

Table IV-1
FEMALE BREAST CANCER (Invasive)

TRENDS IN SEER INCIDENCE AND U.S. MORTALITY USING THE JOINPOINT REGRESSION PROGRAM, 1973-1997
WITH UP TO THREE JOINPOINTS BY RACE AND AGE

	<u>All Races</u>		<u>Whites</u>		<u>Blacks</u>	
	<u>Year</u>	<u>APC</u>	<u>Year</u>	<u>APC</u>	<u>Year</u>	<u>APC</u>
<u>SEER Cancer Incidence</u>						
Age - All Ages	1973-80	-0.6	1973-80	-0.5	1973-79	-0.6
	1980-87	3.8★	1980-87	4.0★	1979-86	3.8★
	1987-97	0.2	1987-97	0.1	1986-97	1.0★
Age - Under 50	1973-80	-1.5★	1973-80	-1.3★	1973-97	1.0★
	1980-86	3.0★	1980-87	2.6★		
	1986-97	-0.4	1987-97	-0.8★		
Age - 50 and Over	1973-80	-0.3	1973-80	-0.2	1973-79	-0.6
	1980-87	4.2★	1980-87	4.4★	1979-86	4.3★
	1987-97	0.5	1987-97	0.4	1986-97	1.3★
<u>U.S. Cancer Mortality</u>						
Age - All Ages	1973-79	-0.2	1973-79	-0.2	1973-91	1.3★
	1979-90	0.4★	1979-89	0.4★	1991-97	-0.3
	1990-97	-2.2★	1989-95	-1.8★		
			1995-97	-4.1★		
Age - Under 50	1973-81	-1.4★	1973-81	-1.5★	1973-76	-5.2★
	1981-89	0.2	1981-90	-0.3	1976-87	1.8★
	1989-97	-2.7★	1990-97	-3.5★	1987-97	-1.0★
Age - 50 and Over	1973-90	0.4★	1973-90	0.4★	1973-97	1.2★
	1990-97	-2.0★	1990-97	-2.2★		

The APC is the Annual Percent Change based on rates age-adjusted to the 1970 U.S. standard population using the Joinpoint Regression Program.

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

Table IV-2
BREAST 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	45.0	1.0	82.6	46.2	0.9	84.5	38.6	2.7	69.0
1974	51.7	1.0	94.9	52.9	1.0	96.8	43.5	1.5	79.3
1975	48.2	0.7	88.2	49.3	0.7	90.1	43.4	0.7	78.5
1976	46.8	0.8	85.5	48.1	0.8	87.8	39.3	1.0	70.5
1977	46.1	0.8	84.0	47.3	0.7	86.2	40.8	1.8	72.2
1978	46.1	0.7	84.1	47.5	0.7	86.5	40.0	0.3	72.0
1979	47.1	0.8	85.6	48.2	0.8	87.6	41.1	1.7	72.4
1980	47.0	0.7	85.5	48.3	0.8	87.9	41.9	0.7	74.7
1981	48.9	0.8	88.9	50.5	0.8	91.9	44.2	1.7	77.6
1982	49.1	0.8	89.3	50.6	0.8	92.3	44.3	1.6	77.5
1983	51.4	0.9	93.4	52.8	0.9	96.2	48.8	0.4	86.5
1984	53.4	0.8	97.2	55.1	0.8	100.5	48.3	1.2	85.2
1985	57.2	0.8	104.1	58.8	0.8	107.4	52.7	0.9	92.8
1986	58.6	0.8	106.7	60.0	0.8	109.7	54.6	1.1	95.6
1987	62.2	0.8	113.2	64.6	0.8	118.1	52.0	1.0	91.0
1988	60.6	1.0	110.3	62.7	0.9	114.6	57.3	2.2	99.4
1989	58.6	0.9	106.8	60.6	0.9	110.9	51.4	1.7	89.8
1990	60.5	0.9	110.4	62.5	1.0	114.6	56.1	1.0	97.9
1991	61.3	0.9	112.1	63.4	0.9	116.5	55.9	1.1	98.2
1992	60.7	0.8	111.1	62.1	0.8	114.4	58.6	1.1	102.6
1993	59.3	0.9	108.8	60.8	0.9	112.2	57.4	1.2	100.9
1994	60.1	0.9	110.5	61.9	0.9	114.5	58.8	1.4	103.2
1995	60.8	0.8	111.9	62.4	0.7	115.9	59.5	1.7	103.9
1996	61.0	1.1	112.4	62.2	1.2	115.5	58.8	1.4	103.2
1997	62.6	1.1	115.4	63.6	1.0	118.4	58.9	1.5	103.0
<u>AGE-ADJUSTED RATES, 1993-97</u>									
<u>AGE AT DIAGNOSIS:</u>									
All ages	60.8	1.0	111.9	62.2	0.9	115.3	58.7	1.4	102.8
Under 65	39.1	0.5	75.8	39.6	0.5	77.7	39.9	0.7	72.5
65 and over	258.5	5.4	441.2	268.8	5.3	459.2	229.8	7.8	379.6
All ages (world std.) [§]	50.7	0.7	94.6	51.8	0.7	97.4	49.6	1.1	87.9
<u>AGE-SPECIFIC RATES, 1993-97</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	0.1	0.0	0.0	0.0	0.3	0.0	0.5
20-24	0.7	0.0	1.4	0.6	0.0	1.1	1.5	0.0	2.9
25-29	4.1	0.0	8.1	3.9	0.0	7.8	6.0	0.0	11.3
30-34	12.5	0.1	24.8	11.9	0.1	24.0	17.3	0.0	32.0
35-39	29.4	0.1	58.4	28.6	0.2	57.4	34.5	0.0	64.4
40-44	58.9	0.3	116.1	58.7	0.3	117.1	62.8	0.4	116.5
45-49	100.7	0.8	198.5	100.7	0.8	201.0	107.8	1.8	199.3
50-54	135.1	1.4	263.7	138.0	1.4	272.4	132.6	2.2	243.5
55-59	158.5	2.2	305.0	160.5	2.0	312.9	162.5	3.5	290.2
60-64	187.7	3.7	353.6	194.6	3.8	371.8	170.4	5.3	299.6
65-69	220.6	3.4	402.7	228.9	3.6	421.1	194.9	1.9	345.3
70-74	262.0	4.9	461.5	271.8	5.3	479.6	237.6	6.0	401.0
75-79	287.1	7.3	482.3	299.1	7.0	501.8	258.1	11.3	417.9
80-84	302.5	8.3	472.9	315.8	7.6	490.5	260.4	16.6	391.9
85+	281.8	7.2	394.0	294.2	6.0	406.7	245.0	19.1	345.3

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

Table IV-3
BREAST 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	15.0	0.3	26.9	15.1	0.3	27.1	14.8	0.5	26.3
1974	14.9	0.3	26.7	14.9	0.3	26.8	15.1	0.5	26.7
1975	14.6	0.3	26.2	14.8	0.3	26.5	14.1	0.3	24.8
1976	14.8	0.3	26.5	15.0	0.3	26.8	14.4	0.5	25.2
1977	15.2	0.3	27.1	15.2	0.3	27.2	15.7	0.4	27.4
1978	14.8	0.3	26.5	14.9	0.3	26.7	15.3	0.5	26.7
1979	14.6	0.2	26.0	14.7	0.2	26.2	14.8	0.4	25.7
1980	14.8	0.2	26.4	14.9	0.2	26.6	15.2	0.3	26.4
1981	14.9	0.2	26.6	15.0	0.2	26.8	15.6	0.4	27.1
1982	15.0	0.3	26.8	15.1	0.2	26.9	16.3	0.4	28.2
1983	15.0	0.2	26.7	15.0	0.2	26.8	16.2	0.4	28.0
1984	15.4	0.2	27.3	15.3	0.2	27.3	17.4	0.4	30.0
1985	15.4	0.3	27.5	15.4	0.3	27.6	16.9	0.3	29.1
1986	15.3	0.2	27.3	15.3	0.2	27.4	17.1	0.3	29.6
1987	15.2	0.3	27.1	15.2	0.3	27.1	17.8	0.4	30.6
1988	15.5	0.2	27.5	15.3	0.2	27.4	18.3	0.6	31.4
1989	15.4	0.3	27.5	15.4	0.2	27.5	17.7	0.4	30.4
1990	15.4	0.2	27.4	15.2	0.2	27.3	18.5	0.4	31.6
1991	15.1	0.2	27.0	15.0	0.2	26.8	18.6	0.3	31.8
1992	14.6	0.2	26.2	14.5	0.2	26.0	18.0	0.4	30.9
1993	14.5	0.3	25.9	14.3	0.3	25.6	18.5	0.5	31.5
1994	14.3	0.3	25.5	14.0	0.3	25.2	18.4	0.5	31.3
1995	14.1	0.3	25.2	13.8	0.3	24.8	18.7	0.6	31.9
1996	13.6	0.3	24.3	13.3	0.2	23.9	18.1	0.6	30.8
1997	13.0	0.3	23.3	12.6	0.2	22.7	18.3	0.5	31.2
<u>AGE-ADJUSTED RATES, 1993-97</u>									
<u>AGE AT DEATH:</u>									
All ages	13.9	0.3	24.8	13.6	0.3	24.4	18.4	0.5	31.3
Under 65	7.5	0.1	14.4	7.2	0.1	13.9	11.3	0.2	20.2
65 and over	72.3	1.7	120.2	72.5	1.6	120.9	83.3	3.5	132.9
All ages (world std.)N	11.1	0.2	20.2	10.8	0.2	19.8	15.1	0.4	26.1
<u>AGE-SPECIFIC RATES, 1993-97</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	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.3
25-29	0.5	0.0	1.1	0.4	0.0	0.9	1.2	0.0	2.2
30-34	2.0	0.0	4.0	1.8	0.0	3.5	4.1	0.0	7.8
35-39	5.1	0.0	10.2	4.6	0.0	9.3	9.3	0.1	17.5
40-44	9.9	0.1	19.5	9.1	0.1	18.2	16.9	0.1	31.5
45-49	17.1	0.2	33.3	16.0	0.1	31.6	28.2	0.4	51.6
50-54	25.3	0.3	48.9	24.1	0.3	47.1	38.6	0.6	69.4
55-59	32.4	0.5	61.8	31.6	0.5	60.8	45.4	0.8	80.2
60-64	40.7	0.8	76.1	40.1	0.8	75.7	54.2	1.7	93.8
65-69	50.9	1.1	92.3	50.9	1.0	93.0	59.5	2.3	102.0
70-74	63.9	1.4	111.8	63.7	1.3	112.1	79.5	3.3	131.4
75-79	78.2	2.1	130.5	78.5	1.9	131.5	89.2	3.9	141.7
80-84	100.0	2.5	155.2	100.4	2.3	155.9	113.0	4.8	168.5
85+	144.6	4.0	200.4	146.4	3.8	202.2	147.6	6.9	205.6

* 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 IV-4
FEMALE BREAST CANCER (Invasive)

SEER INCIDENCES AND U.S. MORTALITY* RATES, AGE-ADJUSTED RATES, BY RACE AND AGE

	All Races, Females			White Females			Black Females		
	All	<50	50+	All	<50	50+	All	<50	50+
<u>SEER INCIDENCE RATES</u>									
<u>YEAR OF DIAGNOSIS:</u>									
1973	82.6	29.0	247.8	84.5	29.4	254.2	69.0	25.9	201.9
1974	94.9	33.0	285.9	96.8	33.0	293.7	79.3	30.4	230.0
1975	88.2	30.0	267.6	90.1	30.1	275.0	78.5	30.7	226.1
1976	85.5	29.7	257.5	87.8	30.3	265.2	70.5	27.5	203.2
1977	84.0	28.8	254.3	86.2	29.1	262.2	72.2	27.2	211.0
1978	84.1	28.5	255.6	86.5	28.8	264.6	72.0	29.7	202.5
1979	85.6	28.0	263.1	87.6	28.4	270.3	72.4	27.6	210.5
1980	85.5	27.7	263.6	87.9	28.0	272.3	74.7	27.8	219.1
1981	88.9	28.8	274.2	91.9	29.4	284.6	77.6	28.4	229.4
1982	89.3	29.8	272.8	92.3	30.3	283.5	77.5	28.0	229.9
1983	93.4	29.6	290.1	96.2	30.0	300.5	86.5	30.3	260.0
1984	97.2	31.1	301.3	100.5	31.6	313.0	85.2	32.2	248.8
1985	104.1	32.5	325.0	107.4	32.6	337.7	92.8	33.2	276.4
1986	106.7	32.6	335.2	109.7	33.1	345.8	95.6	32.7	289.7
1987	113.2	33.5	359.1	118.1	34.2	376.9	91.0	31.4	274.9
1988	110.3	32.3	350.9	114.6	33.0	366.3	99.4	31.4	309.2
1989	106.8	32.0	337.2	110.9	32.8	351.8	89.8	31.5	269.6
1990	110.4	33.5	347.5	114.6	33.6	364.5	97.9	35.6	290.2
1991	112.1	34.7	350.7	116.5	34.7	368.9	98.2	37.4	285.6
1992	111.1	31.9	355.1	114.4	32.1	368.2	102.6	34.1	313.7
1993	108.8	31.5	347.0	112.2	31.7	360.3	100.9	33.4	309.0
1994	110.5	31.2	355.2	114.5	31.3	371.2	103.2	35.4	312.3
1995	111.9	31.9	358.9	115.9	32.0	374.6	103.9	33.9	319.9
1996	112.4	31.9	360.7	115.5	31.9	373.4	103.2	31.9	323.0
1997	115.4	32.0	372.8	118.4	31.9	385.1	103.0	32.0	322.1
1993-97	111.9	31.7	359.1	115.3	31.8	373.1	102.8	33.2	317.4
<u>U.S. MORTALITY RATES</u>									
<u>YEAR OF DEATH:</u>									
1973	26.9	7.0	88.4	27.1	6.8	89.7	26.3	8.9	79.8
1974	26.7	6.9	87.6	26.8	6.7	88.6	26.7	8.7	82.0
1975	26.2	6.8	86.1	26.5	6.7	87.5	24.8	7.9	77.1
1976	26.5	6.5	88.3	26.8	6.4	89.9	25.2	7.5	79.7
1977	27.1	6.6	90.2	27.2	6.5	91.1	27.4	7.8	88.0
1978	26.5	6.4	88.3	26.7	6.3	89.5	26.7	8.4	83.1
1979	26.0	6.3	86.6	26.2	6.2	88.2	25.7	8.4	79.0
1980	26.4	6.3	88.4	26.6	6.2	89.7	26.4	8.0	83.2
1981	26.6	6.2	89.3	26.8	6.0	90.7	27.1	8.5	84.3
1982	26.8	6.2	90.2	26.9	6.0	91.1	28.2	8.3	89.7
1983	26.7	6.0	90.6	26.8	5.8	91.6	28.0	8.2	89.2
1984	27.3	6.3	92.2	27.3	6.0	93.0	30.0	9.2	94.3
1985	27.5	6.3	92.7	27.6	6.1	93.7	29.1	8.8	91.8
1986	27.3	6.4	91.9	27.4	6.1	93.0	29.6	9.4	91.7
1987	27.1	6.2	91.7	27.1	5.9	92.4	30.6	9.5	95.7
1988	27.5	6.2	93.4	27.4	5.9	93.9	31.4	9.3	99.5
1989	27.5	6.2	93.1	27.5	5.9	93.9	30.4	9.2	96.0
1990	27.4	6.1	92.9	27.3	5.9	93.2	31.6	8.8	101.7
1991	27.0	6.0	91.8	26.8	5.7	92.0	31.8	9.1	102.0
1992	26.2	5.8	89.1	26.0	5.5	89.3	30.9	8.9	99.0
1993	25.9	5.5	88.6	25.6	5.2	88.6	31.5	8.6	102.0
1994	25.5	5.5	87.2	25.2	5.1	87.1	31.3	8.7	101.1
1995	25.2	5.4	86.2	24.8	5.0	85.7	31.9	8.8	103.1
1996	24.3	5.2	83.3	23.9	4.8	83.0	30.8	8.8	98.8
1997	23.3	5.0	79.6	22.7	4.6	78.6	31.2	8.2	102.2
1993-97	24.8	5.3	84.9	24.4	4.9	84.6	31.3	8.6	101.4

**

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

Table IV-5
FEMALE BREAST CANCER (Invasive)

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

	All Races, Females			White Females			Black Females		
	All	<50	50+	All	<50	50+	All	<50	50+
<u>5-YR RELATIVE SURVIVAL RATES</u>									
YEAR OF DIAGNOSIS:									
1960-63 ^a	-	-	-	63	-	-	46	-	-
1970-73 ^a	-	-	-	68	-	-	51	-	-
1974-76 ^b	74.7	76.4	74.1	75.4	77.4	74.7	63.0	64.2	62.3
1977-79 ^b	74.7	75.8	74.3	75.5	76.8	75.0	63.1	65.2	61.9
1980-82 ^b	76.3	77.2	76.0	77.1	78.0	76.8	65.9	68.9	64.1
1983-85 ^b	78.1	77.4	78.4	79.3	79.1	79.4	63.5	63.5	63.5
1986-88 ^b	82.8	80.0	83.7	83.9	81.4	84.7	69.4	67.5	70.4
1989-96 ^b	85.0 ^S	82.7 ^S	86.0 ^S	86.4 ^S	84.7 ^S	87.0 ^S	71.4 ^S	69.0 ^S	73.0 ^S
1989-96 ^b									
ALL STAGES	85.0	82.7	86.0	86.4	84.7	87.0	71.4	69.0	73.0
LOCALIZED	96.5	93.5	97.6	97.1	94.5	98.0	89.2	84.6	91.8
REGIONAL	77.0	76.0	77.5	78.6	78.4	78.9	63.6	63.7	63.5
DISTANT	21.4	25.4	20.1	22.4	27.8	21.0	14.8	14.7	15.0
UNSTAGED	54.0	64.3	50.7	54.7	69.4	50.4	49.7	47.7 [†]	50.9
<u>STAGE DISTRIBUTION (%) 1989-96^b</u>									
ALL STAGES									
Number of cases	107,784	26,890	80,894	92,842	21,706	71,136	8,778	3,129	5,649
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
LOCALIZED	62	55	64	63	56	65	51	47	54
REGIONAL	29	37	27	29	37	26	34	41	31
DISTANT	6	5	6	6	5	6	9	7	10
UNSTAGED	3	3	3	3	3	3	5	5	6
<u>5-YR RELATIVE SURVIVAL RATES, 1989-96^b</u>									
AGE AT DIAGNOSIS:									
<45	81.1	-	-	83.3	-	-	67.3	-	-
45-54	85.1	-	-	86.6	-	-	73.1	-	-
55-64	85.8	-	-	86.8	-	-	74.4	-	-
65-74	87.7	-	-	88.7	-	-	74.4	-	-
75+	84.8	-	-	85.8	-	-	67.8	-	-
Under 65	84.2	-	-	85.8	-	-	71.3	-	-
65 and over	86.6	-	-	87.6	-	-	72.0	-	-

^a Rates are based on End Results data from a series of hospital registries and one population-based registry.
^b Rates are from the SEER 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 1997.
^S The difference in rates between 1974-76 and 1989-96 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 IV-6
FEMALE BREAST CANCER (Invasive)

INCIDENCE, MORTALITY, AND SURVIVAL RATES

By Year of Diagnosis/Death

All Races, Females

Year of Diagnosis/Death

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Incidence																						
SEER	85.5	84.0	84.1	85.6	85.5	88.9	89.3	93.4	97.2	104.1	106.7	113.2	110.3	106.8	110.4	112.1	111.1	108.8	110.5	111.9	112.4	115.4
Mortality																						
U.S.	26.5	27.1	26.5	26.0	26.4	26.6	26.8	26.7	27.3	27.5	27.3	27.1	27.5	27.5	27.4	27.0	26.2	25.9	25.5	25.2	24.3	23.3
SEER	26.9	28.0	27.3	26.2	26.8	27.1	27.5	26.8	26.5	27.9	27.0	27.7	27.7	27.5	26.0	26.9	25.5	24.8	24.0	24.9	24.1	22.8
Relative Survival Rates (SEER)																						
1-year	94.6	94.5	94.6	94.9	95.3	95.4	95.6	95.4	95.7	95.9	96.3	96.9	96.8	97.0	97.0	97.3	97.4	97.1	97.5	97.2	96.9	
2-year	88.8	89.1	88.8	88.9	89.8	90.1	90.4	90.5	91.4	91.3	91.7	93.3	93.4	93.4	93.3	93.9	94.4	94.0	94.2	93.9		
3-year	83.5	83.6	83.2	83.2	84.2	84.8	84.8	85.1	86.3	86.4	87.1	89.2	90.0	90.0	89.8	90.1	91.0	90.8	90.9			
4-year	78.5	78.8	78.7	78.4	79.6	79.7	80.7	81.1	82.3	82.4	83.5	86.0	87.1	87.2	86.9	87.6	88.0	87.9				
5-year	74.7	75.3	74.5	74.4	75.4	76.2	77.3	76.8	78.6	78.8	80.5	83.2	84.5	84.6	84.6	85.2	85.5					
6-year	71.3	72.1	71.5	71.4	72.3	73.1	74.0	73.7	76.0	76.3	78.1	80.5	82.2	82.2	82.4	83.1						
7-year	68.4	69.6	68.8	68.3	69.4	70.3	70.9	70.7	73.5	74.1	75.7	78.2	80.2	80.4	80.3							
8-year	66.2	67.4	66.3	66.0	67.1	67.7	68.7	68.4	71.3	72.2	74.1	76.6	78.7	78.9								
9-year	64.0	65.2	64.2	63.6	64.5	65.7	67.2	66.6	68.9	70.2	72.5	74.7	76.7									
10-year	62.4	63.3	62.5	61.8	62.8	63.5	65.2	64.8	66.8	68.5	70.7	73.3										
11-year	60.8	61.5	60.8	60.4	61.0	61.9	63.2	62.8	65.0	67.0	69.3											
12-year	59.1	59.7	59.1	59.2	59.6	60.6	61.7	61.5	64.1	65.7												
13-year	58.0	58.5	58.2	57.9	58.7	58.9	60.6	60.3	62.9													
14-year	57.2	57.5	57.0	56.8	57.7	57.6	59.0	58.8														
15-year	56.1	56.3	56.0	55.7	56.8	56.8	58.2															
16-year	55.6	55.2	55.1	54.7	55.2	55.3																
17-year	54.8	54.3	53.8	53.6	54.1																	
18-year	54.0	53.7	53.0	51.9																		
19-year	53.2	52.5	52.4																			
20-year	52.3	52.2																				
21-year	51.8																					

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 IV-7
 FEMALE BREAST CANCER (Under 50) (Invasive)

INCIDENCE, MORTALITY, AND SURVIVAL RATES

By Year of Diagnosis/Death

All Races, Females

Year of Diagnosis/Death

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Incidence																						
SEER	29.7	28.8	28.5	28.0	27.7	28.8	29.8	29.6	31.1	32.5	32.6	33.5	32.3	32.0	33.5	34.7	31.9	31.5	31.2	31.9	31.9	32.0
Mortality																						
U.S.	6.5	6.6	6.4	6.3	6.3	6.2	6.2	6.0	6.3	6.3	6.4	6.2	6.2	6.2	6.1	6.0	5.8	5.5	5.5	5.4	5.2	5.0
SEER	6.2	7.0	6.2	6.1	6.5	5.9	6.1	5.8	5.8	6.0	6.3	6.0	6.0	5.7	6.0	5.9	5.1	5.3	4.7	5.2	4.9	4.7
Relative Survival Rates (SEER)																						
1-year	96.5	96.6	97.2	96.9	97.8	98.0	97.3	97.7	97.3	97.6	97.9	98.1	98.5	98.2	97.5	98.5	98.4	97.9	98.4	98.0	97.6	
2-year	91.3	90.9	91.3	90.4	90.7	91.9	92.0	91.6	91.4	91.8	92.3	92.6	93.8	93.1	93.0	93.8	94.7	94.1	93.5	93.6		
3-year	86.0	85.2	84.7	83.2	84.7	86.0	86.5	86.0	85.4	85.8	86.1	87.1	89.2	88.8	88.3	89.9	90.6	89.9	88.9			
4-year	80.6	80.7	80.1	78.6	80.0	80.8	82.2	81.2	81.2	81.3	82.1	82.9	85.4	85.0	84.9	86.6	86.1	86.6				
5-year	76.6	76.9	76.0	74.6	75.6	77.3	78.5	76.9	77.5	77.9	78.4	79.4	82.2	82.0	82.2	83.6	83.2					
6-year	73.5	74.2	73.4	72.2	72.5	74.6	74.8	73.6	75.0	75.6	75.8	76.9	80.0	79.5	79.8	81.2						
7-year	71.2	72.2	70.5	69.4	69.6	72.3	72.4	70.8	72.2	73.5	73.0	74.5	77.9	77.7	78.0							
8-year	68.9	70.1	68.7	67.4	67.5	69.8	70.1	68.8	69.7	71.7	71.2	72.7	76.0	76.3								
9-year	66.7	68.0	66.5	65.9	65.9	68.2	68.1	67.2	67.6	69.7	70.0	70.7	74.4									
10-year	65.7	66.3	64.6	64.2	64.3	66.4	66.7	65.4	66.5	68.5	68.7	69.1										
11-year	64.3	65.0	63.0	63.0	63.1	65.0	65.3	64.2	64.8	67.6	67.4											
12-year	62.8	63.3	61.7	61.7	62.2	63.8	63.9	63.3	64.1	66.2												
13-year	61.7	62.4	60.5	60.4	61.3	62.5	63.2	61.7	62.4													
14-year	61.0	61.6	59.7	59.3	60.6	61.4	61.5	60.3														
15-year	60.2	61.4	58.8	58.7	58.7	60.3	60.5															
16-year	59.6	60.6	58.5	57.5	59.0	59.1																
17-year	59.1	60.4	58.1	56.7	58.3																	
18-year	58.6	60.0	57.1	55.6																		
19-year	57.8	59.3	56.3																			
20-year	56.8	58.6																				
21-year	56.0																					

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 IV-8
FEMALE BREAST CANCER (50 and Over) (Invasive)

INCIDENCE, MORTALITY, AND SURVIVAL RATES

By Year of Diagnosis/Death

All Races, Females

Year of Diagnosis/Death

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Incidence																						
SEER	257.5	254.3	255.6	263.1	263.6	274.2	272.8	290.1	301.3	325.0	335.2	359.1	350.9	337.2	347.5	350.7	355.1	347.0	355.2	358.9	360.7	372.8
Mortality																						
U.S.	88.3	90.2	88.3	86.6	88.4	89.3	90.2	90.6	92.2	92.7	91.9	91.7	93.4	93.1	92.9	91.8	89.1	88.6	87.2	86.2	83.3	79.6
SEER	90.7	92.8	92.1	88.0	89.3	92.3	93.6	91.5	90.4	95.3	91.1	94.6	94.8	94.8	87.8	91.5	88.6	85.1	83.6	85.7	83.4	78.8
Relative Survival Rates (SEER)																						
1-year	94.0	93.8	93.8	94.3	94.5	94.6	95.0	94.7	95.2	95.4	95.8	96.5	96.3	96.7	96.8	96.9	97.1	96.9	97.2	97.0	96.7	
2-year	87.9	88.5	87.9	88.5	89.6	89.5	89.9	90.1	91.4	91.1	91.5	93.5	93.2	93.4	93.4	93.9	94.3	94.0	94.5	94.1		
3-year	82.7	83.1	82.7	83.2	84.0	84.5	84.3	84.8	86.6	86.6	87.4	89.9	90.3	90.4	90.3	90.3	91.2	91.1	91.6			
4-year	77.8	78.1	78.2	78.4	79.5	79.4	80.3	81.0	82.7	82.8	84.0	87.1	87.7	88.0	87.7	88.0	88.7	88.4				
5-year	74.0	74.7	74.0	74.3	75.4	75.9	76.8	76.8	79.0	79.1	81.2	84.5	85.3	85.6	85.6	85.9	86.4					
6-year	70.5	71.4	70.8	71.1	72.3	72.6	73.8	73.7	76.4	76.6	79.0	81.8	83.0	83.2	83.5	84.0						
7-year	67.3	68.6	68.2	67.9	69.4	69.7	70.4	70.8	74.0	74.4	76.8	79.6	81.2	81.5	81.4							
8-year	65.1	66.4	65.4	65.5	66.9	67.0	68.3	68.3	72.0	72.5	75.3	78.2	79.8	80.1								
9-year	62.9	64.2	63.3	62.8	64.1	64.9	66.9	66.5	69.6	70.5	73.6	76.4	77.8									
10-year	61.0	62.1	61.8	60.9	62.3	62.4	64.6	64.8	67.2	68.6	71.8	75.1										
11-year	59.3	60.1	59.9	59.5	60.3	60.7	62.4	62.4	65.3	66.9	70.5											
12-year	57.5	58.1	58.1	58.2	58.7	59.4	61.0	61.0	64.4	65.8												
13-year	56.4	56.9	57.3	57.0	57.8	57.5	59.7	59.9	63.6													
14-year	55.5	55.6	56.0	55.9	56.7	56.1	58.1	58.5														
15-year	54.2	54.0	54.8	54.5	55.7	55.4	57.5															
16-year	53.6	52.7	53.7	53.6	53.8	53.8																
17-year	52.6	51.3	52.0	52.3	52.5																	
18-year	51.6	50.5	51.3	50.5																		
19-year	50.7	49.0	50.8																			
20-year	49.9	48.8																				
21-year	49.4																					

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 IV-9
BREAST 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

9 SEER Areas, 1995-97

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	0.11	0.00	0.00	0.05	12.83	
10	0.00	0.00	0.00	0.11	0.00	0.05	0.45	12.93	
20	0.00	0.00	0.01	0.11	0.05	0.45	1.92	12.97	
30	0.00	0.01	0.02	0.11	0.40	1.88	4.50	12.99	
40	0.01	0.02	0.05	0.12	1.49	4.15	7.30	12.76	
50	0.02	0.05	0.09	0.11	2.75	6.00	9.28	11.64	
60	0.03	0.08	0.10	0.10	3.49	7.02	9.09	9.55	
Lifetime Risk of Being Diagnosed =				0.11%	Lifetime Risk of Being Diagnosed =				12.83%
Lifetime Risk of Dying =				0.03%	Lifetime Risk of Dying =				3.34%

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	0.11	0.00	0.00	0.05	13.36	
10	0.00	0.00	0.00	0.11	0.00	0.05	0.44	13.45	
20	0.00	0.00	0.01	0.11	0.05	0.44	1.92	13.49	
30	0.00	0.01	0.02	0.11	0.40	1.89	4.61	13.51	
40	0.01	0.02	0.05	0.11	1.51	4.26	7.57	13.26	
50	0.02	0.05	0.09	0.11	2.83	6.25	9.69	12.11	
60	0.03	0.08	0.10	0.10	3.66	7.34	9.49	9.94	
Lifetime Risk of Being Diagnosed =				0.11%	Lifetime Risk of Being Diagnosed =				13.36%
Lifetime Risk of Dying =				0.03%	Lifetime Risk of Dying =				3.41%

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	0.12	0.00	0.00	0.07	9.98	
10	0.00	0.00	0.00	0.13	0.00	0.07	0.51	10.16	
20	0.00	0.00	0.01	0.13	0.07	0.51	1.89	10.20	
30	0.00	0.01	0.04	0.13	0.45	1.84	4.14	10.23	
40	0.01	0.04	0.07	0.14	1.43	3.78	6.15	10.02	
50	0.03	0.06	0.11	0.14	2.49	5.00	7.41	9.08	
60	0.04	0.09	0.12	0.13	2.81	5.51	6.98	7.38	
Lifetime Risk of Being Diagnosed =				0.12%	Lifetime Risk of Being Diagnosed =				9.98%
Lifetime Risk of Dying =				0.06%	Lifetime Risk of Dying =				3.68%

Table IV-10
 FEMALE BREAST CANCER (Invasive)

AGE-ADJUSTED SEER INCIDENCE AND U.S. MORTALITY RATES

By Race/Ethnicity and Sex

Incidenceⁱ

RACE/ETHNICITY	Rate 1990-1997	Trend 1990-1997
	Rate per 100,000 persons	EAPC (%)
	Females	Females
All Races	109.7	0.4
White	114.0	0.3
White Hispanic	73.0	-0.8
White Non-Hispanic	118.7	0.5★
Black	100.2	0.7★
Asian/Pacific Islander	74.6	2.2★
American Indian	33.4	5.2
Hispanic [⊙]	68.9	-1.0

Mortality[❖]

RACE/ETHNICITY	Rate 1990-1997	Trend 1990-1997
	Rate per 100,000 persons	EAPC (%)
	Females	Females
All Races	25.6	-2.1★
White	25.3	-2.4★
White Hispanic	16.0	-1.0★
White Non-Hispanic	25.6	-2.2★
Black	31.4	-0.2
Asian/Pacific Islander	11.2	-1.4
American Indian	12.1	1.9
Hispanic [⊙]	15.1	-1.2★

- The EAPC is the Estimated Annual Percent Change over the time interval. Statistic not shown. Rate based on less than 25 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

ⁱ Incidence data are from the 11 SEER areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, and Los Angeles). Unless specified, other tables use data from 9 SEER areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

[⊙] Hispanic is not mutually exclusive from whites, blacks, Asian Pacific Islanders, and American Indians. For incidence, all 11 SEER areas are included. For mortality, information is included for all states except Connecticut, Oklahoma, Louisiana, and New Hampshire.

[❖] Mortality data are analyzed from a public-use file provided by the National Center for Health Statistics (NCHS).

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

Table IV-11
FEMALE BREAST CANCER (Invasive)AGE-ADJUSTED SEER INCIDENCE RATES§ AND SEER MORTALITY RATES*
By Registry, Race and Age

	All Races, Females			White Females			Black Females		
	All	<50	50+	All	<50	50+	All	<50	50+
<u>SEER INCIDENCE RATES§, 1993-97</u>									
REGISTRY									
11 registries	110.0	31.1	353.3	114.1	31.3	369.7	101.2	32.4	313.5
9 registries	111.9	31.7	359.1	115.3	31.8	373.1	102.8	33.2	317.4
San Francisco-Oakland	116.4	33.3	372.9	131.1	35.4	426.2	94.9	31.9	289.2
Connecticut	119.3	34.9	379.6	121.5	35.5	387.0	94.0	31.4	287.0
Metropolitan Detroit	109.2	31.4	349.0	110.4	30.6	356.5	101.2	31.9	314.9
Hawaii	102.6	32.1	320.1	126.7	32.1	418.5	-	-	-
Iowa	106.1	29.0	343.7	106.3	29.1	344.2	-	-	-
New Mexico	95.9	28.2	304.7	100.0	29.9	316.4	-	-	-
Seattle-Puget Sound	120.8	31.9	395.2	123.5	32.2	405.1	101.1	30.1	320.1
Utah	94.8	23.1	315.9	96.0	23.5	319.6	-	-	-
Metropolitan Atlanta	117.8	35.3	372.1	116.4	33.5	372.1	120.6	38.1	375.1
San Jose-Monterey	115.8	31.3	376.6	120.8	31.4	396.5	92.6	22.6	308.5
Los Angeles	102.8	29.4	329.0	108.3	29.7	350.7	97.9	30.8	305.0
<u>SEER MORTALITY RATES*, 1993-97</u>									
REGISTRY									
11 registries	24.0	5.0	82.7	24.3	4.7	84.9	32.3	8.9	104.5
9 registries	24.1	4.9	83.3	24.2	4.5	84.8	32.7	9.0	105.7
San Francisco-Oakland	23.4	4.8	80.9	25.3	4.4	89.7	29.5	9.4	91.5
Connecticut	25.4	4.8	88.8	25.3	4.6	89.0	28.7	7.8	93.4
Metropolitan Detroit	27.1	5.8	92.9	25.5	4.8	89.3	32.7	8.9	106.1
Hawaii	16.6	3.6	56.7	23.7	3.4	86.5	-	-	-
Iowa	23.4	4.6	81.5	23.4	4.5	81.6	-	-	-
New Mexico	21.9	4.7	75.2	22.7	4.8	77.7	-	-	-
Seattle-Puget Sound	24.1	4.7	83.8	24.4	4.6	85.3	32.7	7.7	109.9
Utah	20.4	4.0	70.8	20.5	4.0	71.2	-	-	-
Metropolitan Atlanta	26.7	6.0	90.7	23.1	4.2	81.5	39.2	10.1	129.0
San Jose-Monterey	22.5	4.2	78.8	24.3	4.6	85.0	36.8	2.5	142.6
Los Angeles	23.9	5.3	81.5	24.7	5.1	85.1	31.3	8.9	100.6

Note: San Jose-Monterey and Los Angeles are new SEER areas as of 1992 and their data are only used in tables where indicated.
 § 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.
 - Statistic could not be calculated or populations are inadequate.

Table IV-12
FEMALE BREAST CANCER (Invasive)

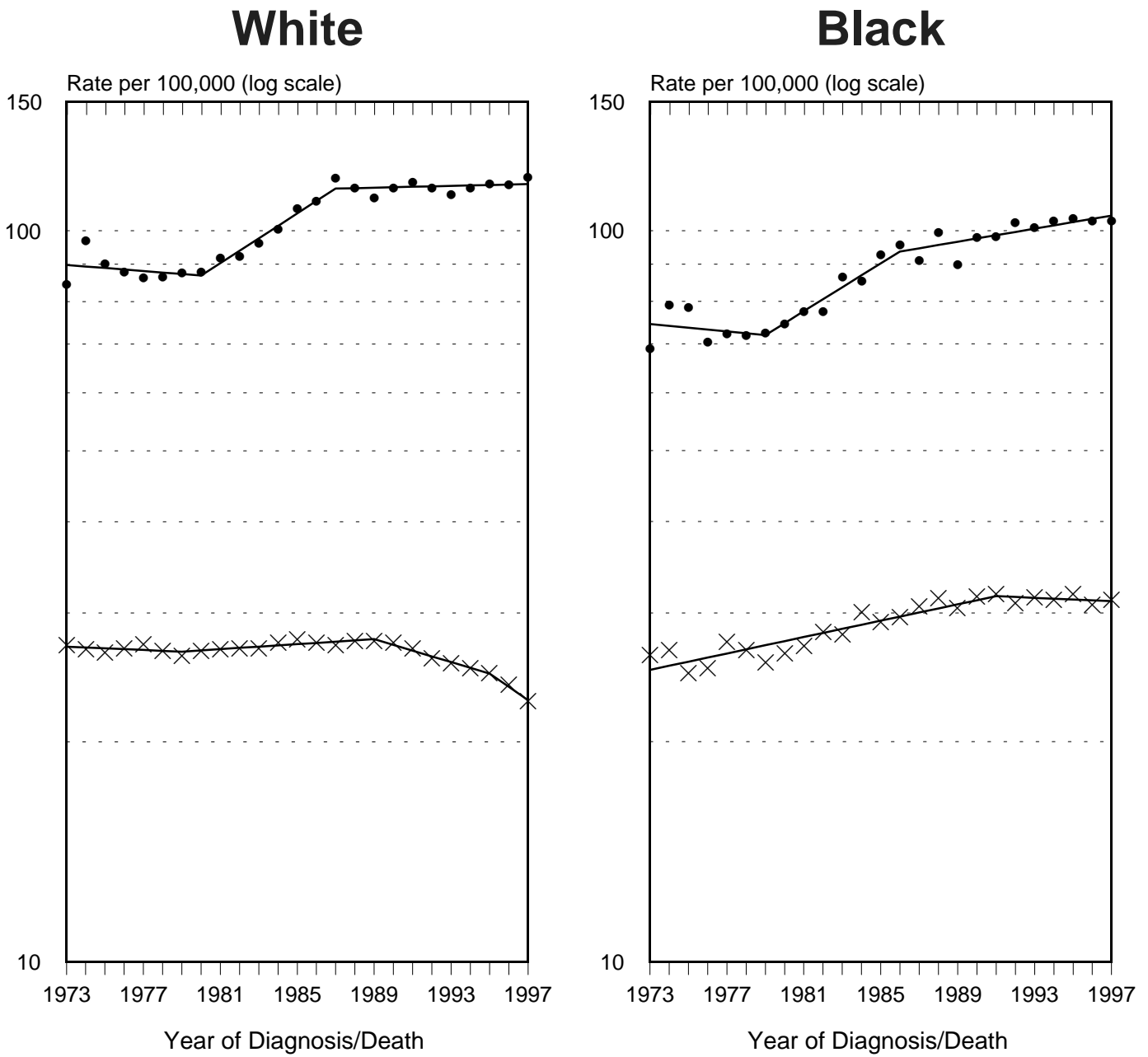
AVERAGE ANNUAL AGE-ADJUSTED CANCER MORTALITY* RATES BY STATE, 1993-97

All Races, Females

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
TOTAL U.S.	24.8	0.06							
High Five States									
District of Columbia	32.5⊕*	1.35	(01)	31.0					
New Jersey	27.8⊕*	0.33	(02)	12.1					
New York	27.4⊕*	0.22	(03)	10.5					
Pennsylvania	27.0⊕	0.26	(04)	8.9					
Massachusetts	27.0⊕	0.37	(05)	8.9					
Low Five States									
New Mexico	21.9*	0.68	(47)	-11.7					
South Dakota	21.5*	0.98	(48)	-13.3					
Colorado	21.1⊕*	0.45	(49)	-14.9					
Utah	20.4⊕*	0.68	(50)	-17.7					
Hawaii	16.6⊕*	0.70	(51)	-33.1					
Alabama	22.6⊕	0.41	(43)	-8.9	Montana	23.2	0.92	(37)	-6.5
Alaska	22.0*	1.53	(46)	-11.3	Nebraska	23.6	0.68	(32)	-4.8
Arizona	22.1⊕*	0.42	(45)	-10.9	Nevada	23.6	0.74	(34)	-4.8
Arkansas	23.0	0.53	(38)	-7.3	New Hampshire	26.7	0.91	(09)	7.7
California	24.0	0.17	(25)	-3.2	New Jersey	27.8⊕*	0.33	(02)	12.1
Colorado	21.1⊕*	0.45	(49)	-14.9	New Mexico	21.9*	0.68	(47)	-11.7
Connecticut	25.4	0.49	(15)	2.4	New York	27.4⊕*	0.22	(03)	10.5
Delaware	26.9	1.10	(06)	8.5	North Carolina	24.5	0.33	(19)	-1.2
District of Columbia	32.5⊕*	1.35	(01)	31.0	North Dakota	22.6	1.07	(42)	-8.9
Florida	23.9	0.22	(27)	-3.6	Ohio	26.3⊕	0.27	(10)	6.0
Georgia	24.0	0.35	(24)	-3.2	Oklahoma	24.2	0.48	(21)	-2.4
Hawaii	16.6⊕*	0.70	(51)	-33.1	Oregon	23.4	0.49	(36)	-5.6
Idaho	22.3*	0.83	(44)	-10.1	Pennsylvania	27.0⊕	0.26	(04)	8.9
Illinois	26.7⊕	0.27	(08)	7.7	Rhode Island	26.2	0.90	(11)	5.6
Indiana	25.1	0.38	(16)	1.2	South Carolina	24.2	0.46	(23)	-2.4
Iowa	23.4	0.50	(35)	-5.6	South Dakota	21.5*	0.98	(48)	-13.3
Kansas	22.8	0.54	(41)	-8.1	Tennessee	24.8	0.39	(17)	0.0
Kentucky	24.3	0.45	(20)	-2.0	Texas	22.9⊕	0.21	(40)	-7.7
Louisiana	26.1	0.45	(12)	5.2	Utah	20.4⊕*	0.68	(50)	-17.7
Maine	24.7	0.79	(18)	-0.4	Vermont	23.9	1.16	(26)	-3.6
Maryland	26.8	0.43	(07)	8.1	Virginia	25.5	0.36	(13)	2.8
Massachusetts	27.0⊕	0.37	(05)	8.9	Washington	23.6	0.39	(33)	-4.8
Michigan	25.4	0.30	(14)	2.4	West Virginia	23.0	0.60	(39)	-7.3
Minnesota	23.7	0.42	(30)	-4.4	Wisconsin	23.8	0.39	(28)	-4.0
Mississippi	23.6	0.54	(31)	-4.8	Wyoming	23.8	1.33	(29)	-4.0
Missouri	24.2	0.38	(22)	-2.4					

* 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 10% or more.
⊕ Difference between state rate and total U.S. rate is statistically significant (p<=.0002).

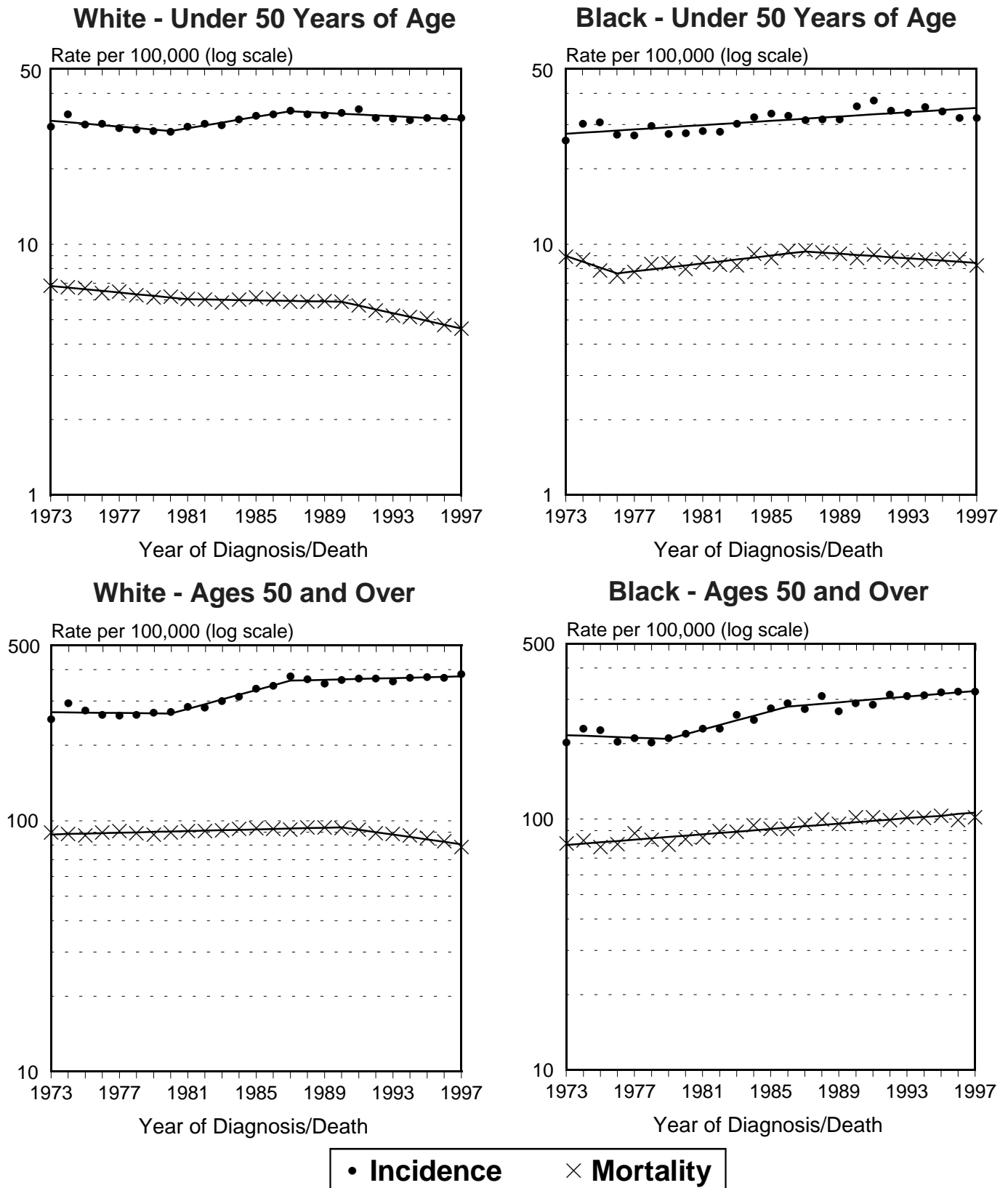
SEER Incidence and U.S. Mortality Rates⁺ Female Breast Cancer By Race



• Incidence × Mortality

⁺ Rates are age-adjusted to the 1970 U.S. standard million population. Regression lines are calculated using the Joinpoint Regression Program.

SEER Incidence and U.S. Mortality Rates⁺ Female Breast Cancer, By Age and Race



⁺ Rates are age-adjusted to the 1970 U.S. standard million population. Regression lines are calculated using the Joinpoint Regression Program.

Breast Cancer Stage Distribution 1997

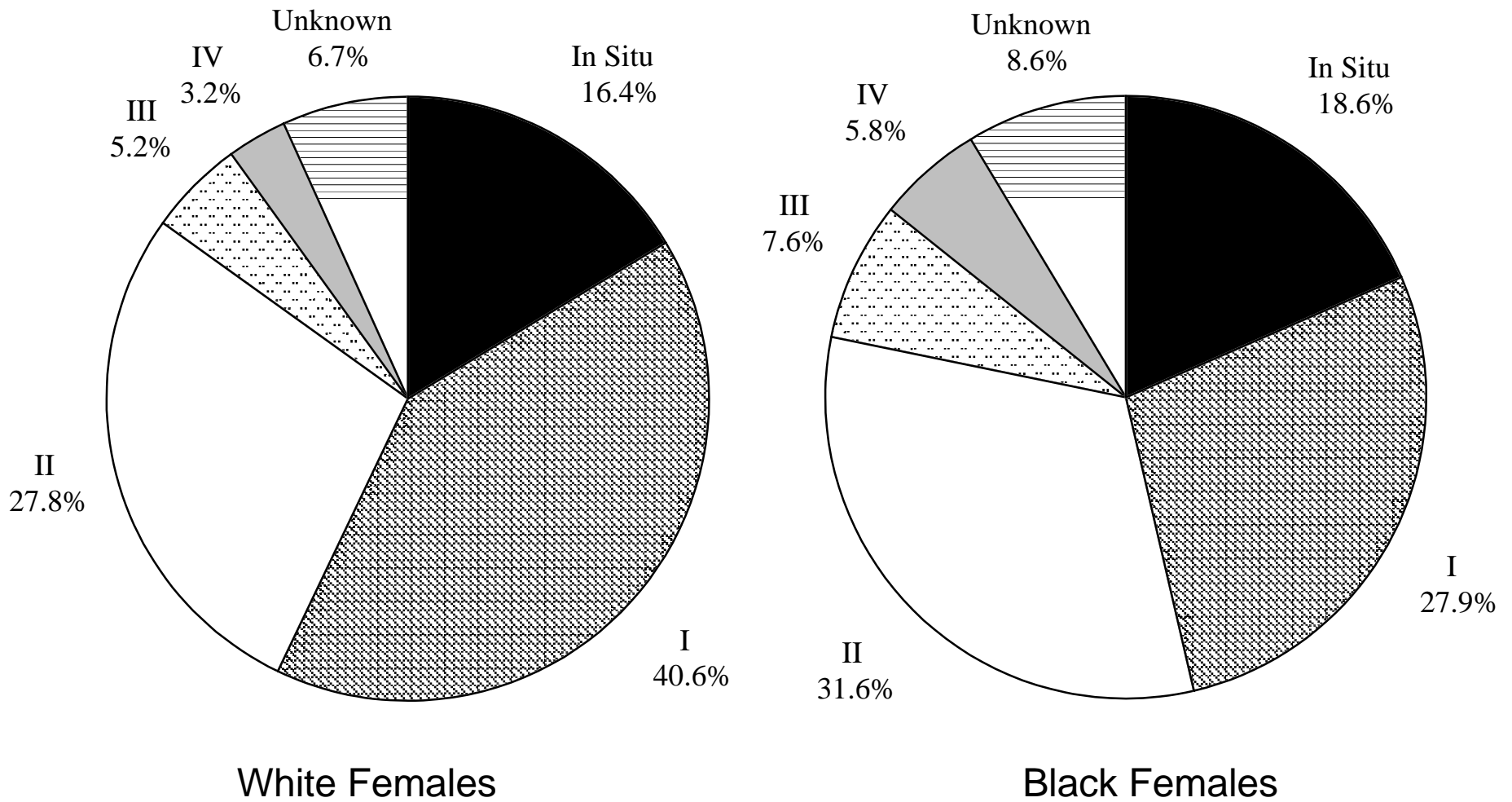


Figure IV-3

Female Breast Cancer by Stage Incidence Rates, 1983-1997

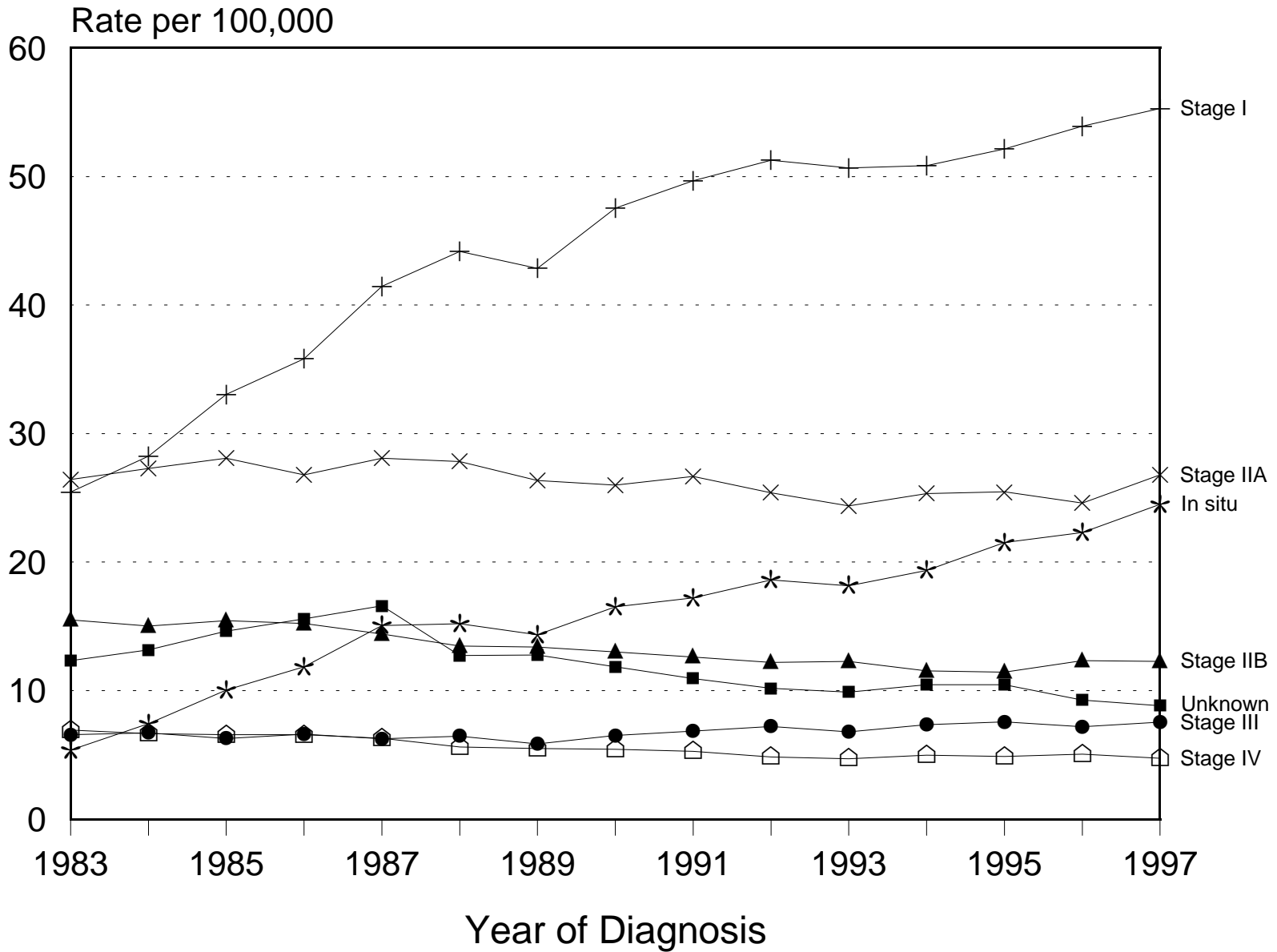
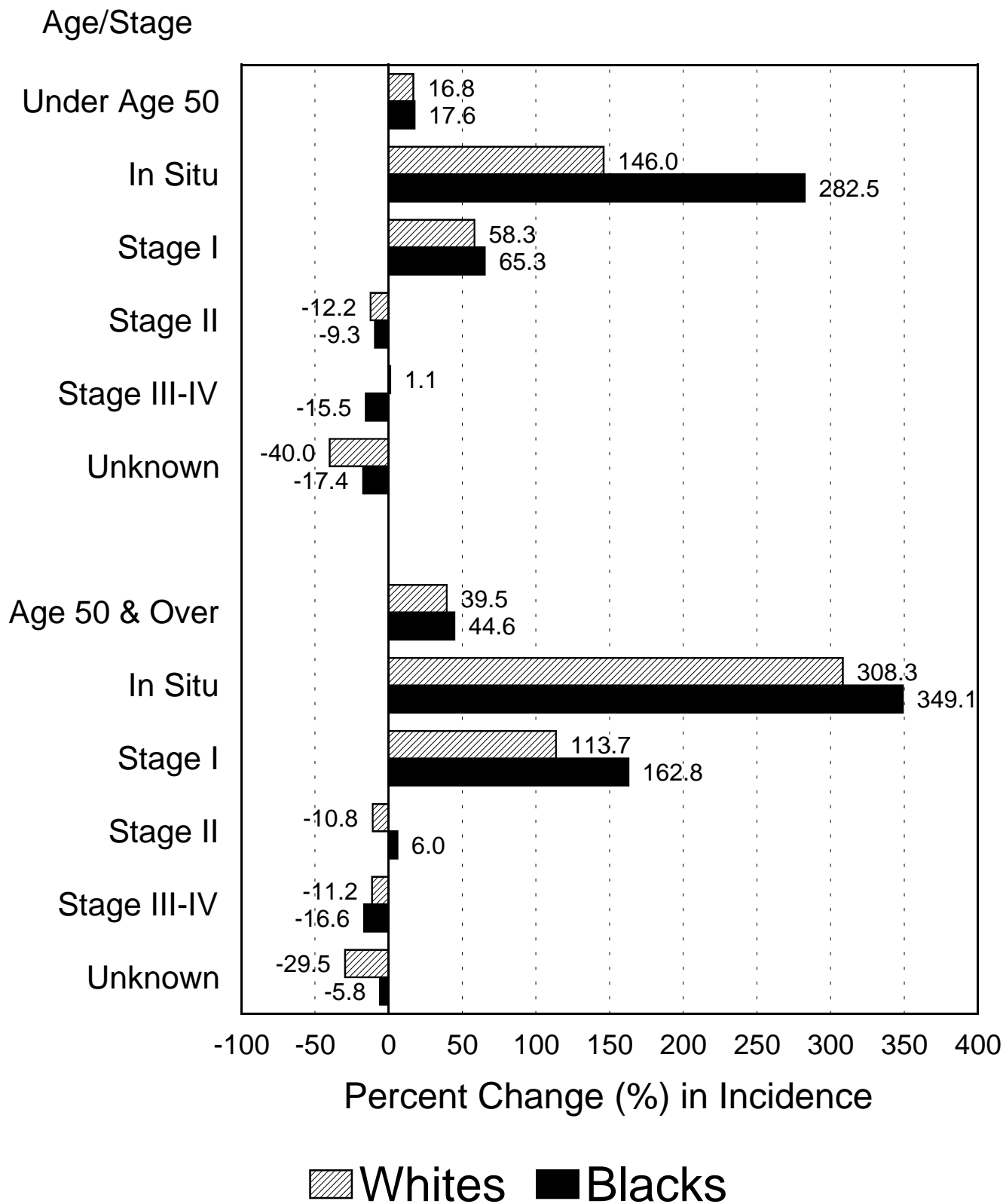
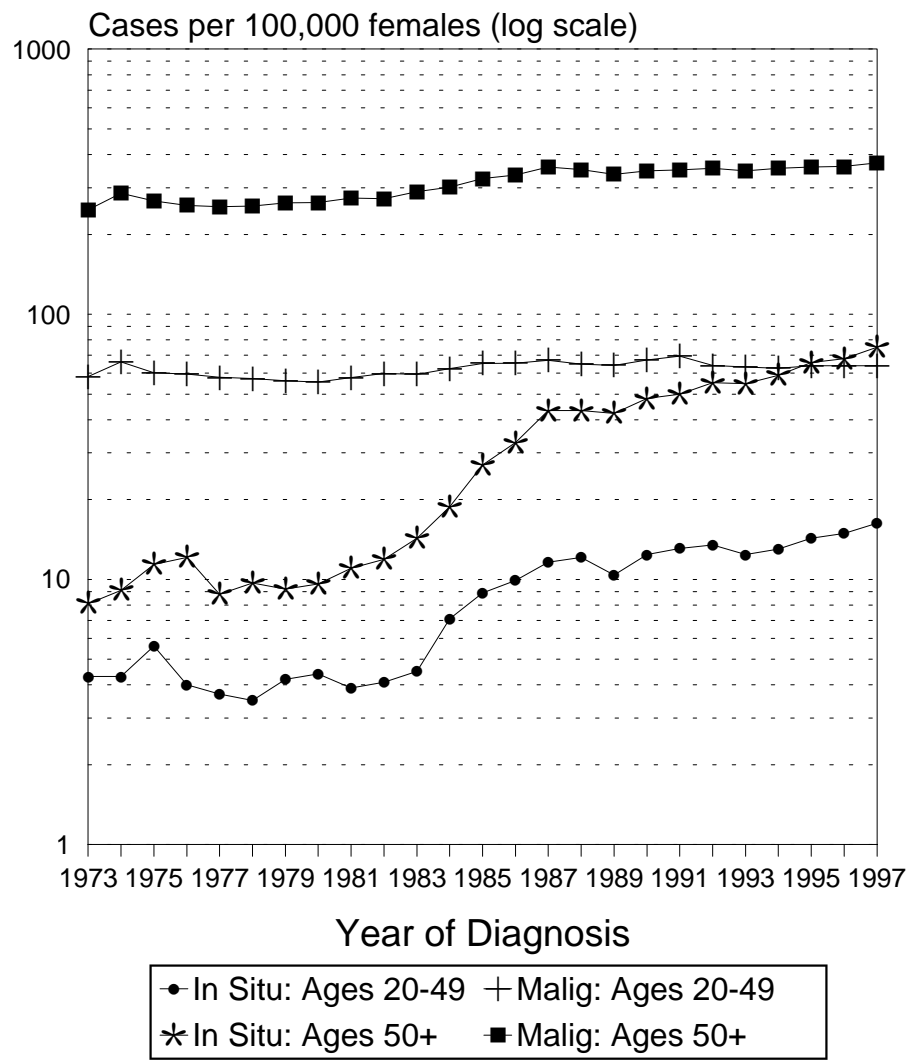
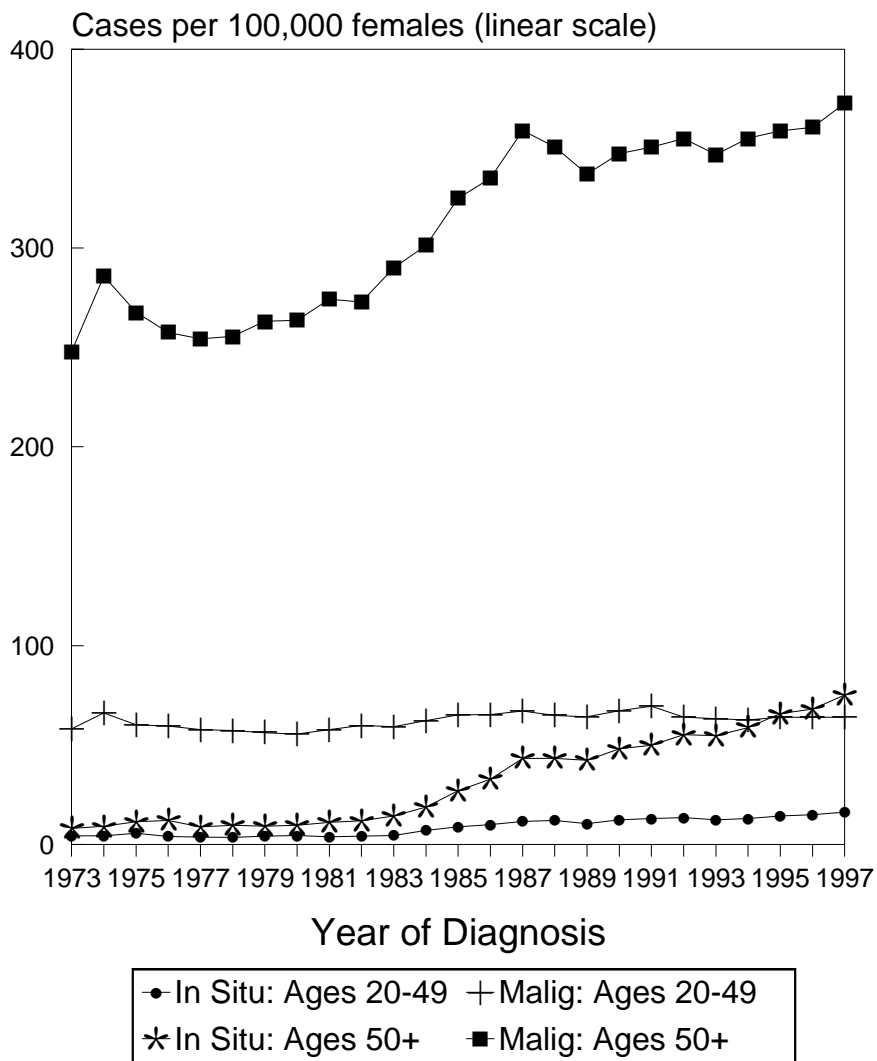


Figure IV-4

Female Breast Cancer by Stage Percent Change in Incidence, 1983-1997



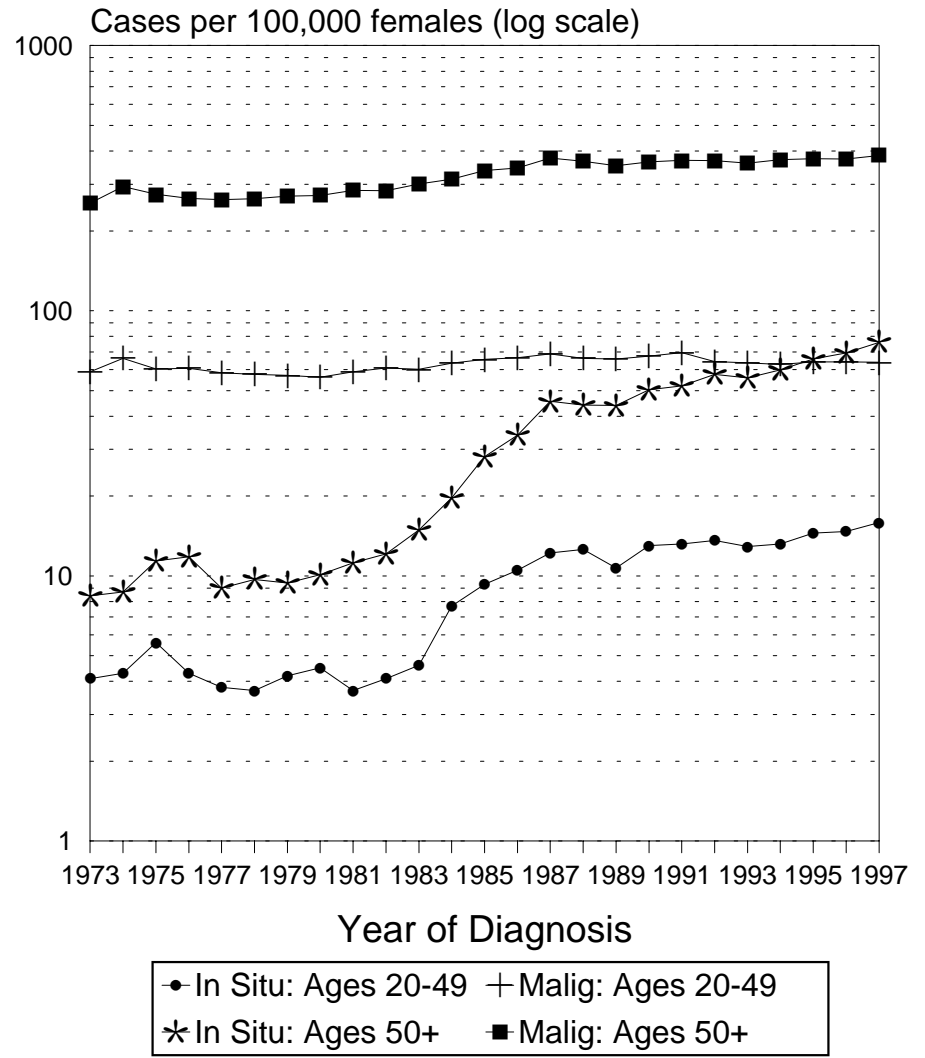
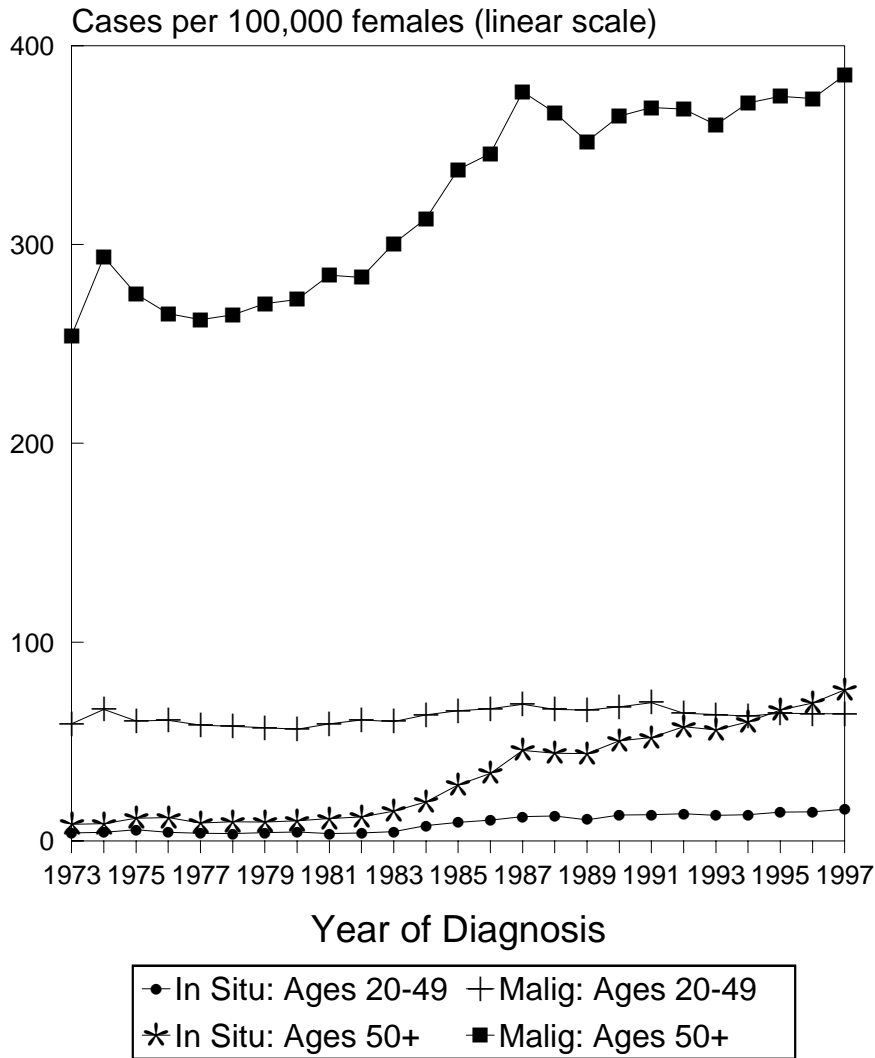
Breast Cancer Incidence Rates, 1973-1997 by Age, In Situ vs. Malignant All Races, Female



Age-adjusted to 1970 Standard

Figure IV-6

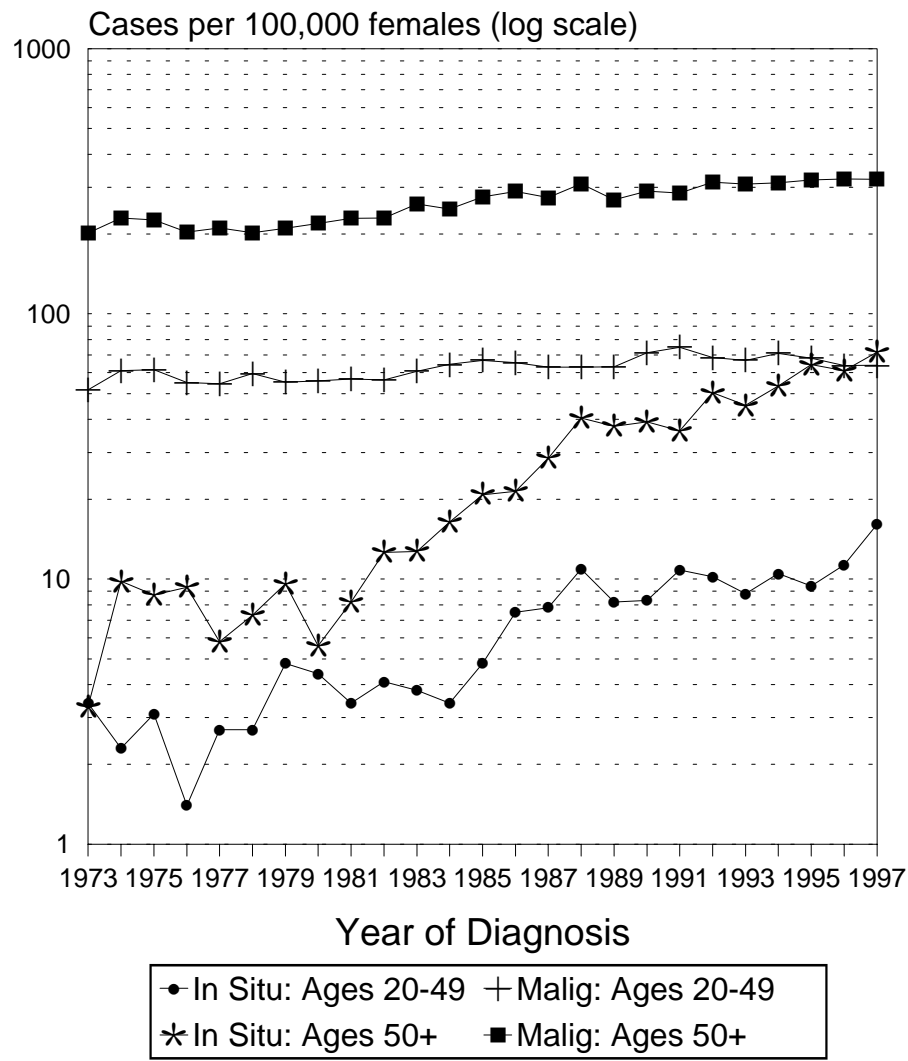
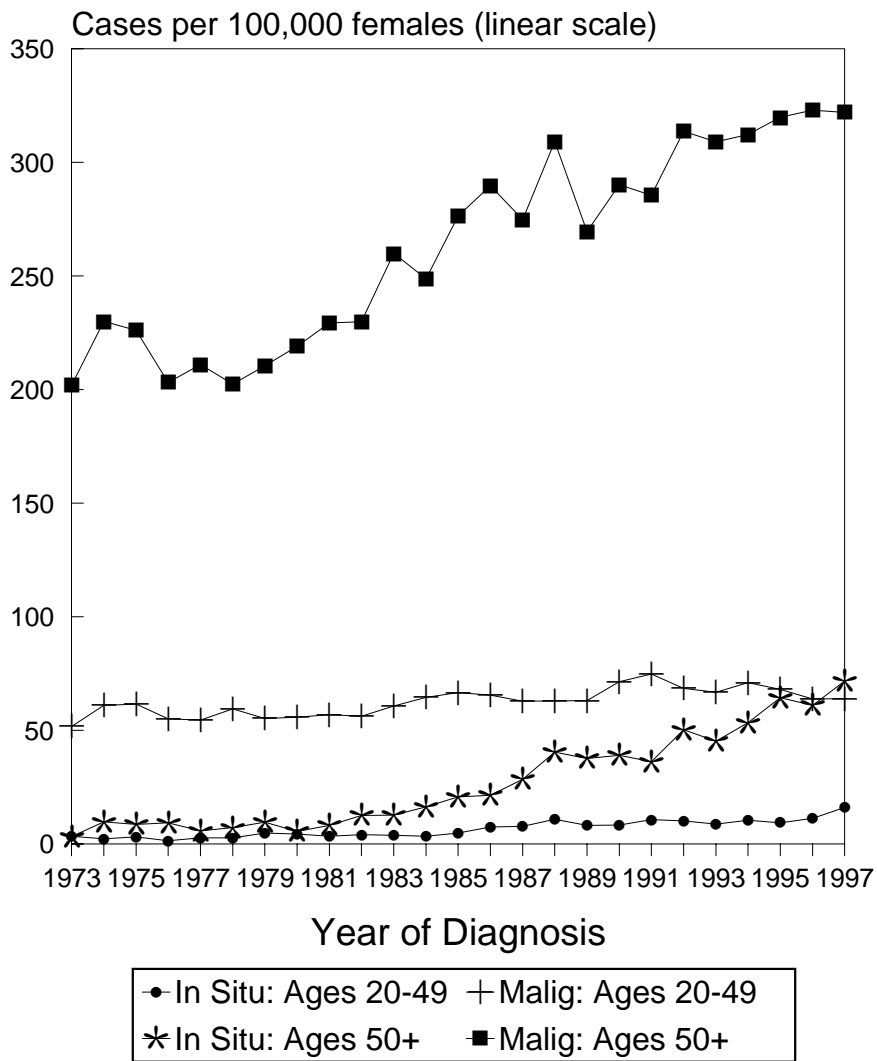
Breast Cancer Incidence Rates, 1973-1997 by Age, In Situ vs. Malignant White Females



Age-adjusted to 1970 Standard

Figure IV-7

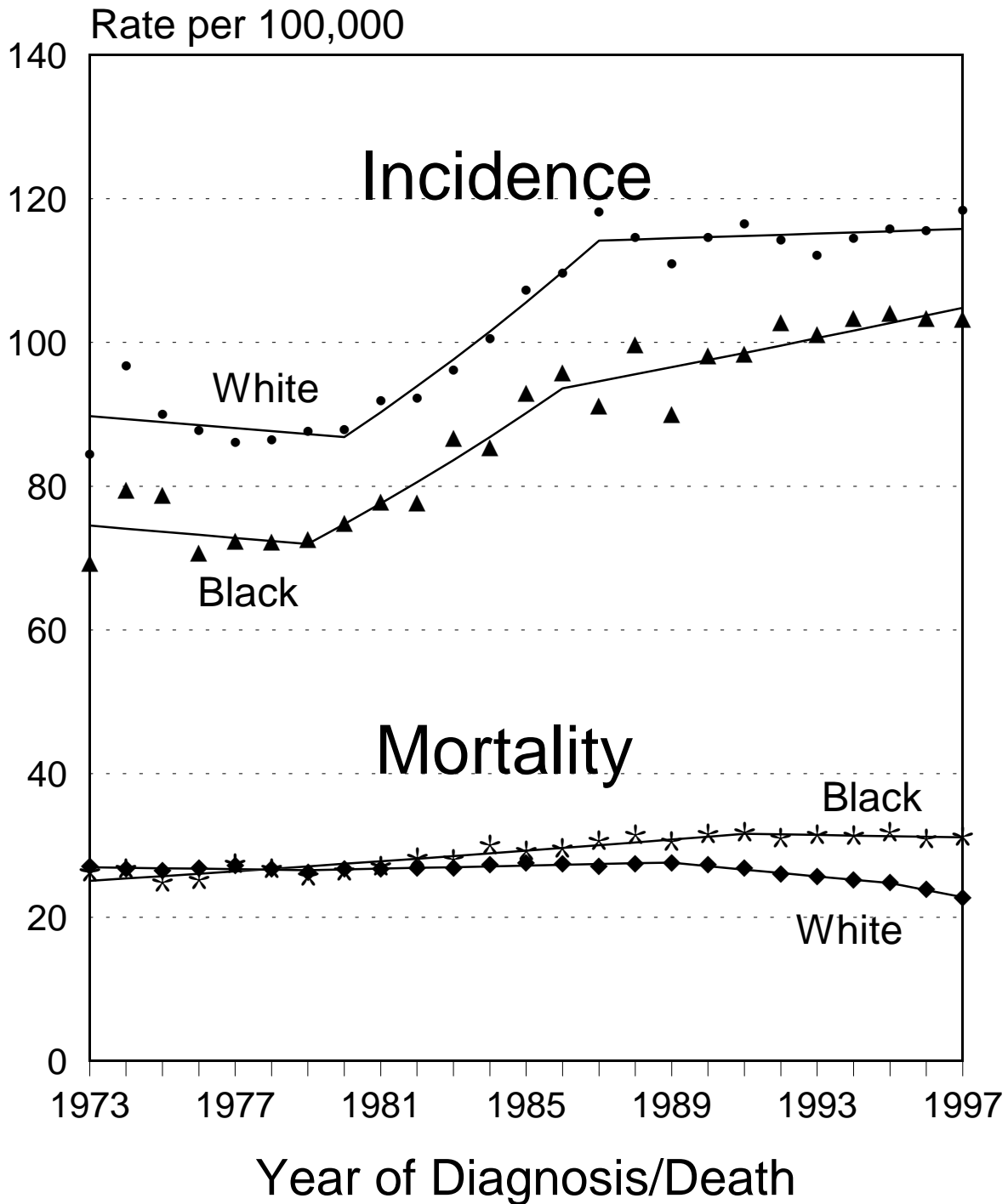
Breast Cancer Incidence Rates, 1973-1997 by Age, In Situ vs. Malignant Black Females



Age-adjusted to 1970 Standard

Figure IV-8

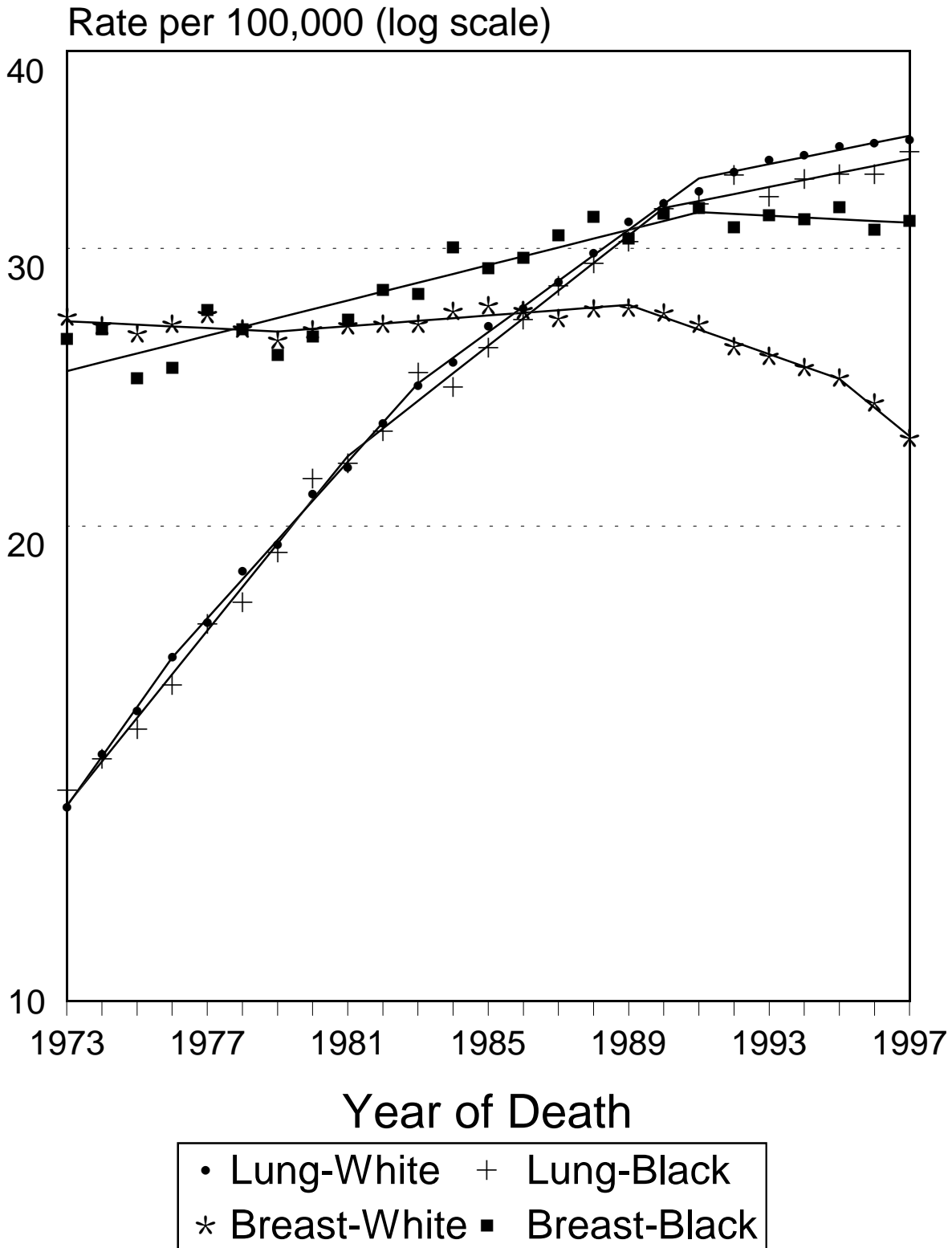
Breast Cancer Incidence & Mortality White Females vs. Black Females



• White Incidence ▲ Black Incidence
 ◆ White Mortality * Black Mortality

Rates are age-adjusted to the 1970 U.S. standard million population. Regression lines are calculated using the Joinpoint Regression Program.

Breast vs. Lung Cancer Mortality White Females vs. Black Females United States, 1973-1997



Rates are age-adjusted to the 1970 U.S. standard million population. Regression lines are calculated using the Joinpoint Regression Program.