OUT OF BODY EXPERIENCE
Rejuvenating Organs Using Ex Vivo Perfusion
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MESSAGE FROM THE CHAIR

I am pleased to present the newly redesigned spring 2017 issue of the Duke Department of Surgery newsletter. At Duke Surgery, we are committed to providing excellence in clinical care by continually seeking to improve life-saving treatments for patients. Our faculty are renowned for their discoveries, ranging from basic mechanistic and translational studies, to clinical innovations. This issue features several of the novel clinical trials led by Duke surgeons that hold tremendous promise for saving countless lives.

First, we highlight the extraordinary work of our multidisciplinary transplant teams. Duke is a leading center for organ transplantation. In the past year, our surgeons transplanted over 450 organs, including heart, lung, kidney, liver, pancreas, intestine, thymus, and hand. The wait times for our transplant programs are among the shortest in the nation and our posttransplant survival rates rank among the best nationwide. These results of these studies move the field forward in developing new devices to prolong the lives of patients with advanced heart failure.

In our education section, we feature a new educational program designed to educate the next generation of surgeons on the importance of self-care.

Finally, I would like to recognize two new division chiefs. Dr. Jeffrey Marcus is our new chief of the Division of Plastic, Maxillofacial, and Oral Surgery. Dr. Howard Francis joins Duke Surgery as our new chief of the Division of Head and Neck Surgery and Communication Sciences. Both Dr. Marcus and Dr. Francis are dynamic team leaders and we will all benefit from their expertise.

Sincerely,

Allan D. Kirk, MD, PhD, FACS

Duke University School of Medicine

David C. Sabiston, Jr. Distinguished Professor and Chairman
Department of Surgery
Duke University School of Medicine
Surgery-in-Chief
Duke University Health System
Each day, tens of thousands of patients on waiting lists across the United States await a simple phone call: one that says a match has been found and an organ is available for transplant. Despite a growing demand for donors, organ shortages continue to hinder many patients’ chances in receiving their potentially life-saving call.

The organ shortage has impacted several transplant teams at Duke. Carmelo Milano, MD, Professor, Division of Cardiovascular and Thoracic Surgery, says part of the reason for the shortage is the method used to preserve organs while in transit from donor to recipient.

“Duke has performed over 1,000 heart transplants using cold static storage,” says Dr. Milano, Heart Transplant Surgical Director. “With this method, the heart is removed from the donor and cooled with a solution before it is transported, but lack of oxygen to the organ can cause graft failure.”

Cold storage has been a staple of the transplant procedure for over 50 years. While this method is serviceable, it is far from ideal. Vital organs are sensitive to cold ischemia while stored on ice, as irreparable damage from a lack of oxygenated blood flow rapidly occurs. When a heart stops beating, or lungs stop breathing, the organ slowly dies.

The cold slows down the deterioration process but not entirely, and this race against the clock severely limits organ availability. The heart is particularly sensitive to damage; Duke’s range of potential donors for heart transplants is limited to those east of the Mississippi, according to Dr. Milano.

The lung transplant team faces similar obstacles, says Matthew Hartwig, MD, Associate Professor, Division of Cardiovascular and Thoracic Surgery. Though the team has successfully transplanted lungs held in cold storage for longer than the conservative 4-hour window, Dr. Hartwig says doing so can create more complications. With such a small window of time, organ matches found a considerable distance away often go unused.

THE ICE AGE MAY BE OVER

The most logical answer to the cold storage problem is also the most challenging: keep a transplanted organ in a near-physiologic state while outside of the body, perfused with blood, and limit the amount of time the organ is kept on ice.

Though the ability to keep an organ alive outside of the body may sound like something out of science fiction, a perfusion system makes this a reality. The device keeps an organ as fully functional as possible after surgical removal, during a process known as ex vivo perfusion. Rather than on ice, the device stores the organ at a normothermic temperature, causing less injury. Nutrient-rich blood taken from the donor filters through the organ, and the system allows close monitoring while the donated organ remains in a living state: beating, breathing, or functional.

Several Duke teams are at the forefront of national clinical studies to examine the efficacy of these devices in transplant
EXPANDING THE DONOR POOL
When asked to share the overall goal of using perfusion systems in transplantation, all surgeons had the same answer: to increase the number of organs available. Longer preservation times allow organs to travel greater distances, offering a larger geographic area to search for matches.

More important than geography is the ability to use “extended criteria organs,” says Jacob Schroder, MD, Assistant Professor, Division of Cardiovascular and Thoracic Surgery.

“Extended criteria hearts have some feature that makes them imperfect—ventricular hypertrophy, minor coronary disease, advanced age of the donor, certain causes of death, or a long estimated ischemic time,” says Dr. Schroder. “The success rate for these hearts has traditionally been very low, but the OCS™ device allows us to take the ischemic time out of the question.”

Whether heart, lung, or liver, when the threat of damage from cold storage is minimized, more organs become viable options for patients in need. To put it simply, Dr. Schroder explains that utilizing the OCS™ is the equivalent of transplanting an organ from a donor found in Raleigh, rather than farther away. Less risk, and more positive outcomes.

THE FUTURE OF EX VIVO PERFUSION
While organ preservation was the main goal of cold storage, perfusion raises an interesting question about the ability to rehabilitate organs while outside of the body. Is it possible to transplant an organ in a better condition than when it was procured?

Dawn Bowles, PhD, Assistant Professor, Division of Surgical Sciences, believes this may be a possibility. She has conducted biological therapy studies using porcine hearts perfused in the TransMedics® OCS™.

“These devices answer questions about whether or not a heart can be rehabilitated while it is stored,” says Dr. Bowles. “It is possible that we could fix some things that need fixing in a heart before it is transplanted.”

While this type of therapy is still on the horizon, it highlights the potential of the new technology. Through a grant from the American Society of Transplant Surgeons, Dr. Barbas is using animal models to test the possibility of repairing damaged livers through perfusion. Repairing organs ex vivo may be another solution to the organ shortage problem.

This potential application may already be a reality for lung transplants. Duke’s next trial with United Therapeutics will test the use of what Dr. Hartwig calls an “organ hospital”—a centralized location where organs are rehabilitated before transplantation.

“This technology is still in its infancy, but I can see our program being able to use the devices to not only stabilize lungs while outside of the body, but to intervene and improve them,” says Dr. Hartwig.

In the end, healthier organs in greater number available for transplant means more patients receiving the life-saving operations they need. For many patients awaiting a transplant, the wait for their phone call may be a short one.

Surgeons reconnect the pulmonary vessels during a lung transplant performed in April 2017.
DUKE HEALTH SURGICAL TEAMS PERFORM 5 Heart, Lung Transplants in 24 hours

William Stagg, Duke Health News

Duke Health’s heart and lung transplant programs have a long history of performing complicated transplants with outstanding success. That reputation was put to a challenging test on December 1, when Duke surgeons and their teams at Duke University Hospital successfully performed three heart transplants and two double lung transplants within a 24-hour period. Despite a full schedule of important surgeries that day, the transplants were performed without impacting the ability of the scheduled surgeries to take place as planned.

“It was business as usual throughout the Heart Center,” said Mani A. Daneshmand, MD, Assistant Professor, Division of Cardiothoracic Surgery, who performed one of the heart transplant procurements. “We have a systematic team, each with a ‘sleep bench’ of committed staff who made this possible. Because these transplants happened in such close proximity, it required the support of every member of the team—anesthesiology, OR nursing, ICU nursing, critical care, perfusion, and surgery. Without everyone pulling together this would have been impossible.”

Jacob Schroder, MD, implanted two of the hearts. Carmelo Milano, MD, implanted one. Jacob Klapper, MD, performed one of the double lung transplants.

Matthew G. Hartwig, MD, MHS, who performed the other double lung transplant and is Associate Professor of Surgery and Surgical Director of Lung and Heart-Lung Transplantation, said that Duke makes a commitment to its patients to always pursue an appropriate donor organ, whenever it becomes available, for all potential recipients.

“The entire team pitches in when necessary to make sure everyone is taken care of safely and effectively. There’s no way to plan for when a donor organ will become available, and all members of the team have to be able to flex up at a moment’s notice to enable these surgeries to take place. I know the on-call operating room staff were pushed to their limits and beyond on December 1, and it would have been impossible to do this sort of thing without their support and commitment to the process,” says Dr. Hartwig.

Duke’s heart transplant program is one of the nation’s largest, and has been named one of the highest performing transplant centers in the country. In 2014, Duke performed its 1,000th transplant—a significant milestone that has been achieved by only a handful of centers.

“Duke’s wait time on its lung transplant list averages about 14 days; the national average is 4 months.”

Duke’s lung transplant program is the largest lung transplant program in the United States. More than 1,600 lung transplants have been performed at Duke since 1992, with 108 occurring in 2015. Duke’s wait time on its lung transplant list averages about 14 days; the national average is four months.

“Our transplant teams do incredible work every day,” said Jill Engel, DNP, RN, FNP, ANP, ACNP, CCRN-CS, associate chief nursing officer of Heart Services. “Their dedication is an inspiration to all of us.”

December 1 capped a busy three-day period in which four hearts and four double lungs were transplanted. It also came in the midst of a flurry of 28 transplants in the 30-day period between November 25 and December 6: five hearts, 11 kidney/kidney–pancreas/pancreas, five livers, and seven double lungs.

“Duke University Hospital has the nation’s best outcomes for adult liver transplants from deceased donors, according to data from 2016. Duke’s transplant center, which in 1984 became the first in North Carolina to provide liver transplants, is among the nation’s most efficient centers. It moves patients from the waiting list to transplant more than 2.5 times faster than the national average.

“That’s an important statistic, because about one-fourth of patients listed throughout the nation die without getting a transplant,” said Stuart Knechtle, MD, executive director of the Duke Transplant Center. Knechtle said Duke performed 98 liver transplants last year—the most in the state.

Survival rates at Duke are also among the nation’s best. Measured at one and three years, survival for adults who received deceased-donor livers at Duke is higher than at all other centers in the United States.

“The chance of having a successful liver transplant is greatest at Duke compared to other centers in the country,” Knechtle said.

Liver transplant is an option for people with end-stage liver disease, cancer and organ failure.

Duke has been a pioneer in solid organ transplantation since establishing one of the nation’s first kidney transplant programs in 1965 and is among the nation’s leading centers for organ transplantation. The center now provides heart, lung and small bowel transplants in addition to liver and kidney. Last year, the transplant center became one of a few in the nation to also offer hand transplantation.

DUKE’S LIVER TRANSPLANT PROGRAM SHOWS BEST-IN-NATION RESULTS

Sarah Avery, Duke Health News

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A SECOND CHANCE AT LIFE

Duke Researchers Find Improved Outcomes with Two Novel Left Ventricular Assist Devices

PHOTO OF CARMELO MILANO, MD, AND JOSEPH ROGERS, MD

Patients with advanced heart failure have a prognosis similar to advanced-stage cancer,” says study co-author Joseph Rogers, MD, Professor of Medicine, Division of Cardiology, Department of Medicine. “Several studies have demonstrated a 1-year survival rate of approximately 20%.”

A LONGER-TERM SOLUTION

In the two studies, Dr. Milano and Dr. Rogers investigated the use of LVADs as a permanent treatment strategy to prolong survival and improve quality of life in patients with advanced heart failure, known as destination therapy.

“We have patients at this institution who have lived 8 or 9 years with LVAD support,” says Dr. Milano. “The LVADs help patients live longer and also they normalize their functional status to a point where a patient can perform most normal daily activity.”

The current axial-flow design, in which blood flows across a rotor bearing in the device, commonly leads to thrombus formation around the bearing. When pump thrombosis occurs, the LVAD must be replaced, necessitating a second operation. According to Dr. Milano, approximately 10% of patients implanted with the HeartMate II (Thoratec-Abbott, Minneapolis, MN) and 148 patients received the axial-flow HeartMate II. While LVADs are most often used as a bridge to transplantation, Duke surgeons have performed more than 1,300 LVAD implants since the program began over 30 years ago.

LVADs are mechanical pumps that replace a weakened left ventricle. Blood is drained from the left ventricle and pumped into the aorta and throughout the body. Duke is a leading center for ventricular assist device implantation. Duke surgeons have performed more than 1,300 LVAD implants since the program began over 30 years ago.

LVADs are most often used as a bridge to transplantation. Once a donor heart becomes available, surgeons remove the device and patients receive a new heart. However, patients with end-stage heart failure who are not candidates for transplant have a low 1-year survival rate without LVAD support. LVADs are a life-saving therapy for patients with advanced heart failure. LVADs are mechanical pumps that replace a weakened left ventricle. Blood is drained from the left ventricle and pumped into the aorta and throughout the body. Duke is a leading center for ventricular assist device implantation. Duke surgeons have performed more than 1,300 LVAD implants since the program began over 30 years ago.

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End-stage heart failure is something that we don’t have a cure for,” says study co-author Carmelo Milano, MD, Professor of Surgery, Division of Cardiovascular and Thoracic Surgery, and Surgical Director of the Duke LVAD program. “Heart transplantation is a very good treatment for end-stage heart failure, but there were 4,000 deaths due to chronic heart failure in North Carolina last year, and in the state approximately 100 heart transplants are performed each year. It’s still a number that’s insignificant relative to the 4,000 people who die in this state from heart failure.”

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Andrew Barbas, MD, Assistant Professor of Surgery, Division of Abdominal Transplant Surgery, was awarded a grant from the American Society of Transplant Surgeons for "Enhancing Mitochondrial Quality Control Programs to Improve Organ Preservation by Nonthermal Ex vivo Liver Perfusion."

Seth M. Cohen, MD, MPH, Associate Professor of Surgery, Division of Head and Neck Surgery and Communication Sciences, received an award from Vanderbilt University and the Patient-Centered Outcomes Research Institute for "Treatment Alternatives in Adult Rare Disease; Assessment of Options in Iloptiapib Sublingual Substoxic: NoACR PR-02 Study."

Mitchell W. Cox, MD, Associate Professor of Surgery, Division of Vascular and Endovascular Surgery, was awarded a grant from InnOval Medical, Inc. and the National Institutes of Health for "A Bulletproof Vascular Graft to Prevent Dialysis Access Cannulation Injury."

Guillermo Ferrari, MD, Associate Professor of Surgery, Division of Surgical Sciences, was awarded a grant from the University of Wyoming and the National Institutes of Health for "Impact of Fc N-glycan structure on HIV-specific antibody functions."

Matthew Hartwig, MD, Associate Professor of Surgery, Division of Cardiovascular and Thoracic Surgery, was awarded a grant from the University of Pennsylvania for "Clinical Risk Factors for Primary Graft Dysfunction.

Ellen D. Dillavou, MD, Associate Professor of Surgery, Division of Vascular and Endovascular Surgery, received an award from Humacyte, Inc. for "Humacyte-006."

Samuel J. Francis, MD, Assistant Professor of Surgery, Division of Emergency Medicine, received an award from Hospital Quality Foundation for "HQF - Safety of Oral Anticoagulants Registry."

Matthew G. Hartwig, MD, Associate Professor of Surgery, Division of Cardiovascular and Thoracic Surgery, received an award from Lung Boengkeoing, Inc. for "A Phase 2, Multicenter, Open Label Study to Measure Safety Donor Lungs (EVLP)."

Jaewoo Lee, PhD, Assistant Professor of Surgery, Division of Vascular and Endovascular Surgery, was awarded a grant from Columbia University for "Nucleic acid scavengers as mitigators of radiation-induced gastrointestinal syndrome."

Robert J. Manso, MD, Assistant Professor of Surgery, Division of Vascular and Endovascular Surgery, was awarded a grant from InnOval Medical, Inc. for "For Self-Sealing Dialysis Graft that Prevents Cannulation Injury and Assures Successful Access."

Peter K. Smith, MD, Professor of Surgery, Division of Cardiovascular and Thoracic Surgery, was awarded a grant from the National Institutes of Health for "Core Clinical Centers for the CTSN."

Debora L. Tucci, MD, Professor of Surgery, Division of Head and Neck Surgery and Communication Sciences, was awarded a grant from the National Institutes of Health for "Addressing Barriers to Adult Hearing Healthcare."

John Migaly, MD, Associate Professor of Surgery, Division of Advanced Oncologic and Gastrointestinal Surgery, received an award from LifeMed for "Efficacy and Safety of LifeSeal Kit for Staple Line Sealing in Colrectal and Colosanal Anastomoses: A Prospective Randomized Study."

Chan W. Park, MD, Assistant Professor of Surgery, Division of Metabolic and Weight Loss Surgery, received an award from Teleflex, Inc. for "Psychology of Minimally Invasive Surgical Scars."

Edward N. Rampersaud Jr., MD, Assistant Professor of Surgery, Division of Urology, received an award from Fox Chase Cancer Center for "A Phase II Study of Sporadic Angiomyolipomas (AMLs) Growth Kinetics while on Everolimus Therapy."

Debra L. Sudan, MD, Professor and Chief, Division of Abdominal Transplant Surgery, received an award from OrganOnx, Ltd. for "A multicenter randomized controlled trial to compare the efficacy of ex-vivo nonthermostatic machine perfusion with static cold storage in human liver transplantation. Additionally, Dr. Sudan received an award from Shire Human Genetics Therapies for "Impact of Fc N-glycan structure on HIV-specific antibody functions."
A recent study found that 90% of surgeons surveyed had experienced ergonomic injury.

After hearing a lecture on posture in the operating room (OR), all six of last year’s chief residents in General Surgery suddenly understood the cause of their persistent lower neck pain. The loupes they used to magnify and visualize the operative field did not fit properly, and this improper fit forced them to bend their necks at an awkward angle during long hours in surgery. Over years of training, the seemingly small error in fit had led to noticeable health issues.

“As residents, we spend so much time focusing on learning about disease processes and anatomy, how to get through a case, and surgical technique, that posture is probably the last thing anybody worries about,” says Dr. Michael Lidsky, recent graduate of the Duke General Surgery Residency. “But, poor posture is probably one of the most detrimental things to a surgeon’s career, and can result in major injury.”

Ergonomic stressors in the OR, such as maintaining awkward postures for extended periods of time, can lead to a variety of musculoskeletal problems. Surgeons often develop pain in their neck, shoulders, and back, which may become debilitating, forcing them to halt an operation or miss work entirely. If left unchecked over time, significant degenerative changes can manifest, possibly resulting in a career-ending injury.

“We know that our senior surgeons have had health issues before,” says Dr. Georgios Kokosis, another recent graduate of the General Surgery Residency. “It’s something that we don’t really pay much attention to, but it does have clinical implications. Unless we find ways to prevent it in the future, it will be happening to generations of surgeons.”

ERGONOMICS IN THE OPERATING ROOM

In collaboration with the Duke Ergonomics Division and with support from Department of Surgery Chair Dr. Allan Kirk, several General Surgery residents initiated a program to teach junior residents and medical students about proper positioning in the OR. The program includes an ergonomic loupes fitting initiative currently in development, ergonomics labs with residents, one-on-one observation of the chief residents, and coach training for the rising chief residents.

“Surgeon positioning should be a high priority in the OR,” says Marissa Pentico, ergonomics coordinator. “The ergonomics team identifies ergonomic risk factors when assessing general work tasks, including awkward postures and prolonged duration of tasks performed. The General Surgery residents are in surgery between 5 and 8 hours, so we make recommendations that will address those risk factors.”

According to Ms. Pentico, these recommendations include avoiding awkward postures when performing surgery by adjusting the height and position of the patient and the operating table, alternating postures by sitting when feasible depending on the type of case, and selecting the most ergonomic equipment to use.

“Certain instruments, if you use them a lot during a case, just the way you hold them in your hands, they’re not ergonomically optimized and it’s a one size fits all,” explains Dr. Lidsky. “What fits a 6 foot 5 male surgeon isn’t necessarily the best device for a 5 foot 3 female surgeon. A lot of that is industry based.”

As part of the program, each resident is fitted with loupes that sit at a proper declination angle to minimize neck flexion. Maintaining neck flexion at less than or equal to 25 degrees can prevent spine and neck strain during long stints in the OR. Additionally, the ergonomics team suggests that residents use anti-fatigue mats and take microbreaks for stretches to reduce the risk of injury.

PEER-BASED ERGONOMICS TRAINING

The Duke Surgery ergonomics program is uniquely peer based and thus fosters collaborative learning. The program aims to have fifth-year General Surgery residents act as ergonomics ‘coaches’ to train junior residents on correct postures during surgery. To ensure the continuation of the program, each year before they graduate, the chief residents will train rising chief residents to be the next group of coaches.

“In addition to teaching surgical technique to junior residents and to each other, senior residents will also be cognizant of their own posture and the way they stand, the way they hold their hands, and the way they have their loupes fitted,” says Dr. Lidsky. “A lot of this is to promote good patterns, better posture, and improved technique early on, which is much easier when learning a skill early on, compared to only 42% of the time for the group that did not receive the feedback.

Dr. Sprinkle presented the results of the study at the Association of Surgical Educators conference in April.

“Ergonomics relies on establishing good habits early on,” says Dr. Cecilia Ong, one of the co-authors on the project and another Duke General Surgery research resident. “These wearable devices provide continual feedback that can promote the development of good habits and their continual reinforcement throughout training.”

COUNTERING THE SURGEON CULTURE

A recent study in the Journal of the American College of Surgeons found that of 127 surgical oncologists surveyed, 90% experienced at least one symptom of ergonomic injury, and 28% reported an ergonomic injury or chronic condition. While guidelines for surgical ergonomics exist, a lack of awareness persists among the surgical community.

Coupled with this nescience is a culture that prizes resilience under stressful situations, often conditioning residents to “work through the pain.” However, this mentality batters those whose untreated injuries lead to major health problems later on in a surgeon’s career. A new focus on improving surgeon health with ergonomic training programs and interventions, such as wearable devices, will ultimately enhance the surgeon’s longevity.

“I think this is part of the surgeon’s culture that we don’t really focus on,” explains Dr. Kokosis. “We’re focused more on being great at what we do, but we don’t really focus on the appropriate posture. As long as we can start talking about it more and come up with ways to prevent it from happening, I think we will be a great start of a program that we hope will be our legacy.”
T32 RESEARCH GRANT IN SURGICAL ONCOLOGY

The National Cancer Institute (NCI) has awarded the Duke Department of Surgery a five-year training grant to support translational research in surgical oncology. The grant is led by four principal investigators, including Kim Lyerly, MD, Division of Surgical Sciences, Shelley Hwang, MD, Division of Advanced Oncologic and Gastrointestinal Surgery, David Harpole, MD, Division of Cardiovascular and Thoracic Surgery, and John Stewart, MD, Division of Advanced Oncologic and Gastrointestinal Surgery.

The Duke Research Training Program in Surgical Oncology will develop surgeons and perioperative physicians into physicians-scientists, which is critical to the multidisciplinary approach needed to investigate novel approaches to cancer. The program will be led by a leadership team of academic surgeon-scientists with expertise in surgical oncology, pathology, immunology, and health outcomes research. Supplemented by mentors with expertise in basic, translational, and clinical research, this multidisciplinary team spans the breadth of surgical oncology research to address research questions in three distinct tracks listed below.

The program will support three research fellows in its first year of funding and six research fellows each following year. Program participants will consist of surgical residents recruited from within as well as outside of Duke. Trainees will select a primary mentor from a highly experienced and diverse group of 37 researchers. Guided by their mentors, the trainees will each develop and execute a research project, which will be the basis of a future career development or independent research award application. Trainees will become skilled in research methods and will be prepared to pursue independent academic careers that will improve the health of patients with cancer or premalignant conditions.

CANCER BIOMARKERS AND BIOLOGY OF LOCAL DISEASE MENTORS:

David H. Harpole, MD (Track Leader)
Benjamin A. Alman, MD
Darell Doty Bignier, MD, PhD
Wei Chen, PhD
Christopher Counter, PhD
Gayathri Devi, PhD
David Kirch, MD, PhD
Corinne Linaeck, MD, PhD
Donald McDonald, MD, PhD
Susan Murphy, PhD
Ann Marie Pendergest, PhD
Nirmala Ramanujam, PhD
Hai Yen, MD, PhD

CANCER IMMUNOTHERAPY MENTORS:

H. Kim Lyerly, MD (Track Leader)
Gerard Blobe, MD, PhD
Marc Caron, PhD
Nelson Chao, MD
Matthews Gromeier, MD
Zachary Hartman, PhD
Matthias Gromeier, MD
Nelson Chao, MD
Marc Caron, PhD

CLINICAL INVESTIGATION AND HEALTH SERVICES RESEARCH MENTORS:

Shelley Hwang, MD, MPH (Track Co-Leader)
John Stewart, MD, MBA (Track Co-Leader)
Andrew Berchuck, MD
Kimberly Lynn Blackwell, MD
Peter E. Fecci, MD, PhD
Susan Halabi, PhD
Marlyn Hockenberry, PhD, RN
Terry Hyslop, PhD
Brant Inman, MD
Evon Myers, MD, MPH
Laura Porter, PhD
Julie Ann Sosa, MD
David Witsell, MD

For more information, please visit https://surgery.duke.edu/research-training-surgical-oncology.

DUKE SURGERY APPOINTS TWO NEW DIVISION CHIEFS

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he Duke Department of Surgery is pleased to announce the appointment of Jeffrey R. Marcus, MD, as the new chief of the Division of Plastic, Maxillofacial, and Oral Surgery, and Howard W. Francis, MD, MBA, FACS, as the new chief of the Division of Head and Neck Surgery and Communication Sciences.

Dr. Marcus is the Paul H. Sherman Endowed Associate Professor of Surgery and an Associate Professor in Pediatrics at Duke. He has served as the Vice Chair of Surgery in Pediatric Surgical Affairs since 2009 and was appointed Duke Children’s Chief of Surgery in 2015. Dr. Marcus is the director of the newly created Center for Children’s Surgery, one of only five centers in the country designated a Level 1 program for children’s surgical care by the American College of Surgeons.

“I am so pleased to have Dr. Marcus assume this critical leadership role,” says Dr. Allan D. Kirk, Chair of the Department of Surgery. “He will follow Dr. Gregory Georgiade, one of the most outstanding surgeons ever to practice at Duke, who has led the division to a state of unprecedented stability. Dr. Marcus’ appointment comes as a result of a nationwide search that attracted an exceptionally large number of outstanding candidates and eventually confirmed that the best candidate was already here.”

“Dr. Marcus is an excellent clinical and academic surgeon, but most importantly, he has demonstrated himself to be a dynamic leader. His organizational skills exercised in his role as Chief of Children’s Surgery have been nothing short of masterful and have benefited all children undergoing surgery at Duke. Importantly, the manner in which Dr. Marcus has practiced, and enriched the students, residents, faculty, and staff who have had the pleasure of working with him, is exemplary. His example will be made more apparent as Division Chief, and it will be to our collective benefit.”

In his new role, Dr. Marcus will grow the clinical enterprise of plastic and reconstructive surgery and oral health services across the Duke Health System, including the recruitment of surgeons and surgeon-scientists in reconstructive microsurgery, breast surgery, oral surgery, and aesthetic surgery. Dr. Marcus will work to foster new collaborations, to support the ongoing research efforts of the faculty, and to further develop and grow the division’s academic interests in clinical outcomes, tissue engineering, surgical innovation and education, and vascularized tissue allotransplantation.

Dr. Francis comes to Duke from Johns Hopkins University where he served as professor and vice director of the Department of Otolaryngology-Head and Neck Surgery (OHNS) and director of the Johns Hopkins Listening Center. Other roles at Johns Hopkins included director of the OHNS residency program, inaugural co-chair of the Johns Hopkins Ambulatory Patient Safety and Quality Task Force, and program development responsibilities within Johns Hopkins International in Trinidad and Tobago, and Southeast Asia.

“We are absolutely thrilled to have someone of Dr. Francis’ stature join our already strong group,” says Dr. Kirk. “He has exceptional leadership skills and will help propel our division to new levels of national prominence. There is uniform enthusiasm for his arrival. The entire institution joins me in welcoming Dr. Francis and his family to the Duke family.”

In his new role, Dr. Francis will grow the clinical enterprise to serve the growing population of the Triangle, recruiting new talented clinicians to Head and Neck Oncology, General Otolaryngology, and Ancillary services. Dr. Francis will also work to enhance and nurture the research and educational programs being developed at Duke across the institution. Areas of focus will include immunology, clinical research, and communication sciences.

DUKE SURGERY ADVANCED EDUCATION COURSES

Duke Surgery is dedicated to training surgeons using the latest surgical techniques and innovative approaches in minimally invasive surgery, microsurgery, and robotic surgery. Utilizing a combination of didactic lectures, live surgeries, video, and hands-on labs, hundreds of surgeons and allied health professionals from around the world have been trained at Duke Surgery. CME credit is available for a number of courses held throughout the year in a wide range of surgical specialties. Following are upcoming Duke Surgery advanced educational courses. For a complete list of all of Duke Surgery’s educational initiatives, visit innovation.surgery.duke.edu/courses.

Duke Masters of Minimally Invasive Bariatric Surgery
June 26-28, 2017
Orlando, FL

Duke Tuesday in Urology
July 18, 2017
Durham, NC

Duke University and Hadassah International Otolaryngology Global Health Conference
July 20-21, 2017
Jerusalem, Israel

Duke Cancer Review 2017
July 22-29, 2017
Cary, NC

Duke Solid-Organ Transplant Summit
September 21-23, 2017
Durham, NC

Duke University and Hadassah International Otolaryngology Global Health Conference
September 21-23, 2017
Jerusalem, Israel

Duke Masters of Minimally Invasive Gastrointestinal Surgery
September 21-23, 2017
Orlando, FL
FACULTY AWARDS

ELLEN DILLAVOU, MD
Associate Professor of Surgery, Division of Vascular and Endovascular Surgery, was appointed to the Editorial Board of the Journal of Vascular Surgery: Venous and Lymphatic Disorders. Dr. Dillavou was also elected President of the Vein Center Board of Directors for the Intersocietal Accreditation Commission.

RACHEL GREENUP, MD, MPH
Assistant Professor of Surgery, Division of Advanced Oncologic and Gastrointestinal Surgery, received the Health Policy Scholarship provided by the American College of Surgeons and the American Society of Breast Surgeons.

LEILA MUREEBE, MD
Associate Professor of Surgery, Division of Vascular and Endovascular Surgery, was appointed to the Editorial Board of Vascular Medicine, the premier peer-reviewed journal of the Society of Vascular Medicine.

SANDHYA LAGOOP-DENADAVYALAN, MD, PhD
Associate Professor of Surgery, Division of Vascular and Endovascular Surgery, received the 2017 Leonard Tow Humanism in Medicine Award. This award is presented annually to a Duke faculty member who embodies compassion, sensitivity, respect for patients and colleagues, and clinical excellence.

JEFFREY MARCUS, MD
Associate Professor of Surgery, Division of Plastic, Maxillofacial, and Oral Surgery, was appointed to the Editorial Boards for JAMA Facial Plastic Surgery and Aesthetic Plastic Surgery.

OLUWADAMILOLA FAYANJU, MD
Assistant Professor of Surgery, Division of Advanced Oncologic and Gastrointestinal Surgery, was selected as a KL2 Scholar through the Duke Clinical and Translational Science Institute. She was also selected by peer review as a Duke Health Scholar, which provides research support and career mentoring for faculty for their continued success as clinician-scientists.

SCOTT HOLLENBECK, MD
Associate Professor of Surgery, Division of Plastic, Maxillofacial, and Oral Surgery, was selected by peer review as a Duke Health Scholar, which provides research support and career mentoring for faculty for their continued success as clinician-scientists.

ELEEN RAYNOR, MD
Associate Professor of Surgery, Division of Head and Neck Surgery and Communication Sciences, was selected as a participant in the Duke School of Medicine's ALICE program. The Office for Faculty Development created the ALICE program in 2016 as a leadership development opportunity for mid-career women faculty in the School of Medicine.

EILEEN SOMMER, MD
Assistant Professor of Surgery, Division of Trauma and Critical Care Surgery, was appointed by peer review as a Duke Health Fellow, which provides research support and career mentoring for faculty for their continued success as clinician-scientists.

APARNA REGE, MD
Clinical Associate, Division of Abdominal Transplant Surgery, won the Organ Donation and Utilization publishing competition from the journal Cureus. Dr. Reges article focused on the trends and outcomes of expanded criteria donor kidney transplantation in the United States.

CYNTHIA SHORTELL, MD
Professor and Chief, Division of Vascular and Endovascular Surgery, was named Chair of the Diversity Committee for the Southern Association for Vascular Surgery.

COURTNEY SOMMER, MD
Assistant Professor of Surgery, Division of Pediatric General Surgery, was selected by peer review as a Duke Health Fellow, which provides research support and career mentoring for faculty for their continued success as clinician-scientists.

LESLIE TOLNITCH, MD
Assistant Professor of Surgery, Division of Gastrointestinal Surgery, was promoted to Professor of Surgery.

KAREN C. BAKER, MD
Associate Professor of Surgery, Urology Clinical interests include male fertility and microsurgery. Research interests include quantifying the impact of common medical conditions on male fertility and investigating their pathogenic effects on spermatogenesis and sperm function, delineating the impact of male factor infertility on outcomes of assisted reproductive techniques, and investigating the efficacy of medical therapy for male factor infertility. Dr. Baker is also interested in the social, psychological and health impacts of infertility.

NEW FACULTY

KATHRYN BHANDARI, MD
Medical Instructor, Head and Neck Surgery and Communication Sciences Clinical interests include heterotopic (abdominal) heart transplantation, cardiac preservation, cardiac allograft chronic rejection, and posttransplantation ventricular performance.

SANDRA COBB, PhD
Medical Instructor, Communication Sciences and Disorders Clinical interests include improving the assessment and management of patients with vestibular and balance disorders. Research interests include refining and developing evidence-based vestibular assessment protocols to make them more cost effective and time efficient, developing and implementing evidence-based screening and decision support to frontline providers to help identify and better triage patients with suspected vestibular and balance disorders, and identifying and understanding factors that contribute to chronic dizziness symptoms.

ELISABETH TRACY, MD
Assistant Professor of Surgery, Division of Urology and Genitourinary Surgery, was promoted to Professor of Surgery.

SMITABHAI NAIR, PhD
Division of Surgical Sciences, was promoted to Professor of Surgery.

SMITA NAIR, PhD
Division of Surgical Sciences, was promoted to Professor of Surgery.
MISSION

Through sustainable, multidisciplinary teams we:

• Provide insight regarding the fundamental nature of patient health and disease
• Empower all patients, trainees, and colleagues with knowledge
• Provide safe and high-quality care based on an advanced understanding of and respect for our patients’ needs and guided by best practices

VISION

Duke Surgery: United, for All Patients

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A gift to the Duke Department of Surgery is a gift of knowledge, discovery, and life. Every dollar is used to further our understanding of surgical medicine, to develop new techniques, technology, and treatments, and to train the surgeons and researchers of the future.

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