TITLE: Effect of Patient Age on Glioblastoma Treatment Costs: A Value Driven Outcome Database Analysis

SPEAKER: BRANDON SHERROD
CITY/STATE: SALT LAKE CITY, UT

AUTHORS: Brandon A Sherrod; Nicholas T Gamboa; Christopher Wilkerson; Michael Karsy; Randy L Jensen; Sarah T. Mcnacho

ABSTRACT:
Objective: To evaluate treatment cost differences between elderly and nonelderly patients with glioblastoma (GBM) using the Value Driven Outcome (VDO) database.

Methods: Retrospective cohort of GBM patients treated in our institution from August 2011 to February 2018. Data were compiled using medical records and the VDO database.

Results: A total of 181 patients with GBM met our inclusion criteria and were included in the analysis. Patients were grouped into age < 70 years at time of surgery (nonelderly; n = 121) and ≥ 70 years (elderly; n = 60). Costs were approximately 38% higher in the elderly group on average (mean 0.68% of total cohort cost vs. 0.49%, p=0.044). Increased age significantly correlated with increased treatment cost on linear regression analysis (p=0.007), however the correlation was weak (R2 = 0.04). Length of stay was associated with increased cost on linear regression (p<0.001, R2 = 0.84) and was significantly longer in the elderly group (8.7 ± 11.3 vs. 5.2 ± 4.3 days, p=0.025). The cost breakdown by facility, pharmacy, supply/implants, imaging, and laboratory costs was not significantly different between age groups. Elderly patients with any postoperative complication had 2.1 times the total costs of elderly patients without complication (p=0.094), 2.9 times the total costs of nonelderly patients with complication (p=0.013), and 2.3 times the total costs of nonelderly patients without complication (p=0.022).

Conclusions: GBM treatment costs are increased in older patients, particularly elderly patients who experience postoperative complications.