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# Repeated surgical resections for management of high-grade glioma and its impact on quality of life

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## Abstract

**Purpose:** High-grade gliomas (HGG) are aggressive cancers, and their recurrence is inevitable, despite advances in treatment options. While repeated tumor resection has been shown to increase survival rate, its impact on quality of life is not clearly defined. To address this gap, we compared quality of life (QoL) changes in HGG patients who underwent first-time (FTR) versus repeat surgical resections (RSR) for management of recurrence.

**Methods:** Forty-four adults with HGG who underwent tumor resection were included in this study and classified into either the FTR group (n = 23) or the RSR group (n = 21). All patients completed comprehensive neuropsychological evaluations that included the Functional Assessment of Cancer Therapy-General (FACT-G) and Functional Assessment of Cancer Therapy-Cognitive Function (FACT-Cog) scales, pre-operatively and at two weeks post-operatively.

**Results:** There was no difference between the FTR and RSR groups in any of the QoL indices (all p > .05), except for improved emotional well-being and worsened social well-being, suggesting minimal detrimental effects of repeat surgeries on QoL in comparison to first time surgery.

**Conclusions:** These results suggest that repeated resection is a viable strategy in certain cases for management of HGG recurrence, with similar impact on QoL as observed in patients undergoing first time surgery. These encouraging outcomes provide useful insight to guide treatment strategies and patient and clinician decision making to optimize surgical and functional outcomes.

**Keywords:** Glioma; Neuropsychology; Onco-functional balance; Quality of life; Repeated resection.

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