



## Fact sheet:

### Geisinger is the exclusive regional provider of state-of-the-art robotic-arm–assisted joint replacement surgery



Geisinger is the first and only healthcare provider in northeast and central Pennsylvania to offer the Mako™ robotic-arm–assisted surgery for partial knee, total knee and total hip replacement surgery. This state-of-the-art technology is not available anywhere else in the region. Geisinger Orthopaedics and Sports Medicine has experienced more than an 80 percent growth in joint replacement surgery due to the population's longevity and more active lifestyle. This is a national trend, with approximately 800,000 joint replacement surgeries performed in the U.S. each year. This number is expected to increase to 3 million by 2030. (2007 American Academy of Orthopaedics – Kurtz et al. study)

Here are some key facts about Mako robotic-arm–assisted joint replacement surgery:

- A candidate for this surgery would be a patient suffering from knee and/or hip pain due to arthritis and for whom nonsurgical therapies have failed. Partial knee, total knee or total hip replacement robotic-arm–assisted surgery relieves pain, restores mobility and returns a patient to an active lifestyle faster.
- The surgery itself is performed by an orthopaedic surgeon. The robotic arm does not perform surgery, nor can it make decisions on its own or move without the surgeon guiding it.
- The process begins with a CT scan of the patient's joint, which is used to generate a 3-D virtual model of the patient's unique anatomy. This virtual model is loaded into the Mako system and is used to create a patient's personalized preoperative plan. This allows the surgeon to precisely evaluate the patient's bone structure, alignment, joint space and surrounding tissue to plan implant location, select the appropriate size and ensure alignment that achieves 99 percent or better accuracy — every time.
- Geisinger orthopaedic surgeons will perform Mako robotic-arm–assisted surgeries at Geisinger Shamokin Area Community Hospital (GSACH) and Geisinger South Wilkes-Barre (GSWB). Patients recovering from robotic-arm–assisted joint surgery have a team of highly skilled staff in a dedicated hospital unit to provide them with all the necessary resources and assistance needed for a successful recovery.
- Robotic-arm–assisted surgery is less invasive, helping to minimize scarring and to ensure a faster recovery. Joint surgery success is largely based on correct sizing and placement of the joint. More accurate implant sizing and placement improves function and longevity, reducing the amount of surgeries needed in a lifetime and creating the opportunity for patients to choose this life-changing option at a younger age.

To learn more about this joint replacement solution or to schedule an appointment, call 800-275-6401 or visit [geisinger.org](http://geisinger.org).

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