

ABSTRACT

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The trial effect in patients with glioblastoma: effect of clinical trial enrollment on overall survival.

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PURPOSE: To determine whether participation in a clinical trial was associated with improved survival in patients with glioblastoma (GBM).

METHODS: Following IRB approval, patients were identified using CPT and ICD codes. Data was collected using retrospective review of electronic medical records. When necessary, death data was obtained from online obituaries. Inverse propensity score matching was utilized to transform the two cohorts to comparable sets. Survival was compared using Kaplan-Meier curves and Wilcoxon Rank Sum Test.

RESULTS: In this cohort of 365 patients, 89 were enrolled in a clinical trial and 276 were not. Patients enrolled in clinical trials had a significantly higher mean baseline KPS score, higher proportion of surgical resections, and were more likely to receive temozolomide treatment than patients not enrolled in a clinical trial. After inverse propensity score matching, patients enrolled in a clinical trial lived significantly longer than those not enrolled (28.8 vs 22.2 months, $p = 0.005$). A potential confounder of this study is that patients not in a clinical trial had significantly fewer visits with neuro-oncologists than patients enrolled in a clinical trial (7 ± 8 vs 12 ± 9 , $p < 0.0001$).

CONCLUSIONS: Clinical trials enroll patients with the most favorable prognostic features. Even when correcting for this bias, clinical trial enrollment is an independent predictor of increased survival regardless of treatment arm.

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