

## C. Female Breast Cancer

### Incidence (New Cases)

Breast cancer is the most common reportable cancer among women. A total of 3,574 women in Maryland were diagnosed with breast cancer in 2002. The 2002 age-adjusted incidence rate in Maryland is 120.1 per 100,000 women (116.2-124.1, 95% C.I.); this is statistically significantly less than the 2002 U.S. SEER age-adjusted incidence rate for breast cancer of 132.9 per 100,000 women.

### Mortality (Deaths)

In 2002, a total of 879 women died of breast cancer in Maryland. Female breast cancer accounts for 8.5% of all cancer deaths in Maryland. Breast cancer is the second leading cause of cancer death among women in Maryland after lung cancer. The age-adjusted mortality rate in Maryland is 29.2 per 100,000 women (27.3-31.1, 95% C.I.). This rate is statistically significantly greater than the 2002 U.S. SEER mortality rate for breast cancer of 25.5 per 100,000 population of women. Maryland ranks 5<sup>th</sup> highest for female breast cancer mortality among the states and the District of Columbia for the period 1998-2002.

**Table 29.**  
**Female Breast Incidence and Mortality Rates**  
**by Race, Maryland and the United States, 2002**

<i>Incidence 2002</i>	<i>Total</i>	<i>Whites</i>	<i>Blacks</i>	<i>Other</i>
New Cases (#)	3,574	2,680	790	104
Incidence Rate*	120.1	125.9	108.7	77.7
U.S. SEER Rate*	132.9	138.2	120.0	NA
<i>Mortality 2002</i>	<i>Total</i>	<i>Whites</i>	<i>Blacks</i>	<i>Other</i>
Deaths (#)	879	606	257	16
Mortality Rate*	29.2	27.3	36.1	12.6
U.S. SEER Rate*	25.5	24.9	34.1	NA

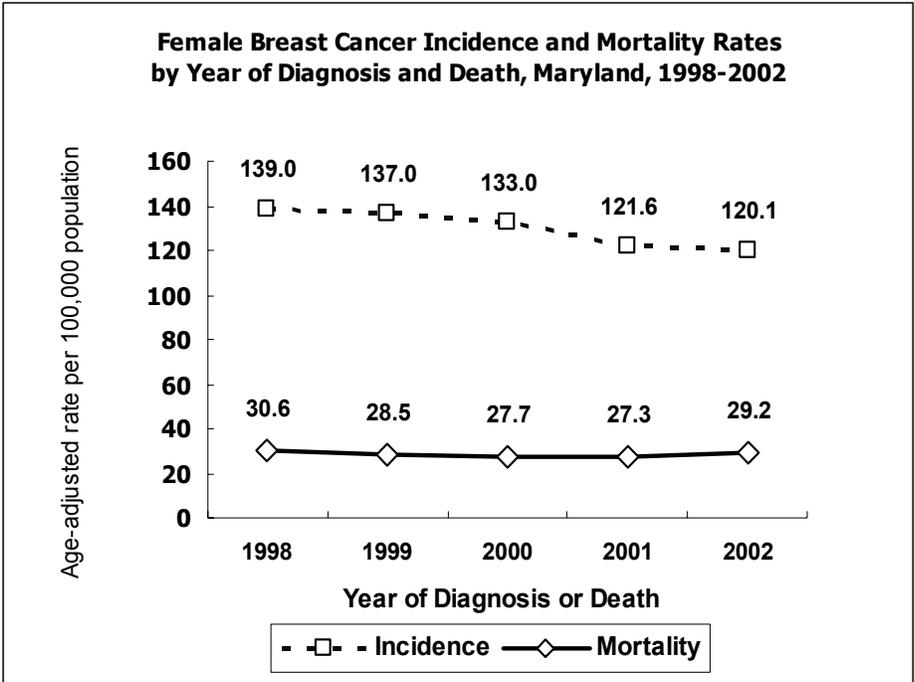
\* Rates are per 100,000 and are age-adjusted to 2000 U.S. standard population

NA: Data were not available

Source: Maryland Cancer Registry, 2002

CDC WONDER, 2002

SEER, National Cancer Institute, 2002



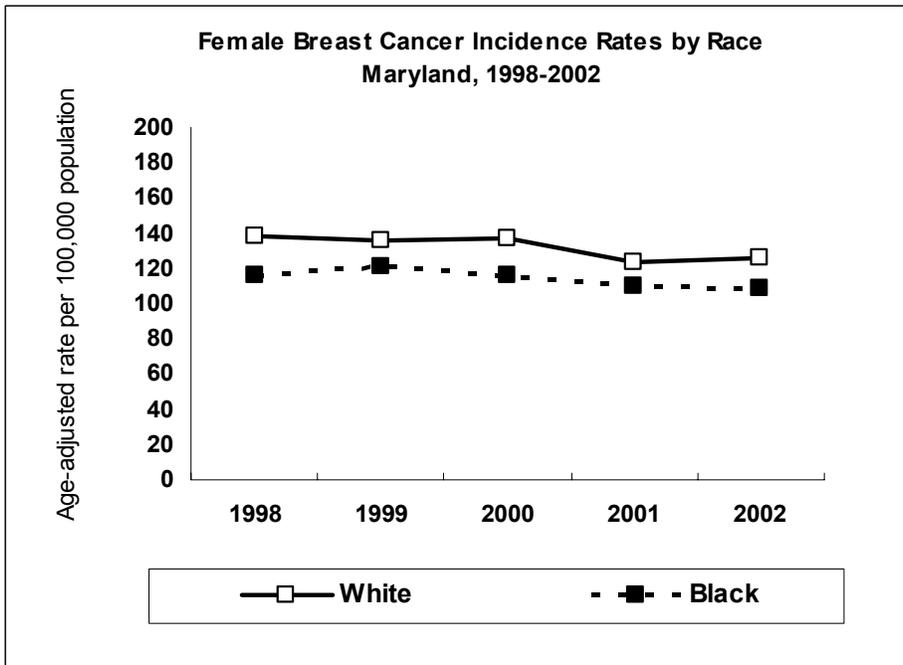
Rates are age-adjusted to 2000 U.S. standard population  
 Maryland Cancer Registry, 1998-2002  
 Maryland Division of Health Statistics, 1998-2001  
 CDC WONDER, 2002

### Incidence and Mortality Trends

From 1998 to 2002, there was a decrease of 4.0% annually in breast cancer incidence among Maryland women.

Similarly, breast cancer mortality decreased an average of 1.4% per year between 1998 and 2002.

See Appendix I, Tables 1 and 2.



Rates are age-adjusted to 2000 U.S. standard population  
 Maryland Cancer Registry, 1998-2002

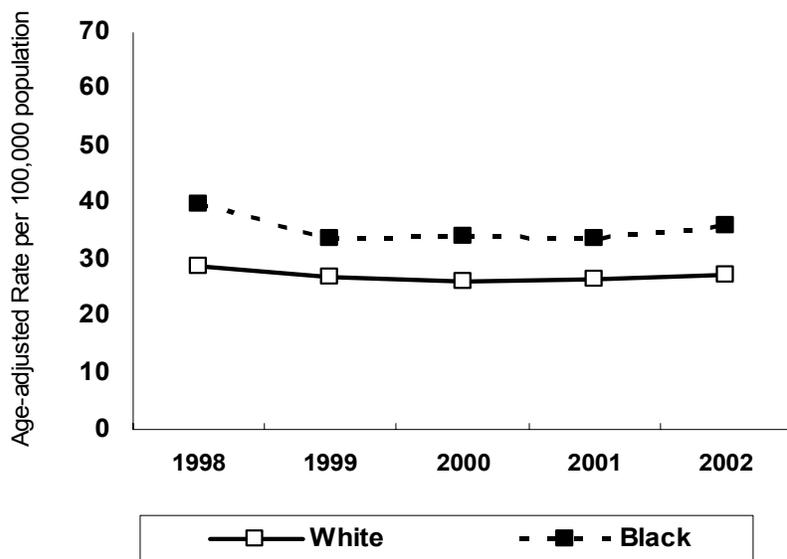
### Race Incidence Trends

White women consistently have higher incidence rates than black women.

Incidence among both black and white women decreased with the highest reduction for white women, who experienced an average 2.8% annual decline, compared to a 2.3% annual drop for black women.

Data for female breast cancer incidence rates can be seen in Appendix I, Table 9.

**Female Breast Cancer Mortality Rates by Race  
Maryland, 1998-2002**



Rates are age-adjusted to 2000 U.S. standard population  
Maryland Division of Health Statistics, 1998-2001  
CDC WONDER, 2002

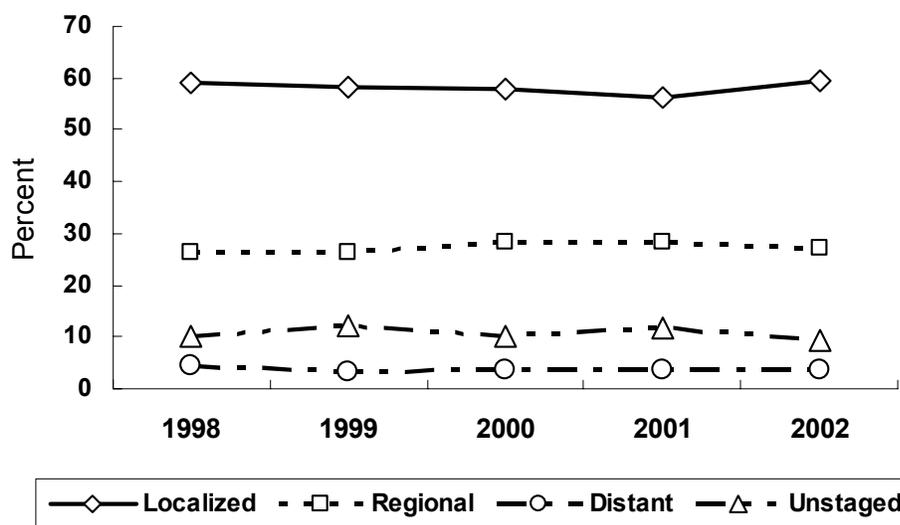
**Race Mortality Trends**

Black women consistently had higher mortality rates than white women.

Mortality rates for both white and black women decreased with the largest drop in rates for black women, averaging 1.9% per year compared to 1.2% for white women.

See Appendix I, Table 10.

**Female Breast Cancer by Stage at Diagnosis  
Maryland, 1998-2002**

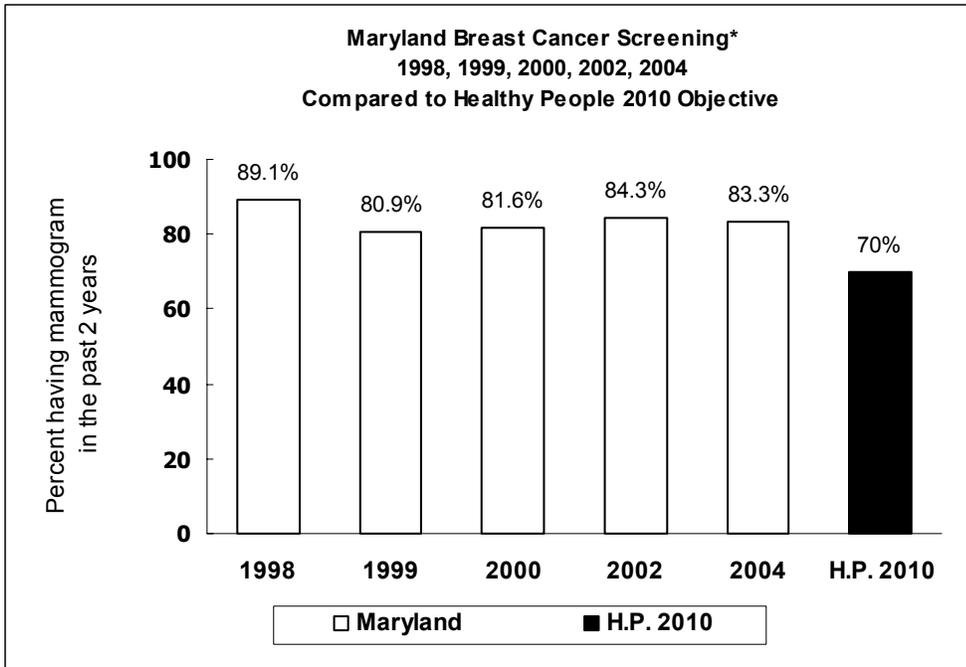


Maryland Cancer Registry, 1998-2002

**Stage of Disease at Diagnosis**

In 2002, 59.5% of female breast cancer cases were diagnosed at the localized (early) stage, compared to 59.2% diagnosed at the localized stage in 1998. The percent of unstaged was 9.5% in 2002 compared to 11.7% the previous year.

See Appendix J, Table 4.



**Healthy People Objectives**

The Healthy People 2010 objective for breast cancer is to increase to 70% the proportion of women age 40 years and older who received a mammogram within the preceding 2 years.

\* Women age 40 years and older  
 BRFSS, Maryland DHMH Center for Preventive Health Services, 1998, 1999, 2000  
 Maryland Cancer Survey, Maryland DHMH Center for Cancer Surveillance and Control, 2002, 2004  
 Healthy People 2010, U.S. Department of Health and Human Services, 2000

In the 2004 Maryland Cancer Survey, 83.3% of Maryland women age 40 years and older reported receiving a mammogram within the preceding 2 years, exceeding the Healthy People 2010 goal of 70%.

**Public Health Evidence (quoted from NCI, PDQ, 08/02/2006, 5/23/2006, STAR Trial 4/24/2006, and the USPSTF, 2/2002 and 7/2002)**

**Screening**

The United States Preventive Services Task Force (USPSTF) recommends screening mammography, with or without clinical breast exam (CBE), every 1-2 years for women aged 40 and older. The USPSTF found fair evidence that mammography screening every 12-33 months significantly reduces mortality from breast cancer. Evidence is strongest for women age 50-69, the age group generally included in screening trials. For women ages 40-49, the evidence that screening mammography reduces mortality from breast cancer is weaker, and the absolute benefit of mammography is smaller than it is for older women. The precise age at which the benefits from screening mammography justify the potential harms is a subjective choice. The USPSTF did not find sufficient evidence to specify the optimal screening interval for women age 40-49. Clinicians should inform women about the potential benefits (e.g., reduced chance of dying from breast cancer), potential harms (e.g., false positive results, unnecessary biopsies), and limitations of the test that apply to women their age.

**Chemoprevention**

The USPSTF recommends against the routine use of tamoxifen or raloxifene for the primary prevention of breast cancer in women at low or average risk for breast cancer. The USPSTF recommends that clinicians discuss chemoprevention with women at high risk for breast cancer and at low risk for adverse effects of chemoprevention. Clinicians should inform patients of the potential benefits and harms of chemoprevention. Women who are concerned that they may be at increased risk of developing breast cancer should talk with their doctor about whether to take tamoxifen or raloxifene as a preventive measure. Initial results of the Study of Tamoxifen and Raloxifene, or STAR, show that the drug raloxifene, currently used to prevent and treat osteoporosis in postmenopausal women, works as well as tamoxifen in reducing breast cancer risk for postmenopausal women at increased risk of the disease. In STAR, both drugs reduced the risk of developing invasive breast cancer by about 50 percent. In addition, within the study, women who were prospectively and randomly assigned to take raloxifene daily, and who were followed for an average of about four years, had 36 percent fewer uterine cancers and 29 percent fewer blood clots than the women who were assigned to take tamoxifen. Aromatase inhibitors or inactivators reduce the incidence of new breast cancers in postmenopausal women who have a history of breast cancer.

**Primary Prevention**

Obesity is associated with increased breast cancer risk in postmenopausal women who have not used hormone replacement therapy (HRT), also called hormone therapy (HT). Exposure to alcohol is associated with increased breast cancer risk in a dose dependent fashion. Strenuous exercising more than 4 hours per week is associated with reduced breast cancer risk. Based on solid evidence, combination HRT (estrogen-progestin)/HT is associated with increased risk of developing breast cancer.

The USPSTF recommends against the routine use of estrogen and progestin for the prevention of chronic conditions in postmenopausal women.

**Public Health Intervention for Breast Cancer (USPSTF and DHMH Breast Cancer Medical Advisory Committee, 2004)**

Early detection of breast cancer:

- Screen using mammography and a clinical breast examination by a health professional every 1-2 years for women age 40 years and older.

**Table 30.**  
**Number of Female Breast Cancer Cases**  
**by Jurisdiction and Race, Maryland, 2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	3,574	2,680	790	104
Allegany	60	s	<6	0
Anne Arundel	344	307	31	6
Baltimore City	448	s	264	<6
Baltimore County	684	564	113	7
Calvert	50	38	s	<6
Caroline	20	s	<6	0
Carroll	109	106	<6	<6
Cecil	39	39	0	0
Charles	56	48	8	0
Dorchester	25	21	<6	<6
Frederick	118	108	s	<6
Garrett	19	19	0	0
Harford	148	s	<6	0
Howard	171	148	17	6
Kent	13	s	<6	0
Montgomery	575	461	58	56
Prince George's	387	143	229	15
Queen Anne's	30	s	<6	0
Saint Mary's	34	28	6	0
Somerset	20	11	9	0
Talbot	33	30	<6	<6
Washington	98	94	<6	<6
Wicomico	61	48	s	<6
Worcester	31	s	<6	0
Unknown	<6	0	<6	0

s=Number was suppressed to ensure confidentiality of cell in other column

Cells with 5 or fewer non-zero cases are not presented per DHMH/MCR Data Use Policy

Source: Maryland Cancer Registry, 2002

**Table 31.**  
**Female Breast Cancer Age-Adjusted Incidence Rates\***  
**by Jurisdiction and Race, Maryland, 2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	120.1	125.9	108.7	77.7
Allegany	117.6	116.4	**	0.0
Anne Arundel	131.9	135.3	118.3	**
Baltimore City	122.4	132.4	115.9	**
Baltimore County	145.7	145.5	169.0	**
Calvert	125.8	111.5	**	**
Caroline	**	**	**	0.0
Carroll	130.7	131.2	**	**
Cecil	84.4	87.9	0.0	0.0
Charles	93.1	109.3	**	0.0
Dorchester	**	**	**	**
Frederick	112.2	110.5	**	**
Garrett	**	**	0.0	0.0
Harford	124.3	133.9	**	0.0
Howard	136.0	149.1	**	**
Kent	**	**	**	0.0
Montgomery	112.0	118.5	91.3	86.0
Prince George's	94.0	102.6	94.4	**
Queen Anne's	119.4	121.0	**	0.0
Saint Mary's	83.5	81.2	**	0.0
Somerset	**	**	**	0.0
Talbot	129.7	136.6	**	**
Washington	127.8	126.7	**	**
Wicomico	124.0	124.7	**	**
Worcester	83.3	91.8	**	0.0

\* Rates are per 100,000 and are age-adjusted to 2000 U.S. standard population

\*\* Rates based on cells with 25 or fewer non-zero cases are not presented per DHMH/MCR Data Use Policy

Source: Maryland Cancer Registry, 2002

**Table 32.**  
**Number of Female Breast Cancer Deaths**  
**by Jurisdiction and Race, Maryland, 2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	879	606	257	16
Allegany	10	10	0	0
Anne Arundel	76	63	12	1
Baltimore City	142	52	89	1
Baltimore County	144	111	31	2
Calvert	11	10	<6	0
Caroline	9	8	<6	0
Carroll	25	23	2	0
Cecil	14	13	<6	0
Charles	14	10	3	1
Dorchester	8	<6	<6	0
Frederick	25	22	3	0
Garrett	6	6	0	0
Harford	23	20	3	0
Howard	33	27	4	2
Kent	<6	<6	0	0
Montgomery	120	100	16	4
Prince George's	137	56	77	4
Queen Anne's	6	<6	<6	0
Saint Mary's	<6	<6	<6	0
Somerset	<6	<6	<6	0
Talbot	15	13	<6	0
Washington	26	26	0	0
Wicomico	15	11	<6	<6
Worcester	8	7	<6	0

Cells with 5 or fewer non-zero cases where county population is less than 100,000  
are not presented per CDC WONDER Data Use Restrictions

Source: CDC WONDER, 2002

**Table 33.**  
**Female Breast Cancer Age-Adjusted Mortality Rates\***  
**by Jurisdiction and Race, Maryland, 2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	29.2	27.3	36.1	12.6
Allegany	19.9	20.3	0.0	0.0
Anne Arundel	29.7	28.4	41.0	11.5
Baltimore City	37.6	34.0	39.4	18.0
Baltimore County	28.7	25.3	45.4	20.1
Calvert	27.6	29.4	**	0.0
Caroline	50.8	52.6	**	0.0
Carroll	29.6	28.1	121.7	0.0
Cecil	30.6	29.4	**	0.0
Charles	25.2	25.2	20.3	40.5
Dorchester	38.0	**	**	0.0
Frederick	24.0	22.9	44.5	0.0
Garrett	32.4	32.5	0.0	0.0
Harford	19.9	18.9	31.8	0.0
Howard	29.2	30.4	21.3	20.6
Kent	**	**	0.0	0.0
Montgomery	23.0	24.1	30.5	7.2
Prince George's	34.3	38.4	31.0	19.2
Queen Anne's	24.1	**	**	0.0
Saint Mary's	**	**	**	0.0
Somerset	**	**	**	0.0
Talbot	53.5	54.3	**	0.0
Washington	32.8	34.0	0.0	0.0
Wicomico	29.6	27.6	**	**
Worcester	20.8	21.0	**	0.0

\* Rates are per 100,000 and age-adjusted to 2000 U.S. standard population

\*\* Rates based on cells with 5 or fewer non-zero cases where county population is less than 100,000 are not presented per CDC WONDER Data Use Restrictions

Source: CDC WONDER, 2002

**Table 34.**  
**Number of Female Breast Cancer Cases**  
**by Jurisdiction and Race, Maryland, 1998-2002**

Jurisdiction	Total	Race			
		Whites	Blacks	Other	Unknown
Maryland	18,336	13,618	3,967	580	171
Allegany	302	296	<6	<6	0
Anne Arundel	1,677	1,468	167	29	13
Baltimore City	2,315	1,002	1,274	26	13
Baltimore County	3,194	2,707	423	41	23
Calvert	228	187	32	s	<6
Caroline	105	93	s	<6	0
Carroll	502	481	8	<6	s
Cecil	224	215	<6	<6	0
Charles	327	241	71	s	<6
Dorchester	139	109	s	<6	<6
Frederick	646	593	43	<6	<6
Garrett	104	104	0	0	0
Harford	710	652	51	<6	<6
Howard	768	618	106	s	<6
Kent	72	60	12	0	0
Montgomery	3,131	2,479	324	287	41
Prince George's	2,211	870	1,218	89	34
Queen Anne's	135	117	s	0	<6
Saint Mary's	210	179	25	6	0
Somerset	85	54	s	<6	0
Talbot	188	167	s	<6	0
Washington	498	483	8	7	0
Wicomico	330	257	65	<6	<6
Worcester	198	167	24	<6	<6
Unknown	37	19	<6	<6	11

s=Number was suppressed to ensure confidentiality of cell in other column

Cells with 5 or fewer non-zero cases are not presented per DHMH/MCR Data Use Policy

Source: Maryland Cancer Registry, 1998-2002

**Table 35.**  
**Female Breast Cancer Age-Adjusted Incidence Rates\***  
**by Jurisdiction and Race, Maryland, 1998-2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	128.2	132.0	114.2	101.6
Allegany	120.0	118.8	**	**
Anne Arundel	134.5	135.6	123.0	87.0
Baltimore City	124.3	140.5	112.9	101.6
Baltimore County	139.3	141.4	135.2	71.2
Calvert	125.4	121.3	129.1	**
Caroline	124.6	131.0	**	**
Carroll	126.2	124.7	**	**
Cecil	103.6	103.8	**	**
Charles	115.8	113.7	113.4	**
Dorchester	137.2	140.7	120.0	**
Frederick	132.7	130.9	165.9	**
Garrett	114.0	114.6	0.0	0.0
Harford	125.6	126.9	116.0	**
Howard	128.9	132.3	126.7	84.2
Kent	112.8	116.1	**	0.0
Montgomery	129.3	133.2	106.1	104.4
Prince George's	115.5	123.9	107.9	99.2
Queen Anne's	116.3	113.4	**	0.0
Saint Mary's	107.6	108.9	**	**
Somerset	126.4	110.0	165.9	**
Talbot	148.9	152.3	**	**
Washington	132.1	132.1	**	**
Wicomico	138.7	136.6	136.9	**
Worcester	120.4	118.6	**	**

\* Rates are per 100,000 and are age-adjusted to 2000 U.S. standard population

\*\* Rates based on cells with 25 or fewer non-zero cases are not presented per DHMH/MCR Data Use Policy

Source: Maryland Cancer Registry, 1998-2002

**Table 36.**  
**Number of Female Breast Cancer Deaths**  
**by Jurisdiction and Race, Maryland, 1999-2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	3,284	2,311	923	50
Allegany	51	51	0	0
Anne Arundel	301	250	48	3
Baltimore City	553	221	330	2
Baltimore County	572	479	85	8
Calvert	32	29	3	0
Caroline	27	24	3	0
Carroll	78	72	6	0
Cecil	47	46	1	0
Charles	70	48	21	1
Dorchester	20	15	5	0
Frederick	94	84	9	1
Garrett	21	21	0	0
Harford	96	89	6	1
Howard	104	86	13	5
Kent	11	9	2	0
Montgomery	449	359	72	18
Prince George's	443	159	275	9
Queen Anne's	25	23	2	0
Saint Mary's	28	22	6	0
Somerset	12	9	3	0
Talbot	35	29	6	0
Washington	98	97	1	0
Wicomico	79	56	21	2
Worcester	38	33	5	0

Source: CDC WONDER, 1999-2002

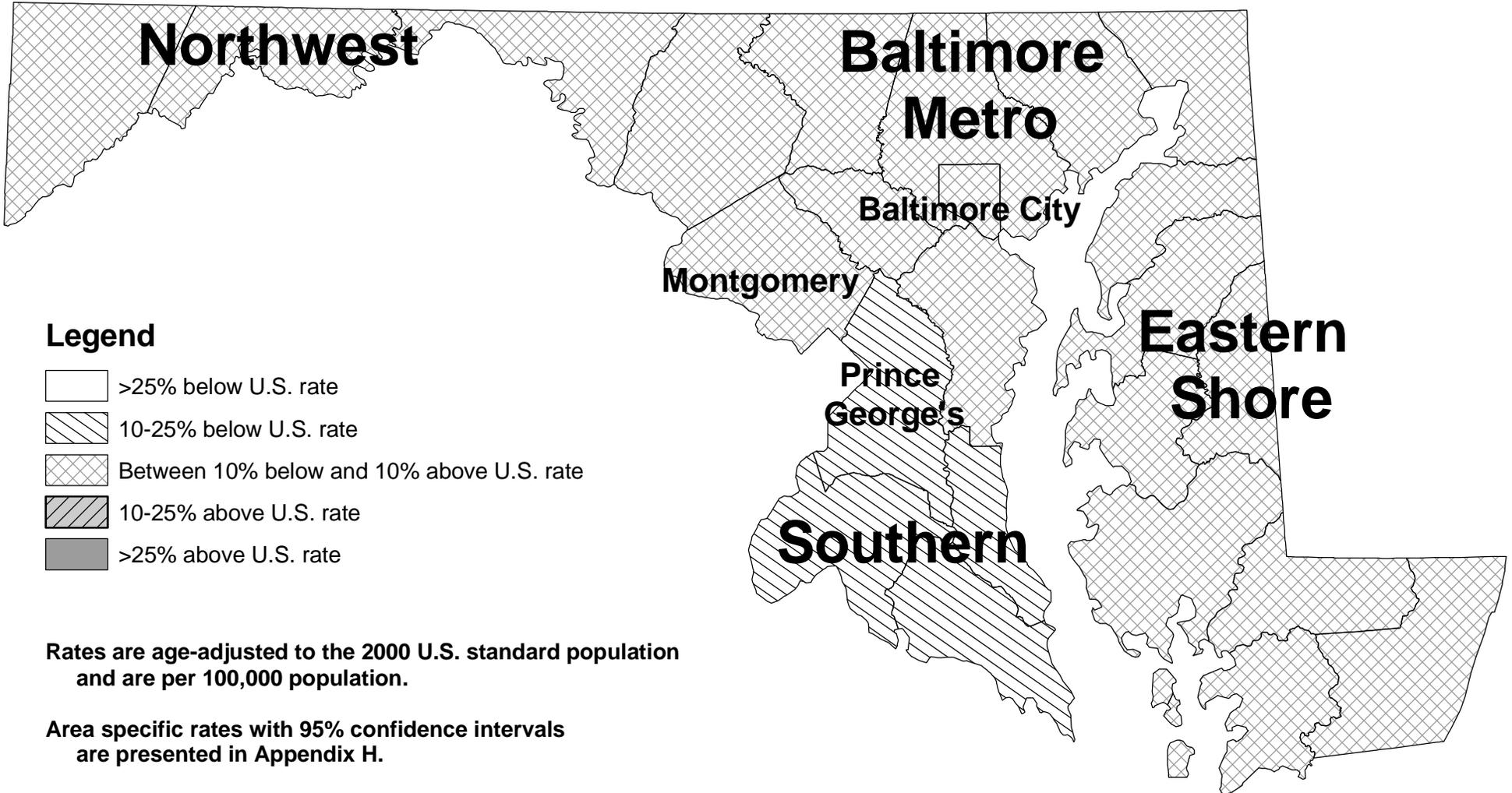
**Table 37.**  
**Female Breast Cancer Age-Adjusted Mortality Rates\***  
**by Jurisdiction and Race, Maryland, 1999-2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	28.2	26.7	34.4	11.2
Allegany	22.4	22.8	0.0	0.0
Anne Arundel	30.6	29.3	43.8	9.1
Baltimore City	36.1	35.2	36.7	9.3
Baltimore County	29.0	28.2	37.0	20.6
Calvert	21.9	23.4	15.1	0.0
Caroline	37.7	39.3	28.3	0.0
Carroll	24.1	22.9	86.8	0.0
Cecil	27.9	28.3	22.5	0.0
Charles	33.1	29.9	48.7	11.0
Dorchester	22.6	21.8	27.4	0.0
Frederick	24.5	23.4	47.9	33.2
Garrett	26.9	27.0	0.0	0.0
Harford	21.6	22.0	17.4	9.8
Howard	24.0	25.3	20.0	11.9
Kent	17.2	15.6	23.3	0.0
Montgomery	22.6	22.6	33.9	9.5
Prince George's	29.7	27.3	31.7	10.8
Queen Anne's	27.4	28.5	22.8	0.0
Saint Mary's	18.1	17.1	28.8	0.0
Somerset	21.6	19.4	23.6	0.0
Talbot	32.7	30.9	45.9	0.0
Washington	31.3	31.9	9.7	0.0
Wicomico	40.0	35.6	54.3	45.5
Worcester	25.2	25.5	25.4	0.0

\* Rates are per 100,000 and are age-adjusted to 2000 U.S. standard population

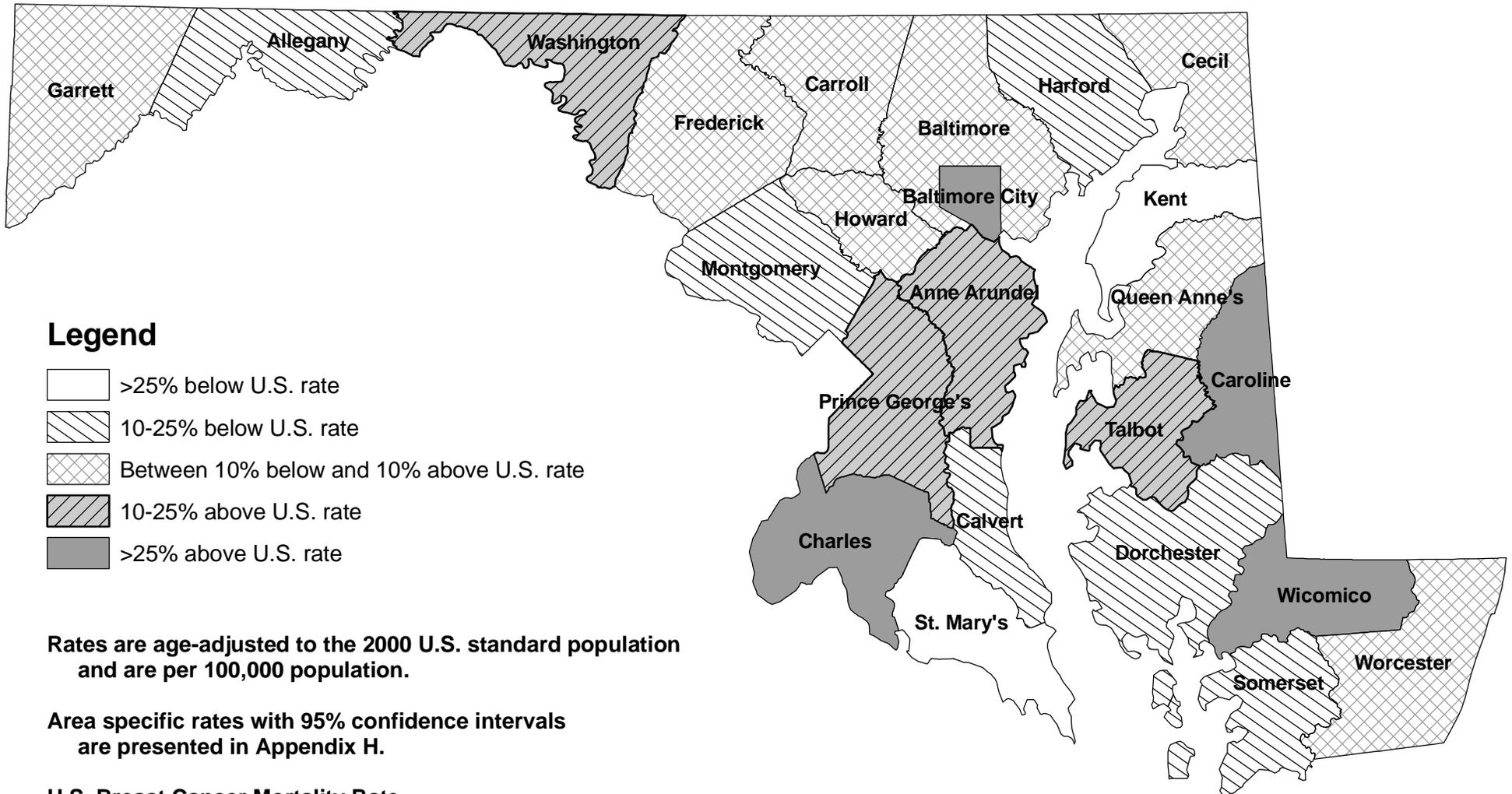
Source: CDC WONDER, 1999-2002

## Maryland Breast Cancer Incidence Rates (1998-2002) by Geographical Area: Comparison to U.S. Rate (1998-2002)



Source: Maryland Cancer Registry, 1998-2002

# Maryland Breast Cancer Mortality Rates (1999-2002) by Geographical Area: Comparison to U.S. Rate (1998-2002)



Source: CDC WONDER, 1999-2002

