

TSRA Announcements

Society Statements on Racism, Injustice, and Inequity

The Society of Thoracic Surgeons: ["Racism cannot be tolerated or ignored. It jeopardizes safety and undermines public health..."](#)

American College of Surgeons: [Call to Action on Racism as a Public Health Crisis: An Ethical Imperative](#)

American Board of Medical Specialties: [Statement on Racism as a Public Health Issue](#)

Society of University Surgeons: [Statement condemning racism, bigotry, and hatred in all forms](#)

Association for Academic Surgery: [Statement condemning systemic racism and oppression targeting people of color](#)

American Medical Association: [AMA Board of Trustees pledges action against racism and policy brutality](#)

TSRA COVID-19 Survey for CT Trainees

If you are an integrated, traditional, or 4+3 cardiothoracic surgery trainee, please complete the following survey stemming from a multicenter international collaboration to characterize the impact of the COVID-19 pandemic on CT surgical training: [CLICK HERE TO ACCESS SURVEY AND ENTER PRIZE DRAWING](#)

STS 8 in 8 Webinar Series

The new 8 in 8 series offers quick access to important topics in cardiothoracic surgery. Each video is narrated by an expert in the field and covers one topic using 8 slides in 8 minutes. The first four topics can be found [here on the STS website](#).

To provide feedback, submit topics, or ask questions, please e-mail education@sts.org.

Trainee Opportunities in CT Surgery

By: J. Hunter Mehaffey

Please look for our July Newsletter for more details on how to join each of the committees below as we begin a new academic year!

To get information about a [TSRA committee](#), contact the outgoing Committee Chairs:

- Projects Committee: [Clauden Louis](#)
- Education Committee: [Hunter Mehaffey](#)
- Membership Committee: [Jordan Bloom](#)
- Communications Committee: [Alex Brescia](#)

General surgery residents, cardiothoracic fellows, and international cardiothoracic surgery residents are eligible for Associate Membership in the TSRA by submitting [this application form](#)

No deadline, rolling

To register for the **Medtronic Foundational Mitral and Tricuspid Skills Course** or for more information on this **funded opportunity**, please contact [Mary Kay Keers](mailto:MaryKayKeers@medtronic.com) at mary.k.keers@medtronic.com.

Register by September 18th for the event to be held October 22-24, 2020

[Denton A. Cooley Fellowship](#)
August 1, 2020

[Advanced Valve Disease Educational Fellowship](#)
August 1, 2020

[Honoring Our Cleveland Clinic Mentors Program](#)
August 1, 2020

[TSRA/STS Global Outreach Fellowship in Cardiothoracic Surgery](#)
December 15, 2020

TSRA Advice Column: Applying During COVID-19

By: Jason Han

Our Advice Column this month includes responses to the following question:

In the setting of the pandemic, do you have any advice for students and residents applying this and next application cycle?

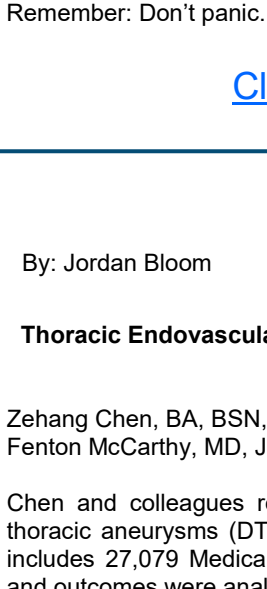
Here are excerpts from those who answered this month:

Shari L. Meyerson, MD
Program Director
Professor of Surgery
University of Kentucky



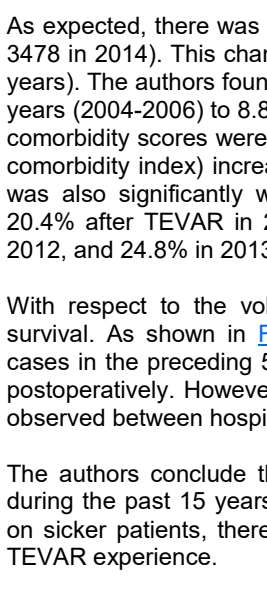
"This year is going to be a challenge for both applicants and programs. It will be crucial to use your application to demonstrate you understand what you are signing up for. That may be in the form of clinical experiences, research, volunteer work or other strategies. If I can't tell from your application why you want to specifically be a cardiothoracic surgeon, I am unlikely to interview you. Applications with 5 pages of one-time activities (ex. raising money for a single charity race) don't excite me as much as applicants who have put their heart and soul into something that means a lot to them and committed to it over an extended period of time. Cardiothoracic surgery is a lifetime commitment and I want to be sure you know what that means..."

Michael Jaklitsch, MD
Program Director
Brigham and Women's Hospital
Professor, Harvard Medical School



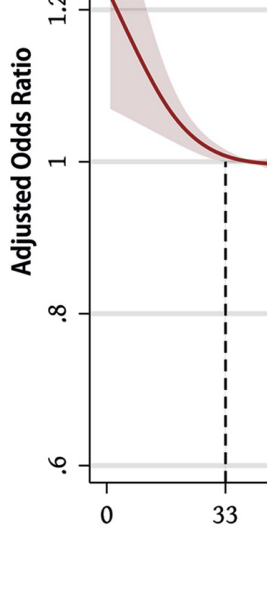
"Current policies recommend 1-6 Cardiothoracic Residency interviews in the 2020-21 academic year be virtual and all programs close their electives to visiting medical students. This poses a serious challenge. Applicants and programs are trying to find a match that will last 6 clinical years. We take one 1-6 candidate in each track per year. Attrition or bad fit is very hurtful to both parties. We do not trust our abilities to determine the best candidate for our program from just applications and virtual interviews. What we are losing is an ability to see the human to human interaction that leads us to believe that we can coach this individual. We are limited in resources to distinguish among 1-6 applicants..."

Arnar Geirsson, MD
Chief, Division of Cardiac Surgery
Associate Professor of Surgery
Yale School of Medicine
[@ArnarGeirssonMD](#)



"The COVID pandemic has really thrown a wrench at the way we practice medicine as well as at surgical education. It is unclear how this will affect applicants to cardiothoracic training programs, both 1-6 and traditional pathways. However, every crisis represents an opportunity and I suspect that we will develop structures and processes that will benefit both the applicants and the training programs in the long run. Most cardiac surgeons are aware of the challenges and I am sure the applicants are acutely aware and worried about the interview process. Networking and being able to present yourself well on Zoom or Skype become more important than ever. You should connect with your on-site mentors for advice and reach out directly to program directors and other leaders of cardiac surgery for more direct advice regarding your career trajectory earlier than later. The future of cardiac surgery remains strong and I am looking forward having you join it."

Andrea J. Carpenter, MD, PhD
Program Director
Professor of Surgery
University of Texas, Health Science Center at San Antonio
[@AJCPrnt](#)



So, you want to be a Cardiothoracic Surgeon and then COVID happened
First: In the words of Douglas Adams, "Don't Panic." We are all in this together. Multiple sources have recommended all programs to review applications and interview applicants virtually. Of course, I can never guarantee that every program will abide by these recommendations, but this should make a level playing field.
Second: You are VERY adept with the virtual world so take full advantage. Start with the usual resources to identify programs that interest you. This includes AAMC (<https://students-residents.aamc.org/>), TSDA (<https://tsda.org/the-tsda-ct-residency-programs/>), your local surgery faculty, and medical school friends who preceded you in the match game. Search the websites of the programs that interest you.

Contact the Program Director (PD) by e-mail with a brief summary of who you are and why you want to be a Cardiothoracic Surgeon. Don't send the PDs a dissertation, as they will see your entire application when you apply and they have too much email to read already. Concentrate on those programs whose PD responds to your inquiry.

Finally, keep your options open. Apply to general surgery in addition to integrated or 4/3 programs. As you work through the process you may decide that the traditional route (general surgery followed by thoracic fellowship) is the best choice for you.

Remember: Don't panic. No matter how much pressure anyone puts on you, don't panic.

[Click here to see their full responses](#)

Manuscript of the Month

By: Jordan Bloom

Thoracic Endovascular Aneurysm Repair Trends and Outcomes in Over 27,000 Medicare Patients for Descending Thoracic Aneurysms

Zehang Chen, BA, BSN, Chase Brown, MD, Fabliha Khurshan, BS, Maximilian Kreibich, MD, Fenton McCarthy, MD, Joseph E. Bavaria, MD, Nimesh D. Desai, MD, PhD

Chen and colleagues report a large retrospective series on the management of descending thoracic aneurysms (DTAs) using thoracic endovascular aneurysm repair (TEVAR). The series includes 27,079 Medicare patients from 2000-2014. Hospitals were stratified by 5-year volume and outcomes were analyzed.

Patients with aortic dissection were excluded. Also, patients younger than 66 years of age were excluded in order to establish a preoperative comorbidity profile using the Elixhauser Comorbidity Index. The mean follow-up time for all included patients was 6.08 ± 0.04 years. The primary end points were postoperative survival at 1 month, 1 year, and 3 years.

As expected, there was a dramatic increase in TEVAR volume over the study period (81 in 2000 to 3478 in 2014). This change was most significant for the medium-volume centers (20-99 cases/5-years). The authors found that 30-day mortality after TEVAR has increased from 6.6% in the early years (2004-2006) to 8.8% (2013-2014). The authors explain this difference by concluding that the patient comorbidity scores were higher in the modern group. Nearly all indicators of risk (age, acute and comorbidity index) increased dramatically over the study period. Survival at 1 year after TEVAR was also significantly worse throughout the study period. Compared with 1-year mortality of 20.4% after TEVAR in 2004 to 2006, mortality was 24.2% in 2007 to 2009, 25.0% in 2010 to 2012, and 24.8% in 2013 to 2014.

With respect to the volume analysis, the authors found an inverse relationship with patient survival. As shown in [Figure 5](#), hospital centers that completed fewer than approximately 33 cases in the preceding 5 years had significantly increased adjusted odds of mortality at 30 days postoperatively. However, after reaching approximately 33 cases, no significant association was observed between hospital volume and effect on 30-day survival.

The authors conclude that TEVAR frequency increased significantly among Medicare patients during the past 15 years. They further postulate that because TEVAR is increasingly performed on sicker patients, there has been a decline in postoperative survival compared with the initial TEVAR experience.

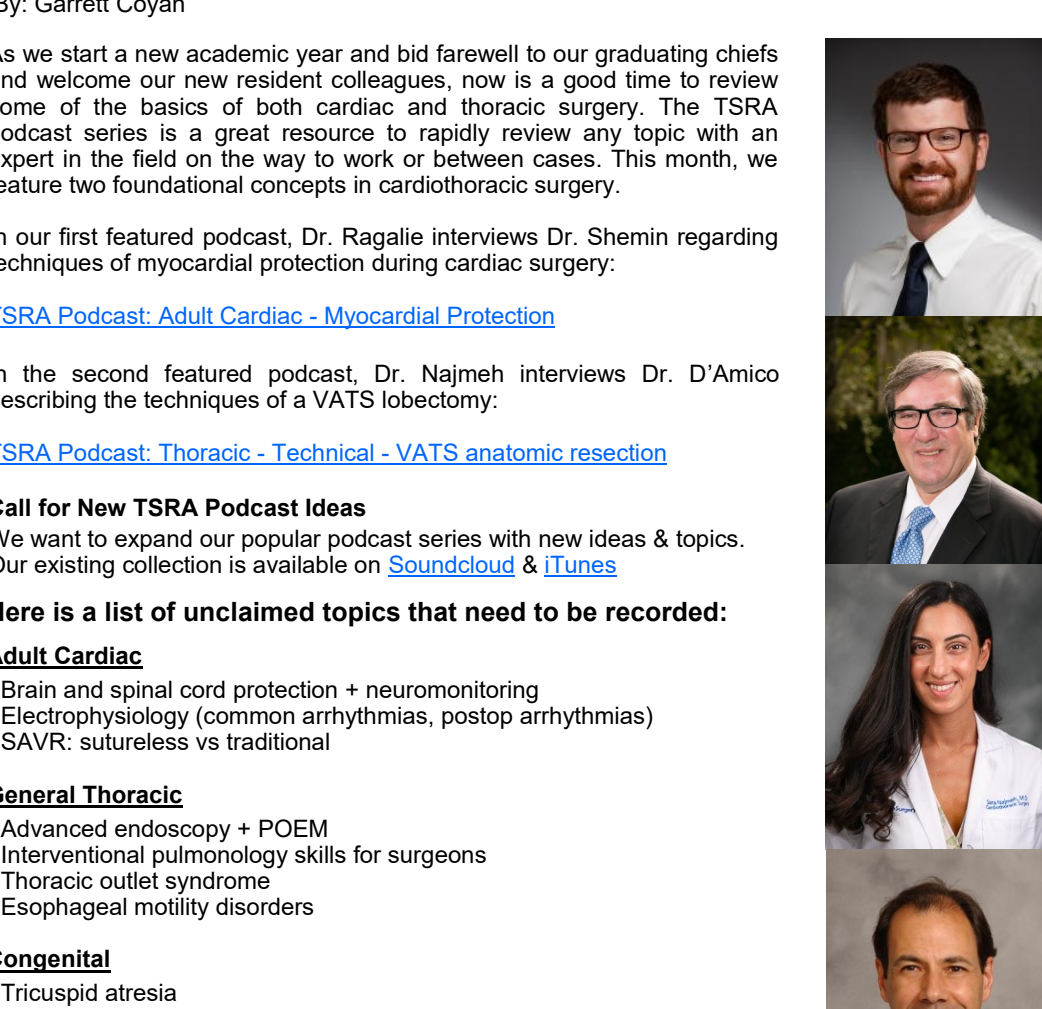


Figure 5. Impact of total hospital volume is shown on 30-day survival. Centers that completed a total of approximately 33 cases in the preceding 5 years had the lowest mortality rates at 30 days after thoracic endovascular aortic repair. The shaded area shows the 95% confidence interval.

Question and answer with lead author, Dr. Zehang Chen

Q: Mr. Chen, Congratulations on publishing your work. Your conclusions and findings make sense. As we use more endovascular therapies for DTAs, patients with higher complexity and more comorbidities will be operated on and thus the rates of morbidity and mortality will be higher. Moreover, endovascular techniques may be favored over open repairs in patients who are deemed too sick to tolerate open surgery. These patients are at the highest risk of complications and morbidity. Why did you choose 5-year groups for the volume analysis? It seems given your statistical power you could have analyzed time as a continuous variable rather than a categorical one. Take a hospital that has done 33 cases in 5 years. Does this mean they do 6-7 cases per year or they just started a TEVAR program and did 17 cases per year for the last few years?

A: "Thanks a lot for your question. We calculated the 5-year volume verbatim, and some subtleties make it differ from an average annual volume of 6-7 cases. For instance, a TEVAR program initiated in 2019, which performed 17 cases in the same year would not be considered to be in the "low-volume" group in 2019, since it did not perform over 33 cases in 2014-2019. Nonetheless, if the program again performed 17 cases in 2020, then it would be considered a "low-volume" hospital for 2020. Note that the categorization of a hospital may vary across different years, and the cases performed at the same hospital in different years will be included in different risk groups for the analysis: e.g., for the theoretical TEVAR program described above, the cases performed in 2019 would be categorized as TEVAR in a "low-volume" center, whilst the cases performed in 2020 would be categorized as TEVAR in a "high-volume" center.

We recognize that the postoperative performance depends on the experience of the multi-disciplinary team at a hospital, which accumulates through time, and is expected to have a lagging effect.

Admittedly, our large sample size warrants the application of more sophisticated statistical models. Note that merely including how long a TEVAR program existed may not fully capture its experience profile: it might be arguable to decide which is more experienced between a program with two years of history but performed 20 cases per year, or a program with ten years of history but only performed one case per year on average. Hence, were we to include the length of history as a continuous variable, we would possibly need to include multiple interaction terms, or adopt time-series analyses, neither of which are as easy to interpret as our presented model."

Q: The findings with respect to volume are a bit confusing. You state that "we found that there is a volume effect with TEVAR and that the centers with the best outcomes have completed a minimum of approximately 33 cases in the prior 5 years." Doesn't the graph (Figure 5) shown seem to show that the odds ratio for survival is higher in the low volume hospitals with less than 33 cases in 5-years? The inflection point is where the OR of survival is 1. Please explain.

A: "Thanks for the question. Figure 5 is presenting the odds ratio for mortality. We said that this impact is shown on 30-d survival only to suggest that this is a cross-sectional analysis, and only the postoperative 30d outcome is investigated. The odds ratio may vary across time, i.e., the proportional hazard assumption in survival analyses is not checked and may not be satisfied. Only the odds ratio at 30d (short-term) is calculated and presented."



Zehang Chen, BA, BSN

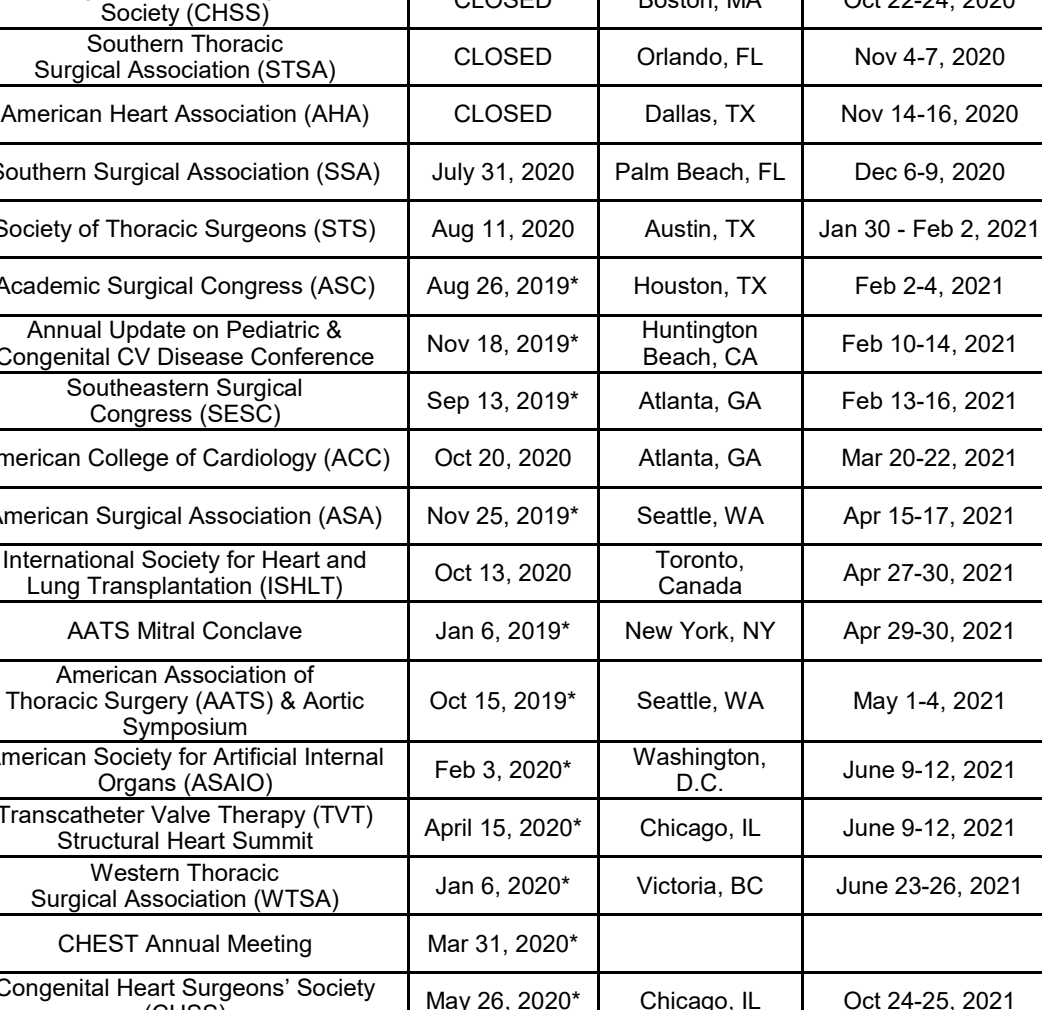


Figure 4. Unadjusted survival after thoracic endovascular aortic repair is shown for different study eras with the corresponding population at risk and 95% confidence intervals (shaded areas).

Q: Finally, I am surprised about the mortality data. You conclude that in all patients included in your study, TEVAR for DTA repair has only about a 75% one-year survival (Figure 4). This surprises me and seems low. How does this compare to open thoracoabdominal repairs? Why do you think the mortality is so high?

A: "Thanks for your question. In an unpublished exploratory analysis, we looked at the mortality of open DTA repair patients in Medicare. The 1-year survival for open patients is around 70%, slightly yet statistically significantly lower than TEVAR patients. One possible explanation of the improved survival might be that TEVAR focuses on the treatment of a segment of the aorta, but may or may not address all aortic problem(s), which leads to late TEVAR failure. Nonetheless, open aortic surgeries are usually associated with higher perioperative mortality, whose survival may be extended by the less invasive TEVAR procedure.

The high mortality rate might also be due to the older age of Medicare patients. Besides a few exceptions, the included Medicare patients are older than 66 years old (65 to be eligible for Medicare, and we require at least one year of patient history for inclusion). Besides, comorbidities that exacerbate the surgical outcome are prevalent in the Medicare cohort, e.g., chronic renal disease. In another paper we published in *JTCVS*, we showed that in the Medicare cohort, the 1-year survival for patients with end-stage renal disease is below 50%."

"Brown CR, Chen Z, Khurshan F, Kreibich M, Bavaria J, Groeneveld P, & Desai N. (2020). Outcomes after thoracic endovascular aortic repair in patients with chronic kidney disease in the Medicare population. *J Thorac Cardiovasc Surg.* 2020;159(2):402-413."

Once again, thank you for your time and your contributions with this work.

Citation: Chen Z, Brown C, Khurshan F, Kreibich M, McCarthy F, Bavaria JE, Desai ND. Thoracic Endovascular Aneurysm Repair Trends and Outcomes in Over 27,000 Medicare Patients for Descending Thoracic Aneurysms. *Ann Thorac Surg.* 2020;109(6):1757-1764.

[Click here to read the full manuscript in The Annals of Thoracic Surgery](#)

Featured TSRA Podcast

By: Garrett Coyan

As we welcome a new academic year and bid farewell to our graduating chiefs and start our new resident colleagues, now is a good time to review some of the basics of both cardiac and thoracic surgery. The TSRA podcast series is a great resource to rapidly review any topic with an expert in the field on the way to work or between cases. This month, we feature two foundational concepts in cardiothoracic surgery.

In our first featured podcast, Dr. Ragalie interviews Dr. Shemin regarding techniques of myocardial protection during cardiac surgery:

[TSRA Podcast: Adult Cardiac - Myocardial Protection](#)

In the second featured podcast, Dr. Ragalie interviews Dr. D'Amico describing the techniques of a VATS lobectomy:

[TSRA Podcast: Thoracic - Technical - VATS anatomic resection](#)

Call for New TSRA Podcast Ideas

We want to expand our popular podcast series with new ideas & topics. Our existing collection is available on [Soundcloud](#) & [iTunes](#)

Here is a list of unclaimed topics that need to be recorded:

Adult Cardiac

- Brain and spinal cord protection + neuromonitoring
- Electrophysiology (common arrhythmias, postop arrhythmias)
- SAVR: sutureless vs traditional

General Thoracic

- Advanced endoscopy + POEM
- Interventional pulmonology skills for surgeons
- Thoracic outlet syndrome
- Esophageal motility disorders

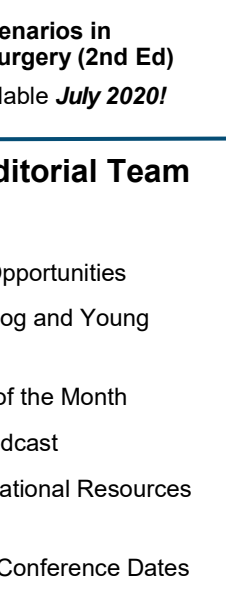
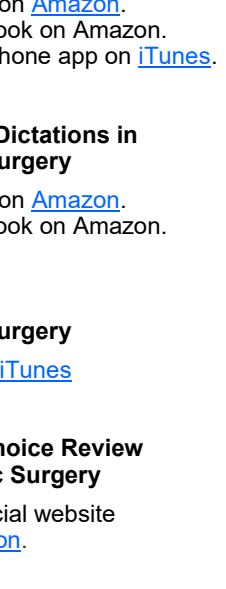
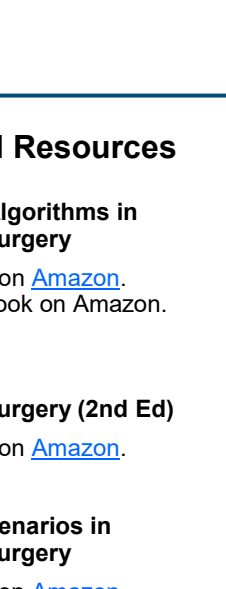
Congenital

- Tricuspid atresia
- Adult congenital heart disease
- Interventional congenital heart procedures
- Congenital mitral valve disease

Career

- Residents as teachers
- Ethics education in CT surgery: where are we now and where are we headed?
- Ethical research practice in CT surgery
- Imperative care vs. futility

If you are interested in recording one of the unclaimed podcast topics -OR- have new topics to propose, please contact [Clauden Louis](#).



TSRA Executive Committee (2019-2020)

Xiaoying Lou
Emory University
President

Justin Watson
OHSU
Vice President

Alex Brescia
University of Michigan
Secretary
Communications Chair

Heidi Reich
Cleveland Clinic
Treasurer

Peter Chen
UT-Houston
Immediate Past President

Clauden Louis
University of Rochester
Projects Chair

J. Hunter Mehaffey
University of Virginia
Education Chair

Jordan Bloom
MGH
Membership Chair

Garrett Coyan
University of Pittsburgh

Jason Han
University of Pennsylvania

David Blitzer
Columbia University

Anthony Mozer
Northwestern University

TSRA Educational Resources

TSRA Decision Algorithms in Cardiothoracic Surgery

1. As a print book on [Amazon](#).
2. As a [Kindle](#) e-book on Amazon.

TSRA Review of Cardiothoracic Surgery (2nd Ed)

1. As a print book on [Amazon](#).

TSRA Clinical Scenarios in Cardiothoracic Surgery

1. As a print book on [Amazon](#).
2. As a [Kindle](#) e-book on Amazon.
3. As an iPad & iPhone app on [iTunes](#).

TSRA Operative Dictations in Cardiothoracic Surgery

1. As a print book on [Amazon](#).
2. As a [Kindle](#) e-book on Amazon.

TSRA Primer of Cardiothoracic Surgery

1. Download from [iTunes](#)

TSRA Multiple Choice Review of Cardiothoracic Surgery

Check out the official website with free [registration](#).

TSRA Clinical Scenarios in Cardiothoracic Surgery (2nd Ed)

Kindle & print available **July 2020!**

TSRA Newsletter Editorial Team

Alex Brescia — Editor

Hunter Mehaffey — Trainee Opportunities

Jason Han — TSRA Advice Blog and Young Surgeon's Notes

Jordan Bloom — Manuscript of the Month

Garrett Coyan — Featured Podcast

Clauden Louis — TSRA Educational Resources and Multiple Choice Questions

Zachary Spigel — Abstract & Conference Dates

Tariq Sohail Babar — Diagnostic Challenge

Parth Patel — Graphic Support

Abstract Deadlines and Conference Dates

By: Zachary Spigel

Meeting	Submission deadline	Location	Dates
Extracorporeal Life Support Organization (ELSO)	July 15, 2020	Virtual	Sept 23-26, 2020
American College of Surgeons (ACS)	CLOSED	Chicago, IL (and/or virtual)	Oct 4-8, 2020
Eastern Cardiothoracic Surgical Society (ECTSS)	July 27, 2020	Manalapan, FL	Oct 7-10, 2020
European Association for Cardio-Thoracic Surgery (EACTS)	CLOSED	Barcelona, Spain	Oct 8-10, 2020
Transcatheter Cardiovascular Therapeutics (TCT)	June 30, 2020	Virtual	Oct 14-18, 2020
CHEST Annual Meeting	CLOSED	Chicago, IL	Oct 17-21, 2020
Congenital Heart Surgeons' Society (CHSS)	CLOSED	Boston, MA	Oct 22-24, 2020
Southern Thoracic Surgical Association (STSA)	CLOSED	Orlando, FL	Nov 4-7, 2020
American Heart Association (AHA)	CLOSED	Dallas, TX	Nov 14-16, 2020
Southern Surgical Association (SSA)	July 31, 2020	Palm Beach, FL	Dec 6-9, 2020
Society of Thoracic Surgeons (STS)	Aug 11, 2020	Austin, TX	Jan 30 - Feb 2, 2021
Academic Surgical Congress (ASC)	Aug 26, 2019*	Houston, TX	Feb 2-4, 2021
Annual Update on Pediatric & Congenital CV Disease Conference	Nov 18, 2019*	Huntington Beach, CA	Feb 10-14, 2021
Southeastern Surgical Congress (SESC)	Sep 13, 2019*	Atlanta, GA	Feb 13-16, 2021
American College of Cardiology (ACC)	Oct 20, 2020	Atlanta, GA	Mar 20-22, 2021
American Surgical Association (ASA)	Nov 25, 2019*	Seattle, WA	Apr 15-17, 2021
International Society for Heart and Lung Transplantation (ISHLT)	Oct 13, 2020	Toronto, Canada	Apr