

# Surgical Solutions

## High Volume, Top Quality, and Rigorous Research: Jefferson Sets New Standards in Pancreatic Cancer Care

Each year, Jefferson surgeons perform over 200 pancreatic resections, including more than 130 "Whipple procedures" — making the hospital #1 in surgical volume for pancreatic cancer and related diseases in the tristate region of Pennsylvania, New Jersey and Delaware.

"While we are very proud of what we have achieved, there are always opportunities for improvement," says Charles J. Yeo, MD, FACS, Samuel D. Gross Professor and Chair of Surgery, who has personally performed more than 1,400 Whipple procedures and treated thousands of patients with pancreatic cancer and related diseases.

Beyond the impressive numbers, the Jefferson Pancreas, Biliary and Related Cancer Center offers much more: multidisciplinary diagnosis and treatment, groundbreaking clinical research, and active involvement in community events — such as Amy's Ride/Run/Walk in Quakertown (May 20) and Pancreatic Cancer Action Network's PurpleStride (November 4).

### New Multidisciplinary Pancreatic Cancer Clinic

When pancreatic cancer is suspected, many patients and their families feel overwhelmed. In addition to the emotional impact, patients may have to schedule several appointments to see primary doctors and gastroenterologists, as well as surgeons, medical oncologists and radiation oncologists. At our Multidisciplinary Pancreatic Cancer Clinic, all relevant clinicians gather each Monday afternoon to review cases and see patients — providing the convenience of multiple appointments during a single visit.

### Development of a National Cancer Institute Funded Research Program

Since his recruitment in 2006, Jonathan Brody, PhD, Vice Chair

for Research in the Department of Surgery, has been building a world-class pancreatic cancer research program. Dr. Brody specializes in studying the molecular basis of cancer development and progression, targeted therapy and personalized medicine. As a translational researcher, he steers the research trajectory of the Brody Laboratory while serving as an advisor/collaborator to all levels of trainees as well as our practicing surgeons, including Drs. Harish Lavu and Jordan Winter.

### Ongoing Clinical Trials

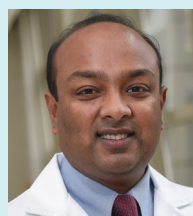
Harish Lavu, MD, FACS, is leading the Whipple Accelerated Recovery Pathway (WARP) trial aimed at supporting faster recovery from pancreatic surgery. In 2007, the team conducted a similar study that established the seven-day "Critical Pathway" standard at Jefferson. The WARP trial — initiated in late 2015 and with nearly 70 patients enrolled to date — is testing a five-day pathway. The protocol incorporates in-hospital physical therapy, specific dietary recommendations and rigorous monitoring following discharge.

Meanwhile, Jordan M. Winter, MD, FACS, is tackling a perennial patient query: "Can pancreatic surgery make the cancer 'spread'?" To explore this topic, Dr. Winter is leading the Water or Saline at High Volumes (WASH) trial that is testing the use of 10 liters of plain water or salt water for abdominal washing immediately following removal of the tumor. Current practice uses just one or two liters of saline at the conclusion of the procedure. The study, started in April 2016 with more than 100 patients enrolled to date, aims to expand to other sites and enroll 800 patients.

For more information, go to [Jefferson.edu/Pancreas](http://Jefferson.edu/Pancreas).



Our multidisciplinary pancreatic cancer team includes surgeons, GI specialists, medical oncologists, radiation oncologists, advanced practice nurses, research scientists, residents, postdoc fellows, graduate students, clinical research coordinators and nutritionists.

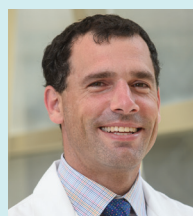


"In Asia, average hospital stay for pancreatic surgery patients is 21 days. In Europe, it's 14 days. In most U.S. hospitals, it's 12 to 14 days. Here at Jefferson, our current seven-day stay requires tremendous coordination across the Surgery, ICU and Nursing teams. With the WARP trial, we are trying to do something few others have consistently been able to do: improve outcomes by safely discharging Whipple procedure patients after just 5 days.

"Why are shorter hospital stays better? Research has shown that being in a hospital when you aren't critically ill actually delays healing and exposes patients to hospital-acquired infections. We want to prepare our patients to leave the hospital as quickly as possible so they can recover safely and more rapidly in the comfort of their own homes."

### Harish Lavu, MD, FACS

*Associate Professor and Chief, Section of Hepatopancreatobiliary Surgery*



"Lymphatics, nerves, small blood vessels and tumor margins frequently have cancer in them, which can only be appreciated at the microscopic level. As we're dividing these structures, can some of these cells be spilled? It isn't inconceivable. The hypothesis of the WASH study is that this high-volume washing may remove those kinds of free-floating cancer cells present after the tumor is resected — ultimately helping to prolong survival.

"Very few surgical cancer studies have looked specifically at pancreatic cancer outcomes. This trial points to the potential for surgical oncologists to affect cancer outcomes with an inexpensive intervention: high-volume abdominal washing. If we can use it to improve survival even by a few months, we're accomplishing the same thing as a billion-dollar drug."

### Jordan Winter, MD, FACS

*Associate Professor*

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## Overview



### Charles J. Yeo, MD, FACS

Samuel D. Gross Professor and Chair  
Department of Surgery

## The Spring of 2017...Change and Hope

There is excitement in the air at Jefferson this spring. We had a superb “Match” on March 17, and will be welcoming 6 terrific categorical general surgery residents come July. The Philadelphia Phillies just completed spring training well above .500, and there are high hopes for an improved year. In late April, the American Surgical Association – co-founded by our very own Dr. Samuel D. Gross (Chair of Surgery, 1856-1882) – hosted their 137th Annual Meeting here in Philadelphia. As part of the social program, attendees toured Lubert Plaza in the heart of our Center City campus, which includes the magnificent Samuel Gross Monument by Alexander Calder.

Jefferson Health continues to sustain momentum towards further expansion, with the planned addition of Kennedy Health in New Jersey and Philadelphia University to our Jefferson family soon. Some work is already underway with Philadelphia University (see the Enterprise Integration column), taking advantage of their expertise in creative design, innovation, and space planning. Add to this the work being done at our Center City, Abington and Aria campuses by our 7 surgical 2.0 Integration teams focusing on patient-centered, highest quality care... much is happening.

April 1 marked the launch of our Wave 2 EPIC implementation (inpatient EPIC) at our Jefferson Hospitals in Center City and on our Methodist campus. The power of this electronic health record (EHR) is quite amazing. Patients are being encouraged to sign up online for the “MyChart” patient portal, we are linked to other organizations via the Care Everywhere platform, and we now have one unified EHR for our outpatient and inpatient environments. As you might imagine, the surgical residents have embraced this new technology with great enthusiasm, while at least some of us (attending surgeons) are finding we have to work a bit harder to become facile. We look forward to further optimization of these systems, so that we can truly see the power of this far reaching, multi-layered EHR.

Please enjoy the various articles which compose this issue and keep up with our news on [Facebook.com/JeffersonSurgery](https://www.facebook.com/JeffersonSurgery) and [Twitter@JEFFsurgery](https://twitter.com/JEFFsurgery) in between issues.

## Enterprise Integration



A December meeting, led by Stephen Spinelli, Jr, PhD, President of Philadelphia University, and Charles J. Yeo, MD, Chair of Surgery at Jefferson (seated, 3rd and 4th from left), gave faculty and staff from both institutions an opportunity to brainstorm about future collaborations.

## Department of Surgery and Philadelphia University Lay Groundwork for Collaboration Prior to Merger

On the surface, the proposed merger of Thomas Jefferson University and Philadelphia University will create one comprehensive institution focused on professional education in health, science, architecture, design, fashion, business and engineering. In practice, it will integrate different models of thought and diverse approaches to studying and solving problems – enabling us to reimagine a new kind of education for the jobs of the future.

The Combination Agreement was signed by both institutions’ Boards of Trustees in September 2016. Although the merger isn’t expected to be completed until later this year, the Department of Surgery isn’t waiting to initiate collaborations with Philadelphia University. With Gerald Isenberg, MD, FACS, Professor and Director of the Surgical Undergraduate Education Program and Colorectal Residency Program, serving as the Department’s liaison, the team is already identifying innovative ways to blend resources and expertise.

Dr. Isenberg recalls the first “road trip” that department clinicians and researchers took last December to the Philadelphia University campus in the East Falls section of the city: “The facilities were amazing, and there was a palpable excitement as we toured the campus. Philadelphia University works with huge companies around the world. They have the ability to make virtually anything right there on the campus.”

He sees tremendous potential to apply those capabilities to further refine the field of surgery – from process workflows to physical instruments used to operate. In fact, one of the ideas under consideration is a one-year Fellowship in which a Department of Surgery resident would spend his or her research year studying surgical

process and design problems at Philadelphia University.

“This would be an opportunity to infuse fresh perspective to steps that we take for granted,” Dr. Isenberg explains. “We want to be challenged – to strip away ‘that’s how we’ve always done it’ thinking.”

Building on work already underway at Jefferson, Scott Cowan, MD, FACS, Associate Professor and Vice Chair for Quality, is working with Philadelphia University on rethinking patient rooms. The team is tapping into Philadelphia University’s expertise in architecture, design and building materials to analyze patient room design and workflow. Combined insights and recommendations could help on a number of fronts – from improving prevention of healthcare-acquired infections to reducing patient fall risk.

“We have an extraordinary opportunity to work together to improve the environment of care for our patients,” he says. “Philadelphia University’s expertise clearly complements what we’re doing here in the hospital in terms of achieving the highest quality of care.”

Dr. Isenberg notes that the merger will also benefit Philadelphia University students, with unprecedented access to the surgical world helping them learn how surgeons approach and solve problems.

“An integrated Philadelphia University and Thomas Jefferson University allows us to reimagine education in a way that launches students into the careers of their passion in a bigger, bolder way,” says Philadelphia University President Stephen Spinelli, Jr, PhD. “We will prepare students for careers of the 21st century, with an emphasis on scientific and applied research, design thinking and discovery.”

For more information, go to [wordpress.philau.edu/powered](https://wordpress.philau.edu/powered).

## In the Spotlight



Advanced practice nurses Liezl DiDonato, Chuck Rowland, Sung Whang, Sophie Mintz, Lori Pelligrino, Dana Ovadia, Theresa Yeo, Ling Fan, Linda Martino, and Shawwna Cannaday

In September, 10 advanced practice nurses from the Department of Surgery gathered for a lunchtime kick-off meeting to form a Nurse Practitioners (NPs) & Physician Assistants (PAs) Professionalism and Scholarship Working Group. This initiative is an important career development component and has been meeting on a monthly basis to discuss issues in clinical practice, explore potential clinical research projects, foster CV development, and address professional practice concerns. Thus far, two projects have been submitted for small grant consideration, several presentations have been developed and two members are collaborating on publishing an online continuing education module for NPs.

All Department of Surgery NPs and PAs are invited. Please contact: [theresa.yeo@jefferson.edu](mailto:theresa.yeo@jefferson.edu).



# Clinical Studies Target Fewer Complications, Better Outcomes for Vascular Surgery

Two studies at the Jefferson Vascular Center (JVC) are assessing innovative methods to reduce risk of complications — and increase positive outcomes — for vascular surgery patients. Here, Paul DiMuzio, MD, FACS, William M. Measey Professor of Surgery and Co-Director, Jefferson Vascular Center, reviews what both studies mean for patient care.

## 'Game-changer' for groin wounds

As Dr. DiMuzio explains, groin incisions in vascular surgery are a source of significant morbidity and healthcare costs. When groin wounds become infected, patients may have to be readmitted and undergo additional surgery. Some patients are at greater risk because of diabetes and obesity, others because of the surgical technique required for their treatment.

In exploring ways to decrease groin wound infections in high-risk patients, the JVC identified a possible solution in Prevena™ — a sponge covered in adhesive that attaches to a small suction device. The suction device removes fluids from the region, helping reduce the risk of infection. Already FDA-approved, Prevena is used by cardiac surgeons for sternal incisions and by orthopedic surgeons in total joint replacements.

"No one had conducted a prospective randomized trial to determine if Prevena is a viable option for high-risk groin wounds," he says. "We were the first."

The results of Jefferson's two-year study — which will be presented later this Spring at the 2017 Annual Meeting of the Society for Vascular Surgery in San Diego — showed a significant reduction in infections and re-admissions. Hospital costs declined by an average of \$6,000 per patient.

**We are now using [the Prevena] device for every patient with high-risk groin incisions, and we expect it to become a standard of care everywhere once the findings are published.**



The Jefferson Vascular Center surgeons, Drs. Paul DiMuzio, Dawn Salvatore and Babak Abai, rely on the support of advanced practice nurses Meghan McCullough, MSN, RN, FNP, AGACNP, and Cara Staley, MSN, RN-BC, AGACNP-BC (on either side of Dr. Salvatore) to manage the Prevena and ROADSTER 2 clinical trials.

"We are now using this device for every patient with high-risk groin incisions, and we expect it to become a standard of care everywhere once the findings are published," he adds. "It's a game changer."

In February, Megan Lundgren, MD, a third-year General Surgery resident and Sidney Kimmel Medical College alumna, presented the study at the Philadelphia Academy of Surgery's Annual Surgical Research Competition. Dr. Lundgren, who helped enroll and care for trial participants, won the inaugural Chris Tzarnas Surgical Research Award for the work.

## Follow-up trial of new treatment for carotid artery disease

Following the promising multi-center ROADSTER trial, the ROADSTER 2 trial is observing and evaluating real-world results of a newly approved procedure for treating carotid artery disease.

The most widely used treatment for carotid artery disease has been the carotid endarterectomy (CEA) procedure, in which plaque is surgically removed from the blocked artery. For patients who may be at high medical or anatomic risk for carotid endarterectomy, carotid stenting may be a better option. Though both procedures are generally safe, heart attack risk is higher with CEA, while stroke risk is higher with stenting. Trans-carotid Artery Revascularization (TCAR) is designed to lower both risks, and the initial ROADSTER trial demonstrated its success.

"The TCAR procedure is a hybrid of the other two treatments," Dr. DiMuzio says. "It places a carotid stent through a minimally invasive incision in the carotid artery at the level of the neck. Blood flow in the artery is temporarily reversed to protect the brain from plaque fragments that may come loose during the procedure. A stent is then inserted into the blood vessel to support the artery walls and prevent blockage or collapse." Dr. DiMuzio adds that stent deployment via access directly through the common carotid artery avoids the need to traverse the aortic arch with catheters, which can lead to embolic stroke.

Though approved by the FDA, the TCAR procedure will not be marketed until the ROADSTER 2 trial is completed. To date, Jefferson is the first and only study location in the Philadelphia area. Dr. DiMuzio and his team have already performed the TCAR procedure and are actively enrolling more patients.

"Nationally, the study is more than halfway to completion — and the TCAR procedure is on its way to becoming an exciting new standard of care for carotid artery disease," he says.

For more information, contact the Jefferson Vascular Center at **215-955-8304** or visit [Jefferson.edu/JVC](http://Jefferson.edu/JVC).



Andrea DelMastro

Since joining the Department of Surgery in 2001 as an administrative assistant in the Division of Transplant Surgery, Andrea DelMastro has moved to our 1300 Wolf Street Office on the Methodist Campus. Born and raised in South Philly, she has returned and served as the Department's practice manager there for the past five years.

At Methodist, Andrea oversees day-to-day operations of 14 providers and a team of registrars, medical assistants and nurse practitioners. The practice includes several specialties within the Department of Surgery: Bariatric, Breast, Colorectal, General, Thoracic and Vascular Surgery & Vascular Medicine. The services provided there include more than just surgical consultations, as several other outpatient services are offered, including vascular ultrasound, minimally invasive vein closure, and wound care.

During the last few years she has been active at both campuses taking on a number of departmental projects: she is currently the Department's lead for the JeffConnect telehealth program and serves as a 'super user' for the EPIC Electronic Health Record implementation.

Another of DelMastro's long-term projects is contributing to the Methodist Hospital Division's Surgery White Paper. The purpose of the ongoing initiative: to identify ways to improve both patient experience and overall surgical patient throughput at Methodist. To date, such improvements have included adding a room for private family surgical consultations and staffing a patient registrar.

She appreciates the diverse challenges of her work: "Every day is different," she says. "I juggle clinic hours, department projects, as well as the unique needs of staff and patients that come up daily." DelMastro strives to make sure her employees are engaged, as she believes that "makes all the difference in patient care."

Above all, Andrea values being part of the Methodist community: "I love that I get to work in an office where I know the majority of my patients from the neighborhood. It's world-class care — with a real hometown feel."





In 2004, Penny Goodman received a living donor kidney transplant thanks to her donor and brother, Gregory Tettemer, and their care team at Jefferson. On December 14, Penny and her husband, Phil, cut the ribbon to their Exam Room named for Gregory in the Nicoletti Kidney Transplant Center located at the corner of 9th and Chestnut Streets in Center City.

## Patient-Benefactors Support New Kidney Transplant Center

December 14, 2017 was a landmark day at Jefferson: the ribbon cutting ceremony of the Nicoletti Kidney Transplant Center at Jefferson. This milestone venture – bringing together research, education and clinical care in one space – came to fruition thanks to a \$2.5 million lead gift from the Robert V. Nicoletti Family Trust. The Center emphasizes living donor transplantation, something that is very personal to the Nicoletti family.

In early 2006, Jefferson doctors determined that the patriarch of the family, businessman and philanthropist Robert (Bob) V. Nicoletti, needed a kidney transplant. Seven members of his family immediately volunteered to donate a kidney. Ultimately, only one was deemed compatible: Bob's youngest daughter, Lori Nicoletti Peruto, Esq. This life-saving kidney gave Bob – who passed away in February 2016 at 85 years-old – another 10 loving years with his children and grandchildren.

Inspired by the care they received at Jefferson, the Nicolettis became steadfast and generous supporters of the Jefferson Transplant Institute. In late 2015, Bob and his three children, Mark R. Nicoletti, Sr., Lori Nicoletti Peruto, Esq., and Donna Nicoletti Ferrier, along with their spouses, provided the leadership gift to name the new Center. This kicked off a campaign supported by other grateful patients, Jefferson leadership and community partners to build a more robust living donor kidney transplant program.

**Living donor transplants generally work better and last almost twice as long as deceased donor transplants.**

Penny Goodman was also inspired to give back after receiving a life-saving kidney in 2004 from her brother, Gregory Tettemer. "Through the generosity of my brother, the skills of the Jefferson team and the grace of God, I have been blessed with many years of excellent

health. We are proud to support this new Center that will ease the burden of the transplant journey for patients and their families."

Living donor transplants generally work better and last almost twice as long as deceased donor transplants. With more than 600 patients on Jefferson's organ transplant wait list, this campaign and the resources provided to patients and families in the Nicoletti Kidney Transplant Center come at a critical time. The Center not only simplifies the patient journey, but it also expands our dedicated multidisciplinary team and supports clinical research.

To learn about supporting the Nicoletti Kidney Transplant Center at Jefferson, visit **[Jefferson.edu/GiveJTI](http://Jefferson.edu/GiveJTI)** or contact Kelly Austin in the Office of Institutional Advancement at **215-955-6383**.



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### Jefferson Surgical Solutions

is published by  
Thomas Jefferson University and  
Thomas Jefferson University Hospital.  
Jennifer Brumbaugh, MA, Editor-in-Chief  
Susan Murphy, Writer  
Robert Neroni, Photography  
Information in Surgical Solutions  
is not intended to provide advice  
on personal medical matters  
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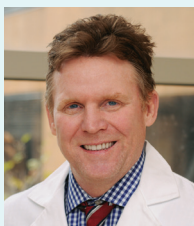
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## News in Brief

**Alec Beekley, MD, FACS** (Division of Acute Care Surgery), and **John Entwistle, MD, FACS** (Division of Cardiothoracic Surgery), have each been promoted to Professor of Surgery.



**Howard Todd Massey, MD**, has joined the Division of Cardiothoracic Surgery as the Surgical Director of Cardiac Transplant. Dr. Massey completed his general surgery residency at the University of Louisville and his thoracic and cardiovascular surgical residency at the University of Texas Southwestern. He then completed a fellowship in Heart and Lung Transplantation and Adult Cardiac Surgery at the Duke University Medical Center. Dr. Massey is dual-certified in Surgery and Thoracic Surgery. Under the leadership of Dr. Massey and **Andrew Boyle, MD**, Medical Director of Advanced Heart Failure, Jefferson has reactivated its Heart Transplant Program with the United Network for Organ Sharing (UNOS).

On March 1, the Jefferson Center for Injury Research and Prevention (JCIRP) proudly hosted the 2017 Vision Zero for Philadelphia Conference presented by the Bicycle Coalition of Greater Philadelphia and Uber. **Stanton B. Miller, MD, MPH**, Founding Director of JCIRP, welcomed an audience including urban designers, transportation planners, and representatives from AAA, AARP and several city and state agencies. Participants will collaborate and implement research-based initiatives to eliminate traffic fatalities and serious injuries by 2030, through education, engineering and enforcement. JCIRP was established in 2013 within the Division of Acute Care Surgery, led by **Murray J. Cohen, MD, FACS**, Director of the Level I Regional Resource Trauma Center at Jefferson.

**Charles J. Yeo, MD, FACS**, Samuel D. Gross Professor and Chair of Surgery, has been named Senior Vice President and Chair—Enterprise Surgery for Jefferson Health, and Editor-in-Chief of the new *Journal of Pancreatic Cancer*.



On April 29, **Theresa Pluth Yeo, PhD, MPH, ACNP**, Adjunct Associate Professor in the Jefferson College of Nursing and Co-Director of the Jefferson Pancreas Tumor Registry received the 2017 Distinguished Alumni Award from Cornell University—New York Hospital School of Nursing.

**Save the Date:** Jefferson will host the **12th Annual Pancreatic Cancer and Related Diseases Symposium** on Saturday, November 11, 2017 from 9 am to 2 pm. The event gives patients and their loved ones an opportunity to connect with expert physicians, scientists and staff and learn about the latest developments in research and treatment. Seating is limited for this free event. Registration is required. Please contact, Kelly Austin at **215-955-6383** to request an invitation. For more information, visit **[Jefferson.edu/PancreasEvent](http://Jefferson.edu/PancreasEvent)**.