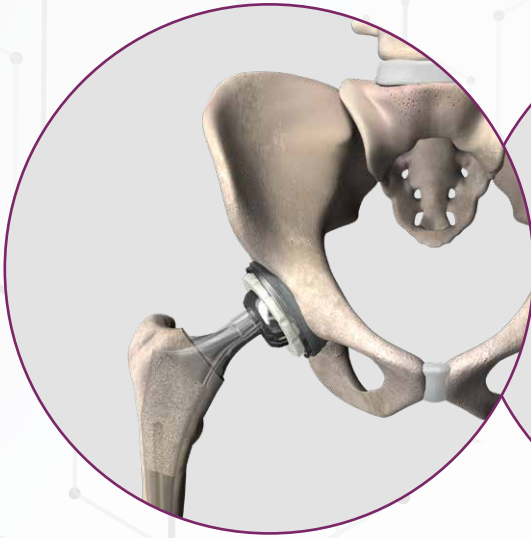
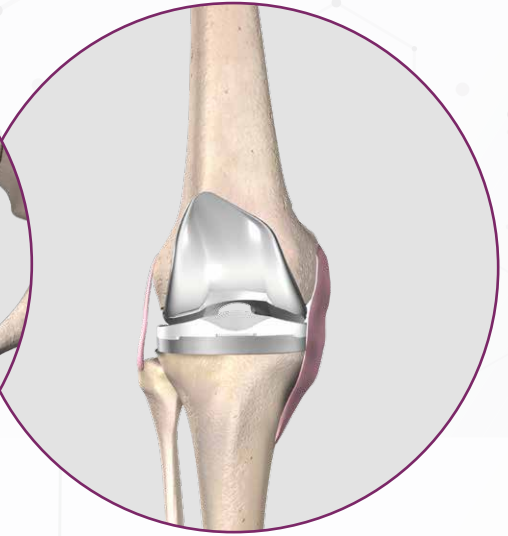


Robotic Technology

TOTAL PROSTHESIS



Hip



Knee

To gain

QUALITY OF LIFE

With intelligent robotic arm assisted interventions by
Mako SmartRobotics™



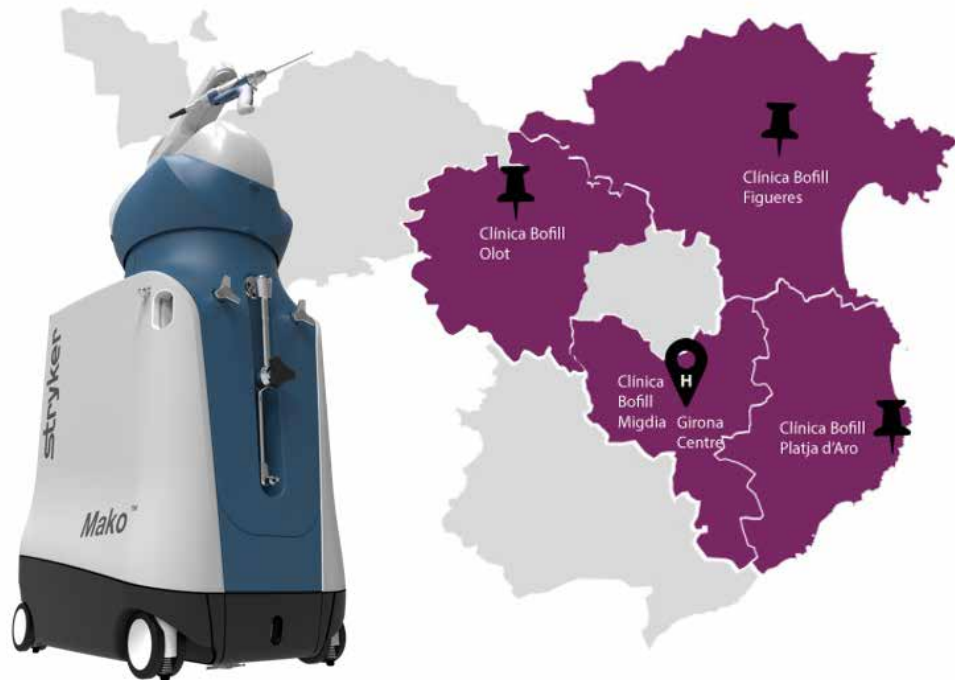
CLÍNICA BOFILL
ProActive Health



First hospital in the province of Girona to offer robotic knee and hip replacement surgery with **Mako SmartRobotics™** technology.

Clínica Bofill becomes the first medical centre in the province of Girona to incorporate Mako technology, the intelligent robotic arm-assisted knee and hip replacement surgery.

The expertise of our orthopaedic surgeons and the **robotic precision of Mako** combine in the operating theatres of Clínica Bofill in Girona to offer a better planned and balanced arthroplasty than the manual one, thus improving the **quality of life of patients suffering from osteoarthritis of the knee or hip** and who need a total prosthetic implant in one of the most important joint capsules of the human body.



Certified medical expert team

The trauma team of the Bofill Clinic responsible for these orthopaedic surgeries has travelled to Luxembourg and Madrid, to train in different applications of robotic surgery of the knee and hip joints with Mako SmartRobotics™.

This group of experts will grow progressively in our hospital. The first ones are Dr. Josep M. Centenera, Dr. Amir Cruz, Dr. Marc Tey and Dr. Pablo M. Sanguino.



Our initial team of certified surgeons, from left to right: Dr. Centenera, Dr. Cruz and, as assistant, Dr. Sanguino.

“With Mako SmartRobotics™ we get better results in total knee arthroplasty, as manual surgery, however well executed, does not achieve the same millimetric precision.”

Dr. Josep M. Centenera

BENEFITS

The new generation of robotic surgery for knee and hip prostheses arrives in Girona!



More precision in surgical interventions

The CT scanner combined with Mako technology provides a 3D image that helps the surgeon in the personalised preoperative planning.



More safety

Mako technology is millimetrically adjusted with a margin of error of less than 0.5mm. Currently, more than 500,000 surgeries have been performed with this technology.



Facilitates recovery and post-operative care

Less time in the operating theatre and less bleeding means less surgery-related risks. In addition, hospital stay and physical rehabilitation time are also reduced.



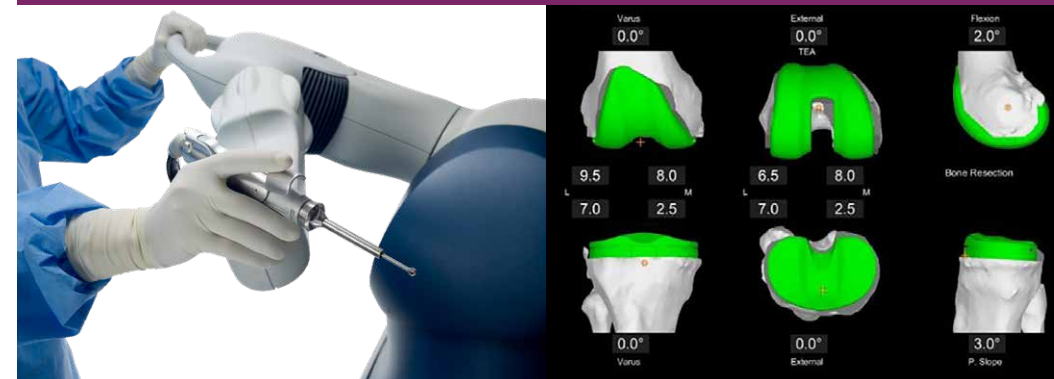
Certified technology

Robotic-arm assisted surgery has been practised outside Spain for 15 years. The scientific evidence on this type of surgery can be found in more than 215 articles and studies.

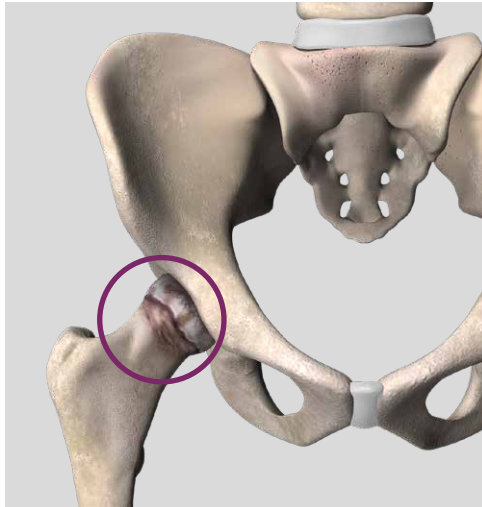
Total hip and knee prosthesis with Mako SmartRobotics™



Always in the best hands... and now, with the precision of the Mako intelligent robotic arm.



Total hip arthroplasty



What is osteoarthritis of the hip?

The hip joint moves easily because the head at the top of the thigh bone (femur) and the base of the hip joint (the acetabulum) are covered by a smooth surface called articular cartilage.

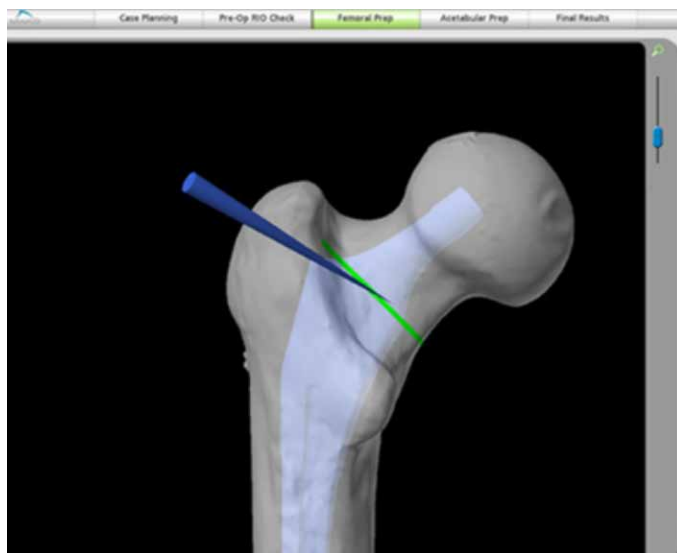
When conservative treatment is not sufficient and hip function deteriorates, hip arthroplasty with a total hip replacement is a treatment that has shown very good results.

It eliminates pain and restores the range of movement of the joint for a full and satisfying life.

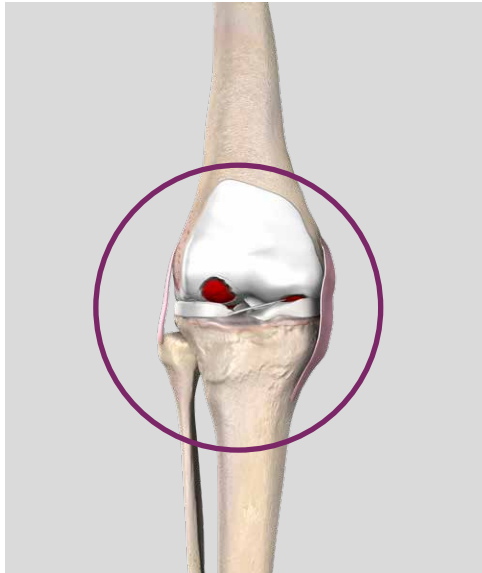
One of the most difficult aspects of joint replacement surgery is placing the prosthetic components in the best possible alignment so that they fit and function smoothly.

The robotic arm provides tactile, visual and auditory feedback to help the surgeon achieve the desired orientation, and this improves stability and mobility.

When the hip is damaged, the resulting pain can limit your body's mobility.



Total knee arthroplasty



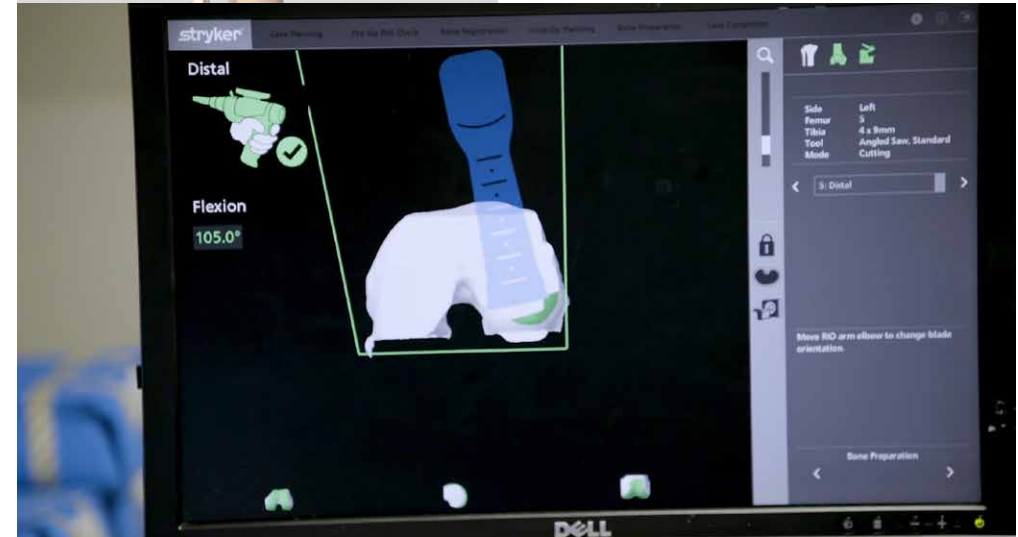
What is osteoarthritis of the knee?

The knee joint moves easily because it is covered by a soft surface called articular cartilage. In a knee with osteoarthritis, this articular cartilage is damaged, which can make the joint stiff and painful and often reduces its range of motion.



Total knee arthroplasty is probably the orthopaedic surgery with the highest success rate and produces great satisfaction for both the patient and the medical team. It helps to improve function significantly, eliminate pain and provide a better quality of life for patients affected by severe degenerative disorders in this joint.

It relieves post-operative pain and improves the function and quality of life of the patient for a considerable period of time.





1. The consultation



When the patient arrives at the consultation, the specialist explains the hip or knee prosthesis surgery (depending on the case) and informs the patient that it can be performed conventionally or using robotic surgery, which mainly provides more precision for the surgeon and a shorter recovery time for the patient.

2. Planning and preparation for surgery

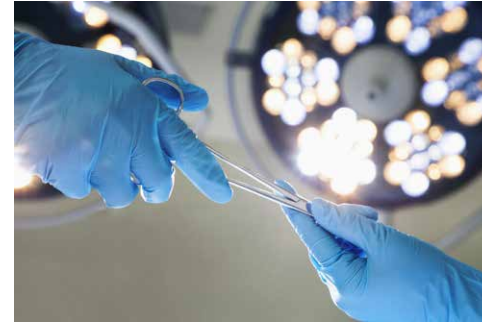
The surgeon requests a previous CAT scan with a specific protocol, as it is necessary to obtain specific data that will be sent to the company's headquarters for study.



Afterwards, the patient's pre-surgery tests are programmed and the surgery date is set. Before the surgery, the medical team studies the case with the Mako SmartRobotics™ robot engineer and a patient-specific pre-operative plan is created using a virtual 3D model for an appropriate selection of the size of the components and intraoperative positioning.



3. The surgery



The patient is admitted on the day and time indicated by the consultant.

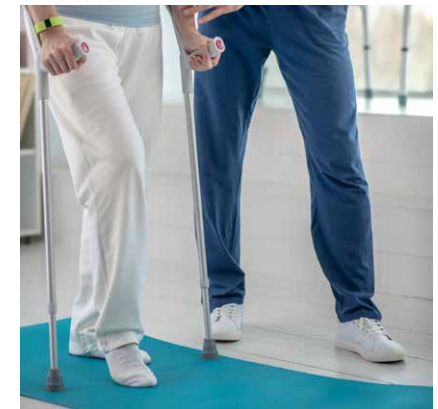
Once in the operating theatre, anaesthesia is the same as for conventional hip replacement surgery. The surgeon reviews the pre-operative plan again with the Mako SmartRobotics™ technician and then the surgery is performed.

4. Rehabilitation and physiotherapy

Rehabilitation and physiotherapy are fundamental processes after any joint surgery, as they lead the patient to full functional recovery.

The first phase begins during the patient's hospital stay, a period which, if no complications arise, usually lasts about 48 hours. During this time, the nursing and physiotherapy teams work together to reduce inflammation and prevent muscle atrophy.

The aim is for the patient to feel well and start walking with the help of crutches or a walker shortly after surgery.



Once discharged, after 2-3 days, the patient can schedule rehabilitation sessions at the Bofill centre closest to their home.





For further information

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