

ABSTRACT

J Neurosurg. 2022 Oct 14:1-7. doi: 10.3171/2022.8.JNS221068. Online ahead of print.

Surgery for glioblastomas in the elderly: an Association des Neuro-oncologues d'Expression Française (ANOCEF) trial.

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OBJECTIVE: The role of surgery in the treatment of malignant gliomas in the elderly is not settled. The authors conducted a randomized trial that compared tumor resection with biopsy only-both followed by standard therapy-in such patients.

METHODS: Patients ≥ 70 years of age with a Karnofsky Performance Scale (KPS) score ≥ 50 and presenting with a radiological suspicion of operable glioblastoma (GBM) were randomly assigned between tumor resection and biopsy groups. Subsequently, they underwent standard radiotherapy during the first years of the trial (2008-2017), with the addition of adjunct therapy with temozolomide when this regimen became standard (2017-2019). The primary endpoint was survival, and secondary endpoints were progression-free survival (PFS), cognitive status (Mini-Mental State Examination), autonomy (KPS), quality of life (European Organisation for Research and Treatment of Cancer [EORTC] QLQ-C30 and QLQ-BN20), and perioperative morbidity and mortality.

RESULTS: Between 2008 and 2019, 107 patients from 9 centers were enrolled in the study; 101 were evaluable for analysis because a GBM was histologically confirmed (50 in the surgery arm and 51 in the biopsy arm). There was no statistically significant difference in median survival between the surgery (9.37 months) and the biopsy (8.96 months, $p = 0.36$) arms (adjusted HR 0.79, 95% CI 0.52-1.21, $p = 0.28$). However, the surgery group had an increased PFS (5.06

vs 4.02 months; $p = 0.034$) (adjusted HR 0.50, 95% CI 0.32-0.78, $p = 0.002$). Less deterioration of quality of life and KPS score evolution than in the biopsy group was observed. Surgery was not associated with increased mortality or morbidity.

CONCLUSIONS: This study suggests that debulking surgery is safe, and-compared to biopsy-is associated with a less severe deterioration of quality of life and autonomy, as well as a significant although modest improvement of PFS in elderly patients suffering from newly diagnosed malignant glioma. Although resection does not provide a significant survival benefit in the elderly, the authors believe that the risk/benefit analysis favors an attempt at optimal tumor resection in this population, provided there is careful preoperative geriatric evaluation. Clinical trial registration no.: NCT02892708 (ClinicalTrials.gov).

DOI: 10.3171/2022.8.JNS221068

PMID: 36242578