Diagnostic and Prognostic Marker in High-Grade Glioma

Purpose of Study:
1. To evaluate diagnostic and prognostic relevance of alterations of specific chromosomes and chromosomal regions using PCR analysis of microsatellite repeats and FISH.
2. To evaluate diagnostic and prognostic relevance of DNA ploidy by flow cytometric analysis and compare this with ploidy determinations by FISH.
3. To assess diagnostic and prognostic relevance of various markers of cellular proliferation and cellular function.

Design Schema:
PCR, FISH, flow cytometry and immunohistochemical determinations performed in the laboratory of Dr. R. B. Jenkins and the Mayo Cancer Center Pathology Laboratory.

Study Chair:
Jan C. Buckner, M.D.
Paul L. Schaefer, M.D.

Statistician:
Wenting Wu, Ph.D.

Projected Number of Patients:
The number of patients to be accrued can not be estimated at this time.

Treating Schedule:
This is not a treatment-evaluation study. Patients are accrued to this study from a variety of treatment regimens

Study Design: Original design: This prognostic factors study was originally designed to evaluate a battery of tumor markers in patients with grade 3 astrocytomas (AA) or high grade oligoastrocytomas (AOA) who were enrolled in 3 NCCTG randomized clinical trials in newly-diagnosed high-grade gliomas (79-72-51, 85-72-51, 88-72-52). The dataset would consist of the prospectively-collected clinical data from these 3 trials together with associated baseline tumor marker data measured on paraffin-embedded tissue collected at the time of participant enrollment in the clinical trial.

Revised design: The study team realized that, as written, protocol 94-72-52 did not require accrual of tumors from patients with grade 4 astrocytomas (GBM). In retrospect, this was an oversight because this group of patients would provide comparable information about the incidence of marker anomalies and the survival of patients with and without specific marker alterations. Consequently, the protocol was rewritten to accrue paraffin-embedded tissue specimens from patients with newly-diagnosed GBM who were enrolled in any Mayo/NCCTG high-grade glioma trials. To enhance the likelihood of finding the most prognostic markers associated with this disease,
NCCTG Translational Research Committee and the GMN participants jointly agreed to include in the analyses those promising GMN markers that were approved by both of them.

**Study Status/Accrual:**

This study opened on 11/28/1995 and has accrued tissue blocks/slides for 520 patients as of 03/24/2011. One patient was entered from a Mayo trial for recurrent gliomas erroneously, and six additional patients were enrolled to this study from a recurrent GBM trial as they provided tissue from the newly diagnosed tumor. The patients enrolled in this study comprise 24% of all patients enrolled in 19 trials.

**Adverse Events:**

No adverse event data is collected as part of this study, as this is not a cancer treatment study.

**References:**

**Manuscripts:**


Abstracts:


