# 53 News

# Batter Up!

Section Softball Game and Family Picinic: A Big Hit!

The first annual Section Softball Game and Picnic for faculty, fellows, residents, staff and their families was held June 18th at Green Hills Park. We were fortunate to have a beautiful, sunny summer day. For the first official gathering of our group in over 2 years, we had nearly 200 people join us for a memorable and fun afternoon.

With a total of 27 players in the **Residents** vs. **Faculty & Everyone Else** softball game, the competition between the teams was intense. Faculty & Everyone Else, skippered by softball vet and occasional neurosurgeon Dr. Reid Thompson and gifted athlete and surgical oncologist Dr. Carmen Solórzano, coasted to an easy win against the raw and untested Residents, 13-11. Under skilled coaches, Dr. Gretchen Edwards and Dr. Monica Polcz, the Residents utilized their superior firepower, youth and experience which showed in the final scoreline.

Highlights of the game were ace pitching by Dr. Wali Johnson, the traditional scrubs uniform and enthusiasm of Dr. Eric Quintana, and home runs by Dr. Mike Smith and Dr. Scott Zuckerman.

Our guests were also entertained by Malinda, balloon artist extraordinaire, adventures with beach balls and on the playgrounds, and lunch and treats courtesy of our food truck convoy including Buns on the Run, Little Cancun On the Go, Smokin' Buttz Mobile, Blue Monkey Shaved Ice, and Ben & Jerry's. It was great to catch up in person after all this time, and to meet your families and furry friends.

Thank you for all who joined us for this event. We hope to make it an annual Section activity each spring.



Congratulations to all of our graduating surgical Residents and Fellows.

We are honored you chose VUMC for your surgical training. Best wishes in your careers and may success follow you in your clinical and research endeavors.

For a full list click here or go to page 29

























#### Summer/Fall 2022

## **Gillaspie sister surgeons together** at VUMC to work and train

Erin Gillaspie, MD, MPH, has a number stuck in her head that she's not likely to ever forget: 289. That's because the VUMC thoracic surgeon is only the 289th female surgeon in her specialty in the United States.

"There aren't a lot of women in my field in particular so few, that they actually number us when we pass our boards," said Gillaspie, assistant professor of Thoracic Surgery at Vanderbilt and director of the Thoracic Robotic Program.

Over the past two decades, there has been a dedicated commitment to employ and train surgeons who better reflect the demographics of the population served by VUMC — first under the leadership of **Daniel Beauchamp, MD**, who served as chair of the Section of Surgical Sciences from 2001 until 2018, and now with his successor, Seth Karp, MD, H. William Scott Jr. Professor and chair of the Section of Surgical Sciences.

Today, there are notably more women serving in key leadership roles in the Section and more women faculty and trainees in general. This includes Erin's sister, **Devin** Gillaspie, MD, a past fellow in the Division of Acute Care Surgery.

"We grew up in a home where innovation and discovery was encouraged, even if it was messy," Erin laughs.





## **Clair: Vein arterializa**tion trial can avert amputation in patients with "desert feet"

Dr Clair

Patients who are facing foot or below-the-knee amputation due to chronic limb-threatening ischemia (CLTI) may soon be offered a minimally invasive way to retain their limb and assure continued ambulation. This percutaneous procedure, developed by LimFlow with the clinical guidance of vascular surgeon Daniel **G. Clair, MD**, is currently in Phase II (PROMISE II) trials.

Clair, who is professor and chair of the Department of Vascular Surgery at VUMC, is the global primary investigator on the trials, and one of the first three surgeons in the country to use the technology. Vanderbilt has been the site of six of the 105 procedures to date in Phase II of the PROMISE trials, and Clair hopes to continue to perform the procedures via an FDA-continued access extension.

"Among the 32 Phase I patients, technical success was achieved in 31 procedures," Clair said. "Twenty-one patients remained alive and amputation-free at six months, and this remained unchanged at 12 months. These same patients, in about 90% of the cases, would have ended up with a foot or below-theknee amputation without this option."

CLTL can lead to "desert foot." which occurs when lower limbs lack the arterial structure to receive fluids, leading to degeneration.

Complete story

## **Parton donates \$1 million to pediatric infectious disease research**

Dolly Parton is donating \$1 million to pediatric infectious disease research at VUMC, another transformative gift aimed to help in the fight against serious infectious diseases such as coronavirus that have worldwide ramifications.

Ongoing research in the Division of Pediatric Infectious Diseases includes how viruses and bacteria cause disease, preventing resistance to antibiotics, preventing and treating infections, diagnosing and treating infections in children with cancer, and the impact of childhood infections globaly.

"I love all children. No child should ever have to suffer, and I'm willing to do my part to try and keep as many of them as I can as healthy and safe as possible," Parton said.

A legendary country music singer-songwriter, Parton Infectious Diseasmade a previous \$1 million gift to VUMC in April 2020 in es. "For over 40 years our division has been a national and honor of her longtime friend, Naji Abumrad, MD, prointernational leader in studies for the diagnosis, treatment fessor of Surgery, to increase scientific knowledge and and prevention of life-threatening infections, and this gift advance the battle against COVID-19. will accelerate our work and support new ideas."

VUMC's researchers have tested an array of new therapies and already existing drugs in urgent clinical trials

## Solórzano, Wellons among faculty members awarded Vanderbilt John Sawyers and Cal Turner endowed chairs

Vanderbilt University has selected a number of prominent faculty members who have distinguished themselves as pioneers and leaders in their fields to receive endowed

areas of scholarship include investigating the progression of Parkinson's disease,



chairs. The honorees' Carmen C. Solórzano, MD John L. Sawyers Chair in Surgical Sciences Professor and Chair, Department of Surgery Director, Vanderbilt Endocrine Surgery

examining diversity and discrimination in the workplace, parsing Latin American literature, and working to erase the stigma of HIV and AIDS.

"We are pleased to recognize these exceptional scholars

aimed at reducing life-threatening symptoms associated with

COVID-19.

"We are deeply honored by Dolly's contribution to our research mission," said Mark Denison, MD, professor of Pediatrics and director of the Division of Pediatric



Dolly Parton and Dr. Abumrad

**Complete story** 

John (Jay) Wellons, III, MD, MSPH Cal Turner Chair in Pediatric Neurological Surgery Professor of Neurological Surgery, Pediatrics, Radiology & Radiological Sciences, and Plastic Surgery Chief, Division of Pediatric Neurological Surgery

and leaders, who embody the values that are central to Vanderbilt's mission," Chancellor Daniel Diermeier said. "The highest honor a university can bestow on its faculty is an endowed chair, and these honorees have earned this distinction

> through outstanding achievement in their disciplines."

Vanderbilt estab-

lished its first endowed chairs in 1918 and currently has 438 endowed chair holders across the university.

## Alexopoulos, Bacchetta and Wu research transplants that rehab damaged donor livers

A multidisciplinary team from VUMC is studying whether injured human donor livers declined for transplant can be recovered by cross-circulation between the human liver and a xenogeneic host.

VUMC general surgery resident Wei Kelly Wu, MD, is working on the project with Matthew Bacchetta, **MD**, **MBA**, **MA**, professor of Cardiac and Thoracic Surgery and professor of Biomedical Engineering, and Sophoclis Alexopoulos, MD, associate professor of Surgery and chief of Liver Transplantation at VUMC.



Complete story

The team's research on livers follows published research from Vanderbilt and Columbia Universities showing that a cross-circulation technique with a clinical model can rehabilitate human lungs deemed too damaged for transplantation. Though no organs rehabilitated through the technique have yet been transplanted, the procedure could eventually increase the limited supply of donor organs, allowing more people the opportunity to receive life-saving transplants, said Bacchetta.

"For us, the boundary of xenotransplant has been crossed, very publicly, and this is an open field now," Bacchetta said. "The xenogeneic platform is now potentially an even more acceptable pathway for regenerating organs and increasing organ availability for patients, both lung and liver, and possibly other organs."

Alexopoulos said the technique especially holds promise for livers because, unlike lungs, they naturally can regenerate and repair themselves.

"We believe that we can take a liver and we just need to provide a healthy environment for it to be able to repair itself and regenerate," he said.

"Globally, in the field of transplantation, the shortage of suitable donor organs is a huge issue, despite the field having come very far in the last three or four decades," Wu said.



Dr. Alexopoulos

Dr. Bacchetta

Dr. Wu

## **Upperman chosen as** president of Surgical **Infection Society**

Jeffrey Upperman, MD, surgeon-inchief for Monroe Carell Jr. Children's Hospital at Vanderbilt and professor and chair of the Department of Pediatric Surgery, has been voted president-elect of the Surgical Infection Society (SIS).

He will serve a three-year term and become president of the member society in April 2023. Upperman has served as a councilor-at-large for SIS since 2017, and also serves as the American College of Surgeons representative for the society.

The SIS is committed to providing leadership in the prevention, diagnosis and treatment of infection in surgical patients. The Society's mission is to educate

Dr. Upperman healthcare providers and the public about

infection in surgical patients and promote research in the understanding, prevention and management of surgical infections.

"I am truly honored to be elected president of the Surgical Infection Society," said Upperman.

"I look forward to continuing the work and mission of the Surgical Infection Society to promote the prevention and management of surgical infections, ensure quality and safety in the surgical care of patients, and advance mission-critical research and innovation."

Complete story

## Dennis named associate chief of at Vanderbilt University Hospital



As part of an enhanced structure at Val derbilt University Hospital (VUH), four new associate chiefs of staff have been named who are tightly connected with the hospital's Patient Care Centers.

Brad Dennis, MD, associate professor Surgery, medical director of the Trauma Stepdown Unit, and associate chief of staff for the VUH Surgical Segment, wa one of the four new associate chiefs to

assume their new roles and report to Warren Sandberg, MD, PhD, VUH chief of staff and chair of the Departmer of Anesthesiology.

"We had an open nomination followed by a rigorous, multidisciplinary selection process," said Sandberg. "Our new

## Nesbitt cheers former patient following MS, lung cancer and multi-marathon milestones

Hendersonville resident Aaron Hawkins crossed the finish line at Nashville's 2022 Rock 'n' Roll Marathon and, after hugging his family, the next person he looked for was Jonathan Nesbitt, MD, professor and former chair of the Department of Thoracic Surgery at VUMC.

Hawkins credits Nesbitt for saving his life and giving him the chance to complete his 49th 26.2 mile race at the age of 49. In 2019, Hawkins learned he had an adenocarcinoma, a cancer originating in mucus-producing glandular cells such as are found in the lungs, breasts, colon and pancreas.

"I told my doctor, 'Well, that's interesting. I've run a lot of marathons, I've never smoked, and you're telling me I have lung cancer?"

By the time he received his 2019 lung cancer diagnosis, Hawkins had completed 45 marathons. Just two days before his surgery, Hawkins ran the Indianapolis Marathon.



performed a lobectomy, removing 50 percent of Hawkins' left lung to eliminate his cancer.

Dr. Nesbitt with Aaron Hawkins and his family

staff I n- n navig n to pa	associate chiefs of staff are superstars with suc- cessful track records of process improvement and delivering on complex projects. They are technical experts, team builders, collaborators and system gators with an intense focus on improving our service atients."
"By r	moving these incredibly talented people into the
asso	ciate chief of staff roles, we have put the last piece
of of ou	ar new structure into place. They have hit the ground
a runn	ing, and we are already gaining more momentum,"
said	Shon Dwyer, RN, MBA, president of VUH.
as Deni	nis is dedicated to working with physician, nursing
and	administrative partners to create an environment that
allov	vs patients to thrive and staff and faculty to flourish.
	Complete story

\_\_\_\_\_



Dr. Nesbitt and Aaron Hawkins

The surgery wasn't Hawkins' first experience with tough medical news. A 2003 diagnosis of relapsing-remitting multiple sclerosis (RRMS) could have ended his marathon career, but Hawkins kept going.

Then, Nesbitt "Aaron has been a blessing and role model for so many, and it has been a true privilege for me to be involved in his care. I expect him to achieve only great things in the future," said Nesbitt.

> Hawkins isn't unlacing his racing flats just yet. He has plans to run his 50th marathon on his 50th birthday in his hometown of Cleveland, Ohio.

## **Bailey, Idrees: Bots boost liver cancer outcome**

Associate professors of Surgery Christina Bailey, MD, MSCI, and Kamran Idrees, MD, MSCI, MMHC, are on an investigative team that confirmed the efficacy of robotic-assisted surgery in treating early-stage hepatocellular carcinoma (HCC).

Liver cancer, primarily HCC, is the third most common contributor to cancer-related deaths worldwide. Early-stage HCC has a better prognosis than advanced-stage HCC and can be treated with minimally invasive surgery, including robotic-assisted and laparoscopic options.

However, few studies have examined the presumably unique and discrepant short-term and long-term outcomes of robotic-assisted and laparoscopic surgeries. Employing data from the National Cancer Database, Bailey — program

director of General Surgery Residency — as well as Idrees — chief of the Division of Surgical Oncology & Endocrine Surgery and Ingram Associate Professor of Cancer — and other colleagues conducted the largest study to date to investigate this question. They found that compared to those who received laparoscopic surgery, patients who underwent robotic surgery had higher overall survival rates at the one-, three- and five-year marks.

These results were published in Cancer with research support from the Vanderbilt Training Program in Molecular and Genetic Epidemiology of Cancer.





Dr. Bailey

Complete story

## Surgical resident and former combat medic Gallagher helped train emergency response teams in Ukraine



Dr. Gallagher (bottom left) and other volunteers in Ukraine

## "With my background in combat medicine, it felt like there was something I could actually do to help"

Kathleen Gallagher, MD, is trained to do what most people can't imagine — triage, evaluate and care for the casualties of combat. Gallagher, a third-year general surgery resident at VUMC and a graduate of Vanderbilt University School of Medicine (VUSM), served as a medic in the U.S. Army National Guard when she was an undergraduate at Bellarmine University in Louisville, Kentucky.

She was deployed to southern Iraq for a year, then to Afghanistan for a year, where she stabilized patients injured on the battlefield and assisted in evacuating them to mobile hospitals for further treatment.

So, it's no surprise that when Russia launched a large-scale invasion of Ukraine in February, Gallagher felt the pull to do something. She took a week of vacation and traveled with the MedGlobal organization to Lviv, Ukraine, to help train emergency response medical teams for five large regional hospitals. Then, three weeks later she arranged to take a one-week leave of absence to return with the non-governmental organization to further implement the training. Med-Global supports refugees, displaced persons and other marginalized communities in conflict-affected and low-resource settings around the world. The hospitals are receiving trainloads of casualties from the front each day.

#### **Complete story**

## Solórzano elected president of AAES

#### Carmen Solórzano, MD.

chair of the Department of Surgery, John L. Sawyers Professor of Surgical Sciences and director of Endocrine Surgery at VUMC, has been chosen president-elect of the American Association of Endocrine Surgeons (AAES).



Dr. Solórzano

The AAES is dedicated to the advancement of the science and art of endocrine surgery. The organization is committed to providing surgical expertise in diseases of the thyroid, parathyroid and adrenal glands, as well as in neuroendocrine tumors of the pancreas. It is considered the world's preeminent endocrine surgery professional organization.

Solórzano is the first Latina and the fifth woman to be elected president of the AAES. The new role adds to the list of national leadership positions in surgery held by Solórzano, including serving as a past vice president of the AAES and as governor of the American College of Surgeons.

"I'm committed to improving patients' lives through continued advancements in endocrine surgery, and it is a tremendous honor to be elected by my peers for this leadership role," said Solórzano. "This organization has played an important part in my development as an expert clinician and surgeon scientist, and it is a career highlight to serve in this capacity."

Solórzano was named chair of the Department of Surgery in 2019, the largest department in the Section of Surgical Sciences. She holds the John L. Sawyers Chair in Surgical Sciences. She was chief of the Division of Surgical Oncology for five years. Solórzano is a well-respected mentor for faculty, residents and medical students.

Complete story

Phillips.

Surgery at Children's Hospital to remove the nodule and part of her thyroid gland has restored Olivia to her usual self. "I feel pretty great," she says with a big smile as she sits crosslegged on the couch in her Hendersonville, Tennessee home.

## **Belcher, Lopez lead Pediatric Thyroid Nodule and Cancer Program's life-saving** collaborative care

Olivia Phillips was not feeling like herself, and she didn't understand why. Then her dad noticed a lump on Olivia's throat.

"We both felt bad about missing it," says Olivia's mother, Lori

The lump turned out to be a thyroid nodule that was overproducing thyroid hormone — a so-called "hot" nodule. To care most effectively for patients like Olivia, Monroe Carell Jr. Children's Hospital at Vanderbilt has established the Vanderbilt Pediatric Thyroid Nodule and Cancer Program.

"Children's Hospital has been

taking excellent care of children with thyroid nodules and cancer since its inception, but before last year, clinicians in different disciplines didn't have an efficient method of collaborating with each other in the care of each patient," says Ryan Belcher, MD, MPH, assistant professor of Otolaryngology-Head and Neck Surgery, lead ear, nose and throat (ENT) surgeon on the program team, and Olivia's surgeon.

"Thyroid surgery in children and adolescents should be performed at centers like Children's Hospital that have a full spectrum of pediatric care, according to ATA [American Thyroid Association] guidelines. That full spectrum includes all of the specialists that are part of the Thyroid Nodule and Cancer Program as well as pediatric anesthesia clinicians, child life specialists, nursing care, and social support systems focused on children and families," says Monica E. Lopez, MD, MS, associate professor of Pediatric Surgery and the lead pediatric surgeon for the program.



Dr. Belcher



Dr. Lopez



## **English's first-in-state gastric surgery gives LVAD patient** chance for heart transplant

Six years ago, a doctor told Veronica Llamas-Barajas she had end-stage heart failure and six months to live. She needed a heart transplant, but her weight was too high to qualify. She was referred to VUMC, believing the best she could hope for was to be kept comfortable for her remaining life. She was 36 years old.

"I didn't feel like I had a future," she said. "I didn't want to die that young."

In time, she found hope. In 2018, Llamas-Barajas received a left ventricular assist device (LVAD) at Vanderbilt, a transplant alternative where a patient's BMI is too high. Then, in August 2021, she became the first LVAD patient in Tennessee to undergo bariatric surgery, a sleeve gastrectomy performed by Wayne English, MD, associate professor of Surgerv and director of Clinical Research for the Vanderbilt Center for Surgical Weight Loss.

"She did so remarkably well," English said. "This is absolutely outstanding. Her body mass index now is significantly less, almost 12 full points, than what it was prior to surgery."



Patient Veronica Llamas-Barajas (light gray shirt) with members of her care team, from left, Casey West, MSN, ANP-BC, Sandip Zalawadiya, MBBS, Jessica Hassler, RN, Wendy Tarpley, RN, and Wayne English, MD

Getting to the point of offering such a surgery took VUMC two years - both for the institution to develop protocols for the higher-risk LVAD patients, and to offer evaluations and counseling to ensure the first patient was right for the procedure.

Llamas-Barajas is looking forward to the prospect of being added to the heart transplant list in the new year.

"It's so exciting because I know that I'm one step closer to transplant," she said. "It motivates me to do better, to make the correct choices."

Complete story

## Naftel leads ROSA Brain procedures that offer precision guidance for pediatric neurosurgery

ROSA Brain, a robotic assistance platform for surgery, offers neurosurgeons a minimally invasive approach to precision brain mapping and the correct placement of their instruments.



"It acts as a system for us to make surgical plans accurate, precise and safe, and we also use it for treatment," said Robert Naftel, MD, associate professor of Neurological Surgery and director of the Pediatric Neurosurgery Fellowship Program at Children's Hospital.

Naftel, the first neurosurgeon to perform a ROSA Brain-guided procedure in Tennessee, says that of the system's many benefits, the greatest is its power to "leverage the abilities of our most valuable resource our talented, deeply caring neurosciences team."

"ROSA allows us to turn this clinical acumen into action by performing safe, precise, individualized surgical care for our patients."

Complete story

## Schoenecker, Summitt and team identify trigger of injury-induced inflammatory response during orthopaedic surgery

Patients that sustain severe trauma are at high risk of The findings, led by graduate student Breanne Gibson and reported in JCI Insight, mortality that comes in waves and may occur days to weeks after injury. Not only are patients at risk for dying suggest that pharmacologically blocking at the time of injury, but a second wave of death occurs plasmin activity — at the right time hours after the injury, from bleeding, and a third wave after severe injury could prevent the "cyhappens days later from systemic inflammatory response tokine storm" that causes the third wave syndrome (SIRS) leading to multiorgan dysfunction. of death, said Jonathan Schoenecker, MD, Dr. Summitt PhD, associate professor of Orthopaedic Surgery and senior author of the study.

Vanderbilt researchers have discovered that early inappropriate activation of the enzyme plasmin caused by severe injury is a trigger of SIRS and resulting organ failure leading to the third wave of death.

## **Environmental impacts of surgery examined by Broucek, Blankush**

A VUMC team of investigators is taking steps to quantify healthcare's climate impact — one surgery at a time.



In a study comparing robotic (rVHR) and open ventral hernia repairs (oVHR), they examined pointof-care costs and

associated economic sectors to determine the cumulative environmental impacts of procedure-associated products and processes.

The results demonstrate that robotic hernia repair causes significantly greater environmental impacts than open repair.

"While robotic surgery has a higher environmental impact in the operating room, it also decreases hospital length of stay and opioid use," said Joseph Blankush, MD, general surgery resident and first author on the study. "In general, we are looking to show that regardless of the procedure, the scale and volume of healthcare delivery, in its current format, causes significant environmental impact."

The healthcare sector's global climate footprint is equivalent to 4.4% of net carbon emissions, according to a report from the nonprofit *Health Care Without Harm*. The United States healthcare sector accounts for 27% of these global health care-associated carbon emissions and

**Complete story** 



Schoenecker's team included Blair Summitt, MD, associate professor in the Department of Plastic Surgery.

Complete story

**Comparison study** presents a model for evaluating the carbon footprints of common surgeries

8 to 10% of the nation's total emissions.

Measuring the fallout of these emissions in terms of downstream environmental impact such as acidification of water, airborne particulate matter and drought, among other factors, the United States population annually loses 405,000 disability-ad-

- justed life-years (DALYs) a measure of disease burden that translates to the number of lifespan years lost due to ill health, disability or early death.
- "As physicians, we're laser focused on what we do in the hospital, but we have to remember that there's a global system around everything," said Joseph Broucek, MD, co-director of the Hernia Center in the Division of General Surgery at Vanderbilt. "We think we're doing a lot of good in the OR, and overwhelmingly we are, but the whole
- industry has grown up around optimizing the supply chain with no real vision of environmental impact."





Dr. Broucek



9

Dr. Blankush

## Beauchamp, Hanna, Means, Smith team have paper in Gastroenterology

Researchers at VUMC have discovered a potential new target in the fight against colorectal cancer, the nation's third most common malignancy and, next to lung cancer, the second leading cancer killer.

Published in the journal Gastroenterology, R. Daniel Beauchamp, MD, **Anna Means, PhD**, and colleagues report that a cell-signaling protein/ chemokine called CCL20 and its receptor, CCR6, are essential to the growth of colorectal tumors following the loss of a tumor suppressor protein, SMAD4.

This alphabet soup of proteins appears to hold a key to identifying and ultimately interrupting the complex, multicellular events that spur malignant growth in the colon.

SMAD4 is part of the transforming growth factor beta (TGF-beta) signaling pathway that regulates the immune/inflammatory response to infection in the epithelial cells that line the colon.

Chronic inflammation, including inflammatory bowel disease, is a predisposing condition for colorectal cancer.

champ lab has demonstrated that SMAD4 blocks or represses the epithelium, and that loss of SMAD4 or inhibition of TGF-beta receptors in a mouse model increases levels of the chemokine CCL20.

"Our prior work found that TGF-beta family signaling through SMAD4 provides an important brake on gut epithelial cell inflammatory responses linked to carcinogenesis," said Beauchamp, the John Clinton Foshee Distinguished Professor of Surgery and professor of Cell & Developmental Biology.

"This current work links the upregulation of CCL20/CCR6 signaling after loss of SMAD4 to the inflammatory microenvironment that promotes colon cancers, particularly in inflammatory conditions such as ulcerative colitis in humans," he said.

In humans, CCL20 is upregulated in ulcerative colitis and Crohn's disease, Journal article **Complete story** 

and elevated in sporadic colorectal

adenomas (polyps) and colorectal

ence cancer susceptibility.

cancer, suggesting that it may influ-

In the current study, the researchers

report that loss of SMAD4 expres-

sion in human ulcerative colitis-as-

sociated cancer specimens is asso-

ciated with increased expression of

CCR6 receptor, and that ulcerative

colitis-associated cancers lacking

infiltration.

SMAD4 have increased immune cell

CCL20 and immune cells bearing the

## Lovvorn named among inaugural members of the Vanderbilt Academy for Excellence in Clinical Medicine

Harold "Bo" Lovvorn III, MD, professor of Pediatric Surgery, has been chosen as an inaugural member of the Vanderbilt Academy for Excellence in Clinical Medicine (AECM). Lovvorn will serve on the AECM, which was created in 2021 by leaders of VUMC and Vanderbilt University School of Medicine (VUSM) to recognize and advance exceptional patient care.

The initiative to establish the AECM grew out of a proposal from the

Complete story

Physician Council for Clinical Service Excellence and was formed to "honor exemplary clinicians who combine humanism, professionalism and a passion for patient care with a scholarly approach to improving patient health and who will establish a community of leaders to promote clinical excellence."

"Being chosen is a peer-reviewed honor and not a lifetime achievement award. It is a recognition of excellence and a commitment to be part

of a service entity with deeply held core values," said David Raiford, MD, professor of Medicine, chief of Clinical Staff Dr. Lovvorn for VUMC, and senior associate dean for Faculty Affairs.

In addition to honoring members for their efforts as outstanding clinicians, the AECM promotes excellence through education and mentorship of faculty and trainees.

## **Bailey, Eng on team that outlines comprehensive** framework for early-onset colorectal cancer

The reasons for rising rates of colorectal cancer in people younger than 50 are largely unknown.

A paper by Vanderbilt researchers —including Christina **Bailey, MD, MSCI**, associate professor of Surgery and program director of the General Surgery Residency published in The Lancet Oncology, provides an overview about the state of the science related to the epidemiology, molecular landscape and treatments for early-onset colorectal cancer as well as the disease's psychological and quality of life impact on patients.

Vanderbilt-Ingram Cancer Center (VICC) is one of the first institutions in the U.S. to tailor a research and patient support program specifically for early-onset colorectal cancer.

"The goal of our manuscript is to bring increased education and awareness to young-onset colorectal cancer patients, and for providers to consider all the potential aspects of their cancer care that they may be personally challenged with," said Cathy Eng, MD, the David H. Johnson Professor of Surgical and Medical Oncology at

Journal article

**Complete story** 



Kidney donor Mary Marlowe with her husband, Steve, daughter, Reagan, and son, Mason.

Mary Marlowe couldn't have known it at the time, but her decision in January 2021 to give a kidney to a total stranger would set off a chain reaction that would result in four people getting kidneys in one week in September 2021 at VUMC. The transplants — which took place over four days — became VUMC's first four-recipient kidney transplant chain.

Three of the recipients were waiting for a living kidney transplant with an approved but incompatible donor, and one recipient was on the waitlist for a deceased kidney

**Complete story** 

# Previous work in the Beaueffects of pro-inflammatory cytokines in the colonic

Drs. Means and Beauchamp

- Vanderbilt University, director of the VICC Young Adult Cancers Initiative, and another one of the paper's authors.
- "We need to support the patient not only with optimal therapeutic treatment, but also emotionally, psychologically and
- physically. I hope with increased education, awareness, research and with the reduction in the screening age from 50 to 45, we will see a reduction in the incidence of colorectal cancer."



Dr. Bailev

## **One organ donation triggers chain** of kidney transplants by Forbes, **Eid, DuBray, Hickman and Shaffer**

donor. It's the largest chain at Vanderbilt since a threeway chain that occurred in 2019.

"I think it's such an extraordinary way for this person who wants to donate to one person to actually allow four people to receive a transplant," said Rachel Forbes, MD, **MBA**, associate professor of Surgery and chief of the Division of Kidney & Pancreas Transplantation in the Department of Surgery. "When you think about these incompatible chains or domino chains, the power of one donor to be able to save so many lives is incredible."

Forbes and all four other surgeons on her team participated — **David Shaffer, MD**, professor of Surgery and surgical director of the Division of Kidney & Pancreas Transplantation, and three assistant professors of surgery for the division: Kareem Eid, MD, Bernard DuBray, MD, and Laura Hickman, MD.

## Thayer, Assi research suggests equitable results on topical treatment for older burn patients

Compared to younger patients, elderly patients have more complications, longer hospital admissions, and higher death rates from burn injuries. It is thought that age-related dysregulation of the immune system in the geriatric population can worsen burn injuries via a prolonged inflammatory response.



Reporting in the journal Burns, Surgical Science leaders and colleagues treated burn injuries in young and older mice with tacrolimus, an immunosuppressive drug, and compared outcomes to control mice.

Wesley Thayer, MD, PhD, associate professor and vice chair of research for the Department of Plastic Surgery, found that topical treatment of tacrolimus with a hydrogel dressing reduced the depth of burn injuries in older mice to the same level as in young mice, effectively counteracting age-related differences in burn outcomes. Topical treatment was shown to have a greater effect than systemic treatment (tacrolimus injections).

Thayer's study peers included **Patrick Assi, MD**, a VUMC resident in Plastic and Reconstructive Surgery; research specialist Alonda Pollins, MLI; and research fellow Christopher Kalmar, MD, MBA.

While further study is needed, these results suggest that topical tacrolimus treatment in older patients, by dampening the inflammatory response, may allow burn wounds to heal with the reduced morbidity and mortality that is seen in younger patients.

This work was partially supported by a Burroughs Wellcome Fund **Physician-Scientist** Institutional Award and a National Institutes of Health grant.



Dr. Thayer

Complete story

12

Journal article

## Huang builds solutions-oriented team as part of quality and innovations officer role

When Eunice Huang, MD, MS, associate surgeon-in-chief for Children's Hospital, moved to Nashville in 2020, her expertise in quality improvement and biomedical informatics landed her a lengthy list of clinical and institutional leadership roles that brightly painted her workday calendar.

In fact, Jeffrey Upperman, MD, surgeon-in-chief for Children's Hospital and professor and chair of the Department of Pediatric Surgery, recruited her for the new role of chief, Surgical Quality and Innovations officer. In this position, Huang has assembled a team of physicians, nurses and others from all pediatric surgical services to identify areas for improvement, generate solutions, then apply the resources needed to move solutions into practice.

"A surgeon spends many hours just taking care of patients," she explained. "If they notice an issue, they often don't have time to consider the many elements needed to reach a solution. Because we have more than 10 surgical specialties here with many moving parts and different workflows, having a central team that is knowledgeable about



the uniqueness and challenges of the space allows us to make quality improvements faster and more effectively."

One of Huang's goals is to further harness the virtual connectivity that was invaluable during the pandemic by developing an app to track a child's progress after they leave the hospital or clinic.

## Hawkins, Geiger analysis calls for stronger diverticulitis clinical practice guidelines

Each year in the United States, diverticulitis, inflammation of abnormal pouches — diverticula — in the wall of the large intestine, accounts for nearly 300,000 hospital admissions and \$1.8 billion in direct medical costs.





RRs with lower Id higher HHI. HF 800 🧱 5500

Geiger, MD, MMHC -associate professor of Surgery and chief of General Surgery — and colleagues found the procedure was conducted more frequently in hospital referral regions with a greater density of surgeons, large for-profit and teaching hospitals in metropolitan areas, and lower levels of competition.

Their analysis, published in the Annals of Surgery, should be a "call to action" to develop strong clinical practice guidelines to define best practice in this complex population of patients.

This research was supported by the National Institutes of Health (grant DK118192), the American Cancer Society and the Urology Care Foundation.

Complete story

#### Journal article

Dr. Geiger

**Complete story** 

Because of the risk that an inflamed diverticulum can rupture, infecting the abdominal cavity, patients with recurrent diverticulitis often undergo elective resection to remove the affected part of the colon. However, strong clinical practice guidelines for this procedure, which is also performed to improve quality of life, are lacking.

Using Medicare data to evaluate variation in rates of elective colon resection for diverticular disease, **Alexander** Hawkins, MD, MPH associate professor of Surgery and director of the Colorectal Research Center — **Timothy** 



Dr Hawkins

## Karp, Shah detail complexities of CHD heart-liver transplant

When Liz Barnett was born in 1980 with congenital heart disease (CHD), her medical team initially thought she didn't have much of a chance at a normal life.



Liz Barnett

"My mom was told ... at birth to go home and have

more kids to keep her company when I died," Barnett said, "that there was no hope for me."

Barnett found hope. As a child, she received a Fontan procedure, allowing her to live with a single ventricle, or pumping chamber in her heart, instead of the usual two. She is now one of seven people to receive a combined heart/liver transplant at VUMC. The Medical Center performed more of these surgeries in 2021 than any other in the United States and is one of the few that specializes in the surgery for adults with CHD.

"These procedures require no less than 40 people to perform and can take as long as 16 hours to complete," said Ashish Shah, MD, professor and chair of Cardiac Surgery. "They are technically complex, physically exhausting operations that demand a unique level of teamwork. They bring out the best in our operating room and ICU teams. Which is why we do

"This program works because of individuals and teams with singular expertise coming together in a unique, patient-centered manner. This allows VUMC to provide care possible at only a few centers in the world," said **Seth Karp, MD**, H. William Scott Jr. Professor, chair of the Section of Surgical Sciences and director of the Vanderbilt Transplant Center.

Complete story

13

## **Delta Dental gift to support pediatric craniofacial program**



Park in advance of the "Smile Power Sunday" Nashville Sounds game. Delta Dental of Tennessee's charitable arm, the Smile180

Foundation, recently made a \$1.075 million commitment to the Cleft and Craniofacial Program at Children's Hospital.

Children's Hospital will use the funds to establish the Delta Dental of Tennessee's Smile180 Foundation Directorship for the Cleft and Craniofacial Program and to provide critical support as the program seeks to expand its services to care for more young patients and their families.

The announcement was made in June at First Horizon Park in advance of the "Smile Power Sunday" Nashville Sounds game. Delta Dental has longstanding support of Children's Hospital. Since 2001, Delta Dental and Smile180 have donated more than \$2.3 million to Children's Hospital.

"We are thankful for Delta Dental of Tennessee and the Smile180 Foundation for their generosity to our programs for more than two decades," said Jeffrey Upperman, MD, surgeon-in-chief of Children's Hospital and chair of the Department of Pediatric Surgery. "Support from organizations like

Delta Dental plays an important role in our mission to expand and enhance our quality, cutting-edge patient care and enables the advance of healthcare. We could not do the work we do every day without our community partners."

This program cares for patients with a wide range of facial differences and is led by Michael Golinko, MD, medical director of the Cleft and Craniofacial Program and chief of Pediatric Plastic Surgery, along with Jim Phillips, MD, co-director of the Cleft Lip and Palate team.

Complete story

## **Menachem lauds VUMC heart-liver transplants** for single-ventricle patients

## Alexopoulos and Shah lead teams in these complex procedures

For years, doctors told Piper Davis it was impossible to have a heart transplant. She was born with just one ventricle, or pumping chamber, instead of two. A generation ago, such patients didn't survive into adulthood. Over her 35 years, Davis had multiple surgeries, including a Fontan, the procedure given to pediatric patients with one ventricle.

"Even in my 20s, transplant was never an option," said Davis, who lives in Cleveland, Tennessee.

Imagine her surprise in May 2020 when she not only received a new heart but a new liver at VUMC, the first known dual heart and liver transplant involving Hepatitis-C-positive

organs in a single-ventricle patient.

"Though such transplants remain rare, they are becoming more common around the country and the program is growing rapidly at VUMC, the only location in Tennessee and one of a few in the South where such transplants are possible," said Jonathan Menachem, MD, assistant professor of Medicine and Pediatrics, a transplant cardiologist, and director of Advanced Congenital Cardiac Therapies (ACCT).

Davis' prognosis is excellent.

"It's a huge change," she said. "It's incredible and overwhelming."





Dr. Alexopoulos





The vast majority of papillary thyroid cancers are slow-growing and typically managed successfully with surgery, with or without radioactive iodine treatment. However, for the subset of these cancers that become aggressive, treatment resistant or widely metastatic, there are very few effective therapies.

This challenge spurred a team of researchers at VUMC to seek molecular targets to cripple the antioxidant defense system supporting the proliferation and growth of metastatic papillary thyroid cancer cells.

Led by Naira Baregamian, MD, MMS, assistant professor of Surgery in the Division of Surgical Oncology and Endocrine Surgery, and Raja Konjeti, PhD, a staff scientist in the Department of Surgery, the team revealed through a series of *in vitro* studies the enzyme glutathione peroxidase 4 (GPX4) to be a potential therapeutic target.

Vanderbilt surgical resident David Hanna, MD, and medical student Sriram Cyr also contributed to the work, which won a firstplace award at the 2021 Cancer Research Paper Competition, an annual event hosted by the ACS Commission on Cancer and the American Cancer Society.

The work allowed investigators to move advanced models with a small molecule that unleashes cell death via ferroptosis.

"We also have a lot of work ahead of us to decipher the impact of



GPX4 in therapy-resistant thyroid tumors with diverse mutational signatures," Baregamian said. "Knowing this will allow a precision oncological approach to treating thyroid tumors."

**Complete story** 

#### **Complete story**

## Lung transplant identifies need for colon cancer surgery for Hopkins' patient Darnell

In a series of events she considers miraculous, Janet Darnell's life was saved twice in one year. Five months after a 2020 lung transplant surgery, and because of tests required for the transplant, Darnell had surgery to remove stage 3 colon cancer.



Dr. Hopkins

Without the lung transplant, the cancer may never have been detected.

Darnell was referred to Vanderbilt for a transplant. Stephanie Norfolk, MD, assistant professor of Medicine, was one of the first of a team of pulmonologists who saw her in clinic.

To receive a transplant, all patients are required to receive a series of tests and screenings to ensure they are good candidates for transplant. Darnell had several colonoscopies both before and after her transplant. That's how a suspicious polyp was detected, leading to surgery five months later when much of her colon was removed.



"It is the only way to get the cancer out and to figure out what stage it is," said her surgeon, Ben Hopkins, MD, associate professor of Surgery.

"The confluence of events that occurred was life-saving," Norfolk said. "Having the lung transplant was what enabled her subsequently to get through surgery for her next diagnosis of cancer."

## **Robotic eTEP hernia repair compares to** open-ventral gold standard

A robotically enhanced-view totally extra-peritoneal (eTEP) technique, newly applied to ventral hernia repair, is proving its mettle among surgeons experienced in robotic assistance technologies. Leading the pack is Joseph Broucek, MD, who has performed scores of eTEP procedures and trained many others across the country in the technique.



Broucek, an assistant professor of Surgery at VUMC, is also working to put hard numbers on the costs and benefits of this procedure in comparison to open surgery, previously considered the gold standard. Studies to date have established that the durability of repair is equivalent, and that robotic procedures have the edge on hospital length of stay (LOS) and wound infection rate. Still missing until now has been data that paints a broad picture of the value for the patient and hospital across the course of hospitalization.

Broucek and his VUMC colleagues Joel Bradley, III, MD, Meredith Duke, **MD**, **MBA**, and **Richard Pierce**, **MD**, **PhD**, are addressing these questions through reports on the first 25 patients to undergo the robotic eTEP procedure at Vanderbilt. They are comparing these to data from the Abdominal Core Health Quality Collaborative and from existing literature on open and robotic retromuscular ventral hernia repair across multiple study sites in the United States.

To date, their findings affirm previously demonstrated benefits, as well as a lower need for narcotic pain medication.

"At a big hospital like Vanderbilt, where we run at over 100% capacity, shorter LOS allows us to free up beds for other critical care patients who need to be transferred in," Broucek said. "This translates into value for both patients and the hospital system."







Dr. Bradley

16

**Complete story** 

Dr. Broucek

Dr. Duke

Dr. Pierce

## **Yengo-Kahn identifies** similar concussion care access pathways for young Black and white athletes

Both Black and white young athletes who suffered concussions while within a sport-related concussion (SRC) clinic referral network did not experience health disparities related to their care, according to a study in the April issue of the Journal of Athletic Training, the National Athletic Trainers' Association (NATA) scientific journal.

Previous studies have shown that, even after accounting for factors such as insurance, severity of disease, income status, and educational levels, Black patients recovered ear-

lier and missed Dr. Yengo-Kahn less school than

their white counterparts, raising concern for differential care quality.

"Sport-related concussions are a public health concern, particularly among pediatric and adolescent populations, where one in five athletes has reported sustaining a concussion in their lifetime," said lead author Aaron Yengo-Kahn, MD, co-director of Research in the Vanderbilt Sport Concussion Center at VUMC.

"Diversity among these athletes matters. We know that seeking care for sport-related concussions is not consistent across demographics, and that can stem from health inequities and lead to further disparities," he said.

Complete story

## **Bacchetta leads multi-center team creating** at-home artificial lung system

VUMC will share in an \$8.7 million federal grant to create an artificial lung system that patients with incurable lung disease can use at home.

The Department of Defense Congressionally Directed Medical Research Program (CDMRP) grant will fund research to create and test the device, which is intended for patients who may not be able to wait long enough for a lung transplant or are not candidates for one.

The goal for the device is to care for such patients indefinitely, said Matthew Bacchetta, MD, MBA, MA, professor of Cardiac and Thoracic Surgery and Biomedical Engineering, who leads Vanderbilt's research team working on the device. The device could also help patients rehabilitate from temporary life-threatening lung issues and serve as a bridge to transplant.



Vanderbilt's research team will share the ent because ECMO is temporary and limited to an ICU four-year grant with teams from Carnegie setting. That's not our design intent. We've completely Mellon University and Cornell University. erased that drawing board and created a new drawing Vanderbilt's team will focus on engineerboard that is focused on management of chronic lung ing and testing the modes of vascular access and the ergonomics of the device tination therapy."

disease in a durable and enduring fashion, really as a desas well as developing the gas exchange Complete story portion of the device. Bacchetta hopes

# Wellons interviewed on NPR about new book, All That Moves Us, a memoir about his career and memorable patient experiences



## John "Jay" Wellons, III, MD, MSPH,

professor of Neurological Surgery, Pediatrics, Radiology & Radiological Sciences, and Plastic Surgery, and Division Chief, Pediatric Neurological Surgery was interviewed about his new book "All That Moves Us" on National Public Radio's "Fresh Air."



## Why Storytelling is part of being a good doctor



Complete story

to include Vanderbilt University students participat-

JS10,251,989 EP 3 129 080 ing in the Vanderbilt Institute for Surgery and Engi-

weep Gas

Blood

neering (VISE). "The intent is that this could potentially be used for years," Bacchetta said. "It's a very different de-

sign approach from ECMO. It's differ-



All That Moves Us

Dr. Wellons (Right) with neurosurgery resident

Review of "All That Moves Us" by Jerome Groopman

## **Upperman appointed to NACCD** advisory committee

Jeffrey Upperman, MD, surgeon-in-chief of Children's Hospital and professor and chair of the Department of Pediatric Surgery, has been appointed to the National Advisory Committee on Children and Disasters (NACCD) by the U.S. Secretary of Health and Human Services (HHS).

The NACCD is charged with evaluating issues and programs and providing recommendations to the HHS secretary to ensure children's public health and medical care needs are met during disasters.

Specifically, the group gives findings, advice and recommendations "to support and enhance all-hazards public health and medical preparedness, response activities and recovery aimed at meeting the unique needs of children, in a developmentally and socially appropriate manner, across the entire spectrum of their physical, mental, emotional and behavioral well-being."

"Dr. Upperman is a national leader in disaster management as well as traumatic injuries in children. With this skill set, he is uniquely qualified to advise the Secretary of Health and Human Services in this important area," said Seth Karp, MD, H. William Scott Jr. Professor and chair of the Section of Surgical Sciences.

"It is indeed an honor and pleasure to again serve our country by helping to prepare families and children for disasters," said Upperman, who has been at Children's Hospital since 2019. "I look forward to continued service to families and communities in need before, during and after disaster strikes by advising the Secretary on evidence-based approaches to the holistic preparation for communities across this great country."

This is Upperman's second appointment to the NAC-CD, having previously served a term from 2014-2018.



## **Blakely leads rare, multi-center** study comparing surgery options for low birthweight babies

More than 20 years ago, Martin Blakely, **MD**, professor of Pediatric Surgery at Children's Hospital, asked what seemed to be a simple question that took nearly two decades to answer: What is the best treatment for two conditions commonly diag-





nosed among low birthweight newborns called necrotizing enterocolitis (NEC) or isolated intestinal perforation (IP)?

The question revolved around two surgical treatments that traditionally had unfavorable outcomes.

In an effort to improve survival and reduce the neurodevelopmental impairment of this patient population, Blakely led 20 centers across the United States in a study called "Necrotizing Enterocolitis Surgery Trial (NEST)," recently published in the Annals of Surgery.

The randomized neonatal surgery trial compared two surgical options — laparotomy versus peritoneal drainage — to determine which intervention was better for each condition.

"Very few of our neonatal surgical treatments have been studied properly and extensively. There has been much debate about these two treatments," said Blakely.

"This is one of the very few randomized trials evaluating neonatal surgical treatment that met its required enrollment and followed the patient population beyond hospital discharge," he said.

"We needed to engage in a scientifically rigorous, valid study design that might change practice. This level of study is extremely rare and almost never done."

**Complete story** 



## **Neurosurgeon Morone and ENT's Tawfik team** to treat Hazlewood's skull-based tumor

Vanderbilt Skull Base Center patient is back living her life to the fullest after the top-quality care from her multidisciplinary team.

reached out to sched-In retirement, Andrea Hazlewood enjoys staying active. She likes to walk, garden, and go to the beach. Most of all, ule an appointment. she loves keeping up with her two grandchildren.

When she started experiencing balance issues and hearing loss, she immediately started looking for answers.

After experiencing bothersome tinnitus (ringing in the ears) in 2016, Andrea had an MRI that found nothing of

concern. Four years later, she was having neck pain and had another MRI, which did show a tumor. Her ENT confirmed that she had a 2.6 cm acoustic neuroma.

"I learned it was important to find a skull base center that performs a lot of procedures and specializes in acoustic neuroma,' says Andrea. She was thrilled to see that the Vanderbilt Skull Base Center has an excellent, multi-faceted program dedicated to acoustic neuroma. "I knew Vanderbilt was the best. I felt relieved," she says. Although it was a three-hour drive from her home in Kentucky, she had no reservations. Within 24 hours of contacting Vanderbilt, the Skull Base Center patient care coordinator



husband and arandchildren



Vanderbilt Health YouTube: Andrea Hazlewood, Acoustic Neuroma Tumor

**Complete story** 

18

## Reprinted with permission from the Acoustic Neuroma Association



Dr. Morone



Dr Tawfi

"The fast response gave me faith in Vanderbilt before I even stepped in the door," she said.

At Vanderbilt, Andrea met neurotologist, Kareem Tawfik, MD and neurosurgeon, Peter Morone, MD.

"The doctors were amazing. Dr. Tawfik immediately put

me at ease. He was so personable. I felt so comfortable," she says.

Because of the tumor's size, and since she had already lost 80% of the hearing in her right ear, the Vanderbilt team decided to do surgery. The complex operation went smoothly and Andrea was discharged from the hospital after three days. At home, she followed her care team's eightweek personalized recovery plan.

"My recovery has been awesome," she says.

Patient Andrea Hazlewood with her

Complete story

"I am delighted that Andrea has made such a spectacular recovery, and I feel so fortunate to be involved with her care." – Dr. Morone

## **Bacchetta reimagines ECMO** for COPD patients

Through his research and practice, Matthew Bacchetta, MD, MBA, MA, professor of Cardiac and Thoracic Surgery, surgical director of the Vanderbilt Lung Institute, and director of the VUMC ECMO Program, is tilting at a dragon larger than almost any other medical problem in the United States: chronic lung disease.

In advanced cases, a patient's best alternative often is a lung transplant, but the lack of viable organs is a major hurdle. Only about 2,500 lung transplants take place each year in the United States due to the shortage of donors and the lack of high-quality organs to replace the failing ones.

"There's simply a severe shortage of donor organs in general," said Bacchetta, "Because of that, it has become a complex process which has made lung transplantation very selective."



Management of the disease without a transplant may require ECMO while a patient's own lungs heal. To date, this treatment is only available in intensive care units, but that may change follow-

Dr. Bacchetta

ing an initiative to create a simpler, more portable ECMO.

Bacchetta, along with colleagues at Carnegie Mellon University and Cornell University, has been awarded \$1.47 million by the U.S. Department of Defense to conduct ECMO research in response to a high level of lung disease among service members.

Complete story

20

# Donate Life **VUMC** a national leader in organ, tissue donations

A total of 109 people gave the gift of life as deceased organ donors at VUMC in 2021, resulting in saving 280 lives, more than any other year, according to Tennessee Donor Services (TDS). More patients generously gave their gift of organs at Vanderbilt last year than any other single hospital in the U.S.

A total of 203 people were tissue donors, enhancing the lives of 3,165 people, reported by TDS, the federally designated donor network.

"Our transplant programs are entirely dependent on the generosity of the donors and donor families who, in time of great sorrow, turn their attention to helping others," said **Seth Karp, MD**, chair of the Section of Surgical Sciences and director of the Vanderbilt Transplant Center. "We are grateful to live in and support such a compassionate community."

Complete story

# 645 1 6 9 6 Life-saving transplants in 2021 at VUMC Transplant Center

The Vanderbilt Transplant Center established a new record in calendar year 2021 for total solid organ transplants, performing 645 life-saving procedures. The Center is now the fifth-largest transplant center by volume in the nation and is the world's largest heart transplant center. It also set records for two organ programs:

• 315 kidney and 54 lung transplants

## **2021 Adult Transplant totals**

- 301 kidney transplants
- 11 simultaneous pancreas-kidney transplants
- 14 liver transplants
- 124 heart transplants
- 54 single- and double-lung transplants and one simultaneous transplant

## **2021 Pediatric Transplant totals**

- Pediatric teams with Children's Hospital performed
- 14 kidney transplants
- 9 liver transplants
- 17 heart transplants

## Choi discovers molecular 'switch' that may illuminate stomach disorders

An international team that included researchers from VUMC has discovered a molecular switch that induces rapid proliferation of zymogen granule-secreting chief cells in the stomach to regenerate damaged tissue. The researchers included **Eunyoung Choi, PhD**, assistant professor of Surgery and a faculty member of the Epithelial Biology Center.

The finding, which was reported in the journal Cell Stem Cell, may be crucial to understanding gastric pathologies, including certain chronic, premalignant conditions.

A population of adult gastric cells in the stomach called "chief cells" normally

Dr. Choi

## Shah lauds Bacchetta's ECMO life-saving fellowship program **Current and former fellows include** Drs. Francois, Patel, Stokes and Tipograf

VUMC is one of the only centers in the country that has a clinical ECLS (extracorporeal life support) fellowship, giving new doctors two years of hands-on experience with a lifesaving critical care tool, one that has only become more important during the COVID-19 pandemic.

ECLS, also known as ECMO, is a life-sustaining mechanical system that temporarily takes over for the heart and lungs of critically ill patients, allowing them to rest and recover.

"The ECLS fellows take care of the sickest patients in the hospital every day," said Matthew Bacchetta, MD, MBA, **MA**, professor of Cardiac & Thoracic Surgery and Director of the VUMC ECMO Program.

Bacchetta, who arrived at Vanderbilt in 2018, said he wanted to establish an ECLS fellowship as he had at Columbia University. Ashish Shah, MD, professor and chair of Cardiac Surgery, said the fellowship has a number of unique features.

**Complete story** 

secrete granules containing precursors, or zymogens, of digestive enzymes and do not proliferate. When tissue damage occurs, however, they can suddenly switch to a rapidly proliferating, regenerative function.



To better understand this, researchers at the Institute of Molecular Biotechnology of the Austrian Academy of Sciences, VUMC and Pohang University of Science and Technology in the Republic of Korea (South Korea) utilized a novel mouse model to trace the effects of stomach tissue injury at a single-cell level.

The transgenic mouse model was generated in the laboratory of Choi, who was one of three corresponding authors of the paper.

The model "allows us to track cell fate changes of cells of origin in metaplasia

and gastric cancer and is a unique model in the gastric cancer field," Choi said.

#### Journal Link

Complete story

"Beyond the basic clinical demands of managing ECLS patients, these fellows are totally immersed in advanced heart and lung failure,' Shah said. "They collaborate at a high level with intensivists, surgeons and perfusionists, and are a key part of transporting ECLS patients from outside hospitals. Importantly, they spend time in Dr. Bacchetta's organ rehabilitation lab where they see the future applications of



mechanical support. Frankly, they are part of our cardiac surgery team. For a surgical resident only a few years into training, they get to be true experts. This was Dr. Bacchetta's vision, and he has built something really special here at Vanderbilt."

Complete story

Vanderbilt Section of Surgical Sciences • Spring/Summer 2022

## Local chapter of Association of Women Surgeons meeting



Vanderbilt Women in Surgery, a local chapter of the Association of Women Surgeons (AWS), met recently and welcomed guest speaker Sherry Wren, MD, vice chair of Surgery at the Stanford School of Medicine, director of Global Surgery at the Center for Innovation and Global Health, and director of Surgery at the Palo Alto Veterans Health Care System.

Wren spoke on disparities in healthcare faced by female patients and on the challenges faced by women in surgery at academic medical centers and healthcare institutions. The women in attendance represented many of the surgical specialties at VUMC, and in the spirit of mentorship, the group welcomed daughters and other female family members to attend.

## **VUMC Patient & Family Advisory Council holds** inagural Choice Awards - Tan and DeWire nominated

The Patient and Family Choice Awards are to honor VUMC staff who act with compassion and excellence to provide an exceptional experience for patients and their



families. It is to be awarded each year by the Patient & Family Advisory Council to those who most exhibit the values of the VUMC Patient & Family Promise.

Only patients and family members can submit nominations.

Tracy DeWire



This year we received nearly 1,600 nominatins for staff in positions from valet to surgeon. The winner was announced in April. Thank you to all nominees for being a role model and visible example of how we engage and live our lives at work.

Two Section staff memebers were nominated this year.

 Tracy DeWire, ACNP, MSN, **BS**, works at the Vanderbilt Breast Center located at 100

Oaks. Nomination comments: - "She is an exceptional nurse practitioner and a sensational human being. Professional yet very warm and approachable, knowledgeable and caring."

• Marcus Tan, MBBS, assistant professor of Surgery, Division of Surgical Oncology & Endocrine Surgery. Nomination comments: - "Because of Dr. Tan's world-class technical skills and his excellent timely judgement, I am able to write these words"... "Dr. Tan coolly assessed a difficult situation, planned the actions necessary, and proceeded with excellence the surgery that had to be performed. His skills and abilities saved my life."

The Patient and Family **CHOICE AWARD** 

## **Baregamian lands Vanderbilt Faculty Research Scholars Award**

Naira Baregamian, MD, MMS, assistant professor of Sur-Vanderbilt investigators and received multiple awards and gery, Division of Surgical Oncology & Endocrine Surgery, national recognition with research appearing in the Journal recently received the Vanderbilt Faculty Research Scholof Cellular and Molecular Medicine and JAMA Oncology, ars (VFRS) Award. This coveted award provides support and the novel results of her research were highlighted in allowing protected research time for early career VU and Vanderbilt DISCOVER monthly journal. VUMC faculty members across the breadth of basic, Baregamian specializes in surgical treatment of benign translational, and clinical science. Since VFRS's inception, and malignant endocrine conditions. the predecessors have almost all received extramural funding, commonly known as NIH K or R01 grant funding. Most researchers are still in academia and are independent researchers with their own labs.

"Receiving this award demonstrates Naira's dedication, perseverance and commitment to being a surgeon-scientist and a leader in the field of Endocrine Surgery. As a division, we are very proud of her accomplishments."

- Kamran Idrees, MD, MSCI, MMHC Chief, Division of Surgical Oncology & Endocrine Surgery

Baregamian, an endocrine surgeon and principal investigator, opened the Endocrine Neoplasia lab in late 2019, investigating tumor metabolism and immunometabolic regulation in endocrine tumor microenvironment, including thyroid, parathyroid and adrenal tumors. She and her team have extensively collaborated with numerous



Marsha Eastridge had no clue she had heart problems dures. until she was diagnosed in 2021. Barely three weeks later, she was undergoing the first of two complex vascular pro-The 1,175 square feet hybrid ORs are nearly double the cedures at Vanderbilt Heart and Vascular Institute (VHVI) that would save her life. ARTIS pheno imaging system, and a large robotic arm

The multidisciplinary, comprehensive care she received



## Shah, Clair rely on new Hybrid OR staff and features for patient Eastridge

at Vanderbilt — all in one hospital stay — involved the Medical Center's top heart and vascular doctors and its new hybrid operating rooms.

Eastridge was referred to at VUMC. She spent 21 days in the hospital, having two major surgeries 12 days apart. The first, an ascending aneurysm procedure involved Ashish Shah, MD, professor and chair of Cardiac Surgery, and the second was a hybrid endovascular procedure involving Daniel Clair, MD, professor and chair of Vascular Surgery.

Shah said the hybrid ORs, two of which opened last year, are a significant investment built to manage patients who require multiple specialties to tackle complicated proce-

size of traditional operating rooms and have a Siemens ready to assist in the most sophisticated procedures.

## **Reed Family Maternal Fetal Clinic delivers** unique, multi-specialty expertise

"We take care of sick babies and mothers." - Co-director Pietsch



Cassie Kroll was surprised and overjoyed to find out she was pregnant with her third child. But paired with that excitement was a deeply held fear. During her second pregnancy, Kroll and her baby were diagnosed

Cassie and Emmett Kroll

with fetal anemia — a condition that occurs when a mother and baby have incompatible blood types.

Upon finding out she was pregnant a third time, while her husband was stationed at Fort Campbell in Clarksville, Tennessee, Kroll immediately sought care at Children's Hospital, which offers specialized comprehensive maternal fetal care.

Last year, Children's Hospital and VUMC experts opened The Reed Family Maternal Fetal Clinic, building and expanding upon a decades-long foundation to provide comprehensive maternal fetal care. The Reed Family Clinic is unique in its ability to harness the power of the many internal specialties and resources to provide compassionate, comprehensive care.

"Our patients have access to a very large team of maternal fetal medicine specialists, pediatric subspecialists, pediatric cardiologists and pediatric surgeons, and we also have access to ECMO (extracorporeal membrane oxygenation) technology," said John Pietsch, MD, retired professor of Pediatric Surgery and Pediatrics, former co-director of the Center for Advanced



Maternal Fetal Care, and founder of the VUMC ECMO program.

"That is unique to Vanderbilt. We take care of sick babies and mothers - accommodating high-risk, complicated cases and involving a multidisciplinary team in the care of the baby and family before and after birth."

Complete story

## **Englot receives the Grant W. Liddle Award Shroder among** abstract finalists

## Dario Englot, MD, PhD, associate

professor of Neurological Surgery and Surgical Director of Epilepsy, has received the Grant W. Liddle Award for his "commitment and leadership in promoting an interest in research among young physicians."



Drs. Englot and Kelly

Englot, also associate professor in the departments of Biomedical Engineering, Electrical and Computer Engineering, Neurology, and Radiology & Radiological Sciences, is nationally recognized for his investigations of brain network abnormalities using neuroimaging and electrophysiology, with a focus on epilepsy.

The award was part of the 40th annual Research Forum hosted by the VUMC Office of Graduate Medical Education and House Staff Advisory Council. General surgery resident Megan Shroder, MD, was among the finalists for top abstracts submitted to the Forum.

Complete story

## Wellons chosen as the McCleery Master Teacher for 2021-22



(L) Dr. Yengo-Kahn introduced the award winner, Dr. Jay Wellons (R) Dr. Reid Thompson, quest speaker Dr. Selwyn Vickers and Dr. Jay Wellons

Jay Wellons, III, MD, MSPH, professor of Neurological Surgery, Pediatrics, Radiology and Radiological Sciences, and Plastic Surgery, was the recipient of the annual Robert S. McCleery Master Teacher Award. This award is made possible through the generosity of the late Dr. Eustace H. Winn Jr. of Greenville, Mississippi.

This award 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. Also nominated were Michael Holzman, **MD**, **MPH**, professor of Surgery, Division of General Surgery, and Wesley Thayer, MD, PhD, associate professor of Plastic and Orthopaedic Surgery, Department of Plastic Surgery.

## **Grogan part of VICC Scientific Retreat focusing on lung** cancer, honoring Massion

Speakers at the VICC 23rd Annual Scientific Retreat celebrated "Advances in Lung Cancer Research" but noted that too many people with the disease are not benefiting from those achievements.

Eric Grogan, MD, MPH, associate professor of Thoracic Surgery and the department's vice chair for research, was among the retreat's attendees.

"Lung cancer is our leading cause of cancer mortality. Twenty-nine percent of our total cancers are lung cancer. That's the work we are going to talk about ... and it is incredibly important," said VICC director Jennifer Pietenpol, PhD, Benjamin F. Byrd Professor of Oncology, Chief Scientific and Strategy Officer for VUMC, and holder of the Brock Family Directorship in Career Development.

The retreat was held in honor of Pierre Massion, MD, an internationally known expert on early detection and prevention strategies for lung cancer, who died in April 2021. He was director of the Cancer Early Detection and Prevention initiative and co-leader of the Cancer Health Outcomes and Control Research Program at VICC. Massion was one of the researchers who pioneered studies that led to the adoption of low-dose CT scans for early detection of lung cancer.

**Complete story** 

Dr. Pietsch



## **Students tap Splittgerber to** receive Shovel Award for outstanding teaching

Each year, the VUSM graduating fourth-year class honors one faculty member with the Shovel Award in recognition of the exceptionally meaningful impact he or she has had on their medical education.



Dr. Splittaerbe

The recipient of the 2022 Shovel Award is Ryan Splittgerber, PhD,

associate professor of Surgery in the Department of Surgery.

Dr. Splittgerber is one of the anatomy professors who teaches in the Foundations of Medical Knowledge (FMK) for first-year students and Immersion phases for third- and fourth-year students. He lectures and oversees the gross anatomy labs and the anatomical donations program for the School of Medicine.

"In all of these roles, he is enthusiastically engaged with educating our students on a variety of important clinically relevant topics," said Cathy Pettepher, PhD, professor of Biochemistry and Medical Education and Administration and assistant dean of Medical Student Assessment.

"He also serves as a mentor and role model and makes himself available whenever a student reaches out for help. This was especially evident during the last few years when we were trying to teach during COVID."

#### Complete story



Dr. Grogan



Dr. Massion

25

## **Eskind receives Academic Enterprise Award for teaching** excellence

Steven Eskind, MD, assistant professor of Surgery, was honored with the Robert D. Collins Award for Teaching Medical or Graduate Students or Practicing Physicians in the Lecture Setting. Eskind, who is one of five master teachers in the Section of Surgical Sciences, received the recognition as part of the 2022 VUSM Academic Enterprise Awards (AEA).

Since 2010, Eskind has directed the Surgical Clerkship Program of Surgery for the VUSM. He also has served as director or co-director of numerous other elective courses in the Immersion Phase in the School of Medicine.

The AEA awards for Excellence in Teaching, Extraordinary Performance of Clinical Service, and Outstanding Contributions to Research were presented during the annual spring faculty meeting.



Drs. Karp, Eskind and Balser



Dr. Jeffrey Eskind, Laurie Eskind, Dr. Steven Eskind and Dr. Jeffrey Balser. Laurie is Steven Eskind's wife and Jeffrey is his brother.

## VUMC again named to 'Honor Roll' of nation's finest hospitals



VUMC has again been named to the Honor Roll of America's Best Hospitals by U.S. News & World Report in the publication's 2022-2023 ranking of health care facilities. VUMC is No. 1 in Tennessee, No. 1 in the Metro Nashville area and the only health system in the Southeast to be named to this year's Honor Roll.

U.S. News uses structural measures and peer reputational scores to rank hospitals. U.S. News evaluated more than 4,500 hospitals, and only 164 were nationally ranked in one medical specialty or more. Only 20 hospitals earned Honor Roll status in this year's ranking.

In addition to inclusion in the Honor Roll, VUMC was nationally ranked in nine data-driven nationally ranked specialties -

- Cancer
- Cardiology & Heart Surgery
- Diabetes & Endocrinology
- Ear, Nose & Throat
- Gastroenterology & GI Surgery
- Geriatrics, Obstetrics & Gynecology
- Pulmonology and Lung Surgery
- Urology

Procedures and conditions ranked as high performing were **abdominal** aortic aneurysm repair (AAA), aortic valve surgery, back surgery (spinal fusion), chronic obstructive pulmonary disease (COPD), colon cancer surgery, diabetes, heart attack, heart bypass surgery, heart failure, hip fracture, hip replacement, kidney failure, knee replacement, lung cancer surgery, ovarian cancer surgery, pneumonia, prostate cancer surgery, stroke and transcatheter aortic valve replacement (TAVR).

**Complete story** 

## **Mohammad to direct Pediatric Solid Organ Transplant Center**



Saeed Mohammad, MD, MS, has been named director of the Pediatric Solid Organ Transplant Center at Children's Hospital, following an extensive national search. In this new role, Mohammad will work to grow Vanderbilt's pediatric transplant services.

Dr. Mohammad

Mohammad, an internationally recognized pediatric transplant physician, joins Vanderbilt from Northwestern University Feinberg School of Medicine. There, he was an associate professor of Pediatrics, fellowship director for the transplant hepatology fellowship, and medical director for the Hepatology and Liver Transplantation program at the Ann & Robert H. Lurie Children's Hospital of Chicago.

"Dr. Mohammad is a national leader in pediatric liver transplant and we are so pleased to welcome him to Vanderbilt," said Seth Karp, MD, H. William Scott Jr. Professor, chair of the Section of Surgical Sciences and director of the Vanderbilt Transplant Center.

"Under his leadership of the pediatric transplant center, we plan to expand the innovative services we provide to children with all end-stage organ disease treated with solid-organ transplantation."

"Vanderbilt has a proud history of excellence in both pediatrics and transplantation, and I am excited to join this team as we work to develop a comprehensive pediatric-focused transplant center to care for the children in Tennessee and across the nation," said Mohammad.

#### **Complete story**

## Guillamondegui interviewed about how some Trauma Centers lack national verification



**Complete story** 

26

## Schaefer named Adult Solid **Organ Transplant Center** medical director

Heidi Schaefer, MD, has been named medical director of the Adult Solid Organ Transplant Center at VUMC.

Schaefer, professor of Medicine in the Division of Nephrology and Hypertension, is a national leader in transplantation and education.

"I am grateful for the opportunity to serve our patients, the transplant center and VUMC in this leadership role, and I am excited to work with our transplant teams to continue with outreach efforts, increasing transplant volumes and growing our research presence nationally," Schaefer said.

She rose to prominent positions at VUMC, including medical director of the Living Kidney Donor Program and medical director of 6MCE Medical/Surgical Transplant Unit. She played a key role in the dramatic growth of the kidney program from 100 kidney transplants in 2004 to more than 300 in 2021. Her leadership of the live donor kidney program produced outstanding outcomes and similarly dramatic growth.

"We are extremely fortunate to have Dr. Schaefer assume this very important role as medical director for the Adult Solid Organ Transplant Center," said Seth Karp, MD, H. William Scott Jr. Professor, chair of the Section of Surgical Sciences and director of the Vanderbilt Transplant Center.



Dr. Schaefer

#### Complete story

Access to trauma care is improving across the country, but progress remains uneven

By Edward Chen Stat Medical News



Dr. Guillamondequi

## **Erasmus named medical** director of Vanderbilt Lung Transplant Program

David Erasmus, MBChB, MD, assistant professor of Medicine, has joined VUMC as medical director of the Vanderbilt Lung Transplant Program.

More than 500 lung transplants have been performed at Vanderbilt since the lung transplant program began in 1990, including 54 lung transplants and one simultaneous heart-lung transplant in calendar year 2021, a record year for the program.



#### "As our lung transplant pro-

gram continues to grow as one of the most innovative in the U.S., we are so excited to have Dr. Erasmus, a preeminent transplant pulmonologist, joining us as our new director," said Seth Karp, MD, H. William Scott Jr. Professor, chair of the Section of Surgical Sciences and director of the Vanderbilt Transplant Center.

In addition to his clinical and administrative responsibilities, Erasmus is involved in the education of fellows, medical residents and medical students. He is a member of the American College of Chest Physicians and the International Society for Heart and Lung Transplantation.

#### **Complete story**



## **ERAS** launched to enhanced recovery for total joint replacment surgery

VUMC's enhanced recovery after surgery (ERAS) program recently expanded to include the 1,400 patients per year who receive total hip replacement or total knee replacement surgery at Vanderbilt University Hospital or Belle Meade Surgery Center.

ERAS originated in Denmark in the early 1990s and has since been adopted internationally. In 2014 at VUH an initial ERAS clinical pathway was introduced for adult colorectal surgery, and in 2015 at Children's Hospital an ERAS pathway was introduced for complex hip surgery. So far, six ERAS clinical pathways have been adopted for major surgical procedures on the adult side and seven have been adopted on the pediatric side.

With ERAS, service lines have reported shorter hospital stays, fewer complications, and reduced opioid usage while maintaining excellent postoperative pain control.

ERAS pathways at VUMC hinge first of all on patient and family education and engagement, which begins in the surgeon's office.

Intraoperatively, ERAS attempts to reduce physiological stress to the patient and preserve preoperative organ function, often through minimally invasive surgical approaches and aggressive use of regional anesthesia and local anesthetics placed around the nerves of the central nervous system.

The effort to spread ERAS to more adult service lines is led by ERAS steering committee co-chairs Matthew McEvoy, MD, professor of Anesthesiology, and Timothy Geiger, MD, MMHC, associate professor of Surgery and chief of the Division of General Surgery.

"One of the keys to success," Geiger said, "is to start with a surgeon within the service line who serves as a champion. You have to have an expert who's interested in helping to define a best practice model and helping his or her group create a program around that model."





Dr. Geiae

#### **New Faculty**

#### **DEPARTMENT OF CARDIAC SURGERY** Assistant Professor of Cardiac Surgery Chetan Pasrija, MD

DEPARTMENT OF PLASTIC SURGERY Assistant Professor of Plastic Surgery **Elizabeth Dale Slater, MD** 

## **DEPARTMENT OF SURGERY DIVISION OF SURGICAL RESEARCH**

Associate Professor of Surgery Nicholas Zachos, PhD

#### **DIVISION OF ACUTE CARE SURGERY** Assistant Professor of Surgery

Amelia Maiga, MD, MPH

Assistant Professor of Clinical Surgery Michael Derickson, MD, MS

# CONGRATULATIONS TO OUR GRADUATING RESIDENTS AND FELLOWS

**Department of Cardiac Surgery** Extracorporeal Membrane Oxygenation Fellow Yatrik Patel, MD

**Department of Neurological Surgery** Patrick Kelly, MD Rebecca Reynolds, MD

Functional Neurosurgery Fellow Tyler Ball, MD Pediatric Neurosurgery Fellow Michael Cools, MD

#### **Department of Oral and Maxillofacial** Surgery

Satoko Hasewaga, DMD Rachel Harvey Strait, DMD, MD Abigail Yazbak, DDS

**Department of Pediatric Surgery** Jacob Olson, MD

#### **Department of Surgery** Joseph Blankush, MD Gretchen Edwards, MD, MPH Diane Haddad, MD, MPH Kayla Kumm, MD Monica Polz, MD, MS Eric Quintana, MD Maren Shipe, MD, MPH

**Division of General Surgery** Colon and Rectal Surgery Fellow Melissa Hite, MD Minimally Invasive Surgery - Bariatric Fellow Jaine McKenzie, MD

## **Faculty Promotions**

DEPARTMENT OF CARDIAC SURGERY Associate Professor of Cardiac Surgery Keki Balsara, MD, MBA

DEPARTMENT OF NEUROLOGICAL SURGERY Associate Professor of Neurological Surgery with Tenure Dario Englot, MD, PhD Assistant Professor of Neurological Surgery Tyler Ball, MD

**DEPARTMENT OF SURGERY DIVISION OF SURGICAL ONCOLOGY & ENDOCRINE SURGERY** 

Associate Professor of Surgery Rondi Kauffmann, MD, MPH

DEPARTMENT OF PEDIATRIC SURGERY Associate Professor of Pediatric Surgery Melissa Danko, MD Walter Morgan, III, MD

**DEPARTMENT OF PLASTIC SURGERY** Associate Professor of Clinical Plastic Surgery **Blair Summitt, MD** 

#### **Department of Plastic Surgery**

Rahman Barry, MD Brian Blumenauer, MD Matt Pontell, MD Adult and Pediatric Cranofacial Fellow Sonia Pandey, MD Hand Surgery Fellow Husevin Karagoz, MD

#### **Division of Acute Care Surgery**

Devin Gillaspie, MD, MS Michael Derickson, MD, MS Amelia Maiga, MD, MPH Rodrigo Rodriguez Grazioso, MD

**Division of Surgical Oncology & Endocrine Surgery Breast Surgery Fellow** Zakiya Shakir, MD

**Department of Thoracic Surgery** Tyler Zorn, MD Donald Moe, MD

**Department of Vascular Surgery** Gulrez Mahmood, MD

