

New tool 'cooks' cancer cells in inoperable brain tumors

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Washington University neurosurgeons used an MRI-guided laser probe to treat hard-to-reach brain tumors at Barnes-Jewish Hospital for the first time last month.
Credit: MONTERIS

Washington University neurosurgeons are tackling brain tumors at Barnes-Jewish Hospital with a new laser probe.

“This tool gives us a treatment for patients with tumors that were previously deemed inoperable,” says Eric C. Leuthardt, MD, assistant professor of neurological surgery and of neurobiology. “It offers hope to certain patients who had few or no options before.”

The tool is an MRI-guided high-intensity laser probe that “cooks” [cancer cells](#) deep within the brain, while leaving surrounding brain tissue undamaged.

Barnes-Jewish Hospital is the third hospital in the United States to have the device.

Ralph G. Dacey Jr., MD, chief of neurosurgery at Washington University School of Medicine, and Leuthardt used the new system for the first time last month in a procedure on a patient with a recurrent brain [tumor](#) located deep in the brain.

Previous surgeries coupled with the hard-to-reach location of the tumor made a standard tumor resection surgery impossible, says Leuthardt, also director of the Center for Innovation in [Neuroscience](#) and Technology at Washington University.

In last month’s procedure, the surgeons drilled a small burr hole about the diameter of a pencil through the patient’s skull, and then used MRI scans to guide the thin laser probe through the [brain](#) into the tumor.

Once inside the tumor, the laser discharged highly focused energy to “cook” and coagulate cancer cells, killing them. The MRI directed positioning of the laser and monitored in real time the discharge of energy to the tumor so healthy surrounding [brain tissue](#) was left undamaged.

The tool, Monteris AutoLITT, received FDA approval for neurosurgical use in May 2009.

Provided by Washington University School of Medicine in St. Louis

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