

Table III-1
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

TRENDS IN SEER INCIDENCE^a AND U.S. MORTALITY^b USING THE JOINPOINT REGRESSION PROGRAM, 1975-2002
WITH UP TO THREE JOINPOINTS BY RACE AND SEX

		Joinpoint Segment 1		Joinpoint Segment 2		Joinpoint Segment 3		Joinpoint Segment 4	
		Year	APC	Year	APC	Year	APC	Year	APC
<u>SEER Cancer Incidence^a</u>									
All Races	Male and Female	1975-1988	1.4 ^c	1988-2002	-0.5 ^c				
All Races	Male	1975-1989	1.2 ^c	1989-2002	-0.5				
All Races	Female	1975-1987	1.7 ^c	1987-2002	-0.5 ^c				
White	Male and Female	1975-1988	1.5 ^c	1988-2002	-0.3				
White	Male	1975-1991	1.2 ^c	1991-2002	-0.5				
White	Female	1975-1987	1.8 ^c	1987-2002	-0.3				
Black	Male and Female	1975-2002	0.1						
Black	Male	1975-2002	0.1						
Black	Female	1975-2002	0.2						
<u>SEER Delay-Adjusted Incidence^a</u>									
All Races	Male and Female	1975-1987	1.5 ^c	1987-2002	-0.2				
All Races	Male	1975-1989	1.2 ^c	1989-2002	-0.3				
All Races	Female	1975-1987	1.7 ^c	1987-2002	-0.3				
White	Male and Female	1975-1987	1.6 ^c	1987-2002	0.0				
White	Male	1975-1989	1.3 ^c	1989-2002	-0.1				
White	Female	1975-1987	1.8 ^c	1987-2002	-0.1				
Black	Male and Female	1975-2002	0.2						
Black	Male	1975-2002	0.2						
Black	Female	1975-2002	0.3						
<u>U.S. Cancer Mortality^b</u>									
All Races	Male and Female	1975-1977	4.0 ^c	1977-1980	-1.2	1980-1991	1.2 ^c	1991-2002	-0.9 ^c
All Races	Male	1975-1977	4.4	1977-1982	-0.4	1982-1990	1.5 ^c	1990-2002	-0.7 ^c
All Races	Female	1975-1992	0.9 ^c	1992-2002	-1.0 ^c				
White	Male and Female	1975-1992	0.9 ^c	1992-2002	-0.8 ^c				
White	Male	1975-1977	5.0 ^c	1977-1981	-0.7	1981-1991	1.3 ^c	1991-2002	-0.7 ^c
White	Female	1975-1992	1.0 ^c	1992-2002	-0.9 ^c				
Black	Male and Female	1975-1984	-0.2	1984-1987	4.5	1987-2002	-0.6 ^c		
Black	Male	1975-1990	0.7 ^c	1990-2002	-0.8 ^c				
Black	Female	1975-1977	10.9	1977-1984	-1.3	1984-1987	6.2	1987-2002	-0.4

Joinpoint Regression Program Version 3.0, April 2005, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Trends are from the SEER 9 areas.

^b Trends are from the NCHS public use data file for the total US.

^c The APC is significantly different from zero (p<.05).

Table III-2
 BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

SEER INCIDENCE RATES, AGE-ADJUSTED AND AGE-SPECIFIC RATES^a, BY RACE AND SEX

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>AGE-ADJUSTED RATES</u>									
YEAR OF DIAGNOSIS:									
1975	5.9	6.8	5.0	6.2	7.3	5.3	4.1	4.3	3.9
1976	5.8	7.1	4.7	6.2	7.5	5.0	3.3	5.3	-
1977	6.2	7.8	4.9	6.6	8.3	5.3	3.5	5.2	-
1978	5.8	6.8	4.9	6.1	7.2	5.2	3.9	4.3	3.5
1979	6.1	7.4	5.0	6.6	8.0	5.4	3.7	4.2	3.2
1980	6.3	7.6	5.2	6.8	8.2	5.6	3.1	3.3	2.9
1981	6.5	8.1	5.2	6.9	8.5	5.6	5.0	7.2	3.2
1982	6.4	7.9	5.2	6.9	8.6	5.6	3.7	4.4	3.1
1983	6.3	7.6	5.2	6.9	8.2	5.8	2.7	3.8	-
1984	6.1	7.2	5.2	6.5	7.6	5.5	4.5	5.3	3.9
1985	6.9	8.5	5.6	7.4	9.1	6.0	4.9	5.6	4.2
1986	6.8	8.1	5.8	7.3	8.6	6.3	4.1	4.7	3.5
1987	7.0	8.1	6.0	7.6	8.7	6.7	4.2	5.5	3.1
1988	6.8	7.9	5.9	7.4	8.5	6.4	4.4	4.5	4.3
1989	6.9	8.5	5.4	7.4	9.2	5.9	4.9	6.0	4.0
1990	7.0	8.1	6.2	7.6	8.7	6.6	4.3	5.2	3.6
1991	7.0	8.6	5.6	7.6	9.3	6.2	3.6	4.5	3.0
1992	7.0	8.6	5.6	7.6	9.4	6.2	3.6	4.0	3.3
1993	6.8	8.1	5.7	7.4	8.9	6.2	4.0	4.1	3.8
1994	6.6	7.9	5.4	7.1	8.5	5.9	4.3	4.5	4.1
1995	6.5	7.9	5.3	7.0	8.5	5.8	3.9	5.0	3.2
1996	6.6	8.2	5.3	7.2	8.9	5.7	3.9	5.1	3.2
1997	6.7	8.0	5.6	7.4	8.8	6.1	3.9	5.1	3.1
1998	6.6	7.7	5.6	7.2	8.4	6.2	4.0	4.3	3.8
1999	6.9	8.3	5.6	7.6	9.2	6.3	3.7	5.2	2.6
2000	6.7	8.1	5.5	7.4	9.0	6.1	4.2	5.3	3.4
2001	6.5	7.8	5.4	7.1	8.5	6.0	4.0	5.4	3.1
2002	6.5	7.7	5.4	7.2	8.6	6.0	4.0	4.8	3.5
<u>AGE-ADJUSTED RATES, 1998-2002</u>									
AGE AT DIAGNOSIS:									
All ages	6.6	7.9	5.5	7.3	8.7	6.1	4.0	5.0	3.2
Under 65	4.7	5.4	4.0	5.2	6.0	4.5	2.9	3.5	2.4
65 and over	19.8	25.5	15.7	21.7	27.7	17.3	11.4	15.5	8.8
All ages(IARC world std) ^b	5.5	6.4	4.6	6.0	7.1	5.1	3.3	4.0	2.8
<u>AGE-SPECIFIC RATES, 1998-2002</u>									
AGE AT DIAGNOSIS:									
<1	3.4	2.7	4.0	3.6	-	4.1	-	-	-
1-4	4.2	4.1	4.3	4.6	4.5	4.7	3.5	-	-
5-9	3.4	3.8	2.9	3.7	4.1	3.2	2.6	3.3	-
10-14	3.0	3.1	2.9	3.3	3.6	2.9	2.0	-	-
15-19	1.9	2.4	1.4	2.1	2.5	1.6	-	-	-
20-24	2.2	2.5	1.9	2.6	3.0	2.2	-	-	-
25-29	3.0	2.9	3.0	3.3	3.4	3.3	-	-	-
30-34	3.4	3.9	2.8	3.9	4.4	3.3	2.3	-	-
35-39	4.1	4.6	3.6	4.7	5.0	4.3	2.1	-	-
40-44	4.7	5.3	4.2	5.3	5.9	4.7	2.5	-	-
45-49	5.8	6.9	4.8	6.5	7.5	5.5	3.6	5.5	-
50-54	7.7	9.3	6.2	8.6	10.2	7.0	4.5	-	-
55-59	10.5	12.1	9.1	11.4	13.2	9.7	8.0	-	-
60-64	13.5	17.5	9.8	15.2	19.7	11.0	5.8	-	-
65-69	16.9	22.3	12.3	18.9	24.8	13.6	9.4	-	-
70-74	21.2	26.3	17.1	23.4	28.4	19.3	12.2	-	-
75-79	22.9	27.9	19.4	25.3	30.4	21.7	-	-	-
80-84	22.0	30.5	16.8	23.3	32.3	17.8	-	-	-
85+	15.3	20.9	12.8	16.1	22.9	13.3	-	-	-

^a SEER 9 areas. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

^b SEER 9 areas. Rates are per 100,000 and are age-adjusted to the IARC world standard population.

- Statistic not shown. Rate based on less than 25 cases for the time interval.

Table III-3
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

U.S. DEATH RATES, AGE-ADJUSTED AND AGE-SPECIFIC RATES^a, BY RACE AND SEX

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>AGE-ADJUSTED RATES</u>									
YEAR OF DEATH:									
1975	4.1	5.0	3.4	4.3	5.2	3.6	2.4	3.2	1.8
1976	4.3	5.3	3.6	4.5	5.5	3.7	2.7	3.5	2.0
1977	4.4	5.4	3.6	4.6	5.7	3.8	2.5	3.0	2.2
1978	4.5	5.5	3.7	4.8	5.8	3.9	2.7	3.4	2.2
1979	4.3	5.2	3.5	4.5	5.5	3.6	2.6	3.3	2.1
1980	4.4	5.4	3.5	4.6	5.8	3.7	2.5	3.0	2.0
1981	4.4	5.3	3.6	4.6	5.6	3.8	2.6	3.3	2.0
1982	4.4	5.4	3.7	4.7	5.7	3.9	2.6	3.4	2.1
1983	4.4	5.3	3.6	4.7	5.6	3.9	2.5	2.9	2.2
1984	4.6	5.6	3.7	4.8	5.9	4.0	2.6	3.3	1.9
1985	4.6	5.6	3.7	4.8	5.9	4.0	2.5	3.2	2.0
1986	4.5	5.6	3.7	4.8	5.9	3.9	2.8	3.5	2.3
1987	4.7	5.7	3.9	5.0	6.0	4.2	2.9	3.6	2.4
1988	4.7	5.9	3.8	5.0	6.2	4.0	2.9	3.6	2.4
1989	4.7	5.8	3.9	5.0	6.2	4.1	2.7	3.5	2.2
1990	4.9	6.0	4.0	5.2	6.3	4.2	3.0	3.7	2.4
1991	4.9	6.0	4.1	5.3	6.4	4.4	2.8	3.4	2.4
1992	4.9	5.9	4.0	5.2	6.3	4.3	2.8	3.4	2.4
1993	4.8	5.9	3.9	5.1	6.2	4.2	2.8	3.6	2.3
1994	4.8	5.9	4.0	5.2	6.3	4.3	2.7	3.2	2.3
1995	4.7	5.7	3.9	5.0	6.0	4.1	2.8	3.4	2.3
1996	4.7	5.7	3.9	5.1	6.1	4.2	2.6	3.2	2.2
1997	4.7	5.7	3.9	5.0	6.0	4.1	2.9	3.3	2.6
1998	4.7	5.7	3.8	5.0	6.1	4.1	2.7	3.4	2.2
1999	4.6	5.7	3.8	5.0	6.0	4.1	2.7	3.3	2.3
2000	4.5	5.6	3.7	4.9	6.0	3.9	2.7	3.3	2.2
2001	4.4	5.5	3.6	4.8	5.9	3.9	2.6	3.1	2.2
2002	4.4	5.5	3.6	4.8	5.8	3.9	2.6	3.2	2.2
<u>AGE-ADJUSTED RATES, 1998-2002</u>									
AGE AT DEATH:									
All ages	4.5	5.6	3.7	4.9	5.9	4.0	2.7	3.3	2.2
Under 65	2.6	3.2	2.1	2.9	3.4	2.3	1.6	2.0	1.3
65 and over	17.7	22.0	14.7	18.8	23.2	15.6	9.8	11.7	8.7
All ages(IARC world std) ^b	3.3	4.0	2.7	3.5	4.3	2.9	2.0	2.4	1.7
<u>AGE-SPECIFIC RATES, 1998-2002</u>									
AGE AT DEATH:									
<1	0.4	0.4	0.4	0.4	0.4	0.4	-	-	-
1-4	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.8
5-9	0.9	0.9	0.8	0.9	0.9	0.9	0.9	1.0	0.7
10-14	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.7	0.6
15-19	0.5	0.7	0.4	0.6	0.7	0.4	0.5	0.6	0.4
20-24	0.6	0.7	0.5	0.6	0.7	0.5	0.6	0.6	0.5
25-29	0.8	0.9	0.7	0.9	1.0	0.7	0.5	0.5	0.5
30-34	1.3	1.6	0.9	1.4	1.8	1.1	0.8	1.1	0.5
35-39	1.9	2.3	1.5	2.1	2.6	1.7	0.9	1.1	0.8
40-44	2.8	3.5	2.1	3.0	3.8	2.3	1.7	2.2	1.3
45-49	4.2	5.1	3.2	4.6	5.6	3.6	2.4	2.9	1.9
50-54	6.2	7.5	4.9	6.7	8.0	5.4	3.6	4.6	2.8
55-59	8.6	10.6	6.8	9.3	11.4	7.3	5.4	6.8	4.3
60-64	11.5	13.9	9.3	12.4	15.0	10.1	6.2	8.5	4.5
65-69	15.1	18.5	12.1	16.2	20.0	13.0	8.2	9.4	7.4
70-74	18.0	22.3	14.7	19.2	23.6	15.7	9.5	11.9	7.9
75-79	20.1	24.8	16.8	21.2	26.0	17.9	10.9	13.6	9.3
80-84	19.9	25.1	16.8	20.8	26.2	17.5	11.8	13.5	11.0
85+	16.3	20.6	14.5	16.9	21.5	15.1	10.0	10.9	9.6

^a NCHS public use data file for the total US. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

^b NCHS public use data file for the total US. Rates are per 100,000 and are age-adjusted to the IARC world standard population.

- Statistic not shown. Rate based on less than 25 cases for the time interval.

Table III-4
 BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)
 SURVIVAL RATES, BY RACE, SEX, DIAGNOSIS YEAR, STAGE AND AGE

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>5-YR RELATIVE SURVIVAL RATES</u>									
YEAR OF DIAGNOSIS:									
1960-1963 ^a	-	-	-	18	16	21	19	17	21
1970-1973 ^a	-	-	-	20	18	22	19	19	19
1974-1976 ^b	22.3	20.4	24.7	22.1	20.4	24.2	26.2	16.9	39.1 ^e
1977-1979 ^b	24.6	23.1	26.6	24.0	22.6	25.7	27.7	24.8	31.0 ^e
1980-1982 ^b	25.4	24.5	26.6	24.7	23.8	25.8	30.8	33.4	26.9 ^e
1983-1985 ^b	26.7	25.3	28.3	26.0	24.9	27.4	32.1	31.6	32.5 ^e
1986-1988 ^b	30.8	29.3	32.6	30.1	28.2	32.4	32.6	35.6	28.9
1989-1991 ^b	31.2	31.5	30.8	30.3	30.2	30.5	38.4	41.2	35.0
1992-1994 ^b	32.9	33.6	32.0	32.2	32.7	31.6	40.1	43.7	36.7
1995-2001 ^b	33.3 ^d	32.4 ^d	34.4 ^d	32.7 ^d	32.1 ^d	33.5 ^d	37.6 ^d	37.7 ^d	37.5
<u>5-YR PERIOD SURVIVAL RATES^{bc}</u>									
YEAR OF DIAGNOSIS:									
1995-2001	33.9	32.1	36.4	33.5	32.0	35.4	34.1	31.5	36.9
<u>5-YR RELATIVE SURVIVAL RATES, 1995-2001^b</u>									
AGE AT DIAGNOSIS:									
<45	62.5	60.7	65.1	63.3	61.7	65.4	57.5	57.2	57.8
45-54	25.8	23.9	28.8	25.8	23.6	29.1	25.7 ^e	30.1 ^e	19.4 ^e
55-64	13.0	11.9	14.7	12.7	11.9	13.9	10.7	3.6	20.3 ^e
65-74	7.0	5.9	8.3	7.0	5.6	8.5	5.7	-	6.0
75+	3.9	3.5	4.2	3.9	3.4	4.1	9.0 ^e	-	11.1 ^e
Under 65	43.3	40.9	46.6	43.0	40.9	46.1	43.4	43.0	43.9
65 and over	5.8	5.1	6.4	5.7	4.9	6.5	6.6	5.3	8.0

- ^a Rates are based on End Results data from a series of hospital registries and one population-based registry.
- ^b Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta). Rates are based on follow-up of patients into 2002.
- ^c Period survival provides a more up-to-date estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three calendar year blocks (1999-2001: 0-1 year survival), (1998-2000: 1-2 year survival), (1997-1999: 2-3 year survival), (1996-1998: 3-4 year survival), (1995-1997: 4-5 years survival).
- ^d The difference in rates between 1974-1976 and 1995-2001 is statistically significant ($p < .05$).
- ^e The standard error of the survival rate is between 5 and 10 percentage points.
- ^f The standard error of the survival rate is greater than 10 percentage points.
- Statistic could not be calculated.

Table III-5
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

SURVIVAL RATES^a

By Year of Diagnosis

All Races, Males and Females

Year of Diagnosis

	1975- 1979	1980- 1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Relative Survival Rates (SEER ^b)																			
1-year	47.6	48.8	49.1	53.6	52.9	53.9	52.5	54.3	55.1	53.2	53.5	54.4	53.3	54.4	52.4	55.1	55.7	55.8	57.9
2-year	32.7	34.8	34.1	38.2	38.7	39.2	37.8	37.9	41.2	40.0	39.4	40.8	39.7	40.9	38.4	41.3	40.4	41.3	
3-year	28.6	30.3	30.5	33.3	35.0	35.9	33.4	33.1	37.7	35.9	36.0	37.2	36.7	37.4	34.7	36.4	36.2		
4-year	26.1	27.6	27.8	31.0	32.5	33.7	30.4	31.3	35.9	33.2	34.3	35.0	35.3	35.4	32.8	33.9			
5-year	24.2	26.1	26.1	29.9	31.0	31.6	29.2	30.0	34.1	32.0	33.1	33.6	34.7	34.0	31.4				
6-year	22.9	24.9	25.0	28.9	29.5	30.5	28.3	29.4	33.3	30.4	32.5	33.1	34.1	32.9					
7-year	22.1	23.9	24.2	28.5	28.1	29.6	27.9	28.5	32.8	29.5	31.5	31.8	33.5						
8-year	21.3	23.2	23.0	27.4	27.7	28.5	27.2	28.2	32.3	28.9	31.5	31.0							
9-year	20.5	22.4	22.6	26.4	27.6	27.7	26.9	27.8	32.3	28.0	31.1								
10-year	20.1	21.7	22.0	25.8	27.6	27.5	26.7	27.5	31.7	27.6									
11-year	19.7	21.2	22.0	25.6	27.0	27.3	26.1	27.1	31.6										
12-year	19.5	21.0	21.6	25.6	26.4	27.2	26.1	27.1											
13-year	19.3	20.7	21.3	25.6	26.2	27.2	26.1												
14-year	19.3	20.6	21.2	25.6	26.2	26.5													
15-year	19.1	20.4	20.7	25.4	26.2														
16-year	19.0	20.2	20.7	25.3															
17-year	19.0	20.2	20.7																
18-year	18.9	20.2																	
19-year	18.9																		
20-year	18.9																		

^a Survival rates are relative rates expressed as percents.
^b Rates are from the SEER 9 areas.

Table III-6
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

SURVIVAL RATES^a

By Year of Diagnosis

All Races, Males

Year of Diagnosis

	1975- 1979	1980- 1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Relative Survival Rates (SEER ^b)																			
1-year	47.5	49.8	49.6	54.5	52.5	53.2	54.4	57.2	57.0	55.4	55.2	55.9	55.3	56.0	55.5	55.3	55.5	54.6	56.1
2-year	31.9	34.5	33.2	39.1	37.1	36.6	38.9	39.8	41.2	40.6	41.2	41.2	41.2	39.9	40.1	40.6	39.0	39.5	
3-year	27.2	30.3	29.2	34.0	33.0	33.5	34.0	33.9	37.8	36.8	37.2	37.8	38.1	36.3	35.7	36.5	34.9		
4-year	25.0	27.2	25.9	31.1	30.7	31.4	30.2	32.0	36.2	34.4	35.2	36.0	37.1	34.4	33.9	33.4			
5-year	22.8	25.2	23.8	29.6	29.4	28.7	29.3	30.9	34.0	33.3	33.2	34.4	36.3	32.5	32.2				
6-year	21.6	24.1	23.0	28.4	28.2	27.4	28.3	30.7	33.7	31.5	32.3	34.0	35.5	31.3					
7-year	20.9	23.4	22.3	28.0	26.5	26.4	27.6	29.4	32.7	30.3	31.7	33.0	34.5						
8-year	19.9	22.7	21.3	27.4	26.1	24.9	27.0	29.4	32.1	29.8	31.7	32.7							
9-year	19.2	21.8	21.1	26.6	26.1	24.4	27.0	29.3	32.0	28.7	31.6								
10-year	18.8	21.2	20.4	26.1	26.0	24.2	27.0	28.8	31.8	28.3									
11-year	18.2	20.9	20.4	25.6	25.4	23.9	26.8	28.6	31.8										
12-year	18.0	20.7	20.4	25.6	24.3	23.8	26.6	28.6											
13-year	17.7	20.4	20.1	25.6	24.3	23.8	26.4												
14-year	17.7	20.2	20.1	25.6	24.3	23.0													
15-year	17.7	20.1	19.6	25.6	24.3														
16-year	17.7	19.7	19.6	25.6															
17-year	17.7	19.7	19.6																
18-year	17.7	19.7																	
19-year	17.7																		
20-year	17.7																		

^a Survival rates are relative rates expressed as percents.
^b Rates are from the SEER 9 areas.

Table III-7
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

SURVIVAL RATES^a

By Year of Diagnosis

All Races, Females

Year of Diagnosis

	1975- 1979	1980- 1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Relative Survival Rates (SEER ^b)																			
1-year	47.8	47.6	48.5	52.4	53.4	54.8	50.0	50.9	52.5	50.3	51.4	52.6	50.6	52.4	48.3	54.7	56.0	57.3	60.2
2-year	33.8	35.1	35.3	37.2	40.7	42.3	36.3	35.6	41.1	39.3	37.1	40.3	37.7	42.2	36.3	42.0	42.1	43.6	
3-year	30.3	30.2	32.1	32.4	37.4	38.9	32.5	32.1	37.6	34.8	34.4	36.4	35.0	38.7	33.4	36.3	37.9		
4-year	27.5	28.2	30.1	30.8	34.6	36.5	30.6	30.4	35.4	31.6	33.1	33.8	32.9	36.5	31.3	34.6			
5-year	26.0	27.2	28.9	30.2	32.7	35.0	29.1	28.9	34.3	30.3	32.8	32.6	32.6	35.7	30.2				
6-year	24.6	25.8	27.6	29.2	31.0	34.2	28.2	27.8	32.7	28.9	32.6	31.8	31.9	34.9					
7-year	23.7	24.6	26.6	29.0	29.8	33.4	28.1	27.5	32.7	28.3	31.1	30.1	31.9						
8-year	23.0	23.7	25.1	27.3	29.5	32.7	27.3	26.5	32.6	27.7	31.0	29.0							
9-year	22.2	23.1	24.5	26.1	29.2	31.5	26.8	26.0	32.5	27.0	30.4								
10-year	21.7	22.4	24.0	25.4	29.2	31.4	26.2	26.0	31.6	26.8									
11-year	21.4	21.7	24.0	25.3	28.6	31.3	25.0	25.2	31.4										
12-year	21.2	21.4	22.7	25.1	28.6	31.1	25.0	25.0											
13-year	21.2	21.0	22.2	25.1	27.7	31.1	25.0												
14-year	20.8	21.0	22.2	24.8	27.7	30.7													
15-year	20.6	20.8	21.7	24.3	27.7														
16-year	20.3	20.6	21.7	23.3															
17-year	20.1	20.6	21.7																
18-year	20.1	20.6																	
19-year	20.1																		
20-year	20.1																		

^a Survival rates are relative rates expressed as percents.
^b Rates are from the SEER 9 areas.

Table III-8
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

Percent Diagnosed With Cancer In 10, 20 and 30 Years and In Remaining Lifetime,
 Given Cancer Free At Current Age By Race and Sex

Lifetime Risk (Percent) of Being Diagnosed (13 SEER Areas) With Cancer and
 Lifetime Risk (Percent) of Dying (Total U.S.) From Cancer

2000-2002

All Races

Current Age	Males				Females			
	+10 yrs	+20 yrs	+30 yrs	Eventually	+10 yrs	+20 yrs	+30 yrs	Eventually
0	0.03	0.06	0.09	0.65	0.03	0.05	0.08	0.50
10	0.03	0.05	0.09	0.63	0.02	0.04	0.07	0.47
20	0.03	0.06	0.12	0.60	0.02	0.05	0.10	0.46
30	0.04	0.10	0.19	0.58	0.03	0.08	0.14	0.44
40	0.06	0.16	0.30	0.56	0.04	0.11	0.21	0.41
50	0.10	0.25	0.42	0.51	0.07	0.16	0.29	0.37
60	0.16	0.34	0.43	0.44	0.10	0.23	0.30	0.32

Lifetime Risk of Being Diagnosed = 0.65%
 Lifetime Risk of Dying = 0.49%

Lifetime Risk of Being Diagnosed = 0.50%
 Lifetime Risk of Dying = 0.39%

Whites

Current Age	Males				Females			
	+10 yrs	+20 yrs	+30 yrs	Eventually	+10 yrs	+20 yrs	+30 yrs	Eventually
0	0.04	0.07	0.10	0.74	0.04	0.06	0.08	0.57
10	0.03	0.06	0.10	0.71	0.02	0.04	0.08	0.53
20	0.03	0.07	0.14	0.68	0.02	0.06	0.11	0.51
30	0.04	0.11	0.22	0.66	0.04	0.09	0.16	0.49
40	0.07	0.18	0.34	0.62	0.05	0.13	0.23	0.46
50	0.11	0.28	0.47	0.57	0.08	0.19	0.32	0.41
60	0.18	0.38	0.48	0.49	0.11	0.26	0.33	0.35

Lifetime Risk of Being Diagnosed = 0.74%
 Lifetime Risk of Dying = 0.53%

Lifetime Risk of Being Diagnosed = 0.57%
 Lifetime Risk of Dying = 0.42%

Blacks

Current Age	Males				Females			
	+10 yrs	+20 yrs	+30 yrs	Eventually	+10 yrs	+20 yrs	+30 yrs	Eventually
0	0.02	0.04	0.05	0.32	0.03	0.05	0.06	0.28
10	0.02	0.03	0.05	0.31	0.02	0.03	0.04	0.26
20	0.01	0.04	0.08	0.30	0.01	0.03	0.05	0.24
30	0.03	0.06	0.12	0.29	0.02	0.04	0.08	0.23
40	0.04	0.10	0.16	0.27	0.02	0.06	0.12	0.22
50	0.06	0.13	0.21	0.25	0.04	0.10	0.15	0.20
60	0.07	0.17	0.21	0.21	0.06	0.12	0.17	0.17

Lifetime Risk of Being Diagnosed = 0.32%
 Lifetime Risk of Dying = 0.23%

Lifetime Risk of Being Diagnosed = 0.28%
 Lifetime Risk of Dying = 0.21%

Devcan Version 6.0, April 2005, National Cancer Institute (<http://srab.cancer.gov/devcan/>).

Source: Incidence data are from the SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia). Mortality data are from the NCHS public use data file for the total US.

Table III-9
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

SEER INCIDENCE AND U.S. MORTALITY
AGE-ADJUSTED RATES AND TRENDS^a
 By Race/Ethnicity and Sex

Incidence^b

RACE/ETHNICITY	Rate 1998-2002			Trend 1992-2002		
	Rate per 100,000 persons			APC (%)		
	Total	Males	Females	Total	Males	Females
All Races	6.4	7.6	5.3	-0.6 ^e	-0.7	-0.5
White	7.1	8.4	6.0	-0.3	-0.4	-0.1
White Hispanic ^c	5.3	6.0	4.8	0.3	0.0	0.5
White Non-Hispanic ^c	7.5	9.0	6.2	-0.1	-0.1	-0.1
Black	3.9	4.5	3.4	-0.7	0.0	-1.3
Asian/Pacific Islander	3.3	4.0	2.8	-1.7 ^e	-1.6	-1.6
Amer Ind/Alaska Nat	2.6	3.6	2.0	-	-	-
Hispanic ^c	5.1	5.8	4.7	0.4	0.1	0.6

Mortality^d

RACE/ETHNICITY	Rate 1998-2002			Trend 1992-2002		
	Rate per 100,000 persons			APC (%)		
	Total	Males	Females	Total	Males	Females
All Races	4.5	5.6	3.7	-0.9 ^e	-0.7 ^e	-1.1 ^e
White	4.9	5.9	4.0	-0.8 ^e	-0.7 ^e	-1.0 ^e
White Hispanic ^c	3.1	3.6	2.6	0.4	0.3	0.5
White Non-Hispanic ^c	5.1	6.2	4.1	-0.7 ^e	-0.6 ^e	-0.9 ^e
Black	2.7	3.3	2.2	-0.6 ^e	-0.8 ^e	-0.6
Asian/Pacific Islander	1.9	2.5	1.4	0.1	3.0 ^e	-3.3 ^e
Amer Ind/Alaska Nat	2.1	2.5	1.7	0.7	0.9	-
Hispanic ^c	3.0	3.6	2.6	0.6	0.5	0.6

- The APC is the Annual Percent Change over the time interval.
 - Statistic not shown. Rate based on less than 25 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.
^a Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130). Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
^b Incidence data are from the 13 SEER areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia).
^c Hispanic and Non-Hispanic are not mutually exclusive from Whites, Blacks, Asian Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics and Non-Hispanics do not include cases from Detroit, Hawaii, Alaska Native Registry and Rural Georgia. For mortality, information is included for all states except Connecticut, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma and Vermont.
^d Mortality data are analyzed from a public use file provided by the National Center for Health Statistics (NCHS).
^e The APC is significantly different from zero (p<.05).

Table III-10
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

AGE-ADJUSTED SEER INCIDENCE RATES AND SEER DEATH RATES^a
 By Registry, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER INCIDENCE RATES^b, 1998-2002</u>									
REGISTRY									
13 SEER Areas	6.4	7.6	5.3	7.1	8.4	6.0	3.9	4.5	3.4
11 SEER Areas	6.4	7.6	5.3	7.1	8.4	6.0	3.9	4.6	3.5
9 SEER Areas	6.6	7.9	5.5	7.3	8.7	6.1	4.0	5.0	3.2
San Francisco-Oakland	6.1	7.3	5.0	7.1	8.5	5.8	4.1	5.9	2.8
Connecticut	7.1	8.7	5.9	7.5	9.2	6.1	3.9	4.3	3.8
Metropolitan Detroit	6.8	8.2	5.6	7.6	9.1	6.3	4.2	5.2	3.5
Hawaii	4.5	5.2	3.9	7.8	8.9	6.6	-	-	-
Iowa	7.1	8.3	6.1	7.1	8.3	6.2	-	-	-
New Mexico	5.6	6.7	4.7	5.9	7.1	4.9	-	-	-
Seattle-Puget Sound	7.5	8.9	6.4	8.1	9.5	6.8	-	-	-
Utah	7.0	8.5	5.8	7.2	8.7	6.0	-	-	-
Metropolitan Atlanta	5.9	7.2	4.9	7.2	8.3	6.1	3.7	4.6	3.0
San Jose-Monterey	6.2	7.5	5.1	7.0	8.3	5.9	-	-	-
Los Angeles	5.7	6.6	4.9	6.5	7.6	5.6	4.0	3.7	4.1
<u>SEER DEATH RATES^c, 1998-2002</u>									
REGISTRY									
13 SEER Areas	4.4	5.5	3.6	4.9	6.1	4.0	2.7	3.3	2.3
11 SEER Areas	4.4	5.5	3.6	4.9	6.1	4.0	2.8	3.3	2.3
9 SEER Areas	4.5	5.7	3.6	5.0	6.2	4.0	2.6	3.4	2.0
San Francisco-Oakland	4.2	5.5	3.2	4.9	6.2	3.9	3.0	5.0	-
Connecticut	4.2	5.4	3.3	4.4	5.7	3.4	2.5	-	-
Metropolitan Detroit	4.6	5.6	3.8	5.1	6.3	4.3	2.7	3.3	2.1
Hawaii	2.7	3.4	2.1	4.6	5.7	3.6	-	-	-
Iowa	5.2	6.4	4.2	5.2	6.4	4.2	-	-	-
New Mexico	3.7	4.4	3.0	3.9	4.7	3.1	-	-	-
Seattle-Puget Sound	5.7	7.2	4.4	6.0	7.5	4.7	-	-	-
Utah	4.7	5.9	3.8	4.9	6.0	3.9	-	-	-
Metropolitan Atlanta	3.9	4.8	3.0	4.5	5.4	3.6	2.3	2.8	1.9
San Jose-Monterey	4.3	5.3	3.4	4.9	6.0	4.0	-	-	-
Los Angeles	4.3	5.0	3.6	4.9	5.8	4.1	3.3	3.4	3.3

^a Incidence and death rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^b The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta. The SEER 11 areas comprise the SEER 9 areas plus San Jose-Monterey and Los Angeles. The SEER 13 areas comprise the SEER 11 areas plus the Alaska Native Registry and Rural Georgia.

^c NCHS public use data file for the total US with analyses limited to the SEER geographic areas.

- Statistic could not be calculated or populations are inadequate.

Table III-11
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

AVERAGE ANNUAL AGE-ADJUSTED CANCER DEATH^a RATES BY STATE, ALL RACES, 1998-2002

Males and Females

State	Rate	SE	Rank	PD
TOTAL U.S.	4.5	0.02		
High Five States				
South Dakota	6.1 ^{bc}	0.39	(01)	35.6
Washington	5.8 ^{bc}	0.14	(02)	28.9
North Dakota	5.7 ^b	0.41	(03)	26.7
Mississippi	5.6 ^{bc}	0.20	(04)	24.4
Arkansas	5.5 ^{bc}	0.20	(05)	22.2
Low Five States				
New Jersey	3.9 ^c	0.09	(47)	-13.3
New York	3.8 ^{bc}	0.06	(48)	-15.6
New Mexico	3.7 ^{bc}	0.21	(49)	-17.8
District of Columbia	3.6 ^b	0.36	(50)	-20.0
Hawaii	2.7 ^{bc}	0.21	(51)	-40.0

Males

State	Rate	SE	Rank	PD
TOTAL U.S.	5.6	0.03		
High Five States				
South Dakota	7.2 ^b	0.63	(01)	28.6
Mississippi	7.1 ^{bc}	0.35	(02)	26.8
Washington	7.1 ^{bc}	0.24	(03)	26.8
Idaho	6.9 ^b	0.49	(04)	23.2
New Hampshire	6.7 ^b	0.49	(05)	19.6
Low Five States				
New Jersey	4.7 ^{bc}	0.16	(47)	-16.1
New York	4.6 ^{bc}	0.11	(48)	-17.9
Alaska	4.5 ^b	0.73	(49)	-19.6
New Mexico	4.4 ^b	0.33	(50)	-21.4
Hawaii	3.4 ^{bc}	0.34	(51)	-39.3

Females

State	Rate	SE	Rank	PD
TOTAL U.S.	3.7	0.02		
High Five States				
North Dakota	5.3 ^b	0.55	(01)	43.2
South Dakota	5.1 ^b	0.49	(02)	37.8
Arkansas	4.6 ^{bc}	0.24	(03)	24.3
Washington	4.6 ^{bc}	0.18	(04)	24.3
Montana	4.5 ^b	0.43	(05)	21.6
Low Five States				
New York	3.1 ^{bc}	0.08	(47)	-16.2
Nevada	3.1 ^b	0.25	(48)	-16.2
New Mexico	3.0 ^b	0.25	(49)	-18.9
District of Columbia	2.5 ^b	0.40	(50)	-32.4
Hawaii	2.1 ^{bc}	0.26	(51)	-43.2

For additional detailed cancer statistics by state, please visit the State Cancer Profiles website. <http://statecancerprofiles.cancer.gov/>

- ^a NCHS public use data file. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
^b Absolute percent difference between state rate and total U.S. rate is 15% or more.
^c Difference between state rate and total U.S. rate is statistically significant (p<=.0002).
SE Standard error of the rate.
PD Percent difference between state rate and total U.S. rate.

Table III-12
BRAIN AND OTHER NERVOUS SYSTEM (Invasive)

Estimated United States Cancer Prevalence Counts^a on January 1, 2002
By Race/Ethnicity, Sex and Years Since Diagnosis

Years Since Diagnosis	0 to <5	5 to <10	10 to <15	15 to <20	20 to <25	0 to <12 ^e	0 to <27 ^e	>=27 ^g	Complete ^h
Race/Sex									
All Races ^b	35,503	21,327	16,177	9,926	6,728	64,276	91,881	14,079	105,960
Males	19,416	11,972	8,575	5,358	3,396	35,534	49,872	6,993 ⁱ	56,865
Females	16,087	9,355	7,602	4,568	3,332	28,742	42,009	7,086 ⁱ	49,095
White ^b	31,555	18,767	14,353	8,873	5,956	56,835	81,518	10,932	92,450
Males	17,290	10,601	7,506	4,757	3,012	31,496	44,225	5,691 ⁱ	49,916
Females	14,265	8,166	6,847	4,116	2,944	25,339	37,293	5,241 ⁱ	42,534
Black ^b	2,570	1,659	1,307	781	580	4,893	7,070	+	+
Males	1,460	838	753	454	294	2,687	3,876	+	+
Females	1,110	821	554	327	286	2,206	3,194	+	+
Asian/Pacific Islander ^c	867	505	+	+	+	1,518	+	+	+
Males	466	287	+	+	+	841	+	+	+
Females	401	218	+	+	+	677	+	+	+
Hispanic ^d	3,068	1,527	+	+	+	5,142	+	+	+
Males	1,665	815	+	+	+	2,781	+	+	+
Females	1,403	712	+	+	+	2,361	+	+	+

Estimated prevalence percent^a on January 1, 2002, of the SEER 11 population diagnosed in the previous 10 years
By Age at Prevalence, Race/Ethnicity and Sex

Age at Prevalence	Age Specific (Crude)										Age-Adjusted ^f
	All Ages	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	All Ages
Race/Sex											
All Races ^c	0.0182%	0.0130%	0.0197%	0.0146%	0.0186%	0.0221%	0.0225%	0.0205%	0.0174%	0.0098%	0.0182%
Males	0.0203%	0.0142%	0.0212%	0.0163%	0.0204%	0.0246%	0.0256%	0.0241%	0.0210%	0.0121%	0.0204%
Females	0.0161%	0.0118%	0.0182%	0.0128%	0.0168%	0.0195%	0.0195%	0.0174%	0.0147%	0.0086%	0.0162%
White ^c	0.0202%	0.0145%	0.0213%	0.0159%	0.0213%	0.0252%	0.0253%	0.0229%	0.0190%	0.0093%	0.0203%
Males	0.0225%	0.0157%	0.0232%	0.0175%	0.0227%	0.0279%	0.0286%	0.0267%	0.0222%	0.0122%	0.0225%
Females	0.0180%	0.0132%	0.0194%	0.0142%	0.0197%	0.0225%	0.0221%	0.0194%	0.0165%	0.0078%	0.0181%
Black ^c	0.0114%	0.0092%	0.0150%	0.0099%	0.0099%	0.0104%	0.0144%	0.0111%	0.0128%	0.0114%	0.0114%
Males	0.0128%	0.0108%	0.0151%	0.0120%	0.0116%	0.0130%	0.0160%	0.0118%	0.0170%	-	0.0128%
Females	0.0100%	0.0077%	0.0149%	0.0080%	0.0084%	0.0082%	0.0131%	0.0106%	0.0101%	0.0148%	0.0102%
Asian/Pacific Islander ^c	0.0109%	0.0078%	0.0147%	0.0104%	0.0103%	0.0117%	0.0104%	0.0114%	0.0094%	0.0126%	0.0110%
Males	0.0124%	0.0091%	0.0150%	0.0119%	0.0122%	0.0117%	0.0128%	0.0130%	0.0158%	0.0167%	0.0126%
Females	0.0095%	0.0065%	0.0145%	0.0090%	0.0085%	0.0116%	0.0083%	0.0101%	0.0047%	0.0097%	0.0096%
Hispanic ^d	0.0123%	0.0103%	0.0132%	0.0076%	0.0128%	0.0170%	0.0164%	0.0178%	0.0143%	0.0090%	0.0132%
Males	0.0129%	0.0110%	0.0128%	0.0081%	0.0131%	0.0189%	0.0187%	0.0211%	0.0142%	-	0.0139%
Females	0.0117%	0.0095%	0.0136%	0.0070%	0.0124%	0.0152%	0.0143%	0.0152%	0.0144%	0.0120%	0.0124%

- ^a US 2002 cancer prevalence counts are based on 2002 cancer prevalence proportions from the SEER registries and 1/1/2002 US population estimates based on the average of 2001 and 2002 population estimates from the US Bureau of the Census. Prevalence was calculated using the First Malignant Primary Only for a person.
- ^{b c d} Statistics based on b) SEER 9 Areas c) SEER 11 Areas and Rural Georgia d) SEER 11 Areas excluding Hawaii and Detroit.
- ^e Maximum limited-duration prevalence: 27 years for 1975-2002 SEER 9 data; 12 years for 1990-2002 SEER 11 data (used to calculate prevalence for Hispanics and Asian Pacific Islanders).
- ^f Percentages are age-adjusted to the 2000 US standard population by 5-year age groups.
- ^{g h i} (g) Cases diagnosed more than 27 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000). (h) Complete prevalence is obtained by summing 0 to <27 and >=27. (i) Age-specific completeness index was approximated using empirical data from historical Connecticut tumor registry.
- Statistic not shown. Statistic based on fewer than 5 cases estimated alive in SEER for the time interval.
- + Not available.

SEER Incidence, Delay Adjusted Incidence and US Death Rates+ Brain and Other Nervous System Cancer, by Race and Sex

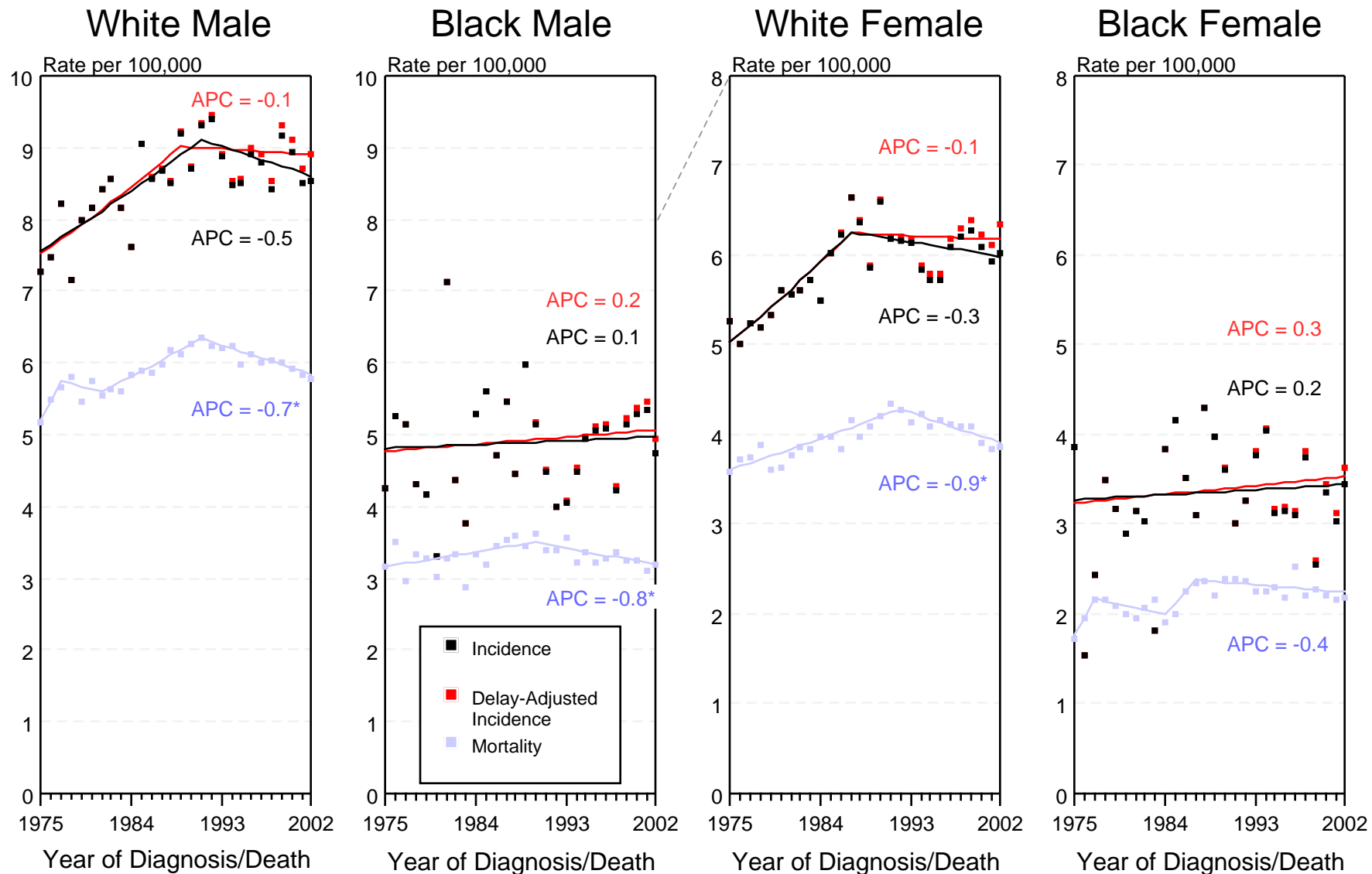


Figure III-1

+ Source: SEER 9 areas and NCHS public use data file for the total US. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.0, April 2005, National Cancer Institute.

The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

* The APC is significantly different from zero ($p < 0.05$).

SEER Incidence and US Death Rates + Brain and Other Nervous System Cancer, Both Sexes

Joinpoint Analyses for 1975-2002 for Whites and Blacks

Rates for 1992-2002 for Asian/Pacific Islander, American Indian/Alaska Native and Hispanic

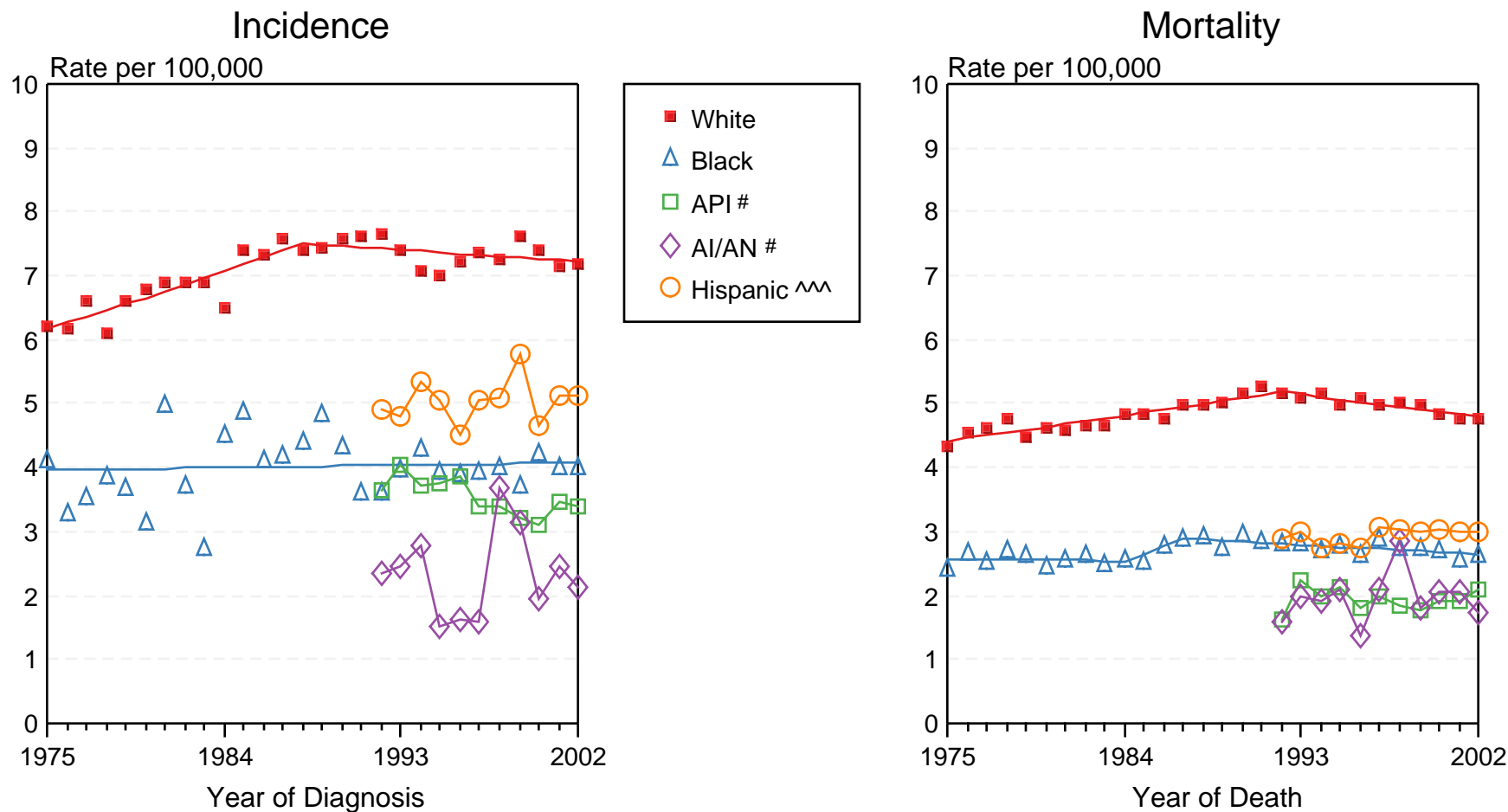


Figure III-2

+ Source: Incidence data for whites and blacks is from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta). Incidence data for Asian/Pacific Islanders, American Indian/Alaska Natives and Hispanics is from the SEER 13 Areas (SEER 9 Areas, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Mortality data is from NCHS public use data file for the total US. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines for whites and blacks are calculated using the Joinpoint Regression Program Version 3.0, April 2005, National Cancer Institute.

API = Asian/Pacific Islander. AI/AN = American Indian/Alaska Native.

^^ Hispanic is not mutually exclusive from Whites, Blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics excludes cases from Detroit, Hawaii, Alaska Native Registry and Rural Georgia. Mortality data for Hispanics excludes cases from Connecticut, Maine, Maryland, Minnesota, Oklahoma, New Hampshire, New York, North Dakota, and Vermont.