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On the cutting edge

New technology allows quicker recovery time for knee replacements

By MATT SCHOCH
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On his feet all day as a car salesman and sitting all night as a drummer in a classic-rock band, David Ellis couldn't afford to have a bad knee.

"It was starting to get so painful, I just couldn't do it anymore," Ellis said of his day job and night gig with band Straight Shooter.

After his knee-replacement surgery in June, Ellis needed to get back on his feet as soon as possible.

Ellis, 52, of Port Huron is one of a few Blue Water Area knee-replacement surgery patients who are taking less time to get out of the operating room and off the couch. They can attribute that to a new process being used by a few local doctors.

Dr. David Ernst, who works at Orthopedic Associates in Port Huron, is one of the doctors using Signature knee technology from Biomet of Warsaw, Ind. The technology allows doctors to create 3-D guides for joint reconstruction.

The number of doctors certified to use Signature is growing in the Midwest and in Michigan. According to Biomet's Web site, there are about 50 certified doctors in Michigan, including several in metro Detroit. Dr. Scott Heithoff of Orthopedic Associates and Dr. Kenneth Scott of Chesterfield Township also are certified, according to Biomet.

Ernst said he thinks the technology will gain steam throughout the country. He said the method allows doctors to determine more precisely where incisions should be made. Also, before Signature, the positioning of the new knee was more of an inexact science.

"It eliminates some of the steps necessary," Ernst said. "It allows you to make as perfect as possible bone cuts to create proper alignment."

After a patient has an MRI, the company provides 3-D model of the knee four to five weeks later.

Ernst, who has done about 30 such procedures, said the model has allowed an average of 20 to 30 minutes to be shaved off time in the operating room. Ernst started doing the surgeries in May; Biomet began offering the technology in 2008.

Ernst said the surgery has a quicker recovery time, reduces the risk of infections and, ultimately, allows for better range of motion.

Ellis, a former softball and racquetball player who had three knee scopes before the replacement, said he was on his feet the day after surgery. He started feeling good after about six weeks of pain, he said.

It was about three months before he was drumming again, but Ellis said he's been told that within a year, he will be good as new.

Dr. Todd Borus, a surgeon for Rebound Orthopedics in Portland, Ore., said he wants to see results before siding with techniques such as Signature.

"The bottom line is it's a very exciting technology," said Borus, who did his residency through the University of Michigan. "But there haven't been any really good studies comparing technologies."

Borus has seen more young patients opt for partial-knee replacements, which he said keeps their cruciate ligaments intact for more activity.

He said Rebound might soon use robotics-based technologies to improve surgeries.

Either way, Borus said the wave of the future is more customization and applying a patient's anatomy to procedures.

Borus said most insurance policies will cover the innovative surgeries unless research someday proves it's not beneficial. Patients pay extra for additional sessions such as the pre-operative MRI. But, he said, there is a significant extra cost to the providers.

Ernst said he's confident in the technology.

"This is a new technique and one that shows a great deal of promise for improving the long-term results," he said.
