

UPSTATE

CANCER CENTER

Syracuse, NY | September 2012

UPSTATE CANCER CENTER TAKES SHAPE

The Upstate Cancer Center building began taking shape over the summer. More than 550 tons of steel began arriving on the Upstate campus at the end of June, and 500 cubic yards of concrete were poured at the end of July for vaults that will house linear accelerators in the department of Radiation Oncology.

The \$50 million facility is scheduled to open late 2013.

“Seeing steel go up on the site is a significant milestone for this community,” said Paul Seale, chief operating officer of Upstate University Hospital.

The center is being built in an environmentally and socially responsible fashion, enabling Upstate to pursue a Silver Rating under the United States Green Building Council’s Leadership in Energy and Environmental Design (LEED) rating system. Part of the project is paid for through bonds.



Top: Architect’s rendering of the Upstate Cancer Center, scheduled to open in 2013. Above: Steel workers from Rauli and Sons, Inc. of Syracuse install metal decking at the Upstate Cancer Center in July.

Upstate is also conducting a capital campaign that has raised \$12.6 million since fall 2011 toward the campaign goal of \$15 million.

The five-story facility will encompass more than 90,000 square feet dedicated to cancer care for children and adults, featuring advanced diagnostic and treatments systems, private infusion rooms, a four-season rooftop garden, meditation rooms and a family resource center. ■

PATHOLOGY CHAIR LEADS THE WAY INTO DIGITIZATION

A cancer diagnosis today starts with a pathologist peering through a microscope at a blood or tissue sample on a slide. Soon, he or she will look at computer screens rather than directly through microscopes.

In laboratories today, a staining technique helps pathologists identify proteins and other substances that characterize certain disease entities. Soon, computers will zero in on even the most subjective of substances.

Pathologists today count the number of cancer cells that divide. But soon, computers will track cellular mitosis. Today pathologists count the number of receptors visible on cancer cells to determine if chemotherapy drugs will work. Soon, computers will locate and count the receptors. Not only that: Computers will determine which aspects of a digital image the pathologist has looked at, or overlooked.

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DIGITIZATION - continued from pg. A1

The transformation to what is known as “e pathology” means precision and accuracy in laboratory diagnostics like never before. Coupling molecular pathology, genomics and other “omics” with new computing and communications technologies in a field called bioinformatics will significantly impact the future of both diagnostic and therapeutic medicine. And Upstate Medical University will play an important role in shaping how some of these new digital technologies are used.

“We are on the cusp of a new way of doing things, not just here at Upstate but throughout medicine in America,” said Robert Corona DO, MBA, the new chair of the Department of Pathology and Laboratory Medicine.

“We’ll be testing some of the newer systems,” he said, explaining that the computational analytics programs that will facilitate the move of pathology into the digital age require approval from the Food and Drug Administration.

That means research conducted at Upstate will essentially compare a human pathologist using a microscope with a human pathologist using a computer and digital images. Corona said it is important to remember that the computer does not replace the pathologist. “Rather, it is a decision support tool.”

He expects to have some studies underway by fall, though it is too soon to share specifics. For now, he says the FDA permits the use of digital tools for education and some consultations.

Patients are likely to appreciate the upgrades in clinical pathology because their images will be easily shared among health professionals. A pathologist will be able to view images and confer about particular patients, in real time, with the radiologist, surgeon, oncologist and, if necessary, other pathologists.

Looking further into the future, Corona says the experts at Upstate will be able to analyze blood and tissue samples from patients from anywhere in Central New York, without requiring patients to travel or samples to be shipped to Syracuse. Indeed, pathologists in America will be able to consult with their medical peers across the globe.

This all makes for an exciting time to be a pathologist.

Corona, who founded Upstate’s Telemedicine Program in 1995 and then was Chief Medical Officer and Vice President of Medical and Scientific Affairs at Welch Allyn Inc., returned to Upstate May 1 to lead the Department of Pathology. He is the John B. Henry Professor of Pathology and Laboratory Medicine. He is a neuropathologist and leader in bioinformatics who has lectured widely on issues related to the interface of technology and advances in medicine.

Earlier in his career at Upstate, Corona received Best Teacher of the Year honors and the President’s Award for Excellence in Teaching.

His doctor of osteopathic medicine degree is from New York College of Osteopathic Medicine. He performed an internship at Southeastern Medical Center in Miami and then trained at Upstate in neurology, anatomic pathology and neuropathology under George Collins MD. He completed additional fellowships in neuropathology at the Armed Forces Institute of Pathology.

Corona is board certified in anatomic pathology, neuropathology and medical management and has been certified as a physician executive by the American College of Physician Executives. ■



Robert Corona
DO, MBA

EGG FREEZING BEFORE CANCER TREATMENT CAN PRESERVE FERTILITY FOR WOMEN

Sperm banks to help preserve a man's ability to procreate have been in existence for decades. The ability to freeze a woman's eggs is relatively new by comparison, and it is a service that Upstate now offers.

Egg freezing involves stimulating the ovary in advance of cancer therapy and then freezing the eggs. After cancer therapy is complete, a woman has frozen eggs that can be used for in vitro fertilization in the future.

"Pregnancies have resulted from oocyte cryopreservation, or freezing. It's a technology that is now accepted as a fairly standard technology, but it's not as routine as embryo freezing. It requires more technical savvy," said Frederick Sengstacke MD, director of Upstate's In Vitro Fertilization program.

Chemotherapy drugs can damage the eggs that are stored in a woman's ovaries; depending on her age and the course of her therapy, her fertility may resume after treatment. Radiation can also damage eggs or cause early menopause, depending on its focus and dose. Bone marrow or stem cell transplants, which require high doses of chemotherapy, often permanently stop a woman from ovulating.

That's why Sengstacke said it is important for doctors to discuss whether preserving fertility matters to newly diagnosed patients.

Reach Sengstacke for referrals at 315-464-8668. ■



Frederick Sengstacke MD

NEW LUNG CANCER SCREENING

A new lung cancer screening program for current and former smokers is now offered by the Upstate Cancer Center and the Upstate Radiology Department. Low-dose CT scans are for smokers between the ages of 55 and 74 or former smokers who quit within the past 15 years and who have a smoking history of at least 30 pack years.

The scans cost \$235 and are not covered by medical insurers. They do not require injections or medications.

In addition to the scan, each participant receives:

- a professional reading and interpretation of the findings by a dedicated chest radiologist,
- a CD with the images for the participant's personal records,
- a letter to his/her personal physician,
- smoking cessation counseling, and

- referrals to other medical professionals and access to Upstate's multidisciplinary Thoracic Oncology Program if anything worrisome is noticed on the scan.

Medical director Leslie Kohman MD said the program was created because of a recent landmark study showing that screening with a low-dose CT scan of the lungs can detect tumors early and can reduce lung cancer mortality by up to 20 percent for high-risk smokers and ex-smokers.

Contraindications include people with a history of lung cancer, under treatment for any other cancers, with recent unexplained weight loss or blood in their sputum, who received antibiotic therapy for a respiratory infection within the last three months, or who have undergone a chest CT in the last 12 months. ■

Set up a lung scan

Patients can schedule a scan by calling 315-464-6303. They take place after 5 p.m. Mondays, in offices at 550 Harrison St.

IMMUNOTHERAPY FOR PROSTATE CANCER

Provenge®, a new method of treating prostate cancer using a patient's own white blood cells, may extend a man's life by several months.

"It's a modest improvement in terms of survival for the patients," said Bernard Poiesz MD, chief of Upstate's Hematology and Oncology division and the Regional Oncology Center. Provenge does not shrink tumors or reduce PSA levels. Rather, the immunotherapy is designed to harness the body's immune cells to attack the prostate cancer cells.

The Food and Drug Administration approved Provenge in 2010, but it was only available in a handful of hospitals. Now Upstate offers the therapy. Poiesz said the first patient is doing well.

"The actual collection of the peripheral blood dendritic cells is done at the Red Cross," he said. The cells are shipped to Dendreon, a biotechnology company in New Jersey, where the patient's personal dose is manufactured and shipped to Upstate, where the patient is infused.

Poiesz said the first step is obtaining approval from



Bernie Poiesz MD

the patient's insurance company. Because Provenge is FDA approved, most insurance plans cover it, but because it costs about \$90,000 for three doses, patient copay amounts can be considerable. Then, Dendreon must agree that the patient is suitable for immunotherapy.

Patients who are likely to see the most benefit from Provenge are men with metastatic prostate cancer whose symptoms are minimal. Their immune system must be functioning. They have to be on hormone therapy, with rising PSA levels, and they cannot be taking narcotics for pain relief.

Poiesz said this approach is promising and that future research will look at the value of giving Provenge to men soon after diagnosis, or pairing it with other immune system modulators. ■

UPSTATE HEART & VASCULAR CENTER NEWS

SUPPORT GROUP & CONFERENCE ON HEART DISEASE IN WOMEN

Nurses from Upstate's Heart and Vascular Center are the organizers of an annual Strong Women, Strong Hearts conference, and they have begun a new support group for women with heart disease.

Both endeavors are free and open to the public, regardless of where individuals receive their medical care.

The support group is called WomenHeart and meets 6 to 7:30 p.m. the last Monday of every

month at the HealthLink/OASIS Learning Center, 6333 State Route 298 in East Syracuse, in the former Telergy building. Meetings will be Sept. 24, Oct. 29, Nov. 26 and Dec. 17.

The second annual Strong Women, Strong Hearts conference will be 10 a.m. to 2 p.m. Saturday, February 2, 2013, in the same location. This past year's event brought education and awareness to more than 350 women who attended the day full of raffles, food, massage, exercise, health screenings, presentations and a vendors' fair. ■

IMPELLA DEVICE ASSISTS PATIENTS WITH SEVERE HEART DISEASE

Cardiologists at Upstate are using a new pumping device to extend the lives of patients with severe forms of heart disease. Patients suffering from heart failure, and those whose hearts are too weak to tolerate angioplasty are candidates for the device called Impella®.



Hani Kozman MD

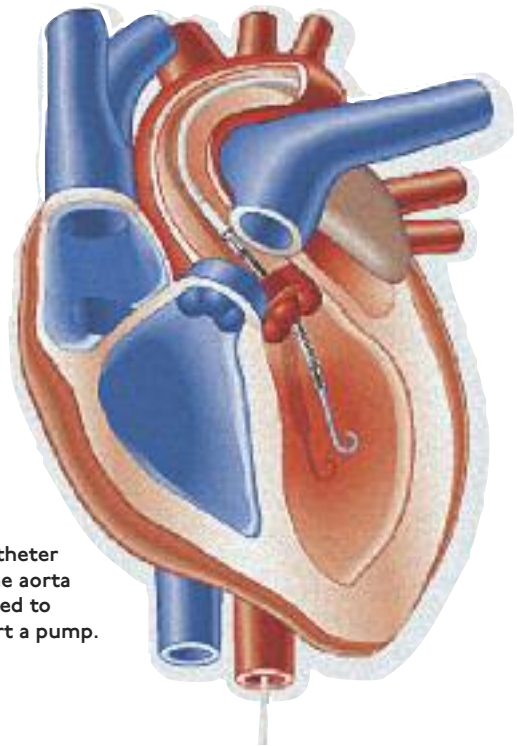
Doctors insert the pump through a catheter that enters the heart through its main artery, the aorta. The pump is about the size of a triple A battery. It spins rapidly, like a corkscrew, propelling blood backward from the left ventricle out to the body to maintain circulation.

Hani Kozman MD said some patients require the Impella during a medical crisis such as a severe heart attack. Other patients are considered high-risk for repairs to their coronary arteries, and the Impella is placed before the patients undergo their procedure. The disposable pumps, which may remain for a few hours up to several days, connect to monitors that provide the electrical source. Upstate has two monitors.

“It’s for the really, really sick patients, for whom there is no alternative,” said Kozman, director of the Cardiac Catheterization Laboratory at Upstate.

David Grugan was just such a patient earlier this year. The 62-year-old Auburn man said he has come close to death twice and is grateful to Dr. Kozman and the Impella, made by Abiomed. After a heart attack in 2009, Grugan had four stents placed to prevent blockages in his coronary arteries. Later, Luna Bhatta MD, director of the Electrophysiology Laboratory, implanted a defibrillator in his chest that would automatically restart his heart if it stopped beating.

Months later, he began having very limiting chest pain and trouble breathing. He was found to have



A catheter in the aorta is used to insert a pump.

additional blockages forming in his coronary arteries. However, with his weak heart function, these would be risky to fix. Kozman spoke with Grugan about his options, and Grugan said he appreciated the doctor’s honesty. His heart would need help pumping during the procedure. Grugan would be on the Impella pump while additional stents were inserted into his heart arteries. Grugan agreed.

“I thought I was going to be there for the weekend, because I had this done on a Thursday,” he recalled. But the day after the procedure, Kozman said Grugan could go home.

He said he had some pain at the procedure site for three weeks afterward but has recovered well. His symptoms have improved significantly and he is able to continue on with life as usual. ■

NEW TREATMENT FOR PATIENTS ADDICTED TO PAIN MEDICINE AFTER BACK SURGERY

People who have become addicted to pain medications after back surgery may be eligible to receive treatment at Upstate that is designed to eliminate the drug dependency, restore the ability to deal with pain and potentially eliminate the pain.

This neuropsychanalytic treatment approach is offered by Brian Johnson MD through Upstate's Addiction Medicine Services at 315-464-3130. Patients will undergo a psychiatric exam, detoxify and be treated for any psychiatric disorders. They will receive low-dose naltrexone to restore

endorphin function and be encouraged to participate in a 12-step recovery program as well.

Participation begins with an initial period of daily treatment, which changes to twice a week once patients are in remission from comorbid psychiatric disorders. Acute treatment is usually over within two months, although Upstate researchers follow the participants for six months. ■



Brian Johnson MD

UTERINE FIBROID EMBOLIZATION: NON-SURGICAL APPROACH FOR WOMEN

Interventional radiologists at Upstate offer uterine fibroid embolization, an alternative to myomectomy or hysterectomy, for women who prefer a nonsurgical option to uterine fibroids.

The procedure involves inserting a catheter in the groin and using X-ray dye to create an arterial road map to the uterus. The doctor advances the catheter and deposits bead-like particles in the arteries that feed the fibroids. "These particles go to all the fibroids in the uterus and preferentially block the blood supply. I'm denying blood flow and oxygen to the fibroids," explained Chadi Zeinati, an assistant professor of radiology at Upstate. The procedure takes a couple of hours, patients stay overnight and are usually back to regular activities within two to three days.

Fibroid embolization has great success with fibroids of all sizes in most locations. Medical opinion is mixed about whether uterine fibroid embolization is a good treatment choice for large fibroids that project into the uterine cavity, outside the uterus, or for pedunculated fibroids that hang from a stalk.

This procedure is not for women who want to optimize their chances for pregnancy. It's also not appropriate for women with a history of pelvic radiation, kidney failure or pelvic infections, poorly controlled diabetes, inflamed blood vessels, bleeding disorders, possible pelvic cancer or an allergy to contrasts containing iodine.



Chadi Zeinati MD

"The risks of the procedure, possible complications and short- and long-term prognosis must be measured on an individual basis against the well-studied surgical alternatives. Patient preference is an important component of this evaluation," especially in those wishing to become pregnant, researchers wrote in the *Journal of Obstetrics Gynaecology Canada*, in 2004 when the procedure was new.

Gynecology and interventional radiology work closely to determine which patients are appropriate for these procedures, which are performed by Zeinati. Reach him by calling Upstate Connect at 315-464-8668. ■

MILITARY SURGEON JOINS BARIATRIC TEAM

He was Director of Trauma for the 86th Combat Support Hospital deployed to Mosul, Iraq, during Operation Iraqi Freedom, and then for two years he ran the Bariatric Surgery and Critical Care programs at Keller Army Community Hospital in West Point. Now Matthew McDonald DO operates at Upstate University Hospital.

McDonald, who completed a surgery residency at Upstate, said he will split his time between general surgery and bariatric surgery. He will see patients at the hospital's Community campus.

"Bariatrics is one of the few areas in surgery where you really have long-term follow-up with patients," he said. "Not many fields in surgery really give you such patient interaction."

During his training at Upstate, McDonald was elected to the Resident Advisory Committee from July 2005 to 2007. He received a Resident Teaching Award in 2003, the same year he was nominated for a Humanitarian in Medicine Award.

McDonald's degree in osteopathic medicine comes from the New York College of Osteopathic Medicine. He got his bachelor's degree in biology at SUNY Potsdam.

After basic training in 1998, McDonald served as a 2nd lieutenant in the Army. He was promoted to captain in 2001 and major in 2007.

Reach McDonald through the Bariatric Surgery Center at 315-464-9852. ■



Matthew
McDonald DO

PEDIATRIC RADIOLOGIST JOINS UPSTATE

Most pediatric radiologists today are radiologists first, who then specialize in pediatrics. Gary Amundson MD completed a pediatrics residency before developing a subspecialty in radiology. He recently joined Upstate as an assistant professor of radiology.

For children who need imaging exams, Amundson said that Upstate offers a variety of modalities, "but you also get a guy, like me, who focuses on making sure that everything is geared toward the child."

He recently was interviewed on Upstate's radio program, *HealthLink On Air** about his position, and he talked about the differences between children and adults. Although there is some overlap with adults, the diseases in children tend to be unique. Then, of course, children are growing and changing, so the radiologist must be aware of what's normal at what age.

*To hear the podcast: healthlinkonair.org

"I do a lot of interaction. The fluoro procedures we do, the ultrasound, nuclear medicine, even some CT work, all involve dealing with parents, explaining things, getting kids to cooperate," Amundson said.

"My patients may have to drink things, they have to get stuck with needles at times. You can't just walk in and deal with them like you would an adult and say 'bear up and take it.' You've got to enroll them in being able to have their test because their cooperation makes a big difference to the quality of our exams."

He said in organizing radiological services for children, "I always ask myself, 'if this were my child, what would I want?' And that always gets you to the right answer."

Reach Amundson for referrals by calling 315-464-8668. ■



Gary Amundson MD