Potential Brain Tumor Treatments Entering the Pivotal Phase of Evaluation

A large, randomized, controlled Phase III clinical trial is traditionally the last, pivotal step in the evaluation of a potential new medicine before it is approved for use by all patients with the indicated disease. A year ago, the NBTS staff conducted and published a review of all the Phase III clinical trials for glioblastoma patients that have been registered with regulators. This became our most read blog of 2017, and to this day continues to be top destination for visitors to this blog. All told, more than 15,000 unique individuals have viewed the post. So, we've committed to publishing this feature twice-yearly moving forward – once at the half-way point of the year and once at the end of the year – and expanding the feature beyond glioblastoma to all brain tumor types.

So, below is a list of Phase III clinical trials that are currently enrolling patients to evaluate potential new brain tumor treatments as recorded at the halfway point of 2018.

Many of these are trials of a “novel/investigational agent” – meaning it is the first time a particular treatment is being tried for brain tumor patients. There are also a number of trials with therapies already in use for some brain tumor patients – meaning researchers are evaluating these already-in-use treatments in different combinations, different dosing regimens, or subpopulations of patients.

What follows is a breakdown/overview of the current Phase III brain tumor clinical trial landscape, followed by the full-list of trials with hyperlinks for more information.

Phase III Brain Tumor Clinical Trials Overview

- There are 14 Phase III clinical trials currently enrolling for brain tumor patients
  - Eleven (11) are for adult (18+) patients
  - Three (3) are for pediatric and young adult (up to age 21) patients
  - Eleven (11) have measures of extending survival as their primary outcome measure (endpoint)
  - Two (2) have measures of “quality of life” or patient-centric measures as their primary endpoint
  - One has “extend of resection” as its primary endpoint
- Seven (7) trials are of “novel” or “investigational” treatments (two of these trials, however, are of the same novel treatment, just in different combinations)
  - One novel treatment (being evaluated in two separate trials), is an immunotherapy known as nivolumab (Opdivo), which is already
being successfully used to treat some lung, skin, kidney, and bladder cancer patients. It’s known as a “checkpoint inhibitor” and works by “releasing the breaks” on the body's immune system - blocking a signal that would have prevented activated T cells from attacking the cancer, thus allowing the immune system to clear the cancer.

- One is a of a gene therapy known as Toca 511 and Toca FC
  - We’ve covered this treatment – which NBTS helped fund – on multiple occasions, check out these posts (here and here)
- One (ABT-414) is of a “targeted therapy,” or treatments designed to attack a specific abnormality in the tumor (this is the concept of “precision” or “personalized” medicine), in this case a common mutation found glioblastoma tumor cells known as “EGFRvIII.”
- Two (2) are of drugs (TSC and Efornithine) that might be able sensitize tumors better to chemotherapy and radiation
- One is for a drug (Armodafinil) that might help reduce fatigue in patients with high-grade glioma

- Seven (7) trials are registered with known/already approved brain tumor therapies/treatment types. These trials include different variations of chemotherapy, radiation, surgery, or combinations thereof.

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**Phase III Clinical Trials with Novel/Investigational Agents**

- **The Toca 5 Trial: Toca 511 & Toca FC versus Standard of Care in Patients with Recurrent High-Grade Glioma**
- **An Investigation Immune-Therapy Study of Temozolomide Plus Radiation Therapy With Nivolumab or Placebo for Newly Diagnosed GBM Patients (CheckMate548)**
- **An Investigational Immuno-Therapy Study of Nivolumab Compared to Temozolomide, Each Given With Radiation Therapy, for Newly-diagnosed Patients With Glioblastoma (CheckMate 498)**
- **Study to Evaluate Efornithine + Lomustine vs Lomustine in Recurrent Anaplastic Astrocytoma (AA) Patients**
- **A Study of ABT-414 in Subjects With Newly Diagnosed Glioblastoma (GBM) With Epidermal Growth Factor Receptor (EGFR) Amplification**
- **Safety and Efficacy Study of Trans Sodium Crocetinate (TSC) in Newly Diagnosed Glioblastoma (GBM) Biopsy-Only Subjects**
- **Armodafinil in Reducing Cancer-Related Fatigue in Patients With High-Grade Glioma**

**Phase 3 Clinical Trials with Prior/Known Agents**

- **A Prospective Phase III Trial to Compare Sterotactic Radiosurgery Versus Whole Brain Radiation Therapy**
• Chemotherapy and Radiation Therapy in Treating Young Patients With Newly Diagnosed, Previously Untreated, High-Risk Medulloblastoma
• A Study Comparing Two Carboplatin Containing Regimens for Children and Young Adults With Previously Untreated Low-Grade Glioma
• Fluorescence-guided Surgery for Low- and High-Grade Gliomas
• Radiation Therapy With Concomitant and Adjuvant Temozolomide Versus Radiation Therapy With Adjuvant PCV Chemotherapy in Patients With Anaplastic Glioma or Low-Grade Glioma
• Maintenance Chemotherapy or Observation Following Induction Chemotherapy and Radiation Therapy in Treating Younger Patients With Newly Diagnosed Ependymoma
• Intraoperative Radiotherapy in Newly Diagnosed Glioblastoma Multiforme

*To support GBM research and help us get to even more potential new glioblastoma treatments faster, please visit here.*

*To checkout more clinical trial options, please visit the NBTS Clinical Trial Finder at trials.braintumor.org and check-out yesterday’s post on all the new clinical trials – of any phase – that have opened in recent months, here.*