All About Stryker Navigation for **Total Knee Replacement Surgery**

Fact Sheet

What is a Total Knee Replacement Surgery?

- A total knee replacement surgery is a surgical procedure that replaces the diseased or damaged cartilage and bone of the knee with a new knee implant made of artificial materials.

What is Navigation for Total Knee Replacement Surgery?

- Technology that helps the surgeon more accurately align knee implants with the patient's anatomy.
- It provides the surgeon with real time information needed to allow for accurate alignment and balance of the implant and ligaments, which are one of the most important prerequisites for the knee joints stability, durability of the implant and for a sufficient range of motion.
- It is rapidly expanding the options of medical technology for Orthopaedic surgery.

How does Navigation Work?

- In the operating room, the position of navigated Smart Active tools equipped with infrared LEDs is continually monitored by a camera and analyzed by the navigation software.
- Smart Active wireless instruments send real time data regarding knee kinematics to a computer.
- A computer and camera system analyzes and graphically displays the alignment and position of navigated Smart Active tools as well as the kinematics of the knee.

What are the Potential Benefits of Navigation?

- It does not require pre-operative x-rays or CT scans.
- It provides the surgeon with a comprehensive understanding of the patient's anatomy before any bone cuts are made.
- It allows the surgeon to make adjustments within 1-2 degrees, helping ensure the best possible fit of the implant.
- It may lead to possible shorter hospital stay, fewer complications, and improved joint stability[2].

Who has the Potential to Benefit from Navigation?

- More replacements, or arthoplasties, are performed on the knee than any other joint[1].
- About 300,000 total knee arthoplasties (TKA) are performed each year in the U.S., a figure that is estimated to rise to 457,000 by 2030[1].
- Increasingly, TKA is being performed with the use of Navigation.
- TKA is usually recommended for patients with severe knee pain and disability caused by damage to cartilage from rheumatoid arthritis, osteoarthritis or trauma.

How can an individual learn more about the Stryker Navigation System?

- Individuals who would like to learn more about the Stryker Navigation System or other Stryker products, can go online to www.stryker.com/navigation.

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[1] American Academy of Orthopaedic Surgeons - www.aaos.org

* Patients should consult their physicians regarding risks associated with Total Knee Replacement Surgery.

[2] J.M. Sikorski, S. Chauhan (2003). *Aspects of Current Management, Computer Assisted Orthopedic Surgery: Do We Need CAOS?* JBJS(Br) Vol. 85-B, No. 3.