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# Recurrent brain metastases from lung cancer: the impact of reoperation.

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### Abstract

**OBJECTIVE:** The best treatment for solitary brain metastases from lung cancer is surgical resection followed by adjuvant treatment. However, about 50% of these patients develop recurrent brain metastases. There is no established treatment standard for this patient group. We therefore analyzed the survival, neurological function, and overall performance status of patients with recurrent solitary brain metastases from lung cancer after second microsurgical resection. **MATERIALS AND METHODS:** Treatment outcome was analyzed in 25 patients (19 men, 6 women) with a mean age of 55.8 years (range, 38-78 years) who received a resection of recurrent solitary brain metastases. Eighty-four percent of all patients had non-small-cell lung cancer and 16% small cell lung cancer (SCLC). Eighty percent of the lesions were located supratentorially, 20% infratentorially. **RESULTS:** The median overall survival after initial diagnosis was 26.9 months, 13.6 months after the first and 8.3 months after the second brain surgery, respectively. The median Karnofsky index improved significantly from 80 to 100 after the second brain surgery; 66.6% of all patients presenting with neurological impairment improved, and 50% regained normal function. No surgery-related morbidity or mortality was noted. Multivariate analysis indicated that the interval until first brain metastasis and between first and recurrent metastases was significantly predictive of survival. **CONCLUSIONS:** The majority of patients in our study group showed significant functional benefit from surgical resection of recurrent brain metastases. This contributes to a better quality of life in this patient group showing a short overall survival time.

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