

Mazor marks the spot for Mercy back patients

By Tara Thomas-Gettman, for The Gazette

It is not just information technology specialists that have to constantly keep up with new tools and trends, surgeons also are part of a field where robots have become a permanent part of the equation.

"Technology is constantly evolving. We have had numerous advances since I completed residency," shares Dr. Steven Schopick, Attending Neurosurgeon at the Mercy Neurosurgery Clinic in Cedar Rapids.

Schopick, who's been with Mercy since February 2022, has been in practice as a neurosurgeon since 1998. The newest technology he's using is the Mazor intraoperative surgical robot.

"The Mazor is a robot used to place pedicle screws in the lumbar spine. It allows the pedicle screws to be placed more accurately using preoperative or intraoperative CT," he explains.

"Originally, surgeons used visual landmarks to determine where to place screws. This evolved to the use of intraoperative x-ray. The Mazor is the next step."

The Mazor robotic guidance system allows for preoperative or intra-operative planning. With features such as customizable implant selection, versatile implant trajectories and 3D analytics, planning allows doctors to make the procedure predictable.

With this robotic technology, spine surgeons can pre-plan the surgery based on the patient's unique spinal anatomy and then execute the plan in the operating room using navigation and robotic guidance to place spinal implants precisely.

Technological advancements in surgery like this spine robotic guidance platform benefit patients in multiple ways.

"From shorter operative time and more accurate screw placement, this will reduce the risk of complications, shorten anesthesia time and reduce exposure to radiation," Schopick adds.

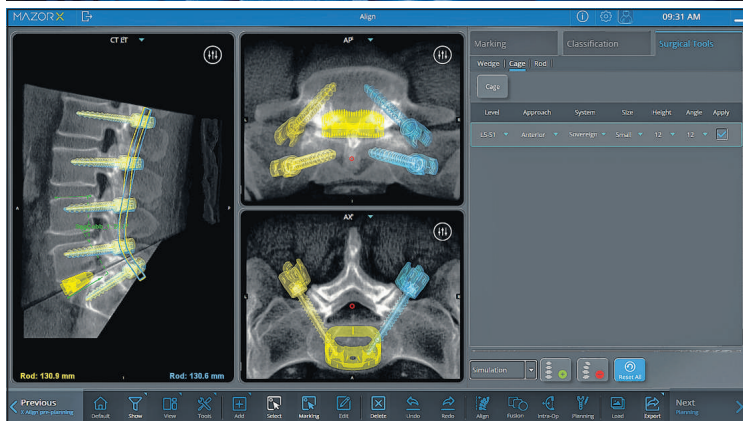
Based on decades of experience, Stealth Navigation technology allows for real-time visualization of the implant entering the anatomy relative to the pre-operative plan. The procedure is executed intra-operatively by combining two guidance technologies in a comprehensive platform that helps surgeons achieve goals for their patients with confidence. Navigation provides the visibility that closes the loop on the execution of the plan.

But this is just the beginning when it comes to technology improving medical practice.

"The use of the Mazor to place screws is just the first step in the use of robotics in spine surgery. In the near future, the robot will help to guide bone removal, decompress nerves and allow safer placement of interbody cages between the vertebral bodies," he says.

Minimally invasive procedures that use the Mazor system can result in smaller incisions, less blood loss and shorter hospital stays when compared to traditional open surgical procedures. Surgeons can also use this robotic guidance system during traditional open surgical procedures.

Perhaps one of the incredibly satisfying elements of advanced tech on the job for surgeons like Dr. Schopick, who is a member of the American Association of Neurological Surgeons, is being able to help patients with specific interventions that were never possible in the past.



Surgeons employ the use of the Mazor X Stealth Edition Spine Robotic Guidance System to place screws with more precision than has been previously possible. Photos courtesy of Mazor

"We recently had a patient who required a fusion of the lower lumbar spine. Due to prior surgery and trauma, his spinal anatomy was quite distorted. He had been refused surgery elsewhere due to the difficulty in placing screws in his spine," details Schopick.

"We were able to pre-plan the placement of screws within a very tight corridor. During surgery, screw placement went quite easily. He is now without pain for the first time in years. This case

would have been almost impossible without this current technology."

The Mercy Neurosurgery Clinic includes care and treatment for brain, neck and spine disorders.

In 2020, Mercy was recognized with a Blue Distinction Centers+ designation for spinal surgery. St. Lukes, Mercy Iowa City and the University of Iowa Hospitals and Clinics have also earned this recognition in The Corridor.

As part of the Blue Distinction Spine Surgery program, these nationally designated providers demonstrate expertise in delivering high-quality patient safety and better health outcomes. The recognition is based on objective measures developed with input from the medical community

and leading accreditation and quality organizations.

Facilities designated as Blue Distinction Centers for Spine Surgery demonstrate expertise in cervical and lumbar fusion, cervical laminectomy and lumbar laminectomy/discectomy procedures. Their precision results in fewer patient complications and readmissions compared to other facilities.

In addition to meeting these quality thresholds, hospitals like Mercy with this designation are, on average, 20 percent more cost-efficient in episodes of care compared to their peers.

"The bottom line for surgeons like Dr. Schopick is embracing new technology as it comes, with an eye toward treating more and more patients with even better care and outcomes.

"As a physician, we are always looking to improve health and decrease pain," he said. "The new technologies in spine surgery are allowing us to accomplish more with less pain and faster recovery."

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- Dr. Steven Schopick, Mercy Neurosurgery Clinic

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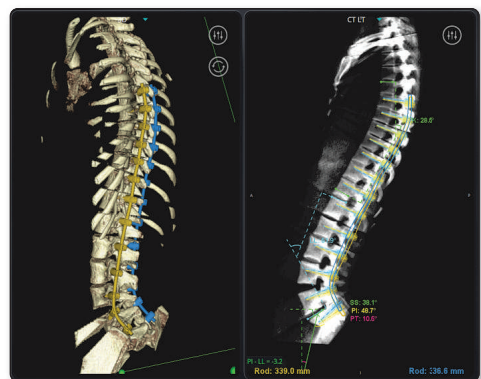
TEST

Get tested! It's the only way to know for sure if you have an STI. Many STIs don't cause any symptoms, so you could have one and not know. If you're not comfortable talking to your regular provider about STIs, find a clinic that provides confidential testing that is free or low cost.

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All STIs are treatable. If you test positive for an STI, work with your healthcare provider to get the correct treatment. Ask about partner services to get your partner tested & treated. Avoid having sex until you and your sex partner both complete treatment.

Public Health



Mazor allows for preoperative or intra-operative planning based on the patient's unique spinal anatomy.