# ROSA<sup>®</sup> KNEE



### Understanding robotic technology for total knee replacement

You're unique, and so is your individual anatomy. That's why Zimmer Biomet offers ROSA® Knee robotic technology. ROSA, which stands for Robotic Surgical Assistant, is designed to help your specially trained surgeon tailor the placement of your knee implant just for you. This brochure will explain what makes the ROSA Knee System unique, what to expect preoperatively, what will happen with ROSA Knee during surgery and what to expect after your surgery. Zimmer Biomet is not providing medical advice. This brochure is for educational purposes only and is intended for use by Health Care Professionals to aid, facilitate and manage discussions with patients about their health care. The information contained in this brochure is to serve as a general guide only and is not intended to replace the advice given from a Health Care Professional. If you require medical advice or wish to discuss your medical concerns, seek guidance from your Health Care Professional. Consult your Health Care Professional about any medications, supplements or treatments you are considering and when seeking treatment, disclose all medications you are taking or treatments you are receiving. If required, as part of your treatment and rehabilitation program. vour Health Care Professional will tailor an exercise and/or dietary plan specifically designed to meet your individual needs. All content herein is protected by copyright, trademarks and other intellectual property rights, as applicable, owned by or licensed to Zimmer Biomet or its affiliates unless otherwise indicated, and must not be redistributed, duplicated or disclosed, in whole or in part. without the express written consent of Zimmer Biomet.

### For further information please contact your Health Care Provider.

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## **ROSA<sup>®</sup> KNEE SYSTEM**

Robotic Technology for Total Knee Replacement



#### Arthritis in the knee joint

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. 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 ROSA Knee robotic technology.





Arthritic Knee

Healthy Knee

ROSA

#### **ROSA KNEE** Robotic Technology

Getting a precise knee implant fit is important to your comfort and overall experience following knee replacement surgery. ROSA Knee uses data collected before and during surgery to inform your surgeon of many details related to your unique anatomy that may affect your implant fit. By using this data to make more informed decisions, your surgeon is able to plan for and carry out a personalised surgery based upon your individual needs.

#### Before surgery

Your preoperative experience will be like that of most total knee patients. But, unlike traditional knee replacement methods, with ROSA Knee, a series of x-rays may be used to create a three-dimensional (3D) model of your knee anatomy. This 3D model will enable the surgeon to plan many specifics of your knee replacement prior to your surgery.

#### During surgery

The surgical procedure using ROSA Knee is similar to traditional total knee replacement, but with a robotic assistant. Your surgeon has been specially trained to use ROSA Knee in order to personalise the surgical approach for your unique anatomy. It's important to understand that the robot does not operate on its own. That means it does not move unless your surgeon prompts it to. Your surgeon is still in the operating room the entire time and is making all of the decisions throughout your surgery.

During your procedure, ROSA Knee utilises a camera and optical trackers attached to your leg to know exactly where your knee is in space. Think of it like a very detailed global positioning system (GPS) that you might use in your car. If your leg moves even a fraction of an inch, the robot can tell and adjusts accordingly. This helps ensure that the plan your surgeon put into place is executed as intended. Throughout your surgery, ROSA Knee provides your surgeon with data about your knee. This information, combined with your surgeon's skill, helps them know how to position your implant based on your unique anatomy.



#### After surgery

Following surgery, you will be hospitalised based upon the recovery plan your surgeon decides is best for you. This hospitalisation may range from one 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.

#### 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 your 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 minimise 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.

#### Summary

The decision to have surgery is sometimes difficult. We hope that this brochure has helped you understand the ROSA Knee System. This brochure is not intended to replace the experience and counsel of your orthopaedic surgeon. If you have any further questions, please speak with your orthopaedic surgeon.