

Laser Beam Technology Heals Brain Tumor Patients (Print)

It's not Star Wars; it's brain surgery.

Now, select brain tumor patients in the Peoria area have a minimally invasive, efficient way to receive a diagnosis and get their tumor removed.

NeuroBlate LITT (Laser Interstitial Thermal Therapy)

"NeuroBlate is a means to treat tumors with thermal energy," says Andrew Tsung, MD, the vice president of OSF HealthCare Illinois Neurological Institute. "It's a laser, which is how the energy is administered, through small probes the size of a wire. It's done through a very small incision, about the size of the width of a dime. Through that incision we're able to insert the small wire directly to the target. Then we're able to ablate, or get rid of, that tumor and at the same time obtain a biopsy specimen to confirm what we're treating."

How does NeuroBlate work?

"It is thermal energy delivered through a laser beam. We can either fire at the end of a laser, as one would think of laser gun, or we can side fire it and rotate the wire," Dr. Tsung says. "So, it's shooting out from the side, kind of like a lighthouse. You spin the lighthouse around as you pull the probe back. You're able to create shapes as you withdraw from the target."

Even very sick patients can undergo this treatment because of the technology's minimally invasive nature.

"We insert it to a target. By taking temperature measurements through the MRI machine and calculations, we're able to control the radius, or the spread of that current through the tumor and stop it at the three-dimensional boundary between where the tumor ends and the brain starts," Dr. Tsung says.

Eligible patients for NeuroBlate

NeuroBlate, offered at OSF HealthCare in Peoria, Illinois, through [Monteris](#), a neurosurgical technology company, has been recognized as a viable treatment for brain tumors. Roughly a handful of patients have received the treatment at OSF, with more coming down the pipeline soon, Dr. Tsung says.

Potential patients for NeuroBlate could have brain tumors, Glioblastoma (cancerous brain tumor), high-grade glioma, low-grade glioma (growing tumors), or metastatic brain cancer, also known as secondary brain tumors. The size of the tumor matters. NeuroBlate is effective on tumors three centimeters or less. Epilepsy patients can also benefit from this treatment.

NeuroBlate decreases recovery time drastically

"The patients oftentimes will not require any pain medication following brain surgery, which is quite astonishing," Dr. Tsung says. "When you make such a small incision, there's minimal disruption to the tissues. The brain itself does not have any pain sensors. That prevents us from using any pain medication. The recovery is quite fast. In patient cases we've done so far, the first patient used no pain medications and was ready to go home by 8 a.m. the next morning."

OSF HealthCare Saint Francis Medical Center is the only medical center in the Peoria region that offers NeuroBlate.

From the patient arriving to undergoing the surgery and then leaving, the whole process only took 16 hours. Most brain surgery patients are in the hospital for at least two nights and then recover with weight restrictions (in terms of lifting). All of this is avoided when using NeuroBlate. Setup takes three to five hours, but treatment time for the patient is three or less minutes.

For more information on NeuroBlate and other neurological services, learn more about OSF INI on the [OSF website](#).