



UF&SHANDS COMMUNICATIONS

Most repairs of aortic aneurysms and dissections use an endovascular stent graft, shown above.

UF Surgeons Among National Leaders in Endovascular Aortic Disease Repairs

UF&Shands is one of the nation's premier destinations for endovascular treatment of aortic aneurysms and dissections.

Endovascular repairs are minimally invasive and do not require the large incisions necessary for open surgery.

"Most of our procedures are performed through small incisions — about one centimeter — in the groins," said **Adam Beck, MD**, an assistant professor in UF's division of vascular surgery and endovascular therapy.

Repairs performed in this manner leave smaller scars, cause much less pain, pose less risk of infection, heal faster, and cause less bleeding than traditional open procedures. Most aortic aneurysm and dissection repairs currently involve the use of endovascular stent grafts, which are made of a woven, cloth-like material and supported by metal stents. These devices are delivered through catheters that are placed over wires and directed to the site of treatment using X-ray imaging. The device is then unsheathed and re-lines the diseased portion of the aorta.

Although straightforward endovascular infrarenal aortic repairs (EVAR) are performed at many institutions around the country, the minimally invasive treatment of thoracic and thoracoabdominal aneurysms, as well as abdominal aneurysms extending above the level of the kidney arteries (juxtarenal or suprarenal aneurysms) is performed only at specialized centers. For these procedures, UF surgeons often use customized devices called branched and fenestrated endografts.

These complex repairs require a great deal of skill and experience on the part of the surgeons and the anesthesia and operating room team. Shands at UF is one of the busiest hospitals in the U.S. for these types of procedures, Beck said. Additionally, for patients with pathology in the thoracic portion of the aorta, the vascular and cardiovascular surgeons at UF work as a collaborative team to offer the most advanced care possible.

"One of the real strengths of our aortic surgery program is that the patients benefit from the expertise of an entire surgical team," said **Philip J. Hess, MD**, an associate professor and program director of thoracic and cardiovascular surgery. "This includes cutting edge technology, which contributes to better outcomes."

Beck noted that UF vascular and cardiovascular surgeons also have extensive experience and a great deal of expertise in performing aortic repairs via open surgery, for patients who require or prefer it. Open aortic repairs are often performed on younger, healthier patients and those who have anatomy not suitable for endovascular repair. Certain patients are better treated with endovascular procedures because they are at higher risk for complications after open surgery, including those with kidney problems, advanced age, coronary artery disease, congestive heart failure or emphysema.

In an effort to continue improving care for patients with aortic problems, UF&Shands is "in the process of establishing a formal Aortic Treatment Center that will work to develop processes of care that will streamline the management of our patients," Beck said. "This will further improve the already excellent overall care that patients receive in our institution."

Some patients may benefit from enrolling in a clinical trial focused on repair of aortic disease. UF&Shands has a long history of participation in successful clinical trials, and is currently involved in 11 active trials. Some trials offer participants access to devices not widely available because of their experimental nature.

For more information about endovascular repair of aortic aneurysms and dissections or related clinical trials, call 352.265.9928.

Patient Success Story

Breathing Free Again

UF performs first diaphragm pacing surgery on a Pompe disease patient

It was a week of firsts for 8-year-old Brian Stanzione — first plane ride, first stay in a hotel and first visit to Florida.

But Brian was not flying from New Jersey to visit Disney World. He came to visit his dad, Michael Stanzione, 53, who became the first person with Pompe disease in the world to receive a diaphragm pacing system, enabling him to breathe freely for the first time in four years.

Lawrence Lottenberg, MD, an acute care surgeon and associate professor of surgery, and **Saleem Islam, MPH, MD**, an associate professor of pediatric surgery, performed the three-hour surgery Aug. 15, which involved implanting a lightweight battery-powered electronic breathing device — the same system paralyzed actor Christopher Reeve received in 2003 to allow him freedom from a ventilator.

UF surgeons implanted a diaphragm pacing system in a spine-injured patient in March 2009, but the device had never been given to a Pompe disease patient before.

For Michael, the procedure is expected to free him of the ventilator that has kept him in the hospital for the past four years and let him resume a more fulfilling life. He hopes to live with his wife and only child in his own house again and go on outings with them, like swimming or to a baseball game.

"I would think all Brian remembers is me in the hospital," he said. "Just sitting down doing homework with him — I would love."

Sitting in his dad's lap in the Shands' hospital room and playing with the remote-controlled window blinds, Brian hopes for the same thing.

"I'm happy, because he gets to come home," said the boy, taking off his dad's UF Gators hat and rubbing his head affectionately.

Bound by Disease

Michael only found out a few years ago that he has Pompe disease, but he has been dealing with the condition for the past 15 years.

The focus of a research program at UF for more than a decade, Pompe disease is a rare inherited neuromuscular



Michael and Brian Stanzione pose for a photo upon Michael's return home.

disorder that causes muscle weakness in people of all ages. People with Pompe disease cannot produce the enzyme acid alpha-glucosidase, so sugars and starches stored in the body as glycogen accumulate and destroy muscle cells, particularly heart and respiratory muscles. Many patients eventually need ventilators to breathe.

The computer programmer was about 35 years old when he first realized his gait was off and it was harder to walk up stairs and get up from a chair. He was misdiagnosed with polymyositis, an inflammatory muscle disease that causes weakening of the skeletal muscles.

But then his breathing became affected and in March 2007, he went to the emergency room "thinking they'd give me a pill and I'd be home in a few hours."

He was admitted to the hospital and received a tracheotomy and another muscle biopsy, which indicated that he had Pompe disease. That's when he was put on a ventilator.

His wife Debbie works full time and his insurance would only cover a couple of hours of home health care per day. But, being on a ventilator, he needed much more and landed in a long-term care facility for four years.

Last Christmas, Michael was able to go home for five hours. He also was able to attend his son's First Communion and surprised him by showing up at one of his football games.

"With my son growing up, it hasn't been easy," he said.

Driven by Hope

Michael first heard of the diaphragm pacing system about a year ago and figured if there was some way to get him off a ventilator and back home, he was determined to find it — wherever it was.

"Once I heard about it, I was just of the mindset — I have to do this," he said.

Part of an Internet network for Pompe patients, he posted a question, asking if anyone knew someone that performs this procedure.

"Somebody from Gainesville contacted me," he said. "It was George Fox."

PHOTO COURTESY OF STANZIONE FAMILY

Fox directed him to his son Phoenix's doctor, **Barry Byrne, MD, PhD**, a professor of molecular genetics in the UF College of Medicine, director of the Powell Gene Therapy Center and an associate chair in the department of pediatrics.

Byrne does research and clinical trials aimed at helping those affected by genetic muscular diseases, including Pompe. Phoenix Fox, 8, was diagnosed with Pompe disease as an infant and his family moved to Gainesville from the Florida Keys to be closer to the treatment offered by Byrne.

Michael and Byrne met last year and both were eager to try the procedure on someone with Pompe disease.

"He's very motivated — he wants to improve his situation and get home to his family," said Byrne. "Brian is a big motivator for him."

Michael arrived at UF July 12, after a 21-hour drive by a medical transport company. After the surgery, he had to be gradually weaned off the ventilator.

"I was scared but it wasn't stopping me," he said. "If there was a 1 percent chance of this working, I would have done it."

A Giant Step Toward Freedom

A month after the procedure, Michael left Shands at UF to undergo about three weeks of intensive rehabilitation at the Kessler Institute for Rehabilitation in West Orange, New Jersey.

"I'm very glad I did it, it was the right move," he said in a phone interview Sept. 28 at the Kessler Institute.

At that time, Michael could be off his ventilator for up to an hour at a time and he hoped eventually to be able to be off it most of the day. Even if he never got off it completely, his greatly reduced dependence on the ventilator "would be a success in my book," he said.

The other big success was reaching his ultimate goal — being able to live at home again with his family. His physical and occupational therapy was grueling, but he was glad to be preparing to go home in mid-October.

When asked what he is looking forward to doing with his son, he simply replied, "Everything."

The risk paid off. On Oct. 18, Michael, who was able to be off his ventilator for up to 12 hours a day, finally got to go home.

Without constantly being on a ventilator, Michael may even be able to get out of his wheelchair, said Byrne. That's because he would have the freedom to exercise and strengthen his muscles more, which he wasn't able to do constantly tied to a ventilator.

"We have to undo years of inactivity — but he's a pretty motivated guy, so I think he'll get there," Byrne said.

Stanzione's success was a team effort, involving everyone from nurses, physical and respiratory therapists and researchers studying the respiratory deficiencies related to Pompe disease, Byrne said.

Read the rest of the story at: floridaphysician.med.ufl.edu

UF Physicians' Patient Access Center

UF Physicians' new Patient Access Center opened in May to better serve patients and referring physicians.

"The goal of the Patient Access Center is to improve access for our patients and referring physicians to all aspects of the patient's care with one phone call," said **Kelly Kerr, MBA**, senior director of operations for UF Physicians, "including appointment scheduling, prescription refills, test results, medical questions and other needs with a focus on patient-centered hospitality. We are in the process of rolling this program out to all of the practices."

Access coordinators at the center answer calls and schedule appointments, help with referrals and connect callers with nurses or physicians when necessary.

To reach the Patient Access Center's scheduling coordinators, call one of the numbers below for patient appointments or physician referrals.

Acute Care Surgery: 352.265.0535	Surgical Oncology: 352.265.0535	Thoracic and Cardiovascular Surgery: 352.265.5470
Burn Center: 352.265.0200	GI Oncology Center: 352.265.0990	Transplantation Surgery: 352.265.0606
General Surgery: 352.265.0604	Pediatric Surgery: 352.273.8800	Vascular Surgery and Endovascular Therapy: 352.265.9928
GI Surgery: 352.265.0535	Plastic and Reconstructive Surgery: 352.271.5367	



Dear Friends:

The University of Florida department of surgery trains more than 50 surgeons each year in eight surgical specialties, including general surgery, pediatric surgery, vascular surgery and endovascular therapy, thoracic and cardiovascular surgery, transplant surgery, minimally invasive surgery, plastic and reconstructive surgery, and critical care. Our goal is to train the best and

brightest medical students to become stellar academic surgeons. Indeed, we hold a unique position in the state of Florida, in that we have the resources to train surgeons to become not only outstanding clinicians delivering high-quality care, but also to develop them as leaders in surgical research and education.

Training the next generation of surgeons and surgical leaders is at the forefront of our daily activity. Not only do we incorporate daily clinical education, but now each of our incoming trainees in general surgery will devote an additional two years to academic development either in basic science or clinical research. We believe this type of scholarship training will produce clinical scientists and clinical educators who ask novel questions and problem solve from an innovative perspective. In turn, this will populate our region and state with well-trained surgeons who will enhance our medical communities.

To date, about 40 percent of our trainees have engaged in a two-year or longer research experience, and their productivity has been excellent. In the last six years, four of our trainees have earned their PhDs. Furthermore, they and others have published in the highest-quality surgical and scientific journals and presented their work nationally and internationally. Many of them have gone on to train in the best advanced training positions in the country and now hold major academic positions.

How do we identify excellent trainees who will pursue academic surgery positions? We start early by showing medical students the benefits and joys of an academic career in surgery. One article in this issue highlights the work of one of our faculty members, **Dr. Peter Nelson**, who has played a large role in delivering this message to medical students nationally. We appreciate Dr. Nelson's broad-reaching efforts and join him in welcoming bright students into a career of academic surgery.

Kevin E. Behrns, MD
Chairman

Department of Surgery Adds Seven New Faculty Members

Bruce McKinley, PhD, professor and director of program improvement and translational research for acute care surgery and intensive care. His focus at UF is on development and implementation of protocols and technology to improve care of trauma and surgical intensive care patients.

Fitzgerald J. Casimir, MD, assistant professor, acute care surgery. Research interests: hemodynamic monitoring and management of acute lung injury. Clinical interests: the use of transesophageal echo for hemodynamic monitoring, use of extracorporeal membrane oxygenation, treatment of flail chest with rib plating, laparoscopic ventral hernia repair, abdominal wall reconstruction and burn surgery.

Chasen Croft, MD, assistant professor, acute care surgery. Research interests: surgical infections, specifically MRSA infections in trauma patients. Clinical interests: trauma and acute care surgery, adult critical care and management of sepsis.

Jose G. Trevino, MD, assistant professor, general surgery. Research interests: pancreatic cancer biology, tumor signaling and chemoresistance. Clinical interests: liver, bile duct and pancreatic surgery.

Atif Iqbal, MD, assistant professor, general surgery. Research interests: outcome-based translational research in colorectal pathology. Clinical interests: Robotic surgery, advanced laparoscopy, pelvic surgery and surgical treatment of rectal cancer, including transanal endoscopic microsurgery.

Shawn D. Larson, MB, ChB, assistant professor, pediatric surgery. Research interests: gastrointestinal physiology and immunology, endocrine tumors and pediatric trauma. Clinical interests: neonatal surgery, pediatric trauma and endocrine surgery.

Thomas Peters, MD, Interim Kidney Transplant Program Director. Research interests: Living kidney donation, long-term organ transplant outcomes and the history of organ transplantation. Clinical interests: Kidney donation and transplantation, immunosuppressive therapy and care to underserved populations, including older and socially disadvantaged patients.



McKinley



Casimir



Croft



Trevino



Iqbal



Larson



Peters

Educating Potential Surgeons

Peter Nelson, MD, is passionate about drawing young people into the field of surgery — so passionate, in fact, that he took on an enormous task in the hopes that the end result will attract more medical students to the ranks of America's surgeons. With funding from numerous surgical organizations and the help of professional video producers, Nelson, an assistant professor in UF's division of vascular surgery and endovascular therapy, set out in 2006 to create a video about the benefits of being a surgeon. His producer partners captured more than 90 hours of interviews with surgeons across the nation, as well as background footage of surgeries taking place at several institutions, including UF, to add to the film's visual interest.

The result is *Redefining Surgery*, a multi-chapter video that addresses the following topics: "Why Surgery?," "Surgical Education," "Academics & Research," "Diversity in Surgery," "The Surgical Life" and "The Future of Surgery." Donations from various surgical societies funded the project.

"We've captured a lot of very personal stories," Nelson said, "Plus we've asked (the interviewees), 'What advice would you give a medical student today considering surgery?'"

The video highlights new developments in surgery and, Nelson said, also deals with questions a person might have when considering a career in surgery, such as the amount of time off surgeons have, whether it's possible to have a family while working as a surgeon and the potential for achieving balance between work and personal life.

"The target audience is preclinical medical students who are formulating their career plans," he said.

Nelson introduced the video at the annual Clinical Congress of the American College of Surgeons in November and will distribute copies of the DVD at the Academic Surgical Congress in February. He has created a website and Facebook, Twitter and YouTube accounts dedicated to the project and said he hopes to develop a social media community on the topic. He also plans to create a series of informative podcasts based on the DVD.

Nelson serves as faculty advisor to UF's Surgical Interest Group, a club for medical students who want to learn about the field of surgery. Currently, there are about 50 students in the group, which holds monthly meetings that include lessons on suturing and lectures from faculty members on various aspects of working in surgery.

When asked why he's so personally committed to increasing the number of people going into surgery, Nelson said he wants to make sure students considering careers as surgeons have accurate, honest information about the field.

"Not everybody's going to want to be a surgeon, but I think it's a shame if somebody doesn't go into surgery, for the wrong reasons," he said. "Hopefully, we can reach out to those people who are... on that fringe where they want to be a surgeon but they just can't pull the trigger because something's holding them back. In most instances, I think it's a bad misconception. They've been given wrong information."

The Association for Academic Surgery, the Society of University Surgeons, the Association for Program Directors in Surgery and the American College of Surgeons sponsored this project.

To view the *Redefining Surgery* trailer, visit:

<http://web.me.com/pnelson/www.redefiningsurgery.com>

To request a copy of the DVD, send an email to redefining_surgery@me.com.



Alex Cuenca, MD, a UF surgical resident, received an award for "Best Basic Science Presentation" from the American College of Surgeons' Region IV Committee on Trauma. He received the award in November for presentation of a research project comparing burn and thermal injury response in humans and certain laboratory models used for study.

Research Briefs



Adam Beck, MD, led the first meeting of the Florida Vascular Study Group

Florida Vascular Study Group Holds First Meeting

The Florida Vascular Study Group, which fosters collaboration statewide among physicians and hospitals to collect and analyze clinical data from patients undergoing vascular procedures, held its first meeting on Oct. 27 at Shands at UF. The group's focus is to improve the care of vascular patients throughout the region.

Surgeons from across Florida and Georgia attended the meeting, and much of the discussion surrounded the possibility of expanding the group to include Georgia medical centers.

"The idea of regionalized study groups is to identify variations in outcomes based on different demographics located in each region," said **Adam Beck, MD**, a UF assistant professor of surgery who established the group and led the meeting. "Combining Florida and Georgia into one region... would improve our ability to identify best practice for our unique patient population in the southern United States."

B Cells Active in Innate Immune System, Researchers Find

UF researchers have identified two steps key to activating the body's innate immune system, its first defense against infection.

The discoveries offer insight into why some trauma patients survive initial injuries but die from seemingly less serious causes soon afterward.

"We're able to bring them through the trauma with an 80 percent or higher success rate, and then after a few weeks in the hospital they succumb to secondary infections," said **Matthew Delano, MD, PhD**, a UF surgical resident.

Researchers, including Delano and **Lyle Moldawer, PhD**,

a professor and vice chairman of research in the department of surgery, say understanding these chemical signals may lead to improved therapies for patients with suppressed immune systems.

In an article published in the July 2011 issue of the *Journal of Experimental Medicine*, the scientists describe how B cells (a type of white blood cell) release a chemical called CXCL10 to trigger inflammation and deploy cells designed to fight any invaders.

Previously, B cells were thought to be involved only in adaptive immunity, which recognizes invaders and responds more effectively to subsequent encounters. The innate immune response is more generic and wasn't thought to convey long-lasting immunity to specific threats.

"What we showed, which is actually quite revolutionary, is that B cells modulate the early innate immune response," Moldawer said.

The August 2011 issue of *Nature Reviews Immunology* contained a review of the paper.

In a separate study published in the July 15, 2011, issue of the *Journal of Immunology*, researchers identified a protein called stromal cell-derived factor 1 (SDF-1), that directs the release of neutrophils, another type of white blood cell, from bone marrow to infection sites. Neutrophils will attack any pathogen and are one of the body's first defenses against infection.

Bone marrow usually makes SDF-1, but stops production when an infection begins. Tissues at the infection site start making the protein instead. Neutrophils then migrate to areas with the highest concentrations of SDF-1, where they battle invading pathogens.

"If we block this increase (in SDF-1 in the infected area), then we don't see a mobilization," Moldawer said. "The neutrophils are not recruited to the site of infection and the infection can't be controlled."

The identification of SDF-1 and of CXCL10 in activating the body's innate immune response could pave the way for medicines that stimulate innate immunity in immune-suppressed patients.

Scientists from UCLA, Yale University, Duke University, Osaka University, Merck Research Laboratories and the University of Virginia helped with the studies.

Visit surgery.med.ufl.edu/about-us/news-archive/ for the complete articles and news about other research initiatives.

Patton Receives ASTS Award



Pamela Patton, PA, MSP, received the 2012 American Society of Transplant Surgeons Advanced Transplant Provider Award at the society's Annual State of the Art Winter Symposium, held in January in Miami. Patton serves as the clinical director of kidney and pancreas transplantation at UF. She has worked in the division of transplantation since 1978.

Richard J. Howard, MD, PhD, medical director of LifeQuest Organ Recovery Services at Shands at UF and former chief of the division of transplantation, nominated Patton for the award. In his nominating letter, he called Patton "the backbone of our transplant program," and noted her excellent work with patients, organizing and conducting research, educating department and hospital personnel and facilitating collaboration between UF&Shands thoracic and abdominal transplant teams.

ASTS gives the award to one person each year for "the time and effort dedicated to advancing clinical practice through translation of scientific information, development of standards and clinical mentoring," according to the society's website.

Florida Department of Health Supports Huang's Research



Emina Huang, MD, an associate professor of surgery, has received a \$180,000 grant from the Florida Department of Health's Bankhead-Coley Cancer Research Program to fund her research into the origins of colon cancer.

Huang and her team of researchers are working with cancer cells and colon cells affected by ulcerative colitis to learn how interleukin-8, an immune system protein thought to contribute to cancer growth, influences the development of colorectal cancer in people who have ulcerative colitis.

Beaver joins American Association for Thoracic Surgery



Thomas Beaver, MD, MPH, was elected as a new member of the American Association for Thoracic Surgery in June. He joins the prestigious organization's more than 1,200 other members, cardiothoracic surgeons from 35 different nations.

Beaver is an associate professor of surgery and director of minimally invasive cardiac surgery at UF.

Eight UF Surgeons Named "Top Doctors"

Physician rankings on U.S. News & World Reports' website show eight UF surgeons are among the nation's "top doctors," as determined by Castle Connolly Medical Ltd., a well-known organization that rates health-care providers.

Kevin E. Behrns, MD, chairman of the department of surgery and the Edward R. Woodward professor of surgery; **Timothy C. Flynn, MD**, a professor of vascular surgery and an associate dean for the College of Medicine; **Tomas D. Martin, MD**, a professor of thoracic and cardiovascular surgery; **Bruce A. Mast, MD**, associate professor and chief of the division of plastic and reconstructive surgery; **Edward D. Staples, MD**, an associate professor of thoracic and cardiovascular surgery, are ranked in the top 1 percent of physicians in their specialties nationwide.

Thomas S. Huber, MD, PhD, a professor and chief of UF's division of vascular surgery; **David W. Kays, MD**, an associate professor and chief of UF's division of pediatric surgery; and **David Mozingo**, a professor of acute care surgery and anesthesiology and director of Shands Burn Center, are ranked in the top 10 percent of physicians in their specialties.

UF Surgeon Co-Chairs American Cancer Society's Breast Cancer Walk

Christiana Shaw, MD, MS, an assistant professor of surgery and a surgical oncologist, co-chaired the 2011 American Cancer Society Making Strides Against Breast Cancer 5k Walk, held in October. Shaw and **Karen Daily, MD**, an assistant professor in UF's division of hematology/oncology, organized the walk and spoke at engagements across town to promote it.

The walk, which took place in downtown Gainesville, drew more than 4,000 participants and onlookers and raised about \$168,000 for breast cancer research, prevention and treatment, as well as support for people suffering from breast cancer. Shaw's team, representing the UF&Shands Breast Center, raised more money than all but one other group.

Several other department personnel and family, friends and patients participated in the walk, too. Shaw said the event's most meaningful effect wasn't raising all that money.

"Although it is important to raise money to help support the American Cancer Society programs, it is much more important that we raise awareness about breast cancer," she said. "Specifically, I think it is important to educate people about early detection and self-breast awareness."



The Stitch

Advancing the
Science of
Surgical Care

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