

# LI neurosurgeons use new technology to remove brain tumors

June 21, 2013 by DELTHIA RICKS / [delthia.ricks@newsday.com](mailto:delthia.ricks@newsday.com)



Blakely Murphy is an energetic teenager who is back playing volleyball -- her passion -- after a medical odyssey into her brain to locate the source of her seizures.

What at first seemed to be epilepsy turned out to be a tumor, growing deep within the inner labyrinths of her brain. The operation that Murphy, 15, underwent two months ago was performed while she was awake.

Not too long ago, the deep-seated growth would have been unreachable because it flourished in an area that could not be treated using conventional techniques. In the past few years, allowing neurosurgeons to traverse the frontiers

however, brain-mapping technology has evolved, of the human brain.

"Her tumor was a benign ganglioglioma, which is a relatively low-grade tumor," said Dr. Steven Schneider, the pediatric neurosurgeon at Cohen Children's Medical Center in New Hyde Park.

Schneider removed the abnormality from Murphy's brain in April during a procedure performed while the St. James teen was awake - - another innovation considered a boon to neurosurgery.

Murphy, her mom, Dawn, and Schneider talked about the surgery Friday during a Cohen news conference.

Murphy's benign growth had developed in what Schneider calls eloquent regions of the brain -- those that control movement, language, vision and speech. He needed Murphy to be awake as his instruments probed the depths of the three-pound organ.

To reach the tumor, Schneider used brain-mapping technology -- neuro-navigation -- that helped



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him move through the brain's folds and crevices, bypassing eloquent regions.

Being awake during surgery means the patient is a participant in the operation, neurosurgeons say.

Murphy has much in common with Donald Squire, 52, of East Northport, who underwent brain surgery for glioblastoma multiforme. This serious malignancy has become a growing public health concern in recent years.

Squire's tumor was also growing in eloquent regions of the brain and he too had to be awake during the procedure. Dr. Ramin Rak, neurosurgeon at the Long Island Brain Tumor Center, removed the cancer at Huntington Hospital in December.

The brain tumor center in Rockville Centre is an arm of Neurological Surgery Pc, a practice with divisions in Nassau and Suffolk counties.

Glioblastoma doesn't grow in a discrete bundle, doctors say, but fans out in tentacles.

Just as Schneider utilized new technology to navigate within the boundaries of Murphy's cranium, Rak too used neuronavigation technology in Squire's case.

Before his tumor was discovered, Squire said his only inkling that something had gone awry was twitching in one eye.

"It was happening every morning for a while," Squire said. "But I would wait a few minutes and it would go away."

His wife, a veteran registered nurse at Huntington Hospital, recommended emergency care when the twitching became persistent and Squire felt an overwhelming sense of malaise. Melanie Squire suspected a stroke. Brain scans revealed the tumor.

Rak said the operation was minimally invasive.

"This allowed us to expose only a smaller part of the brain and to identify anatomical landmarks with neuronavigation," Rak said.

"Everyone told me to take my husband into the city," she said. "But his hands are absolutely golden," Melanie Squire said of Rak.

Rak had told the Squires that Donald might lose some of his peripheral vision as a result of the surgery, but Squire said he has noticed no changes.

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