

Table IV-1
FEMALE BREAST CANCER (Invasive)

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

	All Races, Females			White Females			Black Females		
	All	<50	50+	All	<50	50+	All	<50	50+
<u>INCIDENCE TRENDS (expressed in percents)§:</u>									
<u>1973-96</u>									
All Ages									
Percent Change (PC)	25.3	1.6	33.8	26.2	0.9	35.1	36.7	14.1	45.7
Est. Annual PC (EAPC)	1.5*	0.5*	1.8*	1.6*	0.5*	1.9*	1.8*	1.0*	2.1*
Under 65									
Percent Change (PC)	18.6	-	-	18.9	-	-	32.6	-	-
Est. Annual PC (EAPC)	1.2*	-	-	1.2*	-	-	1.6*	-	-
65 and over									
Percent Change (PC)	37.5	-	-	39.5	-	-	44.5	-	-
Est. Annual PC (EAPC)	2.1*	-	-	2.1*	-	-	2.3*	-	-
<u>1975-79 - ALL AGES</u>									
Percent Change (PC)	-2.3	-5.2	-1.2	-2.1	-5.4	-1.0	-3.3	-2.0	-3.8
Est. Annual PC (EAPC)	-0.8	-1.7*	-0.4	-0.7	-1.7*	-0.4	-1.4	-1.5	-1.4
<u>1992-96 - ALL AGES</u>									
Percent Change (PC)	1.1	-0.8	1.6	1.1	-1.0	1.6	-0.2	-4.4	1.2
Est. Annual PC (EAPC)	0.2	-0.4♦	0.3	0.1	-0.5♦	0.3	-0.2	-1.9	0.3
<u>MORTALITY TRENDS (expressed in percents)*:</u>									
<u>1973-96</u>									
All Ages									
Percent Change (PC)	-7.5	-23.5	-3.6	-9.5	-27.6	-5.2	18.4	-0.8	24.9
Est. Annual PC (EAPC)	-0.1	-0.9*	0.0	-0.2*	-1.2*	-0.1	1.1*	0.5*	1.3*
Under 65									
Percent Change (PC)	-18.1	-	-	-20.9	-	-	7.7	-	-
Est. Annual PC (EAPC)	-0.7*	-	-	-0.9*	-	-	0.7*	-	-
65 and over									
Percent Change (PC)	7.7	-	-	6.6	-	-	37.8	-	-
Est. Annual PC (EAPC)	0.6*	-	-	0.6*	-	-	1.7*	-	-
<u>1975-79 - ALL AGES</u>									
Percent Change (PC)	-0.4	-3.4	0.3	-0.8	-5.1	0.2	4.6	8.9	3.3
Est. Annual PC (EAPC)	-0.2	-1.3*	0.1	-0.2	-1.8*	0.1	1.2	2.4	0.9
<u>1992-96 - ALL AGES</u>									
Percent Change (PC)	-4.7	-5.7	-4.5	-5.5	-7.8	-5.1	0.4	-0.1	0.5
Est. Annual PC (EAPC)	-1.7*♦	-2.2*	-1.6*◊	-1.9*♦	-2.9*	-1.7*♦	0.0	-0.1◊	0.1

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 1992-96 is significantly different from the EAPC for 1975-79 ($p < .05$).

The EAPC for 1992-96 is significantly different from the EAPC for 1975-79 ($p < .10$).

Statistic could not be calculated.

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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>									
YEAR OF DIAGNOSIS:									
1973	45.0	1.0	82.6	46.1	0.9	84.4	38.6	2.7	69.0
1974	51.7	1.0	94.9	52.9	1.0	96.7	43.5	1.5	79.3
1975	48.2	0.7	88.1	49.3	0.7	90.0	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	84.1	47.3	0.7	86.2	40.7	1.8	72.2
1978	46.1	0.7	84.1	47.5	0.7	86.5	39.9	0.3	71.8
1979	47.1	0.8	85.6	48.1	0.8	87.6	41.1	1.7	72.4
1980	47.0	0.7	85.4	48.3	0.8	87.8	41.8	0.7	74.5
1981	48.9	0.8	88.8	50.5	0.8	91.8	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	51.3	0.9	93.3	52.8	0.9	96.2	48.7	0.4	86.3
1984	53.4	0.8	97.2	55.1	0.8	100.5	48.2	1.2	85.0
1985	57.1	0.7	104.1	58.7	0.8	107.3	52.7	0.9	92.7
1986	58.5	0.8	106.7	60.0	0.8	109.5	54.6	1.1	95.6
1987	62.2	0.8	113.2	64.6	0.8	118.1	51.9	1.0	90.8
1988	60.6	1.0	110.3	62.7	0.9	114.5	57.2	2.2	99.4
1989	58.6	0.9	106.7	60.6	0.9	110.8	51.2	1.7	89.4
1990	60.5	0.9	110.4	62.5	1.0	114.5	55.1	1.0	96.5
1991	61.2	0.9	112.0	63.3	0.9	116.3	55.6	1.1	97.7
1992	60.7	0.8	111.1	62.0	0.8	114.2	58.4	1.1	102.2
1993	59.4	0.9	108.9	60.7	0.9	112.0	57.3	1.1	100.8
1994	60.3	1.0	110.8	61.9	1.0	114.6	58.3	1.6	102.1
1995	60.6	0.8	111.6	62.1	0.7	115.3	58.5	1.6	102.4
1996	60.1	1.2	110.7	61.1	1.1	113.3	57.3	1.7	100.3
<u>AGE-ADJUSTED RATES, 1992-96</u>									
AGE AT DIAGNOSIS:									
All ages	60.2	0.9	110.6	61.6	0.9	113.9	58.0	1.4	101.5
Under 65	38.4	0.4	74.5	38.8	0.4	76.2	39.3	0.7	71.5
65 and over	259.2	5.5	440.6	269.5	5.4	458.5	228.4	8.1	375.2
All ages (world std.) ⁸	50.2	0.7	93.6	51.2	0.7	96.2	49.0	1.1	86.8
<u>AGE-SPECIFIC RATES, 1992-96</u>									
AGE AT DIAGNOSIS:									
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	0.0	0.2
20-24	0.6	0.0	1.3	0.5	0.0	0.9	1.4	0.0	2.7
25-29	3.9	0.0	7.8	3.7	0.0	7.4	5.5	0.0	10.3
30-34	12.3	0.1	24.4	11.6	0.1	23.4	17.0	0.2	31.5
35-39	29.7	0.1	59.0	28.9	0.1	58.2	33.5	0.2	62.3
40-44	59.4	0.3	117.0	58.9	0.3	117.6	64.5	0.2	120.3
45-49	99.1	0.7	195.7	99.2	0.7	198.2	107.2	1.6	199.1
50-54	132.0	1.4	257.5	134.0	1.3	264.6	131.4	2.3	241.4
55-59	154.1	2.2	296.3	155.9	2.0	304.0	157.3	4.1	280.2
60-64	184.2	3.0	347.3	190.6	3.0	364.2	166.2	4.1	294.2
65-69	222.2	3.6	404.4	230.9	3.6	423.2	194.7	4.4	341.9
70-74	259.1	5.1	455.5	269.3	5.5	473.9	232.3	5.3	390.7
75-79	288.9	7.3	483.3	299.8	7.1	500.7	264.0	11.7	424.1
80-84	301.1	8.3	468.1	315.6	7.8	487.1	248.3	14.8	372.8
85+	291.5	7.2	405.0	303.2	6.1	416.5	250.3	16.8	353.0

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>									
YEAR OF DEATH:									
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	14.7	0.2	26.2	14.5	0.2	26.0	18.0	0.4	31.0
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	14.1	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	24.0	18.1	0.6	30.8
<u>AGE-ADJUSTED RATES, 1992-96</u>									
AGE AT DEATH:									
All ages	14.2	0.3	25.4	14.0	0.2	25.1	18.3	0.5	31.3
Under 65	7.7	0.1	14.7	7.4	0.1	14.3	11.3	0.2	20.4
65 and over	74.1	1.7	122.9	74.5	1.6	124.0	82.1	3.4	130.9
All ages (world std.)N	11.4	0.2	20.7	11.1	0.2	20.4	15.1	0.4	26.2
<u>AGE-SPECIFIC RATES, 1992-96</u>									
AGE AT DEATH:									
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	2.1	0.0	4.1	1.8	0.0	3.6	4.1	0.0	7.8
35-39	5.3	0.0	10.5	4.8	0.0	9.6	9.5	0.1	17.8
40-44	10.2	0.1	20.2	9.5	0.1	18.9	17.5	0.1	32.6
45-49	17.5	0.2	34.3	16.5	0.2	32.7	28.4	0.3	51.9
50-54	25.9	0.3	50.1	24.7	0.3	48.3	39.4	0.6	71.0
55-59	33.0	0.5	63.0	32.2	0.5	62.1	45.5	0.8	80.5
60-64	42.0	0.8	78.5	41.5	0.7	78.5	53.7	1.5	93.1
65-69	52.9	1.1	95.7	53.1	1.0	96.7	60.2	2.0	103.4
70-74	65.6	1.4	114.7	65.7	1.3	115.5	77.4	3.4	127.3
75-79	80.1	2.0	133.2	80.6	1.9	134.5	87.8	3.8	138.7
80-84	101.7	2.5	157.0	102.4	2.3	158.1	110.1	4.7	164.4
85+	145.4	4.3	200.5	147.5	4.1	202.6	143.8	6.7	200.4

* 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	247.7	84.4	29.4	254.0	69.0	25.9	201.9
1974	94.9	33.0	285.8	96.7	32.9	293.4	79.3	30.4	230.0
1975	88.1	30.0	267.4	90.0	30.1	274.8	78.5	30.9	225.5
1976	85.5	29.7	257.5	87.8	30.3	265.1	70.5	27.5	203.2
1977	84.1	28.8	254.4	86.2	29.1	262.2	72.2	27.2	211.0
1978	84.1	28.5	255.5	86.5	28.8	264.4	71.8	29.6	202.0
1979	85.6	28.0	263.0	87.6	28.4	270.2	72.4	27.6	210.5
1980	85.4	27.7	263.4	87.8	28.0	272.1	74.5	27.8	218.6
1981	88.8	28.8	274.2	91.8	29.3	284.5	77.6	28.6	228.8
1982	89.3	29.9	272.7	92.3	30.3	283.4	77.5	28.0	229.9
1983	93.3	29.6	289.9	96.2	30.0	300.2	86.3	30.3	259.1
1984	97.2	31.1	301.3	100.5	31.6	313.1	85.0	32.1	248.1
1985	104.1	32.6	324.6	107.3	32.7	337.3	92.7	33.5	275.1
1986	106.7	32.6	335.0	109.6	33.1	345.4	95.6	32.6	290.1
1987	113.2	33.5	359.1	118.1	34.2	376.7	90.8	31.5	274.0
1988	110.3	32.3	350.8	114.5	33.0	366.0	99.4	31.4	308.8
1989	106.7	32.0	337.0	110.8	32.8	351.6	89.4	31.4	268.4
1990	110.4	33.4	347.6	114.5	33.5	364.4	96.5	35.4	285.0
1991	112.0	34.6	350.5	116.3	34.7	368.2	97.7	37.3	284.1
1992	111.1	31.9	355.3	114.2	32.0	367.7	102.2	34.0	312.4
1993	108.9	31.5	347.4	112.0	31.6	360.0	100.8	33.2	309.3
1994	110.8	31.2	356.3	114.6	31.3	371.7	102.1	34.9	309.6
1995	111.6	31.7	357.9	115.3	31.8	372.8	102.4	33.4	315.3
1996	110.7	31.3	355.8	113.3	31.1	366.9	100.3	30.9	314.1
1992-96	110.6	31.5	354.7	113.9	31.5	368.0	101.5	33.2	312.3
<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	93.3	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	31.0	8.9	99.0
1993	25.9	5.5	88.7	25.6	5.2	88.7	31.5	8.6	102.0
1994	25.5	5.5	87.3	25.2	5.1	87.1	31.3	8.7	101.2
1995	25.2	5.4	86.3	24.8	5.0	85.8	31.9	8.8	103.2
1996	24.3	5.2	83.4	24.0	4.8	83.2	30.8	8.8	98.9
1992-96	25.4	5.5	86.9	25.1	5.1	86.8	31.3	8.7	100.9

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+
5-YR RELATIVE SURVIVAL RATES									
YEAR OF DIAGNOSIS:									
1960-63 ^a	-	-	-	63	-	-	46	-	-
1970-73 ^a	-	-	-	68	-	-	51	-	-
1974-76 ^b	74.6	76.3	74.0	75.3	77.4	74.6	63.1	64.2	62.5
1977-79 ^b	74.7	75.8	74.3	75.4	76.7	75.0	63.2	65.3	62.0
1980-82 ^b	76.3	77.2	76.1	77.1	78.0	76.9	65.9	69.1	64.0
1983-85 ^b	78.1	77.4	78.3	79.2	79.1	79.3	63.5	63.4	63.6
1986-88 ^b	82.7	80.0	83.7	83.8	81.4	84.7	69.2	67.4	70.3
1989-95 ^b	84.7S	82.6S	85.6S	86.0S	84.5S	86.7S	71.0S	69.3S	72.1S
1989-95^b									
ALL STAGES	84.7	82.6	85.6	86.0	84.5	86.7	71.0	69.3	72.1
LOCALIZED	96.3	93.6	97.3	96.9	94.4	97.7	89.3	85.7	91.3
REGIONAL	76.6	75.4	77.4	78.2	77.6	78.7	62.9	63.7	62.3
DISTANT	21.3	24.9	20.2	22.3	27.7	20.9	14.3	11.7	15.4
UNSTAGED	52.5	63.9	48.8	53.6	70.2	48.7	46.1	42.8†	47.7
STAGE DISTRIBUTION (%) 1989-95^b									
ALL STAGES									
Number of cases	93,557	23,209	70,348	80,814	18,799	62,015	7,532	2,686	4,846
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
LOCALIZED	62	55	64	63	56	64	51	47	54
REGIONAL	29	37	27	29	37	26	35	41	31
DISTANT	6	5	6	6	5	6	9	7	10
UNSTAGED	3	3	3	3	2	3	5	4	6
5-YR RELATIVE SURVIVAL RATES, 1989-95^b									
AGE AT DIAGNOSIS:									
<45	80.8	-	-	82.9	-	-	67.2	-	-
45-54	85.2	-	-	86.5	-	-	74.1	-	-
55-64	85.3	-	-	86.3	-	-	73.5	-	-
65-74	87.4	-	-	88.4	-	-	73.2	-	-
75+	84.3	-	-	85.4	-	-	66.4	-	-
Under 65	84.0	-	-	85.4	-	-	71.3	-	-
65 and over	86.2	-	-	87.2	-	-	70.7	-	-

^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 1996.
S The difference in rates between 1974-76 and 1989-95 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

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
Incidence																							
SEER	88.1	85.5	84.1	84.1	85.6	85.4	88.8	89.3	93.3	97.2	104.1	106.7	113.2	110.3	106.7	110.4	112.0	111.1	108.9	110.8	111.6	110.7	
Mortality																							
U.S.	26.2	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	
SEER	27.6	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	25.6	24.9	24.1	25.0	24.2	
Relative Survival Rates (SEER)																							
1-year	94.8	94.6	94.4	94.6	95.0	95.3	95.4	95.6	95.4	95.7	95.9	96.3	96.8	96.8	97.0	97.0	97.3	97.4	97.2	97.5	97.2	97.2	
2-year	89.0	88.8	89.1	88.7	88.9	89.8	90.1	90.4	90.5	91.4	91.3	91.7	93.2	93.4	93.4	93.3	93.8	94.4	94.0	94.1			
3-year	83.2	83.5	83.5	83.1	83.2	84.2	84.8	84.9	85.1	86.3	86.3	87.0	89.2	90.0	90.0	89.7	90.1	91.0	90.7				
4-year	78.9	78.5	78.7	78.7	78.4	79.6	79.7	80.8	81.1	82.3	82.3	83.5	86.0	87.1	87.2	86.8	87.4	87.9					
5-year	75.4	74.7	75.2	74.5	74.4	75.5	76.1	77.4	76.8	78.6	78.8	80.4	83.2	84.5	84.6	84.5	84.9						
6-year	72.1	71.3	72.0	71.4	71.4	72.4	73.1	74.1	73.6	75.9	76.3	78.1	80.5	82.1	82.2	82.2							
7-year	69.5	68.4	69.5	68.7	68.2	69.4	70.2	70.9	70.7	73.4	74.1	75.7	78.2	80.2	80.3								
8-year	67.6	66.2	67.3	66.2	65.9	67.0	67.6	68.8	68.3	71.3	72.1	74.1	76.6	78.5									
9-year	65.7	63.9	65.1	64.1	63.5	64.5	65.6	67.2	66.6	68.9	70.1	72.3	74.6										
10-year	63.7	62.4	63.3	62.4	61.7	62.7	63.4	65.1	64.8	66.8	68.3	70.5											
11-year	61.9	60.8	61.5	60.7	60.4	60.9	61.8	63.1	62.7	64.9	66.8												
12-year	60.4	59.1	59.6	59.0	59.1	59.4	60.5	61.7	61.5	63.9													
13-year	58.9	58.0	58.5	58.1	57.8	58.6	58.8	60.5	60.1														
14-year	57.9	57.2	57.4	57.0	56.7	57.5	57.4	58.8															
15-year	56.7	56.1	56.2	55.8	55.6	56.5	56.5																
16-year	55.5	55.5	55.2	54.9	54.6	54.8																	
17-year	54.8	54.6	54.2	53.6	53.4																		
18-year	54.1	53.9	53.6	52.7																			
19-year	53.4	53.1	52.4																				
20-year	52.7	52.1																					
21-year	51.6																						

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

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Incidence																						
SEER	30.0	29.7	28.8	28.5	28.0	27.7	28.8	29.9	29.6	31.1	32.6	32.6	33.5	32.3	32.0	33.4	34.6	31.9	31.5	31.2	31.7	31.3
Mortality																						
U.S.	6.8	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
SEER	6.8	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
Relative Survival Rates (SEER)																						
1-year	96.4	96.6	96.6	97.2	96.9	97.8	98.1	97.4	97.7	97.3	97.6	97.9	98.1	98.5	98.2	97.5	98.5	98.4	98.0	98.4	98.0	
2-year	90.5	91.4	90.9	91.4	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	94.1	93.3	
3-year	83.8	86.0	85.1	84.6	83.2	84.7	85.9	86.5	86.0	85.2	85.8	86.1	87.1	89.2	88.8	88.4	89.9	90.6	89.8			
4-year	80.1	80.6	80.6	80.1	78.6	80.0	80.8	82.2	81.2	81.1	81.2	82.1	82.9	85.4	85.0	84.9	86.6	85.9				
5-year	76.3	76.6	76.8	76.0	74.6	75.7	77.2	78.6	76.8	77.4	77.9	78.4	79.4	82.1	82.0	82.2	83.5					
6-year	72.8	73.4	74.0	73.3	72.1	72.5	74.5	74.9	73.5	74.9	75.7	75.8	76.9	79.9	79.5	79.7						
7-year	70.3	71.2	72.0	70.4	69.4	69.6	72.2	72.5	70.8	72.1	73.5	73.0	74.5	77.9	77.7							
8-year	68.6	68.8	69.9	68.6	67.4	67.6	69.6	70.2	68.7	69.6	71.7	71.1	72.7	75.8								
9-year	67.0	66.7	67.8	66.3	65.8	66.0	68.0	68.2	67.1	67.5	69.7	69.9	70.6									
10-year	65.3	65.8	66.2	64.5	64.2	64.4	66.1	66.8	65.3	66.4	68.5	68.6										
11-year	64.2	64.3	64.8	62.9	62.9	63.1	64.8	65.4	64.2	64.7	67.5											
12-year	62.5	62.9	63.1	61.6	61.7	62.2	63.6	64.0	63.2	63.9												
13-year	61.4	61.8	62.1	60.3	60.4	61.3	62.3	63.2	61.5													
14-year	60.6	61.1	61.4	59.5	59.3	60.6	61.1	61.4														
15-year	59.1	60.3	61.1	58.6	58.7	59.9	59.9															
16-year	58.0	59.7	60.3	58.3	57.6	58.8																
17-year	57.1	59.1	60.1	57.9	56.8																	
18-year	56.5	58.6	59.7	56.8																		
19-year	56.0	57.8	59.1																			
20-year	55.4	56.8																				
21-year	54.7																					

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 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

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Incidence																						
SEER	267.4	257.5	254.4	255.5	263.0	263.4	274.2	272.7	289.9	301.3	324.6	335.0	359.1	350.8	337.0	347.6	350.5	355.3	347.4	356.3	357.9	355.8
Mortality																						
U.S.	86.1	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	88.7	87.3	86.3	83.4
SEER	91.8	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	87.9	91.5	88.8	85.3	83.9	86.0	83.7
Relative Survival Rates (SEER)																						
1-year	94.3	94.0	93.7	93.8	94.4	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	96.9	
2-year	88.6	87.9	88.4	87.9	88.5	89.6	89.5	89.9	90.1	91.5	91.1	91.6	93.4	93.2	93.5	93.4	93.8	94.3	94.0	94.3		
3-year	83.0	82.7	83.0	82.6	83.2	84.0	84.5	84.4	84.8	86.6	86.5	87.4	89.8	90.3	90.4	90.2	90.2	90.2	91.1	91.1		
4-year	78.5	77.8	78.0	78.2	78.4	79.5	79.3	80.3	81.0	82.7	82.6	83.9	87.0	87.7	88.0	87.5	87.8	88.6				
5-year	75.1	74.0	74.6	74.0	74.3	75.4	75.8	76.9	76.8	79.1	79.1	81.1	84.5	85.3	85.6	85.4	85.6					
6-year	71.9	70.5	71.3	70.8	71.1	72.3	72.6	73.8	73.6	76.4	76.5	79.0	81.8	83.0	83.2	83.3						
7-year	69.2	67.3	68.6	68.1	67.8	69.3	69.6	70.4	70.7	74.0	74.3	76.8	79.6	81.1	81.4							
8-year	67.3	65.1	66.4	65.3	65.4	66.9	66.9	68.3	68.2	72.0	72.4	75.3	78.1	79.7								
9-year	65.2	62.9	64.1	63.2	62.8	64.0	64.8	66.9	66.5	69.5	70.3	73.4	76.3									
10-year	63.1	61.0	62.1	61.7	60.8	62.2	62.4	64.6	64.7	67.1	68.4	71.6										
11-year	61.0	59.3	60.1	59.9	59.4	60.2	60.7	62.3	62.3	65.3	66.7											
12-year	59.6	57.5	58.2	58.0	58.1	58.5	59.4	60.9	61.0	64.3												
13-year	57.9	56.4	57.0	57.3	56.9	57.7	57.5	59.6	59.9													
14-year	56.8	55.5	55.7	56.0	55.7	56.4	56.0	57.9														
15-year	55.7	54.1	54.0	54.8	54.4	55.3	55.3															
16-year	54.4	53.5	52.8	53.5	53.4	53.4																
17-year	53.7	52.4	51.3	51.8	52.2																	
18-year	53.0	51.5	50.6	51.0																		
19-year	52.1	50.5	49.1																			
20-year	51.4	49.6																				
21-year	50.1																					

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

Table 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

SEER Areas, 1994-96

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	12.56
10	0.00	0.00	0.00	0.11	0.00	0.05	0.43	12.66
20	0.00	0.00	0.01	0.11	0.05	0.43	1.89	12.70
30	0.00	0.01	0.02	0.11	0.39	1.85	4.40	12.73
40	0.01	0.02	0.05	0.11	1.48	4.06	7.15	12.50
50	0.02	0.05	0.09	0.11	2.67	5.85	9.07	11.38
60	0.04	0.08	0.10	0.11	3.42	6.88	8.92	9.36

Lifetime Risk of Being Diagnosed = 0.11% Lifetime Risk of Being Diagnosed = 12.56%
 Lifetime Risk of Dying = 0.03% Lifetime Risk of Dying = 3.39%

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	0.04	13.10
10	0.00	0.00	0.00	0.11	0.00	0.04	0.42	13.19
20	0.00	0.00	0.01	0.11	0.04	0.42	1.89	13.23
30	0.00	0.01	0.02	0.11	0.38	1.86	4.51	13.25
40	0.01	0.02	0.05	0.11	1.50	4.17	7.43	13.02
50	0.01	0.05	0.09	0.11	2.75	6.10	9.48	11.86
60	0.04	0.08	0.10	0.10	3.59	7.20	9.31	9.75

Lifetime Risk of Being Diagnosed = 0.11% Lifetime Risk of Being Diagnosed = 13.10%
 Lifetime Risk of Dying = 0.03% Lifetime Risk of Dying = 3.47%

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	0.13	0.00	0.00	0.07	9.74
10	0.00	0.00	0.00	0.13	0.00	0.07	0.51	9.92
20	0.00	0.00	0.01	0.13	0.07	0.51	1.92	9.96
30	0.00	0.01	0.04	0.14	0.45	1.87	4.06	10.00
40	0.01	0.04	0.08	0.15	1.46	3.70	6.03	9.79
50	0.03	0.07	0.11	0.15	2.38	4.84	7.26	8.83
60	0.05	0.09	0.13	0.14	2.76	5.46	6.82	7.22

Lifetime Risk of Being Diagnosed = 0.13% Lifetime Risk of Being Diagnosed = 9.74%
 Lifetime Risk of Dying = 0.07% Lifetime Risk of Dying = 3.62%

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 1990-1996	Trend 1990-1996
	Rate per 100,000 persons	EAPC (%)
	Females	Females
All Races	109.1	0.1
White	113.2	0.0
White Hispanic	73.4	-0.8
White Non-Hispanic	117.7	0.1
Black	99.3	0.7
Asian/Pacific Islander [‡]	72.6	1.0
American Indian	33.9	9.3
Hispanic [®]	69.4	-1.0

Mortality[♦]

RACE/ETHNICITY	Rate 1990-1996	Trend 1990-1996
	Rate per 100,000 persons	EAPC (%)
	Females	Females
All Races	25.9	-1.8★
White	25.7	-2.0★
White Hispanic	16.1	-1.1
White Non-Hispanic	26.0	-1.9★
Black	31.4	-0.2
Asian/Pacific Islander [‡]	11.4	-1.0
American Indian	12.3	4.0
Hispanic [®]	15.3	-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, 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, 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).

[‡] Population estimates for the Asian Pacific Islanders rates are adjusted Census Bureau estimates. The population estimates used in Wingo PA, Ries LAG, Rosenberg HM, Miller DS, Edwards BK. Cancer Incidence and mortality, 1973-1996. Cancer 82:1197-207, 1998 were unadjusted.

* 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+
SEER INCIDENCE RATES\$, 1992-96									
REGISTRY									
11 registries	109.0	31.0	349.8	113.1	31.1	365.8	100.3	32.7	308.7
9 registries	110.6	31.5	354.7	113.9	31.5	368.0	101.5	33.2	312.3
San Francisco-Oakland	114.6	33.3	365.3	128.6	35.3	416.4	93.3	32.1	282.2
Connecticut	117.3	34.6	372.2	119.1	34.9	378.8	96.2	33.7	289.0
Metropolitan Detroit	109.8	31.5	351.4	110.0	30.3	355.7	102.0	32.7	315.8
Hawaii	99.3	31.3	308.8	124.8	31.7	411.9	-	-	-
Iowa	106.3	29.6	342.7	106.3	29.7	342.5	-	-	-
New Mexico	96.1	28.6	304.2	99.8	30.1	314.6	-	-	-
Seattle-Puget Sound	118.4	31.2	387.4	121.0	31.6	396.9	99.8	31.2	311.6
Utah	94.8	23.0	316.0	95.7	23.3	319.1	-	-	-
Metropolitan Atlanta	114.2	33.9	361.9	113.4	32.6	362.4	113.2	35.4	353.3
San Jose-Monterey	115.4	31.2	375.3	120.7	31.7	395.4	96.6	25.7	315.6
Los Angeles	102.5	29.4	327.9	108.1	29.5	350.5	97.8	32.1	300.4
SEER MORTALITY RATES*, 1992-96									
REGISTRY									
11 registries	24.7	5.1	85.2	25.1	4.8	87.8	32.1	8.7	104.1
9 registries	24.7	5.0	85.5	24.9	4.6	87.3	32.2	8.8	104.1
San Francisco-Oakland	23.9	4.7	83.2	25.9	4.4	92.1	29.5	8.9	92.9
Connecticut	25.7	4.8	90.0	25.4	4.5	89.7	30.2	7.9	98.9
Metropolitan Detroit	27.7	6.0	94.5	26.2	4.9	92.0	32.4	9.3	103.7
Hawaii	17.6	3.6	60.5	25.5	3.3	94.3	-	-	-
Iowa	24.6	4.8	85.8	24.6	4.8	85.6	-	-	-
New Mexico	23.1	4.8	79.4	23.9	5.0	82.4	-	-	-
Seattle-Puget Sound	24.6	4.8	85.8	25.0	4.8	87.4	31.6	6.8	107.9
Utah	20.8	4.1	72.3	21.0	4.2	73.1	-	-	-
Metropolitan Atlanta	26.5	6.1	89.3	23.6	4.7	81.8	36.9	9.5	121.6
San Jose-Monterey	23.9	4.7	83.1	25.9	5.2	89.8	40.1	3.0	154.6
Los Angeles	24.8	5.4	84.7	25.7	5.2	89.0	31.7	8.8	102.5

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, 1992-96

All Races, Females

State	Rate	SE	Rank	PD
TOTAL U.S.	25.4	0.06		
High Five States				
District of Columbia	32.8⊕*	1.36	(01)	29.1
New Jersey	28.4⊕*	0.33	(02)	11.8
New York	28.2⊕*	0.22	(03)	11.0
Rhode Island	28.0*	0.94	(04)	10.2
Massachusetts	27.9⊕	0.38	(05)	9.8
Low Five States				
Idaho	22.3*	0.85	(47)	-12.2
Arizona	22.3⊕*	0.43	(48)	-12.2
Colorado	21.6⊕*	0.46	(49)	-15.0
Utah	20.8⊕*	0.70	(50)	-18.1
Hawaii	17.6⊕*	0.73	(51)	-30.7

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	23.2⊕	0.42	(44)	-8.7	Montana	24.6	0.96	(25)	-3.1
Alaska	23.2	1.61	(43)	-8.7	Nebraska	24.8	0.71	(24)	-2.4
Arizona	22.3⊕*	0.43	(48)	-12.2	Nevada	24.9	0.78	(19)	-2.0
Arkansas	23.1	0.54	(45)	-9.1	New Hampshire	27.5	0.93	(08)	8.3
California	24.4⊕	0.17	(32)	-3.9	New Jersey	28.4⊕*	0.33	(02)	11.8
Colorado	21.6⊕*	0.46	(49)	-15.0	New Mexico	23.1	0.71	(46)	-9.1
Connecticut	25.7	0.50	(16)	1.2	New York	28.2⊕*	0.22	(03)	11.0
Delaware	27.8	1.12	(06)	9.4	North Carolina	24.9	0.34	(20)	-2.0
District of Columbia	32.8⊕*	1.36	(01)	29.1	North Dakota	24.4	1.13	(30)	-3.9
Florida	24.5	0.23	(29)	-3.5	Ohio	27.2⊕	0.28	(11)	7.1
Georgia	24.0	0.35	(37)	-5.5	Oklahoma	24.2	0.49	(34)	-4.7
Hawaii	17.6⊕*	0.73	(51)	-30.7	Oregon	24.0	0.50	(38)	-5.5
Idaho	22.3*	0.85	(47)	-12.2	Pennsylvania	27.7⊕	0.26	(07)	9.1
Illinois	27.5⊕	0.28	(09)	8.3	Rhode Island	28.0*	0.94	(04)	10.2
Indiana	25.9	0.38	(14)	2.0	South Carolina	24.4	0.47	(31)	-3.9
Iowa	24.6	0.52	(27)	-3.1	South Dakota	24.2	1.06	(33)	-4.7
Kansas	23.4	0.55	(41)	-7.9	Tennessee	25.3	0.40	(17)	-0.4
Kentucky	24.8	0.46	(22)	-2.4	Texas	23.5⊕	0.22	(40)	-7.5
Louisiana	26.4	0.46	(12)	3.9	Utah	20.8⊕*	0.70	(50)	-18.1
Maine	25.3	0.80	(18)	-0.4	Vermont	24.8	1.20	(23)	-2.4
Maryland	27.3	0.43	(10)	7.5	Virginia	25.8	0.37	(15)	1.6
Massachusetts	27.9⊕	0.38	(05)	9.8	Washington	24.1	0.40	(35)	-5.1
Michigan	26.0	0.30	(13)	2.4	West Virginia	23.4	0.61	(42)	-7.9
Minnesota	24.5	0.43	(28)	-3.5	Wisconsin	24.8	0.40	(21)	-2.4
Mississippi	23.8	0.55	(39)	-6.3	Wyoming	24.0	1.35	(36)	-5.5
Missouri	24.6	0.38	(26)	-3.1					

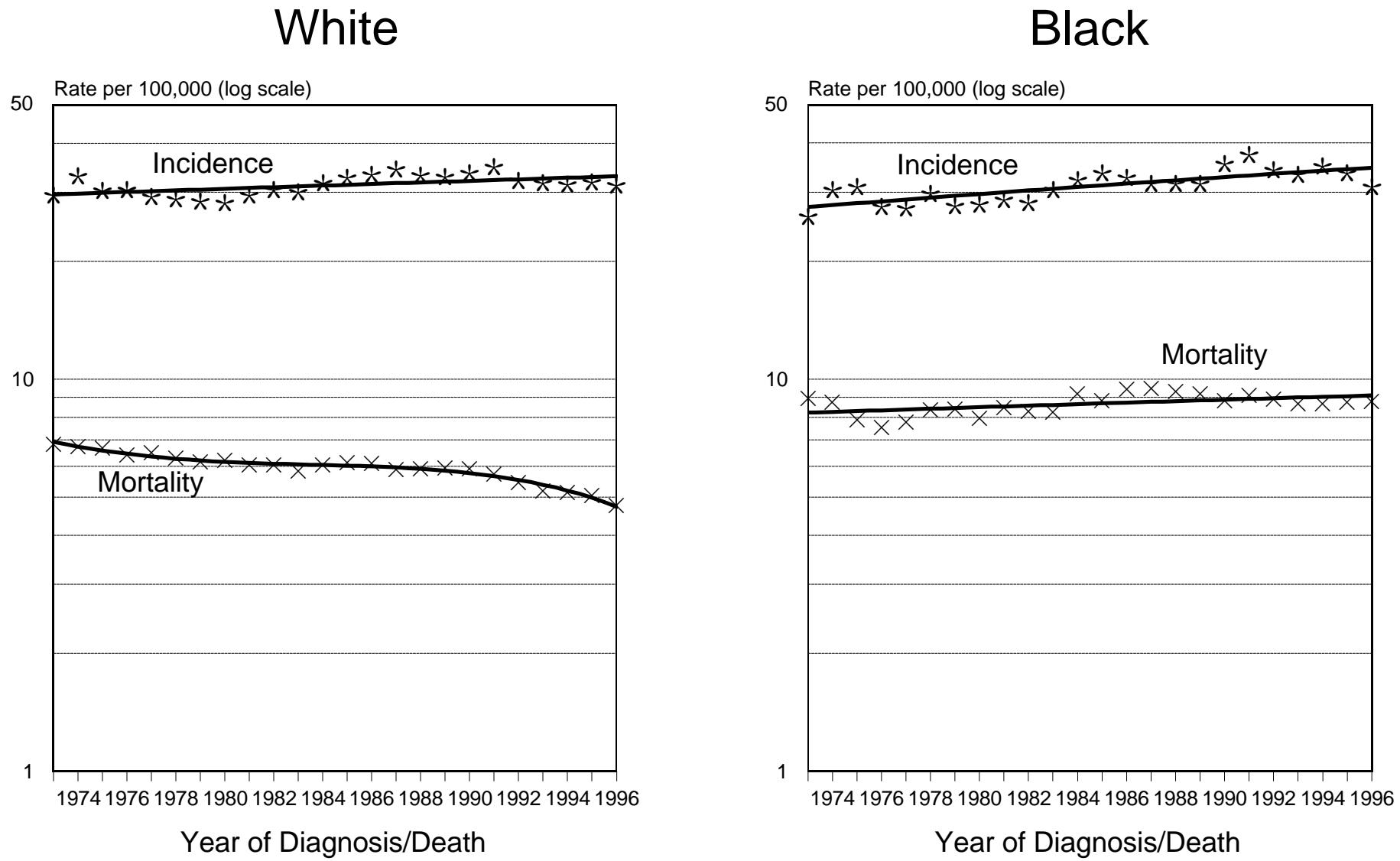
* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
SE Standard error of the rate.

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

⊕ Absolute difference between state rate and total U.S. rate is 10% or more.

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

SEER Incidence and U.S. Mortality Female Breast Cancer, Under 50 Years of Age By Race



SEER Incidence and U.S. Mortality Female Breast Cancer, Ages 50 and Over By Race

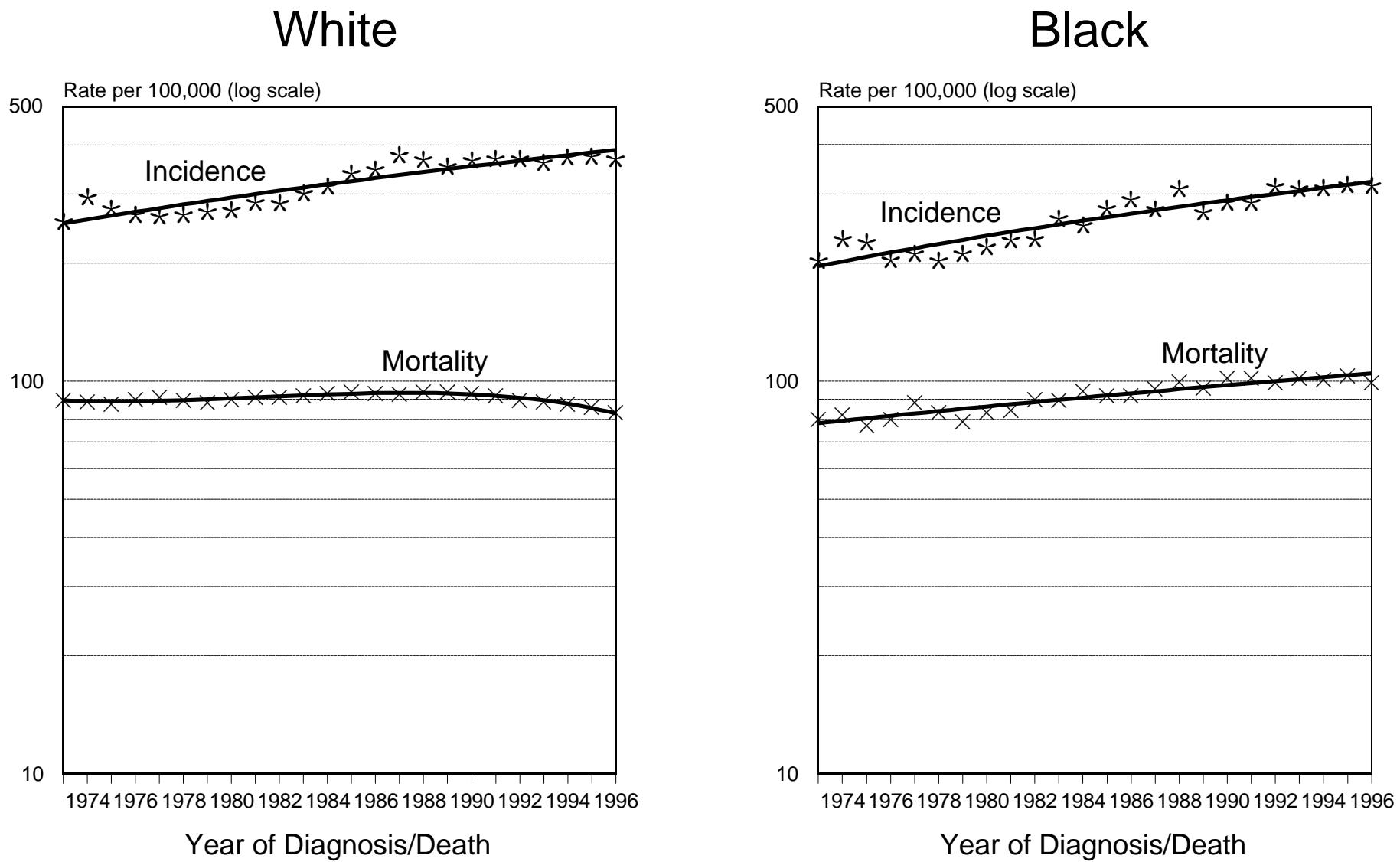
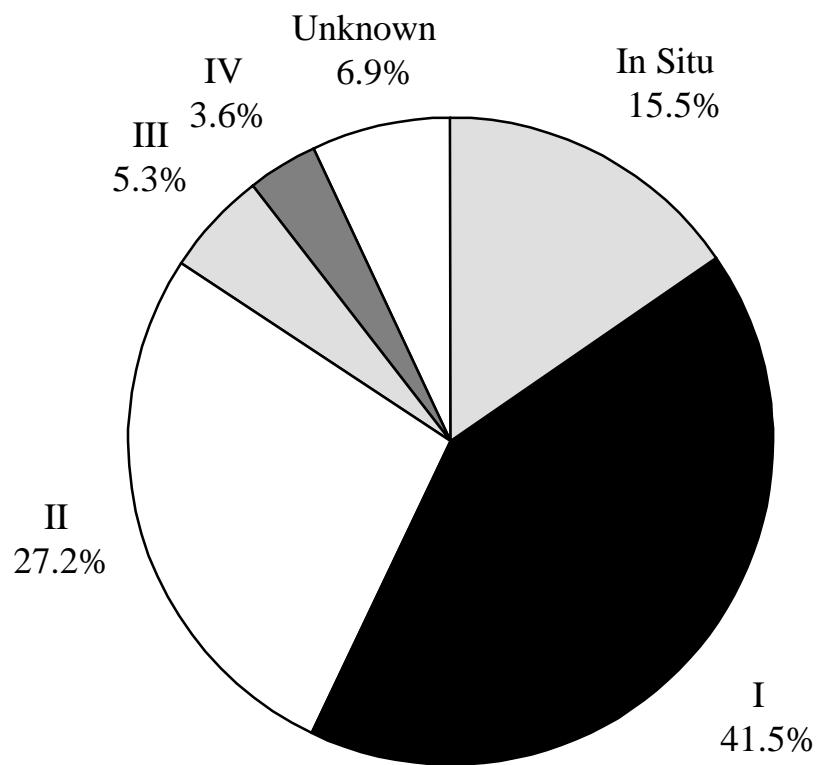
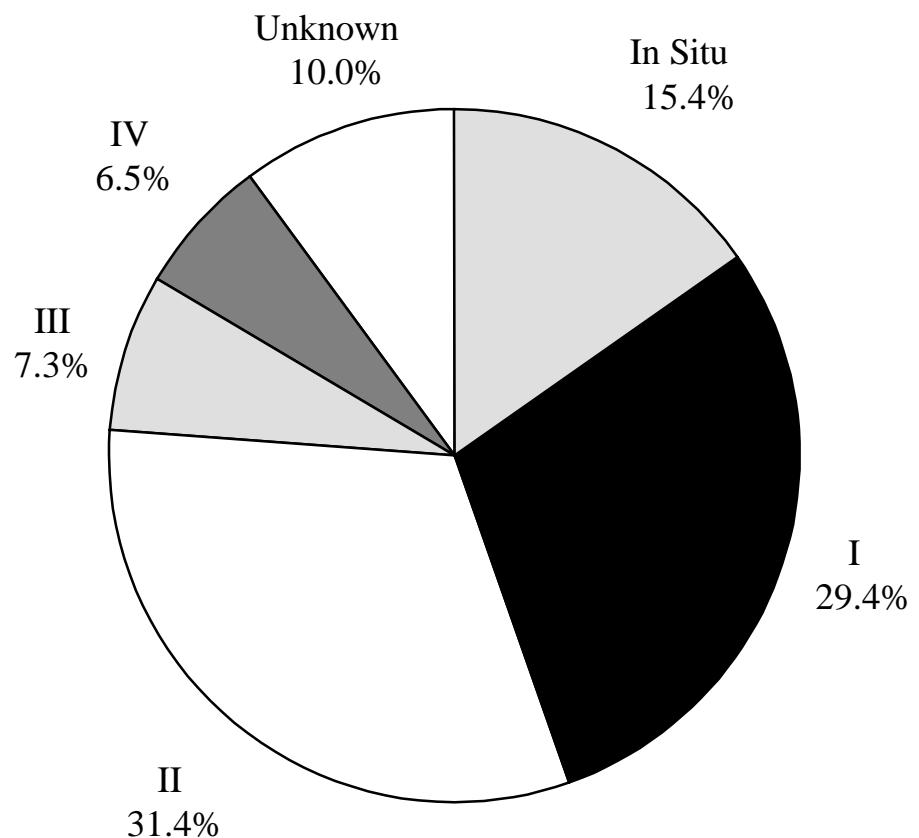


Figure I V-2

Breast Cancer Stage Distribution 1996



White Females



Black Females

Female Breast Cancer by Stage Incidence Rates, 1983-1996

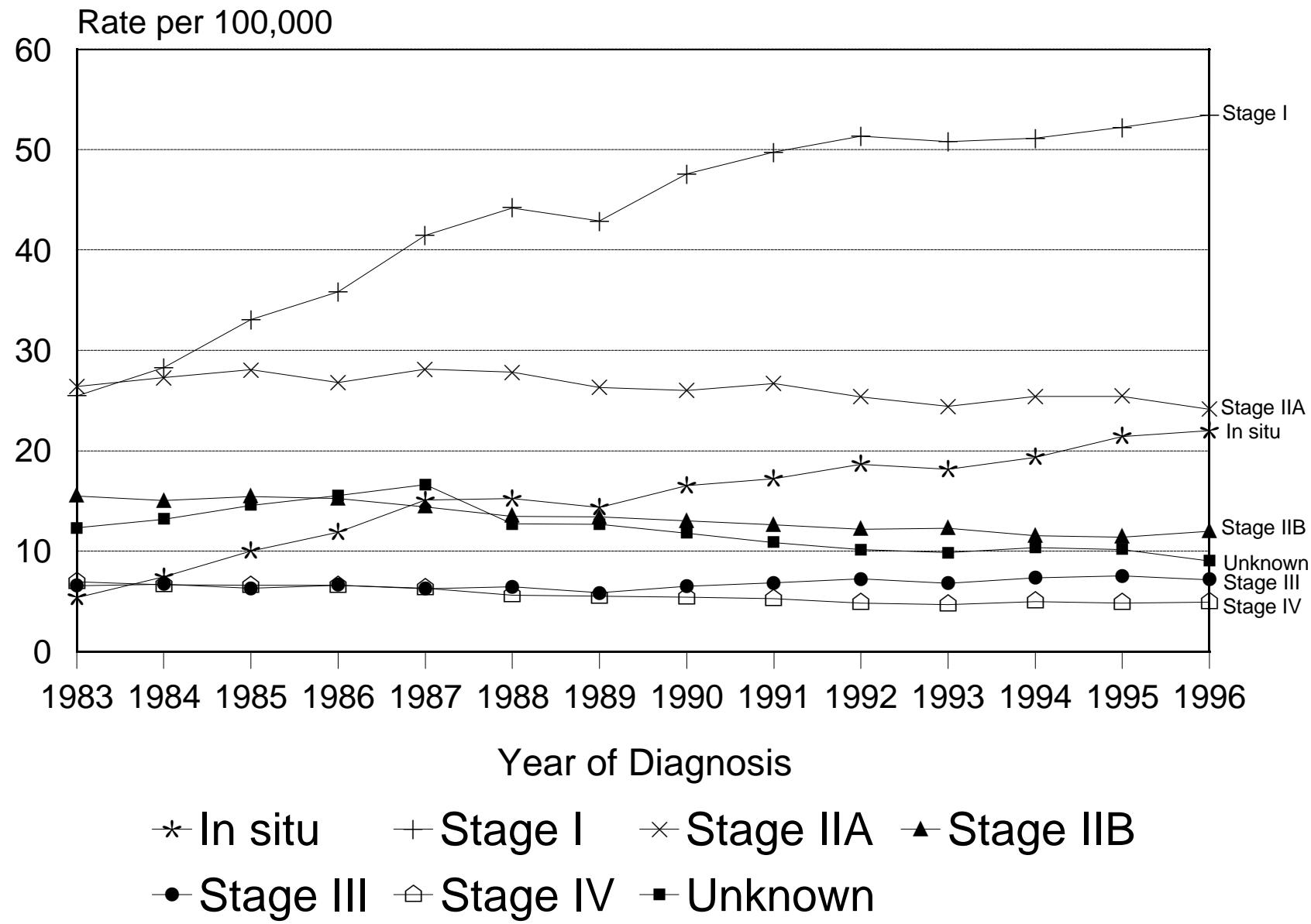
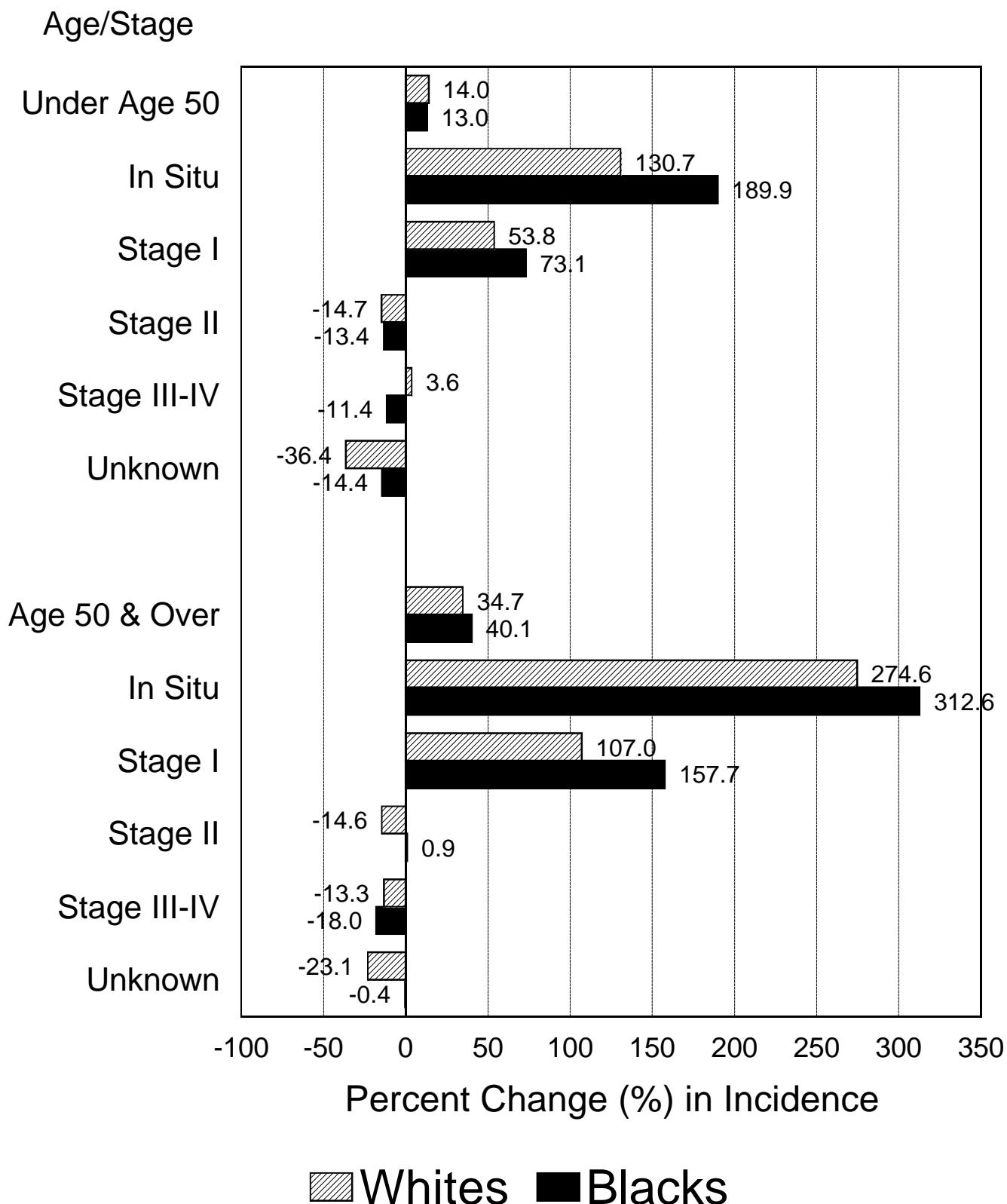


Figure IV-5

Female Breast Cancer by Stage

Percent Change in Incidence, 1983-1996



Breast Cancer Incidence Rates, 1973-1996 by Age, In Situ vs. Malignant All Races, Female

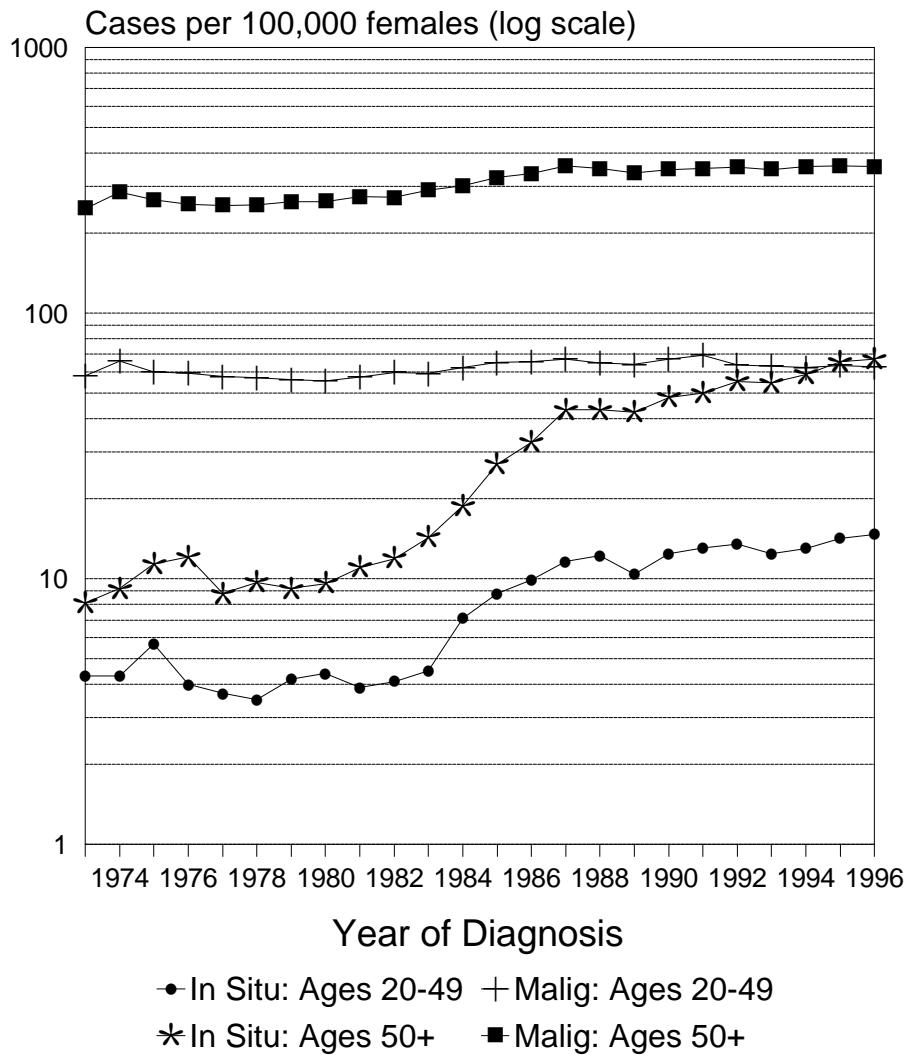
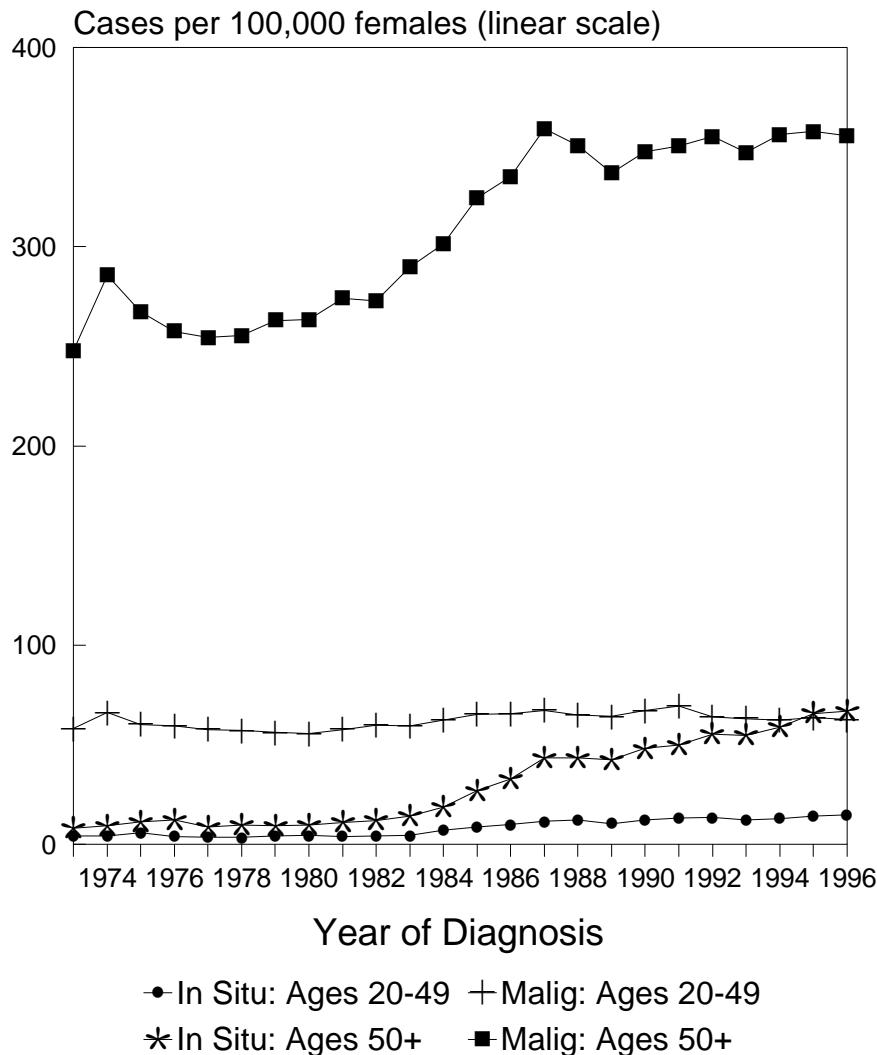
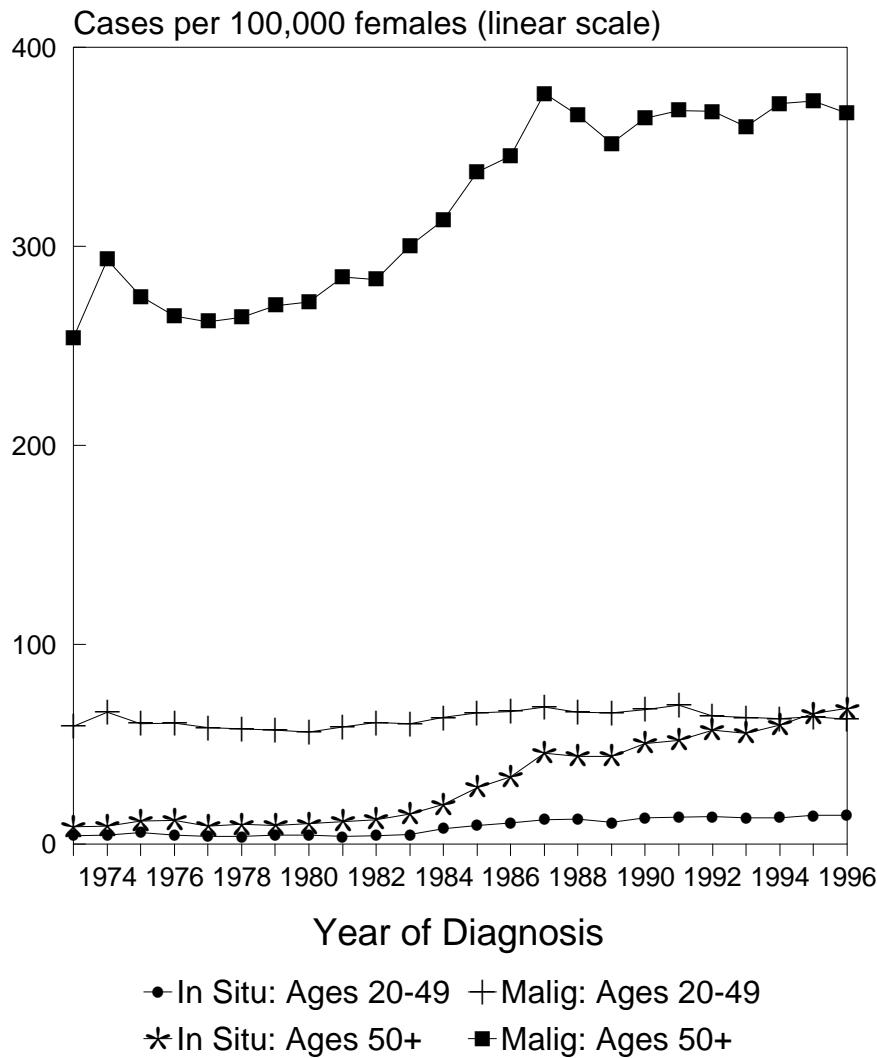


Figure IV-6

Breast Cancer Incidence Rates, 1973-1996 by Age, In Situ vs. Malignant White Females



Age-adjusted to 1970 Standard

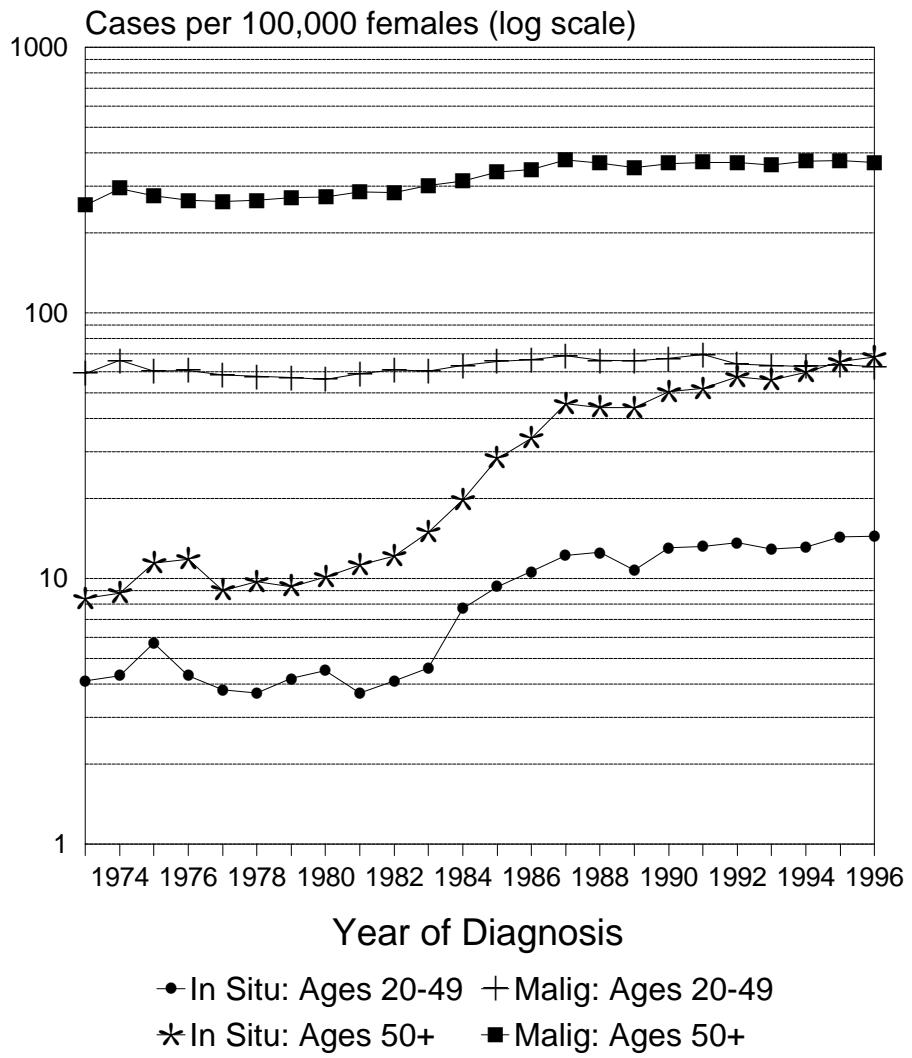
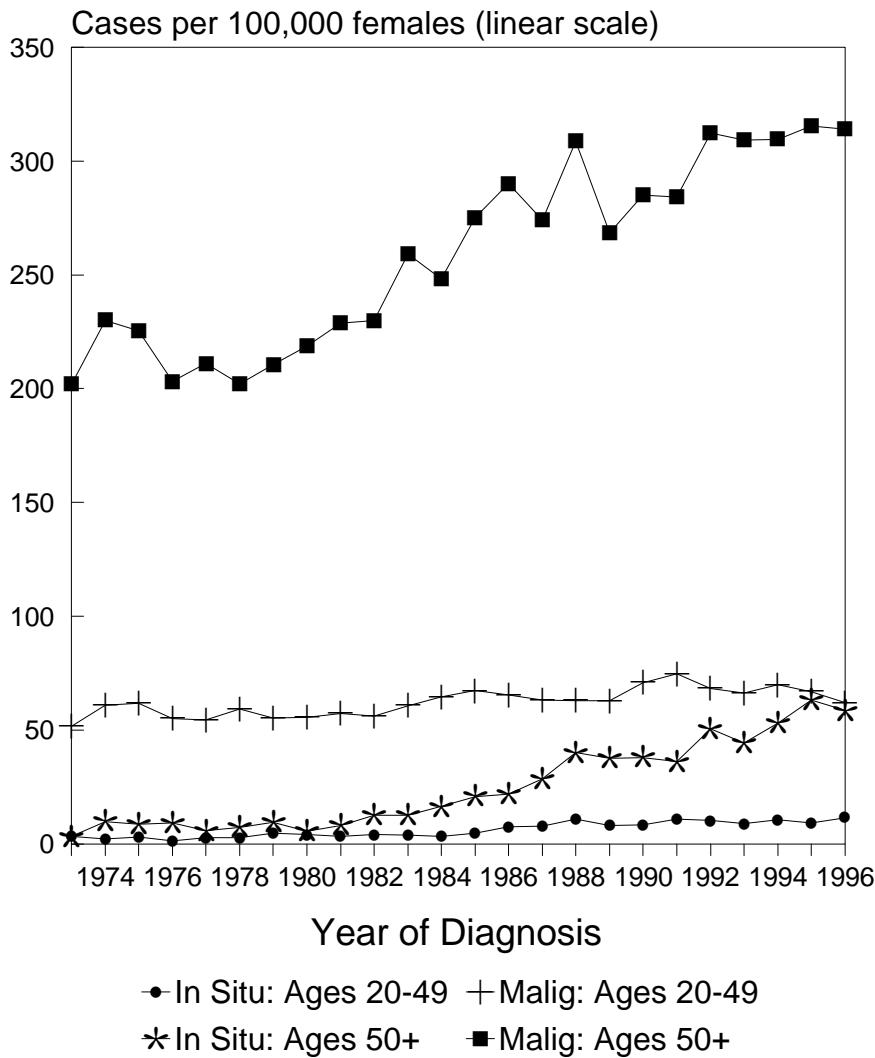


Figure IV-7

Breast Cancer Incidence Rates, 1973-1996 by Age, In Situ vs. Malignant Black Females



Age-adjusted to 1970 Standard

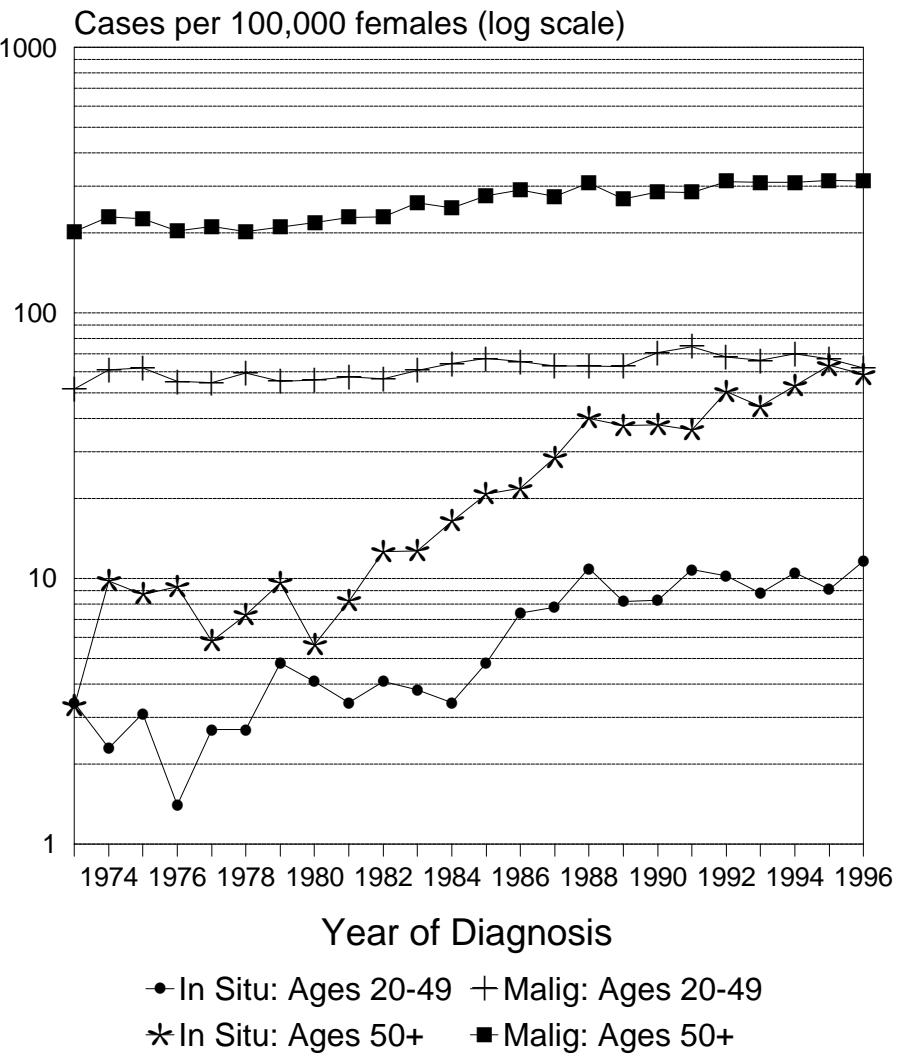


Figure IV-8

Figure IV-9

Breast Cancer Incidence & Mortality White Females vs. Black Females

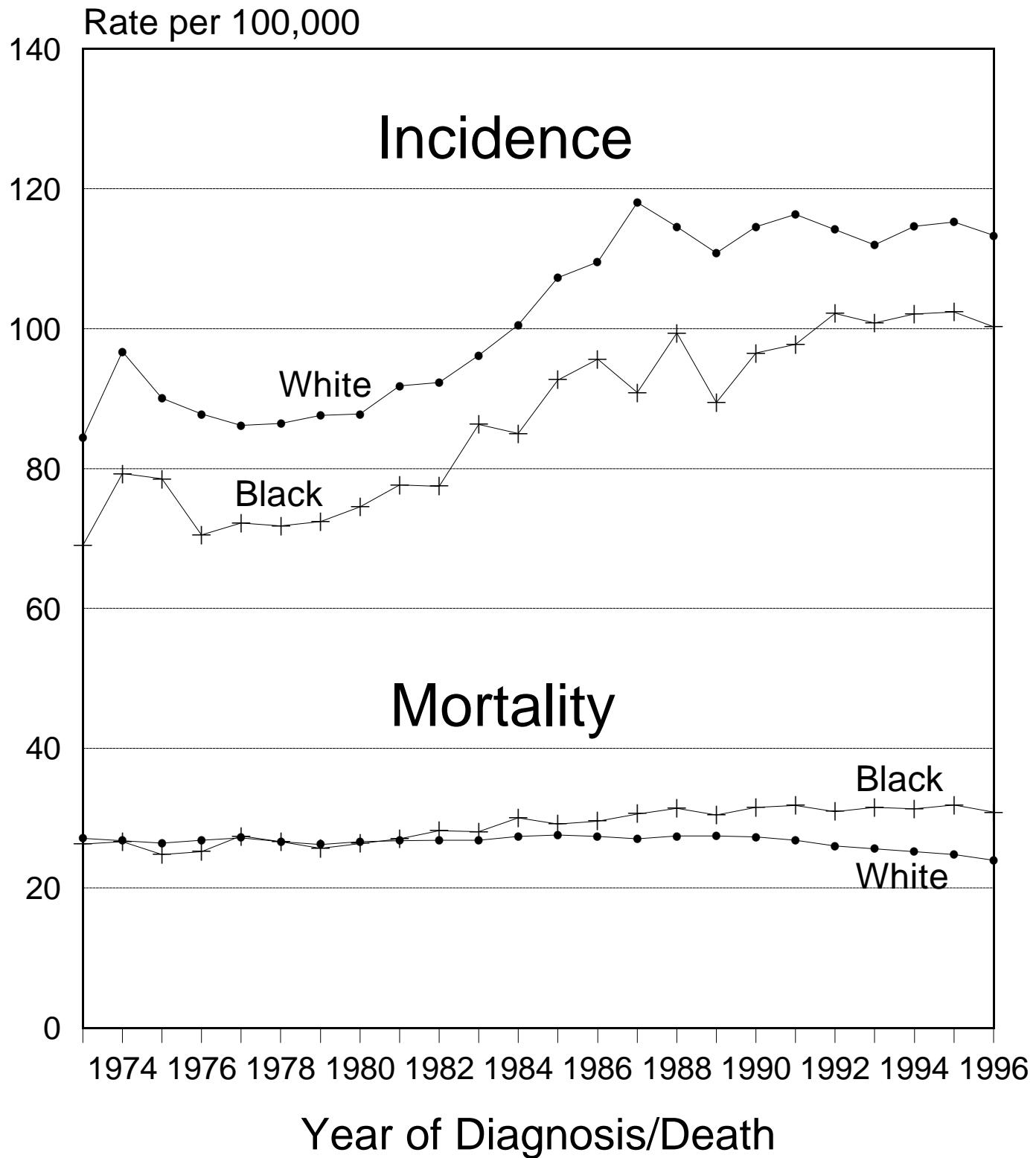
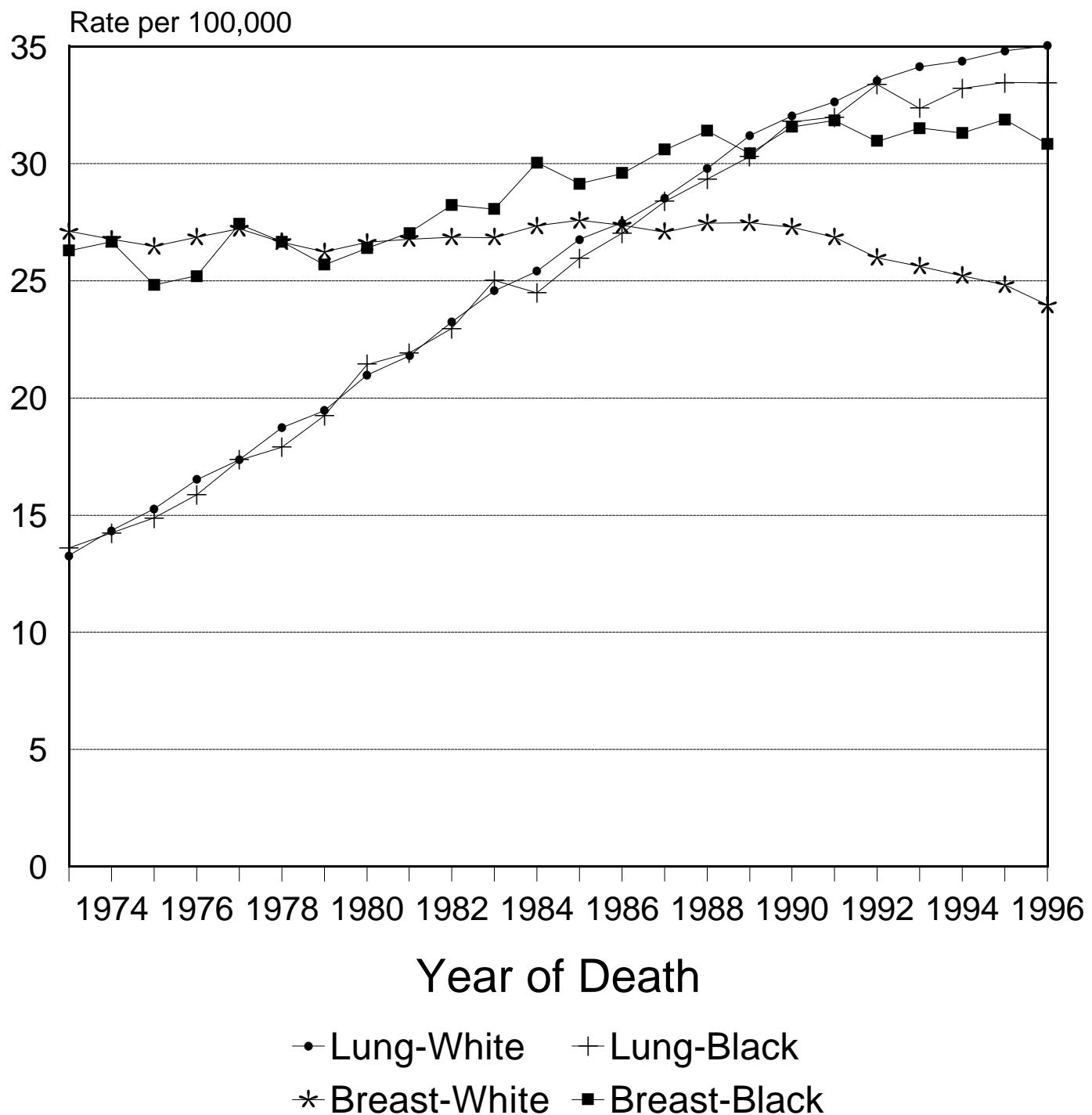


Figure IV-10

Breast vs. Lung Cancer Mortality White Females vs. Black Females United States, 1973-1996



Age-adjusted to 1970 Standard