

Surgery for Glioblastoma in Elderly Patients



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KEYWORDS

- GBM • Elderly • Resection • Adjuvant treatment • Elderly patients • Radiotherapy • Chemotherapy • Survival

KEY POINTS

- The incidence of glioblastoma increases with age, with highest rate in the population between 75 and 84 years old. Given the increased life expectancy, elderly patients represent up to 25% of patients with glioblastoma.
- Age alone is not a predictor of survival in glioblastoma. General condition and performance status strongly influence and guide therapy.
- In this age group, biological age is more relevant than chronologic age.
- Surgery aimed at the maximal safe resection, when feasible, followed by adjuvant therapy according to O⁶-methylguanine-DNA methyl-transferase methylation might be the first therapeutic option.
- Future clinical trials focusing on glioblastomas in the elderly subjects could provide more specific data for patient's selection.

INTRODUCTION AND BACKGROUND

Glioblastoma (GBM) is the most common primary malignant tumor of the central nervous system, accounting for 48.3% of primary malignant brain tumors and 57.3% of all gliomas. The incidence of GBMs increases with age. The highest rate is recorded in the population between 75 and 84 years old; the disease is 2 times more frequent in this age range than in the population aged between 55 and 64 years.¹

Despite advances in surgery and adjuvant treatments, the prognosis remains poor, with a median overall survival (OS) of fewer than 18 months in the adult population. An analysis conducted on more than 88,000 patients with GBM treated between 2004 and 2013 reports a mild increase in the number of patients surviving 3 years after the initial diagnosis.²

The definition of “elderly” is controversial. The elderly age starts at 65 year old, according to the World Health Organization; as for patients with GBM, the National Comprehensive Cancer Network sets the age to consider a patient into the “elderly category” at 70 years.^{3,4} The real-life evidence shows that subjects up to 70 years may still have an active social and intellectual life. Especially in high-income countries, a longer life expectancy is recorded than in the past and or in comparison with low- and middle-income countries. In this age range, the physiologic age is becoming more relevant than the date of birth to shape the indication and intention to treat. Age is a negative prognostic factor, and every year of increase in age is associated with a statistically significant decrease in survival in patients with GBM.^{4–6}

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