

Cutting edge robot helps doctors perform brain surgery



LOUISVILLE, Ky. —

Robots are used in many industries, but now an unprecedented robotic assistant is helping doctors perform brain surgery.

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Technology is assisting neurosurgeons in their quest for perfection.

“Surgery takes less time, patients comfort will be better, they're ability to go and recover will be faster,” neurosurgeon Dr. David Sun said.

Rosa, the robotic surgical assistant, is systematically making surgeons' jobs easier and operations more accurate.

The robot is the first of its kind in Kentucky and on the cutting edge of neuroscience and is one of 30 in North America.

“Allows us to use finesse and make an incision that used to be an inch, 2 inches, 3 inches, and a piece of bone being removed,” Sun said.

Rosa makes incisions finer than two spaghetti strands, assisting surgeons like Sun to biopsy tumors or conduct a treatment plan for epilepsy.

Some of the procedures before took nearly 12 hours, but now they take no longer than five hours.

“We can pass a probe with a laser tip on it through brain tissue, and pass through brain with great accuracy to get it where it needs to be,” Sun said.

Sun said much of the work is done before the operation, pre-planning and programming Rosa for the right trajectories and incisions.

“Takes thousands of points from the head, nose and temple so that we get it and it knows where I am,” Sun said.

More than 100 years after modern neuroscience and surgery took off, Rosa is now on the cusp of the integration of robots to help to make patients’ recovery shorter and lives longer.

“As tech advances, great thing about my field is that in neurosurgery when technology advances in healthcare were often in the front end,” Sun said.

Rosa's surgical reach primarily focuses on patients diagnosed with brain tumors or epilepsy.

Read the article and watch the video here: <http://www.wlky.com/article/cutting-edge-robot-helps-doctors-perform-brain-surgery/8273226>