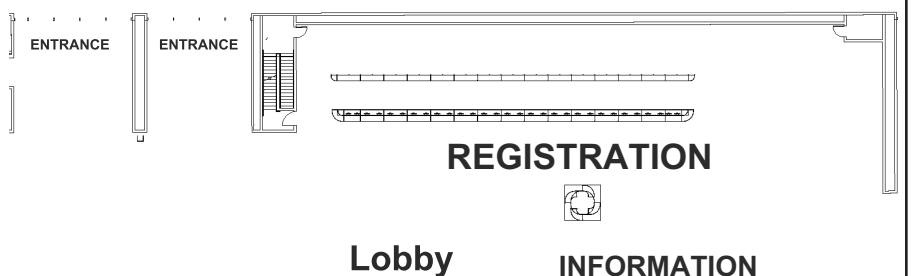
Deerfield, IL
As a global, diversified health care company, Baxter International Inc. applies a unique combination of expertise in medical devices, pharmaceuticals, and biotechnology to create products that advance patient care worldwide.

Continued on following page



The information listed here is accurate as of January 9, 2015. The information for these products and services was provided by the exhibitors, and inclusion in this publication should not be construed as a product endorsement by STS.

First-time exhibitors are highlighted in yellow. Exhibitors highlighted in blue are advertisers of *The STS Meeting Bulletin*. A yellow shade inside a blue box is both.



Continued from previous page

Berlin Heart Inc. 619

The Woodlands, TX
Berlin Heart is the only company worldwide that develops, manufactures, and distributes ventricular assist devices for patients of every age and body size. EXCOR[®] Pediatric provides medium- to long-term circulatory support specifically for infants and children awaiting heart transplants. EXCOR Pediatric is approved for use in the United States under Humanitarian Device Exemption regulations by the FDA.

BFW Inc. 522

Louisville, KY
BFW understands the medical profession's demands like no other. With more than 40 years of experience, the company strives to be a technological pioneer. Its latest innovations are the next generation of dynamic surgical and examination illumination systems that revolutionize the global medical community's understanding about lighting solutions.

Bio-Gate USA 1608

Buena Park, CA
Bio-Gate USA, Inc. is the exclusive distributor for Xenosys products, such as the lightweight surgical telescope, small and bright medical LED headlight system, and camera system. The company has been located in Southern California since 1999.

Biomed Simulation Inc. 409

Poway, CA
Biomed Simulation Inc. supplies patient simulators for surgical and critical care applications. Biomed's flagship simulator, "Califia," connects directly to an HLM or ECMO machine providing realistic patient responses. Its programmability and integration with a wide range of monitors allow the delivery of consistent, robust clinical scenarios.

Biomet Microfixation 826

Jacksonville, FL
Biomet Microfixation is a leading global health care provider of thoracic products. The company's thoracic portfolio includes the Pectus Bar for repair of pectus excavatum and the SternaLock Blu Primary Closure System for sternal closure. The Blu System aligns and stabilizes the sternum after sternotomy and enables easier closure after minimally invasive access.

Bolton Medical 933

Sunrise, FL
Bolton Medical is a subsidiary of the Werfen Life Group, an international company that manufactures and distributes medical diagnostic solutions and medical devices worldwide. Bolton sells endovascular therapies, such as the Relay Thoracic Stent-Graft, in both US and international markets and Relay NBS in international markets.

Bryan Corporation 1137

Woburn, MA

CardiacAssist, Inc. 1602

Pittsburgh, PA
CardiacAssist, inventor of the TandemHeart[®] Extracorporeal Circulatory Support System, offers versatile mechanical circulatory support treatment options. While the company is best known for its Left Ventricular Support platform,

it recently launched a line of arterial cannulae and the PROTEK Duo[™] Venous dual lumen cannula. Stop by booth #1602 to learn more.

Cardiomedical GmbH 306

Langenhagen, Germany

CareFusion 727

San Diego, CA
CareFusion is a global corporation helping clinicians and hospitals measurably improve patient care. The PleurX[®] Catheter System allows patients to manage symptoms associated with recurrent pleural effusions and malignant ascites at home, reducing the length of stay and cost of care while improving quality of life. Visit CareFusion at booth 727 to learn more.

Castle Biosciences 832

Greensboro, NC

Chase Medical 1236

Richardson, TX
Chase Medical is dedicated to cardiac surgeons by delivering a full line of beating heart stabilization products for off-pump procedures. Chase also manufactures and distributes the unique SVR product used in ventricular restoration, as well as the Triumph Cannula, a minimally invasive aortic occlusion device.

ClearFlow 636

Anaheim, CA
The PleuraFlow[®] Active Clearance Technology[™] System offers a safe way to proactively maintain chest tube patency, minimizing complications from ineffective evacuation of blood after surgery. Results from a recent prospective clinical trial showed a 42% decrease in reinterventions and a 30% decrease in postoperative atrial fibrillation with the PleuraFlow ACT.

ConvaTec 934

Bridgewater, NJ
ConvaTec is a leading developer and marketer of innovative medical technologies, including AQUACEL[®] Ag SURGICAL cover dressing. As the only cover dressing to incorporate unique patented Hydrofiber[®] technology, it helps improve outcomes by locking in fluid, including harmful bacteria, and releasing ionic silver to help reduce the risk of infection.

Cook Medical 1133

Bloomington, IN
Founded in 1963, Cook Medical pioneered many of the medical devices now commonly used to perform minimally invasive medical procedures throughout the body. Today, the company integrates medical devices, drugs, and biologic grafts to enhance patient safety and improve clinical outcomes. Since its inception, Cook has operated as a family-held private corporation.

CorMatrix 527

Roswell, GA
CorMatrix[®] Cardiovascular markets its ECM[®] Bioscaffold devices for vascular repair, pericardial repair and reconstruction, cardiac tissue repair, and CanGaroo ECM Envelope. The company is currently conducting preclinical studies to evaluate other cardiac and vascular applications.

Covidien 1311

New Haven, CT
Covidien is a leading global health care products

company that creates innovative medical solutions for better patient outcomes and delivers value through clinical leadership and excellence. Please visit www.covidien.com/surgical to learn more.

CryoLife 511

Kennesaw, GA
CryoLife is a leader in the development and implementation of advanced technologies associated with allograft processing and cryopreservation. CryoLife also pioneers research in the development of implantable biological devices, surgical adhesives, hemostatic agents, and biomaterials for cardiac, vascular, and general surgery.

CT Assist 313

Philippi, WV

CTSNet 410

Chicago, IL
CTSNet (www.ctsnet.org), headquartered in Chicago, is the leading international source of online resources related to cardiothoracic surgery, as well as the major hub of the international online community of cardiothoracic surgeons and allied health care professionals.

Davol Inc. 1321

Warwick, RI
Davol, a BARD company, is the market leader in comprehensive soft tissue reconstruction. In addition to this extensive suite of products, the company's BioSurgery franchise delivers a growing line of enhanced sealants and hemostatic products to complement surgical techniques across thoracic, cardiovascular, and other surgical specialties.

Designs for Vision 520

Ronkonkoma, NY
Just See It[™] with Designs for Vision's lightweight custom-made surgical telescopes—now available with Nike[®] frames. See It Even Better[™] with the L.E.D. Daylite[®] or Twin Beam[®], providing the brightest and safest untethered illumination. Introducing the L.E.D. Daylite[®] Nano Cam HD—document procedure and HD video from your perspective.

DGMR / Global Intercepts 405

Dumont, NJ
Utilizing relationships with health care providers all over the world, DGMR / Global Intercepts provides insights on markets, technologies, and devices. The company is uniquely qualified to evaluate marketing strategies, as well as test product development directions, device concepts, product positioning, messaging, and brand identity. Research studies are initiated before, during, and after any United States or international conference.

Dilon Technologies 315

Newport News, VA
Dilon Technologies Inc. manufactures the Navigator gamma positioning system with Daniel Lung Probe. The Daniel Probe addresses the challenges of localizing small, indeterminate lesions in MIS pulmonary procedures. This VATS technique uses radioisotope localization to facilitate rapid, precise identification of targeted tissue, while minimizing the resection of healthy tissue.

Domain Surgical 300

Salt Lake City, UT
Domain Surgical's FMX Ferromagnetic Surgical System is an advanced thermal energy surgical platform that uses ferromagnetic technology to cut, coagulate, and seal tissue. A variety of surgical tools have been designed to bring the unique clinical benefits of this technology to a broad array of surgical subspecialties.

Dornier MedTech America, Inc. 1232

Kennesaw, GA
Dornier MedTech is committed to providing innovative solutions for a variety of health care fields worldwide and revolutionizes spider and varicose vein treatments by offering multifunctional, state-of-the-art, high performance diode lasers.

EBM 1521

Tokyo, Japan
EBM, a biomedical spin-out venture company from Japan, provides the original beating heart simulator and quantitative assessment system for off-pump coronary artery bypass and vascular anastomosis worldwide. Skill assessment is based on rapid CFD technology and validated silicone vascular model.

Edwards Lifesciences 901

Irvine, CA
Edwards Lifesciences is the global leader in the science of heart valves and hemodynamic monitoring. Driven by a passion to help patients, the company partners with clinicians to develop innovative technologies in the areas of structural heart disease and critical care monitoring, enabling them to save and enhance lives. Additional company information can be found at www.edwards.com.

Elsevier 1327

Philadelphia, PA
Elsevier is the proud publisher of The Annals of Thoracic Surgery and a world-leading provider of information solutions that enhance the performance of science, health, and technology professionals. Elsevier empowers better decision making and the delivery of better care. www.elsevierhealth.com

Enova Illumination 1415

St. Paul, MN
Enova Illumination manufactures the brightest and most adjustable LED surgical headlights that allow complete mobility in the OR—no need to be tethered to fiber optic cables. The products feature extra-long battery life and are lightweight for long-lasting comfort.

Essential Pharmaceuticals 1505

Ewing, NJ
Essential Pharmaceuticals is a specialty pharmaceutical company devoted to the development and sales of branded pharmaceutical products in the transplant/cardiopulmonary surgery fields, including Custodial[®] HTK. Please visit booth #1505 and www.custodial.com.

ETHICON/DePuy Synthes CMF 301

Cincinnati, OH
Ethicon US LLC, a Johnson & Johnson company, commercializes a broad range of innovative surgical products, solutions, and technologies

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used to treat some of today's most prevalent medical issues, such as colorectal and thoracic conditions, women's health conditions, hernias, cancer, and obesity. Learn more at www.ethicon.com or follow Ethicon on Twitter @Ethicon.

European Association for Cardio-Thoracic Surgery (EACTS) 420

Windsor, United Kingdom
EACTS is the largest European association devoted to the practice of cardiothoracic surgery. The main objective of the association is to advance education in the field of cardiothoracic surgery and to promote, for the public benefit, research into cardiovascular and thoracic physiology and therapy, and to correlate and disseminate the useful results thereof. Visit booth 420 for more information.

European Society of Thoracic Surgeons (ESTS) 422

Exeter, United Kingdom
ESTS is the largest international general thoracic surgery organization with more than 1,400 members from all continents. The society's mission is to improve quality in the specialty, from the clinical and surgical management of patients to education, training, and credentialing of thoracic surgeons worldwide.

Fehling Surgical 1027

Acworth, GA
Fehling Surgical features the CERAMO® Instrument Line, SUPERPLAST Probes, and new, innovative retractor systems for minimally invasive cardiac surgery. The CERAMO® surface means high efficiency through enhanced performance, increased endurance, and minimal maintenance.

General Cardiac Tech/Heart Hugger 535

San Jose, CA
Heart Hugger-Sternum Support Harness is a patient-operated support harness applied postoperatively to splint surgical wounds. Benefits include improved patient compliance, faster return to pre-morbid respiratory levels, fewer wound complications, and better postoperative mobility. It is useful for post open-heart, thoracotomy, fractured rib, and other chest trauma patients.

Genesee BioMedical 827

Denver, CO
Design Beyond Standard. Genesee BioMedical, Inc. provides unique devices for cardiothoracic surgery, including sternal/thoracic valve retractors, instruments for minimally invasive cardiac surgery, coronary graft markers, suture guards, retraction clips, and myocardial needles. All products are CE approved. www.geneseebiomedical.com

Gore & Associates 1127

Flagstaff, AZ
The Gore Medical Products Division has provided creative solutions to medical problems for three decades. Over 35 million Gore medical devices have been implanted worldwide. Products include vascular grafts, endovascular and interventional devices, surgical materials, and sutures for use in vascular, cardiac, and general surgery. For more information, visit www.goremedical.com.

Hawaiian Moon 1122

Clearwater, FL
Say goodbye to dry skin with Hawaiian Moon Organic Aloe Cream.

Heart Valve Society (HVS) 1234

Beverly, MA
For the first time, a truly collaborative international valve society, comprised of cardiologists, cardiac surgeons, and researchers, is coming together to create this new organization of unprecedented depth. The Heart Valve Society (HVS) website is www.HeartValveSociety.org.

HeartWare 519

Framingham, MA
HeartWare is dedicated to delivering safe, high-performing, transformative therapies that enable patients with heart failure to get back to life. The HVAD® Pump is designed to be implanted in the pericardial space, avoiding the more invasive surgical procedures required with older LVAD technologies. The HVAD Pump is commercially available around the world.

Hospital Corporation of America 329

Fort Lauderdale, FL
HCA affiliated facilities in East Florida are a part of a quality health care network in East Florida and the Treasure Coast with 14 affiliated hospitals, 12 surgery centers, one integrated regional lab, and one consolidated service center. Together, the network employs more than 12,500 individuals and has close to 6,000 physicians on staff.

ImaCor, Inc. 327

Garden City, NY
ImaCor develops advanced critical care solutions for hemodynamic assessment. hTEE™ (hemodynamic Transesophageal echocardiogram (TEE) is the first and only technology to provide continuously available direct cardiac visualization. hTEE is enabled through the 72-hour ClariTEE® probe, a miniaturized and disposable TEE probe, and the Zura™ Imaging Systems for episodic assessment.

International Society for Minimally Invasive Cardiothoracic Surgery (ISMICS) 412

Beverly, MA
ISMICS: Innovation, technologies, and techniques in cardiothoracic and cardiovascular/vascular surgery. 2015 ISMICS Annual Scientific Meeting, 3-6 June 2015, InterContinental Hotel, Berlin, Germany. www.ismics.org

Intuitive Surgical 1101

Sunnyvale, CA
Intuitive Surgical, Inc. designs, manufactures, and distributes the da Vinci® Surgical System, technology designed to allow surgeons to perform many complex procedures minimally invasively.

IsoRay Medical 729

Richland, WA
IsoRay Medical manufactures and distributes radiation therapy sources for direct implantation into cancer or surgical margins following resection of cancer. IsoRay markets Cesium-131 brachytherapy meshes and strands for resection line treatment following surgery for high-risk lung cancers, resulting in highly conformal

adjuvant radiation therapy that spares critical thoracic structures.

JACE Medical 837

Warsaw, IN
JACE is a medical device development company pioneering a fully integrated resequencing technology and application for sternal resection and closure. The company innovates with an eye toward providing definitive benefits across the entire five-sided health care spectrum of patient, physician, provider, payer, and regulator. Visit the JACE booth and see how the company thinks outside the paradox. www.JACEMED.com

JOMDD 1033

Tokyo, Japan
JOMDD is engaged in the medical device incubation business, leveraging untapped technologies originating from Japan. The company operates as a new technology sourcing engine, currently developing multiple medical devices with high potential and uniqueness, and is looking for potential partnerships with medical device manufacturers to expand its products globally.

KaMedi Co. Ltd. 1510

Hua Hin, Thailand
SternaSafe is an active sternum support band.

Kapp Surgical 1032

Cleveland, OH
Kapp Surgical designs surgical instruments and implants, manufactures them, and sells them, as well as distributes domestically and internationally. Kapp's exclusive products are the Cosgrove Heart Retractor, Strip T's surgical organizer, and countless surgical devices, all FDA-approved with several pending approval.

Karl Storz 1226

El Segundo, CA
Karl Storz offers solutions for thoracic surgery, including slender, easily dismantled MediaFIT instruments that offer economic solutions for mediastinoscopy. The company's EndoCAMeleon® Telescope allows the surgeon to adjust the viewing direction from 0° to 120° throughout procedures without changing telescopes.

KLS Martin 1421

Jacksonville, FL
KLS Martin, a responsive company, is focused on the development of innovative products for oral, plastic, and craniomaxillofacial surgery. New product developments in the company's titanium osteosynthesis plating systems allow these products to be used for rapid sternal fixation and reconstruction.

Koros USA, Inc. 722

Moorpark, CA
For the past 30 years, Koros USA, Inc. has been designing and distributing state-of-the-art surgical instruments, like the Cervical Black Belt, Lumbar Super Slide, and ALIF Polaris Lateral Retractors, along with the Rotating Osteo Punch, Ejector Punch Rongeurs, and many more fine hand instruments.

LifeNet Health 1426

Virginia Beach, VA
LifeNet Health helps save lives and restore health for thousands of patients each year.

It is the world's most trusted provider of transplant solutions, from organ procurement to new innovations in bioimplant technologies and cellular therapies—a leader in the field of regenerative medicine, while always honoring the donors and health care professionals who allow the healing process.

Lippincott Williams & Wilkins 1037

La Mesa, CA

LoupeCam 833

Scottsdale, AZ
LoupeCam® is the market leader in head-mounted HD surgical cameras and is the only company offering cross-platform (Mac, Windows, and soon Android compatibility). The company offers five different magnification lenses to match all surgical points of view, along with a Bluetooth foot pedal, which allows for hands-free control of the camera.

LSI Solutions 1427

Victor, NY
COR-KNOT® delivers instant security with knot placement and integrated suture trimming in one easy step. COR-KNOT® may reduce cardiopulmonary bypass and cross-clamp time. Internationally recognized innovation for advanced CT surgeons. Visit booth 1427 for more information.

MAQUET 633

Wayne, NJ
MAQUET Medical Systems is a market leader focused on improving patient care and quality of life. The company offers a comprehensive portfolio of innovative products designed to meet the needs of clinical professionals in the areas of advanced hemodynamic monitoring, cardiothoracic and vascular surgery, thoracic drainage, cardiac intervention, perfusion, anesthesia, and ventilation.

Market Access Partners 311

Evergreen, CO
Market Access Partners provides market research consulting to the medical device and pharmaceutical industries. The company uses innovative, qualitative methodologies to research opinions of physicians, nurses, and patients. Market Access Partners offers a management-oriented approach to product development and marketing.

Mayo Clinic 312

Jacksonville, FL
Mayo Clinic has been recognized as the best hospital in the nation for 2014-2015 by U.S. News and World Report and one of the top 100 "Best Companies to Work For" by FORTUNE. Mayo Clinic is the largest integrated, not-for-profit medical group practice in the world working in a unique environment that brings together the best in patient care, groundbreaking research, and innovative medical education.

Med Alliance Solutions 1220, 1221

St. Charles, IL
ISO 13485-certified medical device distributor committed to providing high-quality specialty devices for cardiothoracic surgery worldwide. Exclusive US distributor of French instruments manufacturer Delacroix-Chevalier and

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operational partner to Michigan-based Surge Cardiovascular for open heart surgical products.

Medela 715

McHenry, IL
Medela, the market leader in breastfeeding education and research, provides medical vacuum solutions featuring Swiss technology in over 90 countries. Medela Healthcare optimizes patient care through pioneering and intelligent, mobile, digital chest drainage therapy and advanced wound management with negative pressure wound therapy.

Medistim 721

Plymouth, MN
Medistim is the standard of care in the operating room. With the unique combination of transit time flow measurement and high-frequency ultrasound imaging guidance to help reduce and minimize the risk of negative postoperative outcomes, Medistim's quality assessment technology offers surgeons quantifiable validation and guidance during cardiovascular, vascular, transplantation, and neurosurgery.

Medtronic 701

Minneapolis, MN
Medtronic is committed to "Innovating for life" by pushing the boundaries of medical technology and changing the way the world treats chronic disease. Medtronic's breadth of solutions in structural heart and aortic disease management includes: tissue, mechanical, and transcatheter valves; irrigated RF and cryosurgical ablation devices; aortic stent graft systems; and off-pump coronary artery bypass, minimally invasive cardiac surgery/coronary artery bypass grafting, cannulae, and perfusion products.

MedXpert North America 1433

Edmond, OK
MedXpert North America, LLC is a producer of medical devices (implants and instruments) specialized for all kind of procedures in the thoracic part of the human body. The company produces StraTos for three different indications (deformity, reconstruction after tumor resection, as well as trauma) and StraCos for two indications (trauma and reconstruction).

Microsurgery Instruments, Inc. 302

Bellaire, TX
Microsurgery Instruments is one of the leading suppliers of surgical instruments and loupes. The company's instruments include titanium scissors, needle holders, and DeBakey forceps. Its Super-Cut scissors are the sharpest in the market, and its newly designed surgical loupes offer up to 130 mm field of view and up to 11x magnification.

Munson Healthcare 403

Traverse City, MI
As a regional health care system, Munson Healthcare provides direct access to over 700 physicians, representing 54 specialty services at eight health care facilities that have been repeatedly recognized for excellence in quality, service, and patient care. Its 391-bed regional referral center is located in beautiful northern lower Michigan near Lake Michigan. Visit www.munsonhealthcare.org.

Myriad Genetic Laboratories, Inc. 417

Salt Lake City, UT
Myriad Genetics is a leading molecular diagnostic company dedicated to making a difference in patient's lives through the discovery and commercialization of transformative tests to assess a person's risk of developing disease, guide treatment decisions, and assess risk of disease progression and recurrence.

Nadia International 1411

Austin, TX
Educational/surgical bronze sculptures specifically for the thoracic surgeon. These museum-quality limited editions are created by the world famous sculptor Ronadró. More than 7,000 surgeons in 75 countries collect his fine works of art. His works are on display at the Smithsonian Institute and many medical universities throughout the world.

nContact 411

Morrisville, NC
nContact is a leader in the development of disease management programs, with the goal of opening unmet markets, minimizing rehospitalizations, and improving health care savings. nContact's mission is to transform the underserved arrhythmia market and benefit the entire cardiovascular service line.

NeoChord, Inc. 304

Eden Prairie, MN
NeoChord, a US-based medical device company, intends to transform mitral valve repair by providing minimally invasive technology that enables beating heart, sternal-sparing implantation of artificial chord tendinae.

On-X Life Technologies, Inc. 927

Austin, TX
On-X[®] Heart Valves and MV Chordal Repair: Patented natural design and On-X[®] Carbon offer reduced turbulence in a mechanical valve to rival the clinical and hemodynamic performance of bioprostheses. FDA IDE approved PROACT (Prospective Randomized On-X[®] Anticoagulation Clinical Trial) in process. Chord-X ePTFE Suture for MV repair available.

Ornim 1417

Foxboro, MA
Ornim specializes in research, development, and distribution of noninvasive patient monitors specializing in the field of tissue and cerebral blood flow. The company's bedside product, c-FLOW[™], is based on the patented UTLight[™] technology designed to provide physicians with unique monitoring solutions that are imperative to individualized and personalized patient care.

Otto Trading Inc. 1132

Santa Ana, CA

Oxford University Press 1035

Cary, NC
OUP publishes some of the most respected medical books and journals in the world, including the three journals of the European Association for Cardio-Thoracic Surgery. Visit the booth to browse books and pick up journal sample copies.

Pemco Inc. 1514

Cleveland, OH

Pemco has designed and manufactured precision surgical instruments for the cardiovascular field. The company has documented that its perfusion cannula, coronary ostial cannula, and cardiac suckers offer cost savings over disposables. Additional products include reusable subclavian and femoral cannula, anesthesia screens, and the Rultract retractor.

Pinnacle Biologics 321

Bannockburn, IL
Pinnacle Biologics, Inc. specializes in revitalizing health care therapies by promoting, developing, and managing innovative approaches to the commercialization of products with a focus on oncology and orphan diseases. PD T with Photofrin[®] is an effective therapy for select thoracic malignancies.

PneumRx, Inc. 1120

Mountain View, CA
PneumRx, Inc. is a medical device startup focused on developing minimally invasive solutions for unmet needs in pulmonary medicine. The RePneu[®] Coil System is intended to improve exercise capacity, lung function, and quality of life in patients with severe emphysema. The coils compress hyperinflated tissue and tether small airways to prevent airway collapse without blocking lung parenchyma.

QED Medical 1527, 1529

Lexington, KY
QED Medical introduces the new XL 10-watt OR-ready Portable LED Headlight System featuring un-tethered mobility, maximum intensity, and a lightweight design with intensity and spot size controls. Since 1971, QED Medical has developed a comprehensive line of US-made headlight illumination and video headlight systems for applications from examination to surgery.

Quest Medical, Inc. 1126

Allen, TX
Quest Medical, Inc. is a medical device manufacturer and worldwide distributor specializing in protecting the heart during cardiac surgery with the Quest MPS 2[®] and microplegia. Quest also offers a unique variety of aortic punches, safety valves, vascular loops, and an anesthesia line designed for optimum cardiovascular surgery.

Regional Data Managers: STS National Database 1118

Ann Arbor, MI
The Regional Data Managers booth provides opportunities for surgeons to interact with data managers from around the country who are actively involved with regional STS National Database efforts and collaborative STS groups. Visit booth 1118 to learn about regional activities and initiatives.

RMD Global 1616

Las Vegas, NV

Rose Micro Solutions 932

West Seneca, NY
Rose Micro Solutions sells high-quality optical loupes and LED lights for less. The company's loupes start at \$279. Rose Micro Solutions is a family business consisting of four brothers, who named the company after their mother Rose. Stop by booth 932, visit the company online at www.rosemicrosolutions.com, or call (716) 608-0009.

RTI Surgical 421

Alachua, FL
RTI Surgical is a leading global surgical implant company providing surgeons with safe biologic, metal, and synthetic implants. RTI's implants are used in sports medicine, general surgery, spine, orthopedic, trauma, and cardiothoracic procedures, and are distributed in nearly 50 countries. RTI is headquartered in Alachua, FL, and has four manufacturing facilities in the US and Europe.

Rultract 1516

Cleveland, OH
Rultract's surgical retractor provides gentle and uniform lift, allowing maximum exposure for IMA dissection, redo hearts, xiphoid entry, subxiphoid pericardial procedures, minimally invasive procedures (capable for use with Thoratrak), parasternal procedures, pediatric/ASD, t-incisions, transabdominal GEA midcab, Pectus, LVAD extraction, and TEMPLA procedures. www.rultract.net

Scanlan International 500

St. Paul, MN
Highest quality surgical products designed and manufactured by the Scanlan family since 1921. More than 3,000 surgical instruments in titanium and stainless steel, including D'Amico Mediastinoscopy Biopsy Forceps, new shorter VATS instruments, Uniportal VATS instruments, MEMORY Dilators/Vessel Probes, LEGACY Needle Holders and Forceps, and single-use products.

Siemens Medical Solutions USA Inc. 310

Malvern, PA
Siemens Healthcare is one of the world's largest health care industry suppliers and the first full-service diagnostics company. The company is known for bringing together innovative medical technologies, health care information systems, management consulting, and support services to help customers achieve tangible, sustainable, clinical, and financial outcomes. www.usa.siemens.com/healthcare

Society of Thoracic Surgeons, The 1111

Chicago, IL
The Society of Thoracic Surgeons represents more than 6,900 surgeons, researchers, and allied health care professionals worldwide who are dedicated to ensuring the best possible outcomes for surgeries of the heart, lung, and esophagus, as well as other surgical procedures within the chest. The Society offers a wide variety of member benefits, including reduced participation fees in the world renowned STS National Database[™], a complimentary subscription to The Annals of Thoracic Surgery, dynamic educational offerings, online patient information resources, and much more. The Society also supports cutting-edge research via the STS Research Center and advocates in Washington, DC, on behalf of cardiothoracic surgery professionals and their patients. Stop by the STS booth 1111 or visit www.sts.org to learn more.

Sontec Instruments 1501

Centennial, CO
Sontec offers headlamps, loupes, and the most comprehensive selection of exceptional handheld surgical instruments available to the

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discriminating surgeon. There is no substitute for quality, expertise, and individualized service. Sontec's vast array awaits your consideration at its booth.

Sorin Group 1301

Arvada, CO
Sorin Group is a world leader in the treatment of cardiovascular disease. Its innovative product portfolio includes aortic and mitral valve replacement and repair, perfusion equipment, cannula, and MICS instruments. For more information, visit the company's website at www.sorin.com.

Spectrum Health 314

Grand Rapids, MI
Spectrum Health is a not-for-profit health system, based in West Michigan, offering a full continuum of care through the Hospital Group, which is comprised of 11 hospitals; 169 ambulatory/service sites; 1,150 physicians and advanced practice providers, including Spectrum Health Medical Group members; and Priority Health, a 590,000-member health plan. Visit spectrumhealth.org for more information.

Spiration, Inc. 1121

Redmond, WA
The Spiration® Valve System has a humanitarian device approval in the United States to control specific postoperative air leaks of the lung, and has CE mark approval for the treatment of diseased lung in emphysematous patients and for damaged lung resulting in air leaks by limiting air flow to selected areas.

St. Jude Medical 600

St. Paul, MN
St. Jude Medical is a global medical device manufacturer dedicated to transforming the treatment of some of the world's most expensive, epidemic diseases. The company does this by developing cost-effective medical technologies that save and improve lives of patients around the world. Headquartered in St. Paul, MN, St. Jude Medical has four major clinical focus areas that include cardiac rhythm management, atrial fibrillation, cardiovascular, and neuromodulation. Please visit sjm.com.

Stroke Prevention Systems, Z-Medical, Inc. 316

Inman, SC
The company is focused on developing devices for prevention of embolic stroke in cardiovascular procedures, such as TAVR, PCI, ablation, AVR, CABG, TMR, and TEVAR. It designed and clinically implemented the first noninvasive cerebral protection device (Stroke Prevention System, SPST™), activated "on demand" at the time of embolic insult. Several other cerebral protection devices are being developed.

STS Public Reporting 1117

Chicago, IL
STS is committed to transparency and the accurate reporting of cardiothoracic surgery outcomes. In 2015, STS will celebrate its fifth anniversary of public reporting. Visit booth 1117 to learn about the Society's adult cardiac, general thoracic, and congenital heart surgery public reporting initiatives, as well as its ongoing collaboration with Consumer Reports.

SurgiTel/General Scientific Corp. 1600

Ann Arbor, MI
SurgiTel is the manufacturer of premium loupes and headlights sold around the world from its headquarters in Ann Arbor. Holding a variety of patents, SurgiTel is always on the forefront of vision and ergonomics.

SynCardia Systems, Inc. 1326

Tucson, AZ
The SynCardia temporary Total Artificial Heart (TAH-t) is the world's only FDA, Health Canada, and CE approved Total Artificial Heart. It is approved as a bridge to transplant for patients dying from end-stage biventricular failure. Visit the SynCardia booth for updates on the Freedom® portable driver, 50cc TAH-t, and destination therapy.

Terumo 913

Ann Arbor, MI
Vascutek, a Terumo company, will display Gelweave™ gelatin-sealed, woven, and branched vascular grafts. The Vascutek CE-marked Thoraflex™ Hybrid device will also be featured (not cleared for sale in the United States). Terumo will display the VirtuoSaph® Plus Endoscopic Vessel Harvesting System, Beating Heart and Surgical Stabilization products for cardiothoracic procedures, and Terumo® Perfusion Products.

Thompson Surgical 510

Traverse City, MI
Thompson Surgical has been a leader in exposure for over 50 years. Cardiovascular surgeons will benefit from the Thompson Surgical Bolling Retractor, which provides low profile, stable, uncompromised exposure of the heart structures. The company provides innovative, high-quality systems that deliver safe, versatile retraction.

Thoracic Surgery Foundation for Research and Education (TSFRE) 1216

Chicago, IL
TSFRE is the charitable arm of The Society of Thoracic Surgeons. The mission of TSFRE is to foster the development of surgeon scientists in cardiothoracic surgery; increasing knowledge and innovation to benefit patient care. The foundation represents cardiothoracic surgery in the United States and its research and education initiatives support the broad spectrum of cardiothoracic surgery.

Thoracic Surgery Residents Association 537

Chicago, IL
The Thoracic Surgery Residents Association (TSRA) represents the interests of all residents training in cardiothoracic surgery. TSRA provides resources and programming for CT surgery residents, including clinical books and apps, speakers, mixers, and traveling fellowship opportunities.

Thoramet Surgical 823

Rutherford, NJ
Thoramet Surgical Products sells the most complete line of VATS instruments available. Produced in the USA in their own facilities, they are the surgeon's choice. Visit to booth 823 to see their unique versatility. Thoramet has the feel you want, the actuation you need, and the patterns you demand.

Thoratec Corporation 1020

Pleasanton, CA
Thoratec is the world leader in mechanical circulatory support with the broadest product portfolio to treat the full range of clinical needs for patients suffering from advanced heart failure. Thoratec's products include the HeartMate LVAS, Thoratec VAD, CentriMag, and PediMag/PediVAS.

Transonic 733

Ithaca, NY
You've carefully constructed several challenging anastomoses, and they all look good, but are they? Before you close your patient, take a few seconds and get precise blood measurements on each graft. Know if there is a problem now, before the patient lets you know later. Visit Transonic and see how its meters and flow probes can help you improve your outcomes.

VAD Consulting Group, The 401

Spokane, WA
Whether your VAD program is just starting out or you are an established center looking to increase financial and operational efficiencies, the VAD Consulting Group has the experience and expertise to help you in today's challenging environment.

Vikon Surgical 317

Birmingham, AL
Vikon® specializes in surgical headlights and devices that use proprietary technology and patented designs. Vikon Kerrisons are easier to use and clean, and stay sharper longer. The

company's LED technology offers a cool, clean light that optimizes color rendering. These innovations are part of Vikon's commitment to help you improve outcomes.

Vitalcor, Inc./Applied Fiberoptics 718

Westmont, IL
Vitalcor, Inc. is a supplier of medical devices used primarily in cardiothoracic surgery. Since 1975, Vitalcor has provided products that take input from teaching and practicing surgeons to make their practice easier. The company prides itself on offering quality products and providing exceptional customer service.

Vitalitec Geister 627

Plymouth, MA
Vitalitec Geister will be displaying all company products, highlighting the Enclose II Anastomosis Assist Device, Cygnet Flexible Clamps, Intrack Atraumatic Temporary Clamps and Inserts, and Geister ValveGate and ValveGate PRO line of MIS CV instrumentation.

Wexler 1509

Houston, TX
Wexler Surgical designs and manufactures titanium and stainless steel specialty surgical instruments and products for cardiovascular, thoracic, and microsurgery. Visit Wexler online at www.wexlersurgical.com.

Worldwide Design 323

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The STS Meeting Bulletin

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Publication Editors:

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Publication Designer: Elizabeth Byrne Lobdell

Production Specialist: Maria Aquino

Meeting Photography: Martin Allred

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633 N. Saint Clair St., Floor 23, Chicago, IL 60611-3658.

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References: **1.** Ouzounian M et al. Impact of endoscopic versus open saphenous vein harvest techniques on outcomes after coronary artery bypass grafting. *Ann Thorac Surg.* 2010;89:403–408. **2.** Ad N et al. The impact of endoscopic vein harvesting on outcome of first time coronary artery bypass grafting surgery. *J Cardiovasc Surg.* 2011;52:739–748. **3.** Dacey LJ et al. For the Northern New England Cardiovascular Disease Study Group. Long-term outcomes of endoscopic vein harvesting after coronary artery bypass grafting. *Circulation.* 2011;123:147–153. **4.** Grant SW et al. What is the impact of endoscopic vein harvesting on clinical outcomes following coronary artery bypass graft surgery? *Heart.* 2012;98:60–64. **5.** Williams JB et al. Association between endoscopic versus open vein-graft harvesting and mortality, wound complications, and cardiovascular events in patients undergoing CABG surgery. *JAMA.* 2012;308:475–484. **6.** Lombardi P, Lau L. Measurement of Thermal Spread from Use of VASOVIEW HEMOPRO: Study Demonstrates Minimal Thermal Injury to Endothelium. White Paper. MAQUET Cardiovascular. 07/08. LT7900184 **7.** Data on file, MAQUET Cardiovascular; 2008.

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