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1: [Strahlenther Onkol.](#) 2009 Aug;185(8):524-9. Epub 2009 Aug 4.



**Perioperative high-dose-rate brachytherapy in the treatment of recurrent malignant gliomas.**

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**PURPOSE:** To assess the feasibility and effectiveness of perioperative high-dose-rate brachytherapy for recurrent malignant gliomas. **PATIENTS AND METHODS:** Between 2005 and 2008, 21 patients (14 males and seven females) with relapsed malignant glioma underwent a second surgery followed by a brachytherapy implant in the surgical cavity. Median age was 60 years, and median Karnofsky performance status 80. A single fraction of 18 Gy specified at 5 mm depth was administered perioperatively. Then, the applicator was removed nonsurgically. Mean postoperative hospitalization time was 3 days. **RESULTS:** At the time of analysis, 15 patients (71%) had died and six (29%) were alive. Median follow-up was 32.3 months. Median overall survival from diagnosis amounted to 21.7 months. Median survival after recurrence was 8.0 months, and 6-month progression-free survival 42%. Patients were stratified into classes according to the prognostic recursive partitioning analysis. **CONCLUSION:** Perioperative brachytherapy has proven to be safe and well tolerated in patients with recurrent malignant glioma. No severe toxicity was reported, and the treatment has proven to be effective in symptomatic recurrences of malignant gliomas.

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