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Changing Lives Through Research

Thoracic & Esophageal Surgery Team Conducts Diverse Research Studies to Improve Patient Care



Drs. Olubenga Okusanya, Tyler Grenda, and Nathaniel Evans III, and Sung Whang, DNP, CRNP, (center) see patients at the Jane & Leonard Korman Respiratory Institute located at 834 Walnut Street.

Surgeons Nathaniel R. Evans III, MD, Tyler R. Grenda, MD and Olubenga T. Okusanya, MD, provide thoracic and esophageal surgical care to patients at Thomas Jefferson University Hospital in Center City, and throughout Jefferson Health. They also lead and participate in a variety of research initiatives aimed at further optimizing that care. As Dr. Evans, who leads the Division, notes, "Our research

portfolio has become very diverse, running the gamut from simple to very complex questions."

Past clinical trials have worked to enhance care to patients with esophageal and lung cancer. For example, one aimed to identify which patients with esophageal cancer need feeding tubes after surgery and which have better outcomes without them. Another explored a similar question

about which lung cancer patients benefit from surveillance chest X-rays following surgery.

An active study is exploring the optimal sequence of steps in surgical procedures for lung cancer. Dr. Evans explains that surgeons must divide the arteries and veins connected to the affected lung tissue. There is a longstanding debate about the best way to do so.

"Most surgeons do whatever they are most comfortable with or the order that's easier for that particular patient," he says. The Jefferson team has developed a study in which they will randomize patients into two groups and then assess whether the order affects the level of circulating tumor DNA (ctDNA) after surgery.

"Theoretically, if there is more ctDNA, there's a higher risk of a recurrence," Dr. Evans says. "There is some preliminary data to suggest that one method is better than the other, and we are hoping to be able to affirm or disprove those findings." The design and operation of this trial has been facilitated by Dr. Okusanya's participation in Bristol Myers Squibb Foundation's Diversity in Clinical Trials Career Development Program. As one of the first cohort in the selective group of up-and-coming

clinical researchers, he has gained invaluable insight into designing and running clinical trials.

Dr. Evans and his team are also collaborating on multiple studies with the Division of Pulmonary, Allergy and Critical Care in the Department of Medicine, and the Computational Medicine Center at Jefferson led by Isidore Rigoutsos, PhD. Two studies focus on better understanding micro RNA found in lung tumors. This work aims to accomplish what Dr. Evans calls the "Holy Grail" – the ability to diagnose lung cancer with a blood test.

The thoracic surgery team has also completed numerous retrospective studies to drill down on disparities in care for lung and esophageal cancers. Dr. Evans says the findings consistently show that outcomes are worse for women, minorities and people of a lower socioeconomic class.

"Our studies have shown that it's not just outcomes that are different," he says. "The care that people receive is different. For example, some patients are more likely to be offered radiation when surgery might be a better option. The first step to addressing these disparities is being able to document the fact that some patients are being treated differently – often to their detriment."

On the Job

New Faculty



John D. Jacob, MD, has joined the Division of Thoracic and Esophageal Surgery. Dr. Jacob is a graduate of the University

of Santo Tomas Faculty of Medicine and Surgery in the Philippines. He completed his general surgery residency at Abington Memorial Hospital in 2016 followed by a surgical critical care fellowship at the University of Pennsylvania and a thoracic surgery fellowship at the Montefiore Medical Center/Albert Einstein College of Medicine. Dr. Jacob is based at Jefferson Abington Hospital and also sees patients at Thomas Jefferson University Hospital, Jefferson Methodist Hospital, Jefferson Health – Northeast and Jefferson Health – Einstein.



Heather McMahon, MD, has joined the Division of Plastic Surgery. Dr. McMahon is a 2015 graduate of the Sidney Kimmel Medical

College at Thomas Jefferson University. She completed her integrated plastic surgery residency at the University of Virginia School of Medicine followed by a fellowship in microvascular plastic surgery at the University of Texas (MD Anderson). She sees patients at Thomas Jefferson University Hospital in Center City.



Andrew Morgan, MD, has joined the Division of Colorectal Surgery. Dr. Morgan is a 2015 graduate of the Sidney Kimmel

Medical College at Thomas Jefferson University. He completed his general surgery residency at Cooper University Hospital followed by a colorectal fellowship at Cleveland Clinic Florida. He sees patients at Thomas Jefferson University Hospital and Jefferson Methodist Hospital.



Keshava Rajagopal, MD, PhD, has joined the Division of Cardiac Surgery. Dr. Rajagopal is a graduate of the University of

Chicago Pritzker School of Medicine. He completed residencies in general surgery and cardiothoracic surgery at Duke University Medical Center and has joined us after years of private practice in Texas. He sees patients at Thomas Jefferson University Hospital in Center City, and will be the lead surgical director of our new lung transplant program.



Sami Tannouri, MD, has joined the Division of General Surgery. Dr. Tannouri is a graduate of Pennsylvania State University College of

Medicine. He completed his general surgery residency at Thomas Jefferson University Hospital in 2015 followed by a minimally invasive surgery fellowship at University of Maryland Medical Center. He sees patients at Thomas Jefferson University Hospital and Jefferson Methodist Hospital.

Correction

Summer 2022 Issue: Changing Lives Through Research

An article last Summer incorrectly stated that the Jefferson Molecular Profiling of Pancreatic Cancer (JMP PaC) Program was developed by a handful of researchers in the Department of Surgery.

The program was spearheaded by Hien Dang, PhD, Director of the Division of Surgical Research, in collaboration with surgeons Charles J. Yeo, MD, Wilbur Bowne, MD, and Harish Lavu, MD. Senior leadership also includes representatives from non-surgical specialties: Babar Bashir, MD, and Jennifer M. Johnson, MD, PhD (Medical Oncology); Wei Jiang, MD, PhD (Pathology); and Christopher McNair, PhD, Associate Director for Data Science at Sidney Kimmel Cancer Center.