

Welder and blacksmith James O'Shaughnessy was stocking shelves in his shop when a heavy-gauge rod fell and struck him on the head. He was rushed to the Emergency Department and diagnosed with a concussion. As if that weren't troubling enough, the MRI revealed a tumor nearly eight centimeters in length growing near his brain at the base of his skull. Although benign, the tumor was threatening to invade his brain, a result that could be deadly.

James consulted with several physicians and was told he had only two options: open cranial surgery—literally removing the top of his skull—or intense radiation. Both of these concerned James. But then he went to the Mount Sinai Health System and learned of a third option. Head and neck surgeons there were using novel technology including 3D simulation, virtual reality planning, high definition cameras, and navigation technology similar to GPS, but for the brain—

innovations that allowed them to map out a detailed surgical strategy and avoid invasive techniques.

The choice was clear. Surgeons used a 3D map of James's head to identify the safest and least invasive path to remove the tumor and then simulated their surgical approach, almost like playing a real-life video game. On the day of the procedure, physicians removed the tumor through James's nose using their preplanned—and now very familiar—route. When he awoke from

the eight-hour, minimally invasive operation, he was pleasantly surprised: he had no visible incisions and the tumor was gone. Considering that his first surgeon recommended open-skull surgery or radiation, James was very pleased he found Mount Sinai. **For you. For life.**

1-800-MD-SINAI
mountsinai.org/skullbase



WE CREATED A VIRTUAL TUMOR IN ORDER TO REMOVE JAMES'S VERY REAL ONE.