

PHILADELPHIA INTERNATIONAL MEDICINE® NEWS BUREAU

Contact: Leonard N. Karp

215/575-3720; lkarp@philadelphiamedicine.com

October 24, 2011

For immediate release:

In this month's edition

- 1. Temple University Hospital Team Performs Totally Endoscopic Robot-Assisted Mitral Valve Surgery**
- 2. Fox Chase Gleason Scores Better Predict Prostate Cancer's Recurrence After Radiation**
- 3. Thomas Jefferson University Hospital Adopts New Imaging Agent To Improve Detection of Bladder Cancer**
- 4. Nemours Prevents Deadly Infections in Hospitalized Children, Saving More Than Two Million Dollars**

Temple University Hospital Team Performs Totally Endoscopic Robot-Assisted Mitral Valve Surgery

Philadelphia -- A surgical team, led by Temple University Hospital's Chief of Cardiothoracic Surgery, T. Sloane Guy, MD, has performed the Philadelphia region's first totally endoscopic robotic mitral valve procedures on two patients.

The team repaired the mitral valve (the "inflow" valve for the main pumping chamber of the heart) of the first patient using only tiny incisions which minimized scarring and avoided the more invasive aspects of traditional open surgery. The second patient underwent mitral valve replacement with similarly tiny incisions. "Both patients did very well, thanks to the team performing flawlessly," said Dr. Guy.

"Our well trained team at Temple offers a totally endoscopic heart operation not available elsewhere in the Philadelphia region," notes Dr. Guy. "Indeed, the era of the super-star surgeon is over; and the era of the *superstar team* has begun ... and that's what we have here at Temple."

"Many other institutions have done robotic-assisted surgeries in concert with larger and usually more painful thoracotomy or "port access" incisions, in which ribs are often spread apart to gain access to the heart," continued Dr. Guy, "but we are taking full advantage of the robot for these procedures by using only these tiny incisions. In my opinion, only the elimination of these thoracotomies (other than endoscopic ports) allows robotics to add true value to most patients, and we offer that advantage here at Temple."

Dr. Guy and his surgical team used the most sophisticated surgical robot available today – a dual-console da Vinci® Si Surgical System – which Temple University Hospital recently acquired to enhance its clinical capabilities. The robot's instrumentation functions like human hands: it can grasp objects, twist, and turn, allowing surgeons to make very precise movements. High-definition 3-D cameras provide a view of the operative field with superb depth perception.

"Traditional minimally-invasive techniques such as laparoscopic surgery or "port access" mitral valve

surgery require straight-shafted instruments that do not have the three-dimensional range of motion that is possible with robotic-assisted surgery,” says Dr. Guy. “Robotic-assisted surgery also gives superior visualization, letting you see the patient’s heart structures such as the mitral valve even better than during open surgery, and see them in their natural position in the chest.”

Among the potential advantages of robotic-assisted surgery with tiny incisions, Dr. Guy notes, are decreased blood loss, less pain, less time required on a ventilator (breathing machine), minimal chance of infection, quicker healing time, smaller scars, earlier return to work, and shorter hospital stays. In addition to life-saving heart procedures such as mitral-valve repair or replacement, robotic cardiac surgery can also be used for cardiac tumor removal, tricuspid valve procedures, atrial septal defect closure, procedures to correct atrial fibrillation, coronary artery bypass surgery, and others.

Fox Chase Gleason Scores Better Predict Prostate Cancer’s Recurrence After Radiation

In a new study led by Fox Chase Cancer Center radiation oncologist Natasha Townsend, MD, researchers have found that Gleason scores determined by pathologists at Fox Chase Cancer Center more accurately predict the risk of recurrence than Gleason scores from referring institutions. She presented the new research at the 53rd Annual Meeting of the American Society for Radiation Oncology.

When a man is diagnosed with prostate cancer, his tumor is assigned a Gleason score – a number between 2 and 10 indicating the aggressiveness of the cancer and likelihood that the cancer will spread to other parts of his body. In general, Gleason scores 2 to 6 are considered low, 7 is intermediate, and 8 to 10 are high. A patient’s Gleason score is used to make important treatment decisions.

Dr. Townsend and her team looked at the records of 1,649 men who had undergone radiation therapy at Fox Chase between 1994 and 2007. Fox Chase pathologists reviewed the cases of every patient referred to the Center from another institution and determined the Gleason score. Dr. Townsend compared the Fox Chase scores to scores from pathologists at the referring institutions (e.g. urologists, private pathologists’ offices, and other centers that specialize in prostate cancer treatment).

A minor increase or decrease in Gleason score can significantly alter a patient’s treatment, says Dr. Townsend. “We learned that 20 percent, or one in five men, with a Gleason score 7 by the referring institution were determined to have a Gleason score 2 to 6 at Fox Chase,” Dr. Townsend added. “This is important because not only is the prognosis much better but, it changes what treatment might be recommended. For example, patients with Gleason 6 disease are more likely to be offered brachytherapy (i.e. prostate radioactive seeding) and uncommonly treated with androgen deprivation therapy, which strongly impacts quality of life.”

Even greater benefits were seen in patients determined to have Gleason score 8 to 10 disease by the referring institution. “An alarming 58 percent of patients with Gleason score 8 to 10 disease in our study were unconfirmed. These patients were found to have lower Gleason scores and similarly better prognosis,” says

Dr. Townsend. Patients with Gleason score 8 to 10 are universally characterized as having “high-risk” disease and a common practice standard is treatment with combination external beam radiotherapy and hormone therapy. When the Gleason score is lower, physicians are more confident omitting hormone therapy and avoiding the side effects that go along with that treatment.

Pathologists who specialize in prostate cancer likely explain the difference between the Gleason scores. “Most cases were examined by an oncologic pathologist with special experience in urologic pathology,” says Tahseen Al-Seleem, MD, Fox Chase pathologist and co-author on the study. “Cases with discrepancy in diagnosis or grading with the outside institutions were examined by a panel of at least two oncologic pathologists until a consensus diagnosis was reached.”

Changing the Gleason score is meaningless however, unless the changes better predict how patients will do following treatment. “Historically, we know Gleason score 6 patients fare better than Gleason 7, who fare better than Gleason 8 to 10. Our study shows that the Fox Chase Gleason scores better predicted this pattern than the referring institutions. This reassures us that the changes made by Fox Chase pathologists were more accurate, enabling our doctors to better advise patients about treatment options and outcomes,” says Mark K. Buyyounouski, MD, Fox Chase radiation oncologist and senior author on the study. “Quality treatment for prostate cancer begins with understanding how aggressive the cancer may be and how far along it may have progressed. This study is an example of how a second opinion about the biopsy results improves quality.”

Co-investigators include Karen Ruth, Tahseen Al-Saleem, Eric Horwitz, Mark Sobczak, Robert Uzzo, Rosalia Viterbo, and Mark Buyyounouski from Fox Chase.

Thomas Jefferson University Hospital Adopts New Imaging Agent To Improve Detection of Bladder Cancer

Thomas Jefferson University Hospital is one of a select number of medical centers nationwide offering a newly approved optical imaging agent for the detection of papillary cancer of the bladder in patients with known or suspected [bladder cancer](#).

The availability of the imaging agent known as Cysview signals the arrival of an innovative diagnostic technology for patients who have or may have bladder cancer, and underscores Jefferson’s reputation as a leading comprehensive medical facility.

The imaging agent is used to detect bladder cancer in individuals suspected or known to have lesion(s) in the bladder, based on a prior [cystoscopy](#) (the examination of the bladder and urethra using a cystoscope, a thin, tube-like instrument with a light and a lens for viewing). It is used with a white light setting to illuminate the bladder during a routine cystoscopy, and a blue light setting to induce and view fluorescence, thereby enabling physicians to detect lesions in the bladder.

More than 70,000 people in the United States were diagnosed with cancer of the bladder in 2009, and an estimated 14,000 Americans died from the disease last year, according to the National Cancer Institute.

Bladder cancer is the fourth most common type of cancer in men, and the eighth most common in women. Smoking is the most likely cause of bladder cancer. The most common initial sign of the disease is red-colored urine, which calls for urine cytology (tests performed on cells in urine to detect disease) and cystoscopy.

“Bladder cancer is difficult to detect. A missed diagnosis can result in delayed or incomplete treatment, which may lead to serious complications and a lower chance of survival for patients with potentially aggressive tumors,” said [Leonard Gomella, MD, F.A.C.S.](#), the Bernard W. Godwin, Jr. Professor of Prostate Cancer, associate director for Clinical Affairs at the [Kimmel Cancer Center at Jefferson](#), and Chair of the [Department of Urology](#) at Thomas Jefferson University Hospital.

“Cysview represents an important advance in diagnostic technology, enabling more accurate diagnosis of bladder tumors compared to the standard technique. Patients with known or suspected bladder cancer can now come to Jefferson to undergo diagnostic procedures administered by physicians who have been specially trained in the use of this innovative technology.”

The standard diagnostic procedure for bladder cancer combines urine cytology and white light cystoscopy. Although cytology provides specificity and sensitivity in detecting high-grade (highly abnormal) lesions, it provides no information on the location and extent of the disease. If the cells test positive for cancer, the next step is direct visual inspection of the urothelium and mucosa (the inside of the bladder) with white light cystoscopy to localize the tumors. Physicians perform transurethral resection (TUR), a form of cystoscopy-guided biopsy, of suspicious areas of the bladder, and then test the tissue samples to determine if they are malignant.

“We are dedicated to finding new ways to improve the lives of patients living with serious diseases such as cancer, and Cysview is the latest example,” said Dr. Gomella. “By facilitating early diagnosis of bladder cancer, this innovative imaging agent can enable appropriate, timely treatment that may improve patients’ chances of survival.”

Nemours Prevents Deadly Infections in Hospitalized Children, Saving More Than Two Million Dollars

Through its participation in a nationwide network of children’s hospitals dedicated to eradicating central line-associated blood stream infections (CLABSIs) in hospitalized children, Nemours/Alfred I. duPont Hospital for Children has prevented 68 of these infections and saved \$2,377,229 in health care spending.

In collaboration with more than 80 other children’s hospitals nationwide, duPont Hospital for Children’s participation in the National Association of Children’s Hospitals and Related Institutions (NACHRI) Quality Transformation Network (QTN) has helped save 355 children’s lives, prevented 2,964

central line infections, and passed the \$100 million mark for total cost savings.

“Reaching this milestone proves how vital the NACHRI QTN has been and will continue to be,” explains Barbara A. Jackson, RN, BSN; VPS/NACHRI coordinator PICU, duPont Hospital for Children. “The steps taken in this collaborative have been incorporated into our current practices hospital-wide. More important than the money we’ve saved are the lives of children saved thanks to this collaboration.”

CLABSIs are infections that occur in patients’ central venous catheters (a central line is flexible medical tubing inserted into the body). They are also a preventable harm that carries a price tag of at least \$25,000-\$45,000 per event and a 10 to 20 percent mortality risk for children.

“As the NACHRI QTN enters its sixth year, our faculty and clinical teams in children’s hospitals are continually pushing to improve care for our patients,” said NACHRI Quality Transformation Vice President Marlene Miller, MD, MSC. “Because the pediatric community is small and nimble, we can spread proven practice opportunities more rapidly, providing better quality care for children at lower overall costs.”

Until the NACHRI QTN, the efficacy of the adult intervention in pediatric patients was unknown. Using a model distinguished by collaboration combined with rigorous methodologies, tightly coordinated implementation and rich large data sets, NACHRI QTN hospitals have learned that reducing CLABSI events requires an approach combining evidence-based guidelines for catheter insertion with daily maintenance care for central lines. In fact the main driver in reducing CLABSI infections is the reliable use of the recommended daily maintenance care for central lines.

Philadelphia International Medicine is an organization that provides medical and patient support services to international patients. It also provides continuing medical education and health care training and education to international physicians, administrators and other practitioners. As the international department of several Philadelphia-area hospitals, international patients gain access to physicians and hospitals rated among the best in the world through one telephone call to PIM. You can reach PIM by calling 1-215-563-4733; fax, 1-215-563-2777; or e-mail, physicians@philadelphiamedicine.com. You can find out more about PIM through its Website at www.philadelphiamedicine.com.