Tech-Con’s ‘Shark Tank’ Dives Deep

With video of an immense great white shark looming in waters as a stage backdrop, aspiring innovators posed their ideas before a panel of judges during Sunday morning’s STS/AATS Tech-Con Joint Session: “Shark Tank”—Rapid-Fire Elevator Pitches of Revolutionary Technology.

Opening the Shark Tank program were moderators Goraz Ailawadi, MD, Chief of the Section of Adult Cardiac Surgery and Associate Professor of Surgery at the University of Virginia in Charlottesville, and Shanda H. Blackmon, MD, MPH, Associate Professor of Surgery at the Mayo Clinic, Rochester, Minn.

“Tech-Con is completely different from many past years with no CME, enabling us to talk about new devices and approaches that we were not able to discuss before at the STS meeting,” Dr. Ailawadi said.

After presenters took 5 minutes each to state their cases, a panel of four judges queried the innovators about the usefulness, marketability, and cost of their cardiothoracic inventions. The judges gave feedback as the audience was polled in three investment scenarios: Yes, definitely in; No, I’m out; and Possibly, but not as an early investor.

The panelists were Daniela Molena, MD, New York, Eric E. Roselli, MD, Cleveland, Mark Slaughter, MD, Louisville, Ky.; and Steven F. Bolling, MD, Ann Arbor, Mich. After Miguel A. Maluf, MD, PhD, São Paulo, Brazil, described his prototype of an expandable, catheter-implantable, polyurethane stent for patients.

Chamberlain Papers Highlight Impactful Research

Quality standards for lung cancer surgery, optimal timing between myocardial infarction (MI) and coronary artery bypass grafting (CABG) surgery, and initial results from the bifurcated Y-graft Fontan procedure are featured in three of the most important scientific abstracts accepted to the STS 52nd Annual Meeting program.

Each year, the J. Maxwell Chamberlain Memorial Papers kick off the meeting’s scientific sessions and honor Dr. Chamberlain, who has been called “the most important influence in the formation of The Society of Thoracic Surgeons.” Don’t miss the 2016 presentations, which begin at 7:15 a.m. this morning in Exhibit Halls 2-3 as part of the General Session.

MOST CENTERS MISS KEY LUNG CANCER SURGERY QUALITY INDICATORS

Many lung cancer patients may not receive optimal surgical care. New research shows that the vast majority of institutions meet one or two quality standards for the surgical treatment of stage 1 non-small-cell lung cancer, but few institutions meet four key indicators.

“We found that meeting all four quality measures decreased a patient’s risk of mortality by 60%,” said lead author Pamela P. Samson, MD, General Surgery Resident at Washington University School of Medicine in St. Louis.

“Many patients were meeting at least two quality measures during our study years of 2004 to 2013. However, when we looked at the number of patients meeting all four quality measures in the treatment of their stage 1 non-small-cell lung cancer (NSCLC), only 22.5% received what could be called optimal care. The bar needs to be raised, especially when meeting it conveys such a significant survival advantage for patients.”

On behalf of Dr. Samson, Varun Puri, MD, senior author of the study and Associate Professor of Surgery at Washington University, will present the 2016 J. Maxwell Chamberlain Memorial Paper for General Thoracic Surgery, “Quality Measures in Clinical Stage 1 Non-Small-Cell Lung Cancer: Improved Performance in Associated With Improved Survival.” The study was based on 146,908 surgeries for clinical stage I NSCLCs abstracted from the National Cancer Data Base (NCDB).

Surgeries were evaluated on four quality measures established by STS, the National
Presentation by H. Edward Garrett, Jr. M.D.
Monday, Jan. 25 at 3:45pm • Booth #136
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CHAMBERLAIN
continued from page 1

Comprehensive Cancer Network, the American College of Surgeons Commission on Cancer, and American College of Chest Physician guidelines. The measures included performing an anatomical lung resection, surgery within 8 weeks of diagnosis, achieving an R0 resection, and pathologic evaluation of 10 or more lymph nodes. Socioeconomic factors were associated with a greater likelihood of receiving all four quality measures, as was receiving care at an academic medical center, Dr. Samson said.

“We hope that when attendees see these results, they will think about their own institutions and practices and find ways to help more patients meet these quality measures,” Dr. Samson said. “For example, at our own institution, many patients received delayed surgery by this criteria, and we are actively working to improve that. Nationally, we also are concerned with increasing lymph node sampling and decreasing the significant number of patients who are still getting wedge resections, which are seen as oncologically inferior surgeries for lung cancer. These gaps are not evident until you probe national databases, like the NCDB, your own institutional database, and practice patterns. Therefore, we believe this study can be a starting point for the discussion both nationally and locally to improve surgical quality and patient survival.”

STUDY SUGGESTS REDUCING MI TO SURGERY TIMING

The second Chamberlain paper being presented this morning generally supports current trends toward reducing the waiting time between MI and CABG surgery. An analysis of data from 3,060 CABG patients within the Northern New England Cardiovascular Disease Study Group Cardiac Surgery Registry found no difference in either crude or adjusted mortality rates in patients operated on 1–2 days, 3–7 days, or 8–21 days after MI. Patients operated on in <1 day had significantly higher mortality compared to those operated on 3–7 days after MI. Patients who received their CABG 8–21 days after MI had more comorbidities and slightly higher mortality.

“The timing between MI and CABG has been debated for a long time, but there are few data on outcomes with multiple discrete timing intervals of surgery,” said lead author Elizabeth L. Nichols, MS, a PhD candidate at The Dartmouth Institute in Lebanon, N.H. “These results help inform how to provide the best quality care for our patients, while not adding any unnecessary wait times following MI and surgery.”

The Chamberlain Paper for Adult Cardiac Surgery, “Optimal Timing Between Myocardial Infarction and Coronary Artery Bypass Grafting: Impact on In-Hospital Mortality,” compared in-hospital mortality rates. The study excluded emergency and shock patients, as well as patients operated on less than 6 hours following their MI, to create a more uniform cohort.

In-hospital mortality was highest in patients operated on less than 1 day after MI. There was no difference in mortality for surgeries performed 1–2 days and 3–7 days after MI, and a non-significant increase was seen in mortality for surgeries performed 8–21 days after MI.

“We would like to see more data, as always,” Nichols said, “and we would like clinicians to be mindful about how long they wait between MI and CABG. For patients who are stable, we may not have to wait 5 days but wait between MI and surgery.”

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How-To Session Offers Tips on CABG, Aortic Surgery

By nature, cardiothoracic surgeons do not rest on their laurels. They inherently look for ways to be more efficient in their surgeries and optimize outcomes. This was clear when nearly two dozen private practice and academic surgeons helped attendees refine and improve their techniques in four common adult cardiac areas: coronary artery bypass grafting (CABG) surgery, mitral valve surgery, aortic valve surgery, and aortic surgery. They shared their expertise during Sunday’s How-To: Technical Tricks and Pitfalls to Simplify Cardiac Surgery Procedures, a new session this year.

Richard Lee, MD, MBA first saw surgeons perform skeletonized internal mammary artery harvests during his fellowship at the Cleveland Clinic Foundation 14 years ago. He now skeletonizes all his CABG patients.

“When you skeletonize the internal mammary artery, the blood supply to the chest is better preserved than when you take the artery with a pedicle of surrounding tissue. Some people worry about damaging the mammary more, but that is not my experience. I don’t think the injury rate is any higher with skeletonized than with the pedicle,” said Dr. Lee, adding that the extra length of a skeletonized bilateral mammary artery is ideal for obese patients from reoperation at 10 years after surgery.

“Valve-sparing root replacement is associated with a less than 3%–5% mortality in most centers. In our center, this operation is associated with a less than 1% mortality,” Dr. Lee said.

The real value is that a skeletonized internal mammary artery harvest better preserves blood supply to the sternum.

“We think it may decrease the risk of sternal infection, which is useful for people who are diabetic because they have a higher risk of sternal infection,” Dr. Lee said.

In videos, he showed attendees how the procedure extends the length of the internal mammary artery.

“When you skeletonize it, it tends to stretch more, and it’s not confined by the surrounding tissue of a pedicle. I’d say you probably gain 25% more length,” said Dr. Lee, adding that the extra length of a skeletonized bilateral mammary artery is ideal for obese patients undergoing CABG.

Wilson Y. Szeto, MD, Associate Professor of Surgery at the University of Pennsylvania School of Medicine and Chief of Cardiovascular Surgery at Penn Presbyterian Medical Center in Philadelphia, tackled complex valve-sparing surgery for aortic root aneurysms.

Demonstrating the procedure through videos, he noted that the risk of patients needing a permanent pacemaker is higher with aortic valve replacement than with repair. Beyond avoiding the need for lifelong anticoagulation measures after mechanical valve replacement or a second surgery to replace a degenerated bioprosthetic valve, both prosthetic valve types have a higher risk of endocarditis compared to a native repaired valve.

A patient with an aortic aneurysm and a relatively normal aortic valve may be a good candidate for valve-sparing root repair, said Dr. Szeto, although he cautioned against repairing severely damaged valves or ones with large perforations.

“The patient keeps his or her valve and the hemodynamics that go with that valve. That’s much better than any valvular prosthesis,” Dr. Szeto said.

In Aortic Centers of Excellence, valve-sparing operations have been shown to be associated with a greater than 90% freedom from reoperation 10 years after surgery.

RVU Salary Model Sets Up Cardiothoracic Surgeons to Fail

Ask Michael G. Moront, MD if a Relative Value Unit-based productivity employment model is good for cardiothoracic surgeons, and he will tell you no.

For Dr. Moront, an RVU model spurs internal practice competition, discourages the addition of new partners, encourages patient boarding, and does not pay for services that do not fit a medical billing model, such as attending hospital meetings and spending nights sitting by a patient’s bedside.

During Sunday’s Practice Management Summit, he shared how he and his colleagues at Cardiothoracic Surgeons of Northwest Ohio, Promedica Health System, changed from RVU- to salary-based employment contracts.

“Hospitals are very concerned about paying physicians fair market value. They need a number to hang their hats on, and they can calculate that number with RVUs,” said Dr. Moront, Director of Cardiothoracic Surgical Research at Toledo Hospital.

“It was great when things were good. For the most part, we were pretty happy. At first, we got raises and bonuses,” Dr. Moront said. “But then, hospital administrators made decisions that negatively affected 15%–18% of our cardiology referrals, and our salaries fell. The hospitals had no stake in our salaries. We as a group recognized internal group competition caused by the work RVU employment model and wanted to get off the ‘wRVU treadmill.’”

The cardiothoracic surgery group had worked to grow the practice, performing more than 900 heart surgeries each year at two hospitals.

Wanting a new employment model that shared risks and addressed the problems with a wRVU-based agreement, the surgeons went to hospital administrators and were able to lock into a 5-year salary-based contract.

“We’re 2 years into our new contract, and we’re all happy with it,” said Dr. Moront, adding that the new employment model has provided his group with a degree of security in a competitive medical environment, allowing the group to work more cohesively with the hospital.

The hospitals had no stake in our salaries. We as a group recognized internal group competition caused by the work RVU employment model and wanted to get off the ‘wRVU treadmill.’

MICHAEL G. MONTOR, MD
WTS Celebrates 30th Anniversary

When Women in Thoracic Surgery (WTS) was formed in 1986, the American Board of Thoracic Surgery (ABTS) had certified only 37 women. By 2015, that number was 274. Thus 740% increase certainly would cause the late Nina Starr Braunwald, MD, the first woman to be ABTS certified in 1961, to beam with pride. An educational session celebrating the 30th anniversary of WTS, scheduled from 1:30 p.m. to 3:30 p.m. Monday in Room 123, will highlight the significant professional contributions by STS members who also are WTS members. Topics covered will include the untapped potential of women as leaders, significant contributions of female pioneers in congenital heart, adult cardiac, and general thoracic surgery, the changing demographics of ABTS diplomates since 1961, mentoring female and minority surgeons, and the future face of cardiothoracic surgery. A panel discussion will follow.

“With 2016 marking our organization’s 30th anniversary, we wanted to offer a special session at the STS Annual Meeting to highlight the accomplishments of women in our field,” said WTS Vice President and session co-moderator Jessica S. Donington, MD. “We want young women to recognize that a long and successful group of women has preceded them and that women are thriving within cardiothoracic surgery. Both the WTS and the STS leadership believe that women represent an important group within cardiothoracic surgery and that young women should be encouraged to enter the field.”

Women account for nearly half of medical residents, but just 3% of all ABTS-certified surgeons are women. However, Dr. Donington noted that about 15% of those currently completing their cardiothoracic surgery fellowships are female.

Dr. Donington, who in 2004 was the 124th woman to be board-certified in cardiothoracic surgery, recently conducted a survey of the first 200 ABTS-certified female cardiothoracic surgeons. She found that beyond an increase in the number of women entering medical school, mentorship has contributed significantly to the growth of women entering the field of cardiothoracic surgery.

“I think mentors play a particularly important role when one chooses to enter a profession outside of their demographic norm. There are some really key male and female mentors who have influenced many of us. The WTS focuses a lot of effort on mentoring, and we hope we are doing as good a job as the amazing and pioneering women who have gone before us,” said Dr. Donington.

WTS 30th Anniversary Reception
Monday, 6:30 p.m.–8:00 p.m.
Valley of the Sun Ballroom DE, Sheraton Grand Phoenix
All are welcome to attend.

EARLY RISER SESSION 1: WOMEN IN THORACIC SURGERY: PATIENT-CENTERED CARE AND RESEARCH
Tuesday, 7:30 a.m.–8:30 a.m.
Room 123, Phoenix Convention Center

TUE Simulator Helps Facilitate Decision Making in Cardiac Surgery

The advent of 3D transesophageal echocardiography (TEE) has given cardiac surgeons the means to better communicate with cardiac anesthesiologists as they reveal valvular and other heart diseases. Learning to use this 3D technology has recently gone beyond the echo room to simulation training.

The Saturday morning STS/SCA session on Integrating Perioperative Echocardiography Into Cardiac Surgical Decision Making featured a demonstration of the HeartWorks TEE simulator by Inventive Medical.

“The beauty of the simulator is that it allows all of us to get lost in the image if we can’t anticipate what’s about to happen. A lot of times, your echocardiographer will quickly move the probe around and tell you what you’re seeing,” said co-moderator Stanton K. Shernan, MD, Director of Cardiac Anesthesia Services at Brigham and Women’s Hospital and a Professor of Anesthesia at Harvard Medical School in Boston.

Douglas Shook, MD demonstrated how transesophageal echocardiography simulation visually enhances the educational experience for residents, fellows, faculty, and staff.

“Both the WTS and the STS leadership believe that women represent an important group within cardiothoracic surgery and that young women should be encouraged to enter the field.”

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JESSICA S. DONINGTON, MD
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Opportunities Abound for Annals Education

Meeting attendees interested in improving their scholarly research abilities have a number of opportunities at the Annual Meeting to learn more about publishing in The Annals of Thoracic Surgery. A Tuesday morning Early Riser session, The Annals Academy, will provide authors with the necessary tools to turn their data into interesting and potentially practice-improving scholarly articles. The session will be held from 7:30 a.m. to 8:30 a.m. in Room 222A; unlike in previous years, you do not need to purchase a separate ticket to attend. Annals editorial staff also will be available to assist attendees with new submissions, figure editing, journal CME, mailing address changes, and other questions in Room 121C from 8:00 a.m. to 5:00 p.m. on Monday, 9:00 a.m. to 5:00 p.m. on Tuesday, and 8:00 a.m. to 12:00 p.m. on Wednesday. Finally, Annals editorial staff will host several tutorials in the Exhibit Hall. Visit Booth #938 to participate in any of the following sessions:

- New Submissions—Staff will help meeting presenters and other authors navigate the online process to submit their manuscripts.
- Journal CME—Learn how to access CME content on the Annals website and how these activities are developed.
- Figure Clinic—Authors can bring their figure files and learn how to optimally display images, including how to identify image resolution and font size, as well as how to submit files for Annals peer review.

The Annals of Thoracic Surgery, will provide authors of the Thoracic Aortic Surgery Program additional editorial staff also will be available to assist attendees with new submissions, figure editing, journal CME, mailing address changes, and other questions in Room 121C from 8:00 a.m. to 5:00 p.m. on Monday, 9:00 a.m. to 5:00 p.m. on Tuesday, and 8:00 a.m. to 12:00 p.m. on Wednesday. Finally, Annals editorial staff will host several tutorials in the Exhibit Hall. Visit Booth #938 to participate in any of the following sessions:

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Early Risers Offer Something for Everyone

Kick off your Tuesday morning with one of 16 Early Riser Sessions that will be held from 7:30 a.m. to 8:30 a.m. tomorrow. New this year, Early Risers no longer require separate tickets—anyone who is registered for the Annual Meeting can attend, free of charge. Sessions will be offered on a wide variety of topics. See a complete list of sessions below, along with room locations.

Session 1: Women in Thoracic Surgery: Patient-Centered Care and Research
Room 123

Session 2: Task Force on Military Affairs: Disaster Preparedness and Mass Casualty—The Role of a Cardiothoracic Surgeon
Room 221A

Session 3: Transitioning to Retirement
Room 227B

Session 4: How to Acquire and Use Data From the STS National Database for Research
Room 221C

Session 5: The Annals Academy
Room 224A

Session 6: New Technologies and Controversies in Esophageal Disease
Room 126ABC

Session 7: Lung Cancer Screening: Policy, Program Development, and Patient Management
Room 127ABC

Session 8: Coding and Billing in the ICU
Room 125ABC

Session 9: LVAD Thrombosis: Diagnosis and Management
Room 122ABC

Session 10: Tough Calls in Mitral Valve Disease
Room 137ABC

Session 11: Safe Reoperative Surgery
Room 127ABC

Session 12: Three Cases I Wish I Could Get Back
Room 125AB

Session 13: Mechanical Circulatory Support of the Single Ventricle
Room 129

Session 14: Clinical Trials in Thoracic Surgical Oncology
Room 226C

Session 15: Update on Maintenance of Certification for the American Board of Thoracic Surgery
Room 224B

Health Policy Forum: MIPS: The New Medicare Fee-for-Service and What It Means to You
Room 202

Note: Breakfast will not be served at the Early Riser Sessions.

Session Provides In-Depth Look at Quality Measures, Public Reporting

STS is well known for its leadership in reporting surgical outcomes, primarily stemming from the STS National Database, which was established in 1989 as an initiative for quality improvement and patient safety among cardiothoracic surgeons. The Database continues to expand, and a Monday afternoon session will review the latest updates. “Redefining Practice Through Quality and Evidence: What’s New?” will be from 1:15 p.m. to 5:15 p.m. in Room 127ABC.

“This forum will provide a focused look at the clinical practice guidelines, national risk model development, public reporting, and quality initiatives that currently and soon will shape how we’re assessed and judged in a rapidly changing health care marketplace,” said Vinay Badhwar, MD, Director of Cardiac Surgery at the University of Pittsburgh Heart and Vascular Institute, Chair of the STS Public Reporting Task Force, and member of the STS Quality Measurement Task Force. Dr. Badhwar will co-moderate the session with Jeffrey P. Jacobs, MD, Chair of the STS Workforce on National Databases.

For Dr. Jacobs, the science of analyzing outcomes to improve the quality of cardiothoracic surgical care is rapidly evolving. “As cardiothoracic surgeons, it’s our professional responsibility to become experts in these topics so that we can take better care of our patients. With this session, we felt we had an opportunity to really improve cardiothoracic care throughout the country by providing data and information related to outcomes, quality, patient safety, and evidence-driven medicine,” said Dr. Jacobs, Professor of Surgery at Johns Hopkins University and Chief of the Division of Cardiovascular Surgery, Director of the Andrews/Daicoff Cardiovascular Program, and Surgical Director of the Heart Transplantation and Extracorporeal Life Support Programs at Johns Hopkins All Children’s Heart Institute, All Children’s Hospital, and Florida Hospital for Children, St. Petersburg and Orlando.

The program will begin with John D. Mitchell, MD, Chair of the STS Workforce on Evidence-Based Surgery, providing an update on STS clinical practice guidelines for total arterial revascularization, temperature management during cardiopulmonary bypass, lobectomy for lung cancer, and surgical treatment of atrial fibrillation.

After a presentation on local and regional quality collaboratives, discussion of scientific abstracts, and a talk on quality measures, there will be two public reporting presentations, including one with Dr. Badhwar.

“It’s important for STS to transparently provide information about outcomes and activities, not only for physician and hospital consumption, but also for public consumption. We consider this a moral obligation for our professional society,” said Dr. Badhwar, adding that work in adult and congenital cardiac surgery is progressing now into excellence in general thoracic surgery public reporting.

After attendees take in a presentation on STS Congenital Heart Surgery Database risk models, Dr. Jacobs will share updates on three national quality initiatives—the National Quality Forum (NQF), the American Medical Association-convened Physician Consortium for Performance Improvement, and the Centers for Medicare & Medicaid Services Physician Compare website.

Vinay Badhwar, MD
Jeffrey P. Jacobs, MD

“It is important that STS has a seat at the table as these national quality agendas evolve,” Dr. Jacobs said. For example, he noted that the Society’s commitment to quality is exemplified in the NQF’s endorsement of multiple STS performance measures.

“STS is the steward for more NQF-endorsemed measures than any other specialty-based medical professional organization,” Dr. Jacobs said. The Chair of the AMA/Specialty Society Relative Value Scale Update Committee, Peter K. Smith, MD, Durham, N.C., will conclude the session with an update on physician reimbursement, including CPT and the RUC.

“What Peter has accomplished in advocating for our profession to assure fair strategies for assessing the value of physician work is important and legendary in our field,” Dr. Jacobs said.

It’s important for STS to transparently provide information about outcomes and activities, not only for physician and hospital consumption, but also for public consumption. We consider this a moral obligation for our professional society.

VINAY BADHWAR, MD

Visit STS in the Exhibit Hall

Make sure to stop by the STS booth (#523) in the Exhibit Hall to hear the latest updates from staff members. Ask about the first outcomes report from the STS/ACC TVT Registry, plans to upgrade and expand the STS National Database, public reporting initiatives, exciting developments from the STS Research Center (now in its fifth year), and upcoming educational programs, such as the STS ECMO Symposium that will be held in March 2016.

Additionally, STS members can update their contact information and pay membership dues. Non-members can fill out an application to begin taking advantage of the many benefits of STS membership.
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Clark Papers Feature Important Outcomes Research

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since its inception in 1989, the STS National Database has generated hundreds of key clinical research papers. Three of the latest practice-changing studies—one each from the Congenital Heart Surgery Database (CHSD), the Adult Cardiac Surgery Database (ACSD), and the General Thoracic Surgery Database (GTSD)—will be presented as the 2016 Richard E. Clark Memorial Papers from 8:15 a.m. to 9:00 a.m. this morning during the General Session in Exhibit Halls 2-3.

Dr. Clark was a key leader behind the creation of the Database, serving as Chair of the STS Ad Hoc Committee to Develop a National Database for Thoracic Surgery.

UNDERWEIGHT AND SEVERE OBESITY SIMILARLY DANGEROUS FOR LUNG RESECTION

Body mass index (BMI) has long been used to evaluate risk and stratify patients for lung resection due to lung cancer. And while obesity is commonly recognized as a risk factor, being underweight is emerging as a largely underestimated risk of surgical complications.

Researchers queried the GTSD to find more than 41,000 patients who underwent anatomic lung resection for cancer between 2009 and 2014. The patients were grouped by BMI: less than 18.5 kg/m²; normal, 18.5–24.9 kg/m²; overweight, 25.0–29.9 kg/m²; obese I, 30.0–34.9 kg/m²; obse II, 35.0–39.9 kg/m²; and obese III, 40.0 and higher. With more than 435,000 thoracic surgery procedure records and more than 800 participating surgeons, the GTSD is particularly useful for identifying under-recognized associations.


As expected, the most obese patients were at significantly increased risk for surgical complications. The surprise finding was that patients who are underweight are at similarly increased risk for pulmonary and postoperative complications.

“We think that many patients who are underweight are frail, which is associated with impaired strength, reduced activity, and being easily fatigued. There also may be an association with immune system impairment. All of these factors adversely affect outcomes after lung surgery,” Dr. Williams said.

Researchers also found that patients who were overweight or somewhat obese had fewer postoperative and pulmonary complications compared to patients of normal weight, although the reason is unclear.

NEW CLINICAL RISK FACTOR SCORE DEVELOPED FOR ISOLATED TRICUSPID VALVE SURGERY

The Clark Paper for Adult Cardiac Surgery showcases the development of a novel risk prediction score for tricuspid valve (TV) surgery. The literature shows consistently high mortality from TV surgery—about 8%–10%—but this is the first clinical risk score to successfully predict mortality and major morbidity using preoperative patient data.

Lead author Damien J. LaPar, MD, MSc, Cardiothoracic Surgery Fellow at the University of Virginia in Charlottesville, will present “Development of a Risk Prediction Model and Clinical Risk Score for Isolated Tricuspid Valve Surgery: Analysis of the STS Adult Cardiac Surgery Database.”

Researchers analyzed data within the ACSD on more than 2,000 isolated TV repair and replacement surgeries performed for any reason across 49 hospitals. More than 90% of US programs that perform adult cardiac surgery participate in the ACSD. To date, the ACSD has more than 5.8 million surgical records.

This research identified risk scores for both mortality and major morbidity associated with 13 patient factors, such as age, sex, specific comorbidities, New York Heart Association Functional Classification, reoperation, and urgent or emergency status. A simple clinical risk score of 0–10 based on the sum of numerical scores for each factor was strongly associated with incremental increases in predicted morbidity and mortality. The predicted mortality risk ranged from 2% to 34% and predicted major morbidity risk ranged from 3% to 71%.

This is the first successful clinical risk score to be developed for TV surgery. Surgeons may be able to use this score to better identify candidates for TV surgery, as well as to counsel patients and guide perioperative management.

PRESENCE OF NON-CARDIAC AND GENETIC ABNORMALITIES VARIES DRAMatically IN CHD

The Clark Paper for Congenital Heart Disease will explore the prevalence of genetic abnormalities across various types of congenital heart disease.

“Neonates and infants with congenital heart disease have had improved outcomes with regard to morbidity and mortality over the past half century,” said Angira Patel, MD, MPH, Pediatric Cardiologist and Assistant Professor at the Northwestern University Feinberg School of Medicine in Chicago. “We know that when you have a congenital heart disease, the coexistence of another abnormality—whether it is a noncardiac congenital anatomic abnormality, a chromosomal abnormality, or a syndrome—can affect clinical outcomes.

Researchers analyzed the prevalence of coexisting conditions across congenital heart disease diagnostic groups has been a challenging area of research.”

Dr. Patel is the lead author of “Prevalence of Noncardiac and Genetic Abnormalities in Neonates Undergoing Cardiac Surgery: Analysis of the STS Congenital Heart Surgery Database.” Researchers analyzed the CHSD for presence of an associated abnormality in neonates who underwent index cardiac operations between January 2010 and December 2013 at centers across North America. The cohort of more than 15,000 neonates was divided into 10 diagnostic groups based on each infant’s most complex cardiac anomaly or condition.

Researchers then queried the CHSD to determine the prevalence and distribution of non-cardiac anomalies, genetic anomalies, and syndromes across each of the diagnostic groups. The CHSD is the largest database in North America dealing with cardiac malformations. Since its launch in 2002, the CHSD has collected more than 373,000 congenital heart surgery procedure records. The prevalence of these anomalies varied dramatically across different diagnostic groups, ranging from 4% to 59%.

“This is the first large database study in the contemporary era across multiple centers that evaluates the distribution of these anomalies across different cardiac malformations,” Dr. Patel said. “We know that the association of these anomalies has an impact on cardiac outcomes. Understanding the prevalence across diagnostic groups may be useful for patient counseling, recommendations for screening for anomalies and genetic disorders, and perioperative management.”

LOOKING TO THE FUTURE

T

he Society awarded 60 Looking to the Future scholarships to medical students and general surgery residents interested in a career in cardiothoracic surgery. The scholarship program is celebrating its 10th anniversary this year.

Attend the STS/CTSNet Career Fair

Recruiters will be available to talk with you about career opportunities. The Career Fair will be held in the Exhibit Hall.

MONDAY, JANUARY 25
9:00 a.m.–4:30 p.m.

TUESDAY, JANUARY 26
9:00 a.m.–3:30 p.m.
COR-KNOT®
STRONG. SECURE. RELIABLE.

With 8.5 years of proven clinical results and over 2 million fasteners sold worldwide, COR-KNOT® is suture fastening technology you can trust.

Titanium Suture Fastening Technology

Learn how COR-KNOT® could help improve your OR by visiting LSI SOLUTIONS at booth 101
Hear from Experts at Industry-Sponsored Satellite Activities

Satellite activities are programs offered by industry and held in conjunction with the STS 52nd Annual Meeting. They are not developed or sponsored by STS.

Question of the Day

What did you learn today that you will take home with you?

“I think there is a lot of innovation and new thinking among my colleagues and companies, and I’m looking forward to a great year of adopting new practices.”
I-Wen Wang, MD, PhD
Indiana University
Indianapolis

“I learned how to reduce pulmonary hypertension in patients whose hemodynamic values don’t allow them to have a heart transplant.”
Lissette Aliaga Sanchez, MD
Rebagliati Hospital
Lima, Peru

“I think the most important lesson I’ve learned is that in order for us to continue to succeed with new technologies, we have to make sure we form collaborative teams with our cardiology colleagues. That’s imperative.”
Raymond Singer, MD
Lehigh Valley Health Network
Allentown, Penn.

“I learned how to reduce pulmonary hypertension in patients whose hemodynamic values don’t allow them to have a heart transplant.”
Lissette Aliaga Sanchez, MD
Rebagliati Hospital
Lima, Peru

“I was in a session on reoperation, and I learned a lot of interesting techniques to get back into the chest safely. I was one of the speakers, but I learned a lot from the other talks.”
Duke Cameron, MD
Johns Hopkins Medicine
Baltimore

“Work ethic and old-fashioned values are probably one of the most important things about training.”
Caitlin Brown
Medical student
Oregon Health and Science University
Portland

“I’ve learned the value of the heart team approach to treat valvular heart disease.”
Tamim Antaki, MD
Union Hospital
Terre Haute, Ind.

You now have a trustworthy resource to share with your patients.

ctsurgerypatients.org – new!
The Patient Guide to Heart, Lung, and Esophageal Surgery
A Website Presented by Cardiothoracic Surgeons Committed to Improving Patient Care

Available in both English and Spanish, this website is easily viewable on computers, tablets, and smartphones.

All information has been reviewed by STS members and is divided into the following sections:

- Adult Heart Disease
- Pediatric and Congenital Heart Disease
- Lung, Esophageal, and Other Chest Diseases
- Heart and Lung Transplantation
- Before, During, and After Surgery

Visit www.sts.org/patient-information to download a printable PDF for referring your patients to this website.
Attend the STS Social Event Tonight

Join your colleagues tonight from 7:00 p.m. to 10:30 p.m. for an evening of mariachi music, delicious food, and ice-cold margaritas at Corona Ranch, nestled in the shadows of nearby mountains. You can compete against fellow attendees in “cowboy games” and get a front-row seat for an exciting rodeo that will incorporate bronco and bull riding, high-speed horse maneuvers, and trick roping. Don’t miss this opportunity to relax and have fun in an Old Mexico environment. (Please note that this is an outdoor event and the desert can get chilly at night, so please dress accordingly.)

You can purchase a ticket for the social event at Registration on the lower level of the convention center.

Thank You!

The Society of Thoracic Surgeons gratefully acknowledges the following companies for providing education-al grants for the STS 52nd Annual Meeting.

STS Platinum Benefactors
- Provided $50,000 or above
  - Abbott Vascular
  - Medtronic

STS Silver Benefactors
- Provided $10,000–$24,999
  - Ethicon
  - HeartWare
  - Olympus America Inc.
  - St. Jude Medical

Product Showcase

Bolton Medical
A WerfenLife Company

Please come visit us at Booth 1032!

The Original: COSGROVE®, McCarthy and GILLINOV™ Heart Retractors
EXCLUSIVE DESIGN & MANUFACTURING BY KAPP SURGICAL

The Original Cosgrove® Mitral Valve Retractor

Gillinov™ Heart Retractor

Gillinov™/Maze Self Retaining Retractor on Chest Spreader

McCarthy Mini-Sternotomy Retractor with Universal Lift

Visit Us At:
Booth #616
STS Annual Meeting

Bid on an NCAA® Final Four® Trip of a Lifetime!

The Thoracic Surgery Foundation for Research and Education (TSFRE) is auctioning two NCAA Final Four packages for this spring in Houston.

Each package includes:
- Two tickets to the NCAA Final Four games on Saturday, April 2, 2016
- Two tickets to the championship game on Monday, April 4, 2016
- Two airline tickets and a 4-night hotel stay

The estimated retail value of each package is $4,800, and bidding starts at $5,000. Any amount you pay above the retail value is tax-deductible to the extent permitted by law. All proceeds will support TSFRE’s cardiothoracic research and education initiatives.

Place your bid at www.bit.ly/1mLA36P or by visiting the TSFRE Booth #731 in the Exhibit Hall. Winners will be announced on Wednesday, January 27 (you do not need to be present to win).

NCAA and FINAL FOUR are registered trademarks of the National Collegiate Athletic Association.
The STS 52nd Annual Meeting got off to an exciting start this past weekend, with STS/AATS Tech-Con sessions revealing the newest technology coming down the pipeline and a number of symposia in adult cardiac, general thoracic, and congenital heart surgery. Monday’s highlights include the Presidential Address and the top scientific abstracts.
A&B Medical Corporation 211
Durham, NC
A&B Medical’s products include MYO/Wire™ temperary pacing wires, Ovation™ lead systems, MYO/Punch rotating surgical punch, MYO/Lead disposable implantable cable, and DoubleWire high-strength sternal closure system.

Abbott Vascular 231
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, nutritional, and branded generic pharmaceuticals, Abbott serves people in more than 150 countries and employs approximately 70,000 people.

Aibomed Inc. 844
Davies, MA

Acetyl (KCI, LifeCell, Systagenix) 646
San Antonio, TX

ACUTE Innovations 1023
Hillsboro, OR
Furthering its reputation as a leader in the thoracic industry, ACUTE Innovations® continues to make advancements in chest wall stabilization technolog. Stop by Booth 1023 to learn about ACUTE’s cutting-edge products: RBLoc® U Plus Chest Wall Plating System and AcuTieﬂ® II Sternum Closure System.

Admedus 320
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 tissues and is being used by surgeons to repair simple and complex cardiac defects.

Advanced Cardiothoracic Consultants, LLC 932
Indianapolis, IN
Utilizing over 40 years of clinical expertise in cardiothoracic, thoracic transplant/organ replacement, and advanced heart failure, ACTC can provide invaluable clinical and social insights for programs to increase efficiencies. Whether a new or well-established program, host or instructor, let ACTC assist in maintaining financial viability and sustaining growth in today’s challenging health care market.

Aesculap 314
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, plastic and reconstructive, thoracic, microwave, cardiovascular, and laparoscopic surgery.

American Association for Thoracic Surgery 1121
Beverly, MA
Founded in 1917, the American Association for Thoracic Surgery is dedicated to excellence in research, education, and innovation in cardiothoracic and vascular surgery and has become an international association of cardiothoracic surgeons. The AATS is the voice of the world’s foremost cardiothoracic surgeons. www.aats.org

AtriCure Inc 915
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 TriVascular Atrial Support System for Afib and the most widely implanted occlusion device for left atrial appendage management.

Baxter Healthcare Corporation 210
Asbury Park, NJ
Baxter International Inc applies a unique combination of expertise in medical devices, pharmaceuticals, and biotechnologies to create products that advance patient care worldwide.

Baylis Medical Company 551
Montreal, Quebec

Baylor Scott & White 100
Temple, AZ

BD (formerly CareFusion) 1035
San Diego, CA
BD 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 length of stay and cost of care while improving quality of life. Visit BD at Booth 1035 to learn more.

Berlin Heart Inc 1039
The Woodlands, TX
Berlin Heart is the only worldwide developer and distributor of ventricular assist devices for patients of every age and body type. EXCOR® Pediatric is approved for use in the United States under Humanitarian Device Exemption regulations by the Food and Drug Administration.

BFE Inc 438
Louisville, KY
BFE is known as a worldwide technological leader in surgical illumination and headlight video imaging. Visit Booth 438 to experience the foremost innovations in portable LED headlights offering intense, clear, bright white light and the new Hatteras™ LED light source—unmatched intense fiberoptic illumination for headlights and instrumentation.

Biodex, Inc. 650
Williston Park, NY

Bolton Medical 1032
Sunrise, FL
Bolton Medical is a subsidiary of the WerfenLife Companies. Bolton is a company that manufactures and distributes medical diagnostic solutions and medical devices worldwide. Bolton’s vision is to become the leading provider of diagnostic and innovative solutions for aortic disease. Bolton develops, manufactures, and distributes contract, high-quality products solely focused on the aorta.

Bovie Medical Corporation 540
Clearwater, FL
Bovie Medical will be featuring its J-Plasmor®—the helium-based gas plasma technology that is transforming the way surgeons are performed. J-Plasmor works with precision and versatility across open and laparoscopic procedures. Bovie will also exhibit its complete line of electrosurgical products.

C Change Surgical 450
Winston-Salem, NC
The SurgiBLUSH™ System creates sterile flush inside secure, reusable, sterile containers with no exposure to costly, vulnerable surgical drapes that can tear or perforate, unintentionally contaminating your sterile field. Users eliminate long open time to open basins and the ambient, non-sterile environment it is in.

Cancer Treatment Centers of America 443
Goodyear, AZ
Cancer Treatment Centers of America, Inc. (CTCA) is a national network of five hospitals focusing on the treatment of complex and advanced stage cancer. CTCA offers a comprehensive, fully integrative approach to cancer treatment and serves patients from all 50 states at facilities located in Atlanta, Chicago, Philadelphia, Phoenix, and Tulsa.

CardiacAssist, Inc 494
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 cannulas and the PROTEK Duet™ veno-venous dual lumen cannula. Stop by Booth to learn more.

Cardica Inc 630
Redwood City, CA

Christus Health 1040
Irving, TX

Cook Medical 130
Bloomington, IN
Cook Medical pioneered many of the medical devices now commonly used to perform minimally invasive medical procedures worldwide. Today, the company integrates medical devices, drugs, and biografts to enable safer and more effective care and treatment outcomes. Since its inception, Cook has operated as a family-held private corporation.

CorMatrix 539
Roswell, GA
CorMatrix Cardiovascular markets its ECM® Biocassafd devices for vascular repair, paracentral reconstruction, cardiac tissue repair, and CareGaran® ECM Envelope and is currently conducting preclinical studies to evaluate future applications in other vascular and cardiac applications.

CryoLife 321
Kennesaw, GA
CryoLife is a leader in the development and implementation of advanced technologies associated with cold preservation and cryopreservation. CryoLife is also involved in research in the development of implantable biological devices, surgical adhesives, and cost-effective solutions for cardiovascular, and general surgery.

CT Assist 341
Philippi, WV
CT Assist is a managed service provider of cost-effective cardiovascular surgery advanced practitioners that deliver quality care. CT Assist leverages management solutions from long-term to locum tenoners and vacation coverage. The company is a physician-assistant owned and operated enterprise. CT Assist replicates the traditional method of surgting used by surgeons to place stitches and tie intracorporeal knots.

CVS 438
Dover, DE
CVS Health provides health care products and services that enhance quality of life, improve clinical outcomes, and increase accessibility and affordability of health care.

Designs for Vision 1001
Ronkonkoma, NY
Designs for Vision is the world’s leader in developing custom-made surgical telescopes—now available with Nikon® frames. See It Even Better™ with the L.E.D. Telescopes, premium quality, patient comfort and safety, and the lightest, least obtrusive product for the market. Learn more at www.designsforvision.com, or follow us on Facebook @DesignsforVision.

DGMIR/Global intercepts 1102
Dumont, NJ

Dover Evolution, LLC 19
Raynham, MA
Dover Evolution, LLC is the leading innovator in advanced, automated suturing technology. The Endo360 MIS suturing device is the only reusable automated device with wristed articulation, using a proven needle port system that eliminates the traditional method of suturing by users to place stitches and tie intracorporeal knots.

Enova Illumination 125
St. Paul, MN
NEW from Enova Illumination: Cyclops XL-T225 LED surgical baton headlight. With the brightest LED surgical lighted handle designed for deep cavity surgery HD Camera system with edit-free signal, complete control, and instant sharing.

Essential Pharmaceuticals 206
Ewing, NJ
Supporting the preservation and growth of human systems. From the cell to the entire organ, Essential Pharmaceuticals looks to advance medical treatments and the research that creates new medical treatments. Originally developed for cardiac surgery, Custodiol®HTK offers superior convenience, water-like viscosity, and no need for additives or filters, which it is a perfect solution for many transplant centers.

ETHICON/DePuy Synthes CMF 401
Cincinnati, OH
ETHICON LLC, a Johnson & Johnson company, commercializes a broad range of innovative surgical and orthopaedic products, tools, and technologies used to treat some of today’s most prevalent medical issues, such as colorectal and thoracic conditions, wounds, pain management, orthopaedic, and obesity. Learn more at www.ethicon.com, or follow us on Twitter @EthiconCMF.

European Association for Cardio-Thoracic Surgery (EACTS) 830
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 cardiac and thoracic surgery.

NEW EXHIBITORS

The information listed here is accurate as of January 24, 2016. The information for these products and services was provided by the manufacturers, and inclusion in this publication should not be construed as a product endorsement by STS.

MEETING BULLETIN ADVERTISERS
diovascular and thoracic physiology and therapy and to correlate and disseminate the useful results thereof. Visit Booth 830 for more information.

European Society of Thoracic Surgeons

ESTS is the largest international general thoracic surgery organization with more than 15,000 members from all continents. The society’s mission is to improve quality in our specialty; from clinical and surgical management of patients to education, training, and credentialing of thoracic surgeons worldwide. The 24th European Conference on General Thoracic Surgery will be held on 29 May–1 June 2016, in Istanbul, Turkey.

Fehling Surgical

Fehling Surgical features the CERAMOâ 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. BREAKING NEWS: See the Reusable Papillary Muscle Exposure Device and Atrial Lift System!

Genesee BioMedical


Gore & Associates Flagstaff, AZ

The Gore Medical Products Division has provided creative solutions to medical problems for three decades. More than 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.

Grifols Tustin, CA

Grifols provides a full range of blood components, diagnostic tests, and therapies to ensure the safety of every patient. Grifols fosters a commitment to the highest standards of excellence and ethical conduct in the conduct of its business.

HeartWare Framingham, MA

HeartWare is dedicated to delivering safe, high-performing, and 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.

Heart Valve Society, The (HVS)

Beverly, MA

The HVS held its inaugural meeting in May 2015 at the Girmaldi Forum in Monte Carlo, Monaco, with more than 430 medical professionals and 80 industry partners in attendance. Whether you are a cardiologist, surgeon, researcher, or another member of the crucial valve disease treatment team, the HVS welcomes you to become a part of something very unique. Membership is available online.

Hospital Corporation of America

The HVS holds its annual meeting in May at the Girmaldi Forum in Monte Carlo, Monaco. The HVS held its inaugural meeting in May 2015 at the Girmaldi Forum in Monte Carlo, Monaco, with more than 430 medical professionals and 80 industry partners in attendance. Whether you are a cardiologist, surgeon, researcher, or another member of the crucial valve disease treatment team, the HVS welcomes you to become a part of something very unique. Membership is available online.

Infinite Trading Inc.

Las Vegas, NV

INFINITE TRADING INC. provides a full range of blood components, diagnostic tests, and therapies to ensure the safety of every patient. Grifols fosters a commitment to the highest standards of excellence and ethical conduct in the conduct of its business.

International Biophysics Corp

Austin, TX

International Biophysics Corp is a leader in the design and development of advanced medical devices. The company's innovative products are used by healthcare providers worldwide to improve patient outcomes and reduce costs. The company's portfolio includes devices for minimally invasive cardiac surgery, vascular surgery, and other specialties.

Innovative Surgical Sunnyvale, CA

Intuitive Surgical Inc. designs, manufactures, and markets surgical devices and medical information technology to facilitate minimally invasive surgical procedures. The company's flagship product is the da Vinci Surgical System, which is used in more than 35 countries around the world.

Intuitive Surgical, Inc.

Sunnyvale, CA

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Intermountain Healthcare Salt Lake City, UT

The Cardiovascular and Thoracic Surgery Core Curriculum Review is a series of intensive lectures in cardiovascular and thoracic surgery. This course is intended for surgeons preparing for the American Board of Thoracic Surgery certification examination. Please visit corereview.org for more information.

International Society for Minimally Invasive Cardiothoracic Surgery (ISMICS)

Beverly, MA


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distributes the da Vinci Surgical System, technology designed to allow surgeons to perform many complex procedures minimally invasively.

IsoRay Medical 934
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 based brachytherapy meshes and strands for resection line treatment following surgery for high-risk lung cancers, resulting in highly conformal adjacent radiation therapy that spares critical thoracic structures.

JACE Medical 121
Winona Lake, IN
JACE Medical pioneered the world’s first rigid closed system closure applied postmenotomy—the Grand Pefill. JACE Medical is a company and culture committed to creating innovative, transformational technologies that facilitate optimal patient treatment, recovery, and future wellness. Visit Booth 121 and see how the company thinks outside the paradigm. Get more information at JACEMED.com.

Just Co, Ltd 742
Torrance, CA
Only a dedicated plating company can provide the "strongest diamond plating" technology. The company only manufactures the plated layer, which anchors the diamond base on precision. Its technology is unique and popular to those in the medical field for microray technology and endoscope tips.

Kadlec Regional Medical Center 104
Richland, WA
Kapp Surgical Cleveland, OH
Kapp Surgical is a custom design shop that designs surgical instruments and implants, manufactures them, and sells them, as well as distributes domestically and internationally. Kapp’s exclusive products include the Coyne Groove Heart Retractor, Strip T’s surgical organizer, and countless surgical devices, all FDA-approved with several pending approvals.

Karl Storz 546
El Segundo, CA
Karl Storz, a leader in endoscopic equipment and instruments, offers solutions for vascular and thoracic surgery. Its EndoCAmeleon® Laparoscope enables surgeons to adjust the viewing direction from 0° to 120° throughout procedures. And its Video Medistimioscope with DCIR-D1 Camera allows video recording while working under direct vision for documentation and teaching.

Kinamed Inc. 549
Camarillo, CA
KLS Martin 739
Jacksonville, FL
KLS Martin, a responsive company, is focused on the development of innovative products for oral, plastic, and craniofacial/otologic 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. 243
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 ALUF Polaris Lateral Retractor, along with the Rotating Osteo Punch, Ejector Punch Rongers, and many more fine instruments.

Lexion Medical 247
Macon, GA
LifeNet Health 1031
Virginia Beach, VA
LifeNet Health helps save lives, restores health, and give hope to thousands of patients each year. It is the world’s most trusted provider of transplant solutions, providing surgical inventory and procurement innovations in bioprinting 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.

LivaNova (formerly Sorin Group) 201
Austin, TX
LivaNova is a world leader in the treatment of cardiovascular disease. Its innovative product portfolio spans vascular and myocardial revascularization and repair; perfusion equipment, cannula, and minimally invasive cardiac surgery instruments. For more information, visit www.livanova.com.

LoupeCam 643
Scottsdale, AZ
LoupeCam® is the market leader in head-mounted 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 that allows for hands-free control of the camera.

LSI Solutions 101
COR-KNOT™ delivers superior titanium suture fastening technology. LSI solutions include CoaClot, the first clinical wound collection system applied presternotomy: Jeopardy Championship – Round 2 3:30 p.m.–4:00 p.m. Small Theater

Medtronic 713
Foxboro, MA
Medtronic specializes in research, development, and distribution of noninvasive patient monitors specializing in the field of tissue and cerebral blood flow. Its bedside product FLO™, is based on the patented UTight™ technology designed to provide physicians with unique monitoring solutions that are imperative to individualized and personalized patient care.

Medtronic Minneapolis, MN
As a global leader in medical technology, services, and solutions, Medtronic improves the lives and health of millions of people each year. The company researches, develops, commercializes, and commercializes medical devices, therapies, and economic expertise to address the complex challenges faced by health care systems today. Let’s take health care Further. Together. Learn more at Medtronic.com.

Microsurgery Instruments, Inc. 122
Belleair, FL
Microsurgery Instruments is one of the leading suppliers of surgical instruments and loupes. The company’s instruments include titanium scissors, nose 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 of clear view and up to 11x magnification.

Myriad Genetic Laboratories, Inc. 239
Salt Lake City, UT
Myriad Genetics is a leading molecular diagnostic company dedicated to making a difference in patients’ lives through the discovery and commercialization of transformative tests to assess a person’s risk of developing disease, identify optimal treatment decisions, and assess risk of disease progression and recurrence.

Nadia International 614
Austin, TX
Educational/surgical bronze sculptures specifically for the thoracic surgeon. These museum-quality limited editions are created by the world famous sculptor Roland. More than 7,500 surgeons in 77 countries collect his fine works of art. His works are on display at the Smithsonian Institute and many medical universities throughout the world. Introducing MIRACLE OF LIFE is at the 2016 meeting.

nContact 217
Morrisville, NC
nContact is a leader in the development of disease management programs for the goal of opening untapped, 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. 1104
Egen Prairie, MN
NeoChord, a U.S. medical device company, intends to transform mitral valve repair by providing minimally invasive technology that enables beating heart, sternal sparing implantation of artificial chord tendineas.

New Wave Medical 446
Madison, WI
New Wave Medical Inc. has the first and only Intelligent Ablation System for microwave ablation of soft tissue lesions with a total solution for ablating lesions of all shapes and sizes for consistency and control. The computer-controlled platform with Ablation Confirmation software is a turn-key, all-in-one solution that is pre-configured in procedure, confirms physicians with proper probe placement and confirms success of procedure.

Northeast Provider Solutions 112
Valhalla, NY
Northwestern Medicine 102
Winfield, IL
On-X Life Technologies is proud to announce FDA approval to reduce INR to 1.5–2.0 for On-X Aortic Heart Valve patients starting 3 months after surgery. Check-XR® ePTFE stent for mitral repair is now available in an innovative Pre-Measured Loops system.

On-X Life Technologies, Inc. 617
Austin, TX
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OFS HealthCare System 110
Pomia, IL
Oxford University Press 213
New York, NY
Visit the Oxford University Press stand to browse the company’s prestigious surgery books and educational/surgical bronze sculptures specifically for the thoracic surgeon. These museum-quality limited editions are created by the world famous sculptor Roland. More than 7,500 surgeons in 77 countries collect his fine works of art. His works are on display at the Smithsonian Institute and many medical universities throughout the world. Introducing MIRACLE OF LIFE is at the 2016 meeting.

ReviewSTS University Lecture Material Online
n order to maximize the hands-on learning time during STS University, attendees are strongly encouraged to access the corresponding online video lectures prior to or during their daily agenda. You can access the lectures at the computer stations located near the entrance to the Exhibit Hall and near Registration on the Lower Level of the Convention Center. You also can access them from your own computer or handheld device by visiting www sts.org/annualmeeting or by using the STS Annual Meeting Mobile App.

Join the Conversation
ike the STS Facebook page at www.facebook.com/ societyofthoracicsurgeonsand fellow STS on Twitter at @STS_CT Surgeryfor information about lunch and the Annual Meeting. If you tweet about the Annual Meeting, be sure to use the hashtag #STS2016. After the Annual Meeting is over, the STS Facebook and Twitter pages will continue to deliver access to STS events and CME credit opportunities.
Collect your free sample copies of the European Journal of Heart Failure to read the latest research and innovative ideas. EJHF offers a focus on the clinical, experimental and translational aspects of heart failure.

Pinnacle Biologies
Bonnoburgh, IL
Pinnacle Biologies, Inc. specializes in revitalizing medical devices by promoting, developing, and managing innovative approaches to the commercialization of medical devices. Founded in 1993, the company focuses on oncology and orthopedic devices. PDT with Photofrin® is an effective therapy for select thoracic malignancies.

Providence Health Services
Portland, OR
Providence Health Services is affiliated with Swedish Health Services, Pacific Medical Centers, and Kadlec. Together, their organizations include more than 5,000 employed physicians, 35 medical centers, and more than 600 clinics in Alaska, California, Montana, Oregon, and Washington. The company is currently recruiting providers in nearly all medical specialties throughout the West.

QED Medical
Lexington, KY
QED Medical introduces the new XL 10-watt OR-Ready Portable LED Headlight System featuring unmatched light intensity, maximum intensity, and a one-hand focus adjustment. Since 1971, QED Medical has developed a comprehensive line of American-made headlight illumination and video headlight systems for applications from examination to surgery.

Quest Medical Inc.
Ann Arbor, MI
The Quest Medical Inc. booth offers decades of surgical instrument expertise and new products such as the Lumen/Pelican LED light. 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
Ann Arbor, MI
The Regional Data Managers booth provides opportunities for surgeons to interact with database managers from around the country who are actively involved with regional STS National Database and initiatives supporting the broad spectrum of thoracic surgeons.

rEVO Biologies
Framingham, MA
rEVO Biologies, Inc. is a commercial-stage biopharmaceutical company focusing on the development and commercialization of specialty pharmaceuticals to address unmet medical needs in patients with life-threatening conditions. The company’s lead product, Ativan, is the first and only plasma-free antrinobinum bromide.

Rose Micro Solutions
West Seneca, NY
Rose Micro Solutions sells high-quality optical loupes and LED lights for less! The company’s loupes range from $279 to $1,300 and are a family business consisting of four brothers who have been involved in the family business since 1921. More than 3,000 surgical instruments in titanium and stainless steel, including D’Amico Medical and Biologic Visionary Biopsy Forceps, new shorter VATS instruments, universal VATS instruments, MEMORY Dots/Visetion Probes, LEGACY Needle Holders and Forceps, and single-use products.

Scrihan International
St. Paul, MN
High quality surgical products designed and manufactured by the Scrihan family since 1921. More than 3,000 surgical instruments in titanium and stainless steel, including D’Amico Medical and Biologic Visionary Biopsy Forceps, new shorter VATS instruments, universal VATS instruments, MEMORY Dots/Visetion Probes, LEGACY Needle Holders and Forceps, and single-use products.

Thoratec Corporation
Pittsburgh, PA
Thoratec is the world leader in mechanical circulatory support and is the inventor of the Total Artificial Heart. The company’s mission is to develop and manufacture technologies that improve the quality of life for patients suffering from advanced heart failure. Thoratec’s products include the HeartMate II, Thoratec VAD, CentriMag, and PedMag/PedVAD.

VitaHEAT Medical
Phoenix, AZ
VitaHEAT Medical is the world’s first medical device to provide heat to surgical sites. VitaHEAT Medical’s heat source for the pediatric cardiac surgical population.

Vitalcor, Inc.
Ann Arbor, MI
Vitalcor, Inc. is a supplier of medical devices used primarily in cardiovascular surgery since 1975. Vitalcor has provided products that take input from teaching and practicing surgeons to make their operating room easier. The company prides itself on offering products and exceptional customer service.

VitaTec Geister
Plaistow, NH
VitaTec Geister will be displaying all its products, highlighting its new product line. Enplus® Aneur- somsis Assist Device, Cygnet Flexible Clamps, Intrack Atraumatic Temporary Clamps and Inserts, and Geister ValvGate and ValveGate PRO Line.

Wexler Surgical, Inc.
Houston, TX
Wexler Surgical designs and manufactures a variety of titanium and stainless steel Specialty surgical instruments and products for cardiovascular, thoracic, and general surgery. For more information about products and services, email sales@wexlersurgical.com.

Z Health Publishing, LLC
Phoenix, AZ
Z Health Publishing, LLC is an independent publisher of peer-reviewed medical journals and is the leading publisher of evidence-informed healthcare literature. Z Health publishes the Journal of Pain and Palliative Care Pharmacotherapy (JPPCP) and the American Journal of Perioperative Medicine (AJPM). Z Health is a specialty publisher of evidence-based pain management and learning solutions to help perioperative nurses improve patient outcomes and care delivery. Z Health’s products are available online at www.zhealthpub.com.

Zipper Belt
Dallas, TX
Zipper Belt is an innovation for surgeons and doctors who operate under the skin. The Zipper Belt is a surgical apron with a zipper in the back. The zipper allows surgeons to access their body without having to remove their surgical gowns. The Zipper Belt is a unique and innovative product that can improve surgical outcomes and patient comfort.
INSPIRED by a belief that quality designs lead to a better quality of life.
DRIVEN by a passion and respect for the aortic anatomy.
COMMITTED to crafting advanced endovascular solutions for every patient.

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Failure is not an option, but your **choice of therapy** is.

Whether your patients are facing the early stages of heart failure or a more serious cardiac situation, you can look to Maquet for a full range of effective, easy-to-use heart failure treatment options. Our CARDIOSAVE IABP technology helps patients whose hearts are beginning to fail while creating a critical window of time that enables clinicians to determine the best next steps if additional treatment is necessary. In more critical cases, our CARDIOHELP ECLS system combines hemodynamic stabilization with oxygenation to provide full cardiopulmonary support.

From the smallest to greatest of cardiac needs, you’ve got complete support in the Cath Lab with Maquet.

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