

Title: Acute Care Utilization in Glioblastoma (GBM): A descriptive analysis of causes, burden and outcomes

Andrea Wasilewski, Jennifer Serventi, Lily Kamalyan, Thomas Wychowski and Nimish Mohile.

Department of Neurology and Wilmot Cancer Center, University of Rochester Medical Center

Objective: To describe causes, frequency and outcomes of acute care visits (ACV) in GBM.

Background: Utilization of inpatient medical services in GBM is not well studied.

Methods: IRB approved retrospective study of 158 GBM patients at the University of Rochester over 5 years. Documents in the EMR were reviewed to identify all local and outside ACV.

Results: 71% (112/158) of GBM patients had 235 ACV corresponding to 163 hospitalizations (69%) and 72 emergency department visits (31%). 63% of patients had multiple visits. 80% (130/163) of visits were to a medical floor and 20% to an ICU. Admission diagnoses were seizure (33%), neurosurgical procedure (15%), infection (12%), focal neurologic symptoms (9%) and VTE (9%). 46 patients had 1 or more visits for seizures. GBM progression was documented in 38% of visits. Median time to first ACV was 65.6 days (Range: 1-972 days) and 22% of patients had an ACV within 30 days of diagnosis. Median length of stay was 5 days (range 1 to 59) per visit and 10 days over a lifetime. 35% of admitted patients were discharged home; 62% required a higher level of care (23% home with services, 17% to a SNF, 16% to hospice, 6% to acute rehab) and 3% died. 38% of patients had ACV encounters within 30 days of death. Median survival for patients with ACV was 14 vs 22.2 months for patients without ACV. 11.3% of patient who had died spent greater than 20% of their lifetime following diagnosis in the hospital. **Conclusion:** Acute care is utilized by the majority of GBM patients, most commonly for seizures. The high number of ED visits, short length of stay and high number of patients being discharged to home suggest that some ACVs are avoidable. Future studies should focus on interventions and improved seizure control to reduce the frequency of ACV and acute care visits near the end of life should be used as a quality metric in care of GBM patients.