

your guide to

Signature™ Personalized Patient Care

for total knee replacement surgery



understanding **Arthritis and Signature™** Personalized Patient Care

You are unique and so is your individual anatomy. That's why Biomet offers Signature™ Personalized Patient Care, which utilizes MRI (magnetic resonance imaging) or CT (computerized tomography) technology to create personalized positioning guides for total knee replacement. It is important to note that your surgeon will still be using the implants he or she feels are best for you.

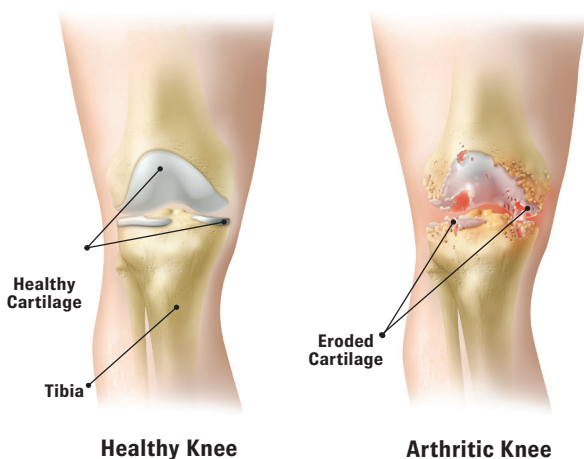
This brochure will explain what makes the Signature™ system unique, what to expect from the preoperative MRI/CT scan, what to expect after surgery, and the benefits offered to you and your surgeon by using the Signature™ personalized positioning guides.



The Knee

The knee is a hinge joint formed by the tibia (shinbone), femur (thighbone), and patella (kneecap). The ends of the bones in the knee joint are covered with cartilage, a tough lubricating tissue that helps cushion the bones during movement.

Osteoarthritis, the most common form of arthritis, is a wear and tear condition that destroys joint cartilage and bone, and it typically develops after years of constant motion and pressure in the joints. As the cartilage continues to wear away, the joint becomes increasingly painful and difficult to move. If conservative treatment options fail to provide relief, your surgeon may recommend total knee replacement using Signature™ Personalized Patient Care.



Signature™ Personalized Patient Care

The Signature™ system utilizes custom femoral and tibial positioning guides developed from your MRI or CT scan. The preoperative scan is used to create a three-dimensional joint reconstruction, which enables the surgeon to preoperatively plan your knee replacement. In the past, surgeon planning has typically been based off of two-dimensional X-rays.

Using MRI or CT technology and patient-matched guides, the Signature™ system allows for a more custom fit of the Vanguard® Complete Knee. The Vanguard® knee offers more femoral size options than other knee systems, which allows for 90 different size combinations.



5 Femoral Sizes — Other Company



10 Femoral Sizes — Biomet

Vanguard® Complete Knee System Offers More Femoral Size Options

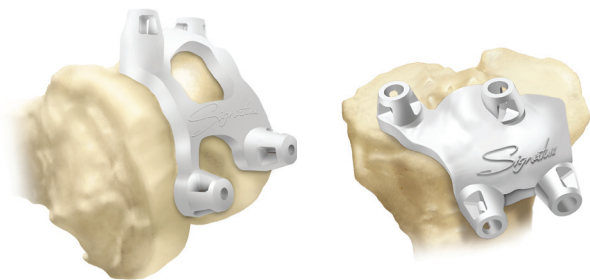
Before Surgery

Your preoperative experience will be like that of most total knee patients except that an MRI or CT scan of your affected leg will be required. The advantage of using imaging is that, unlike an X-ray, it creates a detailed three-dimensional image of your unique anatomy that enables the surgeon to preoperatively plan your knee replacement.

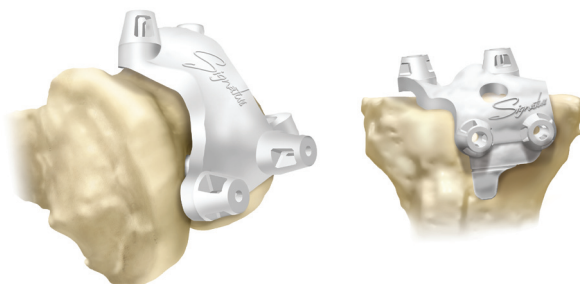
Typically, surgeons use X-rays to size components before surgery. During the knee replacement procedure an assortment of instruments are used to verify component sizing and establish proper positioning and alignment. With the 3-D imaging and Signature™ personalized positioning guides, surgeons have access to a greater level of detail and precision for implant position and alignment before the procedure. This allows for personalized implant positioning and may help enhance surgical efficiency.

You can expect the MRI scan to take approximately 20 minutes. The scan will only be performed on your hip, knee and ankle, so your head will remain outside of the machine. The CT scan usually takes less than five minutes to complete. Similar to an MRI, the CT scans your hip, knee, and ankle, so your head will not be inside the machine. If you have had prior joint replacement surgery, the CT scan may be the best option for Signature™ Personalized Patient Care.

The MRI/CT scan is used for preoperative planning by your surgeon and for the design and manufacture of the Signature™ personalized positioning guides that will be used during your knee replacement.



Signature™ Personalized Positioning Guides (MRI)



Signature™ Personalized Positioning Guides (CT Scan)

During Surgery

The surgical procedure using the Signature™ personalized positioning guides is similar to traditional total knee replacement with a few exceptions. During traditional total knee surgery, multiple instruments are used to position the guides for removing damaged bone and cartilage. Traditional total knee replacement sometimes uses instruments placed inside the femur (thighbone) and/or tibia (shinbone) to assist with implant alignment and positioning.

Signature™ personalized positioning guides are placed directly onto your femur and tibia, and therefore do not require instrumentation of the bone canal. The Signature™ personalized positioning guides enable the surgeon to position a reduced number of instruments during surgery to carry out the preoperative plan.

Complications

While uncommon, complications can occur during and after surgery. Some complications include, but are not limited to, infection, blood clots, implant breakage, malalignment, and premature wear, any of which can require additional surgery. Although implant surgery is extremely successful in most cases, some patients still experience stiffness and pain. No implant will last forever, and factors such as the patient's post-surgery activities and weight can affect longevity. Be sure to discuss these and other risks with your surgeon.

There are many things that your surgeon may do to minimize the potential for complications. Your surgeon may have you see a medical physician before surgery to obtain tests. You may also need to have your dental work up to date and may be shown how to prepare your home to avoid falls.

After Surgery

After surgery, you probably will be hospitalized for two to three days. Recovery time varies, but most people should be able to drive after two weeks, garden after three to four weeks, and golf after six to eight weeks. Your surgeon will tell you when and what activities you can return to and what activities to avoid.

Summary

The decision to have surgery is sometimes difficult. We hope that this brochure has helped you understand Signature™ Personalized Patient Care so that you can make the best decision for yourself. This brochure is not intended to replace the experience and counsel of your orthopedic surgeon. If you have any further questions, please speak with your orthopedic surgeon.

Biomet is a manufacturer of orthopedic implants and does not practice medicine. Only an orthopedic surgeon can determine what treatment is appropriate. Individual results of total joint replacement may vary. The life of any implant will depend on your weight, age, activity level, and other factors. There are potential risks to joint replacement surgery including loosening, wear, fracture, or infection, any of which can require additional surgery. For more information on risks, warnings, and possible adverse effects, talk to your surgeon and see the Patient Risk Information section found within Biomet.com. Always ask your doctor if you have any questions regarding your particular condition or treatment options.

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One Surgeon. One Patient.®