

2008

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Surgical Solutions

First U.S. Patient Enrolls in Groundbreaking Clinical Trial at Jefferson

When James Blessingame, 79, and his wife returned home from church one Sunday, he bent down and could not stand back up, doubled over in pain. He was rushed to a local hospital, where Joseph Lombardi, MD, director of the new Jefferson Aortic Center and Associate Professor of Surgery was called for consultation. Dr. Lombardi diagnosed Mr. Blessingame with a Type B dissection of his thoracic aorta.

Mr. Blessingame was transferred to the Thomas Jefferson University Hospital for surgery where he became the first patient in the U.S. to enroll in the STABLE™ Aortic Dissection clinical trial. “The STABLE trial is an important milestone in the development of novel, minimally invasive treatments for thoracic aortic dissections,” explains Dr. Lombardi, who is global Principal Investigator (PI) of the study.

The STABLE™ trial is an important milestone in the development of novel, minimally invasive treatments for thoracic aortic dissections

Mr. Blessingame, a retired staffing specialist for the federal government, is grandfather to 18 grandchildren and seven great grandchildren. “At my age, I was concerned about having any kind of surgery,” he recalls. “I thought I could just do without it, especially knowing that open surgery could be fatal. But



Mr. James Blessingame, the first patient in the U.S. to enroll in the STABLE™ Aortic Dissection clinical trial, contemplates the morning from his front porch several months after his operation.

my daughter, who is a licensed nurse practitioner, explained how important and non-invasive this surgery was, and how it would really help to reduce the risks of complications or worse.” Performing Mr. Blessingame’s surgery with Dr. Lombardi was Robert A. Larson, MD, Assistant Professor of Surgery, who serves as the site PI for the STABLE™ trial. This trial and other new programs at Jefferson led to the expansion and renaming of the Division of Vascular and Endovascular Surgery.

Endovascular surgery directs therapy through catheters and wires placed within the blood vessels. The stents hold open the wall of the weakened vessel,

and the endovascular grafts – fabric tubes used to make a new path for the blood to flow – are placed inside the vessel. This minimally invasive method spares patients the trauma and risk of open surgery, decreases recovery time, and improves quality of life following the procedure.

“The STABLE™ trial will significantly help treat a condition that affects tens of thousands of people just like James every year,” says Dr. Lombardi. “This truly is a remarkable, lifesaving advancement.”

For more information about endovascular surgery visit:

www.jeffersonhospital.org/aortic

The Surgeons Speak



James Blessingame was a perfect candidate for participation in the STABLE™ Aortic Dissection clinical trial. Given the combination of his age, medical history, and what we were able to learn from our pre-surgical vascular mapping, we knew that we could successfully treat him with the Cook Zenith™ Dissection Endovascular System. The technology we now have enables us to treat patients like James in a way that radically reduces risks and decreases the recovery period.

In Mr. Blessingame’s case, our three-dimensional TeraRecon workstation was critical in determining if he was anatomically suitable for endovascular surgery. We used the 3D imaging to measure the size of the vessel and to determine how much to treat. It is the ultimate planning tool—enabling you to visualize the procedure, select the right devices, and see in advance exactly where the weakened vessel begins and ends. Once planned, the operation was performed with state of the art equipment in our new endovascular operating suite.

Joseph V. Lombardi, MD, (shown left) and Robert A. Larson, MD

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Overview



Charles J. Yeo, MD

Samuel D. Gross Professor and Chair, Department of Surgery

This fall, as we welcome new PGY1 residents and a host of new faculty members, there is great excitement here in the Department of Surgery.

On the clinical front, we have gained additional work at the Methodist Hospital, have grown the Heart Transplant and Advanced Heart Failure Program, have seen an upswing in liver transplants, and are now the busiest hospital by surgical volume for pancreas resections in the tri-state area!

On the quality front, Dr. Herbert Cohn and Randi Altmark, RN, BSN, CNOR have done a tremendous job with the National Surgical Quality Improvement Program. Using those data we have organized the Surgical Care Committee and new Surgical Care Bundle and are driving changes in practice, and hopefully, better outcomes.

On the research front, our grant submissions have doubled in the last three years.

Total grant awards for the last fiscal year approached \$2 million. We have completed a large prospective randomized trial looking at pancreaticojejunostomy following the Whipple procedure, and have clinical trials open in the Divisions of Vascular, Cardiac, Transplant and General Surgery.

On the education front, Dr. Karen Chojnacki has done a great job retooling our surgical curriculum with the help of Drs. Niels Martin and Vincent Armenti, and the Chief Residents.

Finally, we thank Lara Allan Goldstein for her work in greatly increasing the department's development dollars – most recently accepting a generous gift from the Nicoletti family to support an endowed professorship in transplant surgery.

Clinical Integration



Genetic Counselor Sarah Charles, MS, CGC of the Jefferson Kimmel Cancer Center Network (JKCCN) educates families about their risk of developing an inherited disorder.

Jefferson Pancreas Tumor Registry Opens for Enrollment

The Jefferson Pancreas Tumor Registry (Jeff PTR) has been approved by the Institutional Review Board of Thomas Jefferson University Hospital and is designed to help determine the links between familial genetic variations, environmental and occupational influences, and the development of pancreatic cancer

According to Principal Investigator, Dr. Charles J. Yeo, "The purpose of the Jeff PTR is to determine whether pancreas cancer occurs more frequently in families with a history of the disease, and to determine the environmental and occupational risk factors to which pancreas cancer patients have been exposed." Participants will complete a

The goal is to diagnose pancreatic cancer early when it is easier to treat.

detailed questionnaire and may be asked to submit a blood sample and/or cheek swab. The questionnaire is designed to elicit the family health history of a patient with pancreas cancer or a non-affected family member, and to document exposure to occupational and environmental factors, such as residential radon, asbestos, and second-hand

tobacco smoke. The Jeff PTR is a longitudinal study in which participants may engage in long-term follow-up and receive information regarding scientific and epidemiological breakthroughs in pancreas cancer.

Research has shown that certain rare genetic conditions are associated with an increased risk of pancreatic cancer, including familial breast-ovarian cancer, familial melanoma, familial colon cancer, hereditary pancreatitis, and Peutz-Jegher's

syndrome. Genetic Counselor Sarah Charles, MS, CGC of the Jefferson Kimmel Cancer Center Network (JKCCN) educates families about their risk of developing an inherited disorder. Ms. Charles explains, "We haven't yet identified a causative gene to allow predictive testing for pancreatic cancer. But, for patients with a strong family history of pancreatic cancer, we can offer risk assessments and possibly surveillance with endoscopic ultrasound."

Such high risk patients may be referred to Jefferson gastroenterologists such as Thomas Kowalski, MD and David Loren, MD to discuss the pros and cons of invasive surveillance. The goal is to diagnose pancreatic cancer early when it is easier to treat. For persons who do develop pancreatic cancer, Jefferson physicians may use the results of genetic testing to select the most effective therapy. Targeted therapy for pancreas cancer is becoming a reality in part due to recent discoveries made in the laboratory of Jonathan Brody, PhD, Assistant Professor of Surgery, where molecular studies have clearly indicated survival advantages with the use of targeted chemotherapy treatment.

For more information about the Jefferson Pancreas Tumor Registry please visit www.jeffersonhospital.org/pancreasregistry

Please Welcome

Meet Our Surgical Interns

Jefferson surgeons are currently assisted by an exceptional group of categorical interns, half of them Jefferson Medical College graduates. These doctors, who recently matched with Jefferson, started on June 20, 2008 (l to r):

Danielle Pineda, MD, Jefferson Medical College; Richard Burkhart, MD, Boston University School of Medicine; Aleksandra Policha, MD, SUNY/Syracuse; Daniel Relles, MD, Jefferson Medical College; Christina Khan, MD, PhD, University of Illinois;

and Jason Walls, MD, Jefferson Medical College

We are also pleased to welcome back two additional Jefferson Medical College graduates, Carrie Houssock, MD, and Jordan Goldhammer, MD, as preliminary interns in General Surgery.



Changing Lives Through Research



Stephen McIlhenny, PhD candidate with Drs. Eric Hager and Neil Moudgill.

Surgical Residents and PhD Candidate Make Significant Contributions to Ongoing Adult Stem Cell Research

Paul DiMuzio, MD, directs the Vascular Tissue Engineering Laboratory within the Department of Surgery at Thomas Jefferson University. “The overall goal of our research is to develop a durable blood vessel replacement for those patients who do not have enough of their own tissues for heart or leg bypass surgery or hemodialysis access. We combine tissue engineering techniques with adult stem cell technology to make such a graft,” explains Dr. DiMuzio. Specifically, the researchers repopulate a cadaver blood vessel with the patient’s own stem cells (isolated from their fat) that have been changed into endothelial cells.

Recent work has focused on the effects of fluid-induced shear stress and genetic manipulation on the differentiation of the stem cells. The investigators are developing methods to more effectively change the stem cells into endothelial cells by altering their environment as well as their genetic composition. The following research trainees have

investigated these issues under the mentorship of Dr. DiMuzio:

During his research year, Eric Hager, MD, a 4th year resident, studied how fluid flow influences stem cell adhesion to the vascular graft. Dr. Hager successfully demonstrated that

The overall goal of our research is to develop a durable blood vessel replacement for those patients who do not have enough of their own tissues.

shear stress improves the ability of stem cells to adhere to grafts secondary to up-regulation of integrin expression (proteins on the cell surface necessary for cell adhesion). Dr. Hager presented this work at the Society of Vascular Surgery’s National Annual meeting in June, 2008 in San Diego—a presentation highlighted in a press release at the meeting.

Tanya Wynder,

MSN, CRNP, NP-C

Tanya Wynder is one of two Transplant Surgery Nurse Practitioners in the Department of Surgery. She came to Jefferson in April 2006 from Temple University Hospital.

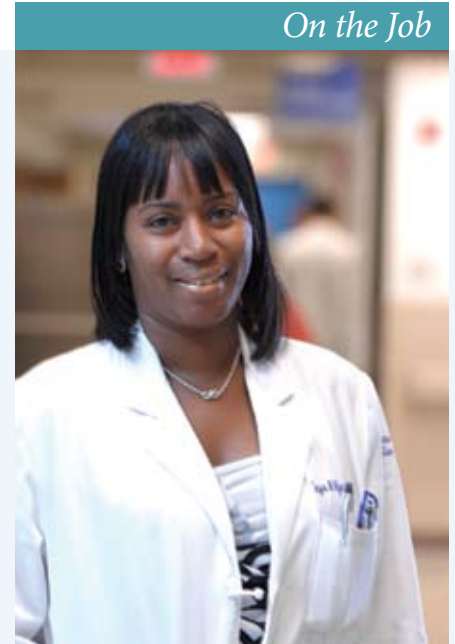
Can you describe your role as a Transplant Nurse Practitioner?

I am deeply involved in patients’ pre- and post-operative care, including patient assessment, history, and physicals. I provide direct care immediately after surgery for patients at the hospital as well as outpatients at the clinic. In 2007, we transplanted 63 livers, 47 kidneys, and 3 pancreases at Jefferson.

What’s the best part of your job?

Well, there are really two things. First are the people I work with. Here, nurse practitioners are truly valued and have an important role. That goes a long way in my job satisfaction. Second is getting to know pre-transplant patients and then to see the real transformation the surgery brings to their lives. For example, kidney recipients no longer need dialysis 4 hours a day for 3 days a week—that’s more than 600 hours a

On the Job



year that they get back. Imagine what you would do with an extra 600 hours a year!

How did you become interested in transplant surgery?

When I was younger, my father needed a heart transplant. He wasn’t patient. One day he said “enough”—he left the hospital and died the next day at home. While I am first and foremost a professional, I think with that experience I bring another layer of compassion and understanding to my patients and their families.

Neil Moudgill, MD, another 4th year resident, evaluated the role of shear stress on stem cell differentiation. He found that shear stress significantly up-regulated certain endothelial cell-specific proteins due to stimulation of a specific differentiating pathway. His work was presented at the Annual Resident Research Competition at the University of Rochester in April, 2008. Neil’s presentation was picked as one of three winners in this national competition.

While surgical residents spend one year in the research laboratory, Stephen McIlhenny, BS, is currently in his fourth year as a PhD candidate in Jefferson’s Tissue Engineering and Regenerative Medicine (T.E.R.M.) program. Stephen designed a novel vascular bioreactor in which the stem cell vascular graft is created and cultured. He successfully demonstrated that a gradual increase in shear stress was critical to the retention

of stem cells on the graft, work that he presented at the 2007 Biomedical Engineering Society (BMES) Annual Meeting in Los Angeles.

Additionally, Stephen recently genetically manipulated the stem cells to express endothelial nitric oxide synthase (eNOS), a gene critical for function of endothelial cells. Most importantly, Steven demonstrated that this manipulation has led to the release nitric oxide (NO), a molecule critical to blood vessel function and health. Steven’s research on stem cell eNOS transfection will be presented at the Tissue Engineering and Regenerative Medicine International Society (TERMIS) meeting in December 2008.

Under the sponsorship of Thomas Tulenko, PhD, Director of the Division of Research, and Dr. DiMuzio, Stephen has been granted an American Heart Association Pre-doctoral Fellowship.

Those Who Give

The Nicoletti Family Professorship in Transplantation Surgery

Robert and Beatrice Nicoletti and their family have generously established an endowed professorship in honor of Cataldo Doria, MD, PhD, FACS, Associate Professor of Surgery and Director of the Division of Transplantation Surgery.

“Dr. Doria literally saved my life,” says Robert Nicoletti. “And everyone at Jefferson was so caring, thoughtful and encouraging. I now have a new lease on life.”

For four years, Robert’s kidneys were progressively failing him – the result of hypertension, or high blood pressure. Robert initially concealed his worsening condition from his close knit family. In early 2006, however, the team at Jefferson determined that he needed a transplant and Robert told his family.

Seven members of the Nicoletti family immediately volunteered to donate a kidney. Ultimately, only one family member was deemed compatible: Robert’s daughter, Lori Peruto. She recalls, “When we learned of Dad’s condition, we knew what we had



Cataldo Doria, MD, PhD, FACS with Robert and Beatrice Nicoletti, and their daughter Lori Peruto

to do. There was no question, no hesitation.”

On June 6, 2006, Robert and Lori arrived at Jefferson for the life-changing procedure. Beatrice Nicoletti was truly impressed with her family’s experience at Jefferson. “When something like this happens, you’re scared,” she says, “but the staff at Jefferson kept us informed every step of the way. That helped ease our fears.” Robert and Lori quickly regained their strength and returned to their normal lifestyle in a few weeks. Both remain in good health, which they attribute to Dr. Doria and the multidisciplinary team at Jefferson. “We knew we were in good hands,” Beatrice says.

Endowed professorships such as this are a critical resource to recruit and retain a distinguished

faculty, and they provide distinct honor and recognition for the faculty members who hold them. “This provides a reliable source of funding as we seek to expand our growing transplant program here at Jefferson,” says Dr. Doria. “We are all extremely grateful to the Nicoletti family for their generous gift.”

Jefferson’s Eakins Legacy Fund will match this gift dollar-for-dollar. The Fund was created from the proceeds of the sale of Thomas Eakins’s The Gross Clinic to support the institution’s key initiatives.

For additional information on the Eakins Legacy Fund and ways to support the Department of Surgery, please contact Lara Allan Goldstein, Director of Development, at **215-955-8797**.

News in Brief



Kristin Brill, MD

Kristin Brill, MD has joined the Department of Surgery’s Division of General Surgery after seven years as a volunteer faculty member in private practice. She specializes in breast surgery.

Michel Haddad, MD has joined the Department of Surgery’s Division of Cardiothoracic Surgery. He specializes in ventricular assist devices, minimally invasive and minimal access cardiac surgery, and cardiac ICU care.

Jay Jenoff, MD and **Niels Martin, MD** have joined the Department of Surgery’s Division of Acute Care Surgery. Both surgeons recently completed a Fellowship in Traumatology & Surgical Critical Care at the Hospital of the University of Pennsylvania. Dr. Jenoff is a 2005 graduate of the Department’s residency program. Dr. Martin, a 2006 graduate of the residency program, has also been named the Associate Program Director.

Harish Lavu, MD has joined the Department of Surgery’s Division of General Surgery. He recently completed a Fellowship in Hepatobiliary and Pancreatic Surgery at the Indiana School of Medicine in Indianapolis.

John Pinckney Maxwell IV, MD recently completed his Fellowship in Colon and Rectal Surgery at Thomas Jefferson University Hospital and has joined the Department of Surgery’s Division of Colon and Rectal Surgery.

Benny Weksler, MD, MBA, has joined the Department of Surgery’s Division of Cardiothoracic Surgery. He recently completed a fellowship in minimally invasive surgery at the University of Pittsburgh Medical Center after several years in private practice in Brazil. He specializes in thoracic surgical oncology.

Gerald Isenberg, MD was named the President of the Association of Program Directors for Colorectal Surgery.

Save the Date: November 1, 2008
Third Annual Pancreatic Cancer Patient Symposium
 Registration required. For more information, go to www.jeffersonhospital.org/pancreas



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Jefferson Department of Surgery
 620 Curtis Building
 1015 Walnut Street
 Philadelphia, PA 19107
www.jeffersonhospital.org/surgery

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 Jennifer Brumbaugh, MA, Editor-in-Chief
 Alison Rooney and Kathleen Cottrell, Writers
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