



UNIVERSAL
Hospital *All about health*

Minimal Invasive **COMPUTER ASSISTED** **SURGERY** (MICS)



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Fellowship Joint Replacement (Austria)
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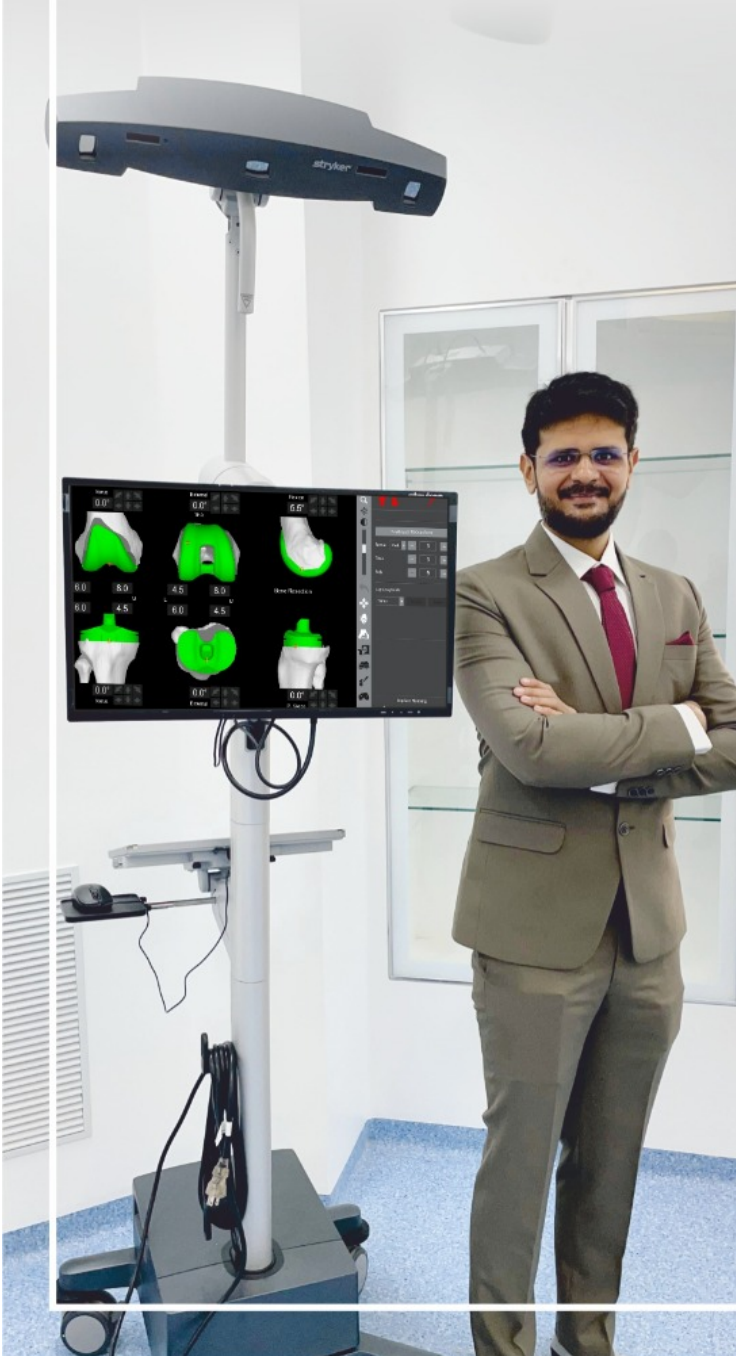
Computers Assisted
Joint Replacement MICS
is Novel Technique Developed
By Dr. Digen Using Most
Advanced Computer
Navigation System From
Stryker Precision this is
First of its kind in entire
south Gujarat.



Universal Superspeciality Hospital,
Beside Jash Infinity, Behind New
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For Appointment :
0261-7177000/01/02





How Computer Navigation Helps in Knee Replacement ?

The success of knee replacement depends up on restoration of limb alignment and balancing of ligaments. Studies have proven that postoperative mal-alignment of more than 4 degrees are associated with prolonged and incomplete recovery, persistent pain, poor range of motion, early failures and overall patient dissatisfaction. In conventional TKR surgeons rely on eye balling to restore limb alignment and fail to achieve desired result in as much as 20% cases. Computer Navigation works like a satellite navigation system. Here, infra-red trackers are attached to patients' bone, which communicate with camera, which in turn transmit details of patient anatomy to a computer. Here, a 3D model of patient's knee is created and displayed on screen. Surgeon can plan orientation and thickness of various cuts and execute the steps. The computer gives real time feedback regarding alignment, gap balancing, range of motion and correction of deformity. This data is stored in computer for future reference.



How MICS Technique is Superior to Conventional TKR ?

In conventional knee-replacement procedures, a long rod is inserted in 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. Computer navigation 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. Satisfactory restoration of limb alignment and ligament balancing leads to superior pain relief and early mobilization in postoperative period. Requirement of painful physical therapy is eliminated and patient can walk on the same day or next morning.

What Are Advantages Of Stryker precision ?

Stryker NAV 3 is most advanced optical navigation technology with proven accuracy. The system can be operated by surgeon without violation of sterile field. The Precision software provides smooth workflow, starting from preoperative deformity and range of motion to final alignment, range of motion and stability parameters.

Advantages of MICS as Experienced by Patient ?

- Rapid recovery
- Better pain relief
- Less blood loss
- No painful physiotherapy required
- Better range of motion
- More confidence in walking and stair climbing
- Greater overall satisfaction
- Longer implant survival
- Shorter hospital stay
- Better results in Obese patients and deformity cases