

Biomarker treatment for brain tumors studied

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The Brain Tumor Unit at the Moores UCSD Cancer Center at the University of California, San Diego, is launching a clinical trial that will examine the use of biomarkers to advance the treatment of malignant gliomas, brain tumors that start in the brain or spinal cord tissue. Annually, about 17,000 Americans are diagnosed with gliomas, which are difficult to treat and often fatal.

The Brain Tumor Unit comprises physicians and researchers from neurosciences, neurosurgery, neuropathology, neuroimaging, [radiation oncology](#), neuropsychology in one team — engaging everyone to advance the patient's care, according to Dr. Bob Carter, chief of the division of neurosurgery at UC San Diego Medical Center and the Moores UCSD Cancer Center.

This unique group is focused on conducting research using personalized medicine — for example, use of biomarkers — and clinical trials to improve the treatment of [brain tumors](#). Biomarkers are molecules or other substances in the blood or tissue that can be used to diagnose or monitor a particular disorder, among other functions. As cells become cancerous, they can release unique proteins and other molecules into the body, which scientists can then detect and use to speed diagnosis and treatment.

One such molecular target is platelet-derived [growth factor receptor](#) (PDGFR). It is involved in cell signaling, and is over expressed in 15 percent of primary gliomas and 60 percent of secondary gliomas. The

study at Moores UCSD Cancer Center will identify those patients with an over expression of PDGFR, in order to identify those patients most likely to respond to a drug called Nilotinib.

The Phase II study will be led by Dr. Santosh Kesari, chief of the division of neuro-oncology in the UCSD Department of Neurosciences and director of neuro-oncology at the Moores UCSD Cancer Center.

"We intend to accelerate personalized therapies for each patient based on an in-depth understanding of each patient's individual tumor," said Kesari. "By looking at the underlying genetics of the tumor combined with clinical data, we hope to optimally tailor treatment and doses."

He added that if the study results are positive, it will underscore the need for more biomarker-based studies and open up novel approaches to treat [cancer](#).

Provided by University of California - San Diego

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