

DR. ISABELLE GERMANO

CLASS BRAIN

JOHN FANNING, A 72-YEAR-OLD PATIENT AT Mount Sinai, suffers from tremors. He has a slight one in his left arm, but his right arm is rock-steady—at least until he presses a remote control, turning off a brain stimulator Dr. Isabelle Germano implanted two and a half years ago, and it begins flailing uncontrollably. “I couldn’t even drink coffee,” he says. “Now I can pick up peas with a knife.” The operation—which had just been approved by the FDA—took six hours; today it would take half that long, thanks mostly to Dr. Germano’s other groundbreaking work. Over the past decade, she has persistently sought the latest advances in neurosurgery, using virtually every new technology before most surgeons had even heard of it, then working with scientists to make it more effective. In 1993, Dr. Richard Bucholz and his team at St. Louis University were developing a prototype of a three-dimensional computer-imaging machine, called the StealthStation, that could pinpoint microscopic lesions during surgery. Germano was the first neurosurgeon on the East Coast to use it, and Bucholz believes her input was essential: “Dr. Germano gave us valuable feedback as to how to improve the ergonomics of the device, a critical step in getting it out of the hands of its inventor and into the hands of neurosurgeons.” Partly as a result of Germano’s help, there are now about 700 faster, safer StealthStations in the U.S.

Germano averages at least one surgery a day (her longest took 22 hours) and divides the rest of her time among lab research, teaching, patients, two young children, and a husband—another Mount Sinai neurosurgeon. Though she comes from a long line of doctors in Turin, Italy, her parents begged her to try something else. “They thought that I would be better off doing other things,” Germano says, “because doctors have a terrible quality of life. And they were absolutely correct. I gave up everything else in life except my work and my family.” She wasted no time making that choice, earning an M.D.-Ph.D. at the age of 24. Today, at 40, she’s one of about three dozen female board-certified neurosurgeons nationwide (out of 3,500 or so).

Germano is currently conducting an early gene-therapy trial that, so far, has



prevented the regrowth of aggressive brain tumors in two patients who didn’t expect to be alive today. Others, like Katherine Fullmer, may never need it. Last fall, Fullmer was planning on having “plain old surgery” to remove a malignant brain tumor, which doctors told her would probably paralyze her right side without vastly improving her prognosis. “If I’d been back at the other hospital,” she says, “I would not walk at all. Until I met Dr. Germano, I thought I’d be dead in a couple of days.” Germano’s computer-guided surgery allowed her to walk within a week, and her tumor hasn’t returned. “She’s not only the best person to physically do the job but also the most compassionate, and when you’ve got a cancer in your head, that’s a pretty amazing thing to have.”

BORIS KACHKA