Brain Tumor Program

UCLA Health System | Program Update

Brain Tumor Program

UCLA is home to one of the world's leading centers for the research, diagnosis and treatment of brain tumors. Our Neurosurgery Brain Tumor Program takes an aggressive approach to tumor treatment that relies on the most advanced surgical tools, the latest radiotherapy and chemotherapy agents, and the most promising and innovative Phase I and II clinical trials. In the aggregate, UCLA patients typically experience better outcomes and quality of life than would be expected for the general population of brain-tumor patients with these diseases.

Program Faculty

Neurosurgery

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Radiation Oncology

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Innovative Clinical Trials

Even with surgery, radiation and chemotherapy, most brain tumors return. At UCLA, we are constantly pushing science and technology toward a cure. Toward that end, our neurosurgeons, neuro-oncologists, radiation oncologists and neuropathologists are involved in a number of clinical trials of new surgical, chemotherapy, and immunotherapy protocols. When a treatment-development pipeline yields a potentially exciting new therapy, UCLA is often one of the first institutions to conduct a Phase I or II clinical trial.

Among the most promising clinical trials currently under way is a Phase II multi-center trial of a vaccine (DCVax-Brain™) developed at UCLA for patients with newly diagnosed glioblastoma. The vaccine is administered after surgery in an effort to prevent the tumor from recurring. Some patients participating in this trial have been cancer-free several years out.

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Our UCLA team of medical professionals focuses exclusively on understanding and treating brain tumors and includes many recognized leaders in fields ranging from neurosurgery to molecular biology, neuro-oncology to neuropathology. Each of our brain tumor neurosurgeons has a decade or more of experience treating patients with this particularly difficult and virulent form of cancer. Together, these neurosurgeons perform hundreds of brain-tumor surgeries each year.

The UCLA neurosurgical team includes surgeons with extensive experience in minimally invasive endoscopic brain surgery, averaging dozens of these procedures each month. This type of surgery minimizes surgical risk and functional disruption to the patient.

“At UCLA, we are constantly pushing science and technology toward a cure for brain tumors.”

Brain Mapping and Image-guided Neurosurgery
UCLA employs advanced neuro-imaging and neuro-navigational techniques that allow our surgeons to aggressively yet safely resect tumors near critical areas of the brain without incurring neurological deficits in the patient. We bring intra-operative MRI (iMRI), functional magnetic resonance imaging (fMRI), and diffusion tensor imaging (DTI) directly into the operating room each day, enabling us to carry out a more refined resection. Our neuro-navigation, along with our specialized expertise and extensive experience with “awake” brain surgery, is especially useful in complex cases in motor and language areas of the brain.

Sophisticated Patient Tracking
UCLA uses predictive-modeling and data-management software to track each patient. Because our database contains many years’ worth of precise information on individual patients — including type of tumor, molecular genetic analysis, treatment protocol and outcome — we have a better idea of which treatment plan will work for the next patient who walks through our doors.

Customized Therapy
Current brain tumor treatments often involve undifferentiated chemotherapy with relatively poor response rates. At UCLA, we recognize that just as each patient is different, each brain tumor is unique based on its molecular make-up. We analyze a tissue sample from each patient’s brain tumor, looking for the presence or absence of certain genes and proteins. The goal is to one day be able to design an individualized therapy that will be far more effective than today’s agents in fighting a particular brain tumor. We expect that this type of highly personal and targeted therapy will modulate progression and increase survival, especially in glioblastoma, the most common primary brain tumor in adults.

For more information and latest updates, visit www.uclahealth.org