

high-grade glioma complications

[Glioblastoma](#) has an unfavorable prognosis mainly due to its high propensity for tumor recurrence. It has been suggested that Glioblastoma recurrence is inevitable after a median survival time of 32 to 36 weeks ^{1) 2)}.

see also [Glioblastoma outcome](#)

In a study of Senders et al. from [Boston](#) and [Utrecht](#), patients were extracted from the [National Surgical Quality Improvement Program](#) registry (2005-2015) and analyzed using [multivariable logistic regression](#).

A total of 7376 [patients](#) were identified, of which 948 (12.9%) experienced a major [complication](#). The most common major complications were [reoperation](#) (5.1%), [venous thromboembolism](#) (3.5%), and [death](#) (2.6%). Furthermore, 15.6% stayed longer than 10 d, and 11.5% were readmitted within 30 d after surgery. The most common reasons for reoperation and [readmission](#) were [intracranial hemorrhage](#) (18.5%) and [wound](#)-related complications (11.9%), respectively. Multivariable analysis identified older [age](#), higher [body mass index](#), higher American Society of Anesthesiologists ([ASA](#)) classification, dependent [functional](#) status, elevated preoperative [white blood cell](#) count (white blood cell count [WBC](#), >12 000 cells/mm³), and longer operative time as predictors of major complication (all $P < .001$). Higher ASA classification, dependent [functional](#) status, elevated [WBC](#), and [ventilator](#) dependence were predictors of extended length of stay (all $P < .001$). Higher ASA classification and elevated WBC were predictors of reoperation (both $P < .001$). Higher ASA classification and dependent functional status were predictors of readmission (both $P < .001$). Older age, higher ASA classification, and dependent functional status were predictors of death (all $P < .001$).

This study provides a descriptive analysis and identifies predictors for short-term complications, including death, after craniotomy for primary malignant brain tumors ³⁾.

[Thromboembolic events](#), seizures, neurologic symptoms and adverse effects from corticosteroids and chemotherapies are frequent clinical complications seen in Glioblastoma (GB) patients. The exact impact these have on dismal patient outcome has not been fully elucidated.

Complications significantly decrease GB patient survival. Age, poor functional status, other than standard adjuvant therapy and eloquent tumor location proved as significant risk factors for encountering a therapy associated complication. Not extensive surgery or tumor size but surgery at eloquent locations impacts complication occurrence the strongest with a 2 fold increased complication occurrence risk ⁴⁾.

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