

Dear Colleagues and Friends,

Greetings from Emory and we are excited to share with you the latest updates from our Division of Cardiothoracic Surgery. Our possible without our alumni support.

This past spring we celebrated the retirement of our mentor, former division chief, and program director, Dr. Robert Guyton. We had an amazing turnout for his retirement celebration, and I want to thank all of you who traveled from afar to attend. I know it meant a lot to him and his family so thank you. He is now an emeritus professor and remains active on our Carlyle Fraser Heart Center Board of Directors.

It is my pleasure to introduce you to our graduates of the class of 2025. Dr. Maureen McKiernan completed her integrated cardiothoracic surgery residency 2 years ago and has recently completed her congenital fellowship at Emory/Children's Healthcare of Atlanta. She was recruited to join the faculty at Columbia University in New York. Dr. Edward Chiou completed his integrated residency and will join the faculty at Oregon Health Sciences University with Howard Song as an adult cardiac surgeon.

Dr. Alex Nissen completed his traditional cardiothoracic surgery residency and will be stationed at Walter Reed Medical Center and also at Medstar in Washington, DC (with Christian Schults). Dr. Lauren Huckaby continued growth and success would not be completed her traditional residency and will do an aortic fellowship at Duke next year. Finally, Dr. Thomas O'Malley completed his thoracic track residency and will join our thoracic surgery faculty at Emory University Hospital Midtown.

> I would like to personally thank all of you who continue to support our efforts through your contributions to the Cardiothoracic Surgery, Research, Education, and Program Development Fund. Your generosity not only helps support our training programs and research but is vital to sustaining our division's mission.

We take great pride in our alumni and enjoy hearing from you. Please keep us up to date on your personal and professional success. We look forward to staying in touch and hope to see many of you at our upcoming meetings.

Sincerely,

Michael E. Halkos

Chief and Professor of Cardiothoracic Surgery **Emory University School of Medicine**





Department of Surgery

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New Faculty



Dr. Muath Bishawi, joins the Division of Cardiothoracic Surgery with a dual appoint-ment as assistant professor of Biomedical Engineering at

Emory/Georgia Tech. He is deeply engaged in surgical research focused on device technologies, and basic and translational research in thoracic end stage heart and lung disease and transplantation, securing funding from NIH, NASA, and industry. He has published over 100 peer reviewed manuscripts and has an H index of 27. He is a reviewer for multiple cardiac surgery journals, and part of the editorial board for the Journal of Cardiac Failure. He has secured multiple patents and launched a medical device company that successfully raised private equity funding and currently in the FDA regulatory process.



Dr. Rachel Medbery is double board-certified by the American Board of Surgery and the American Board of Thoracic Surgery and special-

izes in general thoracic surgery. Her clinical areas of interest include minimally invasive thoracic surgery, lung and esophageal cancer, benign esophageal disease, diaphragm and chest wall disorders. She is also a strong advocate for lung cancer screening.



Dr. Thomas O'Malley joins our Thoracic Surgery team at Emory University

Hospital Emory University Hospital Midtown and Grady Memorial Hospital. He completed his medical degree at the Tulane University School of Medicine in New Orleans, Louisiana. He then completed his general surgery residency at Thomas Jefferson University in Philadelphia,



Dr. Victor Pretorius joins Emory University School of Medicine as Surgical Director of the Heart Transplant and Pulmonary

Thromboendarterectomy (PTE) Programs, where he will lead multidisciplinary efforts to expand advanced surgical therapies for end-stage cardiac and pulmonary vascular disease, furthering Emory's mission of delivering world-class cardiovascular care to patients across the United States.



Dr. Jonathan Zurcher joins our cardiac surgery group at Emory University Hospital. He completed his medical degree at the Medical University of

South Carolina in Charleston, SC. He then completed his general surgery residency at Wake Forest Baptist Health in Winston-Salem, NC. Following residency, he completed his cardiothoracic surgery fellowship at Emory University, after which he completed an additional fellowship year of advanced aortic surgery at Emory University.

Departing **Faculty**

Dr. Kendra Grubb served as the surgical director of the Emory Structural Heart and Valve Center. Prior to joining Emory in 2018, she served as the director of minimally invasive cardiac surgery and the surgical director of the heart valve program at the University of Louisville.

Dr. Grubb departs Emory to become the Vice President & Chief Medical Officer of Medtronic's Structural Heart program.

Dr. Alison Ward leaves her role as Chief of Cardiothoracic Surgery at Grady Memorial Hospital, where she has been since 2021. Prior to joining Emory, Dr. Ward was on the faculty at Augusta University and the Medical College of Georgia.

Dr. Ward departs Emory to join the Division of Cardiothoracic Surgery at Kaiser Permanente Medical Center in San Francisco.





Emory Surgeons Pilot Intuitive 3d Modeling Tool To Improve Surgery Experience For Lung **Cancer Patients**

Since November of 2024, Emory surgeons have been piloting new software that creates a three-dimensional digital image of a patient's lungs. Having access to a 3D model makes removing hard-to-reach cancerous cells more efficient and precise. Think of it as the first time a cartographer added mountains and canyons to the layout of a map — only in this case, that map leads straight to saving a patient's life.

At Emory Saint Joseph's Hospital, Manu Sancheti, MD, and his team are the first thoracic surgeons in the Southeast, and only the third in the country, to explore how this new Intuitive 3D Modeling tool can aid robotic-assisted thoracic surgery.

Non-small cell lung cancer, in particular — the kind that most benefits from robotic surgery and 3D imaging — can often be challenging to pinpoint and remove since the tissue samples can exist deep within the lung. With a combination of robotic-assisted surgery and these enhanced imaging techniques, it is quicker and easier to figure out how to approach suspicious-looking nodules.

To produce a highly detailed 3D model of the patient's lung, Sancheti uses a patient's CT scan, a two-dimensional image routinely used to screen patients for potential cancerous tissue in the lung. Then, he feeds it into the new software, which produces a unique 3D model of the patient's lung, including the location, proportions and size of the tumor that needs to be

As the operation progresses, Sancheti and his team use the model to help guide them in the precise placement of blood vessels, veins, arteries and the other internal workings of the lung.

That added detail and dimension to the image of the patient's lung helps Sancheti and team prepare a plan of action before anyone enters the operating room, setting the stage for a smoother and quicker surgery.

Before they began using 3D imaging, Sancheti said he and his team would pour over the 2D CT scan and "try to develop" a mental picture in our heads of what it would look like threedimensionally. But many times, my discussions with the patients in that situation would be, I'm going to go in and try to do this, but I may have to take a number of different paths to get there."

Now, with the 3D model, Sancheti still has a comprehensive conversation with his patients, but he adds that he's making a 3D model, which will give them an exact action plan. To go back to the map comparison — they'll now know where the sharp peaks and chasms lie and how to navigate around those troublesome areas.

The adoption of this new technique builds upon Emory Heart & Vascular's lengthy history of pioneering advancements in patient care. Four years ago, Sancheti and his team at ESJH became the first in the state to use a new state-of-the-art robot to diagnose lung cancers earlier and less invasively.

Emory also leads the way nationally with robotic surgery. Currently, 90% of thoracic surgeries are performed using minimally invasive techniques, which results in less pain, shorter hospital stays and quicker overall recovery for patients.

The 3D imaging also makes the surgery more precise, preserving more parts of the lung because Sancheti knows exactly where the tumor is and potentially can minimize the amount of lung removed while still providing an appropriate operation for the patient.

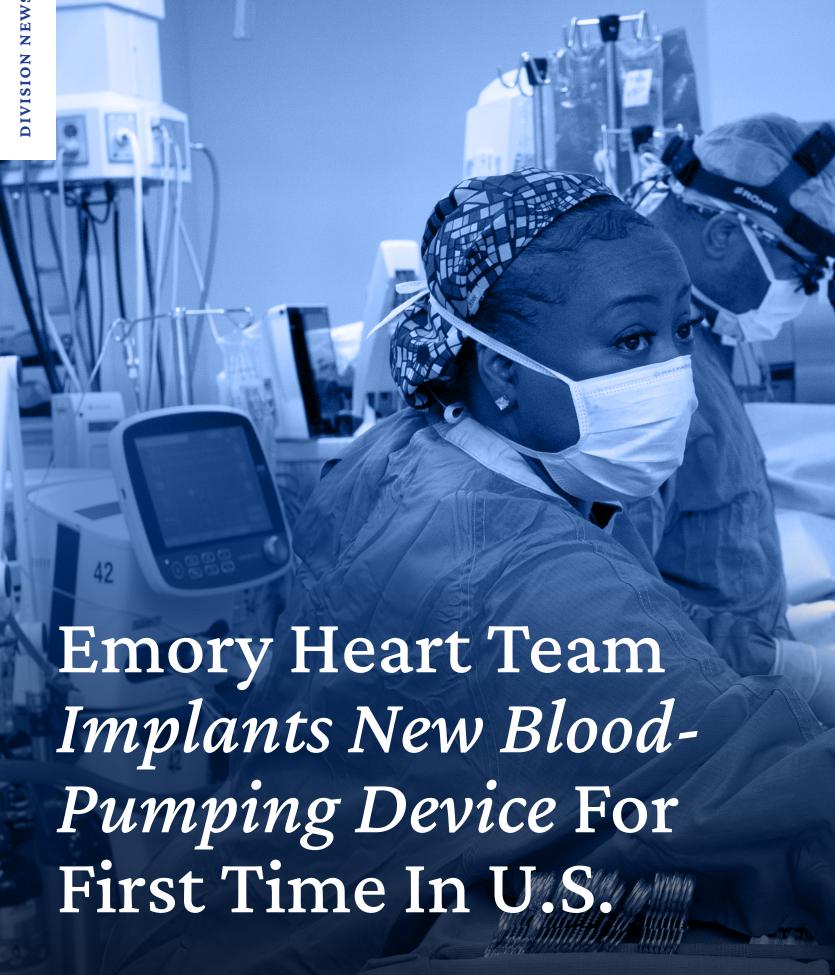
As a result, surgeries take less time, tend to have fewer complications and can be more exacting about how much of the lung needs to be removed to successfully get the tumor out. Sancheti says keeping intact even a fraction of healthier lung tissue can make a dramatic difference in patient recovery time, minimizing shortness of breath and enhancing the level of possible activity post-operation.

Right now, the thoracic surgery department at Emory Saint Joseph's Hospital is the sole team implementing the 3D imaging software, but Sancheti said that the goal is also to expand these techniques across the Emory Health Care system to help with other kinds of surgeries and treat other types of illnesses.

Looking ahead, Sancheti is also excited for Emory to become the country's first academic medical center to use 3D imaging for patient education.

"If I can get a patient's scans before they come to the office, I can get the model made, which takes a few days, and then I could use an iPad or I could use a virtual reality headset and essentially show the patient, This is your tumor, this is what we're removing, these are the blood vessels," he says. "It's just another great example of how technology is changing how we do things in terms of pre-op preparation."

Story by Alexis Hauk, Director of Communications, Emory Heart and Vascular Center- Emory News Center



On Nov. 18, the heart failure and transplantation team at Emory University Hospital (EUH) made history, performing the first-ever surgical implantation in the United States of a brand-new type of ventricular assist device (VAD), which provides crucial care to patients with failing hearts.

An expert team led by veteran cardiothoracic surgeon Mani Daneshmand, MD, successfully implanted a novel magnetically levitated pump, a VAD that has been specifically designed for patient ease and long-term health. The BrioVAD System, made by BrioHealth Solutions Inc., was authorized by the FDA to begin clinical trials earlier this year. Emory became the first site enrolled in the trial to perform the procedure.

As part of the INNOVATE clinical trial, Emory will participate in gathering data on patient experience with the device, joined by other leading medical institutions across the country, including Cleveland Clinic Foundation, Duke University and University of Chicago.

The entry criteria for joining the study were rigorous. Emory qualified because of its high quality and extensive VAD experience. Emory has long led Metro Atlanta and the region in number and success rate of VAD implantations. Since the program began, Emory Healthcare has completed almost 1,000 VAD implants between EUH and Emory St. Joseph's Hospital.

"We're honored to be the first implanting site in this study," Daneshmand says. "The BrioVAD is a promising heart assist pump, designed from the ground up with focus on patient safety and quality of life. With this study, we continue our long history of innovation in pursuit of our mission to bring compassionate, quality care to every patient who arrives at our doors seeking care."

First used in the 1960s, VADs have been an effective treatment for patients with advanced heart failure, often providing an alternative for patients who don't qualify for a transplant — which can mean the difference between life and death.

The lifesaving device, which has evolved significantly over the decades, works by providing mechanical circulatory support and helping to pump blood from the lower chambers of the heart to the rest of the body. Because the device is almost always placed on the left side of the heart, the device is frequently referred to as an LVAD.

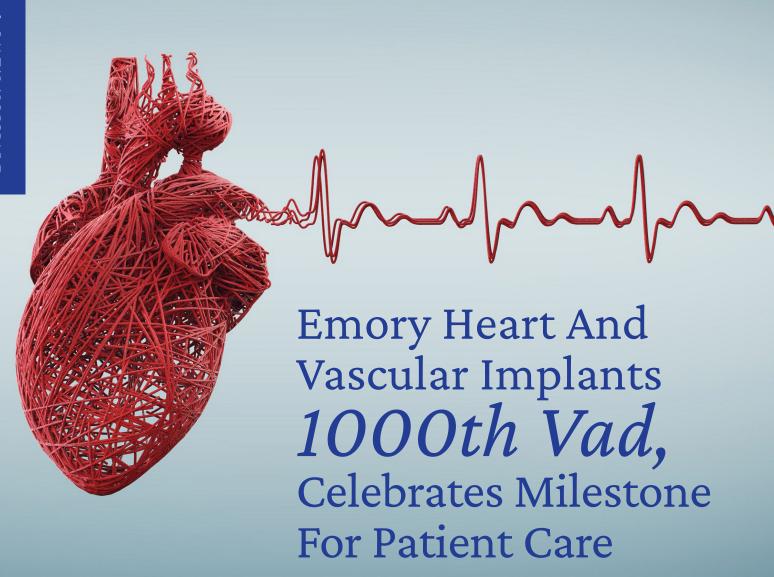
The BrioVAD system is composed of a "hemocompatible blood pump," meaning that it interacts with the blood in a way that may have fewer side effects. The new VAD also includes a fully magnetically levitated rotor and two small, lightweight, patient-worn components.

"The BrioVAD shows great promise to improve on the current, excellent LVAD technology we are using every day," says Daneshmand, who is the Andrew J. McKelvey Professor at Emory School of Medicine and Director of Thoracic Transplant and MCS Surgery.

The hope is that the new VAD may be used as life-long destination therapy, meaning that the VAD is used instead of transplant, or as bridge therapy to transplant or even for supporting recovery of the heart. The INNOVATE trial will assess the system performance in both the short term, with a six-month endpoint, and in the long term over the course of the next 24 months.

Note: The BrioVAD System is an Investigational Device limited by Federal Law to use in the **INNOVATE** Trial.

Story by Alexis Hauk, Director of Communications, Emory Heart and Vascular Center- Emory News Center



Emory Heart and Vascular recently reached another major milestone in the innovative treatment and care for patients with advanced heart failure, implanting its 1000th durable ventricular assist device (VAD) on December 10, 2024.

Since its introduction in the 1960s, VADs have long been a vital alternative for patients whose hearts are in end-stage failure, but who do not qualify for a transplant or would not receive a transplant in time.

And it's a full team effort.

"Each patient's care requires significant effort and countless hours of work and coordination from our surgeons, cardiologists, VAD engineers, social workers and coordinators," says cardiothoracic surgeon Tamer Attia, MD, who performed the 1000th implantation at

Emory University Hospital.

Emory is one of the top five programs in the nation to surpass 1000 LVADs, joined by Duke, Texas Heart Institute, Cleveland Clinic and Columbia.

Emory Healthcare has a rich history of pioneering advancements in heart care, particularly in the use of LVADs, so-called because VADs are implanted almost always on the left side. In 1999, Emory cardiothoracic surgeon David Vega, MD, made history by implanting the first VAD in Georgia to be used as a bridge to transplant. That same surgical team later achieved another breakthrough in 2006, when they implanted the state's first VAD as a means of providing permanent therapy.

In addition to the VAD achievement, the Emory Heart and Vascular team also marked another milestone on

December 3, implanting the 500th Impella 5.5, another crucial option for end-stage heart failure patients who have progressed to cardiogenic shock, a clinical state that is critical and life-threatening.

The Impella is a temporary mechanical circulatory support device that was first introduced in 1999, which has transformed the landscape of cardiac care by providing crucial circulatory support for patients experiencing severe heart failure. In short, an LVAD is a long-term pump for heart failure while an Impella is a short-term pump for emergency situations.

Developed by a company called ABiomed, in the 20 years since its introduction, the Impella has undergone continuous improvements to its design and function with the most recent version, the 5.5 receiving approval from the FDA for mechanical circulatory support in 2019.

"LVADs are made to be more durable, meaning that they are designed to be implanted in patients to allow them to leave the hospital and go back home to live their daily lives. While the Impella 5.5 is a temporary LVAD and can only be used while patients are in the hospital," says Attia.

Emory has been at the forefront of many clinical trials that helped make these options possible for patients, according to Divya Gupta, MD, Emory heart failure and transplantation cardiologist and associate professor in the Department of Medicine.

"We will always do what's right for the patients to make sure that we get the best outcome possible," Gupta adds. "It's not just about offering the latest technology. It's about making sure the treatment truly benefits the patient and improves their quality of life."

Scores of providers have worked to ensure the forward momentum of testing, improving, and perfecting the effectiveness and positive outcomes of new therapies, treatments, and technology. The program is also recognized across the region as a place that finds new solutions for patients that may not have been possible before.



"Our job every day at Emory Heart and Vascular is to provide the best care we can, with the most advanced technology that is available anywhere in the world," says Mahmoud Abdou, MD, cardiologist with the Emory advanced heart failure and transplant team and associate medical director for LVAD. "We have been able to achieve this milestone thanks to a huge arsenal of extremely talented practitioners, who provide not only care and support for patients, but also hope."

Looking ahead to what's next, Attia says, "Part of our growth process is thinking through what we need to care for the patients who are sickest and most in need of care and finding as many ways as possible to help get them through those tough times."

Story by Alexis Hauk, Director of Communications, Emory Heart and Vascular Center- Emory News Center

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Emory Surgeons *First in Georgia* to Perform Novel Stent-Graft Procedure

Aneurysms in the aortic arch are uncommon, accounting for about 10% of thoracic aorta aneurysms. Very rarely, an aneurysm affects the entire aortic arch.

Typically, patients must undergo open heart surgery to treat aneurysms involving the ascending aorta and the aortic arch—an operation that can be especially risky in older people or those with comorbid conditions.

Recently, an older patient with an aneurysm involving the distal ascending aorta and arch was referred to aortic specialists at Emory Heart & Vascular. He was deemed high risk for traditional open surgical repair, and therefore was enrolled in the ARISE II trial, a multi-center national clinical trial evaluating the Gore® Ascending Stent Graft in the treatment of aneurysms involving the ascending aorta. The trial is evaluating a novel stent-graft designed specifically for the ascending aorta. In this patient, the novel ascending stent graft was combined with a commercially available branched arch stent graft to achieve a seal from the ascending aorta, across the aortic arch and into the descending aorta to successfully treat this complex aneurysm.

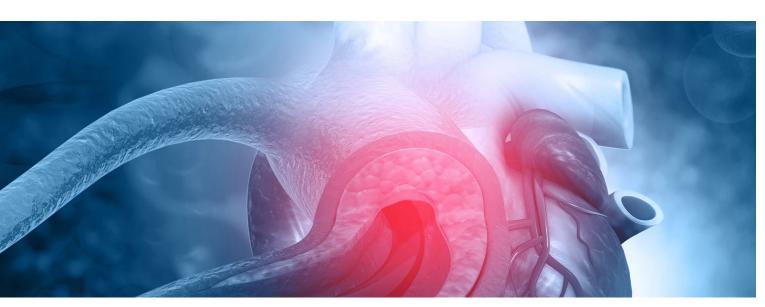
The procedure was performed with excellent results by vascular surgeon Yazan Duwayri, MD, Chief of Vascular

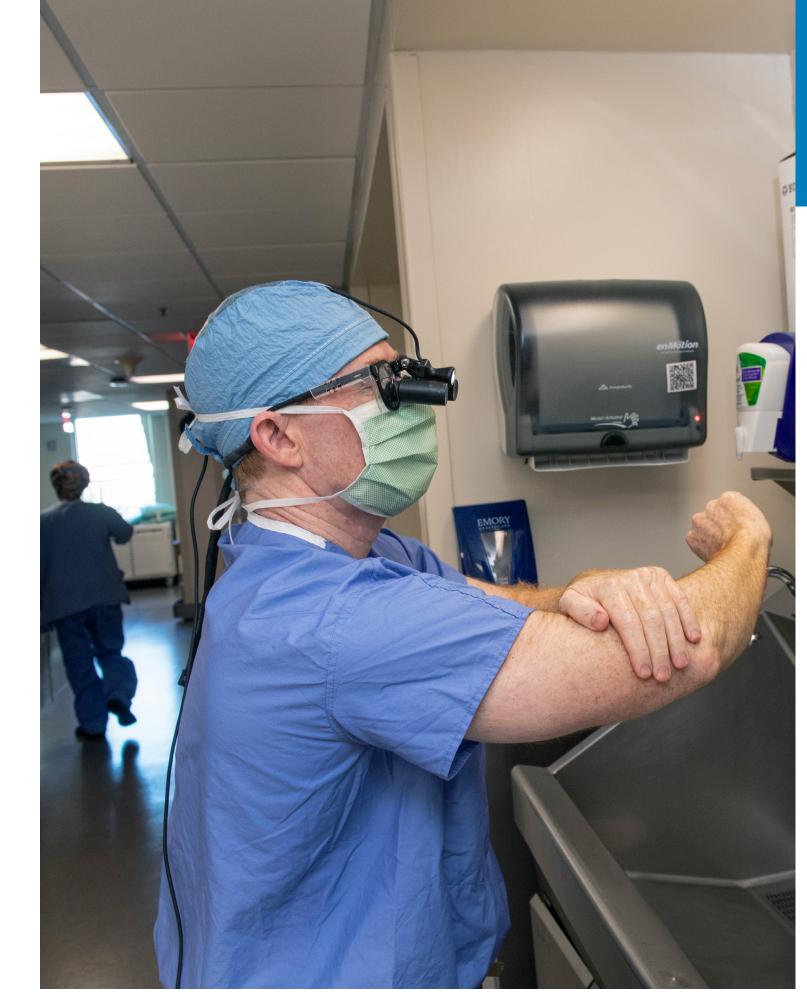
Surgery and cardiothoracic surgeon Bradley Leshnower, MD, Director of Thoracic Aortic Surgery.

The patient, an 81-year-old man, had been diagnosed with an aneurysm in his aortic arch. Due to his age and comorbidities, repairing the aneurysm via an open surgery was deemed high risk. The patient was referred to aortic specialists at Emory Heart & Vascular, where he underwent a minimally invasive hybrid arch repair.

The procedure was completed in two stages. First, Yazan Duwayri, MD, rerouted the arteries going to the brain and arm with a bypass graft to the brachiocephalic artery. After an in-hospital recovery period of four days, the patient underwent the second operation, performed by Drs. Duwayri and Leshnower.

The surgeons performed the procedure via percutaneous access in the right arm, and the right and left femoral arteries. After placing a stent graft across the aortic arch with a branch into the brachiocephalic artery, the novel stent graft was placed into the ascending aorta. A completion aortogram demonstrated complete exclusion of blood flow into the aneurysm. The patient's breathing tube was removed in the operating room, where he regained consciousness. Five days later, he was discharged home and resumed normal activities.





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IN MEMORIAM

Remembering Brianda Hooper

It is with a heavy heart that we share the news of the passing of our esteemed colleague, Brianda Hooper, ACNPC-AG, who bravely fought a battle with cancer. Brianda was an integral part of our Cardiothoracic Surgery team at Emory University Hospital, and her contributions have left an indelible mark on all of us.

Brianda's career was marked by her unwavering dedication and exceptional skills. She joined Emory University Hospital in May 2021 as an Advanced Practice Provider in Cardiothoracic Surgery. Before her tenure at Emory University Hospital, Brianda served at Grady Memorial Hospital Division from August 2015 to May 2021. There, she provided critical care to patients with heart disease and lung disorders, both in inpatient and outpatient settings. Her expertise in surgical interventions and her compassionate care during the pre, intra, and postoperative periods were highly valued.

Brianda's journey in healthcare began much earlier. She worked as a Registered Nurse in the Operating Room at Emory University Hospital Midtown and Emory St. Joseph's Hospital, where she was a vital member of the Cardiothoracic and Vascular surgery teams.

Brianda was not only a dedicated healthcare professional but also a beloved wife, mother, colleague and friend. Her kindness, professionalism, and unwavering commitment to her patients and team will be deeply missed.





Dr. Robert A. Guyton, a titan in the field of cardiothoracic surgery, has retired after a remarkable 45-year career. Under his leadership, Emory University School of Medicine's cardiothoracic surgery program rose to national prominence and is now recognized as a leader in specialized areas like off-pump coronary revascularization, congenital cardiac surgery, robotic mitral surgery, and transcatheter aortic valve replacement.

"Robert is a legend and an ever-present force at Emory," says Amalia Jonsson, MD, Assistant Professor of Surgery (Cardiothoracic); Jonsson worked with Dr. Guyton for 10 years, first as a resident-in-training and then as a colleague. "He cared deeply for his patients and his colleagues and is the one you would call when you had an impossible problem because he always had the answer."

Dr. Guyton graduated from the University of Mississippi in 1967 and went on to earn his MD at Harvard Medical School in 1971. He joined Emory in 1980 as an Assistant Professor of Surgery, was promoted to Associate Professor of Surgery in 1984, and promoted to full Professor in 1989. In 1990, Dr. Guyton was named Chief of the Division of Cardiothoracic Surgery, a position he held until stepping down in 2017. He was also program director of the Emory CT Surgery Residency from 1990 to 2018.

Over the course of his career, Dr. Guyton performed over 12,000 cardiac operations, authored or co-authored over 400 peer-reviewed publications, and held prominent positions in national organizations like the Society of Thoracic Surgeons and the American College of Cardiology.

Legendary Cardiothoracic Surgeon Dr. Robert Guyton Retires

He is known as a stellar educator and mentor, always eager to share his skills and expertise with students and colleagues. His commitment to education and mentoring have been recognized with prestigious awards, including the Socrates Award from the Thoracic Surgery Residents' Association, the Surgery Mentoring Award from the American Heart Association, and the Presidential Citation from the American College of Cardiology. Dr. Guyton has also been responsible for educating some of the most accomplished and successful cardiothoracic surgeons in the country.

"He was a great mentor and a great teacher and had a knack for being able to direct your career in different ways that you may not have planned for yourself," says Dr. Michael E. Halkos, Chief of Cardiothoracic Surgery, who trained under Dr. Guyton. "He always had a vision about what each of his trainees, each of his junior faculty members, what opportunities were available for them, and helped clear obstacles to provide a growth opportunity for each of us."

Dr. Guyton was also a pioneer as a researcher, driving advancements at Emory and beyond. He played a pivotal role in the development of clinical and basic science research and served as the Director of the Cardiothoracic Surgery Research Laboratory at Carlyle Fraser Heart Center from 1980 to 1995. In 1986, he was named co-founding Director of the Emory-Georgia Tech Biomedical Technology Research Center. During the six years he served as Director, the center flourished and established a worldwide reputation for preparing and educating the next generation of leaders in the field of biomedical engineering.

"He has always understood the evolving nature of medicine and has been the driving force behind countless clinical advancements at Emory and within the field of cardiothoracic surgery," says Dr. Halkos."He was passionate about the research process," says Dr. Halkos.

Alumni Newsletter

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2024 Division Award Winners

Robert A Guyton, MD Outstanding Chief Resident:

Alexander Nissen, MD Matthew Stanley, MD

Outstanding Jr Resident:

Alexander Nissen, MD

Kamal Mansour, MD Teaching Award:

Woodrow Farrington, MD

2025 Division Award Winners

Robert A Guyton, MD Outstanding Chief Resident:

Alexander Nissen, MD

Outstanding Jr Resident:

Elizabeth Norton, MD MPH

Kamal Mansour, MD Teaching Award:

Jeffrey Miller, MD and Onkar Khullar, MD

New Matches

In 2024 the integrated residency matched **Ryon Arrington**, **MD** from Emory University School of Medicine. Prior to medical school, Dr. Arington received his B.S. degree in Biochemistry and Molecular Biology from Washington University in St. Louis. Dr. Arrington began his first year of integrated residency training in July, 2024. In 2025 the integrated residency welcomed **Alexander Lu**, **MD**, **PhD**, a medical student from the Texas A&M Health Science Center College of Medicine. Before attending medical school, Dr. Lu earned a B.A. in Biophysics and Neuroscience from Washington University in St. Louis. He also obtained a dual-focus Ph.D. in Molecular Biology and Physiology.

In July of 2025 we welcomed our newest Independent Fellows. J. Nathan Mynard, MD, MS (cardiac surgery), completed his general surgery residency training at Weill Cornell Medical Center in New York, NY. While in residency, Dr. Mynard completed two years of full-time research with Dr. Nasser Altorki, Chair of the Division of Thoracic Surgery at Weill Cornell, earning him an M.S. in Clinical Epidemiology and Health Services Research. He completed his M.D. at the University of Alabama – Birmingham Marnix E. Heersink School of Medicine, and his B.A. in Chemistry from Auburn University. Dr. Mynard will join the training program on August 01, 2025.

Chase King, MD (cardiac surgery) joins the us as the first member of our 4+3 early specialization training pathway. Dr. King completed his general surgery residency training at Emory. He is now in his 5th year of general surgery and 1st year of traditional residency overlap. He received his M.D. degree from University of Kansas School of Medicine and his undergraduate B.S. degree in Biology from Kansas State University.

We are also proud to announce our 2025 Independent Fellowship matches. On the cardiac track, we matched **Raza Ahmad, MD, MS** and **John Eisenga, MD, MS**. Dr. Ahmad is currently completing his general surgery residency at Atrium Health- Carolinas Medical Center in Charlotte and completed medical school at the University of Queensland School of Medicine in Australia. Dr. Eisenga is currently completing his general surgery residency at Baylor College of Medicine in Houston and completed medical school at Creighton University School of Medicine. They will join the training program in August of 2026

Also joining next August on our thoracic track will be **Dr. Jonathan "Jack" Kent. Dr. Kent** is completing is general surgery residency at University of Chicago School of Medicine and completed medical at Georgetown University School of Medicine.



National Recognition

Ross Michael Reul, MD

-Ethicon Future Leaders Program, 2025

Benjamin Wadowski, MD

- -STS Advocacy Scholarship, 2025
- -STS Executive Committee Member Appointee, September 2025

Brittney Williams, MD MPH

-AATS Thoracic Surgical Robotics Fellowship Awardee, 2025

Stay Connected. *Strengthen the Legacy*.

As a graduate of Emory's Cardiothoracic Surgery training program, your part of a proud tradition of surgical excellence and innovation. Your expertise and leadership continue to shape the field—and your continued involvement helps ensure the next generation has the same opportunity to learn, discover, and lead.

Gifts to the Cardiothoracic Surgery Education, Research, and Program Development Fund directly support resident and fellow education, seed new research initiatives, and advance clinical programs that improve patient care. Every contribution—large or small—helps Emory remain at the forefront of surgical discovery and training.

Join us in fueling the future of Cardiothoracic Surgery at Emory. Click **here** or scan to donate.

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