

HEART & VASCULAR NEWS

SPRING 2010

FROM THE UPSTATE HEART AND VASCULAR INSTITUTE,
UPSTATE UNIVERSITY HOSPITAL

Opening Fall 2010

CONSTRUCTION OF UPSTATE'S HEART & VASCULAR INSTITUTE GETS UNDERWAY

This winter, mallets began taking down the walls of the sixth floor auditorium and surrounding offices as demolition crews prepared the space for Upstate University Hospital's long-planned and state-of-the-art Heart & Vascular Institute (HVI).

Consuming 18,500 square feet, the project includes the entire west wing and portions of the north and south wings on the sixth floor, areas that were vacated last summer when patients and offices moved to the 8th floor (cardiovascular floor) of the hospital's new East Tower.

With a considerable nod to the trend that sees many cardiovascular procedures moving from inpatient to outpatient, the HVI has been designed as a welcoming environment for all patients. It consolidates invasive and non-invasive cardiac diagnostic testing into one cohesive and attractive space while integrating data management systems for maximum efficiency. An endovascular imaging suite will accommodate peripheral* and hybrid** vascular and cardiac procedures; the digital-based cardiac "cath" lab; a new stereotaxis magnetic navigation system; and expanded echocardiography capabilities offering 3D and 4D imaging and reconstruction of various heart structures.

Cardiac computed tomography (CT) and magnetic resonance (MR) imaging capabilities will also be expanded. The Institute also features an 8-bed recovery area and family and patient education, consultation and waiting rooms, and, of course, modern aesthetics. ■

* procedures on arteries that lead from the heart to other organs

** a combination of invasive and non-invasive procedures



Upstate cardiovascular staff and administrators meet at the construction site of Upstate's Heart and Vascular Institute, to be located on the sixth floor of Upstate University Hospital. The Institute is undergoing a dramatic renovation that will enhance patient care. Left to right: Steven McClintic, associate administrator; Daniel Villarreal MD, chief of cardiology; Katie Mooney, chief nursing officer; Luna Bhatta MD, electrophysiologist; in front, Paul Seale, chief operating officer; on ladder, Robert Cooney MD, chair of surgery; Kwame Amankwah MD, cardiovascular surgeon; Michael Iannuzzi MD, chair of Medicine; John McCabe MD, chief executive officer; and Hani Kozman MD, interventional cardiologist.

INSIDE	Page
Robotic Surgery	2
New Doctors in Town	3
Aneurysm Treatment	4
After Bypass Surgery	6
Heart Healthy Recipe	7

Cardiac Surgery Benefits From Robotic Assistance

Upstate introduced the Da Vinci® surgical robot to Central New York in 2005. Since then it has become a common sight in area surgery suites. At Upstate, the robot is used for mitral valve repair, single artery bypass surgery, and select other surgical procedures. According to Cardiac Surgeon Charles Lutz, assistant professor of surgery, robotic technology gives the surgeon exceptional vision and control during minimally invasive procedures.

“With the assistance of the robot, we can use smaller incisions yet have a magnified, 3-D view of the anatomy and enhanced precision,” Dr. Lutz says.

“The surgeon is in complete control of the robot at all times, but the dexterity and steadiness provided by the robot surpasses that of the human hand.”

Dr. Lutz adds that this technology relies heavily on the knowledge and skills of the robotic surgical team: “An absolute requirement is having a dedicated support team that is knowledgeable in and comfortable with robotic technology. We are fortunate to have that.” ■



Patricia L. Kuntz, RN, clinical manager, cardiothoracic/vascular surgery, joins cardiothoracic surgeons Charles J. Lutz, MD, and Gregory W. Fink, MD, division chief.

TAKING CARE OF THE HEARTS YOU LOVE

At Upstate, the variety and complexity of heart disorders is as broad as the procedures available to treat them.

As part of an academic medical center, Upstate accepts patients with the full range of heart problems. In fact, it is not uncommon for medically complex patients to be sent to Upstate by other heart centers in the area. “With Upstate’s unwavering support, we meet these challenges through the expertise and solidarity of an exceptional, dedicated cardiovascular team that includes highly credentialed physicians, nurses, and other cardiac specialists,” says Dr. Gregory Fink, associate professor and chief of cardiac surgery.

“We have pioneered advances in cardiac care, including ‘beating heart’ [off-pump] open heart surgery and implantable cardiac circulatory assist devices. Our leadership in cardiovascular services may be quieter than others, but it is real.”

Upstate’s College of Medicine and University Hospital are also where many, if not most, of area heart specialists trained.

Further supporting Upstate’s expanding cardiovascular services, is the soon-to-open Upstate Heart and Vascular Institute. (See front page.) It will be home to the latest advances in cardiovascular services. For example, the endovascular imaging suite will be home to the newest minimally invasive procedures which will result in shorter hospital stays and faster recoveries. The area dedicated to electrophysiology—where pacemakers are implanted and cardiac ablation* is performed—will house new technology, including a magnetic navigation system that assists in providing exceptional clinical outcomes for patients with heart arrhythmias (irregular heartbeats). ■

*Cardiac ablation eliminates irregular heartbeats by destroying the tissue that blocks the electrical signal that travels through the heart.

FOUR HEART SPECIALISTS JOIN UPSTATE

Upstate Medical University welcomes four new cardiologists:

Lewis W. Johnson MD, FACC, CDE, most recently a clinical professor of medicine at Upstate, has held many professional appointments at Upstate, St. Joseph’s Hospital Health Center and Crouse Hospital in Syracuse. He received his MD from Upstate and served his internship at St. Joseph’s Hospital. He is board certified in internal medicine and in cardiovascular disease and is a certified as a specialist in clinical hypertension by the American Society of Hypertension. Because of his specialty interest in diabetes and heart disease, Dr. Johnson will be on site at Upstate’s Joslin Diabetes Center.

Kan Liu MD, PhD, comes to Upstate Medical University from Washington University School of Medicine where he completed his clinical fellowship in Barnes-Jewish Hospital, Division of Cardiovascular Disease. Previously he was an internal medicine resident at the University of Texas Medical Branch. He earned his PhD from the Departments of Internal Medicine and Cellular Biology at the University of Alabama and was a research fellow at the Division of Cardiology and Howard Hughes Medical Institute in Baylor College of Medicine. Dr. Liu earned his MD from Sun Yat-Sen University of Medical Sciences. He is board certified in internal medicine and cardiovascular disease and is an author of the *Washington Manual, Cardiology Consult*.

Robert R. Michiel MD, FACC, FCCP, was previously in private practice in Syracuse. He received his MD from the University of Pennsylvania School of Medicine and served his internship, residency and fellowship in cardiology at SUNY Upstate Medical University. He had appointments at all hospitals in Syracuse. He is board certified in internal medicine and in cardiovascular disease.

Ali K. Salah MD comes to Upstate from St. Francis Heart Hospital at SUNY Stonybrook where he completed a fellowship in advanced cardiovascular MRI, CT and echocardiography imaging. Prior to that he completed a fellowship in cardiovascular MRI at the Washington Hospital Center at Georgetown University and a fellowship in cardiology at Gill Heart Institute at the University of Kentucky. He was an internal medicine resident at the Medical College of Georgia. He completed medical school at Addis Ababa University School of Medicine, where he also served an internship in medicine, surgery and pediatrics. Dr. Salah is board certified in cardiology, comprehensive echocardiography, cardiovascular CT and internal medicine. His interests include heart and vascular imaging, coronary and peripheral arterial diseases, heart failure and adult congenital heart disease. ■



Lewis W. Johnson, MD, FACC, CDE



Kan Liu MD, PhD



Robert R. Michiel, MD, FACC, FCCP

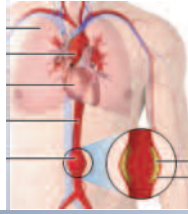


Ali K. Salah, MD

HEART DISEASE: THE NUMBER ONE KILLER OF MEN AND WOMEN

The Upstate cardiovascular team urges you to take action to reduce heart disease.

- Stay physically active
- Don’t smoke
- Eat healthy
- Maintain a normal body weight
- Know your numbers: blood pressure, cholesterol, triglycerides
- See your doctor regularly



Michael Costanza, MD, FACS
Assistant Professor of Surgery,
Vascular Surgery Division

ABDOMINAL AORTIC ANEURYSMS

By Michael Costanza, MD, FACS

The aorta is the largest blood vessel in the body. It starts at the heart and travels through the chest and abdomen. The part of the aorta that goes through the abdomen is called the abdominal aorta and it supplies blood to the lower half of the body.

At about the level of the navel, the abdominal aorta branches into the right and left iliac arteries which carry blood into each leg. An abnormal enlargement of the aorta is called an abdominal aortic aneurysm (AAA). Aneurysms occur when pressure from the flow of blood causes a weak area in the blood vessel wall to expand or bulge like a balloon. Aneurysms can burst or rupture which causes severe internal bleeding and rapidly leads to shock and death. Very few people survive a ruptured AAA and they cause at least 15,000 deaths each year in the U.S.

Diagnosis of AAAs

AAAs can be treated if they are detected before they rupture. Unfortunately, an AAA rarely has symptoms. Over 80 percent of people who die from a ruptured AAA never knew they had one. Most AAAs are detected during a CT scan or ultrasound exam that was performed for another condition. Ultrasound screening programs designed to detect aneurysms have also found many AAAs.

The exact cause of AAAs is unclear. The leading theory suggests that inflammation of the blood vessel wall weakens it and forms an aneurysm.

Risk of Rupture

The risk of rupture depends on the size of the aneurysm. The normal diameter of the abdominal aorta is 2 centimeters or about the width of your thumb. Small aneurysms pose a very low risk for rupture and do not require immediate repair. They usually grow very slowly. In most cases, patients can be followed with an ultrasound or CT scan every 6 to 12 months to monitor growth. Larger AAAs have a higher risk of rupture. AAAs larger than 5.5 cm should be repaired.

Repairing AAAs

There are two ways to repair an abdominal aortic aneurysm: open surgery or endovascular repair.

In an *open surgical repair*, the vascular surgeon makes an incision on the abdomen and replaces the weakened aorta with a tube-shaped aortic graft. This graft consists of a strong, durable, man-made plastic or textile material in the size and shape of a healthy aorta. The tube replaces the weakened portion and allows blood to easily pass through. Most patients stay in the hospital four to seven days after surgery. A full recovery takes six weeks to three months.

Endovascular repair is a less invasive alternative to open surgery. The vascular surgeon makes two small incisions in the groin and threads small tubes (called catheters) and wires through the inside of the blood vessels. With the guidance of live imaging, the surgeon delivers an endograft (a flexible tube) over the wires to the site of the aneurysm. The endograft seals to the normal blood vessel above and below the aneurysm. Patients usually spend two to three days in the hospital and recover quickly with less pain compared to open surgery. The endograft requires regular monitoring via ultrasound exams or CT scans to ensure that it is functioning properly.

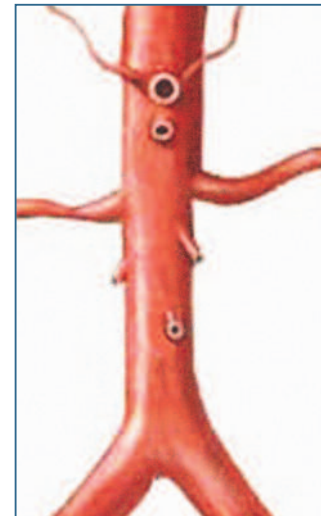
Which Repair Works Best?

Endovascular repairs have specific requirements for the size and shape of the aorta as well as the distance between the kidney (renal) arteries and the aneurysm. Patients with multiple medical problems and suitable aortic anatomy may be better treated with the less invasive endovascular repair. Younger patients with fewer medical problems may prefer an open surgical repair because of its proven durability and less rigorous follow-up requirements. Vascular surgeons at Upstate University Hospital have experience and expertise in performing both open and endovascular AAA repair, and they can help patients decide which type of repair is most appropriate.

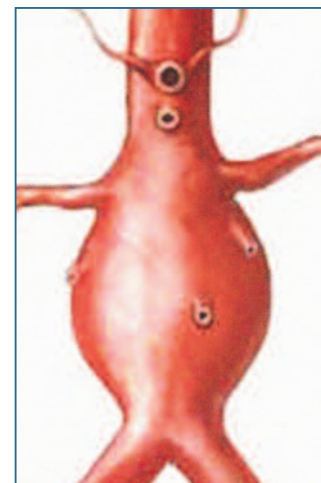
If you are at risk for an AAA, please take advantage of the community screenings including those at Upstate. If you have questions, please contact the Vascular Surgery office at 315-464-6241. ■

Key Risk Factors for Abdominal Aortic Aneurysm

- ◆ 60+
- ◆ Male
- ◆ Immediate relative (mother, father, brother) with an AAA
- ◆ High blood pressure
- ◆ Smoking



Normal aorta



Aorta with large abdominal aneurysm



HOME CARE AFTER CORONARY ARTERY BYPASS SURGERY

By Betsy Fischer, MS, RD, CDN and Abby M. Boire, PharmD

Most patients are discharged home after coronary artery bypass surgery (CABG) with multiple medications that need to be taken daily. We will start with the **anti-platelet medications**. These medications prevent the blood from forming clots that will clog the graft. Two such agents are aspirin and Plavix (clopidogrel).

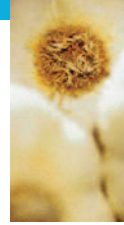
Aspirin has been shown to decrease mortality, and the rate of heart attacks, stroke and kidney failure in those who have taken it after having a CABG. Aspirin is usually continued indefinitely at dosages ranging from 75-325 mg. Plavix is usually continued for nine to twelve months after surgery and is given at a dose of 75 mg/day.

Beta-blockers are another group of medications that patients are started on postoperatively. They help to decrease heart rate, lower blood pressure and decrease the heart's demand for oxygen. Based on patient specific factors, beta blockers may be discontinued after the first visit after surgery. Some patients may need to stay on the beta-blocker indefinitely, however.

Another medication your doctor will likely start you on is called an **angiotensin converting enzyme (ACE) inhibitor**. These have been shown to decrease the rates of ischemic events, i.e. death, repeat bypass surgery, angioplasty or stent replacement. Examples of commonly used ACE inhibitors include enalapril (Vasotec®), lisinopril (Zestril® or Prinivil®), and ramipril (Altace®).

For Patients With Diabetes

It is important to continue with diabetes care/management and lipid-lowering strategies that were in place before the surgery. Blood glucose values should be kept in tight control for patients after CABG with the use of insulin or medications as needed. Also, lipid-lowering agents called statin medications are often prescribed both before and after CABG. These medications are known to halt the progressions of clots in grafts that may form after surgery. ■



BEST-EVER CHILI MAC

Ingredients

- 1 lb. lean ground beef
- 1 small onion, chopped
- 3 medium garlic cloves, minced
- 14.5 oz. fat-free, no-salt-added beef broth
- 1 cup dried elbow macaroni or small shell pasta
- ½ tsp. salt
- 14.5 oz. no-salt-added diced tomatoes, undrained
- 1 medium green bell pepper, diced
- 1 ½ tbsp. chili powder
- 2 tsp. ground cumin
- 1 tsp. dried oregano, crumbled
- ¼ tsp. cayenne or red hot pepper sauce, to taste
- ¼ cup snipped fresh cilantro or thinly sliced green onions
- ¼ cup shredded fat-free or reduced fat Cheddar cheese (optional)

Cooking Instructions

In a large saucepan, cook beef, onion, and garlic over medium heat for 5 minutes, or until browned on the outside and no longer pink in the center, stirring occasionally to turn and break up the beef. Pour into a colander and rinse under hot water to remove excess fat; drain well. Return beef mixture to saucepan.

Stir in broth, macaroni, and salt. Increase heat to high and bring to a boil. Reduce heat and simmer, covered, for 5 minutes. Stir in undrained tomatoes, bell pepper, chili powder, cumin, oregano, and cayenne. Cook, covered, for 10 minutes, or until the macaroni and bell pepper are tender.

To serve, ladle into bowls. Sprinkle with cilantro and cheese. Makes 4 serving. Serve with low sodium crackers. ■

Each one and 1/3 cup serving provides 285 calories, 5.5 g. fat (1.5 g saturated), 464 mg. sodium, 32 g. carbohydrates, 5 g. fiber, 27 g. protein.

From the American Heart Association. www.americanheart.org.

CARDIAC CARE AT UPSTATE

CMS REPORT HIGHLIGHTS UPSTATE'S CARDIAC EXPERTISE

Data as of June 30, 2009

CMS, the Center for Medicaid and Medicare Services, rigorously reviews cardiac care programs and other clinical services at the nation's hospitals and academic medical centers (like Upstate). In one evaluation, CMS studies 13 key performance measures related to the treatment of congestive heart failure and acute myocardial infarction (heart attack). While many hospitals fare well in this composite evaluation, Upstate University Hospital is the top performer in Central New York, as you can see from the graph below.

Cardiac Care Composite Scores (latest data from 4th qtr of '08)

Crouse Hospital	94%
St. Joseph's Hospital Health Center	91%
UPSTATE UNIVERSITY HOSPITAL	97%
Community General Hospital	81%
Auburn	94%
Oneida	89%
Hamilton	96%
Cortland	81%
Oswego	94%
Cayuga	84%
Rome	94%
St. Elizabeth's (Utica)	89%
Faxton-St. Luke's (Utica)	88%

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