

Table XVII-1
MULTIPLE MYELOMA

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)	14.4	19.1	9.8	12.0	19.4	3.8	4.1	-1.4	14.3
Est. Annual PC (EAPC)	0.9★	1.0★	0.7★	0.8★	1.0★	0.5★	0.6	0.5	0.9★
Under 65									
Percent Change (PC)	14.1	15.2	13.0	13.6	23.0	1.8	-6.2	-23.3	21.8
Est. Annual PC (EAPC)	0.6★	0.7★	0.6	0.6★	0.8★	0.3	-0.1	-0.6	0.5
65 and over									
Percent Change (PC)	14.6	21.3	7.9	11.2	17.6	5.0	11.9	16.2	9.4
Est. Annual PC (EAPC)	1.0★	1.2★	0.8★	0.9★	1.1★	0.6★	1.2★	1.2★	1.2★
<u>1975-79 - ALL AGES</u>									
Percent Change (PC)	-4.8	-5.7	-4.8	-6.7	-9.0	-5.5	4.5	13.0	-2.5
Est. Annual PC (EAPC)	-1.2	-2.0	-0.5	-1.8	-3.3	-0.6	1.7	4.8	-1.0
<u>1990-94 - ALL AGES</u>									
Percent Change (PC)	-6.9	-9.8	-2.9	-8.8	-12.1	-4.1	-4.5	-7.6	-0.4
Est. Annual PC (EAPC)	-1.9	-3.6	0.1	-2.6	-4.3	-0.5	-1.0	-3.3	1.3
<u>MORTALITY TRENDS (expressed in percents)*:</u>									
<u>1973-94</u>									
All Ages									
Percent Change (PC)	35.8	36.6	35.9	34.8	36.8	33.5	46.9	43.8	53.2
Est. Annual PC (EAPC)	1.4★	1.4★	1.4★	1.3★	1.4★	1.3★	1.9★	1.9★	2.0★
Under 65									
Percent Change (PC)	17.5	16.3	18.5	16.7	14.9	18.2	19.8	26.1	14.3
Est. Annual PC (EAPC)	0.5★	0.5★	0.5★	0.4★	0.4★	0.4★	0.6★	1.0★	0.3
65 and over									
Percent Change (PC)	45.7	47.2	45.2	44.0	47.8	40.9	66.3	54.5	85.5
Est. Annual PC (EAPC)	1.8★	1.8★	1.9★	1.8★	1.8★	1.7★	2.6★	2.3★	3.1★
<u>1975-79 - ALL AGES</u>									
Percent Change (PC)	4.7	4.6	5.1	4.7	4.6	4.8	5.6	5.0	7.6
Est. Annual PC (EAPC)	1.8★	1.8★	1.8	1.8★	1.8★	1.8	2.1	2.2	2.4
<u>1990-94 - ALL AGES</u>									
Percent Change (PC)	3.8	3.0	4.1	4.4	4.0	4.3	2.6	-1.3	5.9
Est. Annual PC (EAPC)	1.3	1.1	1.3	1.4	1.4	1.3	1.0	-0.2	2.0

§ 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 XVII-2
MULTIPLE MYELOMA

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	3.8	4.5	3.3	3.4	4.0	3.1	9.7	12.8	7.2
1974	3.8	4.5	3.3	3.5	4.2	3.0	8.5	10.0	7.4
1975	4.0	5.2	3.2	3.8	5.0	2.9	8.1	9.3	7.1
1976	4.1	4.8	3.7	3.9	4.6	3.5	7.8	9.2	6.9
1977	4.1	5.1	3.4	3.9	4.9	3.2	7.6	8.9	6.6
1978	3.8	4.7	3.2	3.6	4.4	3.0	7.8	9.0	6.8
1979	3.9	4.8	3.3	3.6	4.3	3.1	8.8	11.8	6.8
1980	4.0	4.7	3.4	3.6	4.4	3.1	8.4	9.3	7.6
1981	4.0	4.8	3.5	3.7	4.4	3.2	8.8	11.7	6.8
1982	4.3	5.0	3.9	4.0	4.6	3.6	9.7	11.9	8.0
1983	4.3	5.5	3.4	3.8	4.9	3.0	11.0	12.9	9.5
1984	4.4	5.6	3.5	4.1	5.1	3.3	9.0	12.9	6.3
1985	4.2	5.1	3.5	3.9	4.8	3.3	7.7	10.3	5.8
1986	4.3	5.0	3.8	3.9	4.8	3.3	9.0	9.7	8.4
1987	4.8	5.8	4.1	4.5	5.6	3.9	8.9	10.6	7.9
1988	4.4	5.3	3.7	4.1	5.0	3.5	9.2	10.7	8.0
1989	4.3	5.3	3.5	4.0	5.0	3.3	8.6	10.7	7.1
1990	4.5	5.8	3.6	4.2	5.5	3.2	9.4	11.5	8.0
1991	4.8	6.1	3.8	4.4	5.6	3.4	10.4	12.8	8.7
1992	4.7	5.7	4.0	4.4	5.4	3.7	8.8	9.9	8.0
1993	4.4	5.8	3.3	3.9	5.2	3.0	9.7	12.7	7.3
1994	4.3	4.9	3.9	3.8	4.6	3.3	9.3	9.8	9.3
<u>AGE-ADJUSTED RATES, 1990-94</u>									
<u>AGE AT DIAGNOSIS:</u>									
All ages	4.5	5.6	3.7	4.1	5.2	3.3	9.5	11.3	8.3
Under 65	1.9	2.2	1.5	1.6	2.0	1.3	4.1	4.6	3.8
65 and over	28.8	36.9	23.5	26.8	34.8	21.6	58.6	72.8	49.8
All ages (world std.) ⁸	3.5	4.3	2.9	3.2	4.0	2.5	7.4	8.8	6.5
<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	0.0	0.0	0.0
20-24	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0
25-29	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
30-34	0.2	0.2	0.1	0.2	0.2	0.1	0.4	0.5	0.3
35-39	0.6	0.8	0.5	0.5	0.6	0.4	1.6	2.0	1.3
40-44	1.4	1.7	1.1	1.2	1.4	0.9	3.2	3.7	2.7
45-49	3.1	3.8	2.4	2.6	3.4	1.9	6.3	7.2	5.5
50-54	5.3	5.8	4.9	4.6	5.2	4.1	13.3	13.6	13.1
55-59	9.1	11.2	7.1	7.9	10.3	5.6	20.2	20.5	20.0
60-64	14.7	17.6	12.1	13.3	15.8	11.1	30.9	37.1	26.1
65-69	21.9	26.6	17.9	20.0	24.0	16.6	46.5	58.4	37.5
70-74	28.6	35.9	23.0	25.8	33.0	20.3	65.1	76.3	57.3
75-79	32.6	41.0	26.9	31.8	41.1	25.5	51.0	60.0	45.5
80-84	38.4	51.2	31.2	35.8	48.5	28.9	81.9	106.5	68.8
85+	37.4	56.0	30.2	35.5	54.8	28.3	75.5	108.9	61.2

[§] 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 XVII-3
MULTIPLE MYELOMA

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	2.3	2.8	1.9	2.1	2.6	1.8	4.2	5.0	3.6
1974	2.3	2.9	1.9	2.1	2.6	1.8	4.2	5.4	3.3
1975	2.4	3.0	2.0	2.2	2.8	1.8	4.4	5.3	3.7
1976	2.5	3.1	2.1	2.3	2.9	1.9	4.7	5.8	3.9
1977	2.5	3.1	2.1	2.3	2.9	1.9	4.6	5.8	3.7
1978	2.5	3.1	2.1	2.3	2.9	2.0	4.7	5.7	4.1
1979	2.6	3.3	2.1	2.4	3.0	2.0	4.9	6.0	4.0
1980	2.6	3.3	2.2	2.4	3.0	2.0	5.0	6.0	4.3
1981	2.6	3.2	2.2	2.4	2.9	2.0	5.3	6.5	4.5
1982	2.7	3.3	2.3	2.5	3.0	2.1	5.4	6.7	4.4
1983	2.7	3.4	2.3	2.5	3.1	2.1	5.5	7.0	4.5
1984	2.8	3.4	2.4	2.5	3.1	2.2	5.4	6.7	4.4
1985	2.8	3.5	2.4	2.6	3.2	2.2	5.6	6.9	4.7
1986	2.8	3.5	2.4	2.6	3.2	2.2	5.8	7.3	4.8
1987	2.9	3.6	2.3	2.6	3.3	2.1	5.7	7.3	4.6
1988	2.9	3.6	2.4	2.6	3.4	2.1	5.6	6.5	5.0
1989	2.9	3.6	2.4	2.7	3.3	2.2	5.6	7.0	4.7
1990	3.0	3.7	2.5	2.7	3.4	2.2	5.9	7.6	4.7
1991	3.1	3.8	2.6	2.8	3.4	2.3	6.2	7.6	5.3
1992	3.0	3.7	2.5	2.7	3.4	2.3	6.0	7.4	5.1
1993	3.1	3.8	2.4	2.9	3.5	2.4	6.2	7.4	5.5
1994	3.1	3.9	2.6	2.9	3.6	2.4	6.1	7.6	5.2
<u>AGE-ADJUSTED RATES, 1990-94</u>									
<u>AGE AT DEATH:</u>									
All ages	3.1	3.8	2.6	2.8	3.5	2.3	6.1	7.5	5.2
Under 65	1.0	1.2	0.9	0.9	1.1	0.7	2.3	2.8	2.0
65 and over	21.6	27.2	18.0	20.2	25.5	16.7	40.6	51.0	34.3
All ages (world std.) ^N	2.3	2.8	1.9	2.1	2.5	1.7	4.6	5.6	3.9
<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	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1
35-39	0.2	0.2	0.2	0.2	0.2	0.1	0.4	0.5	0.4
40-44	0.6	0.7	0.4	0.5	0.6	0.3	1.4	1.8	1.0
45-49	1.3	1.5	1.1	1.1	1.4	0.9	3.3	3.3	3.3
50-54	2.9	3.4	2.5	2.5	3.0	2.0	7.3	8.4	6.3
55-59	5.3	6.2	4.4	4.5	5.3	3.8	12.3	15.0	10.2
60-64	8.9	10.5	7.5	8.1	9.6	6.7	18.2	22.5	15.0
65-69	13.8	16.9	11.3	12.7	15.5	10.4	27.2	33.7	22.4
70-74	19.8	24.5	16.3	18.3	22.7	14.9	39.6	49.5	33.0
75-79	26.7	32.7	22.7	25.1	30.9	21.2	48.1	59.9	41.2
80-84	33.0	42.3	28.0	31.3	40.5	26.3	58.7	70.4	52.7
85+	33.9	48.1	28.4	32.0	45.2	26.9	59.7	84.3	49.6

* 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 XVII-4
MULTIPLE MYELOMA

SURVIVAL RATES, BY RACE, SEX, DIAGNOSIS YEAR 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	-	-	-	12	13	10	-	-	-
1970-73 ^a	-	-	-	19	20	17	-	-	-
1974-76 ^b	24.3	23.8	24.9	24.1	23.4	24.7	27.1	26.8	27.4
1977-79 ^b	26.2	25.7	26.6	24.7	24.9	24.5	34.1	30.7	37.5
1980-82 ^b	28.1	25.7	30.3	27.8	26.2	29.4	29.4	25.8	33.1
1983-85 ^b	28.3	28.6	27.9	27.7	27.8	27.5	30.7	33.2	27.8
1986-93 ^b	28.6 S	29.6 S	27.5 S	28.4 S	29.4 S	27.3 S	30.1	29.9	30.3
<u>5-YR RELATIVE SURVIVAL RATES, 1986-93^b</u>									
AGE AT DIAGNOSIS:									
<45	44.5	42.1	48.4 [↑]	44.0	42.3	46.8 [↑]	41.7 [↑]	37.3 [↑]	48.0 [↑]
45-54	37.8	39.4	36.1	37.9	39.3	36.2	42.9 [↑]	44.7 [↑]	41.4 [↑]
55-64	33.7	35.1	31.8	35.1	36.3	33.5	28.6	29.7 [↑]	27.7
65-74	26.7	27.2	26.3	26.2	26.5	25.9	30.0	28.8	31.2
75+	19.7	17.8	20.8	19.7	17.8	20.8	20.6	18.6 [↑]	22.2
Under 65	36.1	37.3	34.7	36.9	37.9	35.4	34.2	34.5	33.9
65 and over	23.7	23.8	23.6	23.4	23.3	23.3	26.5	25.4	27.4

^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 1994.

S

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 XVII-5
MULTIPLE MYELOMA

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	3.8	3.8	4.0	4.1	4.1	3.8	3.9	4.0	4.0	4.3	4.3	4.4	4.2	4.3	4.8	4.4	4.3	4.5	4.8	4.7	4.4	4.3
Mortality																						
U.S.	2.3	2.3	2.4	2.5	2.5	2.5	2.6	2.6	2.6	2.7	2.7	2.8	2.8	2.8	2.9	2.9	2.9	3.0	3.1	3.0	3.1	3.1
SEER	2.4	2.4	2.5	2.8	2.6	2.5	2.8	2.5	2.7	2.6	2.8	2.7	3.0	2.6	2.6	2.9	3.1	2.9	3.1	3.2	3.2	3.1
Relative Survival Rates (SEER)																						
1-year	61.0	61.4	68.6	65.3	70.5	70.0	69.6	69.7	69.5	73.2	72.5	69.5	72.2	72.0	75.6	74.0	71.5	71.2	75.3	68.3	70.8	
2-year	45.1	45.6	54.3	49.1	52.4	54.6	54.2	54.5	55.6	55.9	56.1	55.8	58.9	57.4	59.6	60.0	58.1	56.6	59.7	55.0		
3-year	33.6	34.8	42.5	36.3	39.1	42.0	43.5	44.0	42.9	44.6	43.9	44.4	46.8	44.9	48.6	47.3	44.4	43.9	47.2			
4-year	27.7	27.1	33.4	31.2	31.2	32.6	33.3	33.9	34.9	37.0	36.4	35.1	36.7	35.6	38.1	39.2	35.5	37.5				
5-year	22.7	20.5	27.5	24.5	25.6	27.0	25.9	27.0	27.5	29.5	28.8	28.2	27.8	30.0	28.6	29.9	26.2					
6-year	18.3	16.3	22.3	18.7	21.7	21.2	20.0	21.2	22.8	21.4	23.3	22.9	22.7	23.9	23.2	24.5						
7-year	13.3	14.9	16.5	15.6	18.3	17.4	17.7	18.7	16.7	17.6	17.7	19.1	19.2	19.1	19.0							
8-year	11.4	11.4	14.0	12.3	16.0	14.6	15.1	15.3	14.2	14.3	14.2	14.7	16.9	17.5								
9-year	11.4	10.6	13.1	10.4	13.1	12.6	12.0	13.8	11.9	12.0	12.2	12.6	13.0									
10-year	10.1	8.4	11.2	9.4	11.9	11.4	9.9	11.4	9.5	11.2	10.4	10.8										
11-year	9.4	7.6	9.7	8.6	9.9	10.4	8.8	10.3	8.4	9.5	9.8											
12-year	7.9	7.5	8.2	8.0	9.3	9.8	7.7	9.5	6.8	8.4												
13-year	7.9	5.8	7.9	6.0	8.8	7.7	6.1	7.8	6.3													
14-year	7.8	5.8	7.2	5.0	8.6	7.3	5.4	5.8														
15-year	7.1	5.3	6.4	4.8	8.6	5.6	4.2															
16-year	6.1	5.3	5.4	4.8	7.3	5.6																
17-year	5.6	5.3	5.4	4.8	6.3																	
18-year	5.6	5.2	4.6	4.2																		
19-year	5.6	4.7	4.5																			
20-year	4.5	4.7																				
21-year	4.5																					

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 XVII-6
MULTIPLE MYELOMA

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	4.5	4.5	5.2	4.8	5.1	4.7	4.8	4.7	4.8	5.0	5.5	5.6	5.1	5.0	5.8	5.3	5.3	5.8	6.1	5.7	5.8	4.9
Mortality																						
U.S.	2.8	2.9	3.0	3.1	3.1	3.1	3.3	3.3	3.2	3.3	3.4	3.4	3.5	3.5	3.6	3.6	3.6	3.7	3.8	3.7	3.8	3.9
SEER	2.8	3.0	3.2	3.1	3.2	3.1	3.4	3.2	3.1	3.2	3.3	3.3	3.7	3.3	3.2	3.5	3.6	3.5	3.8	3.9	4.0	4.1
Relative Survival Rates (SEER)																						
1-year	62.4	60.2	67.8	65.0	70.4	69.3	71.5	69.4	71.8	71.2	73.8	69.4	74.0	71.1	77.4	75.4	71.8	71.2	77.2	72.3	69.0	
2-year	44.4	45.4	54.6	50.7	52.9	53.2	55.0	52.9	58.3	53.9	57.0	58.0	59.2	56.5	61.9	62.6	60.8	57.7	62.8	59.4		
3-year	32.2	34.3	40.5	38.8	37.1	40.7	43.7	41.8	44.2	41.8	45.8	46.5	46.0	43.3	48.6	50.2	46.8	45.3	49.6			
4-year	27.8	25.7	30.9	33.3	31.0	31.1	33.6	32.2	35.7	33.8	37.6	36.5	35.3	34.8	38.2	42.1	38.4	37.3				
5-year	23.1	20.8	24.5	25.6	26.7	25.3	25.2	25.0	26.5	25.5	28.1	30.1	27.6	29.9	30.7	32.4	26.2					
6-year	18.2	17.9	21.3	19.0	21.8	20.9	17.9	20.3	24.1	17.3	24.8	24.2	23.2	24.2	26.0	27.3						
7-year	13.7	17.2	15.2	15.3	19.9	17.0	15.7	18.6	16.4	14.6	20.4	20.5	20.7	19.1	20.7							
8-year	10.8	12.0	12.4	11.1	18.8	14.2	14.3	15.5	13.0	12.2	17.1	16.5	17.6	18.3								
9-year	10.8	10.2	11.6	10.5	16.2	11.0	10.8	14.8	11.1	10.3	14.7	14.0	12.8									
10-year	10.4	9.8	9.0	9.0	14.2	9.5	10.2	12.7	8.4	9.3	12.3	11.8										
11-year	9.7	9.3	7.3	7.2	10.9	8.7	8.2	10.3	6.8	8.6	12.3											
12-year	8.2	9.3	5.9	6.7	10.9	8.3	7.3	10.0	4.8	7.8												
13-year	8.0	6.7	5.8	3.3	10.9	6.6	5.7	6.7	4.7													
14-year	6.9	6.7	5.1	3.0	10.9	6.5	3.9	3.6														
15-year	6.5	6.7	4.3	2.6	10.9	5.1	3.0															
16-year	6.0	6.7	2.7	2.1	10.9	5.1																
17-year	5.4	6.7	2.7	1.5	10.2																	
18-year	5.4	6.7	2.3	1.5																		
19-year	5.1	6.7	2.3																			
20-year	2.8	6.7																				
21-year	2.8																					

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 XVII-7
MULTIPLE MYELOMA

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	3.3	3.3	3.2	3.7	3.4	3.2	3.3	3.4	3.5	3.9	3.4	3.5	3.5	3.8	4.1	3.7	3.5	3.6	3.8	4.0	3.3	3.9
Mortality																						
U.S.	1.9	1.9	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.4	2.4	2.5	2.6	2.5	2.7	2.6
SEER	2.1	2.0	2.1	2.6	2.2	2.2	2.3	1.9	2.3	2.1	2.4	2.2	2.5	2.1	2.2	2.4	2.7	2.5	2.6	2.7	2.6	2.4
Relative Survival Rates (SEER)																						
1-year	59.4	62.6	69.7	65.7	70.6	70.7	67.6	70.0	67.1	75.0	71.0	69.7	70.3	72.9	73.9	72.6	71.1	71.2	73.0	64.0	73.2	
2-year	45.9	45.7	53.8	47.5	51.9	56.0	53.3	56.1	52.8	57.9	54.9	53.1	58.5	58.2	57.5	57.3	55.3	55.3	56.2	50.3		
3-year	35.0	35.3	44.8	34.0	41.2	43.5	43.2	46.1	41.6	47.2	41.9	41.9	47.6	46.5	48.6	44.2	42.0	42.3	44.4			
4-year	27.6	28.5	36.5	29.2	31.3	34.1	33.0	35.6	34.0	40.0	35.1	33.5	38.0	36.3	38.0	36.2	32.5	37.7				
5-year	22.3	20.3	31.2	23.4	24.5	28.8	26.7	28.9	28.5	33.2	29.5	26.1	28.1	30.1	26.7	27.5	26.2					
6-year	18.5	14.9	23.5	18.5	21.6	21.6	22.1	22.0	21.5	25.0	21.7	21.4	22.2	23.7	20.7	21.8						
7-year	12.9	12.7	18.0	15.9	16.6	17.7	19.7	18.8	16.8	20.2	14.7	17.5	17.7	19.1	17.4							
8-year	12.0	10.7	15.9	13.4	13.1	15.1	15.8	15.1	15.2	16.1	11.1	12.5	16.3	16.8								
9-year	12.0	10.7	14.9	10.4	10.0	14.2	13.1	12.8	12.7	13.4	9.5	11.0	13.1									
10-year	9.8	7.1	13.7	9.7	9.7	13.2	9.7	10.3	10.5	12.7	8.4	9.7										
11-year	9.1	6.0	12.3	9.7	8.9	12.1	9.3	10.3	9.9	10.1	7.2											
12-year	7.7	5.8	10.8	9.0	7.4	11.3	8.0	9.2	8.6	8.8												
13-year	7.7	5.1	10.2	8.2	5.8	8.7	6.5	8.7	7.7													
14-year	7.7	5.1	9.5	6.7	5.6	8.1	6.5	7.7														
15-year	7.5	3.8	8.7	6.6	5.4	6.1	5.4															
16-year	6.2	3.8	8.5	6.6	3.2	5.9																
17-year	5.7	3.6	8.5	6.6	2.7																	
18-year	5.7	3.1	7.1	6.0																		
19-year	5.7	2.5	6.6																			
20-year	5.7	2.5																				
21-year	5.7																					

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 XVII-8
MULTIPLE MYELOMA

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	0.62	0.00	0.00	0.00	0.55
10	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.55
20	0.00	0.00	0.03	0.63	0.00	0.00	0.02	0.55
30	0.00	0.03	0.10	0.64	0.00	0.02	0.08	0.56
40	0.03	0.10	0.28	0.66	0.02	0.08	0.21	0.56
50	0.08	0.26	0.48	0.66	0.06	0.20	0.38	0.55
60	0.20	0.44	0.60	0.63	0.14	0.33	0.48	0.51

Lifetime Risk of Being Diagnosed = 0.62% Lifetime Risk of Being Diagnosed = 0.55%
 Lifetime Risk of Dying = 0.48% Lifetime Risk of Dying = 0.42%

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	0.59	0.00	0.00	0.00	0.50
10	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.51
20	0.00	0.00	0.03	0.60	0.00	0.00	0.02	0.51
30	0.00	0.03	0.09	0.61	0.00	0.02	0.07	0.51
40	0.02	0.09	0.25	0.62	0.01	0.06	0.19	0.51
50	0.07	0.23	0.45	0.62	0.05	0.18	0.35	0.51
60	0.18	0.41	0.57	0.60	0.14	0.31	0.44	0.48

Lifetime Risk of Being Diagnosed = 0.59% Lifetime Risk of Being Diagnosed = 0.50%
 Lifetime Risk of Dying = 0.48% Lifetime Risk of Dying = 0.40%

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	0.85	0.00	0.00	0.00	0.96
10	0.00	0.00	0.01	0.87	0.00	0.00	0.01	0.97
20	0.00	0.01	0.05	0.88	0.00	0.01	0.05	0.98
30	0.01	0.05	0.18	0.92	0.01	0.05	0.20	0.99
40	0.04	0.18	0.48	0.96	0.04	0.19	0.42	1.00
50	0.16	0.49	0.78	1.02	0.16	0.39	0.74	1.01
60	0.40	0.74	0.96	1.03	0.26	0.63	0.89	0.94

Lifetime Risk of Being Diagnosed = 0.85% Lifetime Risk of Being Diagnosed = 0.96%
 Lifetime Risk of Dying = 0.59% Lifetime Risk of Dying = 0.70%

Table XVII-9
MULTIPLE MYELOMA

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

All Races, Males and Females

State	Rate	SE	Rank	PD
TOTAL U.S.	3.1	0.01		
High Five States				
District of Columbia	4.8*	0.37	(01)	54.8
South Carolina	3.7*	0.14	(02)	19.4
Louisiana	3.6*	0.13	(03)	16.1
Virginia	3.6⊕*	0.10	(04)	16.1
Maryland	3.5	0.12	(05)	12.9
Low Five States				
Florida	2.7⊕	0.05	(47)	-12.9
Connecticut	2.5*	0.11	(48)	-19.4
South Dakota	2.5*	0.23	(49)	-19.4
Rhode Island	2.5*	0.19	(50)	-19.4
Hawaii	1.6⊕*	0.16	(51)	-48.4

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	3.3	0.12	(10)	6.5	Montana	3.1	0.25	(23)	0.0
Alaska	3.4	0.52	(07)	9.7	Nebraska	2.8	0.17	(44)	-9.7
Arizona	2.8	0.11	(46)	-9.7	Nevada	2.8	0.20	(45)	-9.7
Arkansas	3.1	0.14	(20)	0.0	New Hampshire	3.1	0.23	(19)	0.0
California	2.8	0.04	(42)	-9.7	New Jersey	2.9	0.08	(36)	-6.5
Colorado	2.9	0.13	(40)	-6.5	New Mexico	3.0	0.19	(32)	-3.2
Connecticut	2.5*	0.11	(48)	-19.4	New York	2.8	0.05	(41)	-9.7
Delaware	2.8	0.27	(43)	-9.7	North Carolina	3.5	0.09	(06)	12.9
District of Columbia	4.8*	0.37	(01)	54.8	North Dakota	3.0	0.27	(28)	-3.2
Florida	2.7⊕	0.05	(47)	-12.9	Ohio	3.1	0.07	(18)	0.0
Georgia	3.4	0.10	(09)	9.7	Oklahoma	2.9	0.12	(35)	-6.5
Hawaii	1.6⊕*	0.16	(51)	-48.4	Oregon	3.0	0.13	(29)	-3.2
Idaho	3.2	0.23	(17)	3.2	Pennsylvania	3.0	0.06	(30)	-3.2
Illinois	3.0	0.07	(27)	-3.2	Rhode Island	2.5*	0.19	(50)	-19.4
Indiana	3.1	0.10	(26)	0.0	South Carolina	3.7*	0.14	(02)	19.4
Iowa	3.3	0.13	(14)	6.5	South Dakota	2.5*	0.23	(49)	-19.4
Kansas	3.3	0.15	(12)	6.5	Tennessee	3.3	0.11	(13)	6.5
Kentucky	3.2	0.12	(15)	3.2	Texas	3.1	0.06	(24)	0.0
Louisiana	3.6*	0.13	(03)	16.1	Utah	3.0	0.20	(31)	-3.2
Maine	2.9	0.19	(37)	-6.5	Vermont	3.0	0.31	(33)	-3.2
Maryland	3.5	0.12	(05)	12.9	Virginia	3.6⊕*	0.10	(04)	16.1
Massachusetts	2.9	0.09	(38)	-6.5	Washington	3.1	0.10	(22)	0.0
Michigan	3.4	0.08	(08)	9.7	West Virginia	3.2	0.16	(16)	3.2
Minnesota	3.3	0.11	(11)	6.5	Wisconsin	3.1	0.10	(25)	0.0
Mississippi	3.1	0.15	(21)	0.0	Wyoming	2.9	0.35	(34)	-6.5
Missouri	2.9	0.09	(39)	-6.5					

* 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 XVII-10
MULTIPLE MYELOMA

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.	3.8	0.02							
High Five States									
District of Columbia	6.7*	0.70	(01)	76.3					
Alaska	5.0*	1.00	(02)	31.6					
Virginia	4.7*	0.19	(03)	23.7					
South Carolina	4.7*	0.24	(04)	23.7					
Minnesota	4.5*	0.20	(05)	18.4					
Low Five States									
Connecticut	3.3	0.19	(47)	-13.2					
Rhode Island	3.2*	0.35	(48)	-15.8					
Nebraska	3.1*	0.26	(49)	-18.4					
South Dakota	2.9*	0.37	(50)	-23.7					
Hawaii	2.1⊕*	0.26	(51)	-44.7					
Alabama	4.4*	0.21	(07)	15.8	Montana	4.3	0.43	(08)	13.2
Alaska	5.0*	1.00	(02)	31.6	Nebraska	3.1*	0.26	(49)	-18.4
Arizona	3.6	0.19	(39)	-5.3	Nevada	3.6	0.34	(37)	-5.3
Arkansas	4.0	0.24	(23)	5.3	New Hampshire	4.1	0.40	(18)	7.9
California	3.5	0.07	(43)	-7.9	New Jersey	3.5	0.13	(42)	-7.9
Colorado	3.3	0.21	(46)	-13.2	New Mexico	3.7	0.32	(32)	-2.6
Connecticut	3.3	0.19	(47)	-13.2	New York	3.4	0.09	(44)	-10.5
Delaware	4.1	0.50	(15)	7.9	North Carolina	4.2	0.16	(11)	10.5
District of Columbia	6.7*	0.70	(01)	76.3	North Dakota	3.6	0.44	(34)	-5.3
Florida	3.4	0.09	(45)	-10.5	Ohio	4.0	0.12	(24)	5.3
Georgia	4.1	0.18	(17)	7.9	Oklahoma	3.6	0.21	(36)	-5.3
Hawaii	2.1⊕*	0.26	(51)	-44.7	Oregon	3.6	0.21	(35)	-5.3
Idaho	4.0	0.39	(19)	5.3	Pennsylvania	3.7	0.10	(33)	-2.6
Illinois	3.6	0.11	(38)	-5.3	Rhode Island	3.2*	0.35	(48)	-15.8
Indiana	3.9	0.17	(26)	2.6	South Carolina	4.7*	0.24	(04)	23.7
Iowa	4.2	0.22	(12)	10.5	South Dakota	2.9*	0.37	(50)	-23.7
Kansas	4.1	0.25	(16)	7.9	Tennessee	3.9	0.18	(27)	2.6
Kentucky	4.0	0.21	(20)	5.3	Texas	3.8	0.10	(30)	0.0
Louisiana	4.3	0.21	(09)	13.2	Utah	3.9	0.34	(28)	2.6
Maine	4.0	0.35	(21)	5.3	Vermont	3.9	0.54	(29)	2.6
Maryland	4.5*	0.21	(06)	18.4	Virginia	4.7*	0.19	(03)	23.7
Massachusetts	3.6	0.15	(41)	-5.3	Washington	4.0	0.18	(22)	5.3
Michigan	4.2	0.14	(10)	10.5	West Virginia	4.1	0.28	(14)	7.9
Minnesota	4.5*	0.20	(05)	18.4	Wisconsin	3.8	0.17	(31)	0.0
Mississippi	4.1	0.26	(13)	7.9	Wyoming	4.0	0.61	(25)	5.3
Missouri	3.6	0.16	(40)	-5.3					

* 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 XVII-11
MULTIPLE MYELOMA

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.	2.6	0.02							
High Five States									
District of Columbia	3.6*	0.42	(01)	38.5					
South Carolina	3.1*	0.17	(02)	19.2					
Louisiana	3.1*	0.15	(03)	19.2					
North Carolina	3.0*	0.11	(04)	15.4					
Tennessee	3.0*	0.13	(05)	15.4					
Low Five States									
Nevada	2.1*	0.24	(47)	-19.2					
Connecticut	2.0*	0.13	(48)	-23.1					
Rhode Island	2.0*	0.22	(49)	-23.1					
Delaware	1.9*	0.29	(50)	-26.9					
Hawaii	1.2⊕*	0.20	(51)	-53.8					
Alabama	2.7	0.14	(11)	3.8	Montana	2.1*	0.27	(46)	-19.2
Alaska	2.4	0.58	(36)	-7.7	Nebraska	2.7	0.22	(13)	3.8
Arizona	2.1*	0.13	(44)	-19.2	Nevada	2.1*	0.24	(47)	-19.2
Arkansas	2.5	0.17	(26)	-3.8	New Hampshire	2.5	0.27	(31)	-3.8
California	2.4	0.05	(37)	-7.7	New Jersey	2.5	0.09	(25)	-3.8
Colorado	2.6	0.17	(18)	0.0	New Mexico	2.4	0.22	(38)	-7.7
Connecticut	2.0*	0.13	(48)	-23.1	New York	2.5	0.06	(28)	-3.8
Delaware	1.9*	0.29	(50)	-26.9	North Carolina	3.0*	0.11	(04)	15.4
District of Columbia	3.6*	0.42	(01)	38.5	North Dakota	2.6	0.35	(16)	0.0
Florida	2.3	0.06	(40)	-11.5	Ohio	2.6	0.08	(17)	0.0
Georgia	2.9	0.12	(06)	11.5	Oklahoma	2.4	0.15	(34)	-7.7
Hawaii	1.2⊕*	0.20	(51)	-53.8	Oregon	2.6	0.16	(20)	0.0
Idaho	2.5	0.28	(29)	-3.8	Pennsylvania	2.6	0.07	(21)	0.0
Illinois	2.6	0.08	(15)	0.0	Rhode Island	2.0*	0.22	(49)	-23.1
Indiana	2.5	0.11	(30)	-3.8	South Carolina	3.1*	0.17	(02)	19.2
Iowa	2.6	0.16	(14)	0.0	South Dakota	2.3	0.30	(41)	-11.5
Kansas	2.8	0.18	(10)	7.7	Tennessee	3.0*	0.13	(05)	15.4
Kentucky	2.7	0.15	(12)	3.8	Texas	2.5	0.07	(23)	-3.8
Louisiana	3.1*	0.15	(03)	19.2	Utah	2.2*	0.23	(42)	-15.4
Maine	2.2*	0.23	(43)	-15.4	Vermont	2.3	0.36	(39)	-11.5
Maryland	2.9	0.14	(07)	11.5	Virginia	2.9	0.12	(09)	11.5
Massachusetts	2.5	0.11	(27)	-3.8	Washington	2.4	0.12	(35)	-7.7
Michigan	2.9	0.10	(08)	11.5	West Virginia	2.5	0.19	(24)	-3.8
Minnesota	2.5	0.13	(22)	-3.8	Wisconsin	2.6	0.12	(19)	0.0
Mississippi	2.5	0.17	(32)	-3.8	Wyoming	2.1*	0.40	(45)	-19.2
Missouri	2.4	0.11	(33)	-7.7					

* 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 XVII-12
MULTIPLE MYELOMAAGE-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	4.5	5.6	3.7	4.1	5.2	3.3	9.5	11.3	8.3
San Francisco-Oakland	4.4	5.7	3.4	4.1	5.3	3.1	9.4	11.5	8.0
Connecticut	4.0	5.0	3.2	3.7	4.6	3.0	7.9	10.9	6.1
Metropolitan Detroit	5.6	6.7	4.9	4.5	5.6	3.8	10.0	11.3	9.0
Hawaii	3.5	4.4	2.8	3.8	5.7	2.1	-	-	-
Iowa	4.5	5.8	3.5	4.4	5.7	3.5	-	-	-
New Mexico	3.9	4.4	3.4	3.8	4.4	3.4	-	-	-
Seattle-Puget Sound	4.4	5.4	3.6	4.2	5.1	3.5	10.1	15.4	6.0
Utah	4.1	5.4	3.2	4.1	5.5	3.1	-	-	-
Metropolitan Atlanta	5.1	6.8	4.2	3.9	5.5	2.9	9.2	11.3	8.3
San Jose-Monterey	4.2	5.3	3.4	4.1	5.3	3.3	13.3	17.9	11.0
Los Angeles	4.4	5.5	3.6	4.0	5.0	3.3	9.0	11.8	7.0
<u>SEER MORTALITY RATES*, 1990-94</u>									
REGISTRY									
Standard 9 registries	3.1	3.9	2.5	2.9	3.8	2.3	6.2	7.1	5.6
San Francisco-Oakland	2.9	3.5	2.5	2.8	3.5	2.3	5.6	5.7	5.6
Connecticut	2.5	3.3	2.0	2.4	3.1	2.0	4.8	7.2	3.4
Metropolitan Detroit	3.7	4.7	3.1	3.1	4.1	2.5	6.2	7.1	5.7
Hawaii	1.6	2.1	1.2	2.4	3.5	1.3	-	-	-
Iowa	3.3	4.2	2.6	3.2	4.1	2.6	-	-	-
New Mexico	3.0	3.7	2.4	2.9	3.6	2.3	-	-	-
Seattle-Puget Sound	3.2	4.1	2.5	3.1	3.9	2.4	10.1	14.3	6.5
Utah	3.0	3.9	2.2	3.0	4.0	2.2	-	-	-
Metropolitan Atlanta	3.8	4.7	3.4	3.2	4.2	2.6	6.6	7.0	6.4
San Jose-Monterey	3.0	3.6	2.6	3.1	3.6	2.7	12.1	21.8	5.1
Los Angeles	2.9	3.6	2.3	2.7	3.4	2.1	6.0	7.3	5.2
<u>SURVIVAL RATES[⊙], 1986-93</u>									
REGISTRY									
Standard 9 registries	28.6	29.6	27.5	28.4	29.4	27.3	30.1	29.9	30.3
San Francisco-Oakland	27.0	29.3	24.9	26.6	31.1	22.3	28.1	23.3 [†]	31.4 [†]
Connecticut	24.4	26.3	22.5	23.7	26.5	21.2	35.5 [†]	27.2 [†]	42.1 [†]
Metropolitan Detroit	31.4	31.5	31.4	32.0	31.1	32.8	30.4	32.2	28.7
Hawaii	28.3	33.7 [†]	18.9 [†]	34.5 [†]	34.2 [†]	33.9 [†]	-	-	-
Iowa	29.0	27.8	30.2	29.1	28.3	29.8	-	-	-
New Mexico	27.9	25.7	30.4	27.9	25.5	30.6	-	-	-
Seattle-Puget Sound	32.3	35.9	28.2	32.2	35.8	28.3	36.6 [†]	42.5 [†]	-
Utah	23.5	23.5	23.9	23.3	23.5	23.4	-	-	-
Metropolitan Atlanta	27.6	27.7	27.4	26.8	25.0	28.7	29.0	32.9 [†]	25.6 [†]

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 Multiple Myeloma, Male By Race

White

Black

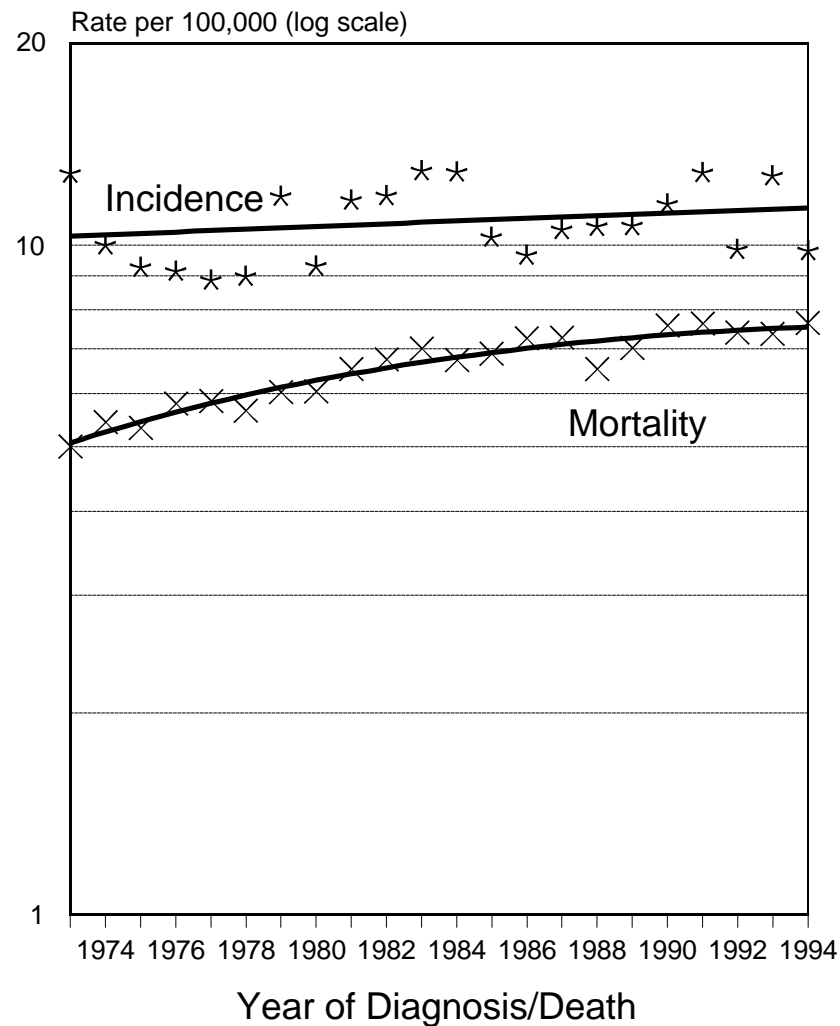
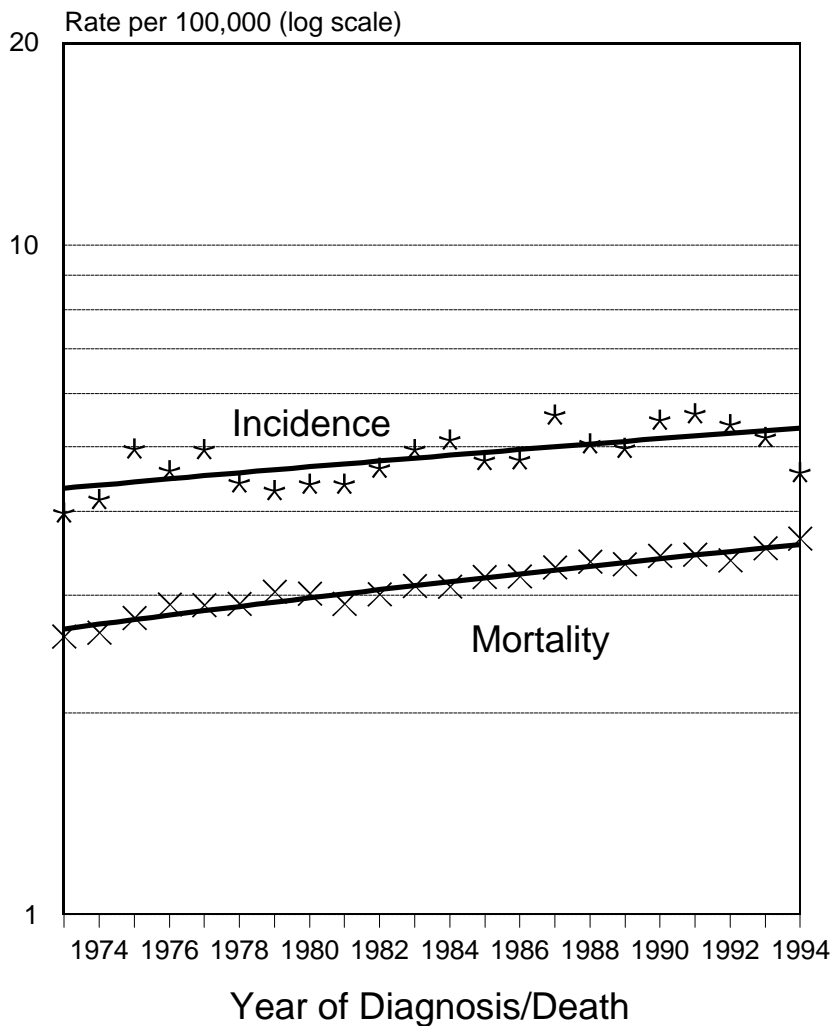


Figure XVII-1

SEER Incidence and U.S. Mortality Multiple Myeloma, Female By Race

White

Black

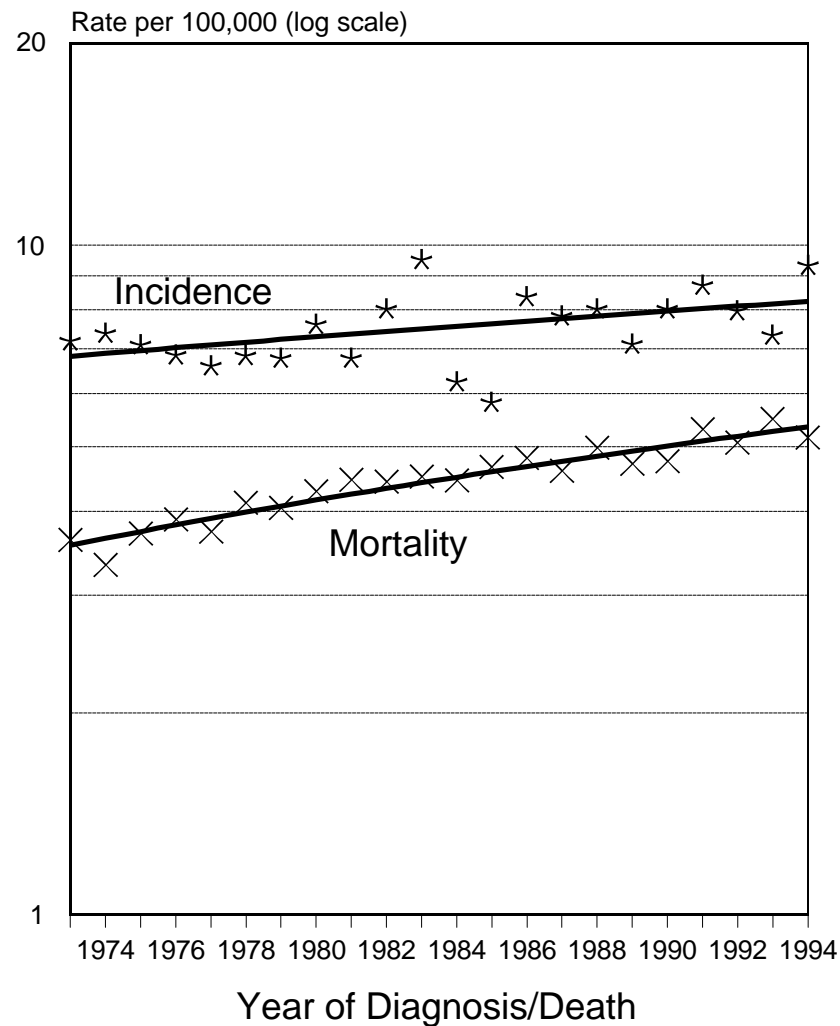
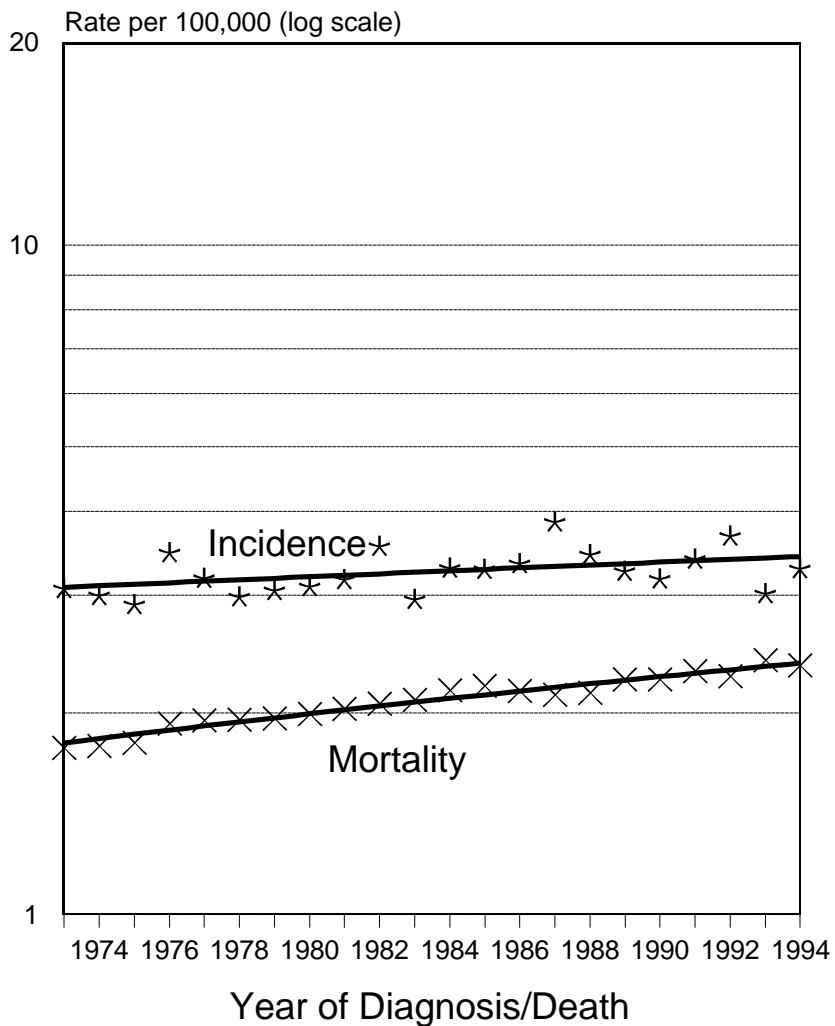


Figure XVII-2