



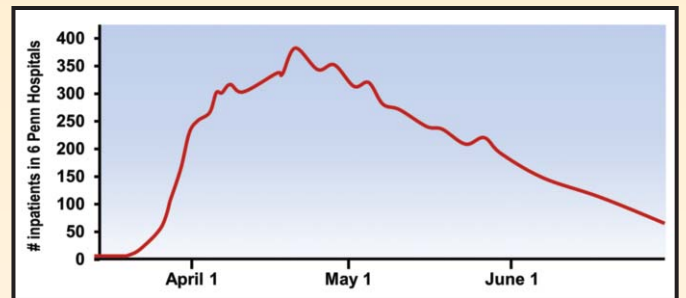
The Penn Surgery Society News is published quarterly for its members, colleagues and friends of the Department of Surgery. For submissions, inquiries or comments, please contact clyde.barker@pennterms.upenn.edu.



Ron DeMatteo, MD
John Rhea Barton
Professor and Chair
of Department of Surgery

Message from the Chair

The effects of the pandemic on Penn Surgery were probably similar to those at most institutions, but are still worth summarizing. Luckily, the initial modeling, albeit based on limited data, missed the mark. It was estimated that 500 patients per day would fill the tents outside the hospitals. In contrast, Joe Bavaria, cardiac/aortic surgeon extraordinaire, scrutinized the data from the Lombardia region of Italy and formulated an hypothesis to predict/explain how the virus would impact Philadelphia. The parallels and his accuracy were uncanny, and worthy of a Netflix documentary, or at least a riveting grand rounds. Reality was that just a handful of patients entered the tents daily. At the peak, there were around 90 inpatients at HUP and Presby each, with fewer at Pennsy (Graph). The conservative policies of the state governor and the medical school certainly helped blunt the surge.



There were several unexplained medical occurrences during the pandemic. Some diseases like appendicitis and heart attacks virtually disappeared. ER volume dwindled. There was conspicuous variability in the survival of infected patients across the Penn hospitals. Nationally, it did become clear that there is racial disparity in outcome after COVID-19 infection.

Communication at the departmental level was vital during the pandemic. There were numerous video town halls targeting faculty, trainees, and APPs. Rachel Kelz distilled the incessant emails from the health system into a single daily email containing all the information relevant to Surgery. Teamwork was outstanding. Ben Jackson led a procedure team at HUP. Surgical APPs were deployed to various new functions. Surgical Critical Care was in overdrive and Cardiac surgeons helped in the ICU as well. Our residents took medical ICU shifts.

Research was almost completely shut down except for a variety of university labs which shifted gears to study COVID-19. Approaches ranged from measuring patient immune responses, developing diagnostic tests, designing vaccines, and performing high throughput screens to identify potential treatments. The inspiring creativity was highlighted in a twice weekly videoconference. I have recommended that a similar concerted effort within the medical school be used to help address social injustice.

OR capacity ran at about 25% of normal, predominantly from cancer and transplant operations. Initially, a one-line justification was necessary to deem an operation as essential to be performed. This was replaced by the Medically Necessary Time-Sensitive (MeNTS) prioritization score developed at the University of Chicago. We are already exceeding 90%

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of normal surgical activity and the hospitals are nearly full again. The planned opening of the new ORs (and the Pavilion in general) will be delayed several months until the fall of 2021. While the medical school will not institute layoffs or furloughs, there will be uniform compensation adjustments for faculty given the loss of revenue.

Several positives are worth noting. The rapid adoption of telemedicine solved our outpatient parking crisis and will become

a large part of many surgical practices. There is certainly now widespread public appreciation for first responders, and healthcare workers in general. Hospitals have renewed awareness of the financial importance of surgical volume. Above all, the resilience of humankind is indubitable.




From the Editor Clyde F. Barker, M.D.

On July 1, 2020 Darren Schneider succeeded Ron Fairman as the Department's Chief of Vascular Surgery. (see page 5) Most readers will assume that he is the fourth to occupy that position following Brooke Roberts 1948-1982, Clyde Barker 1982-2001 and Ron Fairman 2001-2020. I.S. Ravdin's unpublished oral history is one of only a few sources telling us that Brooke Roberts was not Penn's first Vascular Chief. Norman Freeman, a long forgotten surgeon was HUP's first vascular chief (1936-1943). I have found that hardly any vascular surgeon at Penn or elsewhere even knows his name. As leadership of the field now changes to Dr. Schneider, it seems appropriate to recall its early history at HUP. This story is more compelling because Norman Freeman in a sense was the first vascular surgeon anywhere. At least he was the first American surgeon to limit his practice exclusively to the vascular field.

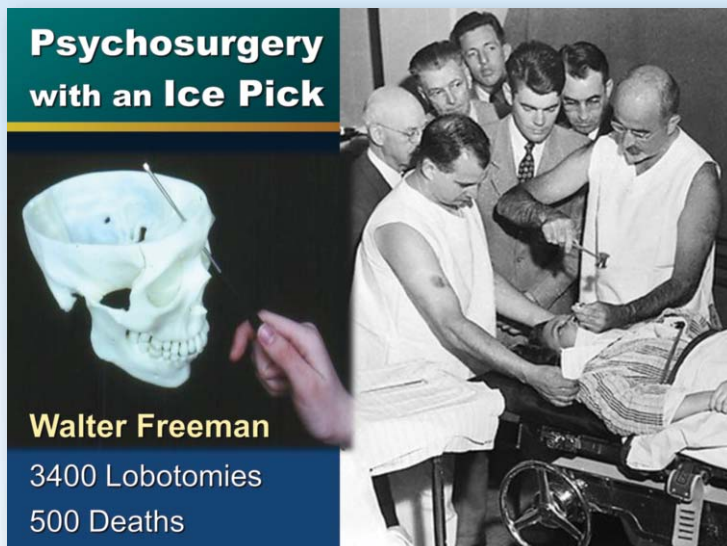
Norman Freeman was born in Philadelphia in 1903. His was an unusual family history. Norman's maternal grandfather was the dominant figure of his early years. His grandfather, W.W. Keen, was probably, at the time, the nation's most famous surgeon. Keen succeeded S.W. Gross as Jefferson's chairman of sur-

gery in 1889 and served in that position for 23 years. He was the first American surgeon to use antisepsis, and the first anywhere to succeed in removing a brain tumor. An even more interesting operation was his successful resection of a tumor from the jaw of U.S. President Grover Cleveland. This procedure was done in 1893, in a makeshift OR on a yacht, as it steamed up Long Island Sound. It was carried out in absolute secrecy to avoid precipitating financial panic if the public learned the President had cancer in a time of the country's financial instability.

Another unusual story of this medical family dynasty is that of Norman Freeman's brother Walter, W. W. Keen's other grandson. Walter was a Penn medical student and pathology resident. After neurology training in Europe he became famous (or infamous) in 1945 for inventing prefrontal lobotomy. Over the next

20 years he performed this operation in over 3,000 patients. It was done with an ice pick inserted through the orbit and driven into the brain. The hypothesis for this rather horrifying experimental procedure was that destroying this part of the brain might calm disturbed or agitated psychiatric patients, making them easier to manage. This notion was based only on some animal experiments and anecdotal

results in a few patients. When Freeman proclaimed the operation's success others followed his lead and in the 1950s performed thousands more lobotomies around the world. At the time there were no institutional review boards or antipsychotic drugs. No reliable data were collected. Some of the patients were helped but many were left in a vegetative or childlike state. About 500 of Freeman's patients died from the operation before he was discred-



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From the Editor *(continued from page 2)*

ited, stripped of his operating privileges and stopped.

The rest of this account is limited to the story of Norman Freeman, the vascular surgeon who pioneered this specialty. Our protagonist, was educated at St. Paul's school and at Yale for college and medical school. He then came to HUP for a 2-year internship under I. S. Ravdin. Ravdin was attracted by the intellect of the young man and sensing his promise as a surgeon-scientist, arranged for him a 2-year research fellowship in Harvard's department of physiology, under the world renowned Walter Cannon. Freeman studied the influence of the sympathetic nervous system on shock, blood loss and the peripheral circulation, authoring with Cannon many highly regarded basic research papers. After this, he completed a surgical residency at MGH and two extra years there as a surgical fellow.

In 1936 Ravdin acquired control of Penn's 2 million dollar Harrison endowment. This allowed him to start building his own academic department. One of his first moves was to recruit the promising young Norman Freeman, who he appointed as the J. William White Assistant Professor of Research Surgery. Because of Freeman's strong interest and publication record in the vascular field, Ravdin appointed him chief of the vascular clinic and provided him with resources and space for a vascular lab for physiologic studies, possibly the first of its kind. For the next 7 years as a member of Ravdin's surgical faculty Freeman more than lived up to the expectations of his chief. He was extraordinarily productive both in clinical and basic research. His studies of peripheral blood flow demonstrated that during shock blood flow to vital organs was protected. In other studies, he was one of the first to show that renal artery constriction resulted in hypertension. Ravdin was pleased with the progress of his golden boy but began to wonder if he might be in an unrealistic hurry for advancement. Ravdin discounted rumors that Freeman was even talking about himself as a possible successor to his chief.

In 1943 Ravdin took 1,000 Penn doctors, nurses and support staff to India, where they built in the midst of the jungle, World War II's largest and busiest military hospital, the 20th General. Major Norman Freeman was one of the most valued members of Ravdin's team. They cared for U.S. and Chinese soldiers including

the legendary American commandos, Merrill's Marauders. (see Fall 2013 newsletter) These forces suffered incredibly high casualties as they struggled to drive the Japanese from northern Burma and carve through the jungle, mountains and swamps, the *Burma Road*. This would be a crucial overland route to supply our Chinese allies. The primitive and hazardous conditions were hardly ideal for conducting research, but Freeman succeeded in producing multiple papers based on studies done on wounded soldiers. One such report was of his treatment by sympathectomy of 114 patients with causalgia caused by gunshot wounds.

Freeman's colleagues considered him a star. Heart surgeon, Julian Johnson was his tentmate. Johnson, who was never given to hyperbole, remembered him as a superb technical surgeon, innovative, energetic and driven to the extent that he seemed happy only when working to the point of exhaustion. "At his best magnificent".

Ironically it was also during this time that the first seeds of


Freeman's eventual professional demise appeared. He and Ravdin, both uncompromisingly strong willed, did not see eye-to-eye on Freeman's innovative approach. Ravdin's autobiography does not detail the context of their disagreements but he repeatedly accused Freeman of "using his patients as guinea pigs". Perhaps it was only that Ravdin disapproved of Freeman using wounded soldiers as subjects for physiologic studies.

But I have wondered about one other area of possible conflict. Army regulations of the time, which General Ravdin as the commander would have been obligated to follow, dictated that arterial injuries be treated by ligation and not by repair. Unfortunately this often resulted in amputation. I have only speculation for the idea, but I can't help wondering whether an experienced vascular surgeon, as stubbornly independent as Freeman, would balk over this plan. Since all the principals are now dead we will never know what the experiments were for which Ravdin criticized Freeman's use of "human guinea pigs". But the infraction was important enough to Ravdin that he resolved not to reappoint his previously favorite protégé to his post war faculty at Penn.

As WWII wound down and the 20th General Hospital closed, Freeman's reputation won him the appointment as Chief

Norman Freeman

America's First Vascular Surgeon



- HUP intern
- Fellow in Physiology, Harvard
- MGH Surgical Resident, Fellow
- 1st Head HUP Vascular Service 1936-1943
- J. William White Assistant Professor HUP 1936-1943
- Staff of Ravdin's 20th General Hospital in India 1943-1945
- First Head of Vascular Service UCSF 1946-

From the Editor *(continued from page 3)*

of Surgery at DeWitt General Hospital in Auburn, California, a U.S. Army vascular center. There he pioneered vascular reconstructions such as direct repair of AV fistulas, 18 successful examples of which he reported to the American Surgical Association in 1946.

In 1946 Freeman, now forsaken by Ravdin, was recruited by Howard Naffziger to UCSF as Associate Clinical Professor and Chief of the Vascular Clinic. Among Freeman's innovations at UCSF were establishment of the first non-invasive vascular lab and routine employment of arteriography. Clinically active he performed some of the first operations for coarctation of the aorta, patent ductus ligation and Blalock shunts. He was also known as an unusually committed, effective and popular teacher. Three future leaders of vascular surgery came under his influence, virtually becoming his trainees in the vascular field. They were Jack Wylie, a surgical resident, and Rutherford Gilfillan and Frank Leeds, surgical fellows. After finishing their training Wylie and Gilfillan joined Freeman as junior partners in his busy practice.

But before long a familiar pattern recurred. Because of his temperamental personality and strongly held positions, he found himself at odds with his chief Naffziger. He therefore moved to Franklin Hospital, a private institution. During this time Freeman performed several novel operations which should have been sufficient to place him in the pantheon of vascular surgery. Unaccountably they have been virtually forgotten. On February 26, 1951 Freeman performed the first resection of an abdominal aortic aneurysm. A month later Charles DuBost in France performed the same procedure, which ever since has been regarded as the first. Even earlier Freeman had resected an aortic aneurysm with restoration of distal blood flow with an iliac vein which had blown out, killing the patient. Freeman's February 26 case also utilized an iliac vein to restore distal circulation, but this time he closed the arterial wall of the aneurysm over the vein. Further buttressing of the vein was provided by injecting blood between the vein and the shell of the aneurysm. A year later the patient was

4 alive and well.

Other firsts by Freeman followed. In 1952 he performed the first renal endarterectomy, curing the patient of hypertension. In the same year he did the first extra anatomic bypass (a femoral to femoral artery bypass). These firsts made him highly respected by the few others in the vascular field at the time such as Rudolph Matas and Mike DeBakey who praised Freeman as capable and inventive.

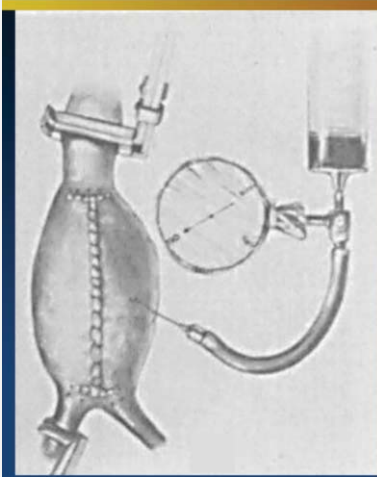
Perhaps of more lasting importance than Freeman's technical

innovations was the influence of his vision of vascular surgery as a distinct, independent specialty. Others like DeBakey and Blalock saw it as part of cardiac, thoracic or general surgery. It seems likely that Norman's attitude was an important influence on the young Jack Wylie who is usually credited with the concept of vascular surgery as an independent entity with a dedicated fellowship leading to special credentials.

Despite his many accomplishments, Freeman's unusual personality and erratic behavior consistently led to damaging conflicts. In retrospect it is easy to recognize in him the symptoms of bipolar condition with which he was eventually diagnosed. Before this entity or its successful treatment were understood multiple periods of hospitalization caused his early retirement from surgical practice at age 59. With inactivity his reputation in the expanding field faded rapidly, forcing him to take clerical jobs. At age 72 he died from heart disease, virtually forgotten and unheralded as America's first vascular surgeon.

Assuming that Dr. Ravdin's criticism of Norman Freeman was accurate and fair – that he treated his patients like guinea pigs – an odd sort of parallel exists between the Freeman brothers. Excessive or inappropriate use of human experimentation seems to have betrayed them both. At one extreme was Norman's brother, Walter, who was certainly guilty of using his prefrontal lobotomy patients as experimental subjects. At the other end of the spectrum brother Norman's innovations worked out to the benefit of his patients and to the progress of vascular surgery. Unfortunately neither of these talented Penn trained doctors enjoyed a lastingly satisfying career.

Norman Freeman's Forgotten Firsts



- First Chief Vascular Surgery HUP, UCSF
- First Resection Abdominal Aortic Aneurysm Feb. 26, 1951
- Extra-Anatomic Bypass 1952
- Renal Artery Endarterectomy to Cure Hypertension 1952
- Non-Invasive Vascular Laboratory 1947

Darren Schneider Appointed Division Chief Vascular Surgery

Dr. Darren Schneider has become the next Chief of the Division of Vascular Surgery and Endovascular Therapy in the Department of Surgery. Dr. Schneider is a national leader in vascular surgery. Since 2010 he has been Chief of the Division of Vascular and Endovascular Surgery at New York Presbyterian Hospital – Weill Cornell Medicine and Co-Executive Director of the Vascular Service Line.

He attended Stanford University and obtained his medical degree from the University of California, San Diego. He was a resident in General Surgery at the University of California, San Francisco (UCSF), during which he spent 3 years at the Gladstone Institutes of Cardiovascular Disease. Subsequently, he was a fellow in Interventional Radiology and then Vascular Surgery at UCSF before joining their surgery faculty for 8 years. In 2010, he was recruited to Cornell.

He has made numerous contributions to clinical research. He was the national principal investigator for the pivotal, multicenter trial that led to FDA approval of an iliac branch stent graft for iliac artery aneurysms. He is the principal investigator of an ongoing, single-center, investigator-sponsored IDE study of endovas-



cular repair of thoracoabdominal aortic aneurysms using branched and fenestrated stent grafts. He has over 100 publications, 28 chapters/reviews, over 150 national/international presentations, and 150 regional presentations.

Dr. Schneider has been committed to education and mentoring and was the Director of the Vascular Surgery Residency programs both at UCSF and Cornell. In addition, he founded the Big Apple Bootcamp for vascular surgery residents and fellows.

He has held numerous leadership roles, including President-Elect of the Northern California Vascular Society and President of the New York Society for Vascular Surgery. He is on the Executive Councils of the Eastern Vascular Society and International College of Angiology. He is a Distinguished Fellow of the Society for Vascular Surgery. He has been recognized in the Best Doctors in America, U.S. News and World Report Top Doctors, and New York Magazine's Best Doctors.

Resident Research Presentations

Contributed by Rachel Kelz, MD, MBA and Sunil Singhal, MD

On July 9, 2020, the General Surgery and Vascular residents who completed their research presented their findings during Grand Rounds. Below is a summary of their findings.

Dr. Nathan Belkin - *“Investigating the effects of single versus dual antiplatelet therapy in vascular surgery patient populations”*



Nate studied under Dr. Grace Wang in the Division of Vascular Surgery. The focus was to investigate both trends in utilization of single versus dual antiplatelet therapy in various vascular surgery patient populations as well as to explore the differential effects of dual antiplatelet



Rachel Kelz



Sunil Singhal

therapy (DAPT) on intervention specific outcomes (bypass graft patency, visceral stent patency, etc.) as well as cardiovascular complications/mortality. Little research currently exists in the vascular surgery literature on this topic, and much of our societal guidelines are based on data extrapolated from the cardiology PCI literature. To expand upon this knowledge gap, they utilized the Vascular Quality Initiative database which is a prospectively collected international registry (USA and Canada) containing pre-operative, peri-operative, and long term follow up (out to 21 months) for various vascular surgery patient populations. They

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Resident Research *(continued from page 5)*

obtained access to modules containing information on carotid endarterectomy, carotid stenting, lower extremity open bypass, lower extremity endovascular intervention, TEVAR, EVAR, and lower extremity amputation patient populations. Those patients discharged on DAPT were more likely to have higher baseline medical and cardiovascular comorbidities and often had more complex vascular surgical interventions. Patients with high risk cardiovascular disease states have a mortality benefit with dual antiplatelet therapy, presumably from a reduction in long term cardiovascular complications. Regarding vascular surgery specific long-term outcomes, they showed a benefit for DAPT therapy in promoting bypass graft patency for prosthetic bypasses only. Their work was highlighted in the plenary presentation at the Vascular Endovascular Surgical Society's winter meeting and the plenary presentation at the American Heart Association's International Stroke Conference.

Dr. Kendall Brooks - *"Surgical Treatment Disparities in Extremity Soft Tissue Sarcoma"*



Kendall worked in the laboratory of Dr. Steven Kovach in the Division of Plastic Surgery. His primary focus was to investigate the distribution of treatment disparities in extremity soft tissue sarcoma using risk-standardized modeling. He also used his time to obtain a master's degree in Clinical Epidemiology. Today, he continues to serve as the resident lead in a randomized controlled trial investigating the role of physical therapy after ventral hernia repair.

Dr. Mark Etherington - *"Immunobiology of Gastrointestinal Stromal Tumors"*



Mark spent two years in the laboratory of Dr. Ronald DeMatteo, MD FACS, John Rhea Barton Professor and Chair of the Department of Surgery. His research focused on understanding the immunobiology of gastrointestinal stromal tumor (GIST) and how subsets of immune cells change during targeted tumor therapy. He developed an interest in gammadelta ($\gamma\delta$) T cells, a unique and rare subset of T lymphocytes. His hypothesis was that $\gamma\delta$ T cells can exert tumor growth control. He demonstrated that $\gamma\delta$ T cells can limit GIST growth through production of inter-

leukin 17 and the targeted therapy imatinib amplifies the production of this cytokine. He also helped generate and employ single-cell RNA sequencing data to phenotype the complexity of intratumoral $\gamma\delta$ T cells to an extent that has not been previously reported.

Dr. Justin Hatchimonji - *"Post-discharge outcomes following Emergency General Surgery"*



In addition to completing a Master's degree in clinical epidemiology (MSCE), Justin spent his professional development years on a variety of trauma and emergency general surgery (EGS) outcomes projects, under the mentorship of Dan Holena, MD, MSCE and others in the trauma division. Topics have included EGS outcomes metrics, trauma center benchmarking, and firearm injury. Most recently, Justin has studied patient-reported outcomes post-discharge in trauma and EGS. He has shown that a) collection of such measures is feasible without many additional resources, b) trauma and EGS patients report detriments in several domains of health-related quality of life well after discharge, and c) these outcomes do not tend to improve over the months following discharge.

Dr. Paul Hernandez - *"Ameliorating Renal Ischemia Reperfusion Injury Using Estrogen: Observations from a Murine Model and Translation to a Human Clinical Trial"*



Paul worked in the laboratory of Dr. Matthew Levine in the division of transplant surgery. His work focused on the modulation of ischemia reperfusion injury (IRI) in kidney, liver, and limb by manipulating histone deacetylases and estrogen receptors in murine models. Work in Dr. Levine's lab had previously demonstrated that supplemental estrogen provided protection from renal IRI. Using a murine model of IRI and renal transplantation, Paul demonstrated that the estrogen improves IRI tolerance by modulating factors extrinsic to the renal parenchyma. Employing transgenic mouse lines, he then went on to show that lymphocytes and cells of the myeloid lineage were not responsible for estrogen-mediated protection, suggesting this effect is not immune mediated. Paul

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also demonstrated that the selective estrogen receptor modulator Raloxifene, which has fewer off-target effects than estrogen, improves renal IRI tolerance in mice. The prospect that estrogen might decrease IRI in renal transplantation has led to the ongoing Peri-operative Estrogen in Renal Transplantation clinical trial at Penn that Paul coordinated during his time in Dr. Levine's lab.

Dr. Lauren Krumeich - *"Pathologic Profiling of T-lymphocytes in Hepatocellular Carcinoma"*



Lauren worked in the laboratories of Matthew H. Levine, MD, PhD and Wayne W. Hancock, MBBS, PhD and obtained a Master of Science in Translational Research studying the lymphocytic infiltrate in hepatocellular carcinoma (HCC). After optimizing an isograft murine model, she identified that the tumor infiltrate was

characterized by immunosuppressive FOXP3+CD4+ regulatory T cells. RNA extracted from these tumors exhibited a predominance for major histocompatibility complex II by reverse transcription polymerase chain reaction, highlighting the importance of CD4+ T-cells in response to HCC. Tumors that responded to intraperitoneal treatment with a PD-1 antibody compared to tumors from vehicle-treated controls revealed downregulated FOXP3+CD4+ T-cells, which correlated directly with circulating alpha-fetoprotein levels by enzyme-linked immunosorbent assay. Treated tumors in comparison to control tumors also exhibited more infiltrating non-regulatory CD4+ T-cells but a similar quantity of CD8+ T-cells, suggesting a pivotal role of helper T cells in response to checkpoint inhibition in this model of HCC.

Dr. Yun Song - *"Evaluating Practice Patterns and Outcomes in Cancer Surgery"*



Yun worked with Dr. Giorgos Karakousis in the Division of Endocrine and Oncologic Surgery. Her research focused primarily on data-driven outcomes in cancer surgery. Using national and institutional data, she evaluated treatment trends and survival outcomes in Merkel cell carcinoma and locoregionally advanced melanoma following the advent of modern systemic therapies. Additionally, Yun utilized large national databases to study outcomes and practice patterns for major abdominal cancer opera-

tions. Her presentation focused on one study describing the association between the Patient Protection and Affordable Care Act's 2014 Medicaid expansion and gastrointestinal cancer outcomes. Her research found that Medicaid expansion was associated with a significant improvement in 3-year overall survival for patients with resected colorectal cancer, for which routine cancer screening is available, but not for other gastrointestinal cancers. The study highlighted the importance of considering insurance coverage expansion in the ongoing health policy debates. During her research time, Yun also evaluated immune biomarkers in sentinel lymph nodes of patients with melanoma, providing some of the important background work for an ongoing clinical trial of neoadjuvant immune checkpoint inhibition in patients with high-risk stage II melanoma.

Dr. Charles Vasquez - *"Risk Factors And Mediators Of Acute Kidney Injury In Post-Operative And Critically Ill Patients"*



Prior to entering his research years, Charles completed a fellowship in Surgical Critical Care at the University of Pennsylvania and received the Fellow of the Year award from the Trauma Surgical ICU staff. He completed self-directed advanced training in echocardiography and passed the first-ever Examination of

Special Competence in Critical Care Echocardiography offered by the National Board of Echocardiography. He became an instructor in the Fundamentals of Critical Care Support (FCCS) and Advanced Trauma Life Support (ATLS) programs. He currently serves on the FCCS National Committee within the Society of Critical Care Medicine and ACGME Surgical Critical Care Milestones 2.0 Work Group. He is now completing a Master of Science in Clinical Epidemiology (MSCE) under the mentorship of Dr. Michael Shashaty in the Division of Pulmonary and Critical Care Medicine. Charlie's research is focused on risk factors and mediators of acute kidney injury in post-operative and critically ill patients. He is funded through a NIH T32 Clinical Research Training in Kidney Disease Grant. He is also actively involved in the prospective, multi-institutional Study of the Treatment and Outcomes in critically ill Patients with COVID-19 (STOP-COVID), including leading a sub-study designed to identify unique COVID-19 subphenotypes and evaluate differential treatment responses to commonly prescribed therapies like anti-coagulation and corticosteroids.

Accomplishments and Career Plans of the 2020 Graduating HUP Chief Surgical Residents

As Contributed by the Residents

Dr. Jennifer J. Chung is a seven years older than when she started this journey, but just as excited and even more aware of what a special opportunity she has had to be a part of the Penn Surgery family. She was born in Los Angeles, which she still believes is the best coast, though she has spent the majority of her life on the other side of the country, attending high school in Maryland, college in Boston, and medical school in Michigan, before landing in Philadelphia. Jenn knew somewhat intuitively from a young age that she wanted to serve humanity in a direct and literal way, though she took her time to develop her other interests before diving into medical school training. In undergrad she inadvertently became a jock rather than an organic chemistry wizard, initially walking onto the Harvard crew team and 4 years later graduating as co-captain of the varsity lightweight team. She embraced a social justice approach to medicine and spent two years after college working with Partners in Health, a nonprofit organization dedicated to innovative approaches to build infrastructure and make healthcare available to some of the world's poorest and most vulnerable populations. Jenn eventually made her way to Ann Arbor, Michigan where she was lucky enough to meet excellent mentors who nurtured her immediate attraction to surgery, and she was inducted into the Alpha Omega Alpha and Gold Humanism Honor societies. She was thrilled to have matched at Penn, where she has been able to participate in the care of complex and challenging surgical patients, work with incredibly bright and dedicated residents and attending surgeons, and has developed her passion for cardiac surgery. Jenn will begin her Cardiac Surgery fellowship at Penn in July 2020 and is excited to have the opportunity to continue to work with the general surgery residents.

Dr. Brett Logan Ecker was born in Ardsley, New York, where he spent his childhood. Brett attended Brown University and graduated with a Bachelor of Arts in Philosophy. He then attended the Icahn School of Medicine at Mount Sinai where he discovered his love for surgery, won the Dreiling Surgery Prize, was inducted into Alpha



8 Omega Alpha honor society, and graduated with a Distinction in Research. Brett was honored to be recruited by Jon Morris (Jomo) to the General Surgery program at the University of Pennsylvania. Brett quickly took to the field of surgical oncology thanks to strong mentorship from Drs. Roses, Karakousis, Fraker and Kelz.

He was academically productive, authoring over 50 peer-reviewed publications and 3 textbook chapters during his training, for which he was recognized with the Jonathan E. Rhoads Research Award. His commitment to education was recognized by the medical students both as a junior resident, when he was nominated to the Gold Humanism Honor Society, and as a chief resident, when he was chosen to receive the Penn Pearls Award for excellence in clinical teaching. Brett earned the nickname "Dynasty" from Jomo thanks to a six-year streak of scoring in the 99th percentile on the annual in-service exam. His greatest accomplishment, however, was finding his partner and soulmate Jess Rogers Ecker during his lab time. The two celebrated their marriage this last fall with friends and family. Following graduation, Brett and Jess will be returning to New York City where Brett will begin his fellowship in Surgical Oncology at Memorial Sloan Kettering Cancer Center. Brett is incredibly grateful to have trained at The University of Pennsylvania and will proudly carry the Penn tradition of surgical excellence throughout his career.

Dr. Grace Sohee Lee-Riddle was born in Park Ridge, Illinois and grew up in Chicago and Omaha, Nebraska. Grace graduated Summa Cum Laude from the University of Pennsylvania and was inducted into the Phi Beta Kappa Honor Society. Her senior thesis was awarded the Morris Viteles Award for Outstanding Senior Research. She then attended the University of Chicago Pritzker School of Medicine where she was elected as a Pritzker Chief for her last year of medical school and was also elected to the Gold Humanism Honor Society. Grace was honored to match into the General Surgery program at the University of Pennsylvania where she quickly discovered her passion for transplant surgery. She was a fellow in advanced biomedical ethics during her research years where she obtained a Master of Science in Medical Ethics and published peer-reviewed papers, reviews, editorials, and book chapters, and presented at numerous national conferences. Her research spanned shared decision-making for liver transplant patients, pregnancy outcomes of living donors, and ethical analyses of emerging transplant policies such as imminent death dona-



tion, medication adherence monitoring, and the use of hepatitis C positive organs in hepatitis C negative recipients. She was elected to serve as the Resident Executive Council Chair for the Penn Surgery residency and was also elected to serve as Vice President of the Graduate Medical Education's Housestaff Governing Council during her third research year. However, Grace's greatest accomplishment in residency was marrying Dr. Elijah Riddle, another Penn Surgery graduate, in March 2019. She is forever grateful for his love and support, as well as all the wild adventures survived and forthcoming. Grace would also like to acknowledge the support of her family and friends who made this journey possible. Following residency, Grace will pursue a fellowship in Abdominal Transplantation at Columbia University in New York City.

Dr. Andrew D. Newton grew up in Finksburg, Maryland. Andy received his undergraduate degree from the University of Maryland, College Park, where he graduated Magna Cum Laude and was inducted into the Phi Beta Kappa honor society. He then attended the University of Maryland School of Medicine, where he graduated Summa Cum Laude. In medical school, he was elected into the Alpha Omega Alpha honor society and received the Wayne W. Babcock Award for Excellence in Surgery and the Balder Scholarship Award for Outstanding Academic Achievement. Andy was thrilled to match into the General Surgery program at the University of Pennsylvania. He came to Penn with an interest in surgical oncology that was solidified by the outstanding mentors in the department of surgical oncology. During his research years, he studied intraoperative molecular imaging for oncologic surgery in translational models and clinical trials under the mentorship of Dr. Sunil Singhal. He also served as the Residents Executive Council Chair and received the William Y. Inouye Resident Award for medical student teaching. During residency, Andy married his wife Joni, and they celebrated the births of their daughter Brooklyn (2 years) and son Lucas (3 months). Following graduation, Andy will be moving with his family to Houston, Texas, where he will begin a fellowship in Surgical Oncology at MD Anderson Cancer Center.

Dr. Avery Christine (Miller) Rossidis hails from Canton, Ohio, where she spent her first 18 years before heading to the east coast for college, medical school, and surgical training. She completed her undergraduate education at Cornell University,



where she earned a Bachelor of Arts in Biochemistry and was active in dance, club lacrosse, and her sorority, Alpha Phi. Avery graduated Summa Cum Laude from Cornell and was inducted into the Phi Beta Kappa honor society. More importantly, at Cornell she met the love of her life, Dr. Michael Rossidis (now a graduate of the Penn Presbyterian Podiatric Surgery program), though it would be another decade before they were married. Avery obtained her medical degree from the Columbia University College of Physicians and Surgeons and was honored to match in General Surgery at the University of Pennsylvania. Avery has always had a passion for working with and caring for children and knew early in her training that she wanted to pursue a career in Pediatric Surgery. During her surgical residency at Penn, she completed a two-year post-doctoral research fellowship at the Children's Hospital of Philadelphia under the tutelage of Drs. Alan Flake and William Peranteau. She investigated an extracorporeal support system for the extremely premature neonate as well as novel techniques for fetal genome editing and was tremendously proud and humbled to publish her work in Nature Medicine. In addition to authoring several peer-reviewed journal articles and book chapters, she has presented her research at national conferences numerous times. Avery and Michael also recently celebrated the birth of their son, Jaxon, who has brought a new level of joy to their lives. Following graduation, the Rossidis Family will be staying in Philadelphia where Avery will complete a fellowship in Pediatric General, Thoracic, and Fetal Surgery at the Children's Hospital of Philadelphia and Michael will be a new associate at Newtown Foot and Ankle Specialists. Together, Avery and Michael would like to thank their family, friends, and colleagues for their unwavering support and love throughout this journey.

Dr. Catherine E. Sharoky was born in Baltimore, Maryland. She moved to New York during childhood, followed by Tampa, Florida where she lived through high school. Kate graduated from The University of North Carolina at Chapel Hill in 2006 with a bachelor of arts degree in Journalism & Mass Communication



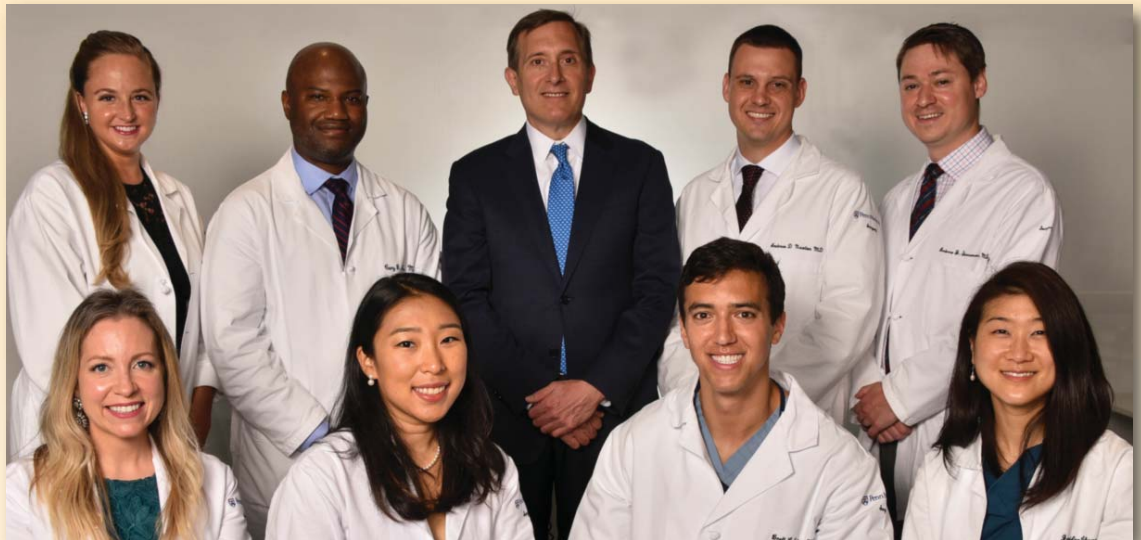
(continued on page 10)

Graduates *(continued from page 9)*

and a second major in United States History. She then attended Goucher College post-baccalaureate premedical program and volunteered at Shock Trauma at the University of Maryland Medical Center where she was first exposed to trauma surgery and critical care. She spent the following two years in Manhattan, where she worked in an immunology basic science laboratory at Weill Medical College of Cornell University. Kate

obtained her medical degree at the University of Maryland School of Medicine where she was inducted into Alpha Omega Alpha as a third year student. During medical school, she was awarded an Albert Schweitzer and an Arnold P. Gold Foundation fellowship for community service projects. She began her training in general surgery at University of Pennsylvania in 2013 where she enjoyed learning all facets of surgery but continued to be drawn to emergency surgery, trauma and critical care. She pursued a Masters of Science in Clinical Epidemiology with a concentration in Bioethics during her post-doctoral research fellowship. She was named the Measey Foundation clinical research scholar, and authored several papers examining clinical outcomes in emergency general surgery and trauma populations under the mentorship of Dr. Rachel Kelz and Dr. Daniel Holena. Her commitment to teaching was recognized as she was awarded the William Y. Inouye Resident Award for excellence in teaching medical students. During her residency training she also met her husband Dr. Jason Wink, currently a plastic and reconstructive surgery chief resident at Penn. They first met in the hospital cafeteria and got married in April of 2018. Kate and Jason welcomed the birth of their daughter, Sophie Catherine Wink, on July 25, 2019. Kate will begin her fellowship in surgical critical care at The R Adams Cowley Shock Trauma Center at the University of Maryland this August.

Dr. Andrew J. Sinnamon was born in Abington, Pennsylvania and grew up in Bucks County, Pennsylvania. He attended Penn State University for his undergraduate degree with a Major in Biochemistry and Molecular Biology and completed an Honors thesis. It was during this time that his mother



Avery Rossidis, Cary Aarons, Ron DeMatteo, Andy Newton, Andrew Sinnamon, Kate Sharoky, Grace Lee-Riddle, Brett Ecker and Jenn Chung

genital bicuspid valve, an experience which first developed his interest in a future in surgery. He received his medical degree from the University of Pennsylvania and during this time he realized he wanted to be part of the Penn Surgery family. It was an honor for him then to match into the General Surgery program. During his junior years of residency Andrew developed an interest in the multidisciplinary care of oncology patients. He therefore completed his two-year post-doctoral research fellowship under the mentorship of Dr. Giorgos Karakousis during which time he authored numerous peer-reviewed journal articles with a focus on clinical decision making in surgical oncology and in melanoma in particular. He also published studies investigating novel imaging techniques in melanoma, presented at national conferences, and obtained a Master of Science in Clinical



Epidemiology. Most importantly, however, it was during this time that he married his wife, Dr. Monica Li, a graduate of the Penn Anesthesia residency. Andrew and Monica were then lucky enough to welcome two beautiful daughters into the world, Sophie (2 years) and Maya (6 months). Following graduation, Andrew, Monica, Sophie and Maya will be moving

to Tampa, Florida, where Andrew will begin his fellowship in Surgical Oncology at Moffitt Cancer Center. Andrew is incredibly grateful for the support from his family, friends, mentors, and coresidents and is honored to be a graduate of the Penn Surgery program.

Career Paths of 2020 HUP Fellowship Graduates

Samuel L. Chen, MD (Vascular Surgery)

Assistant Professor of Surgery
University of California, Irvine Medical Center
Division of Vascular and Endovascular Surgery

Ryan Dobbs, MD (Robotics - Urology)

Cook County Health

Lane Frasier, MD (Traumatology, Surgical Critical

Care and Emergency Surgery)
Assistant Professor
University of Cincinnati Medical Center

Joshua C. Grimm, MD (Thoracic Surgery)

Assistant Professor of Surgery
Hospital of the University of Pennsylvania
Division of Cardiovascular Surgery

Alex Helkin, MD (Traumatology, Surgical Critical

Care and Emergency Surgery)
The Ohio State University, Assistant Professor
Division of Trauma, Critical Care and Burns

Laura Humphries, MD (Craniofacial Surgery -

Plastic Surgery)
University of Mississippi Medical Center
Jackson, Mississippi

Elinore Kaufman, MD (Traumatology, Surgical Critical

Care and Emergency Surgery)
Assistant Professor of Surgery
Hospital of the University of Pennsylvania

Douglas R. Murken, MD (Colon and Rectal Surgery)

Assistant Professor - Clinician Tract
West Virginia University

Harry Nayar, MD (Microvascular Surgery - Plastic Surgery)

University of Wisconsin

Susanna Nazarian, MD (Breast Surgery)

Associate Professor at Jefferson

Anand Parikh, MD, MBA (Vascular Surgery)

Associate Vascular Surgeon
Vascular Surgical Associates of Atlanta

Christina Pasick, MD (Microvascular Surgery - Plastic

Surgery)
Private Practice, New Jersey

David Poliner MD (Traumatology, Surgical Critical

Care and Emergency Surgery)
University of Maryland Medical Center/R Adam Cowley Shock
Trauma- Neurocritical Care Fellow

David Sigmon , MD (Measey Surgery Education Fellow)

University of Illinois at Chicago
Surgery Residency

Madhu Subramanian, MD (Traumatology, Surgical Critical

Care and Emergency Surgery)
Associate Professor of Surgery
Johns Hopkins University School of Medicine
Division of Acute Care Surgery

Paul Therattil, MD (Microvascular Surgery - Plastic Surgery)

Private Practice, New Jersey

Shelly Wilson, MD, PHD (Transplant Surgery)

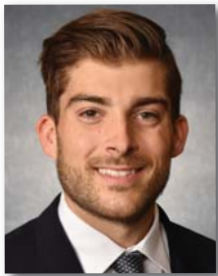
Recovery Surgeon
Gift of Life

Andrew Young, MD (Traumatology, Surgical Critical

Care and Emergency Surgery)
Assistant Professor in the Department of Surgery
The Ohio State University Wexner Medical Center
Division of Critical Care-Trauma/Burn

Welcome New Residents

Categorical General Surgery Program



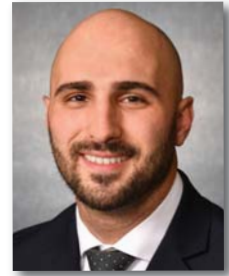
Drew Goldberg
Penn



Madison Grasty
Wayne State



Jasmine Hwang
Penn



Waseem Lutfi
University of Pittsburgh



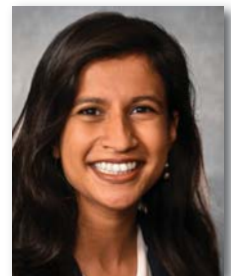
Nicolas Muñoz
Yale



Christopher Neylan
Rutgers, RWJMS



Adele Ricciardi
Yale



Neha Shafique
Harvard

Plastic Surgery Program



Dustin Crystal
Rutgers



Elizabeth Malphrus
George Washington



William Piwnica-Worms
Penn

Thoracic Integrated Program



Andrew Acker
Penn

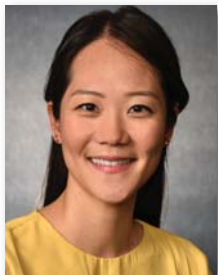


Nicholas Goel
Penn

Urology Program



Margaux Johnsonn
Medical College
of Georgia



Ally Kwun
SUNY - Downstate



Clare Mallahan
Georgetown



Kara Michel
Penn

Vascular Program



Jayne Rice
Harvard

New Residents *(continued from page 12)*

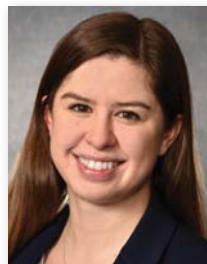
Preliminary General Surgery Program



Michael Chun
Columbia



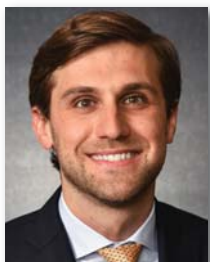
Monica Matsumoto
University of Chicago



Kathryn Ogborn
American Univ. of the Caribbean



Juan Esteban Perez
University of Ecuador



Federico Sertic
University of Milan



Evan Smith
Howard



Fatimah Sorefan-Mangou
University College Cork



Tyler York
RCSI-Bahrain

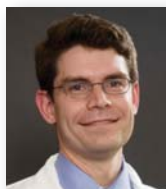
Alumni News

Faculty, Residents, Alumni of Penn Surgery
email your news to Clyde Barker
clyde.barker@penmedicine.upenn.edu

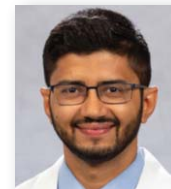
- ◆ Congratulations to **Ruchika Talwar, MD** (PGY3 Urology Resident) for placing 2nd in Philadelphia Urologic Society Residents' Essay Competition; *Concordance of Confirmatory Prostate Biopsy in Active Surveillance with National Guidelines: an Analysis from the Multi-Institutional PURC Cohort.*



- ◆ Congratulations to **Peter L. Abt, MD** and Joseph Baur, PhD on being the recipients of a 2020 American Society of Transplant Surgeons (ASTS) Collaborative Scientist Grant: *Accelerated Liver Defatting During Extracorporeal Organ Perfusion* and to **Ciaran O'Brien, MD** on being the recipient of the ASTS 2020 Jonathan P. Fryer Resident Scientist Scholarship Grant for his work in the lab of Dr. Matthew Levine: *Evaluating the Contribution of the Immune System to Histone Protein Deacetylase 6 Inhibitor Mediated Prevention of Liver Injury after Ischemia-Reperfusion.*



- ◆ **Jashodeep Datta, MD** was awarded the American College of Surgeons' Franklin H. Martin Research Fellowship grant to pursue laboratory research in pancreatic cancer immunology.



- ◆ **Pavan Atluri, MD** Associate Professor of Cardiovascular Surgery, was named to South Jersey Biz's "Best of Health Care 2020" list. Atluri is a nationally recognized expert in heart transplantation, minimally invasive mitral valve repair and septal myectomy.



- ◆ **Nahla Khalek, MD** is the recipient of the 2020 Leonard Tow Humanism in Medicine Faculty Award presented by The Arnold P. Gold Foundation.







- ◆ **Keith D. Calligaro, MD** has been elected Treasurer of the Society for Vascular Surgery.



Alumni News *(continued from page 13)*

New Faculty

- ◆ **Joshua Grimm, MD** was appointed Assistant Professor of Surgery in the Division of Cardiovascular Surgery; MD - University of Texas Medical School at Houston, Houston, Texas; Resident in Surgery, The Johns Hopkins Hospital, Baltimore, Maryland; Fellow in Cardiothoracic Surgery, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania. 
- ◆ **Sameer Mittal, MD** was appointed Assistant Professor of Urology in Surgery in the division of Pediatric Surgery. MD - Georgetown University, School of Medicine, Washington, DC; Resident in Urology, New York Presbyterian Hospital-Weill Cornell Medical Center, New York; Fellow in Pediatric Urology, Children's Hospital of Philadelphia. 
- ◆ **Samir Abu-Gazala, MD** was appointed Assistant Professor of Surgery in the division of Transplant Surgery. MD - Hadassah Hebrew University School of Medicine, Jerusalem, Israel; Surgery Residency, Hadassah-Hebrew University Medical Center, Jerusalem, Israel; Surgery Residency, The Mount Sinai Hospital, New York; Fellowship in Abdominal Organ Transplantation, Hospital of the University of Pennsylvania. 

- ◆ **Elinore J. Kaufman, MD** was appointed Assistant Professor of Surgery in the division of Traumatology, Surgical Critical Care & Emergency Surgery. MD - Harvard Medical School; General Surgery Residency - New York-Presbyterian Weill Cornell Medical Center; Fellowship in Surgical Critical Care at the Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania. 

Departures

- ◆ **Paul Foley, MD**, (HUP chief resident 2010) after 10 years as Assistant Professor of Surgery in the Division of Vascular Surgery has accepted a position as attending vascular surgeon at Doylestown Hospital. 
- ◆ **Paige Porrett, MD, PhD**, (HUP chief resident 2010) after 10 years as Assistant Professor of Surgery in the Division of Transplant Surgery will become Associate Professor of Surgery at the University of Alabama-Birmingham. 
- ◆ **Rita Milewski, MD**, an Assistant Professor of Surgery in the Division of Cardiac Surgery has accepted a position at Yale. 

(continued on page 15)

Post Fellowship Appointments - 2018 General Surgery Chiefs

- ◆ **Ann C. Gaffy, MD** (*Fellowship in Vascular Surgery and Endovascular Therapy at the University of Pennsylvania*)
Finishing final year of Vascular Surgery Fellowship at HUP
- ◆ **Rebecca Hoffman, MD** (*Fellowship in Colon & Rectal Surgery at Washington University in St. Louis*)
Assistant Professor, Division of Colorectal Surgery
Vice Chair of Education, Geisinger Surgical Institute
Geisinger Commonwealth School of Medicine
- ◆ **Matthew Hornick, MD** (*Fellowship Pediatric Surgery at CHOP*)
Assistant Professor of Surgery
Pediatric Surgery
14 Yale University Hospital
- ◆ **Jane Keating, MD** (*Fellowship in Traumatology, Surgical Critical Care and Emergency Surgery*)
Assistant Professor of Acute Care Surgery
University of Connecticut at Hartford Hospital
- ◆ **Lea Lowenfeld, MD** (*Fellowship in Colon and Rectal Surgery at University of Southern California*)
Assistant Professor of Surgery
Division of Colon and Rectal Surgery
NewYork-Presbyterian / Weill Cornell Medical Center
- ◆ **Danielle Spragan, MD** (*Fellowship Cardiac Critical Care Hospital of the University of Pennsylvania*)
Lankenau Medical Center, Main Line Health
Wynnewood, Pennsylvania

Alumni News *(continued from page 14)*

Promotions

(effective July 1, 2020)

◆ **John Fischer, MD, MPH**

Division of Plastic Surgery
Promoted to Associate Professor of Surgery
in the Clinician Educator track



◆ **E. Carter Paulson, MD, MSCE**

Division of Colon and Rectal Surgery
Promoted to Associate Professor of Clinical
Surgery in the Academic Clinician track



◆ **Stephanie Fuller, MD**

Division of Pediatric Surgery, Cardiac
Promoted to Professor of Clinical Surgery
in the Academic Clinician track



◆ **Taine Pechet, MD**

Division of Thoracic Surgery
Promoted to Professor of Clinical Surgery
in the Academic Clinician track



◆ **Thomas Guzzo, MD, MPH**

Division of Urology
Promoted to Professor of Urology in Surgery
in the Clinician Educator track



◆ **Alan Schuricht, MD**

Division of Gastrointestinal Surgery
Promoted to Clinical Professor of Surgery
in the Clinician track



◆ **Brendan Keating, PhD**

Division of Transplant Surgery
Promoted to Research Associate Professor
of Surgery in the Research track



◆ **Mark Seamon, MD**

Division of Traumatology, Surgical Critical
Care and Emergency Surgery
Promoted to Professor of Surgery
in the Clinician Educator track



◆ **Patrick Kim, MD**

Division of Traumatology, Surgical Critical
Care and Emergency Surgery
Promoted to Professor of Surgery
in the Academic Clinician track



◆ **Skandan Shanmugan, MD**

Division of Colon and Rectal Surgery
Promoted to Associate Professor of Clinical
Surgery in the Academic Clinician track



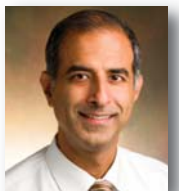
◆ **Gary Korus, MD**

Division of Gastrointestinal Surgery
Promoted to Professor of Surgery
in the Academic Clinician track



◆ **Aseem Shukla, MD**

Division of Urology
Promoted to Professor of Urology in Surgery
in the Clinician Educator track



◆ **Pablo Laje, MD**

Division of Pediatric Surgery
Promoted to Associate Professor of Clinical
Surgery in the Academic Clinician track



◆ **Gregory Tasian, MD, MSc, MSCE**

Division of Pediatric Surgery, Urology
Promoted to Associate Professor of Urology
in Surgery with tenure at CHOP



◆ **Philip Mucksavage, MD**

Division of Urology
Promoted to Associate Professor of Clinical
Urology in Surgery in the Academic
Clinician track





Penn Surgery

Department of Surgery
Attn: Clyde Barker, MD
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3400 Spruce Street
Philadelphia, PA 19104

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Previous Alumni Newsletters - www.uphs.upenn.edu/surgery/Education/penn_surgery_society.html



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SUMMER 2020

Alumni News *(continued from page 15)*

◆ **Thomas Guzzo, MD**

now holds the Founders (Alan J. Wein) Chair in Urology.



◆ **John Fischer, MD**

was awarded a Plastic Surgery Foundation Pilot Research Award.



◆ **Thomas Kolon, MD** won the Pediatric Urology Research Excellence Award and **Stephen A. Zderic, MD** won the Urology Care Foundation Distinguished Scholar Alumnus Award from the Urology Care Foundation.



◆ **Aron Wahrman, MD** was selected to serve on the National Surgery Office's (NSO) Plastic Surgery Surgical Advisory Board (SAB).



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Donald Guthrie Professor of Surgery

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