

Table XII-1
LARYNX 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>1973-94</u>									
All Ages									
Percent Change (PC)	-11.4	-14.1	5.5	-12.8	-17.1	9.0	15.0	21.0	12.4
Est. Annual PC (EAPC)	-0.4★	-0.7★	1.0★	-0.5★	-0.8★	1.0★	0.8★	0.8★	1.8
Under 65									
Percent Change (PC)	-24.9	-26.6	-16.3	-25.8	-29.2	-12.9	-9.6	-1.7	-23.9
Est. Annual PC (EAPC)	-1.2★	-1.5★	-0.3	-1.3★	-1.6★	-0.3	-0.3	-0.1	-0.2
65 and over									
Percent Change (PC)	8.6	1.3	51.3	5.6	-3.1	54.0	81.3	70.5	180.6
Est. Annual PC (EAPC)	0.6★	0.1	3.3★	0.6★	0.0	3.3★	2.8★	2.3★	-
<u>1975-79 - ALL AGES</u>									
Percent Change (PC)	3.9	1.4	21.2	5.0	2.6	19.2	0.1	-5.4	48.2
Est. Annual PC (EAPC)	1.5	0.9	5.0	1.8	1.4	4.5	0.4	-1.2	12.3
<u>1990-94 - ALL AGES</u>									
Percent Change (PC)	-9.1	-7.8	-13.6	-10.2	-9.2	-13.7	-0.9	-0.1	-6.6
Est. Annual PC (EAPC)	-2.9◇	-2.7◇	-3.8	-3.2◆	-3.0◆	-3.9◇	-0.5	-0.7	-2.1
<u>MORTALITY TRENDS (expressed in percents)*:</u>									
<u>1973-94</u>									
All Ages									
Percent Change (PC)	-6.8	-14.1	42.2	-11.5	-19.1	37.5	25.6	24.0	78.7
Est. Annual PC (EAPC)	-0.4★	-0.8★	1.6★	-0.7★	-1.2★	1.4★	1.2★	1.2★	2.6★
Under 65									
Percent Change (PC)	-19.2	-23.4	0.0	-25.3	-29.7	-6.6	7.9	5.9	33.4
Est. Annual PC (EAPC)	-1.0★	-1.2★	-0.2	-1.4★	-1.7★	-0.5	0.5★	0.5★	1.1
65 and over									
Percent Change (PC)	6.2	-6.1	111.8	1.6	-11.0	102.4	59.0	53.5	228.7
Est. Annual PC (EAPC)	0.1	-0.5★	3.7★	-0.1	-0.8★	3.5★	2.3★	2.1★	6.3★
<u>1975-79 - ALL AGES</u>									
Percent Change (PC)	-0.7	-0.2	-1.2	-1.4	-1.7	0.7	5.1	10.2	-12.2
Est. Annual PC (EAPC)	-0.2	-0.1	-0.3	-0.4	-0.5	0.4	1.0	2.5	-4.4★
<u>1990-94 - ALL AGES</u>									
Percent Change (PC)	-2.0	-2.0	-3.7	-2.7	-3.2	-2.4	1.5	4.7	-8.8
Est. Annual PC (EAPC)	-0.4	-0.6	-0.2	-0.7	-1.1	0.3	1.0	1.9	-2.1

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

* NCHS public use tape.

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

◆ The EAPC for 1990-94 is significantly different from the EAPC for 1975-79 (p<.05).

◇ The EAPC for 1990-94 is significantly different from the EAPC for 1975-79 (p<.10).

- Statistic could not be calculated.

Table XII-2
LARYNX 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>									
<u>YEAR OF DIAGNOSIS:</u>									
1973	4.5	8.4	1.3	4.4	8.4	1.2	6.3	11.9	1.8
1974	4.5	8.2	1.4	4.5	8.3	1.4	6.0	10.1	2.4
1975	4.5	8.3	1.3	4.4	8.3	1.3	6.4	11.9	1.8
1976	4.7	8.9	1.2	4.7	8.9	1.3	6.5	12.9	1.3
1977	4.5	8.5	1.2	4.4	8.4	1.2	6.4	11.9	2.0
1978	4.7	8.6	1.6	4.7	8.6	1.7	6.3	11.7	2.0
1979	4.8	8.9	1.5	4.8	9.0	1.5	6.7	11.8	2.7
1980	4.7	8.7	1.4	4.6	8.6	1.4	6.6	12.6	1.8
1981	4.8	8.6	1.7	4.7	8.4	1.8	7.2	14.5	1.6
1982	4.7	8.6	1.6	4.7	8.6	1.6	7.1	13.0	2.5
1983	4.8	8.8	1.6	4.9	9.0	1.6	6.1	10.9	2.4
1984	4.6	8.5	1.4	4.4	8.4	1.3	7.9	14.1	3.1
1985	4.9	8.7	1.8	4.8	8.7	1.8	7.5	13.4	3.0
1986	4.5	8.2	1.5	4.4	8.0	1.5	7.0	13.7	1.9
1987	4.7	8.3	1.8	4.6	8.2	1.7	7.3	13.3	2.8
1988	4.6	8.3	1.7	4.6	8.3	1.6	7.3	13.0	3.0
1989	4.5	7.8	1.8	4.5	7.8	1.8	7.0	12.6	2.9
1990	4.5	8.1	1.7	4.4	7.9	1.6	8.4	15.4	3.2
1991	4.2	7.4	1.6	4.2	7.4	1.7	5.9	11.3	1.9
1992	4.4	7.9	1.6	4.3	7.7	1.5	7.7	14.0	3.0
1993	3.9	7.0	1.3	3.8	6.8	1.4	6.2	12.6	1.3
1994	4.1	7.2	1.6	4.0	7.0	1.5	8.0	14.0	3.4
<u>AGE-ADJUSTED RATES, 1990-94</u>									
<u>AGE AT DIAGNOSIS:</u>									
All ages	4.2	7.5	1.6	4.2	7.4	1.5	7.2	13.4	2.6
Under 65	2.5	4.1	1.0	2.4	3.8	1.0	4.8	8.6	1.7
65 and over	20.4	39.3	6.9	20.5	39.5	6.8	29.4	57.3	10.7
All ages (world std.) ⁸	3.5	6.1	1.3	3.4	5.9	1.3	6.1	11.3	2.1
<u>AGE-SPECIFIC RATES, 1990-94</u>									
<u>AGE AT DIAGNOSIS:</u>									
0-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15-19	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0
20-24	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0
25-29	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
30-34	0.2	0.3	0.1	0.3	0.3	0.2	0.3	0.7	0.0
35-39	0.5	0.8	0.2	0.5	0.7	0.2	1.0	1.7	0.5
40-44	1.4	2.1	0.8	1.1	1.6	0.7	3.9	6.4	1.7
45-49	3.8	6.2	1.4	3.4	5.6	1.3	8.9	16.3	2.5
50-54	8.0	13.0	3.2	7.7	12.6	2.9	16.1	25.1	8.4
55-59	13.2	21.5	5.5	12.8	20.4	5.6	24.3	42.6	9.6
60-64	18.1	31.2	6.4	17.7	29.7	6.7	33.3	66.5	7.0
65-69	23.4	41.1	8.8	23.5	41.3	8.6	35.5	62.3	15.0
70-74	21.2	40.1	6.6	21.0	39.6	6.7	32.7	67.1	8.9
75-79	21.5	43.1	6.9	22.0	44.5	7.0	21.2	44.6	6.9
80-84	15.4	34.6	4.8	15.3	35.6	4.4	23.9	50.6	9.8
85+	9.0	25.5	2.6	8.3	24.2	2.4	18.0	41.3	8.1

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

⁸ SEER Program. Rates are per 100,000 and are age-adjusted to the world standard population.

Table XII-3
LARYNX CANCER (Invasive)

U.S. MORTALITY 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>									
<u>YEAR OF DEATH:</u>									
1973	1.4	2.8	0.3	1.3	2.7	0.3	2.2	4.3	0.5
1974	1.5	2.9	0.4	1.4	2.8	0.3	2.3	4.6	0.6
1975	1.5	2.8	0.4	1.4	2.7	0.4	2.3	4.4	0.7
1976	1.5	2.9	0.4	1.4	2.7	0.4	2.3	4.4	0.7
1977	1.5	2.9	0.4	1.4	2.7	0.4	2.4	4.7	0.6
1978	1.5	2.9	0.4	1.4	2.7	0.4	2.6	5.1	0.6
1979	1.4	2.8	0.4	1.4	2.7	0.4	2.3	4.6	0.6
1980	1.4	2.7	0.4	1.3	2.5	0.4	2.6	5.0	0.8
1981	1.4	2.7	0.5	1.3	2.6	0.4	2.6	4.8	1.0
1982	1.4	2.7	0.5	1.4	2.6	0.5	2.5	4.8	0.7
1983	1.4	2.7	0.5	1.3	2.5	0.4	2.4	4.6	0.8
1984	1.4	2.7	0.5	1.3	2.4	0.5	2.8	5.5	0.7
1985	1.3	2.5	0.5	1.2	2.3	0.4	2.6	5.0	0.8
1986	1.4	2.6	0.5	1.3	2.3	0.4	2.7	5.2	0.9
1987	1.4	2.6	0.5	1.3	2.4	0.4	2.6	5.1	0.8
1988	1.4	2.5	0.5	1.2	2.3	0.4	2.8	5.9	0.7
1989	1.4	2.5	0.5	1.2	2.2	0.5	2.8	5.7	0.8
1990	1.3	2.5	0.5	1.2	2.3	0.4	2.6	5.0	1.0
1991	1.4	2.6	0.6	1.3	2.3	0.5	2.9	5.5	1.1
1992	1.4	2.5	0.5	1.3	2.3	0.5	2.9	5.6	1.0
1993	1.4	2.5	0.5	1.2	2.3	0.4	2.9	5.5	0.9
1994	1.3	2.4	0.5	1.2	2.2	0.5	2.8	5.5	0.9
<u>AGE-ADJUSTED RATES, 1990-94</u>									
<u>AGE AT DEATH:</u>									
All ages	1.4	2.5	0.5	1.2	2.3	0.5	2.8	5.4	1.0
Under 65	0.7	1.2	0.3	0.6	1.0	0.2	1.8	3.3	0.7
65 and over	7.6	14.8	2.8	7.3	14.1	2.7	12.1	25.2	3.9
All ages (world std.)N	1.1	2.0	0.4	1.0	1.7	0.4	2.4	4.4	0.8
<u>AGE-SPECIFIC RATES, 1990-94</u>									
<u>AGE AT DEATH:</u>									
0-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15-19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20-24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25-29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30-34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
35-39	0.1	0.2	0.0	0.1	0.1	0.0	0.3	0.5	0.1
40-44	0.3	0.5	0.1	0.2	0.4	0.1	1.2	2.1	0.4
45-49	0.9	1.5	0.3	0.6	1.0	0.2	3.4	6.0	1.1
50-54	2.2	3.7	0.8	1.7	2.8	0.6	7.1	13.0	2.3
55-59	3.7	6.2	1.5	3.2	5.3	1.2	9.6	16.7	4.0
60-64	5.6	9.5	2.2	5.1	8.5	2.0	11.4	21.0	4.2
65-69	7.2	12.5	2.8	6.7	11.6	2.7	13.1	25.0	4.4
70-74	7.9	14.6	2.9	7.6	13.8	2.8	13.2	25.8	4.7
75-79	7.9	15.1	3.1	7.6	14.4	3.1	11.4	25.1	3.3
80-84	8.0	18.6	2.3	7.9	18.5	2.3	9.7	23.2	2.8
85+	6.8	19.6	2.0	6.7	19.0	2.0	9.3	27.8	1.7

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

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

Table XII-4
LARYNX 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	-	-	-	53	54	46	-	-	-
1970-73 ^a	-	-	-	62	63	56	-	-	-
1974-76 ^b	65.6	65.2	67.9	66.5	66.0	68.8	58.3	57.1	63.8↑
1977-79 ^b	67.1	67.9	62.8	68.2	69.4	62.6	56.0	54.3	63.0↑
1980-82 ^b	68.1	68.1	68.4	69.3	69.0	70.3	58.5	60.1	50.4↑
1983-85 ^b	67.7	69.0	61.8	69.3	70.5	63.6	55.5	56.3	53.0↑
1986-93 ^b	67.1	68.2	62.9	69.1	70.5	63.6	54.2	53.0	58.7
1986-93 ^b									
ALL STAGES	67.1	68.2	62.9	69.1	70.5	63.6	54.2	53.0	58.7
LOCALIZED	84.6	85.4	80.9	85.9	86.9	81.0	72.6	70.7	79.0↑
REGIONAL	54.7	55.2	53.0	56.6	57.2	54.7	44.3	45.3	39.0↑
DISTANT	41.6	40.6	45.1	42.0	41.7	43.2↑	40.1	35.2↑	54.5↑
UNSTAGED	45.4	46.8	40.7↑	47.6	49.3	42.4↑	32.1↑	32.7↑	-
<u>STAGE DISTRIBUTION (%) 1986-93^b</u>									
ALL STAGES									
Number of cases	7,236	5,861	1,375	6,111	4,945	1,166	941	757	184
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
LOCALIZED	49	51	43	51	53	43	41	41	39
REGIONAL	32	31	36	31	30	37	35	36	35
DISTANT	13	13	14	12	12	13	18	17	21
UNSTAGED	6	6	7	6	6	7	6	6	6
<u>5-YR RELATIVE SURVIVAL RATES, 1986-93^b</u>									
AGE AT DIAGNOSIS:									
<45	68.1	67.7	68.6↑	73.7	73.7	72.3↑	42.0↑	37.3↑	-
45-54	71.6	72.6	68.0	75.5	76.6	71.5	57.0	57.7	55.1↑
55-64	66.2	66.7	64.5	68.2	68.9	65.6	52.1	50.4	58.6↑
65-74	66.2	67.7	60.7	66.8	68.7	60.1	61.1	59.8↑	66.6↑
75+	64.6	67.7	52.4↑	67.2	70.7	53.3↑	43.1↑	43.5↑	-
Under 65	67.8	68.3	65.9	70.6	71.3	67.7	52.5	51.2	57.2↑
65 and over	66.0	67.8	59.0	67.1	69.3	58.8	57.6	56.5	62.5↑

^a

^b

Rates are based on End Results data from a series of hospital registries and one population-based registry.

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 1994.

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The difference in rates between 1974-76 and 1986-93 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.

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Statistic could not be calculated.

Table XII-5
LARYNX 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	1994
Incidence																						
SEER	4.5	4.5	4.5	4.7	4.5	4.7	4.8	4.7	4.8	4.7	4.8	4.6	4.9	4.5	4.7	4.6	4.5	4.5	4.2	4.4	3.9	4.1
Mortality																						
U.S.	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.3	1.4	1.4	1.4	1.3
SEER	1.3	1.3	1.4	1.4	1.5	1.3	1.3	1.4	1.4	1.3	1.4	1.2	1.3	1.2	1.2	1.3	1.2	1.3	1.3	1.3	1.2	1.2
Relative Survival Rates (SEER)																						
1-year	85.3	88.3	88.8	88.8	89.6	88.0	87.2	88.9	89.5	88.4	90.3	88.4	90.8	89.9	88.2	87.0	89.6	88.0	90.8	88.4	87.5	
2-year	74.3	80.2	76.9	77.0	82.8	79.8	79.0	79.5	82.4	79.8	81.9	77.4	81.1	81.0	79.5	77.3	80.5	78.3	80.9	78.2		
3-year	67.6	74.8	70.6	71.7	77.4	74.8	72.3	75.4	76.3	75.2	75.7	71.4	76.2	74.1	74.5	72.8	75.0	71.7	74.0			
4-year	62.8	70.8	66.2	67.8	73.6	69.8	67.9	70.7	72.9	71.5	72.4	66.6	70.9	69.9	70.9	70.2	68.1	67.6				
5-year	61.2	68.3	63.7	65.0	70.7	67.2	63.6	66.6	69.3	68.4	69.6	64.2	69.0	66.9	68.7	67.9	64.6					
6-year	57.5	66.5	60.2	62.6	67.6	66.3	62.5	64.4	66.7	65.6	66.8	62.4	65.4	62.7	65.7	65.6						
7-year	56.3	64.7	56.9	61.6	65.5	62.7	61.4	61.8	64.0	63.7	64.3	60.8	63.1	60.5	62.4							
8-year	54.4	62.5	54.2	59.4	63.2	61.1	60.8	60.5	62.5	61.5	63.2	59.7	60.0	58.7								
9-year	51.5	61.2	51.6	58.5	61.3	57.7	59.3	57.8	61.6	58.6	60.9	57.9	57.8									
10-year	48.1	60.0	50.0	56.0	59.8	55.1	57.6	56.4	60.1	56.9	59.1	56.2										
11-year	46.6	57.5	49.3	54.8	59.8	53.7	55.1	53.6	58.5	55.1	57.1											
12-year	43.4	56.7	46.9	54.1	57.2	52.5	54.2	52.1	57.5	51.4												
13-year	41.8	55.5	46.8	52.8	55.9	50.8	53.4	50.6	55.8													
14-year	41.3	52.8	46.2	52.0	54.3	49.8	51.0	50.5														
15-year	40.7	50.9	44.9	51.9	51.5	47.7	46.8															
16-year	37.9	47.2	42.8	49.1	50.0	46.8																
17-year	37.9	44.6	41.8	47.2	48.4																	
18-year	37.9	43.6	41.8	46.3																		
19-year	36.9	41.1	38.5																			
20-year	34.5	38.9																				
21-year	34.3																					

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 XII-6
LARYNX 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	1994
Incidence																						
SEER	8.4	8.2	8.3	8.9	8.5	8.6	8.9	8.7	8.6	8.6	8.8	8.5	8.7	8.2	8.3	8.3	7.8	8.1	7.4	7.9	7.0	7.2
Mortality																						
U.S.	2.8	2.9	2.8	2.9	2.9	2.9	2.8	2.7	2.7	2.7	2.7	2.7	2.5	2.6	2.6	2.5	2.5	2.5	2.6	2.5	2.5	2.4
SEER	2.7	2.6	2.7	2.7	2.8	2.6	2.5	2.6	2.5	2.4	2.5	2.3	2.4	2.3	2.1	2.3	2.2	2.3	2.4	2.2	2.2	2.2
Relative Survival Rates (SEER)																						
1-year	84.1	89.0	89.4	89.3	90.2	87.5	87.4	88.8	89.5	88.7	90.6	88.7	90.9	90.2	88.9	87.2	90.1	88.6	90.9	88.6	88.1	
2-year	72.7	80.1	77.2	76.7	83.7	79.1	79.1	79.7	82.9	80.3	82.3	77.2	82.0	81.1	80.6	76.7	81.5	79.1	81.3	79.4		
3-year	65.3	74.3	71.0	71.5	78.7	75.0	72.2	76.2	77.0	75.3	76.4	71.6	76.9	74.9	77.0	71.7	75.8	72.1	74.0			
4-year	60.9	70.6	66.2	67.4	75.6	70.1	67.8	71.5	73.2	71.3	73.6	68.1	71.7	70.5	73.2	69.7	70.0	68.5				
5-year	59.1	67.5	63.3	64.9	73.0	67.7	63.4	67.4	69.1	67.7	71.3	65.7	69.9	67.5	70.8	67.7	66.8					
6-year	55.7	66.1	59.9	62.7	69.8	66.8	62.2	64.9	66.8	65.1	68.7	63.8	66.5	63.4	68.4	65.6						
7-year	54.4	64.6	56.4	61.9	67.8	63.4	61.3	62.2	63.9	63.8	66.2	62.2	64.6	61.3	65.1							
8-year	52.5	62.2	53.8	59.5	65.1	62.0	60.9	60.8	62.8	61.9	65.1	61.5	62.6	59.4								
9-year	50.6	61.3	51.1	58.8	63.3	58.9	59.3	57.8	62.0	59.2	62.8	59.8	60.6									
10-year	47.7	60.1	49.9	56.4	61.8	56.9	57.6	57.1	61.9	57.7	60.4	58.1										
11-year	46.5	57.4	49.7	55.4	61.7	56.0	55.7	54.6	60.0	55.6	58.5											
12-year	43.0	56.1	48.0	55.4	58.7	55.0	54.9	53.1	58.9	52.6												
13-year	41.2	55.4	47.9	54.2	57.9	53.8	54.2	52.1	57.6													
14-year	41.0	52.7	47.5	53.9	56.0	52.3	51.4	52.1														
15-year	41.0	51.1	46.6	53.6	52.8	50.3	48.1															
16-year	37.9	47.2	44.1	50.8	50.9	49.4																
17-year	37.9	44.9	43.8	48.2	49.8																	
18-year	37.9	43.9	43.8	47.4																		
19-year	37.0	42.2	39.8																			
20-year	34.6	40.6																				
21-year	34.4																					

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 XII-7
LARYNX 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	1994
Incidence																						
SEER	1.3	1.4	1.3	1.2	1.2	1.6	1.5	1.4	1.7	1.6	1.6	1.4	1.8	1.5	1.8	1.7	1.8	1.7	1.6	1.6	1.3	1.6
Mortality																						
U.S.	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5
SEER	0.3	0.3	0.5	0.5	0.5	0.3	0.4	0.5	0.5	0.5	0.6	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4
Relative Survival Rates (SEER)																						
1-year	91.8	84.3	85.5	85.8	86.5	90.7	86.2	89.8	89.1	87.0	88.8	87.2	90.0	88.4	85.4	85.8	87.8	85.7	90.4	87.2	84.4	
2-year	82.3	80.7	75.4	78.3	77.7	83.0	78.4	78.7	80.2	78.0	79.9	78.2	77.1	80.6	74.9	79.9	76.7	74.8	79.1	72.9		
3-year	79.7	76.8	68.3	73.3	70.4	73.9	72.6	71.7	73.4	75.1	72.5	70.2	72.8	70.3	64.6	77.4	72.2	69.9	74.0			
4-year	72.5	72.1	66.1	70.0	62.9	68.5	68.2	66.9	72.0	72.7	66.9	59.6	67.1	66.9	61.9	72.3	61.7	64.1				
5-year	71.7	72.1	65.6	65.7	57.9	65.1	64.4	62.8	70.5	71.0	62.4	57.1	65.2	64.0	60.3	68.9	57.1					
6-year	66.5	68.4	61.6	62.3	55.5	64.3	63.6	61.7	66.4	67.8	58.5	56.2	60.6	59.6	55.5	65.8						
7-year	65.6	65.3	59.3	59.7	53.9	60.0	62.0	59.9	64.1	63.1	56.5	54.4	57.2	57.3	52.4							
8-year	63.6	63.9	56.1	59.0	53.3	57.7	60.4	58.8	61.0	59.7	55.1	51.6	49.9	55.5								
9-year	55.6	60.6	53.7	56.4	51.7	53.1	59.5	57.7	60.0	56.0	53.0	49.5	46.8									
10-year	49.6	59.2	50.2	53.7	50.0	48.4	57.7	53.1	53.7	53.8	53.0	48.2										
11-year	47.0	57.8	47.6	52.0	50.0	45.8	52.2	49.2	53.1	53.1	51.7											
12-year	45.6	57.8	42.0	47.0	49.8	43.8	51.0	47.9	52.4	47.0												
13-year	44.1	55.7	42.0	46.2	46.9	41.0	49.8	44.4	49.7													
14-year	42.6	53.0	41.3	43.0	46.2	41.0	49.5	43.9														
15-year	39.6	50.1	38.3	43.0	45.5	39.2	41.6															
16-year	37.9	47.0	37.4	41.1	45.5	38.7																
17-year	37.9	43.6	34.1	41.1	42.3																	
18-year	37.9	42.7	34.1	41.1																		
19-year	37.0	37.4	34.1																			
20-year	34.9	33.1																				
21-year	34.5																					

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 XII-8
LARYNX 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, 1992-94

All Races

Current Age	Males				Females			
	+10 yrs	+20 yrs	+30 yrs	Eventually	+10 yrs	+20 yrs	+30 yrs	Eventually
0	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.18
10	0.00	0.00	0.01	0.78	0.00	0.00	0.00	0.18
20	0.00	0.01	0.04	0.78	0.00	0.00	0.01	0.18
30	0.01	0.04	0.19	0.80	0.00	0.01	0.05	0.18
40	0.04	0.19	0.46	0.81	0.01	0.05	0.11	0.18
50	0.16	0.44	0.70	0.80	0.04	0.10	0.16	0.17
60	0.31	0.59	0.69	0.70	0.07	0.12	0.14	0.14

Lifetime Risk of Being Diagnosed = 0.77%
 Lifetime Risk of Dying = 0.25%

Lifetime Risk of Being Diagnosed = 0.18%
 Lifetime Risk of Dying = 0.06%

Whites

Current Age	Males				Females			
	+10 yrs	+20 yrs	+30 yrs	Eventually	+10 yrs	+20 yrs	+30 yrs	Eventually
0	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.18
10	0.00	0.00	0.01	0.78	0.00	0.00	0.00	0.18
20	0.00	0.01	0.04	0.78	0.00	0.00	0.01	0.18
30	0.01	0.04	0.18	0.79	0.00	0.01	0.05	0.18
40	0.04	0.18	0.45	0.80	0.01	0.05	0.11	0.18
50	0.15	0.43	0.69	0.80	0.04	0.10	0.16	0.17
60	0.30	0.59	0.69	0.70	0.07	0.12	0.14	0.14

Lifetime Risk of Being Diagnosed = 0.77%
 Lifetime Risk of Dying = 0.25%

Lifetime Risk of Being Diagnosed = 0.18%
 Lifetime Risk of Dying = 0.06%

Blacks

Current Age	Males				Females			
	+10 yrs	+20 yrs	+30 yrs	Eventually	+10 yrs	+20 yrs	+30 yrs	Eventually
0	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.27
10	0.00	0.00	0.01	1.02	0.00	0.00	0.00	0.28
20	0.00	0.01	0.10	1.03	0.00	0.00	0.02	0.28
30	0.01	0.10	0.38	1.08	0.00	0.02	0.10	0.28
40	0.09	0.39	0.79	1.13	0.02	0.10	0.19	0.28
50	0.33	0.77	1.06	1.15	0.08	0.18	0.22	0.28
60	0.53	0.88	0.97	0.98	0.10	0.15	0.18	0.21

Lifetime Risk of Being Diagnosed = 0.99%
 Lifetime Risk of Dying = 0.34%

Lifetime Risk of Being Diagnosed = 0.27%
 Lifetime Risk of Dying = 0.12%

Table XII-9
LARYNX CANCER (Invasive)

AVERAGE ANNUAL AGE-ADJUSTED CANCER MORTALITY* RATES BY STATE, 1990-94

All Races, Males and Females

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
TOTAL U.S.	1.4	0.01							
High Five States									
District of Columbia	3.6⊕*	0.35	(01)	157.1					
Delaware	2.0*	0.23	(02)	42.9					
Louisiana	1.9⊕*	0.09	(03)	35.7					
Maryland	1.8*	0.08	(04)	28.6					
New York	1.7⊕*	0.04	(05)	21.4					
Low Five States									
Hawaii	0.9*	0.13	(47)	-35.7					
Minnesota	0.9⊕*	0.06	(48)	-35.7					
Washington	0.9⊕*	0.06	(49)	-35.7					
Alaska	0.8*	0.24	(50)	-42.9					
Utah	0.6⊕*	0.09	(51)	-57.1					
Alabama	1.3	0.07	(27)	-7.1	Montana	1.2	0.16	(32)	-14.3
Alaska	0.8*	0.24	(50)	-42.9	Nebraska	1.1*	0.11	(36)	-21.4
Arizona	1.1*	0.07	(39)	-21.4	Nevada	1.5	0.14	(19)	7.1
Arkansas	1.2	0.09	(33)	-14.3	New Hampshire	1.7*	0.17	(07)	21.4
California	1.1⊕*	0.03	(37)	-21.4	New Jersey	1.5	0.06	(18)	7.1
Colorado	1.0*	0.08	(43)	-28.6	New Mexico	1.1*	0.12	(34)	-21.4
Connecticut	1.3	0.08	(25)	-7.1	New York	1.7⊕*	0.04	(05)	21.4
Delaware	2.0*	0.23	(02)	42.9	North Carolina	1.3	0.06	(26)	-7.1
District of Columbia	3.6⊕*	0.35	(01)	157.1	North Dakota	1.0*	0.17	(44)	-28.6
Florida	1.5	0.04	(17)	7.1	Ohio	1.4	0.05	(23)	0.0
Georgia	1.5	0.07	(15)	7.1	Oklahoma	1.2	0.08	(29)	-14.3
Hawaii	0.9*	0.13	(47)	-35.7	Oregon	1.0*	0.08	(41)	-28.6
Idaho	0.9*	0.13	(46)	-35.7	Pennsylvania	1.4	0.04	(22)	0.0
Illinois	1.5	0.05	(16)	7.1	Rhode Island	1.6	0.17	(13)	14.3
Indiana	1.2	0.06	(30)	-14.3	South Carolina	1.6	0.09	(12)	14.3
Iowa	1.2	0.08	(31)	-14.3	South Dakota	1.0*	0.16	(40)	-28.6
Kansas	1.1*	0.09	(38)	-21.4	Tennessee	1.4	0.07	(24)	0.0
Kentucky	1.6	0.09	(10)	14.3	Texas	1.4	0.04	(21)	0.0
Louisiana	1.9⊕*	0.09	(03)	35.7	Utah	0.6⊕*	0.09	(51)	-57.1
Maine	1.7*	0.15	(06)	21.4	Vermont	1.6	0.23	(11)	14.3
Maryland	1.8*	0.08	(04)	28.6	Virginia	1.4	0.07	(20)	0.0
Massachusetts	1.6	0.07	(08)	14.3	Washington	0.9⊕*	0.06	(49)	-35.7
Michigan	1.5	0.06	(14)	7.1	West Virginia	1.6	0.12	(09)	14.3
Minnesota	0.9⊕*	0.06	(48)	-35.7	Wisconsin	1.1*	0.06	(35)	-21.4
Mississippi	1.0*	0.09	(42)	-28.6	Wyoming	0.9*	0.20	(45)	-35.7
Missouri	1.3	0.07	(28)	-7.1					

* 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 XII-10
LARYNX CANCER (Invasive)

AVERAGE ANNUAL AGE-ADJUSTED CANCER MORTALITY* RATES BY STATE, 1990-94

All Races, Males

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
TOTAL U.S.	2.5	0.02							
High Five States									
District of Columbia	6.9⊕*	0.72	(01)	176.0					
Delaware	4.1*	0.49	(02)	64.0					
Louisiana	3.7⊕*	0.20	(03)	48.0					
Maryland	3.3*	0.18	(04)	32.0					
South Carolina	3.1*	0.20	(05)	24.0					
Low Five States									
Wyoming	1.6*	0.39	(47)	-36.0					
Idaho	1.6*	0.25	(48)	-36.0					
Washington	1.6⊕*	0.11	(49)	-36.0					
Alaska	1.2*	0.46	(50)	-52.0					
Utah	1.1⊕*	0.18	(51)	-56.0					
Alabama	2.4	0.15	(26)	-4.0	Montana	2.0*	0.30	(36)	-20.0
Alaska	1.2*	0.46	(50)	-52.0	Nebraska	2.0*	0.22	(35)	-20.0
Arizona	1.9*	0.14	(39)	-24.0	Nevada	2.4	0.28	(25)	-4.0
Arkansas	2.3	0.19	(31)	-8.0	New Hampshire	3.0*	0.34	(10)	20.0
California	1.9⊕*	0.05	(40)	-24.0	New Jersey	2.7	0.12	(19)	8.0
Colorado	1.7⊕*	0.15	(45)	-32.0	New Mexico	2.0*	0.23	(37)	-20.0
Connecticut	2.4	0.17	(28)	-4.0	New York	3.1⊕*	0.08	(07)	24.0
Delaware	4.1*	0.49	(02)	64.0	North Carolina	2.7	0.13	(20)	8.0
District of Columbia	6.9⊕*	0.72	(01)	176.0	North Dakota	1.8*	0.33	(43)	-28.0
Florida	2.7	0.08	(17)	8.0	Ohio	2.6	0.10	(24)	4.0
Georgia	2.8	0.15	(14)	12.0	Oklahoma	2.1*	0.16	(34)	-16.0
Hawaii	1.7*	0.25	(44)	-32.0	Oregon	1.9*	0.16	(42)	-24.0
Idaho	1.6*	0.25	(48)	-36.0	Pennsylvania	2.6	0.09	(23)	4.0
Illinois	2.9*	0.10	(13)	16.0	Rhode Island	3.1*	0.36	(08)	24.0
Indiana	2.3	0.13	(30)	-8.0	South Carolina	3.1*	0.20	(05)	24.0
Iowa	2.4	0.17	(27)	-4.0	South Dakota	2.2	0.33	(32)	-12.0
Kansas	2.1*	0.18	(33)	-16.0	Tennessee	2.6	0.15	(22)	4.0
Kentucky	2.7	0.17	(16)	8.0	Texas	2.6	0.09	(21)	4.0
Louisiana	3.7⊕*	0.20	(03)	48.0	Utah	1.1⊕*	0.18	(51)	-56.0
Maine	3.1*	0.31	(06)	24.0	Vermont	2.8	0.46	(15)	12.0
Maryland	3.3*	0.18	(04)	32.0	Virginia	2.7	0.14	(18)	8.0
Massachusetts	3.0*	0.14	(11)	20.0	Washington	1.6⊕*	0.11	(49)	-36.0
Michigan	2.9*	0.11	(12)	16.0	West Virginia	3.0*	0.25	(09)	20.0
Minnesota	1.6⊕*	0.12	(46)	-36.0	Wisconsin	2.0*	0.13	(38)	-20.0
Mississippi	1.9*	0.18	(41)	-24.0	Wyoming	1.6*	0.39	(47)	-36.0
Missouri	2.3	0.13	(29)	-8.0					

* 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 XII-11
LARYNX CANCER (Invasive)

AVERAGE ANNUAL AGE-ADJUSTED CANCER MORTALITY* RATES BY STATE, 1990-94

All Races, Females

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
TOTAL U.S.	0.5	0.01							
High Five States									
District of Columbia	1.2*	0.27	(01)	140.0					
Kentucky	0.7*	0.08	(02)	40.0					
Maryland	0.7*	0.07	(03)	40.0					
New York	0.7*	0.03	(04)	40.0					
Nevada	0.7*	0.13	(05)	40.0					
Low Five States									
Alaska	0.3*	0.21	(47)	-40.0					
Kansas	0.3*	0.06	(48)	-40.0					
Hawaii	0.2*	0.08	(49)	-60.0					
South Dakota	0.1*	0.09	(50)	-80.0					
Utah	0.1⊕*	0.05	(51)	-80.0					
Alabama	0.5	0.06	(26)	0.0	Montana	0.6*	0.16	(15)	20.0
Alaska	0.3*	0.21	(47)	-40.0	Nebraska	0.4*	0.08	(42)	-20.0
Arizona	0.4*	0.06	(36)	-20.0	Nevada	0.7*	0.13	(05)	40.0
Arkansas	0.4*	0.07	(40)	-20.0	New Hampshire	0.6*	0.14	(09)	20.0
California	0.5	0.02	(28)	0.0	New Jersey	0.6*	0.05	(14)	20.0
Colorado	0.5	0.07	(29)	0.0	New Mexico	0.4*	0.10	(34)	-20.0
Connecticut	0.6*	0.08	(11)	20.0	New York	0.7*	0.03	(04)	40.0
Delaware	0.4*	0.15	(32)	-20.0	North Carolina	0.4*	0.04	(43)	-20.0
District of Columbia	1.2*	0.27	(01)	140.0	North Dakota	0.3*	0.13	(46)	-40.0
Florida	0.5	0.03	(17)	0.0	Ohio	0.5	0.04	(22)	0.0
Georgia	0.6*	0.06	(12)	20.0	Oklahoma	0.6*	0.08	(10)	20.0
Hawaii	0.2*	0.08	(49)	-60.0	Oregon	0.4*	0.06	(45)	-20.0
Idaho	0.5	0.13	(30)	0.0	Pennsylvania	0.5	0.04	(23)	0.0
Illinois	0.5	0.04	(21)	0.0	Rhode Island	0.4*	0.10	(38)	-20.0
Indiana	0.4*	0.05	(33)	-20.0	South Carolina	0.5	0.07	(20)	0.0
Iowa	0.4*	0.06	(41)	-20.0	South Dakota	0.1*	0.09	(50)	-80.0
Kansas	0.3*	0.06	(48)	-40.0	Tennessee	0.5	0.06	(27)	0.0
Kentucky	0.7*	0.08	(02)	40.0	Texas	0.5	0.03	(24)	0.0
Louisiana	0.6*	0.07	(13)	20.0	Utah	0.1⊕*	0.05	(51)	-80.0
Maine	0.6*	0.13	(06)	20.0	Vermont	0.6*	0.21	(07)	20.0
Maryland	0.7*	0.07	(03)	40.0	Virginia	0.5	0.06	(18)	0.0
Massachusetts	0.6*	0.06	(08)	20.0	Washington	0.4*	0.05	(44)	-20.0
Michigan	0.5	0.05	(19)	0.0	West Virginia	0.6*	0.10	(16)	20.0
Minnesota	0.4*	0.06	(37)	-20.0	Wisconsin	0.4*	0.05	(35)	-20.0
Mississippi	0.4*	0.07	(39)	-20.0	Wyoming	0.5	0.19	(31)	0.0
Missouri	0.5	0.06	(25)	0.0					

* 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 XII-12
LARYNX CANCER (Invasive)
 AGE-ADJUSTED SEER INCIDENCE RATES§, SEER MORTALITY RATES*, AND 5-YEAR RELATIVE SURVIVAL RATES‡
 By Registry, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER INCIDENCE RATES§, 1990-94</u>									
REGISTRY									
Standard 9 registries	4.2	7.5	1.6	4.2	7.4	1.5	7.2	13.4	2.6
San Francisco-Oakland	3.7	6.5	1.5	3.9	6.8	1.5	6.1	10.8	2.5
Connecticut	4.8	8.5	1.9	4.6	8.2	1.8	7.5	14.3	2.8
Metropolitan Detroit	5.7	10.4	2.0	5.0	9.1	1.7	8.2	15.3	2.8
Hawaii	3.0	5.4	0.8	6.2	10.6	1.9	-	-	-
Iowa	4.2	7.7	1.5	4.2	7.6	1.4	-	-	-
New Mexico	3.1	5.2	1.3	3.3	5.5	1.4	-	-	-
Seattle-Puget Sound	3.7	6.5	1.3	3.8	6.7	1.4	5.3	9.5	1.1
Utah	2.1	3.7	0.8	2.2	3.7	0.8	-	-	-
Metropolitan Atlanta	5.2	9.7	2.0	4.7	8.5	1.9	7.1	14.4	2.2
San Jose-Monterey	2.9	5.3	1.0	3.1	5.6	1.1	5.0	8.4	2.1
Los Angeles	3.8	6.8	1.4	3.7	6.6	1.3	6.6	11.7	2.9
<u>SEER MORTALITY RATES*, 1990-94</u>									
REGISTRY									
Standard 9 registries	1.2	2.3	0.5	1.2	2.1	0.4	2.8	5.0	1.1
San Francisco-Oakland	1.0	1.7	0.5	1.0	1.8	0.5	2.2	3.2	1.3
Connecticut	1.3	2.4	0.6	1.2	2.2	0.6	3.3	5.8	1.6
Metropolitan Detroit	1.9	3.5	0.6	1.6	3.0	0.5	3.1	5.8	1.1
Hawaii	0.9	1.7	0.2	1.8	2.9	0.6	-	-	-
Iowa	1.2	2.4	0.4	1.2	2.3	0.3	-	-	-
New Mexico	1.1	2.0	0.4	1.2	2.0	0.5	-	-	-
Seattle-Puget Sound	0.9	1.5	0.3	0.9	1.6	0.4	0.9	1.2	0.5
Utah	0.6	1.1	0.1	0.5	1.1	0.1	-	-	-
Metropolitan Atlanta	1.7	3.0	0.8	1.4	2.3	0.7	3.0	6.1	1.0
San Jose-Monterey	0.7	1.3	0.2	0.8	1.4	0.3	2.6	5.3	0.0
Los Angeles	1.3	2.2	0.5	1.2	2.0	0.5	2.7	5.2	0.9
<u>SURVIVAL RATES‡, 1986-93</u>									
REGISTRY									
Standard 9 registries	67.1	68.2	62.9	69.1	70.5	63.6	54.2	53.0	58.7
San Francisco-Oakland	66.6	68.3	60.8	67.1	68.9	60.8	64.7†	65.7†	59.9†
Connecticut	69.1	70.3	64.9	70.7	72.1	65.6	51.7†	51.0†	-
Metropolitan Detroit	63.9	63.9	64.0	67.4	68.2	63.8	53.8	50.6	63.9†
Hawaii	68.0	69.9	-	67.7†	69.8†	-	-	-	-
Iowa	71.6	71.7	71.0	72.0	72.0	71.8	-	-	-
New Mexico	61.6	66.5	45.5†	62.9	68.7	43.8†	-	-	-
Seattle-Puget Sound	72.4	72.4	72.5	73.5	73.5	73.5	-	-	-
Utah	66.9	68.6	51.0†	67.5	69.3	51.0†	-	-	-
Metropolitan Atlanta	60.6	63.1	51.1†	64.9	67.9	54.0†	49.0†	50.6†	40.9†

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.

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

* NCHS public use tape. 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 and are based on follow-up of patients through 1994.

† 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 or populations are inadequate.

SEER Incidence and U.S. Mortality Larynx, Female By Race

White

Black

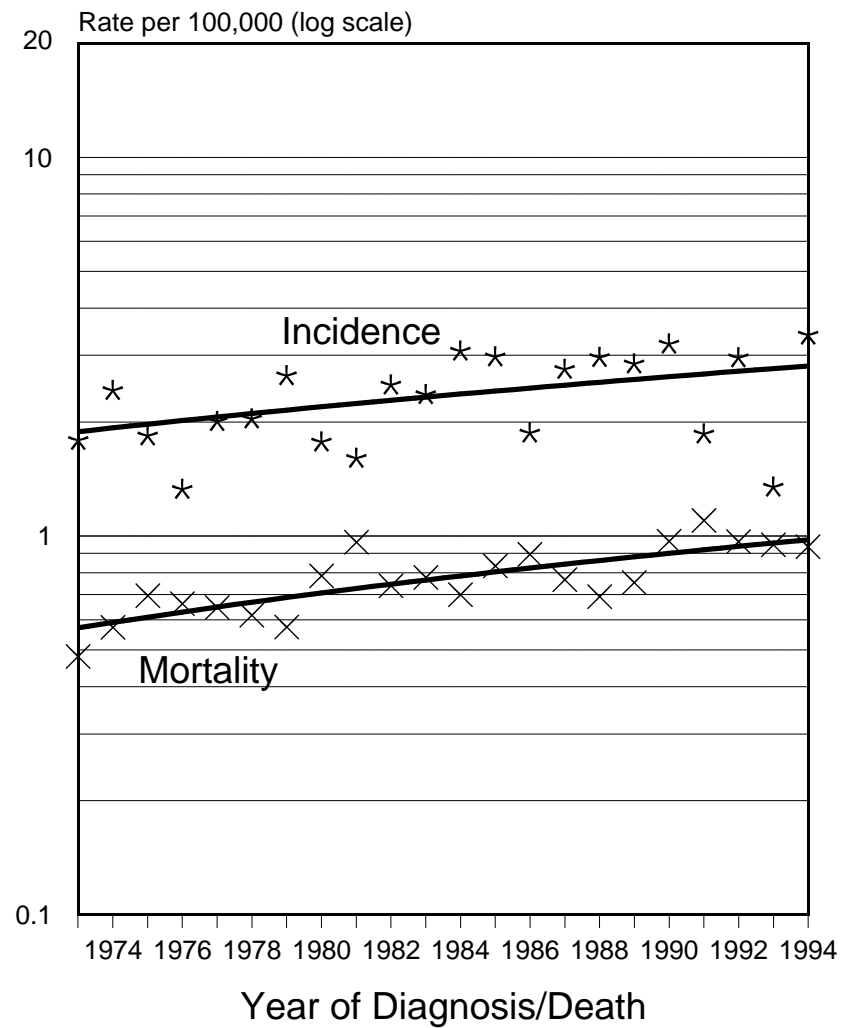
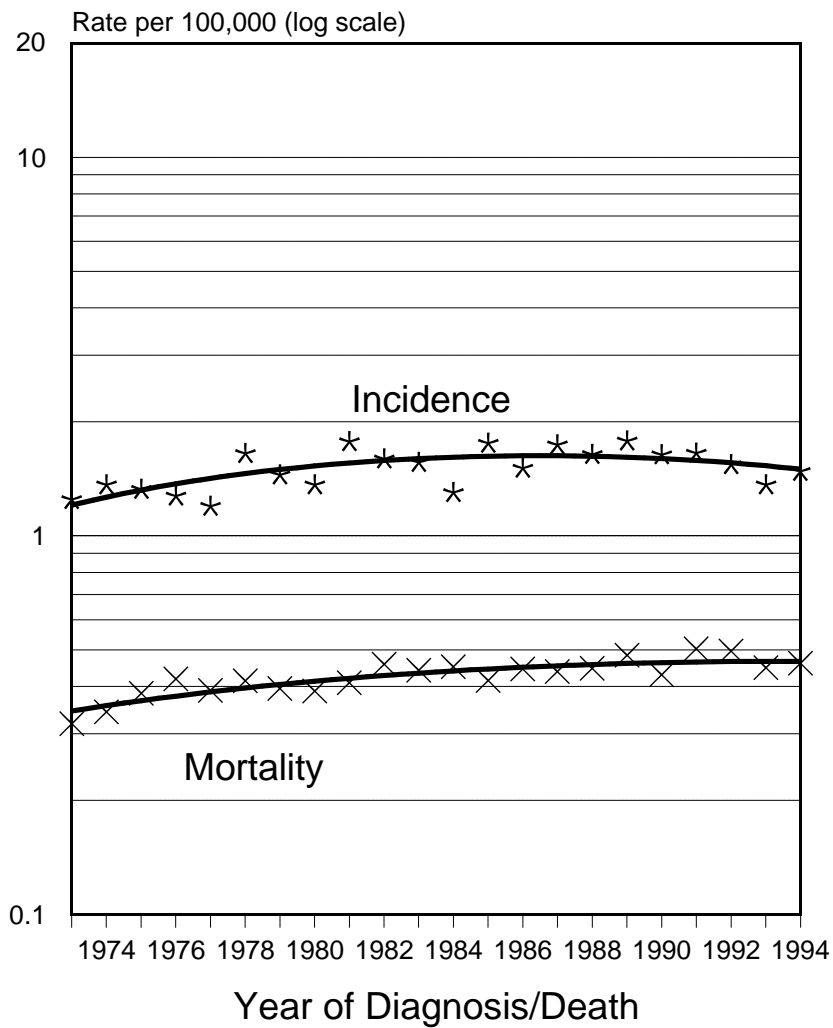


Figure XII-2