

SURGERY NEWS

THE MICHAEL E. DEBAKEY DEPARTMENT OF SURGERY

Baylor
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Dr. Gustavo Oderich

World
renowned
endovascular
surgeon
joins
Baylor

Transplant program
sets record numbers

New endocrine
and acute care
fellowships

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SURGERY

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#DeBakeySurgeon

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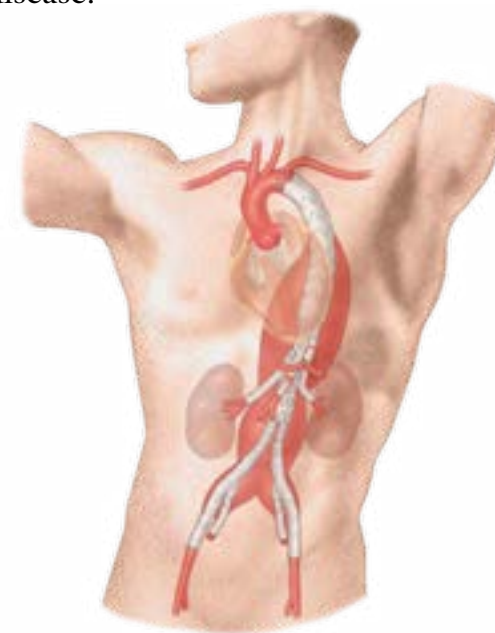
Gustavo S. Oderich, M.D., has joined as chief of the Division of Vascular Surgery and Endovascular Therapy, director of the new Baylor Medicine Center for Aortic Surgery and a member of The Texas Heart Institute at Baylor College of Medicine.

“We are absolutely thrilled to welcome Dr. Gustavo Oderich to Baylor College of Medicine,” said Todd Rosengart, M.D., professor and chair of the Michael E. DeBakey Department of Surgery. “As a world-renowned leader in minimally invasive aortic surgery, Dr. Oderich builds upon the extraordinary legacy of pioneers like Drs. DeBakey, Cooley, Coselli and Crawford. His expertise in complex endovascular techniques is unmatched and will not only elevate our clinical and research programs but also inspire and train the next generation of vascular surgeons. We could not be more excited about the future under his leadership.”

Known for his pioneering work in minimally invasive techniques, Oderich is a global leader in the development and use of fenestrated and branched stent grafts to treat complex aortic aneurysms. Oderich’s practice encompasses a wide range of vascular conditions, including carotid, supra-aortic trunk, renal and mesenteric artery diseases, as well as the multidisciplinary care of patients with connective tissue disorders such as Marfan, Loeys-Dietz and Vascular Ehlers Danlos Syndrome.

Video: Meet Dr. Oderich

“Dr. Oderich is a world-class leader in complex aortic repair, and his use of customized fenestrated and branched stent grafts—available at only 10 centers in the United States—brings unparalleled innovation to our program,” said Marc Moon, M.D., professor and chief of the Division of Cardiothoracic Surgery. “His arrival strengthens our ability to offer truly cutting-edge, patient-specific treatments and expands the options available for those with complex aortic disease.”



Fenestrated-branched endovascular graft.
Illustration by David Factor

With over 7,000 open and endovascular repairs, including more than 2,000 endovascular aortic repairs (EVARs)/thoracic endovascular aortic repairs (TEVARs) and 900 fenestrated-branched endovascular repairs (FB-EVARs), Oderich’s expertise spans two decades at the Mayo Clinic in Rochester, Minnesota, where he served as immediate past chair of vascular and endovascular surgery. He has also served as professor and chief of vascular and endovascular surgery clinical director for the Advanced Endovascular Aortic Program at the University of Texas Health Science Center at Houston – McGovern Medical School. During his tenure at the Mayo Clinic, Oderich led the Mayo Clinic Aortic Center program, known for its innovative endovascular repair techniques and significant reductions in mortality and morbidity compared to open surgical repair outcomes.

“Dr. Oderich is a true innovator in endovascular surgery, and his expertise in complex aortic repair perfectly complements our open surgical approaches.”
- Dr. Joseph Coselli

“Dr. Oderich is a true innovator in endovascular surgery, and his expertise in complex aortic repair perfectly complements our open surgical approaches,” said Joseph Coselli, M.D., professor and executive vice chair in the Department of Surgery. “His leadership strengthens our ability to offer the most advanced, individualized care for patients with aortic disease.”

His contributions to the field are well recognized through over 950 publications, including 460 peer-reviewed articles, 140 book chapters, 330 abstracts and 23 letters and editorials. He is the editor of a landmark textbook, *Endovascular Aortic Repair: Current techniques in fenestrated, branched and parallel grafts*. Oderich serves as the global principal investigator for two ongoing trials assessing industry-manufactured fenestrated and branched grafts. He is a sought-after speaker and lecturer who has delivered more than 690 lectures worldwide, such as at Harvard, Stanford, Dartmouth, Karolinska Institute and the University of Paris.

Oderich received his medical degree from the Federal University of Rio Grande do Sul and completed residency at Mayo Clinic Alix School of Medicine with vascular surgery fellowships at Mayo Clinic and Cleveland Clinic Lerner College of Medicine.



HEALTHCARE UPDATE

Drs. Liao, Fernandez, Loor, Garcha, Goss, Rosengart and Lembcke pose at the celebration

Transplant program sets record numbers

Our heart, lung, liver and kidney transplant teams at Baylor St. Luke's Medical Center achieved a historic milestone in 2024, performing a record-breaking 390 transplants—the highest total ever performed at Baylor St. Luke's. This remarkable achievement surpasses the previous record by 30%, reflecting the hospital's commitment to advancing organ transplantation and saving more lives than ever before.

“This unprecedented growth in our transplant programs is a testament to the dedication of our multidisciplinary teams and the generosity of organ donors,” said **John Goss, M.D.**, professor and chief of the Division of Abdominal Transplantation. “We continue to push the boundaries of what's possible in transplantation, ensuring that more patients receive life-saving procedures with the best possible outcomes.”

The milestone reflects ongoing advancements in surgical techniques, donor organ utilization and post-transplant care.

“This growth is a testament to the dedication of our multidisciplinary teams and the generosity of organ donors”
- Dr. John Goss

“Every transplant represents a second chance at life for our patients,” said **Gabriel Loor, M.D.**, associate professor and surgical director of the Lung Transplant Program at Baylor St. Luke's. “We are incredibly proud of the collaborative efforts that made this record-breaking year possible and remain committed to providing world-class care.”

Video: Interview with Dr. Loor



Drs. Natasha Hansraj and Erin Greenleaf and pose with Navy Veteran Pat Towns, aortic surgery patient

MEDVAMC now offers cutting edge care to complex aortic patients

Surgeons at the Michael E. DeBakey VA Medical Center are among the first in the nation to offer a cutting-edge procedure using the newly FDA-approved Gore EXCLUDER Thoracoabdominal Branch Endoprosthesis (TAMBE), a device that offers new hope for veterans with life-threatening aortic aneurysms.

Between October and December of 2024, the MEDVAMC vascular team successfully treated four Texas veterans using this minimally invasive technology. Unlike traditional open surgery, which requires a large incision and carries significant risks, the TAMBE procedure is performed through tiny punctures, reducing recovery time and improving patient outcomes.

“We are thrilled to bring this cutting-edge lifesaving technology to MEDVAMC and our veterans,” said **Erin Greenleaf, M.D., M.S.**, assistant professor in the Division of Vascular Surgery and Endovascular Therapy. “Until now, patients with these aneurysms often faced major surgery with a high risk of complications. With this new minimally invasive technology, our veterans can be out of the hospital in a few days and get right on the road to recovery.”

Aortic aneurysms occur when a section of the aorta—the body's largest artery—weakens and bulges, creating a potentially life-threatening condition if the vessel ruptures. Thoracoabdominal aortic aneurysms are particularly complex because they involve the section of the aorta that runs through both the chest and abdomen, branching off to supply blood to vital organs. The TAMBE is designed specifically to treat these challenging aneurysms by reinforcing the weakened artery walls while preserving blood flow to critical vessels. This next-generation device offers a minimally invasive solution for patients who are often too high-risk for traditional open surgery.

The first U.S. implant was performed in 2015 by **Gustavo Oderich, M.D.**, professor and chief of the Division of Vascular Surgery and Endovascular Therapy, who was then at Mayo Clinic and served as one of the principal investigators for the TAMBE pivotal trial, which ended in 2021. The device received FDA approval in 2024, and the MEDVAMC is proud to be among the early adopters of this groundbreaking technology.

“This technology is a game-changer,” Dr. Oderich said. “We are very proud of our VA team and that our veterans can now receive life-saving treatment with less risk and a faster recovery.”



Dr. Amelia Lucisano with Marine Corps Veteran Byron Potier, bariatric patient

Bariatric program launched at MEDVAMC

Amelia Lucisano, M.D., M.S., assistant professor, has launched a comprehensive bariatric surgery program at the Michael E DeBakey VA Medical Center, offering veterans a potential life-changing option to combat obesity and reclaim their health.

“Prior to the start of our bariatric surgery program, veterans found it difficult to navigate the process of pursuing surgery,” she said. “Now we can offer them consultation, workup, surgery and post-operative care at the MEDVAMC which we believe will improve the quality and delivery of the entire process.” With the addition of her program, MEDVAMC joins a short list of VA hospitals nationally to offer an in-house bariatric surgery program.

In the year since the program’s inception, Dr. Lucisano has personally screened over 200 patients with an interest in surgery and helped providers navigate their workup. She has completed over 50 initial consultations and is constantly working to prepare candidates for a safe and successful surgery.

After early success with the first cases in late 2024, she has continued to complete new surgical cases each month and hopes to help many more veterans in 2025 and beyond. For her the greatest success has been the feedback from patients. “There is nothing more rewarding than hearing directly from the patients about how profoundly their lives have changed in such a short period of time,” Dr. Lucisano said. “My goal is to help as many people as possible through this life-changing process.”

A majority of Americans are overweight or obese and these conditions are often linked to major comorbidities such as heart disease, diabetes, high blood pressure, fatty liver, arthritis and cancer, among many others.

“The obesity epidemic is unfortunately a major problem among veterans, 78% of whom are overweight or obese,” Dr. Lucisano said. “In fact, the prevalence of obesity in the veteran population is higher than the national rate and increasing over time. Thousands of veterans served by our hospital could benefit substantially from weight loss, and bariatric surgery happens to be the most effective and durable treatment for obesity.”

“For these critically ill individuals, there may not be another chance.”
- Dr. Ramiro Fernandez



Dr. Ramiro Fernandez with Physician Assistant Subin Valayil

Baylor surgeons perform lifesaving double lung transplant during rare Houston winter storm

As a rare winter storm brought Houston to a standstill on January 20, 2025, Baylor Medicine surgeons raced against time to perform a lifesaving double lung transplant. The patient, an elderly individual in critical condition, had been on the transplant list for a month when a compatible donor lung became available. With urgency mounting, the procurement team embarked on a five-hour flight to retrieve the organ, braving the worsening weather.

“The window for transplantation can close rapidly for critically ill patients,” said **Ramiro Fernandez, M.D.**, assistant professor in the David J. Sugarbaker Division of Thoracic Surgery. “Opportunities like this don’t come often, and delays can be life-threatening.” The donor lungs arrived in Houston just as the storm intensified and the surgical team at Baylor St. Luke’s Medical Center swiftly began the transplant. Dr. Fernandez and his team completed the complex procedure in six hours, but the patient’s challenges were not over.

Early the next morning, complications required a second emergency surgery. With snow-covered roads preventing Dr. Fernandez from reaching the hospital, **Gabriel Loor, M.D.**, associate professor and surgical director of the Lung Transplant Program at Baylor St. Luke’s, braved treacherous conditions to step in and perform the critical operation. “This team is incredibly dedicated,” said Dr. Loor. “We’re among the top five lung transplant programs in the country by volume, and that’s a testament to everyone’s commitment.”

Despite Houston being blanketed in snow and daily life grinding to a halt, the surgical team remained steadfast in their mission. “It was truly a heroic effort,” Dr. Fernandez said. “For these critically ill individuals, there may not be another chance.” Thanks to their relentless dedication, a life was saved during one of the city’s most challenging moments.

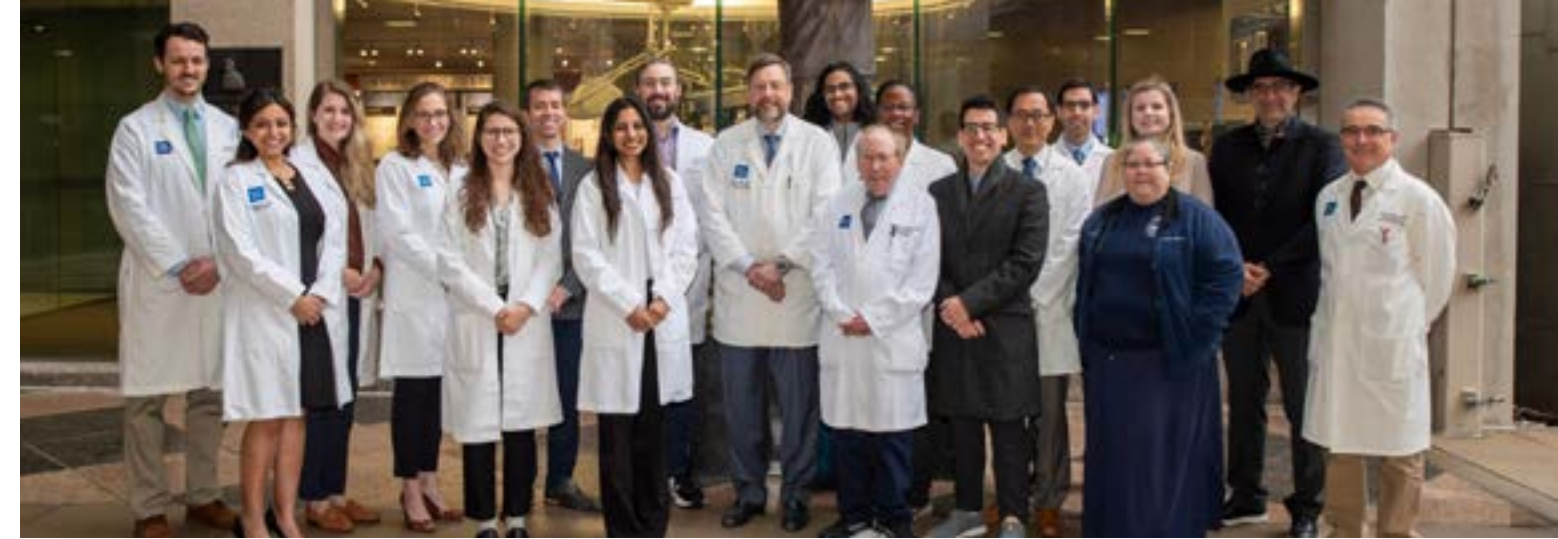
New surgery location at McNair Campus

January 2025 marked an exciting new chapter in the expansion of surgical services at the McNair Campus. In January, we began performing complex inpatient surgeries including colorectal surgery, bariatric surgery complex urologic surgery and pancreas surgery. This groundbreaking move forward represents a significant milestone in the hospital's growth and increasing capabilities at McNair.

As part of a broader strategy to expand inpatient surgical services, our department is moving more complex cases to McNair. This transition follows the successful shift of elective surgeries, which began with the opening of the O'Quinn Medical Tower several years ago. The new facilities are outstanding, patient satisfaction has been exceptional and safety has remained a top priority throughout this process.

The success of moving surgeries to McNair is due to careful planning and the expansion of resources. Capabilities have grown with the addition of a 6-bed SICU staffed by our department critical care boarded surgeons, a 24/7 rapid response team and all necessary ancillary services such as pharmacy, radiology and laboratory support required to assure the highest quality for inpatient surgery. A robotic Xi surgical system has also been moved from the OR at Baylor St. Luke's Medical Center, further expanding the hospital's robotic surgical capabilities.

This shift to McNair is not just about increasing surgery volume but also ensuring high standards of safety and quality care as well as patient satisfaction. High-performing nursing staff from Baylor St. Luke's were selected and have supported patients at McNair. With the opening of the new inpatient unit in January 2025 and ongoing investments in infrastructure, McNair is poised to continue its rapid growth.



Dr. Mills (center) with members of the Division of Vascular Surgery and Endovascular Therapy

Dr. Mills' lasting impact on vascular surgery

Joseph Mills, M.D., professor and past chief of the Division of Vascular Surgery and Endovascular Therapy, has led the division with unwavering dedication, shaping the future of vascular surgery through his leadership, innovation and commitment to education. As he passes the torch to Gustavo Oderich, M.D., professor and chief, we reflect on Dr. Mills' remarkable contributions and the strong foundation he has built for the division's continued success.

Dr. Mills, an internationally recognized expert in lower extremity revascularization, diabetic foot problems and ischemic steal syndrome, joined Baylor College of Medicine in 2014, bringing with him a wealth of experience and a reputation as a trailblazer in vascular surgery. Under his leadership, the division flourished, with significant advancements in patient care, research and education. He has been instrumental in modernizing vascular surgery training, overseeing the launch of the ACGME-accredited Vascular Surgery Integrated Residency Program and ensuring that future generations of surgeons receive comprehensive training in a collaborative environment.

"Dr. Mills has set the bar incredibly high—not just in clinical excellence but in the way he has mentored and inspired the next generation of vascular surgeons," said Todd Rosengart, M.D., professor and chair of the Department of Surgery. "His leadership has transformed our division into one of the premier vascular surgery programs in the country."

Dr. Mills' clinical expertise is unparalleled. His work in developing the Wound, Ischemia and foot Infection (WIFI) classification system has revolutionized the approach to lower extremity ischemia and has been widely adopted in vascular surgery. He has also championed a multidisciplinary approach to diabetic foot care, bringing together podiatrists vascular surgeons and other specialists to improve patient outcomes. As the director of the Diabetic Foot and Wound Care Center at Baylor St. Luke's Medical Center, he has spearheaded innovative treatments and established the center as a leader in comprehensive diabetic foot management.

During his tenure as the Society for Vascular Surgery president from 2023-2024, Dr. Mills made an indelible impact on the field through his advocacy for policy changes his commitment to advancing patient care and his emphasis on fostering a collaborative approach within the profession. His leadership highlighted the need for unity among vascular surgeons and the importance of teamwork in improving patient outcomes.

"Dr. Mills has had an extraordinary influence on vascular surgery," Dr. Oderich said. "His innovations in limb salvage and diabetic foot care have saved countless limbs, and his dedication to education has strengthened the future of our field. It's an honor to follow in his footsteps, and I look forward to building on the incredible legacy he has created."

From DeBakey summer surgery student to academic surgeon



Dr. Lyahn Hwang at her white coat ceremony at UT Southwestern

For **Lyahn Hwang, M.D.**, assistant professor of surgery in the Division of Plastic Surgery, one summer experience changed everything. As a college student at Rice University, Dr. Hwang was deeply interested in research and the sciences, even considering a career in social work before falling in love with biology. But it wasn't until she was accepted into the Michael E. DeBakey Summer Surgery Program at Baylor College of Medicine that her future truly took shape.

"I was fortunate enough to be selected, and it really changed my life," Dr. Hwang shared. "It's the reason why I went into medicine, and it's the reason why I'm a surgeon."

The program—originally created by Dr. Michael E. DeBakey in the 1960s—was designed to expose talented students to the field of surgery and encourage them to apply their scientific talents toward medicine. What began as a unique opportunity for science fair

winners has evolved into a highly competitive eight-week summer program for college undergraduates. Each year, more than 200 students apply for just 15-20 coveted spots.

Participants are paired with a surgical faculty mentor and fully immersed in the clinical world—rounding with surgical teams, observing complex operations and learning the fundamentals of surgical care. Students rotate through hospitals in the Texas Medical Center including Ben Taub Hospital, Baylor St. Luke's Medical Center and Texas Children's Hospital, gaining exposure to a wide range of specialties like trauma, pediatric surgery, vascular surgery, cardiothoracic, transplantation and surgical oncology.

For Dr. Hwang, it was the first time she truly experienced the operating room.

"I was fortunate enough to be selected, and it really changed my life—it's the reason why I went into medicine, and it's the reason why I'm a surgeon."
- Dr. Lyahn Hwang

Watch the video

"I came from a research background—I loved working in the labs at Rice and MD Anderson," she said. "But there weren't a lot of opportunities to go into the OR and work directly with surgeons. Once I heard about the program, I knew I had to try it."

That summer, Dr. Hwang saw everything from trauma cases to bread-and-butter general surgery procedures like gallbladder removals. She also spent time with pediatric surgeons—an experience that broadened her perspective and confirmed her passion for working with her hands.

coming back to what she learned that summer—her love for procedural work and the impact of surgery. "You get thrown into everything during your clinical years, but I realized I couldn't just sit and talk about patients—I needed to do something with my hands," she said. "That's when I knew I was meant to be a surgeon."

Her experience also made a lasting impact on her DeBakey Summer Surgery class. "I remember our group from 2012—every one of us went into medicine, about a third of us into surgical fields,"



Dr. Lyahn Hwang is a highly specialized hand surgeon

"I knew I wanted to tangibly help people, and surgery was the best way to do that," she said. "This program really laid the foundation for me. I still remember that summer so fondly—seeing all sides of surgery, spending time with incredible mentors, and feeling like I was part of the team even as a college student."

Dr. Hwang went on to attend medical school at The University of Texas Southwestern Medical School, where she kept an open mind, even considering pediatrics and internal medicine. But she kept

she said. "I'm the only woman from that group who became a surgeon. My sister is also a neurosurgeon, so we still talk a lot about the importance of experiences like this and how much early mentorship matters."

More than 40 years since its inception, the Michael E. DeBakey Summer Surgery Program continues to give students like Dr. Hwang the chance to witness the art of surgery up close—building confidence, skills and connections that last a lifetime.

Essential Surgery Skills Course prepares global surgeons this August

The Center for Global Surgery is offering a six-day skills course this August 18-22 that prepares physicians, residents and fellows to practice in tropical, remote and resource-limited areas of the world. The conference provides hands-on experience in a wide range of emergent and essential surgical procedures. The courses are organized and taught by physicians with extensive global health experience. Educational sessions utilize tissue and model-based simulations to prepare participants to face common surgical scenarios in orthopedics, urology, obstetrics, gynecology, anesthesia and more. Additionally, participants are challenged to consider content useful for work in disaster relief, humanitarian aid and areas of conflict. Upon completion of the conference, participants receive a certificate in Tropical Surgery, Obstetrics and Gynecology.

This conference was first held in 2018 with 15 participants coming from all over the United States to Baylor College of Medicine to receive more training for low-resource contexts during their surgical career. The conference received lots of praise for offering high-yield training in a short amount of time. In 2023, the course had a virtual component in order to engage colleagues in Morocco and Myanmar. Morocco had just suffered a severe earthquake that injured thousands of people, and Myanmar was, and still is, in the midst of a civil war- both creating a vital urge for training to care for their populations. More than 30 trainees logged on in the middle of the night to listen to lectures and watch simulations, asking questions and receiving real time feedback, alongside the 13 in-person participants.



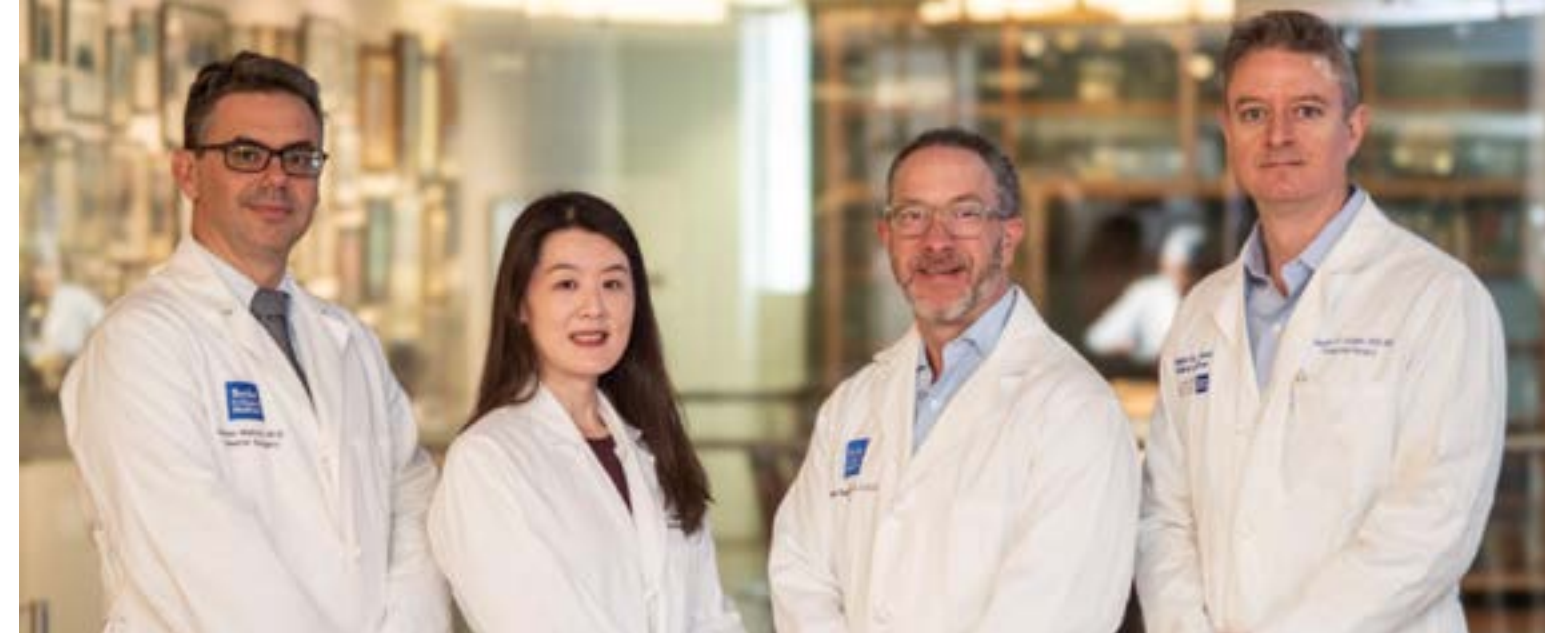
Dr. Yao Yang, general surgery resident, practices external fixation of fractures with Dr. Omar Atassi during the conference

Steven Elzein, M.D., a resident at Houston Methodist Hospital, took the course in 2023 to gain more knowledge on limited resource settings. He wants to serve low-resourced communities at least in service trips if not full time. “I wanted to gain experience with a wider variety of surgical procedures,” he said. “The lectures were good, but the hands-on part was amazing.”



Residents Dr. Jordynn Baldwin (Henry Ford Health, Michigan) and Dr. Steven Elzein (Houston Methodist Hospital) practice post-partum repair of vaginal lacerations in the simulation lab

Those interested in participating in the course can email globalsurgery@bcm.edu or call 713-798-6078 for more information.



Drs. Makris, Zheng, Suliburk and Grogan lead the new endocrine fellowship

Expanding surgical expertise: New endocrine and acute care fellowships

In 2025, we launched two new fellowship programs—Endocrine Surgery and Acute Care Surgery—designed to provide advanced, high-volume training in specialized fields. These fellowships offer an unparalleled opportunity for surgeons to refine their expertise in dynamic clinical environments while gaining advanced training and exposure to cutting-edge surgical techniques and research.

The Endocrine Surgery Fellowship at Baylor College of Medicine offers exceptional training within one of the nation’s highest-volume endocrine surgery programs, with an annual case volume of 900–1,000 cases. This one-year fellowship provides a unique experience across four distinct clinical settings: a high-volume quaternary care center, a public hospital where fellows independently manage a clinic and OR, a private practice-like environment and a VA hospital. Fellows gain exposure to one of the country’s leading transoral endocrine surgery programs, as well as extensive experience in thyroid radiofrequency ablation and adrenalectomy techniques, including transabdominal, retroperitoneoscopic and robotic approaches. Additionally, the program encourages participation in NIH-funded research projects. The fellowship offers an average operative experience of 100 thyroid cases, 100 parathyroid cases and 20–30 adrenal cases per year, with the flexibility to tailor the experience to meet individual training goals.

The Acute Care Surgery Fellowship at Baylor College of Medicine is a two-year AAST-accredited program designed to provide advanced training in trauma, emergency general surgery and surgical critical care. Fellows gain experience across multiple hospital sites, including a high-volume trauma center with significant penetrating trauma cases and additional exposure to vascular and cardiac surgery. The program offers structured education, progressive clinical responsibility and a clear pathway to independent practice. Fellows also have opportunities for research, quality improvement and leadership development. Strong institutional support and experienced faculty ensure a solid foundation for training acute care surgeons ready for practice. With a deliberate focus on continuous evaluation and program refinement, the fellowship provides a dynamic environment that prepares surgeons for independent practice and leadership in the field of acute care surgery.

RESEARCH UPDATE

After reaching 24th grant award ranking in the Blue Ridge Institute for Medical Research (BRMR) last year, we maintained top 30 rank this year at 28 with \$7.2 million, and with expectation of re-attaining top 25 next year.

Iki Adachi, M.D.—\$660,000 Additional Ventures SVRF Award

“Mechanically Assisted Establishment of Biventricular Physiology for Failing Fontan Circulation”

This project focuses on developing the “ReVolution” pump, a mechanical support device designed to convert single-ventricle Fontan circulation into a two-ventricle system, mimicking normal heart function.

Tamer Mohamed, Ph.D., and Todd Rosengart, M.D.—\$560,000 NIH R61 Grant

“Triple Gene Therapy for Ischemic Heart Failure”

This project explores a triple gene therapy approach to promote heart cell regeneration, cardiac reprogramming and improved blood vessel growth for treating ischemic heart failure.

Crystal Shin, Ph.D.—\$440,000 Department of Defense Discovery Award

“Biopolymers for Intestinal Healing and Immune Modulation to Treat Inflammatory Bowel Disease”

This study aims to develop biopolymer-based therapies to reduce inflammation and treat ulcerative colitis.

E. Ramsay Camp, M.D., and Hyun-Sung Lee, Ph.D.—\$200,000 Victory Houston, Inc.

“Targeting Cell Cycle Alterations to Overcome Resistance to FOLFIRINOX for Pancreatic Cancer”

Using pancreatic cancer models and patient tumor samples, this research will investigate how 9p21 gene loss affects chemotherapy resistance and the tumor’s immune environment.

Gabriel Loor, M.D.—\$170,000 St. Luke’s Foundation Grant

“Ex Vivo Lung Perfusion Organ Reconditioning”

This study aims to develop an advanced ex vivo lung perfusion system to extend lung preservation from 12 to 50 hours, increasing the number of viable donor lungs for transplantation. By improving lung assessment and rehabilitation, this research seeks to expand the donor pool and enhance transplant outcomes.

Jayer Chung, M.D.—\$50,000 Roderick D. MacDonald Research Award

“Development of Machine Learning Models for Peripheral Arterial Disease and Chronic Limb-Threatening Ischemia”

This project aims to develop machine learning models that incorporate angiographic data to improve risk assessment for peripheral arterial disease (PAD) and chronic limb-threatening ischemia (CLTI). The award is funded by the Roderick D. MacDonald Research Fund at Baylor St. Luke’s Medical Center.

Riham Abouleisa, Ph.D.—\$50,000 Roderick D. MacDonald Research Award

“Testing a Novel Approach to Induce Cardiac Regeneration in Human Heart Slices”

This project will explore innovative methods to promote heart tissue regeneration using human heart slices, potentially leading to new treatments for cardiac repair. The award is funded by the Roderick D. MacDonald Research Fund at Baylor St. Luke’s Medical Center.

Ravi Ghanta, M.D.—\$40,000 Roderick D. MacDonald Research Award

“Synthetic Augmentation of Cardiac Mitochondria Using CRISPR-Based Tools”

This project will explore CRISPR-based techniques to enhance mitochondrial function in the heart, potentially leading to new treatments for cardiac disease. The award is funded by the Roderick D. MacDonald Research Fund at Baylor St. Luke’s Medical Center.

Mary Elizabeth Guerra, M.D.—\$30,000 Society of University Surgeons Foundation Resident Research Scholar Award

“Contribution of Fibroblast-Derived Exosomes to Human Scarring Heterogeneity”

This study examines how fibroblast exosomes influence scarring, potentially leading to new therapies for reducing scar formation.

OrganVive named winner of INSTINCT shark tank event

The Interdisciplinary Surgical Technology and Innovation Center (INSTINCT) crowned OrganVive as the winner of the Shark Tank competition. There were two rounds of the competition, the first round held in October 2024, where 10 teams of scientists, students and surgeons pitched their ideas and products to a group of savvy shark investors.

OrganVive, including **Gabriel Loor, M.D., Yaxin Wang, Ph.D., and Chris Chan, Ph.D.**, presented an ex vivo lung repair platform called NOBEL that preserves and repairs lungs ex vivo using cold perfusion with blood and nutrients plus natural-like ventilation. The platform prevents damage and supports recovery, extending preservation to 48 hours—twice as long as current systems. NOBEL also enables targeted delivery of therapies, offering a way to rescue damaged lungs and expand the donor pool.

The INSTINCT Shark Tank final round held in March 2025 featured three teams. OrganVive presented their project alongside Auris ORthopedic, and Providocs. Auris ORthopedic, represented by Matthew Milad and Cotton Andrews, introduced an innovative 3D prosthetic model designed to connect

a hip implant to a stabilizing rod inside the thigh bone. This development aims to eliminate stress fracture risks and enable faster recovery compared to traditional plate fixation. Providocs, including **Harrison Kaplan, M.D., Roberto Vera, M.D., Travis Miles, M.D., and Ravi Ghanta, M.D.**, showcased an AI-powered application intended to assist providers quickly find and use institutional guidelines, protocols and key information—reducing errors caused by lack of access and making it easier to follow best practices for more consistent care and improved outcomes.

INSTINCT, part of the Department of Surgery, offers a variety of events, funding, mentoring and more to encourage and aid surgeon inventors in the development of their ideas. The INSTINCT Shark Tank was first held in 2022 and is now an annual competition event to encourage members of the department to take their idea and develop it into a device or therapy and potentially make it available to patients.

‘Sharks’ and Dr. Gabriel Loor (center) with the winning pitch for OrganVive



In the OR Light



Ravi Ghanta, M.D.

Professor
Division of Cardiothoracic Surgery
Olga Keith Wiess Professor of Surgery

Where are you from?

Oakdale, Louisiana.

What made you decide to go into medicine?

I was drawn to science and engineering driven by a curiosity in understanding how things work. My father was a physician and being in a rural town, he was a “jack of all trades” doctor. I admired his dedication to his patients and his community. Accompanying him on hospital rounds and occasional house calls, I witnessed firsthand the profound impact a physician can have on people’s lives and the deep fulfillment that comes from lasting doctor-patient relationships. These experiences led me to conclude that medicine represented the perfect merger of science, engineering and service, making it the ideal career path for me.

What made you choose surgery and how did you choose your specialty?

From early in my medical training, I was drawn to surgery. I loved the precision, technical skill and immediate impact surgery has on patients. I enjoyed

the environment of the operating room, where teamwork is critical to achieving a good outcome. As I explored different surgical specialties, cardiac surgery stood out to me as the most challenging and rewarding. The heart is a marvelous biologic machine and restoring its function requires technical mastery and a deep understanding of physiology and mechanics. As heart disease is the leading cause of death in the industrialized world, I knew I would be working in a field of enormous public health consequence. Ultimately, I believe the right specialty is one that you genuinely enjoy and never truly see as work.

What do you like most about your job?

I appreciate the interconnected aspects of clinical surgery, teaching and research, each contributing uniquely to my professional fulfillment. Clinical practice is particularly rewarding, offering the satisfaction of performing complex procedures with successful outcomes. I especially enjoy clinical practice at Ben Taub Hospital, where we care for patients from all backgrounds, often presenting with diverse and complex pathology.

The opportunity to serve this patient population is both challenging and deeply rewarding. Teaching medical students, residents and fellows is equally gratifying, as their curiosity keeps me sharp and witnessing their growth and skill development gives me a sense of contribution. Research extends our impact beyond individual patients and trainees, fostering creativity and innovation that can drive advancements in the field. I get to lead our Laboratory for Translational Therapeutics with the goal of developing bench to bedside solutions for major clinical problems in surgery.

Is there anything you would tell someone thinking about going into medicine?

Medicine, surgery and cardiac surgery are great fields. Cardiac surgery is a merger of science, technical precision, service and human connection. I would definitely do it all over again.

What do you like to do when you’re not working?

I spend all of my free time with my family, including my two middle schoolers. When we’re not at their sporting events or competitions, we love traveling—whether it’s hiking in the mountains or exploring ancient historic sites.



Alexandra Buda, M.D.

General Surgery Resident
Global Surgery Track

Where are you from?

New Haven, CT

What made you decide to go into medicine?

I am amazed by the patient-physician relationship. It is an absolute honor and privilege to hear someone’s story and help them through their disease process.

What made you choose surgery and how will you choose your specialty?

Surgery is an incredible art. It blends science, hands-on skills and leadership to care for patients in a truly remarkable way.

What do you like most about medicine?

Listening to patients’ unique stories and backgrounds and the interdisciplinary, team-based spirit!

Is there anything you would tell someone thinking about going into medicine?

It is very rewarding yet challenging, collaborative field full of opportunities.

What do you like to do when you’re not working?

Hiking, watercolor and taking care of my plants.



Kimmie Holloway, Ph.D.

Senior Communications Associate

Where are you from?

Breaux Bridge, Louisiana

Where did you go to school?

I received a bachelor’s from the University of Louisiana (UL) and a doctorate from Louisiana State University Health Shreveport.

What made you choose your career?

I initially thought I was going to be a journalist for *Rolling Stone* magazine because I loved music and freelance writing. But, during an AP biology class at Northside High School, I discovered my aptitude for physiology. From there, I majored in biology and was offered a work study job in the microscopy core at UL and the rest is history.

What do you like most about your job?

This role represents the culmination of my professional aspirations. My passion for science spans a broad range of fields. And now, I am able to remain informed about various biomedical advancements while pursuing my initial interest in writing and supporting some of the most brilliant scientists, physicians and administrators.

What do you like to do when you’re not working?

Spending time outside by either going for walks, watching my kids play or keeping my plants alive. I also love reading historical and science fiction novels, eating my husband’s cooking, watching movies that make me laugh or slightly scared and drinking coffee.

MEET OUR NEW FACULTY



Ryan P. Dumas, M.D., associate professor of surgery in the Division of Trauma, Bariatric and Acute Care Surgery and section chief of acute care surgery, specializes in trauma resuscitation and emergency general surgery. As past associate

trauma medical director at Parkland Memorial Hospital, he is leading the opening of a surgical care ICU at the McNair campus.

“Dr. Dumas is a remarkable leader in trauma surgery and research, bringing innovative approaches to resuscitation and surgical critical care,” said Todd Rosengart, M.D., professor and chair of the department. “His expertise in video technology is transforming the way we evaluate and improve trauma care, ultimately enhancing patient outcomes. As he spearheads the launch of our surgical care ICU at the McNair campus, his dedication to advancing acute care surgery continues to elevate our institution’s impact on the field.”

Dr. Dumas is a leader in trauma research, focusing on video technology to improve resuscitation, education and patient outcomes. He has numerous peer-reviewed publications and led the first multicenter trial on trauma video review. As principal investigator of a multicenter collaborative with over 40 institutions, he continues to advance trauma care through innovative research and clinical trials.

He earned his medical degree from Indiana University, completed his general surgery residency at The University of Texas Southwestern Medical School, and received advanced training in trauma and surgical critical care at the Hospital of the University of Pennsylvania. Board certified in both surgery and surgical critical care, he joined Baylor College of Medicine in 2024.



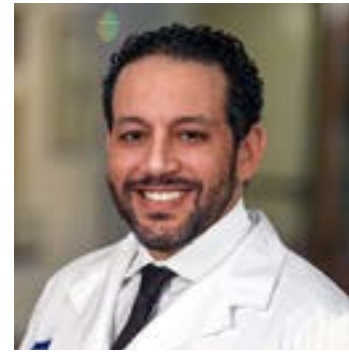
Thanila Macedo, M.D., associate professor and director of vascular imaging for the department, brings over two decades of expertise in diagnostic radiology, with a distinguished career that includes appointments at the

Mayo Clinic and UT McGovern Medical School, as well as leadership roles in vascular imaging and education.

Dr. Macedo offers a wealth of experience and a valuable perspective to the new Baylor Medicine Center for Aortic Surgery, which is led by her husband, Gustavo Oderich, M.D. An expert in vascular imaging, she utilizes state-of-the-art technology, including contrast-enhanced ultrasound (CEUS), dynamic CTA and advanced 3D reconstruction techniques.

“Dr. Macedo will play a key role in imaging our patients,” Dr. Oderich said. “Her meticulous attention to detail and expertise in vascular imaging and diseases will significantly enhance the care we provide.”

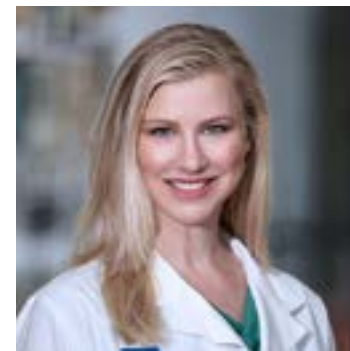
Dr. Macedo earned her medical degree from the Universidade Federal de Goiás, completed additional training at Jackson Memorial Hospital, and specialized in diagnostic radiology and vascular/interventional radiology at the Mayo Clinic. She recently completed an executive MBA in healthcare leadership at The University of Texas Southwestern Medical School.



Steven Maximus, M.D., associate professor of surgery in the Division of Vascular Surgery and Endovascular Therapy, specializes in the treatment of aortic aneurysms, dissections, trauma, and complex aortic pathology using

both endovascular and open surgical approaches. He is one of the few physicians in the United States with an FDA physician-sponsored investigational device exemption to study physician-modified endografts for complex aneurysm repair. His expertise also includes transcatheter arterial revascularization, and he has trained physicians nationwide in this technique.

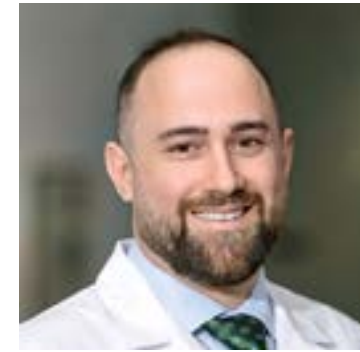
Before joining Baylor College of Medicine, Dr. Maximus was director of aortic surgery and associate program director for vascular surgery at University of California, Davis. A national leader in endovascular innovation, he was the first in the University of California system to deploy the Gore Thoracic Branch Endoprosthesis. He completed vascular surgery training at the University of Chicago and an advanced endovascular aortic fellowship under Dr. Gustavo Oderich at UT McGovern Medical School.



Jennifer Leonard, M.D., Ph.D., associate professor in the Division of Trauma and Acute Care Surgery, specializes in studying the role of the innate immune system in post-traumatic acute lung

injury and the mechanisms of neutrophil activation and function. She has received numerous accolades, including the American Association for the Surgery of Trauma Research Fellowship Grant and is a recognized leader in her field.

She completed her medical degree and doctorate in biochemistry and molecular biology at Mayo Clinic College of Medicine, followed by a general surgery residency at Mayo Clinic and a fellowship in trauma and critical care surgery at the University of Pennsylvania.



Timo Z. Nazari-Shafti, M.D., assistant professor in the Division of Cardiothoracic Surgery, specializes in all aspects of adult cardiac surgery, with a particular focus on coronary artery bypass surgery, including off-

pump coronary artery surgery. He has a strong interest in advancing new technologies for minimally invasive bypass grafting, such as minimally invasive direct coronary artery bypass and totally endoscopic coronary artery bypass.

Originally from Lübeck, Germany, Dr. Nazari-Shafti earned his medical degree from the Otto-von-Guericke-University in Magdeburg, Germany. He completed two postdoctoral fellowships in the United States, one at Tulane University and the other at Houston Methodist Research Institute. He then completed an integrated residency at the German Heart Center Berlin, one of Europe’s leading cardiac surgery hospitals.

Dr. Nazari-Shafti’s research focuses on enhancing various aspects of coronary artery bypass grafting. His work spans endothelial biology at the bench, preclinical large-animal studies, and clinical trials. This broad scope reflects his commitment to translating basic scientific discoveries into clinical innovations.

Honors and Awards

Shanda Blackmon, M.D. 2025 Society of Thoracic Surgeons (STS) Distinguished Service Award; Texas Leadership Board of the American Lung Association

Gregory Boyajian, M.D. 2025 Global Outreach Fellowship from the Thoracic Surgery Residents' Association

Stacey Carter, M.D. Norton Rose Fulbright Faculty Excellence Award Selection Committee

Christy Chai, M.D. Excellence in Medical Leadership Award from the Society of American Gastrointestinal and Endoscopic Surgeons; Norton Rose Fulbright Faculty Excellence Award Selection Committee

Subhasis Chatterjee, M.D. Norton Rose Fulbright Faculty Excellence Award Selection Committee

Samuel Creden, M.D. Resident of the Quarter, Baylor College of Medicine's Graduate Medical Education Resident Council

Rachel W. Davis, M.D. and **Todd Rosengart, M.D.**, Two of the top listened-to podcasts in 2024 from the *Journal of the American College of Surgeons*

O.H. Frazier, M.D. Baylor College of Medicine Lifetime Achievement Award

Zachary Gray, PA-C 2024 Carl Fasser Visionary Leadership Award

Mary Elizabeth Guerra, M.D. Society of University Surgeons (SUS) Resident Research Scholar Award

Jaymie Ang Henry, M.D., MPH 2025 Society of Thoracic Surgeons (STS) Advocacy Conference Scholarship

Kathryn Huff, PA-C Lead advanced practice provider (APP) for surgical critical care at Baylor St. Luke's Medical Center

Atif Iqbal, M.D. Appointed vice chair for clinical quality for improvement in the Department of Surgery

Kenneth Mattox, M.D. 2024 American Medical Association (AMA) Distinguished Service Award

Travis J. Miles, M.D. 2025 American Association for Thoracic Surgery Member for a Day

Joseph Mills, M.D. Roger Pecoraro Award from the American Diabetes Association; Szilagyi Visiting Professor at Henry Ford Hospital; Lawrence B. Harkless Leadership in the Diabetic Foot Award from the American Limb Preservation Society (ALPS)

Anh Nguyen, M.D., Ph.D. Editorial board of the *Journal of Cardiothoracic Surgery*

Miguel Bargas Ochoa, Young Investigator Award, Diabetic Foot Conference (DFCon)

Henry Olano Soler, M.D., MPH American College of Surgeons (ACS) Leadership Conference and Advocacy Summit Travel Scholarship

Vicente Orozco-Sevilla, M.D. Hero with Heart Award from The Marfan Foundation

Todd Rosengart, M.D. Cardiothoracic Surgeon Scientist Distinguished Lectureship, University of Pittsburgh School of Medicine

Bradford Scott, M.D. First vice-president of the Texas Surgical Society

Jeffrey Ross, DPM, M.D. American Podiatric Medical Association's research committee

Alastair Thompson, M.D. Editor for the *Journal of Clinical Oncology*

Jeremy L. Ward, M.D. Selected for the ACS Surgeons as Leaders course

Sophia Williams-Perez, M.D. Resident chair of the new Trainee Committee of the Association for Surgical Education (ASE)

Yuan Xu, Ph.D. SOAR Research Mentor Champions Award from Baylor College of Medicine

Yao Yang, M.D. Texas Beta Chapter of Alpha Omega Alpha

Martin Zielinski, M.D. Member of the Central Committee on Trauma of the ACS.