

Table III-1
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)
 TRENDS IN SEER INCIDENCE AND U.S. MORTALITY, BY RACE AND SEX

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>INCIDENCE TRENDS (expressed in percents)§:</u>									
<u>1973-93</u>									
All Ages									
Percent Change (PC)	22.6	24.0	21.8	24.9	25.1	25.6	11.4	8.2	15.1
Est. Annual PC (EAPC)	1.1★	1.1★	1.1★	1.2★	1.1★	1.3★	0.9	0.6	1.5
Under 65									
Percent Change (PC)	8.6	8.5	8.3	11.5	10.7	12.0	-10.5	-24.0	9.9
Est. Annual PC (EAPC)	0.6★	0.6★	0.5★	0.7★	0.7★	0.7★	0.4	-0.4	1.6
65 and over									
Percent Change (PC)	66.7	72.5	62.3	66.7	68.3	67.1	109.4	470.2	26.8
Est. Annual PC (EAPC)	2.4★	2.3★	2.5★	2.4★	2.2★	2.7★	2.5★	5.5★	0.8
<u>1975-79 - ALL AGES</u>									
Percent Change (PC)	1.7	1.5	2.3	2.0	1.9	2.4	3.3	-8.6	22.7
Est. Annual PC (EAPC)	0.7	1.1	0.3	0.8	1.2	0.5	-0.4	-1.5	3.5
<u>1989-93 - ALL AGES</u>									
Percent Change (PC)	-2.4	-1.1	-3.8	-1.8	-0.8	-2.9	-17.7	-25.6	-10.4
Est. Annual PC (EAPC)	-0.7	-0.8	-0.5	-0.6	-0.8	-0.4	-5.9	-9.2★◇	-3.1
<u>MORTALITY TRENDS (expressed in percents)δ:</u>									
<u>1973-93</u>									
All Ages									
Percent Change (PC)	13.5	13.3	14.4	15.3	14.7	16.6	10.6	12.0	10.6
Est. Annual PC (EAPC)	0.6★	0.6★	0.7★	0.7★	0.7★	0.7★	0.5★	0.5	0.7★
Under 65									
Percent Change (PC)	-8.7	-8.2	-9.7	-6.2	-6.1	-6.8	-17.1	-15.4	-18.8
Est. Annual PC (EAPC)	-0.4★	-0.4★	-0.5★	-0.3★	-0.3★	-0.4★	-0.8★	-0.8★	-0.6★
65 and over									
Percent Change (PC)	69.7	65.1	76.1	68.9	63.7	75.8	123.4	122.1	127.5
Est. Annual PC (EAPC)	2.6★	2.4★	2.7★	2.6★	2.4★	2.7★	3.6★	3.5★	3.9★
<u>1975-79 - ALL AGES</u>									
Percent Change (PC)	2.5	3.4	2.0	2.8	4.0	1.9	2.7	-3.7	12.4
Est. Annual PC (EAPC)	0.7	1.0	0.4	0.7	1.2	0.3	1.1	-1.0	4.3
<u>1989-93 - ALL AGES</u>									
Percent Change (PC)	0.2	-0.3	0.7	0.7	0.1	1.1	-1.5	-2.1	-1.3
Est. Annual PC (EAPC)	0.1	0.1	0.1	0.3	0.2	0.3	0.0	0.1	-0.6◇

The Est. Annual PC is the Estimated Annual Percent Change (EAPC) over the time interval.

§ SEER Program.

δ NCHS public use tape.

★ The EAPC is significantly different from zero ($p < .05$).

◆ The EAPC for 1989-93 is significantly different from the EAPC for 1975-79 ($p < .05$).

◇ The EAPC for 1989-93 is significantly different from the EAPC for 1975-79 ($p < .10$).

- Statistic could not be calculated.

Table III-2
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)
 SEER INCIDENCE RATES, AGE-ADJUSTED AND AGE-SPECIFIC RATES, 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:									
1973	5.0	6.0	4.1	5.3	6.3	4.3	3.8	4.5	3.0
1974	5.1	6.0	4.3	5.4	6.5	4.5	2.5	2.5	2.5
1975	5.5	6.3	4.7	5.8	6.8	4.9	3.8	4.0	3.6
1976	5.4	6.6	4.3	5.7	7.0	4.7	3.0	4.9	1.4
1977	5.7	7.1	4.7	6.1	7.5	5.0	3.3	4.3	2.6
1978	5.4	6.3	4.6	5.7	6.7	4.9	3.7	4.0	3.4
1979	5.6	6.8	4.6	6.1	7.3	5.0	3.4	4.0	2.7
1980	5.8	6.9	4.8	6.2	7.4	5.2	3.2	3.5	2.8
1981	5.9	7.3	4.7	6.3	7.6	5.1	4.8	6.8	3.1
1982	5.9	7.1	4.8	6.3	7.6	5.2	3.5	4.2	2.9
1983	5.8	6.9	4.7	6.3	7.5	5.2	2.6	3.7	1.7
1984	5.6	6.5	4.8	5.9	7.0	5.0	4.1	4.7	3.7
1985	6.3	7.6	5.1	6.7	8.1	5.5	4.5	5.2	3.9
1986	6.2	7.3	5.2	6.7	7.8	5.7	3.9	4.5	3.3
1987	6.4	7.4	5.6	6.9	7.9	6.2	3.9	4.9	3.1
1988	6.2	7.2	5.3	6.7	7.8	5.7	4.0	4.1	3.8
1989	6.2	7.7	4.9	6.7	8.2	5.3	4.5	5.6	3.6
1990	6.4	7.4	5.6	6.9	7.9	6.0	4.0	4.8	3.5
1991	6.3	7.7	5.1	6.9	8.3	5.7	3.4	4.1	2.9
1992	6.3	7.6	5.1	6.8	8.3	5.6	3.4	3.9	3.1
1993	6.1	7.2	5.0	6.5	7.8	5.4	3.6	3.8	3.3
<u>AGE-ADJUSTED RATES, 1989-93</u>									
AGE AT DIAGNOSIS:									
All ages	6.3	7.5	5.2	6.8	8.1	5.6	3.8	4.4	3.3
Under 65	4.7	5.6	3.9	5.1	6.1	4.2	3.0	3.4	2.7
65 and over	20.0	24.6	16.9	21.6	26.6	18.3	10.7	13.3	8.8
All ages (world std.) ^λ	5.7	6.7	4.7	6.1	7.3	5.1	3.5	4.0	3.1
<u>AGE-SPECIFIC RATES, 1989-93</u>									
AGE AT DIAGNOSIS:									
0-4	4.0	4.2	3.7	4.1	4.4	3.9	3.8	4.2	3.5
5-9	3.3	3.7	2.9	3.6	4.1	3.1	2.7	2.5	2.9
10-14	2.8	3.3	2.3	2.8	3.2	2.4	2.5	2.9	2.1
15-19	2.2	2.5	1.9	2.4	2.7	2.1	1.8	2.2	1.5
20-24	2.4	2.6	2.1	2.6	3.0	2.3	0.9	0.5	1.2
25-29	2.9	3.4	2.4	3.1	3.6	2.6	2.5	3.3	1.7
30-34	3.2	3.8	2.7	3.6	4.2	3.0	1.4	1.9	0.9
35-39	4.1	5.1	3.1	4.6	5.7	3.5	2.0	2.5	1.5
40-44	5.1	6.2	3.9	5.6	6.8	4.3	2.9	3.2	2.6
45-49	6.4	7.7	5.1	6.9	8.4	5.5	4.3	4.6	4.0
50-54	9.3	11.0	7.6	10.2	11.9	8.5	4.1	5.3	3.0
55-59	11.6	14.7	8.7	12.5	15.8	9.4	6.5	7.0	6.2
60-64	13.5	16.4	11.0	15.0	18.0	12.1	7.3	8.2	6.5
65-69	17.6	21.0	14.8	19.3	22.7	16.5	9.2	12.0	7.1
70-74	22.3	27.1	18.7	24.0	29.0	20.3	12.3	15.1	10.4
75-79	22.9	27.0	20.1	24.3	28.9	21.2	15.7	20.1	13.0
80-84	20.6	27.3	16.9	22.4	30.1	18.3	7.6	11.0	5.8
85+	14.6	22.1	11.7	15.6	25.0	12.1	3.5	0.0	5.1

§ SEER Program. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population, except where noted.

λ SEER Program. Rates are per 100,000 and are age-adjusted to the world standard population.

Table III-3
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)
 U.S. MORTALITY RATES, AGE-ADJUSTED AND AGE-SPECIFIC RATES^δ, 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:									
1973	3.7	4.5	3.1	3.9	4.7	3.2	2.4	3.0	1.9
1974	3.7	4.5	3.0	3.9	4.8	3.2	2.1	2.5	1.8
1975	3.8	4.5	3.1	4.0	4.7	3.3	2.3	3.0	1.7
1976	3.9	4.8	3.2	4.1	5.0	3.4	2.5	3.2	1.9
1977	4.0	4.9	3.2	4.2	5.1	3.4	2.4	2.8	2.0
1978	4.1	4.9	3.4	4.3	5.2	3.5	2.5	3.1	2.0
1979	3.8	4.7	3.1	4.0	4.9	3.3	2.4	2.9	2.0
1980	3.9	4.9	3.1	4.1	5.1	3.3	2.3	2.8	1.9
1981	3.9	4.7	3.2	4.1	4.9	3.4	2.3	3.0	1.9
1982	3.9	4.7	3.3	4.2	5.0	3.5	2.4	3.1	1.9
1983	3.9	4.7	3.2	4.1	5.0	3.4	2.3	2.7	2.0
1984	4.0	4.9	3.3	4.3	5.1	3.5	2.3	3.1	1.8
1985	4.0	4.9	3.3	4.3	5.2	3.5	2.3	2.9	1.8
1986	4.0	4.9	3.2	4.2	5.2	3.4	2.5	3.1	2.1
1987	4.1	5.0	3.5	4.4	5.2	3.7	2.6	3.2	2.1
1988	4.1	5.1	3.3	4.4	5.4	3.5	2.6	3.2	2.2
1989	4.1	5.0	3.4	4.4	5.3	3.6	2.5	3.0	2.1
1990	4.3	5.2	3.5	4.5	5.5	3.7	2.6	3.3	2.1
1991	4.3	5.2	3.6	4.6	5.5	3.8	2.5	3.0	2.2
1992	4.2	5.1	3.5	4.5	5.4	3.8	2.5	3.0	2.1
1993	4.2	5.1	3.4	4.5	5.4	3.7	2.5	3.2	2.0
<u>AGE-ADJUSTED RATES, 1989-93</u>									
AGE AT DEATH:									
All ages	4.2	5.1	3.5	4.5	5.4	3.7	2.5	3.1	2.1
Under 65	2.7	3.3	2.2	2.9	3.5	2.4	1.7	2.1	1.4
65 and over	17.9	21.9	15.1	18.9	23.1	16.0	9.7	12.2	8.1
All ages (world std.) ^φ	3.6	4.3	3.0	3.8	4.6	3.2	2.2	2.7	1.8
<u>AGE-SPECIFIC RATES, 1989-93</u>									
AGE AT DEATH:									
0-4	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.7	0.8
5-9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0
10-14	0.7	0.8	0.7	0.8	0.9	0.7	0.5	0.5	0.5
15-19	0.6	0.7	0.5	0.6	0.8	0.5	0.6	0.7	0.5
20-24	0.6	0.7	0.6	0.7	0.7	0.6	0.5	0.4	0.6
25-29	0.9	1.0	0.8	1.0	1.1	0.8	0.8	0.9	0.6
30-34	1.5	1.8	1.2	1.6	1.9	1.3	0.9	1.1	0.8
35-39	2.1	2.5	1.6	2.2	2.7	1.8	1.2	1.6	0.9
40-44	3.1	3.8	2.3	3.3	4.1	2.5	1.9	2.4	1.4
45-49	4.6	5.6	3.5	4.9	6.0	3.7	2.9	3.6	2.3
50-54	7.0	8.7	5.4	7.5	9.3	5.8	4.3	5.7	3.2
55-59	9.8	11.9	7.8	10.5	12.7	8.4	5.1	6.3	4.1
60-64	12.9	15.8	10.3	13.7	16.7	11.1	7.3	9.2	5.8
65-69	16.1	19.5	13.4	17.2	20.6	14.4	8.6	11.0	6.8
70-74	19.0	22.8	16.1	20.0	23.8	17.1	10.8	14.5	8.4
75-79	20.1	25.0	16.9	21.2	26.3	17.8	10.6	12.4	9.6
80-84	19.4	24.3	16.8	20.4	25.5	17.6	10.1	12.7	8.7
85+	14.0	19.0	12.1	14.6	20.1	12.5	8.2	8.6	8.0

^δ NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population, except where noted.

^φ NCHS public use tape. Rates are per 100,000 and are age-adjusted to the world standard population.

Table III-4
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

SURVIVAL RATES, BY RACE, SEX, DIAGNOSIS YEAR, STAGE AND AGE

	<u>All Races</u>			<u>Whites</u>			<u>Blacks</u>		
	<u>Total</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>	<u>Males</u>	<u>Females</u>
<u>5-YR RELATIVE SURVIVAL RATES</u>									
YEAR OF DIAGNOSIS:									
1960-63 ^a	-	-	-	18	16	21	19	17	21
1970-73 ^a	-	-	-	20	18	22	19	19	19
1974-76 ^b	22.4	20.4	24.8	22.2	20.5	24.3	26.6	17.2	39.4 [†]
1977-79 ^b	24.5	23.2	26.2	23.8	22.7	25.2	27.8	25.0	30.9 [†]
1980-82 ^b	25.2	24.4	26.3	24.6	23.9	25.6	30.7	33.9	26.3
1983-85 ^b	26.6	25.3	28.1	26.0	24.8	27.4	33.1	32.1	34.4 [†]
1986-92 ^b	29.3 ^Ω	28.4 ^Ω	30.3 ^Ω	28.8 ^Ω	27.6 ^Ω	30.2 ^Ω	31.8	35.3 ^Ω	27.9
<u>5-YR RELATIVE SURVIVAL RATES, 1986-92^b</u>									
AGE AT DIAGNOSIS:									
<45	57.0	55.4	59.1	58.3	56.1	61.1	46.0	48.1	43.3 [†]
45-54	21.8	17.8	28.2	21.4	17.1	28.1	22.2 [†]	22.9 [†]	23.4 [†]
55-64	8.9	6.9	12.3	8.9	6.5	13.1	0.0	0.0	0.0
65-74	5.5	4.6	6.3	4.7	3.8	5.6	12.4 [†]	18.5 [†]	6.7 [†]
75+	3.1	1.5	4.2	3.2	1.6	4.2	0.0	-	-
Under 65	39.0	36.1	42.9	39.0	35.6	43.8	35.8	38.2	33.0
65 and over	4.7	3.8	5.6	4.3	3.3	5.1	8.5	13.1 [†]	5.1

^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 Program. They are based on data from population-based registries in Connecticut, New Mexico, Utah, Iowa, Hawaii, Atlanta, Detroit, Seattle-Puget Sound and San Francisco-Oakland. Rates are based on follow-up of patients through 1993.

^Ω The difference in rates between 1974-76 and 1986-92 is statistically significant ($p < .05$).

[†] The standard error of the survival rate is between 5 and 10 percentage points.

[†] 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)

INCIDENCE, MORTALITY, AND SURVIVAL RATES

By Year of Diagnosis/Death

All Races, Males and Females

Year of Diagnosis/Death

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Incidence																					
SEER	5.0	5.1	5.5	5.4	5.7	5.4	5.6	5.8	5.9	5.9	5.8	5.6	6.3	6.2	6.4	6.2	6.2	6.4	6.3	6.3	6.1
Mortality																					
U.S.	3.7	3.7	3.8	3.9	4.0	4.1	3.8	3.9	3.9	3.9	3.9	4.0	4.0	4.0	4.1	4.1	4.1	4.3	4.3	4.2	4.2
SEER	3.5	4.1	3.9	4.0	4.1	3.7	3.9	4.0	4.1	4.3	4.0	3.9	4.1	4.1	4.3	4.1	4.1	4.1	4.4	4.1	4.2
Relative Survival Rates (SEER)																					
1-year	42.0	41.9	44.7	47.2	47.7	47.2	50.5	44.5	48.5	48.9	49.3	51.7	49.0	53.2	52.7	53.6	52.4	53.7	54.5	51.8	
2-year	25.2	28.0	30.9	33.0	34.1	31.7	33.4	31.8	33.5	35.0	33.7	38.2	34.2	37.6	38.3	38.8	37.3	37.0	39.7		
3-year	20.6	24.5	27.6	27.6	29.1	28.1	29.9	28.2	30.4	28.9	28.9	33.3	30.6	32.6	34.5	35.6	32.7	31.9			
4-year	18.7	21.3	25.8	25.3	25.2	26.4	27.5	25.5	27.8	26.9	25.8	30.7	27.9	30.0	32.0	33.4	29.5				
5-year	16.8	19.4	24.0	23.3	23.2	25.2	25.0	24.3	26.1	25.1	24.3	29.4	26.2	28.6	30.4	31.0					
6-year	15.6	18.8	22.8	21.8	22.4	24.1	23.1	22.7	25.3	23.6	23.5	28.4	25.2	27.8	28.8						
7-year	14.7	17.8	21.8	21.1	22.1	23.4	21.9	22.3	23.8	22.6	22.4	27.4	24.5	27.3							
8-year	14.0	17.8	20.8	21.1	20.4	22.7	21.1	21.9	22.6	21.9	21.6	26.9	23.2								
9-year	14.0	17.4	20.2	20.1	19.5	21.5	20.8	21.7	21.7	20.9	21.1	25.8									
10-year	13.6	17.1	19.9	20.1	19.4	21.1	20.1	21.0	21.2	19.6	20.1										
11-year	13.6	16.0	19.7	19.8	18.9	20.5	19.6	20.0	21.1	19.2											
12-year	13.4	15.6	19.1	19.8	18.8	20.4	19.1	19.7	20.5												
13-year	13.1	15.2	19.0	19.8	18.8	20.1	18.8	19.1													
14-year	12.9	15.1	19.0	19.8	18.5	20.1	18.8														
15-year	12.9	15.1	18.8	19.8	18.5	19.7															
16-year	12.6	15.1	18.7	19.8	18.5																
17-year	12.6	15.1	17.5	19.8																	
18-year	12.5	15.1	17.2																		
19-year	12.4	15.1																			
20-year	12.4																				

Note: Incidence and mortality rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

Survival rates are relative rates expressed as percents.

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

INCIDENCE, MORTALITY, AND SURVIVAL RATES

By Year of Diagnosis/Death

All Races, Males

Year of Diagnosis/Death

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Incidence																					
SEER	6.0	6.0	6.3	6.6	7.1	6.3	6.8	6.9	7.3	7.1	6.9	6.5	7.6	7.3	7.4	7.2	7.7	7.4	7.7	7.6	7.2
Mortality																					
U.S.	4.5	4.5	4.5	4.8	4.9	4.9	4.7	4.9	4.7	4.7	4.7	4.9	4.9	4.9	5.0	5.1	5.0	5.2	5.2	5.1	5.1
SEER	4.2	5.2	4.7	4.9	5.2	4.6	4.7	4.9	4.9	5.3	4.9	4.7	4.9	5.0	5.2	5.1	4.9	5.1	5.1	5.1	5.2
Relative Survival Rates (SEER)																					
1-year	42.2	39.9	44.0	47.4	48.0	46.8	50.8	45.1	50.0	49.6	49.9	53.8	49.1	53.9	52.4	53.3	54.3	56.1	56.5	54.4	
2-year	25.2	26.7	29.9	30.6	33.8	32.1	32.7	30.7	34.5	34.2	32.6	39.8	32.9	38.1	36.8	36.6	38.5	38.1	39.7		
3-year	20.3	21.2	26.4	25.8	27.8	27.8	28.4	27.3	31.2	28.7	28.3	35.3	29.1	32.9	32.4	33.8	33.5	31.9			
4-year	18.4	18.3	25.1	23.5	23.8	26.9	25.9	24.7	28.0	25.9	25.1	31.8	25.9	30.0	30.2	31.6	29.5				
5-year	16.0	16.0	23.1	21.6	21.3	25.6	22.8	23.3	25.9	24.0	23.1	29.3	23.8	28.1	28.7	28.5					
6-year	14.5	14.9	21.9	19.3	21.1	25.0	20.8	22.1	24.9	22.7	22.8	28.0	23.1	27.1	27.4						
7-year	14.0	14.0	21.2	19.0	20.9	24.8	19.1	22.1	23.2	22.4	21.4	27.4	22.6	26.7							
8-year	13.2	14.0	20.2	18.8	19.4	23.3	18.4	22.0	22.1	21.7	20.4	27.4	21.4								
9-year	13.0	13.7	19.6	18.0	17.7	22.8	18.3	21.8	21.0	20.7	19.9	26.2									
10-year	13.0	13.1	19.5	17.9	17.6	22.7	17.5	21.2	20.6	18.9	19.0										
11-year	13.0	11.6	19.3	17.9	16.7	21.7	17.1	20.5	20.4	18.5											
12-year	13.0	11.3	18.9	17.9	16.5	21.6	16.7	20.0	19.6												
13-year	13.0	10.8	18.8	17.9	16.5	21.2	16.4	19.6													
14-year	13.0	10.8	18.8	17.9	16.1	21.2	16.4														
15-year	13.0	10.8	18.6	17.9	15.8	21.1															
16-year	12.9	10.8	18.6	17.9	15.7																
17-year	12.6	10.8	18.5	17.9																	
18-year	12.3	10.8	18.1																		
19-year	11.9	10.7																			
20-year	11.9																				

Note: Incidence and mortality rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

Survival rates are relative rates expressed as percents.

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

INCIDENCE, MORTALITY, AND SURVIVAL RATES

By Year of Diagnosis/Death

All Races, Females

Year of Diagnosis/Death

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Incidence																					
SEER	4.1	4.3	4.7	4.3	4.7	4.6	4.6	4.8	4.7	4.8	4.7	4.8	5.1	5.2	5.6	5.3	4.9	5.6	5.1	5.1	5.0
Mortality																					
U.S.	3.1	3.0	3.1	3.2	3.2	3.4	3.1	3.1	3.2	3.3	3.2	3.3	3.3	3.2	3.5	3.3	3.4	3.5	3.6	3.5	3.4
SEER	2.8	3.2	3.2	3.2	3.1	3.0	3.1	3.1	3.4	3.5	3.2	3.3	3.5	3.3	3.5	3.3	3.5	3.2	3.9	3.2	3.4
Relative Survival Rates (SEER)																					
1-year	41.7	44.3	45.5	47.0	47.4	47.8	50.2	43.7	46.5	48.0	48.5	49.0	48.8	52.4	53.0	53.9	49.9	50.8	51.9	48.4	
2-year	25.2	29.6	32.1	36.3	34.6	31.2	34.3	33.1	32.2	36.1	35.2	36.3	35.8	37.0	40.2	41.6	35.7	35.7	39.8		
3-year	21.0	28.7	29.1	30.2	31.0	28.4	32.0	29.2	29.3	29.2	29.7	30.9	32.4	32.2	37.1	38.0	31.6	31.9			
4-year	19.2	25.0	26.7	27.6	27.2	25.8	29.5	26.5	27.5	28.3	26.7	29.5	30.3	29.9	34.1	35.5	29.6				
5-year	18.0	23.7	25.0	25.8	25.7	24.8	27.9	25.7	26.4	26.6	25.8	29.4	29.2	29.3	32.2	34.2					
6-year	17.2	23.4	23.9	25.1	24.1	23.1	26.0	23.5	25.8	24.8	24.3	28.9	27.8	28.6	30.5						
7-year	15.6	22.4	22.6	24.0	23.5	21.7	25.6	22.3	24.7	22.9	23.7	27.4	26.9	28.2							
8-year	15.1	21.9	21.5	24.0	21.6	21.7	24.5	21.8	23.5	22.2	23.0	26.1	25.4								
9-year	15.1	21.6	20.9	22.9	21.6	20.0	24.0	21.5	22.7	21.2	22.5	25.2									
10-year	14.4	21.6	20.3	22.9	21.6	19.3	23.4	20.7	22.1	20.3	21.4										
11-year	14.3	21.2	20.2	22.4	21.6	19.2	22.8	19.3	22.1	20.0											
12-year	13.7	20.6	19.2	22.4	21.6	19.0	22.2	19.2	21.8												
13-year	12.7	20.4	19.2	22.1	21.6	18.9	21.8	18.5													
14-year	12.1	20.1	19.2	21.2	21.6	18.9	21.3														
15-year	12.1	19.8	19.0	21.2	21.6	18.1															
16-year	12.1	19.8	18.5	20.8	21.6																
17-year	12.1	19.1	16.3	20.8																	
18-year	12.1	19.1	16.3																		
19-year	12.1	19.1																			
20-year	12.1																				

Note: Incidence and mortality rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

Survival rates are relative rates expressed as percents.

Table III-8

BRAIN AND OTHER NERVOUS SYSTEM (Invasive)SEER INCIDENCE RATES§ BY AGE AND YEAR OF DIAGNOSIS

All Races, Males and Females

Age	Year of Diagnosis																				
	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
0-4	2.3	2.8	2.0	3.2	2.4	3.1	3.4	3.3	2.5	2.9	3.1	3.6	3.7	4.3	3.5	3.7	4.2	4.4	3.8	3.7	3.9
5-9	2.3	2.8	2.5	2.4	3.8	2.7	3.0	2.2	2.9	2.6	1.9	3.1	3.2	3.8	3.4	3.1	2.9	3.8	3.4	3.1	3.5
10-14	2.4	2.1	2.2	1.7	2.8	2.2	2.2	2.9	2.1	1.8	1.7	1.8	2.0	2.2	2.4	3.0	2.6	2.3	3.4	2.9	2.8
15-19	1.5	1.6	1.7	1.7	2.5	1.9	1.7	1.4	1.9	1.8	2.0	1.9	1.7	2.6	2.2	2.1	2.1	2.2	1.7	3.4	1.6
20-24	1.6	2.0	2.2	1.7	2.3	1.8	2.1	1.8	2.2	2.3	1.7	1.8	2.3	1.9	2.7	2.0	2.1	2.8	2.5	2.2	2.2
25-29	1.4	2.3	2.3	2.6	2.0	2.7	2.7	1.9	2.6	2.6	2.4	2.9	2.5	2.7	3.0	3.1	3.0	2.8	3.4	2.9	2.5
30-34	2.4	2.3	2.7	2.8	3.1	2.8	3.5	3.0	2.8	3.6	2.8	3.7	4.1	3.5	3.3	3.5	2.8	3.7	3.3	2.8	3.5
35-39	3.3	3.1	4.1	4.0	3.2	3.3	5.1	4.3	4.0	3.5	4.2	4.2	4.2	4.3	4.4	4.1	4.0	4.0	3.6	4.9	3.9
40-44	4.9	4.2	5.0	5.0	5.0	3.3	4.5	4.3	6.0	6.8	4.7	4.2	5.8	5.1	4.7	5.5	5.4	5.2	5.3	4.9	4.6
45-49	7.8	7.1	6.3	5.8	7.2	6.9	7.3	5.4	6.7	6.2	5.8	5.3	7.2	6.9	6.2	8.6	6.5	6.2	7.0	6.6	5.8
50-54	9.9	8.5	9.2	8.9	10.5	8.5	8.4	11.0	10.8	8.6	8.7	8.9	8.7	9.0	8.6	7.4	8.8	10.3	10.8	8.2	8.4
55-59	12.7	11.4	12.8	10.3	11.8	11.9	12.5	13.3	10.1	11.8	12.9	11.4	12.3	11.1	13.7	9.8	11.9	13.0	12.0	10.8	10.4
60-64	14.7	13.1	17.2	15.0	12.8	14.9	12.7	13.9	16.7	17.0	16.1	12.0	15.5	15.2	16.3	12.6	13.3	15.9	11.5	12.9	14.0
65-69	14.2	17.6	18.3	19.1	18.1	16.0	15.7	17.7	21.6	15.9	19.6	19.3	20.0	17.4	21.3	19.8	16.8	18.1	17.0	17.7	18.4
70-74	13.6	15.1	14.7	18.1	17.1	18.0	18.5	20.1	16.9	20.4	17.8	16.7	20.2	22.9	21.5	20.9	24.3	18.4	22.5	24.7	21.8
75-79	8.0	14.5	14.1	16.7	16.4	15.2	16.2	20.1	17.2	20.0	23.0	18.7	21.2	19.0	20.6	26.4	22.7	23.0	21.3	21.5	25.9
80-84	5.2	4.4	8.1	8.0	11.4	12.5	14.4	15.6	18.4	15.4	16.8	16.7	20.7	17.1	19.8	18.3	22.6	20.6	19.2	22.7	18.3
85+	2.4	2.6	4.7	5.2	7.1	5.2	4.9	7.1	7.3	8.9	6.9	10.0	13.1	14.3	10.1	7.6	14.4	11.5	18.0	15.5	13.6

§ SEER Program. Rates are per 100,000.

Table III-9

BRAIN AND OTHER NERVOUS SYSTEM (Invasive)SEER INCIDENCE RATES§ BY AGE AND YEAR OF DIAGNOSIS

All Races, Males

Year of Diagnosis

Age	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
0-4	2.7	3.1	2.2	3.7	2.2	3.2	3.0	3.1	2.6	3.2	3.7	3.9	4.6	4.6	3.3	4.2	4.3	5.2	3.8	3.4	4.4
5-9	2.5	3.2	2.4	3.1	3.8	3.0	3.2	2.5	3.6	2.3	2.0	2.5	3.7	4.6	3.4	3.5	3.3	4.5	3.6	2.7	4.5
10-14	2.3	2.3	1.8	1.6	2.6	3.1	2.5	2.6	2.2	2.3	1.8	1.9	2.7	1.9	1.9	2.5	3.7	2.5	3.8	3.2	3.3
15-19	1.8	1.6	2.2	2.1	2.5	1.8	2.3	1.8	2.5	1.7	2.1	2.4	1.8	3.6	1.9	2.8	1.9	2.2	2.2	4.5	1.7
20-24	2.4	2.3	2.3	1.7	3.1	2.0	2.5	2.1	2.7	3.1	1.8	2.4	2.8	2.2	3.1	2.3	2.3	2.7	2.1	3.1	2.9
25-29	1.6	2.0	2.7	3.4	2.1	2.8	2.7	2.8	2.7	3.1	2.0	2.6	2.8	3.0	2.5	3.7	3.4	3.4	3.9	3.5	2.9
30-34	3.3	2.1	2.8	3.8	4.0	3.5	3.7	3.2	4.2	4.4	3.0	4.6	4.6	3.9	4.1	4.5	3.5	4.4	4.1	3.1	3.9
35-39	3.5	3.6	4.5	5.4	4.7	3.1	5.0	4.9	4.0	4.2	4.3	5.2	4.5	5.1	5.5	4.2	5.2	4.5	4.8	6.5	4.2
40-44	7.0	5.3	5.5	6.3	6.1	4.5	6.1	4.9	8.5	6.6	5.5	5.7	7.5	5.2	6.2	5.9	6.4	5.7	6.4	6.1	6.6
45-49	9.3	9.0	8.5	5.7	9.3	8.1	8.7	7.3	8.9	9.1	7.7	7.1	8.5	9.0	7.4	9.9	8.7	6.7	8.8	7.9	6.5
50-54	12.7	9.3	10.0	11.3	13.1	9.9	11.7	13.2	11.1	9.4	11.6	8.6	10.9	10.8	9.7	9.7	11.7	11.7	13.6	10.2	8.1
55-59	16.1	15.3	16.0	11.1	13.5	13.9	16.3	16.7	11.6	13.7	17.5	15.3	15.7	13.2	16.3	11.0	16.1	15.2	16.3	13.4	12.7
60-64	17.1	15.0	20.6	20.3	16.4	16.3	15.4	17.6	21.5	20.1	21.1	14.6	16.8	20.9	21.3	16.2	18.1	18.0	12.2	16.6	17.4
65-69	15.2	20.1	22.0	26.4	22.3	19.3	20.6	21.5	28.2	18.2	23.6	20.7	25.4	20.1	26.3	24.6	17.8	22.6	22.3	20.2	22.3
70-74	16.9	19.0	18.1	18.9	22.9	19.8	24.4	23.7	20.7	27.5	21.1	19.8	23.4	24.4	26.0	24.7	29.6	19.2	28.8	30.4	27.4
75-79	9.4	20.1	17.0	22.4	23.3	21.3	19.9	25.7	26.3	28.5	28.8	22.9	27.7	18.9	25.4	29.6	27.4	25.8	23.1	26.9	31.4
80-84	5.6	4.9	8.1	9.1	19.2	19.2	13.5	19.0	21.9	23.5	19.8	18.2	22.6	23.8	19.4	17.0	35.4	25.0	25.8	31.8	19.5
85+	2.4	6.0	7.4	7.2	13.9	5.0	8.1	11.0	9.3	18.4	6.0	13.3	26.2	21.3	13.8	12.3	14.6	19.4	31.2	27.7	17.4

§ SEER Program. Rates are per 100,000.

Table III-10

BRAIN AND OTHER NERVOUS SYSTEM (Invasive)SEER INCIDENCE RATES§ BY AGE AND YEAR OF DIAGNOSIS

All Races, Females

Year of Diagnosis

Age	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
0-4	1.9	2.5	1.9	2.6	2.6	3.0	3.7	3.6	2.4	2.6	2.5	3.3	2.9	3.9	3.8	3.2	4.0	3.5	3.8	4.0	3.4
5-9	2.1	2.5	2.7	1.7	3.9	2.5	2.8	2.0	2.2	3.0	1.7	3.7	2.7	3.0	3.4	2.8	2.5	3.1	3.1	3.5	2.5
10-14	2.5	1.9	2.6	1.7	2.9	1.3	1.9	3.2	2.0	1.3	1.7	1.6	1.3	2.4	2.8	3.5	1.4	2.1	2.9	2.5	2.3
15-19	1.3	1.7	1.2	1.4	2.5	2.0	1.0	1.0	1.2	1.8	2.0	1.3	1.6	1.5	2.6	1.5	2.4	2.2	1.2	2.3	1.4
20-24	0.8	1.7	2.1	1.7	1.5	1.6	1.7	1.6	1.7	1.5	1.7	1.2	1.8	1.7	2.3	1.8	1.8	3.0	2.9	1.3	1.4
25-29	1.1	2.7	1.8	1.8	1.9	2.6	2.6	1.1	2.6	2.1	2.9	3.2	2.1	2.4	3.5	2.5	2.5	2.1	2.9	2.4	2.1
30-34	1.5	2.4	2.5	1.9	2.3	2.2	3.4	2.8	1.5	2.9	2.7	2.8	3.6	3.0	2.6	2.4	2.1	3.1	2.6	2.6	3.1
35-39	3.2	2.5	3.7	2.6	1.8	3.4	5.2	3.7	4.1	2.7	4.0	3.1	3.9	3.6	3.4	4.0	2.8	3.6	2.4	3.2	3.5
40-44	2.8	3.1	4.6	3.7	3.9	2.2	3.0	3.7	3.6	6.9	4.1	2.7	4.2	5.0	3.3	5.2	4.6	4.7	4.3	3.7	2.7
45-49	6.4	5.2	4.3	6.0	5.2	5.6	6.1	3.6	4.6	3.4	3.9	3.5	5.9	4.9	5.0	7.3	4.3	5.6	5.2	5.3	5.2
50-54	7.2	7.7	8.5	6.7	8.0	7.2	5.4	8.9	10.5	7.8	6.0	9.2	6.6	7.2	7.6	5.1	6.0	9.0	8.1	6.2	8.6
55-59	9.6	7.7	9.8	9.6	10.1	10.1	8.9	10.1	8.8	10.0	8.7	7.7	9.1	9.2	11.3	8.6	8.0	10.9	7.9	8.5	8.3
60-64	12.5	11.3	14.0	10.2	9.6	13.6	10.4	10.6	12.4	14.2	11.6	9.7	14.4	10.2	12.0	9.5	9.2	14.0	10.9	9.6	11.1
65-69	13.4	15.6	15.4	13.1	14.6	13.3	11.7	14.5	16.2	14.0	16.4	18.2	15.5	15.2	17.2	15.8	16.0	14.4	12.6	15.6	15.2
70-74	11.2	12.2	12.2	17.5	12.9	16.7	14.2	17.5	14.1	15.2	15.3	14.4	17.9	21.8	18.1	18.0	20.3	17.8	17.6	20.3	17.5
75-79	7.2	10.9	12.4	13.2	12.0	11.3	13.8	16.6	11.6	14.6	19.4	16.1	17.0	19.0	17.5	24.3	19.6	21.1	20.0	17.9	22.0
80-84	4.9	4.1	8.1	7.4	7.3	8.9	14.8	13.9	16.5	11.2	15.3	15.9	19.6	13.6	20.0	19.0	15.8	18.1	15.5	17.7	17.6
85+	2.4	1.0	3.5	4.2	4.0	5.3	3.6	5.4	6.5	5.0	7.2	8.8	8.0	11.6	8.6	5.8	14.4	8.5	13.0	10.7	12.2

§ SEER Program. Rates are per 100,000.

Table III-11
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 With Cancer and
 Lifetime Risk (Percent) of Dying From Cancer

SEER Areas, 1991-93

All Races

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	0.68	0.03	0.05	0.07	0.54
10	0.03	0.06	0.10	0.65	0.02	0.04	0.07	0.51
20	0.03	0.07	0.14	0.62	0.02	0.05	0.09	0.49
30	0.04	0.11	0.22	0.60	0.03	0.07	0.15	0.47
40	0.07	0.18	0.33	0.57	0.04	0.12	0.23	0.45
50	0.12	0.27	0.44	0.53	0.08	0.19	0.33	0.41
60	0.17	0.35	0.43	0.45	0.12	0.27	0.34	0.35

Lifetime Risk of Being Diagnosed = 0.68%
 Lifetime Risk of Dying = 0.51%

Lifetime Risk of Being Diagnosed = 0.54%
 Lifetime Risk of Dying = 0.41%

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	0.75	0.04	0.06	0.08	0.59
10	0.03	0.06	0.11	0.72	0.02	0.05	0.08	0.56
20	0.03	0.08	0.16	0.69	0.02	0.06	0.10	0.54
30	0.05	0.13	0.24	0.66	0.03	0.08	0.16	0.52
40	0.08	0.20	0.36	0.63	0.05	0.13	0.25	0.49
50	0.13	0.30	0.48	0.57	0.08	0.21	0.36	0.45
60	0.18	0.38	0.47	0.48	0.13	0.29	0.37	0.38

Lifetime Risk of Being Diagnosed = 0.75%
 Lifetime Risk of Dying = 0.57%

Lifetime Risk of Being Diagnosed = 0.59%
 Lifetime Risk of Dying = 0.46%

Blacks

Current Age	Males				Females			
	+10 yrs	+20 yrs	+30 yrs	Eventually	+10 yrs	+20 yrs	+30 yrs	Eventually
0	0.03	0.05	0.07	0.27	0.02	0.04	0.06	0.27
10	0.03	0.04	0.06	0.24	0.02	0.03	0.04	0.25
20	0.02	0.04	0.05	0.22	0.01	0.02	0.05	0.23
30	0.02	0.04	0.08	0.21	0.01	0.04	0.08	0.22
40	0.02	0.07	0.14	0.21	0.03	0.07	0.12	0.21
50	0.05	0.13	0.19	0.21	0.05	0.10	0.17	0.19
60	0.09	0.17	0.19	0.19	0.06	0.13	0.16	0.16

Lifetime Risk of Being Diagnosed = 0.27%
 Lifetime Risk of Dying = 0.23%

Lifetime Risk of Being Diagnosed = 0.27%
 Lifetime Risk of Dying = 0.19%

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

AVERAGE ANNUAL AGE-ADJUSTED CANCER MORTALITY δ RATES BY STATE, 1989-93

All Races, Males and Females

State	Rate	SE	Rank	PD
TOTAL U.S.	4.2	0.02		
High Five States				
North Dakota	5.6 δ	0.41	(01)	33.3
Oregon	5.0 δ	0.18	(02)	19.0
Tennessee	5.0 $\oplus\delta$	0.14	(03)	19.0
Arkansas	5.0 δ	0.19	(04)	19.0
Kansas	4.9 δ	0.19	(05)	16.7
Low Five States				
New York	3.5 $\oplus\delta$	0.06	(47)	-16.7
New Mexico	3.5 δ	0.21	(48)	-16.7
Alaska	3.3 δ	0.45	(49)	-21.4
District of Columbia	3.1 δ	0.32	(50)	-26.2
Hawaii	2.4 $\oplus\delta$	0.21	(51)	-42.9

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	4.0	0.13	(39)	-4.8	Montana	4.2	0.31	(27)	0.0
Alaska	3.3 δ	0.45	(49)	-21.4	Nebraska	4.5	0.23	(20)	7.1
Arizona	3.6	0.14	(45)	-14.3	Nevada	3.8	0.24	(44)	-9.5
Arkansas	5.0 δ	0.19	(04)	19.0	New Hampshire	4.6	0.28	(17)	9.5
California	4.1	0.05	(31)	-2.4	New Jersey	3.6 \oplus	0.09	(46)	-14.3
Colorado	4.6	0.17	(15)	9.5	New Mexico	3.5 δ	0.21	(48)	-16.7
Connecticut	3.9	0.15	(40)	-7.1	New York	3.5 $\oplus\delta$	0.06	(47)	-16.7
Delaware	4.1	0.34	(30)	-2.4	North Carolina	4.6	0.11	(18)	9.5
District of Columbia	3.1 δ	0.32	(50)	-26.2	North Dakota	5.6 δ	0.41	(01)	33.3
Florida	4.3	0.07	(25)	2.4	Ohio	4.1	0.08	(36)	-2.4
Georgia	4.1	0.11	(38)	-2.4	Oklahoma	4.6	0.16	(16)	9.5
Hawaii	2.4 $\oplus\delta$	0.21	(51)	-42.9	Oregon	5.0 δ	0.18	(02)	19.0
Idaho	4.6	0.30	(12)	9.5	Pennsylvania	4.2	0.08	(29)	0.0
Illinois	4.1	0.08	(37)	-2.4	Rhode Island	4.4	0.28	(22)	4.8
Indiana	4.3	0.12	(26)	2.4	South Carolina	4.8	0.16	(08)	14.3
Iowa	4.7	0.17	(10)	11.9	South Dakota	4.6	0.34	(14)	9.5
Kansas	4.9 δ	0.19	(05)	16.7	Tennessee	5.0 $\oplus\delta$	0.14	(03)	19.0
Kentucky	4.9 δ	0.16	(06)	16.7	Texas	4.6	0.08	(13)	9.5
Louisiana	3.9	0.13	(43)	-7.1	Utah	4.1	0.24	(34)	-2.4
Maine	4.1	0.24	(35)	-2.4	Vermont	4.1	0.37	(33)	-2.4
Maryland	4.1	0.13	(32)	-2.4	Virginia	3.9	0.11	(41)	-7.1
Massachusetts	4.2	0.11	(28)	0.0	Washington	4.9 δ	0.14	(07)	16.7
Michigan	4.6	0.10	(19)	9.5	West Virginia	3.9	0.19	(42)	-7.1
Minnesota	4.7	0.14	(11)	11.9	Wisconsin	4.4	0.13	(21)	4.8
Mississippi	4.8	0.19	(09)	14.3	Wyoming	4.3	0.44	(24)	2.4
Missouri	4.4	0.12	(23)	4.8					

δ NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

SE Standard error of the rate.

PD Percent difference between state rate and total U.S. rate.

δ Absolute difference between state rate and total U.S. rate is 15% or more.

\oplus Difference between state rate and total U.S. rate is statistically significant ($p \leq .0002$).

Table III-13
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

AVERAGE ANNUAL AGE-ADJUSTED CANCER MORTALITY δ RATES BY STATE, 1989-93

All Races, Males

State	Rate	SE	Rank	PD
TOTAL U.S.	5.1	0.03		
High Five States				
North Dakota	6.6 δ	0.64	(01)	29.4
South Carolina	6.2 δ	0.28	(02)	21.6
Tennessee	6.1 δ	0.23	(03)	19.6
Oregon	5.9 δ	0.29	(04)	15.7
Washington	5.9 δ	0.22	(05)	15.7
Low Five States				
New Mexico	4.4	0.35	(47)	-13.7
New York	4.4 \oplus	0.10	(48)	-13.7
Alaska	4.3 δ	0.71	(49)	-15.7
District of Columbia	4.1 δ	0.55	(50)	-19.6
Hawaii	3.1 $\oplus\delta$	0.33	(51)	-39.2

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	4.9	0.22	(38)	-3.9	Montana	5.0	0.48	(33)	-2.0
Alaska	4.3 δ	0.71	(49)	-15.7	Nebraska	5.3	0.37	(22)	3.9
Arizona	4.4	0.22	(46)	-13.7	Nevada	4.9	0.40	(37)	-3.9
Arkansas	5.6	0.30	(10)	9.8	New Hampshire	5.7	0.47	(08)	11.8
California	5.0	0.09	(32)	-2.0	New Jersey	4.5	0.15	(45)	-11.8
Colorado	5.5	0.27	(13)	7.8	New Mexico	4.4	0.35	(47)	-13.7
Connecticut	5.0	0.25	(34)	-2.0	New York	4.4 \oplus	0.10	(48)	-13.7
Delaware	5.3	0.57	(24)	3.9	North Carolina	5.5	0.19	(15)	7.8
District of Columbia	4.1 δ	0.55	(50)	-19.6	North Dakota	6.6 δ	0.64	(01)	29.4
Florida	5.2	0.12	(27)	2.0	Ohio	5.0	0.14	(30)	-2.0
Georgia	4.7	0.18	(41)	-7.8	Oklahoma	5.6	0.26	(09)	9.8
Hawaii	3.1 $\oplus\delta$	0.33	(51)	-39.2	Oregon	5.9 δ	0.29	(04)	15.7
Idaho	4.9	0.45	(35)	-3.9	Pennsylvania	5.1	0.13	(28)	0.0
Illinois	5.0	0.14	(29)	-2.0	Rhode Island	5.3	0.46	(20)	3.9
Indiana	5.3	0.20	(21)	3.9	South Carolina	6.2 δ	0.28	(02)	21.6
Iowa	5.7	0.28	(07)	11.8	South Dakota	5.4	0.55	(19)	5.9
Kansas	5.9 δ	0.31	(06)	15.7	Tennessee	6.1 δ	0.23	(03)	19.6
Kentucky	5.6	0.25	(12)	9.8	Texas	5.4	0.12	(18)	5.9
Louisiana	4.6	0.22	(42)	-9.8	Utah	4.5	0.36	(44)	-11.8
Maine	4.9	0.39	(36)	-3.9	Vermont	5.3	0.62	(23)	3.9
Maryland	5.0	0.21	(31)	-2.0	Virginia	4.8	0.18	(39)	-5.9
Massachusetts	5.2	0.19	(26)	2.0	Washington	5.9 δ	0.22	(05)	15.7
Michigan	5.6	0.16	(11)	9.8	West Virginia	4.5	0.31	(43)	-11.8
Minnesota	5.5	0.23	(14)	7.8	Wisconsin	5.4	0.21	(16)	5.9
Mississippi	5.4	0.30	(17)	5.9	Wyoming	4.8	0.67	(40)	-5.9
Missouri	5.3	0.20	(25)	3.9					

δ NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

SE Standard error of the rate.

PD Percent difference between state rate and total U.S. rate.

δ Absolute difference between state rate and total U.S. rate is 15% or more.

\oplus Difference between state rate and total U.S. rate is statistically significant ($p \leq .0002$).

Table III-14
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)

AVERAGE ANNUAL AGE-ADJUSTED CANCER MORTALITY^δ RATES BY STATE, 1989-93

All Races, Females

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
TOTAL U.S.	3.5	0.02							
High Five States									
North Dakota	4.7 [*]	0.53	(01)	34.3	Montana	3.6	0.40	(26)	2.9
Arkansas	4.5 [*]	0.25	(02)	28.6	Nebraska	3.8	0.29	(15)	8.6
Kentucky	4.4 [*]	0.20	(03)	25.7	Nevada	2.8 [*]	0.30	(46)	-20.0
Idaho	4.3 [*]	0.39	(04)	22.9	New Hampshire	3.6	0.35	(24)	2.9
Mississippi	4.3 [*]	0.24	(05)	22.9	New Jersey	2.9 [⊕]	0.11	(45)	-17.1
Low Five States					New Mexico	2.7 [*]	0.26	(48)	-22.9
New York	2.8 [⊕]	0.07	(47)	-20.0	New York	2.8 [⊕]	0.07	(47)	-20.0
New Mexico	2.7 [*]	0.26	(48)	-22.9	North Carolina	3.9	0.14	(13)	11.4
District of Columbia	2.2 [*]	0.38	(49)	-37.1	North Dakota	4.7 [*]	0.53	(01)	34.3
Alaska	2.2 [*]	0.54	(50)	-37.1	Ohio	3.3	0.10	(37)	-5.7
Hawaii	1.8 [⊕]	0.25	(51)	-48.6	Oklahoma	3.7	0.20	(21)	5.7
					Oregon	4.2 [*]	0.22	(06)	20.0
Alabama	3.3	0.16	(34)	-5.7	Pennsylvania	3.3	0.09	(35)	-5.7
Alaska	2.2 [*]	0.54	(50)	-37.1	Rhode Island	3.7	0.35	(20)	5.7
Arizona	3.0	0.17	(43)	-14.3	South Carolina	3.7	0.19	(22)	5.7
Arkansas	4.5 [*]	0.25	(02)	28.6	South Dakota	3.9	0.43	(14)	11.4
California	3.4	0.07	(30)	-2.9	Tennessee	4.1 [*]	0.17	(08)	17.1
Colorado	3.7	0.21	(19)	5.7	Texas	3.9	0.09	(12)	11.4
Connecticut	3.1	0.18	(42)	-11.4	Utah	3.7	0.31	(18)	5.7
Delaware	3.3	0.41	(39)	-5.7	Vermont	2.9 [*]	0.43	(44)	-17.1
District of Columbia	2.2 [*]	0.38	(49)	-37.1	Virginia	3.2	0.14	(40)	-8.6
Florida	3.6	0.09	(23)	2.9	Washington	4.0	0.17	(09)	14.3
Georgia	3.5	0.14	(28)	0.0	West Virginia	3.3	0.24	(36)	-5.7
Hawaii	1.8 [⊕]	0.25	(51)	-48.6	Wisconsin	3.6	0.16	(27)	2.9
Idaho	4.3 [*]	0.39	(04)	22.9	Wyoming	3.8	0.58	(16)	8.6
Illinois	3.3	0.10	(38)	-5.7					
Indiana	3.5	0.15	(29)	0.0					
Iowa	3.9	0.22	(11)	11.4					
Kansas	4.2 [*]	0.24	(07)	20.0					
Kentucky	4.4 [*]	0.20	(03)	25.7					
Louisiana	3.2	0.17	(41)	-8.6					
Maine	3.3	0.30	(33)	-5.7					
Maryland	3.4	0.16	(32)	-2.9					
Massachusetts	3.4	0.14	(31)	-2.9					
Michigan	3.7	0.12	(17)	5.7					
Minnesota	4.0	0.18	(10)	14.3					
Mississippi	4.3 [*]	0.24	(05)	22.9					
Missouri	3.6	0.15	(25)	2.9					

^δ NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

SE Standard error of the rate.

PD Percent difference between state rate and total U.S. rate.

^{*} Absolute difference between state rate and total U.S. rate is 15% or more.

[⊕] Difference between state rate and total U.S. rate is statistically significant (p<=.0002).

Table III-15
BRAIN AND OTHER NERVOUS SYSTEM CANCER (Invasive)
 AGE-ADJUSTED SEER INCIDENCE RATES \S , SEER MORTALITY RATES δ , AND 5-YEAR RELATIVE SURVIVAL RATES ϕ
 By Registry, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER INCIDENCE RATES\S, 1989-93</u>									
REGISTRY									
Standard 9 registries	6.3	7.5	5.2	6.8	8.1	5.6	3.8	4.4	3.3
San Francisco-Oakland	6.3	7.7	5.0	7.0	8.5	5.7	4.4	5.8	3.2
Connecticut	6.7	8.1	5.5	7.0	8.4	5.8	3.0	3.8	2.2
Metropolitan Detroit	6.3	7.6	5.3	7.0	8.6	5.6	3.8	4.0	3.7
Hawaii	4.0	5.0	3.0	7.0	9.2	4.6	-	-	-
Iowa	6.7	8.2	5.4	6.7	8.1	5.4	-	-	-
New Mexico	4.7	5.7	4.0	4.9	5.7	4.2	-	-	-
Seattle-Puget Sound	6.6	7.9	5.3	6.9	8.1	5.8	3.0	4.9	0.7
Utah	6.6	7.3	5.9	6.7	7.4	6.0	-	-	-
Metropolitan Atlanta	6.2	7.0	5.5	7.1	8.0	6.3	3.8	3.9	3.7
San Jose-Monterey	6.1	6.7	5.5	6.6	7.4	5.9	5.3	1.8	8.1
Los Angeles	5.6	6.9	4.6	6.2	7.6	5.0	4.1	4.7	3.7
<u>SEER MORTALITY RATESδ, 1989-93</u>									
REGISTRY									
Standard 9 registries	4.2	5.1	3.4	4.5	5.5	3.8	2.7	3.3	2.2
San Francisco-Oakland	4.0	4.9	3.2	4.7	5.7	3.7	2.7	3.2	2.2
Connecticut	3.9	5.0	3.1	4.1	5.2	3.1	2.1	2.1	2.1
Metropolitan Detroit	4.5	5.6	3.6	4.9	6.1	3.9	2.8	3.5	2.2
Hawaii	2.4	3.1	1.8	4.2	5.9	2.6	-	-	-
Iowa	4.7	5.7	3.9	4.8	5.7	4.0	-	-	-
New Mexico	3.5	4.4	2.7	3.6	4.5	2.9	-	-	-
Seattle-Puget Sound	4.9	5.8	4.1	5.1	6.0	4.3	3.0	4.3	1.5
Utah	4.1	4.5	3.7	4.2	4.6	3.8	-	-	-
Metropolitan Atlanta	3.9	4.4	3.5	4.3	4.8	3.9	3.0	3.5	2.7
San Jose-Monterey	3.7	4.7	2.9	4.1	5.2	3.1	1.7	1.5	1.8
Los Angeles	4.1	5.1	3.4	4.6	5.7	3.7	2.9	3.4	2.6
<u>SURVIVAL RATESϕ, 1986-92</u>									
REGISTRY									
Standard 9 registries	29.3	28.4	30.3	28.8	27.6	30.2	31.8	35.3	27.9
San Francisco-Oakland	32.0	30.5	33.9	30.9	28.7	33.8	32.8 \uparrow	36.8 \uparrow	25.8 \uparrow
Connecticut	26.0	24.7	28.0	25.7	24.0	28.2	34.0 \uparrow	43.7 \uparrow	-
Metropolitan Detroit	27.6	28.1	27.0	27.7	27.9	27.5	25.6	27.7 \uparrow	23.3 \uparrow
Hawaii	33.4	28.4	39.5 \uparrow	30.9	24.7 \uparrow	37.7 \uparrow	-	-	-
Iowa	26.7	26.2	27.2	26.2	25.5	27.0	-	-	-
New Mexico	27.8	23.8	32.5	27.0	23.2	31.6	-	-	-
Seattle-Puget Sound	30.7	31.5	29.6	30.8	31.3	30.1	-	-	-
Utah	32.0	31.0	33.0	31.9	30.8	33.1	-	-	-
Metropolitan Atlanta	32.6	31.0	34.3	32.4	30.2	34.9	33.1	34.5 \uparrow	31.6 \uparrow

Note: San Jose-Monterey and Los Angeles are new SEER areas as of 1992 and their data are only used in this table and not other tables in this section.

\S SEER Program. Incidence rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

δ NCHS public use tape. Mortality rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

ϕ Survival rates are relative rates expressed as percents and are based on follow-up of patients through 1993.

\uparrow The standard error of the survival rate is between 5 and 10 percentage points.

\uparrow The standard error of the survival rate is greater than 10 percentage points.

- Statistic could not be calculated or populations are inadequate.

SEER Incidence and U.S. Mortality Brain and Other Nervous System, Male By Race

White

Black

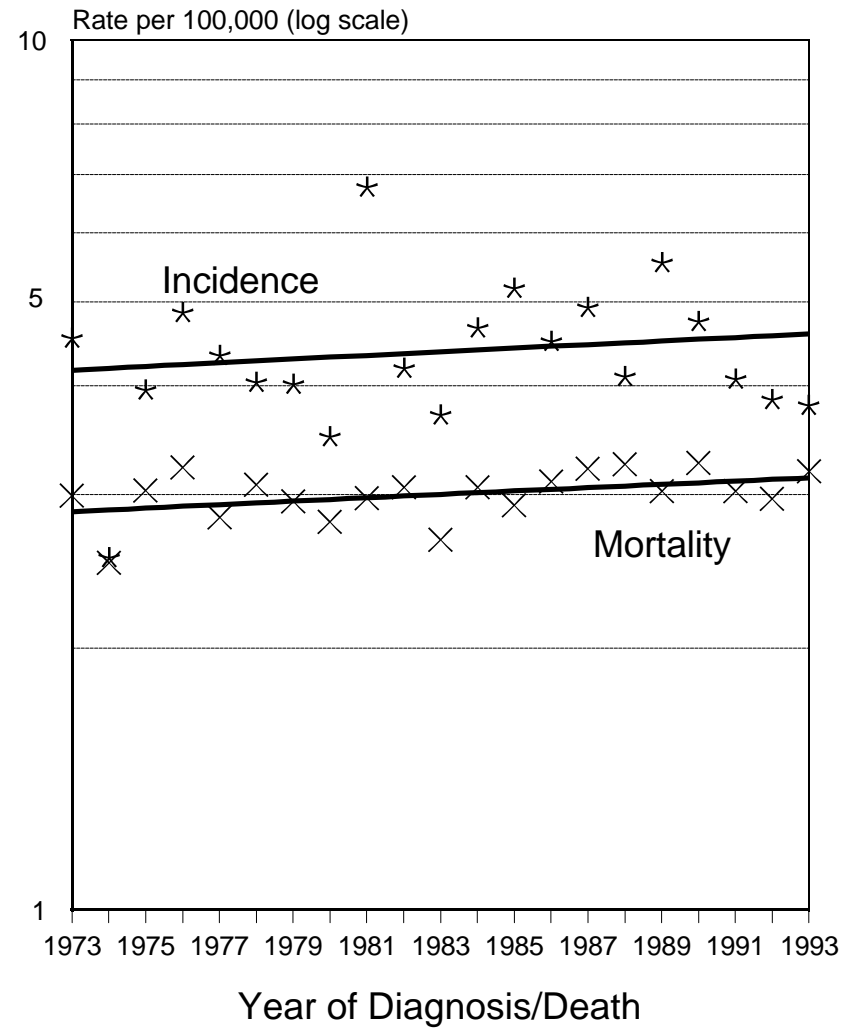
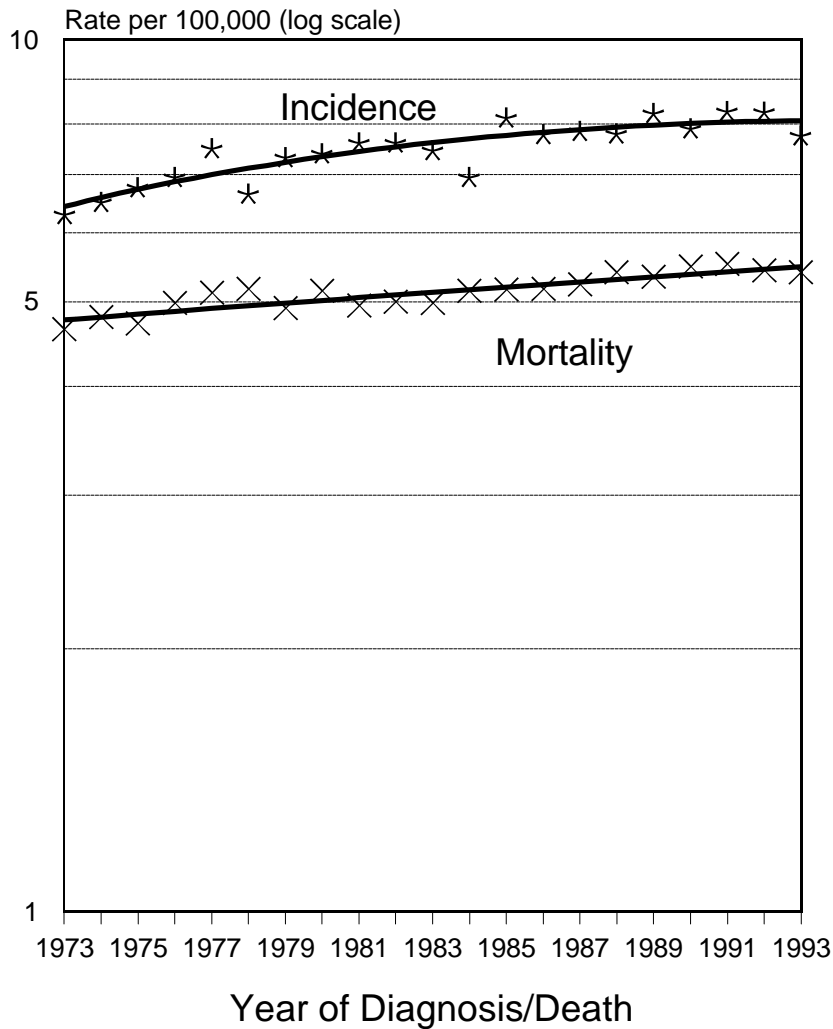


Figure III-1

SEER Incidence and U.S. Mortality Brain and Other Nervous System, Female By Race

White

Black

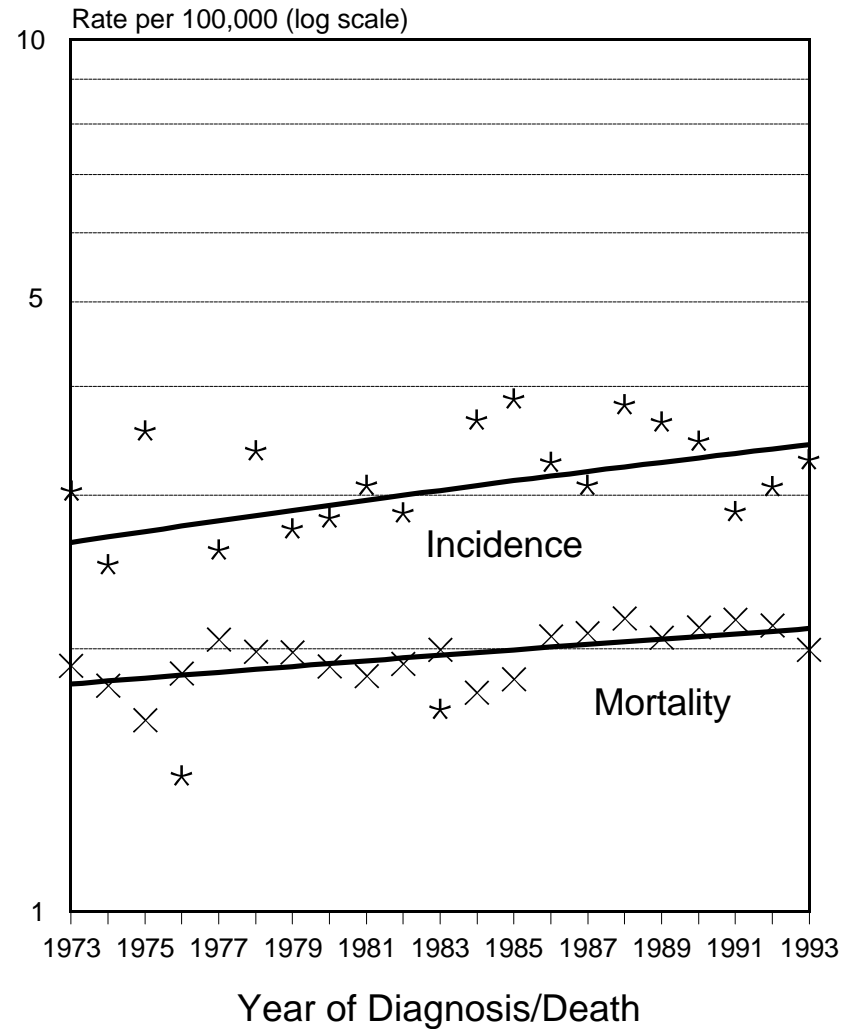
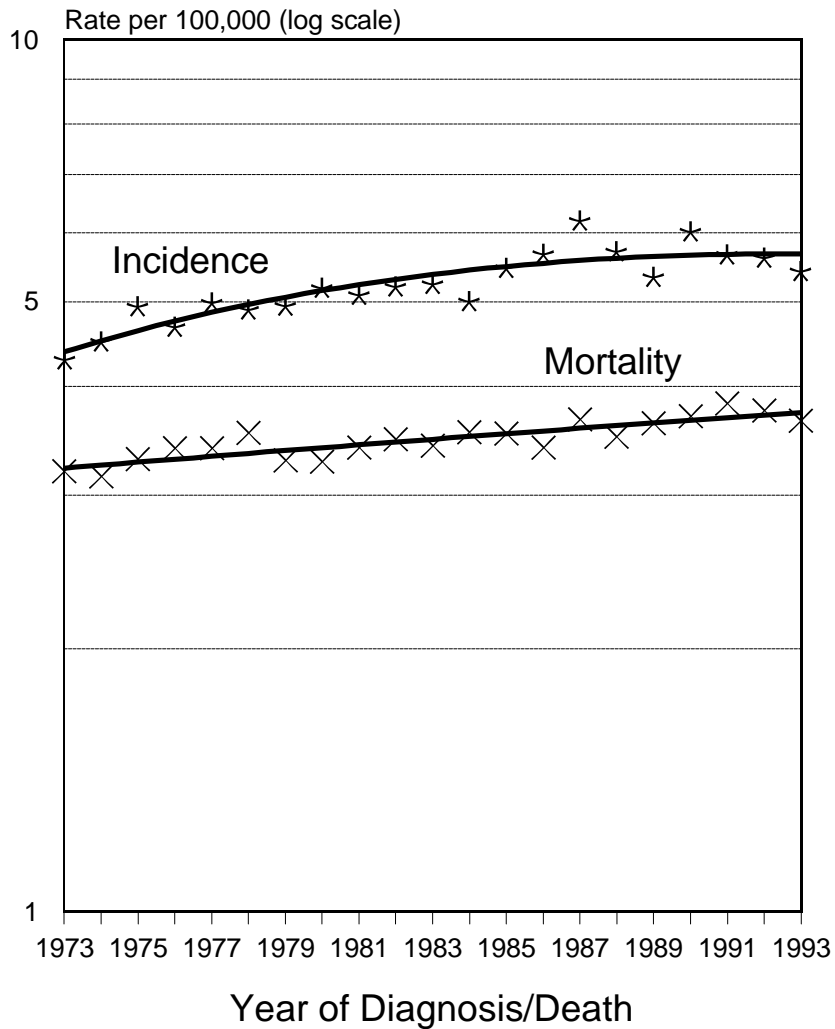


Figure III-2