C. Female Breast Cancer

Incidence (New Cases)

Breast cancer is the most common reportable cancer among women. A total of 3,551 women in Maryland were diagnosed with breast cancer in 2001. Female breast cancers represent 15.4% of all cancers in 2001. The 2001 age-adjusted incidence rate in Maryland is 121.6 per 100,000 women (117.6-125.7, 95% C.I.); this is statistically significantly less than the 2001 U.S. SEER age-adjusted incidence rate for breast cancer of 134.8 per 100,000 women.

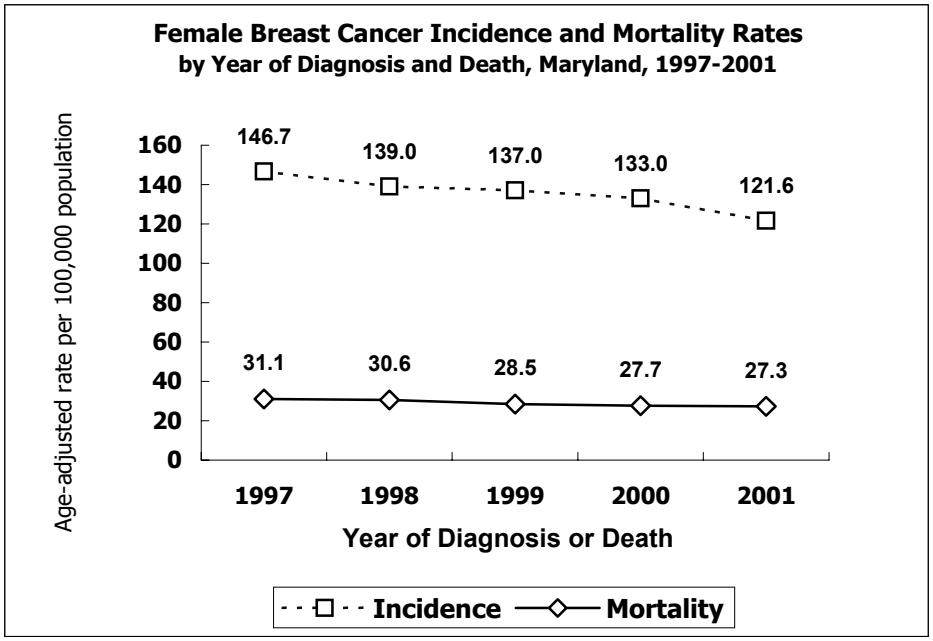
Mortality (Deaths)

In 2001, a total of 801 women died of breast cancer in Maryland. Female breast cancer accounts for 7.9% of all cancer deaths in Maryland. Breast cancer is the second leading cause of cancer death among women after lung cancer in Maryland. The age-adjusted mortality rate in Maryland is 27.3 per 100,000 women (25.4-29.2, 95% C.I.). This rate is equivalent to the 2001 U.S. mortality rate for breast cancer of 25.9 per 100,000 population of women. Maryland women rank 8th highest for female breast cancer mortality among the states and the District of Columbia for the period 1997-2001.

Table 29.
Female Breast Incidence and Mortality Rates
by Race, Maryland and the United States, 2001

Incidence 2001	*Total*	*Whites*	*Blacks*	*Other*
New Cases (#)	3,551	2,581	787	133
Incidence Rate*	121.6	123.4	109.4	110.0
U.S. SEER Rate*	134.8	140.8	110.1	NA
Mortality 2001	*Total*	*Whites*	*Blacks*	*Other*
MD Deaths (#)	801	566	221	14
MD Mortality Rate*	27.3	25.9	32.0	**
U.S. Mortality Rate*	25.9	25.4	34.5	NA

* 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
NA: Data were not available
Source: Maryland Cancer Registry, 2001
Maryland Division of Health Statistics, 2001
SEER, National Cancer Institute, 2001

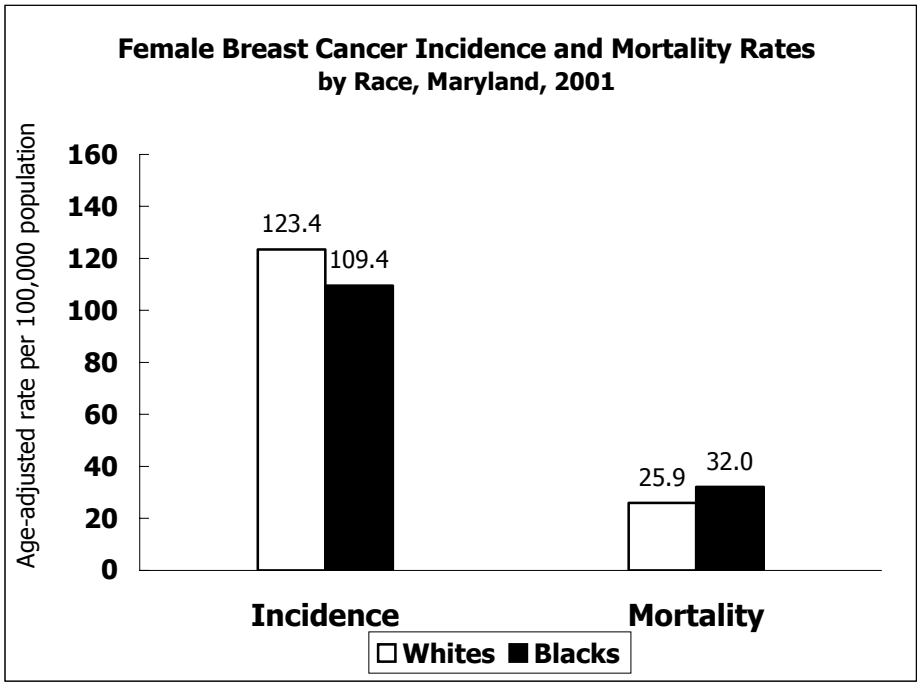


Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1997-2001
Maryland Division of Health Statistics, 1997-2001

Trends

From 1997 to 2001, there has been a decrease of 4.1% annually in breast cancer incidence among Maryland women.

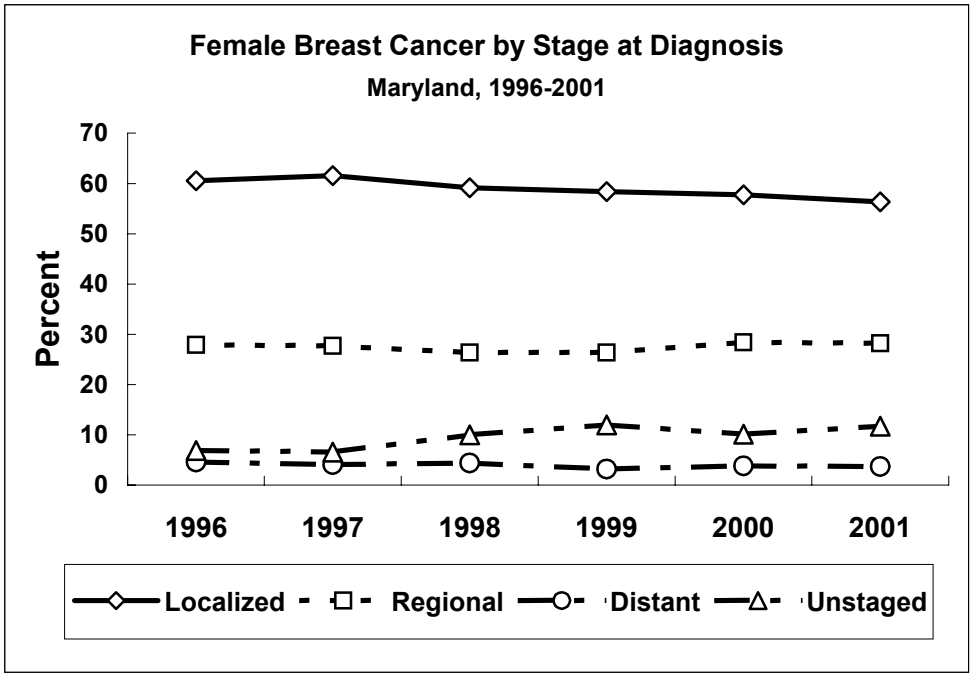
Similarly, breast cancer mortality has been decreasing an average of 3.5% per year between 1997 and 2001.



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

Race-Specific Rates

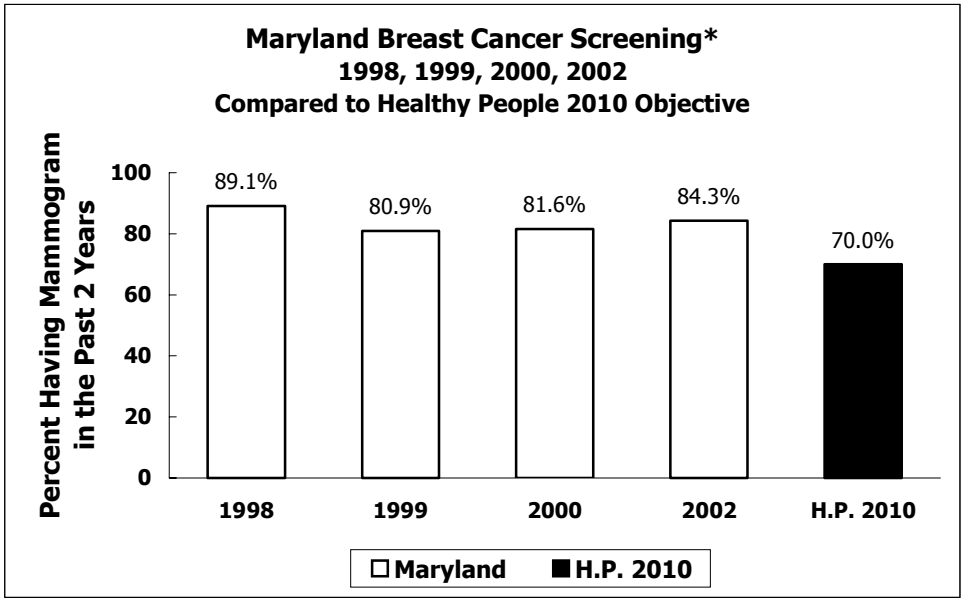
White women had a statistically significantly higher incidence of breast cancer. However, black women had a higher breast cancer mortality rate than white women (although the rate is not statistically significantly higher in 2001).



Maryland Cancer Registry, 1996-2001

Stage of Disease at Diagnosis

In 2001, 56.4% of female breast cancer cases were diagnosed at the localized (early) stage, compared to 60.6% diagnosed at the localized stage in 1996. The percent of unstaged cases has increased.



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

Healthy People Objectives

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

In the 2002 Maryland Cancer Survey, 84.3% of Maryland women 40 years and older reported receiving a mammogram within the previous 2 years, exceeding the Healthy People 2010 goal of 70%. In fact, Maryland women exceeded Healthy People 2010 for mammograms in 1998, 1999, 2000, and 2002.

Public Health Evidence (quoted from NCI, PDQ, 7/13/2004, 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 aged 50-69, the age group generally included in screening trials. For women aged 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 aged 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 raloxifen as a preventive measure. A clinical trial (STAR) comparing the efficacy of tamoxifen and raloxifene for reducing the risk of breast cancer among high-risk post-menopausal women is currently underway.

Primary Prevention

Obesity is associated with increased breast cancer risk in post-menopausal women who have not used hormone replacement therapy (HRT), also called hormone therapy (HT). Exposure to alcohol may be associated with increased breast cancer risk. Studies suggest that exercise may be associated with reduced risk of breast cancer. Based on good 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)
Early detection of breast cancer: ➢ Screen using mammography and a clinical breast examination by a health professional every 1-2 years for women aged 40 and older.

Table 30.
Number of Female Breast Cancer Cases by Jurisdiction and Race, Maryland, 2001

Jurisdiction	Total	Race			
		Whites	Blacks	Other	Unknown
Maryland	3,551	2,581	787	133	50
Allegany	47	s	<6	0	0
Anne Arundel	308	263	32	s	<6
Baltimore City	485	210	262	s	<6
Baltimore County	602	511	77	<6	s
Calvert	53	44	s	<6	0
Caroline	21	s	<6	0	0
Carroll	112	106	<6	<6	<6
Cecil	45	s	0	<6	0
Charles	65	47	14	<6	<6
Dorchester	33	26	7	0	0
Frederick	116	102	s	<6	0
Garrett	24	24	0	0	0
Harford	160	139	18	<6	<6
Howard	135	109	20	<6	<6
Kent	11	s	<6	0	0
Montgomery	569	426	61	71	11
Prince George's	405	142	229	19	15
Queen Anne's	30	s	<6	0	<6
Saint Mary's	41	34	<6	<6	0
Somerset	19	9	s	<6	0
Talbot	47	s	<6	0	0
Washington	109	106	<6	<6	0
Wicomico	70	55	s	<6	<6
Worcester	42	38	<6	<6	0
Unknown	<6	<6	0	0	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, 2001

Table 31.
Female Breast Cancer Age-Adjusted Incidence Rates*
by Jurisdiction and Race, Maryland, 2001

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	121.6	123.4	109.4	110.0
Allegany	98.1	94.4	**	0.0
Anne Arundel	120.1	118.2	111.1	**
Baltimore City	129.7	150.8	114.6	**
Baltimore County	130.1	132.9	111.8	**
Calvert	136.0	133.0	**	**
Caroline	**	**	**	0.0
Carroll	137.6	134.0	**	**
Cecil	100.8	102.8	0.0	**
Charles	111.0	107.1	**	**
Dorchester	163.4	164.6	**	0.0
Frederick	115.1	108.5	**	**
Garrett	**	**	0.0	0.0
Harford	136.3	130.9	**	**
Howard	106.4	109.8	**	**
Kent	**	**	**	0.0
Montgomery	113.6	111.4	94.7	120.0
Prince George's	101.7	103.9	96.1	**
Queen Anne's	125.4	130.6	**	0.0
Saint Mary's	103.2	101.8	**	**
Somerset	**	**	**	**
Talbot	175.3	185.2	**	0.0
Washington	144.6	145.2	**	**
Wicomico	146.0	145.8	**	**
Worcester	125.5	133.4	**	**

* 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, 2001

Table 32.
Number of Female Breast Cancer Deaths by Jurisdiction and Race, Maryland, 2001

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	801	566	221	14
Allegany	16	16	0	0
Anne Arundel	66	56	10	0
Baltimore City	139	s	83	<6
Baltimore County	148	126	s	<6
Calvert	13	s	<6	0
Caroline	6	6	0	0
Carroll	24	s	<6	0
Cecil	11	11	0	0
Charles	27	19	8	0
Dorchester	<6	<6	<6	0
Frederick	16	s	<6	0
Garrett	6	6	0	0
Harford	22	s	<6	<6
Howard	22	s	<6	0
Kent	<6	<6	0	0
Montgomery	113	88	18	7
Prince George's	95	s	66	<6
Queen Anne's	7	s	<6	0
Saint Mary's	<6	<6	0	0
Somerset	<6	<6	0	0
Talbot	<6	<6	0	0
Washington	20	20	0	0
Wicomico	20	s	<6	0
Worcester	11	s	<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 Division of Health Statistics, 2001

Table 33.
Female Breast Cancer Age-Adjusted Mortality Rates*
by Jurisdiction and Race, Maryland, 2001

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	27.3	25.9	32.0	**
Allegany	**	**	0.0	0.0
Anne Arundel	26.8	26.2	**	0.0
Baltimore City	36.6	35.9	36.6	**
Baltimore County	30.1	30.1	**	**
Calvert	**	**	**	0.0
Caroline	**	**	0.0	0.0
Carroll	**	**	**	0.0
Cecil	**	**	0.0	0.0
Charles	52.8	**	**	0.0
Dorchester	**	**	**	0.0
Frederick	**	**	**	0.0
Garrett	**	**	0.0	0.0
Harford	**	**	**	**
Howard	**	**	**	0.0
Kent	**	**	0.0	0.0
Montgomery	22.2	21.9	**	**
Prince George's	24.8	19.3	29.1	**
Queen Anne's	**	**	**	0.0
Saint Mary's	**	**	0.0	0.0
Somerset	**	**	0.0	0.0
Talbot	**	**	0.0	0.0
Washington	**	**	0.0	0.0
Wicomico	**	**	**	0.0
Worcester	**	**	**	0.0

* Rates are per 100,000 and 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 Division of Health Statistics, 2001

Table 34.
Number of Female Breast Cancer Cases by Jurisdiction and Race, Maryland, 1997-2001

Jurisdiction	Total	Race			
		Whites	Blacks	Others	Unknown
Maryland	18,628	13,876	3,952	573	227
Allegany	302	296	<6	<6	0
Anne Arundel	1,730	1,500	184	28	18
Baltimore City	2,376	1,096	1,240	26	14
Baltimore County	3,156	2,683	400	43	30
Calvert	232	194	31	<6	<6
Caroline	113	100	s	<6	0
Carroll	527	506	8	<6	s
Cecil	236	227	<6	<6	0
Charles	327	237	72	s	<6
Dorchester	147	113	s	0	<6
Frederick	646	593	42	<6	s
Garrett	108	105	0	<6	<6
Harford	670	611	52	<6	<6
Howard	739	589	110	34	6
Kent	77	62	15	0	0
Montgomery	3,252	2,571	347	268	66
Prince George's	2,266	913	1,215	97	41
Queen Anne's	140	120	s	0	<6
Saint Mary's	222	187	24	11	0
Somerset	87	60	s	<6	0
Talbot	197	174	s	<6	0
Washington	483	471	<6	s	0
Wicomico	337	265	61	s	<6
Worcester	213	180	26	<6	<6
Unknown	45	23	<6	<6	14

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, 1997-2001

Table 35.
Female Breast Cancer Age-Adjusted Incidence Rates*
by Jurisdiction and Race, Maryland, 1997-2001

Jurisdiction	Total	Race		
		Whites	Blacks	Others
Maryland	132.8	136.2	117.2	107.8
Allegany	118.1	117.1	**	**
Anne Arundel	142.3	141.9	140.3	94.6
Baltimore City	126.8	150.2	110.8	102.3
Baltimore County	138.9	140.3	135.5	78.3
Calvert	134.4	133.7	126.5	**
Caroline	136.4	143.8	**	**
Carroll	135.5	133.9	**	**
Cecil	113.1	113.7	**	**
Charles	121.4	116.1	126.5	**
Dorchester	144.1	144.1	142.0	0.0
Frederick	138.3	136.1	173.3	**
Garrett	119.0	116.6	0.0	**
Harford	122.5	122.8	122.7	**
Howard	129.2	131.2	133.9	81.2
Kent	121.3	118.9	**	0.0
Montgomery	137.9	140.7	116.3	106.3
Prince George's	122.3	128.5	113.5	109.4
Queen Anne's	124.5	120.0	**	0.0
Saint Mary's	116.9	117.2	**	**
Somerset	132.9	126.4	**	**
Talbot	155.4	157.7	**	**
Washington	129.1	129.8	**	**
Wicomico	144.4	143.0	130.0	**
Worcester	132.5	130.7	117.9	**

* 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, 1997-2001

Table 36.
Number of Female Breast Cancer Deaths by Jurisdiction and Race, Maryland, 1997-2001

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	4,025	2,877	1,096	52
Allegany	59	59	0	0
Anne Arundel	354	294	s	<6
Baltimore City	702	s	406	<6
Baltimore County	697	609	81	7
Calvert	35	28	7	0
Caroline	24	s	<6	0
Carroll	84	s	<6	0
Cecil	65	s	<6	0
Charles	79	55	24	0
Dorchester	24	s	<6	0
Frederick	110	99	s	<6
Garrett	23	23	0	0
Harford	129	116	s	<6
Howard	130	102	22	6
Kent	13	s	<6	0
Montgomery	599	491	88	20
Prince George's	517	187	321	9
Queen Anne's	27	s	<6	0
Saint Mary's	43	33	10	0
Somerset	19	s	<6	0
Talbot	30	24	6	0
Washington	121	s	<6	0
Wicomico	95	66	s	<6
Worcester	46	40	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 Division of Health Statistics, 1997-2001

Table 37.
Female Breast Cancer Age-Adjusted Mortality Rates*
by Jurisdiction and Race, Maryland, 1997-2001

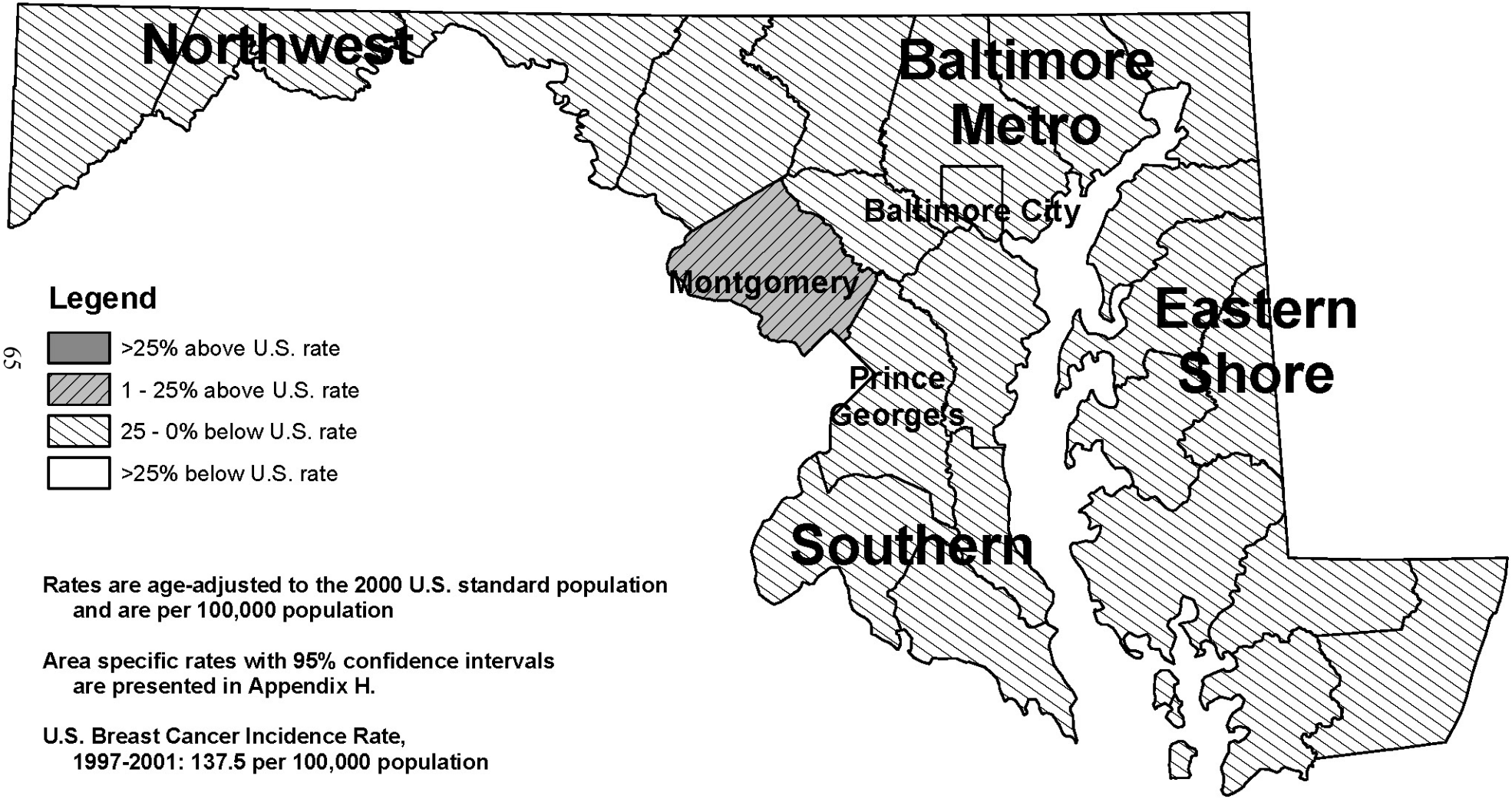
Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	28.5	27.1	34.6	10.2
Allegany	19.5	19.8	0.0	0.0
Anne Arundel	29.9	28.5	42.9	**
Baltimore City	36.1	34.9	36.6	**
Baltimore County	28.8	29.0	33.1	**
Calvert	20.5	19.5	**	0.0
Caroline	**	**	**	0.0
Carroll	21.6	20.9	**	0.0
Cecil	31.8	32.7	**	0.0
Charles	32.5	28.7	**	0.0
Dorchester	**	**	**	0.0
Frederick	24.2	23.2	**	**
Garrett	**	**	0.0	0.0
Harford	24.5	24.2	**	**
Howard	25.3	25.1	**	**
Kent	**	**	**	0.0
Montgomery	25.2	25.7	33.9	**
Prince George's	29.4	25.2	32.7	**
Queen Anne's	24.5	27.2	**	0.0
Saint Mary's	22.9	20.9	**	0.0
Somerset	**	**	**	0.0
Talbot	21.7	**	**	0.0
Washington	30.6	31.2	**	0.0
Wicomico	39.4	33.8	60.1	**
Worcester	25.1	25.6	**	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 Division of Health Statistics, 1997-2001

Maryland Breast Cancer Incidence Rates by Geographical Area: Comparison to U.S. Rates, 1997-2001



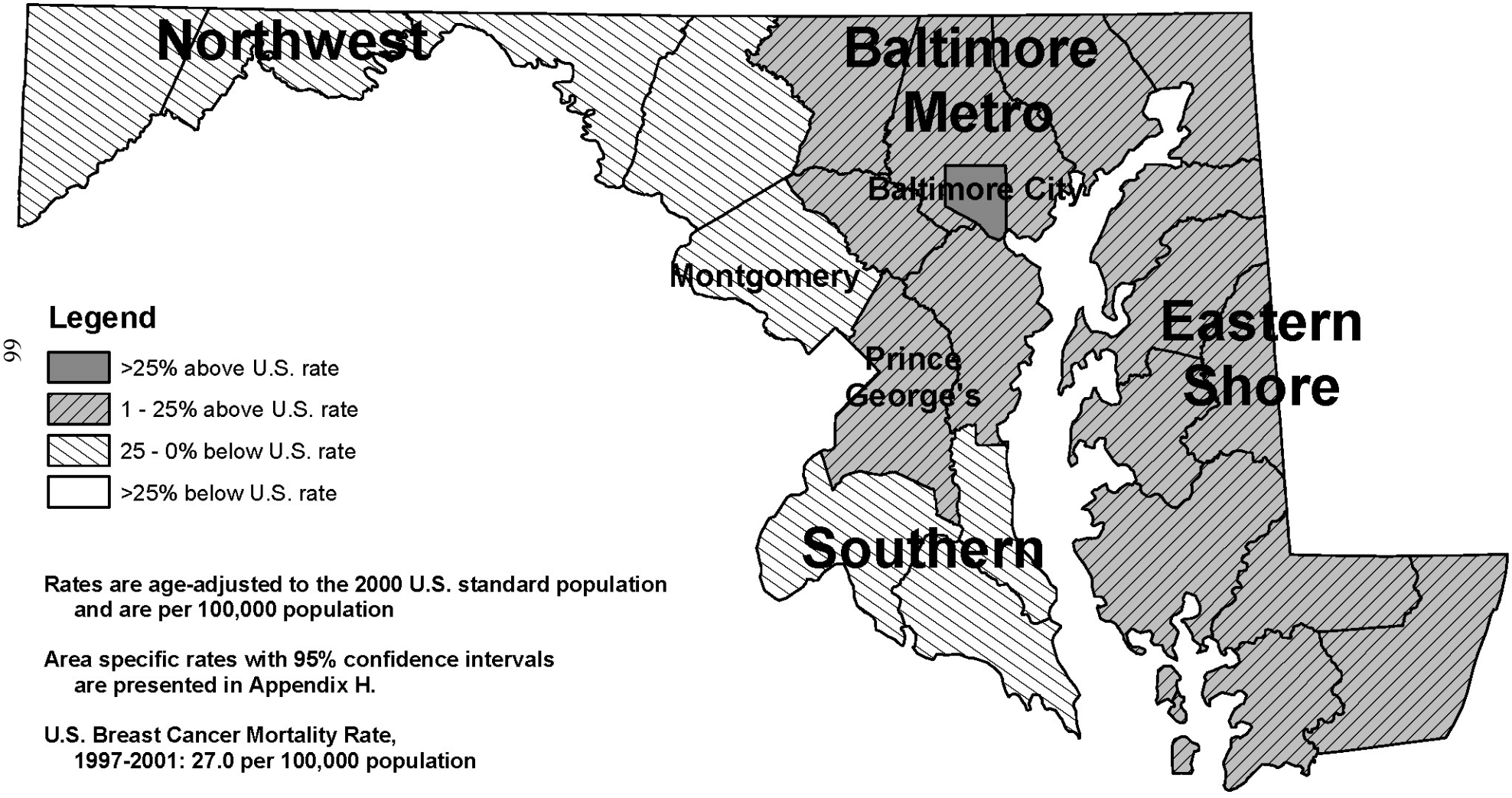
Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 population

Area specific rates with 95% confidence intervals are presented in Appendix H.

U.S. Breast Cancer Incidence Rate, 1997-2001: 137.5 per 100,000 population

Source: Maryland Division of Health Statistics, 1997-2001

Maryland Breast Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rates, 1997-2001



Legend

- >25% above U.S. rate
- 1 - 25% above U.S. rate
- 25 - 0% below U.S. rate
- >25% below U.S. rate

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

Area specific rates with 95% confidence intervals are presented in Appendix H.

U.S. Breast Cancer Mortality Rate, 1997-2001: 27.0 per 100,000 population

Source: Maryland Division of Health Statistics, 1997-2001