

Abstracts

P17.43. SOCIOECONOMIC STATUS PREDICTS SURVIVAL IN PATIENTS WITH NEWLY DIAGNOSED GLIOBLASTOMA

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BACKGROUND: Socioeconomic status (SES) is associated with access to health care in the United States. Patients with glioblastoma (GBM) require intensive therapy from time of diagnosis to the end of life, and reduced access to health care could negatively impact survival. To evaluate whether SES is associated with overall survival in patients with GBM, we analyzed population-based cancer registry data. **METHODS:** The Surveillance, Epidemiology, and End Results (SEER) program tracks cancer incidence and survival in the United States. SEER data is collected within 18 geographically defined areas representing approximately 28% of the United States population. We obtained a custom SEER data set containing information on GBM diagnosed

in the 2000-2010 period, excluding prior diagnoses of lower grade glioma, as well as information on census-tract level SES divided into quintiles based on the Yost index, which includes measures of occupation, unemployment, poverty, income, education and house values. JMP 9.0.1 software was utilized to evaluate GBM survival via Kaplan-Meier analyses as well as univariable and multivariable Cox proportional hazards regression models. **RESULTS:** A total of 26,481 patients with glioblastoma on whom SES data was available were included in the analysis group. In order from lowest to highest SES quintile, median survival was 5 months, 6 months, 6 months, 7 months, and 9 months ($p < 0.0001$). The association between SES and survival was not driven solely by poor outcomes in the lowest SES group; the difference in survival between the middle and highest quintiles was also statistically significant ($p < 0.0001$). SES remained highly associated with survival in a multivariable model also including patient age, sex, race/ethnicity, radiation therapy usage (yes vs no), and surgery type (gross total resection vs other surgery vs no surgery). **CONCLUSION:** There is a strong association between higher SES and increased survival after diagnosis of GBM in the United States. This effect may be due to later presentation with disease, less aggressive treatment after presentation, or a combination of these factors. It will be important to re-assess this association in the future, to gauge the impact of upcoming changes to the United States healthcare payment system.