

# STS Meeting Bulletin

The Society of Thoracic Surgeons  
56th Annual Meeting  
New Orleans, Louisiana | sts.org  
#STS2020

SATURDAY | JAN. 25, 2020

## Saturday Program

6:30 a.m. – 5:00 p.m.

Registration  
Hall B1 Lobby

7:00 a.m. – 8:30 a.m.

STS University (Session I)  
Hall B1

8:30 a.m. – 9:00 a.m.

Break

9:00 a.m. – 10:30 a.m.

STS University (Session II)  
Hall B1

10:30 a.m. – 11:00 a.m.

Break—Visit Tech-Con Exhibits  
Great Hall Lobby

11:00 a.m. – 6:15 p.m.

Tech-Con

You must purchase a separate ticket to attend these events.

See page 10 for complete Tech-Con schedule.

### Free Wi-Fi Available

Complimentary wireless internet is available in the common areas and meeting rooms of the convention center for all STS Annual Meeting attendees. To connect, select “STS2020” from the available networks. A password is not required.



## Scrub In Today at STS U



Learn a new surgical procedure or perfect your skills with one-on-one instruction from the experts.

If you haven't already signed up to attend STS University this morning, there's still time to register for these interactive, hands-on sessions. Visit the registration desk in the Hall B1 Lobby to see what courses still have openings. Sessions take place from 7:00 a.m. to 8:30 a.m. and again from 9:00 a.m. to 10:30 a.m. in Hall B1. Descriptions of each course as well as supplemental video lectures are available at [sts.org/stsuniversity](http://sts.org/stsuniversity).

### STS University Courses

Course 1: VATS Lobectomy

Course 2: Complex Chest Wall Issues for the Thoracic Surgeon: Reconstruction after Tumor Resection, Pectus Deformities, and Rib Fractures

Course 3: Robotic Lobectomy

Course 4: Aortic Root Enlargement Procedures and Aortic Valve Leaflet Reconstruction

Course 5: NEW! ECMO Cannulation

Course 6: Essentials of TAVR

Course 7: Mitral Valve Repair

Course 8: Valve-Sparing Aortic Root Replacement—Reimplantation

Course 9: Minimally Invasive Aortic and Mitral Surgery

Course 10: Transseptal Puncture for Surgeons

## Welcome to New Orleans

On behalf of the STS leadership, thank you for joining us in the Big Easy at the 2020 STS Annual Meeting! New Orleans is a vibrant city with a rich history—and I know you'll enjoy not only the educational offerings, but also the cultural experiences that await you.

New this year, the meeting begins with a full day of sessions on Saturday, starting with STS University and ending with the always-thrilling Shark Tank presentations during Tech-Con. We also have added a new keynote lecture on Sunday, will demonstrate our next generation STS National

Database throughout the meeting, and have many engaging scientific and educational discussions both inside and outside of the session rooms. I hope you take advantage of as many of these activities as possible, as well as spend time with our exhibitors and network with colleagues, before the conclusion of the meeting on Tuesday afternoon.

### Keynote Lecturers

I'm extremely proud of our lineup of inspiring keynote speakers—especially on Sunday, with the introduction of a new lecture honoring Vivien

Thomas, the surgical technician who helped pioneer the anastomosis of the subclavian artery to the pulmonary artery. His contributions went unrecognized for many years, but now we can pay tribute to him in a national forum. The inaugural Vivien Thomas Lecture will be given by Dr. Clyde Yancy, vice dean for diversity and inclusion and chief of the Division of Cardiology at Northwestern University's Feinberg School of Medicine in Chicago, as well as a past president of the American Heart Association.

see **WELCOME**, page 3

## See How NextGen STS National Database Will Improve Your Practice

A Sunday morning session will demonstrate the many ways that surgeons can use the STS National Database to support their practice and improve outcomes for their patients.

The next generation STS National Database is launching for the Adult Cardiac and General Thoracic Surgery Databases, while Congenital Heart Surgery Database participants will gain access in the next few weeks. The session will begin with a look at the new cloud-based dashboards that provide highly secure, interactive access to outcomes data.

“These enhanced dashboards will help facilitate quality

improvement in real time,” said Felix G. Fernandez, MD, MSc, from Emory University in Atlanta, who is one of the session moderators and chairs the STS Workforce on National Databases. “Surgeons will be able to interact with their data in a very meaningful way.”

Attendees also will receive an update on how public reporting of surgical outcomes is evolving to meet the needs of patients and providers, while remaining a primary instrument of quality.

“By providing access to risk-adjusted outcomes, the Database allows surgeons to understand their outcomes and areas for focused



“These enhanced dashboards will help facilitate quality improvement in real time.”

Felix G. Fernandez, MD, MSc

improvement,” Dr. Fernandez said. “Public reporting also allows surgeons to assure patients and their caregivers that the services they provide are safe.”

Additional presentations will highlight how the Database is used for professional advocacy, including its role in establishing physician reimbursement for different procedures, as well as

coverage determination by the Centers for Medicare & Medicaid Services. ●

### Utilizing the STS National Database in Your Daily Practice

Sunday  
7:45 a.m. – 9:45 a.m.  
Room 208



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**Prof. Dr. Med. Farhad Bakhtiary**  
Chief Physician at Helios Hospital,  
Siegburg-Bonn, Germany

BOOTH **225**

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# Video-Based Sessions Enrich the Learning Experience



“The ability to produce excellent surgical outcomes often is not only the product of traditional educational paradigms, but also more contemporary learning platforms such as visiting mentorships or the sharing of surgical videos and expertise.”

S. Adil Husain, MD

Cardiothoracic surgeons often learn best by observing real surgeries and seeing how others navigate common and complex procedures. With that in mind, Sunday’s “MyTube” sessions will offer videos focusing on all three disciplines.

“The ability to produce excellent surgical outcomes often is not only the product of traditional educational paradigms, but also more contemporary learning platforms such as visiting mentorships or the sharing of surgical videos and expertise,” said S. Adil Husain, MD, from the University of Utah in Salt Lake City, who will co-moderate the congenital heart surgery session.

## Adult Cardiac Surgery

State-of-the-art techniques for coronary artery bypass grafting (CABG) surgery, aortic valve surgery, transcatheter approaches, and complex valve repair will be on display during the adult cardiac video session.

Co-moderator and creator of the how-to video session, Gorav Ailawadi, MD, MBA, from the University of Virginia in Charlottesville, said many surgeons don’t perform intraoperative coronary graft assessments following

common CABG procedures.

“I think hearing from some thought experts on the topic could elevate outcomes with CABG by better assessing the patency of bypasses,” he said. “We’ll focus on the surgical techniques with the goal of facilitating rapid transmission of knowledge, while offering technical tips and describing pitfalls to avoid.”

Experts also will explore transeptal puncture, percutaneous axillary access for catheter-based valvular and aortic interventions, the pitfalls of mitral valve repair with anterior leaflet prolapse and of tricuspid valve repair in endocarditis, and extended arch and branched arch graft repairs in acute type A dissection.

“This will be an exciting session—video-based presentations are a draw,” Dr. Ailawadi said. “It’s a more fun and effective way to learn than a PowerPoint lecture with mounds of data.”

## Congenital Heart Surgery

A series of eight videos will help surgeons learn how to avoid common obstacles during congenital heart surgery.

According to Dr. Husain, topics that continue to spark debate and will

be featured include:

- Options for the surgical correction of valve disease in the neonatal and infant populations
- Technical variations in reconstructing aortic arch anomalies
- New frontiers within tracheal interventions

“We will have an opportunity to discuss the caveats and pitfalls of these surgical techniques and their best-use cases and scenarios,” Dr. Husain added. “We hope the presentations will cultivate much discussion among the attendees.”

## General Thoracic Surgery

General thoracic surgeons can expect videos on the latest techniques for minimally invasive thoracic surgery, highlighting the use of advanced methods and adjuncts to address common clinical conditions of the lungs, esophagus, and mediastinum.

Session co-moderator Nathaniel R. Evans III, MD, from Thomas Jefferson University in Philadelphia, said that a group of “young and new voices representing a diverse population of thoracic surgeons” will guide video-led discussions covering hot topics such as anastomotic techniques in esophagectomy, localization of



subsolid lung nodules, and minimally invasive pectus excavatum repair.

That last topic, Dr. Evans said, was specifically chosen because thoracic surgeons reported that if they knew more about minimally invasive pectus excavatum repair, they might pursue a specialization in it, especially if no one currently was performing these operations in their area. Another highlight will be the discussion of three different approaches to minimally invasive esophagectomy and the varying results.

Exposure to new surgical techniques and approaches is critical to the evolution of cardiothoracic surgery, and Dr. Evans said he is confident attendees will gain valuable information that may help them implement these strategies back home. ●

### MyTube: Adult Cardiac Video and Expert Panel Session

Sunday  
7:45 a.m. – 9:45 a.m.  
Room 217

### MyTube: Congenital Video and Expert Panel Session

Sunday  
7:45 a.m. – 9:45 a.m.  
Room 211

### MyTube: Pushing the Limits of Minimally Invasive Thoracic Surgery and Avoiding Pitfalls

Sunday  
7:45 a.m. – 9:45 a.m.  
Room 220

## WELCOME

continued from page 1

On Monday, Dr. Domenico Pagano will deliver the Thomas B. Ferguson Lecture on the soundness of data that support the practice of evidence-based medicine. And on Tuesday, our C. Walton Lillehei Lecturer, Dr. Bartley Griffith, will speak about the journey toward a wearable pump lung.

I hope you will attend each of these keynotes, as well as my Presidential Address on Monday morning at 11:15, “On Life, Leadership, and the Pursuit of Happiness.”

## Database Updates

The meeting also is a great opportunity for you to learn more about our next generation STS

National Database. In the coming weeks, participants will have access to their data on state-of-the-art, interactive dashboards that are available 24/7 on a highly secure platform. And we’ll continue to roll out new features throughout the year. These features will help you save time and resources, while accelerating quality improvement and point-of-care decision-making. STS staff will be available in the Exhibit Hall to answer your questions, and you can hear more during the plenary session on Monday morning.

I’m thrilled that the new Database is ready after working on this project for more than 2 years. I’m also thrilled with the many exciting sessions on the program that will help you stay informed about the most pressing issues facing the specialty. Recent discussions surrounding

the ISCHEMIA trial have led to a fierce debate about how to best treat patients with severe but stable angina. We’ll explore what cardiothoracic surgeons need to know in the Adult Cardiac: Ischemic session on Monday afternoon. I’m also looking forward to illuminating sessions on transcatheter aortic valve replacement in low-risk patients, machine learning in the prediction of cardiothoracic surgery outcomes, and lymphatic intervention after congenital heart surgery.

We’ll extend the conversations about some of these hot topics in one of the Exhibit Hall theaters. On Tuesday, you can take part in discussions on “Recent Clinical Trials and Their Impact on You” and “Training the Thoracic Surgeon.”

You won’t want to miss these discussions or sessions that we’ve developed in conjunction with other

organizations from around the world, including “Controversies in Thoracic Organ Failure” with ISHLT, “Surgery for Advanced Stage Cancer—When Is Out of Bounds Not Out of Bounds?” with CATS, and “Bicuspid Aortic Valve Repair with Aortic Root Aneurysm—Techniques and Outcomes” with EACTS.

I would like to thank Dr. David Cooke, chair of the STS Workforce on Annual Meeting, as well as the entire Program Committee and the STS staff, for putting together a meeting that I hope will educate us, motivate us, and remind us that it’s all about the patient.

Thank you again for being here. I look forward to spending time with you in the coming days. ●

Robert S.D. Higgins, MD, MSHA  
STS President



The Society  
of Thoracic  
Surgeons

## STS Meeting Bulletin

The Official Newspaper  
of the STS 56th Annual Meeting

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**GETINGE** 

# Why Do US and Canadian Surgeons View Cancer Treatment Differently?

Surgeons around the world differ in their perspectives about when, where, and how to treat advanced stage cancer of the lungs, esophagus, trachea, and mediastinum. Whether one plays it safe or pushes the envelope can depend upon the surgeon's professional preference, but also may be influenced by what is standard practice geographically.

A session on Sunday morning—developed in collaboration with the Canadian Association of Thoracic Surgeons—will examine how cardiothoracic surgeons from both sides of the US and Canadian border approach the treatment of advanced stage cancer.

"This will be an opportunity to talk about challenging cases where the answers are not clear and may be 'out of bounds' of any guidelines," said Linda W. Martin, MD, MPH, from the University of Virginia Health System in Charlottesville.

One differentiating factor between Canada and the US is regionalization. In the late 20th century, most Canadian provinces adopted a new approach to health care that consolidated complex care.

"Canadian surgeons are willing to refer patients to centers of expertise. They don't feel this is a negative for them. And Canadian patients are willing to travel a significant distance to get expert care at a high-volume center," said Gail E. Darling, MD, from Toronto General Hospital and University Health Network, who will moderate the session with Dr. Martin.

In contrast, the US health care system is less regionalized. This appeals to American patients who generally prefer treatment close to home with shorter wait times. Most thoracic oncology surgeons see a wide variety of cases, from routine to complex.

In both countries, evolving



"We are seeing occasional responses to systemic therapy that border on miraculous, with stage IV patients having durable responses with only residual cancer in the lung."

Linda W. Martin, MD, MPH

market pressures will continue to influence surgical paradigms. For example, the availability of systemic therapy can affect patient eligibility for surgery.

"We are seeing occasional responses to systemic therapy that border on miraculous, with stage IV patients having durable responses with only residual cancer in the lung," Dr. Martin said. "Part of our discussion will be centered on when—or if—we should consider operating in these situations."

During Sunday's 2-hour session, the presenters will go beyond the published literature to explain how surgeons in two different health

care systems are thinking about these emerging scenarios:

- When to consider surgery for oligometastatic lung cancer
- Which T4 lesions are appropriate for resection
- The strengths and limitations of resection, ablation, or radiation for pulmonary metastases
- How and when to implement salvage esophagectomy

Following each mini-lecture, the moderators will take a deep dive into the topic through a related case study and tumor-board style debate. Attendees also will have the opportunity to voice their opinions.

No matter which side of the

border surgeons practice, and no matter which end of the surgical spectrum they represent, this session will offer new perspectives for advanced cancer care. "As surgeons, we should always be aware of what is possible," said Dr. Darling. ●

**STS/CATS: Surgery for Advanced Stage Cancer—When Is Out of Bounds Not Out of Bounds?**

Sunday  
10:00 a.m. – 12:00 p.m.  
Room 215

# Dive into the Digital Age to Boost Your Publishing Potential

Tweets, Facebook posts, YouTube videos, and other social media outlets can help you engage with colleagues about important scientific issues and broaden the impact of your findings. It's also a useful tool to promote ideas for future exploration.

"Just like everything else in the world, science has become much more interactive," said Jennifer C. Romano, MD, from the Congenital Heart Center at Mott Children's

Hospital in Ann Arbor, Michigan. Dr. Romano and Joanna Y. Chikwe, MD, from Cedars-Sinai Medical Center in Los Angeles, will co-moderate *The Annals Academy* session that will feature a crash course in using social media to increase your research impact.

"Social media can help us go beyond just reporting the data," Dr. Romano said. "It can help you and other leaders in the field engage in conversations about what the research findings mean and the next steps."

With the goal of helping surgeons effectively present their clinical data to the largest possible audience, Sunday's session also will offer accelerated coaching from leading experts on how to write and publish high-impact research. "Often, just a little extra help and thought at the planning, analysis, and writing stages can turn a study that very few people will read into a much more impactful one," Dr. Chikwe said. "*The Annals Academy* is designed to give surgeons that extra bit of help."



"Just like everything else in the world, science has become much more interactive."

Jennifer C. Romano, MD

Speakers also will offer insights on the journal submission process, including how to design studies, craft manuscripts, respond to reviewer comments, and write more powerful papers using national datasets.

"A tremendous number of publications result from the STS National Database," Dr. Romano said. "Because the Database is so massive (more than 8 million records), it's easy to analyze a variety of things and produce statistically significant findings. The challenge is coming up with something that's clinically significant and relevant to enhance what we can learn."

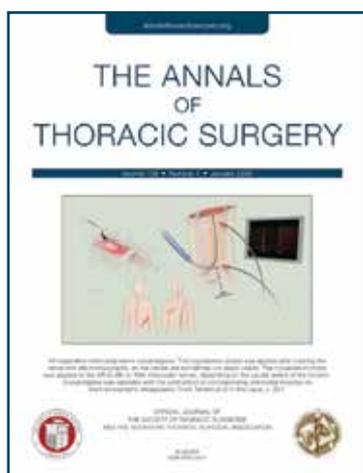
Experts will share their viewpoints on invited editorials

***The Annals Academy: The Editor's Pick—Top Papers and Why***

Sunday  
10:00 a.m. – 12:00 p.m.  
Room 211

and how those can help advance research, too. Details on who gets invited to write editorials and commentaries, how to take advantage of this opportunity, and best practices for writing an invited editorial will be presented.

"*The Annals* is very different and more dynamic today than the print journal of previous years," said Dr. Romano. "This session will help you understand how to take advantage of all *The Annals* has to offer." ●



## Thank You

The Society of Thoracic Surgeons gratefully acknowledges the following companies for providing educational grants for the STS 56th Annual Meeting.

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Olympus

This list is accurate as of  
Jan. 15, 2020.



### Leader Insight Wilson Y. Szeto, MD

“Joining the STS is an absolute must. We are a relatively smaller specialty and it is important for us to be able to get together on a regular basis to exchange ideas and learn from each other. Having a strong relationship with colleagues helps to move the specialty forward as well as give our patients the best possible treatment and outcomes.”

# Learn How to Accelerate Your Research Career

If at first you don't succeed, try, try again. That advice couldn't be any more salient for the medical research community, according to Elizabeth A. David, MD, from the University of Southern California in Los Angeles.

Dr. David will lead a panel of experts on Sunday who will share their research failures and successes, along with lessons learned. The tips in this session are designed to help researchers at any stage of their careers and in any type of workplace, from the academic world to clinical practice.

“I can promise you this: In order to have success, you will most likely fail first,” Dr. David said. “By sharing our failures, we might be able to speed others' successes.”

Navigating the grant process is

one key area the session will explore, including advice for leading multi-institutional research studies, securing a “K” and/or “R” grant from the National Institutes of Health, renewals, and insights from study sections.

“No one receives a grant their first time,” Dr. David said. “Researchers who have successfully obtained grants will share what they did right and what they should have done differently.”

The session also will cover the importance of quantifying academic productivity toward promotion. It's important for researchers to market their success and results in order to gain funding, but most don't know how to characterize their research



“I can promise you this: In order to have success, you will most likely fail first. By sharing our failures, we might be able to speed others' successes.”

Elizabeth A. David, MD

achievements, Dr. David said.

The session is sponsored by Women in Thoracic Surgery and is designed for anyone pursuing research grants, including residents. In fact, the session will feature a presentation by a resident who successfully secured research funding—which is very difficult to do, said Dr. David, adding that she hopes the experience will inspire medical students and junior residents.

“Research is how we innovate and optimize patient care and outcomes,” Dr. David said. “Research is a part of our lives, both in quality improvement and patient safety, every day.” ●

#### Failures, Successes, and Resilience in Research

Sunday  
7:45 a.m. – 9:45 a.m.  
Room 225



www.ests.org



## 28th ESTS MEETING

31 MAY - 3 JUNE 2020 • THE HAGUE, THE NETHERLANDS  
EUROPEAN CONFERENCE ON GENERAL THORACIC SURGERY

GENERAL INFORMATION		MAIN CONTACT DETAILS
 <p><b>VENUE</b> World Forum Churchillplein 10, 2517 JW Den Haag, The Netherlands www.worldforum.nl/en</p> <p><b>WEBSITE</b> www.ests2020.com www.ests.org</p> <p><b>ABSTRACT SUBMISSION</b> - OPENS: MONDAY 2 DECEMBER 2019 - CLOSES: THURSDAY 9 JANUARY 2020</p>	<p><b>ESTS SECRETARIAT</b> ESTS Executive Director Sue Hesford PO Box 159 Exeter EX2 5SH UK Tel: + 44 1392 332818 Email: sue@ests.org.uk www.ests.org</p> <p><b>MEETING SECRETARIAT</b> VIAJES EL CORTE INGLES SA C/ Alberto Bosch 13 28014 Madrid (Spain) Tel. +34 91 3300565 <b>Exhibition</b> Ms Asun Marzo amarzo@viajesece.es T. +34 932463566 <b>Registrations - General Information</b> Ms Tatiana Rodriguez ests@viajesece.es</p>	
<p><b>SESSIONS AND TOPICS</b></p> <ul style="list-style-type: none"> <li>• Postgraduate Symposium on General Thoracic Surgery Teams competing for the Masters Cup</li> <li>• Database and Quality Certification</li> <li>• Innovative Technologies in Thoracic Surgery</li> <li>• Patients/Carers Session</li> <li>• ESTS Biology Club</li> <li>• A Multidisciplinary Tumour Board Session: challenging cases</li> <li>• Nightmares in Thoracic Surgery</li> <li>• Tracheal and Airway Surgery</li> <li>• Robotic Surgery</li> <li>• Perioperative Complications Prevention/Prehabilitation/ERATS</li> <li>• Esophageal Session</li> <li>• Surgeon's Well Being Session</li> <li>• Chest Wall Session</li> <li>• Transplant Session</li> <li>• Junior Lunch Symposium: Experts revealing the secrets of thoracic surgery. Exciting mix of clinical and research topics facilitated by senior and junior doctors</li> <li>• Lung Cancer Management Update</li> <li>• Pro&amp;Con Session</li> <li>• Local Society Session</li> <li>• Sunrise Seminars</li> <li>• Sessions in co-operation with: CATS - IALSC - ISMICS - ISTS - JACS - SBCT - STS - WTS</li> </ul> <p><b>SYMPOSIUM FOR NURSES &amp; ALLIED HEALTH PROFESSIONALS</b></p> <ul style="list-style-type: none"> <li>• Lectures and abstract presentations on clinical, management and research issues in Nursing and Physiotherapy</li> </ul>		




## 34th EACTS Annual Meeting

Barcelona, Spain  
8-10 October 2020

Abstract deadline  
30 April 2020

To find out more visit  
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Raising Standards through Education and Training

# Planning for Unexpected Complications Can Improve Surgical Outcomes

Cardiothoracic surgery seldom proceeds precisely as planned. Every patient and every operation bring the potential for surprises, challenges, and complications. With the right kind of forethought and planning, however, surgeons can work through those difficult cases to achieve good outcomes.

“It doesn’t matter how skilled a surgeon you are; patients don’t read the textbooks,” said Ibrahim Sultan, MD, from the University of Pittsburgh Medical Center in Pennsylvania. “You can be surprised by a complication—or you can plan for it, troubleshoot in advance by playing out the scenario in your mind, and salvage the situation to help ensure the best possible outcome for your patient.”

Most unexpected developments fall into distinct categories of common complications, Dr. Sultan said. Experienced surgeons know to be prepared for the patient who may have trouble coming off bypass or the occasional patient with true intramyocardial coronary targets.

“You can’t really tell a patient that, ‘Oh, by the way, I couldn’t find your coronary artery to bypass,’” said Dr. Sultan, who will co-moderate a session on Sunday morning that will provide tips on how to get out of tough situations in adult cardiac surgery. “It’s imperative that surgeons go into an operation knowing exactly how they will find true intramyocardial coronaries in the 2%–5% of patients where they do occur.”

Just as adult cardiac surgeons



“You can be surprised by a complication—or you can plan for it, troubleshoot in advance by playing out the scenario in your mind, and salvage the situation to help ensure the best possible outcome for your patient.”

Ibrahim Sultan, MD

should plan for the possibility of an unexpected aortic dissection or a redo sternotomy using peripheral cannulation to establish cardiopulmonary bypass, congenital heart surgeons have their own challenges.

For example, there is always the potential for neo-aortic regurgitation following a stage 1 Norwood palliation or problems weaning a patient from cardiopulmonary bypass after an arterial switch operation. A session on planning

for obstacles encountered during congenital heart surgery also will be held on Sunday morning.

“These sessions will provide an environment where it is okay to talk about surgical challenges and how you did—or didn’t—get through them,” Dr. Sultan said. “We will all find ourselves in these circumstances during our careers, and these are the approaches, thought processes, and tips that can help you and your patients through tough situations.” ●

**Adult Cardiac Surgery SOS: How to Get Out of Tough Situations**

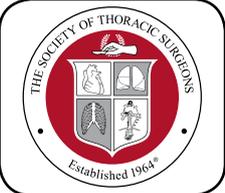
Sunday  
10:00 a.m. – 12:00 p.m.  
Room 217

**Congenital Cardiac Surgery SOS: How to Get Out of Tough Situations**

Sunday  
10:00 a.m. – 12:00 p.m.  
Room 208

**DOWNLOAD NOW**

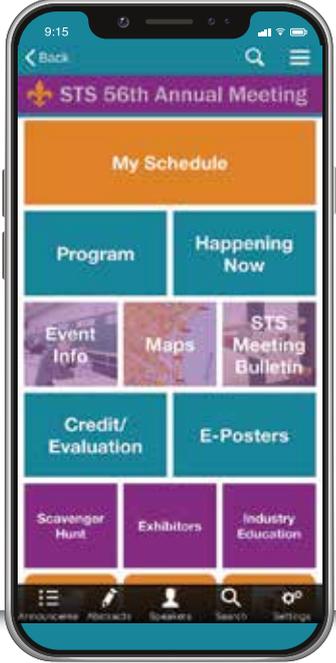
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## Learning Opportunities in the Exhibit Hall

Exhibiting companies and others will present talks and demonstrations in the Learning Lab Theater, which is located at Booth #844.

### Sunday

4:45 p.m. – 5:30 p.m.  
STS Jeopardy Championship

### Monday

12:30 p.m. – 1:00 p.m.  
AngioVac and Its Use in the Right Heart  
Hosted by **AngioDynamics**

### 3:30 p.m. – 4:00 p.m.

The Clinical Benefits of a New Thoracic Energy Device – Before and After the LigaSure™ Maryland Jaw Thoracic Sealer/Divider  
Hosted by **Medtronic**

*This list is accurate as of Jan. 15, 2020.*

## Industry Symposia

The following programs are offered by industry and held in conjunction with the STS 56th Annual Meeting. They are not developed or sponsored by STS.

### Saturday

6:30 p.m. – 8:00 p.m.  
Surgical Standards and the Evolving Landscape of TAVR  
Hilton New Orleans Riverside, Magazine Room, 2 Poydras St.  
Hosted by **Boston Scientific**

6:30 p.m. – 10:00 p.m.  
Clinical Experience with Intrathoracic Rib Fixation  
Coquette, 2800 Magazine St.  
Hosted by **Zimmer Biomet**

*This list is accurate as of Jan. 15, 2020.*

## Photography and Recording Policy

Photography and video recording of Tech-Con 2020 sessions are strictly prohibited, except by authorized personnel. Video recording of STS 56th Annual Meeting sessions is strictly prohibited, except by authorized personnel.



## 2020 Annual Meeting Exhibitors

 Tech-Con Exhibitor  New Exhibitor  STS Meeting Bulletin Advertiser

A&E Medical	517	 Cook Medical	943	Johnson & Johnson Medical Devices Companies	125	Rultract/Pemco, Inc.	411
Abbott	414	CorMatrix	208	 Kapp Surgical	1025	Saphena Medical	542
 Abiomed, Inc.	817	 CryoLife	1013	Karl Storz Endoscopy	905	 Scanlan International	400
Abyrx, Inc.	329	CT Assist	734	Kinamed, Inc.	540	Society of Thoracic Surgeons, The	101
Acute Innovations	210	CTSNet	307	KLS Martin	431	Sontec Instruments	426
 Advanced Neuromonitoring Associates, Inc.	1128	CV Staff Solutions	437	Koros USA, Inc.	443	STS Regional Data Managers	1129
American Association for Thoracic Surgery	1039	Designs for Vision	335	LifeNet Health	209	 Summit International Medical Technologies	1036
AngioDynamics	842	 EA Medical, LLC	643	LivaNova	117	SurgiTel/General Scientific Corp.	424
 Applied Medical	929	EchoPixel	635	LocumTenens.com	538	SynCardia Systems, LLC	736
 Ascyrus Medical	927	Eclipse Loupes and Products	1008	 LSI Solutions	225	Talis Clinical	917
 Atlas Medical USA	740	 ECOM Medical, Inc.	1030	Med Alliance Solutions	725	Terumo	825
 AtriCure, Inc.	801	Edwards Lifesciences	401	Medela Healthcare	737	THINK AORTA Working Group	1142
Auris Health	133	Elsevier	901	  Medestim	511	 ThinkMed Consulting	234
Aziyo	910	Essential	132	 medpro	1002	Thompson Surgical	816
Baylis Medical	1012	European Association for Cardio-Thoracic Surgery	1134	 Medtronic	601	 Thynk Health	639
 Baylor St. Luke's Medical Center	940	European Society of Thoracic Surgeons	1035	MedXpert North America	1105	Transonic	325
BD	811	Fehling Surgical	716	 Merit Medical Endotek	937	 Urethrotech	1004
Berlin Heart, Inc.	1107	 Foldax	1040	Microsurgery Instruments, Inc.	1130	 USB Medical	305
BFW, Inc.	818	Genesee BioMedical	432	 Möller Medical GmbH	1034	Veran Medical Technologies	113
bioMérieux, Inc.	743	  Getinge	425	Nadia International	308	Visit Austin	1101
Biom'up USA, Inc.	1031	Gore & Associates	109	Nova Biomedical	838	Vitalcor, Inc.	301
BioStable Science & Engineering	742	 Harris Bay	1103	Olympus America, Inc.	717	Weatherby Healthcare	1131
Boston Medical Products, Inc.	935	Hayes Locums	840	 On Call Medical Coats	1000	Western Thoracic Surgical Association	1140
Boston Scientific	911	HCA	1007	 OncoCyte	541	 Wexler Surgical, Inc.	110
C Change Surgical	1010	Heart Hospital Baylor Plano, The	535	 Orasoptic	1028	Wolters Kluwer	1124
 CardioQuip	925	Heart Valve Society	1138	 Our Lady of the Lake Regional Medical Center	1024	Women in Thoracic Surgery	134
 Cardiovascular and Thoracic Solutions, LLC	1026	 Houston Methodist Hospital - DeBakey CV Education	1125	Oxford University Press	1126	  Zimmer Biomet Thoracic	217
Centese	536	International Society for Minimally Invasive Cardiothoracic Surgery	1136	Peters Surgical	617	ZipLine Medical, Inc.	1029
CHF Solutions	942	Intuitive Surgical	525	Pinnacle Biologics	135	ZipperBelt	841
 CHI Saint Joseph Medical Group	641	IQVIA	101	Presbyterian Healthcare Services	741		
 CinVivo	941	 JACE Medical	213	Quest Medical, Inc.	309, 310		
ClearFlow	731			R&D Surgical USA, Inc.	836		
				Ronin Surgical Corp.	441		

*Listing current as of Jan. 15, 2020.*



### Exhibit Hall Hours

**Sunday, January 26:** 4:30 p.m. – 6:30 p.m.  
**Monday, January 27:** 9:00 a.m. – 4:30 p.m.  
**Tuesday, January 28:** 9:00 a.m. – 1:30 p.m.

### Learning Lab Theater

Exhibiting companies and others will present talks and demonstrations. See page 8 for a list of presentations.

### Don't Miss...

#### Career Fair

Meet face-to-face with employers at the STS/CTSNet Career Fair. Recruiters will be available to talk about career opportunities.

#### E-Posters

Scientific posters are electronic this year, and several monitors are available for viewing.

**Show Floor Suites**

154	254	255	354	355	454	455	554
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**Food & Beverage**

**Learning Lab**  
844

**Show Floor Suites**

853	854	1048	1148	1055	1154	1155	1254
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1265
1263
1261
1259
1257
1255
1253

**E-Posters** 236

**STS Lounge** 835

**First-Time Exhibitors**

134	135	234	335	Genesee Biomedical	443	542	OncoCyte	643	742	743	842	843	942	943	1042	1142	1143	1242	1243
132	Auris Health	133	432	CV Staff Solutions	541	538	The Heart Hospital Baylor Plano	641	740	741	840	841	940	941	1040	1140	1141	1240	1241
Johnson & Johnson Medical Devices Companies	125	LSI Solutions	225	536	535	539	536	639	736	737	836	835	937	1036	1039	1138	1139	1238	1239
Transonic	325	329	426	424	431	425	Intuitive Surgical	525	635	734	731	825	935	1034	1037	1136	1137	1236	1237
Terumo	825	931	1030	1028	1029	1128	1025	1124	1025	1124	1025	1124	1025	1124	1025	1124	1025	1124	1125

**Entrance**

**STS** 101

**Medtronic** 601

**Edwards Lifesciences** 401

**Abbott** 414

**Medistim** 511

**A & E Medical** 517

**BD** 811

**Aziyo** 910

**Abiomed Inc** 817

**Talis Clinical** 917

**CryoLife** 1013

**HCA** 1007

**Headshot Studio** 1001

**Scanlan International** 400

**Quest Medical Inc** 309

**LifeNet Health** 209

**Quest Medical Inc** 310

**308**

**Wexler Surgical, Inc** 110

**LivaNova** 117

**Zimmer Biomet Thoracic** 217

**Core & Associates** 109

**Acute Innovations** 210

**208**

**213**

**307**

**305**

**Vitalcor, Inc.** 301

**301**

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**1008**

**1006**

**905**

**1004**

**1002**

**901**

**1000**

**1107**

**1105**

**1103**

**1101**

### STS Booth (#101)

Hear about the latest the Society has to offer, including member benefits, advocacy efforts, educational courses, the STS Research Center, and the next generation STS National Database.



### Headshot Studio (#1001)

Have a professional headshot taken for business or personal use, compliments of STS.

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# Tech-Con Explores New Frontiers in Adult Cardiac and General Thoracic Surgery

**T**oday's Tech-Con program will feature innovative techniques and novel approaches to solving common clinical problems faced by adult cardiac and general thoracic surgeons.

The adult cardiac sessions will incorporate the most advanced surgical therapy and technology for treating coronary artery disease, atrial fibrillation, and aortic dissection, said moderator Ibrahim Sultan, MD, from the University of Pittsburgh Medical Center in Pennsylvania.

Presentations on organ donation after cardiac death and the intraoperative use of bare stents as adjuncts for aortic remodeling in type A aortic dissection will offer important takeaways that adult cardiac surgeons won't want to miss.

The general thoracic sessions will focus on advances in nanotechnology, mediastinal diseases, and lung cancer, with a little something about "what's old is new" in esophageal surgery. Moderator Andrew C. Chang, MD, from Michigan Medicine in Ann Arbor, predicts that general thoracic surgeons will be especially interested in robotics, particularly the incorporation of robotic bronchoscopy.

"Tech-Con will provide information that is on the edge of



"Tech-Con will provide information that is on the edge of innovation and is almost practice-ready."

**Andrew C. Chang, MD**

innovation and is almost practice-ready," he said. "These presentations and discussions are intended to be more practical and less academically oriented than what might be addressed within the typical sessions at the Annual Meeting."

New this year are two Lunch and Learn sessions where industry representatives will share their thoughts on emerging device technology and challenges that they go through while developing medical devices. The adult cardiac session will discuss the future of transcatheter management for the mitral valve, while the general thoracic session will examine the use of a robot for airway management.

In the afternoon, Mark S. Cohen, MD, innovation chief at the University of Michigan Rogel Cancer Center in Ann Arbor, will deliver a keynote lecture, followed by the always-exciting Shark Tank presentations. Entrepreneurs will pitch their novel cardiothoracic surgery products to the audience and a panel of experts in medical device development.

Products to be presented include:

- A soft robotic biventricular cardiac compression device for the treatment of acute heart failure syndrome
- A chest drainage unit with an integrated carbon dioxide detector
- Catheters designed to stop brain damage during cardiac arrest
- A mixed-reality application for improving visualization in thoracic surgery

Attendees will be able to vote for their favorite products using live polling. After the Shark Tank presentations, the day will wrap up with a cocktail and networking reception in the Tech-Con exhibit area.

You still can purchase a ticket to attend today's Tech-Con sessions. Visit the Registration desk in the Hall B1 Lobby and add a ticket to your Annual Meeting registration. ●

## Tech-Con

Saturday  
11:00 a.m. – 6:15 p.m.  
Great Hall B and Rivergate Room

## Tech-Con Schedule



See what new techniques and technologies are on the horizon for cardiothoracic surgery.

### 11:00 a.m. – 12:30 p.m.

Adult Cardiac: Ischemic, Heart Failure, and Atrial Fibrillation  
*Great Hall B*

General Thoracic: Chest Wall, Mediastinum, and Esophagus  
*Rivergate Room*

### 12:30 p.m. – 1:30 p.m.

Adult Cardiac Lunch & Learn: The Future of Transcatheter Mitral Valve Therapies  
*Great Hall B*

General Thoracic Lunch & Learn: Airway Management – Why Use a Robot?  
*Rivergate Room*

### 1:30 p.m. – 3:00 p.m.

Adult Cardiac: New Technologies in Aortic and Structural Heart Disease  
*Great Hall B*

General Thoracic: Innovations in Lung Cancer Care  
*Rivergate Room*

### 3:00 p.m. – 3:30 p.m.

Break—Visit Tech-Con Exhibits  
*Great Hall Lobby*

### 3:30 p.m. – 5:30 p.m.

Joint Session: Keynote Lecture and Shark Tank  
*Great Hall B*

### 5:30 p.m. – 6:15 p.m.

Reception  
*Great Hall Lobby*

*You must purchase a separate ticket to attend the events listed above.*



Hear about innovative cardiothoracic surgery devices during the Shark Tank presentations.



Network with colleagues and meet with exhibitors at the Tech-Con reception.

**Register now!**

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STS Annual Meeting



### Leader Insight Mara B. Antonoff, MD

“For early career surgeons who are seeking to advance in their career, I would advise them to not try to define their niche too soon. You can figure out the best place for you in terms of both your research and clinical activity, depending not only on your interest, but also what needs might exist in the facility where you practice and how it complements other researchers and clinicians in the same institution.”

# Team Approach Improves Recovery after Cardiothoracic Surgery

**S**tate-of-the-art strategies for recovery after cardiothoracic surgery are changing. The latest enhanced recovery protocols (ERP) rely on a multidisciplinary team approach that includes surgeons, anesthesiologists, intensivists, and other specialists to minimize trauma during surgery while maximizing safety, outcomes, and value.

“ERP is a process of care that is as disruptive to our field as transcatheter aortic valve replacement has been,” said Rakesh C. Arora, MD, from the University of Manitoba in Winnipeg, Canada, who will moderate a Sunday morning session planned by STS and the Society of Cardiovascular Anesthesiologists (SCA). “When we have teams focusing on perioperative outcomes and improving the patient journey, it can have a substantial impact on the trajectory of patients who normally



“When we have teams focusing on perioperative outcomes and improving the patient journey, it can have a substantial impact on the trajectory of patients who may not necessarily thrive after an operation.”

Rakesh C. Arora, MD

may not thrive after an operation.”

Surgeons still need to select the right patient for the right procedure and deliver a technically perfect operation, Dr. Arora noted. But surgical skill alone is not sufficient.

“The other team members are similarly important in ERP,” he said. “It is not just surgery; it is a bundle of care that includes surgery and all of the other services that contribute to patients and their outcomes.”

Part of that team approach has both surgeons and anesthesiologists taking more proactive roles in setting patient expectations, said Stanton K. Sherman,

MD, from Harvard Medical School and Brigham and Women’s Hospital in Boston, who also will moderate the STS/SCA session. Analgesic agents have been a significant cause of postoperative morbidity in the past. Improving outcomes by minimizing the potential for analgesia-associated morbidity means reducing the use of narcotics and substituting local blocks for general anesthesia where possible.

“Having no pain whatsoever during surgery shouldn’t be the goal,” Dr. Sherman explained. “Instead, it’s a tradeoff—less-than-perfect analgesia for being able to go home sooner

with fewer complications. That kind of mental preparation begins before surgery when both the surgeon and the anesthesiologist talk with the patient. We are changing the ways we manage patients so that they leave the hospital with the same expectations of recovery but perhaps a higher level of safety.” ●

#### STS/SCA: Cardiac and Thoracic Enhanced Recovery after Surgery

Sunday  
10:00 a.m. – 12:00 p.m.  
Room 220

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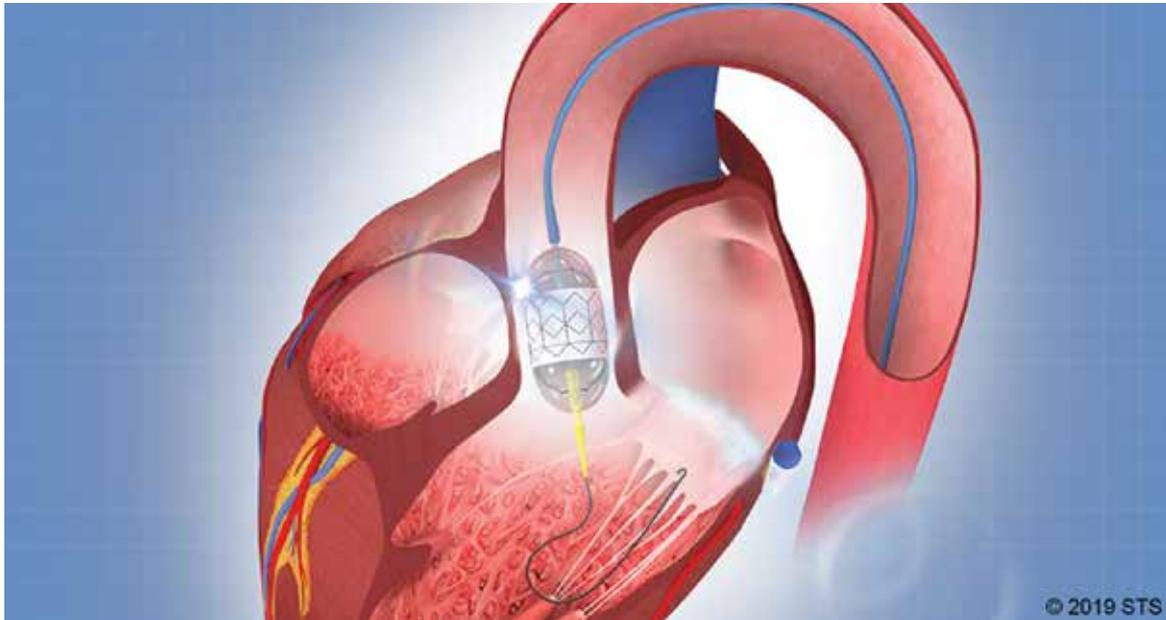
## Need a Professional Headshot?

Have a professional headshot taken for business or personal use, compliments of the Society, in the Exhibit Hall Booth #1001:

Sunday • 4:30 p.m. – 6:30 p.m.  
Monday • 9:00 a.m. – 4:30 p.m.  
Tuesday • 9:00 a.m. – 1:30 p.m.

Photographs will be taken on a first-come, first-served basis. You will be emailed a link to download your high-resolution photograph following the Annual Meeting.

# Is It Too Soon to Consider TAVR for Younger, Low-Risk Patients?



**A** Sunday session will explore whether transcatheter aortic valve replacement (TAVR) is an appropriate treatment option for all low-risk patients, especially younger ones. One factor clouding the issue: long-term durability remains an open question.

“TAVR has become an established form of therapy for the treatment of aortic valve disease in a very short time,” said Edward P. Chen, MD,

from Emory University in Atlanta. “Where it will ultimately fall in the spectrum of treatment options for structural heart disease is still unclear. The low-risk population approval suddenly expands the treatment



Edward P. Chen, MD

options we have for these patients, but the long-term outcome data are yet to be determined.”

Dr. Chen will co-moderate the TAVR session with Ourania Preventza, MD, MBA, from Baylor College of Medicine in Houston.

The US Food and Drug Administration’s 2019 approval of TAVR for patients at low surgical risk could transform the treatment of aortic valve disease, but only if research



“Expanding TAVR to low-risk populations will potentially change the way we replace aortic valves for approximately 70% of patients, perhaps more.”

Ourania Preventza, MD, MBA

supports long-term durability.

“Expanding TAVR to low-risk populations will potentially change the way we replace aortic valves for approximately 70% of patients, perhaps more,” said Dr. Preventza.

While the mean age of patients in the low-risk trials was approximately 70 years, cardiac surgeons see a growing number of younger patients in their 50s and 60s—and a 50-year-old TAVR recipient who is otherwise in good health can expect to live another 20 to 30 years. Since only 1-year outcomes data currently are available for this low-risk population, it is impossible to know how well the valves will perform after 10 to 20 years or if they’ll even last. “For lower-risk patients, we would like to see longer-term data,” Dr. Preventza noted.

Another important issue expected to be discussed in the session is the

original approval of TAVR in higher-risk populations. With evidence that some results from the early PARTNER trials were not included in the original publication, the overall message of TAVR versus surgery could potentially change, according to Dr. Chen.

“We should consider what is best for each patient individually in order to optimally determine the ultimate role of TAVR in the overall treatment paradigm of aortic valve disease,” he said. “This session is our opportunity to explore all of those issues together.” ●

**Evolving Impact: TAVR in Low-Risk Patients—Results of the Evolut Low Risk and PARTNER 3 Trials**

Sunday  
12:45 p.m. – 2:45 p.m.  
Room 208

# Debate Will Explore How to Treat IV Drug Users with Recurrent Endocarditis

**W**hen a post-surgical reinfection in an endocarditis patient occurs as a result of drug use, does the drug user deserve a second valve replacement? Or is this a waste of surgical resources?

These are two questions that experts will address during the Ethics Debate on Sunday afternoon.

“What is best for recidivist addicts: requiring them to take responsibility for their own health and not reoperating if they continue using IV drugs or exposing them to a series of major reoperations that will not prevent their inevitable death by endocarditis?” asked debate moderator Robert M. Sade, MD. He is director of the Institute of Human Values in Health Care at the Medical University of

South Carolina in Charleston and chairs the Cardiothoracic Ethics Forum, a joint STS and American Association for Thoracic Surgery group that is responsible for ethics education in the specialty.

The debate will center around a young woman who was treated with an opioid painkiller after a major operation and then, in a typical addictive pattern, becomes dependent on opioids and heroin. As a result, she develops infective endocarditis. A surgeon replaces her infected aortic valve and refers her to a drug rehabilitation center. After refusing rehab, the patient is readmitted within a few months with recurrent endocarditis. The surgeon faces the dilemma of whether to reoperate, given that the patient declined treatment for her drug addiction.



“What is best for recidivist addicts: requiring them to take responsibility for their own health and not reoperating if they continue using IV drugs, or exposing them to a series of major reoperations that will not prevent their inevitable death by endocarditis?”

Robert M. Sade, MD

The pro position might argue that surgeons have a responsibility to do the best for their patients; nothing is more important than continuing to live, even when their patients are suffering from the second disease of drug addiction, Dr. Sade said.

The con position likely will be that surgeons have no obligation to use precious—and costly—surgical resources on patients who do not shoulder personal responsibility and make an effort to manage their drug addiction, he said.

“Surgeons are ethically committed to doing what is best for their patients, but also arguably have responsibilities for stewardship of surgical resources,” said Dr. Sade.

Infection of cardiac valves has been a growing problem due to the opioid crisis, and the burden on cardiothoracic surgery services has become quite heavy, Dr. Sade said. Reinfection is not uncommon, but occurs mostly in patients who revert to using drugs.

“Though this debate will not produce definitive answers to difficult questions, it will provide the analytical tools needed for thinking about how to approach them,” he added. ●

**Ethics Debate: Should Opioid Addicts Have a Second Valve Replacement for Endocarditis?**

Sunday  
12:45 p.m. – 1:45 p.m.  
Room 211

# NEW ORLEANS

## Where to Go and What to Do

### Garden District

If you'd like a break from the hustle and bustle of the French Quarter, look no farther than the Garden District. Oak tree-lined streets and historic homes with elaborate architecture and lush landscaping make this neighborhood a favorite among visitors. Head to Commander's Place for authentic Cajun and creole fare (try the turtle soup).

### Jambalaya

Just as good to eat as it is fun to say, jambalaya is a rice dish that is said to have originated in the French Quarter. The recipe varies but includes the "holy trinity" of diced onion, celery, and green pepper, plus smoked pork sausage (usually). Some cooks also throw in chicken, ham, or even seafood. Try it in the French Quarter at Mother's or Coop's Place.



### Beignets

Traditionally a breakfast item, these French-inspired pastries are tasty any time of day. Deep-fried and covered with powdered sugar, beignets are similar to a donut without the glaze. Top spots for these puff pastries are Café du Monde (cash only) and Café Beignet.



### Streetcars

One of the best ways to see New Orleans is to stroll through its scenic—and compact—neighborhoods. If you don't feel like walking, hop on one of the city's famous streetcars. These trolley-style rides are an iconic part of New Orleans and generally have stops every two or three blocks. Just look for the words "Car Stop" on orange signs to spot the nearest streetcar pick-up. A one-way ride costs \$1.25 (exact change required), or you can purchase an unlimited 1-day pass for \$3.



### For the Foodie

The Southern Food & Beverage Museum is located in the Garden District and features an exhibit for each of the southern states, plus a top-of-the-line demonstration kitchen. The exhibits describe cultural traditions surrounding southern food and recipes. The location also houses the Museum of the American Cocktail, which celebrates mixology. Visitors also can enjoy a meal from Chef Isaac Toups at Toups South inside the museum.

### Ghost Tours

Known as one of the most haunted cities in America, New Orleans embraces a colorful history that includes legends of vampires, ghosts, and voodoo. "Haunted" tours that promise exposure to the city's spooky side are some of the most popular around. French Quarter Phantom's Ghost & Vampire Walking Tour will lead you on a 2-hour exploration of the area with a master storyteller describing historically accurate tales of hauntings and vampire lore. New Orleans Ghost Adventures offers a Voodoo & Cemetery Tour that includes a stop at a voodoo museum where you can purchase "magic" potions before heading to St. Louis Cemetery No. 1, where famed voodoo queen Marie Laveau is buried.



### All that Jazz

Of all the things the Big Easy is known for, jazz music may easily top the list. The Spotted Cat Music Club is a casual favorite for jazz, while Preservation Hall offers acoustic concerts with an intimate feel (purchase tickets ahead of time to get seats in the front row; otherwise, it may be standing room only).

### Did You Know?

New Orleans has been described as the "northernmost Caribbean city and the westernmost European city." The birthplace of jazz, the city is home to beautiful architecture, a rich art scene, and its own brand of cuisine that combines Caribbean and French flavors with some down-home cooking. Long a popular tourist destination, New Orleans is now one of the fastest-growing cities for millennials in the country.



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