

# News

## News Flash

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Released by the

Public Relations Department

### FOR IMMEDIATE RELEASE:

Monday, April 12, 2010

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### Five Year Analysis at Mercy Medical Center Shows

Significant Advantages of Robotic Total Knee Replacement  
Review of 1,000 Consecutive Computer-Assisted Procedures Presented At  
Annual Meeting of American Academy of Orthopaedic Surgeons

Rockville Centre, NY &ndash; A review of 1,000 consecutive Computer-Assisted Robotic Total Knee Replacements performed over a five year period at Mercy Medical Center shows that the computer-assisted procedures result in far better leg alignment, much less likelihood of complicating infection, and a far lower early failure rate than surgeries performed using conventional techniques.

The key factor in successful total knee replacement is precise placement of the artificial joint so that the center of the patient's hip and knee line up within three degrees of his or her ankle. Using conventional techniques, the best surgeons achieve alignment within three degrees 50 to 80 percent of the time. At Mercy Medical Center, it was achieved in all, (100%) of the 1,000 computer-assisted robotic procedures performed between February, 2005 and January, 2010.

Final post-surgical alignment averaged just under one degree (0.8), and was within three degrees in all of the 1,000 patients.

Typically, the failure rate for knee replacements is three to eight percent per year, and one half (50%) of early knee replacement failures, those occurring less than two years after surgery, are attributed to misalignment, instability and aseptic loosening. These typically require a second more difficult and often less successful operation called a revision total knee replacement.

At Mercy Medical Center, there were no early failures (0%) and no revision operations (0%) secondary to misalignment, instability or aseptic loosening in the first 1,000 consecutive computer-assisted robotic total knee replacement patients over the first five years of the study.

Jan Koenig, MD, Director of Orthopedic Surgery at Mercy Medical Center, presented the findings on March 10, 2010 to a group of over 200 international orthopedic surgeons at the Annual Meeting of the American Academy of Orthopaedic Surgeons (AAOS) in

New Orleans. His presentation, The Evolution of Computer-Assisted Total Knee Replacement (CAS-TKR) Past, Present and Future, was a featured part of Medacta Orthopedics Scientific presentations.

It is estimated that as many as 500,000 total knee replacement surgeries currently are performed in the United States each year, with that number projected to increase to more than 4 million annually as the population ages.

#### Conventional vs. Robotic Knee Replacement

In conventional knee-replacement procedures, a long rod is invasively inserted the length of the femur (the bone above the knee) to determine proper alignment of the artificial joint, and surgeons must drill holes in the bones to position cutting tools. Robotic cutting devices that are positioned mechanically with computer assistance eliminate all that, making the procedure truly minimally-invasive and reducing the risk of infection and emboli while maintaining the highest level of accuracy. Dr. Koenig, who is President and Co-founder of Orthopaedic Excellence of Long Island, noted that the infection rate in conventional total knee replacement procedures is reported at one to five percent, but among the 1,000 patients at Mercy there were only two patients with infections for a rate of only two-tenths of one percent (0.2%). At the present time, Mercy Medical Center has the longest consecutive experience with computer assisted robotic total knee replacement in the country, and is the only hospital in New York State routinely performing computer-assisted robotic total knee replacements. The procedures are performed using a system called the PiGalileo™, developed and manufactured in Switzerland by PLUS Orthopedics.

Dr. Koenig and his team have been diligently working on the next generations of Computer Assisted and Robotic surgery that will be available to the public in the near future. Because of cutting-edge technology like Robotic Knee Replacement, Mercy Medical Center has consistently been ranked among the top hospitals in the country for Joint Replacement Surgery and has been ranked as the best hospital on Long Island for Joint Replacement Surgery in 2010 by HealthGrades®, the nation's leading independent healthcare ratings company.

For information and physician referrals, call: 516-62MERCY or visit on line at : [www.MercyMedicalCenter.info](http://www.MercyMedicalCenter.info)

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Photos:

#1) Jan Koenig, MD, Director of Orthopedic Surgery at Mercy Medical Center, president and co-founder of Orthopaedic Excellence of Long Island.

#2) In 1,000 consecutive total knee replacements performed by Dr. Jan Koenig (center) at Mercy Medical Center, the PiGalileo™ Computer-Assisted Orthopedic Surgery System produced far better and extremely accurate leg alignment, much less likelihood of complicating infection, and a far lower failure rate than surgeries performed using conventional techniques.

Newsday 4/7/2009

Focus On Hospitals