



Section of Surgical Sciences

SUMMER / FALL • NEWS REPORT 2023



Section of Surgical Sciences

— Departments and Divisions —

Department of Cardiac Surgery

- Division of Pediatric Cardiac Surgery

Department of Neurological Surgery

- Division of Pediatric Neurological Surgery

Department of Oral and Maxillofacial Surgery

- Division of Dentistry

Department of Surgery

Department of Pediatric Surgery

Department of Plastic Surgery

- Division of Hand and Upper Extremity Surgery
- Division of Pediatric Plastic Surgery

Department of Thoracic Surgery

Division of Surgical Research

Department of Vascular Surgery



Department of Surgery

Division of General Surgery

Division of Hepatobiliary Surgery &
Liver Transplantation

Division of Kidney & Pancreas Transplantation

Division of Surgical Oncology &
Endocrine Surgery

Division of Acute Care Surgery

- Burn Center

- Emergency General Surgery

Division of VA General Surgery

Williamson County



State of the Section 2023 - On track for growth and achievements but the need for connectivity is strong

Compiling the list of achievements of Surgical Sciences for the State of the Section every year, I am reminded what an extraordinarily accomplished group of professionals you all are.

The best thing about being at Vanderbilt University Medical Center is getting to work with each other every day. Your clinical achievements, innovations, and commitments to education set the highest bar and make us one of the most sought-after places in the world to work and train.

Over the next year I'd like to focus on connectedness. Although I'm not sure I can precisely define it, I do feel that as we have grown, weathered a pandemic, and collapsed our normal three-dimensional interactions into two dimensions, things seem different.

In our last Vice Chairs meeting we discussed this at length. Over the next year, we will plan to have a different kind of holiday party that includes children, plan a day at the zoo, and re-establish what I hope to be an annual softball game. We are also looking at days where the Section members can engage in a charitable activity in our community. Please contact me if you have ideas, and please consider attending when we do have these events.



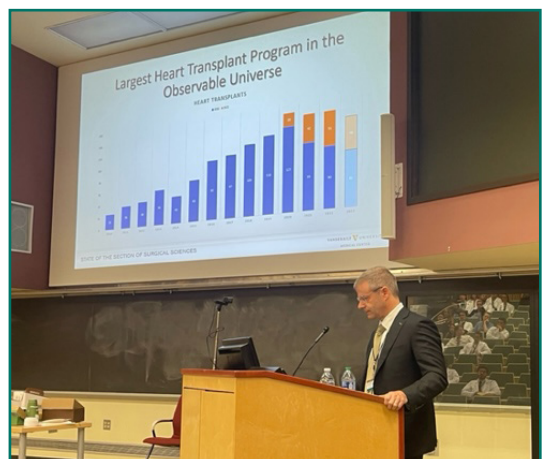
Seth Karp, MD
Chair, Section of Surgical Sciences

Thank you for all you do, and I look forward to a productive academic year.



If you missed the State of the Section 2023 you can watch the recorded presentation that was Sept. 22, 2023 during Surgical Grand Rounds.

[Click picture above and login](#)



Patel named chief of the Division of Acute Care Surgery

Mayur Patel, MD, MPH, professor of Surgery and Ingram Chair in Surgical Sciences, has been named chief of the Division of Acute Care Surgery in the Department of Surgery at VUMC.



Patel

An internationally renowned trauma surgeon-scientist, Patel has been a member of the VUMC faculty since 2012. He has secondary appointments in the departments of Neurological Surgery and Hearing and Speech Sciences.

“Dr. Patel has a unique aptitude for forging productive collaboration and enhancing the capability of those around him,” said **Seth Karp, MD**, H. William Scott Jr. Professor and chair of the Section of Surgical Sciences. “He is a highly respected and committed mentor, and for more than a decade he has been educating the next generation of learners pursuing research in a medical career. He is well prepared to lead Acute Care Surgery, ensuring the continued delivery of exceptional clinical care, solid mentorship of our trainees, and pursuit of research that strengthens the field and improves patient safety and outcomes.”

“We do many things, we do them well and are always pushing ourselves to do better. Our incredible teams — including 17 faculty, eight fellows and a dedicated group of advanced practice providers, registered nurses, interdisciplinary colleagues and administrative partners — make this happen. I am thrilled to serve this high-functioning, tight-knit group,” Patel said.

“Dr. Patel’s regional and national leadership in the field of trauma, critical care surgery and traumatic brain injury is undisputed,” said **Carmen Solórzano, MD**, John L. Sawyers Professor of Surgical Sciences and chair of the Department of Surgery. “Add to that his commitment to the education and development of faculty, medical students, surgical residents and fellows, and he was an easy choice for this key leadership role.”

[Complete story link](#)

Montenovo is new chief of Hepatobiliary Surgery and Liver Transplantation

Martin Montenovo, MD, associate professor of Surgery at VUMC, has been named chief of the Division of Hepatobiliary Surgery and Liver Transplantation in the Department of Surgery.

Montenovo joined VUMC in September 2019 when he was recruited to help develop and expand the Medical Center’s living donor liver transplant program. Living donor liver transplantation is when a diseased or malfunctioning liver is surgically removed and replaced with a portion of healthy liver from a living donor. Because of the liver’s ability to regenerate, the partial liver soon grows into a complete organ.

In March 2020, Montenovo worked alongside Sophoclis Alexopoulos, MD, then chief of Liver Transplantation, and a large, multidisciplinary transplant team to successfully perform the first such procedure at VUMC. Since then, the living donor liver transplant program has continued to grow.

“Dr. Montenovo’s wealth of knowledge in the field of liver transplantation, his unwavering commitment to clinical excellence and team-based approach have contributed to making our transplant program one of the top programs in the world,” said **Carmen Solórzano, MD**, chair of the Department of Surgery and John L. Sawyers Professor of Surgical Sciences. “He was an obvious choice for this position.

“In February, he stepped up to provide interim leadership of the Division of Hepatobiliary Surgery and Liver Transplantation. We look forward to celebrating the successes of Dr. Montenovo and our remarkable transplant teams as they restore individuals receiving liver transplants to improved health.”



Montenovo

[Complete story link](#)

Dennis, Gondek lead multi-site study of procedure to limit blood loss by partially blocking aorta



Dennis

Acute care surgeons at VUMC are leading a two-year, multi-center observational study of a minimally invasive technique to control life-threatening blood loss by inserting a balloon inside the aorta to restrict blood flow below the heart.

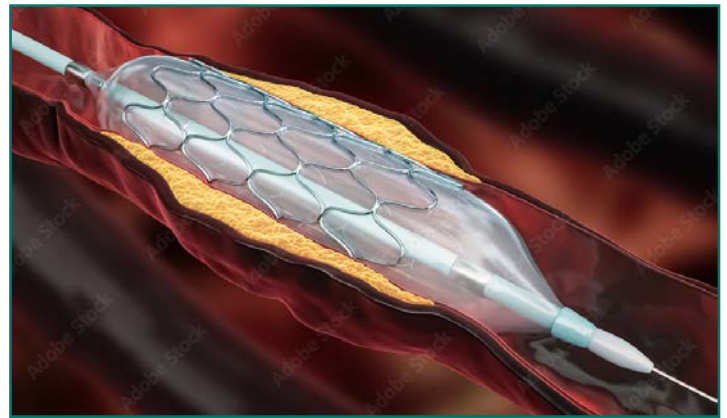


Gondek

Funded by a \$6 million U.S. Army Medical Research and Development Command grant, the Partial REBOA Outcomes Multicenter Prospective Trial (PROMPT) will examine clinical outcomes when using a procedure called partial resuscitative endovascular balloon occlusion of the aorta (REBOA) to control hemorrhage and to better

define the safest and most effective way to perform the procedure.

“We believe from our experience with the device that it clearly has benefits, but we want to fine-tune this procedure so we can provide the maximum benefit for the greatest number of patients,” said co-principal investigator **Bradley Dennis, MD**, associate professor of Surgery and medical director of VUMC’s Trauma Intensive Care



Unit. “Doing this now, in a controlled fashion with a limited number of trauma centers, will help us standardize partial REBOA use and identify the best practices so we can then help spread that information to the rest of the country.”

“If surgeons are doing a procedure with a high risk for hemorrhaging, we can put the catheter in and not inflate the balloon, which means that we’re not occluding the aorta at all,” said co-principal investigator **Stephen Gondek, MD, MPH**, assistant professor of Surgery. “But if something goes wrong, it takes three seconds to inflate it and temporarily stop the blood flow.

[Complete story link](#)

Joseph Magliocca named director of the Vanderbilt Transplant Center

Joseph Magliocca, MD has been named director of the Vanderbilt Transplant Center and surgical director of the Pediatric Liver Transplant Program.

Magliocca, professor of Surgery in the Division of Hepatobiliary Surgery and Liver Transplantation within the Department of Surgery, is a board-certified surgeon specializing in liver transplantation. He comes to Vanderbilt from Emory University School of Medicine in Atlanta, where he was an associate professor of Surgery and Pediatrics.

He served as surgical director of the Adult Liver Transplant and Living Donor Liver Transplant programs in the Emory Transplant Center. He also served as the surgical director of the Pediatric Liver Transplant Program at Children’s Healthcare of Atlanta and was a member of the Cancer Prevention and Control Research Program at the Winship Cancer Institute.

“I am thrilled to join such an extraordinary team at this renowned institution,” Magliocca said. “My vision for the program is multifaceted; the primary priority is to deliver

the highest quality organ transplant care to all patients in need, while maintaining exceptional patient outcomes. Additionally, our goals will focus on the continued development of the academic mission of the Transplant Center to advance the field of organ transplantation in Vanderbilt’s rich academic environment. Finally, I want to continue the tradition of the Transplant Center as a place where people love to work.”



Magliocca

Seth Karp, MD, H. William Scott Jr. Professor, chair of the Section of Surgical Sciences and former director of the Transplant Center said, “Vanderbilt is extremely fortunate to have recruited an established national leader as the director of our Transplant Center,” Karp said. “Dr. Magliocca brings a wealth of clinical experience in the adult and pediatric space as well as a vision to expand our services in patient care, research and education.”

[Complete story link](#)

Hawkins, Ford and Geiger study recommends multi-modal pain management after anorectal outpatient surgery to help address opioid overdose

Despite ongoing efforts to reduce overprescribing, prescription-related opioid death rates continue to increase, with attributed deaths approaching 17,000 in 2021 — up from 14,000 in 2019.

Surgical specialties are the source of 10% of prescribed opioids in the United States. With many surgeries, including anorectal surgeries now performed in outpatient settings, postoperative pain can be a challenge, often requiring patients to manage their pain at home.

“There are limited evidence-based guidelines for postoperative pain management in patients undergoing outpatient anorectal surgery,” said **Alexander Hawkins, MD, MPH**, associate professor of Surgery and director of the Colorectal Research Center at VUMC.

To address this knowledge gap, Hawkins and his team studied patient opioid use and created prescribing recommendations for anorectal procedures. Collaborators include Vanderbilt colleagues **Molly Ford, MD** and **Timothy Geiger, MD, MMHC** — both associate professors of Surgery, and Melissa Hite, MD.

“Our study strengthens the current body of evidence, as our observations were similar,” Hawkins said. “We found that the median number of pills to achieve adequate pain control ranged from two to 16 tablets of oxycodone 5 mg.

“We encourage the use of a multi-modal pain-control approach to pain management,” he added.



Hawkins



Ford



Geiger

[Complete story link](#)

Huang named to prestigious academic medicine executive leadership program

Eunice Huang, MD, MS, professor of Pediatric Surgery, is one of four VUMC faculty members selected to participate in the highly competitive 2023-2024 Hedwig van Ameringen Executive Leadership in Academic Medicine (ELAM) program at Drexel University. Huang was one of two faculty chosen for the Executive Leadership in Academic Health Care (ELH) track launched in 2022.



Huang

One of Huang’s primary interests is promoting innovative methods to implement guidelines for standardization of best practices across institutions to advance cost-effective accurate diagnostics for pediatric surgical interventions such as appendicitis and inguinal hernias.

Another important focus for Huang is effective use of electronic health record data for research and knowledge generation to aid practitioners and families in caring for pediatric patients especially with complex congenital problems.

Huang’s VUMC leadership roles include vice chair for Clinical Services, associate program director for Pediatric Surgery Fellowship, Section vice chair for Surgical Quality & Patient Safety and associate surgeon-in-chief and chief surgical quality and innovations officer for Monroe Carell.

“Vanderbilt University School of Medicine typically supports one to two ELAM fellows annually. This year will mark our first ELH fellows. The four participants accepted are the most we have ever had in one year. It is truly exciting to have had all four of our nominees accepted,” said Maureen Gannon, PhD, associate dean for Faculty Development.

[Complete story link](#)

Goldenring, Kaji honored at American Physiology Summit

James Goldenring, MD, PhD, and **Izumi Kaji, PhD**, were among three faculty members and five postdoctoral fellows at VUMC who received research honors from the American Physiological Society (APS) during its 2023 American Physiology Summit in Santa Monica, California.

The professional organization represents nearly 10,000 scientists and educators whose studies of physiology — biological function — are advancing understanding and treatment in medical fields as diverse as cancer, heart disease, obesity and addiction.

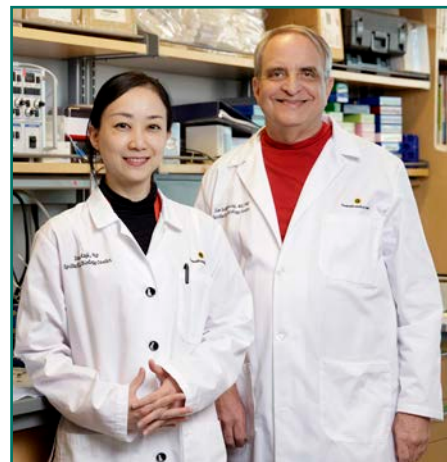
Goldenring, the Paul W. Sanger Professor of Experimental Surgery at VUMC, was presented with the Horace W. Davenport Distinguished Lectureship by the society's Gastrointestinal and Liver Physiology Section in recognition of his group's significant contributions to understanding the development of gastric cancer and other GI diseases.

Goldenring is professor of Surgery and of Cell & Developmental Biology and vice chair of Surgical Research for the Section of Surgical Sciences. The lectureship, named for former APS president Horace W. Davenport, is the section's most prestigious award.

"The American Physiological Society has been a continu-

ing leader in the support of basic research in gastroenterology and, in particular, its commitment to the training and development of graduate students and postdocs," Goldenring said. "I am truly humbled to receive this award from the APS, which really recognizes the efforts of so many trainees and collaborators who contributed immeasurably to this work over the years."

Kaji, who is investigating nutrient sensing and absorptive mechanisms in the gastrointestinal tract with a goal of treating congenital diarrhea, received the New Investigator Award from the Gastrointestinal and Liver Physiology Section.



Drs. Kaji and Goldenring

[Complete story link](#)

Danko, surgical director of pediatric ECMO lauds program's Platinum Level of Excellence in Life Support by (ELSO)

For the past 15 years Monroe Carell Jr. Children's Hospital at Vanderbilt's heart-lung support program has achieved the highest level of recognition available from the Extracorporeal Life Support Organization (ELSO).

This year, the program, the first in Tennessee to use extracorporeal membrane oxygenation (ECMO), garnered the premium designation bestowed by the society — the Platinum Level of Excellence in Life Support by ELSO.

"Being recognized at the Platinum Level validates the pediatric ECMO team's continued leadership in the ECMO community worldwide," said Daphne Hardison, RN, MSN, CES-P, manager of ECMO at Monroe Carell. "ECMO specialists worked together to showcase our commitment to a comprehensive quality program."

ECMO is a life-sustaining mechanical system that temporarily takes over for the heart and lungs of critically ill patients, allowing their organs to rest and recover by removing carbon dioxide from the blood, replacing it with lifesaving oxygen, and returning it to the patient's circulatory system.

Vanderbilt was the first to use this technology in Tennessee

in 1989, with the first patient placed on ECMO in the Neonatal Intensive Care Unit. The pediatric program is one of the largest and most successful programs in the world.

"I am so proud of our ECMO program for this achievement," said **Melissa Danko, MD**,

associate professor of Pediatric Surgery and surgical director of ECMO at Monroe Carell. "This is a testament of the level of commitment and dedication shown by each and every member of our team. The patients we treat are the sickest in the hospital, and we strive to provide the best care for these children and their families."



Danko

[Complete story link](#)

Study shows Vanderbilt-developed technology assists surgeons in identifying parathyroids

Baregamian, Kiernan, and Solórzano part of research team of surgeons and biomedical engineers who show patient safety may improve by using the probe-based device (PTeye)

A team of surgeons and biomedical engineers at VUMC and Vanderbilt University have shown the use of probe-based near infrared autofluorescence (NIRAF) technology helps confirm the identification of parathyroid glands during endocrine surgery, and their findings are part of a multi-site trial of the technology now underway.

Parathyroid glands, which are about the size of a grain of rice, regulate blood calcium levels to support heart, nervous system, kidney and bone function. Locating parathyroid tissue and distinguishing it from other tissues during surgery is difficult, even for expert surgeons, because of the glands' unpredictable anatomic position, small size and similar appearance to surrounding tissues. Preserving the delicate blood supply of parathyroid glands is also challenging.

In 2018, the Food and Drug Administration cleared two devices to assist with the detection of parathyroid glands in adults, including the probe-based device called the PTeye developed by a team at the Vanderbilt Biophotonics Center, led by Anita Mahadevan-Jansen, PhD, professor of Biomedical Engineering and the Orrin H. Ingram Chair in Biomedical Engineering and the VUMC Endocrine Surgery team led by **Carmen Solórzano, MD**, chair of the Department of Surgery, John L. Sawyers Chair in Surgical Sciences and director of Vanderbilt Endocrine Surgery.



Baregamian



Kiernan



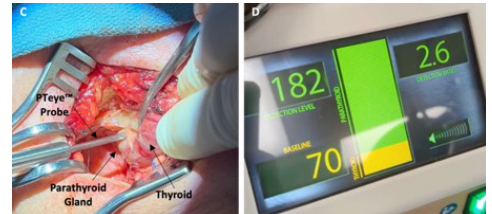
Solórzano

In the probe group, the parathyroid identification rate of the senior surgeon improved from 3.2 to 3.6 parathyroids per patient, while that of the junior surgeon also rose from 2.2 to 2.5 parathyroids per patient. Parathyroid identification was even more prominent for surgeon trainees, increasing significantly from 0.9 to 2.9 parathyroids per patient. Additionally, there was a significant reduction in frozen section in the probe group versus the control group.

Solórzano stressed that the technology is an adjunctive tool, intended to assist but not replace a surgeon's visual identification of parathyroid gland and frozen sections to confirm thyroid tissue type. Further trial data is pending regarding PTeye value in thyroid procedures.

"I use this technology in my difficult surgical procedures, and I find that it makes a difference for my patients," said Solórzano.

Additional collaborators for the study published in the *Annals of Surgery* include **Colleen Kiernan, MD, MPH**; Giju Thomas, PhD; Anuradha Patel, MD; Run Fan, PhD, MS; Fei Ye, PhD, MSPH; Parker Willmon, MS; and **Naira Baregamian, MD, MMS**. [Journal link](#)



Parathyroids exhibit autofluorescence, meaning when the glands are illuminated with light of a specific wavelength, they reflect light back with a different wavelength. This allows the then glowing parathyroid glands to be more easily differentiated from other tissues in real time and without the need for frozen section biopsy to confirm parathyroid tissue which can take 20-30 minutes.

[Complete story link](#)

A year of teamwork by Drolet, Hill, Perdikis and Stehr help restore patient's arm after devastating ATV accident

During her clinic visit Dawn Reed shows VUMC occupational therapist **Justin Stehr, OTR, CHT** her tattoo across her right forearm that reads in her own shaky cursive, "I was not built to break." To Reed, and those who know about her recovery from a massive injury to this arm, these words are fitting.

Over more than a year, hundreds of providers from Emergency Medicine, Trauma, Orthopaedic Surgery, Plastic Surgery and Occupational Therapy have played a role in saving and restoring the function of Reed's right arm and hand after a utility terrain vehicle (UTV) accident in July 2022. Many who assisted in her healing and rehabilitation call her recovery nothing short of miraculous.

At the time of the accident Reed lived in Michigan and was visiting friends in rural Franklin County, TN. Every structure of her arm - bone, skin, ligaments, muscles, tendons and nerves - was damaged. Reed's arm had been "degloved," meaning the top layers of skin and tissue were torn away from underlying muscle, connective tissue and bone. Her radius and ulna bones were crushed, with one-third of her ulna missing or in splinters.



Drolet



Hill



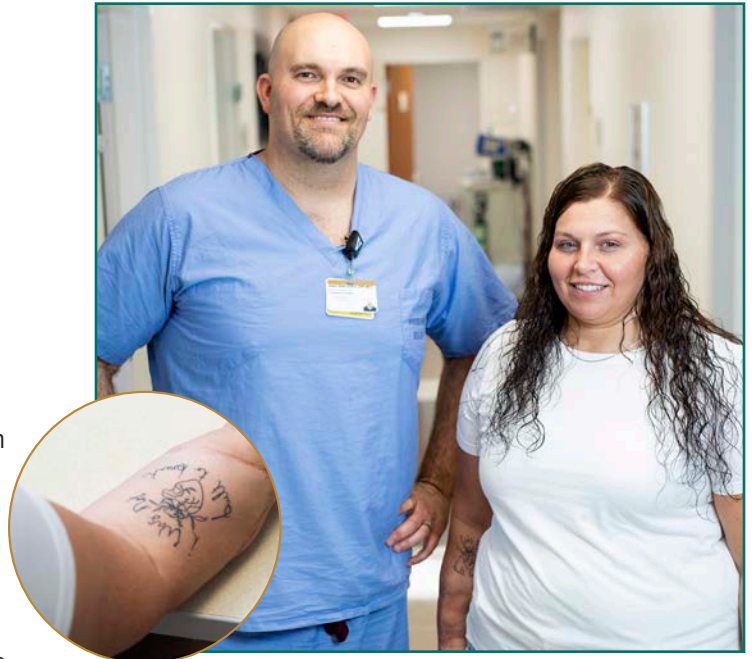
Perdikis

Mihir Desai, MD, was on call when Reed arrived. He and his team began a four-hour surgery to reconnect viable internal structures to give her arm the best chance at restored blood flow and nerve regeneration. After surgery, Reed wanted to return home to Michigan. The stipulation was that she immediately connect with specialists there to manage the ongoing intensive care and rehabilitation of her arm.

In Michigan, after an exploratory surgery to remove skin that had begun dying, an orthopaedic surgeon, and a plastic surgeon agreed: she needed an immediate transfer to University of Michigan Medical Center, where her arm would likely be amputated.

"My boyfriend told me, 'You just need to go back down to Vanderbilt. They're the ones that saved your arm,'" Reed said. "My family agreed."

The surgeon in Michigan contacted Desai and he felt she needed a "free flap" surgery if there was any chance to save her arm. He pulled in two experts



Justin Stehr, OTR, CHT worked with Dawn Reed for over a year

from VUMC's Department of Plastic Surgery, **Brian**

Drolet, MD, chief of Hand and Upper Extremity Surgery, and **Brad Hill, MD**, director of Limb Reconstruction.

"I vividly remember meeting her in the OR holding room," said Drolet. "We were looking at a large soft tissue defect, with exposed bone and hardware. We knew immediately this was going to be big problem to tackle."

For Reed's next major surgery, Drolet was joined by **Galen Perdikis, MD**, chair of the Department of Plastic Surgery. For the free flap procedure, the surgeons transferred a section of skin and tissue from her thigh to her arm to replace the failing tissue. The procedure involves delicate microsurgery to reconnect arteries, which bring blood into the flap, and veins, which allow blood to flow out. The surgeons also replaced the metal hardware to join Reed's bones together.

"After surgery, Dawn went to the Surgical ICU where they checked on that flap every hour with a Doppler to monitor for blood flow," Drolet said. "There is high intensity post-op care."

Soon after she was discharged, Reed began working with Stehr, an occupational therapist in the Department of Plastic Surgery with special training in trauma, wound care and therapy specific to hands and arms.

[Complete story link](#)

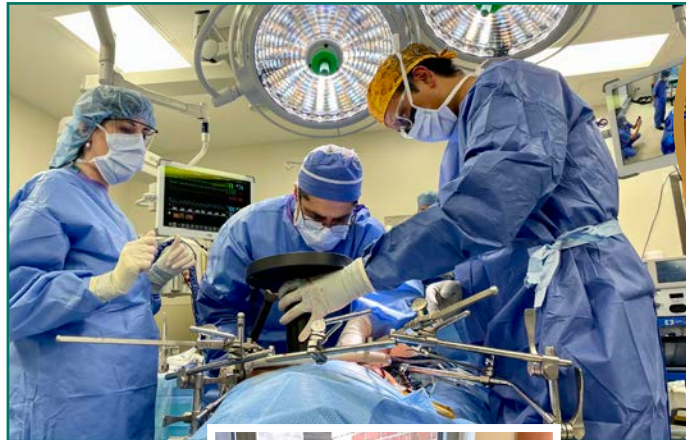
Idrees performs novel intraoperative radiotherapy for pancreatic cancer on first patient in Tennessee

Maudean Armour of Clarksville, TN, is grateful she's the first patient in the state to undergo intraoperative radiotherapy for pancreatic cancer — a new technology that targets any remaining cancer cells with electrons during surgery.

The IntraOp Mobetron IORT with electrons at VUMC makes surgery possible for patients with pancreatic cancer who may have been told their tumors are inoperable because of involvement of major blood vessels.

"I was kind of surprised to be the first," Armour said. "I know pancreatic cancer is not a big secret. I knew Alex Trebek (former host of Jeopardy) had died from it. I was surprised, but at the same time blessed, that I had a doctor who had the knowledge and confidence to do it."

Armour's journey to Vanderbilt occurred after a series of referrals that began when her primary care physician wondered why her glucose level had spiked. The wife of a retired veteran of the U.S. Army, she had undergone an annual physical at age 64 at Fort Campbell.



Armour was physically active with a six-day-a-week gym routine, so her doctor suspected there may be a reason

for the high glucose level other than diabetes. He ordered a CT (computed tomography) scan, noticed a suspicious mass, and then referred her to a Nashville hospital for another scan.

Doctors there referred her to **Kamran Idrees, MD, MSCI, MMHC**, chief of the Division of Surgical Oncology and Endocrine Surgery.

"With the precision of intraoperative radiation therapy, we can target any remaining cancer cells on or near blood vessels to vital organs to preserve them.

With this technology, we can precisely give radiation to the area of concern during surgery while avoiding unnecessary radiation to other organs," Idrees said.

[Complete story link](#)



Armour and Idrees

Grogan among seven new leaders named to Vanderbilt-Ingram research programs



Grogan

"The researchers who have been appointed to lead these programs are committed to continuing the record of excellence established by their predecessors," said Ben Ho Park, MD, PhD, Benjamin F. Byrd Jr. Professor of Oncology and director of the Vanderbilt-Ingram Cancer Center (VICC). "These programs are vital to the mission and the success of VICC as a National Cancer Institute-designated Comprehensive Cancer Center."

The new leaders for the Cancer Health Outcomes and Control Research Program, which is aimed at improving population health in the areas served by VICC, are Stacie Dusetzina, PhD, **Eric Grogan, MD, MPH**, and Daniel Barocas, MD, MPH.

Grogan, associate professor of Thoracic Surgery and Medicine, focuses on the early detection and optimal therapy for patients with lung cancer. In addition to his work at Vanderbilt, he serves as chief of Thoracic Surgery at the Nashville Veterans Affairs hospital.

[Complete story link](#)

Gillaspie among multiple surgeons who team with VISE to improve surgical technology and instruments

Many surgical improvements — both small and large — are being designed and tested here, due to a strong and “extraordinarily unique” collaboration between VUMC and the Vanderbilt Institute for Surgery and Engineering (VISE), said **Erin Gillaspie, MD, MPH**, assistant professor of Thoracic Surgery and a surgeon who has collaborated with VISE.

Gillaspie said that the leaders of VISE have taken great strides to integrate themselves into the surgical world, even moving onto the Medical Center campus to make it easier for surgeons to spend time with VISE engineers designing new ideas, creating protocols and writing proposals, and helping to test and refine new devices.

“Equally, it has allowed teams of engineers to come spend time in the clinical setting, including the operating rooms, which allows them to have a deeper understanding of our current technologies, applications and hurdles that we are working to overcome,” she said.

“The partnership of engineering and surgery, to me, is one that is extraordinarily exciting and incredibly useful,” Gillaspie said. “We’ve seen a great expansion in technology and instruments, especially in the past two decades; there are still so many opportunities to both enhance



Gillaspie

current technologies as well as to develop new ones.”



Many current devices, while excellent, have significant shortcomings that have been a challenge to overcome, Gillaspie said. “For example, our standard laparoscopic tools are using cameras that only project images to us in two dimensions.

[Complete story link](#)



Menzel

Menzel lauds expanded guidelines and greater benefits for younger age weight loss surgery

Over 42 percent of Americans have obesity, the highest rate ever for the condition in the United States, according to recent CDC reports. Comorbidities such as type 2 diabetes, hypertension, dyslipidemia, and, quality-of-life issues — often emerge early in patients with obesity.

Bariatric surgeons are including younger patients in the cohort considered as candidates for metabolic surgery — bariatric surgery with the specific intent to treat diabetes and other metabolic disease. Their goal is to address the problems before they turn into serious, life-long health issues.

“A big part of the decision to offer bariatric surgery to younger patients is to treat weight-related conditions earlier in their course, or prevent them from developing entirely,” said **Christopher Menzel, MD**, assistant professor of Clinical Surgery, a surgeon at the Vanderbilt Weight Loss Center, and medical director of the bariatric surgery

program at Vanderbilt Wilson County Hospital.

Younger surgery patients in their 20’s and 30’s are now being joined by a subset of teens.

“Obesity-related conditions, such as diabetes, polycystic ovary syndrome, and sleep apnea, among others, greatly impact patients’ lives in those formative years, which can change the trajectory of their mental, physical and emotional health,” Menzel explained.

“Prior to medical school, I worked as a personal fitness trainer and nutritionist,” he said. “People I worked with would lose weight over a period of time, but eventually they would hit a plateau — whether it be at a loss of 20 pounds or 100 pounds — and couldn’t lose any more weight. I saw the struggles first-hand, despite meal planning, calorie counting and intense exercise. That’s part of where my passion to become a bariatric surgeon comes from.”

[Complete story link](#)

Clair team investigates new limb salvage procedure to help patients avoid leg amputation



Clair

More than 75% of patients facing amputation from the most severe form of peripheral artery disease were able to keep their limb after an innovative treatment as part of a multicenter study published in the *New England Journal of Medicine*.

The alternative to amputation, known as “limb salvage,” for patients with chronic limb-threatening ischemia (CLTI) came from the PROMISE II U.S. clinical trial assessing LimFlow technology and its use in performing transcatheter arterialization of the deep vein system.

The trial completed recently, and results were formally presented at the VIVA (Vascular InterVentional Advances) meeting in Las Vegas.

“This procedure is the only option for a subset of patients with severe vascular disease who are at risk for amputation of their limbs,” said the study’s co-principal inves-

tigator **Daniel Clair, MD**, professor and chair of the Department of Vascular Surgery.

“Patients with long-standing diabetes and severe vascular disease in the foot itself often have no way to restore enough blood flow to the foot to heal wounds. In the past, a majority of these patients ended up losing their limbs,” he said.

The technique of arterialization of the veins was initially proposed over 100 years ago, but it was not until understanding that blood flow needed to be directed into the foot veins that limbs were able to be saved, Clair said.

[Complete story link](#)

[Journal link](#)



Zamora to present on adult-pediatric surgery collaborations and how they can advance pediatric robotic surgery, including at Monroe Carell



Despite the intuitive pediatric advantage of maneuvering well in small spaces, robotics in children’s surgery has lagged adult volumes by a large margin.

Irving Zamora, MD, MPH, assistant professor of Pediatric Surgery, has prepared an abstract, “Development of a Pediatric Robotic Surgery Program: Collaboration in Action,” that describes the two-

year-long initiative. The work — prepared with Vanderbilt University School of Medicine (VUSM) student Marshall Wallace and colleagues — was presented at the International Pediatric Endosurgery Group annual meeting, and also focuses on training residents and fellows, as well as opening the door to colleagues around the world who

want to learn from Monroe Carell’s experiences.

“Our hospital is on the same campus as the adult hospital, so we have had a special opportunity to benefit from collaborating with experienced robotics surgeons as we applied this technology in children over a tiered case difficulty progression,” Zamora said.

Zamora believes the time is ripe for pediatric surgeons to derive similar benefits as their adult colleagues, including wristed movements, enhanced 3D visualization, stable camera control and the ability to work safely in tight quarters with delicate tissues. He and his colleagues are developing a formal curriculum while continuing to increase capacity in complex cases and those involving younger and smaller children.

“Then we definitely want to focus on our outcomes research, being able to determine how we’re doing through formal measurement and utilize that data to help continue to improve the program going forward,” he said.

[Complete story link](#)

Baregamian, Lopez, Solórzano co-author study on identifying parathyroids during pediatric endocrine surgery



Damage or removal of calcium-regulating parathyroid glands during endocrine surgery can put children at risk for poor growth and slow mental development. Preserving the often rice-sized organ in children is vital, but not always easy.



Baregamian



Lopez



Solórzano

In a first-of-its-kind study in children, researchers at Monroe Carell and VUMC found that a probe technology that uses near-infrared autofluorescence lighting helps positively identify and preserve the parathyroids during endocrine surgery.

Contributing to the study were Section faculty **Naira Baregamian, MD, MMS**, assistant professor of Surgery; **Monica Lopez, MD, MS**, associate professor of Pediatric Surgery; and **Carmen Solórzano, MD**, John L. Sawyers Professor of Surgical Sciences and chair of the Department of Surgery.

This study, “Identifying Parathyroids in Pediatric Thyroid/Parathyroid Surgery by Near Infrared Autofluorescence,” enrolled 19 children, all between the ages of 6 and 16 years, who had endocrine surgery (thyroidectomy or parathyroidectomy) between 2019 and 2022. The researchers found that the probe technology accurately detected the parathyroid gland 95.8% of the time, with 46 out of 48 correctly identified.

The findings, reported in the journal *The Laryngoscope*, come more than a decade after Vanderbilt University biomedical engineers and endocrine surgeons first discovered that near-infrared autofluorescence (NIRAF)

was shown effective in identifying parathyroids during endocrine surgery in adults. The team went on to develop a probe technology that later earned FDA approval.

[Complete story link](#)

[Journal link](#)

Goldenring receives AGA Distinguished Achievement Award

James Goldenring, MD, PhD, the Paul W. Sanger Professor of Experimental Surgery at VUMC, has been honored by the American Gastroenterological Association (AGA) for making significant contributions to understanding gastrointestinal disease.



Goldenring

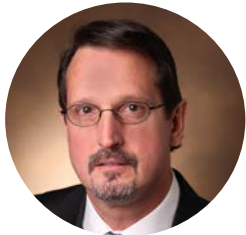
Goldenring, vice chair of Surgical Research for the Section of Surgical Sciences and professor of Surgery and Cell & Developmental Biology, received the AGA's Distinguished Achievement Award in Basic Science during Digestive Disease Week in Chicago in May.

In its announcement, the AGA noted Goldenring's groundbreaking studies of congenital diarrheal diseases, and his group's models of metaplastic (precancerous) changes in the stomach.

“Dr. Goldenring's seminal studies of both epithelial pathophysiology and gastric precancer have made immeasurable contributions to our understanding of GI diseases,” the announcement read.

[Complete story link](#)

English, Flynn prepare patients and medical students for life saving weight loss journeys



English



Flynn

Kenneth Reynolds believed the ceiling of a patient room in the cardiac unit of a West Tennessee hospital would be the last thing he saw before he died.

The hospital recorded his weight at 780 pounds, and he was hospitalized due to acute decompensated heart failure. His heart wasn't adequately circulating blood, he struggled with each breath, causing fluid to build up in his body.

Reynolds made it out of that room. Today he weighs 402 pounds, and he credits a team at the Vanderbilt Weight Loss Center for giving him back his life.

"My heart doctor looked at me and said, 'You have to get to Vanderbilt,'" Reynolds said. Reynolds steeled himself for one last try.

He met Sahar Takkouche, MD, assistant professor of Medicine and a physician at the Vanderbilt Weight Loss Center, and heard the words, "We can do this."

Takkouche has teamed up with her colleagues, including **Robb Flynn, PhD**, to teach a course on obesity at VUSM, allowing medical students to have educational clinical rotations at the Vanderbilt Weight Loss Center.

For his surgery, Reynolds met with **Wayne English, MD**, associate professor of Surgery and director of Clinical Research for the Vanderbilt Center for Surgical Weight Loss, so he understood the milestones he had to meet, including losing a minimum of 100 pounds. Last year, English successfully performed a Roux-en-Y gastric bypass for Reynolds.

"The surgery for Mr. Reynolds was life-altering and vital in preserving his future health," said English. "Metabolic and bariatric surgery alters fat storage metabolism, decreases insulin resistance, lowers blood sugar, and improves the body's overall cardiometabolic function. This happens because the regulation of those critical metabolic functions occurs through a system of hormones, most of which are produced in the stomach and intestine."

[Complete story link](#)



Reynolds

Shah pioneers perfusion method that maintains transplant organ health, improves cardiac transplant rates

Keeping donor hearts viable from recovery through surgery has been an ongoing challenge since the beginning of cardiac transplant. Cold storage transport has begun to give way to *ex situ* or machine reperfusion in recent years, with improved rates of success.

Now, *in situ* thoraco-abdominal normothermic regional perfusion (taNRP) has emerged as another promising method of maintaining heart function in conjunction with other organs.

Ashish Shah, MD, professor and chair of the Department of Cardiac Surgery, has pioneered this procedure for resuscitation of the heart after circulatory death. He is an author on a 2022 multicenter study showing that including the taNRP option raised transplantation rates 23% over a seven-year period, with equal-to-superior outcomes compared with transplantation with traditional brain-death donors.

Since 2020, Shah's team at Vanderbilt

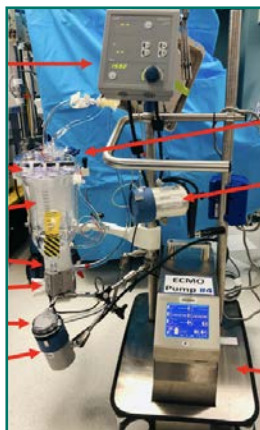
has performed 90 transplants using taNRP, out of nearly 300 total heart transplants. He says that in contrast to machine perfusion or traditional recoveries, taNRP resuscitates hearts within minutes of death, bringing oxygen and nutrients to cardiomyocytes, thereby lowering or even reversing ischemic damage.

"We also see anecdotal evidence that keeping the hormones and nutrients going to the heart, versus using other methods that keep the heart isolated, may protect it and render it more functional," he said. "Further, it is clear that the livers and kidneys from these taNRP donors are in better condition."

"We are now at a new frontier that focuses on what the future of physiology looks like and how it applies to transplantation," says Shah.

[Complete story link](#)

[Journal link](#)



Shah

Williams recognized by Nashville Academy of Nutrition and Dietetics

Brandon Williams, MD, assistant professor of Surgery, and Sarah Ferguson, MPH, RDN, LDN, Dietetic Internship Director, were recently recognized by the Nashville Academy of Nutrition and Dietetics (NAND) for their achievements in the field.

Williams received the Iris Award, which recognizes individuals who support the field of nutrition through scientific and technical knowledge. Ferguson received the Outstanding Dietetic Educator Award, which recognizes an exemplary dietetics educator working in the greater Nashville area.

“Dr. Williams is extremely dedicated to training the future dietitians in our program. He assists them as they complete rotations in the Center for Medical and Surgical Weight Loss clinic and even invites them to join him in the operating room to observe surgical weight loss procedures first-hand,” Ferguson said.

“By sharing his expertise and facilitating these experiential learning opportunities, Dr. Williams provides each intern with specialized insights they can take with them as they continue their career.”



From left, Brandon Williams, MD, and Sarah Ferguson, MPH, RDN, LDN, with current intern, Abbie Stasior, and program alumna Heather Bumbalough.

[Complete story link](#)



Pediatric patient Will Terry (far right) with his family, underwent surgery after suffering a traumatic brain injury riding a kick scooter

Wellons part of neurocritical care team that helps boy survive complex severe brain injury

ingredients in a recipe for enhanced outcomes.

At Monroe Carell, the pediatric neurocritical care team combines experts from different areas of pediatric medicine to care for each child according to individual needs to maximize that child’s quality recovery.

“What we do matters in the acute setting, where minutes and hours count and where getting it right and intervening in the right way at the right time really can sort of tilt the scales in favor of a better outcome by preventing ongoing injury,” said Michael Wolf, MD, director of Neurocritical Care in the Division of Critical Care Medicine at Monroe Carell. Three years ago, every minute mattered for 9-year-old Will Terry, who suffered a traumatic brain injury when he flipped over the handlebars of a kick scooter during a family trip to Florida on May 5, 2020. He needed special-

When a child suffers severe trauma or illness that impacts the brain or spine, time, collaboration and diverse medical expertise become key

ized pediatric neurologic and neuro-surgical critical care. Complicating his situation, Will was diagnosed as an infant with a bleeding disorder and Noonan’s syndrome.

Will was flown back to Nashville for care. The emergency transport team was concerned if Will would survive the flight. “I knew we were going home,” recalls Will’s mom, Catherine Terry, about the flight to Nashville and to Monroe Carell, “and there was just this sense of peace that we would be with people who knew Will, who I trusted for his care.

“The blood on the brain can cause swelling. The risk for dying from injury is from the swelling on the brain,” said Lindsay Pagano, MD, director of Neurocritical Care.

“Will’s neurosurgeon, **Jay Wellons, MD, MSPH**, professor and chief, Division of Pediatric Neurological Surgery, came in and did a decompressive craniotomy (removal of part of the skull) to relieve the pressure on the brain,” Pagano said.



Wellons

[Complete story link](#)

Shah, Pierce exemplify growth benefit of VUMC cardiac surgery multi-specialty expertise to aid patient recovery

Tony Raia was stunned when he was denied life insurance. At 54 years old, the Franklin, Tennessee man was the sort of person who ran half marathons and completed high intensity workouts at the gym, with no known health problems. But blood testing for insurance revealed cardiac markers that resulted in coverage being denied.

Shortly thereafter, Raia came to Vanderbilt for an unrelated naval hernia surgery, when **Richard Pierce, MD, PhD**, associate professor of Surgery, and his team discovered a heart murmur. That led him to the Vanderbilt Heart and Vascular Institute and, several tests later, eventually for an aortic root replacement and mitral valve repair. This is the story of a seemingly healthy man who needed major heart procedures and benefited from a multi-specialty team that now has him back at the gym and living a healthy life.

“He represents a great case of what we can offer uniquely at Vanderbilt,” said **Ashish Shah, MD**, professor and chair of the Department of Cardiac Surgery, “saving his heart valve and not requiring an artificial valve, providing minimal access surgery but also complex reoperations with early extubation.”

Shah said Raia’s medical journey highlights the remarkable changes in cardiac surgery at Vanderbilt.

“From shared decision making on his initial procedure, to removing the breathing tube in the operating room, cardiac surgery at Vanderbilt looks very different than it did 10 years ago and even five years ago,” Shah said.

“Our entire team — cardiac anesthesia, perfusion, perioperative nursing, outpatient nurse navigators, inpatient



Vanderbilt heart patient Tony Raia, with his wife, Jenn, and daughter, Gabriella, 6, at their home in Franklin, Tennessee

nursing and the advanced practice corps — elevated our performance.”

Raia, who refers to Shah as the “Rembrandt of hearts,” said the surgeon always told it to him straight.

“He’s just not only a master of his craft, but he’s just a cool dude,” he said. “His bedside manner is unbelievable.”



Pierce



Shah

[Complete story link](#)

Study finds underperforming organ procurement organizations contribute to nationwide shortage

The number of potential organ donors in the United States could solve the shortage for most organs, but many organs are not recovered due to performance variations in the opaque organ procurement organization process, according to a just-published study with first and corresponding authors from VUMC.

The study, "Variability in Organ Procurement Organization Performance by Individual Hospital in the United States," published in *JAMA Surgery*, includes VUMC authors **Seth Karp, MD**, H. William Scott Jr. Professor, chair of the Section of Surgical Sciences and director of the Vanderbilt Transplant Center, **Wali Johnson, MD, MPH** and **Kathryn Kraft, MD**.

"With better government oversight and organ procurement organization performance, we have the potential to

nearly eliminate deaths on transplant waiting lists," Karp said.

More than 11,000 waitlisted patients died or became too sick for a transplant in 2021 alone, the study states, highlighting the critical need to increase the supply of donor organs. To compare donor potential to actual donors, researchers performed a retrospective cross-sectional analysis across 13 hospitals covered by two organ procurement organizations in 2017 and 2018.



Karp

[Complete story link](#)

[Journal link](#)

Local family learns firsthand the dangers of ATVs, including multi-passenger UTVs and golf carts Lovvorn notes higher volume of all-terrain vehicle trauma cases at Monroe Carell in 2023



"Parker, stay with me. Parker stay with me. Parker..." are the words Stephanie Holmes could hear in the background when she returned a call from an unidentified number.

Her 13-year-old son had been in a utility task vehicle (UTV) accident. Parker was supposed to be

across the street from their home in Dickson, TN.

"He was supposed to take our side-by-side (UTV) across the street, which is all that we allow," recalled Holmes.

"He decided to be a typical preteen and take it down the road, pick up a friend, and take the long way back home.

"That long way," exclaimed Holmes, "is a very curvy, back road with a 90-degree angled turn that he incorrectly maneuvered. He was going too fast, hit gravel, lost traction

and over corrected. He slammed into a tree.

"I got a call from a state trooper while cooking dinner. He was supposed to be home at 5:30. But instead, he was at an unknown address."

Parker, who suffered a traumatic brain injury (TBI), is one of 30 ATV trauma cases in the first quarter of the year that required the trauma care at Monroe Carell. The number is alarming for the trauma service.

"In the last three years, we have seen on average about 95 ATV trauma cases a year," said **Bo Lovvorn, MD**, professor of Pediatric Surgery and medical director, Pediatric Trauma Program at Monroe Carell. "In the four months of 2023, we have had more than 30. This would indicate a higher volume than previous years.

While ATV accidents are commonly associated with high-profiled injuries, trauma prevention advocates at Monroe Carell want the community to add UTVs and golf carts to the list of motorized vehicles that can be dangerous.



Lovvorn

[Complete story link](#)

Alexander celebrates one-year lung transplant anniversary with surgeon Demarest

Barrett Alexander, a 30+ year Gwinnett County, Georgia high school band director, retired due to what was thought to be sarcoidosis but turned out to be hypersensitivity pneumonitis. He came to be diagnosed with interstitial lung disease (ILD) and came to VUMC thoracic surgeon **Caitlin Demarest, MD, PhD**, assistant professor of Thoracic Surgery, for treatment. Demarest performed his lung transplant in August 2022. Postoperatively, he required extracorporeal membrane oxygenation (ECMO) for a few days but overall recovered very well. After intense rehabilitation from therapists at the Dayani Center for three months, Barrett returned to Georgia. He could walk 2 1/2 miles and lift about 100 pounds.

"We got along well, and I bonded with Alexander and his wife, Meta, from the first moment we met pre-transplant. He is one of those patients you just "click" with," said Demarest. "I also performed a Nissen fundoplication on him post-transplant to prevent reflux and lung rejection. One thing we bonded over was our shared love for 90's R&B. At a routine check-up they told me that they were up late the night before at the Janet Jackson concert. I said, "Hey, I was there too!"

They decided to celebrate his one-year transplant anniversary in August 2023 at a concert by 90's R&B stars Jodeci, Dru Hill, and SWV. Demarest reached out to Ascend Amphitheatre, telling them Barrett's story, and they were kind enough to give them complimentary access to the VIP lounge.

"Attending that concert with my lung transplant patient on his one-year anniversary was a profoundly moving experience," Demarest said. "As his surgeon, witnessing him live out his second chance at life was a poignant reminder of the incredible impact that organ transplantation can have on individuals and their loved ones. It was a night filled with the beautiful harmony of both music and the precious gift of life, as well as a testament to the incredible bond formed between surgeons and their patients."

Barrett added, "I'm very fond of my surgeon, as well as my entire team."



Top: Lung transplant patient Barrett Alexander and his surgeon Dr. Caitlin Demarest celebrate his 1-year post transplant anniversary at a concert.

Below: Randy Malesick, Caitlin Demarest, Meta and Barrett Alexander

Monroe Carell named among the 2023 “Best Hospitals for Pediatrics” by Money and The Leapfrog Group

Monroe Carell is one of only 25 children’s hospitals to make Money/The Leapfrog Group’s first-ever “Best Hospitals for Pediatrics” list and is the only pediatric hospital in Tennessee to earn the distinction.

“This first-of-its-kind recognition by both Money and The Leapfrog Group honors the hard work of the outstanding physicians, nurses and staff of Monroe Carell Jr. Children’s Hospital at Vanderbilt for their support of our most vulnerable patients. I want to congratulate everyone for the selfless teamwork leading to this award,” said **C. Wright Pinson, MBA, MD**, Deputy Chief Executive Officer and Chief Health System Officer for VUMC.

This recent accolade is in addition to Monroe Carell being named a Leapfrog Top Hospital in December 2022 and among the nation’s “Best Children’s Hospitals” by *U.S. News & World Report* in June 2022.



[Complete story link](#)

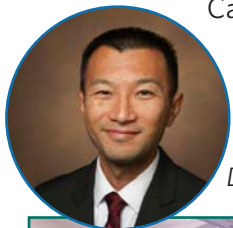
Renovated pediatric operating rooms enhance surgical care for cardiac and robotic surgery cases

Every detail of operating rooms 12 and 13 at Monroe Carell Jr. Children’s Hospital at Vanderbilt was carefully planned to match the precision of the seasoned surgeons that use them and to give children the best in pediatric health care.

OR 12, used for cardiac surgery, and OR 13, a multi-use room primarily used for robotic surgical cases, are the first two renovated operating rooms to come online for the first phase of renovations to overhaul 10 of the hospital’s 18 ORs. This is the first major renovation of the ORs since Monroe Carell opened in 2004.

Every year, Monroe Carell surgical teams perform surgery on more than 18,000 children who come from Tennessee as well as across the Southeast and the nation. Monroe

Carell is also a Level 1 trauma center and is consistently one of the top four largest pediatric heart transplant programs in the country.

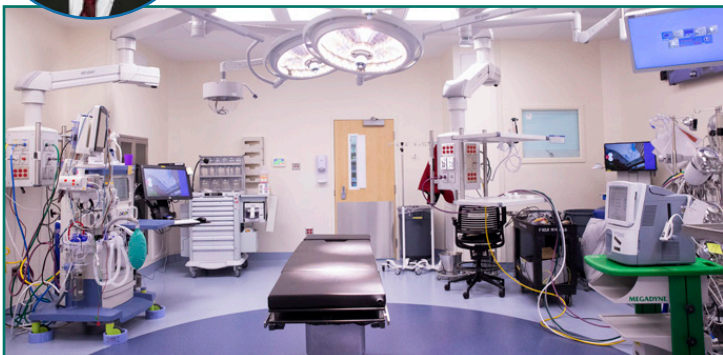


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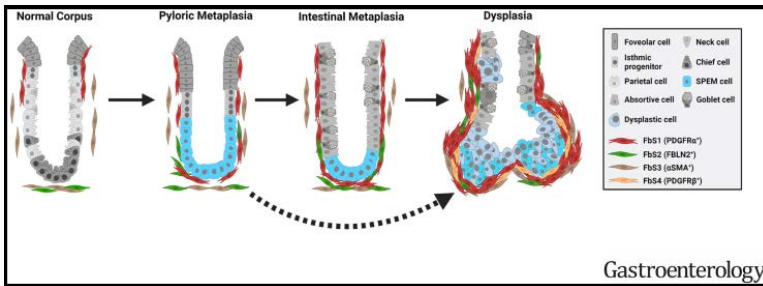
“The OR renovations come at a perfect time with our increased pediatric heart transplants and ventricular assist device implantations in the last few years. The state-of-the-art technology allows us to give a more comprehensive care experience centered around delivering excellent care to each complex congenital heart disease patient with improved communication and collaboration,” said **Nhue Do, MD, MBA**, surgical director of the pediatric heart transplant and ventricular assist device program at Monroe Carell. “The updated ORs give us the ability to offer innovative treatments to patients that otherwise might not be alive today.”

On any given day, about 250 employees interact with and care for children in the surgery center, including everyone from check-in, to the ORs, to the recovery areas.

[Complete story link](#)



Section colleagues co-author paper on nutrient absorption in microvillus inclusion disease and the impact of gene mutation



Mutations in the gene MYO5B cause microvillus inclusion disease (MVID), which prevents nutrient absorption in the intestines and is characterized by severe watery diarrhea that typically starts in the first hours after birth. People with MVID usually require lifelong intravenous feedings (parenteral nutrition) or small bowel transplantation.



Roland



Kaji



Goldenring

Izumi Kaji, PhD, assistant professor of Surgery, and colleagues developed a mouse model of a novel patient-based MYO5B mutation — which they identified by targeted exome sequencing — to explore MVID pathogenesis. The researchers used transmission electron microscopy and multiplexed immunofluorescence staining to characterize tissue samples from the patient and mouse model.

They reported in the journal *Cellular and Molecular Gastroenterology and Hepatology* (CMGH) that the model phenocopies the MVID patient.

The study shows that the novel mutation disrupts the microvillus structure of intestinal epithelial cells and suggests a defect in the maturation of these cells. The study also demonstrates a rapid strategy for establishing mouse models to study patient-specific mutations in monogenic disorders.

Co-authors from the Section of Surgical Sciences include **Joseph Roland, PhD**, research associate professor, and **James Goldenring, MD, PhD**, Paul W. Sanger Professor of Experimental Surgery.

[Complete story link](#)

[Journal link](#)

Clair notes expertise gained in complex vascular disorders through acquisition of VeinCare Centers

Vanderbilt Heart and Vascular Institute has acquired VeinCare Centers of Tennessee, a Clarksville, Tennessee-based clinic offering minimally invasive vein treatments using cutting-edge technology.

The addition of the clinic, now known as Vanderbilt Vascular Surgery Clarksville, will allow patients greater access to Vanderbilt-quality care closer to home. It also adds to the Vanderbilt family Stephen Daugherty, MD, the clinic's founder and a board-certified surgeon, regional pioneer, and national leader in treating complex venous disorders.



Clair

Vanderbilt Vascular Surgery Clarksville, located on the campus of Tennova Healthcare-Clarksville, specializes in treating patients with everything from common varicose vein problems to complex venous compressive syndromes, such as May-Thurner Syndrome, Nutcracker Syndrome and Pelvic Congestion Syndrome. Such diseases are often not well understood by clinicians who do not specialize in vein disorders, said **Daniel Clair, MD**, professor and chair of the Department of Vascular Surgery.

"These are often not diagnosed early," Clair said. "Often patients experience a great deal of pain and suffering and are seen by multiple physicians without a proper diagnosis. Dr. Daugherty is regionally and nationally known for his reputation in dealing with these complex venous problems."

[Complete story link](#)

Robinson performs novel thoracoscopic Foker surgery that helps infant's esophageal condition

Surgeons at Monroe Carell Jr. Children's Hospital at Vanderbilt recently performed an innovative surgery to repair a rare esophageal condition in a 9-month-old patient. The hospital is the first in the state to use the thoracoscopic Foker process, a minimally invasive technique, to repair long-gap esophageal atresia also known as Type A EA.

"This unique expertise was previously not available in our state and is offered at only a few centers nationally," said **Jamie Robinson, MD, MS, PhD**, assistant professor of Pediatric Surgery at Monroe Carell. "We now have the opportunity to provide a novel approach to the repair of



Robinson

this complex esophageal condition to patients throughout the region."

The Foker process uses traction to gradually lengthen or stretch the esophagus until the upper and lower ends are close enough together to surgically join them.



Lovvorn

Lily Hale was the first patient to undergo the revolutionary procedure at Monroe Carell. At 6 days old, Lily was transferred to Monroe Carell with a congenital heart defect that required urgent attention. She underwent two heart repair surgeries within the first



Esophageal surgery patient Lily Hale with her parents, Jessica and Wesley Hale

month of her life. A final cardiac surgery in December placed Lily in a good place for the esophageal procedures that would allow her to swallow her own saliva and eventually eat and drink by mouth.

While Lily was hospitalized for her cardiac issues, the Hales — Jessica and her husband, Wesley — spoke with **Bo Lovvorn, MD**, professor of Pediatric Surgery and medical director, Pediatric Trauma Program at Monroe Carell, about Lily's complex esophageal issues.

He introduced the family to Robinson, the newest member of the surgery team, who had trained at Boston Children's where she learned how to perform the Foker procedure.

[Complete story link](#)

Bick's study suggests way to relieve cognitive deficits caused by Parkinson's disease

Parkinson's disease is a progressive brain disorder that wreaks havoc on the body and the mind.

While medications and a surgical technique called deep brain stimulation (DBS) can relieve the uncontrollable movements and muscle rigidity that characterize the disease, there currently are no good treatments for the deterioration in cognition caused by the disorder.

That is about to change.

Using an innovative technique, researchers at VUMC have detected alterations in brain activity, called beta oscillations, that are associated with cognitive impairment in patients with Parkinson's disease.

These findings raise the possibility of using DBS to slow the decline of cognitive function, a major source of disability, diminished quality of life, and death in more than three-quarters of patients with Parkinson's disease, said the paper's senior author, **Sarah Bick, MD**, assistant professor of Neurological Surgery at VUMC.

This approach, reported in June in the journal *Brain*, "could yield pivotal advances in our understanding of pathological neural circuits," scientists at London's Wellcome Centre for Human Neuroimaging noted in a commentary published in August.



Bick

[Complete story link](#)



Bacchetta



Wu

Bacchetta, Wu study could lead to rehabilitated donor livers for transplantation

Not enough suitable donor livers are available, meaning that patients nationwide die every day while waiting on the transplant list. But a multidisciplinary team from VUMC recently published research that shows promise for increasing the supply of organs by rehabilitating injured organs historically rejected for transplant.

It demonstrated that injured human donor livers declined for transplant can be recovered by cross-circulation between the human liver and a xenogeneic host, or animal platform.

The study, “Xenogeneic cross-circulation for physiologic support and recovery of *ex vivo* human livers,” appears in the journal *Hepatology*.

Researchers utilized human livers declined for transplantation and attached them to a xenogeneic platform. Using cross-circulation, they observed the liver over 24 hours of support on the platform.

“This work is a natural extension of work we demonstrat-

ed in human lungs, providing further evidence for the ability to resuscitate rejected human organs using a pig host as a bioreactor,” said the story’s senior author, **Matthew Bacchetta MD, MBA, MA**, professor of Cardiac Surgery, Thoracic Surgery, and Biomedical Engineering.

“It also lays the groundwork for investigating liver injury and recovery in new donor procurement techniques.”

First author **Wei Kelly Wu, MD**, surgery research resident in the Department of Surgery, added, “This platform’s ability to provide durable, multisystem physiologic regulation may be uniquely suited to rehabilitate severely injured organs or study novel therapeutics for organ recovery.”



[Complete story link](#)

[Journal link](#)

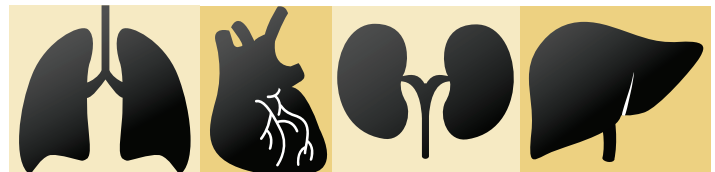
Vanderbilt Transplant Center reaches new record in number of procedures performed

The Vanderbilt Transplant Center performed a record number of solid organ transplants in fiscal year 2023 (FY23) — 665 life-saving procedures among its adult and pediatric programs. The total number of transplants from FY23, the period between July 2022 and the end of June 2023, is up 3% from the 645 transplants during the same period in FY22.

Vanderbilt’s lung transplant program had a record fiscal year, with 80 transplants, a 29% increase over FY22. Growth was also driven by kidney transplants, increasing 7% to 315 adult and pediatric transplants.

“Performing 665 solid organ transplants in a single year is an incredible accomplishment that could not be achieved without extraordinary teamwork and commitment,” said **Joseph Magliocca, MD**, professor of Surgery and director of the Vanderbilt Transplant Center. “It is truly a testament to the dedication of all people within the entire Vanderbilt University Medical Center.”

665 solid organ transplants a year



In the Adult Transplant program in FY23, teams performed 301 kidney transplants (including simultaneous pancreas-kidney transplants and pancreas-after-kidney transplants), 112 heart transplants, 130 liver transplants, and 80 lung transplants.

Pediatric transplant teams with Monroe Carell Jr. Children’s Hospital at Vanderbilt performed 14 kidney transplants, 21 heart transplants and seven liver transplants.

It takes a highly specialized, multidisciplinary team of about 150 people to work on a single transplant. The transplant teams include physicians in each organ specialty, surgeons, anesthesiologists and nurse anesthetists, intensivists, nurses, nurse practitioners, pharmacists, social workers, financial coordinators, nutritionists, organ procurement coordinators, preservationists and operating room staff, among others.

[Complete story link](#)



Shinall

Study shows palliative care provided at point of oncology surgery does not improve patient outcomes

One of the most important advances in palliative care in oncology over the past 15 years has been the recognition that palliative care specialists can improve cancer patients' outcomes well before their end of life.

Palliative care is specialized care provided to individuals with a serious illness that focuses on decision-making support, pain and symptom management, as well as psychosocial interventions to improve quality of life.

Past randomized clinical trials have shown palliative care specialists can improve the quality of life and lengthen the survival of patients receiving chemotherapy for metastatic cancer. Palliative care benefits patients undergoing curative treatments, like bone marrow transplantation for hematologic malignancies, or cancers of the blood or blood-forming tissue.

Because of this evidence, in 2016 the American Society of Clinical Oncology recommended specialist palliative care

be included with active treatment for advanced malignancies.

Palliative care specialists and oncology surgeons from VUMC and the VA Tennessee Valley Healthcare System have published a study in *JAMA Surgery* providing evidence that the addition of palliative care services earlier in the disease process, specifically to patients having surgery for cancer, does not demonstrate benefits to the patients. The study indicates the provision of palliative care at the point of surgery does not increase the patients' distress or harm them in any way.

"Palliative care specialists are in short supply, so we don't want to expand the patient population for palliative care specialists without good data that they help that population," said lead author **Myrick "Ricky" Shinall Jr., MD, PhD**, associate professor of Surgery and Medicine.

"The study was important to test whether this further move upstream in the cancer care continuum would be a good use of a limited resource."

[Complete story link](#)

Khan's vision for ambulatory colectomy with same-day discharge fulfilled at VUMC

Colectomies have undergone an evolution in recent decades — from open surgeries to laparoscopic to robotic procedures. Now, VUMC has introduced ambulatory colon resection, which allows a patient to schedule a morning colectomy and return home by late afternoon.

Serving patients with colorectal cancer, diverticulitis and inflammatory bowel disease, **Aimal Khan, MD**, assistant professor of Surgery, has been working with Matthew McEvoy, MD, medical director of the Perioperative Consult Service and vice chair of Perioperative Medicine in the Department of Anesthesiology, to build and expand a same-day colectomy program at Vanderbilt.

After learning about the limited experience of other surgeons in Texas in early 2022, Khan pitched the idea of ambulatory colectomy to McEvoy, who also serves as medical director of the Enhanced Recovery After Surgery (ERAS) program and High-Risk Surgical Encounter (Hi-RiSE) Preoperative Optimization Clinic at Vanderbilt.

"It dovetailed with our ERAS work to refine anesthesia, pain medication and other early recovery protocols for shorter hospital stays and less addiction risk," Khan said.

Khan says that typically colectomy has required a three- to five-day in-hospital recovery period to ensure that the patient was stable after anesthesia, had pain under control, and had no surgical site infections. Following ERAS implementation, that period was shortened to 1-3 days, with improved outcomes seen in patients undergoing colon or rectal resection, Khan said.

"As more surgeons have come on board after receiving their primary training in minimally invasive surgical techniques, further shortening the end-to-end process seemed a natural outgrowth of that evolution," Khan noted.



Drs. Khan and McEvoy, who assisted with this new ambulatory process

[Complete story link](#)

Former patient steps up to help others with traumatic injuries



William Nolan and his fiancée, Cassie Rooke, enjoy active lives, including taking long walks with their dog, Grizz. Nolan volunteers as a Trauma Peer Visitor to support others hospitalized with serious trauma.

When Nashville native William Nolan was recovering from traumatic injuries at Vanderbilt University Medical Center in 2020, visitor restrictions due to the pandemic meant he spent countless, difficult hours alone without the support of friends or family.

Nolan and his now-fiancée, Cassie Rooke, were hiking at Percy Warner Park in May 2020 when a fast-moving storm knocked a large tree down on top of them. They were transported to VUMC and were soon in surgery to repair extensive trauma. Rooke had serious injuries to her legs and an arm, as well as numerous upper-body injuries. Nolan had a serious pelvic injury, leg injury and various upper-body and internal injuries.

His most devastating trauma was a brachial plexus injury that separated the nerves in his left arm from his spinal cord, leaving his arm paralyzed. After waiting eight months to see if any nerve regrowth would restore move-

ment, Nolan decided to have his arm amputated.

Nolan now tells others it was one of the best choices of his life. He has returned to working full time for the state of Tennessee's Department of Finance and Administration, is planning an April 2024 wedding with Rooke, and is getting back to the outdoor sports and activities he loves such as hunting, boating and fishing. Rooke's injuries have also healed, and she's working as an oncology nurse, a job she loves.

VUMC has had a Trauma Peer Visitor program, an initiative supported by the Trauma Survivors Network of the American Trauma Society, for about 15 years, but the pandemic halted the program, said **Cathy Wilson, MSN, RN**, outreach educator and coordinator for the Division of Acute Care Surgery. Now it's active again, thanks to the help of Nolan and other former patients and their families who want to give back.



Wilson

[Complete story link](#)

Trauma Center marks its 25th anniversary



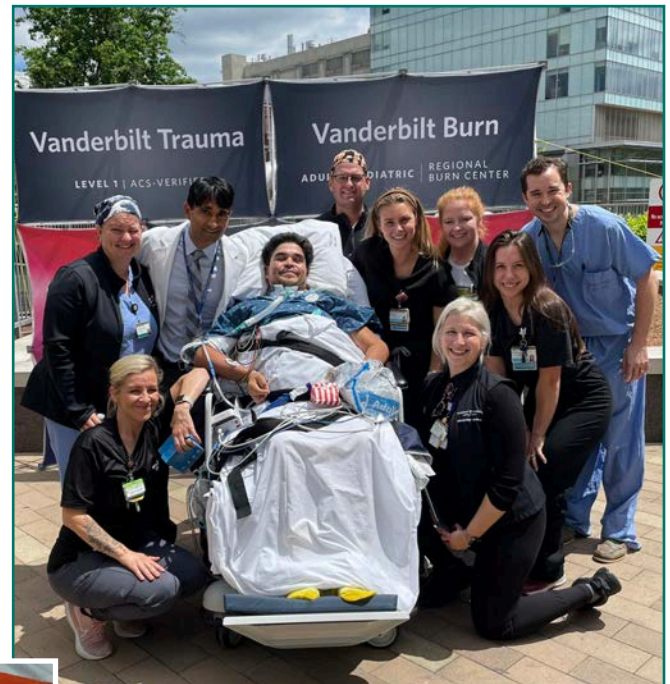
Faculty and staff gathered to celebrate the 25th anniversary of the Trauma Center's debut in its current location on the 10th floor of Vanderbilt University Hospital. The Trauma Center is the only Level 1 provider of trauma care in the state and annually admits more than 5,000 trauma patients from Tennessee and surrounding states, as well as 650 burn patients, 2,000 surgical ICU patients, and 1,000 emergency general surgery patients.

VUMC celebrates trauma survivors and their care providers

Members of Vanderbilt University Medical Center's Acute Care Surgery team, Trauma Intensive Care Unit, and former patients who recovered or individuals who are currently recovering from traumatic injuries recently gathered on the Medical Center's Plaza for an annual celebration of National Trauma Survivors Day.

The day is part of a larger National Trauma Awareness Month, sponsored annually by the American Trauma Society in collaboration with the Society of Trauma Nurses. The event allows physicians, nursing staff and others on the care team to reconnect with survivors of traumatic injuries and celebrate their recovery.

Members of the Vanderbilt Trauma Survivors Network, a support group that offers resources for trauma survivors, their families and friends following a traumatic event, were invited. Also invited were trauma peer visitors, former trauma survivors who return to VUMC and visit patients with traumatic injuries to support them as they heal.



Darinel Castillo, a patient in Vanderbilt University Medical Center's Trauma Intensive Care Unit, participated in the recent National Trauma Survivors Day, surrounded by members of his care team.

[Complete story link](#)



Goldenring and colleagues study reveals new clue to gastric cancer



Goldenring

Fibroblast cells play key roles in the repair of damaged tissue and in pathological scarring. Now, researchers at VUMC have uncovered evidence of their direct involvement in the development of gastric cancer.

These findings, published in the journal *Gastroenterology*, could lead to novel interventions to prevent cancer of the stomach, the third leading cause of cancer deaths worldwide after lung and colorectal malignancies.

Until recently it has been difficult to identify which cells are involved in the steps leading to gastric cancer, notably the development of precancerous stomach lesions called metaplasia, and later, dysplasia, the appearance of abnormal cells.

“Our studies demonstrated that particular subsets of fibroblasts present in the stomachs of patients with metaplasia and cancer can promote transition of precancerous metaplasia towards dysplasia,” said **James Goldenring, MD, PhD**, the Paul W. Sanger Professor of Experimental Surgery and vice chair for Surgical Research in the Section of Surgical Sciences.

In 1999 Goldenring and his colleagues were the first to describe spasmolytic polypeptide-expressing metaplasia (SPEM), a lineage of metaplastic cells in the stomach that develop from normal protein-secreting cells after damage to the stomach lining. Chronic persistence of these cells can lead to the development of gastric cancer.

For several years they have been using metaplastic and dysplastic gastroids, three-dimensional cultures of epithelial cells isolated from the stomach lining of mice and humans, to identify the characteristics of precancerous stem cell populations.

[Complete story link](#)

[Journal link](#)

Splittgerber one of 13 inductees elected to the Academy for Excellence in Education



Splittgerber

The Academy for Excellence in Education was established in 2006 to provide a forum to foster higher levels of participation and promote excellence and scholarship in the delivery of education to health professionals.

The academy is a collective of outstanding faculty educators in the Vanderbilt University School of Medicine who are highly engaged in the educational mission. Each strives to have a significant impact on educational endeavors in diverse settings with a variety of learners.

The Academy for Excellence in Education elected **Ryan Splittgerber, PhD** and 12 other new members for 2023.

Splittgerber joined the faculty in 2018 and is an associate professor in the Department of Surgery. He was elected to the academy based on his excellence in teaching, educational leadership, mentorship and educational scholarship. He has received multiple teaching awards at multiple universities, including the 2022 Shovel Award presented by Vanderbilt’s graduating medical school class to the most impactful faculty member during their medical education. He has served as a Master Science Teacher and is a consultant for faculty who teach basic sciences in the Immersion Phase. He has also been a member of the VUSM admissions committee.

Over the past 10 years he has served as dissertation committee director, member or teaching mentor for multiple students. He is the lead author for “Snell’s Clinical Neuroanatomy,” which published its eighth edition in 2018 and will publish its next edition at the end of this year.

[Complete story link](#)

Beauchamp honored at symposium highlighting basic research by surgeon scientists

Pursuit of Basic Research by Surgeon Scientists



Honoring the Legacy of R. Daniel Beauchamp, MD

Dr. Seth Karp opens the research forum with warm remarks about Dr. Beauchamp.

Photo right: pictured left to right: Brian Gibson, Bryn Beauchamp, and Shannon Beauchamp



The profound impact of **R. Daniel Beauchamp, MD**, former chair of the Section of Surgical Sciences at VUMC, was deeply evident as his family, colleagues and mentees gathered for a recent symposium highlighting basic research conducted by research surgeons and physician-scientists, all of whom were closely associated with the noted physician-scientist.

Beauchamp, the John Clinton Foshee Distinguished Professor of Surgery, died in November 2022, and the event was held to honor his legacy and to celebrate the achievements of others he inspired, collaborated with or advised throughout his career as a physician who not only served his patients at the bedside but also pursued significant translational research to guide improved treatment for cancer patients.

Over his almost 30-year faculty career at Vanderbilt, Beauchamp was a noted leader in the application of molecular biology, and his laboratory made important cancer research discoveries that advanced colorectal cancer treatment and generated additional investigations.

“Dan’s impact was prodigious, and I think he was most proud of making those around him better and being a mentor to so many surgeon-scientists,” said **Seth Karp, MD**, H. William Scott Jr. Professor and chair of the Section of Surgical Sciences. “A large part of his legacy will be the importance he placed on surgeons as scientists, as necessary to advance patient care. This day is devoted to that vision and its clear success ... It is a testament to the impact one person can have when their goal is teaching and supporting others. I hope this will inspire all of us but especially the students and trainees to understand the fruits of a lifetime in service.”

Beauchamp served as chair of the Section of Surgical Sciences for 17 years until he stepped down from the role in July 2018 to focus on his research. He also served as deputy director of Vanderbilt-Ingram Cancer Center (VICC) from 2011 to 2019 and was appointed to the role of vice president for Cancer Center Network Affairs in 2018.



From left, Mark Evers, MD; Seth Karp, MD; Robert Coffey, MD; Carmen Solórzano, MD; J. Joshua Smith, MD, PhD; Naji N. Abumrad, MD; Steven Leach, MD; and Paula Marincola Smith, MD, PhD, pose for a photo during the R. Daniel Beauchamp Memorial Symposium at Vanderbilt University Medical Center. Not pictured: David Hanna, MD

GUEST SPEAKERS INCLUDED:

Mark Evers, MD, director of the Markey Cancer Center at the University of Kentucky

Steven Leach, MD, director of the Dartmouth Norris Cotton Cancer Center

Robert Coffey, MD, co-director of the Epithelial Biology Center at Vanderbilt University Medical Center

Joshua Smith, MD, PhD, associate member of the Colorectal Service of the Department of Surgery at Memorial Sloan Kettering Cancer Center

Co-presenters **David Hanna, MD**, chief resident in General Surgery at VUMC, and **Paula Marincola Smith, MD, PhD**, a Complex General Surgical Oncology Fellow at MD Anderson Cancer Center

[Complete story link](#)

H. William Scott Jr. Lecture in Surgical History gives new insight on surgery icon Vivien Thomas



Thomas

The legacy of surgical pioneer **Vivien Thomas**, with unfiltered insight gleaned directly from his personal writings, was celebrated during the **H. William Scott Jr.** Lecture in Surgical History that was presented by Robert S.D. Higgins, MD, MSHA, president of Brigham and Women's Hospital and executive vice president of Mass General Brigham.

The event kicked off the 50th anniversary celebration of the H. William Scott Jr. Society, a VUMC organization established in 1972 to honor Scott, who served as chair of the Department of Surgery from 1952 until 1982.

Thomas, an African American man living in Nashville, worked as a Vanderbilt laboratory assistant with **Alfred Blalock, MD**. Blalock and Thomas began experimental work in hemorrhagic shock and pulmonary hypertension, and Thomas created and mastered complex surgical techniques. When Blalock was

offered the position of chief of surgery at Johns Hopkins in 1941, he insisted that Thomas join him.

There, Thomas was charged with creating a 'blue baby'-like condition (cyanosis) in a dog, then correcting the condition by means of a subclavian artery to pulmonary artery anastomosis. In 1944, Thomas guided Blalock through the first such procedure in a human.

Thomas' time at Vanderbilt and his contributions to cardiac surgery have been noted in many historical accounts and retold in both the PBS documentary "Partners of the Heart" and in an HBO movie "Something the Lord Made."



Scott lecture guest speaker, Robert S.D. Higgins, MD, MSHA



Members of the Scott family (L to R), grandson, H. William Scott, IV (Will), son, H. William Scott, III (Bill), Bill's wife Sue, and daughter Elizabeth McWilliams.



Drs. Holzman, Geevarghese, Higgins, Karp, Christian, and Solórzano

[Complete story link](#)

Sachdeva delivers the Section's annual McCleery Lecture on excellence in surgical training; Lovvorn received the Master Teachers Award



On May 26, the Section of Surgical Sciences hosted the 14th Annual Robert S. McCleery, MD, Lecture. Delivering the lecture was Ajit Sachdeva, MD, Director of Division of Education at the American College of Surgeons and adjunct professor at Northwestern's Feinberg School of Medicine.



Drs. Sunil Geevarghese, Colleen Kiernan, McCleery Master Teacher Award winner, Harold "Bo" Lovvorn, and Reid Thompson.

The annual Robert S. McCleery Master Teacher Award for Surgical Education recognizes an outstanding full-time surgical teacher of surgical residents at VUSM, and is presented each academic year through a nomination process by the surgical residents. **Harold "Bo" Lovvorn, III, MD**, professor of Pediatric Surgery and medical director, Pediatric Trauma Program at Monroe Carell, is the 2023 Master Teacher Award recipient. Also nominated were **Colleen Kiernan, MD, MPH**, assistant professor of Surgery, Division of Surgical Oncology and Endocrine Surgery, and **Reid Thompson, MD**, William F. Meacham Professor of Neurological Surgery and Chair, Department of Neurological Surgery.

Join me in Congratulating our Service Award Recipients

I would like to thank members of our faculty and staff for helping the Section achieve our goals throughout the years with their dedication, years of service and support. It is an honor to recognize these members of our team for their many years of service to Vanderbilt and the Section.

The dedicated service of our faculty and staff in the Section of Surgical Sciences continues to be instrumental in our academic and clinical success.

The Section has many moving parts that come together to accomplish the goal of improving patients' lives through innovation in surgical techniques, research discoveries and shaping future leaders in surgery.



Seth J. Karp, MD

Chair, Section of Surgical Sciences
Surgeon-in-Chief, Vanderbilt University Medical Center

Congratulations

THE SECTION OF SURGICAL SCIENCES HONOREES FOR 2023 ARE:

35 YEARS OF SERVICE

Karla Christian
Christy Nichols

25 YEARS OF SERVICE

Anna Means
Christina Prince
Kathy Taylor

20 YEARS OF SERVICE

Wuraola Adesinasi
Callie Baker
Sabry Iskandar

15 YEARS OF SERVICE

Raeanna Adams
Colleen Brophy
Eunyoung Choi
Joyce Cheung-Flynn
C. Robb Flynn
Eric Grogan
Oliver Gunter
Elizabeth Krebs
Keeli Lewis

Patrick Martin

Melissa Potter

Julie Rezk

Joseph Roland

Wesley Thayer

Alicia VanBebber

10 YEARS OF SERVICE

Rachel Forbes

Molly Ford

Robert Naftel

Richard Pierce

Matthew Spann

5 YEARS OF SERVICE

Matthew Bacchetta

David Beck

Joseph Broucek

Brianna Caldwell

Holly Cato

Ryan Chaliff

Ross Dawkins

José Diaz

Meredith Duke

Caroline Godfrey

Michael Golinko

Stephen Gondek

Crystal Hawkins

Regina Hensley

Sylvia Hernandez

Erin Wolf Horrell

Nelly-Ange Kontchou

Bo Li

Eric Mace

Ronnie Mubang

Kimberly Presentation

Erika Rivera

Ryan Splittgerber

Taylor St. Amour

Michael Stengel

Patrick Stone

Latasha Todd

Rei Ukita

Megan Vucovich

Ellen Williams

Anne Yanda

Chantelle Young

New Faculty

DEPARTMENT OF CARDIAC SURGERY

Assistant Professor of Cardiac Surgery
Swaroop Bommareddi, MD

DEPARTMENT OF SURGERY DIVISION OF ACUTE CARE SURGERY

Assistant Professor of Surgery
Stephen Gadowski, MD
Andrew Medvecz, MD, MPH

DIVISION OF GENERAL SURGERY

Assistant Professor of Surgery
Joseph Blankush, MD
Jason Samuels, MD
Assistant Professor of Clinical Surgery
Roshni Venugopal, MD

DIVISION OF HEPATOBILIARY SURGERY & LIVER TRANSPLANTATION

Professor of Surgery; Director, Vanderbilt Transplant Center
Joseph Magliocca, MD
Associate Professor of Surgery
Michael Rizzari, MD

DIVISION OF KIDNEY & PANCREAS TRANSPLANTATION

Assistant Professor of Surgery
Christian Crannell, MD
Charlie Mouch, MD

DIVISION OF SURGICAL RESEARCH

Professor of Surgery
Elisa Gordon, PhD, MPH
Research Assistant Professor
Tetyana Pedchenko, PhD

DEPARTMENT OF NEUROLOGICAL SURGERY

Assistant Professor of Neurological Surgery
Patrick Kelly, MD

DEPARTMENT OF ORAL & MAXILLOFACIAL SURGERY

Assistant Professor of Oral & Maxillofacial Surgery
Raquel Capote, DMD, MSD, MPH
Assistant Professor of Clinical Oral & Maxillofacial Surgery
Spencer Haley, DDS

DEPARTMENT OF PEDIATRIC SURGERY

Assistant Professor of Pediatric Surgery
Kevin Johnson, MD
Assistant Professor of Clinical Pediatric Surgery
Margaret Gallagher, MD

DEPARTMENT OF PLASTIC SURGERY

Professor of Plastic Surgery
William Lineaweaver, MD
Assistant Professor of Plastic Surgery
Patrick Assi, MD
Panambur ("Lax") Bhandari, MD
Shady Elmaraghi, MD
Carrie Kubiak, MD
Susan Orra, MD
Matthew Pontell, MD

DEPARTMENT OF THORACIC SURGERY

Professor of Thoracic Surgery
Allan Pickens, MD

DEPARTMENT OF VASCULAR SURGERY

Assistant Professor of Vascular Surgery
Ziad Al Adas, MD

Faculty Promotions

DEPARTMENT OF NEUROLOGICAL SURGERY

Professor of Neurological Surgery
Lola Chambless, MD

DEPARTMENT OF SURGERY DIVISION OF ACUTE CARE SURGERY

Professor of Surgery, with Tenure
Mayur Patel, MD, MPH

DIVISION OF GENERAL SURGERY

Associate Professor of Surgery
Richard Pierce, MD, PhD

DIVISION OF SURGICAL ONCOLOGY & ENDOCRINE SURGERY

Associate Professor of Surgery
Marcus Tan, MBBS

DIVISION OF SURGICAL RESEARCH

Research Assistant Professor of Surgery
Suseela Somarajan, PhD

Drs. Kyle Cassling, Brad James and Marcus Tan



Dr. Raeshell Sweeting (right) with her surgical team

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