

# Glioblastoma in the 21st century: Wealthier patients living longer than poorer patients

June 2 2011

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Survival rates of wealthier patients and those younger than 70 with glioblastoma, the most common and aggressive malignant brain tumor, have improved since 2000, whereas rates for those living in poorer areas and older than 70 have remained stagnant, according to an abstract being presented at the American Society of Clinical Oncology annual meeting in Chicago by Thomas Jefferson University Hospital researchers on Saturday, June 4.

The addition of concurrent and adjuvant temozolomide, a chemotherapy drug also referred to as TMZ, to post-operative [radiation therapy](#) has been shown to improve overall survival in [randomized trials](#) for patients younger than 70, but it was unknown if this benefit translated down to the population-based level.

To answer this, researchers performed a population-based survival analysis of newly diagnosed glioblastoma patients (from 2000 to 2007) covering the period before and after the introduction of temozolomide. They further analyzed the impact of mean regional income on any improvements in overall survival during this time period.

Survival statistics and pertinent clinical and demographic variables were extracted from the Survival, Epidemiology and End Results (SEER) Database for patients diagnosed. Patients were divided into income quartiles based on mean household income in their county of residence.

From 2001 to 2007, the median survival time increased from 7 to 9

months for the entire population. One-year survival rate increased from 29 percent to 39 percent.

Outcomes in patients older than 70 years did not improve over this period, even amongst patients who had gross total resection and radiation therapy. Over the study period, the absolute disparity in one-year survival between economically poor-and-affluent areas increased from 6.6 percent to 10.1 percent.

"The management of patients with glioblastoma continues to be a challenge for treating oncologists," said Mark Mishra, M.D., of the department of [radiation oncology](#) at Thomas Jefferson University Hospital. "The results of this large, population-based analysis indicate that recent advances in the treatment of glioblastoma patients have resulted in a small, but significant improvement in overall survival over the past decade.

"However, these improvements have also been accompanied with a widening of the health disparities gap for these patients."

Future efforts should be made to identify and mitigate factors contributing to the widening economic disparities gap, according to the researchers.

There are approximately 17,000 primary brain tumors diagnosed in the United States each year, 60 percent of which are gliomas. The most common and malignant glioma is glioblastoma, the type of brain cancer Senator Ted Kennedy was diagnosed with and died from.

**More information:** [ABSTRACT #6089](#)

Provided by Thomas Jefferson University

Citation: Glioblastoma in the 21st century: Wealthier patients living longer than poorer patients (2011, June 2) retrieved 11 May 2024 from

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