

ABSTRACT NO:23
RESEARCH ARTICLE**Contribution of Unspecified Brain Malignancies to Overall Brain Cancer Mortality Trends in the United States: A 26 years CDC WONDER Analysis**Aqsa Memon¹, FNU Venjhraj², Rajesh Kumar³, Meva Ram⁴, Aizah Khadim⁵, Ravi Das⁶**Abstract**

Objective: Brain cancer mortality trends in the United States may be affected by deaths recorded as unspecified brain malignancies, affecting epidemiological interpretation. We aimed to evaluate the impact of unspecified brain malignancies on overall brain cancer mortality trends patterns over time.

Methods: Mortality data were extracted in June 2026 from the CDC WONDER as multiple causes of deaths with ICD-10 codes (C71.9 and C71), respectively, from 1999 to 2024. The age-adjusted mortality rate (AAMR) per 100,000 persons, by sex, race, census, 2013 urbanization, state, and place of death, as well as the (CMR) by age, were reported and analyzed using Joinpoint regression software to evaluate (APC) and (AAPC) and corresponding 95 % confidence intervals (CIs).

Results: From 1999 to 2024, 359,859 deaths occurred among patients with unspecified brain malignancies and overall brain cancer. The overall AAMR declined from 6.53 per 100,000 in 1999 to 5.69 per 100,000 in 2024. The largest decline was observed between 2015 to 2024, corresponding to APC of -1.1657 (95% CI: -1.42 to -0.91; $p < 0.000001$). The AAPC throughout the period was -0.516 (95% CI: -0.34 to -0.64; $p < 0.000001$). Men (7.55) had higher average AAMRs than women (4.95), adult aged >75+ years had a higher burden (CMR:19.41), Non-Hispanic whites had highest mortality (7.02) while, Non-Hispanic Asian or Pacific islander had the lowest mortality (2.81). Midwest had the greatest mortality (6.45) and the Northeast had the lowest (5.87). Non-metropolitan areas showed average higher AAMR then the Metropolitan areas (6.60 vs 6.13). South Dakota was highest mortality state during 2019-2020, while Vermont was highest mortality state during 2021 to 2024.

Conclusion: Analysis reported higher burden of brain malignancy among the males, older ages, and Non-Hispanic white populations, Midwest, Non metropolitan areas highlighting diagnostic precision and targetted intervention.

Keywords: Brain tumour, Malignancy, Cancer

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