Hip Replacement

A New Level of Precision with the most advanced Leo II MAKO Robotic Total Hip Replacement platform now at your doorsteps……at No Extra Costs ……

At Anup Institute, Leo II Robotic Joint Replacement care unit we strive to give the best to our patients and Fingerprints lasts forever in the lives we touch! We also endeavour to provide world class care within the reach of every individual/patients!

With this in our minds **we are offering Robotic Total Joint Replacement sat No Extra cost**. In fact, the prices are far less than offered at most of the hospitals not only in India but around the world.

Thus, providing world's best platform, best available implant with robotic precision at no extra cost …

ROBOTIC GUIDED TOTAL HIP REPLACEMENT….Is is a scifi or Real …

Robotic hip replacement surgery

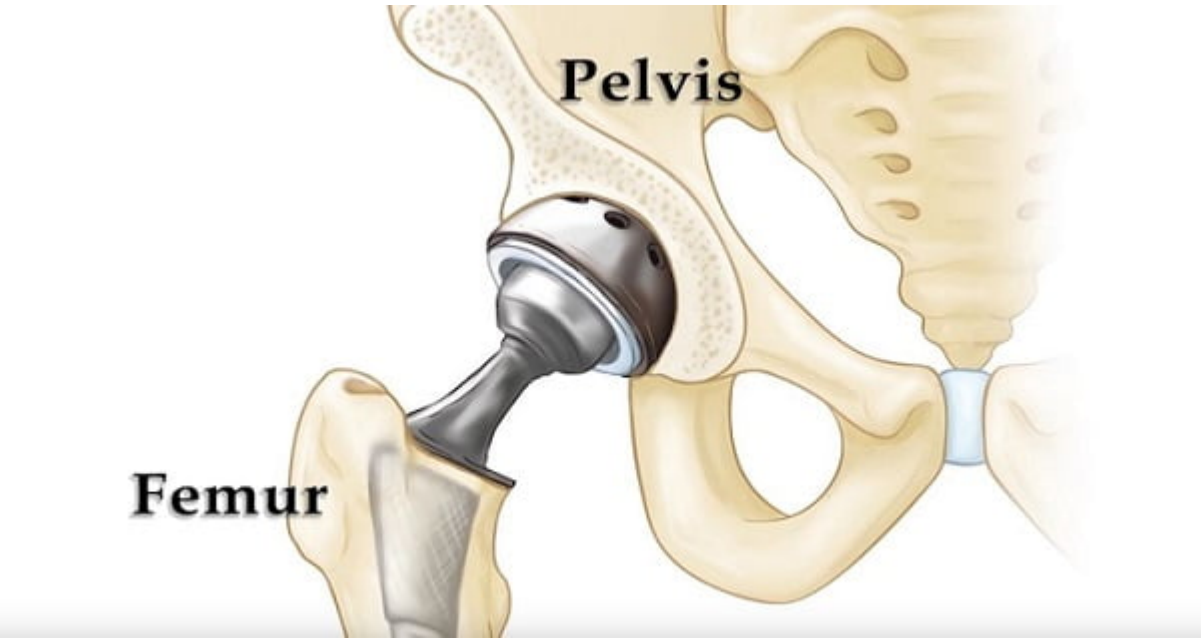
We as surgeons want to perform a perfect total hip replacement (THR) with every operation. Human performance does have limitations, especially when performing a mechanical operation in a biological environment. Fifty years of innovation by surgeons has certainly improved total hip replacement (THR)operation. Despite the substantial improvements, complications and early mechanical failures do occur.

Robotic Hip Replacement Better?

Diminished results of Total Hip Replacement (THR) have been observed in

- Dislocation

- Excessive wear due to poor component position
- Periprosthetic fractures
- Squeaking
- Fracture of articulation again due to poor component position



As surgeons, during our operations, we cannot visualize the relationship of the socket(acetabulum) to the pelvis through its spinopelvic dynamics, nor can we visualize the inner contour of the thigh bone(femur) that affects the positioning of the components of Total Hip Replacement. The judgment errors made because of inaccurate information of anatomy may cause short term complications such as dislocation and impingement pain, that lead to the feelings of failure for the surgeon or after a certain period passes there can be complications of wear and loosening, which are absolute failures for the patient.

The Question is how do we minimize these limitations in such a way that Total Hip Replacement lasts forever….

Today, every human endeavour that involves a device has used modern technology of computers and robotic platform to minimize the human errors.

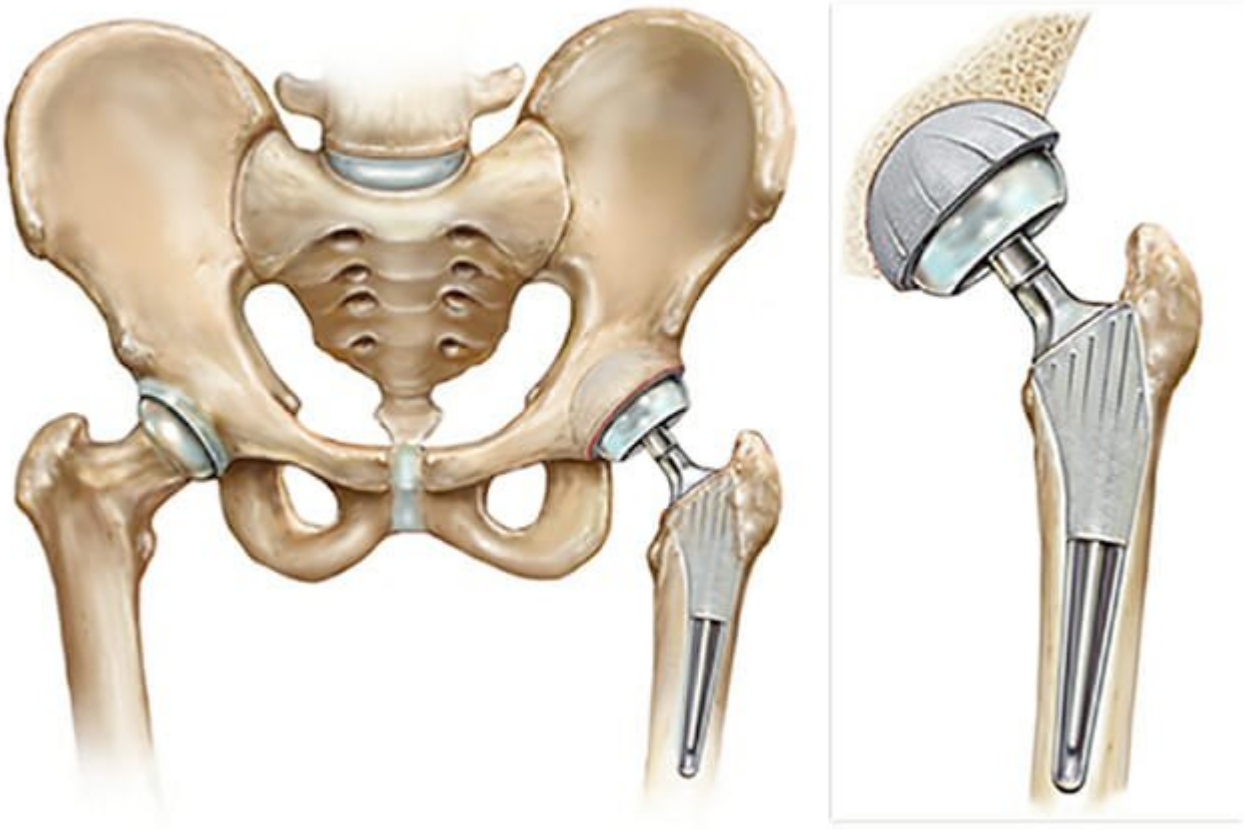
Computers can give quantitative knowledge and that can impact

qualitative judgement decisions to make them accurate and precise. **This Leo II Mako – the smart Robotic platform eliminates all this and is the solution we surgeons can use to solve our intraoperative dilemmas.**

Let us Understand and get there….

Steps of How the Leo II Mako System improves Total Hip Replacement (THR) for someone with arthritis painwith 100% precision.

Often people ask, "What are the best options for robotic hip replacement near me and how should I decide who is the best?"



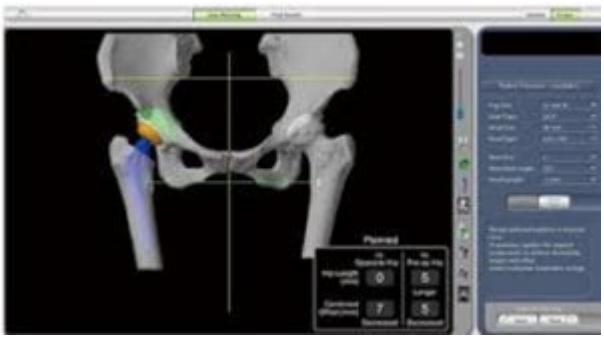
We would reply, "Always talk to the surgeon and discuss the procedure. Clarify all your queries and know about their infrastructure, technology and quality of service. Only when you are convinced should you arrive at the final decision. **Robotic Orthopedic Surgery cost in India** vary and you can decide on the basis of expertise of the surgeon, and

facilities available.”

STEP 1 :INVESTIGATIONS AND SEGMENTATION

The X rays and CT scan of the patient’s pelvis is segmented and fed into the robot to obtain a three-dimensional model of the hip joint -the femur(thigh bone), the socket and the surfaces damaged due to arthritis.

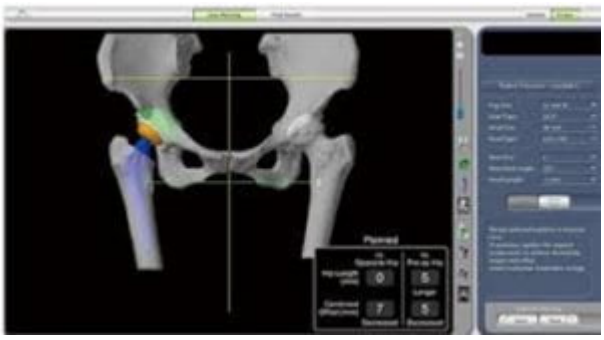
Figure 1 -Pre-Planning and Segmentation of the CT SCAN image



The surgeon has his or her preferences so can preoperatively plan the best possible location for the femoral component and tibia component over the model bone depending on the factors that include patient size, angle of legs, location of articulating surface, and how the head of femur moves in the socket(acetabulum).

STEP 2: PATIENT SPECIFIC PERSONALIZED PRE-OPERATIVE PLANNIG PRIOR TO SURGERY

Figure 2 – Patient Specific Personalized Pre-Operative Planning prior to Surgery



The surgeon’s team loads the decided plan onto the robot. The

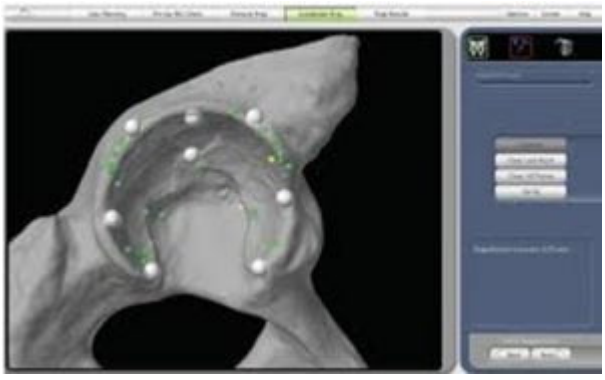
surgeon compares the plan to that patient's motion- he bends the hip, flexes it, straightens it out, and looks at how the motion is being shown on the robot's screen. On the basis of the laxity and tension of the ligaments the surgeon might change the position of the component by fraction of milliliters before finalizing the plan.

The robot arm locks the plane of its reamer to a place relative to the location of the final three-dimensional plan and helps the surgeon to perform cuts. Now the surgeon will push the reamer but the robot restricts where the reamer can go in space. It is important to note that the surgery is performed by the orthopedic surgeon guiding Leo II Mako's robotic arm through the surgery to position the implant in the hip joint.

Leo II Mako Smart Robotic armwill not conduct the surgery nor will it make any decision all by itself. It won't move without the surgeon's guidance. It will allow the surgeon to adjust the plan when the surgery is in process.

STEP 3: EXECUTION OF PLAN WITHIN PRE-DEFINED LIMITS OF HAPTIC BOUNDARY ENABLING MORE THAN 99% ACCURACY

Figure 3 – The plan is executed within the already defined limits of Haptic boundary. So, soft tissue and neurovascular damage isn't done and accurate position is visualized on the screen while the operation is in progress.



The surgeon performs the surgery but now with better accuracy and precision as per the planmeant specifically for the

patient. This wasn’t possible earlier with the conventional and manual instruments.

Soft tissue trauma is prevented by robot’s haptic boundary. There are many peer-reviewed publications that reveal the benefits, which include:

Reduction of post-operative pain, less opioid drug use, patient satisfaction, fewer readmissions due to complication during surgery, and lesser days of stay at the hospital.

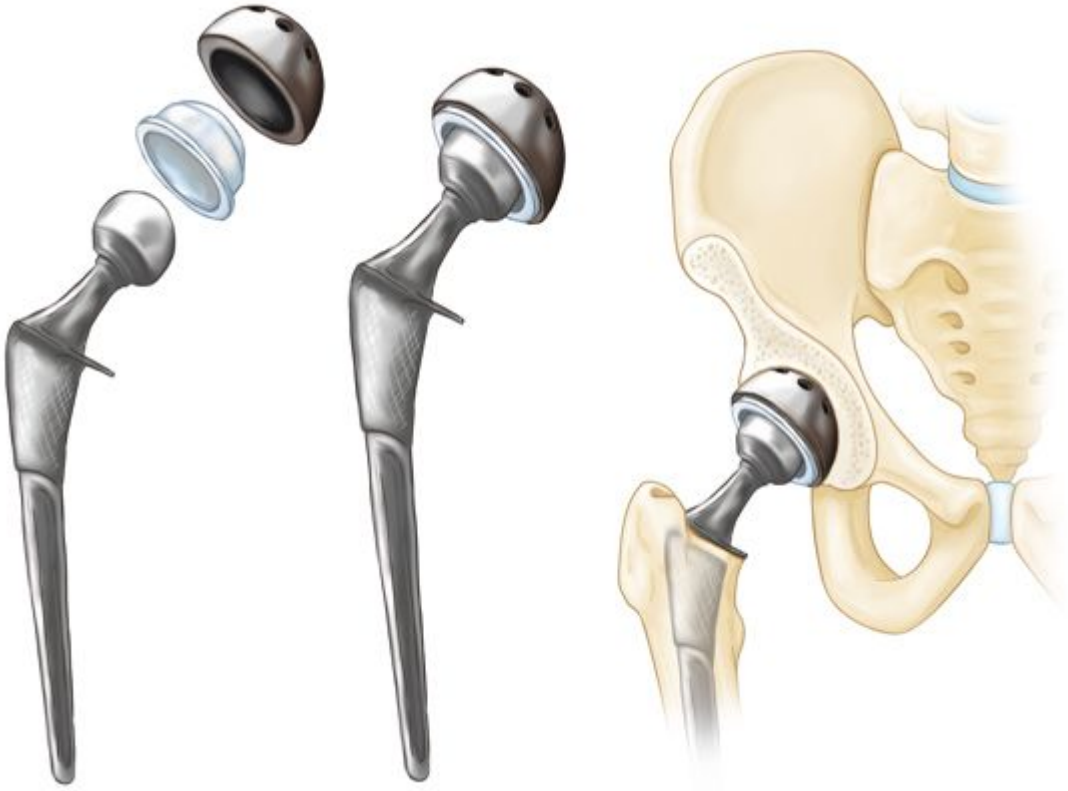
It is worth noting that patients have been happy with the results and this is proved by the **robotic hip replacement reviews.**

Robotic surgery in India is now possible. While you are analyzing the **robotic hip replacement surgery cost in India** it’s imperative that you take into account the expertise and the experience of the surgeon. It is also wise to know about the kind of facilities, technology and infrastructure available at the hospital.

Benefits of Robotic-Assisted Total Knee Replacement positive outcomes

- Robotic surgery is being adopted since it gives a best surgical plan, with the best execution to render a positive clinical outcome for the patient.
- It has been used as an option to address human errors that can potentially lead to misalignment and decreased longevity of the prothesis.
- Robotic surgery leads to precision and allows for more accurate positioning of implant resulting in a more natural feeling post-surgery.
- It results in improved safety and reduced risk of injury to the adjacent tissues due to lesser retraction.
- Value and safety are provided by the Pre-Op CT, smaller incisions and this leads to quicker recovery, lesser

days of hospitalization and reduced pain and potential long-term function.



In a nutshell the robotic technology helps in

- A better implant position resulting in a more natural feeling for the patient post-surgery.
- It is safer and risk of injury to adjacent tissues is reduced due to lesser traction.
- Value and safety are provided by Pre-Op CT
- Small incision can mean a quick recovery, lesser hospitalization period, and lesser pain.
- Minimal blood loss
- Precision in mapping of the joints.
- Leo II Mako AccuStop™ technology allows your surgeon to cut less by cutting precisely what is planned to help protect your healthy bone.
- Early mobilization and early discharge from the hospitals(less hospital stay).
- A happy patient.

You can visit the website of *AIOR – Anup Institute of Orthopedics and Rehabilitation* *https://www.aior.co.in/best-orthopedic-hospital.php* to know about one of the **best robotic surgeon in India**. If you are looking out for competitive **hip replacement surgery cost in Bihar**, get in touch with our teamhttps://www.aior.co.in/contact-us.php.