**FROM THE CHAIR**

My belief in leading with positivity has never been shaken in the Department of Surgery. Even now, as we near two years of living with the harrowing pressures of the pandemic, the people who surround us continue to give their all to advancing our mission and contributing to our legacy of providing the best care, conducting innovative research, and training tomorrow’s best and brightest. This always lifts me up and should do the same for you.

Enriching the legacy is aided by attracting and supporting superlative people. That’s exactly what the late, great Emory cardiac surgeons Ellis Jones and Charles Hatcher did when they brought Kirk Kanter to Emory in 1988. Dr. Kanter went on to have an illustrious 33 year career that embodied a cardinal aspect of our purpose: to positively impact the lives of our patients and trainees. As he retires this year, he leaves a breathtaking record of performing approximately 11,200 cases, 416 of which were transplants, with pediatric heart transplants being 246 of that number. As an academic, he trained more than 100 residents and received $6,444,216 in direct funding for his research.

All of these facts boil down to a simple yet powerful conclusion: large numbers of pediatric and adult patients, former residents, and Emory as a whole benefited substantially from Dr. Kanter’s skill, knowledge, and humanism.

John Galloway and William McKinnon also made indelible impressions on the history of the department and in the lives of our stakeholders. Both trained here exclusively and joined Emory upon graduating. Dr. McKinnon became a vascular surgeon at Emory University Hospital Midtown in 1980, and Dr. Galloway joined the Nutrition and Metabolic Support Service (NMSS) at Emory University Hospital in 1986. They also gave decades of service to generations of trainees, patients, colleagues, and their respective fields, taking what they learned here to elevate Emory to even higher altitudes. Dr. McKinnon retired in 2019, while Dr. Galloway is still clinically active as co-director of the NMSS, one of the most high-volume programs of its type in the country.

In homage to what they achieved and gifted us in the process, I and other department leaders recently initiated the Galloway and McKinnon Alumni Society of the Department of Surgery. This completes a cycle for those who have trained with us, giving them the opportunity to celebrate the institution that influenced their particular career paths and to honor those who guided them on the way.

约翰·F·斯威尼
Joseph Brown Whitehead Professor of Surgery and Chair
Department of Surgery
Emory University School of Medicine

**ANNUAL REPORT 2021**

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8 Education
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Find the report online at surgery.emory.edu/about-us/annual-reports.html
Judicious evolution

2021 saw our patients benefit greatly from surgeons on the technology forefront. From mastering new systems in the operating room to undertaking advocacy efforts on the ground, Emory surgeons continued to work tirelessly to ensure world-class patient care.

EARLIER TO DIAGNOSE, EARLIER TO TREAT

Manu Sancheti and his colleagues at Emory Saint Joseph’s Hospital were the first in the state to use Intuitive’s Ion robot. With its ultra-thin and maneuverable catheter, the robot can reach deep into the peripheral areas of the lung so doctors can biopsy suspicious tissue.

“Early stages of lung cancer can be challenging to diagnose since we need to take samples from deep within the lung,” says Sancheti, chief of general thoracic surgery at Emory Saint Joseph’s Hospital and director of robotic thoracic surgery for Emory Healthcare. “With this robot, we can access those areas of the lung more easily and biopsy suspicious nodules with precision and in a minimally-invasive way.”

In addition to diagnosing lung cancers earlier, Emory Saint Joseph’s Hospital is one of the first hospitals in the Southeast to use this technology to get real-time information about whether the tissue is cancerous and potentially proceed immediately to surgical treatment.
“When we use the Ion in our hybrid operating room alongside the da Vinci surgical robots, we can diagnose early-stage lung cancers and treat them all in the same surgical session,” Sancheti says. “This revolutionizes the treatment process, allowing us in some cases to shave weeks off the treatment regimen, which typically involves multiple appointments. Patients are relieved, and excited about our use of novel and advanced technology.”

During the robotic-assisted bronchoscopy, the surgeon uses a controller with a heads-up display to navigate the camera-equipped catheter along a pre-planned path through the lung airways. With its 3.5-millimeter size and ability to articulate 180 degrees in any direction, the Ion can reach all 18 segments of the lung. Once the surgeon approaches the targeted area, they can then biopsy the suspect tissue.
“When performing bronchoscopies for lung nodule biopsy, we now have an unprecedented level of precision due to the advanced features of this robotic navigation,” says Alejandro Sardi, an interventional pulmonologist at Emory Saint Joseph’s Hospital. “This is just the latest step in our efforts to diagnose earlier and provide better outcomes for patients at Emory Saint Joseph’s Hospital.”

ANOTHER FIRST

In August 2021, Manu Sancheti and Onkar Khullar successfully performed Georgia’s first robotic-assisted tracheobronchoplasty to treat tracheobronchomalacia (TBM) at Emory University Hospital Midtown. The team reports that the patient responded well to the surgery, and has a much-improved quality of life.

While uncommon, TBM is progressive and debilitating and occurs when tracheal tissue becomes soft, weak, and redundant. The consequence is frequent collapsing of the airway. As a result, patients experience severe coughing, wheezing, recurrent pneumonia, and difficulty breathing.

“Doing a tracheobronchoplasty for TBM involves placing mesh stenting on the back of the trachea to reinforce the airway and ease symptoms, and has traditionally been performed with an open approach,” says Khullar, whose faculty responsibilities include serving as associate program director for the thoracic surgery program of the cardiothoracic surgery residency. “Doing the procedure robotically offers a minimally invasive option, and gives surgeons more bandwidth to make the complex technical maneuvers necessary to complete the surgery.”

Robotic-assisted tracheobronchoplasty allows surgeons to reconstruct the airway walls with precise control of tiny instruments on four thin robotic arms, resulting in smaller incisions, less pain, and quicker recovery.

“The robot works well in the limited space of the chest cavity because of the articulated wrist-action of the instruments,” says Sancheti. “Even with the small skin incisions, the improved dexterity allows us to sew the mesh in a small area more efficiently and effectively. The 3D camera also provides excellent visualization of the surgical area.”

A formidable surgical team, Khullar and Sancheti have considerable robotic surgery experience. Khullar initiated a robot-assisted general thoracic surgery program at Grady Memorial Hospital in 2018 that has grown to approximately 50–75 cases annually. Sancheti developed a robotic thoracic surgery curriculum for cardiothoracic surgery residents. He trains thoracic surgeons from all over the world in robotic surgery, and assumed direction of Emory Healthcare’s robotic thoracic surgery program in 2017. Additionally, he shaped the robotic thoracic surgery program at Emory Saint Joseph’s Hospital into one of the busiest programs in Georgia and the entire Southeast. To date, the program has performed over 650 robotic procedures, including robotic bronchoscopy.

“Doing the procedure robotically offers a minimally invasive option, and gives surgeons more bandwidth to make the complex technical maneuvers necessary to complete the surgery.”

—ONKAR KHULLAR

JOURNEY TO UPGRADE

Surgeons take on disease, injury, and catastrophe daily for their patients. Some go even further, doggedly navigating bureaucracies to help thousands of people, most of whom they’ll never meet. General and GI surgeons Jackson Slappy, Ankit Patel, and Jon Pollock worked together to do just that, and now patients can choose robotic surgery as an option at the Atlanta Veterans Administration Healthcare System.

“Robotic surgery offers incredible benefits for our veterans, the most significant being equal or better results compared to older surgical methods. It’s extremely gratifying to be able to make this technology available to them,” says Slappy, chief of general surgery at the Atlanta VA at the time; he departed from Emory in January 2022 to become chief of staff at the Columbia VA Healthcare System.

Slappy performed the facility’s first robotic procedure in mid-April 2021, effectively commemorating the hospital’s acquisition of a da Vinci robot-assisted surgical platform in culmination of a years-long
Jackson Slappy, Jon Pollock, and Ankit Patel with the robot. Part of Slappy and Pollock’s training in robotic surgery involved working with robotic simulators at Emory.

**PATIENT CARE**

130
Number of robotic procedures performed in 2021 (estimated)

6
VA surgeons credentialed to use the new system

10-12
Number of surgeons to ultimately be credentialed

6 general | 2 urology
1 thoracic | 1 GYN
process to obtain approval for instituting robotic surgery there.

“With this double milestone, not only can Atlanta’s veterans have the advantages of robotic surgery, but the VA can serve as an additional source of robotics training for Emory residents. With the increase of surgical robotics in our profession, having this training asset available is imperative,” he says.

Patel and urologist Christopher Filson, both robotics practitioners and advocates, began campaigning to acquire a robot for the VA in 2013. Assembling a narrative and proposal for initiating a robotics program for prostate surgery at the hospital, they presented the material to Atef Salam, the Atlanta VA’s chief of surgery at the time. Salam was impressed by the advantages robotics offered patients — increased precision and accuracy, less pain, shortened recovery time, and the option of having a minimally invasive procedure instead of traditional open surgery.

“Given the priorities of the Atlanta VA then, the effort stalled,” says Slappy. “Meanwhile, my colleagues and I were referring our patients who were interested in robotic options to other hospitals in the Emory system. Then Ann Brown arrived as the new director of the VA in 2019 and we were back in business.”

After Brown gave the go-ahead to revive the effort, Slappy dusted off Filson and Patel’s original business plan and updated it. Brown signed off on the proposal, and Slappy began moving the initiative through the VA’s National Surgery Office, Central Office, and purchasing and acquisition bureaucracy.

“One major disincentive for leaders was the cost of the robots, which can be as much as $2.2 million,” he says. “Eventually, they realized the expense would be absorbed quickly by the volume of common cases that could be done robotically. People throughout the organization saw that the robotic versions of many procedures were becoming the best options.”

Working to leverage shifting attitudes, Slappy established a working group with Jon Pollock to determine what types of instruments, supplies, and additional adjustments would be needed to accommodate the technology.

“After managing the Emory general surgery residency rotation at Soddo Hospital in Ethiopia from 2011–2016, I had returned to Atlanta,” says Pollock. “I gradually came around to the benefits of having robotic surgery available at the VA, and by 2020 I was all in. Dr. Slappy’s tireless leadership as he worked the initiative through the VA approval process particularly inspired me.”

Patel, who had successfully integrated robotics training into Emory’s residency curriculum, helped train and advise Slappy and Pollock for their robotic surgery credentials and observed them perform their first robotic procedures.

As of late 2021, surgeons have performed 103 robotic surgery cases at the Atlanta VA, and it is estimated they will complete 130 by year’s end. Other physicians at the facility, particularly from the urology and thoracic surgery sections, are also working to obtain VA robot-assisted surgery privileges.

“The program is doing very well, and given usage and demand we expect to request a second robot in the next budget cycle.”

— JACkSON SLPAPy
Fifty-year-old Tyrone Baldwin became the 1,000th heart transplant patient at Emory University Hospital, making Emory Healthcare the first medical system in Georgia to reach this milestone. After receiving his new heart in May 2021, he left the hospital less than three weeks later.

“We, at Emory, are committed to providing all Georgians access to the highest quality of care across the spectrum. Our heart transplant program provides the most advanced therapies for heart failure available anywhere,” says Mani Daneshmand, director of the Emory Heart & Lung Transplantation, Mechanical Circulatory Support and Emory Extracorporeal Membrane Oxygenation Programs.

David Vega, professor of surgery in the Division of Cardiothoracic Surgery, and his colleague Andrew Smith, professor of medicine in the Division of Cardiology, have contributed significantly to the successes of this program.

“For 36 years, we have been supported by excellent institutional commitment, which has assisted us in caring for numerous patients who have exhausted all options for end-stage heart disease,” says Vega, who has performed nearly half of Emory’s heart transplants. “Our multidisciplinary team is uniformly focused on our patients and their families, and that has been our mission and will continue to be our mission.”

“However, none of this work would be possible without the donors and the donor families,” he added. “It is the incredible gift they give at a time of unexpected tragedy that helps others live.”

PATIENT CARE

Reaching a new precedent
**Bridging the gap**

“This is a success story,” says Divya Gupta, Emory Healthcare’s medical director of advanced heart failure and heart transplant. “However, a minority of African Americans who are eligible receive a heart transplant. We know there are many more out there who could use this lifesaving procedure. They need to know we are here for them.”

Mani Daneshmand underscores Emory’s work to eliminate disparities and its progress in diversifying its transplant patient pool to benefit communities of color. “In the last few years, our multidisciplinary team of cardiologists, surgeons, anesthesiologists, critical care experts, nurses, coordinators, perfusionists, researchers, and allied health professionals have worked tirelessly to increase access to life saving, advanced heart failure therapies, including transplant, for all Georgians.”

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**Patent Care**

**Surgeons pull together**

In the spring of 2020, Matthew Clifton took the helm as chief of the Division of Pediatric Surgery after serving as interim chief for more than two years. For Clifton, collaborating with surgeons to align programs at the Egleston and Scottish Rite facilities of Children’s Healthcare of Atlanta has been a priority since his tenure began.

He is quick to point out that regardless of which hospital they operate in, he and his colleagues start from the same place. “In every single decision, we ask ourselves whether the outcome will ease the suffering of children through surgery. We work to capitalize on the strengths that the teams from each hospital bring to the table. We focus on transparency, communication, and change management across Emory’s tripartite mission of patient care, teaching, and research.”

He adds that he and his partners are currently collaborating on the development of a new three-year plan that will formulate a shared vision for pediatric surgery at Emory. “We’re working to ensure the process is very inclusive. Aligning the groups will be an important component of sustaining Children’s Healthcare of Atlanta’s position as a top-tier children’s hospital.”

John Sweeney, chair of the Department of Surgery, says, “We are extremely fortunate to have Dr. Clifton on our faculty and leadership team. He is a stellar representative as the division recruits additional faculty, initiates research programs, and helps guide Children’s into their new facilities in the coming years.”
Increasing options to meet demand

Over the past three years, the Department of Surgery has added three new fellowships to its wide range of training programs, further expanding learning in the surgical specialties and leveraging its collaborative culture to support clinical and didactic education within the department and across the school.

“Significantly, and in keeping with our cooperative ethos, the directors of these three new fellowships are dedicated to working together to provide excellent training for all of the fellows, while also maintaining the dedication to our general surgery resident education and experience,” says Maria Russell, program director for the newly approved Complex General Surgical Oncology Fellowship.

**Launching from the CUSP**

*Emory’s two-year Complex General Surgical Oncology Fellowship will accept its first fellow in 2022*, with actual training starting in 2023 and another fellow being added the following year. Emphasizing excellence in surgical education, intellectual curiosity in research, teamwork with oncologic care providers, and appreciation of the art and science of compassionate care of the cancer patient, the fellowship is ACGME-accredited.

“The program’s mission is to train well-rounded general surgical oncology experts and academic innovators in the multidisciplinary management of cancer. Learning how to function within this collaborative team environment will ensure our fellows can provide the best overall care for their patients,” Russell says.

“This fellowship is very timely given the Division of Surgical Oncology’s enormous growth,” she adds. “Since 2009, our faculty has increased to 26 members. Additionally, our presence has expanded to a total of six hospitals within the Emory Healthcare Network.” Program fellows will rotate within the Winship Cancer Institute at Emory University Hospital, Emory University Hospital Midtown, and Emory Saint Joseph’s Hospital.
Surgeons qualifying for the Colorectal Surgery Fellowship will benefit from both a complex case mix and higher volume and lower acuity, according to fellowship program director Virginia Shaffer. “Fellows will experience academics and a community practice with excellent exposure to all kinds of surgery; open, laparoscopic, and robotic, in addition to a wide range of multidisciplinary work, including gastrointestinal, urogynecological, oncological, and radiological cases.”

In this comprehensive, ACGME-accredited clinical and research program, initiated in 2019, fellows perform procedures at Emory University Hospital and Emory Johns Creek Hospital.

“Our fellows learn that what they are doing makes a profound difference in people’s wellbeing,” adds Shaffer, “whether that is by removing a cancer or by doing an operation that vastly improves a patient’s quality of life.” Additionally, Shaffer points out that surgeons pursuing this specialty can expect the unexpected “because cases can vary significantly. We often experience some uncertainty going in. For example, a Hartmann’s reversal to close an end colostomy and restore bowel continuity can take a couple of hours, or it can take eight hours or more.”

As a field, Shaffer says that colorectal surgery “offers variety, and combines the best of multiple areas of surgery; cases vary from large and complex to smaller and less invasive cases.”
BUILDING ON HISTORY

For general and GI surgeon Neil Saunders, who is also certified in complex surgical oncology, it’s only natural that the American Association of Endocrine Surgeons accredited the Emory Endocrine Surgery Fellowship in 2020. As the fellowship’s program director, Saunders knows the Department of Surgery’s long history of endocrine surgery. “This fellowship recognizes both our background and dedication to the science of treating and studying endocrine diseases. Since William McGarity started the practice here in the fifties and conducted his important studies of hyperparathyroid cases, it has expanded steadily. The last five to 10 years have seen immense program growth, and we have the volume to offer both excellent training for residents and ample cases to support a fellow.”

In addition to exposing advanced trainees to the field’s variety of operations, the program also builds diagnostic skills critical in difficult cases. “Oftentimes, disease processes of the endocrine system can be challenging to diagnose, and it requires a thorough understanding of both how the endocrine system works and a keen eye for detecting aberrations in it. Program fellows will benefit greatly from our analytical approach,” says Saunders.

Saunders’ optimism is clear. “We’re training surgeons to set up and grow a program and become future leaders in endocrine surgery,” he concludes.

Neil Saunders on a Zoom call with 2021-2022 endocrine surgery fellow Adriana Ramirez. “The fellows train at Emory University Hospital and Emory Saint Joseph’s Hospital,” he says, “which treat very high numbers of complex, resource-intensive patients every year.”

“The last five to 10 years have seen immense program growth, and we have the volume to offer both excellent training for residents and ample cases to support a fellow.”

—NEIL SAUNDERS
For professor of surgery Ravi Rajani, years of cross-collaboration between education, research, and patient care sets the foundation for his new position as assistant dean for education for Emory at Grady Memorial Hospital.

Rajani’s new role finds him building on a long history with Grady. Beginning in 2007, when he served as a trauma and surgical critical care fellow, to his academic and clinical appointments in later years, he draws on deep institutional knowledge and passion for supporting learning while helping ensure world-class healthcare for patients.

As primary liaison between the Emory School of Medicine and the hospital, he says, “I’m excited about the new position because it oversees multiple educational levels for Emory at Grady, encompassing undergraduate medical education, graduate medical education, and our affiliated programs in allied health.”

“Grady is an educational oasis for virtually every clinical training program at Emory and particularly special to me personally,” Rajani continues. “It remains a stellar learning opportunity because of incredible faculty who are truly devoted to superb education and excellent clinical care.”

“This position will give me the amazing opportunity to negotiate between multiple perspectives and priorities to realize common goals and paths to success. The lessons I learned from other educational leaders within the Department of Surgery, including Alfred Chahine, Keith Delman, and Jahnavi Srinivasan have allowed me to step into this post in a very meaningful way. I will always be indebted to them for helping my development toward this position.”

Rajani will work closely with Carlos Del Rio, executive associate dean for clinical affairs at Grady; J. William Eley, executive associate dean for medical education and student affairs; and Marilane B. Bond, associate dean for medical education.

Joining Emory in 2011 as the chief of vascular and endovascular surgery at Grady, Rajani has been integral to developing cardiovascular services at the hospital and is currently co-director of the Grady Heart and Vascular Center. He was also associate program director for the general surgery residency for the past five years.

Rajani has served as the site and national principal investigator for several clinical trials evaluating endovascular management for types of vascular trauma, and is particularly interested in refining thoracic stent graft technology for treating blunt aortic injury. Clinically, his primary focus has been on endovascular techniques to facilitate limb salvage in threatened extremities, especially for diabetic patients.
# Trainee Kudos

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<tr>
<th>TRAINEE</th>
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<tr>
<td>Kirsten Baecher, MD</td>
<td>Gold Medal Resident Paper Award, 2021 Southeastern Surgical Congress</td>
<td>Michael Lowe, MD, MA</td>
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<td>Ciara Brown, MD</td>
<td>Top Individual Score, Residents Bowl, 90th Annual Meeting of the American Society of Plastic Surgeons</td>
<td>Albert Losken, MD</td>
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<tr>
<td>Owen Brown, MD</td>
<td>Top Rated Resident Abstract, 90th Annual Meeting of the American Society of Plastic Surgeons</td>
<td>Peter W. Thompson, MD</td>
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<tr>
<td>Amanda Fobare, MD</td>
<td>2020-2021 Distinguished Fellow, Emory House Staff Organization Professionalism Excellence (HOPE) Award; Editor, Audible Bleeding, Society for Vascular Surgery Podcast</td>
<td>Yazan Duwayri, MD</td>
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<td>Carson Hoffman, MD</td>
<td>Best Basic/Translational Poster, 2021 William C. Wood Research Symposium, Emory</td>
<td>Luke Brewster, MD, PhD, MA</td>
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<tr>
<td>James Jeong, MD, DMD</td>
<td>Oral Abstract Scientific Presentation Award, 103rd Annual Meeting of the Association of Oral and Maxillofacial Surgeons</td>
<td>Dina Amin, DDS</td>
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<td>Aileen Johnson, MD</td>
<td>Best Poster, 2021 Resident Research Day at Grady Memorial Hospital</td>
<td>Christian Larsen, MD, DPhil</td>
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<td>Jessica Keilson, MD</td>
<td>2021 Chester P. Rochfort Scholarship of Winship Cancer Institute; 2022 ASCO Conquer Cancer Merit Award</td>
<td>Shishir K. Maithel, MD</td>
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<tr>
<td>Brendan Lovasik, MD</td>
<td>2020-2021 J.D. Martin Resident Award, Emory; Best Basic/Translational Presentation, 2021 William C. Wood Research Symposium, Emory</td>
<td>Andrew Adams, MD (University of Minnesota Medical School)</td>
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<td>Abraham Matar, MD</td>
<td>2021 ATC Young Investigator Travel Award</td>
<td>Andrew Adams, MD</td>
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<td>Caroline Medin, MD</td>
<td>2022 ASCO Conquer Cancer Merit Award</td>
<td>Shishir K. Maithel, MD</td>
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<tr>
<td>R. Anthony Meena, MD</td>
<td>2020-2021 Distinguished Resident, Emory House Staff Organization Professionalism Excellence (HOPE) Award; Best Clinical Presentation, 2021 William C. Wood Research Symposium, Emory; 2021 Robert B. Smith, MD, Best Resident Award, Georgia Vascular Foundation</td>
<td>Olamide Alabi, MD</td>
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<tr>
<td>Parth Patel, MD</td>
<td>Best Abstract, STS/EACTS Aortic Surgery Session, The Society of Thoracic Surgeons 2021 Annual Meeting; Best Resident Paper Award, Congenital Heart Surgeons Society 2021 Annual Meeting</td>
<td>Mani Daneshmand, MD</td>
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<tr>
<td>Alexandra Reitz, MD</td>
<td>Best Clinical Poster, 2021 William C. Wood Research Symposium</td>
<td>Theresa Gillespie, PhD, MA, BSN</td>
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<td>Emma Rooney, MD</td>
<td>2020-2021 Barbara J. Pettitt Medical Teaching Award, Emory; 2020-2021 Distinguished Resident, Emory House Staff Organization Professionalism Excellence (HOPE) Award</td>
<td>Guillermo Escobar, MD</td>
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<td>Constance Shreckengost, MD, PhD</td>
<td>2021 Vanderbilt-Emory-Cornell-Duke Fogarty Global Health Fellowship</td>
<td>Steven Roser, DMD, MD</td>
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<td>Melika Zarei, MD</td>
<td>2020-2021 Distinguished Resident, Emory House Staff Organization Professionalism Excellence (HOPE) Award</td>
<td>Albert Losken, MD</td>
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<tr>
<td>Jonathan Zurcher, MD</td>
<td>Robert A. Guyton, MD, Outstanding Junior Resident Award, Emory</td>
<td>Mani Daneshmand, MD</td>
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*All awards listed are as of December 13, 2021*
Decades of guiding breakthroughs

In October 2021, Christian Larsen, professor of surgery, was honored by the American Medical Association with their Scientific Achievement Award for his pioneering endeavors and years of research, innovation, and leadership in the transplantation field.

“Discovery and innovation are key drivers in transforming patient care, and Dr. Larsen’s groundbreaking career has fundamentally changed contemporary transplant surgery and opened new paths for surgeons around the world to help their patients,” says Gerald E. Harmon, president of the AMA. “His expertise in transplant immunology has enabled patients to obtain life-saving organ transplants and prevented the long-term and life-threatening complications caused by rejection.”

Larsen, whose research history spans more than four decades, is recognized for his imposing track record in moving findings from the lab to the patient care arena. Known for paradigm-shifting research that has been continuously funded by the NIH and other organizations, he played a leading role in developing costimulation blockers, a newer type of immunosuppressive drug that selectively inhibit T cell activation and avoid non-immune toxicities of older drugs.

He and his long-time collaborator Thomas Pearson helped drive the development of the costimulation blocker belatacept, approved in June 2011 by the U.S. Food and Drug Administration for kidney transplant recipients — the first time a new class of drug had been approved for transplant since the 1990s. In 2012 he received an additional NIH grant of nearly $20 million to lead the continuing development of more effective costimulation blockers for near-term treatment of transplant patients and better strategies for long-term, true immune tolerance of transplanted organs.

Larsen is the founding director of the Emory Transplant Center. He chaired the Department of Surgery from 2009-2013, and served as the School of Medicine’s dean from 2013-2016. Although he currently focuses on kidney transplantation in his clinical practice, he and Pearson were the first surgeons in Georgia to perform an islet transplant in 2003. The National Academy of Medicine (previously the Institute of Medicine) has also celebrated his contributions to science, electing him to its 2014 class of leading health scientists globally.
An alternate approach to coping with pain

During her general surgery training, Maggie Diller found her patients sometimes voiced grave concerns about post-op medications. “Opioid abuse and addiction are a national health crisis,” she says, “and many surgical patients, for whom opioids are prescribed as postoperative pain control, are leery of becoming dependent. Understandably so. As surgeon-scientists, and as healers, we must find ways to lessen the use of opioids after surgery.”

Now, thanks to the Department of Surgery’s first Pilot Research Award, Diller is heading up new research into post-surgical pain management using a digital mindfulness intervention. Her study will investigate the feasibility of a novel approach for pain control following oncologic surgery.

After integrating input from surgeons and mindfulness researchers, Diller and her team collaborated with yoga and meditation science experts to create a unique guided meditation specific to a surgical population, then adapted the exercise for delivery via mobile phones. Artificial intelligence technology automatically delivers the intervention while simultaneously collecting and storing patient-reported outcomes via interactive text messaging.

Diller points to recent, compelling data involving meditation for chronic disease patients. “If we can use meditation for chronic illness and it reduces both opioid use and pain levels, why not adapt it for surgical patients? Additionally, the Joint Commission is incentivizing researchers to develop opioid-sparing pain regimens. We hope to demonstrate feasibility and acceptability of mindfulness interventions for patients after surgery, determine effectiveness, and ultimately design and implement a true, multimodal pain regimen for surgical patients.”

Through this proposal, she aims for mindfulness therapy to be extended to a particular patient population disproportionately affected by opioid dependence and to address the critical gaps in knowledge that have prevented the therapy’s safe and effective implementation into perioperative pain management strategies.

“Dr. Diller’s proposal demonstrated extraordinary potential, and we are excited to partner with her by funding this impactful, patient-centric research,” says John Sweeney, chair of the Department of Surgery.

During her general surgery residency at Emory, Diller undertook a two-year research sabbatical which laid the groundwork for implementing her own clinical and translational research. She worked under the mentorship of transplant immunologist Mandy Ford and then-program director Keith Delman, engaging in such projects as investigating the combination of specific therapies in patients with advanced melanoma and examining the mechanics of the immune response to improve cancer cellular therapies.

Diller joined the department in 2020 after completing her clinical fellowship in advanced gastrointestinal, minimally invasive, and bariatric surgery at Cedars Sinai Medical Center. Urologic oncologist Viraj Master, her current research mentor, is a well-established, NIH-funded investigator who provides many shared resources and extensive experience in the study and application of integrative techniques.
Bridging the gap

Throughout his career, transplant surgeon Raymond Lynch has been an enduring exponent of improving access to organ transplantation for underserved patients. A chronic shortage of donors has kept many end-stage organ failure patients from needed transplants for years, with an annual average of more than 50,000 patients added to kidney and liver donation waitlists between 2016 and 2020. With years of research and advocacy on behalf of those patients, Lynch began looking at the problem from the donor side. Since much of his clinical work and research has centered around the Veteran’s Administration Medical Centers (VAMCs), the VA was a logical place to focus his research. “It is a privilege and an honor to work with veterans and very gratifying,” he says. “Additionally, from the research side, the VAMCs have rigorous records protections and the quality of their data is excellent.”

“We are examining donation systems because reducing the organ shortage improves equity for patients with organ failure. It is then imperative to look at equity in donation access. How well do we provide donation care to persons of all backgrounds and demographic groups, and critically, how do we improve equity in donation moving forward?”

As principal investigator of a 2020-21 pilot study on veteran attitudes and limitations to organ recovery, Lynch discovered that “over a nine-year period, only 33 donors were recovered from the 115 Veteran’s Administration Medical Centers (VAMCs) out of nearly 8,500 eligible decedents.”

“Our data shows that VAMCs recover deceased donor organs at a rate of 6% that of non-VA hospitals,” he adds. “The basis for this disparity is unclear but given the high concentration of vulnerable and underserved groups at VAMCs, it is essential to improve donation access for these patients.”

Researchers have found lower transplant authorization rates with inconsistency in authorization collection and wide variability of data collected by organ procurement organizations (OPOs) that is not aggregated or reported at the system level. Lynch maintains that improvements can be made by finding areas for intervention, sharing best practices, and supporting fresh insights into their application.

In August 2021, Lynch was notified that his NIH R01 proposal “Veteran Access and Limitations to Organ Recovery (VALOR)” scored in the first percentile, prompting the School of Medicine to honor Lynch with the Emory 1% Award. As of December 2021, the grant awaits final approval. Findings from Lynch’s pilot study provide the basis for the project, which seeks to assist the VA and OPOs in perceiving and remedying barriers to donation care for veterans. Along with analyzing VA data and interviewing stakeholders to define obstacles to donation, the grant would allow Lynch and his team to design new ways to engage both OPOs and the VA. Significantly, they will trial a program facilitating veteran organ donation through technologic assistance along with real-time expertise in approaching families and managing donors in the VA environment.

“How well do we provide donation care to persons of all backgrounds and demographic groups, and critically, how do we improve equity in donation moving forward?”

— Raymond Lynch
Shining a light on cancer

Shortly after joining the Department of Surgery in early 2020 as the director of translational research for cutaneous malignancies at Winship Cancer Institute, Chrystal Paulos found herself acclimating her robust research and translational activity to a new lab during a surging pandemic. She maintained an auspicious level of activity, and her substantial research portfolio has continued unabated in 2021.

Most significantly, in September she was awarded the 2021 Translational Award from the V Foundation for Cancer Research. A three-year, $600,000 grant supporting bench-to-bedside research that concludes with the planning of a future clinical trial, the award will fund her study involving melanoma patients unresponsive to anti-PD-1 based immunotherapy.

“Combination immunotherapy is also used to treat patients with melanoma, but significant toxic side effects counterbalance its higher response rate. To date, there are few reliable blood or tumor markers that can predict which therapy may be the best choice for patients. “This project focuses on understanding why some patients are resistant to PD1-based therapies,” she says. “We recently discovered that patients who had more of the protein CD26 in their tumor’s immune cells were more responsive to treatment. These collective findings beg the question: What is the role of CD26 in the immune response to melanoma?”

Emory hematologist and medical oncologist Ragini Kudchadkar will join Paulos’ research team as co-principal investigator on this study. In addition, surgical oncologists Mike Lowe and Keith Delman and biostatistician Yuan Li will collaborate.

Paulos and her team will study CD26 melanoma immunity using patients’ blood and tumor samples to uncover data that will allow CD26 to be used as a biomarker in prognoses for patients treated with PD-1-based therapies. This discovery would pave the way for clinical studies to evaluate the success of CD26 as a predictive marker in determining whether combination or single-agent immunotherapy would be the most appropriate treatment for a patient.

Paulos also played a leading role in two studies released in late 2021 that reported promising results for treating oral cavity squamous cell carcinoma (OCSCC), the most common form of head and neck cancer. Published in Cell Reports Medicine, the results were a collaboration between teams at Winship, MUSC Hollings Cancer Center, and UCLA Jonsson Comprehensive Cancer Center.

The investigators examined the efficacy of pre-surgical treatment of patients with the immune checkpoint inhibitor anti-PD-1. In the process, they detected possible biomarkers that show the likelihood of a patient’s response to immunotherapy.

Paulos led the research arm at Winship, and Hannah Knochelmann, a graduate student in Paulos’ lab, was first author on one of the papers and second author on the other.
Defining quality of care for all

As her extramural funding increases, exemplified by a new Veterans Administration DEI Research Supplement award, vascular surgeon and burgeoning investigator Olamide Alabi continues her objective of identifying quality care through a health equity framework. “My overarching goals are to better interpret patient-reported outcomes and their measurements so we can improve factors that matter to veterans, not just what matters to physicians who care for veterans,” she says.

Among the nearly 12 million Americans with peripheral artery disease (PAD), overlapping populations of veterans, African Americans, and residents of underserved and disadvantaged communities commonly experience worse outcomes.

“Veterans and socially underprivileged individuals often have a higher rate of several risk factors associated with PAD, such as smoking, diabetes, and high blood pressure,” she says. “Plus, Black patients with PAD are three to five times more likely to experience major amputation than white patients and major amputation rates are higher in the Southern United States, making it no surprise that Black veterans in the South with PAD are more likely than other groups to have major lower extremity amputation.”

With the VA DEI award, Alabi aims to examine access to care among veterans with PAD, investigate care variations that lead to potentially preventable lower extremity amputation, and begin devising innovative solutions to improve these veterans’ quality of care.

“Societal and environmental determinants of health often affect who gets quality treatment and who does not,” Alabi says. “Prior studies, including my own, have found that the absence of care plans with appropriate risk factor and lifestyle modification, lack of accessibility to specialty care, and delays in referral and diagnosis are probably contributing to poorer outcomes for veterans with PAD in the South. There are potential social/sociocultural conditions as well, such as access to nutritious food or adequate transportation and patient-provider discordance, particularly in the form of trust issues.”

Early medical and procedural interventions involving PAD are vital to prevent lower-limb amputations. Numerous studies have delineated ethnoracial disparities in various stages of care for the PAD patient. Alabi believes that race is likely a surrogate for place and access, and that evaluating social and geographic determinants can yield important information and targets for designing novel strategies to alleviate disparities in the timely diagnosis and treatment of PAD.

Luke Brewster, chief of vascular surgery at the Atlanta VA Healthcare System, is the lead mentor on the project. His investigations of promising new therapies for veterans with PAD will lend a valuable perspective to the study. Other team members include Emory medical sociologist Molly Perkins and cardiovascular disease epidemiologist and health equity researcher Kelly Hunt, from the Medical University of South Carolina and the Charleston VA Health Equity and Rural Outreach Innovation Center.

The VA’s Office of Research and Development applies DEI Supplement awards to funding mentored research experiences for early-career scientists from underrepresented backgrounds. Alabi’s award is among the first wave of the program’s funding cycle, which pairs junior researchers with established VA scientists for prospective career guidance.

“Societal and environmental determinants of health often affect who gets quality treatment and who does not.”
—Olamide Alabi
Nader Massarweh, MD, MPH, has joined the department as our new vice chair of veterans affairs, associate professor of surgery for the Emory Division of Surgical Oncology, and chief of surgery at the Atlanta VA Healthcare System. He comes to Emory after serving on the faculty of the Michael E. DeBakey Department of Surgery at Baylor College of Medicine with a clinical practice at the Michael DeBakey VA Medical Center. He was also a faculty member of the Section of Health Services Research in the Department of Medicine and an investigator at the Center for Innovations in Quality, Effectiveness and Safety.

In his leadership role at the Atlanta VA, Massarweh oversees all surgical clinical services, research, and training for the hospital. He hopes to modernize its surgical and perioperative services, including the use of advanced minimally invasive and robotic technology. In addition, he will work to strengthen the collaboration between the VA, Emory, and Morehouse School of Medicine through recruitment, mentorship, and management of faculty affairs across the academic affiliates.

As an active surgeon-scientist, Massarweh has received grants from the National Institutes of Health/National Cancer Institute and the Agency for Healthcare Research and Quality. He currently has funding as principal investigator from the VA’s Office of Health Services Research and Development. His primary research focus is assessing the impact and effectiveness of national health policy initiatives, evaluating the reliability and value of national quality measures, and implementing the timely dissemination of surgical performance data.

Heather R. Faulkner, MD, MPH, is the new director of clinical research for the Division of Plastic and Reconstructive Surgery. She was formerly director of quality and safety for the Division of Plastic Surgery at Massachusetts General Hospital, chief of plastic surgery at Mass General Brigham Salem Hospital, and assistant professor of surgery at Harvard Medical School.

Faulkner plans on developing a formal year-long research fellowship as well as shorter mini-fellowships for medical students, and building a division-wide breast reconstruction database to track clinical outcomes and patient satisfaction using Patient-Reported Outcome Measures (PROMs). Her personal research will continue to focus on clinical outcomes in plastic surgery, Enhanced Recovery after Surgery (ERAS), patient safety, and patient satisfaction.

After graduating from the trauma surgery and surgical critical care fellowships at Grady Memorial Hospital, M. Andrew Davis, MD, joined the faculty at Baylor College of Medicine and became a trauma surgeon/intensivist at Ben Taub Hospital, one of only two Level 1 trauma centers in Houston.

He returned to Grady in early 2021 as a trauma surgery attending and critical care intensivist, while also taking on the role of director of perioperative medical services. In addition to his clinical duties, he will be involved with improving and maintaining quality standards regarding OR efficiency and throughput.
Barath Badrinathan, MD, RPVI, completed his general surgery residency and vascular surgery fellowship at Emory University. Prior to joining Emory, he was an attending surgeon at the Cleveland Clinic Foundation. His clinical interests are peripheral arterial disease, carotid disease, aortic aneurysms, dialysis access, thoracic outlet syndrome, and venous insufficiency.

Jazmín Cole, MD, earned her medical degree at the Keck School of Medicine of USC. She completed her general surgery residency at Houston Methodist Hospital and her advanced gastrointestinal/minimally invasive surgery/flexible endoscopy surgery fellowship at University Hospitals Cleveland Medical Center. She specializes in abdominal wall reconstruction, hernia repair, and foregut surgery.

Vascular surgeon-researcher Katherine Hekman, MD, PhD, is based at Emory University Hospital and the Atlanta VA Healthcare System. Her basic science laboratory investigates stem cell-based regenerative therapies for vascular disease, while her clinical research concentrates on surgical site infections, venous thromboembolism, and promoting wellness in surgical training.

Amalia Jonsson, MD, is an adult cardiac surgeon specializing in coronary and valvular heart disease with an emphasis on robotically-assisted mitral valve and coronary artery bypass procedures. During her integrated general surgery-cardiothoracic surgery residency at Emory, she received outstanding resident awards in 2017, 2018, and 2020, and was administrative chief.

Yuda Liu, MD, completed his advanced aortic surgery fellowship at Emory University in 2021, and is now a member of the cardiothoracic surgery team at St. Francis Hospital in Columbus, GA, led by Jacob Davtyan, MD. He specializes in cardiac revascularization, diseases of the aorta, aortic valvular disease, and transcatheter aortic valve replacement.

John Lyons, MD, is an attending on the acute and critical care surgery service at Emory University Hospital and in the ICUs of the Emory Critical Care Center. During his Emory general surgery residency he did a three-year research sabbatical in the lab of Emory sepsis and shock investigator Craig Coopersmith, MD, and also worked with transplant immunologist Mandy Ford, PhD.

Felipe Maegawa, MD, MS, is an award-winning teacher of technical skills in the operating room. Before joining Emory, he was an associate professor of surgery at the University of Arizona, clinical director of general surgery for the Southern Arizona VA Health Care System, and site director for the general surgery residency training program at the Southern Arizona VA.

During her general surgery residency at Baylor College of Medicine, Meredith Mason, MD, did a two-year fellowship in clinical and health services research at the Houston Health Services Research and Development Center for Innovations in Quality, Effectiveness and Safety. She joined Emory after completing her clinical fellowship in complex general surgical oncology at MD Anderson Cancer Center.

Ahmed Nassar, MD, was appointed to our faculty after completing his abdominal transplant surgery fellowship at the Emory Transplant Center. During his research fellowship in ex-vivo organ perfusion at the Cleveland Clinic, OH, he assisted in developing an organ perfusion device that received an investigational device exemption from the FDA for clinical use.

Omobolanle (Mobola) Oyefule, MD, graduated with a medical degree from Vanderbilt School of Medicine, completed her general surgery residency at Cleveland Clinic, FL, and did an advanced GI/bariatric/minimally invasive surgery fellowship at Mayo Clinic, Rochester. Her clinical roles include performing minimally invasive general surgery and bariatric surgery at Emory University Hospital Midtown.

Pranavi Ravichandran, MD, RPVI, completed her integrated vascular surgery residency at the University of Ottawa in 2018, where she returned to work as a surgeon and lecturer before joining our faculty. Her primary practice location is Emory Johns Creek Hospital. Her academic and research interests include surgical education and disparities in healthcare access.

Katherine Ross-Driscoll, PhD, MPH, is a member of the Emory Transplant Health Services and Outcomes Research Program of the Department of Surgery, and the Health Services Research Center at Emory. Her research investigates the influence that access to care and quality of treatment has on racial, socioeconomic, and geographic outcome disparities among patients with end-stage liver disease.

Alison Ward, MD, did her general surgery residency, cardiothoracic surgery research fellowship, and integrated general surgery-cardiothoracic surgery residency at NYU Langone Health, after which she joined the Medical College of Georgia at Augusta University. She is based at Grady Memorial Hospital, where she practices general adult cardiac surgery with a clinical and research interest in hypertrophic cardiomyopathy.
2021 Faculty Awards and Distinctions

Shelly Abramowicz, DMD, MPH
Editorial Board, Journal of Oral and Maxillofacial Surgery

Jaime Benarroch-Gampel, MD, MS
Editorial Board, Annals of Vascular Surgery

Gary Bouloux, MD, DDS, MDSc
President, American Society of Temporomandibular Joint Surgeons

John Calvert, PhD
Top Reviewer, Journal of Molecular and Cellular Cardiology

Kenneth Cardona, MD
AYA Sarcoma Working Group, National Clinical Trial Network
mCODE Executive Committee, American Society of Clinical Oncology

Grant Carlson, MD
Founder’s Award for Best Member Paper, Southeastern Society of Plastic Surgeons

J. Middleton Chang, MD
Editorial Board, Annals of Vascular Surgery

Angela Cheng, MD
Editorial Board, Journal of Reconstructive Microsurgery

Craig Coopersmith, MD
Outstanding Leadership During the COVID-19 Pandemic Award, The Emory Clinic

Keith Delman, MD
Chair, Surgical Council on Resident Education Committee, Society of Surgical Oncology/American Board of Surgery
2021 Inductee, Emory MilliPub Club

Christopher Dente, MD
2020 Emory at Grady Innovation Award, Emory at Grady Professional Development Committee

Stephanie Drew, DMD
Hidden Gem Award, Emory Medicine Recognitions Committee
Chair, Nominations Committee, American College of Oral and Maxillofacial Surgeons

Megan Durham, MD
Associate Editor, Journal of Techniques and Innovations in Pediatrics

Yazan Duwayri, MD
Executive Council, Southern Association for Vascular Surgery
Distinguished Fellow, Society for Vascular Surgery

Mandy Ford, PhD
Member-at-Large, Board of Directors, American Society of Transplantation
Editorial Board, Clinical Immunology Communications

Theresa Gillespie, PhD, MA, BSN
Chair, Scientific Research Hub, Africa BIO Consortium Innovation Hub
Chair, Primary Care Peer Review Panel, 2021 Military Health System Research, Department of Defense

Wendy Greene, MD
Board of Governors, American College of Surgeons (ACS)
Outstanding Service Award, Society of Critical Care Medicine Board & Southeastern Surgical Congress

Kendra Grubb, MD, MHA
Editorial Board, Cardiovascular Revascularization Medicine

Jessica Harding, PhD
Editorial Board, Diabetes Care

Elizabeth Hechenbleikner, MD
1st Place, Georgia Hospital Association 2021 Patient Safety and Quality Award
Chair, Education Committee, Georgia Chapter of the American Society for Metabolic & Bariatric Surgery

Juvonda Hodge, MD
Committee on Trauma, ACS
Subcommittee on Pediatric Burn Care, American Burn Association

William Keeling, MD
President-Elect, National Pulmonary Embolism Response Team Consortium

William Kitchens, Jr., MD, PhD
Member-at-Large, Community of Transplant Scientists Executive Committee, American Society of Transplantation

David Kooby, MD
Editorial Board, Annals of Surgery
Christian Larsen, MD, DPhil
2021 Scientific Achievement Award, American Medical Association

Bradley Leshnower, MD
Chair, Young Leadership Committee, Council on Cardiovascular Surgery and Anesthesia

Denise Lo, MD
Strategic Planning Strike Force, American Society of Transplant Surgeons

Michael Lowe, MD, MA
Vice Chair, Corporate Relations Committee, Society of Surgical Oncology

Raymond Lynch, MD
Emory 1% Award, for receiving NIH study section review scores in the top one percentile

Shishir Maithel, MD
Eligibility Criteria Consistency Initiative, Oncology Center of Excellence
Program Chair, 4th Annual Asia-Pacific Cholangiocarcinoma Summit

Jonathan Meisel, MD
2021 Dean’s Teaching Award, Emory School of Medicine

Jeffrey Miller, MD
Editorial Review Board, American Society for Artificial Internal Organs Journal

Sharon Muret-Wagstaff, PhD, MS, MPA
Academy of Master Surgeon Educators, ACS
Co-Chair, Research and Development Committee, Accredited Education Institutes Consortium, ACS

Kenneth Newell, MD, PhD
Chair, Circle of Excellence, American Society of Transplantation

Muralidhar Padala, PhD
Committee for Standards for Transcatheter Heart Valve Repair and Replacement Devices, International Standards Organization

Ronald Parsons, MD
Associate Editor, Transplantation

Rachel Patzer, PhD, MPH
Chair, Data Advisory Committee, United Network for Organ Sharing
Co-Chair, Technical Expert Panel Committee, Centers for Medicare and Medicaid Services

Barbara Pettitt, MD
2021 Mary Edwards Walker Inspiring Women in Surgery Award, ACS

Allan Pickens, MD
Presidential Task Force on Governance, Society of Thoracic Surgeons
Editorial Board, Journal of Translational Oncology

Ravi Rajani, MD
Councilor at Large, Vascular and Endovascular Surgery Society
Vascular Surgery Certifying Exam Committee, American Board of Surgery

Christopher Ramos, MD
Chair, Program Committee, Georgia Vascular Society

Joe Sharma, MD
President-Elect, Georgia Society of the ACS
Chair, Telehealth Workgroup, Board of Governors, ACS

Subhadra Shashidharan, MD
Curriculum Taskforce: Advanced Congenital Section and Topic Editors, Thoracic Surgery Online Curriculum, Society of Thoracic Surgeons

Fawwaz Shaw, MD
National Board Review for Pediatrics, United Network for Organ Sharing
Reviewer of the Year, Congenital Heart Surgery, The Annals of Thoracic Surgery

Charles Staley, MD
President’s Advisory Committee, Society of Surgical Oncology

Toncred Styblo, MD, MS
Unsung Heroine Award for 2021, Center for Women at Emory

Keneeshia Williams, MD
Certificate in Applied Surgical Education Leadership Program, ACS

Virginia Shaffer, MD
Editorial Board, Journal of Surgical Research: Clinical and Laboratory Investigation
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