Abstract
The results of a second operation for tumor removal in 24 adult patients with supratentorial glioblastoma multiforme or anaplastic astrocytoma were analyzed. The median survival time after reoperation was 14 weeks. Five of the 24 patients lived 6 months or longer after reoperation. Only three of these patients maintained a Karnofsky rating (KR) of at least 60 for 6 months or longer after reoperation. Preoperative neurological status (KR) is the most significant determinant of survival after reoperation (p = 0.02). When the KR is at least 60, median survival after reoperation is 22 weeks. When the KR prior to reoperation is less than 60, median survival is 9 weeks. Only one of 13 patients with a KR of less than 60 prior to reoperation survived longer than 6 months after the second operation. The interval between first and second operation is significantly related to survival (p = 0.03), but when adjustment is made for the KR the interoperative interval is no longer significantly related to survival after the second operation (p = 0.39). Age, sex, and location of tumor were not significantly related to duration of survival. This study suggests that reoperation is most likely to produce the best result when the KR is at least 60 and the interval between operations is longer than 6 months. Using these criteria, one-third of the patients could be expected to survive with a KR of at least 60 for 6 months. The study indicates that reoperation should not be carried out when the KR is less than 60.