

Local hospital first to perform complete knee replacement

By JANE PETERSON Of The Oakland Press

It was challenging for Doug Martin of Ortonville, who had knee replacement surgery last month, to slow down during the busy holiday season. However, his recovery time has been reduced thanks in part to a new procedure performed at **St. Joseph Mercy Oakland** by Safa Kassab, M.D.

The hospital was the first in Michigan to perform the custom-fit total knee replacement procedure. Arlene Jensen of Clarkston was the first to undergo the procedure, with Martin not too long after her. Kassab, an orthopedic surgeon, uses the OtisKnee Custom Fit Knee Replacement procedure to precisely match the size and placement of an implant to his patients' own pre-arthritis knee anatomy.



Arlene Jensen gets help doing her short arc quads-knee extension exercise from her granddaughter, Chelsea Jensen, 13, in Independence Township.

The customized process begins with an MRI taken before surgery to develop precise measurements of the patient's arthritic knee. The MRI is sent to California-based OtisMed Corp., an orthopedic technology company, which uses proprietary computer software to create a 3-D image of the knee and then virtually correct the deformity to return the knee to its pre-arthritis state.

Then, a computerized 3-D image of the implant to be used in the patient's surgery is Shape-Matched to the virtual knee model. This helps determine the correct implant size and placement, based on the patient's own pre-arthritis knee anatomy.

The last step brings all these elements together with the creation of special cutting guides for the surgeon to use during the procedure. These patient-specific guides, which are accurate to within a few millimeters, indicate to the surgeon exactly where to make bone cuts. The result is a knee replacement customized for each individual patient.

This new approach "is changing the way we cut the knee," said Kassab. There is less bone taken off from the knee with patients reporting a quicker and less painful recovery. Martin, 54, is pleased with the outcome, saying he expects the procedure to improve his quality of life. After many years in the construction industry, he said the toll was evident on his knees. Arthritis set in and he walked with a limp. He said simple tasks like getting up from his desk to greet a customer became difficult. When he learned about the custom-fit total knee replacement procedure, he didn't hesitate.

“I was ready for it,” said Martin. He says he can’t wait to play with his grandchildren and walk on the beach without limping. Jensen, the first to undergo the procedure in Michigan, hopes it will eliminate the knee pain she has struggled with most of her life. She had surgery Dec. 4 and is looking forward to being able to get back to work as a medical assistant, walk her dog and play with her 4-year-old twin grandsons free of pain.

“I’m pretty pleased,” she said. “It’s getting better every day.” Kassab expects to do several hundred of the procedures in the coming year. Patients with arthritic knees who are having enough pain that they are considering surgical treatment are the best candidates for the implant, Kassab said, adding that patients should talk with their physician to see if they qualify.

To learn more about the custom-fit knee replacement procedure, contact the **St. Joseph Mercy Oakland** physician referral line at (800) 372-6094.