Neurosurg Focus. 2006 Apr 15;20(4):E1.

Trends in brain cancer incidence and survival in the United States: Surveillance, Epidemiology, and End Results Program, 1973 to 2001.

Deorah S, Lynch CF, Sibenaller ZA, Ryken TC.

Department of Epidemiology, College of Public Health, University of Iowa Hospitals and Clinics, Iowa City, Iowa, USA.

Abstract

OBJECT: An increasing incidence of brain cancer has been reported for the last three decades. In this study of brain cancer incidence and patient survival in the US, the authors attempt to update information on trends by examining data provided by the Surveillance, Epidemiology, and End Results (SEER) Program.

METHODS: Population-based data from the SEER Program were used to calculate the incidence of and survival rates for people with brain cancer. The approximate Poisson method was used to calculate relative risks for brain cancer and to determine a 95% confidence interval. Annual age-standardized incidence rates were calculated, and time-trend analysis was conducted using joinpoint regression analysis. The relative risks of brain cancer were 1.48 for men compared with women, 3.18 for elderly persons compared with young adults, 1.86 for Caucasian patients compared with African-American patients, and 1.35 for those in metropolitan counties compared with those in nonmetropolitan counties. The incidence of brain cancer increased until 1987, when the annual percentage of change reversed direction, decreasing from 1.68 to 20.44%. The elderly experienced an increase until 1985, but their rates were stable thereafter. Rising trends were noticed for glioblastoma multiforme (GBM), oligodendroglioma, anaplastic astrocytoma, medulloblastoma, and mixed glioma, and falling trends were observed for astrocytoma not otherwise specified and malignant glioma. The survival rate for patients with GBM has not shown improvement in the last two decades.

CONCLUSIONS: Increased risk of brain cancer is associated with being male, Caucasian, elderly, and residing in a metropolitan county. The incidence rate of brain cancer in the US is gradually declining, but the rising trend of GBM combined with its poor survival rate is disconcerting and needs further exploration.

PMID: 16709014 [PubMed - indexed for MEDLINE]