

Table XXIV-1
TESTIS CANCER (Invasive)

TRENDS IN SEER INCIDENCE AND U.S. MORTALITY, BY RACE

	All Races, Males	White Males	Black Males
<u>INCIDENCE TRENDS (expressed in percents)§:</u>			
<u>1973-93</u>			
All Ages			
Percent Change (PC)	44.7	57.5	-37.0
Est. Annual PC (EAPC)	2.1★	2.5★	-0.8
Under 65			
Percent Change (PC)	48.0	60.5	-25.3
Est. Annual PC (EAPC)	2.2★	2.6★	-0.7
65 and over			
Percent Change (PC)	-26.9	-16.6	-
Est. Annual PC (EAPC)	-1.8	-1.6	-
<u>1975-79 - ALL AGES</u>			
Percent Change (PC)	3.2	3.9	19.5
Est. Annual PC (EAPC)	1.1	1.3	7.0
<u>1989-93 - ALL AGES</u>			
Percent Change (PC)	-3.7	-2.9	-30.6
Est. Annual PC (EAPC)	-1.6	-1.3	-10.5
<u>MORTALITY TRENDS (expressed in percents)δ:</u>			
<u>1973-93</u>			
All Ages			
Percent Change (PC)	-65.7	-65.3	-46.8
Est. Annual PC (EAPC)	-5.8★	-5.8★	-3.5★
Under 65			
Percent Change (PC)	-66.7	-66.4	-31.7
Est. Annual PC (EAPC)	-5.9★	-5.9★	-2.9★
65 and over			
Percent Change (PC)	-58.8	-56.8	-74.8
Est. Annual PC (EAPC)	-5.0★	-4.9★	-4.8★
<u>1975-79 - ALL AGES</u>			
Percent Change (PC)	-27.3	-29.3	18.2
Est. Annual PC (EAPC)	-9.8★	-10.7★	9.7
<u>1989-93 - ALL AGES</u>			
Percent Change (PC)	-2.2	-0.6	-15.7
Est. Annual PC (EAPC)	-1.2◆	-0.6◆	-5.5

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 XXIV-2
TESTIS CANCER (Invasive)

SEER INCIDENCE RATES, AGE-ADJUSTED AND AGE-SPECIFIC RATES, BY RACE

	All Races, Males	White Males	Black Males
<u>AGE-ADJUSTED RATES</u>			
YEAR OF DIAGNOSIS:			
1973	3.0	3.2	0.4
1974	3.3	3.5	1.5
1975	3.3	3.7	0.6
1976	3.2	3.5	1.1
1977	3.8	4.2	0.4
1978	3.2	3.6	1.3
1979	3.5	3.9	0.8
1980	3.9	4.5	0.8
1981	3.8	4.3	0.6
1982	4.0	4.6	0.7
1983	4.2	4.8	1.1
1984	3.9	4.5	0.6
1985	4.1	4.7	1.1
1986	4.3	5.0	0.5
1987	4.4	5.0	0.8
1988	4.1	4.8	0.6
1989	4.9	5.6	1.1
1990	4.5	5.3	0.6
1991	4.5	5.1	0.7
1992	4.6	5.4	0.4
1993	4.5	5.2	0.7
<u>AGE-ADJUSTED RATES, 1989-93</u>			
AGE AT DIAGNOSIS:			
All ages	4.6	5.3	0.7
Under 65	5.0	5.8	0.7
65 and over	1.2	1.3	0.5
All ages (world std.) ^λ	4.8	5.6	0.7
<u>AGE-SPECIFIC RATES, 1989-93</u>			
AGE AT DIAGNOSIS:			
0-4	0.4	0.4	0.2
5-9	0.1	0.1	0.4
10-14	0.1	0.1	0.0
15-19	3.1	3.9	0.0
20-24	8.4	9.9	1.4
25-29	12.9	15.0	1.6
30-34	14.4	16.7	1.7
35-39	11.0	12.6	2.1
40-44	8.6	9.9	1.6
45-49	5.3	6.1	0.3
50-54	3.3	3.7	0.4
55-59	2.3	2.6	1.1
60-64	1.9	2.2	0.0
65-69	1.4	1.6	0.7
70-74	0.9	0.9	0.9
75-79	1.3	1.4	0.0
80-84	1.3	1.3	0.0
85+	0.7	0.9	0.0

§ 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 XXIV-3
TESTIS CANCER (Invasive)
 U.S. MORTALITY RATES, AGE-ADJUSTED AND AGE-SPECIFIC RATES^δ, BY RACE

	All Races, Males	White Males	Black Males
<u>AGE-ADJUSTED RATES</u>			
YEAR OF DEATH:			
1973	0.8	0.8	0.3
1974	0.7	0.8	0.2
1975	0.7	0.7	0.2
1976	0.6	0.7	0.3
1977	0.6	0.7	0.2
1978	0.5	0.5	0.2
1979	0.5	0.5	0.3
1980	0.4	0.4	0.2
1981	0.3	0.4	0.2
1982	0.4	0.4	0.2
1983	0.3	0.4	0.2
1984	0.3	0.3	0.2
1985	0.3	0.3	0.2
1986	0.3	0.3	0.1
1987	0.3	0.3	0.2
1988	0.3	0.3	0.1
1989	0.3	0.3	0.2
1990	0.2	0.3	0.1
1991	0.2	0.3	0.1
1992	0.2	0.3	0.1
1993	0.3	0.3	0.1
<u>AGE-ADJUSTED RATES, 1989-93</u>			
AGE AT DEATH:			
All ages	0.3	0.3	0.1
Under 65	0.2	0.3	0.1
65 and over	0.3	0.4	0.3
All ages (world std.) ^φ	0.3	0.3	0.1
<u>AGE-SPECIFIC RATES, 1989-93</u>			
AGE AT DEATH:			
0-4	0.0	0.0	0.0
5-9	0.0	0.0	0.0
10-14	0.0	0.0	0.0
15-19	0.1	0.1	0.1
20-24	0.4	0.4	0.1
25-29	0.6	0.7	0.2
30-34	0.6	0.6	0.3
35-39	0.6	0.6	0.3
40-44	0.4	0.4	0.1
45-49	0.3	0.3	0.2
50-54	0.2	0.2	0.1
55-59	0.2	0.2	0.2
60-64	0.2	0.2	0.2
65-69	0.3	0.3	0.1
70-74	0.3	0.3	0.0
75-79	0.3	0.3	0.3
80-84	0.6	0.5	0.8
85+	0.8	0.8	0.9

^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 XXIV-4
TESTIS CANCER (Invasive)

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

	All Races, Males	White Males	Black Males
<u>5-YR RELATIVE SURVIVAL RATES</u>			
YEAR OF DIAGNOSIS:			
1960-63 ^a	-	63	-
1970-73 ^a	-	72	-
1974-76 ^b	78.6	78.6	75.7†
1977-79 ^b	87.4	87.8	66.2†
1980-82 ^b	91.6	91.9	89.7†
1983-85 ^b	91.2	91.5	88.1†
1986-92 ^b	95.0Ω	95.4Ω	85.8†
1986-92 ^b			
ALL STAGES	95.0	95.4	85.8†
LOCALIZED	98.5	98.5	87.7†
REGIONAL	97.3	97.8	-
DISTANT	72.2	73.8	-
UNSTAGED	92.2	92.9	-
<u>STAGE DISTRIBUTION (%) 1986-92^b</u>			
ALL STAGES			
Number of cases	4,191	3,987	60
Percent	100%	100%	100%
LOCALIZED	66	66	55
REGIONAL	20	20	23
DISTANT	12	11	20
UNSTAGED	3	3	2
<u>5-YR RELATIVE SURVIVAL RATES, 1986-92^b</u>			
AGE AT DIAGNOSIS:			
<45	95.0	95.3	88.3†
45-54	96.5	97.2	-
55-64	90.7	91.2†	-
65-74	93.8†	95.7†	-
75+	80.2†	80.2†	-
Under 65	95.0	95.4	85.8†
65 and over	91.9†	93.1†	-

^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 XXIV-5
TESTIS 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	3.0	3.3	3.3	3.2	3.8	3.2	3.5	3.9	3.8	4.0	4.2	3.9	4.1	4.3	4.4	4.1	4.9	4.5	4.5	4.6	4.5
Mortality																					
U.S.	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
SEER	1.1	0.7	0.8	0.7	0.6	0.5	0.4	0.5	0.3	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3
Relative Survival Rates (SEER)																					
1-year	91.1	89.0	90.0	91.2	94.5	95.3	94.9	96.0	97.1	96.2	95.7	95.5	97.1	98.1	98.6	98.9	98.2	98.3	98.5	98.0	
2-year	81.1	79.7	83.9	85.5	89.7	91.1	91.8	90.6	94.2	93.6	93.0	92.4	94.0	96.8	97.8	96.5	95.8	96.6	96.9		
3-year	76.6	76.2	80.8	83.0	87.6	89.1	90.8	89.7	93.9	93.3	92.0	91.7	93.4	96.5	96.7	95.9	95.0	96.1			
4-year	74.1	75.0	80.1	82.2	86.2	88.2	89.9	89.1	93.9	92.7	91.4	90.4	92.8	95.8	96.0	95.1	94.7				
5-year	73.7	74.1	79.6	81.7	85.1	87.3	89.9	89.1	93.9	92.0	91.3	89.8	92.6	95.5	95.6	94.6					
6-year	73.7	73.2	78.9	81.6	84.5	87.3	89.6	89.1	93.2	92.0	91.3	88.8	92.3	95.4	95.0						
7-year	73.7	73.2	78.9	81.1	84.1	87.3	89.3	89.1	93.1	92.0	90.7	88.8	92.3	95.4							
8-year	73.0	73.2	78.2	80.7	84.1	87.3	89.3	89.1	93.1	92.0	89.7	88.3	91.4								
9-year	73.0	73.2	77.8	80.7	84.1	87.3	89.3	89.1	92.7	91.7	89.3	87.2									
10-year	73.0	73.2	77.1	79.8	83.8	86.3	89.3	89.0	92.7	91.5	89.2										
11-year	73.0	73.2	76.4	79.0	83.8	86.3	88.5	89.0	92.2	91.5											
12-year	72.2	72.9	76.1	78.9	83.6	86.3	88.5	88.8	91.9												
13-year	71.4	71.0	75.8	77.8	82.8	86.3	88.5	88.0													
14-year	71.1	69.4	74.4	76.7	82.8	86.0	88.5														
15-year	71.1	68.6	74.1	76.2	82.7	86.0															
16-year	71.1	68.6	73.8	75.1	81.8																
17-year	71.1	68.6	73.8	74.6																	
18-year	71.1	68.5	73.0																		
19-year	69.9	68.4																			
20-year	67.8																				

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 XXIV-6
TESTIS CANCER (Invasive)

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

Lifetime Risk (Percent) of Being Diagnosed With Cancer and
 Lifetime Risk (Percent) of Dying From Cancer

SEER Areas, 1991-93

All Races

Current Age	+10 yrs	+20 yrs	+30 yrs	Eventually
0	0.00	0.02	0.12	0.34
10	0.02	0.12	0.23	0.34
20	0.10	0.22	0.28	0.33
30	0.12	0.19	0.21	0.23
40	0.07	0.09	0.10	0.11
50	0.03	0.04	0.04	0.05
60	0.01	0.02	0.02	0.02

Lifetime Risk of Being Diagnosed = 0.34%
 Lifetime Risk of Dying = 0.02%

Whites

Current Age	+10 yrs	+20 yrs	+30 yrs	Eventually
0	0.00	0.02	0.14	0.40
10	0.02	0.14	0.27	0.40
20	0.11	0.25	0.33	0.38
30	0.14	0.22	0.24	0.27
40	0.08	0.11	0.12	0.13
50	0.03	0.04	0.05	0.05
60	0.02	0.02	0.03	0.03

Lifetime Risk of Being Diagnosed = 0.40%
 Lifetime Risk of Dying = 0.02%

Blacks

Current Age	+10 yrs	+20 yrs	+30 yrs	Eventually
0	0.00	0.00	0.02	0.04
10	0.00	0.02	0.03	0.04
20	0.02	0.03	0.04	0.05
30	0.02	0.03	0.03	0.03
40	0.01	0.01	0.01	0.01
50	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00

Lifetime Risk of Being Diagnosed = 0.04%
 Lifetime Risk of Dying = 0.00%

Table XXIV-7
TESTIS CANCER (Invasive)AVERAGE ANNUAL AGE-ADJUSTED CANCER MORTALITY^δ RATES BY STATE, 1989-93

All Races, Males

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
TOTAL U.S.	0.3	0.01							
High Five States									
North Dakota	0.4 [⊛]	0.16	(01)	33.3	Montana	0.4 [⊛]	0.13	(03)	33.3
Nevada	0.4 [⊛]	0.11	(02)	33.3	Nebraska	0.3	0.08	(15)	0.0
Montana	0.4 [⊛]	0.13	(03)	33.3	Nevada	0.4 [⊛]	0.11	(02)	33.3
Idaho	0.4 [⊛]	0.12	(04)	33.3	New Hampshire	0.3	0.10	(06)	0.0
Colorado	0.4 [⊛]	0.06	(05)	33.3	New Jersey	0.3	0.04	(16)	0.0
Low Five States					New Mexico	0.2 [⊛]	0.07	(43)	-33.3
Connecticut	0.2 [⊛]	0.04	(47)	-33.3	New York	0.3	0.02	(14)	0.0
Alaska	0.1 [⊛]	0.09	(48)	-66.7	North Carolina	0.2 [⊛]	0.03	(44)	-33.3
Hawaii	0.1 [⊛]	0.06	(49)	-66.7	North Dakota	0.4 [⊛]	0.16	(01)	33.3
Mississippi	0.1 [⊛]	0.04	(50)	-66.7	Ohio	0.3	0.03	(12)	0.0
Delaware	0.1 [⊛]	0.06	(51)	-66.7	Oklahoma	0.3	0.05	(25)	0.0
					Oregon	0.2 [⊛]	0.05	(28)	-33.3
					Pennsylvania	0.3	0.03	(20)	0.0
					Rhode Island	0.3	0.11	(07)	0.0
					South Carolina	0.3	0.05	(26)	0.0
					South Dakota	0.3	0.12	(10)	0.0
					Tennessee	0.2 [⊛]	0.04	(27)	-33.3
					Texas	0.3	0.02	(24)	0.0
					Utah	0.3	0.09	(08)	0.0
					Vermont	0.2 [⊛]	0.11	(40)	-33.3
					Virginia	0.2 [⊛]	0.03	(38)	-33.3
					Washington	0.3	0.04	(21)	0.0
					West Virginia	0.2 [⊛]	0.07	(29)	-33.3
					Wisconsin	0.2 [⊛]	0.04	(36)	-33.3
					Wyoming	0.2 [⊛]	0.14	(39)	-33.3
Alabama	0.2 [⊛]	0.04	(41)	-33.3					
Alaska	0.1 [⊛]	0.09	(48)	-66.7					
Arizona	0.2 [⊛]	0.05	(34)	-33.3					
Arkansas	0.2 [⊛]	0.06	(32)	-33.3					
California	0.3	0.02	(19)	0.0					
Colorado	0.4 [⊛]	0.06	(05)	33.3					
Connecticut	0.2 [⊛]	0.04	(47)	-33.3					
Delaware	0.1 [⊛]	0.06	(51)	-66.7					
District of Columbia	0.3	0.14	(17)	0.0					
Florida	0.3	0.03	(23)	0.0					
Georgia	0.2 [⊛]	0.03	(45)	-33.3					
Hawaii	0.1 [⊛]	0.06	(49)	-66.7					
Idaho	0.4 [⊛]	0.12	(04)	33.3					
Illinois	0.2 [⊛]	0.03	(33)	-33.3					
Indiana	0.2 [⊛]	0.04	(35)	-33.3					
Iowa	0.3	0.06	(09)	0.0					
Kansas	0.3	0.06	(22)	0.0					
Kentucky	0.2 [⊛]	0.04	(42)	-33.3					
Louisiana	0.2 [⊛]	0.04	(37)	-33.3					
Maine	0.2 [⊛]	0.07	(46)	-33.3					
Maryland	0.2 [⊛]	0.04	(31)	-33.3					
Massachusetts	0.3	0.04	(18)	0.0					
Michigan	0.3	0.03	(13)	0.0					
Minnesota	0.2 [⊛]	0.05	(30)	-33.3					
Mississippi	0.1 [⊛]	0.04	(50)	-66.7					
Missouri	0.3	0.05	(11)	0.0					

^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 XXIV-8
TESTIS CANCER (Invasive)AGE-ADJUSTED SEER INCIDENCE RATES§, SEER MORTALITY RATESδ, AND 5-YEAR RELATIVE SURVIVAL RATESϕ
By Registry and Race

	All Races, Males	White Males	Black Males
<u>SEER INCIDENCE RATES§, 1989-93</u>			
REGISTRY			
Standard 9 registries	4.6	5.3	0.7
San Francisco-Oakland	4.7	6.0	0.9
Connecticut	4.9	5.4	0.8
Metropolitan Detroit	4.4	5.4	0.8
Hawaii	3.8	5.7	-
Iowa	4.5	4.6	-
New Mexico	4.8	5.2	-
Seattle-Puget Sound	5.3	5.7	0.7
Utah	5.5	5.6	-
Metropolitan Atlanta	3.1	4.2	0.6
San Jose-Monterey	4.3	5.0	0.4
Los Angeles	3.6	4.3	1.0
<u>SEER MORTALITY RATESδ, 1989-93</u>			
REGISTRY			
Standard 9 registries	0.2	0.2	0.1
San Francisco-Oakland	0.2	0.3	0.0
Connecticut	0.2	0.2	0.0
Metropolitan Detroit	0.2	0.3	0.1
Hawaii	0.1	0.4	-
Iowa	0.3	0.3	-
New Mexico	0.2	0.1	-
Seattle-Puget Sound	0.3	0.3	0.4
Utah	0.3	0.3	-
Metropolitan Atlanta	0.0	0.1	0.0
San Jose-Monterey	0.4	0.4	0.6
Los Angeles	0.3	0.4	0.1
<u>SURVIVAL RATESϕ, 1986-92</u>			
REGISTRY			
Standard 9 registries	95.0	95.4	85.8†
San Francisco-Oakland	94.2	94.5	-
Connecticut	96.7	96.6	-
Metropolitan Detroit	92.6	92.9	-
Hawaii	89.1	90.5	-
Iowa	95.8	95.8	-
New Mexico	95.8	97.4	-
Seattle-Puget Sound	96.3	96.5	-
Utah	97.3	97.3	-
Metropolitan Atlanta	94.0	94.0	-

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.
 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.
 † 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 Testis, Under 65 Years of Age By Race

White

Black

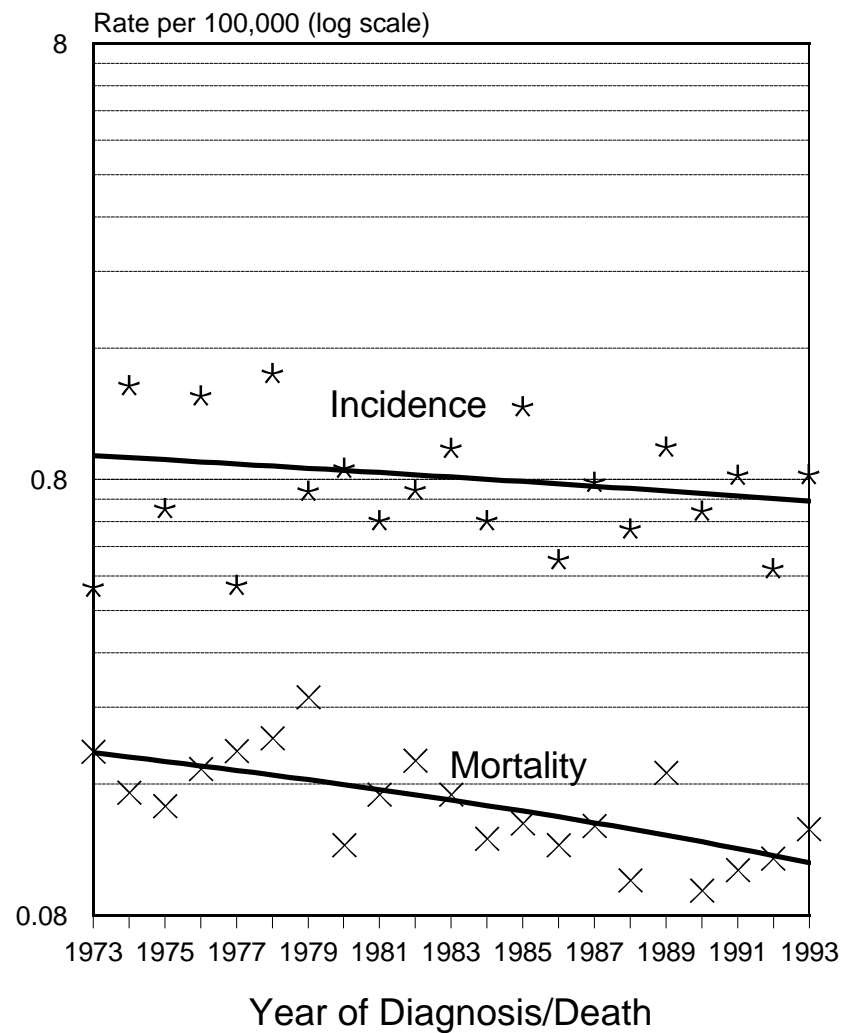
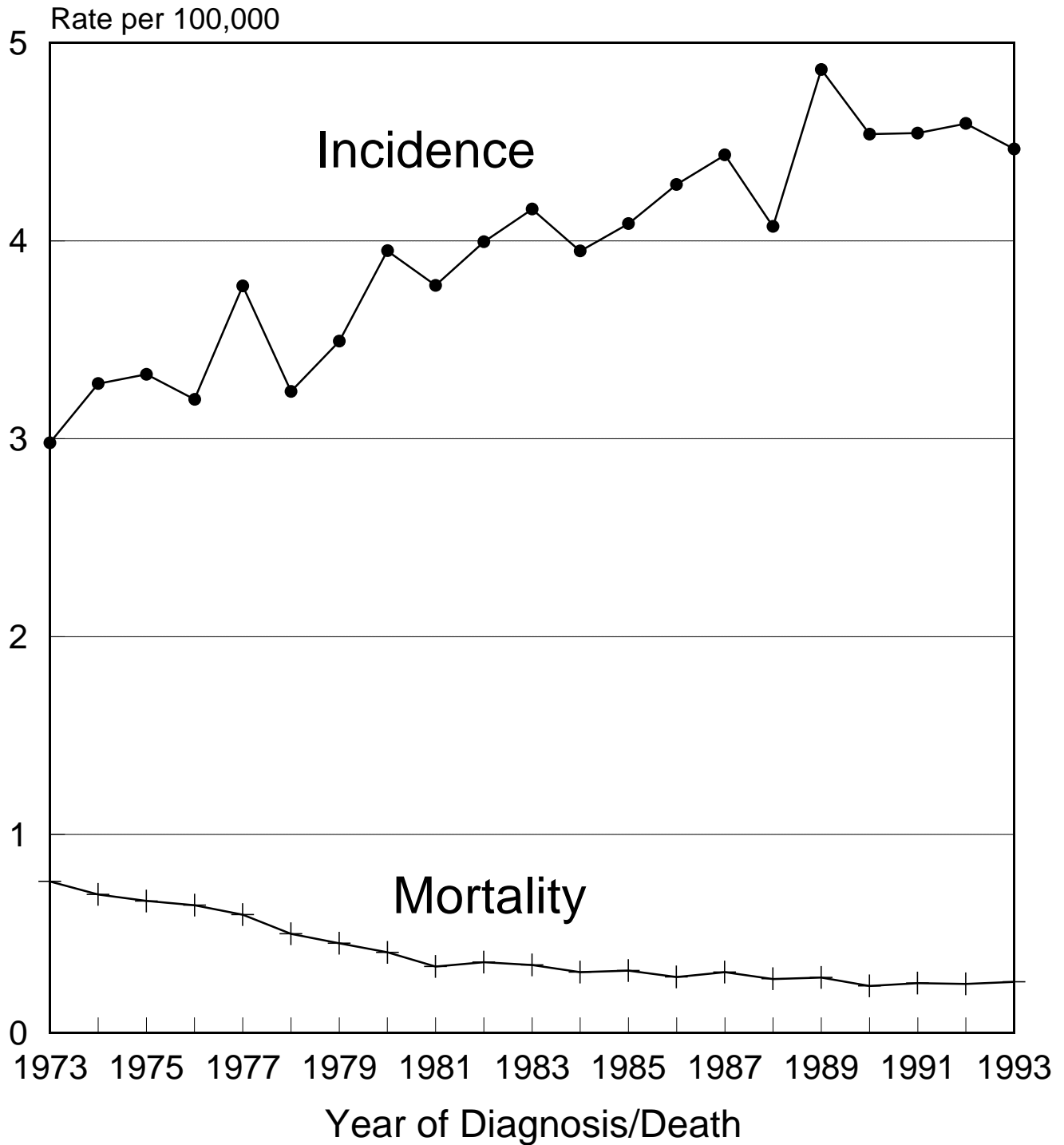


Figure XXIV-1

Testicular Cancer SEER Incidence and U.S. Mortality, 1973-93



Age-adjusted to 1970 Standard