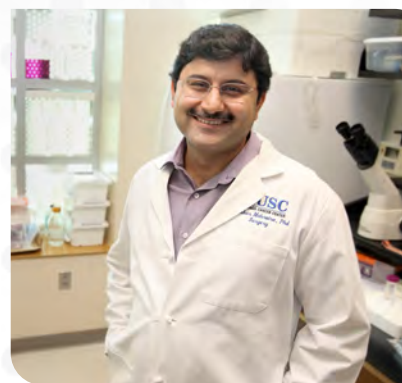


TRANSFORMING CARE

INNOVATION | IMPACT | INFLUENCE



DEPARTMENT OF SURGERY

2024 ANNUAL REPORT



1824-2024 | *Then. Now. Next.*



DEPARTMENT OF SURGERY LEADERSHIP

Prabhakar Baliga, M.D.

Chair, Department of Surgery

Jamie Meyer

Vice Chair, Finance and Administration

William Hawkins, M.D.

Vice Chair, Clinical Affairs

Christian Streck, M.D.

Vice Chair, Education

Jean Marie Ruddy, M.D.

Vice Chair, Research

Heather Evans, M.D., MS

Vice Chair, Veterans Affairs

David Mahvi, M.D.

Vice Chair, Faculty Development

Sharee Wright, M.D.

Vice Chair, Diversity, Equity and Inclusion

Andrea Abbott, M.D., MSCR

Vice Chair, Personal Development and Wellbeing

ACKNOWLEDGMENTS:

The Department of Surgery would like to thank the many individuals, especially our leadership, whose collective efforts have helped to complete this year's annual progress report. Additionally, we would like to thank those who are featured within these pages for their continued service to MUSC and contributions to this publication.

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MESSAGE FROM THE CHAIR

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This year, MUSC celebrates its bicentennial. As we commemorate the tenacity, grit, and innovative spirit of the visionaries who founded the Medical University of South Carolina (MUSC) in 1824, we honor the 200-year legacy of contributions, milestones, and firsts that MUSC faculty, leaders, students, and staff have made to the health care journey here in South Carolina and the U.S.

The Department of Surgery is now one of 24 departments in the College of Medicine. The 12 divisions in our department foster a culture of innovation and collaboration, leading to significant advancements in patient care. Our leadership teams have focused on strategic growth and recruitment, bringing world-class

faculty to MUSC, and creating opportunities for notable multidisciplinary collaborations to provide leading-edge care to thousands of patients annually.

Our growth and impact on patients and communities directly result from our people, who are the heart of our work and the culture we are cultivating. It is crucial to attract and retain surgeon-scientists and cutting-edge researchers who are best suited to uphold our tripartite mission, some of whom you will learn about in this report. Equally inspiring, I am delighted each year as some of our faculty assume new leadership roles within the MUSC enterprise and on a national and international scale within their respective professional fields.

As we evolve as a department, one of my greatest joys is seeing our next generation of surgeons graduate with the knowledge and skills gained through our training programs and mentorship opportunities. They are ready to take their next career step, seek new challenges and innovative ways to improve patient care and educate the next generation to do the same.

I hope you enjoy reading about the foundation our history provides and the strides we are making today, which enable us to explore new opportunities to enhance patient care through our innovation, impact, and influence.

I am deeply grateful for your ongoing interest in the Department's progress and the future of surgery.

A handwritten signature in blue ink that reads "Baliga". The signature is fluid and cursive, with a long horizontal stroke at the bottom.

Prabhakar Baliga, M.D., FACS
R. Randolph Bradham, M.D., Endowed Chair in Surgery
Chair, Department of Surgery
Medical University of South Carolina

INNOVATION | IMPACT | INFLUENCE

1824-2024



The foundational history of the MUSC Department of Surgery was laid in the eighteenth century at a time when Charleston shared the scientific and medical aspirations of the American Enlightenment with Boston, New York, and Philadelphia. **David Ramsay, M.D.**, a member of the Continental Congress who served as a military surgeon during the Revolutionary War, was among the founders of the Medical Society of South Carolina.

When MUSC was founded in 1824, **James Ramsay, M.D.**, the son of **David Ramsay, M.D.**, became the first Professor and Chair of Surgery. Ramsay was followed in the Chair's role by many notable surgeons, including **Julian John Chisolm, M.D.**, author of "A Manual of Military Surgery" and inventor of a chloroform inhaler used for battlefield anesthesia, and **Robert Kinloch, M.D.**, President of the Medical Society of South Carolina and a founder of the American Surgical Association, the oldest surgical society in the United States.

1824

Over the next two centuries, as the college continued to grow and evolve, the Department of Surgery was fortunate to be led by exceptional leaders and innovators. Sustained by our dedicated surgical visionaries, our clinical divisions are now home to numerous NIH-funded, internationally renowned investigators, master clinicians, and award-winning researchers and educators who are leaders in their specialized fields of surgery.

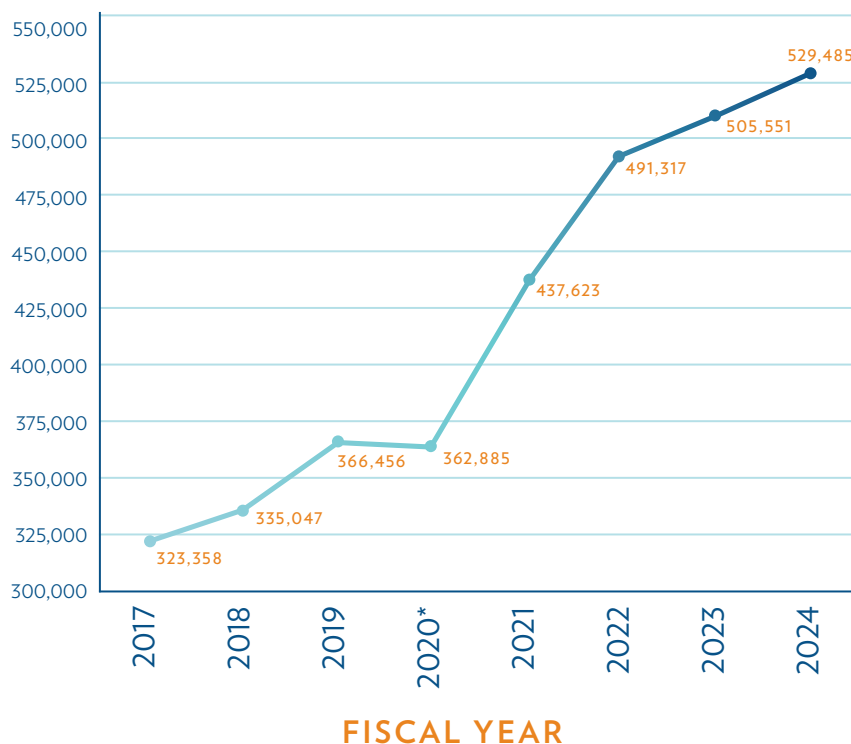
We have achieved remarkable medical breakthroughs, including the first successful kidney transplant in the state, the first heart transplant in South Carolina, the invention of an instrument to allow the first successful heart valve operation, the first robotic mitral valve surgery in SC, and much more.

Today, the Department of Surgery is recognized nationally and internationally for its faculty, clinical care, basic research, and education quality.

2024

DEPARTMENT OF SURGERY CLINICAL GROWTH

WORK MEASURED BY RELATIVE VALUE UNITS (wRVUs)



46%

Increase in Clinical Growth Over the Past 4 Years



"The Department of Surgery has experienced unprecedented clinical growth in our post-Covid era. Our cutting-edge clinical and research prowess provides a depth of expertise unparalleled in many academic medical centers."

-Prabhakar Baliga, M.D.
R. Randolph Bradham, M.D.,
Endowed Chair in Surgery
Chair, MUSC Department of Surgery

*FY 2020 includes one month moratorium of elective surgical procedures

1824-2024 | *Then. Now. Next.*

In 1824, the Medical College of the State of South Carolina opened. It was one of the first medical schools in the country and the first in the deep south. James Ramsay, M.D. served as the first Chair of Surgery in 1824.



First Kidney Transplant in South Carolina performed by Thomas Fitts, M.D.

James Ramsay, M.D., became the first Chair of Surgery

The MUSC Surgical Residency Program started

The Medical University Hospital opened



1934

1955

1968

1824

1864

1948

1956

1973

Julian John Chisolm, M.D., invented the Chisolm inhaler used for battlefield anesthesia



First Open-Heart Surgery Operation performed in South Carolina

First successful Mitral Valve Operation in the modern era performed by Horace G. Smithy, M.D.



Curtis P. Artz
 MUSC Surgical Society established



MUSC Pediatric & Congenital Heart Center ranked #2 in the nation



David J. Cole, M.D.,
First surgeon to become the President of the Medical University of South Carolina



Patrick Thomas, M.D.,
First African American to graduate from the MUSC Surgical Residency Program



The First Heart Transplant in South Carolina performed by Jack Crumbley, M.D., and Fred Crawford, M.D.

MUSC Autologous Islet Cell Transplant Program treated its first patient

2024

1987

2005

2009

2014

1985

1990

2006

2011

2020

First Liver Transplant performed in South Carolina

MUSC Trauma Program became the first ACS Committee on Trauma Program in South Carolina

Carolyn Reed, M.D.,
First woman surgeon at MUSC. She held many leadership roles, including the first woman to chair the ABTS and the first woman to be elected president of the STS

MUSC Bariatric Surgery Program recognized as a Center of Excellence by the ASMBS



MUSC Pediatric ECMO Program received platinum-level ELSO Award of Excellence in Life Support



Today, MUSC stands as a beacon of excellence that is shaping the future of medicine.

TRANSFORMATIONAL LEADERSHIP

This year, several of our talented department members assumed transformational leadership roles and our department recruited several new division leaders. Each of these individuals are nationally recognized and brings to their new position valuable experience and extraordinary commitment.



Mark Lockett, M.D.

*Chief Quality Officer
MUSC Health – Charleston Division*

Mark Lockett, M.D., has been selected as MUSC Health's new Chief Quality Officer for Charleston. In his new role, he will lead MUSC Health – Charleston in continued efforts to provide the safest and highest-quality care for patients by building a culture and systems that foster excellence. Dr. Lockett has an impressive background in improving quality, patient safety, and patient satisfaction. He has been involved in continuous quality improvement efforts throughout his career. Lockett previously served as the Deputy Chief of Staff for Acute Care Services and Medical Director for Quality and Patient Safety at the Ralph H. Johnson VA Medical Center.



Cynthia Talley, M.D.

*Senior Associate Dean for GME and CME
College of Medicine*

Cynthia Talley, M.D., has been named Senior Associate Dean for GME and CME for the College of Medicine following a national search. Dr. Talley brings an excellent combination of leadership, clinical, education, and administrative skills to this position, having served as the Associate Dean for GME under the leadership of Dr. Ben Clyburn over the past several years. In this role, she joins the senior leadership team in the College of Medicine Dean's Office, where she will devote her energy and effort to the continued development of these important mission areas for our institution.



Sharee Wright, M.D.

*Senior Associate Dean for Pathways
College of Medicine*

Sharee Wright, M.D., has been named Senior Associate Dean for Pathways in the College of Medicine. In her new role as Senior Associate Dean for Pathways, Dr. Wright will facilitate and oversee the development, implementation, and continuous improvement of innovative pathway programs to develop a student body, training programs, and workforce that will improve health and health care disparities and develop a tracking program and continual communication program for current and former pathway participants. In the Department of Surgery, Dr. Wright will continue to serve as Vice Chair of Diversity Equity and Inclusion.



TRANSFORMATIONAL LEADERSHIP CONTINUED



Christian Streck, M.D.

Vice Chair of Education

Christian Streck, M.D., has been named the new Vice Chair of Education in the Department of Surgery. Before assuming the vice chair role, Dr. Streck led the General Surgery Residency Program as Program Director for eight years. Under Dr. Streck's leadership, our General Surgery Education Program experienced unprecedented growth. During his tenure, the categorical general surgery resident complement increased from five to eight residents per year, and more opportunities were created for residents to be in the lab with dedicated research time, increasing from two spots to five.



Steven Hanish, M.D.

*Division Chief
Transplant Surgery*

Steven Hanish, M.D., has been named the new Chief of Transplant Surgery. Dr. Hanish is a distinguished transplant surgeon who joins us from the University of Texas Southwestern Medical School. At MUSC, Dr. Hanish will enhance the transplant division's clinical programs, creating collaborative approaches to grow MUSC's solid organ transplant program and expand the multi-disciplinary approach for patients with end-stage organ disease in South Carolina.



M. Lance Tavana, M.D.

*Division Chief
Plastic, Reconstructive and Hand Surgery*

After a national search, the MUSC Department of Surgery is pleased to announce that **M. Lance Tavana, M.D.**, Associate Professor of Surgery and Director of Clinical Operations of Plastic Surgery at MUSC Health, has been selected as the new Chief of the Department of Surgery's Division of Plastic, Reconstructive and Hand Surgery. Dr. Tavana joined MUSC in 2012, and throughout his career he has been integral to the division's clinical and residency programs' growth and innovation.



A YEAR IN REVIEW

Christian Streck, M.D., Named Vice Chair of Education



Christian Streck, M.D., now leads the education division, building on the programmatic strengths created under Dr. Talley's leadership, who served as vice chair since 2018 and is now the College of Medicine's senior associate dean for GME and CME.

JULY



Kevin Roggin, M.D., Appointed Chief of Surgical Oncology, Outlines Next Day Access Plan

Newly appointed Chief of Surgical Oncology, Kevin Roggin, M.D., outlines a bold new initiative: a next-day access program for patients diagnosed with stomach cancer, small intestine cancer and hepato-pancreato-biliary (HPB) cancers. The program launched in July 2024.

SEPTEMBER

Andrea Abbott, M.D., MSCR, Awarded MUSC Health Quality Medical Director of the Year

Andrea Abbott, M.D., MSCR, was honored with the Quality Medical Director of the Year Award for the entire MUSC Health System during the System Quality and Safety Annual Award Ceremony.



NOVEMBER

AUGUST



Arman Kilic, M.D., Awarded a \$1.9M NIH R01

Arman Kilic, M.D., surgical director of MUSC's Heart Failure and Heart Transplant Program and director of the Harvey and Marcia Schiller Surgical Innovation Center, has been awarded \$1.9M for his proposed work to help shrink the chasm between transplant demand and transplant supply. He and his team plan to use AI and ML to help optimize heart transplantation.

OCTOBER

Mike M. Mallah, M.D., Honored with MUSC President's Values in Action Award

Mike M. Mallah, M.D., the MUSC Global Surgery Program director, was recognized with the MUSC Values in Action Award for his collaborative efforts in creating an innovative Global Surgery Program built on an ethos of bidirectionality. Each year, the President's Values in Action award program recognizes employees who go above and beyond to demonstrate MUSC's values.



DECEMBER



R. Randolph Bradham, M.D., Endowed Chair in Surgery

The newly created R. Randolph Bradham, M.D., Endowed Chair in Surgery is a long-term commitment to excellence and embodies the spirit and values of R. Randolph Bradham, M.D., who served as the department's second full-time chair and has greatly impacted countless physicians and surgeons and, as a result, patients nationwide.

This is how we're Changing What's Possible



William Hawkins, M.D., Named Deputy Director of Hollings Cancer Center

William Hawkins, M.D., joined MUSC Hollings Cancer Center in the newly created role of deputy director, where he will focus on strengthening translational research, increasing clinical trials across South Carolina, and assisting Jason Newman, M.D., chief of the Oncology Integrated Center of Clinical Excellence, with making clinical operations more efficient.

JANUARY

Steven I. Hanish, M.D., Joins MUSC; Named Division Chief of Transplant Surgery

Steven I. Hanish, M.D., has been named the new transplant surgery division chief, where he aims to create collaborative approaches to grow MUSC's solid organ transplant program. Dr. Hanish is a distinguished transplant surgeon who joins us from the University of Texas Southwestern Medical School.



MARCH

Mark Lockett, M.D., Named Chief Quality Officer for MUSC Health - Charleston

In this new role, Mark Lockett, M.D., will lead MUSC Health - Charleston in continued efforts to provide the safest and highest-quality care for patients by building a culture and systems that foster excellence. Dr. Lockett has an impressive background in improving quality, patient safety, and patient satisfaction. He has been involved in continuous quality improvement efforts throughout his career.



MAY

FEBRUARY

M. Lance Tavana, M.D., Named Plastic, Reconstructive and Hand Surgery Division Chief

M. Lance Tavana, M.D., Associate Professor of Surgery and Director of Clinical Operations of Plastic Surgery at MUSC Health, has been selected to lead the MUSC Department of Surgery's Division of Plastic, Reconstructive and Hand Surgery. Dr. Tavana joined MUSC in 2012, and throughout his career he has been integral to the division's clinical and residency programs' growth and innovation.



APRIL



Clinical Trial of "Purified" CAR-T Cell Therapy Awarded NCI Grant to Expand

Shikhar Mehrotra, Ph.D., and Brian Hess, M.D., collaborated on a project to develop "purified" CAR-T cells to treat people with certain B-cell non-Hodgkin lymphomas who have already tried other therapies. The Hollings clinical trial is testing a new patented variation manufactured in the Center for Cellular Therapy that the researchers hope will have longer-lasting results with fewer side effects.

JUNE

Sharee Wright, M.D., Appointed College of Medicine Senior Associate Dean for Pathways

In her new leadership role, Sharee Wright, M.D., will facilitate and oversee the development, implementation, and continuous improvement of innovative pathway programs to develop a student body, training programs, and workforce that will improve health and health care disparities.



FY 2024

BY THE NUMBERS

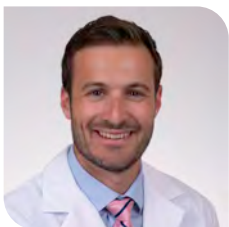
Our commitment to providing the highest level of compassionate patient care, best-in-class training for the next generation of surgical leaders, and cutting-edge clinical, basic science and translational research are Changing What's Possible for our patients.



NEW FACULTY FY 2024



Mary Kate Bryant,
M.D., MSCR
Foregut & Bariatric Surgery



Douglas Cassidy, M.D.
Foregut & Bariatric Surgery



Aaron Cunningham, M.D.
Pediatric Surgery



Lloyd "Mac" Felmly, M.D.
Pediatric Cardiothoracic
Surgery



Steven Hanish, M.D.
Transplant Surgery



William Hawkins, M.D.
Surgical Oncology



Lindsey Korepta, M.D.
Vascular Surgery



Santosh Nagaraju, M.D.
Transplant Surgery



Kevin Roggin, M.D.
Surgical Oncology



Dirk Spitzer, Ph.D.
Surgical Oncology
Research



Chad Tober, M.D.
Vascular Surgery



Maggie Westfal, M.D., MPH
Colorectal Surgery

NEW FACULTY RECRUITS FY 2024



Brittany Bankhead, M.D.
Acute Care Trauma
Surgery



Quynh Chu, M.D.
Thoracic Surgery



Diego di Sabato, M.D.
Transplant Surgery



Adria Johnson, M.D.
Burn Surgery



Chun Li, M.D.
Vascular Surgery



Kannan Samy, M.D.
Transplant Surgery



Matteo Trezzi, M.D.
Pediatric Cardiothoracic Surgery

PROMOTIONS



Paramita Chakraborty, Ph.D.
Research Assistant Professor



Thomas Curran, M.D., MPH
Associate Professor



Virgilio George, M.D.
Professor with Tenure



Steven Kahn, M.D.
Professor with Tenure

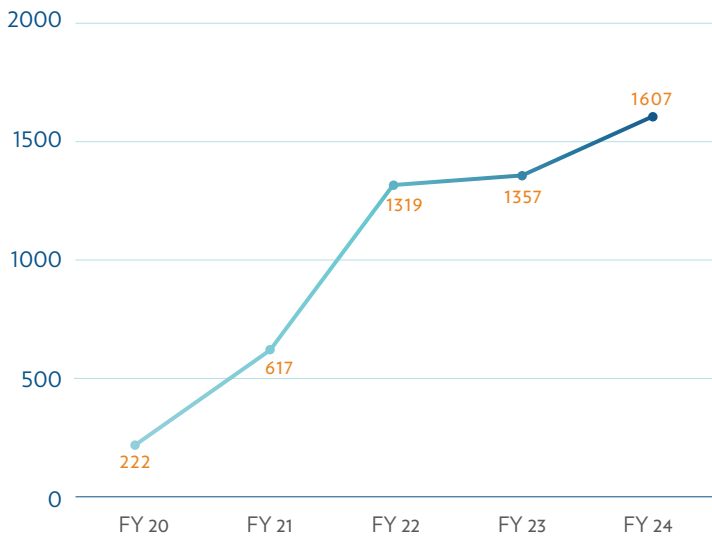


Aaron Leshner, M.D., MSCR
Professor with Tenure

ADVANCES IN CARE

ROBOTIC SURGERY EXPANDS ACROSS MORE SURGICAL DISCIPLINES

GROWTH IN ROBOTIC SURGICAL PROCEDURES IN THE MUSC DEPARTMENT OF SURGERY



623% Increase in Robotic Surgery Over the Past 4 Years

With ten state-of-the-art da Vinci Xi robots, and one da Vinci SP robot, we now have one of the most comprehensive robotic programs in the country and the only hospital in the state offering robotic surgery in all applicable surgical specialties. Several clinical specialties have enhanced patient care with new robotic surgery certification and expertise in novel robotic procedures.

In August of 2024, we added two new da Vinci 5 (DV5) systems, da Vinci's most advanced and integrated robotic surgical system. DV5 has 10,000x the computing power of the da Vinci Xi.

MUSC Health is one of three medical centers in the world who have been allocated a dual console da Vinci 5 system as a limited release.

MUSC Health Metabolic & Bariatric Surgery Program

Bariatric surgeon and clinical director of bariatric and robotic surgery **Rana Pullatt, M.D.**, is an internationally recognized leader in robotic bariatric surgery. He performs some of the most complex surgeries for high BMI patients robotically, including the duodenal switch, SADI, and gastric bypass conversion to a duodenal switch. When done with skilled surgeons robotically, these technically challenging operations have better outcomes with shorter recovery times. Our center was the first center in SC to offer Median Arcuate Ligament Syndrome (MALS) surgery using the robotic platform in the state and continues to be a leader in Robotic MALS surgery in the Carolinas. The standard treatment of MALS is the release of the celiac artery by open or laparoscopic surgery. By treating this rare, complex syndrome robotically, patients have all the benefits of robotic surgery: less post-operative pain and a quicker recovery with fewer complications.

The program has also grown to include a robotic surgery option for adolescent bariatric patients. Pediatric surgeon **Aaron Lesher, M.D., MSCR**, earned da Vinci surgical system certification and



Rana Pullatt, M.D., Clinical Director of Bariatric and Robotic Surgery

now offers robotic surgery for this population. The most common adolescent bariatric procedure is vertical sleeve gastrectomy (VSG), frequently performed laparoscopically.

The advantages of performing the VSG robotically for the patient include less pain, scarring, risk of infection, and a quicker recovery time. For the surgeon, the da Vinci System provides the advantage of motion scaling by equalizing the performance of both the dominant and non-dominant hand and tremor reduction, which are critical in working in and around the smaller anatomical structures of adolescents and children.

Colorectal Surgery: The NICE Procedure

The colorectal surgery team, led by **Virgilio George, M.D.**, has added robotic surgery to treat patients with chronic or acute diverticulitis and Crohn's disease. Surgery for chronic or acute diverticulitis is the second most common colon procedure in the U.S. Most procedures to treat diverticulitis and Crohn's disease are performed laparoscopically or in an open surgical procedure.

MUSC Health is one of a few colorectal centers in the state performing the robotic NICE (natural orifice intracorporeal anastomosis and extraction) procedure. The foundation of the NICE approach uses the rectum as a natural orifice to complete the surgery. However, done laparoscopically, NICE is highly complex, with less than 1% of procedures done with laparoscopic natural orifice resection. Now, with robotic technology, surgeons can perform very complex surgical maneuvers in an extremely precise, stepwise manner. The patient is left with four dime-sized incisions where the ports are placed as the specimen is extracted transrectally.

While NICE robotic surgery's benefits are the same as other robotic procedure: less pain, quicker recovery time, shorter



Colorectal surgeons Maggie Westfal, M.D., MPH, Thomas Curran, M.D., MPH, Virgilio George, M.D., and Colleen Donahue, M.D.

hospital stays, and reduced risk of infections, the NICE procedure offers one more important benefit to patients undergoing colorectal surgery: the earlier return of bowel function.

ROBOTIC COMPLEX ABDOMINAL WALL RECONSTRUCTION SURGERY



Douglas Cassidy, M.D., is a fellowship-trained minimally invasive (MIS) surgeon who specializes in laparoscopic, robotic, and endoscopic techniques for hernia and benign foregut surgery. He leads the MIS Robotic Abdominal Wall Reconstruction Program at MUSC Health. He is exceedingly well trained in complicated abdominal wall reconstructions, including robotic transversus abdominis release technique to repair large ventral hernias.



Steven Fann, M.D., a general and acute care surgeon, specializes in treating all types of abdominal wall hernias: ventral, incisional, inguinal, flank, and parastomal hernias. He is on the cutting edge of expanding robotic surgery to treat some of the most complex and atypical hernias, as well as extensive, complicated abdominal wall reconstructions, including robotic transversus abdominis release and robotic eTEP retrorectus hernia repair. Using the da Vinci Xi robot improves outcomes and reduces risks for the patients while reducing strain, fatigue, and risk of musculoskeletal injury for the clinician.



Stephen Fann, M.D. guiding the port placement for robot-assisted surgery.

Surgical Oncology Division Streamlines Services

Kevin Roggin, M.D., joined MUSC in September 2023 as the division chief of Surgical Oncology/HPB and Endocrine Surgery. Soon after his arrival, he outlined a plan to reorganize the division of surgical oncology to include three sections: Abdominal Surgical Oncology/HPB, Breast/Melanoma/Sarcoma, and Endocrine Surgery. Each section is led by a section chief.

Dr. Kevin Roggin said his philosophy of cancer care is simply to treat patients as he would want to be treated.

Photos by Clif Rhodes



SURGICAL ONCOLOGY SECTION CHIEFS



Kevin Roggin, M.D.
Abdominal Surgical Oncology/HPB
Section Chief



Andrea Abbott, M.D., MSCR
Breast, Melanoma and
Sarcoma Section Chief



Denise Carneiro-Pla, M.D.
Endocrine Surgery
Section Chief



Roggin says that realignment helps synchronize our comprehensive, multidisciplinary, and patient-centered cancer care across MUSC Health. This approach allows patients to clearly understand the advanced specialization and specific services that our providers perform to promote timely, high-quality care with excellent clinical outcomes.

Our teams at Hollings Cancer Center, MUSC Health Ashley River Tower, MUSC Health East Cooper, MUSC Health West in West Ashley, and MUSC Health Nexton Medical Park are making significant improvements in the manner and efficiency with which cancer patients can access our healthcare system and regional network. We are heavily invested in basic and translational research to identify novel therapies, including molecularly engineered combination therapies, and participating in innovative clinical trials to test promising new therapies and treatment combinations.

He says that advancing clinical care is achieved through efficient multidisciplinary treatments and personalized clinical trials aimed at helping patients maximize their quality of life and survival.



U.S. News & World Report
ranks MUSC Health high
performing in Cancer
Treatment.

OPTIMIZING PATIENT-CENTERED CARE THROUGH THE NEWLY LAUNCHED NEXT DAY ACCESS PROGRAM

“We understand that patients are traveling from long distances and overcoming many financial and social hurdles to get here, so we want to try to make their experience at our medical center as efficient as possible,” says Roggin. “We see a tremendous volume of patients, and the care of every patient is extremely important to us.” The question then became, “How can we deliver optimal care in an efficient and timely manner during one of the most stressful times in a cancer patient’s life?”

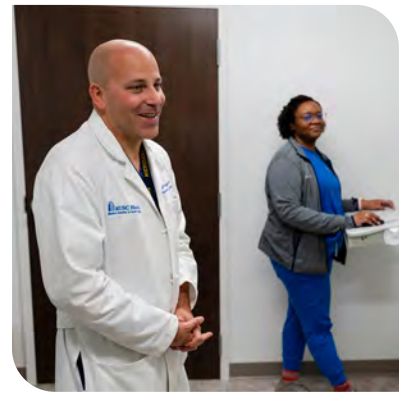
And with that idea in mind, the Next Day Access Program for Abdominal Cancer was born. The program works by centralizing patient intake so that the most experienced healthcare practitioner is directly answering the calls through a new number (843-985-7262) to quickly determine which care pathway is needed.

The program aligns our talented providers so that they are working cooperatively to manage and treat complex patients across the

state and make it easier for both patients and referring providers to access our health care treatment network. “We want the patients to have a personalized, compassionate, and efficient experience from the moment they dial our number until they complete their cancer treatment,” he says.

Roggin adds, “Our surgeons have embraced this program so that patients with cancer diagnosed yesterday can start their treatment tomorrow.”

The goal is to expand this pilot program for abdominal cancers to other types of cancer.



Hereditary Cancer Clinic Expansion Provides Care for Patients Throughout South Carolina

The MUSC Hollings Cancer Center Hereditary Cancer Clinic, led by [Kevin Hughes, M.D.](#), is one of the first centers in the United States dedicated specifically to helping people with mutations in cancer-causing genes.

The Hereditary Cancer Clinic provides a central location where patients with mutations for any type of hereditary cancer can get counseling, testing, screening, diagnosis, and treatment.

Six genetic counselors work together with our team to perform genetic testing on patients and counsel patients on the implications of any variants or abnormalities discovered in their testing process. Then, patients with rare inherited conditions are referred to specialized clinics so they can understand the optimal surveillance strategies and discuss the risks and benefits with possible interventions.

“Our goal is to minimize cancer mortality,” Hughes said. “We believe managing care and screening guidelines for this group of patients who are at an extremely high risk of cancer will help us diagnose and treat cancer earlier and hopefully prevent it all together.”

The program has expanded through various collaboratives, and now patients across the state have access to expertise at the Hollings Cancer Center Hereditary Cancer Clinic.



“

It was actually a relief because it made sense. It didn't give me anxiety to know I had this mutation. It put the ball in my court to do what I need to do.

”

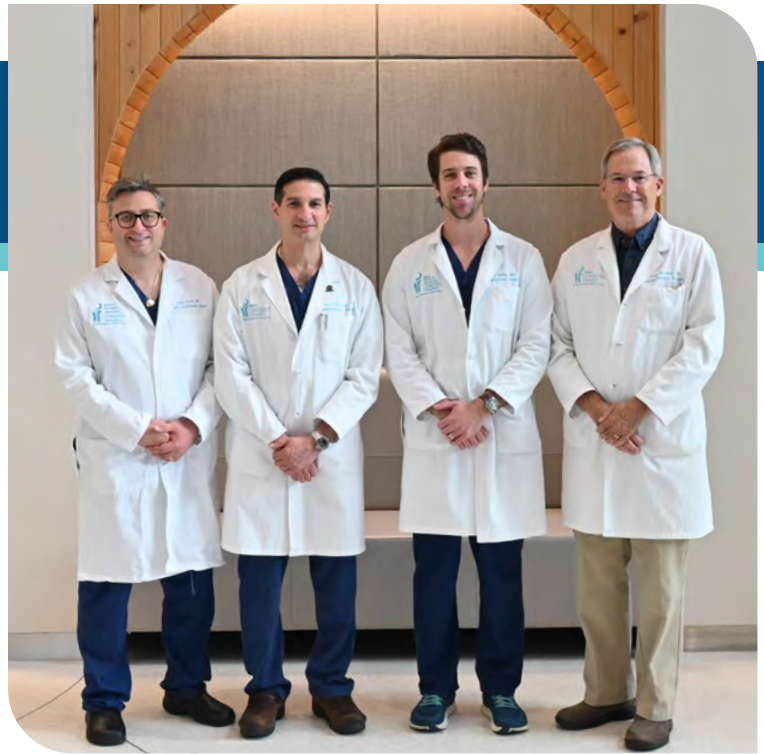
Mary Katherine Melroy, genetic counseling patient,
whose mother had breast cancer

Children's Heart Center Ranks 2nd in the United States



The Pediatric & Congenital Heart Center at the MUSC Shawn Jenkins Children's Hospital ranked No. 2 in the nation in U.S. News & World Report's 2024-2025 Best Children's Hospitals survey. The MUSC Health Pediatric and Congenital Heart Center remains No. 1 in outcomes, marking the second time in three years that the center has achieved this ranking. This is the 17th consecutive year that the Cardiology & Heart Surgery program has made the U.S. News list of Best Children's Hospitals.

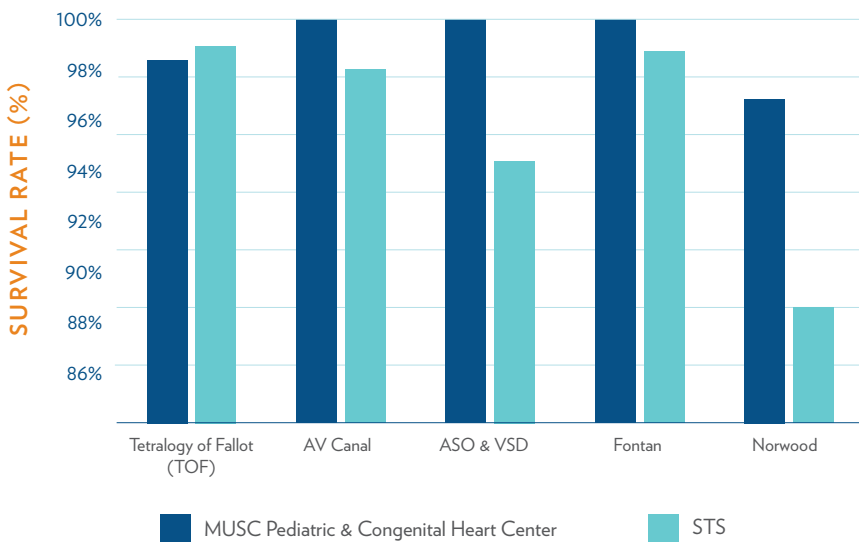
This is an amazing accomplishment for our talented surgeons, our entire Pediatric and Congenital Heart Program Team, and our truly amazing state-wide team.



Matteo Trezzi, M.D., Mino Kavarana, M.D., Lloyd "Mac" Felmly, M.D., and Scott Bradley, M.D.

BENCHMARK OPERATION, JULY 2019–DECEMBER 2023

Higher Percentages are Better Outcomes



In addition to outstanding survival rates, our length of stay is lower than the national average for 9 of 10 benchmark operations.

CHILDREN'S HEART CENTER UNRIVALED OUTCOMES

The Pediatric & Congenital Heart Center at the MUSC Shawn Jenkins Children's Hospital is recognized across the nation as a leader in the highly specialized fields of pediatric cardiology and cardiac surgery. Our surgical outcomes rank among the best centers in the world.

Additionally, the Pediatric and Congenital Heart Program was recognized as providing exceptional care by the Society of Thoracic Surgeons Congenital Heart Surgery Public Reporting. Their overall 4-year observed mortality is 1.48% (expected 2.68%).

Since public reporting began in the spring of 2015 the number of programs that have been significantly better than expected has ranged from 6-12 for any given harvest (out of ~120 programs nationally), with the MUSC Pediatric & Congenital Heart Center being one of them every year highlighting our consistency in providing exceptional care!

Growth and Innovation in the Aortic Center Optimizes Patient Care

The MUSC Health Aortic Center, led by cardiothoracic surgeon **Sanford Zeigler, M.D.**, and vascular surgeon **Mathew Wooster, M.D.**, is among an elite few in the country with a collaborative, highly specialized team comprised of two vascular surgeons and two cardiothoracic surgeons who work side by side on complex aortic arch and thoracic aortic repair. This multidisciplinary team approach is the key to success in complex aortic surgeries. We are South Carolina's only program to offer complex aortic surgeries for certain types of aortic aneurysms and aortic dissection.



The program has seen steady growth, with referrals across the Southeast. Most patients are referred to MUSC by vascular or cardiac surgeons across South Carolina, Georgia, North Carolina, and Tennessee. To help patients from across the region gain access to our expert care, Advanced Practice Provider **Brooke Hendrickson, NP**, is now a dedicated APP for the Aortic Center. Hendrickson's role is pivotal. She treats pre- and post-operative patients, conducts inpatient consults, is responsible for outpatient management and patient referrals, and manages the monthly aorta conference and marketing efforts.

INNOVATIONS IN CARE

MUSC Health was the first medical center in the Southeast to implant the commercially available Thoraflex Hybrid frozen elephant trunk device, used for the open surgical repair or replacement of damaged or diseased vessels of the aortic arch and repair of the descending thoracic aorta with or without involvement of the ascending aorta, in cases of aneurysm and/or dissection.

"Patients with complex aortic arch disease would typically need two complex open operations," said Zeigler. "Now, with Thoraflex Hybrid, we can treat patients who may be at great risk of rupture with a device that brings the primary benefit of requiring a single-stage procedure, minimizing the time during which the body has no blood flow during the operation and minimizing blood loss, overall improving patient outcomes."



MUSC Health was the first medical center in South Carolina to implant the commercially available Gore TAG thoracic branch endoprosthesis (TBE) device. The TBE device provides a solution for patients with complex tears in difficult-to-reach anatomy – one that does not require an open surgical procedure. During a thoracic branched endograft procedure, MUSC Health vascular surgeons and cardiac surgeons work together on the case.

“

Larry Flowers had an aortic tear in a section of his aortic artery that, until now, has been very difficult to treat. Before this device became commercially available, the options were limited for patients like Mr. Flowers.

”

Mathew Wooster, M.D.



AT THE FOREFRONT OF CLINICAL RESEARCH

We are one of the top enrollers nationally for the Triomphe study, specifically engineered for minimally invasive total arch repair.



U.S. News & World Report ranks MUSC Health high performing in abdominal aortic aneurysm repair and aortic valve surgery.



New Carpal Tunnel Release Procedure Offers Significant Benefits as an Outpatient Procedure

M. Lance Tavana, M.D., is making significant strides in patient care efficiency with his innovative approach to endoscopic carpal tunnel release surgery. This minimally invasive procedure is designed to relieve the symptoms of carpal tunnel syndrome, a condition caused by pressure on the median nerve in the wrist that leads to pain, numbness, and weakness in the hand.

Tavana's new technique eliminates the need for traditional anesthesia or the resources of a full OR suite. This method significantly reduces the risks of general anesthesia, such as adverse reactions and prolonged recovery times. Patients remain awake during the procedure, which typically lasts less than 10 minutes, and they spend less than one hour at the facility for their procedure.

“

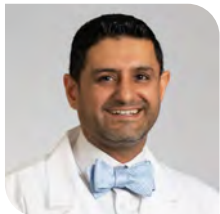
It was a very fast procedure... 5 days later I was back at work with very minimal pain, and full access. No more numbness, no more tingling, my hand was back to itself!

”

Nancy Waterhouse, MUSC Carpal Tunnel Surgical Patient

The endoscopic approach involves making a small incision in the wrist and inserting a tiny camera, or endoscope, to visualize the carpal tunnel. With this clear view, Tavana can precisely cut the transverse carpal ligament, thereby relieving pressure on the median nerve. Patients who undergo this procedure often report remarkable improvements in their symptoms almost overnight. The absence of general or sedation anesthesia allows for a quicker recovery, and patients often return to normal activity within a week.

MUSC Health Transplant: Mid-Carolinas Program Improves Quality and Access to Care in the Midlands



In March 2022, MUSC Health added a Transplant Program to the Lancaster area, making it one of three kidney transplant programs in the state. The MUSC Health Transplant - Mid-Carolinas Program, led by **Prince Anand, M.D.**, director of transplant services, has experienced significant growth and success. The program has an impressive volume per hospital bed and is dedicated to delivering outstanding patient care. Anand attributes the program's success

in maintaining high volume and quality care to collaborative teamwork and dedication. This fiscal year, the program performed 96 kidney transplants; since its inception, they have completed 174 transplants. He is grateful to the MUSC transplant team members for their support since the program began, noting the MUSC Health Mid-Carolinas surgeons, **Ahmad Alqassieh, M.D.**, and **Ammar Mahmood, M.D.**, are MUSC fellowship-trained in abdominal organ transplant.



Ahmad Alqassieh, M.D., in the OR



The Organ Procurement and Transplantation Network's new allocation system prioritizes proximity to donor hospitals, explains MUSC transplant division chief **Steven Hanish, M.D.** "For renal failure patients in the Catawba region of SC, having a transplant program near a metropolitan area like Charlotte increases their chances of receiving a transplant," he said. "An added benefit for these patients is that they can now be dual-listed at both Lancaster and Charleston, increasing their likelihood of being allocated a donor organ."

MUSC Health Turning the Tide Violence Intervention Program

CREATING CHANGE FOR VICTIMS OF COMMUNITY GUN VIOLENCE

MUSC's Turning the Tide Violence Intervention Program (TTVIP) has served and supported patients and families, the community, and MUSC Health's care team members and trainees since July 2021. TTVIP fills a much-needed gap in the continuum of care for violently injured patients. TTVIP is a hospital-based violence intervention program (HVIP), one of the few public health approaches and evidence-based community violence intervention strategies that have been demonstrated to reduce violence-related risks, re-injury, criminal justice system involvement, and healthcare-related costs, while increasing access to and receipt of supportive services and improving recovery outcomes.

FUNDING EXPANDS CARE



As an externally funded program, TTVIP is supported by a variety of grants, corporate donations, and philanthropy. These generous contributions to TTVIP are necessary to meet and sustain our mission of supporting and serving those disproportionately impacted by community gun violence.

The Duke Endowment is providing funding for a Mental Health Clinician dedicated to TTVIP's clients. **Beverly Crittendon, Ph.D., LPC-A**, is a licensed professional counselor who exclusively treats violently injured patients, supporting their emotional recovery, and addressing PTSD and depression symptoms developed post-injury. This expansion of services follows best practices, as mental healthcare has been shown to be highly influential in improving patients' outcomes.

AVERAGE ANNUAL IMPACT

- 155 patients responded to & supported
- 60% of eligible patients enrolled in long-term intervention
- >35 educational or training sessions provided
- 3 student experiences (internships, shadowing, special projects, etc.)
- >15 community outreach events participated in

RESEARCH STUDIES IMPACT



Trauma surgeon **Ashley Hink, M.D., MPH** has made it her life's mission to create meaningful change for victims of gun violence. As the founder of South Carolina's only HVIP,

part of her effort to create this change involves understanding the impact of HVIPs, particularly in underinvested communities.

Hink was awarded a three-year \$600,000 grant from the Kaiser Permanente Center for Gun Violence Research and Education for her study titled "Advancing the Evidence for HVIPs in the Southeast: Comprehensive Patient-Centered Outcomes and Stakeholder Insights." The study aims to evaluate the MUSC TTVIP, one of the few HVIPs in the Southeast.

The evaluation will include comprehensive patient outcomes, perceived benefits of HVIPs from the perspectives of multiple stakeholders, and opportunities for HVIP improvement. "Getting feedback directly from the patients and families we serve and understanding how our work impacts their recovery and well-being after injury is critical to providing patient-centered care, both in the hospital and the community," said Hink.

Scan the QR code to watch the Kaiser Permanente video highlighting Turning the Tide.



If you'd like to support this program that is creating positive change in our community, please scan this QR code to visit our giving page and select "MUSC Violence Prevention Program."

Shadowing Experiences and Summer Internship Programs Aim to Expand a Diverse Talent Pipeline

Our pipeline programs are designed to support students with diverse experiences and backgrounds interested in entering careers in surgery.

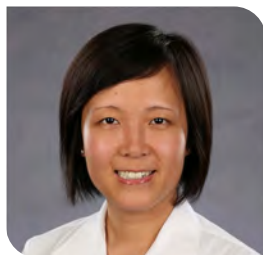
CLINICAL OBSERVATION AND SHADOWING



The Department of Surgery partners with the College of Medicine to provide opportunities for students in high schools around Charleston and our Regional Health Network to learn more in depth about careers in surgery. “This year, the program has expanded, and now, every clinical division has faculty members participating in the department’s shadowing program,” said **Sharee Wright, M.D.**, vice chair of Diversity, Equity and Inclusion in the MUSC Department of Surgery.

DEPARTMENT OF SURGERY CHOSEN FOR DIVERSITY AND INCLUSION VISITING PROFESSORSHIPS

This year, the MUSC Department of Surgery was honored to be selected as a participating site to host diversity, equity, and inclusion visiting professors from the American Society of Colon and Rectal Surgeons and the Association of VA Surgeons. Each speaker presented a Grand Rounds and had several opportunities to meet in small groups to discuss and share their experiences, opening the doors to a lively exchange of ideas.



*Endovascular surgeon **Naixin Kang, M.D.**, from the University of Miami Health System, was awarded a visiting professorship through the Association of VA Surgeons.*



*Colorectal surgeon **Carolina Martinez, M.D.**, from the University of Florida, was awarded a visiting professorship through the American Society of Colon and Rectal Surgeons.*



Left to right: Chair Prabhakar Baliga, M.D., Vice Chair of Diversity, Equity and Inclusion Sharee Wright, M.D., and Will Lancaster, M.D., with summer interns Zi-Asia Jackson and Dedrionna Wilson.

SUMMER INTERNSHIP

This summer, the department hosted its first cohort of paid summer interns as a pathway to improve medical school admission. Two students were chosen to participate in the eight-week immersion program because of their interest in diversifying the surgical workforce and to provide an opportunity to strengthen their medical school applications. In addition to shadowing in the OR and clinics, the students performed specific tasks like scribing in the clinic space or assisting with data entry for clinical trials. The program’s goal is to provide the students with broad exposure to the many career opportunities an academic medical center offers.

NEW COLLABORATIONS CREATE MORE RESOURCES FOR THE LGBTQIA+ COMMUNITY



Healthy Pride is a new collaborative effort between the Departments of Pediatrics and Surgery. Allies and members of the LGBTQIA+ community periodically meet to discuss issues of navigating the workplace as LGBTQIA+ members. PRISM (People Respecting Identities and Sexualities at MUSC) is a new employee resource group. Dr. Wright looks forward to incorporating PRISM into the Healthy Pride sessions as a next step.



To learn more about how you can open doors for students with diverse experiences and backgrounds, please scan the QR code.

Growth in Personal Development and Wellbeing Program Catalyzes Change



It's been three years since the department created the space for a department-wide Personal Development and Wellbeing Program and named **Andrea Abbott, M.D., MSCR**, the vice chair. The new initiative aimed to develop a cohesive culture where we support each other. As the initiative rolled out once the COVID mask mandates were lifted in 2021, Abbott and her committee focused on creating fun, engaging social events and finding ways to reduce stress during the work week.

"It's not just about hosting events," she said. "It's about building a culture that supports each other, thereby reducing burnout."

Three years later, the program has grown to catalyze the changes in our department that she envisioned. She said the momentum is on the upswing. Several events were very popular this year, including paintball, bonfires, and a harbor cruise. Abbott notes that not only has attendance increased, but because of the camaraderie generated during events, smaller groups are also getting together to socialize.

Abbott's team has grown to include collaborating with the department's new communications and event coordinator, Jennifer Garcia. She helps disseminate wellbeing news and runs some wellbeing events, such as the Fun Day at Work and the monthly staff recognition program. Abbott says this support is important and welcomed.

Abbott says her team is doing even more than building this culture. They are studying it. "We are not only incorporating wellness into our culture, but we are also actually studying it and publishing our results in major academic journals," said Abbott.



"You can choose to go to a job, work the job, and go home. Or you can come to a place where it feels like a home away from home where the people you work with are your family. And I would say that's the culture I'm striving for in our department."

*-Andrea Abbott, M.D., MSCR
Vice Chair, Personal Development and Wellbeing*



EARLY CAREER FACULTY DEVELOPMENT PROGRAM HELPS YOUNGER FACULTY NAVIGATE THEIR CAREERS

This spring, the department held an Early Career Faculty Development Program led by **Andrea Abbott, M.D.**, and **Jean Marie Ruddy, M.D.** The program was for early career faculty within five years of their practice. Over three days, invited speakers discussed topics relevant to building a career in academic medicine.

Topics covered were how to build a productive clinical practice, develop a research portfolio, and enhance their academic reputation at a state and national level through surgical societies. Each day ended with an open forum for discussion and exchange of ideas and advice.



MUSC GLOBAL SURGERY PROGRAM

Expands Surgical Experiences Across the Globe and Across MUSC

The MUSC Global Surgery Program cultivates innovation by partnering with academic surgical institutions worldwide to improve patient care in developed and developing countries.

by Jennifer Garcia



The MUSC Global Surgery Program, led by **Mike M. Mallah, M.D.**, and facilitated by a dedicated group of residents and medical students, leverages global relationships to create bidirectional clinical education, research, and innovation opportunities that improve surgical patient care in low- and middle-income countries and developed nations. In doing so, the program aims to be a premier international partner for academic surgical institutions worldwide. Significant strides are moving the program closer to this goal in its second full year.



FIRST ACGME INTERNATIONAL SURGICAL ROTATION APPROVED

This year, MUSC received ACGME / ABS board approval for an international surgical rotation. **Daniel Akyeampong, M.D.**, was the first resident to rotate in George Hospital in the Southern Cape Region of South Africa once the site became ACGME-approved. In FY24, three residents rotated in South Africa, and each trainee came back from this experience hungry for more global surgery opportunities. The enthusiasm the trainees brought back is contagious and has helped energize the program's expansion, which has increased to four residents in FY25, with an expanded duration of two months.

While the South African training site is one of the first to have an ACGME-approved international surgical rotation, Mallah is exploring opportunities to formalize more training sites worldwide. One exciting new partnership is with Cinterandes, a non-profit organization with a mobile surgery program in the Ecuadorian Andes – the first of its kind in the world. Currently, our medical students rotate at the mobile surgical site, and the team is hoping to expand it to an ACGME-approved surgical rotation in the near future.

INTERDEPARTMENTAL COLLABORATIONS

Mallah's passion for global surgery is creating connections with other department leaders with the vision to change the landscape of global surgery at MUSC. Since the program's inception, nine well-attended events have been held. More than 70 people have been at each event, with a broad spectrum of attendees, including trainees, physicians, APPs, clinical staff, researchers, and hospital administrators from various specialties.



As a result of these meetings, several departments, including neurosurgery, orthopedics, and emergency medicine, now have faculty who are interested in partnering with the Global Surgery Program. Pediatric neurosurgeon **Ramin Eskandari, M.D., MS**, has joined the program as the Associate Program Director to facilitate programmatic growth and expansion.

The enthusiasm and hunger for global surgery is growing and it's only the beginning. As the program grows in scope creating more opportunities for global health, we can't do it alone.

To be a part of the movement in developing more opportunities for the next generation of global surgeons, please scan the QR code or visit <https://bit.ly/muscglobalsurgery>.



To watch our Global Surgery Video and learn more about the MUSC Global Surgery Program, please scan the QR code or visit <https://bit.ly/4gc1cMb>.





OUR INFLUENCE GOES BEYOND THE CLINIC

GLOBAL SURGERY PROGRAM DIRECTOR MIKE M. MALLAH, M.D., HONORED WITH THE MUSC VALUES IN ACTION AWARD

Trauma Surgeon **Mike M. Mallah, M.D.**, was recognized for his significant contributions to improving the lives of patients in low-resource settings during the MUSC President’s Values in Action Awards Ceremony, which recognizes employees who demonstrate MUSC’s five values: compassion, innovation, collaboration, respect, and integrity.

Dr. Mallah was recognized by **MUSC President David J. Cole, M.D.**, and **First Lady Kathy Cole**, in the collaboration category for tireless efforts to develop a robust Global Surgery Program that fosters collaboration on a global scale by connecting some of the brightest medical minds in the developing world with the surgical experience, resources and proven excellence of the MUSC Department of Surgery. It combines the three pillars of patient care, education, and research to develop bidirectional service, learning, and investigative opportunities.



Values in Action Collaboration Awardee Mike M. Mallah, M.D. (far right) celebrates with (from left to right) nominator Department of Surgery Chair Prabhakar Baliga, M.D., First Lady Kathy Cole, and MUSC President David J. Cole, M.D.

TEDxCHARLESTON

Big Business and Surgery: Who Belongs in your Operating Room?

Adam Tanious, M.D., MMSc, MBA

Adam Tanious, M.D., MMSc, MBA, took the TEDxCharleston stage to highlight the crucial dialogue that needs to happen between surgeons advocating for patient-centered care and the for-profit medical industry that strives to bring less invasive therapies to patients through innovative technology.



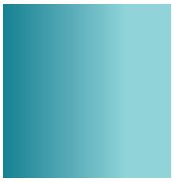
As a surgeon and an entrepreneur, Tanious says the physician-industry connection is critical. Innovative medical technology can allow doctors to offer patients less invasive therapies than traditional surgery. But to do that, surgeons need to have an ongoing dialogue with the for-profit medical industry that develops those technologies.

But he says doctors must be careful not to let that relationship sway their decisions about what is best for patients. Tanious wants to start a community conversation about how to establish rules for that critically important physician-industry link to ensure that patients always come first.

To view Dr. Tanious’ TEDxCharleston Talk in full, please visit <https://bit.ly/4d6vCfL> or scan the QR code.



NEWS & ANNOUNCEMENTS



A. Abbott



P. Baliga



M.K. Bryant



D. Carneiro-Pla



D. Cassidy



B. Crookes



T. Curran



C. Donahue



K. Engelhardt



E. Eriksson



Y. Gavrilova



C. Green



A. Hink



B. Huang



J. Jones



S. Kahn



A. Kilic



J. Kim



N. Klauber-DeMore



L. Korepta



W. Lancaster



K. Lee



A. Leshner

■ **Andrea Abbott, M.D., MSCR** MUSC Health Quality Medical Director of the Year Award, Named Section Chief – Breast Surgery, Gold Humanism Honor Society Faculty Member

■ **Prabhakar Baliga, M.D.** Honored with the R. Randolph Bradham, M.D. Endowed Chair in Surgery

■ **Mary Kate Bryant, M.D., MSCR** Harvey and Marcia Schiller Surgical Innovation Center Surgical Innovation Award

■ **Denise Carneiro-Pla, M.D.** Named Section Chief of Endocrine Surgery, Distinguished International Lecturer at the XLVII Congreso Internacional de Cirugía General

■ **Douglas Cassidy, M.D.** Center for Excellence in Surgical Education, Research, and Training (CESERT) Giant Robot Award from the Association of Surgical Education, General Surgery Education Director of Simulation

■ **Bruce Crookes, M.D.** MUSC Blue Sky Award

■ **Thomas Curran, M.D., MPH** Wake Forest NCI Community Oncology Research Program Research Base New Investigator Workshop

■ **Colleen Donahue, M.D.** MUSC General Surgery Program Director, accepted to ACS Certificate in Applied Surgical Education Leadership Program

■ **Kathryn Engelhardt, M.D., MS** International Association for the Study of Lung Cancer Academy, AATS Leadership Academy

■ **Evert Eriksson, M.D.** President Elect, Chair of the Ethics Committee, and Executive Committee Member of the Chest Wall Injury Society, ACS Trauma Quality Programs Chest Wall Injury Best Practices Guidelines Panel

■ **Yulia Gavrilova, Ph.D.** Psychiatry Chair Research Fund Grant to support the Burn Behavioral Health Program

■ **Christa Green, MPH** Everytown Executive Director Fellowship

■ **Ashley Hink, M.D., MPH** Kaiser Permanente Grant, NC State University Distinguished Alumna Award, SCHA Healthcare Hero

■ **Bernice Huang, M.D.** Clerkship Director

■ **Jeffrey Jones, Ph.D.** Harvey and Marcia Schiller Surgical Innovation Center Surgical Innovation Award, American Heart Association Award

■ **Steven Kahn, M.D.** Fellow of the American Burn Association (Inaugural Class), SCRA Grant

■ **Arman Kilic, M.D.** NIH R01, COM Translational Team Science Award

■ **Joshua Kim, MS** Future Medical Leaders SC Biz News' Healthcare Hero

■ **Nancy Klauber-DeMore, M.D.** 2023 Chicago Medical School Distinguished Alumna Award, HCC Clinical Trials Investment Program Award

■ **Lindsey Korepta, M.D.** Vascular Surgery Associate Program Director

■ **William Lancaster, M.D.** General Surgery Associate Program Director

■ **Keller Lee** MUSC Inclusive Excellence Certificate Program

■ **Aaron Leshner, M.D., MSCR** Chair of the Curtis P. Artz MUSC Surgical Society, Harvey and Marcia Schiller Surgical Innovation Center Surgical Innovation Award

- **Mark Lockett, M.D.** Chief Quality Officer, MUSC Health – Charleston
- **Mike M. Mallah, M.D.** MUSC President’s Values in Action Award, EAST Global Surgery Ad Hoc Taskforce, MUSC White Coat Ceremony Keynote Speaker
- **Jamie Meyer** MUSC Office of Equity Real DEIL (Diversity, Equity and Inclusion Leader) Award, Executive Lead Advisor for PRISM (LGBTQ+ employee resource group)
- **Shikhar Mehrotra, Ph.D.** Zucker Institute of Technology Breakthrough Award, NCI Grant to expand the HCC CAR-T Cell Therapy Clinical Trial
- **Rohit Mittal, M.D.** Fellow of the American Burn Association (Inaugural Class)
- **Rupak Mukherjee, Ph.D.** Golden Apple Award Pre-clerkship Teaching Excellence Award - HRR Theme, MUSC Alpha Omega Alpha Chapter Induction
- **Jeri O’Banner** Invited speaker - Association of Residency Administrators in Surgery Meeting
- **Rana Pullatt, M.D.** American Society for Metabolic and Bariatric Surgery (ASMBS) Distinguished Service Award, Co-chaired the 40th ASMBS Annual Meeting, Chaired the ASMBS International Certification Exam Taskforce
- **Tracy Rice, M.D.** Invited speaker - Special Section of the ATC meeting
- **Jean Marie Ruddy, M.D.** VA Merit Award
- **Keith Smalls** 2023 – NEXUS Global Summit Presenter, Charleston RiverDogs Healthcare Hero
- **Christian Streck, M.D.** Vice Chair of Education, Co-chair of the Pediatric Trauma Society Guidelines Committee, MUSC-P Executive Board, Harvey and Marcia Schiller Surgical Innovation Center Surgical Innovation Award
- **Jeffrey Sutton, M.D.** Golden Apple Award - Clinical Preceptor Excellence in Teaching Award: Faculty Award
- **Zachary Sutton, PA-C** MUSC Health APP Award for Compassion and Advocacy
- **David Taber, Pharm.D., MS** MUSC Department of Surgery Clinical Trials Principal Investigator of the Year Award
- **Cynthia Talley, M.D.** Senior Associate Dean for GME and CME, 2024 ACS Chapter Success Story - ACS Leadership and Advocacy Summit
- **Adam Tanious, M.D., MMSc** TEDx Charleston invited speaker
- **Hongjun Wang, Ph.D.** VA CSR&D Merit Grant / NIH STEMCAP Research Grant
- **Maggie Westfal, M.D., MPH** HCC Clinical Scholar
- **Dirk van der Windt, M.D., Ph.D.** American Society of Transplant Surgeons (ASTS) Surgeon Scientist Committee
- **Sarah Walters, PA-C** MUSC Health APP Best Practice Center Accountability Award
- **Sharee Wright, M.D.** Senior Associate Dean for Pathways, Paul B. Underwood Chapter of the Gold Humanism Society
- **Sanford Zeigler, M.D.** Harvey and Marcia Schiller Surgical Innovation Center Surgical Innovation Award



M. Lockett



M. M. Mallah



J. Meyer



S. Mehrotra



R. Mittal



R. Mukherjee



J. O’Banner



R. Pullatt



T. Rice



J. M. Ruddy



K. Smalls



C. Streck



J. Sutton



Z. Sutton



D. Taber



C. Talley



A. Tanious



H. Wang



M. Westfal



D. van der Windt



S. Walters



S. Wright



S. Zeigler





MESSAGE FROM THE VICE CHAIR

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What a great year of listening and learning! It has been fascinating to consider the novelty and diversity of research interests among our growing faculty cohort, further amplified by their peer collaborations and resident mentor activities. As evidenced by the exciting discussion at the Research session of

the Early Career Development Program in the spring of 2024, investigator interests expand well beyond animal models and national databases. Thus, aiming to create programming that would appeal to the breadth of investigators was clearly a fool's errand.

Preparing for our next academic year, initiatives will focus on like-minded researchers sharing opinions, ideas, and experiences, to the benefit of junior and senior faculty alike. Building on the success of the Surgery Seminar Series coordinated by **Hongjun Wang, Ph.D.**, the Surgical Outcomes Research and Innovation Nucleus (SORIN) is being re-launched by **David Taber, PharmD**, to engage health services researchers as well as clinical trial

principal investigators. As Director of Research Administration, **Morgan Overstreet, MS**, will play a major role in this endeavor, particularly with expansion of the clinical trial opportunities. We were also excited to welcome **Chris Steffen, MBA**, as the new Grants Administrator and a key part of our pre-award team.

The Basic and Translational Researchers welcomed a new lab in Surgical Oncology led by **William Hawkins, M.D.**, and **Dirk Spitzer, Ph.D.**, thereby expanding the scientific acumen of the department. Several surgical faculty members were also recipients of the inaugural Schiller Institute Surgical Innovation Awards Competition to facilitate artificial intelligence applications in health services research.

Resident research continues to be a priority and the Surgeon Scientist Pathway, which assisted three residents to connect with terrific mentorship teams for the 2025 academic year, will be transitioning to leadership with **Kate Engelhardt, M.D., MS**, and **Dirk Van der Windt, M.D., Ph.D.** Additional individual achievements are highlighted below.

*Jean Marie Ruddy, M.D.
Vice Chair of Research*

DIVISION HOSTS SEVERAL OPPORTUNITIES TO ENGAGE AND LEARN

Early Career Development Program

To facilitate Junior Faculty engagement, **Andrea Abbott, M.D., MSCR**, and **Jean Marie Ruddy, M.D.**, compiled an Early Career Faculty Development Program for the Spring of 2024. During the Research session, speakers and senior faculty provided guidance on resources and opportunities available within the department and across MUSC.

Surgeon Scientist Pathway Program

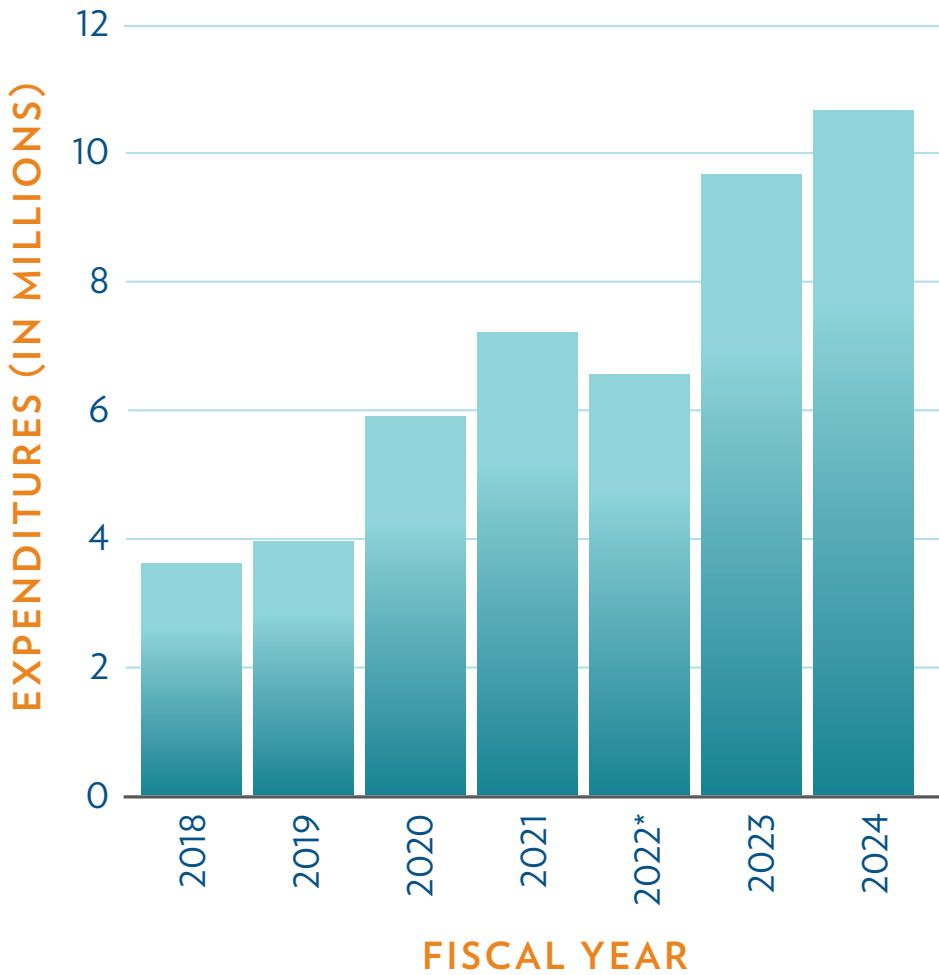
Our trainees work side-by-side with nationally recognized experts who help them develop an academic niche in the surgeon-scientist pathway for residents who choose to enter dedicated research time during their residency.

Surgery Seminar Series

An exciting initiative that was generated during the Fall Research Retreat was a department-wide Surgery Seminar Series. **Hongjun Wang, Ph.D.**, leads the series, which encompasses basic, translational, and clinical research topics across the broad spectrum of the Department of Surgery. These well-attended monthly events increase awareness of our investigator's research initiative, provide valuable feedback to the presenter, and create opportunities for collaboration and camaraderie.



EXTRAMURAL FUNDING EXPENDITURES



FY FUNDING EXPENDITURES

81% Increase in Research Expenditures Over the Past 4 Years

The Department of Surgery holds 9 active NIH R01 grants and two more R01s with JIIs for FY25. Our faculty are receiving federal grant funding through 2024, including 9 R01 grants, a UG3 and UG3-UH3 transition, K08, K23, and DOJ grants.

**In FY 2022, our portfolio was affected by several Ph.D. research faculty changes in the department.*



NIH RANKINGS (BRIMR REPORTING)

Last year was particularly noteworthy for several of our researchers.

The Department of Surgery ranked number 35 nationally for the most funds awarded to a surgery department by the National Institutes of Health (NIH) in 2023, according to the Blue Ridge Institute for Medical Research (BRIMR). According to the NIH's reporting for the federal FY 2023, the MUSC Department of Surgery received \$5.3M in NIH grants, the largest amount of NIH funding for the Department of Surgery in the past ten years recorded in the BRIMR database.

Out of 710 researchers that achieved national ranking:

- Hongjun Wang, Ph.D., ranked in the **top 10%**
- Shikhar Mehrotra, Ph.D., ranked in the **top 21%**
- Nancy Klauber-DeMore, M.D., ranked in the **top 22%**



H. Wang



S. Mehrotra



N. Klauber-DeMore

ADVANCING PANCREATIC CANCER CARE THROUGH INNOVATIVE AND COLLABORATIVE RESEARCH



William Hawkins, M.D., is a surgical oncologist and researcher focusing on improving outcomes for pancreatic cancer patients. As the newly appointed Deputy Director at Hollings, Dr. Hawkins aims to promulgate collaborative team science and multi-disciplinary exchanges on a larger scale with the goal of impacting additional cancers. Before joining the Hollings Cancer Center, he was a member of the Senior Leadership for the Alvin J. Siteman Cancer Center, Washington University in Saint Louis.

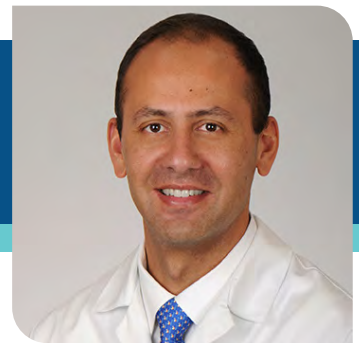
His research focuses on systematically developing and testing novel strategies for treating pancreatic adenocarcinoma. Dr. Hawkins serves as Director of Washington University Pancreatic Cancer NCI Specialized Programs of Research Excellence (SPORE) Program, one of only three SPORES in the nation. In the past five years, his team successfully launched more than 50 pancreatic cancer clinical trials and accrued 1,254 patients while improving minority accrual from 8% to 15.4%. With Hawkins' move to MUSC, he and his team have recently expanded their collaborative science to include a new site. This strategic expansion is a testament to their commitment to growing the research program and improving survival for patients with pancreatic cancer.

PROMINENT RESEARCH SCIENTIST FROM THE WILLIAM HAWKINS LAB JOINS MUSC



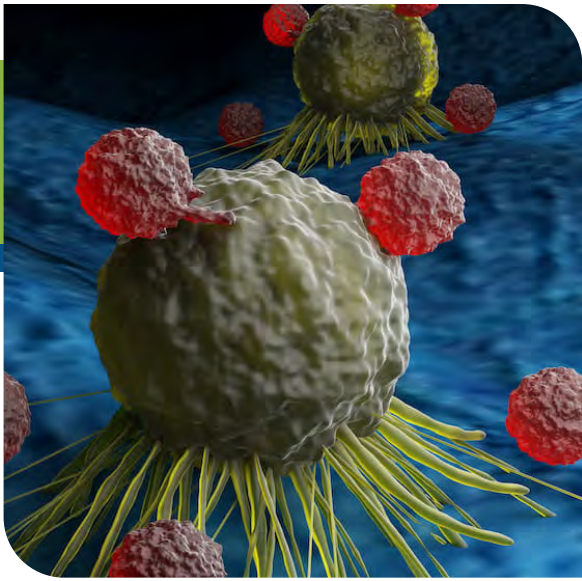
Since 2008, **Dirk Spitzer, Ph.D.**, has worked in the William Hawkins Lab at Washington University in Saint Louis. His research led to the development of targeted TR3 therapeutics for cancer biomarkers mesothelin and MUC16. These biomarkers are well-characterized and are highly present on the surface of several human cancers, including pancreatic and ovarian cancers. This technology provides much-needed anticancer therapeutics for these cancers. Now, at MUSC and continuing his work with Hawkins, Spitzer can align his research with the Hollings Cancer Center, where he says he will have more opportunities to develop his research on the various drug platform technologies closer to clinical application.

Arman Kilic, M.D. has been awarded a \$1.9M NIH R01 Grant to Improve the Heart Transplant Process with Artificial Intelligence



Arman Kilic, M.D., Surgical Director of MUSC's Heart Failure and Heart Transplant Program and Director of the MUSC Harvey and Marcia Schiller Surgical Innovation Center, has been awarded a \$1.9M NIH R01 grant for his proposed work to help shrink this chasm between heart transplant demand and supply.

Kilic and his team, including Angel Jordan University Professor of Computer Science at Carnegie Mellon University **Tuomas Sandholm, Ph.D.**, and the AI scientists at the Schiller Surgical Innovation Center, plan to use AI and machine learning to help optimize heart transplantation, hopefully saving lives in the process.



MUSC Scientists are Leaders in Cellular Therapy Translational Research

Clinical Trial of “Purified” CAR-T Cell Therapy Awarded \$3.2M NCI Grant to Expand

A clinical trial at MUSC Hollings Cancer Center that has shown success with the first two patients has now received \$3.2 million in funding from the National Cancer Institute to expand. **Brian Hess, M.D.**, and **Shikhar Mehrotra, Ph.D.**, who is the co-scientific director of the Center for Cellular Therapy (CCT), have partnered on a project to

develop “purified” CAR-T cells to treat people with certain B-cell non-Hodgkin lymphomas who have already tried other therapies. By engineering the CAR-T cells locally, in the MUSC Center for Cellular Therapy, the Hollings team can eliminate the need to freeze and transport the product, which reduces viability, and can lower the cost of the treatment.



Mehrotra is a highly funded researcher, with 7 NIH grants that includes a conventional R01, and SBIR/STTR R41 & R42, is in the Just in Time process for another NIH/NCI R01. He is co-leader of the Cancer Biology and Immunology research program, a professor of surgery and the Cecilia and Vincent Peng Endowed Chair in melanoma and cutaneous oncology.



Shikhar Mehrotra, Ph.D., and Brian Hess, M.D., Honored with the Zucker Institute Technology Breakthrough Award

The Zucker Institute Technology Breakthrough Award recognizes an MUSC Innovation that represents a significant leap forward in its respective field. **Shikhar Mehrotra, Ph.D.**, and **Brian Hess, M.D.**, were selected for their innovative basic research and efforts leading to the first home-grown CD19 CAR-T cell therapies to treat lymphoma patients at the Hollings Cancer Center.

Hongjun Wang, Ph.D., Receives Several Significant Awards in FY24



Hongjun Wang, Ph.D., is a basic and translational scientist whose research focuses on pancreatic islet cell biology and transplantation immunology in the treatment of type 1 and type 2 diabetes and chronic pancreatitis. She is the co-scientific director of the Center for Cellular Therapy. In FY24, Wang received two significant awards to support her research endeavors: a VA Clinical Science Research and Development (CSR&D) Merit Grant for a pain study using autologous bone marrow-derived mesenchymal stem cells and an NIH STEMCAP-1 pain study for chronic pancreatitis patients to evaluate the safety and efficacy of an infusion of donor-derived mesenchymal stem cells to relieve chronic pain.

Wang is a highly funded researcher, and currently has 5 federal grants, including 3 R01’s, 1 UG3 that transitions to a \$1.5 M UH3 in FY25 and 2 VA Merit Awards, including the VA CSR&D Merit Grant. She is in the Just in Time process on another NIH grant that shows promise for funding in FY25.



NOTABLE RESEARCH AWARDS & ACHIEVEMENTS



Hollings Clinical Scholar Program



Maggie Westfal, M.D., MPH, has been named an HCC Clinical Scholar, funding her proposal entitled Implementation of a Pilot Program for Opportunistic Salpingectomy at the Time of Gastrointestinal Surgery at MUSC: An Evaluation of Patient and Provider Knowledge and Attitudes. The Hollings Clinical Scholar program fosters the careers of junior physician-scientists and aims to facilitate breakthrough clinical care discoveries.

MUSC Blue Sky Award



Trauma Surgeon **Bruce Crookes, M.D.**, substance use researcher **Sara Witcraft, Ph.D.**, and mental health researcher **Kenneth Ruggiero, Ph.D.**, received the MUSC Blue Sky Award, offered by the Office of the Vice President of Research in partnership with the

Office of Innovation for highly innovative research projects. Their project will explore using digital personas capable of one-on-one conversations to deliver substance use screening and brief interventions more efficiently and consistently in trauma centers.

VA Merit Award



Jean Marie Ruddy, M.D., received a VA Merit Award for her research entitled: Targeting Biomechanical Signaling in AAA. Building on her prior work examining tension-induced signaling in small AAA, Ruddy will utilize advanced ultrasound software to assess mechanical strain among AAA patients as an indicator of AAA stability.

American Heart Association Award



Jeffrey Jones, Ph.D., received the American Heart Association 3-year Transformational Project Award for his research entitled Novel Cell-based Therapy for Thoracic Aortic Aneurysm.

Kaiser Permanente Center for Gun Violence Research and Education Award



Ashley Hink, M.D., MPH, is the Principal Investigator and **Christa Green, MPH**, is a Co-investigator on a prestigious grant awarded to them from the Kaiser Permanente Center for Gun Violence Research and Education entitled *Advancing the Evidence for HVIPs in the Southeast: Comprehensive Patient-Centered Outcomes and Stakeholder Insights*

IDEA Therapeutics Award



Steven Kahn, M.D., received the MUSC Office of Innovation and Zucker Institute for Innovation Commercialization IDEA Therapeutics Grant and additional funding in FY25 from the South Carolina Research Authority for his novel burn gel research study.

Hollings Cancer Center Award



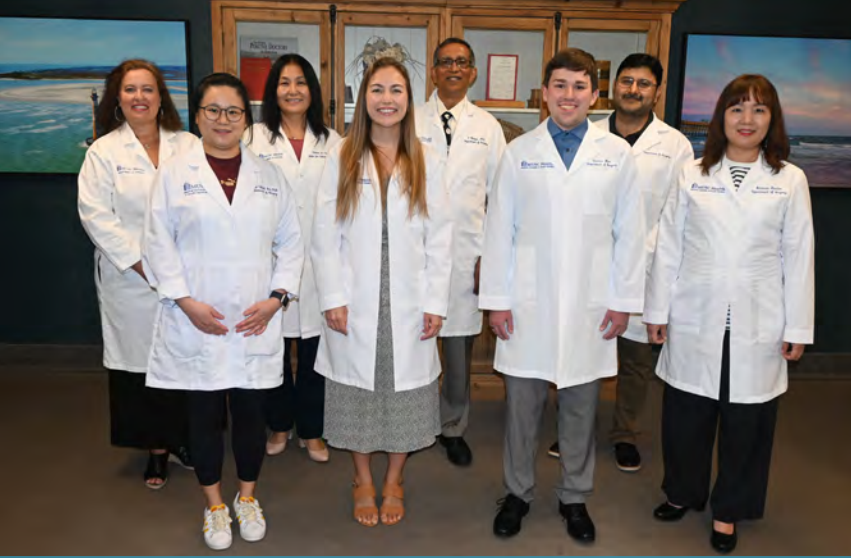
Nancy Klauber-DeMore, M.D., received HCC funding for *A Phase 1A Window Trial On Cannabidiol (CBD) For Breast Cancer Primary Tumors*.



U.S. PATENTS AWARDED TO TWO SCIENTISTS

Shikhar Mehrotra, Ph.D., and Meenal Mehrotra, M.D., Ph.D., were recognized for advancing science as an inventor on a U.S. Patent.

- **S. Mehrotra:** P1716 CD38-NAD+ Regulated Metabolic Axis in Anti-Tumor Immunotherapy
- **M. Mehrotra:** P1818 T Regulatory (Treg) Cell Transplantation in Osteogenesis Imperfecta (OI)



Steady Growth in the Center for Cellular Therapy Aids Research to Improve Patients' Lives

Members of the CCT team from left to right: Quality Assurance Director Tara Duke, MLS (ASCP)^{CM}, Wenyu Gou, Ph.D., Co-Scientific Director Hongjun Wang, Ph.D., Brianna Stanton, Chair and Medical Director Prabhakar Baliga, M.D., Co-Scientific Director Shikhar Mehrotra, Ph.D., Inhong Kang, Ph.D., (Missing: Yanchun Li)

The Center for Cellular Therapy (CCT), a university shared-core resource, is dedicated to scaling up translational studies and supporting investigator-sponsored clinical trials involving cellular therapy. Our experienced Quality Assurance (QA) and manufacturing teams work side-by-side with clinicians and scientists to provide services to investigators to produce expanded cell-therapy and gene-therapy-based biotherapeutic products for clinical trials employing cGMP standards, serve as a regulatory resource to MUSC in the preparation of cell-therapy and gene-therapy-based INDs, and facilitate the clinical development of novel cellular therapies.

Approved Clinical Trials

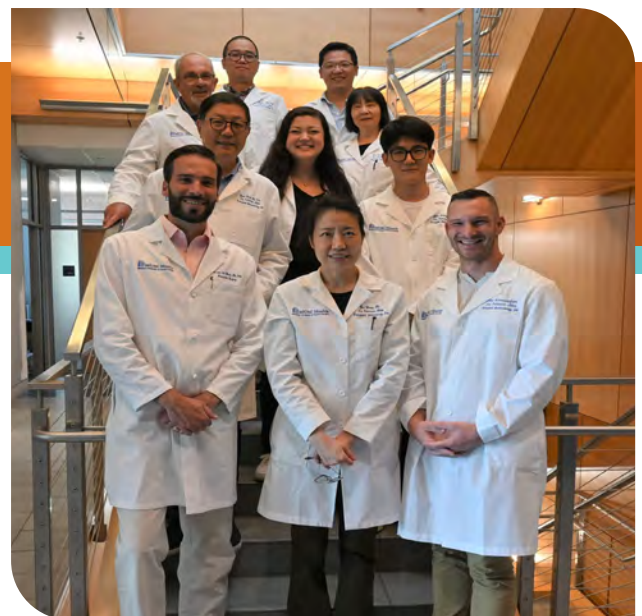
- Mesenchymal stem cell (MSC) trials, indications for the MSC trials include Chronic Pain for VA Hospital (PI: Dr. Wang), Chronic Pain for MUSC (PI: Dr. Wang); Lupus (PI: Dr. Gilkeson), Type 1 Diabetes (PI: Dr. Wang), MSC and islet co-transplantation for Chronic Pancreatitis (PI: Dr. Wang), Systemic Sclerosis (PI: Drs. Hudson, McGill)
- CD19 CAR-T cell therapy (Principal Investigators: Dr. Hess and Dr. Mehrotra)

Standard of Care

- Autologous hematopoietic progenitor cells - Cancer patients (in collaboration with the Clinical Pathology Cryo Laboratory)
- Islet Cell Transplants

Lee Patterson Allen Transplant Immunobiology Lab (TIBL)

Yuan Zhai, Ph.D., director of the TIBL, leads a collaborative research effort with transplant surgeons Joseph Scalia, M.D., and Dirk van der Windt, M.D., Ph.D. Current research includes dissecting macrophage signaling and pro-resolution mechanisms in liver injury, understanding the role of innate lymphoid cells in protecting liver grafts from the damage produced by initial ischemia and subsequent reperfusion, determining roles of donor derived cell-free DNA in liver inflammation after ischemia/reperfusion, and potential therapeutic utilization of myeloid derived suppressor cells to induce recipient tolerance during organ transplantation.



Members of the TIBL Team

Harvey and Marcia Schiller Surgical Innovation Center

This year, there has been substantial progress in the Harvey and Marcia Schiller Surgical Innovation Center's three pillars: artificial intelligence (AI), investigator-initiated clinical trials, and human-centered design (HCD). The team has considerably grown their portfolio of AI projects.

With unprecedented growth has come the realization of the importance of co-locating our growing team of researchers and physicians. The vision of the new physical space is defined as a place dedicated to stimulating the creativity of its core teams, including AI and data managers, clinical trialists, and human-centered designers, all dedicated to advancing surgical care through innovation and collaboration.



HARVEY AND MARCIA SCHILLER SURGICAL INNOVATION CENTER AWARD WINNERS

The Next Step in Advancing Care through AI

The Harvey and Marcia Schiller Surgical Innovation Center held an inaugural Surgical Innovation Awards Competition. These awards are meant to provide internal funding to surgical faculty to develop the necessary preliminary data to support extramural grant applications and/or commercialization efforts. We received 13 exceptionally innovative scientific proposals, and four projects were awarded.



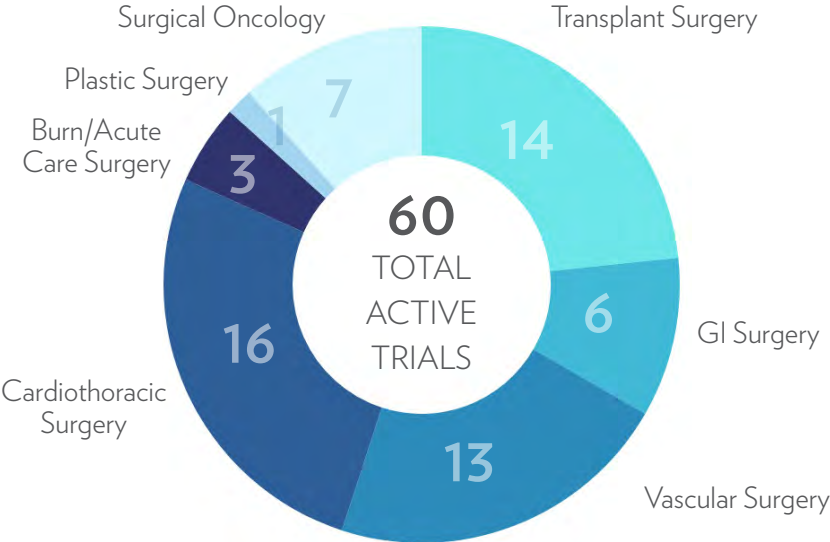
(left to right) Jeffrey Jones, Ph.D., Sanford Zeigler, M.D., Heather Holman, M.D., Aaron Lesher, M.D., MSCR, Harvey Schiller, Ph.D., Prabhakar Baliga, M.D., Marcia Schiller, Mary Kate Bryant, M.D., MSCR, Arman Kilic, M.D., Christian Streck, M.D., Brett Welch, MBA, MHA, Michael Zhang, M.S., Andrew Wright, M.S.

- *Good Planning for Better Scanning: Evaluation of Pediatric Blunt Abdominal Trauma*
Christian Streck, M.D.
Pediatric Surgeon
- *Incidence of Thoracic Aortic Aneurysms and Neurogenic Hypertension in PTSD Patients*
Jeffrey Jones, Ph.D., Sanford Zeigler, M.D. and Heather Holman, M.D., Ph.D. candidate
- *Rescuing Non-Responders after Bariatric Surgery in an Adolescent and Young Adult Population*
Aaron Lesher, M.D., MSCR
Pediatric Bariatric Surgeon
- *Utility of Visceral Adiposity on Abdominal CT for Prediction of Bariatric Surgery Outcomes*
Mary Kate Bryant, M.D., MSCR
Adult Bariatric Surgeon

If you are interested in joining our acceleration in our innovation space by supporting a short- or long-term research fellowship, please contact **Brittany Davis**, College of Medicine Development Coordinator, at davbritt@muscc.edu or scan the QR code.



CLINICAL TRIALS BY DIVISION



SURGICAL OUTCOMES RESEARCH AND INNOVATION NUCLEUS (SORIN)

The Department of Surgery has seen significant growth in industry-sponsored research and investigator-initiated clinical trials. We have a diverse and active portfolio that spans across most surgical disciplines housed within the Department of Surgery.

GROWTH IN LEADERSHIP

With a major focus on expanding our industry-led and investigator-initiated clinical trials, we now have a new qualitative division, led by **Saylor Hardin**. She joined us upon completion of her MPH and has a robust background in public health, biostatistics and qualitative research. She is working closely with the thoracic oncology division to improve patient outcomes and optimize shared decision making. **Deanna DeHoff** now leads the clinical trials. She has been crucial to the growth over the past four years and brings a deep understanding of clinical trial management to the team.



David Taber, Pharm.D., MS
Director, SORIN



Morgan Overstreet, MS
Director, Research Administration



Deanna DeHoff
Program Manager, Clinical Trials



Saylor Hardin, MPH
Program Coordinator, Qualitative Research

HUMAN-CENTERED DESIGN PROGRAM

The Human-Centered Design (HCD) Program at MUSC creates novel solutions in the healthcare space to solve unmet medical needs for users such as patients and physicians. This year it expanded on the strong education platform that **Joshua Kim, MS**, Design Director, has built.

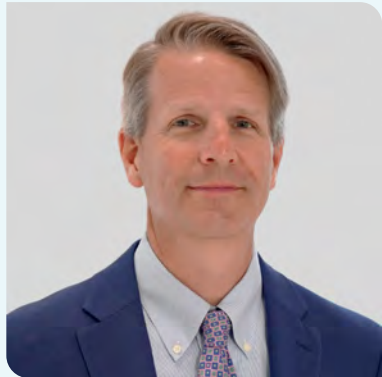


Doug Hamilton, an expert in business accelerators, joined MUSC as a program architect to lead the acceleration phase. Upon completion of the discovery and ideation phase for 13 ongoing and new projects, Hamilton successfully linked the teams and their intellectual property with industry professionals who can address their specific

needs. Incorporating an accelerator program is paramount to the success of startups interested in engaging with medical technology companies and venture capitalists.

If you are interested in supporting our Human-Centered Design program, scan the QR code.

EDUCATION HIGHLIGHTS



CHRISTIAN STRECK, M.D.
Vice Chair of Education

GENERAL SURGERY

Colleen Donahue, M.D. Program Director
William Lancaster, M.D. Associate Program Director

COLLEGE OF MEDICINE SURGERY STUDENTS

Bernice Huang, M.D. Clerkship Director
Maggie Westfal, M.D. 4th Year Students, SIG

PLASTIC SURGERY FELLOWSHIP

Milton Armstrong, M.D. Program Director

PLASTIC SURGERY INTEGRATED

M. Lance Tavana, M.D. Program Director

CT SURGERY INTEGRATED

Barry Gibney, D.O. Program Director
Nicolas Pope, M.D. Associate Program Director

VASCULAR SURGERY INTEGRATED

Ravi Veeraswamy, M.D. Program Director
Lindsey Korepta, M.D. Associate Program Director

SURGICAL CRITICAL CARE FELLOWSHIP

Alicia Privette, M.D. Program Director

PEDIATRIC CT SURGERY FELLOWSHIP

Minoo Kavarana, M.D. Program Director

TRANSPLANT SURGERY FELLOWSHIP

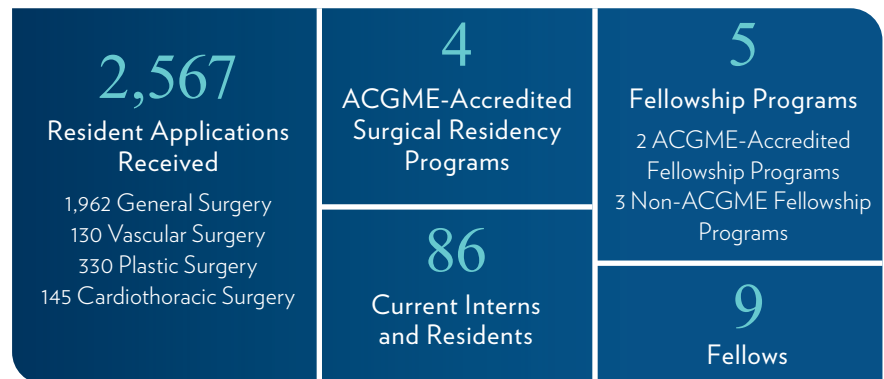
John McGillicuddy, M.D. Program Director

CARDIOTHORACIC SURGERY TRANSPLANT & MECHANICAL SUPPORT FELLOWSHIP

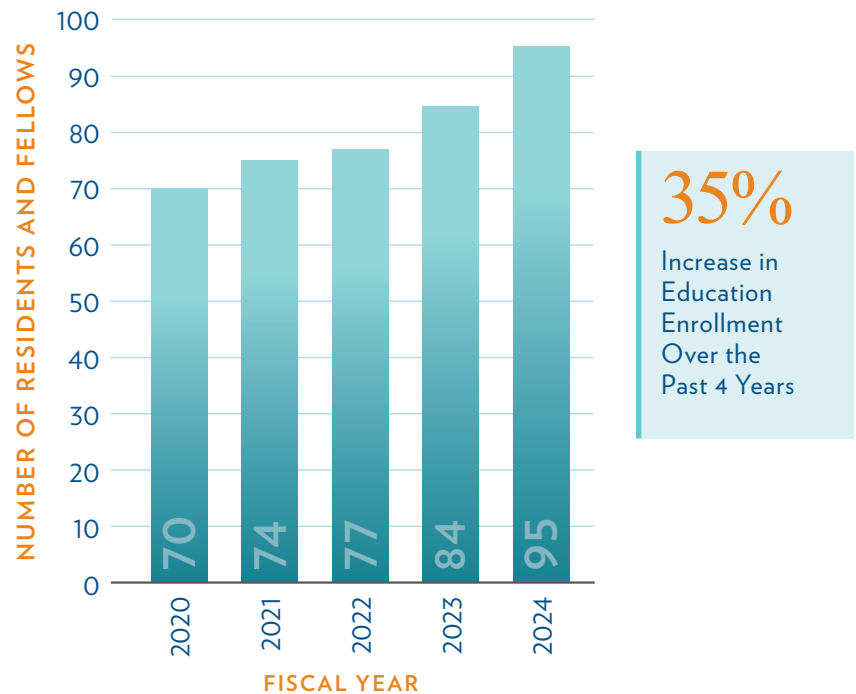
Arman Kilic, M.D. Program Director

AT A GLANCE

Our residency and fellowship programs offer an unparalleled training experience focusing on clinical excellence and patient-centered care. We offer a robust career development and mentorship program, integrated into Surgical Grand Rounds, didactics, journal clubs, and research opportunities.



PROGRAM GROWTH AND EXPANSION



- Vascular Surgery 1-6 with Research Track: First Match
- CT Surgery 1-6 & General Surgery added a designated Research Track for FY25
- Surgical Critical Care Fellowship Complement Increase
- New Pediatric Surgery Research Fellowship
- Plastic Surgery Integrated Resident Program Complement Increase
- ACGME International Surgical Rotation Approved; expands to 4 residents for 2 months each per year.

Douglas Cassidy, M.D. Leads Simulation Curriculum in the Department's New Simulation Space



Douglas Cassidy, M.D., is the newly appointed Director of Surgical Simulation for the MUSC General Surgery Residency Program. He is passionate about incorporating surgical simulation into a general surgery residency curriculum. He says simulation-based training can not only improve technical skills, but also enhance communication skills, situational awareness, and interprofessional team dynamics to optimize patient safety.



Cassidy is exceedingly well-trained in surgical and simulation education. He joined MUSC in October, and the timing could not have been more perfect. The department was planning a significant renovation, including remodeling the general surgery resident education space.



The upgrades included a brand new state-of-the-art Surgical Simulation Center, which features surgical trainers in laparoscopic surgery, robotic surgery, endoscopy, and microscopic surgery, as well as surgical equipment to practice open surgical skills and techniques. The main OR da Vinci Simulator is also in this simulation space.

The skills lab serves as our residents' SAGES FLS and FES testing center and will be utilized for classroom and small-group learning. The Center is adjacent to the resident workspace, making it accessible to the residents on a 24-hour, 7-days-a-week basis.



Douglas Cassidy, M.D., and Christian Streck, M.D., at the Surgery Simulation Suite Ribbon Cutting Ceremony

DISTINGUISHED VISITING LECTURERS

The Education Division hosts lectures delivered by nationally and internationally recognized experts in their respective field.



Patricia Turner, M.D., MBA, FACS
Executive Director and CEO,
American College of Surgeons



Amy J. Goldberg, M.D.
The Marjorie Joy Katz Dean, Lewis Katz School
of Medicine, Temple University,
Vice Chair, American Board of Surgery



Michael Borger, M.D., Ph.D.
University Professor of Cardiac Surgery,
University of Leipzig, Germany



Diana L. Farmer, M.D.
Chair of Surgery, UC Davis

SC/NC AMERICAN COLLEGE OF SURGEONS ANNUAL MEETING UPDATE



Left to right: Patrick Dennis, M.D., T. Karl Byrne, M.D., Kate Byrne, Mike M. Mallah, M.D., Lilian Hsu, M.D., PGY-5, Cynthia Talley, M.D., Andrea Abbott, M.D., MSCR, Rana Pullatt, M.D., Riley Nichols, medical student, Jeffrey Sutton, M.D., and Sydney Bertram, medical student

This year's SC/NC Chapter of the ACS Annual Meeting was held at Wild Dunes Resort, Isle of Palms, SC. There was a significant increase in SC-ACS membership over the past year and SC represented 50% of conference attendees.

Congratulations to the winners of the Cancer Resident Abstract Sessions:

- First Place | Lillian Hsu, M.D.
- Second Place | Macelyn Batten, D.O.
- Third Place | Ben Usry, Medical Student

RESIDENT RESEARCH

To train the next generation of Surgeon-Scientists, the program encourages residents to spend one to two years conducting research by working in a lab or earning an advanced degree. In FY-25, our resident research opportunities are expanding to include dedicated research tracks for each of our programs, providing more opportunities for our trainees to become the next generation of Surgeon-Scientists to lead the path forward in advances in healthcare.

SURGERY RESEARCH RECOGNITION DAY AND ERIC R. FRYKBERG, M.D., LECTURE

Surgery Research Recognition Day showcases the exceptional research work in which our residents, medical students and graduate students participate. It is also an opportunity to learn from world-class experts during the annual Eric R. Frykberg, M.D. Lecture. This year, **Diana L. Farmer, M.D.**, an internationally renowned fetal and neonatal surgeon and chair of the Department of Surgery at UC Davis Health, was the invited Eric R. Frykberg, M.D. Lecturer.



Surgery Research Recognition Day Program Leadership with invited lecturer Diana Farmer, M.D. (left to right) Jean Marie Ruddy, M.D., Thomas Curran, M.D., MPH, Diana Farmer, M.D., Heather Evans, M.D., MS, and Prabhakar Baliga, M.D.

AWARD WINNERS



*Oral Presentation,
Basic/Translational Category
Heather Holman, M.D., Ph.D. Candidate*



*Oral Presentation,
Health Services Category
Jennie H. Kwon, M.D.*



*Best Poster
Ahmed Lotfy, Ph.D.*

Our resident research scholars are avid learners. But they can't do it alone. If you would like to support our surgical learners, please give to the Surgical Resident Research and Education Fund by visiting <https://bit.ly/residentresearchfund>

SCHOLARLY PRODUCTIVITY

Our resident research scholars, **Macelyn Batten, D.O.**, **Lillian Hsu, M.D.**, **Brielle Ochoa, M.D.**, **Saranya Sundaram, M.D.**, and **Meredith Taylor, M.D.**, were highly successful in their endeavors.



M. Batten



L. Hsu



B. Ochoa



S. Sundaram



M. Taylor

BY THE NUMBERS

7 AWARDS | 12 JOURNAL PUBLICATIONS | 2 BOOK CHAPTERS |
40 PODIUM AND POSTER PRESENTATIONS | 2 ADVANCED DEGREES

GRADUATION 2024

In June, a black-tie dinner was held at the Francis Marion Hotel to celebrate our graduates and welcome them into our Curtis P. Artz MUSC Surgical Society. We wish them well in the next step in their professional career and look forward to seeing all that they will accomplish.



To see our list of graduates and learn about the next steps in their careers, visit <https://medicine.musc.edu/departments/surgery/alumni>

DEPARTMENT OF SURGERY AWARDS CEREMONY



a thought-provoking lecture "Ruminations from a curmudgeon former surgeon."

The Department of Surgery recognizes our exceptional faculty and trainees for their outstanding educational achievements, patient care, and research during our annual awards ceremony. The department was honored to have **Jacob Robison, M.D.**, Professor Emeritus in the division of vascular surgery, provide

Scan the QR code to see the full list of honorees



QUIANA KERN, M.D., HONORED WITH THE TRAILBLAZER AWARD

This year, we had the privilege of recognizing **Quiana Kern, M.D.**, whose milestones were so impressive she was formally recognized during the Graduation Dinner.



When **Quiana Kern, M.D.**, graduated in June, she achieved a remarkable milestone. She is the first female to graduate from the MUSC Cardiothoracic Surgery Integrated Residency Program, and the first black female to graduate from any CT integrated residency program in the United States. Dr.

Kern was appropriately honored at the graduation dinner with the Trailblazer Award.

GOLDEN APPLE AWARD WINNERS



Jeffrey Sutton, M.D.

Clinical Preceptor Excellence in Teaching Award: Faculty Award



Rupak Mukherjee, Ph.D.

Preclerkship Teaching Excellence Award - HRR Theme

CARDIOTHORACIC SURGERY

*In the **Division of Cardiothoracic Surgery**, our nationally recognized surgeons provide highly specialized care to diagnose and treat cardiac and thoracic patients, working with colleagues in cardiology and vascular surgery to develop innovative strategies resulting in the highest level of complex care with the least invasive procedures. Quynh Chu, M.D. joins us upon completing her cardiothoracic surgery fellowship at New York Presbyterian/Weill Cornell Medical Center.*

Professor and Chief

Marc R. Katz, M.D., MPH

Professor, Chair Emeritus

Fred A. Crawford, M.D.

Distinguished University Professors Emeritus

Robert M. Sade, M.D.

John M. Kratz, M.D.

Associate Professors of Surgery

Barry Gibney, D.O.

Arman Kilic, M.D.

Sanford Zeigler, M.D.

Assistant Professors of Surgery

Quynh Chu, M.D.

Kathryn Engelhardt, M.D., MS

Nicolas Pope, M.D.

Lucas Witer, M.D.

Self Memorial Regional Hospital

Claudio Guareschi, M.D.

Steven Greer, M.D.

AnMed Medical Center

Vasant Jayasankar, M.D.

Research Faculty

Jeffrey Jones, Ph.D.

Rupak Mukherjee, Ph.D.

CARDIOTHORACIC SURGERY HIGHLIGHTS



ADVANCES IN CLINICAL CARE

The MUSC Aortic Center, under the leadership of cardiothoracic surgeon **Sanford Zeigler, M.D.**, and vascular surgeon **Mathew Wooster, M.D.**, has achieved remarkable growth. Their collaborative, highly specialized team, comprising vascular and cardiothoracic surgeons, has seen a **59% increase** in endovascular arch repair and an **23% increase** in open proximal and arch operations. This significant growth is a testament to the program's commitment to advancing clinical care.

Spotlight on Kathryn Engelhardt, M.D., MS



Kathryn Engelhardt, M.D., MS, joined MUSC in 2022 and rapidly built a busy thoracic surgery practice. She is double board-certified in thoracic and general surgery. An avid researcher, she received the Hollings Clinical Scholar Award in FY23. This year, she participated in the American Association of Thoracic Surgery Leadership Academy and the International Association for the Study of Lung Cancer Leadership Academy, and she is an associate editor for the *Annals of Thoracic Surgery Short Reports*.

INNOVATIONS IN RESEARCH

The Division of Cardiothoracic Surgery is engaged in leading-edge basic science, translational, and clinical research.

- **Arman Kilic, M.D.**, has been awarded a \$1.9M NIH R01 Grant for his proposed work to help shrink this chasm between heart transplant demand and supply.
- The Cardiothoracic Surgery Division is the busiest clinical trials division in the Department of Surgery, with 16 ongoing clinical trials. In addition, **Marc R. Katz, M.D., MPH**, is a co-PI on six cardiac trials.

BY THE NUMBERS

59%

Increase in
Endovascular Total
Aortic Arch Repair

56

Heart Transplants

17

Lung Transplants

21%

Increase in Inpatient
Thoracic Surgery Cases

Then.

In 1979, Fred A. Crawford, M.D., joined MUSC as chief of the Division of Cardiothoracic Surgery. Less than ten years later, he was part of a team that performed the first heart transplant in South Carolina.

Now.

The division has grown to include 11 surgical faculty and its statewide expansion includes collaborations with Self Memorial Regional Hospital and AnMed Medical Center.

Next.

Upon completion in 2028, Tideland's Health Carolina Bays Hospital will offer a heart care institute and open-heart surgery program operated in partnership with MUSC Health.

COLORECTAL SURGERY

*The **Division of Colorectal Surgery** is nationally and internationally recognized for its pioneering efforts and extensive experience in minimally invasive surgery, including state-of-the-art laparoscopic and robotic procedures for colorectal cancer and inflammatory bowel disease. Our team lends a unique depth and breadth of experience to a wide range of benign and malignant diseases of the lower GI tract.*

Professor and Chief
Virgilio George, M.D.

Associate Professors of Surgery
Thomas Curran, M.D., MPH
Pinckney J. Maxwell IV, M.D.

Assistant Professors of Surgery
Colleen Donahue, M.D.
Maggie Westfal, M.D., MPH

Advanced Practice Provider
Karen Anderson, PA-C

COLORECTAL SURGERY HIGHLIGHTS



ADVANCES IN CLINICAL CARE



Our team provides advanced care using a multidisciplinary approach for patients diagnosed with colorectal cancers and has earned national reaccreditation through the ACS National Accreditation Program for Rectal Cancer (NAPRC), recognizing our commitment to providing the best possible care for patients with the disease.

Karen Anderson, PA-C, works closely with the surgical team and leads the colorectal cancer survivorship program, focusing on surveillance for cancer recurrence using the latest technology of circulating tumor

DNA (ctDNA), allowing for earlier detection of cancer recurrence compared to traditional testing algorithms.

RESEARCH

Maggie Westfal, M.D., MPH, has been named a Hollings Cancer Center Clinical Scholar. The HCC Clinical Scholars program provides dedicated time for outstanding assistant professors to focus on cancer-related clinical investigations.



EDUCATION

Colleen Donahue, M.D., has been named the general surgery residency program director. This new role allows her to be more involved with the residency from a broader perspective including selection of residents, curriculum development and creating a strong academic teaching program, which facilitates each general surgery resident's success.



BY THE NUMBERS

23%

Increase in Inpatient Surgical Cases

10%

Increase in New Patients

1,144

Surgical Cases

15%

Increase in Inpatient Encounters

Then.

In 2015, Virgilio George, M.D., joined MUSC as Section Chief for Colorectal Surgery. He brought with him novel MIS surgical treatment options & expertise for colorectal cancer surgery.

Now.

Today, the division is at the forefront of innovative, minimally invasive procedures and personalized care, continually improving the quality of life for patients through research and comprehensive care.

Next.

Looking ahead, the division aims to revolutionize colorectal surgery with emerging technologies like robotic-assisted surgery and enhanced recovery protocols, while pioneering personalized genetic surgical care.

FOREGUT & METABOLIC SURGERY

The **Division of Foregut and Metabolic Surgery** is nationally and internationally recognized for its surgical expertise and multidisciplinary approach to caring for patients in need of weight loss surgery. The Bariatric Surgery Program is a Robotic Center of Excellence and a certified center for observation for Robotic Bariatric Surgery. We have hosted surgeons from across the country and from all over the world.

Professor and Chief
Rana Pullatt, M.D.

Professor of Surgery
T. Karl Byrne, M.D.

Assistant Professors of Surgery
Mary Kate Bryant, M.D., MSCR
Douglas Cassidy, M.D.

Advanced Practice Provider
Kelsie Goodwin, NP

FOREGUT & METABOLIC SURGERY HIGHLIGHTS



RANA PULLATT, M.D., HONORED WITH NATIONAL RECOGNITION FOR CLINICAL EXCELLENCE

Rana Pullatt, M.D., is a renowned surgeon who cares for some of the most challenging high BMI patients in South Carolina. For his notable and outstanding contributions to the field of metabolic and bariatric surgery, he was honored with the 2023 American Society of Metabolic and Bariatric Surgery (ASMBS) Foundation's 2023 Clinical Excellence Award and the ASMBS 2024 Distinguished Service Award.

ADVANCES IN CLINICAL CARE

In addition to expertise in the Duodenal Switch and SADI operations, where our bariatric surgery center has the largest volume of these surgeries in the state, our center is the only one in South Carolina offering a gastric bypass conversion to a duodenal switch, a complex procedure offered to extremely high BMI patients. Not only is it the only center offering this procedure in SC, but **Rana Pullatt, M.D.**, does these complex procedures robotically. When done with skilled surgeons robotically, these technically challenging operations have better outcomes with shorter recovery times.

RESEARCH

Mary Kate Bryant, M.D., MSCR, won a Surgical Innovation Award from the Harvey and Marcia Schiller Surgical Innovation Center Competition for her research *Utility of Visceral Adiposity on Abdominal CT for Prediction of Bariatric Surgery Outcomes*. Her research has been presented at several national meetings.

EDUCATION

Douglas Cassidy, M.D., received the Center for Excellence in Surgical Education, Research, and Training (CESERT) Giant Robot Award from the Association of Surgical Education for his proposal Development of a National Interprofessional Team Training Simulation for Emergency Robot Undocking.

T. Karl Byrne, M.D., is the premier teacher of advanced laparoscopic surgical techniques for our trainees.

BY THE NUMBERS

43%

Increase in
Outpatient Encounters

32%

Increase in Inpatient
Surgical Cases

1,185

New Patients

25%

Increase in wRVUs

Then.

T. Karl Byrne, M.D., led the way in weight loss surgery in 1992 with the first bariatric surgery program in SC.

Now.

Today, MUSC Health is nationally recognized for bariatric surgery.

Next.

MUSC Health is in the process of building a multidisciplinary comprehensive Obesity Management Center.

GENERAL, ACUTE CARE, TRAUMA & BURN SURGERY

.....

Surgeons in the **Division of General, Acute Care, Trauma and Burn Surgery** offer a full spectrum of highly specialized care using the least invasive procedures for both elective and emergent surgeries. This year, trauma surgeon **Brittany Bankhead, M.D.** and burn surgeon **Adria Johnson, M.D.** joined our team.

Professor and Chief

Bruce Crookes, M.D., MBA

Professors of Surgery

Evert Eriksson, M.D.

Heather Evans, M.D., MS

Stephen Fann, M.D.

Steven Kahn, M.D.

Stuart Leon, M.D.

E. Douglas Norcross, M.D.

Cynthia Talley, M.D.

Associate Professors of Surgery

Ashley Hink, M.D., MPH

Alicia Privette, M.D.

Brittany Bankhead, M.D.

Assistant Professors of Surgery

Yulia Gavrilova, Ph.D.

Adria Johnson, M.D.

Mike M. Mallah, M.D.

GENERAL, ACUTE CARE, TRAUMA & BURN SURGERY HIGHLIGHTS



CLINICAL CARE

The Rise in Robotic Surgery for Complex Abdominal Wall Hernias and Reconstruction

Steven Fann, M.D., specializes in treating all types of abdominal wall hernias; ventral, incisional, inguinal, flank, and parastomal hernias. He is on the cutting edge of expanding robotic surgery to treat some of the most complex and atypical hernias, as well as large, difficult abdominal wall reconstructions, including robotic Transversus abdominis release and robotic eTEP retro rectus hernia repair, reducing the invasiveness of most hernia repairs. Using the da Vinci Xi robot improves outcomes and reduces risks for the patients, while reducing strain, fatigue and risk of musculoskeletal injury for the clinician.

RESEARCH

Brittany Bankhead, M.D., is a trauma surgeon with a strong interest in innovation. As the Stop the Bleed State Champion of Texas for the Committee on Trauma, she saw a need for improved hemorrhage control training. She built a multidisciplinary regional team that was accepted into the National Science Foundation's Innovation Corps, where her team shifted their focus for commercialization from solely local injury prevention to also include improved military biofeedback hemorrhage control training. Dr. Bankhead's team received significant regional and national funding.

EDUCATION

The Surgical Critical Care Fellowship, led by SCC Program Director **Alicia Privette, M.D.**, has been approved for a complement increase for two non-ACGME second-year fellows (one Acute Care Surgery fellow and one Burn fellow) as well as received preliminary approval for a third ACGME first year SCC fellowship position that is designated for applicants interested in obtaining a burn certification.

BY THE NUMBERS

25%

Increase in Outpatient General/Burn Surgery

14%

Increase in General, ACT & Burn Surgery wRVUs

2,259

New Patients

13%

Increase in Outpatient Encounters

Then.

In 1989, E. Douglas Norcross, M.D., joined MUSC as the first trauma surgeon. By 2011, we were the first ACS COT program in South Carolina.


Now.

In 2024, we have 14 faculty members, four of whom are integral to the care for burn patients in the state's only comprehensive burn center for adult and pediatric patients.

Next.

In the next fiscal year, the division is anticipating ABA Burn Center Verification and approval for a new Burn Fellowship.

SURGICAL ONCOLOGY/ HPB AND ENDOCRINE SURGERY



The Division of Surgical Oncology/HPB and Endocrine Surgery provides comprehensive surgical care for patients with benign and malignant breast diseases, endocrine tumors, melanoma, sarcoma, soft tissue tumors, and cancers of the stomach, small intestine, liver, pancreas, gallbladder, bile duct, periampullary region, retroperitoneal sarcomas, and other rare benign or malignant tumors. Our surgeons are at the forefront of minimally invasive techniques for cancer surgeries that improve precision and reduce the surgical impact on patients.

Professor and Chief

Kevin Roggin, M.D.

Professors of Surgery

President David J. Cole, M.D.

Denise Carneiro-Pla, M.D.

William Hawkins, M.D.

Kevin Hughes, M.D.

Mark Lockett, M.D.

David Mahvi, M.D.

Associate Professors of Surgery

Andrea Abbott, M.D., MSCR

William Lancaster, M.D.

Rochelle Ringer, M.D.

Assistant Professors of Surgery

Bernice Huang, M.D.

Tara Grahovac, M.D.

Jeffrey Sutton, M.D.

Adjunct Professor of Surgery

Jon van Heerden, M.D.

Research Faculty

Nancy Klauber-DeMore, M.D.

Shikhar Mehrotra, Ph.D.

Dirk Spitzer, Ph.D.

Hongjun Wang, Ph.D.

SURGICAL ONCOLOGY/HPB AND ENDOCRINE SURGERY HIGHLIGHTS



ADVANCES IN CLINICAL CARE

Surgical Oncology Division Streamlines Services

The Division of Surgical Oncology/HPB and Endocrine Surgery was reorganized to include three sections: Abdominal Surgical Oncology/HPB, Breast/Melanoma/Sarcoma, and Endocrine Surgery. The realignment will help synchronize the division's comprehensive, multidisciplinary, and patient-centered cancer care. Each section is led by a section chief. This approach allows patients to clearly understand the advanced specialization and specific services that our providers perform to promote timely, high-quality care with excellent clinical outcomes.



Kevin Roggin, M.D.
Abdominal Surgical Oncology/
HPB Section Chief



Andrea Abbott, M.D., MSCR
Breast, Melanoma and Sarcoma
Section Chief



Denise Carneiro-Pla, M.D.
Endocrine Surgery Section Chief

William Hawkins, M.D., Named Deputy Director of Hollings; Leads HPB Cancer Research Lab

William Hawkins, M.D., is a surgical oncologist and researcher focusing on improving outcomes for pancreatic cancer patients. As the newly appointed Deputy Director at Hollings, Dr. Hawkins aims to promulgate collaborative team science and multi-disciplinary exchanges on a larger scale with the goal of impacting additional cancers. His research focuses on systematically developing and testing novel strategies for treating pancreatic adenocarcinoma.

Since 2008, **Dirk Spitzer, Ph.D.**, has worked in the William Hawkins Lab at Washington University in Saint Louis. Now, at MUSC and continuing his work with Hawkins, Spitzer can align his research with the Hollings Cancer Center, where he says he will have more opportunities to develop his research on the various drug platform technologies closer to clinical application.

BY THE NUMBERS

22%

Increase in Outpatient
Endocrine Surgery

7%

Increase in Outpatient
Surgical Oncology/HPB
Surgery

4,663

New Patients

17,526

Outpatient Encounters

Then.

In 1994, David J. Cole, M.D., was recruited from the NIH to join and eventually head the rapidly growing program in Surgical Oncology.

Now.

Today, the division has grown to include 17 clinical and research faculty with clinical expertise in a broad range of oncologic, HPB and endocrine surgery.

Next.

In the next fiscal year, the division is anticipating expanding the Next Day Access Program for Abdominal Cancers to other types of cancer.

PEDIATRIC SURGERY

.....
*Our nationally recognized pediatric surgeons in the **Division of Pediatric Surgery** collaborate with best-in-class experts in pediatric anesthesia, emergency medicine, ICU, and other pediatric subspecialists to provide high quality family-focused care for complex pediatric surgical conditions. This year, fellowship-trained pediatric surgeon Aaron Cunningham, M.D., joined our team.*

Professor and Chief
Christian Streck, M.D.

Professor Emeritus
H. Biemann Othersen, Jr., M.D.

Professors of Surgery
Robert Cina, M.D.
Aaron Leshner, M.D., MSCR
Dennis Vane, M.D.

Associate Professor of Surgery
Laura Hollinger, M.D.

Assistant Professors of Surgery
Aaron Cunningham, M.D.
Rohit Mittal, M.D.

PEDIATRIC SURGERY HIGHLIGHTS



ADVANCES IN CLINICAL CARE

Robotic Excellence for Adolescent Bariatric and MIS Surgery



Pediatric Surgery is expanding care for our adolescent bariatric and minimally invasive surgery. **Aaron Lesher, M.D., MSCR**, earned da Vinci surgical system certification and now offers robotic surgery for the adolescent bariatric population. Adolescent bariatric surgery is most commonly performed laparoscopically. The advantages of bariatric robotic surgery include less pain, scarring, and risk of infection and a quicker recovery time. For the surgeon, the da Vinci System provides the advantage of motion scaling and hand tremor reduction, which are critical in working in and around the smaller anatomical structures of adolescents and children.

RESEARCH

- The division was invited to join ATOMAC+, a pediatric research collaborative, which advances tomorrow's innovation through meaningful investigations and collaborations. ATOMAC+ Pediatric Trauma Network has led the way in multicenter pediatric trauma clinical research.
- **Aaron Lesher, M.D., MSCR**, and **Christian Streck, M.D.**, each received a Surgical Innovation Award from the Harvey and Marcia Schiller Surgical Innovation Center competition. The award supports their AI research proposals that show promise to advance care.

EDUCATION

Allison Frederick, M.D., PGY-Research, is the inaugural pediatric surgery research fellow, thanks to an endowment created through a philanthropic gift from Barbara Stuart Christie. The endowment provides funding to support dedicated research time for residents interested in a career in pediatric surgery.

BY THE NUMBERS

672

Inpatient Surgical Cases

1,710

New Patients

48%

Increase in
Inpatient Encounters

26%

Increase in wRVUs

Then.

When **H. Biemann Othersen, Jr., M.D.**, joined the faculty at MUSC in 1965, he was the state's first pediatric surgeon and one of the first in the Southeast.

Now.

The division has grown to include six highly specialized pediatric surgeons and one research fellowship opportunity.

Next.

The division anticipates expanding their research footprint in trauma, burns, ECMO, and surgical oncology.

PEDIATRIC CARDIOTHORACIC SURGERY

*In the **Division of Pediatric Cardiothoracic Surgery**, our nationally renowned surgeons work with a multispecialty team at the MUSC Shawn Jenkins Children's Hospital to deliver the highest level of care and support to our patients ranging from infancy to adults. Our team treats the full spectrum of heart disorders, from the common and simple to the rare and most complex. The Pediatric & Congenital Heart Center at the MUSC SJCH ranked No. 2 in the country in the 2024-2025 U.S. News & World Report's Best Children's Hospital survey.*

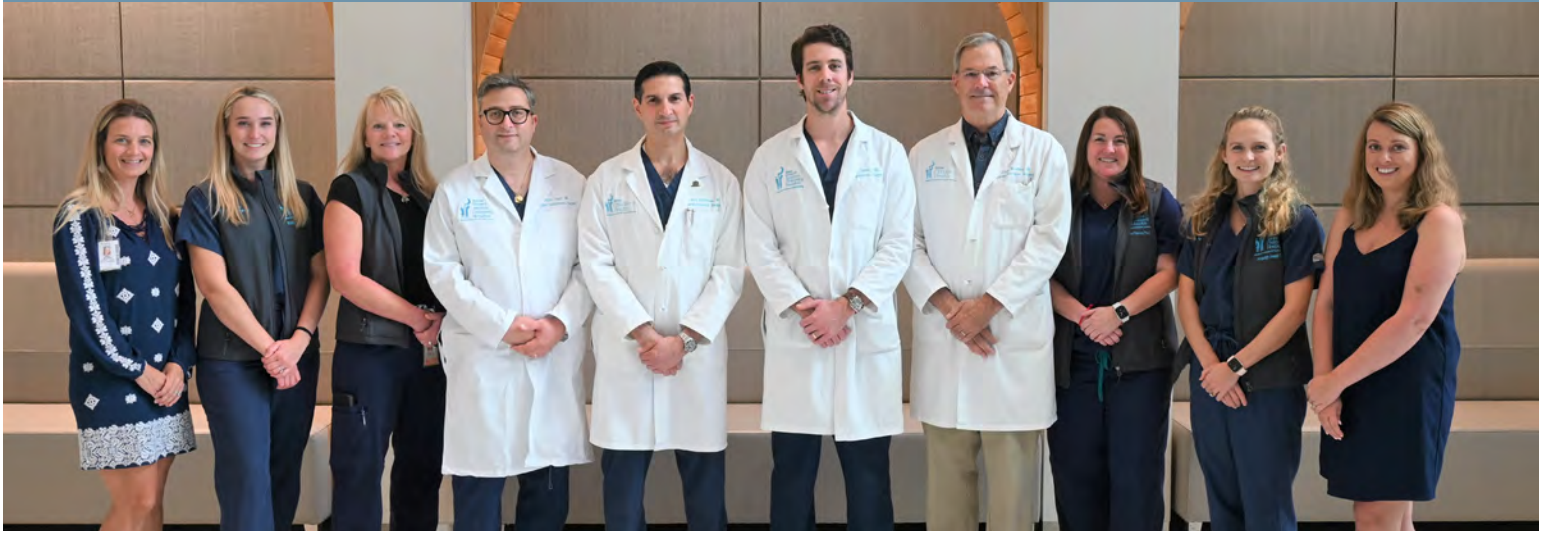
Professor and Chief
Minoo Kavarana, M.D.

Distinguished University Professor Emeritus
Robert M. Sade, M.D.

Professor Emeritus of Surgery
Scott M. Bradley, M.D.

Assistant Professors of Surgery
Lloyd "Mac" Felmly, M.D.
Matteo Trezzi, M.D.

PEDIATRIC CARDIOTHORACIC SURGERY HIGHLIGHTS



CLINICAL CARE EXPERTISE



Our dedication to improving the lives of children in need of critical heart surgeries builds on the success of our outstanding team, led by **Minoo Kavarana, M.D.** Under Kavarana's leadership, the division continues to expand and grow in services that include pediatric ventricular assist devices, heart transplantation, and the adult congenital heart program. The division is the only program in the state of SC to offer the Ross procedure which is a complex procedure for children and young adults in need of aortic valve replacement. Kavarana performed the first reinforced Ross procedure in the state which provides significant long-term durability of the Ross valve over and above the standard Ross-procedure. Following this our program has seen steady growth in the Ross Procedure both in children and young adults. New this year, the division is establishing a living donor valve program, a testament to our continuous growth and innovation.



Mac Felmly, M.D., joined the team in summer 2023. With the addition of Felmly, the heart transplant program is experiencing significant growth. He received significant training in and specializes in complex pulmonary artery reconstruction and the repair of multiple aorto-pulmonary collaterals, which was pioneered by Stanford University where he trained. He is also starting up a new pediatric lung transplant program for which we now have approval.



Matteo Trezzi, M.D., a pediatric cardiothoracic surgeon specializing in congenital heart surgery, joined the team in Summer 2024. After his MUSC pediatric cardiac surgery fellowship training, Trezzi was an attending at the Bambino Gesù Children's Hospital of Rome for the past 10 years where he received significant experience in pediatric ECMO, ventricular assist devices, heart transplantation and lung transplantation.

BY THE NUMBERS

64%

Increase in Pediatric Heart Transplants

17%

Increase in Surgical Cases

40%

Increase in Inpatient Encounters

10%

Increase in wRVUs

THANK YOU

The department thanks pediatric cardiac surgeon **Scott M. Bradley, M.D.**, who retired after nearly 30 years of service to MUSC, for creating the strong foundation upon which our division can continue to grow in clinical expertise.



Then.

Robert M. Sade, M.D., joined MUSC to create and lead the MUSC Pediatric Cardiac Surgery Program.

Now.

Today, our pediatric cardiac surgical outcomes rank among the best centers in the world.

Next.

The division plans to expand by creating a lung transplant program and a pulmonary artery reconstruction program.

PLASTIC, RECONSTRUCTIVE & HAND SURGERY

.....

*The **Division of Plastic, Reconstructive and Hand Surgery** offers the full spectrum of plastic surgery including hand surgery, reconstructive surgery, pediatric plastic surgery, lymphedema, breast reconstruction, and microsurgery as well as cosmetic surgery and aesthetic services. Our surgeons combine deep expertise with the latest techniques to provide exceptional care.*

Associate Professor and Chief
M. Lance Tavana, M.D.

Professors of Surgery
Milton Armstrong, M.D.
Fernando Herrera, M.D.

Associate Professor of Surgery
Kevin Delaney, M.D.

Assistant Professors of Surgery
Gabriel Klein, M.D., MSCR
Isis Scomacao, M.D.

PLASTIC, RECONSTRUCTIVE & HAND SURGERY HIGHLIGHTS



NEW LEADERSHIP

After a national search, the MUSC Department of Surgery is pleased to announce that **M. Lance Tavana, M.D.**, Associate Professor of Surgery and Director of Clinical Operations of Plastic Surgery at MUSC Health, has been selected as the new Chief of the MUSC Department of Surgery's Division of Plastic, Reconstructive and Hand Surgery. The Department of Surgery extends deep gratitude to **Milton B. Armstrong, M.D.**, for his many years of leadership and significant contributions to the growth and expansion of the division's clinical expertise and educational programming. These contributions have provided a solid foundation for Dr. Tavana in his new role.

ADVANCES IN CLINICAL CARE

Isis Scomacao, M.D., offers both lymphovenous bypass and lymph node transfer surgical procedures. These novel surgical treatments are an effective management tool to reduce the symptoms of lymphedema, allowing patients to resume a more normal and active life. MUSC Health is one of a handful of surgical centers across the U.S. offering this novel therapy.

EDUCATION



Integrated Plastic Surgery Graduating Chief **Donna Mullner M.D.**, joins the division in fall 2025, after completing a Hand Surgery Fellowship at the University of Kentucky.



Integrated Plastic Surgery Chief **Jenna Thuman, M.D., PGY-6**, matched into a prestigious facial plastic and reconstructive fellowship with Dr. Paul Nassif, Dr. Babak Azizzadeh, and Dr. Grace Lee Peng in Beverly Hills, CA.



Plastic Surgery Fellowship Chief **David Magno-Padron, M.D.**, matched into an Aesthetic Fellowship with Morales Plastic Surgery in Houston, TX.

BY THE NUMBERS

19%

Increase in Inpatient Hand Surgery

8.5%

Increase in Surgical Cases

3,006

New Patients

23,648

Outpatient Encounters

Then.

In 1969, the plastic surgery fellowship program was started.

Now.

The plastic surgery integrated residency program was started in 2016 and is expanding from 1 – 2 residents per year.

Next.

The division looks forward to expanding the residency program and starting subspecialty fellowships in the future.

TRANSPLANT SURGERY



.....
*Surgeons in the **Division of Transplant Surgery** are nationally recognized leaders in transplantation working side-by-side with nephrologists, hepatologists, immunologists, interventionalists and radiologists to provide the most comprehensive patient care in the region. Our statewide expansion provides greater access to our specialized care. Three fellowship-trained transplant surgeons recently joined our team: Santosh Nagaraju, M.D., Diego di Sabato, M.D., and Kannan Samy, M.D.*

Professor and Chief
Steven Hanish, M.D.

Professors of Surgery
Chair Prabhakar Baliga, M.D.
John McGillicuddy, M.D.
Joseph Scalea, M.D.

Associate Professors of Surgery
Diego di Sabato, M.D.
Santosh Nagaraju, M.D.

Assistant Professors of Surgery
Tracy Rice, M.D.
Kannan Samy, M.D.
Dirk van der Windt, M.D.

MUSC - Lancaster
Assistant Professors of Surgery
Ahmad Alqassieh, M.D.
Ammar Mahmood, M.D.

Research Faculty
David Taber, Pharm.D., MS
Yuan Zhai, M.D., Ph.D.

TRANSPLANT SURGERY HIGHLIGHTS



ADVANCES IN CLINICAL CARE

More Solutions, Better Outcomes for Patients with End-Stage Liver Disease

This spring, the liver transplant team brought a new technology to their program, the Transmedics OCS Liver perfusion pump, developed to improve upon the limitations of cold storage preservation and increase access to liver transplants for patients with end-stage liver disease. This pump is similar to the OrganOx perfusion pump the division began using this fall. Unique to the Transmedics platform is that the liver is placed on the device at the donor hospital reducing the cold ischemic time significantly. Both systems improve patient outcomes by keeping the donor organ perfused and warm, allowing organs to be retrieved from a greater distance as well as assess the liver's quality while being perfused. Now, with both devices on hand, more patients can have better access and outcomes.

Living Kidney Donor Program Achieves Milestone

In FY23, the living kidney donor program, led by **Tracy Rice, M.D.**, converted living donor nephrectomies to a fully robotic donor practice. **In FY24, the program celebrated a milestone: 100 robotic nephrectomies.** Dr. Rice says the combination of robotic surgery and the enhanced recovery pathways at MUSC allow for a quicker and safer recovery for living donors.

RESEARCH

David J. Taber, PharmD – Dr. Taber's research focuses on optimizing transplant medication safety through Pharmacist-led mHealth based intervention. He is the PI of a \$1.5M R18 study with the U.S. Department of Health & Human Services AHRQ and is the PI on a \$3.1M NIH/NIDDK study that aims to demonstrate an effective and efficient approach to improve long-term outcomes in African American kidney recipients while reducing health disparities.

Yuan Zhai, Ph.D., and **Dirk van der Windt, M.D., Ph.D.**, work collaboratively to discover, test, and implement novel and clinically relevant immunologic solutions to life-critical problems through innovative translational research.

BY THE NUMBERS

8%

Increase in Living Donor
Kidney Transplants

304

Kidney Transplants

7,856

Outpatient Encounters

1,250

New Patients

Then.

In 1968, MUSC performed the first kidney transplant in South Carolina.

Now.

Today, MUSC is one of the largest kidney and pancreas transplant programs in the country with outstanding outcomes in robotic nephrectomies.

Next.

The division aims to improve transplant access and equity, initiating a living donor liver program and a robotic living donor implant program.

VASCULAR SURGERY

The **Division of Vascular Surgery** provides advanced vascular care encompassing the full range of medical optimization, open surgery and the latest endovascular techniques. This year, the team expanded to include Lindsey Korepta, M.D., and Chun Li, M.D., MPH.

Professor and Chief
Ravi Veeraswamy, M.D.

Professor of Surgery
Thomas E. Brothers, M.D.

Associate Professors of Surgery
Lindsey Korepta, M.D.
Jean Marie Ruddy, M.D.
Mathew Wooster, M.D.
A. Sharee Wright, M.D.

Assistant Professors of Surgery
Matthew Gibson, M.D.
Chun Li, M.D., MPH
Adam Tanious, M.D., MMSc
J. Chadwick Tober, M.D.
Gabor Winkler, M.D.

VASCULAR SURGERY HIGHLIGHTS



ADVANCES IN CLINICAL CARE

The MUSC Aortic Center, led by vascular surgeon **Mathew Wooster, M.D.**, and cardiothoracic surgeon **Sanford Zeigler, M.D.**, have created a highly specialized multidisciplinary team comprised of vascular and cardiothoracic surgeons who work side by side on complex aortic arch repair. Advanced Practice Provider **Brooke Hendrickson, NP**, is a dedicated APP for the Aortic Center, where she treats pre- and post-operative patients, conducts inpatient consults and is responsible for outpatient management of patients.

NEW PROVIDERS



Lindsey Korepta, M.D., joined MUSC as an associate professor. Dr. Korepta has a strong interest in women's health and the treatment of aortic disease, carotid disease, hemodialysis access, and lower extremity venous and peripheral artery disease.



Chun Li, M.D., MPH, completed her vascular fellowship and general surgery residency at Beth Israel Deaconess Medical Center, and she received her master's in public health from the Harvard University T.H. Chan School of Public Health. Dr. Li joined MUSC as an assistant professor.

RESEARCH

Jean Marie Ruddy, M.D., received a VA Merit Award for her research entitled: *Targeting Biomechanical Signaling in AAA*.

EDUCATION

Saranya Sundaram, M.D., PGY- Research, had a highly productive year. She gave three podium presentations at national meetings including a plenary session at the Society of Vascular Surgeons annual meeting, her research was published in the *Journal of Vascular Surgery* and *Annals of Vascular Surgery*, and she distinguished herself with SVS VQI Fellowship in Training Program's Jack L. Cronenwett Quality Improvement Scholarship Award, given to only five students annually.

BY THE NUMBERS

59%

Increase in
Endovascular Total
Aortic Arch Repair

12%

Increase in
Surgical Procedures

17,131

Outpatient
Encounters

13

Clinical Trials

Then.

Bruce Elliott, M.D., & Jacob Robison, M.D., were the first vascular surgeons in South Carolina, building the strong foundation for vascular surgery at MUSC.

Now.

Ravi Veeraswamy, M.D., grew the division to include a statewide network of 11 highly specialized full-time surgical faculty.

Next.

The division plans to expand their resident training program and integrated network of vascular care across the state and increase the research infrastructure.



The R. Randolph Bradham, M.D., Endowed Chair in Surgery



The Department of Surgery announces the establishment of the R. Randolph Bradham, M.D., Endowed Chair in Surgery, and recognizes **Prabhakar Baliga, M.D.**, chair of the Department of Surgery, as the inaugural chairholder. An endowed chair is the highest honor MUSC bestows upon a faculty member.

“I am honored to receive the newly created R. Randolph Bradham, M.D., Endowed Chair in Surgery, which exemplifies Dr. Bradham’s lifelong values and service to the community,” said Baliga. “The R. Randolph Bradham, M.D., Endowed Chair in Surgery is a first-of-its-kind in the department, supporting the chair and, ultimately, the department, providing greater opportunity to create innovative and transformative education programs to educate the next generation of surgical leaders.”

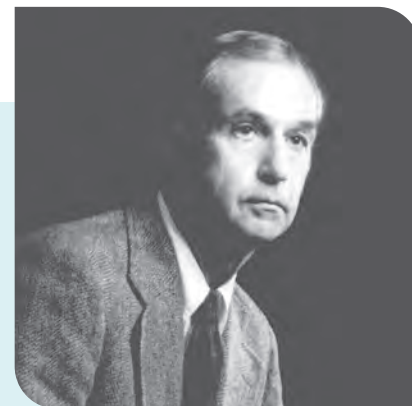
The newly created endowed chair is a long-term commitment to excellence and embodies the spirit and values of R. Randolph Bradham, M.D., who served as the department’s second full-time chair and has impacted countless physicians and surgeons and, as a result, patients nationwide. It is made possible through our benevolent donors within the Bradham family, whose vision, support, and trust in our leadership determined our ability to establish this endowed chair.

“Many of the qualities that made Dad a great parent also made him a great doctor and surgeon. His intelligence, curious mind, tireless determination to help others, compassion, selflessness and humility all worked beautifully together,” said John M. Bradham. “By endowing this chair, we hope that his legacy will continue and help to instill these qualities in future generations of physicians.”

Dr. Bradham led a life of service, exemplifying a commitment to excellence and professionalism in surgical training and patient care. He joined MUSC in 1956, and when the then-chair of the department’s health began to fail, Dr. Bradham gradually and altruistically assumed leadership responsibilities. He officially served as the second full-time chair from 1960-62, and his selfless commitment to quality care and professionalism spanned his entire career and life.

Throughout his adult life, Dr. Bradham credited his military service to his success as a leader and cardiothoracic surgeon. He served as staff sergeant and squad leader in the 66th infantry division in the Army during WWII, the “Black Panthers” charged with neutralizing German forces in Northern France. “After going through the war and all that, doing surgery didn’t upset me,” he said during an interview in 2017 for MUSC’s Legacies Magazine.

A brilliant and accomplished cardiothoracic surgeon, Dr. Bradham was well known for his humility and selflessness; his concern, both as a doctor and as a person, was always to ease the pain and suffering of others. In 1995, he fully retired, then authored four books, three of which were about his experiences during WWII, became a licensed airline pilot at the age of 81, and started the largest blueberry farm in South Carolina, “Sweet Blues,” to which he was deeply committed until his passing in 2018.



R. Randolph Bradham, M.D.

H. Biemann Othersen, Jr., M.D., Chair of the Curtis P. Artz MUSC Surgical Society, trained under Dr. Bradham, along with colleagues **Randy Smoak, M.D.**, **Wendell Levi, M.D.**, and many other prominent surgeons. He says he and his classmates benefited greatly from his wisdom and guidance during those critical times, as did the whole department. The two kept in touch over the years. During a 2011 visit to “Sweet Blues,” a conversation on the importance of a surgical leadership education program came up. “During my visit, we were talking about the next generation of surgeons and how much they can learn from us – And, equally important, what we can learn from them,” Othersen said.

Realizing the healthcare landscape was changing at a swift pace and affecting surgical education programs nationwide, institutional leaders in the Department of Surgery, including MUSC President and former Department of Surgery Chair, **David J. Cole, M.D., FACS**, Interim Chair **David B. Adams, M.D.**, and current Chair **Prabhakar Baliga, M.D.**, met with Dr. Bradham on several occasions to discuss his vision for an

innovative and transformative surgical education program. These institutional leaders had the privilege of multiple opportunities to speak at length with him and discuss his thoughts on what was essential to include when considering ways to enhance and elevate our education program. Several themes emerged, including creating a leadership program, expanding our global surgery footprint, and advancing care through learning the latest technologies using advanced simulation training.

In 2017, during the Curtis P. Artz MUSC Surgical Society luncheon honoring Dr. Bradham as a Distinguished Alumnus, the department leadership was pleased to announce Dr. Bradham graciously lent his name to the R. Randolph Bradham, M.D., Endowment for the Enhancement of Surgical Education. The endowment is devoted to the education of surgical leaders. As a result of this endowment, in 2020, the education division launched the Future Surgical Leaders Program, a first-of-its-kind surgical residency training program in the U.S. Two years later, the program expanded to include a Pathways Program to develop an academic niche for our graduates. By 2023, a Global Surgery Program was created, leveraging global relationships to create bidirectional clinical education, research, and innovation opportunities that improve the care of surgical patients in low- and middle-income countries and developed nations.



Foremost in this initiative is permanently naming the first-ever endowed chair for the chair's office in Dr. Bradham's name. Through its creation, an even greater opportunity has been given to the Department of Surgery to expand on the current education initiatives. "This commitment changes the trajectory and level of care we provide at MUSC," said Baliga. "By providing a stable source of departmental funding in perpetuity, it allows us to significantly impact the next generation of surgeons and ensures that we carry on the strong values of service to the community that Dr. Bradham embodied – and, as a result – improve patient care for decades to come."



LOWVELO23 riders celebrate during their ride last November

Record Ride: LOWVELO Participants Raise \$650K for Cancer Research at MUSC Hollings Cancer Center

It was one for the record books. LOWVELO23 had more riders, volunteers and dollars raised than any ride in its five-year history. Participants – all 1,334 of them – combined

to smash the fundraising record, collecting more than \$650,000 for lifesaving cancer research at MUSC Hollings Cancer Center.

Hollings director **Raymond N. DuBois, M.D., Ph.D.**, explained that events like LOWVELO allow MUSC Hollings Cancer Center to work on high-risk, high-reward research that federal agencies don't fund.

For instance, LOWVELO funds over the years have helped to establish a CAR-T cell therapy research program, led by **Shikhar Mehrotra, Ph.D.**, co-leader of the Cancer Biology & Immunology Research Program, and Hollings hematologist and oncologist **Brian Hess, M.D.**

This January, Hollings started its first two patients on a clinical trial to receive purified CAR-T cells, partly funded by LOWVELO.

"The first patient was totally cancer-free within three weeks," said DuBois. "He had a B-cell lymphoma, and it responded really well. What we found was that cells made at Hollings are much stronger cancer fighters. They persist much longer, so the remission happens sooner."

Right now, Hollings is one of only a handful of cancer centers across the country where these cancer-fighting cells are being made on-site in laboratories and used for the center's patients enrolled in a clinical trial.

Won't you join us for this year's ride on November 2 by joining and supporting the Bladed Bikers team, led by surgical oncologist William Hawkins, M.D.?



100% of rider-raised dollars go directly to life changing research just like Dr. Mehrotra's CAR-T cell therapy.

Curtis P. Artz MUSC Surgical Society Offers Fellowship and Support

The Curtis P. Artz MUSC Surgical Society, an organization for alumni of the MUSC Department of Surgery, was founded in 1974. As many know, Dr. Artz was a renowned trauma and burn surgeon who joined the faculty at MUSC in 1965. Known widely as a beloved teacher, scientist, and surgeon, he served as professor and chairman of the Department of Surgery until his untimely death in 1977. Since 2010, **H. Biemann Othersen, Jr., M.D.**, has been Chair of the Curtis P. Artz MUSC Surgical Society. The Society was established to maintain fellowship, friendship, and a sense of unity, provide a means to communicate surgical achievements, celebrate distinguished alumni, and support our current residents throughout their training.

During this year's graduation dinner, as we welcomed our graduates into our alumni family, we paid tribute to Dr. Othersen, who has served MUSC for nearly 60 years and for the past 14 years as our Chair the Curtis P. Artz Society MUSC Surgical Society, where his passion has been cultivating an enduring relationship among the trainees, students, and faculty of the Department of Surgery.

Dr. Othersen officially retired from this role in June, and we are pleased that **Aaron P. Leshner, M.D., MSCR**, Professor of Surgery and Pediatrics, has assumed this leadership role. Dr. Leshner is a proud graduate of the MUSC General Surgery Program and has been on faculty for the past 10 years.



"As surgical alumnus of MUSC, I am fortunate to have benefited from the support of the Curtis P. Artz MUSC Surgical Society during my training. As a faculty member, I see the full circle of how important our surgical society is to our alumni and trainees."

*-Aaron Leshner, M.D., MSCR
Chair, Curtis P. Artz MUSC Surgical Society*

All our alumni, retired faculty, current faculty, and trainees are encouraged to attend our MUSC Department of Surgery Reception on Sunday, October 20, in conjunction with the American College of Surgeons Annual Meeting in San Francisco.



(left to right) Prabhakar Baliga, M.D., Aaron Leshner, M.D., MSCR, and Biemann Othersen, M.D. at the 2024 Graduation Dinner

The Society's support for residents takes many forms. The Curtis P. Artz MUSC Surgical Society Award for Excellence, given to two outstanding residents with the highest ABSITE score, is a testament to our commitment to excellence. The society also sponsors an alumni reception at the annual American College of Surgeons meeting. And the provision of meals during call weekends is a small but significant way of showing our support and boosting resident camaraderie. Dr. Leshner explains, "Having a warm meal on a long call shift gives busy teams a chance to get together and relax for a few moments before the next Level A trauma or perforated colon comes through the door." These are small ways that we can improve the daily lives of our trainees.

Dr. Leshner, who has been actively engaged with the Artz Society for many years, is eagerly looking forward to reconnecting with many of our alumni as we reinvigorate some of our events. His enthusiasm is contagious, and we hope you share in his excitement for what's to come. "We all value the people who supported us during our training and now have the opportunity to help support the training of the next generation of surgeons," he said.



If you would like to support the future surgeons of tomorrow, please visit <https://bit.ly/giving-ArtzSociety> or scan the QR code.



Gratitude

To serve patients is our greatest privilege.



It is an honor to care for you and your families.

Your Gift is Changing What's Possible

By giving to the MUSC Department of Surgery, you support our dedicated surgeons, researchers and clinical staff who thrive on providing the best and most compassionate care for our patients, are leaders in innovations in research and clinical outcomes, and are committed to excellence in education – preparing the future surgeons today for the challenges of tomorrow.

*We invite you to become part of this mission with your own promise to support MUSC's surgical programs.
To donate to the MUSC Department of Surgery, scan the QR code or visit <https://bit.ly/giving-muscsurgery>*





DEPARTMENT OF SURGERY
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