

ROBOT ASSISTED HIP AND KNEE **REPLACEMENTS** **(MAKO HIP AND KNEE)**

Robot assisted joint replacement combines CT images with 3-D technology to allow surgeons to construct a surgical plan that is tailored to the individual patient's anatomy.

What this means is patient specific implant positioning, which is individualised to each patient, depending on the size, shape, alignment of their joint, which is different for each of us.

At the time of surgery sensors are placed around the joint, which allows the software and robot to locate the joint in 3 dimensions. The robot arm enters the surgical field and is able to very precisely remove the correct amount of bone whilst preserving soft tissues. This is done to fractions of millimetres.**

What this means for patients is less pain, reduced length of hospital stay, quicker recovery and quicker return to work. It should translate to a higher likelihood of longer lasting joints and that of a natural feeling or normal feeling joint.

This technology provides much more information than was previously available to the operating Surgeon. In the knee, the Surgeon is able to very accurately and precisely balance the soft tissues throughout the range of movement whilst ensuring stability and alignment of the knee is optimised, in a way which was not possible previously.

In the hip the centre of rotation of the hip is restored. This is a 3-dimensional point and what that means for the patient is equal leg lengths, reduced risk of the hip catching or impingement and reduced risks of hip dislocation after surgery. It should translate into longer lasting hip replacements.

This technology is facilitating and accelerating the trend towards more minimally invasive surgery such as partial knee replacements where a minimally invasive approach can be used. The soft tissues are preserved such as the ACL and PCL. It is increasingly recognised that patients with partial knee replacements functionally do better. However, patient selection for partial knee replacements remain key. Your Surgeon will assist in deciding whether this is a suitable option for you.

With this technology Surgeons have the confidence to perform partial joint replacements due to the precision and accuracy of the partial knee reconstruction, thus choosing if appropriate a procedure which is less major, bone conserving whilst retaining the option of a full knee replacement if ever that is necessary in the future.

In younger patients with hip arthritis with associated deformities such as back arthritis and pain, patients are reassured by the dynamic assessment and individualised implant positioning which is key to ensuring longevity and stability of a joint performed for quality of life in high demand, active young patients with hip arthritis.

Robot Assisted Joint replacements reassures patients in relation to the technical approach to surgery so they can focus on their recovery and rehabilitation, which is still very important after hip and knee replacements.

For more information, visit;

www.manchesterhipsurgeons.co.uk

www.manchesterkneesurgeons.co.uk

www.manchesterhipandknee.com

** Please note in the unlikely event of systems or technical difficulties, your surgeon will take over and perform a 'conventional total hip/knee replacement **