

Glioblastoma outcome in elderly patients

The optimal [glioblastoma treatment](#) for [elderly patients](#) is unclear.

[Glioblastoma multiforme](#) (GBM) is commonly diagnosed in patients older than 60 years, but the treatment protocols are mostly based on trials in patients aged up to 70 years. These lead to little consensus and to an absence of protocols regarding the standard treatments.

Over 65 years of age patients present a higher incidence of pathological antecedents and a poorer presurgical functional status. Age, cardiovascular risk, functional status and the type of surgical procedure have significantly increased the occurrence of post-surgical complications ¹⁾.

Less [experienced neurosurgeons](#) achieve similar surgical results and outcomes in elderly GBM patients within the setting of academic [teaching hospitals](#). Adjuvant treatment and avoidance of surgery-related morbidity are crucial for generating a treatment benefit for this cohort ²⁾

Patients with a [KPS](#) score ≤ 50 appear to have increased survival and functional status following tumor resection and radiation. The extent of benefit from concomitant chemotherapy is unclear. Future studies may benefit from reporting that utilizes a prognostic classification system such as the RTOG RPA class, which has been shown to be effective at separating outcomes even in patients with low performance status. Patients with GBMs and low KPS scores need to be evaluated in prospective studies to identify the extent to which different therapies improve outcomes ³⁾.

2017

Alvord et al. performed a retrospective cohort SEER-Medicare analysis of 1652 patients aged ≥ 65 years with glioblastoma who received ≥ 10 fractions of RT from 2005 to 2009, or from 1995 to 1999 before TMZ was available. Three cohorts were assembled based on diagnosis year and treatment initiated within 60 days of diagnosis: (1) 2005-2009 and TMZ/RT, (2) 2005-2009 and RT only, or (3) 1995-1999 and RT only. Associations with OS were estimated using Cox proportional hazards models and propensity score analyses; OS was calculated starting 60 days after diagnosis. Pre-specified sensitivity analyses were performed among patients who received long-course RT (≥ 27 fractions). Median survival estimates were 7.4 (IQR, 3.3-14.7) months for TMZ/RT, 5.9 (IQR, 2.6-12.1) months for RT alone in 2005-2009, and 5.6 (IQR, 2.7-9.6) months for RT alone in 1995-1999. OS at 2 years was 10.1 % for TMZ/RT, 7.1 % for RT in 2005-2009, and 4.7 % for RT in 1995-1999. Adjusted models suggested decreased mortality risk for TMZ/RT compared to RT in 2005-2009 (AHR, 0.86; 95 % CI, 0.76-0.98) and RT in 1995-1999 (AHR, 0.71; 95 % CI, 0.57-0.90). Among patients from 2005 to 2009 who received long-course RT, however, the addition of TMZ did not significantly improve survival (AHR, 0.91; 95 % CI, 0.80-1.04). In summary, among a large cohort of older glioblastoma patients treated in a real-world setting, the addition of TMZ to RT was associated with a small survival gain ⁴⁾.

Pretanvil et al., conducted a retrospective review of the California Cancer Registry to examine

treatment patterns and survival by age.

They identified 2670 adult patients from the California Cancer Registry with glioblastoma, and compared the extent of resection, treatment type and modality.

Elderly patients had the greatest overall survival (OS) with combined surgery, radiation and chemotherapy. However, they were more likely to undergo biopsy and less likely to receive combined radiation and chemotherapy than patients <70.

OS was maximized in elderly patients who were able to get some surgical resection and undergo combined radiation and chemotherapy. OS survival in some elderly patients may be improved by more extensive therapy ⁵⁾.

2016

In a analysis of multimodality therapy for elderly patients with GBM, OS was superior with combined modality treatment (CMT) compared with chemotherapy (CT) alone and RT alone. Survival was similar between CT alone and RT alone, and both CT alone and RT alone were superior to no therapy. This analysis supports the use of CMT for suitable elderly candidates ⁶⁾.

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