

# Brain tumor removal through a hole smaller than a dime

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More than two decades ago, Ryan Vincent had open brain surgery to remove a malignant brain tumor, resulting in a lengthy hospital stay and weeks of recovery at home. Recently, neurosurgeons at Houston Methodist Hospital removed a different lesion from Vincent's brain through a tube inserted into a hole smaller than a dime and he went home the next day.

Gavin Britz, MBBCh, MPH, FAANS, chairman of neurosurgery at Houston Methodist Neurological Institute, used a minimally-invasive technique to remove a vascular lesion from deep within the 44-year-old patient's brain, the first to use this technique in the region. Traditionally, vascular lesions or [brain tumors](#) that are located deep within the brain can cause damage just by surgical removal.

"With this new approach, we can navigate through millions of important brain fibers and tracts to access deep areas of the brain where these benign tumors or hemorrhages are located with minimal injury to normal brain," said Britz. "Ryan's surgery took less than an hour."

Houston Methodist neurosurgeons Britz and David Baskin, M.D., director of the Kenneth R. Peak Brain & Pituitary Tumor Center, are using this "six-pillar approach" that encompasses the latest technology in minimally-invasive surgeries—mapping of the brain; navigating the brain like a GPS system; safely accessing the brain and tumor/lesion; using high-end optics for visualization; successfully removing the [tumor](#) without disrupting tissues around it; and directed therapy using tissue

collected for evaluation that can then be used for personalized treatments.

The new surgical technique is used to remove cancerous and non-cancerous tumors, lesions and cysts deep inside the brain. This approach reduces risks of damage to speech, memory, muscle strength, balance, vision, coordination and other function areas of the [brain](#).

Provided by The Methodist Hospital System

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