Could Proton Therapy Benefit Patients with Brain Tumors?

NRG Oncology Clinical Trial BN005
A Phase II Randomized Trial of Proton Versus Photon Therapy (IMRT) for Cognitive Preservation in Patients with IDH Mutant, Low to Intermediate Grade Gliomas

About the trial
NRG-BN005 will compare the side effects, both good and bad, of two different types of radiotherapy. The usual treatment for your type of brain cancer is radiotherapy with a photon beam. Another form of radiotherapy is with a proton beam which uses proton particles to send the radiation inside the body to the tumor. This trial will compare patients treated with standard photon beam radiotherapy to patients treated with photon beam radiotherapy. Using proton therapy could reduce the negative cognitive effects on brain function than photons because less of the brain is exposed to radiation. However, proton therapy could also be associated with more frequent tumor recurrences. This clinical trial will determine if proton therapy is better, worse, or equal to photon therapy for patients that have brain tumors with an IDH mutation.

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About NRG Oncology
NRG Oncology conducts practice-changing, multi-institutional clinical and translational research to improve the lives of patients with cancer. Founded in 2012, NRG Oncology is a Pennsylvania-based nonprofit corporation that integrates the research of the National Surgical Adjuvant Breast and Bowel Project (NSABP), the Radiation Therapy Oncology Group (RTOG), and the Gynecologic Oncology Group (GOG). The research network seeks to carry out clinical trials with emphases on gender-specific malignancies, including gynecologic, breast, and prostate cancers, and on localized or locally advanced cancers of all types. NRG Oncology’s extensive research organization comprises multidisciplinary investigators, including medical oncologists, radiation oncologists, surgeons, physicists, pathologists, and statisticians, and encompasses more than 1,300 research sites located worldwide with predominance in the United States and Canada. NRG Oncology is supported primarily through grants from the National Cancer Institute (NCI) and is one of five research groups in the NCI’s National Clinical Trials Network.
What is a clinical trial?
Clinical Trials are research studies that look to find better ways to prevent, diagnose, or treat disease.

Who can join this study?
In addition to having a grade II or III glioma, there are other eligibility requirements to participate in this study. Your doctor can determine if you meet these requirements.

Am I required to be in this study?
No. Taking part in this study is voluntary. You are free to choose to participate, not to participate, or to leave the study at any time. If you decide not to take part in this study, your doctor will discuss other treatment options with you.

What are the possible treatments?
All patients will be randomly assigned to two separate treatment groups. Group 1 will receive the standard of care radiotherapy (photon therapy) and up to 12 cycles of chemotherapy. Group 2 will receive proton therapy and up to 12 cycles of chemotherapy.

How long will I be in this study?
You will receive the neurocognitive assessment before radiation treatment and after completing radiation at 6 months, and 1 year, and then once a year for 10 years. After you finish radiation, your doctor will continue to watch you for side effects and follow your condition for 10 years.

Are there side effects?
Possible risks for patients who receive radiation therapy for brain tumors include scalp redness or soreness, hair loss, temporary hearing decrease or loss, fatigue, temporary brain tumor symptoms such as headaches, seizures, or weakness.
Possible risks for patients who receive temozolomide for brain tumors include constipation, nausea, vomiting, diarrhea, dizziness, muscle weakness, paralysis, difficulty walking, trouble with memory, fatigue, difficulty sleeping, and hair loss.

More Information
You may visit the NCI website at cancer.gov for more information about studies or general information about cancer.

You may also call the NCI Cancer Information Service to get the same information at 1-(800)-4-CANCER (1-800-422-6237)