



# Brain and Other Central Nervous System (CNS) Cancer

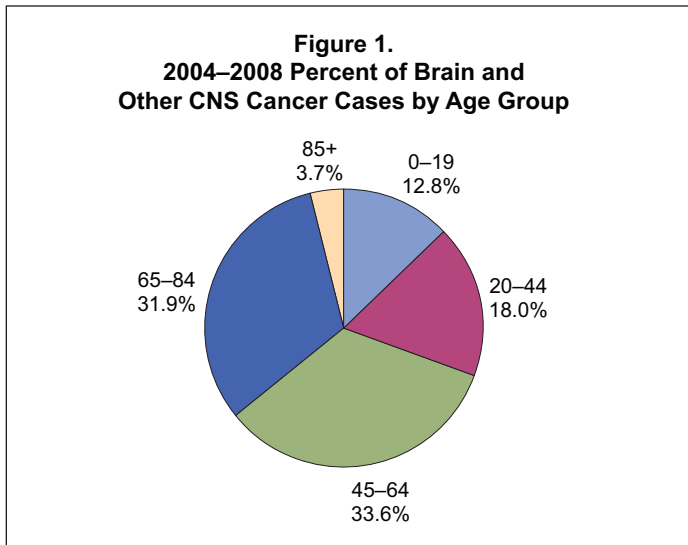
A Fact Sheet from the North Carolina Central Cancer Registry, State Center for Health Statistics

June 2011

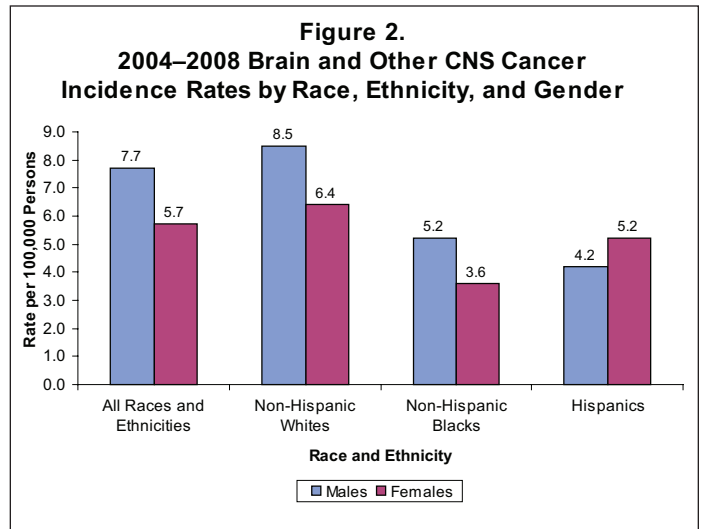
Cancer of the brain and other central nervous system (CNS) excluding benign cases, was the 15th most frequently occurring and the 11th leading cause of cancer death in North Carolina from 2004 to 2008. It is anticipated that 670 people (367 males and 303 females) in North Carolina will be diagnosed with and 413 people (230 males and 183 females) will die of cancer of the brain and other CNS in 2011.

## Incidence

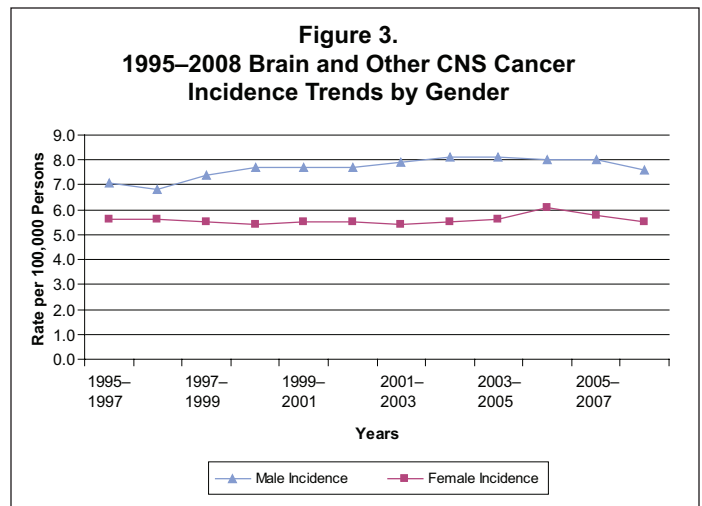
The percentage of cases of brain and other CNS cancer from 2004 to 2008 is displayed by age group in Figure 1. More than 12 percent of brain and other CNS cancer was diagnosed in people ages 0 to 19. In fact, more than 10 percent was diagnosed in children ages 0 to 14.



Between 2004 and 2008, the age-adjusted incidence rate for brain and other CNS cancer in North Carolina was 6.6 per 100,000 persons per year (Figure 2). In all non-Hispanic races, men are more likely to be diagnosed with brain and other CNS cancer than women.

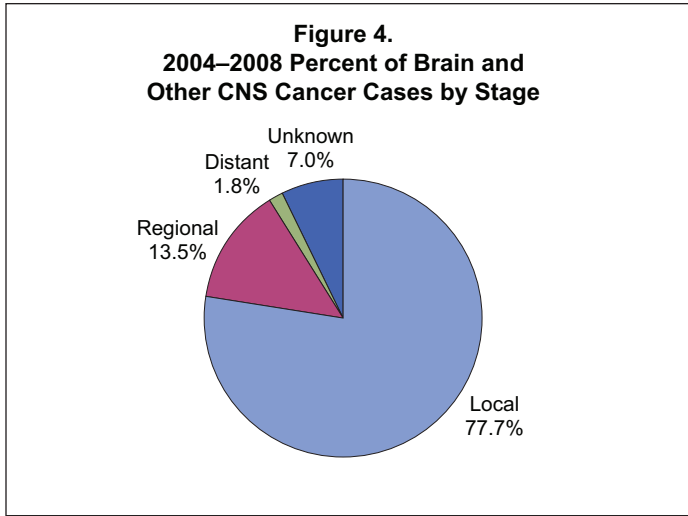


From 1995 to 2008, brain and other CNS cancer incidence rates have remained fairly stable for both men and women (Figure 3).

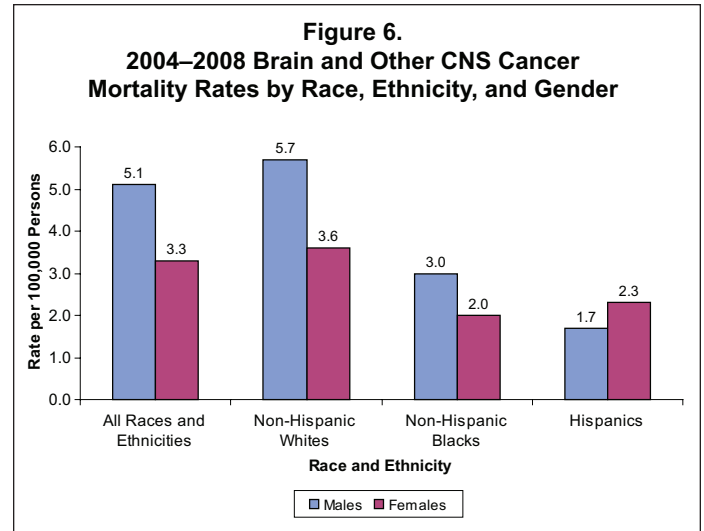


## Stage at Diagnosis\*

Figure 4 shows the stage distribution of brain and other CNS cancer cases diagnosed between 2004 and 2008. More than 75 percent of brain and other CNS cancer cases were diagnosed at the localized stage.

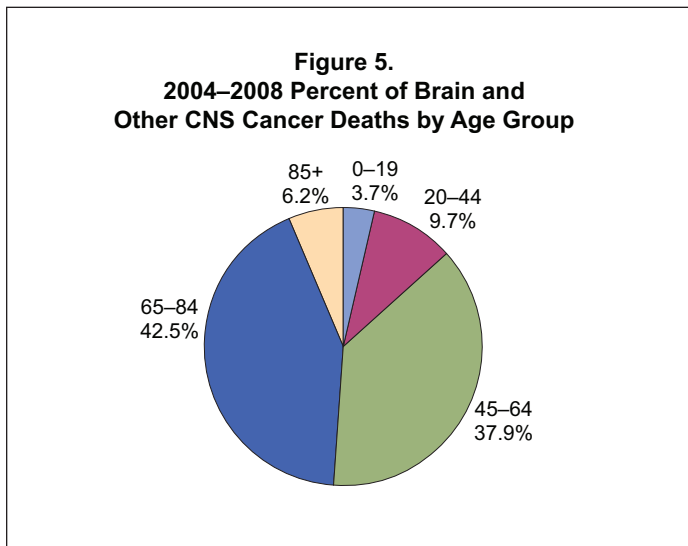


The age-adjusted mortality rate of brain and other CNS cancer from 2004 to 2008 was 4.1 per 100,000 persons per year (Figure 6). In all non-Hispanic races, men are more likely to die from brain and other CNS cancer than women.

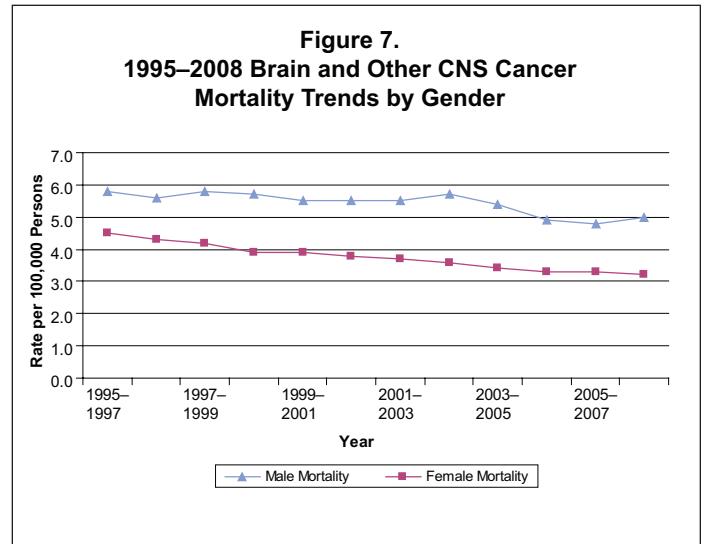


## Mortality

People ages 65 to 84 had the highest percentage of deaths compared with other age groups. Figure 5 shows the percentage of deaths that occurred between 2004 and 2008 displayed by age group.



From 1995 to 2008, brain and other CNS cancer mortality rates generally have decreased for both men and women (Figure 7).



## Data Sources and Methods

Data on North Carolina cases were obtained from the North Carolina Central Cancer Registry (CCR). Hospitals are the primary source of data. The CCR supplements hospital data with reports from physicians who diagnose cases in a non-hospital setting. The CCR also collects data from pathology laboratories and freestanding treatment centers. Data on cancer deaths were obtained from Statistical Services in the State Center for Health Statistics. Population data from the National Center for Health Statistics were used in the denominators of the rates, which are expressed per 100,000 persons. Rates were age-adjusted using the 2000 United States Census data. To examine trends, three-year overlapping rates were used to improve stability over time. Stage at diagnosis was defined according to Surveillance Epidemiology and End Results Summary Stage guidelines as *in situ*, localized, regional, distant, and unknown/NA. For further information about the NC CCR, please visit [www.schs.state.nc.us/SCHS/CCR](http://www.schs.state.nc.us/SCHS/CCR).

\* According to the National Cancer Institute (NCI), “many cancer registries, such as NCI’s Surveillance, Epidemiology, and End Results Program (SEER), use summary staging. This system is used for all types of cancer. It groups cancer cases into five main categories: **In situ**—Abnormal cells are present only in the layer of cells in which they developed. **Localized**—Cancer is limited to the organ in which it began, without evidence of spread. **Regional**—Cancer has spread beyond the primary site to nearby lymph nodes or organs and tissues. **Distant**—Cancer has spread from the primary site to distant organs or distant lymph nodes. **Unknown**—There is not enough information to determine the stage.” Additional information on staging can be found at [www.cancer.gov/cancertopics/factsheet/detection/staging](http://www.cancer.gov/cancertopics/factsheet/detection/staging).