Orthopedic Surgeon Stephen Makk, MD, believes in the value of precision, and is banking on better outcomes from newer technology designed to improve accuracy. “In knee and hip replacement surgery, precise joint position and leg alignment are key factors that can maximize successful outcomes,” Dr. Makk explains.

With that goal in mind, Dr. Makk has been using computer navigation to ensure proper alignment of the joint and leg in joint replacement surgery since 2005. “The intraoperative navigation computer uses GPS-type technology to make three-dimensional digital models of a patient’s bones and leg alignment,” Dr. Makk said. This serves as a guide to the surgeon in positioning the instruments, understanding what part of the joint to remove, in making more precise cuts and knowing where to insert the new joint.

Patients benefit in two ways, according to Dr. Makk: a well-aligned joint replacement wears more slowly, and in turn, should last longer. “The hope is that this will allow better function and delay the need for future revision surgery,” Dr. Makk added, “but many factors can influence this.”

Dr. Makk said almost all joint replacement patients can benefit from computer-navigated surgery, but advised they discuss their individual case with their surgeon.