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*Revolutionizing Knee Replacement:
Local doctor first in NO to use computer-assisted method*

The wind and rain of Hurricane Katrina was still miles offshore, but Dr. Richard Meyer, a local Board Certified Orthopedic Surgeon, knew his patients would need him. After performing several total knee replacements at Touro and Memorial Medical Center just days before the massive storm made landfall, Dr. Meyer knew evacuating with his family was not an option.

He and his teenage son braved the storm in their Uptown home waiting for the tempest to subside. As soon as it was safe to traverse outdoors, the two took to their bikes down heavily damaged St. Charles Avenue toward the hospitals to check on his patients. With the water rising and chaos mounting, the doctor and his son made certain the patients were secure before ultimately deciding to evacuate.

When the city finally reopened to residents, Dr. Meyer and his family made a decision that many doctors did not – to return to the Crescent City, knowing he would be needed now more than ever for his specialty, hip and knee reconstructive surgery using computer-assisted equipment with minimally-invasive techniques.

Not only is Dr. Meyer specialty trained in this surgery, but he is also the only doctor in New Orleans to perform the procedure with computer-assisted technology called the *Ci* System. By providing a real-time 3-dimensional view of the knee joint, Dr. Meyer is able to more accurately align implants, regardless of the incision size, without the use of X-rays during the surgery. Studies have shown that poor alignment of a knee

prosthesis is associated with increased wear and failure of the implant; therefore, the computer actually increases the likelihood of prosthesis longevity. It also reduces the amount of drilling required to the bone and minimizes the risk of pulmonary emboli (blood clots).

At the beginning of surgery, a very small exposure is made in the knee joint. Two special arrays, or pins, with attached sensors are placed on side of the knee, one at the end of the femur (thigh bone), and the other at the top of the tibia (shin bone). Infrared signals then pick up the locations of the arrays and transmit the information to the computer, enabling the surgeon to generate the three-dimensional model of the knee using a probe that registers data as it touches various points. “This system allows me to verify everything I’m doing on a step-by-step basis, so I am able to make the best possible decisions during the procedure,” says Dr. Meyer. The result is less bleeding and soft tissue exposure, thus leading to faster recovery time.

One of his more recent patients, JoAnn Calcagno, was elated after her surgery with Dr. Meyer. “I couldn’t walk distances,” she says. “It was so frustrating. When you can’t walk, you have to do something. I was walking the French Quarter less than a week after my surgery.”

Similarly, Kenner resident Carol Price found the recovery time an asset. A prior knee replacement surgery in 2004 without the computer-assisted technology left her in pain for weeks. But in 2005, she opted for another procedure, but this time with Dr. Meyer and the *Ci* system. “The recovery the second time was much quicker and less painful.”

Dr. Meyer's post-Katrina practice is now busier than ever, but not because of a lack of doctors. Rather, the increase can be attributed to what he calls "Katrina Knee," an umbrella term for knee injuries occurring during the cleanup and repair effort. "Kneeling and squatting during construction projects, including climbing up ladders, lifting heavy equipment and materials and squatting on rooftops, are the major cause of hyperflexion leading to patella-femoral (knee) pain and injuries."

Those who seek his treatment range from local laborers and homeowners to out-of-town and out-of-country workers. The overall majority of injuries he treats, however, are non-Katrina related. Because of an aging baby-boomer generation, candidates for knee-replacement surgery are steadily increasing. Nearly 400,000 knee replacements are performed in the United States each year, making knee replacement the most common joint replacement surgery today. Doctors estimate that the number of these surgeries will jump to approximately one million by the year 2015.

One man who is certainly happy with the outcome of his surgery is Jefferson Parish resident Jorge Ochoa, who had two knee replacement procedures, the second with the *Ci* system. "I am definitely glad I did the (computer assisted) surgery. My recovery time was much faster this time around."

Dr. Meyer is the only physician in the region with almost two years of experience performing the surgery with computer-assisted technology. In fact, Touro Infirmary, where Dr. Meyer practices, is now a visitation site for training under his direction.

But notoriety is not what keeps this doctor striving to find the best care for his patients. "My goal as an orthopedic surgeon is to reduce the level of debilitating arthritis

pain suffered by my patients,” says Dr. Meyer. “Computer-assisted technology will become the standard of care.”

And the highest standard of care for his patients is just what Dr. Meyer demands. After all, in the city’s darkest hour, he road his bike down St. Charles Avenue to make sure the best care was exactly what his patients got.