



**ADVANCED ORTHOPEDICS  
AND SPORTS MEDICINE INSTITUTE, PC**  
A CENTER OF EXCELLENCE FOR BONE AND JOINT CARE

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## Case of The Quarter

### **The First Fully Cementless, Minimally Invasive, Total Knee Replacement Performed at CentraState Medical Center.**

William Ward is already on his feet well into the rehabilitation process following the total replacement of his left knee on November 20<sup>th</sup>. William, who retired from the Freehold Police Department in 2005, received the first fully cementless, minimally invasive, total knee replacement using trabecular metal technology in the history of the CentraState Medical Center in Freehold New Jersey.

Trabecular metal is an innovative material made with tantalum that resembles bone and is highly porous. "This makes it an ideal material for orthopedic implants." explains Dr Nasar, one of the two orthopedic surgeons from the Advanced Orthopedics and Sports Medicine Institute in Freehold, New Jersey who operated on Ward. "When used in joint replacements, human bone grows right into and through the trabecular metal in a rapid fashion creating a very strong bond. This allows us to implant artificial joints without the use of bone cement. Bone cement can weaken and crack over time and generate debris. By eliminating bone cement from the implant, we can perform a simpler procedure that can last longer."

Dr. Michael Greller and Dr. Alan Nasar, orthopedic surgeons at the Advanced Orthopedics and Sports Medicine Institute in Freehold, New Jersey operated on William Ward at the CentraState Medical Center, in a procedure that took only 90 minutes, performing minimally invasive surgery through incisions now less than half the length of incisions made in past procedures.

Ward opted for an advanced anesthetization blocking the sensation between the knee and the brain, which meant less post-operative pain and a further contribution to his rapid recovery . "I'm sorry I waited so long to have this done, I didn't feel a thing." revealed Ward, adding that the constant grinding pain from his knee and loss of mobility finally overrode his fear of the joint replacement surgery. The cartilage in Ward's knee had been eroded after osteoarthritis, trauma from two car accidents, and 25 years as a police officer all contributed to the damage. Joint pain, swelling, stiffness and loss of mobility are symptoms experienced by about 450,000 Americans who seek surgical treatment each year.

“He’ll soon be riding that motorcycle again.” Dr Greller remarked, a day after the highly successful surgery that resulted in Ward’s new knee in perfect alignment with his upper and lower leg. “This technology has the most potential benefit for young, active patients in need of knee replacement surgery.”

Drs. Greller and Nasar have been on the cutting edge of orthopedic technology in joint replacement surgery. Recent innovations such as the Gender Knee replacement, computer assisted surgery, and minimally invasive joint replacement have been adopted by the orthopedic surgeons at the Advanced Orthopedics and Sports Medicine Institute in Freehold, New Jersey, to provide patients with an individualized, technologically advanced approach to joint replacement.

