NC-08. PREDICTORS OF SURVIVAL AFTER SECOND SURGERY FOR RECURRENT GIOBLASTOMA MULTIFORME TUMOURS
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BACKGROUND AND PURPOSE: The impact of second surgery and overall predictors of outcome following GBM recurrence remains controversial, with few definitive studies published to date. This study sought to identify major predictors of survival after second surgery.

METHODS: We collected clinical, pathological and radiographic data through a retrospective review of patient charts. All patients underwent elective surgery for GBM recurrence at our institution in the past 6 years. Kaplan Meier, with log-rank test and Breslow test, was applied to determine and compare significance of dichotomized variables on survival time. The Mann Whitney U non-parametric test was used to determine whether the median survival time differed significantly between groups, for the various clinical factors investigated.

RESULTS: Among variables examined, age, less than 50 (P = 0.04) was significant. Patients younger than 50, had a median survival period of 11.8 months, while patients, age 50 or older, survived a median time of 4.2 months. Additionally, our data supports that the palliative effects of second surgery may be complemented by adjuvant therapy as a second round of chemotherapy may prolong survival. Though chemotherapy after reoperation was not found to be statistically significant in extending survival time using the Kaplan-Meier test (P = 0.08), the median survival time was found to be significantly higher in patients that received chemotherapy after reoperation, compared with those who did not, using the Mann Whitney U test (P = 0.03). Patients who underwent chemotherapy after second resection survived a median of 10.6 months. Comparatively, median survival time of patients who did not undergo chemotherapy was 3.9 months.

CONCLUSION: These results confirm that patient age (<50) is an important predictor of increased survival after second surgery. Additionally, our data supports that if second surgery will decrease performance status and prevent the administration of further chemotherapy postoperatively, the benefits of re-resection are limited.