



The November 2<sup>nd</sup>, 2020 Boston Surgical Society meeting was held in Philadelphia via Zoom. The Philadelphia Academy of Surgery invited the members of the Boston Surgical Society to join them virtually as they presented the Samuel D. Gross Prize to Stephen A. Rosenberg MD, PhD. Dr. Rosenberg, who trained in Boston at the Peter Brent Brigham Hospital and served as a mentor to many of our members at the National Cancer Institute in Maryland, was being honored for his pioneering work in gene and immunotherapies to combat advanced cancer.

After accepting his award, Dr. Rosenberg gave a presentation entitled, “The Development of Cellular Immunotherapy for Patients with Cancer.” At the end of his talk, many of our members reached out to congratulate him and reminisce about the time that they had spent together.

Please refer to the Philadelphia Academy of Surgery minutes.

Respectfully submitted,

Claire Cronin MD, MBA



The Annual Meeting of the 2020 season of the Boston Surgical Society was held on December 7<sup>th</sup>, Pearl Harbor Day. It was the second official gathering of the year due to the COVID-19 pandemic. When the members last met in person on March 2<sup>nd</sup>, there were only 90 presumed positive cases in the state of Massachusetts. By December 7<sup>th</sup>, over 250,000 Massachusetts residents had tested positive for the virus, and 11,000 people had died.

In the intervening nine months our members were called on to take care of these patients in ICU's, pop-up respiratory units, and field hospitals. Elective operative cases were shut down for a few months to preserve ventilators, and PPE (personal protective equipment.) Some of us continued to operate on cancers and emergencies, while others found themselves with little to do.

For the first time in history, the Annual Meeting was held from the comfort of our member's homes or offices through the technology of Zoom, a video platform most of us had never heard of in March. There will be no descriptions of artisanal salads or trumped-up chicken dishes in these minutes, as it was more of a bring-your-own affair.

Our president, Dr. Richard Ehrlichman, elegantly dressed in a tuxedo, opened the meeting with the announcement that the officers of the Boston Surgical Society will remain the same for 2021 due to the cancellation of most of the 2020 season, making him the first president to serve two terms. In light of these circumstances, his presidential address will be postponed for a year.

Dr. Ehrlichman presented the treasurer's report on behalf of Dr. Rubens. For the 2019-2020 time period, \$12,685 in dues have been collected and the society has incurred only \$292 in expenses, for a net balance of \$12,393. Total assets in both the checking and savings account total \$88,703.

Four new members were welcomed to the Boston Surgical Society:

Nikola Dobrilovic, MD MBA. Boston Medical Society  
Nahel Elias, MD. Massachusetts General Hospital.  
Brent Weil, MD. Boston Children's Hospital.  
Benjamin Zendejas-Muumert, MD. Boston Children's Hospital.

The speaker of the night was Dr. Matthew A. Nehs, an endocrine surgeon from Brigham and Women's Hospital. The topic was "Accessing the Adrenal: From Adenoma to Zuckerkandl."

Dr. Nehs began with an introduction to Emil Zuckerkandl (1849-1910), the Hungarian anatomist who named everything he possibly could after himself. Zuckerkandl believed that surgical strategy starts with the understanding of anatomy and famously declared, "Anatomy is the war map for the operations of the physician." This is never truer than when it comes to the adrenal gland.

There are many approaches to the adrenals; trans-abdominal or retroperitoneal, open or laparoscopic. Factors to consider when planning for surgery are pathology, tumor size, patient factors (size, visceral fat, prior surgery, and occupation), and the RANDO criteria. The RANDO criteria being a measure of surgeon's tolerance for difficulty based on the resident's skill, also known as "Resident Ain't Never Done One."

Benign and functional masses are usually dealt with laparoscopically, leading to a good cosmetic outcome and an earlier return to work. The decision to approach the glands anteriorly or posteriorly depends primarily on patient factors. The retroperitoneoscopic procedure allows for direct access to the adrenals without the need to mobilize the liver, spleen, pancreas or colon, while avoiding any adhesions from previous surgeries, and offers access to both adrenal glands for bilateral procedures.

Dr. Nehs reviewed his locally developed Posterior Adiposity Index, a measurement of back fat by CT scan that can predict operative time and help inform the best approach to adrenalectomy. He summarized their findings in the rhyme, "Lot of grey: retroperitoneoscopic is the way, but if you see a lot of black: don't go through the back." The colors representing organs and muscles vs. visceral fat on the scans.

Malignant endocrine lesions have high mortality rates, and require an oncologic resection. Open excisions need to be planned to incorporate any intravascular tumor thrombus or lymphadenectomy. Dr. Nehs quipped that when it comes to wide exposure, "the Mercedes incision is the Cadillac of incisions."

The final subject of the talk philosophically touched on the anatomical location of the soul, which in Dr. Nehs opinion is in the area of the juxtarenal IVC, where extra-adrenal paragangliomas can arise. When an endocrine surgeon is called upon to remove one of these organs of Zuckerkandl, he or she needs a strategy that involves more than hope. Dr. Nehs advised that it is always best to begin with the end in mind and the right choice for exposure will follow. Hope is an important life principal, but is not an effective strategy for surgeons.

Dr. Ehrlichman thanked Dr. Nehs for his historical and philosophical slant on adrenal surgery. The meeting was closed at 7:54pm.

Respectfully submitted,



Claire Cronin MD, MBA



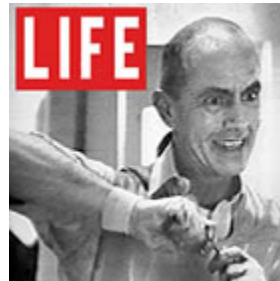
As a Nor'easter prepared to drop two feet of snow in Eastern Massachusetts, the members of the Boston Surgical Society gathered safely from their homes through Zoom on February 1<sup>st</sup>, 2021, to hear about Hot Topics in Vascular Surgery. Dr. Matthew Menard from the Brigham and Women's Hospital presented the ongoing NIH-sponsored trial he developed with Alik Farber MD from Boston Medical Center, comparing the Best Endovascular vs the Best Surgical Therapy in Patients with Critical Limb Ischemia Trial (BEST-CLI). Dr. Samuel Schwartz, recently departed from Massachusetts General Hospital, reported from sunny California, about PQ Bypass.

Dr. Richard Ehrlichman welcomed the group to the evenings event, with a particular acknowledgement to the vascular residents in attendance.



Dr. Menard started his presentation with some background facts that have led to a 24% increase in peripheral arterial disease (PAD) over the last decade. While smoking is down, diabetes and obesity are rampaging forward, putting patients at risk for critical limb ischemia (CLI). The five-year mortality rate for PAD is 32%, and even though only 1-2% of this population goes on to critical limb ischemia, 50% of these CLI patients end up with an amputation or are dead within one year.

The first successful treatment for PAD was performed in 1948 by Dr. Kunlin who used a reverse greater saphenous vein to bypass a stenotic femoral artery, and this surgery has remained the gold standard. In 1964, “Crazy” Charles Dotter MD, launched endovascular therapy by threading a catheter through a stenotic superficial femoral artery, which landed him on the cover of LIFE Magazine.



Despite this new technology, open bypass is still the first line of treatment ~40% of the time as of 2020. In an effort to understand the best value (dollars spent per health-related outcome) for CLI, spurred on by a good amount of beer at Foxwoods Casino, Drs Menard and Farber set out in 2007 to answer the question: which first revascularization option (open bypass surgery vs endovascular therapy) for CLI has the best value?

They developed a prospective, randomized, multicenter, multispecialty, pragmatic, open-label superiority trial with the goal of obtaining 2,100 patients at 160 clinical sites. The study had two cohorts of patients: the first was to be comprised of 1,620 patients with adequate saphenous vein graft, the second group was to include 480 patients without adequate saphenous vein, who if randomized to the open arm of the trial, were treated with arm vein, short saphenous vein, composite vein, cryopreserved vein, or prosthetic conduit. The endpoints were amputation, as well as major re-intervention, such as new bypass, jump graft revision, or thrombectomy/thrombolysis.

After enrolling 1,856 patients, the study ran out of funding a year ago. Additional funding totaling \$5.5 million was raised through local and national medical societies, as well as industry (Janssen), in order to reach the goal of 24-month patient follow up. While the results of the BEST trial are pending, Dr. Menard believes the study will clarify the evolving role of both endovascular and open treatments for CLI, and that the two interventions should be complementary, and not mutually exclusive strategies.

With orange trees in the background, Dr. Schwartz, now of Arrowhead Regional Medical Center, introduced his talk “PQ Bypass.” The technology of PQ Bypass is a percutaneous femoro-popliteal bypass for long segment infero-inguinal occlusive disease using stents to traverse the in-situ femoral vein.

Access to the superficial femoral artery superiorly is obtained using a wire through the contralateral common femoral artery. The posterior tibial vein is accessed below the obstruction and a snare cage is threaded up the femoral vein. A device with a hollow needle is threaded over the arterial wire and fired posteriorly through the arterial wall into the femoral vein. The arterial

wire is threaded through the artery into the vein. The hollow needle is threaded down the wire and a second firing of the needle creates a distal anastomosis. Stents are placed from distal to proximal.



This procedure is good for long segment obstructions of up to 70cm. Patency rates are 81% at one year, recovery is quick, and there is a very low rate of DVT's. Mechanical obstruction of the stents can occur due to external forces such as the 90-degree angle of office chairs. The needle can dull after repeated firings across calcified vessels, and there is a small chance of pseudoaneurysm. The covered stents may eliminate target options for open bypass. Stented patients need to be on anti-platelet therapy for life in addition to DOAC therapy for the first six weeks.

Dr. Ehrlichman thanked the speakers for an enlightening discussion and closed the meeting at 9 pm.

Respectfully submitted,

Claire Cronin MD, MBA



It has been a full year since the members of the Boston Surgical Society last met in person due to the COVID-19 pandemic. As of March 1<sup>st</sup>, 2021, over 1.7 million residents of Massachusetts have been vaccinated against the disease. This evening's meeting was held virtually via Zoom to hear Dr. Beth Frates discuss Lifestyle Medicine for Leaders.

Dr. Ehrlichman welcomed the attendees and introduced Dr. Frates, a Harvard trained physiatrist, who is one of the pioneers of Lifestyle Medicine education. She has authored three books, including *Lifestyle Medicine Handbook: An Introduction to the Power of Healthy Habits*, which has been distributed by Dr. Lillemoe to the department of surgery at Massachusetts General Hospital.

The definition of Lifestyle Medicine is the use of evidence-based lifestyle therapeutic intervention—including a whole-food, plant-predominant eating pattern, regular physical activity, restorative sleep, stress management, avoidance of risky substances, and positive social connections—as a primary modality, delivered by clinicians trained and certified in this specialty, to prevent, treat, and often reverse chronic disease. The leading causes of death in the United States are heart disease, cancer, stroke, and chronic lower respiratory disease, which are directly attributed to tobacco use, poor diet, physical inactivity, and alcohol consumption.

The six pillars of Lifestyle Medicine were outlined:

- 1) **Exercise:** The goal is to accumulate 150 minutes of moderate activity (or 75 minutes of high intensity activity) per week along with strength training twice per week on non-consecutive days. The benefits include but are not limited to, prevention of cardiac disease and stroke, reduction of blood glucose levels, prevention of bone loss, better sleep, increased energy, improved mood, and prevention of dementia.

Physicians, who work out, are more likely to counsel their patients on the importance of exercise. Excessive sitting is a lethal activity, which is important in the age of Zoom. It is recommended that we stand every hour (every 30 minutes for those with diabetes), schedule walking minutes, use an exercise ball, invest in a treadmill or bicycle workstation.

- 2) **Diet:** Lifestyle medicine follows the evidence when it comes to the myriad of diets available to our patients and ourselves. This includes limiting refined sugars, processed foods, and trans-fats, or as Michael Pollen, the author of the Omnivore's Dilemma writes, "Eat food, not too much, mostly plants." Dr. Frates recommends following the information in the *Full Plate Diet*, which can be found for free at [fullplateliving.org](http://fullplateliving.org). The power of food to heal was recognized by Hippocrates who penned, "Let food be thy medicine, and let medicine be thy food."
- 3) **Stress Management:** Stress is a state of mental or emotional strain resulting from adverse or very demanding circumstances. Some stress is good and can be motivating, but excess stress can damage our minds and bodies. Stress reducing techniques include getting out in nature, exercise, mindfulness (being present in the moment), meditation, taking vacations, diaphragmatic breathing, laughing, and most relevant to our current work styles is to check less emails.
- 4) **Sleep:** The National Sleep Foundation recommends 7-9 hours of sleep per night. Sleep deprivation affects every organ and is associated with diabetes, heart disease, and obesity. Those with poor health are more likely to report sleep disturbances. The

reaction time for being awake for 24 hours is similar to having a blood alcohol level of 0.10 (the legal limit is 0.08), which impacts surgical errors.

- 5) **Social Connections:** Maslow's Hierarchy of Needs puts the sense of belonging and love above physiologic and safety needs. Not only is there a link between cardiovascular disease and cancer with a low quality of social ties, but there is also a connection with poor surgical outcomes when there is a lack of sense of teamwork. A landmark study in 1979 by Berkman and Syme in *Am. J. Epidemiol.* revealed that people with more social connections are less likely to die from all causes.
- 6) **Substance Use:** The lifestyle medicine recommendations are to quit smoking and follow the American Heart Association guidelines for alcohol intake, which is one drink for a woman and two drinks for a man in a 24-hour period. However, no alcohol is recommendation for cancer prevention.

All the pillars are interconnected. For example, exercise decreases cravings for sugary substances while decreasing stress. Stress increases the desire for high fat foods and substance use, while interrupting sleep. Sleep deprivation, as every resident knows, increases the desire for high calorie foods. Alcohol not only disrupts sleep but can get in the way of high-quality social connections.

Dr. Ehrlichman thanked Dr. Frate for this important discussion. If any member of the audience met all six pillars in their current life, they were eligible for a free Lifestyle Medicine Handbook.

Respectfully submitted,



Claire Cronin MD, MBA



The final meeting of the Boston Surgical Society 2020/2021 season was held on April 5, 2021. The topic for the evening was the much anticipated Fifth Annual Resident Case Competition which drew the largest audience of the year with 74 attendants—all gathering on Zoom.

Dr. Ehrlichman opened the meeting by thanking Kristen Boyer for her tireless work throughout the year. Douglas Smink M.D. was introduced as the night's host. The format of the

evening was outlined: seven residents from local teaching hospitals would present their interesting cases and compete for the top three prizes of \$1000, \$750, and \$500. Would Tufts Medical Center hold on to their first place crown from 2020? The anticipation was palpable.

The judges were introduced: Dr. Monica Valero Camacho from the Beth Israel Deaconess Medical Center (BIDMC), Dr. Virginia Little from Boston Medical Center (BMC), Dr. Nelya Melnitchouk from the Brigham and Women's Hospital (BWH), Dr. Angela Kuhnen from Lahey Medical Center (LMC), Dr. Denise Gee from Massachusetts General Hospital (MGH), and Dr. Bill Mackey from Tufts Medical Center (TMC).

The first contestant to present was Dr. Ammara Watkins, a thoracic fellow from the Beth Israel Deaconess Medical Center. The title of her case was "Robotic Repair of Redundant Conduit Herniation Following Esophagectomy." The patient was a 72 year old woman who was two years post robot-assisted minimally invasive Ivor-Lewis esophagectomy for a T3N1 tumor, who presented to the office with new onset dysphagia and orthostasis. EGD demonstrated a normal anastomosis with no evidence of tumor recurrence, however the pylorus was not traversable. CT scan demonstrated a dilated stomach conduit that was compressing the IVC, accounting for the patient's hypotension. Redundant conduits are a rare post-operative complication that can lead to obstruction. The robotic repair was outlined using an abdominal approach and aided by 3D CT modeling that identified the gastroepiploic artery, which needed to be preserved as the sole vascular supply to the stomach. The conduit was reduced from the chest back into the abdominal cavity, and a pexy was performed using non-absorbable suture between the conduit, the crus, and the diaphragm. A pyloric drainage procedure was not necessary but should be considered when necessary. The patient is symptom free at six months.

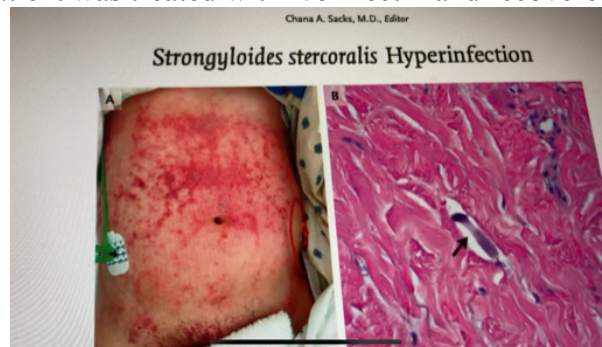


Megan Janeway MD from Boston Medical Center introduced her case, entitled, "The Rhythm of the Night." Dr. Janeway and her co-resident, Dr. Na Eun Kim, received a trauma page early on a Sunday morning for a male patient with a stab wound to the chest and abdomen. After brief primary and secondary surveys, the patient was brought emergently to the operating room. During induction, the trauma team noted an unusual motion of the knife as it pulsed side to side to the beat of the heart. The curved knife had penetrated through the abdominal wall, traversed the pericardium, and caused two right ventricular lacerations that were bleeding into the pericardium. A pericardial window was created and the lacerations were repaired primarily with 5-0 prolene, pledgeted sutures. A JP was left in the pericardium. The patient recovered and was discharged without his knife.



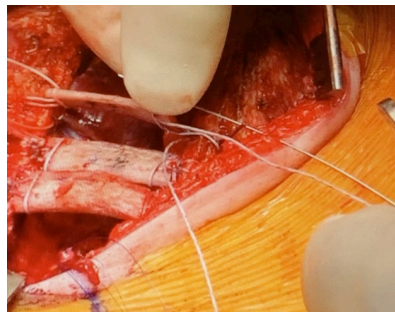


“An Especially Strong Early Postoperative Bowel Obstruction” was the title of the third case presented by Dr. Sasha Mahvi from the Brigham and Woman’s Hospital. The patient was a 65 year old male with advanced squamous cell carcinoma of the floor of the mouth (T4N3b) and a history of HIV, who had undergone resection with DIEP reconstruction and radiation. The surgical site broke down and he required fat grafting. Five days after his abdominal liposuction he presented with abdominal pain, WBC of 13, and a new erythematous rash across his abdomen. The CT scan was initially read as a perforated sigmoid diverticulitis. In the operating room, a 5mm hole the size of the liposuction needle was identified in the sigmoid colon, which was resected and then repaired primarily. Post operatively, he developed an ileus and the rash progressed across his trunk and legs. Dermatology was consulted and diagnosed the rash as livedo reticularis related to transient hypotension. The patient continued to decompensate and a CT scan on POD#5 identified diffuse colonic dilatation with a 16cm cecum. The patient was returned to the operating room where a subtotal colectomy and ileostomy was performed. A few days later, the pathology from the first sigmoid resection and the subsequent subtotal colectomy returned as strongyloidiasis. Strongyloides is a round worm found in tropical areas that burrows through the skin, and takes up residence in the intestine. Most infections are asymptomatic but when the worms lay their larvae in the mucosa, there can be an autoinfection, resulting in ileus, small bowel obstruction, and lung infiltration. This is the first report of a large bowel obstruction. The skin rash is related to the worm infiltrating the dermis. A simple skin biopsy would have identified the problem. HIV is a risk factor for hyperinfection and the mortality can range between 15-87%. The patient was treated with ivermectin and recovered fully.

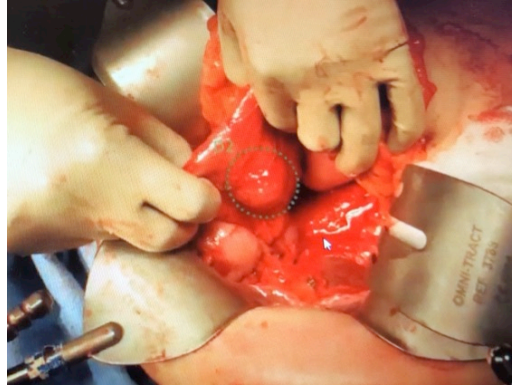


The fourth case presentation was delivered by Jamie Robinson MD, PhD from Boston Children’s Hospital entitled, “Breathless.” The patient is a 14 year old female with cerebral palsy

and spastic quadriplegia who experienced recurrent blue spells with desaturations to 20-40% that worsened after cervical spinal fusion to straighten her spine. She had been intubated at an outside hospital. Bronchoscopy with the patient actively breathing revealed that the mid and distal trachea had severe narrowing with cartilage compression that extended into both main stem bronchi. CTA revealed a narrowed anterior-posterior chest wall dimension with the trachea being compressed between the sternum, aorta, and spine. Repair would require expansion of the chest wall. Working with engineering colleagues, computer modeling of the patient's chest wall was manipulated to identify the ideal measurements required to expand the chest wall. 3D printing of models of the rib cage were created to help mold metal plates that would be implanted during the surgery. A few weeks prior to her operation, tissue expanders were placed by the plastics team to expand the soft tissues. The operative procedure included harvesting of the 7<sup>th</sup> and 9<sup>th</sup> ribs to be used as rib grafts for sternal reconstruction. Sternotomy was performed followed by thymectomy. Anterior tracheopexy, aortopexy, and bilateral bronchopexies sutures were placed to open up the airways. The ribs were cut into smaller segments and used as bridges between the edges of the sternum, and the preciously modeled metal plates were screwed into place. Bronchoscopy and CT scans revealed open airways. The expanded soft tissues were closed over the reconstructed wall. The patient was extubated and no longer suffers from hypoxia.



Ali Al Jabri, MD from Lahey Medical Center presented an “Unusual Case of Recurrent Diverticulitis.” A 58 year old female presented with fever, chills, and malaise for one day associated with mild abdominal discomfort that radiated to her back. Her labs were normal but a CT scan demonstrated retroperitoneal air around the second portion of the duodenum. The patient was diagnosed with a perforated duodenal ulcer, started on PPI's and discharged with a plan for an outpatient upper endoscopy. Endoscopy revealed a giant duodenal diverticulum opposite to the ampulla. The plan was conservative care. Seven months later, she had similar symptoms but with more inflammation seen on CT scan. She was treated with antibiotics for duodenal diverticulitis. Three months later, she was brought to the operating room where a wide Kocher maneuver was performed, and a broad-based diverticulum was identified and stapled. Duodenal diverticulitis is a rare phenomenon and the treatment of this patient's chronic symptoms was extrapolated from similar diseases in other portions of the GI tract.

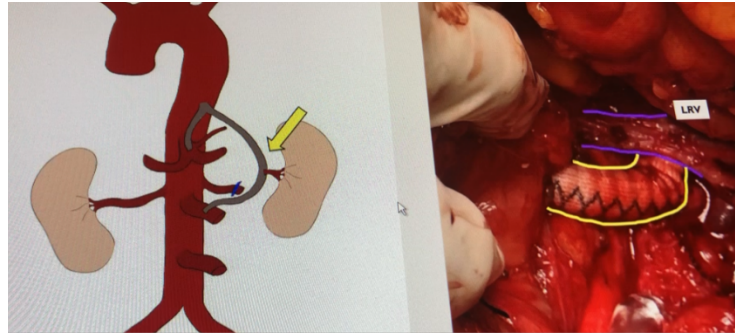


“A Goose, an Arch, a Ring...Oh My!” was the title of the case presented by the Massachusetts General Hospital fourth year resident Dr. Christina Costantino. The subject is a baby boy born at 34 weeks with Trisomy 21, with a known right sided aortic arch, balanced AV canal defect, and a vascular ring. The baby was admitted to the NICU at an outside hospital where an oral gastric tube was unable to be advanced down the esophagus and he was transferred to MGH where he was diagnosed with esophageal atresia, tracheoesophageal fistula, and Hirshprung’s disease. A g-tube and ileostomy was performed on his third day of life. Preoperative vascular planning for his cardiac anomalies, and repair of his tracheoesophageal fistula were undertaken. A few days later, the child underwent a left thoracotomy and the vascular ring made up of the ligamentum arteriosum was divided. A short and wide tracheoesophageal fistula was identified 1.5cm above the carina. The distal esophageal pouch was fused to the wall of the trachea. A small tracheotomy was performed to release the fistula and then closed primarily. The two ends of the esophagus were brought together without tension and closed over a 5-french feeding tube. The patient was extubated on POD#2 and tolerated enteral feeds.



Tina Tian M.D. from Tufts Medical Center presented the last case of the evening, “The Takayasu Tri-Pass.” A 52 year old male with a known history of right renal atresia and hypertension, who presented with chest pain and shortness of breath. A CTA was ordered to rule out a pulmonary embolism and he was noted to have diffuse thickening and inflammation of the aorta wall. His right renal artery was occluded and his left renal artery was severely stenosed. His inflammatory markers were elevated and he was diagnosed with a type III Takayasu’s arteritis, a large vessel vasculitis. Medical therapy with high dose steroids and tocilizumab were started but his hypertension was not well controlled despite the use of three antihypertensive agents. Two years after diagnosis he underwent an aorto-celiac, aorto-superior mesenteric artery, aorto-left

renal bypass with a Dacron graft. Three anastomoses were performed from the super-celiac aorta to the celiac artery, SMA, and left renal artery. The patient's creatinine returned to normal levels and his renal vascular hypertension completely resolved to the point that he no longer needed his hypertensive agents.



The judges retired to their Zoom “break-out room” to vote for the top three case presentations while the remainder of the attendees waited patiently on screen. The third prize of \$500 went to Dr. Christina Costantino from MGH, the second prize of \$750 was presented to Dr. Tina Tian from Tufts Medical Center, and this year's winner of the \$1,000 grand prize was awarded to Dr. Jamie Robinson of Children's Hospital.

Dr. Smink thanked the seven trainees for their wonderful presentations as well as the judges. Dr. Ehrlichman closed the meeting with the wish that we will all be together in the upcoming year. The meeting concluded at 8:12 pm.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Cronin'.

Claire Cronin MD, MBA