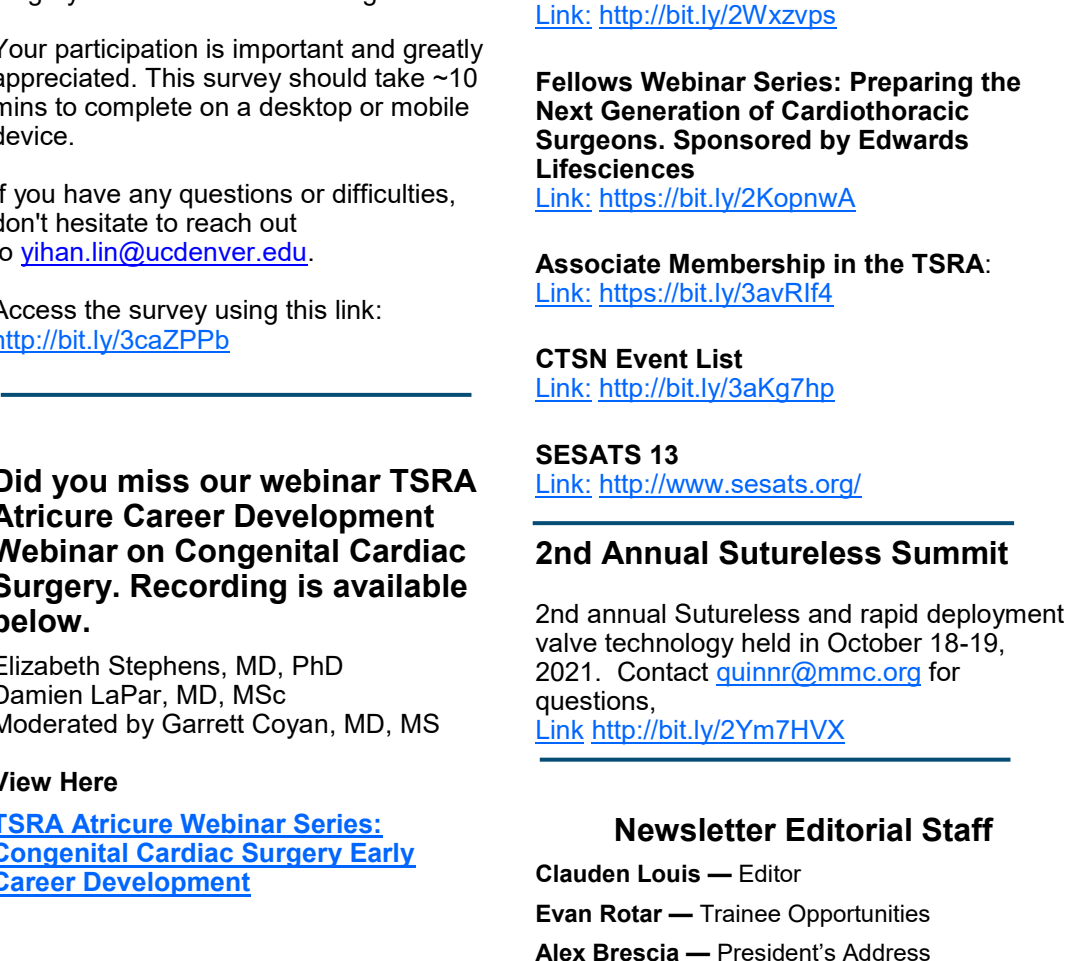


**Management of left main coronary artery disease: CABG vs. PCI**  
Featuring world experts and trainees in both cardiac surgery and interventional cardiology



The event will include case presentations and discussion of 5-year data from the EXCEL and NOBLE trials, with an opportunity for Q&A from the audience

<https://bit.ly/3b135ei>

**Survey: Humanitarian Global Surgery amongst Cardiothoracic Surgeons and Trainees**

Dear residents and fellows,  
We are conducting a survey to better understand the landscape of humanitarian efforts amongst cardiothoracic surgeons and trainees.  
We hope to identify barriers to participating in global cardiothoracic surgery, and potential solutions to mitigate these barriers.  
Ultimately, we plan to use the results of this survey to create more accessible opportunities in global cardiothoracic surgery for our trainees and surgeons.

Your participation is important and greatly appreciated. This survey should take ~10 mins to complete on a desktop or mobile device.

If you have any questions or difficulties, don't hesitate to reach out to [yihan\\_lin@ucdenver.edu](mailto:yihan_lin@ucdenver.edu).  
Access the survey using this link: <https://bit.ly/3caZPPb>

**Trainee Opportunities in CT Surgery**

**STS Candidate/Pre-Candidate Membership**  
[Link: https://bit.ly/3h59zUM](https://bit.ly/3h59zUM)

**Edwards Lifesciences Minimally Invasive Mitral and Tricuspid Closure**  
[Link: https://bit.ly/3pqGjXj](https://bit.ly/3pqGjXj)

**Medtronic Mechanical Circulatory Support Webinar**  
[Link: http://bit.ly/2WAVyD9](http://bit.ly/2WAVyD9)

**Medtronic TAVI Advanced Symposium Webinars**  
[Link: https://bit.ly/2Wxzvps](https://bit.ly/2Wxzvps)

**Fellows Webinar Series: Preparing the Next Generation of Cardiothoracic Surgeons. Sponsored by Edwards Lifesciences**  
[Link: https://bit.ly/2KopnWA](https://bit.ly/2KopnWA)

**Associate Membership in the TSRA:**  
[Link: https://bit.ly/3avRt44](https://bit.ly/3avRt44)

**CTSN Event List**  
[Link: http://bit.ly/3akQ7hp](http://bit.ly/3akQ7hp)

**SESATS 13**  
[Link: http://www.sesats.org/](http://www.sesats.org/)

**2nd Annual Sutureless Summit**  
2nd Annual Sutureless and rapid deployment valve technology held in October 18-19, 2021. Contact [quinn@dmcc.org](mailto:quinn@dmcc.org) for questions.  
[Link: https://bit.ly/2ym7HVX](https://bit.ly/2ym7HVX)

**Did you miss our webinar TSRA Attributed Career Development Webinar on Congenital Cardiac Surgery. Recording is available below.**

Elizabeth Stephens, MD, PhD  
Damien LaPar, MD, MSc  
Moderated by Garrett Coyan, MD, MS

**View Here**  
[TSRA Attributed Webinar Series: Congenital Cardiac Surgery Early Career Development](#)

**Newsletter Editorial Staff**

- Clauden Louis** — Editor
- Evan Rotar** — Trainee Opportunities
- Alexa Luc** — President's Address
- Jessica Luc** — Manuscript of the Month
- David Blitzler** — Featured Podcast
- Parth Patel** — Abstract & Conference Dates
- Yihan Lin** — Global Health
- Fatima Wilder** — Diagnostic Challenge
- Garrett Coyan** — TSRA Educational Resources and Multiple Choice Questions

**Young Surgeon's Note**

By: Jason Han  
Yes, we are *both cardiac surgeons: One family's unique perspective on work-life balance* by Courtney J. Gemmato, MD and Andrew C.W. Baldwin, MD  
By Jason J. Han MD

This article from the Young Surgeon's Note section of JTCVS by Drs. Gemmato and Baldwin is a portrayal of a feat that many would have considered and still consider to be highly improbable--having a successful 2-cardiothoracic-surgeon family. Especially for female cardiothoracic (CT) surgeons, who comprise just 7% of the workforce reported by the Society of Thoracic Surgeons, Dr. Gemmato writes that finding a role model in cardiac surgery who is married to another cardiac surgeon and has started a family is exceedingly difficult. It is so rare that to many aspiring CT surgeons it may appear at a glance to be impossible. *This was her inspiration behind writing this article--she wanted their experiences to serve as an example to those who look up to us that it is possible.* Of course, that does not mean it's easy.

Female CT surgeons are "...unavoidably aware of stereotypes and preconceptions that affect their day-to-day lives in the hospital." Onlookers may be skeptical of your reality, and you may have to prove them wrong every single day. Moreover, female CT surgeons are unmistakably a part of a minority, although there is hope that this is gradually changing. ~20% of cardiothoracic surgery residents are female. "Just over 200 women have ever been certified as diplomates of the American Board of Thoracic Surgery." Active female membership in the American Association for Thoracic Surgery constitutes less than 5%.

Childbearing in this context adds another formidable challenge, which often leads women to "...delay having children... or to believe their career will be adversely affected..." by posing inherent physical challenges and invoking negative stereotypes. Added to that, female CT surgeons are much less likely to find a dedicated stay-at-home spouse (17%) than their male counterparts (53%), which leads to on average having less support at home while juggling the same clinical demands. Yet, it is possible, and we all have a role to play in enabling our colleagues achieve their goals.

It requires a paradigm shift among training programs and in the field at large to "...normalize the concept of pregnancy within the residency" with progressive institutional changes. The culture must change to let future generations know that it is possible, and in fact, even encouraged to have a family and a career. As she writes, "The culture of surgery should move to embrace those with families rather than view them with skepticism regarding their commitment or flexibility." It relies on colleagues and friends who understand and are willing to be flexible with the demands of starting a family in a dual-surgeon household. Although advanced planning is helpful, having support is essential for times when cardiac surgery disrupts even the most foolproof plans.

It is also important to communicate clearly. Dr. Gemmato writes that "While occasionally awkward and undesirably personal, I found that clear communication of my needs during pregnancy was rarely (if ever) met with disapproval. In this way, I was able to operate until my 39th week of pregnancy..."



If you are interested in learning more, please find the [article here](#) at the Journal of Thoracic and Cardiovascular Surgery. This thought-provoking article by Drs. Gemmato and Baldwin is a must-read for all trainees. *Trainees are encouraged to join the discussion at <https://twitter.com/TSRA>. Please add comments in the twitter chats or in the form of letter to the editor.*

**Manuscript of the Month**

By: Clauden Louis  
**Title of Feature Manuscript: The Interview Process During the Pandemic: A Thoracic Education Cooperative Group (TECOG) and Thoracic Surgery Residents Association (TSRA) Collaborative Project**

**Authors:** Melissa Taylor, Freya Wallen, J. Hunter Mehaffey, Ali Shirafkan, Alexander Brescia, Kirsten Tremmer, Clauden Louis, Justin Watson, Ikenna C. Okereke

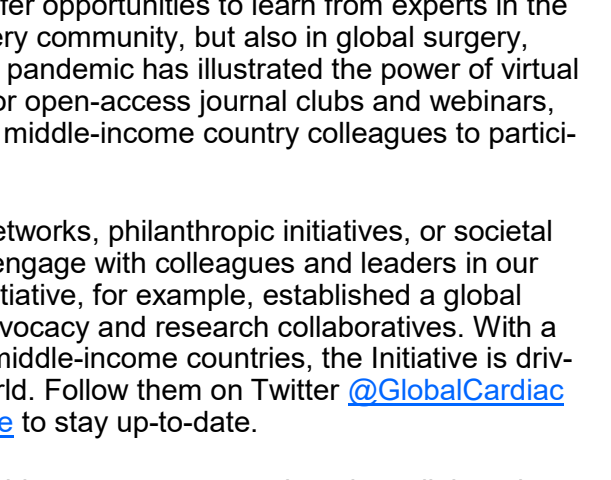
**Abstract**  
Background: The 2020 interview cycle for cardiothoracic fellowships was affected by the COVID-19 pandemic. Many programs shifted from in-person to virtual interviews. We evaluated applicant perceptions of the various interview formats.

Methods: All 2019-2020 cardiothoracic fellowship applicants received an electronic survey after completion of the match process. The survey assessed 1) number of in-person/virtual interviews completed, 2) perception of efficacy and likelihood of ranking a program based on format and 3) strengths/inequalities of virtual interviews.

Results: Response rate was 36% (48/133). Seventy-three percent (35/48) of respondents interviewed with more than 10 programs. Fifty-two percent (25/48) of respondents were able to schedule additional interviews once virtual formats were available. A slight majority (56%, 27/48) ranked a program at which they had an in-person interview as their first choice. Interviewing at more than 10 programs was associated with an increased likelihood of successfully matching at a program (p = 0.02). Overwhelmingly respondents favored an in-person component to the interview process (96%, 46/48). And only 29 percent (14/48) of respondents felt they could adequately evaluate a program virtually. The factors which had the highest percentages of adequate portrayal during virtual interviews were the didactic schedule/curriculum (81%, 39/48) and case number/autonomy (58%, 28/48). The factors with the lowest percentages were culture/personality (19%, 9/48) and city/lifestyle (15%, 7/48).

Conclusion: Applicants strongly favored an in-person component to interviews, highlighting potential deficiencies in the virtual interview process. Programs should consider the addition of virtual tours of their hospitals, narrations from staff and vignettes from current fellows about lifestyle and well-being.

**Interview with First Author**  
**Dr. Melissa Taylor**



**What were the main takeaway points from the manuscript?**  
Our study evaluated the applicant experience during fellowship interviews when quarantine measures instituted during the COVID-19 pandemic required conversion from traditional in person interviews to a virtual format. Most applicants felt they were unable to fully evaluate programs virtually and there was an impressive 96% of applicants that preferred an in-person component to the interview process. This may be due the inadequate portrayal of the culture and personality of a program, one of the most important factors to applicants when ranking a program, in a virtual format.

**Can you tell me about what inspired you to do this study?**  
There is very little literature on the utilization of virtual formats for interviews in residency or fellowship applications, especially on a national level. After experiencing the challenge of converting to virtual formats and finding that other programs felt similarly unprepared, we collaborated with the TSRA and Thoracic Education Cooperative Group to evaluate the utilization of the virtual format on a national level. The use of virtual formats has great potential to increase the number of interviews, decrease the financial and time costs for both programs as well as applicants. We sought to identify the components of the virtual interview process that were successful and those that needed to improve to be able to effectively utilize the virtual format in the future.

**Would you have some advice to those who are looking to interview and match during these new interview experiences given changes since COVID?**  
There recently has been a plethora of editorials on the subject as it has been a challenging time for everyone. I would advise applicants in their residence and presentations professional, applicants should utilize social media to network with professionals and colleagues in practice. Social media allows interactions outside of interviews through society meetings, hashtags, and discussions of the latest research or interesting topics shared. The interview process whether in person or virtually is very abbreviated. Opportunities such as social media empower applicants to extend their interactions and enable a program or faculty to get to know them better.

**What do you see the are the next steps for programs regarding recruiting virtually?**  
For programs, the utilization of social media appears to play a key role in allowing insight for applicants into the day to day life, culture, and values of a program through photos, videos, and promotion of clinical and academic activities of trainees, staff, and faculty. Program websites should stay updated with didactic schedules, rotations, case numbers, active and published research, as well as profiles of faculty, current trainees, and alumni. Additional "virtual tours" of the program including the city life, a program's facilities, as well as other unique qualities that strengthen the program should be communicated through photos and videos.

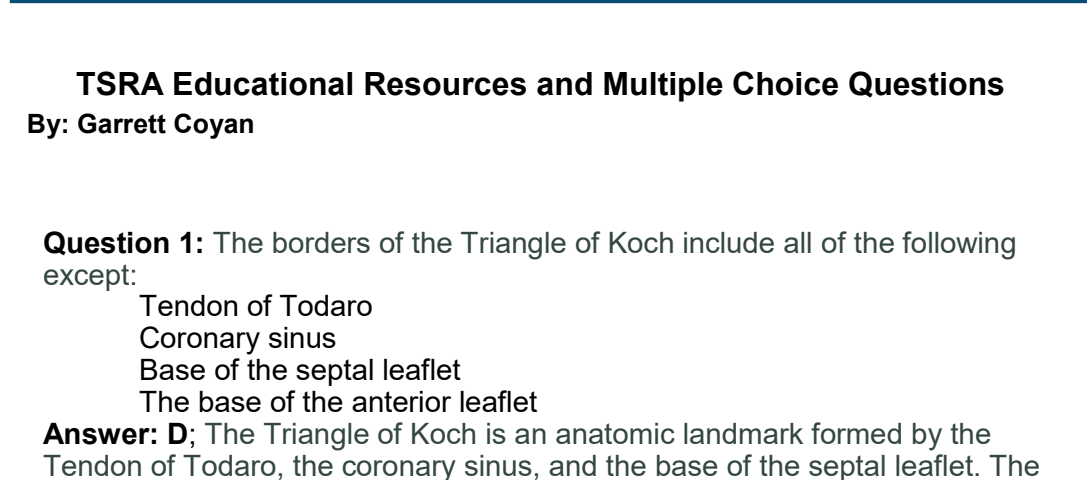
**Featured TSRA Podcast**

By: David Blitzler  
This month, we are featuring the second part of our series on the impact of COVID-19 for medical students and residents. In this episode, we have a panel discuss [Finding a Job in the COVID-19 Era](#). Close readers will remember that we featured the first part of the series, [Applying to Cardiothoracic Surgery Residency During COVID-19](#), in a previous newsletter. All of these and more can also be found at [the podcast main site](#). Happy listening!

**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)  
- Total arterial revascularization  
- Managing/interrupting LVAD  
- Transcatheter Mitral Valve Replacement  
- AVR: sutureless vs. Traditional  
- **General Thoracic**  
- Advanced endoscopy + POEM  
- Thoracic outlet syndrome  
- Esophageal motility disorders  
- **Congenital**  
- Palliative Procedures  
- **Career**  
- Residents as teachers  
- Ethical research practice in CT surgery  
- Imperative care vs. utility

If you are interested in recording one of the unclaimed podcast topics -OR- have new topics to propose, please contact Garret Coyan @ [covaygn@dupmc.edu](mailto:covaygn@dupmc.edu).



**TSRA Executive Committee (2020-2021)**

- Alex Brescia, University of Michigan, President
- J. Hunter Mehaffey, University of Virginia, Vice President
- Clauden Louis, University of Rochester, Secretary and Communications Chair
- Anthony Mozer, Northwestern University, Treasurer
- Xiaoying Lou, Emory University, Immediate Past President
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- Jason Han, University of Pennsylvania, Education Chair
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- Jordan Bloom, Massachusetts General Hospital
- Justin Watson, Oregon Health & Sciences University
- Jessica Luc, University of British of Columbia
- Fatima Wilder, John Hopkins University
- Yihan Lin, University of Colorado Hospital

**TSRA Education Resources**

- TSRA Clinical Scenarios in Cardiothoracic Surgery (2nd Ed)**  
Kindle & print available NOW!!!  
1. As a print book on Amazon.  
2. As a Kindle e-book on Amazon.
- 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.  
**Stay tuned 3rd edition first quarter 2021!!!**
- TSRA Operative Dictations in Cardiothoracic Surgery**  
1. As a print book on Amazon.  
2. As a Kindle e-book on Amazon.
- TSRA Multiple Choice Review of Cardiothoracic Surgery**  
Check out the official website with free content collaboration product with free content questions. Questions updated frequently, 588 questions. Authentic feel.

**Abstract Deadlines and Conference Dates**

By: Parth Patel  
If there are meetings you would like to see here please contact Parth M. Patel, [parth.mukund.patel@emory.edu](mailto:parth.mukund.patel@emory.edu)

Meeting	Submission deadline	Location	Dates
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**Cardiovascular and Thoracic Specific Meetings**

International Society for Heart and Lung Transplantation (ISHLT)	October 27, 2020	Virtual	Apr 27-30, 2021
American Association of Thoracic Surgery (AATS) & AATS Symposium	January 6, 2021	Virtual	Apr 30- May 2, 2021
Aortic Mitral Conclave	October 27, 2020	Virtual	Apr 30- May 2, 2021
American College of Cardiology (ACC)	December 2, 2020	Atlanta, GA + Virtual	May 15-17, 2021
Transcatheter Valve Therapy (TVT) Structural Heart Summit	April 15, 2020	Chicago, IL	June 9-12, 2021
International Society of Minimally Invasive Cardiothoracic Surgery (ISMICS)	January 11, 2021	Warsaw, Poland	June 17-19, 2021
Western Thoracic Surgical Association (WTSAA)	January 11, 2021	Victoria, BC, Canada	June 23-26, 2021
Extracorporeal Life Support Organization (ELSO)	July 15, 2020	Indianapolis, IN	Sep 30- Oct 3, 2021
Eastern Cardiothoracic Surgical Society (ECTSS)	July, 27 2020	Manalappam, FL	Oct 6-9, 2021
European Association for Thoracic Surgery (EACTS)	April 30, 2021	Barcelona, Spain	Oct 14-16, 2021
International Thoracic Oncology Summit	August 17, 2020	Virtual	Oct 16-17, 2020
Transcatheter Cardiovascular Therapeutics (TCT)	June 15, 2020	San Francisco, CA	Oct 22-26, 2021
Congenital Heart Surgeons' Society (CHSS)	May 26, 2020	Chicago, IL	Oct 24-25, 2021
CHEST Annual Meeting	April 28, 2021	Vancouver, Canada	Oct 24-27, 2021
American College of Surgeons (ACS)	March 1, 2021	Washington, D.C.	Oct 24-28, 2021
Surgical Treatment for Arrhythmias and Rhythm Disorders	September 11, 2020	Virtual	Oct 30-31, 2020
Southern Thoracic Surgical Association (STSA)	April 5, 2021	Atlanta, GA	Nov 3-6, 2021
American Heart Association (AHA)	June 4, 2020	Boston, MA	Nov 13-15, 2021
Resuscitation Science Symposium	June 4, 2020	Boston, MA	Nov 13-15, 2021
Society of Thoracic Surgeons (STS)	August 11, 2020	Miami, FL	Jan 29 - Feb1, 2022
Annual Update on Pediatric & Congenital CV Disease Conference	November 30, 2020	Virtual	Feb 11-14, 2021

**General Surgery Meetings of Interest**

Academic Surgical Congress (ASC)	August 7, 2020	Virtual	Feb 2-4, 2021
American Surgical Association (ASA)	November 16, 2020	Seattle, WA	Apr 15-17, 2021
American Transplant Congress (ATC)	December 4, 2020	Virtual	June 5-9, 2021
American Society for Artificial Internal Organs (ASAIO)	February 1, 2021	Washington, D.C.	June 9-12, 2021
Southeastern Surgical Congress (SESC)	February 19, 2021	Atlanta, GA	August 21-24, 2021
Southern Surgical Association (SSA)	July, 31 2020	Hot Springs, VA	Dec 5-8, 2021

**Global Surgery**

By: Yihan Lin  
**Virtual and Collaborative Engagement in Global Cardiothoracic Surgery**  
Danielle O'Hara, Dominique Vervoort

There is no shortage of cardiothoracic surgery trainees interested in global cardiothoracic surgery. International experiences offer valuable skills and insight, as well as provide sustainable cardiovascular interventions in resource-limited settings through mentorship, knowledge transfer, and academic collaboration. Opportunities from the [TSRA](#) and the [ISF](#) can be found for trainees interested in mission trips.

Research in cardiothoracic care in resource-limited settings is needed to identify community-specific challenges to develop meaningful, sustainable solutions. The Thoracic Surgery Foundation, in collaboration with Edwards Lifesciences, supports research initiatives in variable-resource contexts through its [Every Heartbeat Matters award](#).<sup>3</sup>

Virtual seminars and journal clubs offer opportunities to learn from experts in the field - within the cardiothoracic surgery community, but also in global surgery, global health, and data science. The pandemic has illustrated the power of virtual education, whether as conferences or open-access journal clubs and webinars, reducing thresholds for our low- and middle-income country colleagues to participate and share their experiences.<sup>4-7</sup>

Raising awareness through social networks, philanthropic initiatives, or societal engagement offers opportunities to engage with colleagues and leaders in our field. The Global Cardiac Surgery Initiative, for example, established a global platform for trainees to engage in advocacy and research collaboratives. With a majority of members from low- and middle-income countries, the Initiative is driven by voices from all parts of the world. Follow them on Twitter [@GlobalCardiac](#) or subscribe to their newsletter [online](#) to stay up-to-date.

Creating mutually-beneficial partnerships serves to strengthen the collaborative culture that is needed to achieve academic and clinical sustainability for our international partners.<sup>8</sup> The TSRA, through its global health arm, emphasizes such a collaborative culture. To collaborate with the TSRA on global health opportunities, please email [https://bit.ly/3avRt44](mailto:https://bit.ly/3avRt44).

The importance of surgery in the global health agenda is increasingly recognized, and cardiothoracic surgery is no exception. As future consultants and leaders in our field, cardiothoracic surgical trainees play an integral role in building collaborative partnerships and maximizing global surgical capacity.<sup>2</sup> The foundation we build together now will prepare us to address complex global issues related to the delivery of high-quality cardiovascular and thoracic surgical care for all.

**References:**  
1. Swain JD, Sinnott C, Breakey R, et al. Ten-year clinical experience of humanitarian cardiothoracic surgery in Rwanda: Building a platform for ultimate sustainability in a resource-limited setting. *J Thorac Cardiovasc Surg*. 2018;155(6):2541-2550. doi:10.1016/j.jtcvs.2017.11.106  
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3. TSF Every Heartbeat Matters Awards : TSF – The Thoracic Surgery Foundation. Accessed February 16, 2021. <https://thoracicsurgeryfoundation.org/awards/edwards/>  
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8. Vervoort D, Velazco-Davila LD. Closing the gap by filling the gaps: Leveraging international partnerships to train the world's cardiac surgical workforce. *J Thorac Cardiovasc Surg*. 2020;160(2):e51-e52. doi:10.1016/j.jtcvs.2020.03.143

**Diagnostic Challenge**

By: Fatima Wilder  
A 59-year-old woman presents to your office with report of a productive cough that has been worsening for the past 6 months.

- RDS:** No fevers, chills. Intermittent acid reflux, early satiety and sometimes feels like she burps up her food for hours after eating
- PMH:** GERD, sarcoidosis
- PSH:** EGD with biopsy, shoulder surgery
- Allergies:** Seasonal
- Rx:** Prilosec

**Diagnosis: Alveolar proteinosis with achalasia**

•Pulmonary alveolar proteinosis (PAP) is not a single disease, but rather a syndrome  
◦Alveolar surfactant builds up, limiting oxygenation of the blood and ultimately resulting in dyspnea  
◦Diseases that cause PAP can be grouped into three categories:  
-primary (autoimmune (85-90%) or hereditary),  
-secondary, and  
-congenital (5% of all the rest in combination with secondary causes)  
◦The natural history typically follows the clinical course of the underlying disease.  
◦Symptoms (vary depending on the underlying etiology):  
-Dyspnea is most common: Most patients develop dyspnea very slowly, typically noticing it only with activity at first and eventually also at rest  
-Fingerings may appear cyanotic  
-Cough may be dry or productive  
-Fatigue, weight loss, chest pain, or a general feeling of ill health (malaise) can also occur.

•XR can be used in workup but CT, typically reveal extensive white patches within the lungs (ground glass opacity) with superimposed angular lines (reticular densities).

**Pulmonary alveolar proteinosis - management**  
Therapy for PAP varies depending upon what disease is present, disease severity, and the age of the patient.  
In autoimmune PAP~30% do not have symptoms and 5 – 7% improve spontaneously.  
Of those needing therapy, whole lung lavage (WLL) is the current standard therapy. WLL is a procedure done with the patient asleep in which excess surfactant is 'washed' out of one lung with copious saline irrigation  
In secondary PAP, removal and avoidance of the causative agent (e.g., silica dust exposure) or successful treatment of the underlying disorder may improve symptoms.  
Treatment of congenital PAP is generally supportive. Lung transplantation has been successfully used in infants and children with congenital PAP.  
In our patient, the underlying diagnosis is believed to be secondary PAP due to achalasia (note the dilated esophagus).

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**TSRA Educational Resources and Multiple Choice Questions**

By: Garrett Coyan  
**Question 1:** The borders of the Triangle of Koch include all of the following except:  
-Tendon of Todaro  
-Coronary sinus  
-Base of the septal leaflet  
-The base of the anterior leaflet  
**Answer: D;** The Triangle of Koch is an anatomical landmark formed by the Tendon of Todaro, the coronary sinus, and the base of the septal leaflet. The AV node is located at the apex of the triangle. Identification of these structures enables the surgeon to adjust suture placement to avoid heart block

**Question 2:** A cardiologist refers a patient to you for aortic and mitral valve replacement and two vessel bypass –OM2 and RCA. You evaluate the patient and review his echocardiogram and find that he does need to have his aortic valve replaced but you feel confident of repairing his mitral valve. Upon reviewing his cath, you agree that he will need a two vessel bypass. You schedule him for CPB. On the day of surgery your operative strategy is:  
-Put on CPB, replace aortic valve, repair the mitral valve and then bypass the coronaries.  
-Put on CPB, repair the mitral valve, replace the aortic valve and then bypass the coronaries  
-Stay off pump under normothermia, repair the mitral valve, replace the aortic valve and then bypass the coronaries  
-Put on CPB, do the distal anastomosis, repair the mitral valve, replace the aortic valve and then the proximal anastomosis prior to coming off pump.  
**Answer: D;** Perform the distal anastomosis first as it is difficult to get good exposure once the valves are placed. In addition, once the distal anastomoses are completed cardioplegia can be administered down the graft distal to the obstruction, which improves myocardial preservation. If repairing the mitral valve first then replacing the aorta closed, as it will help in testing the mitral valve after repair. If keeping the mitral valve then the aorta can be opened prior to working on the mitral as the neo-mitral valve will not need to be tested. Replacing the mitral valve first may cause AV groove disruption when the heart is lifted up for performing the distal anastomosis.

**Question 3:** Regarding spinal protection in Thoraco-abdominal aortic aneurysm repair:  
-CSF drainage does not impact paraplegia rates  
-Distal aortic perfusion devices does not allow any spinal protection over the clamp and sew method  
-Motor Evoked Potentials (MEPs) are more sensitive than Somatosensory Evoked Potentials (SSEPs) at detecting spinal ischemia  
-Postoperative hypotension protects patients from paraplegia and decreases evoked bleeding  
**Answer: C;** MEP (motor evoked potentials) are more sensitive than SSEP. SSEPs only detect ischemia in the dorsal spinal cord. The remaining answer choices are false.

**Best of luck on the Thoracic Surgery Inservice Training Exam from the TSRA Executive Committee!**