

## G. Cervical Cancer

### Incidence (New Cases)

No 2002 data were available for Maryland cervical cancer incidence cases or rates.

### Mortality (Deaths)

In 2002, a total of 73 women died of cervical cancer in Maryland. The age-adjusted cervical cancer mortality rate in Maryland is 2.5 per 100,000 women (1.9-3.1, 95% C.I.). This rate is the same as the 2002 U.S. SEER cervical cancer mortality rate of 2.5 per 100,000 population of women. Maryland women rank 26<sup>th</sup> highest for cervical cancer mortality rate among the states and the District of Columbia for the period 1998-2002.

**Table 65.**  
**Cervical Cancer Incidence and Mortality Rates**  
**by Race, Maryland and the United States, 2002**

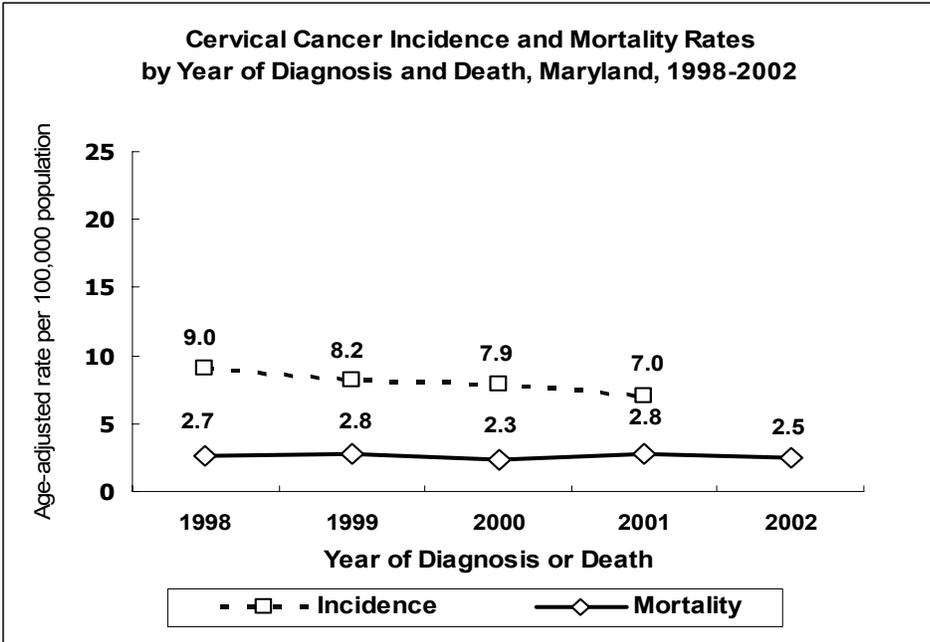
<i>Incidence 2002</i>	<i>Total</i>	<i>Whites</i>	<i>Blacks</i>	<i>Other</i>
New Cases (#)	NA	NA	NA	NA
Incidence Rate*	NA	NA	NA	NA
U.S. SEER Rate*	7.2	6.8	10.3	NA
<i>Mortality 2002</i>	<i>Total</i>	<i>Whites</i>	<i>Blacks</i>	<i>Other</i>
Deaths (#)	73	35	35	3
Mortality Rate*	2.5	1.7	4.8	3.3
U.S. SEER Rate*	2.5	2.3	5.0	NA

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

NA: Data were not available

Source: CDC WONDER, 2002

SEER, National Cancer Institute, 2002



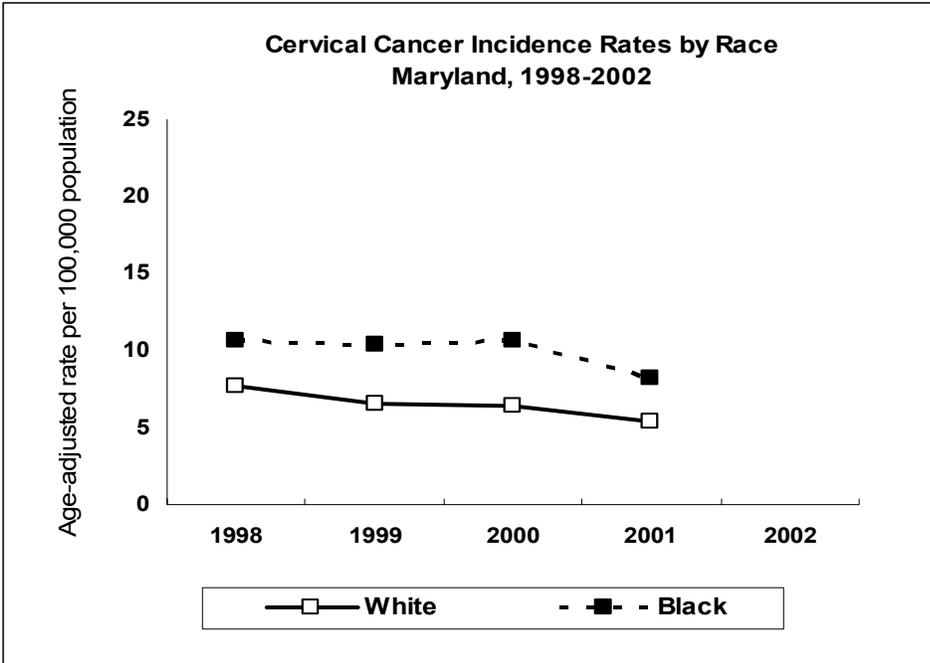
Rates are age-adjusted to 2000 U.S. standard population  
 Maryland Cancer Registry, 1998-2001  
 Maryland Division of Health Statistics, 1998-2001  
 CDC WONDER, 2002

**Incidence and Mortality Trends**

Cervical cancer mortality rates have decreased an average of 1.5% per year from 1998 to 2002.

The 2002 incidence rate was not available.

See Appendix I, Tables 1 and 2.



Rates are age-adjusted to 2000 U.S. standard population  
 Maryland Cancer Registry, 1998-2001

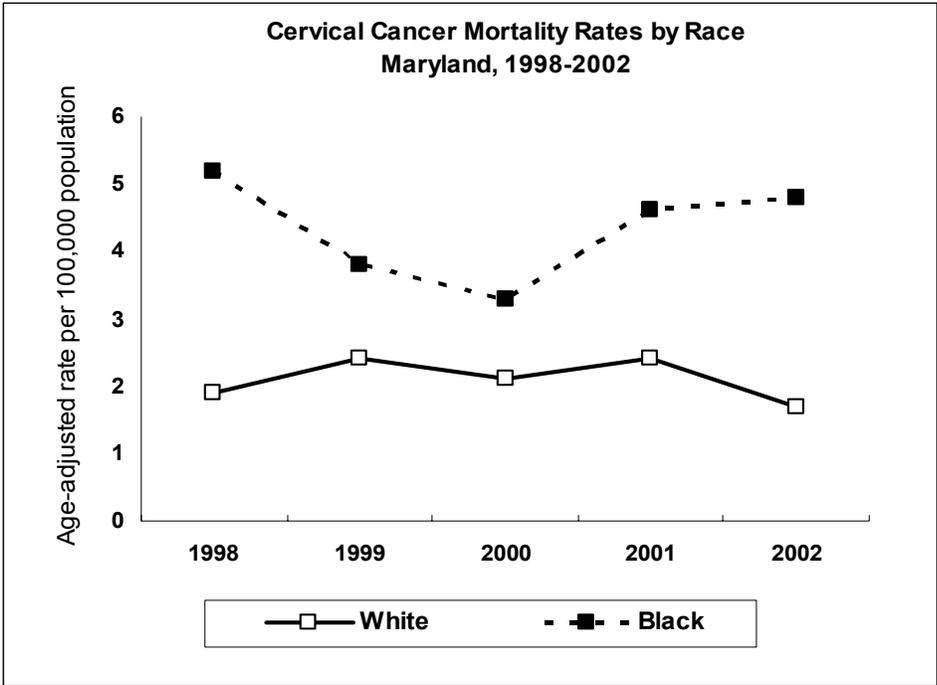
**Race Incidence Trends**

Cervical cancer incidence rates for black women were greater than those for white women, 1998 - 2001.

Between 1998-2001, both races experienced a yearly drop in incidence rates—a 10.2% drop for white women and a 7.5% decline for black women.

No data are available for 2002.

See Appendix I, Table 17.



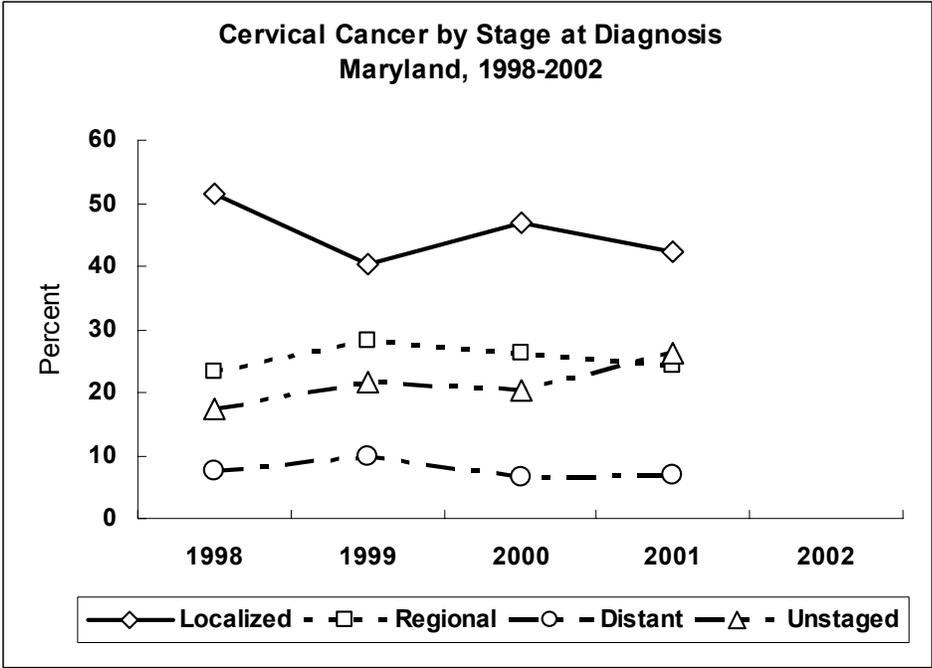
Rates are age-adjusted to 2000 U.S. standard population  
 Maryland Division of Health Statistics, 1998-2001  
 CDC WONDER, 2002

**Race Mortality Trends**

Black women had higher rates of cervical cancer mortality than white women from 1998 to 2002.

The average annual mortality rate for black women increased 0.3% per year, while the rate for white women decreased an average 2.2% per year.

See Appendix I, Table 18.



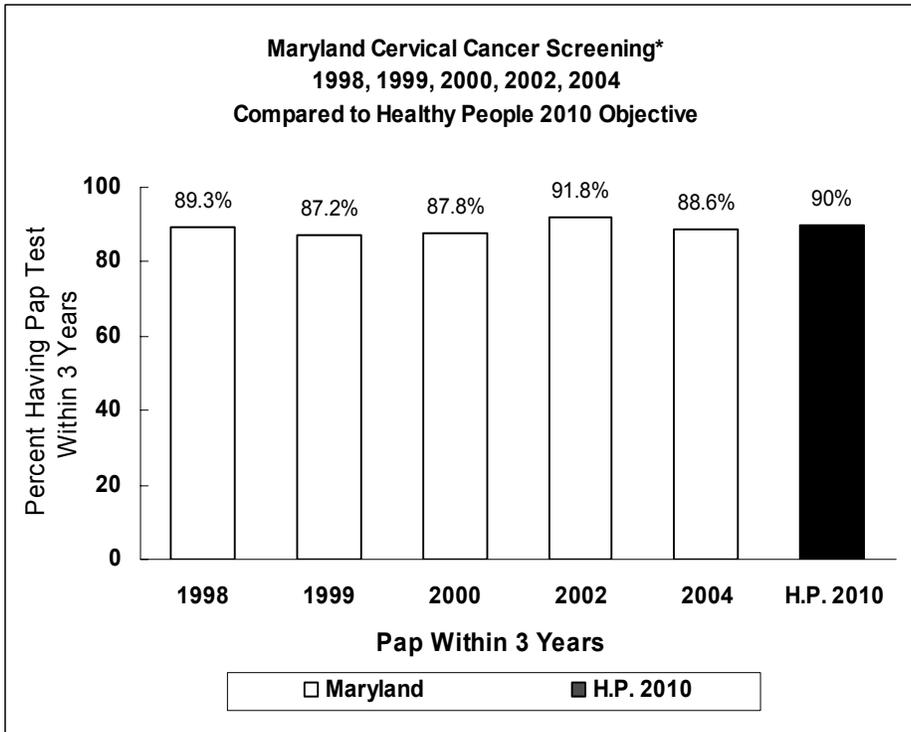
Maryland Cancer Registry, 1998-2001

**Stage at Diagnosis**

From 1998 to 2001, diagnosis at the local stage had an average annual percent decrease of 4.3%. Diagnosis at the regional stage stayed about the same, experiencing only a 0.4% higher percentage. Distant stage dropped 7.3% over the same period, while unstaged went up by 12.7%.

Data for 2002 cervical cancer stage were not available.

See Appendix J, Table 8.



**Healthy People 2010 Objectives**

A Healthy People 2010 objective for cervical cancer is to increase the percentage of women age 18 years and older who have had a Pap test within the preceding 3 years to 90%. In 2004, 88.6% of women 18 years and older reported they had their Pap test within the preceding 3 years.

\* Women 18 years of age and older having Pap test within 3 years  
 BRFSS, Maryland DHMH Center for Preventive Health Services, 1998, 1999, 2000, 2002, 2004  
 Healthy People 2010, U.S. Department of Health and Human Services, 2000

**Public Health Evidence (quoted from NCI, PDQ, 3/23/2006, 7/21/2006, FDA Statement 6/8/2006, and USPSTF, 1/2003)**

**Screening**

Based on solid evidence, regular screening using the Papanicolaou (Pap) test in addition to treatment of precancerous abnormalities decreases the incidence and mortality of cervical cancer. Screening is effective when started within three years after beginning vaginal intercourse. Continued screening in elderly women who have had negative Pap tests is of minimal value. Screening is not helpful in women who do not have a cervix as a result of a hysterectomy for a benign condition.

Newer techniques that employ liquid-based cytology (e.g., ThinPrep) have been developed to improve the sensitivity of screening. As with the Pap test, the optimal studies to determine the sensitivity and specificity of these technologies have not been done. Some less than optimal studies show that sensitivity is modestly higher for detecting any degree of cervical intraepithelial neoplasia, with modestly lower specificity. One careful study, however, showed that conventional Pap testing was slightly more sensitive and specific than liquid-based cytology.

The evidence is also mixed about whether liquid-based techniques improve rates of test adequacy. One advantage of liquid-based cytology is that human papillomavirus (HPV) testing can be done on the same preparation; one disadvantage is that liquid-based approaches are more expensive than conventional Pap testing. No study has examined whether liquid-based cytology actually reduces the number of women dying of cervical cancer compared with conventional Pap testing.

**Primary Prevention**

Epidemiologic studies to evaluate risk factors for the development of squamous intraepithelial lesions (SIL) of the cervix and cervical cancer demonstrate conclusively a sexual mode of transmission of a carcinogen. It is now widely accepted that HPV is the primary causative infectious agent. Based on solid evidence, the following measures are effective to avoid HPV infection and thus cervical cancer: abstinence from sexual activity; barrier protection and/or spermicidal gel during sexual intercourse; and (based on fair evidence) vaccination against HPV-16/HPV-18. Based on solid evidence, cigarette smoking, both active and passive, increases the risk of cervical cancer. On June 8, 2006, the Food and Drug Administration announced the approval of Gardasil, the first vaccine developed to prevent cervical cancer, precancerous genital lesions and genital warts due to HPV types 6, 11, 16, and 18. The vaccine is approved for use in females 9-26 years of age. The Advisory Committee on Immunization Practices (ACIP) recommendations on its use are expected to be published in November 2006.

<b>Public Health Intervention for Cervical Cancer (NCI, PDQ, USPSTF, and ACIP)</b>
<ul style="list-style-type: none"><li>➤ Screen using the Pap test for all women who have a cervix, within three years after onset of sexual activity or by age 21 years if not sexually active.</li><li>➤ Vaccinate girls and women according to ACIP recommendations.</li></ul>

**Table 66.  
Number of Cervical Cancer Cases  
by Jurisdiction and Race, Maryland, 2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland				
Allegany				
Anne Arundel				
Baltimore City				
Baltimore County				
Calvert				
Caroline				
Carroll				
Cecil				
Charles				
Dorchester				
Frederick				
Garrett				
Harford				
Howard				
Kent				
Montgomery				
Prince George's				
Queen Anne's				
Saint Mary's				
Somerset				
Talbot				
Washington				
Wicomico				
Worcester				
Unknown				

**Data not yet available  
See Executive Summary  
(pages 1 & 2).**

**Table 67.  
Cervical Cancer Age-Adjusted Incidence Rates  
by Jurisdiction and Race, Maryland, 2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland				
Allegany				
Anne Arundel				
Baltimore City				
Baltimore County				
Calvert		<p align="center"><b>Data not yet available</b> <b>See Executive Summary</b> <b>(pages 1 &amp; 2).</b></p>		
Caroline				
Carroll				
Cecil				
Charles				
Dorchester				
Frederick				
Garrett				
Harford				
Howard				
Kent				
Montgomery				
Prince George's				
Queen Anne's				
Saint Mary's				
Somerset				
Talbot				
Washington				
Wicomico				
Worcester				

**Table 68.**  
**Number of Cervical Cancer Deaths**  
**by Jurisdiction and Race, Maryland, 2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	73	35	35	3
Allegany	0	0	0	0
Anne Arundel	8	4	4	0
Baltimore City	13	2	11	0
Baltimore County	9	6	3	0
Calvert	0	0	0	0
Caroline	0	0	0	0
Carroll	0	0	0	0
Cecil	<6	<6	0	0
Charles	2	2	0	0
Dorchester	0	0	0	0
Frederick	7	7	0	0
Garrett	<6	<6	0	0
Harford	1	1	0	0
Howard	0	0	0	0
Kent	0	0	0	0
Montgomery	7	2	3	2
Prince George's	17	4	12	1
Queen Anne's	0	0	0	0
Saint Mary's	<6	<6	0	0
Somerset	<6	<6	0	0
Talbot	0	0	0	0
Washington	1	1	0	0
Wicomico	0	0	0	0
Worcester	<6	<6	<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 69.  
Cervical Cancer Age-Adjusted Mortality Rates\*  
by Jurisdiction and Race, Maryland, 2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	2.5	1.7	4.8	3.3
Allegany	0.0	0.0	0.0	0.0
Anne Arundel	3.0	1.9	12.7	0.0
Baltimore City	3.6	1.6	4.9	0.0
Baltimore County	1.9	1.7	5.2	0.0
Calvert	0.0	0.0	0.0	0.0
Caroline	0.0	0.0	0.0	0.0
Carroll	0.0	0.0	0.0	0.0
Cecil	**	**	0.0	0.0
Charles	3.6	4.7	0.0	0.0
Dorchester	0.0	0.0	0.0	0.0
Frederick	6.8	7.3	0.0	0.0
Garrett	**	**	0.0	0.0
Harford	1.0	1.1	0.0	0.0
Howard	0.0	0.0	0.0	0.0
Kent	0.0	0.0	0.0	0.0
Montgomery	1.5	0.5	5.2	3.4
Prince George's	4.4	3.1	5.6	11.3
Queen Anne's	0.0	0.0	0.0	0.0
Saint Mary's	**	**	0.0	0.0
Somerset	**	**	0.0	0.0
Talbot	0.0	0.0	0.0	0.0
Washington	1.3	1.3	0.0	0.0
Wicomico	0.0	0.0	0.0	0.0
Worcester	**	**	**	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 70.  
Number of Cervical Cancer Cases  
by Jurisdiction and Race, Maryland, 1998-2002**

Jurisdiction	Total	Race			
		Whites	Blacks	Other	Unknown
Maryland					
Allegany					
Anne Arundel					
Baltimore City					
Baltimore County		<p align="center"><b>Data not yet available</b> <b>See Executive Summary</b> <b>(pages 1 &amp; 2).</b></p>			
Calvert					
Caroline					
Carroll					
Cecil					
Charles					
Dorchester					
Frederick					
Garrett					
Harford					
Howard					
Kent					
Montgomery					
Prince George's					
Queen Anne's					
Saint Mary's					
Somerset					
Talbot					
Washington					
Wicomico					
Worcester					
Unknown					

**Table 71.  
Cervical Cancer Age-Adjusted Incidence Rates  
by Jurisdiction and Race, Maryland, 1998-2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland				
Allegany				
Anne Arundel				
Baltimore City				
Baltimore County				
Calvert				
Caroline				
Carroll				
Cecil				
Charles				
Dorchester				
Frederick				
Garrett				
Harford				
Howard				
Kent				
Montgomery				
Prince George's				
Queen Anne's				
Saint Mary's				
Somerset				
Talbot				
Washington				
Wicomico				
Worcester				

**Data not yet available  
See Executive Summary  
(pages 1 & 2).**

**Table 72.**  
**Number of Cervical Cancer Deaths**  
**by Jurisdiction and Race, Maryland, 1999-2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	299	176	115	8
Allegany	2	2	0	0
Anne Arundel	20	15	5	0
Baltimore City	72	21	51	0
Baltimore County	38	30	8	0
Calvert	1	0	1	0
Caroline	1	0	1	0
Carroll	6	6	0	0
Cecil	5	5	0	0
Charles	9	6	2	1
Dorchester	5	3	2	0
Frederick	16	16	0	0
Garrett	2	2	0	0
Harford	5	4	1	0
Howard	6	3	3	0
Kent	0	0	0	0
Montgomery	30	19	5	6
Prince George's	47	16	30	1
Queen Anne's	1	1	0	0
Saint Mary's	4	3	1	0
Somerset	2	2	0	0
Talbot	4	2	2	0
Washington	11	11	0	0
Wicomico	6	5	1	0
Worcester	6	4	2	0

Source: CDC WONDER, 1999-2002

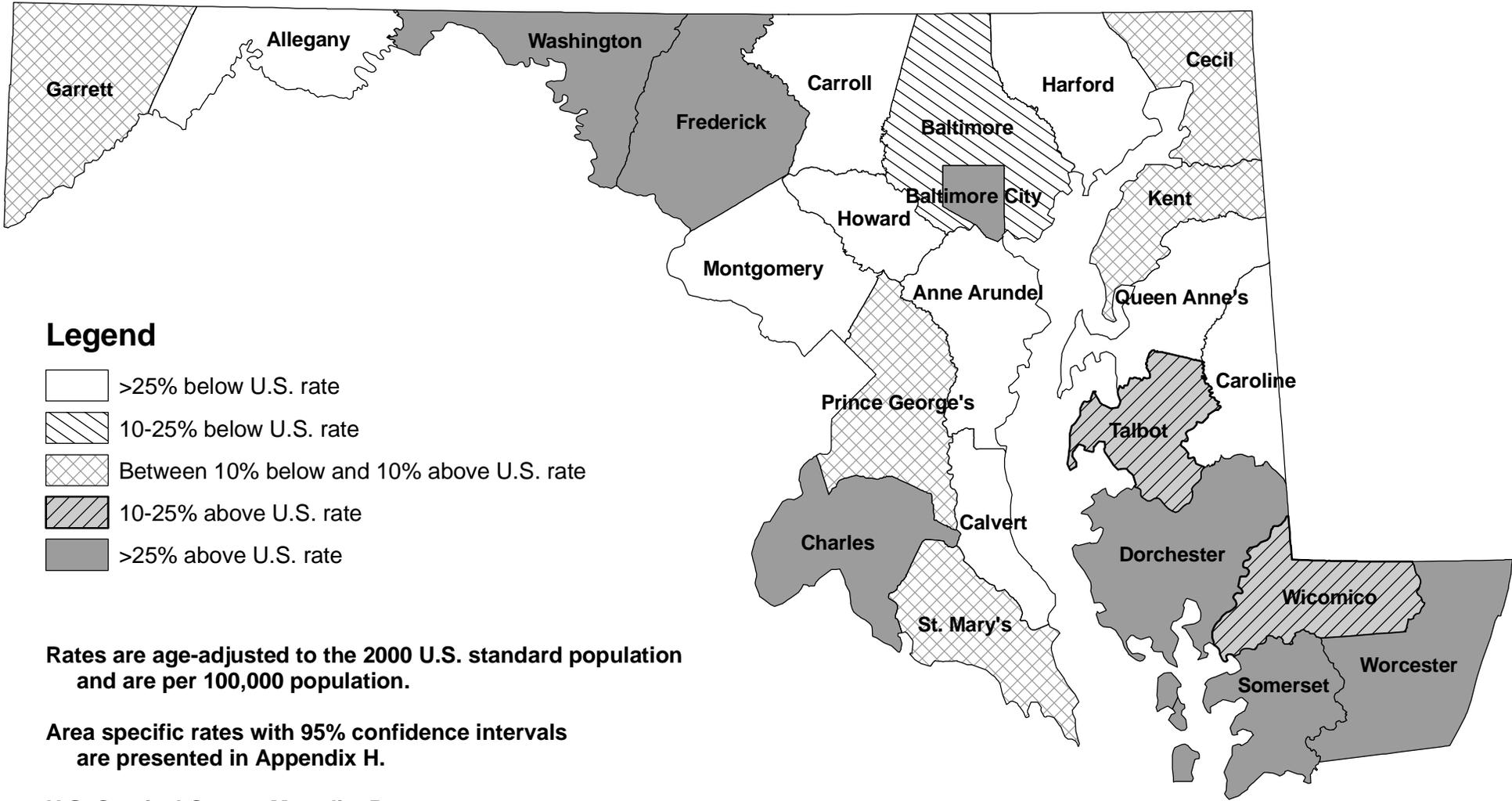
**Table 73.  
Cervical Cancer Age-Adjusted Mortality Rates\*  
by Jurisdiction and Race, Maryland, 1999-2002**

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	2.6	2.1	4.1	2.6
Allegany	1.2	1.3	0.0	0.0
Anne Arundel	2.0	1.7	4.0	0.0
Baltimore City	4.9	3.8	5.7	0.0
Baltimore County	2.1	2.1	3.3	0.0
Calvert	0.5	0.0	4.2	0.0
Caroline	1.1	0.0	9.0	0.0
Carroll	1.8	1.8	0.0	0.0
Cecil	2.8	2.9	0.0	0.0
Charles	4.4	3.9	3.7	38.7
Dorchester	6.9	6.5	9.5	0.0
Frederick	4.2	4.5	0.0	0.0
Garrett	2.9	2.9	0.0	0.0
Harford	1.1	1.0	2.5	0.0
Howard	1.3	0.8	4.6	0.0
Kent	0.0	0.0	0.0	0.0
Montgomery	1.5	1.3	2.0	3.4
Prince George's	3.0	3.0	3.6	3.2
Queen Anne's	1.1	1.2	0.0	0.0
Saint Mary's	2.6	2.2	4.7	0.0
Somerset	4.1	5.7	0.0	0.0
Talbot	3.3	2.0	13.8	0.0
Washington	3.6	3.7	0.0	0.0
Wicomico	3.1	3.2	2.8	0.0
Worcester	4.3	3.6	10.5	0.0

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

Source: CDC WONDER, 1999-2002

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



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. Cervical Cancer Mortality Rate, 1998-2002: 2.8 per 100,000 population

Source: CDC WONDER, 1999-2002