The surgical problem: How do you remove a potentially fatal brain tumor without causing the kind of massive trauma that usually results from cutting through the skull in order to reach the cancer?

The surgical solution: Design an innovative new technique in which the surgeon inserts a tiny laser scalpel through the patient’s nose and then maneuvers it (via a flexible tube, or “endoscope”) to the affected area of the brain while leaving the skull entirely intact and free of trauma.

Highly regarded brain surgeon Joshua Kouri (Colleges ’93) helped research and implement the powerful innovative approach to neurosurgery involving tumors located near the pituitary gland.

As an engineer, I’ve been trained to use my precise analytical skills to figure out new ways of doing things. And as a brain surgeon, I’ve been trained to explore every possible approach to treating cancer. By combining those two disciplines together, I think I can be a better doctor for my patients—and that’s my whole purpose as a physician who often treats people struggling with cancer.

Kouri, 33, says the breakthrough surgical technique is so new that he is still in the process of refining it for patients, while warning them of the physical trauma too often associated with brain surgery.

“Absolutely, if you can remove a tumor without having to cut open the patient’s skull, then you will experience less trauma and a faster healing time, with very little chance of infection. “

“This is a very exciting time to be a brain surgeon because the tools we’re using just keep getting better all the time.”

Kouri, who hails from a family of Native Americans in the Boulder area, decided to major in civil and environmental engineering before attending the CU campus in the early 1990s. But when he signed up to take an elective course in organic chemistry, he found he was “entirely fascinated” by the complex molecular processes that take place in living cells. “I discovered that I was hooked on biological science,” he says. “By the middle of my senior year, I was already applying to medical schools.”

Kouri went on to earn his M.D. at the University of Michigan, then spent a year as a National Institutes of Health clinical researcher, before settling down to a seven-year residency at the University of Florida’s Department of Neurosurgery, which he recently completed. Having adopted the Sunshine State (“I love tennis and golf—but I never have time to play”), he plans to launch his own surgical practice in South Florida within the next year.

Kouri dreams of defining his career goals, and he’ll tell you they’re actually quite simple: “I just want to be the best surgeon I can possibly be so I can make a difference in people’s lives.”