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SEER Stat Fact Sheets: Brain and Other Nervous System

Cancer: Brain and Other Nervous System Go

Mortality data for the current data year is not yet available (view details). Updated lifetime risk and cancer estimate statistics for the current data year (if applicable) will not be available until the mortality data is released.

It is estimated that 22,020 men and women (11,980 men and 10,040 women) will be diagnosed with and 13,140 men and women will die of cancer of the brain and other nervous system in 2010[1].

The following information is based on NCI's SEER Cancer Statistics Review[2].Use the links on this page to learn more about each statistic type:

Incidence & Mortality

SEER Incidence

From 2004-2008, the median age at diagnosis for cancer of the brain and other nervous system was 56 years of age[3]. Approximately 12.9% were diagnosed under age 20; 8.9% between 20 and 34; 9.6% between 35 and 44; 15.2% between 45 and 54; 18.6% between 55 and 64; 16.3% between 65 and 74; 13.9% between 75 and 84; and 4.5% 85+ years of age.

The age-adjusted incidence rate was 6.5 per 100,000 men and women per year. These rates are based on cases diagnosed in 2004-2008 from 17 SEER geographic areas.

Incidence Rates by Race

Race/Ethnicity	Male	Female
All Races	7.7 per 100,000 men	5.4 per 100,000 women
White	8.4 per 100,000 men	5.9 per 100,000 women
Black	4.6 per 100,000 men	3.5 per 100,000 women
Asian/Pacific Islander	4.0 per 100,000 men	3.2 per 100,000 women
American Indian/Alaska Native [a]	3.8 per 100,000 men	3.6 per 100,000 women
Hispanic [b]	5.7 per 100,000 men	4.3 per 100,000 women

US Mortality

Mortality data for the current data year is not yet available.

From 2003-2007, the median age at death for cancer of the brain and other nervous system was 64 years of age[4]. Approximately 4.2% died under age 20; 3.8% between 20 and 34; 7.1% between 35 and 44; 14.9% between 45 and 54; 21.8% between 55 and 64; 22.2% between 65 and 74; 19.6% between 75 and 84; and 6.3% 85+ years of age.

The age-adjusted death rate was 4.3 per 100,000 men and women per year. These rates are based on patients who died in 2003-2007 in the US.

Death Rates by Race

Race/Ethnicity	Male	Female

All Races	5.2 per 100,000 men	3.5 per 100,000 women
White	5.6 per 100,000 men	3.8 per 100,000 women
Black	3.1 per 100,000 men	2.0 per 100,000 women
Asian/Pacific Islander	2.3 per 100,000 men	1.6 per 100,000 women
American Indian/Alaska Native [a]	2.7 per 100,000 men	1.6 per 100,000 women
Hispanic [b]	3.2 per 100,000 men	2.4 per 100,000 women

Trends in Rates

Trends in rates can be described in many ways. Information for trends over a fixed period of time, for example 1996-2008, can be evaluated by the annual percentage change (APC) (See Fast Stats for trends over fixed time intervals) . If there is a negative sign before the number, the trend is a decrease; otherwise it is an increase. If there is an asterisk after the APC then the trend was significant, that is, one believes that it is beyond chance, i.e. 95% sure, that the increase or decrease is real over the period 1996-2008. If the trend is not significant, the trend is usually reported as stable or level. Joinpoint analyses can be used over a long period of time to evaluate when changes in the trend have occurred along with the APC which shows how much the trend has changed between each of the joinpoints.

The joinpoint trend in SEER cancer incidence with associated APC(%) for cancer of the brain and other nervous system between 1975-2008, All Races

Male and Female		Male		Female	
Trend	Period	Trend	Period	Trend	Period
1.5*	1975-1987	1.2*	1975-1989	1.6*	1975-1987
-0.3*	1987-2008	-0.5*	1989-2008	-0.2	1987-2008

Mortality data for the current data year is not yet available.

The joinpoint trend in US cancer mortality with associated APC(%) for cancer of the brain and other nervous system between 1975-2007, All Races

Male and Female		Male		Female	
Trend	Period	Trend	Period	Trend	Period
3.7	1975-1977	4.4	1975-1977	1.0*	1975-1992
-0.7	1977-1981	-0.4	1977-1982	-1.1*	1992-2007
1.3*	1981-1991	1.3*	1982-1991		
-1.0*	1991-2007	-1.0*	1991-2007		

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Survival & Stage

Survival can be calculated by different methods for different purposes. The survival statistics presented here are based on relative survival, which measures the survival of the cancer patients in comparison to the general population to estimate the effect of cancer. The overall 5-year relative survival for 2001-2007 from 17 SEER geographic areas was 33.4%. Five-year relative survival by race and sex was: 31.2% for white men; 34.2% for white women; 33.8% for black men; 42.4% for black women.

Stage Distribution and 5-year Relative Survival by Stage at Diagnosis for 2001-2007, All Races, Both Sexes

Stage at Diagnosis	Stage Distribution (%)	5-year Relative Survival (%)
Localized (confined to primary site)	74	36.2
Regional (spread to regional lymphnodes)	16	21.3
Distant (cancer has metastasized)	2	36.8
Unknown (unstaged)	7	30.4

The stage distribution is based on Summary Stage 2000. (See Fast Stats for more detailed statistics)

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Lifetime Risk

Updated lifetime risk statistics for the current data year will not be available until the mortality data is released.

Based on rates from 2005-2007, 0.61% of men and women born today will be diagnosed with cancer of the brain and other nervous system at some time during their lifetime. This number can also be expressed as 1 in 165 men and women will be diagnosed with cancer of the brain and other nervous system during their lifetime. These statistics are called the lifetime risk of developing cancer. Sometimes it is more useful to look at the probability of developing cancer of the brain and other nervous system between two age groups. For example, 0.26% of men will develop cancer of the brain and other nervous system between their 50th and 70th birthdays compared to 0.18% for women. (See Fast Stats for more detailed statistics, and Probability of Developing and Dying of Cancer for methodology)

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Prevalence

On January 1, 2008, in the United States there were approximately 128,193 men and women alive who had a history of cancer of the brain and other nervous system -- 67,624 men and 60,569 women. This includes any person alive on January 1, 2008 who had been diagnosed with cancer of the brain and other nervous system at any point prior to January 1, 2008 and includes persons with active disease and those who are cured of their disease. Prevalence can also be expressed as a percentage and it can also be calculated for a specific amount of time prior to January 1, 2008 such as diagnosed within 5 years of January 1, 2008. (See Fast Stats for more detailed statistics, and Overview of Prevalence Statistics for methodology)

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References

All statistics in this report are based on SEER incidence and NCHS mortality statistics. Most can be found within:

Howlader N, Noone AM, Krapcho M, Neyman N, Aminou R, Waldron W, Altekruse SF, Kosary CL, Ruhl J, Tatalovich Z, Cho H, Mariotto A, Eisner MP, Lewis DR, Chen HS, Feuer EJ, Cronin KA, Edwards BK (eds). *SEER Cancer Statistics Review, 1975-2008*, National Cancer Institute. Bethesda, MD, http://seer.cancer.gov/csr/1975_2008/, based on November 2010 SEER data submission, posted to the SEER web site, 2011.

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