Mortality Trends of Glioma in Disaggregated Asian-American (AA) subgroups (SEER 2005-2020)

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Introduction

- Gliomas are the most common primary tumor in the brain
- Grade IV glioma (Glioblastoma) has a devastating 5-year survival rate around 5%
- There is a lack of glioma prevalence and mortality data among AA subgroups
- We conducted a retrospective cohort study to investigate the trends of brain cancer mortality in disaggregated AA subgroups

Methods

All SEER 2005-2020 registrations: n = 4,350,899

Glioma*: n = 59,279

Adult patients: n = 52,154

Biopsy confirmed: n = 46,384

Race data available: n = 46,236

First cancer: n = 45,957

Brain Site**: n = 44,483

Survival < 1 month since entry to dataset: n = 38,838

Distribution of Glioma Grade in Asian subgroups shown in the figure above

- The distribution of high grade glioma varies significantly amongst different Asian subgroups.
- Other Asian had a significantly lower portion of high grade glioma.

In our multivariate logistic regression model

- Being South Asian (p = 0.02) and Southeast Asian (p = 0.033) are significantly associated with higher glioma grading compared to NHW.
- The survival probability of individuals with glioma of different Asian subgroups varied significantly over time, after adjusting for age and sex.
- Cumulative incidence of being "Alive" or "Dead due to Cancer" significantly varies across the different racial groups.

Conclusions

- Asians are often treated as one racial group in cancer epidemiology studies
- However, there are significant differences in diagnosis and prognosis amongst AA subgroups

Reference

*ICD 10 codes 9380-9489
**Brain Site ICD site hist WHO 2008 Standard