EMORY

Division of Cardiothoracic Surgery

ANNUAL ALUMNI NEWSLETTER 2022



Controle

Department of Surgery



Dear Friends and Colleagues,

It is with great pride that we publish the fourth edition of Emory's Division of Cardiothoracic Surgery Alumni Newsletter. With each new publication, our goal is to keep alumni engaged as well as informed about the ongoing growth and success of our surgical training program.

As the Division Chief, I am pleased to share that Emory Cardiothoracic Surgery remains one of the most successful academic-medical training programs in the country. Our predecessors established a program built on trust, teamwork and tradition, which has allowed us to consistently graduate outstanding residents year after year. This year, I'm thrilled to announce we have 3 graduating residents – Kanika Kalra, MBBS, Xiaoying Lou, MD, and David Zapata, MD. Dr. Zapata will be joining the faculty at the University of Maryland as an Assistant Professor of Cardiothoracic Surgery; Dr. Kalra will be joining the faculty at Emory University as an Assistant Professor of Cardiothoracic Surgery; and Dr. Lou will be pursuing an Advanced Aortic Fellowship at the Cleveland Clinic.

In addition to celebrating the incredible achievements of our trainees, I would like to personally thank all of you who have contributed to the Robert A. Guyton Resident Education Fund, which helps support resident educational activities. Our faculty, staff, and alumni have always been heavily invested in the continued success of our surgical training program as well as the Division and I look forward to your ongoing support.

It is a great source of pride among the faculty and staff that our alumni stay engaged with our program. We enjoy hearing from you, so please keep us up-to-date on your personal and professional successes. We look forward to staying in touch with all of you and hopefully can see everyone again in person at next year's STS meeting.

Sincerely, Michael Halkos, MD

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Department of Surgery



NEW FACULTY

Joshua L. Chan. MD Joshua L. Chan, MD will be joining the faculty at Emory University as an

Assistant Professor of Surgery in the Division of Cardiothoracic Surgery. Dr. Chan is an adult cardiac surgeon with a primary clinical focus in heart and lung transplantation, mechanical circulatory support, and complex aortic disease. Prior to joining Emory, Dr. Chan was at Cedars-Sinai Medical Center in Los Angeles where he received advanced fellowship training in thoracic transplantation. He previously completed his cardiothoracic surgery fellowship at Stanford University, general surgery residency at Cedars-Sinai Medical Center, and a postdoctoral research fellowship at the National Institutes of Health. In addition to his clinical interests, his research will focus primarily on the pathophysiology of transplant rejection and optimizing transplant outcomes. Dr. Chan will be based at Emory University Hospital.



Kanika Kalra, MD Kanika Kalra, MD will be starting as an Assistant Professor

of Cardiothoracic Surgery in November 2022. Dr. Kalra is an adult cardiac surgeon with a clinical interest in coronary revascularization, and a special interest in surgical and innovative management of valvular heart disease through open, minimally invasive and robotic approaches. She grew up in New Delhi, India, and received her medical degree

completed her residency in general surgery in of Women in Thoracic Surgery, David Campbell Scholarship from the Eastern Cardiothoracic addition to her clinical focus, she has a strong and translational research laboratory in right sided valvular heart disease and heart failure. Hospital Midtown.

Omar M. Lattouf, MD Omar M. Lattouf, MD will be rejoining A 10 Emory Cardiothoracic Surgery's faculty as a Professor of Surgery in 2022. Because of his outstanding leadership abilities, clinical reputation and ability to build bridges across Emory Healthcare, Dr. Lattouf has been appointed as Chief of Cardiothoracic Surgery at Tanner Healthcare System. As a vital contributor to Emory's distinguished reputation in cardiothoracic surgery for more than three decades, Dr. Lattouf harbors substantial experience in complex cardiac procedures including heart transplantation, laser re-vascularization, left ventricular reduction procedures, thoracoscopic minimally invasive interventional therapy and mitral valve repair. His primary location will be at Tanner Healthcare System in Carrolton, Georgia.

from the Lady Hardinge Medical College. Dr. Kalra 2019 from Emory University, during which she received Carpenter Scholarship from the Society Surgical Society and will complete her fellowship in cardiothoracic surgery at Emory this year. In interest in research and plans to develop a basic Her primary location will be at Emory University

DEPARTING FACULTY



Kirk Kanter, MD

Dr. Kanter joined the Emory faculty in 1988 after completing his cardiothoracic surgical training at Johns Hopkins

and his congenital cardiac surgical training at the Royal Brompton and Harefield Hospitals in London, England. He became the Chief of Congenital Cardiac Surgery at Children's Healthcare of Atlanta in 1990 and was promoted to full professor that same year. His accomplishments and contributions throughout his career are enormous. Dr. Kanter developed the congenital cardiac surgery program over his tenure such that in his last year as section chief, the pediatric cardiac surgery program was the 3rd largest in the US and among the highest quality programs. He grew the program from around 300 annual cases to >1000 while he was the section chief. He started the pediatric heart transplant program at CHOA and the adult lung transplant program at Emory. He also performed the first Norwood procedure, the first Ross procedure, the first successful heart-lung transplant, the first successful heart transplant, and the first successful ventricular assist device in either children or adults - all of these were firsts in Georgia.

He has made significant contributions with over 300 publications in peer-reviewed journals and over 250 presentations at national and international meetings. He has been on the editorial boards of four high impact journals in transplantation and cardiothoracic surgery. He has also served and led numerous national and international committees including throughout his career.

ESJH Mitral Valve Repair Reference Center:

The American Heart Association and the Mitral Foundation have designated Emory Saint Joseph's Hospital as a Mitral Valve Repair Reference Center for the third year in a row. A Repair Reference Center is a recognition awarded to high volume mitral repair hospitals that have shown excellence in clinical outcomes and performance in mitral valve repairs. Emory Saint Joseph's Hospital is the only Reference Center in Georgia and the only hospital in the southeast to with this designation for three consecutive years. Emory Saint Joseph's Hospital has one of the largest mitral repair programs and one of the largest robotic cardiac programs in the country.



Heart and Vascular Expansion Project at Emory University Hospital

We are excited to announce that our Heart and Vascular service line, which includes cardiothoracic surgery, will be expanding to the new Emory University Hospital Tower, which completed construction several years ago. In this new space, there will be an integrated procedural space to include cardiothoracic surgical operating rooms, hybrid rooms, EP labs and cath labs. In addition, there will be a new cardiothoracic ICU (+16 beds) one floor above the procedural suites in addition to the current 20-bed ICU. There will also be an additional 24 acute care beds to accommodate significant growth on this campus.

David Vega honored at Celebrate Life Gala

Almost exactly two years after the Georgia Transplant Foundation (GTF) was forced to postpone its 2020 annual Celebrate Life Gala fundraiser because of COVID-19, the GTF triumphantly held a hybrid version of the event — both virtual and in person — on March 12th at the JW Marriott Buckhead hotel. Sponsored by Care Dx, Piedmont Transplant, and the Emory Transplant Center, the Gala recognized champions from the Atlanta transplant community as Celebrate Life Honorees for 2022, one of whom was J. David Vega, MD, professor of surgery and surgical director of the heart transplant program at Emory University Hospital.

This distinction was informed both by Dr. Vega's amazing record as lead surgeon on hundreds of transplants since his arrival at Emory in 1996, and by his personal, familial connection to the transplant process through his niece Abby Bacho, who was only nine years old when she became an organ donor on Christmas Day of 2012 after a tragic car accident, saving the lives of five people in the process.

In the special video shown before his introduction at the event, Dr. Vega was notably moved when he spoke of the generosity of donor families. "I've always had to reconcile myself emotionally, spiritually, and mentally to the tragedy on one side that brings joy to the other," he said. "Every transplant is special and awe inspiring; I consider each one a medical miracle, every time. I've done probably close to 400 heart transplants, and I never take them lightly."

Speaking of his niece, Dr. Vega said, "I remember it like it





Emory Healthcare is proud to honor Jacob Davtyan, MD, the 2022 Medical Professional Honoree of the Greater Columbus Heart Ball, for his achievements in cardiothoracic surgery and his impact on the Columbus community.

Hakob Davtyan Heart of Columbus Award

Hakob (Jacob) G. Davtyan, MD, Emory cardiothoracic surgeon and Medical Director of the Cardiothoracic Surgery Service at St. Francis Hospital in Columbus, GA, was recognized as the Heart of Columbus Honoree at the 2022 Greater Columbus Heart and Stroke Ball.

In 2016, Dr. Davtyan came to Emory to lead the initiation of the affiliation of St. Francis Hospital's Cardiac Surgery Service with Emory's Division of Cardiothoracic Surgery, expanding the Columbus-based program and aligning it with Emory's three existing CT surgery services at Emory University Hospital, Emory University Hospital Midtown, and Emory Saint Joseph's Hospital. Dr. Davtyan was already well acquainted with Emory, having been mentored during his Emory CT surgery residency and fellowship by Robert Guyton, MD, former chief of Emory CT Surgery from 1990-2017.

emoryhealthcare.org/heart



EMORY

HEALTHCARE

The AHA sponsors Heart Balls in communities across the country to celebrate regional successes in driving change, funding science, and improving health, as well as to raise the critical funds needed to ensure that its work can continue.

1000THHEART TRANSPLAN

Vega, who has performed nearly half of the 1000 heart transplants at Emory, attributed the program's successes to support by hospital leadership and a focus on patient care. "For 36 years, we have been supported by excellent institutional commitment, which has assisted us in caring for numerous patients who have exhausted all options for end-stage heart disease," says Vega. "Our multidisciplinary team is uniformly focused on our patients and their families, and that has been our mission and will continue to be our mission."

ALUMNI NEWSLETTER



Since 1985, Emory's heart transplant program has served many residents of Georgia and the surrounding states. In 2008, Emory celebrated the first 500 transplants, and from 2008 to 2021, skilled heart transplant surgeons completed an additional 500 transplants in approximately half the time. Two long-time Emory physicians, Andrew Smith, MD, professor of medicine in the Division of Cardiology, and David Vega, MD, professor of surgery in the Division of Cardiothoracic Surgery, have contributed significantly to the successes of this program.

In addition, an essential element of Emory's mission focuses on addressing disparities in healthcare, and in recent years, the multidisciplinary transplant team has made significant progress in diversifying its transplant patient pool in order to benefit communities of color. According to the American Heart Association, many racial and ethnic minority populations have higher rates of cardiovascular disease and related risk factors. "Our team of cardiologists, surgeons, anesthesiologists, critical care experts, nurses, coordinators, perfusionists, researchers and allied health professionals have worked tirelessly to increase access to life saving, advanced heart failure therapies, including transplant, for all Georgians," says Mani Daneshmand, MD, associate professor of surgery, Division of Cardiothoracic Surgery at Emory and director of the Emory Heart & Lung Transplantation,

Mechanical Circulatory Support and Emory ECMO (Extracorporeal Membrane Oxygenation) Programs.

"With about two-thirds of Emory's heart transplant patients being minorities, our program has surpassed other programs of similar size," says Divya Gupta, MD, associate professor of medicine in the Division of Cardiology, Emory University School of Medicine. "Our team has worked very hard to diminish many obstacles for our patients to receive and have successful heart transplants." According to the Scientific Registry of Transplant Recipients, from July 2019 to June 2020, 72.3 percent of Emory heart transplant patients were African Americans.

In addition to completing 1000 successful heart transplants, Emory's team has cared for thousands of patients with varying degrees of heart failure and continues to focus on research as well as advanced technologies. The stability of the program relies heavily on a culture of collaboration as well as dedication to the specialty, its patients and donors. Emory's Transplant team expresses unwavering gratitude to the donors and donor families and recognizes that none of their work would be possible without the incredible gift they give to help save the lives of others.

Brad Leshnower Receives NIH Grant for UTABD

The National Institutes of Health and the National Heart, Lung, and Blood Institute awarded Brad Leshnower, MD, an R01 grant to study risk stratification of uncomplicated type B aortic dissection (UTABD) using clinical and engineering analysis.

The primary objective of the project is to develop a novel, personalized machine-learning model for predicting those patients with acute UTABD that would most likely fail optimal medical therapy and benefit instead from endovascular treatment.

The design and creation of the model will be aided by the biomechanical engineering expertise of Rudy Gleason, PhD, a Georgia Institute of Technology scientist and expert in cardiovascular

mechanics and tissue growth, remodeling, and engineering. Dr. Gleason oversees the Tissue Mechanics Lab at Georgia Tech, which will be performing extensive biomechanical testing on aortic tissue from the Emory Aortic Tissue Bank and sophisticated structural modeling of the aorta based upon CT scans of patients with UTBAD.

A large database of patients with type B aortic dissection treated by Dr. Leshnower at the Emory Aortic Center will provide the risk factors that will be key components of the model. Demographics, clinically relevant predispositions, anatomic shape features, aortic tissue mechanics, the fluid-structure interaction (FSI) method, and machine learning techniques will then be incorporated to determine the risk potential for the formation of false lumen aneurysm and the likelihood of a catastrophic aortic event.

"The ability to develop accurate tear and rupture metrics from aortic specimens drawn from our own patient database is one of the unique aspects of this model," says Dr. Leshnower, who also codirects the Aortic Center. "Once the model is validated, we will begin prospective testing."

A cohort assembled from patients presenting at the Aortic Center with a new diagnosis of acute UTABD will then receive 4D flow MRI performed by John Oshinski, PhD, director of Emory's Center for Systems Imaging Core. After the resulting data is examined and evaluated by the model, its predictive reliability will be evaluated.

Emory's Structural Heart & Valve Center

The Structural Heart Team continues to advance therapies for valvular heart disease and heart failure.

With the highest TAVR volume and most transcatheter experience in the state of Georgia, the Emory Team continues lead the treatment of aortic valve disease and also offers transcatheter options through clinical trials and novel therapies for mitral, tricuspid, and pulmonic valve disease.

Beyond valves, transcatheter heart failure therapies are being studied and Dr. Kendra Grubb leads two trials for devices specifically designed for transcatheter ventricular restoration; AccuCinch, a posterior ventriculoplasty with excellent reduction in heart failure in early studies, and the BioVentrix device, an anterior ventriculoplasty for patients with anterior scar after myocardial infarction.

Continuing the distinctive collaboration with the NIH in the innovation of novel therapies for high-risk or inoperable patients, Dr. Adam Greenbaum and Dr. Vasilis Babaliaros developed SESAME (Septal Scoring Along the Midline Endocardium)



a catheter based electrosurgical myotomy to address septal hypertrophy by splitting the septal budge. Designed to facilitate transcatheter mitral valve replacement in patients at risk for outflow track obstruction, the first in human experience with SESEME has shown promising results and now has found additional indications in symptomatic heart failure patients with left ventricular hypertrophy, especially after TAVR. "It's an exciting time. The Emory Team continues to push the boundaries of possibilities for transcatheter therapies," said Grubb, Surgical Director of the Emory Structural Heart and Valve Center.



Onkar Khullar & Manu Sancheti Perform First RA Tracheobronchoplasty in Georgia

In August of 2021, Manu S. Sancheti, MD, and Onkar V. Khullar, MD, successfully performed Georgia's first roboticassisted tracheobronchoplasty to treat tracheobronchomalacia (TBM) at Emory University Hospital Midtown. The patient recovered post-operatively and is currently doing well.

TBM is a rare, progressive, and debilitating condition that occurs when the tissue of the trachea becomes soft and weak, causing severe coughing, wheezing, recurrent pneumonia, and difficulty breathing from tracheal collapse.

"Doing a tracheobronchoplasty for TBM involves placing mesh stenting on the back of the trachea to reinforce the airway and ease symptoms," says Dr. Khullar. "It has traditionally been performed with an open approach, though doing the procedure robotically offers a minimally invasive option for doing the complex technical maneuvers necessary to complete the surgery."

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

"We used the Intuitive da Vinci Xi robot," says Dr. Sancheti. "It works well in the limited space of the chest cavity



because of the articulated wrist-action of the instruments. Even with the small skin incisions, the improved dexterity allows us to sew the mesh in a very small area more efficiently and effectively. The 3D camera also provides excellent visualization."

Dr. Khullar and Dr. Sancheti are a formidable surgical team and possess considerable robotic surgery experience. Dr. Khullar initiated a robotic general thoracic surgery program at Grady Memorial Hospital in 2018 that has grown to approximately 50-75 cases annually. Dr. Sancheti, director of Emory's robotic thoracic surgery program, assumed direction of the program in 2017, developed a robust robotic thoracic surgery curriculum for cardiothoracic surgery residents and developed the robotic thoracic surgery program at Emory Saint Joseph's Hospital into one of the busiest such programs in Georgia and the entire Southeast, performing over 650 robotic procedures to date.



IN MEMORY REMEMBERING



Joseph Irvin Miller, Jr, MD, former professor and Chief of General Thoracic surgery at Emory University, passed away peacefully at home on December 23, 2021, at the age of 81.

Dr. Miller graduated from Emory University School of Medicine in 1965, and before returning to Emory to complete his cardiothoracic surgery residency, he trained as a general surgery and cardiac fellow at the Mayo Clinic in Rochester, MN. In 1974, upon successfully completing his cardiothoracic surgery residency, then Chief of Cardiothoracic

Surgery, Dr. Charles Hatcher offered him a position as a faculty member and attending surgeon, which he proudly accepted. Dr. Miller served as a trusted mentor, dedicated educator and cornerstone of the Emory community for 36 years.

Highly regarded as a surgeon's surgeon, Dr. Miller dedicated his career to being an exceptionally skilled and compassionate healer as well as a generous and enlightening teacher. In addition to performing thousands of surgeries, primarily to treat lung cancer, esophageal cancer, esophageal stenosis/strictures and hyperhidrosis, he served as the director of the American Board of Thoracic Surgery from 1991-1999; vice chairman of the Residency Review Committee for Thoracic Surgery from 1997-1999; an examiner for the American Board of Thoracic Surgery from 1992-2010; was on the editorial boards of Chest, Journal of Thoracic and Cardiovascular Surgery and American Family Physician; and was voted one of Castle Connolly's Best Doctors in America ten consecutive times. In 2010, Emory Healthcare recognized Dr. Miller for his significant impact on the health and wellness of countless Atlanta citizens by presenting him with the distinguished Second Century Award. His career was marked by a multitude of impactful achievements, and among those, he considered serving as the 50th president of the Southern Thoracic Surgical Association a career highlight. During his presidential address in 2003, he detailed the 13 qualities of excellence that comprise 'the complete cardiothoracic surgeon' and throughout his career, not only did he exemplify those qualities, but also instilled them in future generations of surgeons.

When asked about Dr. Miller, Robert Guyton, MD, former Chief of Cardiothoracic Surgery at Emory, described him best by saying:

"I worked with Dr. Miller for 42 years. Although he was a nationally recognized surgeon and made countless contributions to our profession as a scholar, it was his dedication to being a doctor and a teacher that distinguished him amongst his peers and defined his career. Simply put, he was the best in three areas. First, he was a doctor's doctor. If you sent a patient to him you knew everything possible would be done for that patient. Second, he was a student's doctor. With passion and resilience, he taught over 140 residents and fellows. Approximately 4% of the cardiothoracic surgeons in the US proudly carry on his legacy. And third, Dr. Joseph Miller was a patient's doctor. He wholeheartedly believed that taking care of the emotional and spiritual needs of his patients was every bit as critical as taking care of their physical needs - a trait that inspired the practice and professions of those around him."

When the Cardiothoracic Surgery Network asked Dr. Miller to compose a statement on why he chose to become a Cardiothoracic Surgeon and if he would do it again, he eloquently responded, "despite the increased length of training, governmental regulations, declining reimbursement, the 80-hour work week, and the demands to produce, I find the field of Cardiothoracic Surgery a grand and glorious profession. Surgery is still fun. It is the staff of life... Would I do it again? The answer is an emphatic yes."

Dr. Miller had a profound impact on Emory as well as the field of cardiothoracic surgery and his legacy will be eternally honored through the Division of Cardiothoracic Surgery's commitment to leadership, research and education.

REMEMBERING



Joseph Malcolm Craver, MD, Professor of Cardiothoracic Surgery Emeritus at Emory University School of Medicine, passed away peacefully on June 2, 2022, at the age of 81.

Dr. Joe Craver received his MD from the University of North Carolina School of Medicine in 1967, did his general surgery residency and cardiovascular fellowship at Massachusetts General Hospital, and completed his chief residency in thoracic and cardiovascular surgery at the University of Virginia Medical Center in 1974. As a young physician in training, he embraced the

objectivity and superior results of heart surgery. In mentoring younger surgeons, he came to realize his own talent as a teacher, and education became his great passion. By the time he retired, he had in concert with his partners at Emory, participated in advancing the field of heart surgery by employing and refining such developing techniques as aortic valve surgery, mitral valve repair, and bypass surgery and art of heart surgery.

Dr. Craver joined the Department of Surgery of the Emory University School of Medicine in 1974, attracted by a position in academic heart surgery with a strong clinical component. In reflection of the status of the 1970s as a pioneering era for heart surgery, Emory's new capabilities at that time were coronary angiography and coronary artery bypass surgery, improved valve substitutes and repair techniques, and the early recognition of the importance of intraoperative protection and preservation of the heart muscle. During this period, Dr. Craver played a key role in expanding and strengthening cardiac surgical patient care, clinical research, and advancing Emory's cardiothoracic surgery training program.

"You can't place a value on helping save a patient's life," Dr. Craver says. "But when you teach a new surgeon, one who's going to go out and save thousands more people, that extends your life's work exponentially."

Dr. Craver played a significant role in expanding and strengthening cardiac surgical patient care, clinical research, and Emory's cardiothoracic surgery training program. He also performed Georgia's first minimally invasive, direct coronary artery bypass ("keyhole") surgery in 1996. This innovative technique evolved into procedures that currently shorten hospitals stays, reduce patient recovery time, and lower costs.

Dr. Craver's leadership and dedication secured his place among the architects of Emory's success in heart care and his legacy will be carried on through the Division of Cardiothoracic Surgery at Emory University School of Medicine.

We offer our deepest sympathies to Dr. Craver's family, and will forever cherish the memory of his audacious love for his calling. His memorial service was held at North Avenue Presbyterian Church on Saturday, June 11. In lieu of flowers, the family asked for those wishing to make a donation to consider the Emory Goizueta Alzheimer's Disease Research Center at Emory University School of Medicine or to the North Avenue Presbyterian Church. For the former, contact the Office of Gift Accounting, Emory University, 1762 Clifton Road, Suite 1400, Atlanta, GA, 30022, 'giftplanning@emory.edu.



Xiaoying Lou- aortic super fellowship at Cleveland Clinic David Zapata- faculty position as assistant professor at University of Maryland



Robert A. Guyton, MD, **Resident Education Fund**

To honor Dr. Robert Guyton and to provide direct support to cardiothoracic resident education and training, the Robert A. Guyton, MD Resident Education Endowment has been recently established. Emory's CT surgery residency program accounts for approximately 5% of all active cardiothoracic surgeons in the country today. Dr. Guyton has been responsible for the education of some of the most accomplished and successful CT surgeons in the field and has personally trained more than 140 resident physicians. The Guyton Resident Education Fund will help Emory stay in the vanguard of medical training and patientcentered care by funding residents' attendance at national conferences, as well as, their research.

Thank you for considering a donation to the Robert A. Guyton Resident *Education Fund. Please click the following link to make a contribution:* engage.emory.edu/Guyton21





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