Maryland Department of Health & Mental Hygiene

Cancer Report 2006

Cigarette Restitution Fund Program

Cancer Prevention, Education, Screening and Treatment Program

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State of Maryland

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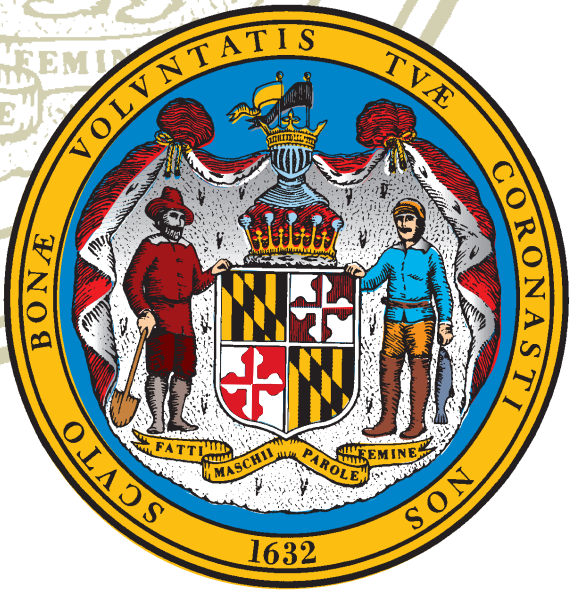

September 2006

STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene
201 W. Preston Street ● Baltimore, Maryland 21201
Robert L. Ehrlich, Jr., Governor - Michael S. Steele, Lt. Governor – S. Anthony McCann, Secretary

Dear Fellow Marylanders:

Cancer is the second leading cause of death in Maryland and in the nation. Over 26,000 Marylanders were diagnosed with cancer in the year 2002, and more than 10,000 died from this disease. Maryland ranks fifteenth in the nation in cancer mortality. Technical advances and improving resources have led to earlier diagnosis and better treatment of most cancers. As a result, more people diagnosed with cancer are surviving each year.

The Cigarette Restitution Fund (CRF) Program is among the highest priorities for the Maryland Department of Health and Mental Hygiene. The CRF Program includes the Cancer Prevention, Education, Screening and Treatment Program. The primary goals are to reduce cancer mortality and to decrease health disparities in cancer. The Department is coordinating efforts of the CRF Program through local health departments and other partnerships in order to reduce the burden of cancer.

The enclosed 2006 Cancer Report of the Cigarette Restitution Fund Program reviews total cancers and the seven specific cancer sites targeted by the Cancer Prevention, Education, Screening and Treatment Program: lung and bronchus, colon and rectum, female breast, prostate, oral, melanoma of the skin, and cervix. These cancers were selected for review based on the capacity for prevention (e.g., lung and bronchus, melanoma of the skin), early detection and treatment (e.g., colon and rectum, female breast, cervix, oral cavity), or on the impact on incidence and mortality (e.g., prostate).

Cancer prevention and control is the result of awareness and proactive behavior of all Marylanders. On behalf of the Maryland Department of Health and Mental Hygiene, I appreciate your efforts to control cancer in our great State.

Sincerely,

S. Anthony McCann
Secretary

Maryland Department of Health & Mental Hygiene

2006 Cancer Report

Cigarette Restitution Fund Program

Cancer Prevention, Education, Screening and Treatment Program

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Acknowledgements

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We thank the following agencies and individuals for their contributions to and assistance with this document:

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- Surveillance and Evaluation Unit, Center for Cancer Surveillance and Control, DHMH, for coordinating and developing the report. Lorraine Underwood provided administrative assistance.

We thank all the individuals who contributed to the development and careful review of this document.

Dedication

We dedicate this report to all persons whose lives have been touched by cancer.

While this publication reflects numbers and statistics, we recognize that the focus is on individuals and the devastating impact that a cancer diagnosis places on an individual and their significant others, such as families and friends. We hope to make a difference for cancer survivors and people in their lives so they can face the many challenges and aspects related to cancer diagnosis and treatment.

Table of Contents

I. Executive Summary

A. Introduction

This publication is the Cigarette Restitution Fund Program's (CRFP) 2006 Cancer Report. The primary purpose of the Cancer Report is to assist local health departments and local community health coalitions under the CRFP in planning and implementing comprehensive cancer prevention, education, screening, and treatment programs. The data and the "Public Health Intervention" recommendations are intended to provide guidance to local health departments, Statewide academic health centers, community health coalitions, and other community organizations as they decide how to allocate limited resources (e.g., staff time, funding) for the maximum benefit, with the goal of reducing cancer mortality.

The CRFP was established to provide for the distribution of funds as a result of multi-state litigation against the tobacco industry. This program provided approximately $28.4 million in 2005 to combat cancer. The CRFP law established the Cancer Prevention, Education, Screening and Treatment (CPEST) Program within the Maryland Department of Health and Mental Hygiene (DHMH). The primary goal of the CPEST Program is to reduce cancer mortality in the State of Maryland.

The CRFP law requires DHMH to identify the types of cancers that may be targeted under the CPEST Program. In addition to overall cancers presented in this report, DHMH has selected seven targeted cancers that are examined individually. The seven targeted cancers are: lung and bronchus, colon and rectum, female breast, prostate, oral, melanoma of the skin, and cervix. These cancers were selected because they can be prevented (e.g., lung and bronchus, melanoma) or detected and treated early (e.g., colon and rectum, female breast, cervix, oral cavity), or because of their impact on incidence and mortality (e.g., prostate).

Additionally, the CRFP law requires counties to develop plans to: 1) eliminate the higher incidence and mortality rates of cancer in minority populations (as defined in the CRFP law as women, or individuals of African, Hispanic, Native American, and Asian descent) and the higher rates in rural areas, and 2) increase availability of and access to health care services for medically underserved populations and uninsured individuals.

The Cancer Report provides information on cancer incidence, mortality, stage of disease at diagnosis, public health evidence, recommended areas for public health intervention, and Maryland screening behaviors compared to the Healthy People 2010 objectives for screening behaviors.

DHMH discovered some problems with the incidence and stage of disease data in the Maryland Cancer Registry (MCR) for the years 2002 and 2003, especially data relating to cervical cancer and melanoma skin cancer. For this reason, incidence data for these two cancer sites and for all cancer sites for 2002 have not been included in this report. Cancer incidence data for 2002 are only presented for lung, colorectal, breast, prostate, and oral

cancers. In addition, incidence data for 2003 are not included in this report. DHMH is actively taking steps to correct the data in the MCR and expects to have this data available in early 2007. Future cancer reports will include the data for these years and these cancer sites.

B. Major Highlights of the Report

1. Major findings for **all cancer sites**:

- Beginning in 1991, cancer mortality rates began exceeding those from heart disease for Maryland residents under age 85 years.
- For persons 85 years and older, mortality rates due to cancer have either leveled off or are increasing slightly, while corresponding rates for heart disease continue to decline.
- Cancer is the second leading cause of death in Maryland, responsible in 2002 for 23.6% of all deaths; 10,395 cancer deaths occurred in 2002. Cancer mortality in Maryland decreased 2.0% per year from 1998-2002.
- Maryland is ranked 15th among states and the District of Columbia in total cancer mortality for the time period 1998-2002, dropping from 13th (from 1997-2001) and 11th (from 1996-2000).
- The 2002 cancer mortality rate for Maryland is statistically significantly higher than the corresponding U.S. rate.
- Cancer mortality rates increase with increasing age for both males and females.
- Males generally have higher incidence and mortality rates than females.
- White males, black males, white females, and black females showed decreasing cancer mortality rates. The largest decline in mortality rate was for white males, having an average annual decrease of 2.3% per year from 1998 to 2002.
- Black males have the highest mortality rates, white females the lowest.

2. Major findings for **lung and bronchus** cancer:

- Lung cancer is the leading cause of cancer death in both men and women in Maryland, accounting for 28.5% of all cancer deaths.
- Tobacco use is the primary cause of lung cancer; tobacco smoking causes 90% of lung cancer in males and 78% of lung cancer in females.
- The public health intervention for lung cancer is the prevention and cessation of tobacco use.
- In 2002, Maryland for the first time surpassed the Healthy People 2010 goal to reduce the current use of tobacco products by youth.

3. Major findings for **colon and rectum** cancer:

- Colorectal cancer is the second leading cause of cancer death in Maryland.
- The recommended public health intervention for colorectal cancer is early detection through screening colonoscopy or fecal occult blood testing with flexible sigmoidoscopy.

- Maryland's rank in colorectal cancer mortality dropped from 5th highest (1997-2001) to 12th highest (1998-2002).
- The percentage of Maryland adults age 50 years and older receiving colonoscopy or sigmoidoscopy increased 8.4% between 2002 and 2004; in 2004, 63.1% had a colonoscopy or sigmoidoscopy.
- Maryland continues to surpass the Healthy People 2010 objective to increase the percent of adults receiving a colonoscopy or sigmoidoscopy.

4. Major findings for **female breast** cancer:

- Breast cancer is the most common reportable cancer among women and the second leading cause of cancer death among women after lung cancer.
- The recommended public health intervention for breast cancer is early detection using mammography and clinical breast examination by a health care professional.
- Maryland has exceeded the Healthy People 2010 objective for mammography screening in 1998, 1999, 2000, 2002, and 2004.

5. Major findings for **prostate** cancer:

- Prostate cancer is the most common reportable cancer among men and the second leading cause of cancer death among men after lung cancer.
- Black men consistently experienced prostate incidence rates above those of white men. Rates for both white and black men have been increasing; the fastest increase was for white males.
- Prostate cancer mortality rates for black men consistently exceeded corresponding rates for white men from 1998 to 2002.
- Mortality rates for black men have been increasing at an average annual rate of 0.8% compared to a decrease of 6.0% for white men.
- Clinicians should discuss with their patients the potential benefits and uncertainties regarding prostate cancer detection and treatment, consider individual patient preferences, and individualize the decision to screen.

6. Major findings for **oral** cancer:

- There is extensive evidence that tobacco use causes oral cancer.
- The recommended public health interventions for oral cancer are avoidance and cessation of tobacco use, avoidance and reduction of alcohol consumption, avoidance of sun and use of ultraviolet (UV) light-blocking lip balm, and screening for oral cancer targeted to individuals 40 years of age and older.

7. Major findings for **melanoma** skin cancer:

- When tracked over time, males had a pattern of higher melanoma incidence rates than females; both male and female incidence rates have been increasing.

- From 1998 to 2002, male mortality rates have been increasing at an annual rate of 8.7%, while corresponding female rates have been declining an average of 1.5% per year.
- The recommended public health intervention for skin cancer is reduction of exposure to UV light by: 1) avoiding the sun between 10 a.m. and 4 p.m., 2) wearing sun protective clothing when exposed to sunlight, 3) using sunscreens with a SPF of 15 or higher, and 4) avoiding artificial sources of UV light (e.g., tanning booths).

8. Major findings for **cervical** cancer:

- The recommended public health intervention for cervical cancer is early detection using the Pap test for women beginning at the onset of sexual activity or by age 21 if not sexually active.
- The Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP) recommends the human papilloma virus vaccine as a means for preventing cervical cancer. ACIP recommends the vaccine, Gardasil, be given routinely to girls when they are age 11-12 years. The ACIP recommendation also allows for vaccination of girls beginning at age nine years as well as vaccination of girls and women, age 13-26 years.

C. Major Changes to this Report from the 2004 Annual Cancer Report

- Incidence data for all cancer sites, melanoma, and cervical cancer are not presented.
- The all cancer sites chapter now has two new graphs comparing cancer mortality rates with those caused by heart disease for persons below age 85 years and 85 years and older.
- DHMH used CDC WONDER as the primary source for Maryland mortality data; specifically, it was used for single year (2002) and aggregate year (1999-2002) data.
- A revised method for representing the geographic distribution of rates for cancer incidence and cancer mortality was applied to the maps. Previously, a ramp of four rate groupings was used based on the percentage above or below the U.S. rate. Now there are five categories. The ramp groups data into five divisions: >25% above U.S. rate; 10-25% above U.S. rate; between 10% below and 10% above U.S. rate; 10-25% below U.S. rate; >25% below U.S. rate.

II. All Cancer Sites

Incidence (New Cases)

The Maryland all cancer sites incidence data for 2002 are not available. The 2002 U.S. rate is 471.4 per 100,000 population published by the National Cancer Institute, Surveillance Epidemiological End Results (SEER) Program.

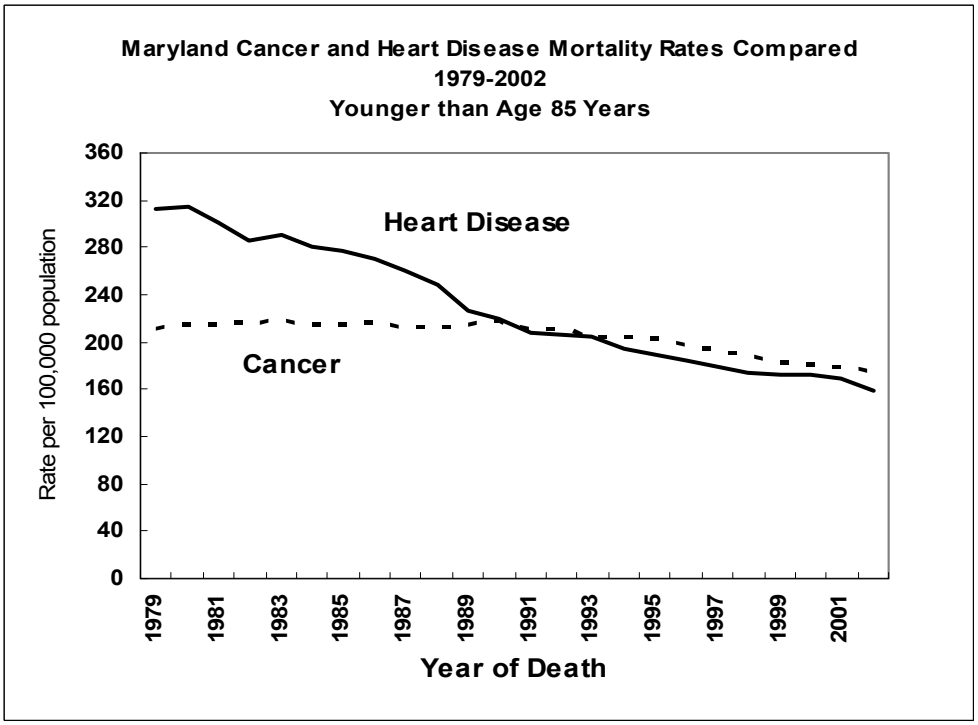
Mortality (Deaths)

Cancer is the second leading cause of death in Maryland, accounting for 23.6% of all deaths in 2002. A total of 10,395 Maryland residents died from cancer in 2002. The overall Maryland cancer mortality rate for 2002 is 200.9 per 100,000 population (197.0-204.8, 95% Confidence Interval (C.I.)). This rate is statistically significantly higher than the 2002 U.S. SEER cancer mortality rate of 193.5 per 100,000 population. Maryland is ranked 15th highest among all states and the District of Columbia in total cancer mortality for the period 1998-2002.

Table 1.
All Cancer Sites Incidence and Mortality Rates
by Gender and Race, Maryland and the United States, 2002

Incidence 2002	*Total*	*Males*	*Females*	*Whites*	*Blacks*	*Other*
New Cases (#)	NA	NA	NA	NA	NA	NA
Incidence Rate*	NA	NA	NA	NA	NA	NA
U.S. SEER Rate*	471.4	553.2	415.1	479.0	517.3	NA
Mortality 2002	*Total*	*Males*	*Females*	*Whites*	*Blacks*	*Other*
Deaths (#)	10,395	5,275	5,120	7,642	2,588	165
Mortality Rate*	200.9	246.3	171.3	194.1	241.9	91.3
U.S. SEER Rate*	193.5	239.9	162.7	191.6	240.2	NA

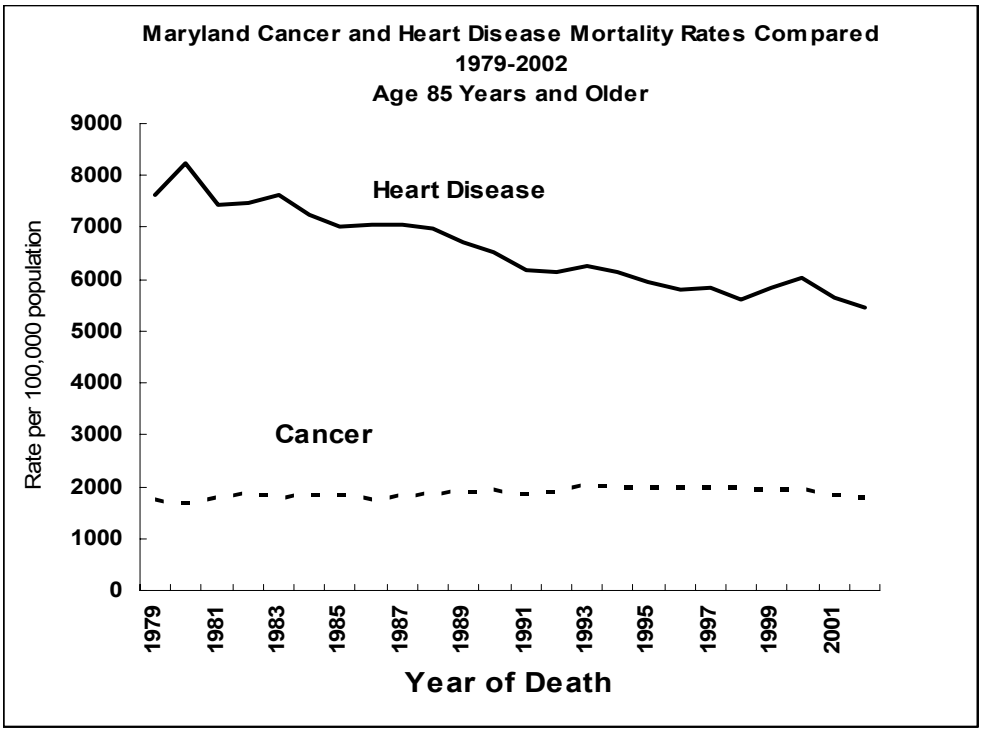
* Rates are per 100,000 and are age-adjusted to 2000 U.S. standard population
NA: Data were not available
Source: CDC WONDER, 2002
SEER, National Cancer Institute, 2002



Maryland Division of Health Statistics, 1979-2002

Cancer vs. Heart Disease Mortality Rates, Age Under 85 Years

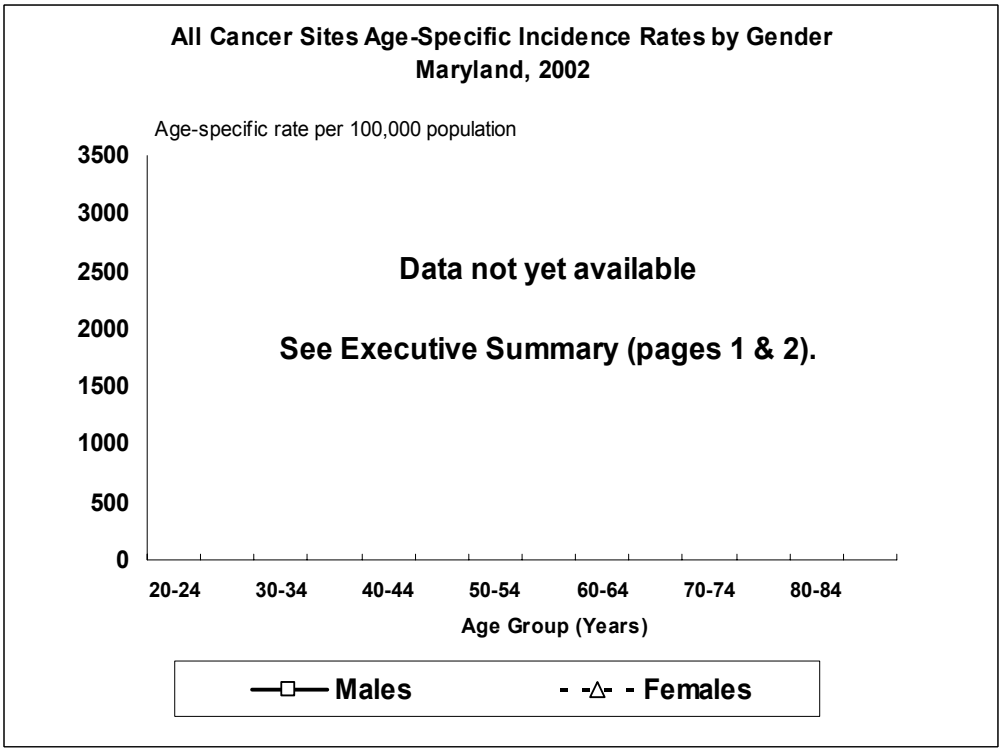
Beginning in 1991, cancer mortality rates began exceeding those from heart disease for Maryland residents under age 85 years.



Maryland Division of Health Statistics, 1979-2002

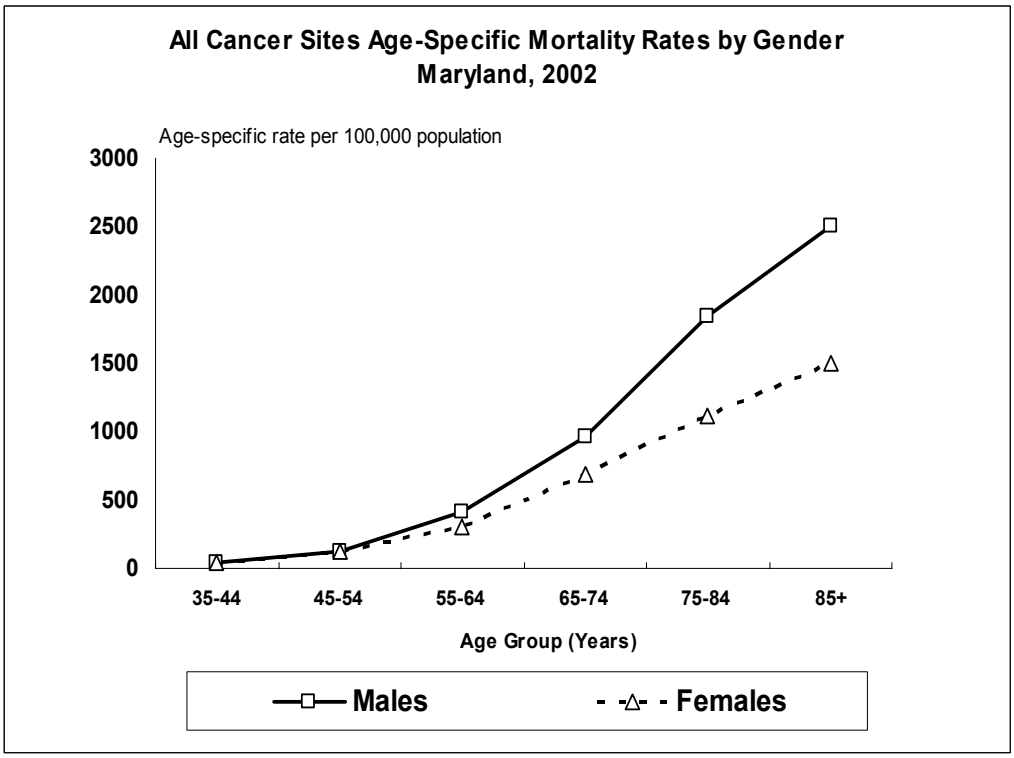
Cancer vs. Heart Disease Mortality Rates, Age Over 85 Years

For persons age 85 years and older in Maryland, mortality rates due to cancer have either leveled off or are increasing slightly; corresponding rates for heart disease continue to decline faster than those for cancer.



Age-Specific Incidence Rates by Gender

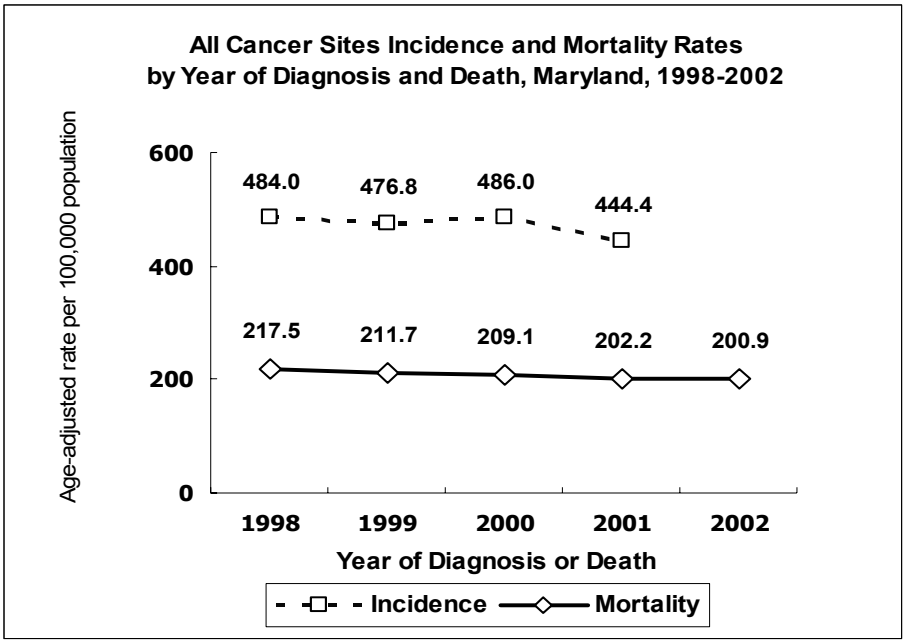
Age-specific incidence rate data for all cancer sites is not available for 2002.



Age-Specific Mortality Rates by Gender

Cancer mortality rates increase with age. Males have a higher cancer mortality rate than females after age 54 years.

CDC WONDER, 2002
CDC WONDER age categories are in 10-year intervals.



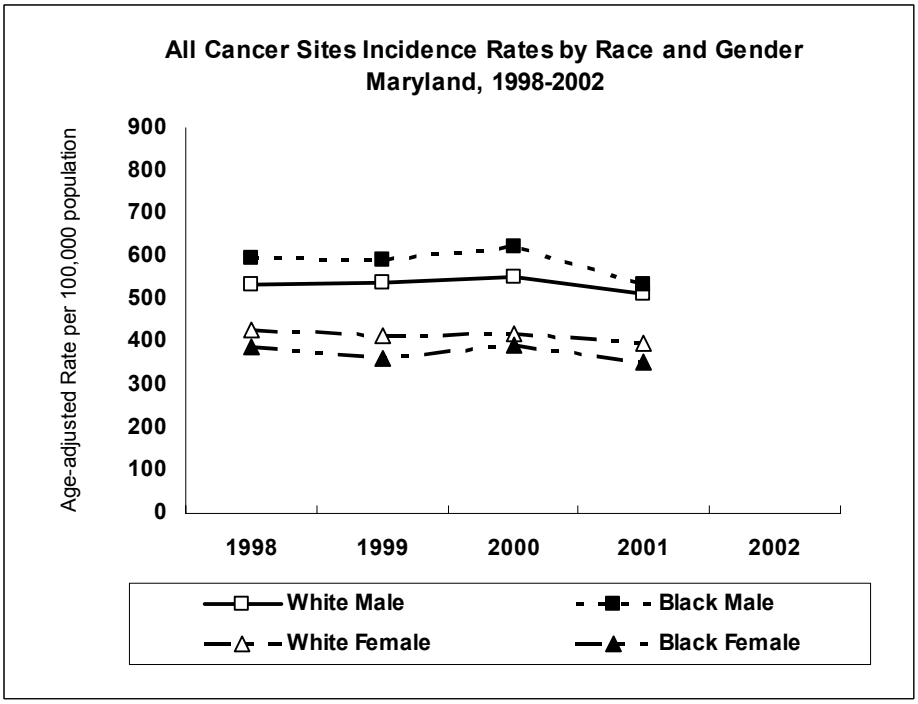
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2001
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Incidence and Mortality Trends

All cancer site mortality rates decreased an average of 2.0% per year from 1998 to 2002.

The all cancer sites incidence data for 2002 were not available.

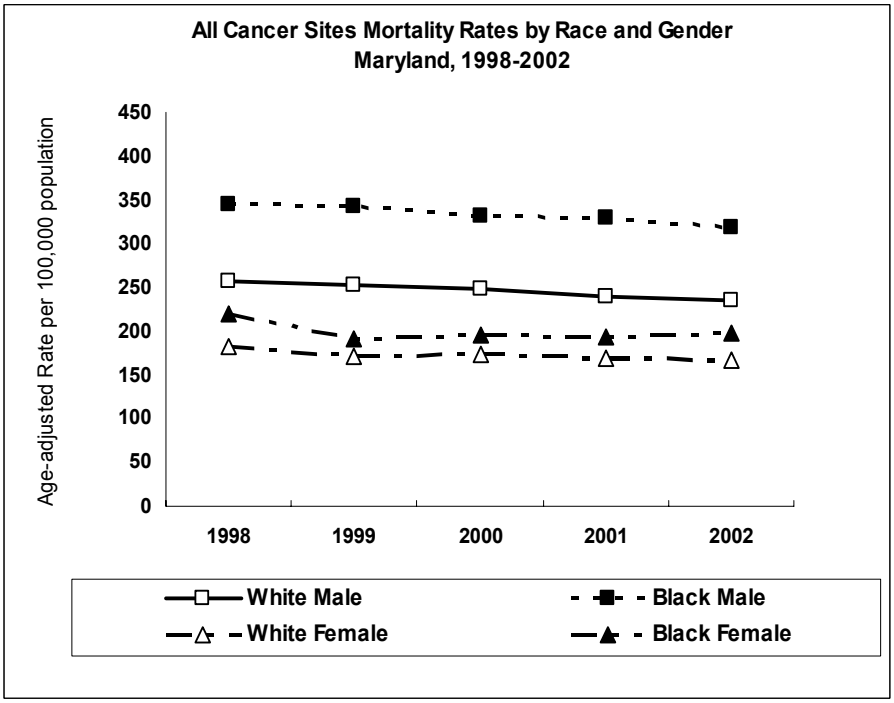
See Appendix I, Tables 1 and 2.



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

Race and Gender Incidence Trends

Males have higher incidence rates than females. Black males have the highest rates; black females the lowest. From 1998 to 2001, there was a downward trend in incidence rates for black males and black females. Incidence rates for white males decreased an average of 1.0%, while those for black males declined 3.0%. The all cancer sites incidence rate by race and gender for 2002 were not available. See Appendix I, Table 3.



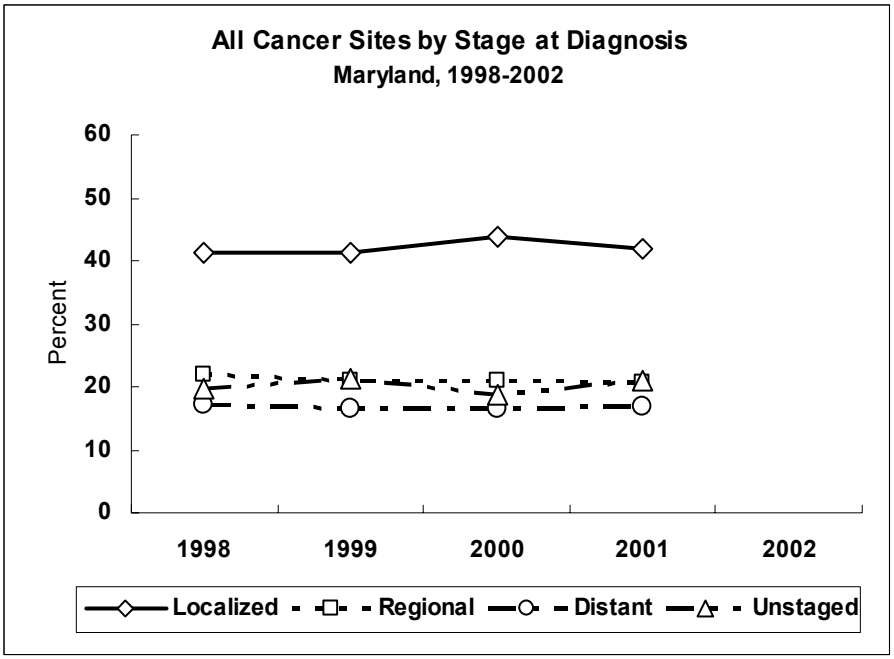
Rates are age-adjusted to 2000 U.S. standard population
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Race and Gender Mortality Trends

Males have higher mortality rates than females. Black males have the highest rates; white females the lowest.

All gender and race categories showed a downward trend with the largest decrease occurring for white males with an average annual decrease of 2.3% per year from 1998 to 2002.

See Appendix I, Table 4.



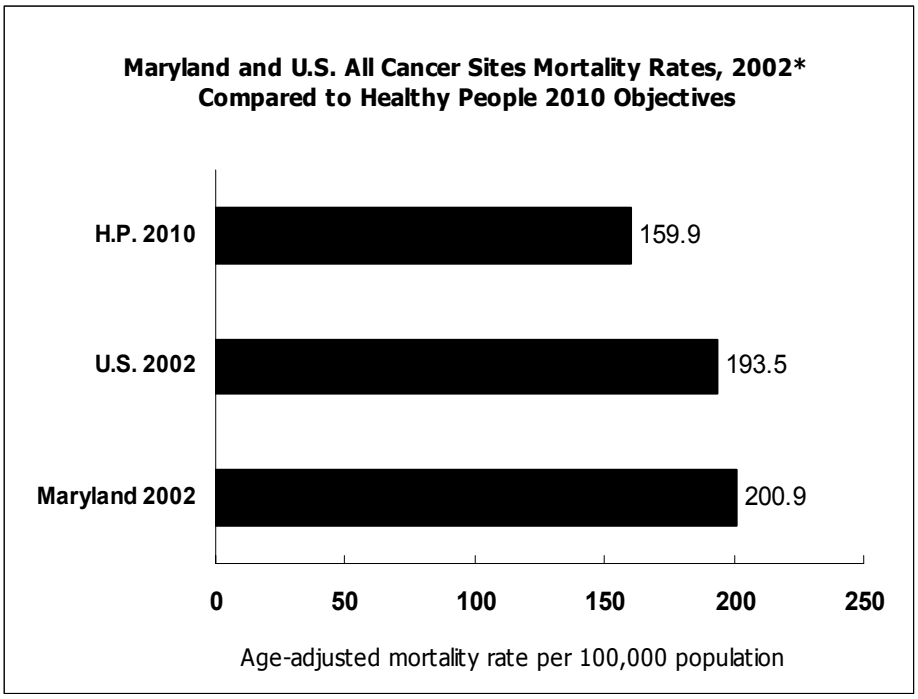
Maryland Cancer Registry, 1998-2001

Stage at Diagnosis

Approximately 42% of all cancers are diagnosed at the local stage.

See Appendix J, Table 1.

Data for all cancer sites incidence stage at diagnosis were not available for 2002.



*Maryland and U.S. rates are age-adjusted to 2000 U.S. standard population
CDC WONDER, 2002
SEER, National Cancer Institute, 2002
Healthy People 2010, U.S. Department of Health and Human Services, 2000

Healthy People 2010 Objectives

The overall cancer mortality rate in 2002 for Maryland is 200.9 per 100,000 population. The Healthy People 2010 goal is to reduce cancer mortality to 159.9 per 100,000 population.

Summary – Identification of Targeted Cancers

The cancers targeted under the Cigarette Restitution Fund in 2006 include: lung and bronchus, colon and rectum, prostate, breast, cervical, oral, and melanoma of the skin. These cancers were chosen due to the ability to prevent, detect early, and effectively treat these cancers, and due to their impact on incidence and mortality. The remaining sections of this report address these targeted cancers. The public health interventions to reduce the impact of these cancers among Marylanders are listed in the chart below.

The public health interventions to reduce the impact of the targeted cancers are:

- Prevention and cessation of tobacco use
- Early detection and treatment of:
  - colon/rectum cancer
  - breast cancer
  - cervical cancer
  - prostate cancer
  - oral cancer
- Protection of the skin from excessive sun exposure or exposure to UV light

Table 2.
Number of Cancer Cases for All Cancer Sites
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	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 3.
All Cancer Sites Age-Adjusted Incidence Rates
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	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 4.
All Sites Cancer Cases and Age-Adjusted Incidence Rates Among Marylanders of Hispanic Ethnicity Regardless of Race Maryland and Jurisdictions, 2002

Jurisdiction	Number	Rate
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		
St. Mary's		
Somerset		
Talbot		
Washington		
Wicomico		
Worcester		
Region	**Number**	**Rate**
BALTIMORE METRO REGION		
EASTERN SHORE REGION		
NATIONAL CAPITAL REGION		
NORTHWEST REGION		
SOUTHERN REGION		

Data not yet available

See Executive Summary (pages 1 & 2).

Table 5.
Number of Deaths for All Cancer Sites
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	10,395	5,275	5,120	7,642	2,588	165
Allegany	210	124	86	208	<6	0
Anne Arundel	925	478	447	795	119	11
Baltimore City	1,733	859	874	667	1,057	9
Baltimore County	1,877	940	937	1,639	217	21
Calvert	151	76	75	133	18	0
Caroline	75	33	42	61	13	<6
Carroll	303	159	144	296	7	0
Cecil	167	96	71	158	7	<6
Charles	183	102	81	146	31	6
Dorchester	97	58	39	74	23	0
Frederick	337	180	157	311	25	1
Garrett	60	36	24	60	0	0
Harford	392	208	184	354	35	3
Howard	289	146	143	238	40	11
Kent	49	29	20	38	11	0
Montgomery	1,229	579	650	1,008	153	68
Prince George's	1,285	626	659	555	703	27
Queen Anne's	94	44	50	83	11	0
Saint Mary's	144	83	61	115	27	<6
Somerset	69	38	31	52	17	0
Talbot	100	47	53	84	16	0
Washington	294	144	150	289	4	1
Wicomico	194	104	90	158	34	<6
Worcester	138	86	52	120	18	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 6.
All Cancer Sites Age-Adjusted Mortality Rates*
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	200.9	246.3	171.3	194.1	241.9	91.3
Allegany	211.8	311.5	152.9	214.2	**	0.0
Anne Arundel	209.1	250.7	181.0	203.9	273.6	112.7
Baltimore City	267.9	336.6	224.5	249.3	286.9	102.8
Baltimore County	212.1	258.8	182.0	212.1	223.8	108.5
Calvert	236.1	292.8	204.6	240.7	216.6	0.0
Caroline	230.1	242.0	229.5	219.9	283.3	**
Carroll	205.0	267.4	170.7	206.5	179.3	0.0
Cecil	205.0	267.2	159.9	202.4	273.7	**
Charles	200.6	269.1	155.1	209.1	160.2	266.8
Dorchester	237.9	339.8	174.5	230.1	259.1	0.0
Frederick	190.4	238.8	155.4	187.2	304.6	36.1
Garrett	169.4	234.9	120.4	170.4	0.0	0.0
Harford	196.7	242.5	163.0	193.0	264.4	62.5
Howard	155.5	191.9	135.1	159.3	165.3	95.8
Kent	173.2	231.3	130.0	158.2	270.8	0.0
Montgomery	140.0	160.7	126.5	142.0	178.3	77.4
Prince George's	211.2	252.9	184.3	206.5	226.9	100.7
Queen Anne's	212.8	212.9	206.7	212.2	235.0	0.0
Saint Mary's	200.7	256.3	158.4	190.2	267.9	**
Somerset	259.1	333.8	210.6	261.1	244.3	0.0
Talbot	186.3	207.1	175.0	176.7	252.7	0.0
Washington	196.1	232.4	177.0	199.9	142.3	93.0
Wicomico	218.7	277.4	173.6	222.7	207.1	**
Worcester	196.3	276.6	136.0	195.2	219.1	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 7.
Number of Cancer Cases for All Cancer Sites
by Jurisdiction, Gender and Race, Maryland, 1998-2002

Jurisdiction	Total	Gender		Race			
		Males	Females	Whites	Blacks	Other	Unknown
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 8.
All Cancer Sites Age-Adjusted Incidence Rates
by Jurisdiction, Gender and Race, Maryland, 1998-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	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 9.
Number of Cancer Deaths for All Cancer Sites
by Jurisdiction, Gender and Race, Maryland, 1999-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	41,149	20,999	20,150	30,474	9,995	680
Allegany	795	436	359	783	11	1
Anne Arundel	3,609	1,841	1,768	3,111	449	49
Baltimore City	7,022	3,548	3,474	2,909	4,080	33
Baltimore County	7,429	3,710	3,719	6,490	864	75
Calvert	544	307	237	458	83	3
Caroline	309	158	151	255	53	1
Carroll	1,130	597	533	1,090	36	4
Cecil	699	393	306	667	30	2
Charles	797	415	382	608	173	16
Dorchester	389	232	157	286	103	0
Frederick	1,282	684	598	1,174	100	8
Garrett	259	149	110	259	0	0
Harford	1,486	800	686	1,362	116	8
Howard	1,174	583	591	956	175	43
Kent	214	130	84	174	40	0
Montgomery	4,867	2,311	2,556	4,008	551	308
Prince George's	4,987	2,520	2,467	2,276	2,599	112
Queen Anne's	357	176	181	303	53	1
Saint Mary's	562	317	245	467	90	5
Somerset	252	152	100	191	60	1
Talbot	405	214	191	345	59	1
Washington	1,210	603	607	1,191	17	2
Wicomico	788	405	383	616	166	6
Worcester	583	318	265	495	87	1

Source: CDC WONDER, 1999-2002

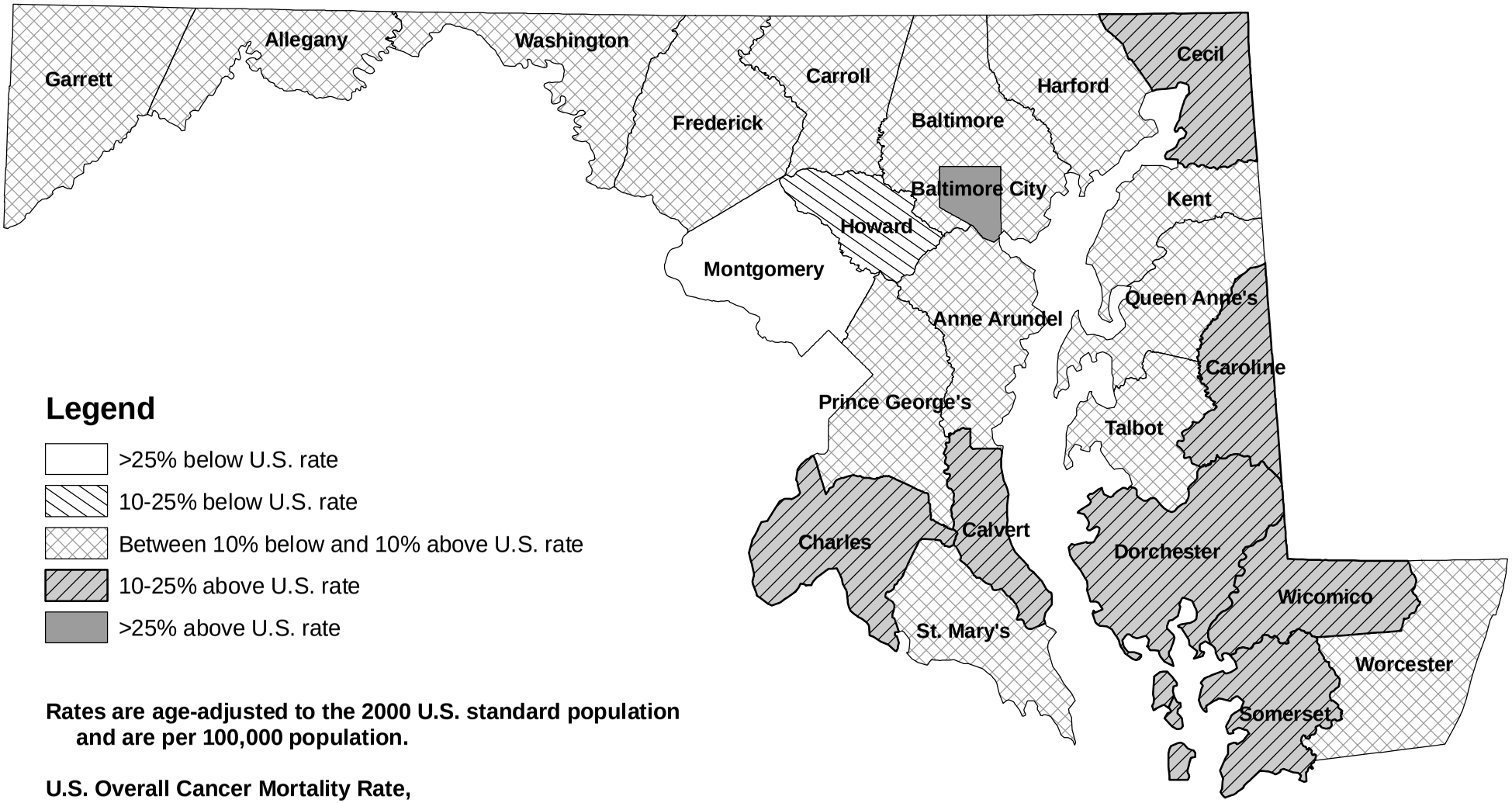
Table 10.
All Cancer Sites Age-Adjusted Mortality Rates*
by Jurisdiction, Gender and Race, Maryland, 1999-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	206.0	256.2	173.9	199.2	244.4	109.6
Allegany	198.5	273.1	151.8	199.6	193.2	67.4
Anne Arundel	213.5	256.5	185.6	208.8	269.8	150.0
Baltimore City	267.3	344.7	219.8	256.2	277.9	92.1
Baltimore County	215.4	264.7	184.5	214.2	248.5	119.8
Calvert	227.6	312.9	174.9	223.8	256.7	120.4
Caroline	241.8	289.0	207.1	234.1	295.2	172.3
Carroll	202.1	266.6	164.9	200.6	291.3	78.9
Cecil	228.9	304.7	181.2	227.8	283.3	62.7
Charles	226.2	278.5	190.1	223.4	237.4	197.0
Dorchester	239.2	341.4	169.0	225.8	291.8	0.0
Frederick	193.1	243.7	158.4	187.9	329.2	92.9
Garrett	185.6	250.7	139.4	186.4	0.0	0.0
Harford	197.1	255.3	159.3	196.2	236.2	46.9
Howard	167.6	201.9	147.2	167.5	206.1	99.1
Kent	189.0	264.3	133.4	179.0	250.7	0.0
Montgomery	145.3	169.9	129.8	146.6	166.6	106.5
Prince George's	215.9	270.9	182.2	215.1	226.4	108.0
Queen Anne's	209.2	222.6	197.5	200.4	283.3	1,550.8
Saint Mary's	205.4	255.3	166.2	202.5	232.6	299.6
Somerset	237.0	332.3	171.7	241.5	219.3	387.7
Talbot	193.3	240.4	162.6	187.9	230.9	129.5
Washington	206.9	251.4	180.7	210.2	115.5	43.8
Wicomico	229.8	286.5	191.0	223.9	263.5	125.8
Worcester	213.5	265.1	176.7	209.0	256.8	82.5

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

Source: CDC WONDER, 1999-2002

Maryland All Cancer Sites 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.

U.S. Overall Cancer Mortality Rate, 1998-2002: 197.8 per 100,000 population

Source: CDC WONDER, 1999-2002

III. Targeted Cancers

A. Lung and Bronchus Cancer

Incidence (New Cases)

There were 3,406 new lung and bronchus cancer cases (called lung cancer) among Maryland residents in 2002. The 2002 Maryland age-adjusted lung cancer incidence rate is 65.6 per 100,000 population (63.5-67.9, 95% C.I.), which is statistically significantly greater than the 2002 U.S. SEER lung cancer incidence rate of 62.1 per 100,000 population.

Mortality (Deaths)

There were 2,967 lung cancer deaths among Maryland residents in 2002. Lung cancer accounts for 28.5% of all cancer deaths in Maryland and is the leading cause of cancer deaths in both men and women. The 2002 age-adjusted lung cancer mortality rate is 57.3 per 100,000 population (55.2-59.4, 95% C.I.) in Maryland. As with lung cancer incidence, this rate is also statistically significantly greater than the 2002 U.S. SEER mortality rate for lung and bronchus cancer of 54.9 per 100,000 population. Maryland has the 18th highest lung cancer mortality rate among the states and the District of Columbia for the period 1998-2002.

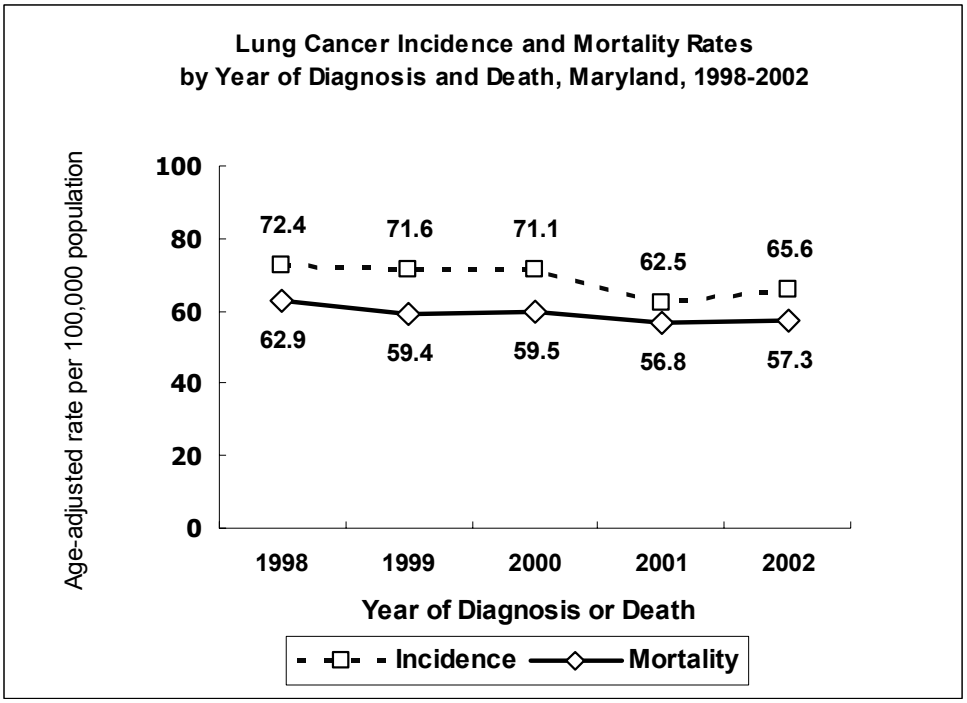
Table 11.
Lung Cancer Incidence and Mortality Rates
by Gender and Race, Maryland and the United States, 2002

Incidence 2002	*Total*	*Males*	*Females*	*Whites*	*Blacks*	*Other*
New Cases (#)	3,406	1,798	1,608	2,599	743	64
Incidence Rate*	65.6	80.2	54.8	66.4	66.6	34.3
U.S. SEER Rate*	62.1	77.8	50.8	62.7	80.1	NA
Mortality 2002	*Total*	*Males*	*Females*	*Whites*	*Blacks*	*Other*
Deaths (#)	2,967	1,634	1,333	2,221	707	39
Mortality Rate*	57.3	74.2	45.0	56.4	64.5	20.8
U.S. SEER Rate*	54.9	73.5	41.5	55.2	62.2	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



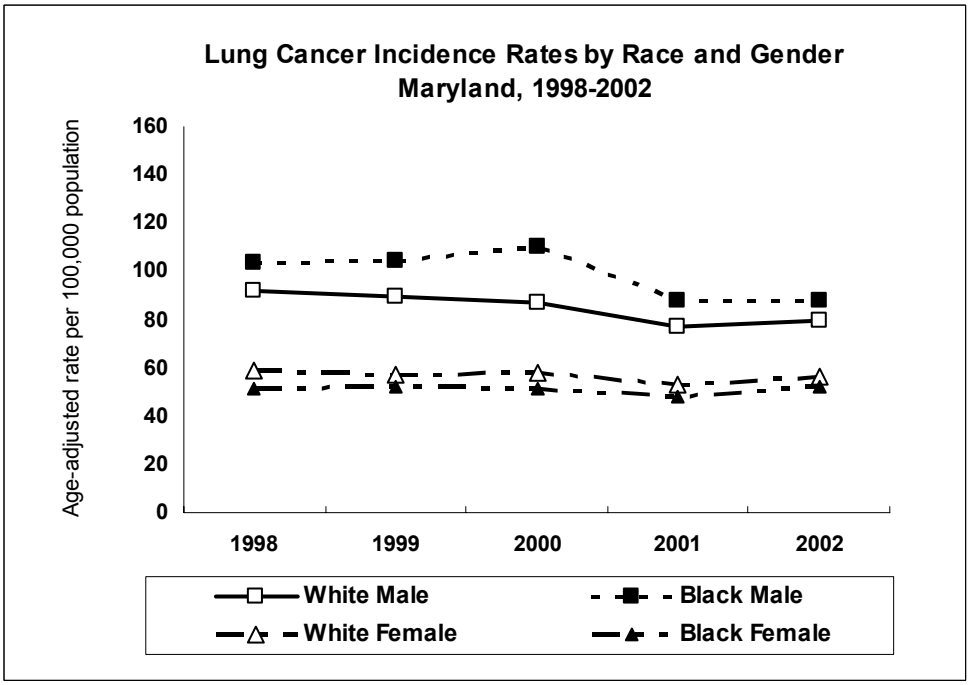
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2002
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Incidence and Mortality Trends

Lung cancer incidence rates have decreased an average of 3.3% per year from 1998 to 2002 in Maryland.

Lung cancer mortality began to decline in the 1990s. In Maryland, lung cancer death rates have decreased an average of 2.3% per year from 1998 to 2002.

See Appendix I, Tables 1 and 2.



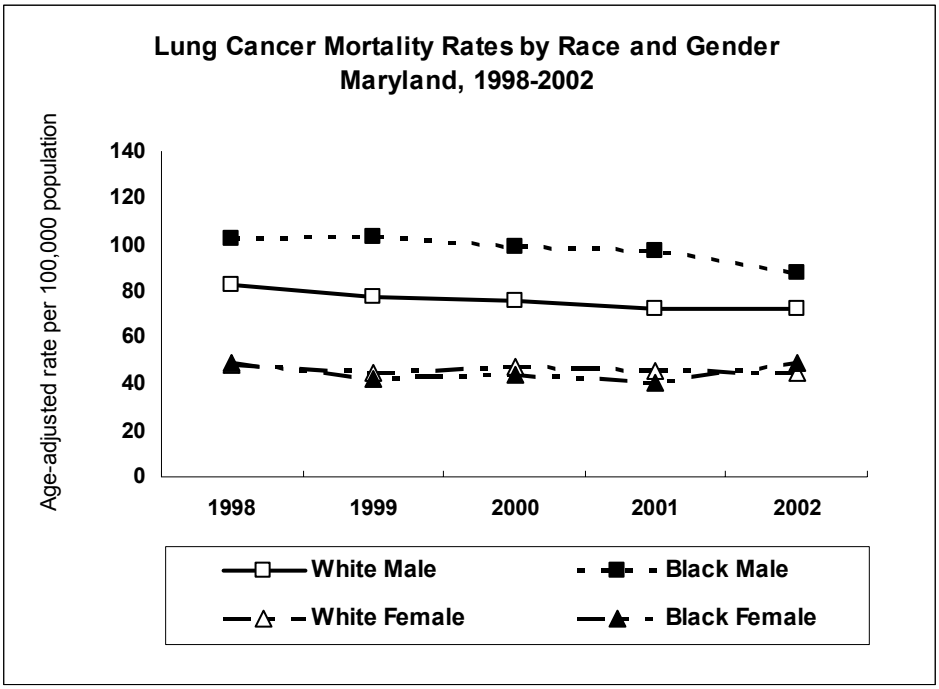
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2002

Race and Gender Incidence Trends

Male lung cancer incidence rates exceeded those for females. Black females had the lowest rates, black males the highest.

While all rate groupings are decreasing, the biggest reduction was for black males who have experienced an average decrease of 4.9% per year from 1998 to 2002.

See Appendix I, Table 5.



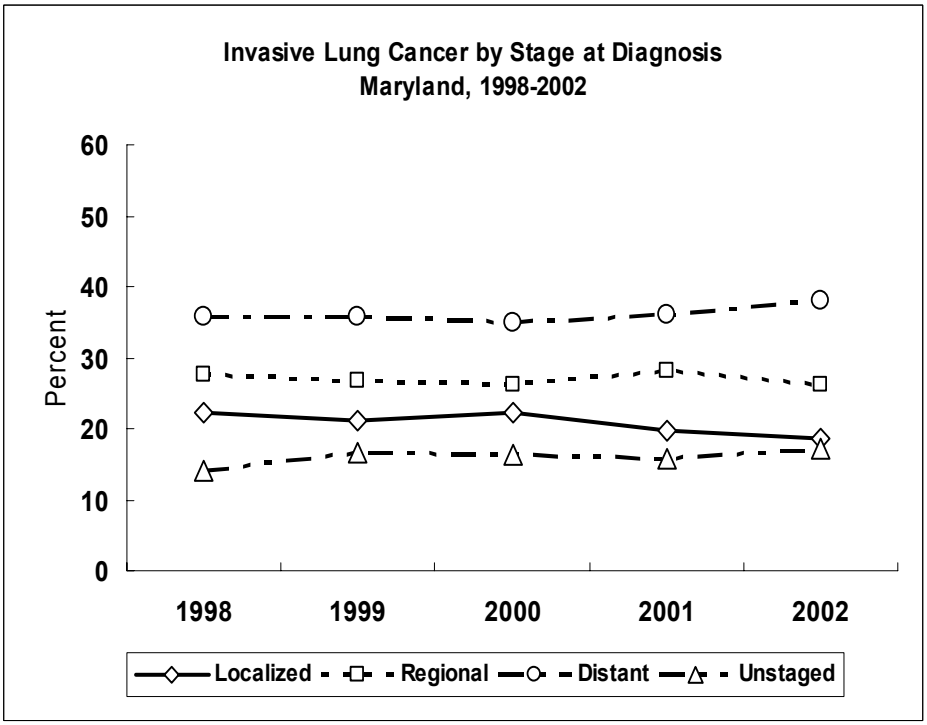
Rates are age-adjusted to 2000 U.S. standard population
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Race and Gender Mortality Trends

From 1998 to 2002, males consistently had higher mortality rates than females.

Mortality rates for all race and gender groups have been declining with the biggest drop involving black males with an average annual reduction of 3.5% per year.

See Appendix I, Table 6 for the data.

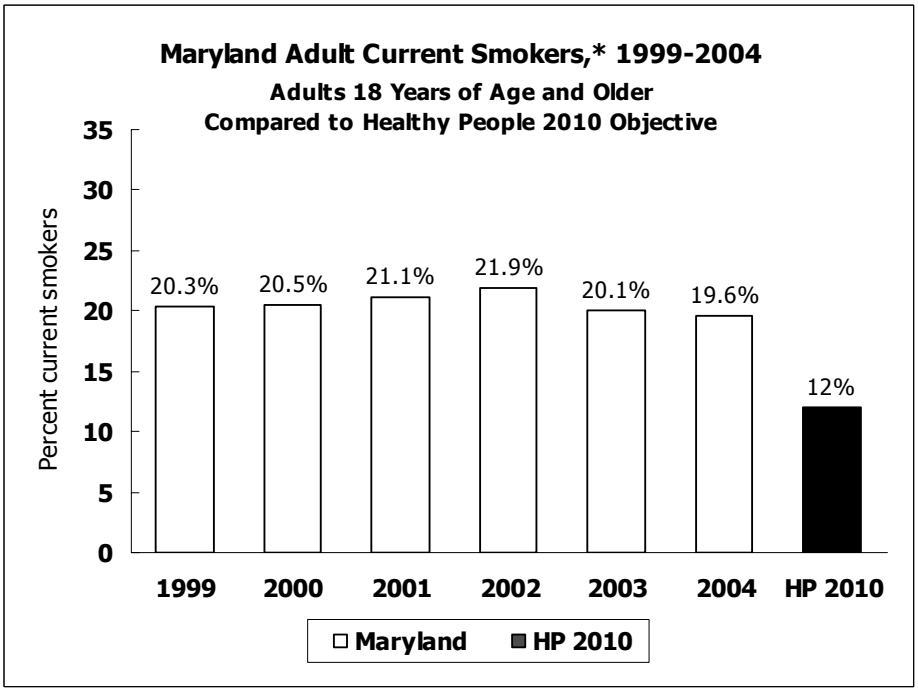


Maryland Cancer Registry, 1998-2002

Stage at Diagnosis

More lung cancer cases are diagnosed at the distant stage than localized or regional stage cancer. In 2002, 37.9% of lung cancer cases were at the distant stage at the time of diagnosis.

See Appendix J, Table 2 for the data.

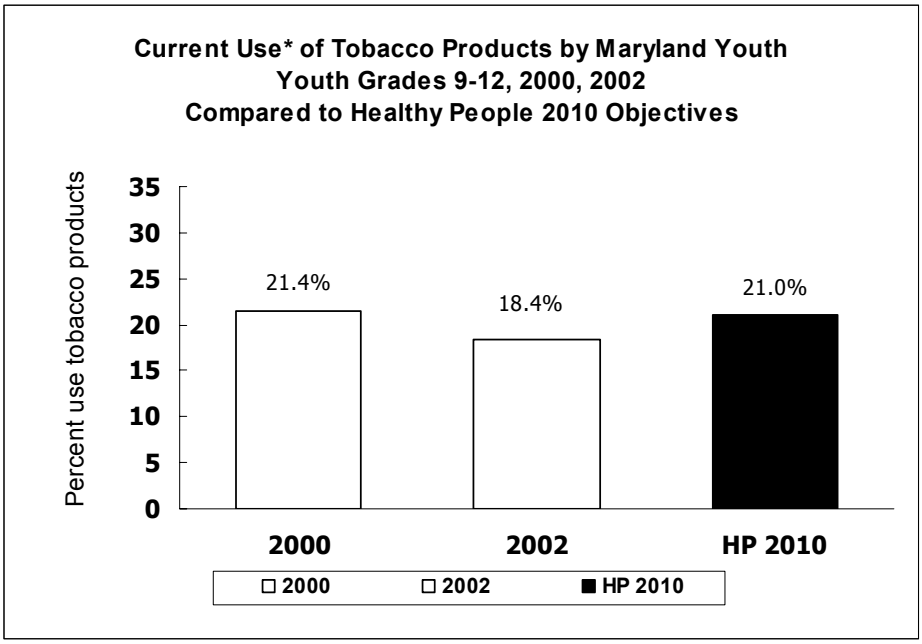


* Current Smoker is defined as a person 18 years or older who smokes cigarettes every day or some days

BRFSS, Maryland DHMH Center for Preventive Health Services, 1999-2004
Healthy People 2010, U.S. Department of Health and Human Services, 2000

Healthy People 2010 Objectives

The Healthy People 2010 objective is to reduce the percentage of adults (≥ age18 years) who are current smokers to 12%. The percentage of adult smokers in Maryland has remained relatively stable between 1999 and 2004, with an average annual decline of 0.6% in current smokers.



* Current Use of Tobacco Products is defined as a youth from grades 9-12 who has used any tobacco product, including cigarettes, smokeless or spit tobacco, and other products containing tobacco in the last 30 days

MYTS, Maryland DHMH Center for Health Promotion, Education, and Tobacco Use Prevention, 2000, 2002

Healthy People 2010 Objectives

For youth, grades 9-12, the Healthy People 2010 tobacco use objective is to reduce the percentage of youth who are current users of tobacco products to 21%.

Based on the Maryland Youth Tobacco Survey (MYTS) in 2002, 18.4% of Maryland youth were current users of tobacco products. In 2002, Maryland achieved the Healthy People 2010 objective. MYTS has not been repeated since 2002.

Public Health Evidence (quoted from National Cancer Institute [NCI], Physician Data Query [PDQ], 2/17/2006 and 4/20/2006; International Agency for Research on Cancer, 2002; and United States Preventive Services Task Force [USPSTF] 5/2004)

Primary Prevention

Cigarette smoking has been established as the primary cause of lung cancer, and tobacco smoking is estimated to cause 90% of lung cancer in males and 78% of lung cancer in females. Cigar and pipe smoking have also been associated, independently, with increased lung cancer risk. Smoking avoidance would result in decreased mortality from primary lung cancers. Long-term sustained smoking cessation results in decreased incidence of lung cancer and of second primary lung tumors. A 30-50% reduction of lung cancer mortality has been noted after 10 years of smoking cessation.

Environmental, or second-hand, tobacco smoke contains the same components as inhaled mainstream smoke at 1% to 10% the concentration, depending on the component. Exposure to radon increases lung cancer incidence and mortality. Considered in total, occupational exposures have been estimated to account for approximately 10% of lung cancers. These carcinogens include asbestos, radon, tar and soot (source of polycyclic aromatic hydrocarbons), arsenic, chromium, and nickel. For many of these workplace carcinogens, cigarette smoking interacts to synergistically increase the risk.

Chemoprevention

High-intensity smokers (one or more packs per day) who take pharmacological doses of beta-carotene supplementation (> 20 mg/day) have an *increased* lung cancer incidence and mortality that is associated with taking the supplement.

Screening

The United States Preventive Services Task Force (USPSTF) concluded that the evidence is insufficient to recommend for or against screening for asymptomatic persons for lung cancer with either low dose computerized tomography ("spiral CT"), chest x-ray, sputum cytology, or a combination of these tests. Because of the invasive nature of diagnostic testing and the possibility of a high number of false-positive tests in certain populations, there is potential for significant harms from screening. Therefore, the USPSTF could not determine the balance between the benefits and harms of screening for lung cancer.

Public Health Intervention for Lung Cancer (CDC Best Practice Guidelines, 8/1999)

- Prevent initiation of tobacco use among youth and young adults
- Promote quitting of tobacco use among youth and adults
- Eliminate non-smoker's exposure to environmental tobacco smoke
- Identify and eliminate tobacco-related health disparities

The CDC Best Practice Guidelines address components of Comprehensive Tobacco Control Programs including:

- ***Community-based and statewide programs:***

✓ Adoption of smoke-free laws and policies (e.g., raising the costs of tobacco products, reducing minors access to tobacco products and reducing exposure to environmental smoke)
✓ Individually-focused identification of tobacco use and cessation counseling by medical and dental providers
✓ Effective smoking cessation programs for current tobacco users (individual, telephone, or group counseling)
✓ Nicotine replacement and other pharmacotherapy
✓ Effective community-based tobacco use prevention activities encompassing all sectors of the community (e.g., homes, work sites, places of worship and entertainment, and civic organizations)

- ***School-based programs:***

✓ Evidence-based tobacco prevention curricula in schools
✓ Evidence-based tobacco cessation programs for youth in schools

- ***Enforcement programs:***

✓ Enforce laws and policies to reduce minors' access to tobacco products
✓ Enforce laws and policies to reduce exposure to environmental tobacco smoke

- ***Counter-marketing programs:***

✓ Counter tobacco advertisements
✓ Raise awareness of the dangers of environmental tobacco smoke
✓ Discourage the use of tobacco products and promote smoke-free behavior as the norm
✓ Promote cessation of tobacco use

- ***Surveillance and evaluation:***

✓ Monitor tobacco-related behaviors, attitudes, and health outcomes
✓ Evaluate local and state tobacco-related programs

- ***Chronic disease:***

✓ Prevent and detect other tobacco-related diseases such as cardiovascular disease and asthma

- ***Administration and management:***

✓ Have sufficient staffing and management structures to facilitate coordination of program components and multiple agencies/groups

Table 12.
Number of Lung and Bronchus Cancer Cases by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	3,406	1,798	1,608	2,599	743	64
Allegany	82	40	42	s	<6	0
Anne Arundel	314	159	155	279	25	10
Baltimore City	587	314	273	s	342	<6
Baltimore County	681	357	324	609	65	7
Calvert	50	26	24	40	10	0
Caroline	25	13	12	s	<6	0
Carroll	85	50	35	s	<6	0
Cecil	44	28	16	41	<6	<6
Charles	43	19	24	36	7	0
Dorchester	44	26	18	s	<6	0
Frederick	118	75	43	108	s	<6
Garrett	22	15	7	22	0	0
Harford	146	77	69	138	s	<6
Howard	116	52	64	94	s	<6
Kent	27	15	12	s	<6	0
Montgomery	327	150	177	263	39	25
Prince George's	293	145	148	140	146	7
Queen Anne's	38	14	24	s	<6	0
Saint Mary's	55	38	17	44	s	<6
Somerset	27	17	10	17	10	0
Talbot	39	23	16	35	<6	<6
Washington	98	52	46	89	9	0
Wicomico	86	50	36	71	15	0
Worcester	59	43	16	s	<6	0
Unknown	0	0	0	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, 2002

Table 13.
Lung and Bronchus Cancer Age-Adjusted Incidence Rates* by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	65.6	80.2	54.8	66.4	66.6	34.3
Allegany	85.8	97.4	76.7	83.1	**	0.0
Anne Arundel	69.3	77.5	62.6	70.0	**	101.6
Baltimore City	91.3	119.3	72.1	94.8	89.9	**
Baltimore County	78.3	96.3	65.2	80.9	67.4	**
Calvert	80.7	102.1	**	74.0	**	0.0
Caroline	**	**	**	**	**	0.0
Carroll	57.8	74.7	42.9	58.8	**	0.0
Cecil	52.3	70.6	**	50.8	**	**
Charles	45.9	**	**	48.6	**	0.0
Dorchester	108.7	149.1	**	123.1	**	0.0
Frederick	66.4	94.2	44.6	64.9	**	**
Garrett	**	**	**	**	0.0	0.0
Harford	70.7	82.1	61.0	72.5	**	**
Howard	59.7	58.0	60.9	61.0	**	**
Kent	95.7	**	**	**	**	0.0
Montgomery	37.9	41.4	35.6	37.7	43.5	**
Prince George's	47.4	56.0	41.5	52.2	43.1	**
Queen Anne's	82.3	**	**	79.8	**	0.0
Saint Mary's	78.4	117.5	**	73.9	**	**
Somerset	100.2	**	**	**	**	0.0
Talbot	73.8	**	**	74.9	**	**
Washington	66.7	78.8	56.3	62.7	**	0.0
Wicomico	98.3	134.7	71.2	101.1	**	0.0
Worcester	82.4	129.5	**	85.5	**	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 14.
Number of Lung and Bronchus Cancer Deaths
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	2,967	1,634	1,333	2,221	707	39
Allegany	66	43	23	66	0	0
Anne Arundel	279	141	138	248	27	4
Baltimore City	543	281	262	214	326	3
Baltimore County	583	324	259	528	51	4
Calvert	44	22	22	38	6	0
Caroline	21	12	9	21	0	0
Carroll	80	45	35	80	0	0
Cecil	51	31	20	48	<6	<6
Charles	53	32	21	43	9	1
Dorchester	32	24	8	26	6	0
Frederick	85	55	30	78	7	0
Garrett	20	12	8	20	0	0
Harford	124	71	53	114	8	2
Howard	74	37	37	64	9	1
Kent	20	10	10	13	7	0
Montgomery	262	127	135	214	33	15
Prince George's	316	177	139	128	181	7
Queen Anne's	27	11	16	24	<6	0
Saint Mary's	46	34	12	38	7	<6
Somerset	24	16	8	18	6	0
Talbot	29	16	13	26	<6	0
Washington	76	40	36	74	2	0
Wicomico	68	39	29	58	10	0
Worcester	44	34	10	40	<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 15.
Lung and Bronchus Cancer Age-Adjusted Mortality Rates* by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	57.3	74.2	45.0	56.4	64.5	20.8
Allegany	68.3	104.0	41.9	69.9	0.0	0.0
Anne Arundel	63.0	72.1	56.3	63.8	55.5	54.6
Baltimore City	84.2	108.2	67.9	81.7	87.0	28.5
Baltimore County	66.1	87.9	50.7	68.7	53.6	16.4
Calvert	71.3	96.3	61.3	71.4	72.4	0.0
Caroline	64.7	87.7	48.2	75.8	0.0	0.0
Carroll	54.8	73.3	42.1	56.3	0.0	0.0
Cecil	61.4	79.1	45.6	60.4	**	**
Charles	58.1	82.2	41.6	60.7	49.7	32.6
Dorchester	77.4	142.8	32.7	79.3	67.6	0.0
Frederick	47.9	69.7	30.5	46.7	90.2	0.0
Garrett	54.8	73.0	37.7	55.2	0.0	0.0
Harford	60.5	76.7	46.7	60.6	57.5	41.5
Howard	41.3	51.4	36.6	45.6	29.6	4.8
Kent	68.8	76.6	61.4	52.2	168.9	0.0
Montgomery	30.3	35.5	26.8	30.6	35.1	18.2
Prince George's	51.8	66.4	40.5	47.0	59.1	22.0
Queen Anne's	61.4	55.6	67.6	62.2	**	0.0
Saint Mary's	64.0	101.5	32.6	61.8	73.0	**
Somerset	89.3	130.4	52.8	90.5	92.3	0.0
Talbot	53.5	68.0	43.6	54.1	**	0.0
Washington	50.9	61.0	42.0	51.2	71.1	0.0
Wicomico	76.5	99.9	57.7	81.7	60.0	0.0
Worcester	60.4	103.3	24.9	62.4	**	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 16.
Number of Lung and Bronchus Cancer Cases by Jurisdiction, Gender and Race, Maryland, 1998-2002

Jurisdiction	Total	Gender		Race			
		Males	Females	Whites	Blacks	Other	Unknown
Maryland	17,011	9,250	7,758	13,062	3,659	259	31
Allegany	386	226	160	378	s	0	<6
Anne Arundel	1,601	837	763	1,428	151	s	<6
Baltimore City	2,968	1,617	1,351	1,301	1,644	16	7
Baltimore County	3,184	1,698	1,485	2,848	305	s	<6
Calvert	235	142	93	201	s	<6	0
Caroline	124	70	54	102	s	<6	0
Carroll	419	246	173	406	s	<6	0
Cecil	298	167	131	287	s	<6	0
Charles	303	180	123	241	57	<6	<6
Dorchester	187	107	80	144	43	0	0
Frederick	526	329	197	480	41	<6	<6
Garrett	113	71	42	s	<6	0	0
Harford	715	396	319	670	s	<6	0
Howard	507	246	261	415	79	13	0
Kent	105	55	50	91	14	0	0
Montgomery	1,743	874	868	1,439	192	s	<6
Prince George's	1,654	918	736	838	767	s	<6
Queen Anne's	158	74	84	136	s	<6	0
Saint Mary's	257	153	104	224	29	<6	<6
Somerset	133	78	55	97	36	0	0
Talbot	167	92	75	146	s	<6	0
Washington	506	267	239	481	s	0	<6
Wicomico	380	198	182	311	s	<6	0
Worcester	320	195	125	269	44	<6	<6
Unknown	22	14	8	17	<6	0	<6

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 17.
Lung and Bronchus Cancer Age-Adjusted Incidence Rates* by Jurisdiction, Gender and Race, Maryland, 1998-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	68.0	86.5	54.8	68.6	69.7	33.4
Allegany	78.3	107.5	55.8	78.2	**	0.0
Anne Arundel	74.4	89.0	64.3	75.2	70.0	**
Baltimore City	90.5	122.0	70.0	95.4	87.6	**
Baltimore County	74.5	93.8	60.9	76.1	70.3	29.0
Calvert	80.6	115.6	57.6	80.0	86.5	**
Caroline	78.3	101.1	62.3	75.6	**	**
Carroll	60.5	82.2	44.8	60.4	**	**
Cecil	76.2	94.2	62.8	76.7	**	**
Charles	66.9	89.3	49.7	68.6	62.2	**
Dorchester	92.3	121.2	71.1	90.9	98.3	0.0
Frederick	63.9	91.8	43.0	62.0	109.7	**
Garrett	64.4	90.7	43.2	64.1	**	0.0
Harford	74.0	95.0	59.3	75.2	65.4	**
Howard	58.1	64.6	53.9	59.2	65.4	**
Kent	74.3	87.5	62.2	75.4	**	0.0
Montgomery	42.4	50.1	36.7	43.1	47.0	30.8
Prince George's	56.2	73.7	44.1	62.5	50.5	34.8
Queen Anne's	72.7	71.6	73.7	70.5	**	**
Saint Mary's	74.6	95.6	57.1	77.1	60.1	**
Somerset	99.6	127.0	75.1	97.8	104.7	0.0
Talbot	65.0	81.2	52.9	64.0	**	**
Washington	69.8	84.8	59.3	68.5	**	0.0
Wicomico	88.7	108.8	74.1	90.5	84.7	**
Worcester	93.3	124.3	67.1	90.2	104.0	**

* 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, 1998-2002

Table 18.
Number of Lung and Bronchus Cancer Deaths
by Jurisdiction, Gender and Race, Maryland, 1999-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	11,628	6,506	5,122	8,835	2,663	130
Allegany	226	141	85	223	3	0
Anne Arundel	1,072	571	501	959	103	10
Baltimore City	2,131	1,183	948	924	1197	10
Baltimore County	2,210	1,212	998	1,994	205	11
Calvert	170	99	71	147	23	0
Caroline	98	55	43	83	15	0
Carroll	308	174	134	302	6	0
Cecil	215	129	86	205	9	1
Charles	215	122	93	171	39	5
Dorchester	124	78	46	95	29	0
Frederick	332	213	119	302	30	0
Garrett	71	47	24	71	0	0
Harford	468	266	202	433	30	5
Howard	308	169	139	254	46	8
Kent	68	40	28	55	13	0
Montgomery	1,082	556	526	904	128	50
Prince George's	1,299	738	561	629	642	28
Queen Anne's	104	52	52	88	15	1
Saint Mary's	152	99	53	131	20	1
Somerset	85	57	28	64	21	0
Talbot	106	65	41	97	9	0
Washington	347	188	159	340	7	0
Wicomico	250	145	105	204	46	0
Worcester	187	107	80	160	27	0

Source: CDC WONDER, 1999-2002

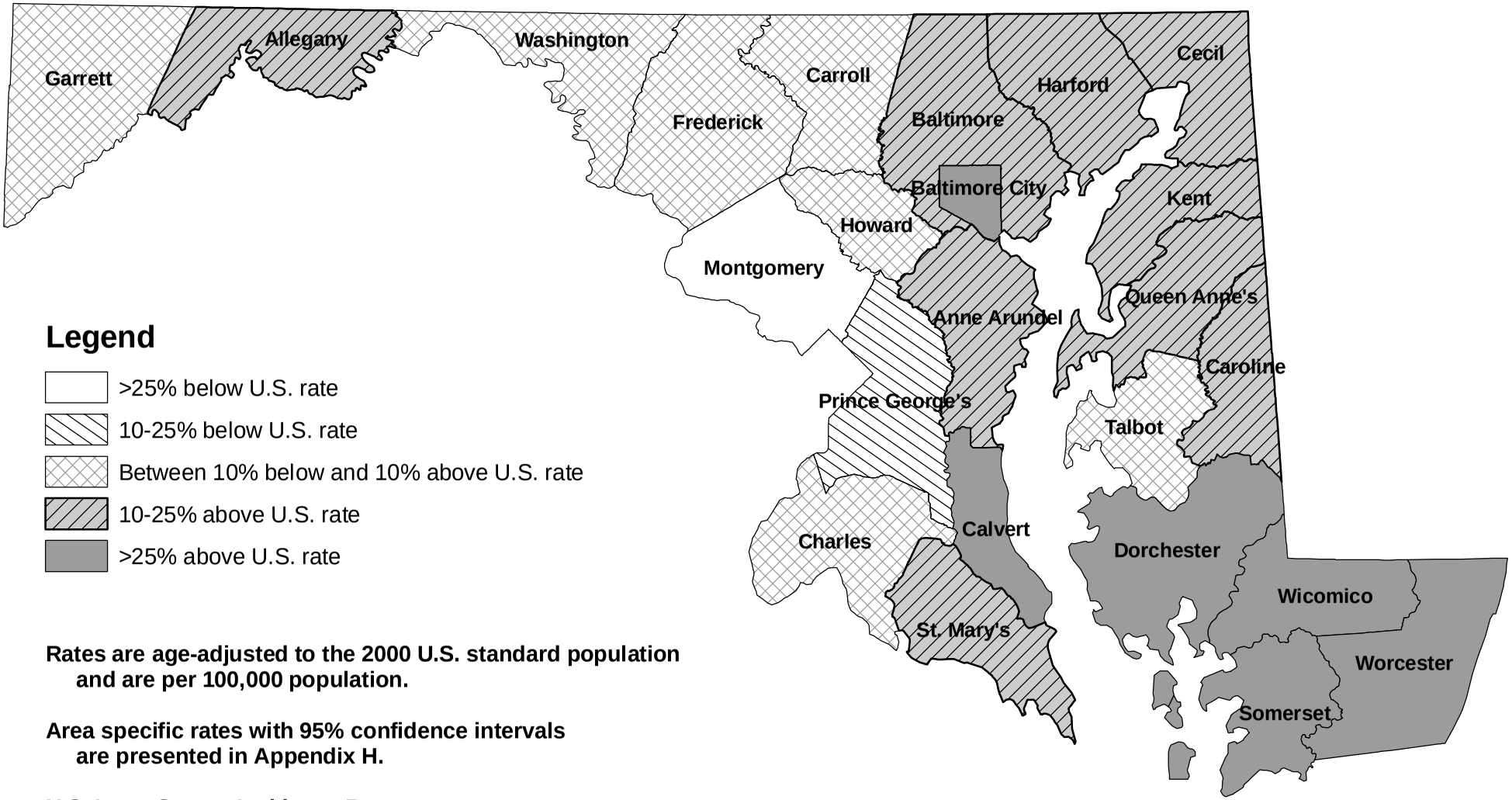
Table 19.
Lung and Bronchus Cancer Age-Adjusted Mortality Rates* by Jurisdiction, Gender and Race, Maryland, 1999-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	58.1	77.3	44.6	57.6	64.3	21.4
Allegany	57.0	85.6	36.1	57.4	48.6	0.0
Anne Arundel	63.2	78.0	52.7	64.0	60.5	36.1
Baltimore City	81.3	113.1	60.4	83.3	80.4	27.4
Baltimore County	64.0	84.7	49.8	65.7	59.4	15.9
Calvert	71.3	98.7	53.9	71.9	71.4	0.0
Caroline	76.5	100.4	59.1	76.1	83.9	0.0
Carroll	55.8	75.5	42.5	56.3	45.3	0.0
Cecil	67.9	88.7	50.8	67.6	83.6	40.0
Charles	59.9	80.7	45.8	61.7	53.5	42.0
Dorchester	76.0	112.7	50.8	74.1	82.6	0.0
Frederick	50.0	73.5	32.1	48.3	100.6	0.0
Garrett	50.4	74.6	29.9	50.6	0.0	0.0
Harford	60.9	81.0	46.7	61.1	62.7	30.3
Howard	45.0	59.3	36.3	46.0	51.3	19.1
Kent	58.9	80.3	43.3	55.5	79.0	0.0
Montgomery	32.7	40.6	27.1	33.4	39.2	18.6
Prince George's	56.1	76.0	42.5	58.6	55.6	27.3
Queen Anne's	59.6	63.1	56.6	57.1	84.1	1,550.8
Saint Mary's	54.9	77.5	36.2	56.2	51.1	86.2
Somerset	79.2	115.6	48.6	80.4	76.3	0.0
Talbot	50.1	71.9	34.7	52.4	34.4	0.0
Washington	59.2	76.5	47.1	59.7	61.6	0.0
Wicomico	72.3	99.7	53.0	73.4	71.7	0.0
Worcester	66.0	85.0	51.7	64.9	79.0	0.0

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

Source: CDC WONDER, 1999-2002

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



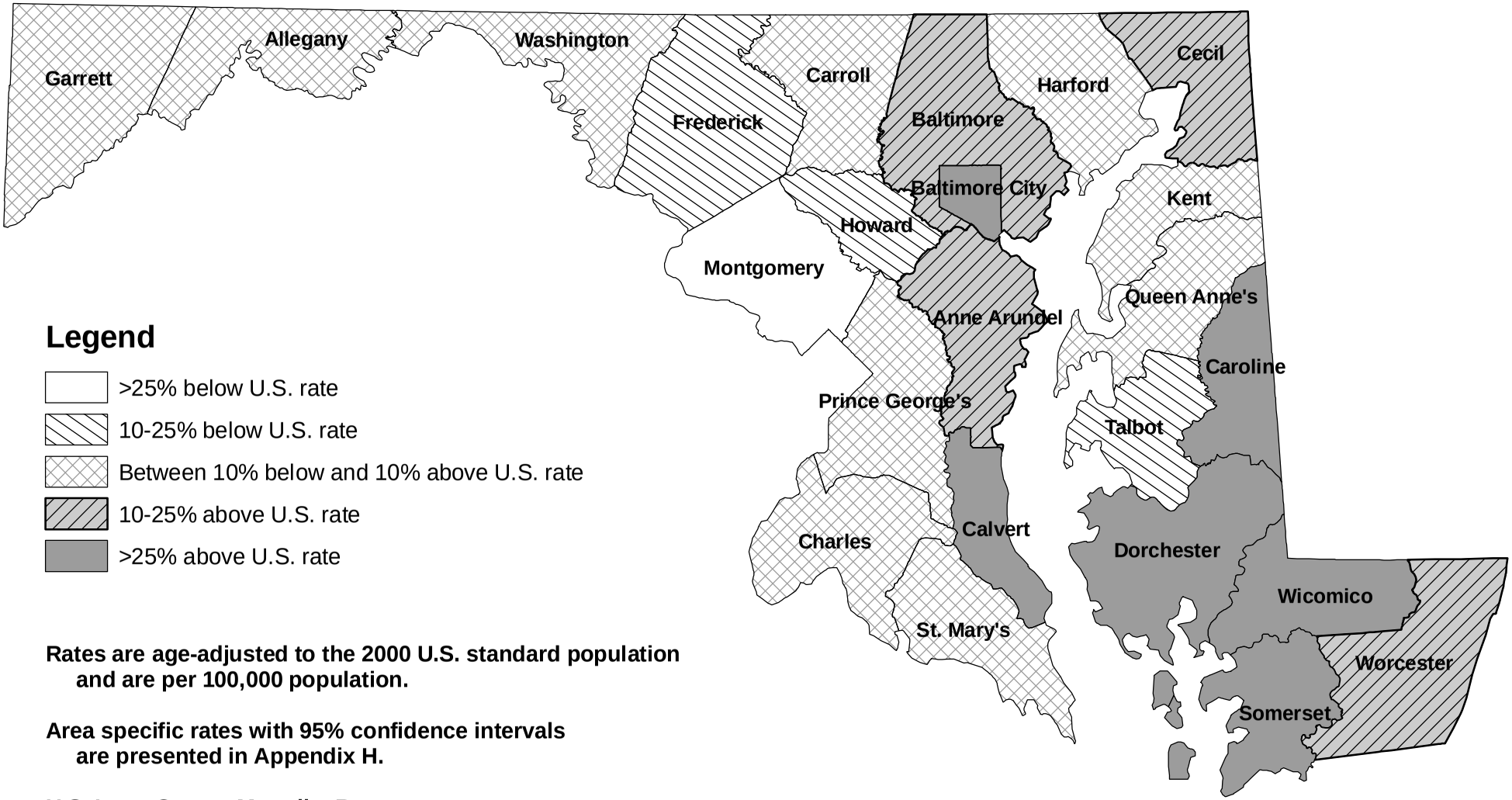
Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 population.

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

U.S. Lung Cancer Incidence Rate, 1998-2002: 64.2 per 100,000 population

Source: Maryland Cancer Registry, 1998-2002

Maryland Lung 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. Lung Cancer Mortality Rate, 1998-2002: 55.7 per 100,000 population

Source: CDC WONDER, 1999-2002

B. Colon and Rectum Cancer

Incidence (New Cases)

Cancer of the colon or rectum is often referred to as colorectal cancer. There were 2,549 new cases of colorectal cancer diagnosed among Maryland residents in 2002. The age-adjusted colorectal cancer incidence rate in Maryland for 2002 is 48.9 per 100,000 population (47.1-50.9, 95% C.I.) which is statistically significantly less than the 2002 U.S. SEER age-adjusted colorectal cancer incidence rate of 51.9 per 100,000 population.

Mortality (Deaths)

A total of 1,078 persons died of colorectal cancer in 2002 in Maryland. Colorectal cancer accounts for 10.4% of all cancer deaths and is the second leading cause of cancer deaths in Maryland. The age-adjusted colorectal cancer mortality rate in Maryland is 21.0 per 100,000 population (19.7-22.3, 95% C.I.). This rate is statistically significantly higher than the 2002 U.S. SEER colorectal cancer mortality rate of 19.6 per 100,000 population. Maryland has the 12th highest colorectal cancer mortality rate among the states and the District of Columbia for the period 1998-2002.

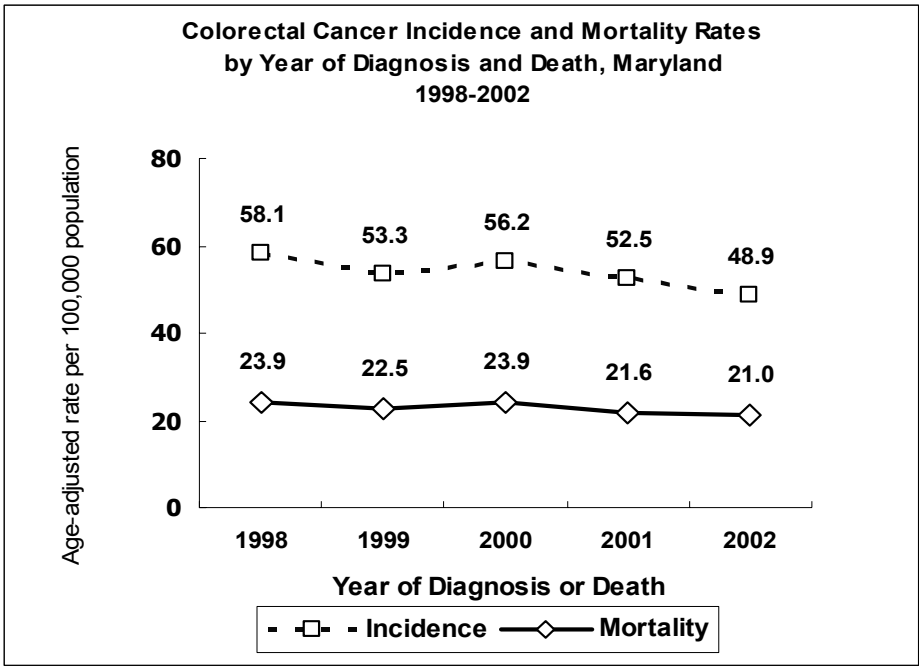
Table 20.
Colorectal Cancer Incidence and Mortality Rates
by Gender and Race, Maryland and the United States, 2002

Incidence 2002	*Total*	*Males*	*Females*	*Whites*	*Blacks*	*Other*
New Cases (#)	2,549	1,258	1,291	1,877	594	78
Incidence Rate*	48.9	55.8	43.4	47.9	54.2	42.9
U.S. SEER Rate*	51.9	59.9	45.6	50.9	61.6	NA
Mortality 2002	*Total*	*Males*	*Females*	*Whites*	*Blacks*	*Other*
MD Deaths (#)	1,078	539	539	789	277	12
MD Mortality Rate*	21.0	25.0	17.7	20.0	27.2	9.1
U.S. Mortality Rate*	19.6	23.8	16.5	19.1	26.9	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

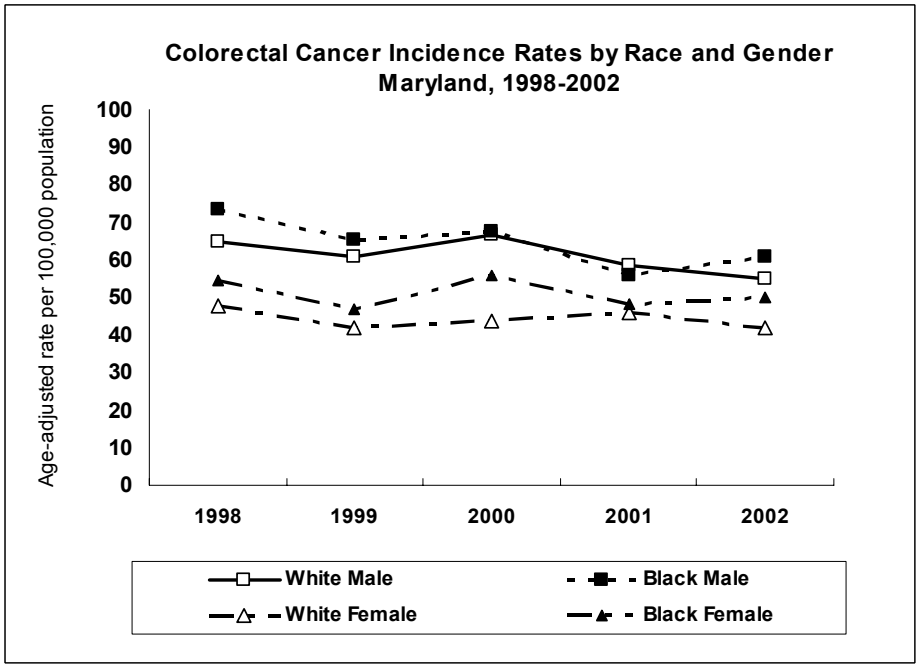


Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2002
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Incidence and Mortality Trends

Both incidence and mortality rates for colorectal cancer have been declining. Incidence rates dropped an average of 3.5% per year from 1998 to 2002, and mortality rates dropped an average of 3.0% per year.

See Appendix I, Tables 1 and 2.



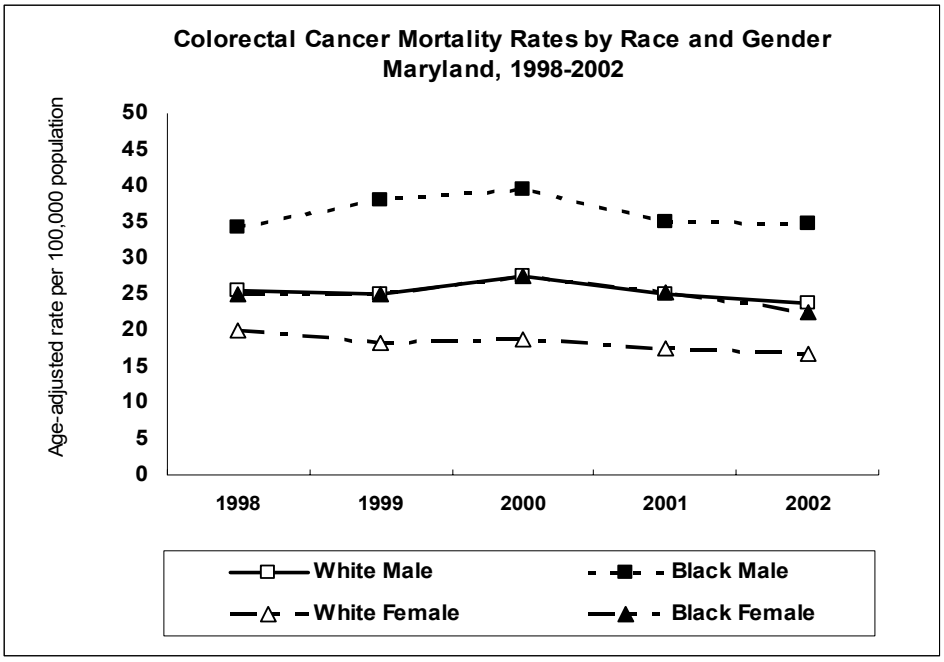
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2002

Race and Gender Incidence Trends

All groups depicted in the graph show a drop in incidence rates over time. Overall, males had higher rates than females.

The largest drop occurred with an average annual decline of 5.1% for black males from 1998 to 2002.

See Appendix I, Table 7.



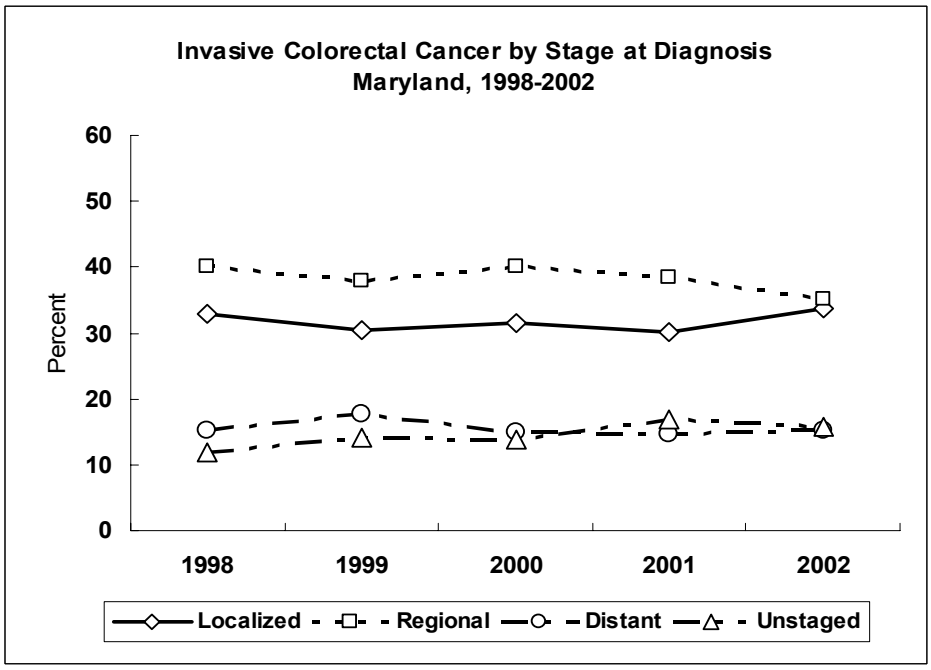
Rates are age-adjusted to 2000 U.S. standard population
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Race and Gender Mortality Trends

Mortality rates for black males were highest; white females were lowest. In addition, mortality rates for white males and black females followed a very similar pattern and were about equal.

Mortality rates for all four categories have been decreasing with the largest decline occurring for white females, having an average annual drop of 3.7% from 1998 to 2002.

See Appendix I, Table 8.



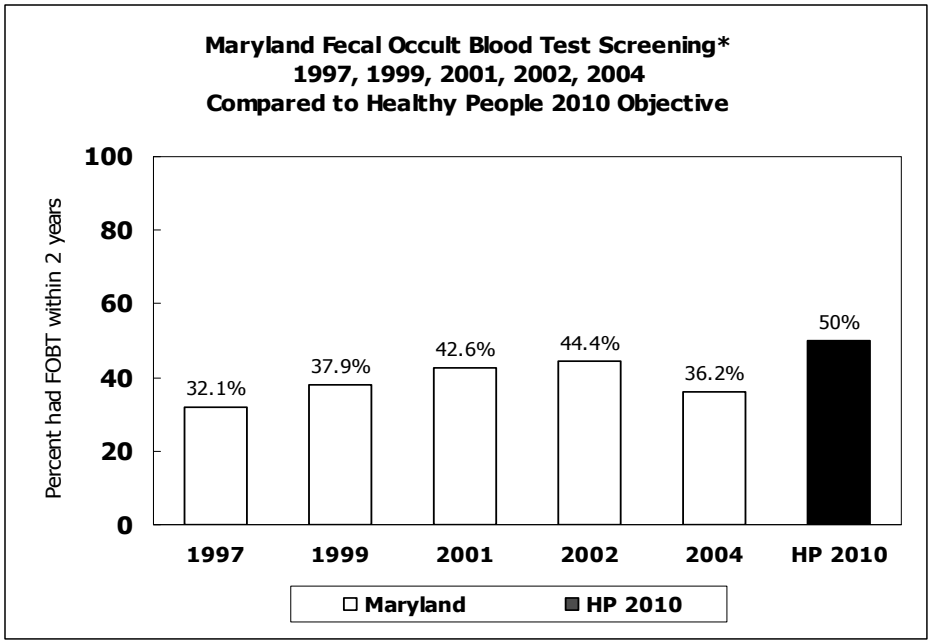
Maryland Cancer Registry, 1998-2002

Stage at Diagnosis

In 2002, 33.9% of colorectal cancers were diagnosed at the localized (early) stage in Maryland, compared with 32.8% in 1998.

The percentage of unstaged colorectal cancer has increased from 11.8% in 1998 to 15.9% in 2002.

See Appendix J, Table 3.

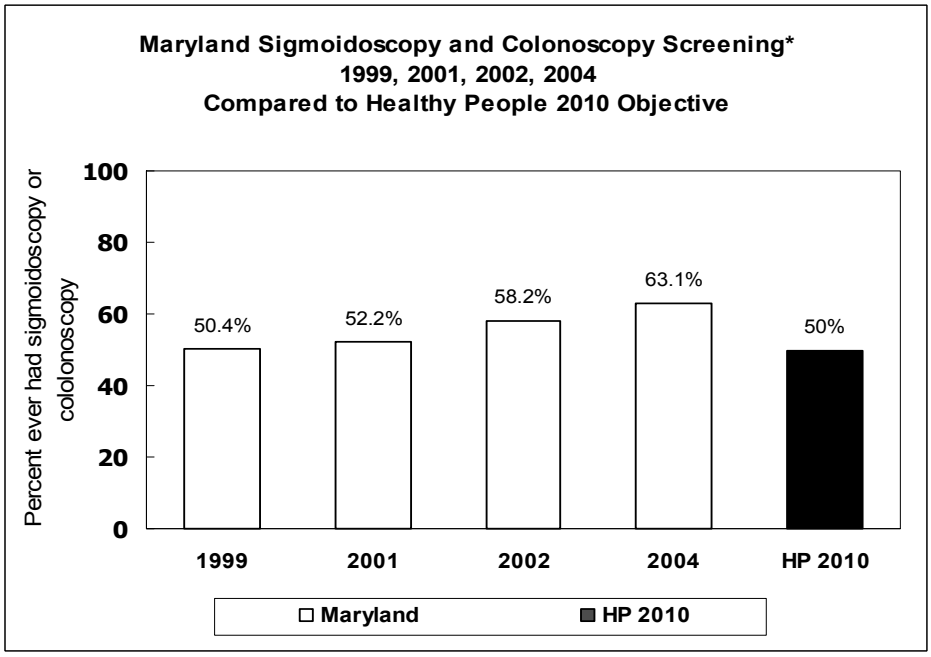


* Adults age 50 years and older having FOBT within the preceding 2 years
BRFSS, Maryland DHMH Center for Preventive Health Services, 1997, 1999, 2001
Maryland Cancer Survey, DHMH Center for Cancer Surveillance and Control, 2002, 2004
Healthy People 2010, U.S. Department of Health and Human Services, 2000

Healthy People 2010 Objectives

One Healthy People 2010 objective for colorectal cancer is to increase to 50% the proportion of adults age 50 years and older who received a fecal occult blood test (FOBT) in the preceding 2 years.

After a steady increase from 1997 to 2002, FOBT testing declined to 36.2% in 2004 from 44.4% in 2002. This may be due to the use of alternate screening methods, such as colonoscopy.



* Adults age 50 years and older ever having had sigmoidoscopy or colonoscopy
BRFSS, Maryland DHMH Center for Preventive Health Services, 1999, 2001
Maryland Cancer Survey, DHMH Center for Cancer Surveillance and Control, 2002, 2004

Healthy People 2010 Objectives

The second Healthy People 2010 objective for colorectal cancer is to increase to 50% the proportion of adults age 50 years and older who ever received a sigmoidoscopy or colonoscopy.

In 2004, 63.1% of Maryland adults age 50 years and older reported having ever had a sigmoidoscopy or colonoscopy, again surpassing the Healthy People objective.

Public Health Evidence (quoted from NCI, PDQ, 5/22/2006 and 7/21/2006 and USPSTF, 7/2002)

Screening

Screening for colorectal cancer reduces colorectal cancer mortality. The United States Preventive Services Task Force (USPSTF) strongly recommends that clinicians screen men and women 50 years of age and older for colorectal cancer. The USPSTF found fair to good evidence that several screening methods (e.g., fecal occult blood testing [FOBT], sigmoidoscopy, colonoscopy, double contrast barium enema [DCBE]) are effective in reducing mortality from colorectal cancer. Proven methods of FOBT screening use guaiac-based test cards prepared at home by patients from three consecutive stool samples and forwarded to the clinician. They concluded that the benefits from screening substantially outweigh potential harms, but the quality of evidence, magnitude of benefit and potential harms vary with each method. They found that there were insufficient data to determine which strategy is best in terms of the balance of benefits and potential harms or cost-effectiveness. The USPSTF found insufficient evidence that newer technologies, such as computer tomographic colography ("virtual colonoscopy"), are effective in improving health outcomes.

Prevention

Colonoscopy with removal of adenomas reduces the risk of colorectal cancer. Harms of polyp removal include infrequent perforation of the colon during the procedure, bleeding, and infection following the procedure. Although far from clear-cut, the available evidence suggests colorectal cancer risk is possibly associated with some interaction of dietary fat and protein and caloric intake. Epidemiological, experimental (animal), and clinical studies suggest that diets low in calcium and folate are associated with an increased incidence of colorectal cancer. There is inadequate evidence to suggest that a diet low in fat and high in fiber, fruits, and vegetables decreases the risk of colorectal cancer; however, there are no known harms from dietary modification, including reduction of fatty acids and increase in intake of fiber, fruits, and vegetables. Obesity is associated with a two-fold risk increase in colorectal cancer in premenopausal women. Cigarette smoking is associated with an increased tendency to form adenomas and to develop colorectal cancer.

Chemoprevention

Nonsteroidal anti-inflammatory drugs (NSAIDs) including proxicam, sulindac, and aspirin may prevent adenoma formation or cause adenomatous polyps to regress in individuals with prior colorectal cancer or adenomatous polyps and in the setting of familial adenomatous polyposis. However, harms of NSAID use include upper gastrointestinal bleeding and serious cardiovascular events such as heart attack, heart failure, and hemorrhagic stroke.

Public Health Intervention for Colorectal Cancer (DHMH Colorectal Cancer Medical Advisory Committee, 2005)
Early detection of colorectal cancer: ➢ For those at average risk, screen with colonoscopy or with FOBT and flexible sigmoidoscopy. ➢ For those unable or unwilling to undergo colonoscopy or sigmoidoscopy, FOBT is an alternative initial screening method. ➢ Reserve DCBE or other emerging technologies as an alternative for situations where the patient and the provider discuss and determine that DCBE or other test is dedicated for the individual.

Table 21.
Number of Colorectal Cancer Cases
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	2,549	1,258	1,291	1,877	594	78
Allegany	52	26	26	52	0	0
Anne Arundel	236	116	120	189	40	7
Baltimore City	386	173	213	166	214	6
Baltimore County	520	259	261	426	82	12
Calvert	38	18	20	32	<6	<6
Caroline	20	14	6	s	<6	0
Carroll	74	36	38	s	<6	0
Cecil	41	25	16	s	<6	0
Charles	39	25	14	29	s	<6
Dorchester	27	16	11	s	<6	0
Frederick	106	50	56	101	<6	<6
Garrett	18	8	10	18	0	0
Harford	77	47	30	68	s	<6
Howard	103	51	52	86	11	6
Kent	17	7	10	s	<6	0
Montgomery	292	144	148	229	35	28
Prince George's	244	123	121	96	139	9
Queen Anne's	24	10	14	s	<6	0
Saint Mary's	38	20	18	35	<6	<6
Somerset	12	s	<6	6	6	0
Talbot	33	14	19	29	<6	<6
Washington	70	35	35	s	<6	0
Wicomico	45	19	26	34	s	<6
Worcester	35	14	21	28	s	<6
Unknown	<6	<6	<6	<6	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, 2002

Table 22.
Colorectal Cancer Age-Adjusted Incidence Rates*
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	48.9	55.8	43.4	47.9	54.2	42.9
Allegany	53.6	64.6	44.5	54.8	0.0	0.0
Anne Arundel	53.4	56.8	49.3	49.1	90.3	**
Baltimore City	59.4	67.5	54.2	61.3	57.8	**
Baltimore County	59.6	70.3	51.5	56.3	83.1	**
Calvert	55.4	**	**	54.2	**	**
Caroline	**	**	**	**	**	0.0
Carroll	50.4	58.0	44.7	50.3	**	0.0
Cecil	49.5	**	**	50.8	**	0.0
Charles	38.2	**	**	36.5	**	**
Dorchester	67.8	**	**	**	**	0.0
Frederick	59.7	63.2	56.2	60.5	**	**
Garrett	**	**	**	**	0.0	0.0
Harford	35.7	46.8	26.3	34.1	**	**
Howard	51.1	54.5	46.1	53.4	**	**
Kent	**	**	**	**	**	0.0
Montgomery	33.0	38.1	28.8	32.4	42.9	33.9
Prince George's	37.9	44.3	33.0	35.9	40.6	**
Queen Anne's	**	**	**	**	**	0.0
Saint Mary's	50.9	**	**	55.3	**	**
Somerset	**	**	**	**	**	0.0
Talbot	59.8	**	**	58.2	**	**
Washington	47.6	54.4	43.2	45.8	**	0.0
Wicomico	51.2	**	51.0	48.2	**	**
Worcester	50.3	**	**	46.8	**	**

* 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 23.
Number of Colorectal Cancer Deaths
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	1,078	539	539	789	277	12
Allegany	19	10	9	18	<6	0
Anne Arundel	89	46	43	74	15	0
Baltimore City	200	103	97	89	110	1
Baltimore County	201	91	110	171	28	2
Calvert	14	9	<6	12	<6	0
Caroline	9	<6	<6	<6	<6	0
Carroll	33	21	12	31	2	0
Cecil	19	12	7	18	<6	0
Charles	22	12	10	18	3	1
Dorchester	11	10	<6	9	<6	0
Frederick	36	24	12	33	2	1
Garrett	8	<6	<6	8	0	0
Harford	35	16	19	27	8	0
Howard	33	21	12	24	8	1
Kent	<6	<6	<6	<6	0	0
Montgomery	111	47	64	92	14	5
Prince George's	124	55	69	61	62	1
Queen Anne's	8	<6	6	7	<6	0
Saint Mary's	22	11	11	21	<6	0
Somerset	<6	<6	0	<6	0	0
Talbot	12	<6	7	9	<6	0
Washington	32	15	17	32	0	0
Wicomico	24	14	10	17	7	0
Worcester	10	<6	6	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 24.
Colorectal Cancer Age-Adjusted Mortality Rates*
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Others
Maryland	21.0	25.0	17.7	20.0	27.2	9.1
Allegany	18.3	26.3	14.6	17.7	**	0.0
Anne Arundel	20.4	24.3	17.5	19.0	38.7	0.0
Baltimore City	30.7	40.9	23.7	32.1	30.6	13.4
Baltimore County	22.6	24.8	20.5	21.9	32.7	20.2
Calvert	21.7	29.3	**	21.0	**	0.0
Caroline	27.7	**	**	**	**	0.0
Carroll	22.3	37.0	14.1	21.8	44.9	0.0
Cecil	22.0	30.0	15.4	21.6	**	0.0
Charles	23.7	23.9	20.1	25.7	9.8	110.8
Dorchester	26.0	59.1	**	27.3	**	0.0
Frederick	20.2	29.4	11.7	19.6	28.8	36.1
Garrett	23.5	**	**	23.6	0.0	0.0
Harford	18.8	20.1	17.7	15.8	67.9	0.0
Howard	17.0	26.0	11.5	14.9	34.9	11.8
Kent	**	**	**	**	0.0	0.0
Montgomery	12.8	13.0	12.2	13.0	16.7	6.3
Prince George's	21.4	23.5	19.9	22.8	21.4	5.5
Queen Anne's	19.0	**	24.5	19.6	**	0.0
Saint Mary's	30.8	35.7	28.9	34.6	**	0.0
Somerset	**	**	0.0	**	0.0	0.0
Talbot	20.7	**	18.6	17.3	**	0.0
Washington	21.3	24.7	19.1	21.9	0.0	0.0
Wicomico	27.2	36.5	17.8	24.0	43.9	0.0
Worcester	15.0	**	14.6	11.5	**	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 25.
Number of Colorectal Cancer Cases
by Jurisdiction, Gender and Race, Maryland, 1998-2002

Jurisdiction	Total	Gender		Race			
		Males	Females	Whites	Blacks	Other	Unknown
Maryland	13,267	6,594	6,670	9,803	2,862	404	198
Allegany	299	138	161	294	<6	0	<6
Anne Arundel	1,132	574	558	943	143	21	25
Baltimore City	1,902	861	1,040	885	984	21	12
Baltimore County	2,488	1,215	1,273	2,095	318	44	31
Calvert	171	86	84	142	24	<6	<6
Caroline	111	65	46	95	16	0	0
Carroll	369	180	189	355	10	<6	<6
Cecil	213	114	99	204	s	<6	<6
Charles	224	118	106	162	51	<6	s
Dorchester	135	72	63	110	s	0	<6
Frederick	501	269	232	456	28	8	9
Garrett	92	46	46	92	0	0	0
Harford	493	267	226	432	52	<6	<6
Howard	453	219	234	347	70	28	8
Kent	74	30	44	63	11	0	0
Montgomery	1,667	845	822	1,260	188	183	36
Prince George's	1,477	736	740	649	745	54	29
Queen Anne's	128	60	68	106	s	0	<6
Saint Mary's	227	122	105	186	36	<6	<6
Somerset	76	51	25	58	s	<6	0
Talbot	164	90	74	133	s	<6	<6
Washington	408	202	206	392	s	<6	0
Wicomico	218	92	126	175	s	<6	0
Worcester	198	112	86	149	31	s	<6
Unknown	47	30	17	20	<6	<6	20

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 26.
Colorectal Cancer Age-Adjusted Incidence Rates*
by Jurisdiction, Gender and Race, Maryland, 1998-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	53.3	62.6	46.4	51.5	56.2	49.7
Allegany	60.7	67.5	56.1	61.0	**	0.0
Anne Arundel	53.1	61.3	47.3	50.5	66.0	**
Baltimore City	57.6	66.9	52.0	61.4	54.0	**
Baltimore County	58.1	68.3	50.4	55.5	72.7	57.8
Calvert	56.9	63.5	50.7	55.2	**	**
Caroline	70.2	93.8	51.2	70.0	**	0.0
Carroll	53.5	63.3	46.6	53.0	**	**
Cecil	54.8	61.9	47.4	54.9	**	**
Charles	51.1	58.7	44.0	47.3	58.2	**
Dorchester	67.3	84.6	55.2	69.4	**	0.0
Frederick	60.9	75.0	50.2	59.3	77.5	**
Garrett	53.4	60.5	47.5	53.7	0.0	0.0
Harford	51.8	65.3	42.4	49.3	84.1	**
Howard	50.5	55.3	45.9	47.8	64.6	47.0
Kent	51.6	48.3	54.3	51.4	**	0.0
Montgomery	39.8	48.1	33.8	37.2	46.9	46.7
Prince George's	50.9	60.6	44.1	49.1	50.7	46.4
Queen Anne's	61.7	65.0	60.0	58.4	**	0.0
Saint Mary's	66.6	77.0	58.2	64.2	78.0	**
Somerset	57.5	87.1	**	58.2	**	**
Talbot	63.7	80.3	51.3	58.1	97.0	**
Washington	56.2	64.1	49.1	55.6	**	**
Wicomico	51.2	49.6	49.9	51.1	50.9	**
Worcester	58.7	72.5	46.7	51.0	73.9	**

* 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, 1998-2002

Table 27.
Number of Colorectal Cancer Deaths
by Jurisdiction, Gender and Race, Maryland, 1999-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	4,456	2,188	2,268	3,222	1,151	83
Allegany	99	49	50	96	3	0
Anne Arundel	331	174	157	280	47	4
Baltimore City	766	362	404	315	447	4
Baltimore County	822	388	434	708	103	11
Calvert	58	33	25	47	10	1
Caroline	40	22	18	32	8	0
Carroll	130	62	68	124	6	0
Cecil	76	42	34	71	5	0
Charles	92	51	41	71	19	2
Dorchester	50	36	14	39	11	0
Frederick	151	84	67	136	13	2
Garrett	37	19	18	37	0	0
Harford	155	74	81	134	21	0
Howard	117	61	56	93	21	3
Kent	19	8	11	14	5	0
Montgomery	480	214	266	384	55	41
Prince George's	572	280	292	254	304	14
Queen Anne's	38	12	26	29	9	0
Saint Mary's	72	41	31	62	9	1
Somerset	22	15	7	15	7	0
Talbot	48	23	25	31	17	0
Washington	134	67	67	132	2	0
Wicomico	86	38	48	67	19	0
Worcester	61	33	28	51	10	0

Source: CDC WONDER, 1999-2002

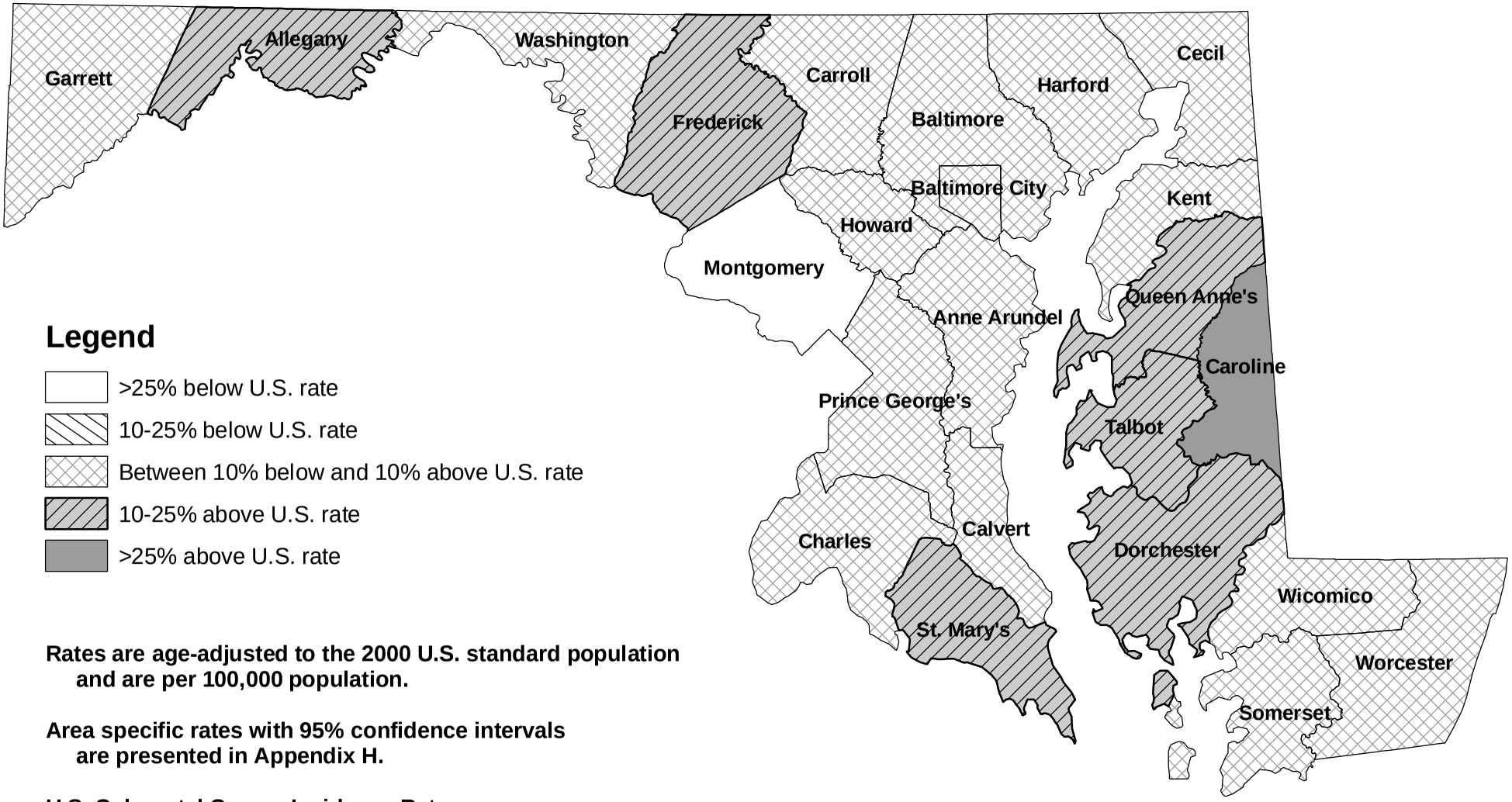
Table 28.
Colorectal Cancer Age-Adjusted Mortality Rates*
by Jurisdiction, Gender and Race, Maryland, 1999-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	22.5	27.0	19.3	21.1	29.4	14.9
Allegany	24.1	30.9	19.7	23.8	60.7	0.0
Anne Arundel	20.0	24.4	16.7	19.1	29.6	18.2
Baltimore City	29.1	35.8	24.8	27.0	31.4	12.3
Baltimore County	23.6	27.9	20.6	23.0	33.2	19.1
Calvert	25.3	36.0	18.3	23.8	32.2	51.2
Caroline	31.4	38.7	24.8	29.5	45.8	0.0
Carroll	23.2	29.0	20.5	22.8	44.5	0.0
Cecil	24.8	30.0	20.2	24.1	48.8	0.0
Charles	27.0	30.8	21.7	27.2	24.6	47.4
Dorchester	30.1	53.7	14.6	30.4	30.7	0.0
Frederick	23.2	31.0	17.8	22.1	44.0	21.7
Garrett	26.9	30.9	22.9	27.0	0.0	0.0
Harford	21.5	25.0	19.4	20.3	44.9	0.0
Howard	17.4	21.2	14.6	17.0	23.2	13.1
Kent	16.9	15.4	18.3	14.9	31.8	0.0
Montgomery	14.4	15.8	13.2	13.9	16.8	14.9
Prince George's	25.8	30.8	22.4	24.3	27.7	14.1
Queen Anne's	23.7	16.5	28.5	20.9	45.9	0.0
Saint Mary's	26.5	33.4	21.2	27.3	22.5	20.6
Somerset	20.5	35.6	10.4	18.5	27.1	0.0
Talbot	22.6	24.5	21.0	16.3	67.8	0.0
Washington	22.8	28.0	19.1	23.1	9.9	0.0
Wicomico	25.3	25.9	23.0	24.4	31.1	0.0
Worcester	23.0	28.9	17.6	21.8	30.0	0.0

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

Source: CDC WONDER, 1999-2002

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



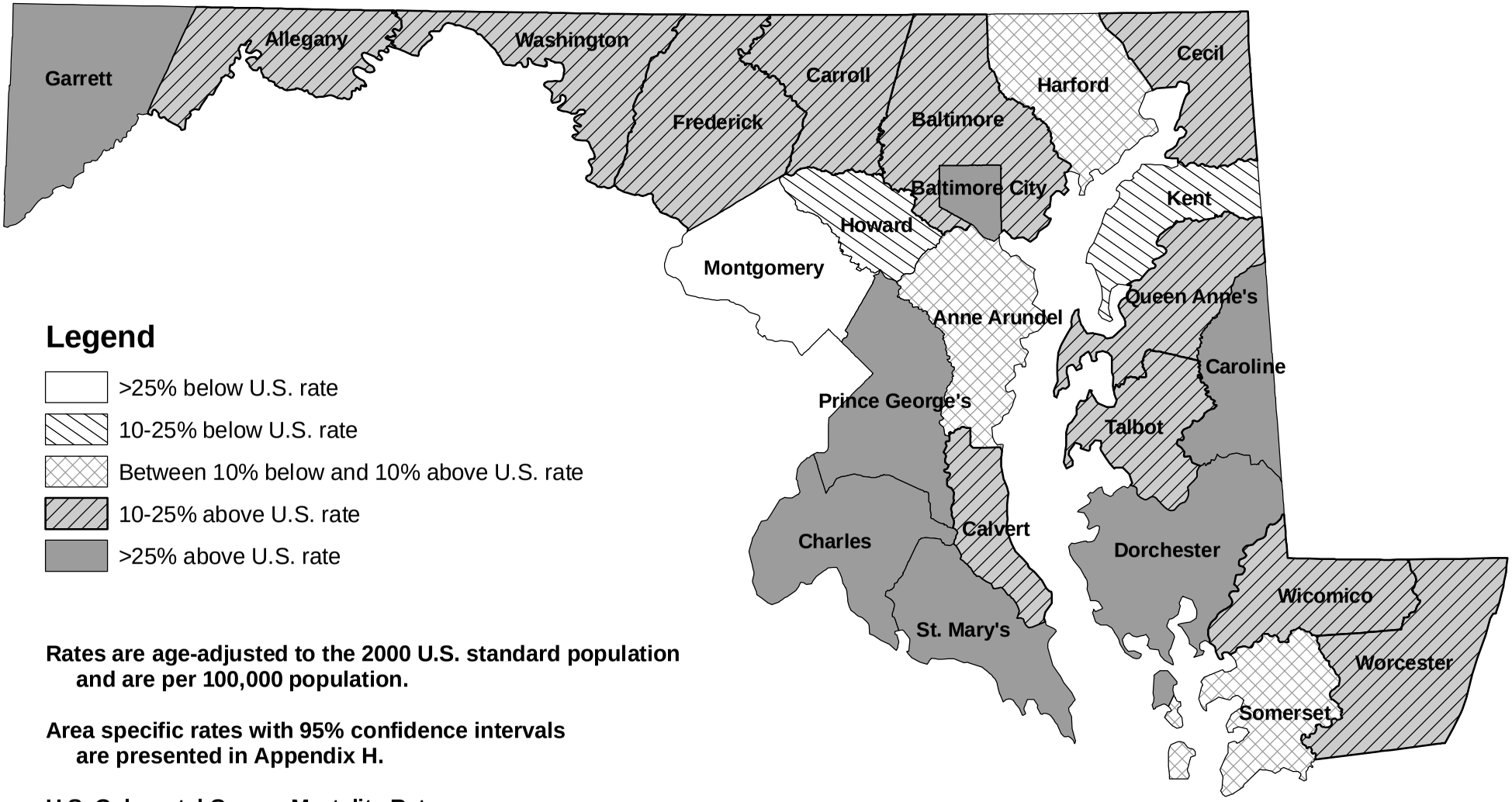
Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 population.

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

U.S. Colorectal Cancer Incidence Rate, 1998-2002: 54.0 per 100,000 population

Source: Maryland Cancer Registry, 1998-2002

Maryland Colorectal 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. Colorectal Cancer Mortality Rate, 1998-2002: 20.5 per 100,000 population

Source: CDC WONDER, 1999-2002

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.

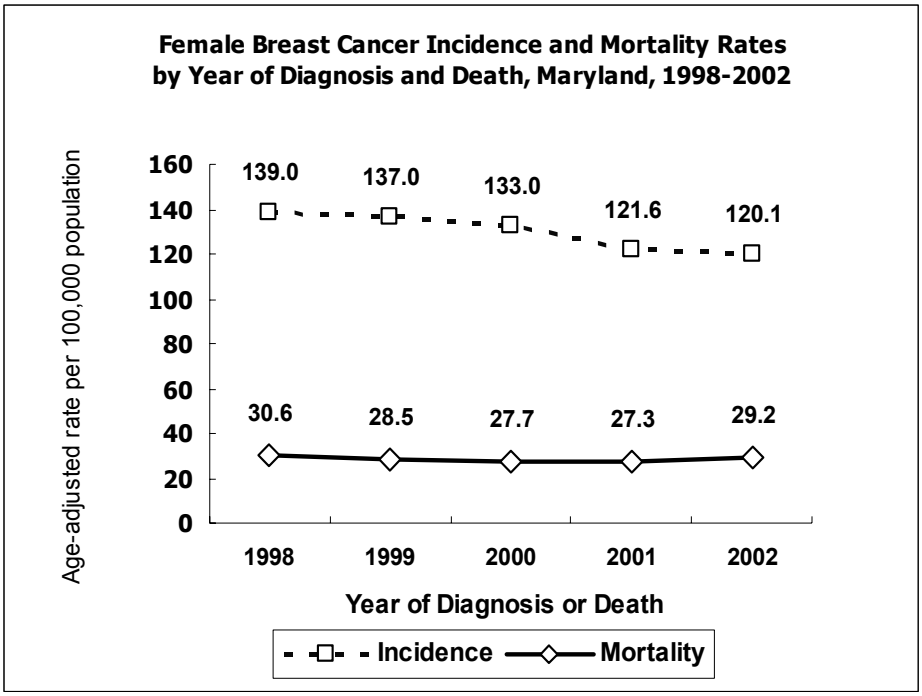
Mortality (Deaths)

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 5th 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

Incidence 2002	*Total*	*Whites*	*Blacks*	*Other*
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
Mortality 2002	*Total*	*Whites*	*Blacks*	*Other*
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



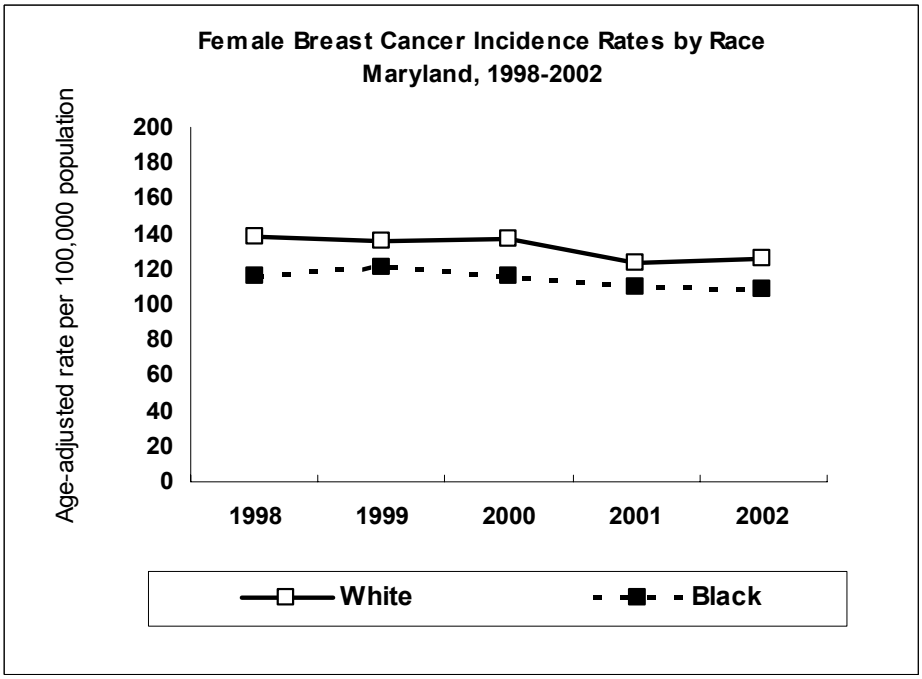
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2002
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

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.



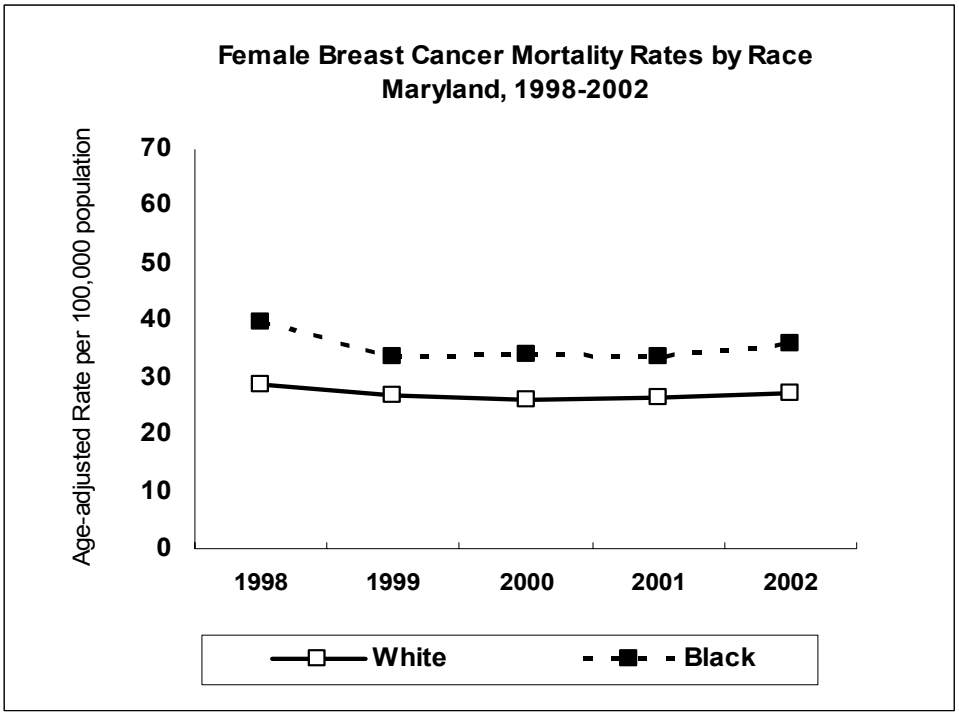
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2002

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.



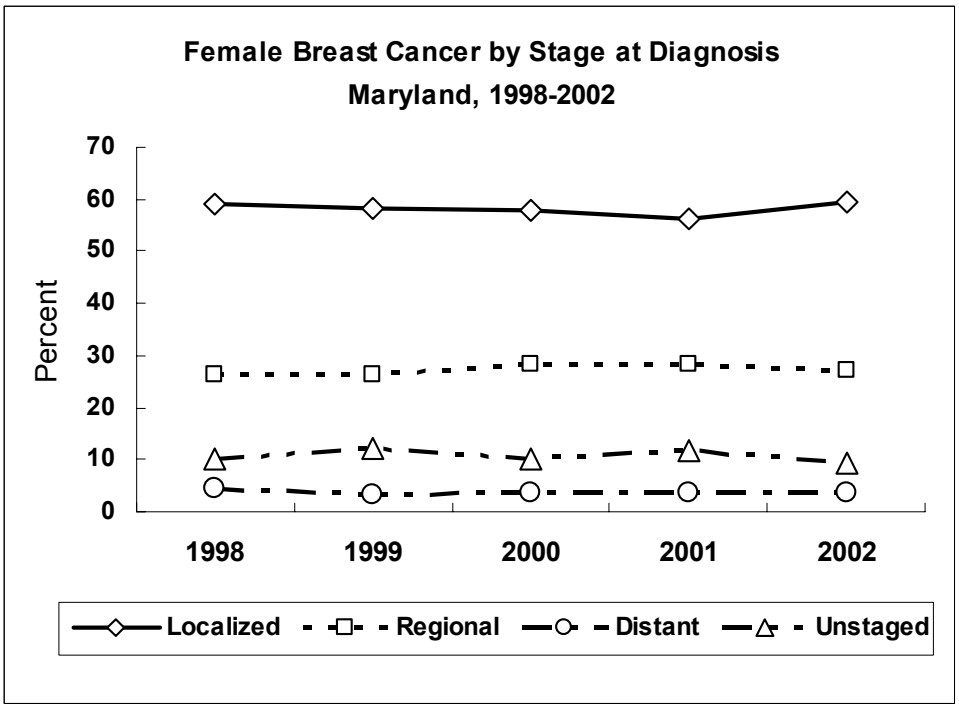
Rates are age-adjusted to 2000 U.S. standard population
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

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.

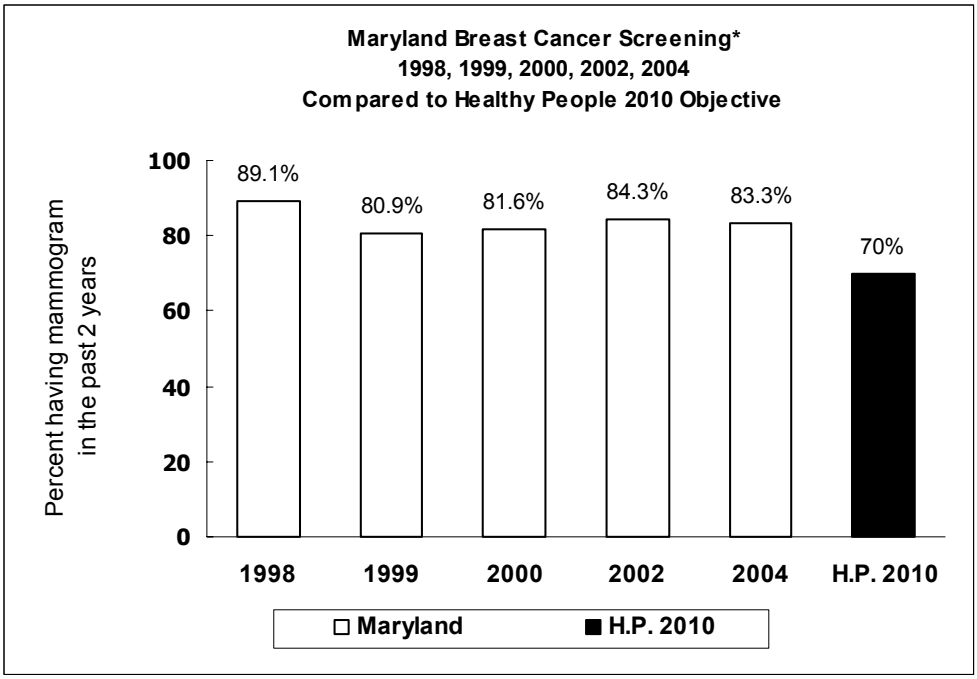


Maryland Cancer Registry, 1998-2002

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

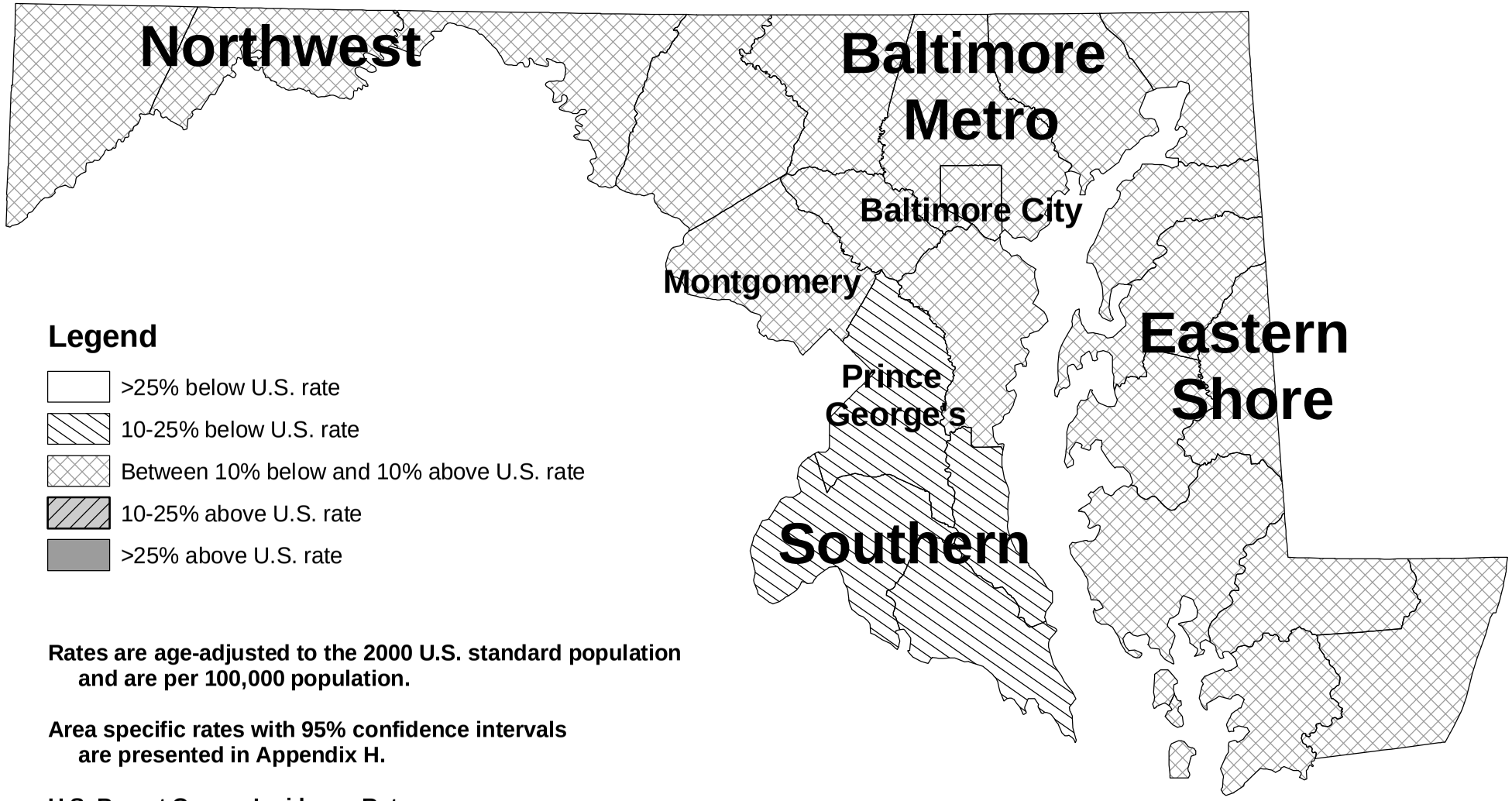
Table 37.
Female Breast Cancer Age-Adjusted Mortality Rates*
by Jurisdiction and Race, Maryland, 1999-2002

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)



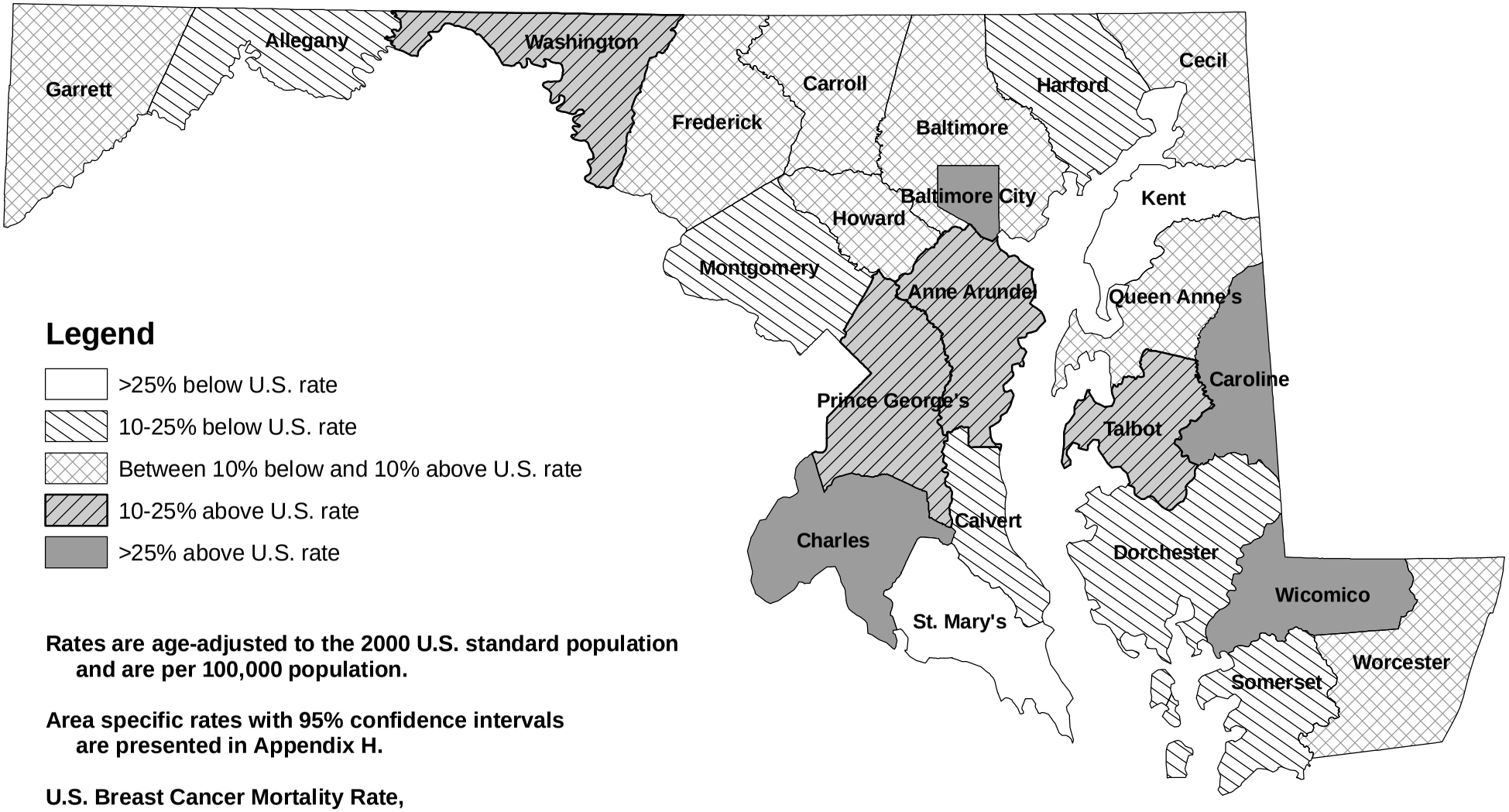
Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 population.

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

U.S. Breast Cancer Incidence Rate, 1998-2002: 137.1 per 100,000 population

Source: Maryland Cancer Registry, 1998-2002

Maryland Breast 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. Breast Cancer Mortality Rate, 1998-2002: 26.4 per 100,000 population

Source: CDC WONDER, 1999-2002

D. Prostate Cancer

Incidence (New Cases)

A total of 4,294 cases of prostate cancer were diagnosed among men in Maryland during 2002. Prostate cancer is the most common reportable cancer among men. The age-adjusted prostate cancer incidence rate in Maryland for 2002 is 187.7 per 100,000 men (182.0-193.5, 95% C.I.); this is statistically significantly higher than the 2002 U.S. SEER age-adjusted incidence rate for prostate cancer of 176.3 per 100,000 men.

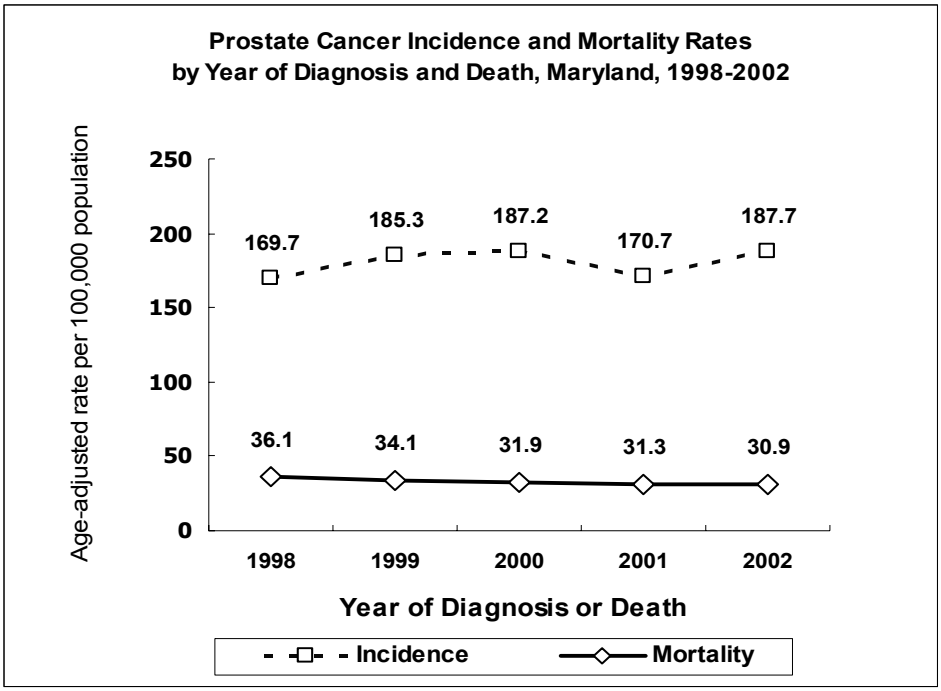
Mortality (Deaths)

Prostate cancer is the second leading cause of cancer deaths in Maryland among men after lung cancer. In 2002, 570 men died of prostate cancer in Maryland; this accounts for 5.5% of all cancer deaths in Maryland. The age-adjusted mortality rate for prostate cancer is 30.9 per 100,000 men (28.4-33.4, 95% C.I.). This rate is statistically significantly higher than the 2002 U.S. SEER mortality rate for prostate cancer of 28.1 per 100,000 men. Maryland has the 10th highest mortality rate for prostate cancer among the states and the District of Columbia for the period 1998-2002.

Table 38.
Prostate Cancer Incidence and Mortality Rates
by Race, Maryland and the United States, 2002

Incidence 2002	*Total*	*Whites*	*Blacks*	*Other*
New Cases (#)	4,294	3,019	1,169	105
Incidence Rate*	187.7	173.2	259.7	129.1
U.S. SEER Rate*	176.3	171.9	275.8	NA
Mortality 2002	*Total*	*Whites*	*Blacks*	*Other*
Deaths (#)	570	344	220	6
Mortality Rate*	30.9	23.5	71.4	14.1
U.S. SEER Rate*	28.1	25.8	63.0	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



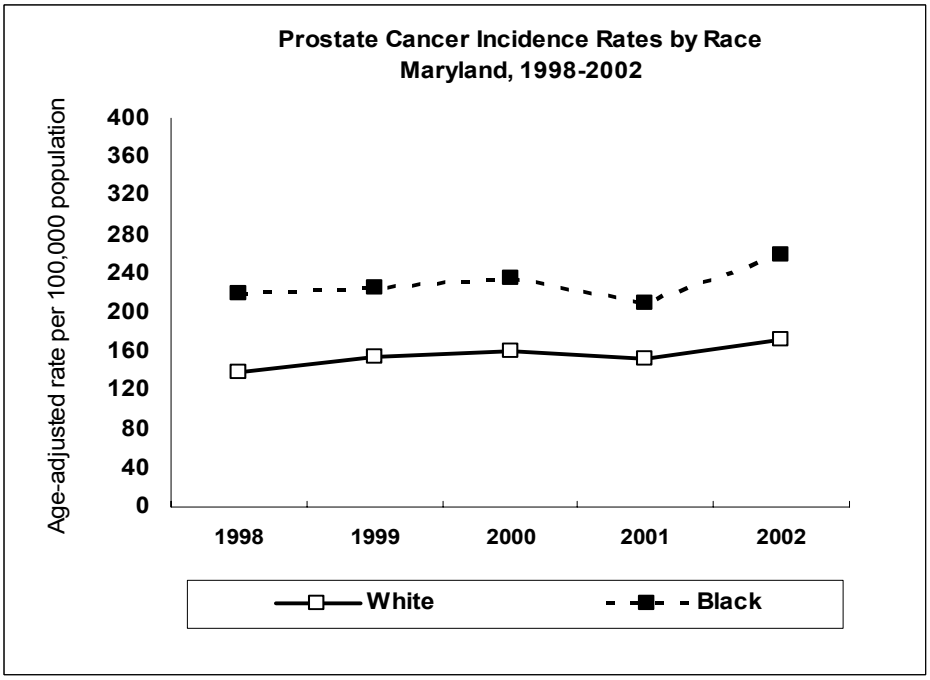
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2002
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Incidence and Mortality Trends

Prostate cancer incidence rates increased an average of 1.2% per year from 1998 to 2002 in Maryland.

Prostate cancer mortality rates declined an average of 3.9% per year among men from 1998 to 2002.

See Appendix I, Tables 1 and 2.



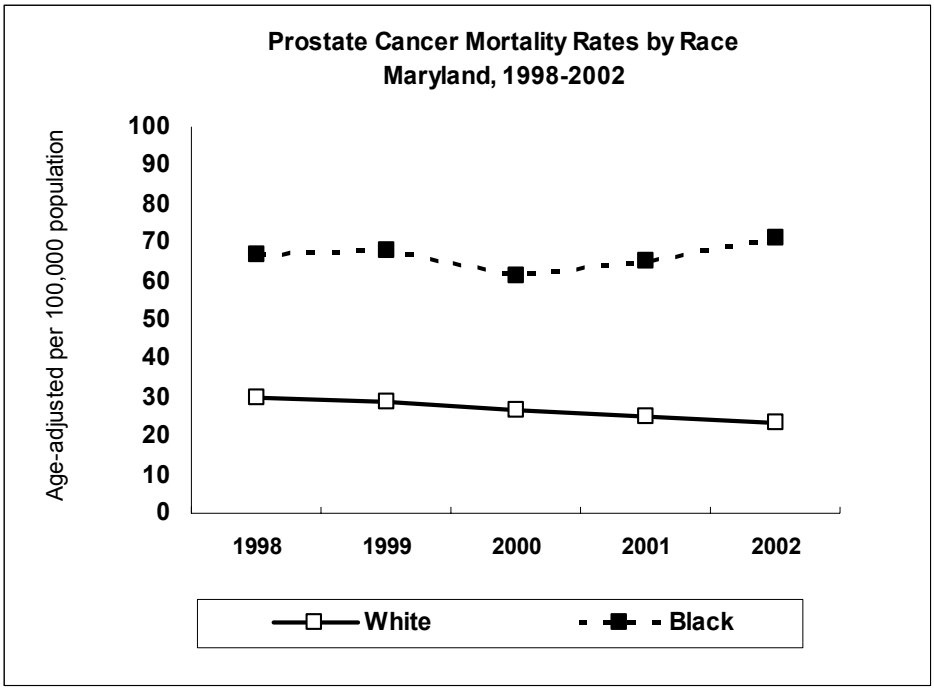
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2002

Race Incidence Trends

Black men consistently experienced prostate cancer incidence rates above those of white men from 1998 to 2002.

Rates for both white and black men have been increasing. The fastest increase in rates was for white males, having an average annual increase of 4.4%, compared to 2.6% for black men from 1998 to 2002.

See Appendix I, Table 11.



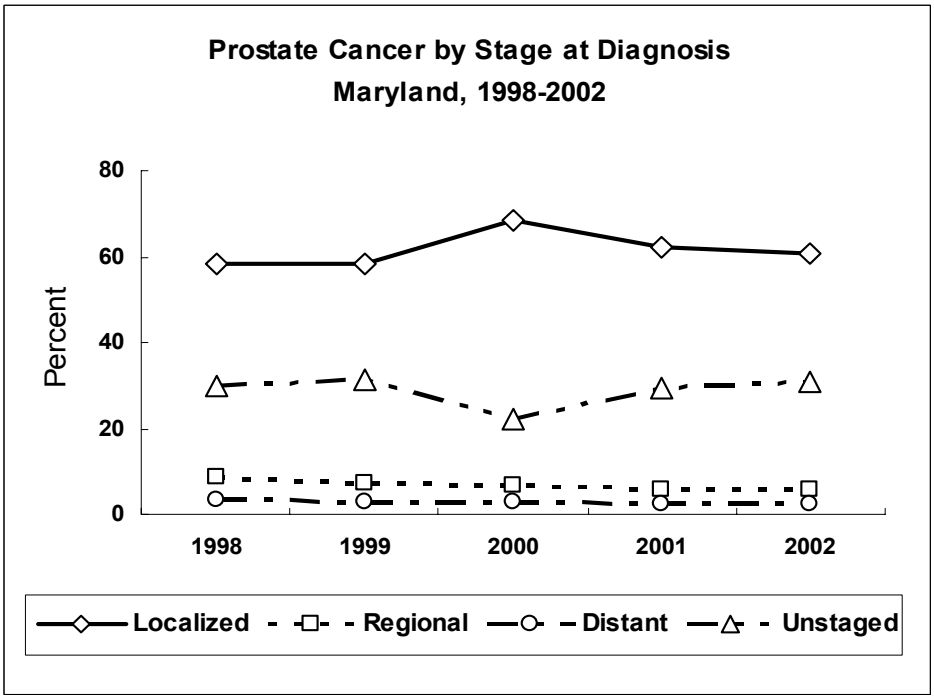
Rates are age-adjusted to 2000 U.S. standard population
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Race Mortality Trends

Prostate cancer mortality rates for black men consistently exceeded rates for white men from 1998 to 2002.

Rates for black men increased at an average annual rate of 0.8% compared to an average annual decrease of 6.0% for white men from 1998 to 2002.

See Appendix I, Table 12.

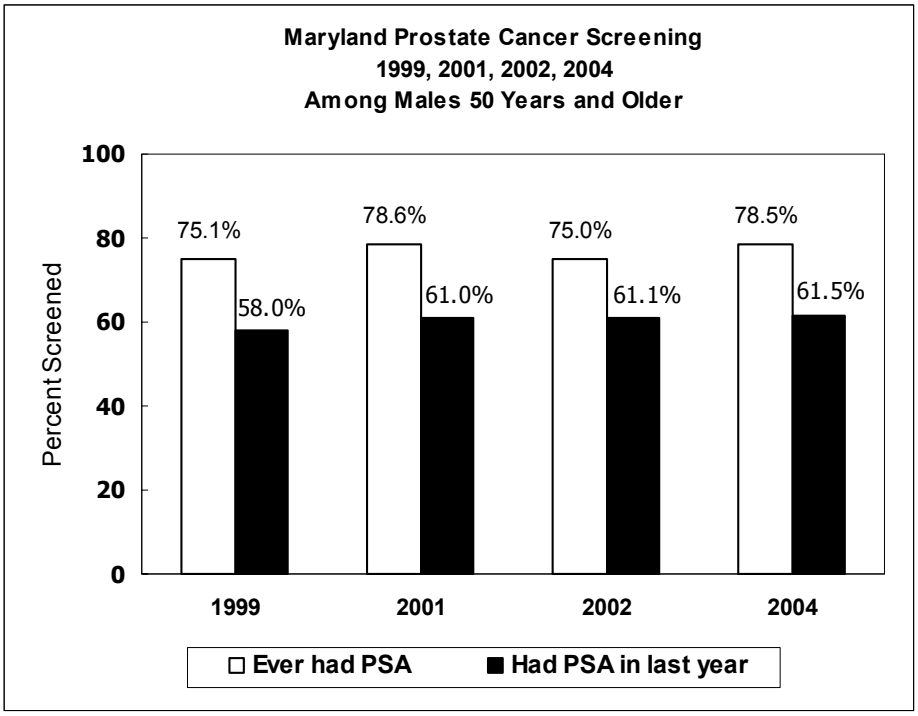


Maryland Cancer Registry, 1998-2002

Stage at Diagnosis

During 2002, 60.9% of prostate cancer cases were diagnosed at the localized (early) stage in Maryland. This was an increase from 58.2% in 1998.

See Appendix J, Table 5.



* Men 50 years and older
BRFSS, Maryland DHMH Center for Preventive Health Services, 1999, 2001
Maryland Cancer Survey, Maryland DHMH Center for Cancer Surveillance and Control, 2002, 2004

Healthy People 2010 Objectives

There is no Healthy People 2010 objective for prostate cancer detection.

In 2004, 78.5% of Maryland men age 50 years and older reported that they have ever had a prostate specific antigen (PSA) test, and 61.5% of men age 50 years and older had a PSA in the past year.

Public Health Evidence (quoted from NCI, PDQ, 7/21/2006 and 7/21/2006)

Screening

Digital rectal examination (DRE) and the serum prostate specific antigen (PSA) test are two commonly used methods of detecting prostate cancer. The evidence is insufficient to determine whether screening for prostate cancer with DRE or PSA reduces mortality from prostate cancer. Screening tests are able to detect prostate cancer at an early stage, but it is not clear whether this earlier detection and consequent earlier treatment leads to any change in the natural history and outcome of the disease. Observational evidence shows a trend toward lower mortality for prostate cancer in some countries, but the relationship between these trends and intensity of screening is not clear, and associations with screening patterns are inconsistent. The observed trends may be due to screening or to other factors such as improved treatment.

Based on good evidence, screening with PSA and/or DRE detects some prostate cancers that would never have caused important clinical problems. Thus screening leads to some degree of overtreatment. Current prostate cancer treatments, including radical prostatectomy and radiation therapy, result in permanent side effects in many men. The most common of these side effects are erectile dysfunction and urinary incontinence.

Primary Prevention

There is insufficient evidence that the prevention strategies of dietary change (i.e., reducing dietary fat or increasing fruits and vegetables), or vitamin E (alpha-tocopherol), selenium, or lycopene supplementation, are effective in reducing prostate cancer incidence or mortality.

Chemoprevention

Based on solid evidence, chemoprevention with finasteride reduces the incidence of prostate cancer, but the evidence is insufficient to determine whether chemoprevention with finasteride reduces mortality from prostate cancer.

Public Health Intervention for Prostate Cancer (American Cancer Society Guidelines for the Early Detection of Cancer, 2005 CA Cancer J Clin 2005 55: 31-44 and DHMH Prostate Cancer Medical Advisory Committee, 2005)
➢ On the basis of available data, men should be made aware of the availability of the PSA and DRE tests and the potential risks and benefits, in order to make an informed choice about screening. ➢ Clinicians should discuss with their patients the potential benefits and uncertainties regarding prostate cancer detection and subsequent treatment, consider individual patient preferences, and individualize the decision to screen. ➢ PSA and DRE should be offered annually to men age 50-70 years who have at least a 10-year life expectancy. High-risk men (African American men or men with one or more first degree relatives diagnosed with prostate cancer) should begin testing at age 45 years. Men at even higher risk of prostate cancer (African American men who have one first-degree relative with prostate cancer diagnosed before the age of 65 years or men of any race or ethnicity who have *more than one* first-degree relative diagnosed with prostate cancer before age 65 years) may begin screening at age 40 years.

Table 39.
Number of Prostate Cancer Cases
by Jurisdiction and Race, Maryland, 2002

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	4,294	3,019	1,169	105
Allegany	75	71	<6	<6
Anne Arundel	401	349	44	7
Baltimore City	515	172	333	10
Baltimore County	734	585	140	9
Calvert	53	39	14	0
Caroline	22	16	6	0
Carroll	126	s	<6	<6
Cecil	70	54	16	0
Charles	69	52	17	0
Dorchester	38	27	11	0
Frederick	200	181	s	<6
Garrett	24	s	<6	0
Harford	211	177	s	<6
Howard	176	129	39	8
Kent	15	s	<6	0
Montgomery	717	526	135	56
Prince George's	493	s	295	<6
Queen Anne's	43	36	s	<6
Saint Mary's	31	23	8	0
Somerset	28	19	s	<6
Talbot	48	38	10	0
Washington	99	90	s	<6
Wicomico	60	44	s	<6
Worcester	43	36	7	0
Unknown	<6	<6	<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 40.
Prostate Cancer Age-Adjusted Incidence Rates* by Jurisdiction and Race, Maryland, 2002

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	187.7	173.2	259.7	129.1
Allegany	183.9	178.1	**	**
Anne Arundel	187.4	184.2	214.8	**
Baltimore City	199.5	156.6	234.1	**
Baltimore County	197.7	182.9	341.0	**
Calvert	178.6	160.7	**	0.0
Caroline	**	**	**	0.0
Carroll	190.4	193.0	**	**
Cecil	191.4	154.6	**	0.0
Charles	140.4	137.6	**	0.0
Dorchester	215.8	196.0	**	0.0
Frederick	269.8	260.5	**	**
Garrett	**	**	**	0.0
Harford	219.7	198.1	602.1	**
Howard	200.0	179.6	397.1	**
Kent	**	**	**	0.0
Montgomery	184.1	170.8	367.8	149.6
Prince George's	171.8	155.9	201.6	**
Queen Anne's	197.4	179.9	**	**
Saint Mary's	87.8	**	**	0.0
Somerset	239.5	**	**	**
Talbot	209.8	189.8	**	0.0
Washington	148.5	139.7	**	**
Wicomico	155.5	142.9	**	**
Worcester	123.2	114.5	**	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 41.
Number of Prostate Cancer Deaths
by Jurisdiction and Race, Maryland, 2002

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	570	344	220	6
Allegany	17	17	0	0
Anne Arundel	35	24	11	0
Baltimore City	121	18	103	0
Baltimore County	85	70	14	1
Calvert	7	<6	<6	0
Caroline	<6	<6	<6	0
Carroll	18	18	0	0
Cecil	6	<6	<6	0
Charles	6	5	1	0
Dorchester	7	<6	<6	0
Frederick	20	18	2	0
Garrett	<6	<6	0	0
Harford	14	14	0	0
Howard	15	10	4	1
Kent	<6	<6	<6	0
Montgomery	79	63	12	4
Prince George's	78	28	50	0
Queen Anne's	<6	<6	<6	0
Saint Mary's	<6	<6	<6	0
Somerset	<6	<6	<6	0
Talbot	10	8	<6	0
Washington	14	14	0	0
Wicomico	8	6	<6	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 42.
Prostate Cancer Age-Adjusted Mortality Rates*
by Jurisdiction and Race, Maryland, 2002

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	30.9	23.5	71.4	14.1
Allegany	42.9	43.7	0.0	0.0
Anne Arundel	23.8	18.2	86.7	0.0
Baltimore City	51.1	16.3	86.4	0.0
Baltimore County	24.9	22.4	64.0	6.7
Calvert	31.8	**	**	0.0
Caroline	**	**	**	0.0
Carroll	37.5	38.5	0.0	0.0
Cecil	18.4	**	**	0.0
Charles	21.3	24.1	11.9	0.0
Dorchester	40.2	**	**	0.0
Frederick	29.1	27.9	74.3	0.0
Garrett	**	**	0.0	0.0
Harford	20.5	21.7	0.0	0.0
Howard	26.8	21.4	69.1	53.5
Kent	**	**	**	0.0
Montgomery	24.4	22.9	59.2	17.8
Prince George's	41.3	28.8	65.0	0.0
Queen Anne's	**	**	**	0.0
Saint Mary's	**	**	**	0.0
Somerset	**	**	**	0.0
Talbot	46.5	40.2	**	0.0
Washington	25.9	26.5	0.0	0.0
Wicomico	26.1	24.5	**	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 43.
Number of Prostate Cancer Cases
by Jurisdiction and Race, Maryland, 1998-2002

Jurisdiction	Total	Race			
		Whites	Blacks	Other	Unknown
Maryland	19,589	13,149	4,941	448	1,051
Allegany	347	334	8	<6	<6
Anne Arundel	1,638	1,321	222	21	74
Baltimore City	2,620	874	1,561	29	156
Baltimore County	3,373	2,623	529	42	179
Calvert	255	180	49	<6	s
Caroline	94	73	s	<6	0
Carroll	559	520	s	<6	25
Cecil	307	254	s	<6	27
Charles	395	278	97	11	9
Dorchester	146	97	s	<6	<6
Frederick	679	543	s	<6	86
Garrett	131	s	<6	0	0
Harford	864	722	89	<6	s
Howard	706	529	118	25	34
Kent	78	61	s	0	<6
Montgomery	3,138	2,312	446	208	172
Prince George's	2,536	912	1,401	75	148
Queen Anne's	167	139	22	<6	<6
Saint Mary's	204	161	38	<6	<6
Somerset	93	60	s	<6	0
Talbot	203	165	35	<6	<6
Washington	468	438	20	<6	s
Wicomico	274	187	80	<6	<6
Worcester	239	206	26	<6	s
Unknown	75	s	s	<6	33

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 44.
Prostate Cancer Age-Adjusted Incidence Rates*
by Jurisdiction and Race, Maryland, 1998-2002

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	179.3	156.4	230.8	125.7
Allegany	166.2	163.5	**	**
Anne Arundel	163.2	148.0	230.9	**
Baltimore City	197.4	150.7	217.9	135.6
Baltimore County	186.0	165.0	275.4	121.2
Calvert	183.0	150.8	267.4	**
Caroline	133.6	121.4	**	**
Carroll	180.9	173.7	**	**
Cecil	178.1	155.2	**	**
Charles	196.3	174.1	254.7	**
Dorchester	163.3	137.3	254.6	**
Frederick	195.3	164.6	281.1	**
Garrett	161.5	161.1	**	0.0
Harford	201.5	180.4	348.7	**
Howard	172.7	156.1	256.1	**
Kent	125.2	113.9	**	0.0
Montgomery	173.6	159.4	266.5	123.6
Prince George's	190.5	150.6	211.1	129.9
Queen Anne's	155.7	142.2	**	**
Saint Mary's	119.2	109.8	175.4	**
Somerset	151.4	126.9	216.7	**
Talbot	175.9	161.7	274.4	**
Washington	147.5	142.4	**	**
Wicomico	148.0	125.3	237.2	**
Worcester	145.2	139.1	150.5	**

* 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 45.
Number of Prostate Cancer Deaths
by Jurisdiction and Race, Maryland, 1999-2002

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	2,254	1,458	773	23
Allegany	47	47	0	0
Anne Arundel	146	112	32	2
Baltimore City	474	132	342	0
Baltimore County	363	305	56	2
Calvert	36	20	16	0
Caroline	18	10	8	0
Carroll	64	62	2	0
Cecil	47	39	8	0
Charles	35	19	15	1
Dorchester	31	16	15	0
Frederick	63	54	9	0
Garrett	18	18	0	0
Harford	79	71	8	0
Howard	53	38	13	2
Kent	12	8	4	0
Montgomery	281	232	38	11
Prince George's	270	103	163	4
Queen Anne's	16	11	5	0
Saint Mary's	27	21	6	0
Somerset	15	10	5	0
Talbot	33	26	7	0
Washington	59	59	0	0
Wicomico	41	25	15	1
Worcester	26	20	6	0

Source: CDC WONDER, 1999-2002

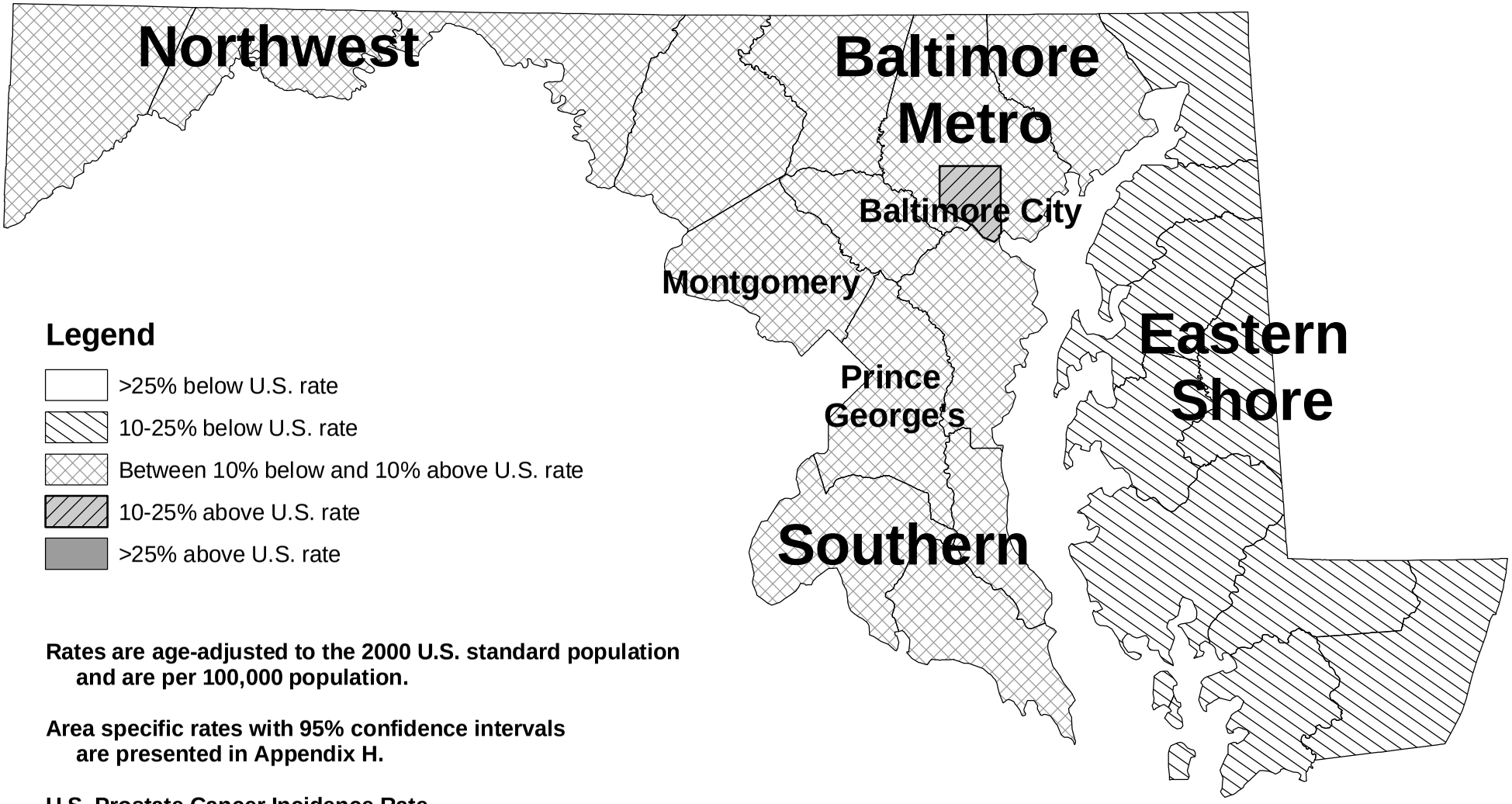
Table 46.
Prostate Cancer Age-Adjusted Mortality Rates*
by Jurisdiction and Race, Maryland, 1999-2002

Jurisdiction	Total	Race		
		Whites	Blacks	Other
Maryland	32.1	26.0	66.6	12.3
Allegany	31.4	31.9	0.0	0.0
Anne Arundel	26.0	22.2	64.1	24.4
Baltimore City	50.3	28.4	74.2	0.0
Baltimore County	28.2	25.9	62.4	9.3
Calvert	46.7	33.5	135.8	0.0
Caroline	38.3	25.4	113.0	0.0
Carroll	35.3	35.5	29.7	0.0
Cecil	45.1	41.0	144.4	0.0
Charles	32.1	24.8	61.5	29.9
Dorchester	48.5	30.4	119.3	0.0
Frederick	26.4	24.1	86.9	0.0
Garrett	35.5	35.6	0.0	0.0
Harford	29.2	27.9	59.9	0.0
Howard	25.4	22.0	58.3	22.4
Kent	25.6	20.2	69.6	0.0
Montgomery	22.8	22.1	44.4	12.5
Prince George's	38.9	27.7	59.9	12.6
Queen Anne's	23.5	17.8	59.7	0.0
Saint Mary's	26.2	23.7	41.5	0.0
Somerset	36.1	33.7	50.4	0.0
Talbot	38.6	33.5	68.0	0.0
Washington	27.7	28.3	0.0	0.0
Wicomico	36.0	26.9	78.5	61.7
Worcester	25.8	23.7	47.7	0.0

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

Source: CDC WONDER, 1999-2002

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



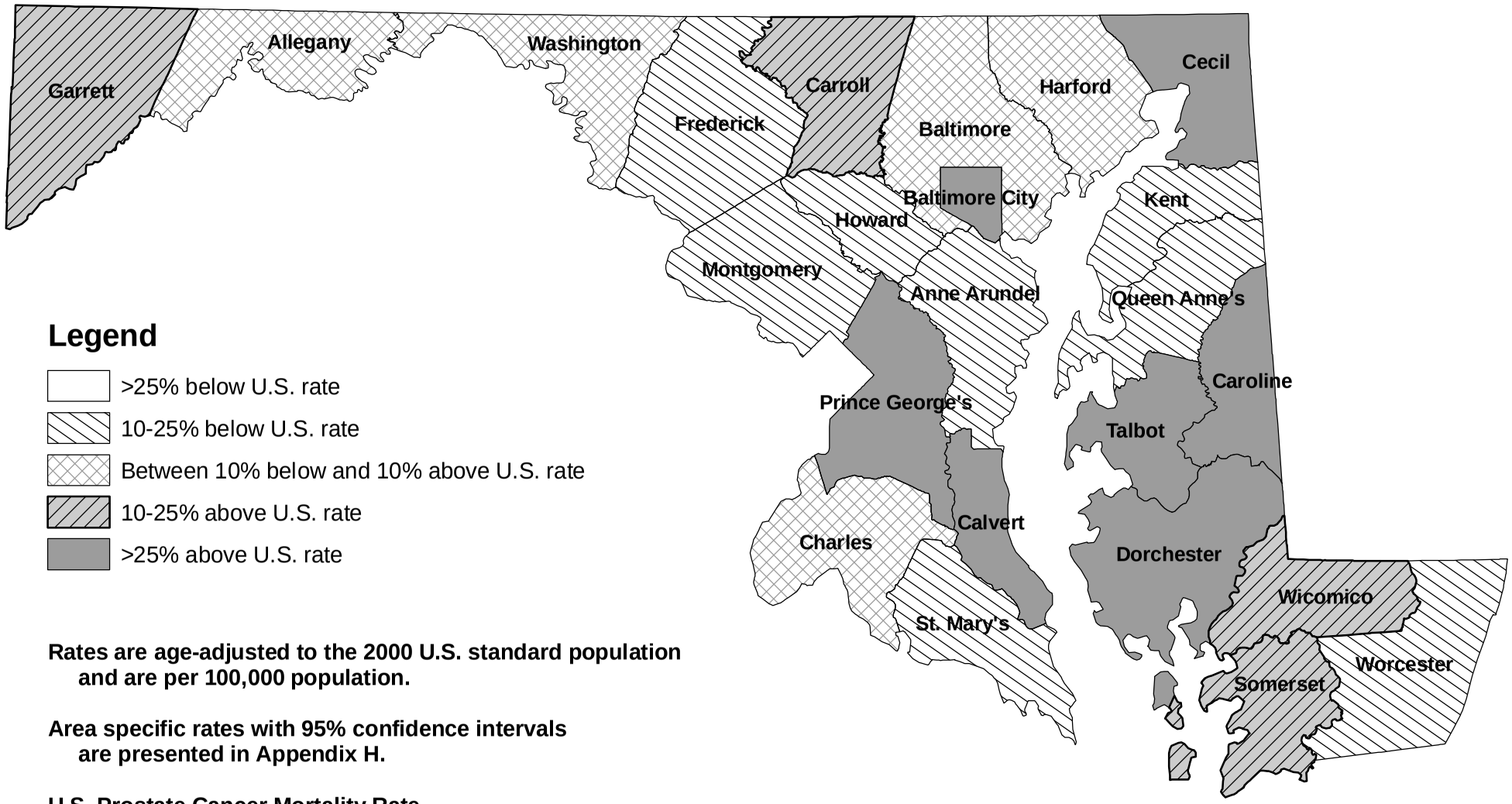
Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 population.

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

U.S. Prostate Cancer Incidence Rate, 1998-2002: 177.6 per 100,000 population

Source: Maryland Cancer Registry, 1998-2002

Maryland Prostate 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. Prostate Cancer Mortality Rate, 1998-2002: 30.3 per 100,000 population

Source: CDC WONDER, 1999-2002

E. Oral Cancer

Incidence (New Cases)

A total of 529 cases of oral cavity and pharynx cancer (called oral cancer) were diagnosed in Maryland in 2002. The age-adjusted incidence rate for oral cancer in Maryland in 2002 is 9.7 per 100,000 population (8.9-10.6, 95% C.I.), which is statistically significantly lower than the 2002 U.S. SEER age-adjusted oral cancer incidence rate of 10.8 per 100,000 population.

Mortality (Deaths)

In 2002, 158 persons in Maryland died of oral cancer. The age-adjusted mortality rate of 3.0 per 100,000 population (2.5-3.5, 95% C.I.) in Maryland is similar to the 2002 U.S. SEER oral cancer mortality rate of 2.7. Maryland ranks 15th highest for oral cancer mortality among the states and the District of Columbia for the period 1998-2002.

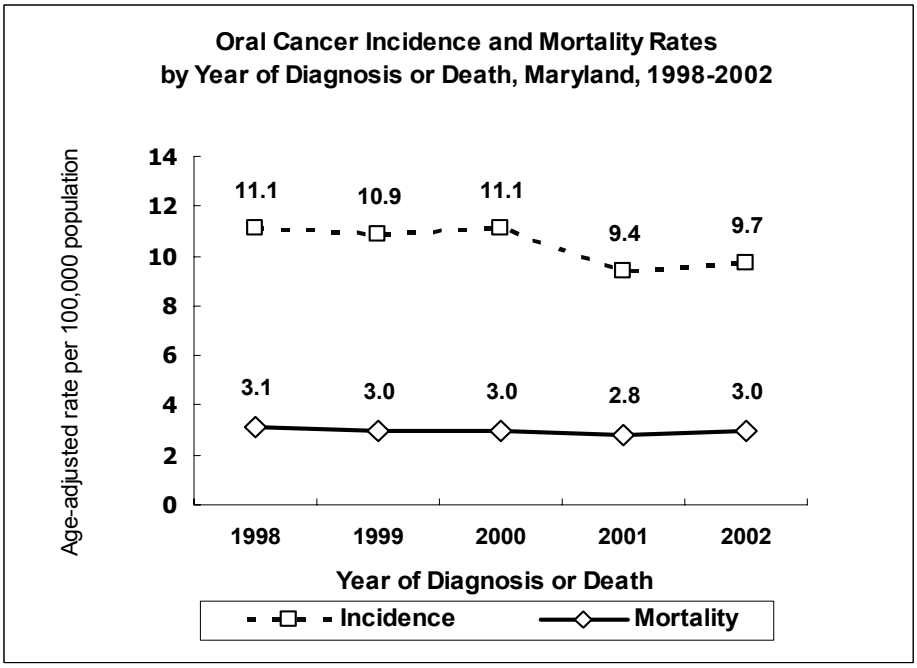
Table 47.
Oral Cancer Incidence and Mortality Rates
by Gender and Race, Maryland and the United States, 2002

Incidence 2002	*Total*	*Males*	*Females*	*Whites*	*Blacks*	*Other*
New Cases (#)	529	373	156	393	122	13
Incidence Rate*	9.7	14.9	5.3	9.9	9.5	**
U.S. SEER Rate*	10.8	15.9	6.5	11.0	10.9	NA
Mortality 2002	*Total*	*Males*	*Females*	*Whites*	*Blacks*	*Other*
Deaths (#)	158	98	60	110	46	2
Mortality Rate*	3.0	4.2	2.0	2.8	3.8	1.3
U.S. SEER Rate*	2.7	4.1	1.5	2.6	3.7	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

Source: Maryland Cancer Registry, 2002
CDC WONDER, 2002
SEER, National Cancer Institute, 2002



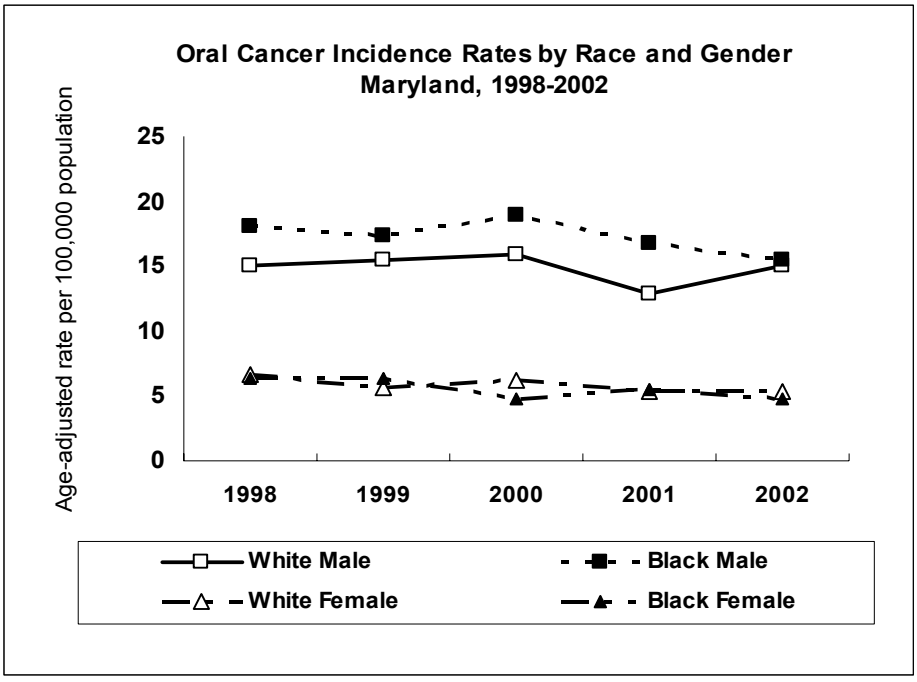
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2002
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Incidence and Mortality Trends

The incidence of oral cancer decreased an average of 4.1% per year in Maryland from 1998 to 2002.

Mortality rates for oral cancer declined an average of 1.3% per year from 1998 to 2002.

See Appendix I, Tables 1 and 2.



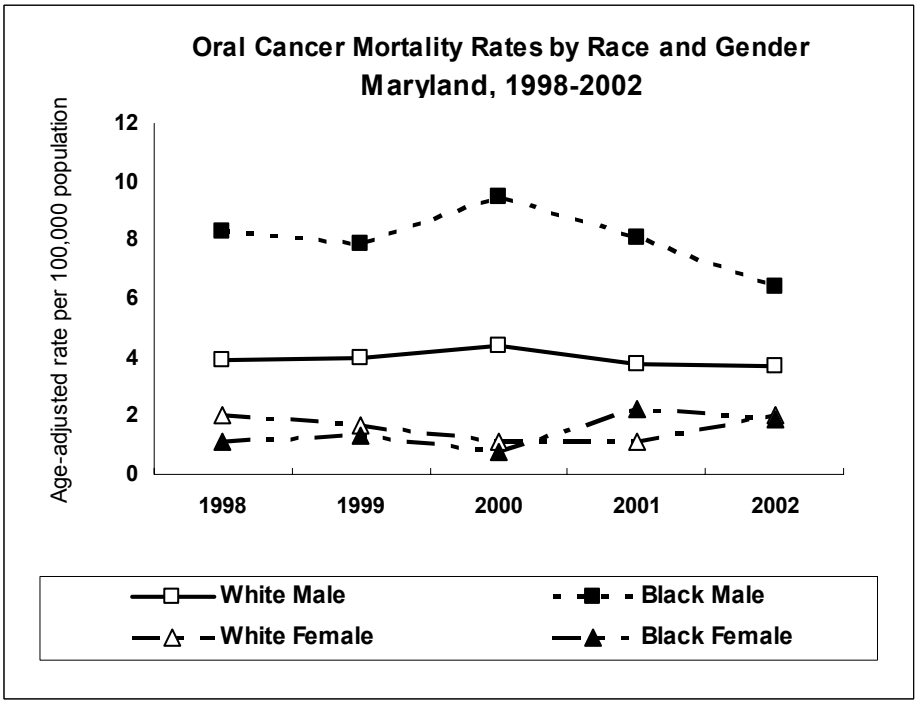
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2002

Race and Gender Incidence Trends

Males consistently had higher oral cancer incidence rates than females.

Oral cancer incidence rates have been declining for all gender and race categories, with the greatest average yearly decline of 6.7% occurring for black females.

See Appendix I, Table 13.



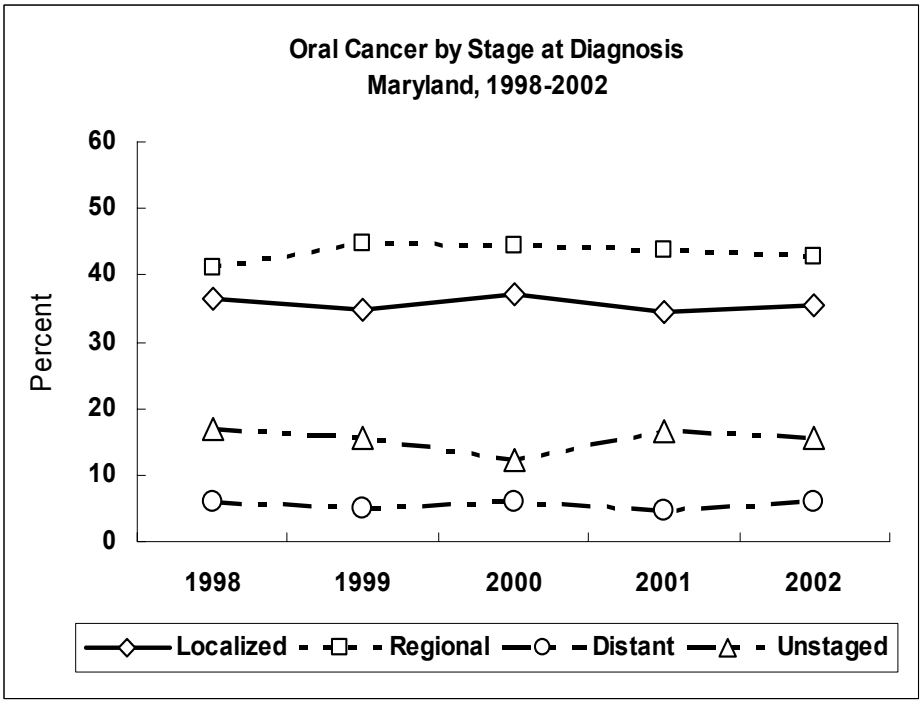
Rates are age-adjusted to 2000 U.S. standard population
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Race and Gender Mortality Trends

In 2002, males had higher oral cancer mortality rates than females; black females had the lowest mortality rates, while black males had the highest.

While oral cancer mortality rates have been declining for three race and gender categories, one group, black females, had an average annual rate increase of 17.6% from 1998 to 2002.

See Appendix I, Table 14.

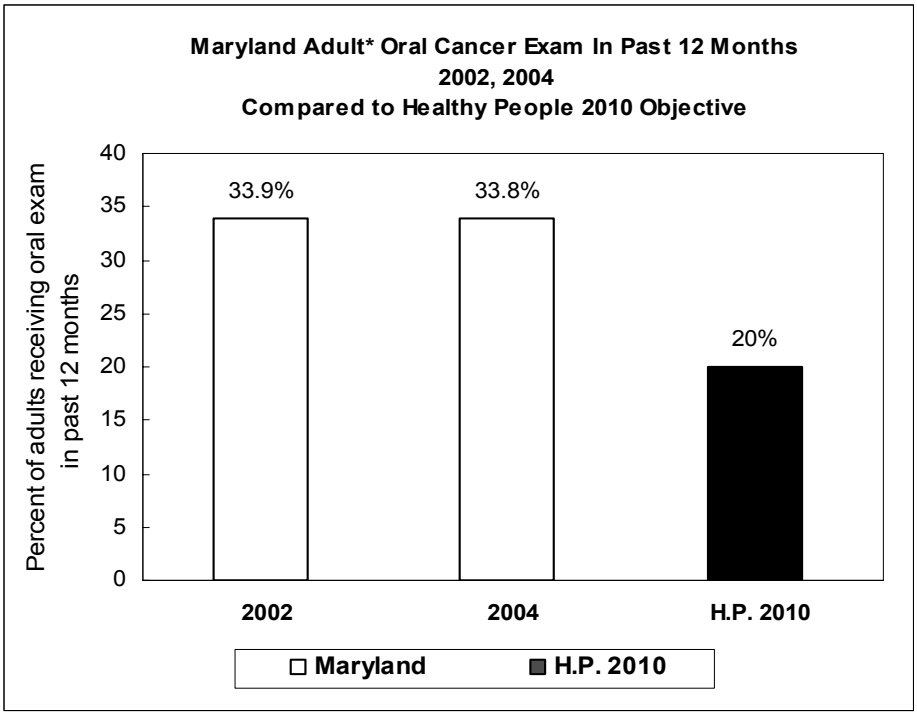


Maryland Cancer Registry, 1998-2002

Stage at Diagnosis

During 2002, 35.5% of oral cancer cases were diagnosed at the localized (early) stage in Maryland; 42.7% were diagnosed at the regional stage.

See Appendix J, Table 6.



* Adults age 40 years and older
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

Healthy People 2010 Objectives

The Healthy People 2010 objective for oral cancer is to increase to 20% the proportion of adults age 40 years and older who report having had an oral cancer screening examination in the past 12 months to detect oral and pharyngeal cancer.

In the 2004 Maryland Cancer Survey, 33.8% of persons 40 years of age and older reported they had an oral cancer exam in the past year, again surpassing the Healthy People target.

Public Health Evidence (quoted from NCI, PDQ, 3/23/2006 and USPSTF 2/2004)

Primary Prevention

Tobacco (including cigarettes, cigars, pipes, and smokeless or spit tobacco) causes oral cancer. Tobacco use is responsible for more than 90% of oral cancer among men and 60% among women, and is responsible for more than 90% of oral cancer-related deaths in males. Alcohol use, particularly beer and hard liquor, is associated with an increased risk of oral cancer. The combined use of tobacco and alcohol increases the risks for oral cancer more than either risk behavior alone. For lip cancer, there is evidence that sunlight exposure is associated with an increased risk.

Avoidance or cessation of exposure to tobacco (e.g., cigarettes, pipes, cigars, and smokeless tobacco) would lead to a decrease in oral cancer. A 50% reduction of oral cancer risk has been noted after 3 to 5 years of smoking cessation and a return to normal risk noted after 10 years of cessation. Although alcohol use is a risk factor for oral cancer, there is inadequate evidence that cessation of alcohol use decreases the risk of oral cancer. A diet high in fruits and fiber is associated with a decreased risk of oral and pharyngeal cancer, particularly among smokers; however, there is inadequate evidence to determine whether a *change* in diet would decrease the risk of oral cancer. There is inadequate evidence to determine whether reducing sun exposure would prevent lip cancer.

Screening

While the routine examination of asymptomatic and symptomatic patients can lead to detection of earlier stage cancers as well as premalignant lesions, the United States Preventive Services Task Force (USPSTF) concludes that the evidence is insufficient to recommend for or against routinely screening adults for oral cancer. The USPSTF found no new good-quality evidence that screening for oral cancer leads to improved health outcomes for either high-risk adults (i.e., those over the age of 50 who use tobacco) or for average-risk adults in the general population. It is unlikely that controlled trials of screening for oral cancer will ever be conducted in the general population because of the very low incidence of oral cancer in the U.S. There is also no new evidence for the harms of screening. As a result, the USPSTF could not determine the balance between benefits and harms of screening.

Public Health Intervention for Oral Cancer (DHMH Oral Cancer Medical Advisory Committee, 2005)
➢ Avoidance or cessation of smoking and other tobacco use. ➢ Avoidance or reduction of alcohol consumption. ➢ Avoidance of sun exposure; use of UV light-blocking lip balm. ➢ Screening for oral cancer targeted to individuals age 40 years and older.

Table 48.
Number of Oral Cancer Cases
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	529	373	156	393	122	13
Allegany	9	s	<6	s	<6	0
Anne Arundel	50	36	14	s	<6	0
Baltimore City	98	72	26	42	56	0
Baltimore County	91	64	27	75	s	<6
Calvert	<6	<6	<6	<6	<6	0
Caroline	<6	<6	<6	<6	<6	0
Carroll	15	s	<6	14	0	0
Cecil	6	<6	<6	<6	<6	0
Charles	9	9	0	9	0	0
Dorchester	<6	<6	0	0	<6	0
Frederick	24	16	8	18	<6	<6
Garrett	<6	<6	0	<6	0	0
Harford	23	s	<6	s	0	<6
Howard	17	s	<6	s	0	<6
Kent	<6	0	<6	<6	0	0
Montgomery	71	48	23	58	s	<6
Prince George's	43	27	16	21	s	<6
Queen Anne's	<6	<6	<6	<6	0	0
Saint Mary's	14	s	<6	11	<6	<6
Somerset	<6	0	<6	0	<6	0
Talbot	9	<6	<6	s	<6	0
Washington	12	<6	s	12	0	0
Wicomico	10	<6	s	10	0	0
Worcester	8	s	<6	s	<6	0
Unknown	<6	<6	0	<6	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, 2002

Table 49.
Oral Cancer Age-Adjusted Incidence Rates*
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	9.7	14.9	5.3	9.9	9.5	**
Allegany	**	**	**	**	**	0.0
Anne Arundel	10.1	15.3	**	10.6	**	0.0
Baltimore City	15.3	25.7	6.8	17.3	14.3	0.0
Baltimore County	10.8	17.0	5.7	10.8	**	**
Calvert	**	**	**	**	**	0.0
Caroline	**	**	**	**	**	0.0
Carroll	**	**	**	**	0.0	0.0
Cecil	**	**	**	**	**	0.0
Charles	**	**	0.0	**	0.0	0.0
Dorchester	**	**	0.0	0.0	**	0.0
Frederick	**	**	**	**	**	**
Garrett	**	**	0.0	**	0.0	0.0
Harford	**	**	**	**	0.0	**
Howard	**	**	**	**	0.0	**
Kent	**	0.0	**	**	0.0	0.0
Montgomery	7.6	11.0	**	8.1	**	**
Prince George's	5.8	7.6	**	**	**	**
Queen Anne's	**	**	**	**	0.0	0.0
Saint Mary's	**	**	**	**	**	**
Somerset	**	0.0	**	0.0	**	0.0
Talbot	**	**	**	**	**	0.0
Washington	**	**	**	**	0.0	0.0
Wicomico	**	**	**	**	0.0	0.0
Worcester	**	**	**	**	**	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 50.
Number of Oral Cancer Deaths
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	158	98	60	110	46	2
Allegany	<6	<6	<6	<6	0	0
Anne Arundel	15	15	0	12	3	0
Baltimore City	28	17	11	7	21	0
Baltimore County	27	17	10	24	3	0
Calvert	<6	0	<6	<6	<6	0
Caroline	0	0	0	0	0	0
Carroll	3	2	1	3	0	0
Cecil	<6	<6	<6	<6	0	0
Charles	5	5	0	4	1	0
Dorchester	<6	<6	0	0	<6	0
Frederick	4	2	2	2	2	0
Garrett	0	0	0	0	0	0
Harford	7	5	2	7	0	0
Howard	3	0	3	3	0	0
Kent	<6	<6	0	<6	0	0
Montgomery	20	9	11	15	3	2
Prince George's	17	11	6	9	8	0
Queen Anne's	<6	<6	<6	<6	0	0
Saint Mary's	<6	<6	0	0	<6	0
Somerset	0	0	0	0	0	0
Talbot	<6	0	<6	<6	0	0
Washington	5	3	2	4	1	0
Wicomico	<6	<6	<6	<6	<6	0
Worcester	<6	<6	<6	<6	0	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 51.
Oral Cancer Age-Adjusted Mortality Rates*
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	3.0	4.2	2.0	2.8	3.8	1.3
Allegany	**	**	**	**	0.0	0.0
Anne Arundel	3.0	6.1	0.0	2.7	6.1	0.0
Baltimore City	4.4	6.4	3.0	2.5	5.5	0.0
Baltimore County	3.0	4.4	1.9	3.1	2.6	0.0
Calvert	**	0.0	**	**	**	0.0
Caroline	0.0	0.0	0.0	0.0	0.0	0.0
Carroll	2.2	3.8	0.9	2.2	0.0	0.0
Cecil	**	**	**	**	0.0	0.0
Charles	4.9	10.1	0.0	4.8	5.4	0.0
Dorchester	**	**	0.0	0.0	**	0.0
Frederick	2.6	2.7	1.9	1.4	27.8	0.0
Garrett	0.0	0.0	0.0	0.0	0.0	0.0
Harford	3.5	7.0	1.6	3.8	0.0	0.0
Howard	1.7	0.0	2.6	2.1	0.0	0.0
Kent	**	**	0.0	**	0.0	0.0
Montgomery	2.3	2.4	2.1	2.1	3.8	2.7
Prince George's	2.6	3.9	1.5	3.4	1.8	0.0
Queen Anne's	**	**	**	**	0.0	0.0
Saint Mary's	**	**	0.0	0.0	**	0.0
Somerset	0.0	0.0	0.0	0.0	0.0	0.0
Talbot	**	0.0	**	**	0.0	0.0
Washington	3.3	4.6	2.3	2.7	24.4	0.0
Wicomico	**	**	**	**	**	0.0
Worcester	**	**	**	**	0.0	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 52.
Number of Oral Cancer Cases
by Jurisdiction, Gender and Race, Maryland, 1998-2002

Jurisdiction	Total	Gender		Race			
		Males	Females	Whites	Blacks	Other	Unknown
Maryland	2,680	1,844	836	1,898	648	84	50
Allegany	57	41	16	s	<6	0	0
Anne Arundel	271	197	74	230	34	s	<6
Baltimore City	505	365	140	198	295	<6	s
Baltimore County	440	292	148	357	64	10	9
Calvert	37	20	17	30	s	0	<6
Caroline	17	s	<6	14	<6	0	<6
Carroll	71	54	17	s	0	0	<6
Cecil	46	35	11	s	<6	0	<6
Charles	41	30	11	36	<6	<6	<6
Dorchester	22	16	6	s	<6	0	0
Frederick	65	45	20	58	<6	<6	0
Garrett	9	9	0	9	0	0	0
Harford	97	70	27	89	<6	<6	<6
Howard	78	55	23	61	8	s	<6
Kent	9	s	<6	9	0	0	0
Montgomery	345	204	141	268	35	35	7
Prince George's	286	192	94	119	148	s	<6
Queen Anne's	33	21	12	s	<6	0	0
Saint Mary's	49	39	10	37	9	<6	<6
Somerset	7	<6	<6	<6	<6	0	<6
Talbot	29	22	7	s	<6	0	0
Washington	68	42	26	62	<6	<6	<6
Wicomico	49	34	15	34	s	<6	0
Worcester	44	34	10	38	<6	0	<6
Unknown	<6	<6	<6	<6	0	0	<6

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 53.
Oral Cancer Age-Adjusted Incidence Rates*
by Jurisdiction, Gender and Race, Maryland, 1998-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	10.3	15.7	5.9	9.9	10.6	7.9
Allegany	12.5	20.9	**	12.2	**	0.0
Anne Arundel	11.8	18.7	6.1	11.5	14.0	**
Baltimore City	15.7	26.1	7.5	15.8	15.1	**
Baltimore County	10.6	16.2	6.4	10.2	11.4	**
Calvert	11.9	13.0	**	10.8	**	0.0
Caroline	**	**	**	**	**	0.0
Carroll	9.7	15.7	**	9.5	0.0	0.0
Cecil	11.4	17.8	**	11.4	**	0.0
Charles	8.6	13.0	**	10.0	**	**
Dorchester	11.5	**	**	**	**	0.0
Frederick	7.5	11.1	**	7.1	**	**
Garrett	**	**	0.0	**	0.0	0.0
Harford	9.4	14.6	5.0	9.4	**	**
Howard	7.8	10.9	**	7.7	**	**
Kent	**	**	**	**	0.0	0.0
Montgomery	7.9	10.5	5.9	7.9	6.9	7.1
Prince George's	8.3	12.5	5.0	9.0	7.5	**
Queen Anne's	15.0	**	**	15.9	**	0.0
Saint Mary's	12.7	20.3	**	11.5	**	**
Somerset	**	**	**	**	**	0.0
Talbot	12.6	**	**	**	**	0.0
Washington	9.5	13.1	6.7	9.0	**	**
Wicomico	11.3	17.2	**	9.9	**	**
Worcester	13.9	23.1	**	13.9	**	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, 1998-2002

Table 54.
Number of Oral Cancer Deaths
by Jurisdiction, Gender and Race, Maryland, 1999-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	597	419	178	398	189	10
Allegany	13	6	7	13	0	0
Anne Arundel	55	44	11	43	11	1
Baltimore City	142	112	30	51	91	0
Baltimore County	99	67	32	85	13	1
Calvert	8	5	3	7	1	0
Caroline	0	0	0	0	0	0
Carroll	8	6	2	8	0	0
Cecil	8	7	1	7	1	0
Charles	21	18	3	12	9	0
Dorchester	5	4	1	2	3	0
Frederick	10	7	3	8	2	0
Garrett	2	2	0	2	0	0
Harford	17	12	5	15	2	0
Howard	18	8	10	14	2	2
Kent	5	5	0	4	1	0
Montgomery	66	34	32	53	8	5
Prince George's	68	47	21	30	37	1
Queen Anne's	8	5	3	8	0	0
Saint Mary's	6	5	1	4	2	0
Somerset	2	2	0	1	1	0
Talbot	7	5	2	7	0	0
Washington	12	7	5	11	1	0
Wicomico	6	2	4	3	3	0
Worcester	11	9	2	10	1	0

Source: CDC WONDER, 1999-2002

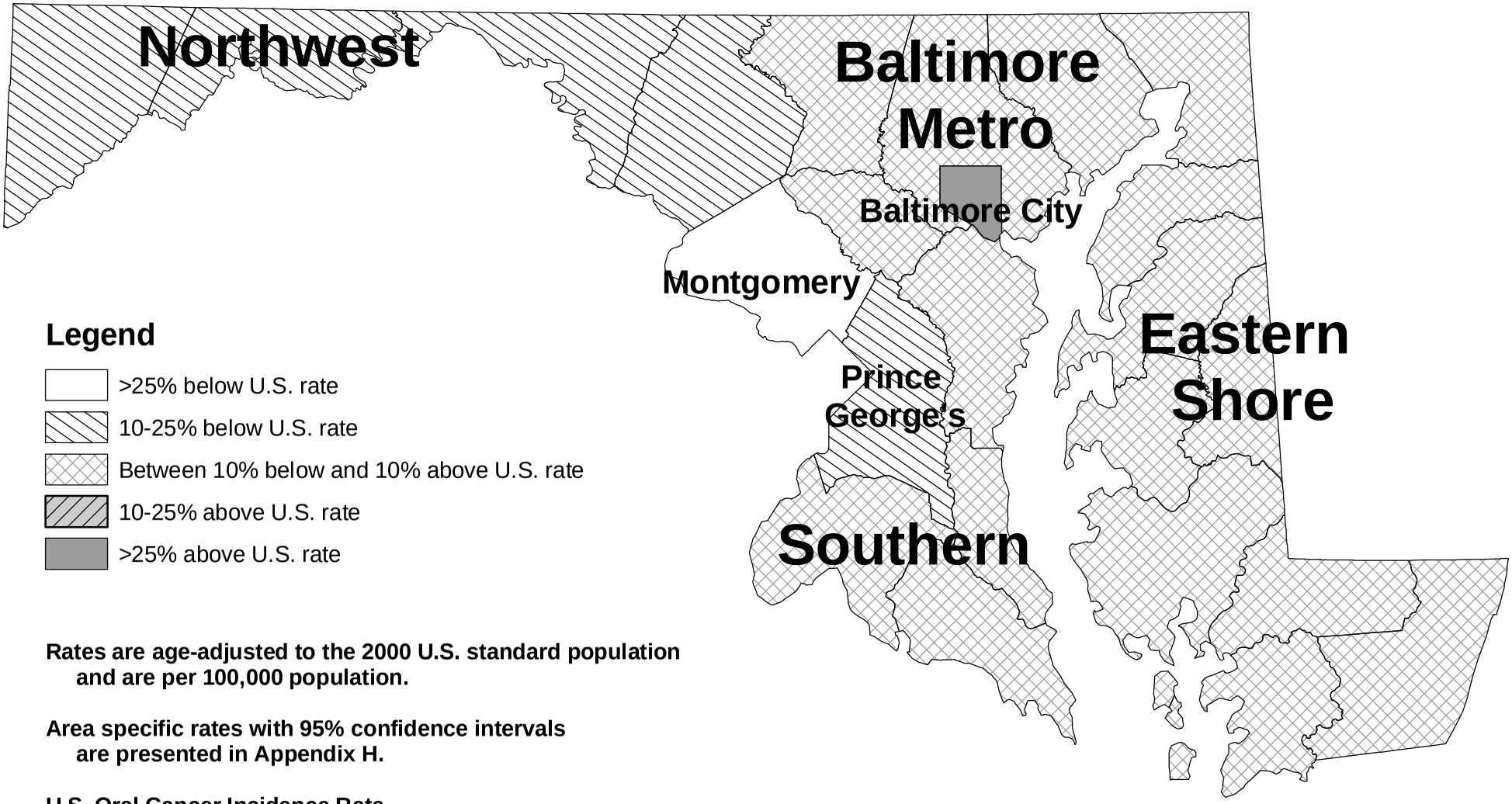
Table 55.
Oral Cancer Age-Adjusted Mortality Rates*
by Jurisdiction, Gender and Race, Maryland, 1999-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	2.9	4.7	1.5	2.6	4.2	1.1
Allegany	3.2	3.8	2.8	3.2	0.0	0.0
Anne Arundel	3.1	5.5	1.2	2.8	7.0	1.3
Baltimore City	5.5	10.3	1.9	4.7	5.9	0.0
Baltimore County	2.9	4.7	1.6	2.8	3.3	0.9
Calvert	3.1	3.4	2.4	3.1	3.6	0.0
Caroline	0.0	0.0	0.0	0.0	0.0	0.0
Carroll	1.5	3.1	0.5	1.6	0.0	0.0
Cecil	2.4	4.7	0.5	2.3	8.1	0.0
Charles	5.2	9.6	1.4	4.1	9.5	0.0
Dorchester	3.2	6.0	1.2	1.9	8.5	0.0
Frederick	1.6	2.6	0.8	1.4	7.5	0.0
Garrett	1.4	3.0	0.0	1.4	0.0	0.0
Harford	2.3	4.3	1.1	2.2	3.2	0.0
Howard	2.4	2.2	2.3	2.3	2.8	2.3
Kent	4.4	10.3	0.0	4.1	5.6	0.0
Montgomery	2.0	2.3	1.6	1.9	2.4	1.4
Prince George's	2.7	4.2	1.5	2.8	2.7	0.6
Queen Anne's	4.8	5.7	3.4	5.4	0.0	0.0
Saint Mary's	2.3	3.9	0.7	2.0	4.5	0.0
Somerset	1.7	3.8	0.0	1.1	3.7	0.0
Talbot	3.3	5.5	1.5	3.8	0.0	0.0
Washington	2.1	2.9	1.5	2.0	6.4	0.0
Wicomico	1.7	1.3	2.1	1.1	4.8	0.0
Worcester	3.7	7.2	1.2	3.9	3.0	0.0

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

Source: CDC WONDER, 1999-2002

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



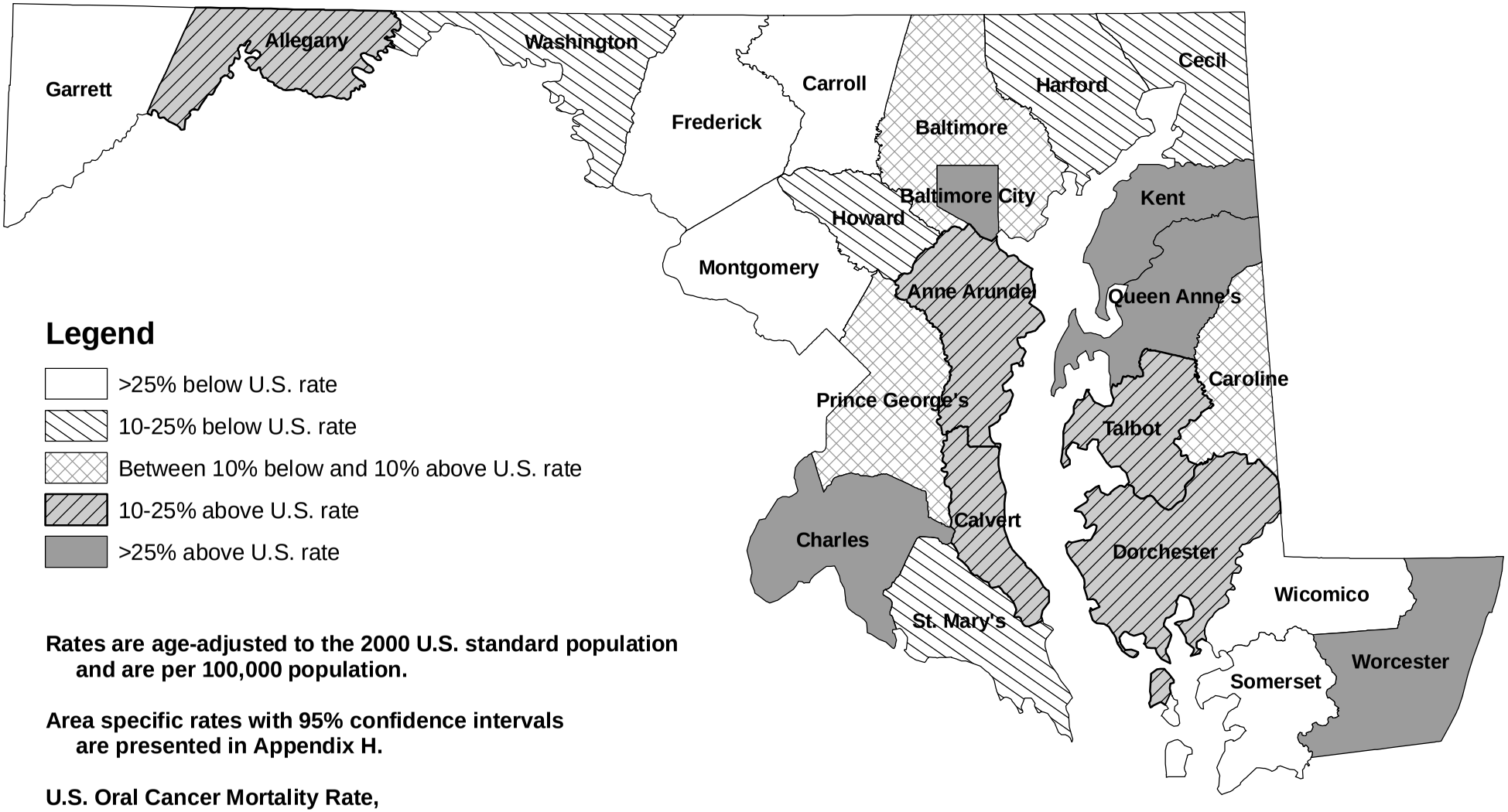
Rates are age-adjusted to the 2000 U.S. standard population and are per 100,000 population.

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

U.S. Oral Cancer Incidence Rate, 1998-2002: 10.8 per 100,000 population

Source: Maryland Cancer Registry, 1998-2002

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

Source: CDC WONDER, 1999-2002

F. Melanoma of the Skin

There are three major types of skin cancer: basal cell carcinoma, squamous cell carcinoma, and melanoma. Basal cell and squamous cell carcinoma are the most common forms of skin cancer and are not reportable to the Maryland Cancer Registry. Melanoma is the rarest and most serious type of skin cancer (NCI, PDQ).

Incidence (New Cases)

The Maryland melanoma incidence data for 2002 are not available.

Mortality (Deaths)

In 2002, a total of 145 persons died of melanoma in Maryland. The age-adjusted mortality rate for melanoma in Maryland is 2.8 per 100,000 population (2.3-3.3, 95% C.I.). This rate is similar to the 2002 U.S. SEER melanoma mortality rate of 2.6 per 100,000 population. Maryland is ranked 35th for melanoma mortality among the states and the District of Columbia for the period 1998-2002.

Table 56.
Melanoma Cancer Incidence and Mortality Rates
by Gender and Race, Maryland and the United States, 2002

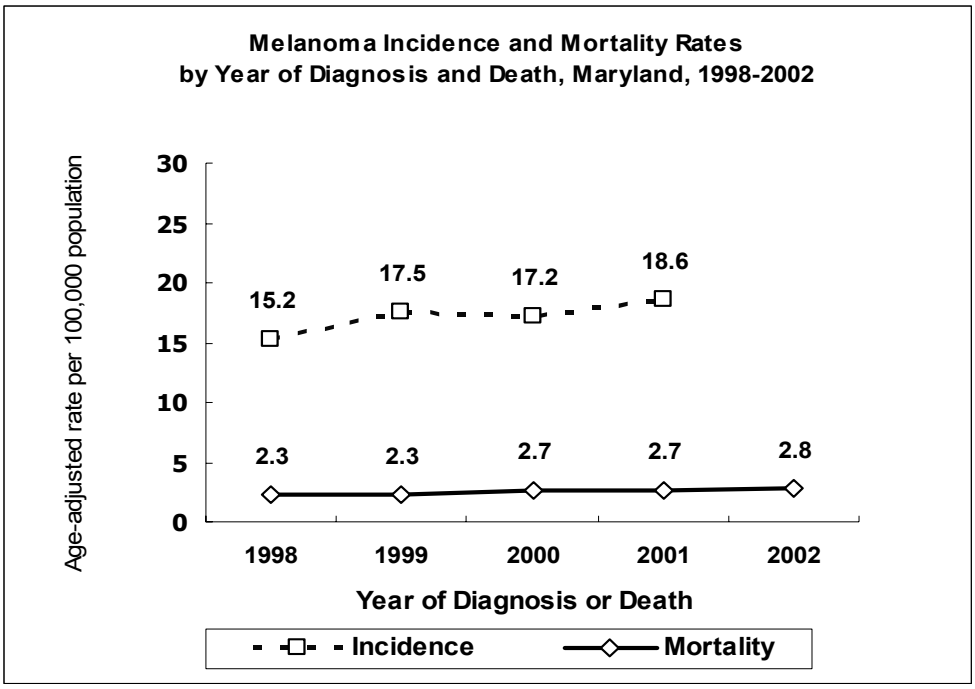
Incidence 2002	*Total*	*Males*	*Females*	*Whites*	*Blacks*
New Cases (#)	NA	NA	NA	NA	NA
Incidence Rate*	NA	NA	NA	NA	NA
U.S. SEER Rate*	18.3	22.6	15.3	21.9	NS
Mortality 2002	*Total*	*Males*	*Females*	*Whites*	*Blacks*
Deaths (#)	145	102	43	141	4
Mortality Rate*	2.8	4.6	1.4	3.6	0.3
U.S. SEER Rate*	2.6	3.8	1.7	2.9	0.4

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

NA: Data were not available

NS: Statistic not shown. Rate based on less than 25 cases.

Source: CDC WONDER, 2002
SEER, National Cancer Institute, 2002



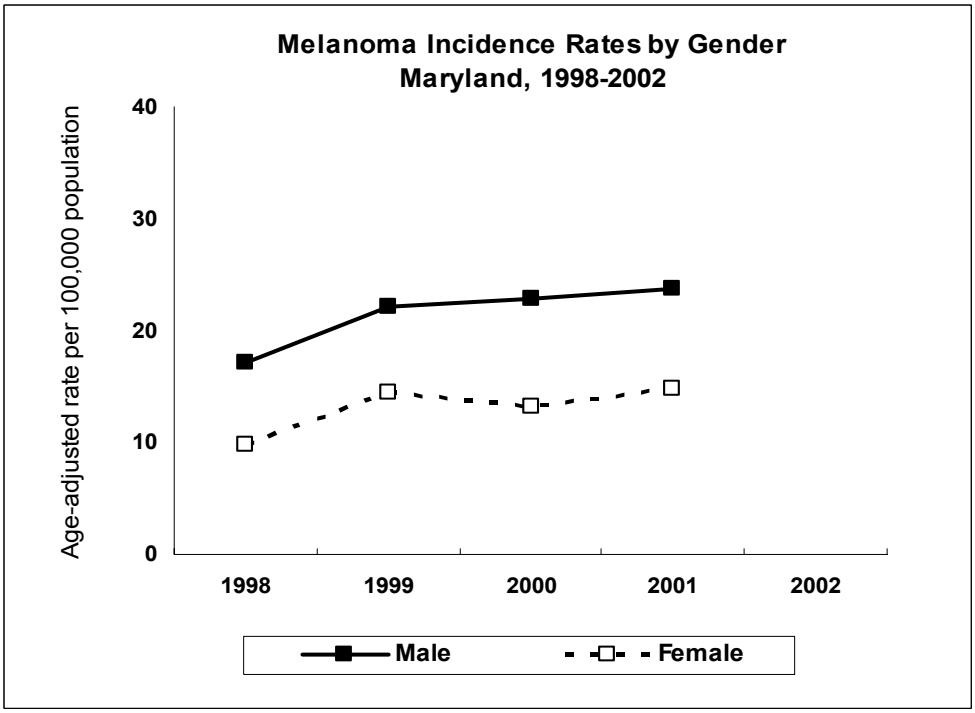
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2001
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Incidence and Mortality Trends

Melanoma incidence rates in Maryland increased an average of 6.1% yearly from 1998 to 2001. Mortality rates increased an average of 5.7% per year from 1998 to 2002.

The melanoma incidence rate for 2002 is not available.

See Appendix I, Tables 1 and 2.



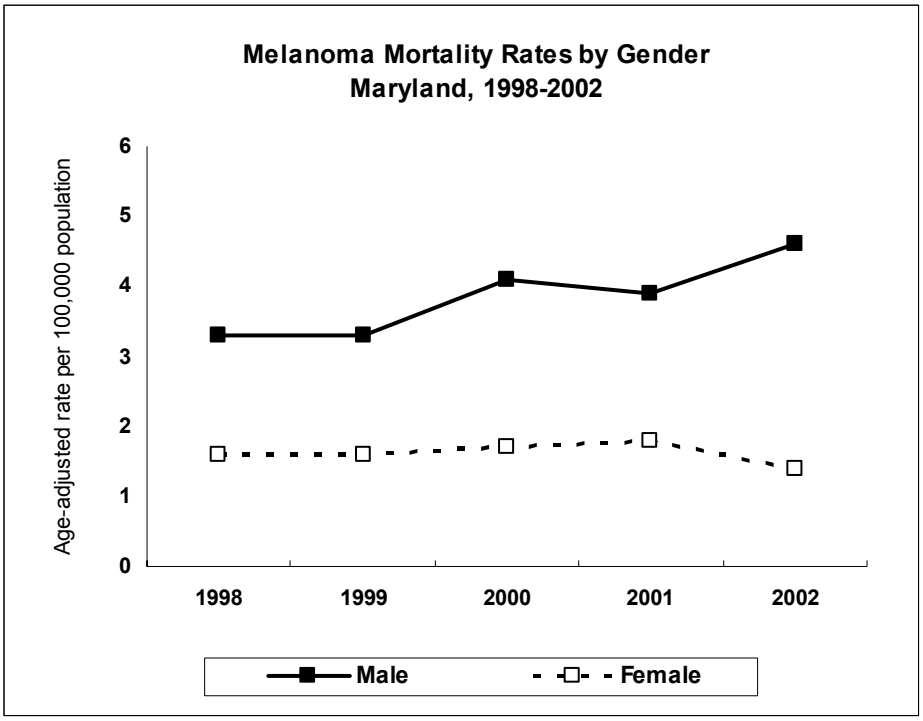
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2001

Gender Incidence Trends

When tracked over time, 1998-2001, females had higher incidence rates than males with a 12.3% increase.

Melanoma incidence numbers and rates for both genders were not available for 2002.

See Appendix I, Table 15.



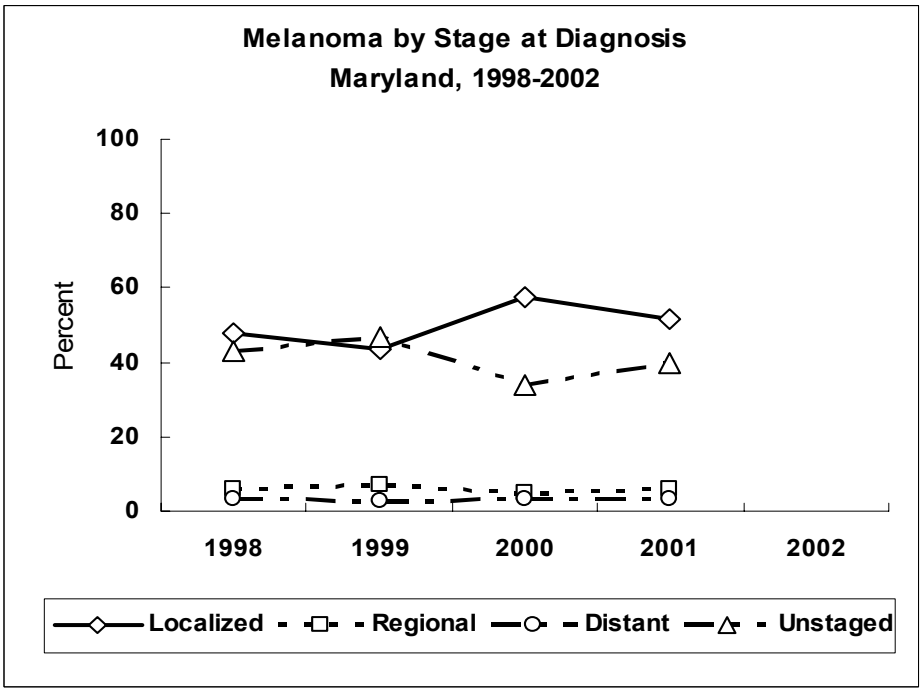
Rates are age-adjusted to 2000 U.S. standard population
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Gender Mortality Trends

In general, males had higher rates of melanoma mortality rates than females.

Male mortality rates from melanoma increased at an annual rate of 8.7%, while corresponding female rates have been declining an average 1.5% per year from 1998-2002.

See Appendix I, Table 16.



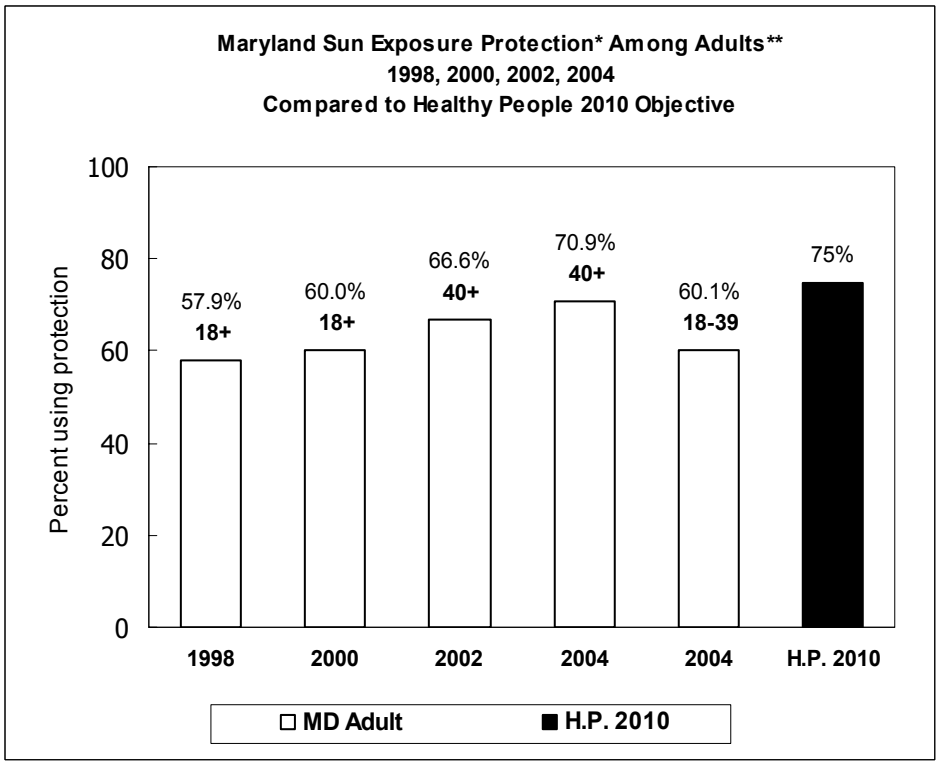
Maryland Cancer Registry, 1998-2001

Stage at Diagnosis

From 1998-2001, localized stage cases increased on average 5.2% per year. This compares with a yearly decline of 5.4% for regional stage. Distant stage increased 0.8% per year, and unstaged dropped by 5.3%.

Melanoma incidence stage data were not available for 2002.

See Appendix J, Table 7.



Healthy People Objectives

The Healthy People 2010 objective is to increase to 75% the percentage of persons age 18 years and older who use at least one of the following measures that may reduce the risk of skin cancer: avoid sun between 10 a.m. and 4 p.m.; wear sun-protective clothing when exposed to sunlight; use sunscreen with a sun protective factor of 15 or higher; and avoid artificial sources of ultraviolet light (e.g., tanning booths).

* Sun Exposure Protection Among Adults means percentage of adults who report "always" or "nearly always" using one or more of the following measures: a) avoid sun between 10 a.m. and 4 p.m., b) wear sun-protective clothing when exposed to sunlight, c) use sunscreen with a sun protective factor of 15 or higher; the BRFSS and MCS do not include tanning booths.
** For BRFSS an adult is age 18 years and older, and for MCS an adult is age 40 years and older
BRFSS, Maryland DHMH Center for Preventive Health Services, 1998, 2000
Maryland Cancer Survey, Maryland DHMH Center for Cancer Surveillance and Control, 2002, 2004 (age 40+ years) and Maryland Cancer Survey-Young Adults, 2004 (age 18-39 years, unweighted to Maryland population)
Healthy People 2010, U.S. Department of Health and Human Services, 2000

In 2004, 70.9% of adults age 40 years and older used one or more sun exposure protection measure. According to the 2004 MCS-Young Adults, 60.1% of adults age 18-39 years used sun exposure protection (unweighted data).

Public Health Evidence (quoted from NCI, PDQ, 7/21/2006 and 5/25/2006, and USPSTF, 4/2001)

Primary Prevention

Epidemiologic evidence suggests that exposure to UV radiation and the sensitivity of an individual's skin to UV radiation are risk factors for skin cancer, though the type of exposure (high-intensity and short-duration vs. chronic exposure) and pattern of exposure (continuous vs. intermittent) may differ among the three main types of skin cancer. There is inadequate evidence to determine whether the avoidance of sunburn alters the incidence of cutaneous melanoma. Sunburn can be avoided by reducing exposure to high-intensity UV radiation (e.g., sunlight, tanning booths), by wearing protective clothing when exposed to sunlight, and by using adequate amounts of sufficiently protective sunscreen. Sunscreen is *not* a substitute for the avoidance of sun exposure and there have been conflicting reports as to the effect of sunscreen use on the risk of developing melanoma. There is inadequate evidence to determine whether the use of sunscreen reduces the incidence of non-melanoma skin cancer (basal cell and squamous cell cancer).

Screening

The United States Preventive Services Task Force concludes that the evidence is insufficient to recommend for or against routine screening for skin cancer using a total-body skin examination for the early detection of cutaneous melanoma, basal cell cancer, or squamous cell skin cancer.

Public Health Intervention for Skin Cancer
Reduction of exposure to UV light by: ➢ Avoiding sun exposure, especially between 10 a.m. and 4 p.m. ➢ Wearing sun-protective hat and clothing when exposed to sunlight. ➢ Using sunscreens with a SPF of 15 or higher. ➢ Avoiding artificial sources of UV light (e.g., tanning booths).

Table 57.
Number of Melanoma Cases
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	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 58.
Melanoma Age-Adjusted Incidence Rates
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	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 59.
Number of Melanoma Cancer Deaths
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	145	102	43	141	4	0
Allegany	<6	<6	0	<6	0	0
Anne Arundel	19	11	8	19	0	0
Baltimore City	6	3	3	6	0	0
Baltimore County	31	23	8	30	1	0
Calvert	6	<6	<6	<6	<6	0
Caroline	<6	<6	0	<6	0	0
Carroll	6	5	1	6	0	0
Cecil	<6	<6	<6	<6	0	0
Charles	1	1	0	1	0	0
Dorchester	0	0	0	0	0	0
Frederick	4	3	1	4	0	0
Garrett	<6	<6	0	<6	0	0
Harford	9	6	3	9	0	0
Howard	1	0	1	1	0	0
Kent	<6	<6	0	<6	<6	0
Montgomery	27	20	7	27	0	0
Prince George's	12	6	6	11	1	0
Queen Anne's	<6	<6	0	<6	0	0
Saint Mary's	<6	<6	<6	<6	0	0
Somerset	0	0	0	0	0	0
Talbot	0	0	0	0	0	0
Washington	2	1	1	2	0	0
Wicomico	<6	<6	0	<6	0	0
Worcester	0	0	0	0	0	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 60.
Melanoma Age-Adjusted Mortality Rates*
by Jurisdiction, Gender and Race, Maryland, 2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	2.8	4.6	1.4	3.6	0.3	0.0
Allegany	**	**	0.0	**	0.0	0.0
Anne Arundel	4.2	6.4	3.5	4.7	0.0	0.0
Baltimore City	0.9	1.3	0.8	2.1	0.0	0.0
Baltimore County	3.7	6.5	1.7	4.3	0.8	0.0
Calvert	9.1	**	**	**	**	0.0
Caroline	**	**	0.0	**	0.0	0.0
Carroll	3.6	6.5	1.1	3.7	0.0	0.0
Cecil	**	**	**	**	0.0	0.0
Charles	0.7	1.5	0.0	0.9	0.0	0.0
Dorchester	0.0	0.0	0.0	0.0	0.0	0.0
Frederick	2.1	3.9	0.9	2.3	0.0	0.0
Garrett	**	**	0.0	**	0.0	0.0
Harford	4.4	7.3	2.4	4.8	0.0	0.0
Howard	0.7	0.0	1.0	0.8	0.0	0.0
Kent	**	**	0.0	**	**	0.0
Montgomery	3.1	5.3	1.4	3.9	0.0	0.0
Prince George's	2.0	2.6	1.6	4.2	0.2	0.0
Queen Anne's	**	**	0.0	**	0.0	0.0
Saint Mary's	**	**	**	**	0.0	0.0
Somerset	0.0	0.0	0.0	0.0	0.0	0.0
Talbot	0.0	0.0	0.0	0.0	0.0	0.0
Washington	1.4	1.7	1.6	1.5	0.0	0.0
Wicomico	**	**	0.0	**	0.0	0.0
Worcester	0.0	0.0	0.0	0.0	0.0	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 61
Number of Melanoma Cases
by Jurisdiction, Gender and Race, Maryland, 1998-2002

Jurisdiction	Total	Gender		Race			
		Males	Females	Whites	Blacks	Other	Unknown
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 62.
Melanoma Age-Adjusted Incidence Rates*
by Jurisdiction, Gender and Race, Maryland, 1998-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	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 63.
Number of Melanoma Deaths
by Jurisdiction, Gender and Race, Maryland, 1999-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	531	341	190	509	20	2
Allegany	14	9	5	14	0	0
Anne Arundel	58	40	18	56	2	0
Baltimore City	36	19	17	34	2	0
Baltimore County	101	63	38	97	4	0
Calvert	14	7	7	13	1	0
Caroline	5	2	3	5	0	0
Carroll	28	22	6	28	0	0
Cecil	12	6	6	12	0	0
Charles	8	5	3	8	0	0
Dorchester	1	1	0	1	0	0
Frederick	17	13	4	17	0	0
Garrett	3	2	1	3	0	0
Harford	21	14	7	21	0	0
Howard	12	5	7	12	0	0
Kent	7	6	1	6	1	0
Montgomery	97	65	32	94	1	2
Prince George's	39	24	15	30	9	0
Queen Anne's	8	6	2	8	0	0
Saint Mary's	13	10	3	13	0	0
Somerset	2	0	2	2	0	0
Talbot	8	5	3	8	0	0
Washington	12	8	4	12	0	0
Wicomico	10	7	3	10	0	0
Worcester	5	2	3	5	0	0

Source: CDC WONDER, 1999-2002

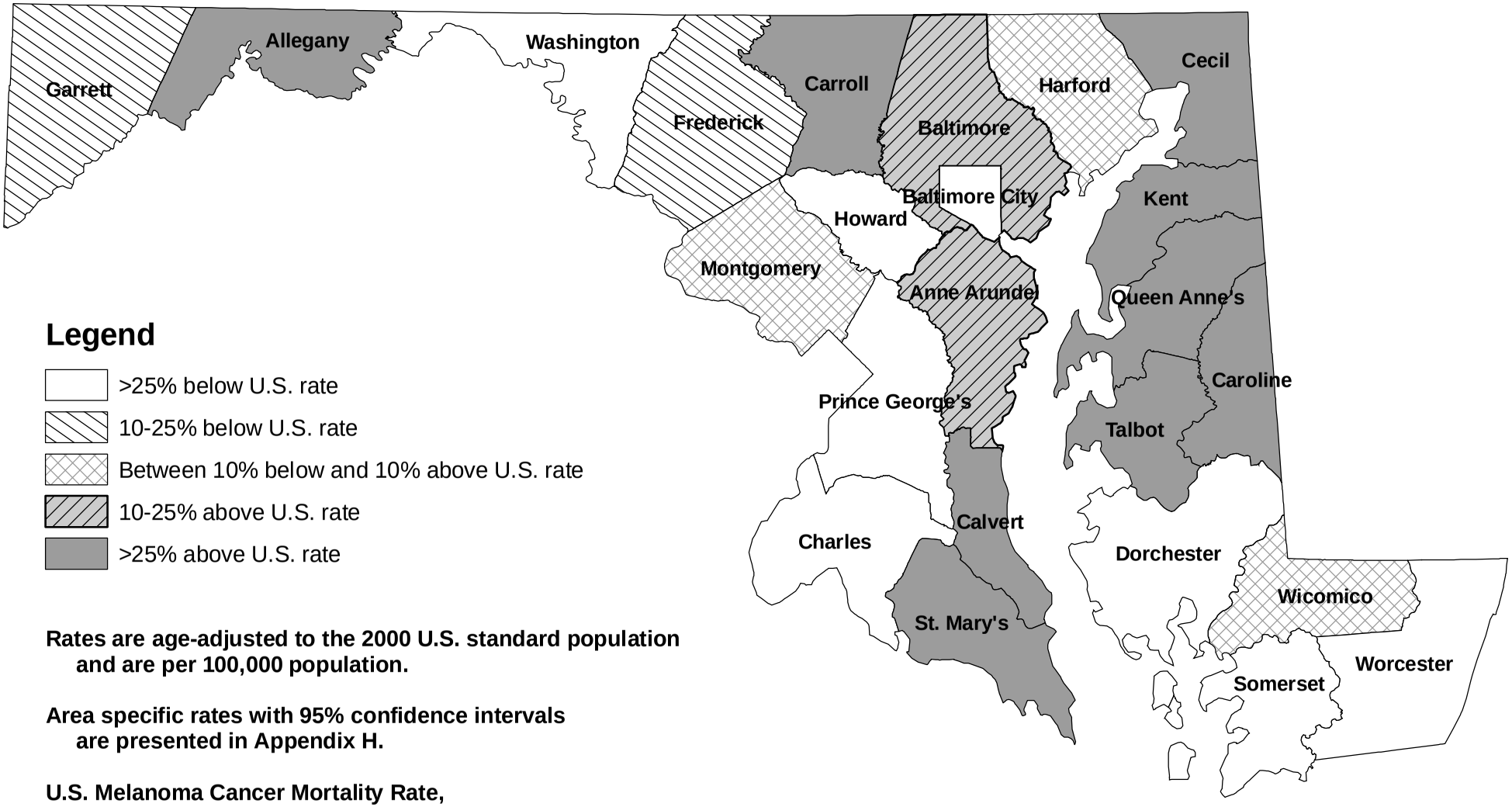
Table 64.
Melanoma Age-Adjusted Mortality Rates*
by Jurisdiction, Gender and Race, Maryland, 1999-2002

Jurisdiction	Total	Gender		Race		
		Males	Females	Whites	Blacks	Other
Maryland	2.6	4.0	1.6	3.3	0.5	0.2
Allegany	3.8	5.6	2.6	3.9	0.0	0.0
Anne Arundel	3.2	5.2	1.8	3.5	1.4	0.0
Baltimore City	1.4	1.8	1.0	3.0	0.1	0.0
Baltimore County	3.0	4.5	1.9	3.3	1.1	0.0
Calvert	5.9	5.6	5.6	6.4	3.1	0.0
Caroline	3.9	3.3	4.3	4.5	0.0	0.0
Carroll	4.7	8.5	1.9	4.8	0.0	0.0
Cecil	4.0	5.6	3.4	4.1	0.0	0.0
Charles	1.8	2.2	1.3	2.4	0.0	0.0
Dorchester	0.6	1.3	0.0	0.7	0.0	0.0
Frederick	2.3	4.1	1.1	2.5	0.0	0.0
Garrett	2.4	3.4	1.6	2.4	0.0	0.0
Harford	2.6	4.1	1.6	2.9	0.0	0.0
Howard	1.5	1.2	1.6	1.9	0.0	0.0
Kent	6.9	12.8	1.6	7.1	5.6	0.0
Montgomery	2.9	4.6	1.6	3.4	0.3	0.5
Prince George's	1.7	2.4	1.1	2.9	0.6	0.0
Queen Anne's	4.7	6.7	2.8	5.2	0.0	0.0
Saint Mary's	4.3	6.6	2.0	5.1	0.0	0.0
Somerset	1.8	0.0	3.0	2.4	0.0	0.0
Talbot	4.3	5.5	3.9	5.1	0.0	0.0
Washington	2.0	3.2	1.2	2.1	0.0	0.0
Wicomico	2.9	5.1	1.5	3.7	0.0	0.0
Worcester	2.0	1.4	2.8	2.5	0.0	0.0

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

Source: CDC WONDER, 1999-2002

Maryland Melanoma 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. Melanoma Cancer Mortality Rate, 1998-2002: 2.7 per 100,000 population

Source: CDC WONDER, 1999-2002

G. Cervical Cancer

Incidence (New Cases)

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

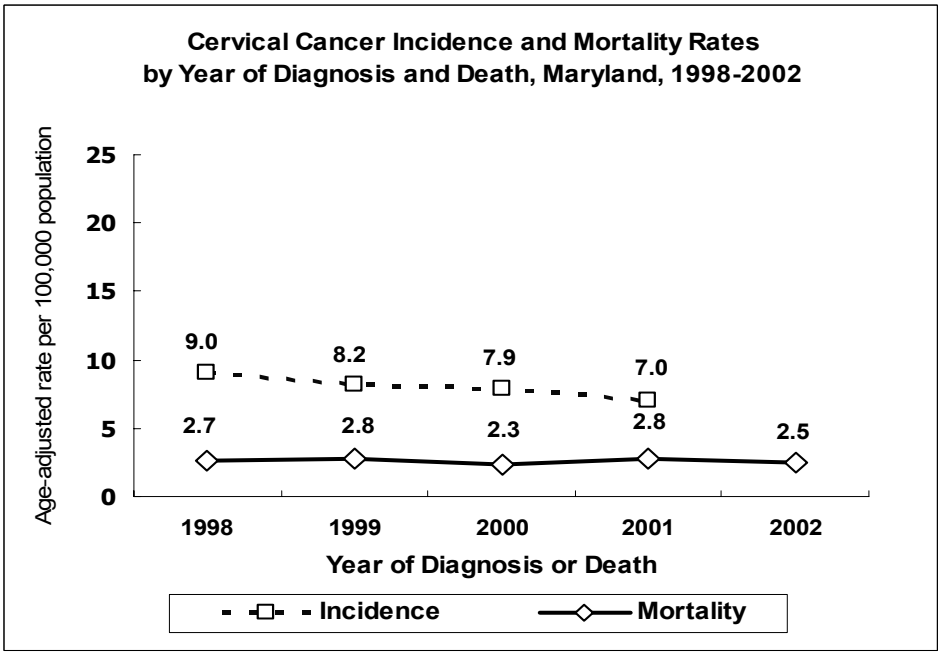
Mortality (Deaths)

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 26th 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

Incidence 2002	*Total*	*Whites*	*Blacks*	*Other*
New Cases (#)	NA	NA	NA	NA
Incidence Rate*	NA	NA	NA	NA
U.S. SEER Rate*	7.2	6.8	10.3	NA
Mortality 2002	*Total*	*Whites*	*Blacks*	*Other*
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



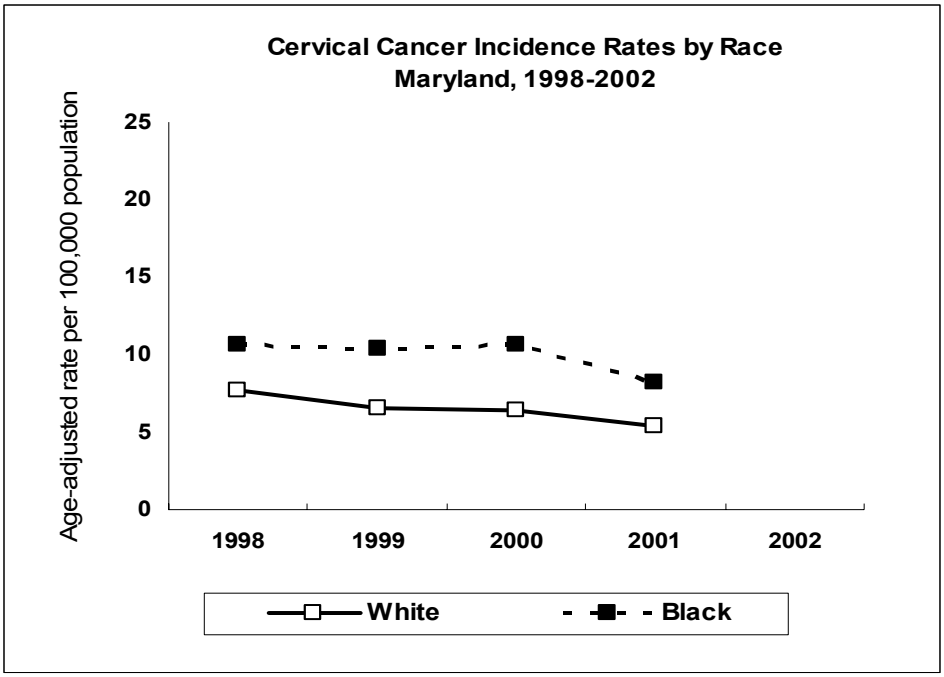
Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1998-2001
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

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

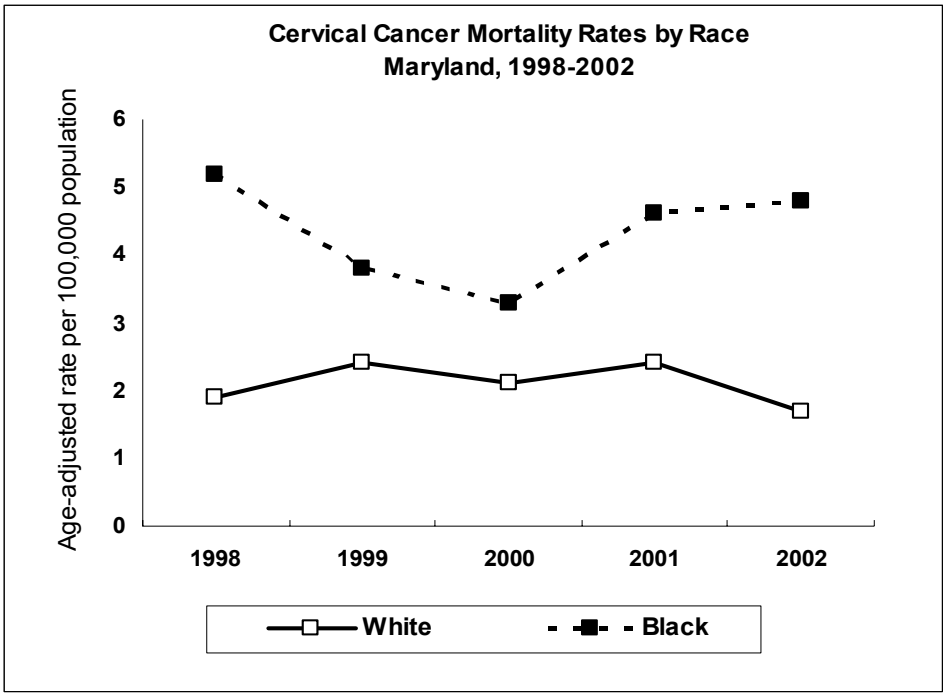
Race Incidence Trends

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.



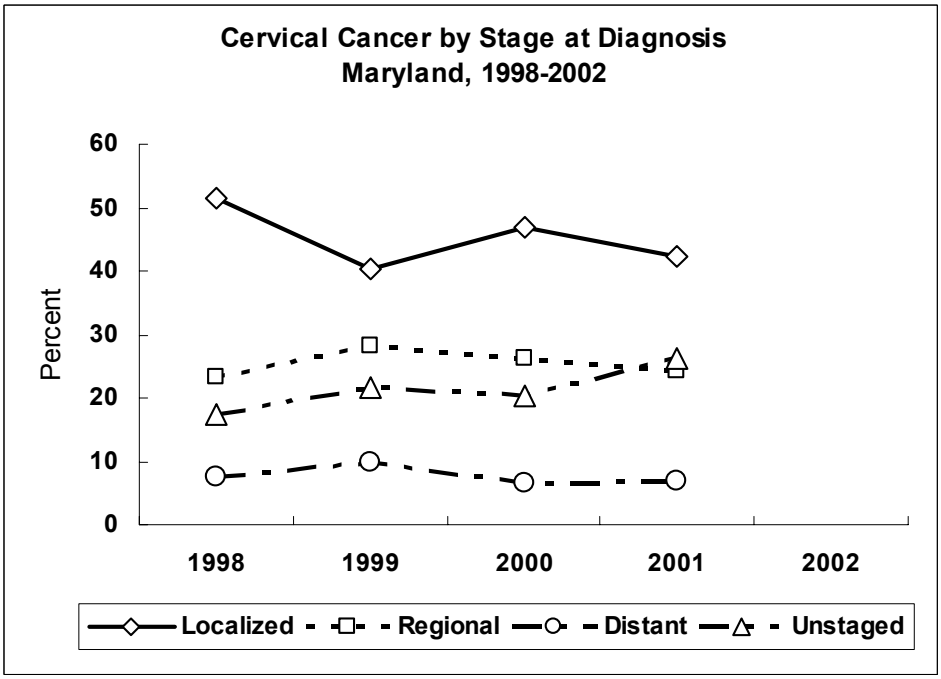
Rates are age-adjusted to 2000 U.S. standard population
Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

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.



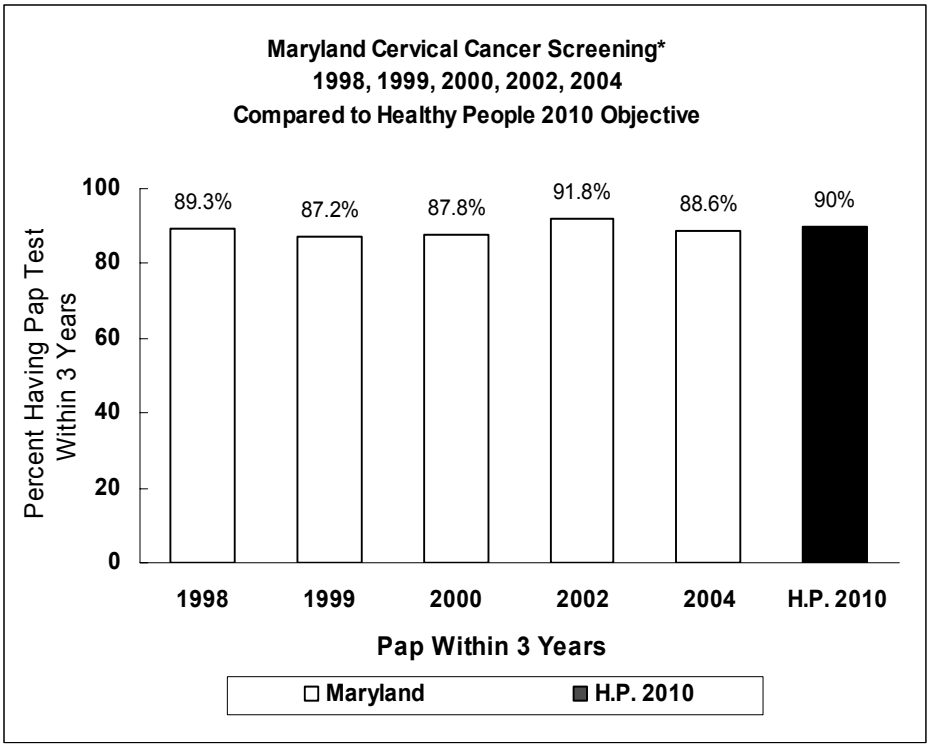
Maryland Cancer Registry, 1998-2001

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.



* 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

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.

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.

Public Health Intervention for Cervical Cancer (NCI, PDQ, USPSTF, and ACIP)
➢ 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. ➢ Vaccinate girls and women according to ACIP recommendations.

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				
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 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					
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 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

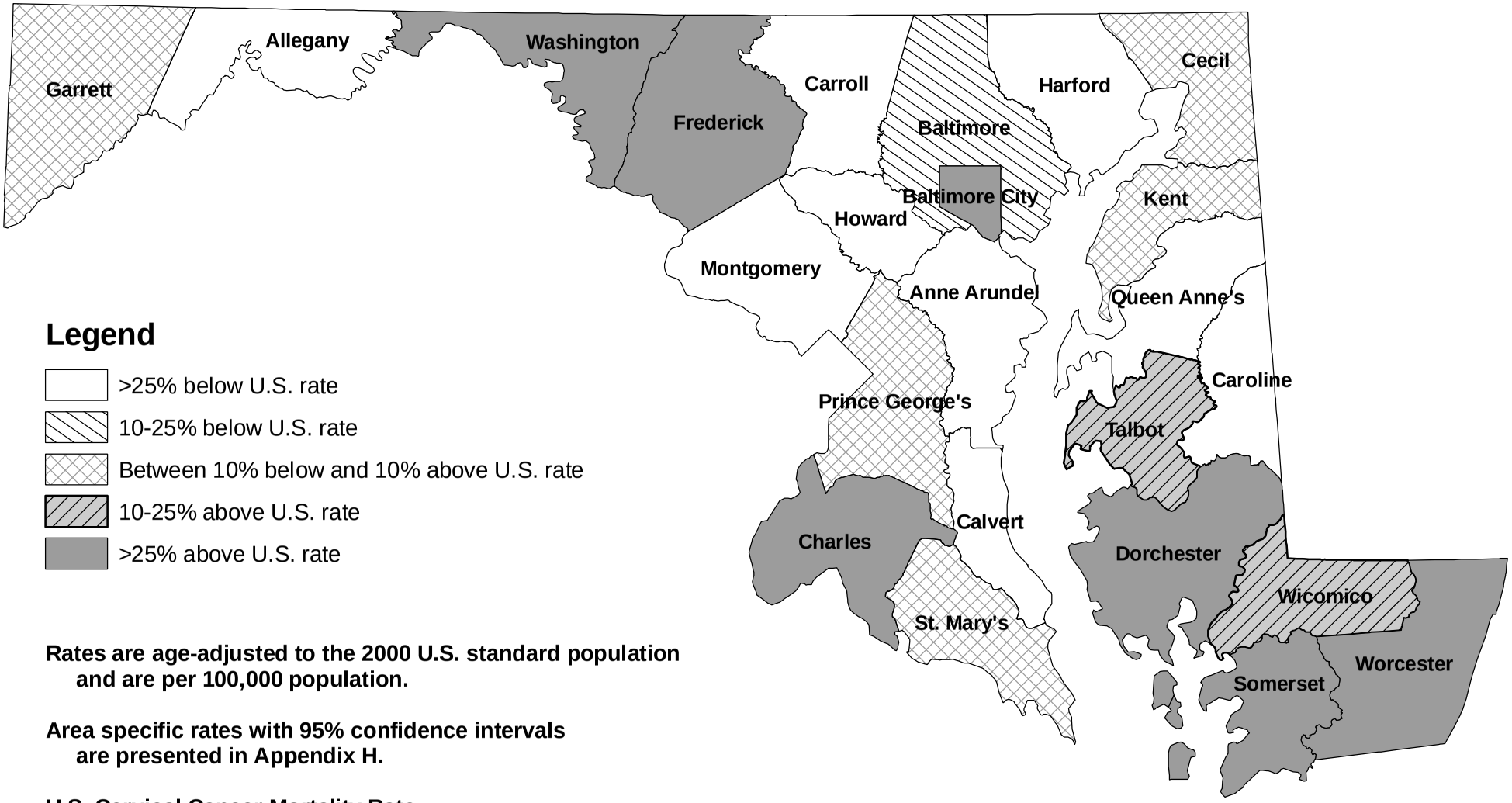
Table 73.
Cervical Cancer Age-Adjusted Mortality Rates*
by Jurisdiction and Race, Maryland, 1999-2002

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

IV. County-Specific Data

Incidence and Mortality Data by County

Five-year (1998-2002) combined incidence data for lung, colorectal, female breast, prostate, and oral cancers, four-year mortality data (1999-2002) for all the targeted cancers by jurisdiction, and rates for Maryland and the U.S. are provided in this section.

The rates for counties and Baltimore City may be based on small numbers of cases or small population sizes. Therefore, comparisons of rates of one jurisdiction to the U.S., Maryland, or another jurisdiction may not be valid. For valid mortality comparisons, refer to Appendix H and the maps.

Table 74.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Allegany County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	795	198.5	206.0	197.8
Lung and Bronchus	386	78.3	68.0	64.2	226	57.0	58.1	55.7
Colorectal	299	60.7	53.3	54.0	99	24.1	22.5	20.5
Female Breast	302	120.0	128.2	137.1	51	22.4	28.2	26.4
Prostate	347	166.2	179.3	177.6	47	31.4	32.1	30.3
Oral	57	12.5	10.3	10.8	13	3.2	2.9	2.8
Melanoma	NA	NA	NA	18.4	14	3.8	2.6	2.7
Cervical	NA	NA	NA	8.0	2	1.2	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 75.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Anne Arundel County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	3,609	213.5	206.0	197.8
Lung and Bronchus	1,601	74.4	68.0	64.2	1,072	63.2	58.1	55.7
Colorectal	1,132	53.1	53.3	54.0	331	20.0	22.5	20.5
Female Breast	1,677	134.5	128.2	137.1	301	30.6	28.2	26.4
Prostate	1,638	163.2	179.3	177.6	146	26.0	32.1	30.3
Oral	271	11.8	10.3	10.8	55	3.1	2.9	2.8
Melanoma	NA	NA	NA	18.4	58	3.2	2.6	2.7
Cervical	NA	NA	NA	8.0	20	2.0	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 76.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Baltimore City, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	City Number	City Rate	MD Rate	U.S. SEER Rate	City Number	City Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	7,022	267.3	206.0	197.8
Lung and Bronchus	2,968	90.5	68.0	64.2	2,131	81.3	58.1	55.7
Colorectal	1,902	57.6	53.3	54.0	766	29.1	22.5	20.5
Female Breast	2,315	124.3	128.2	137.1	553	36.1	28.2	26.4
Prostate	2,620	197.4	179.3	177.6	474	50.3	32.1	30.3
Oral	505	15.7	10.3	10.8	142	5.5	2.9	2.8
Melanoma	NA	NA	NA	18.4	36	1.4	2.6	2.7
Cervical	NA	NA	NA	8.0	72	4.9	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 77.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Baltimore County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	7,429	215.4	206.0	197.8
Lung and Bronchus	3,184	74.5	68.0	64.2	2,210	64.0	58.1	55.7
Colorectal	2,488	58.1	53.3	54.0	822	23.6	22.5	20.5
Female Breast	3,194	139.3	128.2	137.1	572	29.0	28.2	26.4
Prostate	3,373	186.0	179.3	177.6	363	28.2	32.1	30.3
Oral	440	10.6	10.3	10.8	99	2.9	2.9	2.8
Melanoma	NA	NA	NA	18.4	101	3.0	2.6	2.7
Cervical	NA	NA	NA	8.0	38	2.1	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 78.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Calvert County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	544	227.6	206.0	197.8
Lung and Bronchus	235	80.6	68.0	64.2	170	71.3	58.1	55.7
Colorectal	171	56.9	53.3	54.0	58	25.3	22.5	20.5
Female Breast	228	125.4	128.2	137.1	32	21.9	28.2	26.4
Prostate	255	183.0	179.3	177.6	36	46.7	32.1	30.3
Oral	37	11.9	10.3	10.8	8	3.1	2.9	2.8
Melanoma	NA	NA	NA	18.4	14	5.9	2.6	2.7
Cervical	NA	NA	NA	8.0	1	0.5	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 79.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Caroline County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	309	241.8	206.0	197.8
Lung and Bronchus	124	78.3	68.0	64.2	98	76.5	58.1	55.7
Colorectal	111	70.2	53.3	54.0	40	31.4	22.5	20.5
Female Breast	105	124.6	128.2	137.1	27	37.7	28.2	26.4
Prostate	94	133.6	179.3	177.6	18	38.3	32.1	30.3
Oral	22	**	10.3	10.8	0	0.0	2.9	2.8
Melanoma	NA	NA	NA	18.4	5	3.9	2.6	2.7
Cervical	NA	NA	NA	8.0	1	1.1	2.6	2.8

* 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 not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 80.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Carroll County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	1,130	202.1	206.0	197.8
Lung and Bronchus	419	60.5	68.0	64.2	308	55.8	58.1	55.7
Colorectal	369	53.5	53.3	54.0	130	23.2	22.5	20.5
Female Breast	502	126.2	128.2	137.1	78	24.1	28.2	26.4
Prostate	559	180.9	179.3	177.6	64	35.3	32.1	30.3
Oral	71	9.7	10.3	10.8	8	1.5	2.9	2.8
Melanoma	NA	NA	NA	18.4	28	4.7	2.6	2.7
Cervical	NA	NA	NA	8.0	6	1.8	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 81.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Cecil County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	699	228.9	206.0	197.8
Lung and Bronchus	298	76.2	68.0	64.2	215	67.9	58.1	55.7
Colorectal	213	54.8	53.3	54.0	76	24.8	22.5	20.5
Female Breast	224	103.6	128.2	137.1	47	27.9	28.2	26.4
Prostate	307	178.1	179.3	177.6	47	45.1	32.1	30.3
Oral	46	11.4	10.3	10.8	8	2.4	2.9	2.8
Melanoma	NA	NA	NA	18.4	12	4.0	2.6	2.7
Cervical	NA	NA	NA	8.0	5	2.8	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 82.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Charles County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	797	226.2	206.0	197.8
Lung and Bronchus	303	66.9	68.0	64.2	215	59.9	58.1	55.7
Colorectal	224	51.1	53.3	54.0	92	27.0	22.5	20.5
Female Breast	327	115.8	128.2	137.1	70	33.1	28.2	26.4
Prostate	395	196.3	179.3	177.6	35	32.1	32.1	30.3
Oral	41	8.6	10.3	10.8	21	5.2	2.9	2.8
Melanoma	NA	NA	NA	18.4	8	1.8	2.6	2.7
Cervical	NA	NA	NA	8.0	9	4.4	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 83.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Dorchester County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	389	239.2	206.0	197.8
Lung and Bronchus	187	92.3	68.0	64.2	124	76.0	58.1	55.7
Colorectal	135	67.3	53.3	54.0	50	30.1	22.5	20.5
Female Breast	139	137.2	128.2	137.1	20	22.6	28.2	26.4
Prostate	146	163.3	179.3	177.6	31	48.5	32.1	30.3
Oral	22	11.5	10.3	10.8	5	3.2	2.9	2.8
Melanoma	NA	NA	NA	18.4	1	0.6	2.6	2.7
Cervical	NA	NA	NA	8.0	5	6.9	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 84.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Frederick County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	1,282	193.1	206.0	197.8
Lung and Bronchus	526	63.9	68.0	64.2	332	50.0	58.1	55.7
Colorectal	501	60.9	53.3	54.0	151	23.2	22.5	20.5
Female Breast	646	132.7	128.2	137.1	94	24.5	28.2	26.4
Prostate	679	195.3	179.3	177.6	63	26.4	32.1	30.3
Oral	65	7.5	10.3	10.8	10	1.6	2.9	2.8
Melanoma	NA	NA	NA	18.4	17	2.3	2.6	2.7
Cervical	NA	NA	NA	8.0	16	4.2	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 85.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Garrett County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	259	185.6	206.0	197.8
Lung and Bronchus	113	64.4	68.0	64.2	71	50.4	58.1	55.7
Colorectal	92	53.4	53.3	54.0	37	26.9	22.5	20.5
Female Breast	104	114.0	128.2	137.1	21	26.9	28.2	26.4
Prostate	131	161.5	179.3	177.6	18	35.5	32.1	30.3
Oral	9	**	10.3	10.8	2	1.4	2.9	2.8
Melanoma	NA	NA	NA	18.4	3	2.4	2.6	2.7
Cervical	NA	NA	NA	8.0	2	2.9	2.6	2.8

* 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 not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 86.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Harford County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	1,486	197.1	206.0	197.8
Lung and Bronchus	715	74.0	68.0	64.2	468	60.9	58.1	55.7
Colorectal	493	51.8	53.3	54.0	155	21.5	22.5	20.5
Female Breast	710	125.6	128.2	137.1	96	21.6	28.2	26.4
Prostate	864	201.5	179.3	177.6	79	29.2	32.1	30.3
Oral	97	9.4	10.3	10.8	17	2.3	2.9	2.8
Melanoma	NA	NA	NA	18.4	21	2.6	2.6	2.7
Cervical	NA	NA	NA	8.0	5	1.1	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 87.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Howard County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	1,174	167.6	206.0	197.8
Lung and Bronchus	507	58.1	68.0	64.2	308	45.0	58.1	55.7
Colorectal	453	50.5	53.3	54.0	117	17.4	22.5	20.5
Female Breast	768	128.9	128.2	137.1	104	24.0	28.2	26.4
Prostate	706	172.7	179.3	177.6	53	25.4	32.1	30.3
Oral	78	7.8	10.3	10.8	18	2.4	2.9	2.8
Melanoma	NA	NA	NA	18.4	12	1.5	2.6	2.7
Cervical	NA	NA	NA	8.0	6	1.3	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 88.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Kent County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	214	189.0	206.0	197.8
Lung and Bronchus	105	74.3	68.0	64.2	68	58.9	58.1	55.7
Colorectal	74	51.6	53.3	54.0	19	16.9	22.5	20.5
Female Breast	72	112.8	128.2	137.1	11	17.2	28.2	26.4
Prostate	78	125.2	179.3	177.6	12	25.6	32.1	30.3
Oral	9	**	10.3	10.8	5	4.4	2.9	2.8
Melanoma	NA	NA	NA	18.4	7	6.9	2.6	2.7
Cervical	NA	NA	NA	8.0	0	0.0	2.6	2.8

* 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 not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 89.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Montgomery County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	4,867	145.3	206.0	197.8
Lung and Bronchus	1,743	42.4	68.0	64.2	1,082	32.7	58.1	55.7
Colorectal	1,667	39.8	53.3	54.0	480	14.4	22.5	20.5
Female Breast	3,131	129.3	128.2	137.1	449	22.6	28.2	26.4
Prostate	3,138	173.6	179.3	177.6	281	22.8	32.1	30.3
Oral	345	7.9	10.3	10.8	66	2.0	2.9	2.8
Melanoma	NA	NA	NA	18.4	97	2.9	2.6	2.7
Cervical	NA	NA	NA	8.0	30	1.5	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 90.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Prince George's County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	4,987	215.9	206.0	197.8
Lung and Bronchus	1,654	56.2	68.0	64.2	1,299	56.1	58.1	55.7
Colorectal	1,477	50.9	53.3	54.0	572	25.8	22.5	20.5
Female Breast	2,211	115.5	128.2	137.1	443	29.7	28.2	26.4
Prostate	2,536	190.5	179.3	177.6	270	38.9	32.1	30.3
Oral	286	8.3	10.3	10.8	68	2.7	2.9	2.8
Melanoma	NA	NA	NA	18.4	39	1.7	2.6	2.7
Cervical	NA	NA	NA	8.0	47	3.0	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 91.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Queen Anne's County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	357	209.2	206.0	197.8
Lung and Bronchus	158	72.7	68.0	64.2	104	59.6	58.1	55.7
Colorectal	128	61.7	53.3	54.0	38	23.7	22.5	20.5
Female Breast	135	116.3	128.2	137.1	25	27.4	28.2	26.4
Prostate	167	155.7	179.3	177.6	16	23.5	32.1	30.3
Oral	33	15.0	10.3	10.8	8	4.8	2.9	2.8
Melanoma	NA	NA	NA	18.4	8	4.7	2.6	2.7
Cervical	NA	NA	NA	8.0	1	1.1	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 92.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Saint Mary's County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	562	205.4	206.0	197.8
Lung and Bronchus	257	74.6	68.0	64.2	152	54.9	58.1	55.7
Colorectal	227	66.6	53.3	54.0	72	26.5	22.5	20.5
Female Breast	210	107.6	128.2	137.1	28	18.1	28.2	26.4
Prostate	204	119.2	179.3	177.6	27	26.2	32.1	30.3
Oral	49	12.7	10.3	10.8	6	2.3	2.9	2.8
Melanoma	NA	NA	NA	18.4	13	4.3	2.6	2.7
Cervical	NA	NA	NA	8.0	4	2.6	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 93.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Somerset County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	252	237.0	206.0	197.8
Lung and Bronchus	133	99.6	68.0	64.2	85	79.2	58.1	55.7
Colorectal	76	57.5	53.3	54.0	22	20.5	22.5	20.5
Female Breast	85	126.4	128.2	137.1	12	21.6	28.2	26.4
Prostate	93	151.4	179.3	177.6	15	36.1	32.1	30.3
Oral	7	**	10.3	10.8	2	1.7	2.9	2.8
Melanoma	NA	NA	NA	18.4	2	1.8	2.6	2.7
Cervical	NA	NA	NA	8.0	2	4.1	2.6	2.8

* 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 not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 94.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Talbot County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	405	193.3	206.0	197.8
Lung and Bronchus	167	65.0	68.0	64.2	106	50.1	58.1	55.7
Colorectal	164	63.7	53.3	54.0	48	22.6	22.5	20.5
Female Breast	188	148.9	128.2	137.1	35	32.7	28.2	26.4
Prostate	203	175.9	179.3	177.6	33	38.6	32.1	30.3
Oral	29	12.6	10.3	10.8	7	3.3	2.9	2.8
Melanoma	NA	NA	NA	18.4	8	4.3	2.6	2.7
Cervical	NA	NA	NA	8.0	4	3.3	2.6	2.8

* 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 not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 95.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Washington County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	1,210	206.9	206.0	197.8
Lung and Bronchus	506	69.8	68.0	64.2	347	59.2	58.1	55.7
Colorectal	408	56.2	53.3	54.0	134	22.8	22.5	20.5
Female Breast	498	132.1	128.2	137.1	98	31.3	28.2	26.4
Prostate	468	147.5	179.3	177.6	59	27.7	32.1	30.3
Oral	68	9.5	10.3	10.8	12	2.1	2.9	2.8
Melanoma	NA	NA	NA	18.4	12	2.0	2.6	2.7
Cervical	NA	NA	NA	8.0	11	3.6	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 96.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Wicomico County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	NA	NA	NA	480.4	788	229.8	206.0	197.8
Lung and Bronchus	380	88.7	68.0	64.2	250	72.3	58.1	55.7
Colorectal	218	51.2	53.3	54.0	86	25.3	22.5	20.5
Female Breast	330	138.7	128.2	137.1	79	40.0	28.2	26.4
Prostate	274	148.0	179.3	177.6	41	36.0	32.1	30.3
Oral	49	11.3	10.3	10.8	6	1.7	2.9	2.8
Melanoma	NA	NA	NA	18.4	10	2.9	2.6	2.7
Cervical	NA	NA	NA	8.0	6	3.1	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Table 97.
Incidence (1998-2002) and Mortality Rates* (1999-2002) by Type of Cancer
Worcester County, Maryland, and U.S. (1998-2002)

Type of Cancer	Incidence (1998-2002)				Mortality (1999-2002)			
	County Number	County Rate	MD Rate	U.S. SEER Rate	County Number	County Rate	MD Rate	U.S. SEER Rate (1998-2002)
All Cancers	1,721	524.1	NA	480.4	583	213.5	206.0	197.8
Lung and Bronchus	320	93.3	68.0	64.2	187	66.0	58.1	55.7
Colorectal	198	58.7	53.3	54.0	61	23.0	22.5	20.5
Female Breast	198	120.4	128.2	137.1	38	25.2	28.2	26.4
Prostate	239	145.2	179.3	177.6	26	25.8	32.1	30.3
Oral	44	13.9	10.3	10.8	11	3.7	2.9	2.8
Melanoma	NA	NA	NA	18.4	5	2.0	2.6	2.7
Cervical	NA	NA	NA	8.0	6	4.3	2.6	2.8

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

NA: Data not available

Source: Maryland Cancer Registry, 1998-2002
CDC WONDER, 1999-2002
SEER, National Cancer Institute, 1998-2002

Appendix A

Cigarette Restitution Fund
Cancer Report Requirements

Cigarette Restitution Fund Cancer Report Requirements

The Maryland General Assembly established a Cigarette Restitution Fund (CRF) to provide for the distribution of funds from the tobacco settlement (Enrolled House Bill 1425-2000/Enrolled Senate Bill 896-2000). The law created a Tobacco Use Prevention and Cessation Program and a Cancer Prevention, Education, Screening and Treatment Program, and provides parameters on how the funds may be spent. One provision of the law requires the Maryland Department of Health and Mental Hygiene to conduct a baseline cancer survey (2000) as well as cancer surveys at least every other year thereafter.

The law requires that the survey include:

(1) The number and percentage of individuals who have each targeted cancer, both Statewide and in each county;
(2) The number and percentage of individuals within each minority population who have each targeted cancer, both Statewide and in each county;
(3) The mortality rate for each targeted cancer, both Statewide and in each county;
(4) The mortality rate for the different minority populations for each targeted cancer, both Statewide and in each county;
(5) The number of identifiable cancers with a high incidence in the State for which there are effective methods of prevention and early detection, and treatment after detection;
(6) Any aspect of targeted and non-targeted cancers that DHMH seeks to measure; and
(7) Any other factor that DHMH determines to be important for measuring rates of cancer in the State or for evaluating whether the program meets its objectives.

This information is provided in this Cancer Report as follows:

Required Component of the Cancer Report	***Location of Information in this Report***
1. Number and percentage of individuals having each targeted cancer, both Statewide and in each jurisdiction.	Tables 1, 11, 12, 13, 16, 17, 20, 21, 22, 25, 26, 29, 30, 31, 34, 35, 38, 39, 40, 43, 44, 47, 48, 49, 52, 53, 56, 62, 65, 74-97
2. Number and percentage of individuals within each minority population having each targeted cancer, both Statewide and in each jurisdiction.	Same as above.
3. Mortality rate for each targeted cancer both Statewide and in each jurisdiction.	Tables 1, 5, 6, 9, 10, 11, 14, 15, 18, 19, 20, 23, 24, 27, 28, 29, 32, 33, 36, 37, 38, 41, 42, 45, 46, 47, 50, 51, 54, 55, 56, 59, 60, 63, 64, 65, 68, 69, 72, 73, 74-97
4. Mortality rate for the different minority populations for each targeted cancer, both Statewide and in each county.	Same as above.
5. Number of identifiable cancers with a high incidence in the State for which there are effective methods of prevention and early detection, and treatment after detection.	High incidence and effective prevention: Lung cancer: Tables 11, 12, 13, 16, 17 High incidence and effective detection: Colorectal and breast cancer: Tables 20, 21, 22, 25, 26, 29, 30, 31, 34, 35

6. Other aspects of targeted and non-targeted cancers that the Department seeks to measure.	For cancer overall and for each targeted cancer, the report: 1. Compares the cancer burden to that of heart disease; 2. Compares Maryland incidence and mortality rates to that of the U.S.; 3. Depicts trends by age for overall cancer incidence and mortality; 4. Delineates incidence and mortality trends by race and gender; 5. Shows 5-year mortality trends and 4-year combined data; 6. Presents 5-year combined incidence data for lung, colorectal, breast, prostate, and oral cancers; 7. Tracks stage of disease at diagnosis over a 5-year period; 8. Lists appropriate Healthy People 2010 objective(s) showing trend data for each targeted cancer and identifies where Maryland currently is in meeting the respective objective(s); 9. Describes the evidence for screening, primary prevention and chemoprevention for each targeted cancer, based on current scientific literature; and 10. Describes the recommended public health intervention for each targeted cancer based on the evidence referenced above. This information is located throughout the report.
7. Other factors that the Department determines to be important for measuring rates of cancer in the State or for evaluating whether the program meets its objectives.	Same as above.

Appendix B

Cancer Report Format

Cancer Report Format

1. Selection of Targeted Cancers

Under the Cigarette Restitution Fund Program, Cancer Prevention, Education, Screening and Treatment Program, the Maryland Department of Health and Mental Hygiene targeted seven cancer sites: lung and bronchus, colon and rectum, female breast, prostate, oral, melanoma of the skin, and cervix. These cancers have been targeted because they can be prevented (e.g., lung and bronchus, melanoma of the skin) or detected early and treated (e.g., colon and rectum, female breast, cervical, oral), or are a major cause of cancer death (e.g., prostate).

2. Report Format

Information provided in this report focuses on all cancer sites reported in Maryland and the seven specific cancer sites targeted by the Cancer Prevention, Education, Screening and Treatment Program.

The report begins with a graph that depicts the burden of cancer by comparing the pattern over time for mortality rates caused by cancer compared to those due to heart disease for two age groups: younger than 85 years and age 85 and older.

For each targeted cancer site and all cancer sites, the number of new cancers, cancer deaths, and age-adjusted cancer incidence and mortality rates are presented by race, gender, and jurisdiction in the chapters; however, 2002 incidence data for all cancer sites, melanoma, and cervical are not available. All rates are age-adjusted to the 2000 U.S. standard population. For each targeted cancer site, trends in incidence and mortality, race- and gender-specific incidence and mortality rates, trends in stage of disease at diagnosis, public health evidence, recommended areas for public health intervention, and Maryland screening/behavior rates compared to Healthy People 2010 screening/behavior objectives are also presented. Each section also contains 5-year combined data for incidence and 4-year combined for mortality. A section with county-specific data portrays 5-year incidence and 4-year mortality data along with Maryland and U.S. rates.

Additionally, Maryland 2002 incidence and mortality rates with 95% confidence intervals (95% C.I.) were compared to U.S. 2002 data from the Surveillance, Epidemiology and End Results (SEER) Program Cancer Statistics Review (1998-2002). Maryland rankings on 5-year SEER mortality rates by cancer site were also included in each cancer chapter. The SEER program does not provide statistics on "other" races for incidence and mortality; therefore, incidence and mortality counts and rates were not presented for the "other" race category.

Figures (graphs and maps) are also used to display data. Two "All Cancer Sites" graphs show age-specific incidence and mortality rates by gender. Graphs are further used to display data on incidence and mortality from 1998-2002 with the estimated annual percentage change (EAPC) (see Appendix D, Glossary, for more information on EAPC);

separate 5-year time-series graphs for incidence and mortality by race and gender, including EAPCs; stage of diagnosis; and cancer-related behaviors of persons in Maryland compared to persons in the U.S.

Maryland population estimates for 2002 by race and gender can be found in Appendix E. Population numbers are denominators for calculating rates. In addition, Appendix F depicts the 2000 U.S. standard population organized by age groupings. There is a listing of International Classification of Diseases for Oncology (ICD-O-3) codes for incidence along with corresponding ICD-10 codes for mortality for cancer sites included in the report (Appendix G). Maps portray Maryland incidence and mortality data compared to the U.S. for combined years 1998-2002 for incidence and 1999-2002 for mortality by geographical area. Maps denote areas with incidence and mortality grouped into five categories compared to corresponding U.S. rates (see Appendix H for map data). Appendix I shows the age-adjusted cancer incidence and mortality rates for all cancer sites and the targeted cancers for quick comparisons of rates and the estimated annual percentage change, 1998-2002, along with direction of the trend for each cancer site. Finally, Appendix J provides the percentages that depict trends in cancer stage at diagnosis for all cancer sites and the targeted cancers from 1998 to 2002.

Appendix C

2006 Cancer Report Data Sources, References, and Data Considerations

2006 Cancer Report Data Sources, References, and Data Considerations

A. Maryland Data Sources

The Maryland-specific data used in this report were supplied by offices in the Maryland Department of Health and Mental Hygiene (DHMH) including the Maryland Cancer Registry, Division of Health Statistics, Center for Preventive Health Services, Center for Health Promotion, Education and Tobacco Use Prevention, and the Center for Cancer Surveillance and Control, Surveillance and Evaluation Unit.

1. Maryland Cancer Registry

The Maryland Cancer Registry (MCR), Center for Cancer Surveillance and Control, DHMH, is a computerized data system that registers all new cases of reportable cancers (excluding non-genital squamous cell or basal cell carcinoma) diagnosed or treated in Maryland. Incidence rates used in this report were calculated for the year 2002, in which the most complete data were available and include all cases reported for 2002 to the MCR as of November 2004. In this publication, incidence data are presented for lung, colorectal, breast, and oral cancers. Incidence data for melanoma and cervical cancer were not available due to data problems. The omission of data for all cancer sites is due to problems with the data for melanoma and cervical cancer.

The Maryland cancer reporting law mandates the collection of cancer information from hospitals, radiation therapy centers, diagnostic laboratories (both in-State and out-of-State), freestanding ambulatory care facilities, surgical centers, and physicians whose non-hospitalized cancer patients are not otherwise reported. MCR also participates in data exchange agreements with neighboring states including Delaware, Pennsylvania, Virginia, and West Virginia as well as the District of Columbia. Information on Maryland residents diagnosed or treated for cancer in these states and the District of Columbia is included in this report.

2. Maryland Division of Health Statistics

The Division of Health Statistics in the Vital Statistics Administration of DHMH registers births, deaths, marriages, and divorces. Data provided from this office includes numbers of deaths and Maryland population estimates. MCR used data from the Maryland Vital Statistics Administration for calculating Maryland cancer mortality rates annually from 1998 through 2002 on graphs of incidence and mortality trends and for displaying cancer and heart disease annual mortality rates on graphs. Single-year Maryland cancer mortality data for 2002 used in this report were from the Centers for Disease Control and Prevention (CDC), CDC WONDER, a national data source.

3. Behavioral Risk Factor Surveillance Survey

The Maryland Behavioral Risk Factor Surveillance Survey (BRFSS) is an annual telephone survey conducted on a random sample of Maryland adult residents. This survey, managed by the Maryland DHMH, Center for Preventive Health Services, Office of Surveillance and Assessment provided risk behavior and cancer screening information for this report. Maryland data can be accessed online at http://www.marylandbrfss.org. In addition, both Maryland and state-aggregated

national data on health risk behavior can be obtained from the CDC Web site at: http://www.cdc.gov/brfss.

4. Maryland Youth Tobacco Survey

The Maryland Youth Tobacco Survey (MYTS) was administered for the purpose of gathering attitude, usage, and exposure information regarding tobacco products for Maryland youth grades 9-12 Statewide and within each of the 23 counties and Baltimore City in Maryland. Survey results are also used in apportioning Local Tobacco Use Prevention and Cessation grants among Maryland's 24 major political subdivisions.

The most recent survey was conducted in the Fall of 2002. Over 66,000 students in eligible Maryland public middle and high schools completed MYTS questionnaires Statewide.

The MYTS is managed by the Center for Health Promotion, Education, and Tobacco Use Prevention. Complete data for the MYTS were published in 2000 and 2002. Copies of published reports are available from the Center at 410-767-1362. Reports are also available through the DHMH Web site at: http://www.fha.state.md.us/crfp/html/stats.cfm.

The most recent report monitors changing tobacco use behaviors in Maryland and can be found at: http://www.mdpublichealth.org/crfp/pdf/Fall2003DataReport.pdf.

5. *Youth Risk Behavioral Surveillance System (YRBSS)*

The YRBSS was developed in 1990 to monitor priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth in the U.S., including data about tobacco use, dietary behaviors, and alcohol and drugs. The purposes of YRBSS are to determine the prevalence of health risk behaviors, to develop trends, and to evaluate progress towards meeting Healthy People (HP) 2010 objectives and similar indicators of progress.

The YRBSS includes national, state, and local school-based surveys of representative samples of 9th through 12th grade students. The CDC designs the sample and conducts the national YRBSS survey, while state and local surveys are conducted by departments of health and education. These surveys are conducted every two years, usually during the spring semester and provide data representative of public high school students in each state. House Bill 358 mandated that Maryland schools conduct their own YRBS (27 schools, 2000 students, all counties). Maryland conducted a YRBS survey in the Fall of 2005. The Maryland YRBSs data report is expected in late 2006. Until then, Maryland data are available online at the CDC Web site. The following Web location enables extracting YRBS data, including the capability of querying Maryland-specific information: http://apps.nccd.cdc.gov/yrbss.

6. Maryland Cancer Survey

The Maryland Cancer Survey (MCS) is managed by the DHMH, Center for Cancer Surveillance and Control, Surveillance and Evaluation Unit. The purpose of the MCS was to determine cancer screening rates and to measure cancer risk behaviors among persons age 40 years and older living

in Maryland, for selected cancers targeted by DHMH. The methodology used in the MCS is similar to the BRFSS. Unlike the BRFSS, the MCS conducted in 2002 and 2004, focuses on people age 40 years and over, who have the highest risk of developing cancer. MCS data are tabulated and reported as not including missing values; all percentages are based on the number of respondents who answered the question. Missing values were excluded because there were a few non-responses for questions and for consistency of reporting all outcomes with the same sample.

7. *Maryland Cancer Survey—Young Adults*

The 2004 Maryland Cancer Survey—Young Adults (MCSYA) was a pilot survey, focusing on cancer risk behaviors in adults age 18-39 years residing in Maryland. This survey was performed in conjunction with the 2004 MCS, which was restricted to people 40 years of age and older. In households where there was no one age-eligible for the MCS (i.e., 40 years of age or older), a resident between the ages of 18-39 years was invited to participate in the MCSYA. This survey was not designed to be "population-based" and is not weighted back to the Maryland population; however, the respondents were sampled from all jurisdictions in Maryland and the data provide a large convenience sample from which to gain insights into risk behaviors, and yield possible directions for future research and intervention. Questions from the following areas were included in the MCSYA: sun exposure, diet and physical activity, smoking and alcohol use, and access to health care.

B. National Data Sources

Statistics for U.S. cited in this report were obtained from the federal Centers for Disease Control and Prevention (CDC), the Office of Disease Prevention and Health Promotion (U.S. Department of Health and Human Services (DHHS)), the National Center for Health Statistics (NCHS), and the National Cancer Institute (NCI). Maryland mortality statistics were obtained from CDC WONDER, a Web-based data resource sponsored by CDC.

1. CDC WONDER

Wide-ranging Online Data for Epidemiologic Research (WONDER) -- is an easy-to-use Internet system that makes information from CDC available to public health professionals and the public at large. It provides access to a wide array of public health information, including one Web resource dealing with data and information about HP 2010 targets, and a separate Web site where data, such as cancer mortality numbers and rates can be accessed using International Classification of Disease (ICD) codes. The Compressed Mortality Data Request Screen for extracting mortality rates using ICD codes is found at: http://wonder.cdc.gov/mortICD10J.html.

Mortality data for this report was obtained from the CDC WONDER Compressed Mortality File (CMF) 1999 – 2002. CMF is a county-level national mortality and population database spanning the years 1979-2002. The number of deaths, crude death rates, and age-adjusted death rates can be obtained by place of residence (total U.S., state, and county), age group, race (white, black, and other), gender, year of death, and underlying cause-of-death (4-digit ICD code or group of codes). Mortality data for this report used combined 1999-2002 data instead of the 1998-2002 time frame

utilized with incidence data for this report. CDC WONDER uses the 1999-2002 grouping because extensive changes in coding definitions took place with the revision of the ICD coding manual. Deaths for 1979-1998 are classified using the Ninth Revision (ICD-9); deaths for 1999 and beyond are classified using the Tenth Revision (ICD-10). The two classification schemes are different enough to make direct comparisons of cause-of-death difficult.

2. Healthy People 2010

HP 2010 is a collaboration of local and national governmental agencies and private organizations that have developed national health objectives to improve the health of Americans. There are 28 focus areas and 467 specific objectives in HP 2010. HP 2010 objectives now serve as a year 2000 baseline; beginning with the baseline year, National Health Interview Survey and other data being compared against the Healthy People 2010 objectives are age-adjusted to the 2000 U.S. population. The HP initiative is under the Office of Disease Prevention and Health Promotion, DHHS. Further information can be found on the Web site at: http://www.healthypeople.gov/.

3. Surveillance, Epidemiology, and End Results Program (SEER)/National Center for Health Statistics

The Surveillance, Epidemiology, and End Results (SEER) Program of the NCI is an authoritative source of information on cancer incidence, stage, and survival in the U.S. The mortality data reported by SEER are provided by NCHS. Staff of the NCI manages SEER. The SEER Program collects and publishes cancer incidence and survival data in order to assemble and report estimates of cancer incidence, survival, and mortality in the U.S. The data are collected from 14 U.S. cancer registries and three supplemental registries throughout the U.S. and are estimated to represent approximately 26% of the U.S. population. The SEER database adequately represents cancer incidence in the U.S. population with regard to race, ethnicity, age, gender, poverty, and education, and by collecting data on epidemiologically significant population subgroups. The SEER program began in 1973 and, in 1992, was expanded to increase coverage of minority populations, primarily Hispanics. The SEER program updates cancer statistics annually in a publication called the SEER Cancer Statistics Review (CSR). SEER data for specific cancers can be seen on the Web at: http://seer.cancer.gov/csr/1975_2002/results_merged/sect_02_all_sites.pdf. Further information about SEER can also be found on the Web site at www.seer.cancer.gov. Statistics for the U.S. cited in this report were obtained from SEER.

C. References Used for Public Health Evidence and Public Health Intervention Sections

1. National Cancer Institute, Physician Data Query (NCI, PDQ)

Information provided in the chapters under the sections for "Public Health Evidence" and "Public Health Intervention" was taken primarily from the NCI, PDQ® Web site. When extracting PDQ information, dates for the latest cancer prevention and screening updates were determined by examining the PDQ Web page under the heading “Summary of Evidence, Changes To This Summary.” Prevention and screening sections from this source provide information for health

professionals and the public on various aspects of cancer control such as prevention, screening, treatment, genetics, and clinical trials. For some cancer types, the information is reviewed by a scientific editorial board and is updated as new research becomes available. The Editorial Board has revised its procedure; a two-step process is now in place for evaluating levels of evidence: a) study design, and b) assessment of the evidence. Whereas the Board previously only considered study design (evidence from the best studies available; ranked in descending order of strength), the PDQ Editorial Board now evaluates evidence in two steps. The first step is to describe the evidence within five domains (see below); the second is an assessment of certainty--to judge the overall "level" of evidence as "solid," "fair," or "inadequate." The Board conducts the same process separately for potential benefits and potential harms of each intervention.

Step 1: Description of the Evidence
Step 1 involves evaluating the levels of evidence in five domains.

1. Study Design: study designs in order of strongest evidence to weakest evidence, are described as follows:

    a. Evidence obtained from at least one randomized controlled trial (this is considered the gold standard for scientific research);
    b. Evidence obtained from controlled trials without randomization;
    c. Evidence obtained from well-designed and conducted cohort or case-control studies, preferably from more than one center or research group;
    d. Evidence obtained from multiple time series with or without intervention; and
    e. Opinions of respected authorities based on clinical experience, descriptive studies, or reports of expert committees.

2. Internal Validity
3. Consistency (coherence)/volume of the evidence
4. Direction and magnitude of effects for health outcomes (both absolute and relative risks; as quantitative as possible; may vary for different populations)
5. External validity

Step 2: Assessment of the Evidence
Step 2 is a judgment of the level of certainty (good, fair, poor) and is based on the Board's understanding of the direction and magnitude of the health effects of widespread implementation. The assessment may also include a statement of benefits and a second statement of harms.

More information about NCI, PDQ can be accessed at:
Levels of evidence
http://www.cancer.gov/cancertopics/pdq/screening/levels-of-evidence

Prevention and screening/detection
http://www.cancer.gov/cancertopics/pdq/prevention
http://www.cancer.gov/cancertopics/pdq/screening

The PDQ reference is used throughout the report for consistency in interpreting the results of scientific literature and the PDQ Summary of Evidence is often quoted verbatim. This report includes the date(s) of the last update of the PDQ for each targeted cancer site accessed in September 2006. PDQ definitions are included in Appendix D (Glossary). For additional information, the Web site is: http://www.cancer.gov/cancertopics/pdq.

2. Maryland Department of Health and Mental Hygiene, Medical Advisory Committees for Breast, Cervical, Colorectal, Oral, and Prostate Cancer

The Center for Cancer Surveillance and Control has convened four Medical Advisory Committees to formulate guidelines for breast, cervical, colorectal, and prostate cancer screening, diagnosis, and treatment. The Office of Oral Health has convened a Medical Advisory Committee to formulate guidelines for oral cancer for screening, diagnosis, and treatment. The guidelines are located at: http://www.fha.state.md.us/cancer/html/guidelines.html.

3. Additional Medical Literature Quoted or Cited

Lung and Bronchus Cancer: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. Best Practices for Comprehensive Tobacco Control Programs (August 1999). http://www.cdc.gov/tobacco/bestprac.htm.

Lung and Bronchus Cancer: U.S. Preventive Services Task Force. Lung Cancer Screening: Recommendation Statement. May 2004. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/clinic/3rduspstf/lungcancer/lungcanrs.htm.

Lung and Bronchus Cancer: International Agency for Research on Cancer Monographs on the Evaluation of Carcinogenic Risks to Humans: Tobacco Smoke and Involuntary Smoking. 2002; 83: Section 5.2.

Colorectal Cancer: U.S. Preventive Services Task Force, Agency for Healthcare Research and Quality, Rockville, MD. Screening for Colorectal Cancer: Recommendations and Rationale (July 2002). Originally in *Annals of Internal Medicine*, 2002;137:129-31. http://www.ahrq.gov/clinic/3rduspstf/colorectal/colorr.htm.

Female Breast Cancer: U.S. Preventive Services Task Force, Agency for Healthcare Research and Quality, Rockville, MD. Screening for Breast Cancer: Recommendations and Rationale (February 2002). http://www.ahrq.gov/clinic/3rduspstf/breastcancer/brcanrr.htm.

Female Breast Cancer: U.S. Preventive Services Task Force, Agency for Healthcare Research and Quality, Rockville, MD. Chemoprevention of Breast Cancer: Recommendations and Rationale (July 2002). http://www.ahrq.gov/clinic/3rduspstf/breastchemo/breastchemorr.htm.

Prostate Cancer: Robert A. Smith, Vilma Cokkinides, and Harmon J. Eyre
American Cancer Society Guidelines for the Early Detection of Cancer, 2005
CA Cancer J Clin 2005 55: 31-44. http://caonline.amcancersoc.org/cgi/content/full/55/1/31.

Oral Cancer: U.S. Preventive Services Task Force, Agency for Healthcare Research and Quality, Rockville, MD. Screening for Oral Cancer: Recommendation Statement (February 2004). http://www.ahrq.gov/clinic/3rduspstf/oralcan/oralcanrs.htm.

Skin Cancer: U.S. Preventive Services Task Force, Agency for Healthcare Research and Quality, Rockville, MD. Screening for Skin Cancer: Recommendations and Rationale (April 2001). Article originally in *Am J Prev Med* 2001;20(3S):44-6. http://www.ahrq.gov/clinic/3rduspstf/cervcan/cervcanrr.htm.

Cervical Cancer: U.S. Preventive Services Task Force, Agency for Healthcare Research and Quality, Rockville, MD. Screening for Cervical Cancer (January 2003). Publication No. 03-515A. http://www.ahrq.gov/clinic/3rduspstf/cervcan/cervcanwh.htm.

D. Data Considerations

1. Data Confidentiality

DHMH regards all data received, processed, and reported to and by the MCR and the Division of Health Statistics as confidential. Data are secured from unauthorized access and disclosure.

The MCR manages and releases cancer information in accordance with the laws, and regulations established by the State of Maryland as set forth in the Code of Maryland Regulations, COMAR 10.14.01 (Cancer Registry) and Health-General Article, § 18-203 and § 18-204, Annotated Code of Maryland.

Because incidence data and mortality data come from different sources, separate suppression procedures were employed. For incidence, number of cases collected by MCR and for the rates calculated using case and population data, the following protocols apply: In order to ensure patient confidentiality and to comply with the *MCR Data Use Policy*, cells with five or fewer cases are presented with "<6." Cell counts that could be used to calculate the number of cases within a restricted cell are suppressed with "s." Incidence rates based on 25 or fewer cases are presented with asterisks (**) because the rates are unstable and do not provide reliable information.

Mortality data for the report were extracted from CDC WONDER, using its Web-based data query facility. ICD codes listed in Appendix G were used for identifying type of cancer for extraction. Like DHMH and MCR, CDC WONDER also has its own set of data use restrictions. However, methods CDC WONDER uses for ensuring individual confidentiality are different from the DHMH/MCR data use policy used with incidence data presented in this report. With CDC WONDER, counts and rates for counties with year 2000 populations of less than 100,000 are suppressed if the number of deaths is five or less (presented as "<6" for counts and "**" for rates) and the death count is based on only one or two years of data. Death counts and rates are not suppressed if three or more years of data are combined. The CDC WONDER Web site location for querying data can be found at: http://wonder.cdc.gov/mortICD10J.html.

2. Rate Analysis

Single year incidence rates presented in this report were calculated using Maryland resident cancer cases diagnosed from January 1, 2002 through December 31, 2002, and reported to the MCR as of November 2004. The mortality data consist of deaths that occurred between January 1, 2002 and December 31, 2002. Multiple year incidence rates presented were calculated for 5-year collapsed rates using MCR 1998-2002 data. Corresponding mortality rates were extracted from CDC WONDER as 4-year combined data from 1999-2002.

Age-adjustment, also called age-standardization, is one of the tools used to control for the different and changing age distributions of the population in states, counties, etc., and to enable meaningful comparisons of vital rates over time. Age-adjusted rates do not include cancer cases on which age has not been reported. Federal agencies have adopted the year 2000 U.S. standard population as the standard for age-adjusting incidence and mortality rates, beginning with data year 1999. For consistency and ease of comparison, incidence and mortality rates in this report were calculated and age-adjusted using the 2000 U.S. population as the standard population. This latest standard replaces prior standards based on the 1940 or 1970 standard population for the nation. Additional information on age-adjustment can be found at http://www.cdc.gov/nchs/data/statnt/statnt20.pdf.

Incidence numbers and rates are suppressed according to the DHMH Data Use Policy and are not presented for cells having counts of 5 or fewer (displayed as "<6"). Incidence rates are not shown when based on 25 or fewer cases (presented as "**"). Rates based on numbers of this size are unstable and do not provide reliable information. Suppression for mortality data follows a separate schedule than for incidence. CDC WONDER Data Use Restrictions apply for suppressing mortality numbers and rates in this report.

Mortality numbers and rates are suppressed according to CDC WONDER data use restrictions. Single-year (2002 for this report) number of cases or number of deaths is suppressed when the year 2000 population for a particular county was less than 100,000 and the number of deaths is five or less; suppressed number or count values appear in the tables as "<6." Similarly, single-year (2002 in this report) mortality rates are suppressed whenever a rate is based on a death count of five or less; suppressed rate values appear as "**" in the tables. Whenever collapsed data involving three or more years are used, no suppression of incidence or mortality rates takes place. This is so even for "small" counties having a population less than 100,000. For four-year combined rates as used in this report, there is no suppression--even a value of "1" is shown in the tables.

The Estimated Annual Percent Change (EAPC) was calculated for incidence and mortality trends and for tracking incidence and mortality rates by race and gender over time (from 1998 to 2002). See Appendix D, Glossary, for the definition of EAPC.

3. Confidence Intervals and Statistical Significance

A confidence interval is a range of values within which the true rate is expected to fall. Confidence intervals can be used as an indicator of the precision of a value. A small confidence

interval enables the rate as a single data point to be used in place of a confidence interval. Conversely, a small sample or population can require a large difference before the difference becomes statistically significant. Many of the tests for statistical significance used in this report are based on relatively small populations; therefore, a test of statistical significance merely serves as a benchmark for evaluating difference. Sample size is closely related to size of the confidence interval. A rate having a larger sample will have a confidence interval that is more narrow and, therefore, more precise. For additional information regarding the formula used to calculate the confidence level, refer to the SEER Web site at: http://www.seer.cancer.gov/seerstat/WebHelp/Rate_Algorithms.htm.

All Maryland rates presented in this report were calculated at the 95 percent confidence level. For example, the 2002 U.S. SEER-reported lung cancer incidence rate was 62.1 per 100,000 population. Maryland's rate is 65.6 per 100,000. The 95% confidence interval for this rate is 63.5 to 67.9. We have, therefore, a 95% degree of certainty that the true (real) rate is between 63.5 and 67.9 per 100,000 age-adjusted population.

When data are comparable (not statistically significantly different), the terms "similar" or "same" are used in this report for describing the comparison.

4. Year 2000 U.S. Standard Population

Federal agencies have adopted the year 2000 U.S. standard population as the new standard for age-adjusting incidence and mortality rates, beginning in data year 1999 (see Appendix F). The year 2000 population standard replaces at least three different population standards used in earlier years. The use of multiple standards resulted in difficulties comparing data prepared by national and federal agencies, and caused confusion among data users and the general public. Use of the 2000 standard was recommended to promote uniformity of data among agencies, and to eliminate the need to calculate rates using more than one standard.

5. National Comparison Data

Maryland and county incidence and mortality rates are compared to 2002 U.S. SEER incidence rates and 2002 U.S. SEER mortality rates. The SEER program does not provide rates for "other" races, so comparisons between U.S. SEER rates and Maryland rates are not presented for the "other" race category.

Maryland's mortality ranking among the 50 states and the District of Columbia for all cancer sites combined and for specific targeted cancers is based on a five-year average. SEER data contained in this report is based on the average annual age-adjusted cancer death rates by state, 1998-2002. Because mortality rates describe the cancer burden better than incidence rates, only Maryland rankings for mortality are presented for each targeted cancer. Data used for Maryland cancer mortality ranking by site were extracted from: http://seer.cancer.gov/faststats/sites.php?site=All%20Cancer%20Sites&stat=Mortality, then choosing tables displaying age-adjusted mortality rates for 1998-2002 by state. Data were extracted from the Web page into Excel spreadsheet format for sorting in order to create the actual ranking.

Area analysis in the report also makes comparisons against national data. For both incidence and mortality rate maps, the U.S. cancer incidence or mortality rate was used as a baseline against which Maryland jurisdictions (county and region) are compared. A ramp is used for grouping Maryland data into categories in reference to baseline. The ramp groups data into five divisions: >25% above U.S. rate; 10-25% above U.S. rate; between 10% below and 10% above U.S. rate; 10-25% below U.S. rate; >25% below U.S. rate. Note that 10-25% includes the 10 and 25%, but less than 10 and more than 25 do not include the endpoints of the range. This year, a new category has been added to the four map data groupings that appear in last year's report. The fifth cluster is the middle incidence or mortality rate category: "between 10% below and 10% above U.S."

6. Race and Ethnicity

The MCR began requiring submission of more detailed data on race and ethnicity beginning August 1998. Previously, race reported as Native American, Asian, and Pacific Islander were counted in the "other" race category. For 2002, MCR reported race in three categories: white, black, and other. The other race category now combines: a) American Indian or Alaska Native, and b) Asian or Pacific Islander. As opposed to previous years, a race-bridging algorithm for population numbers used when calculating rates was used for assigning unknowns to one of the three groups: white, black, and other. Hispanic ethnicity data is not available.

7. Healthy People 2010 Objectives/BRFSS/MCS

Risk behaviors were compared to HP 2010 objectives. Measures for cancer-related behaviors (e.g., screening tests) and the recommendations for their use may change over time. BRFSS and MCS questions that measure screening and other health behaviors are updated to reflect changes in how risk behavior needs to be measured.

No changes to the HP 2010 numerical targets for cancer and cancer-related behavior have occurred within the past year, involving data for this report. HP 2010 objectives can change over time to reflect new health-related behavior and screening recommendations. Comparisons in this report are made between the HP 2010 objectives (developed from data age-adjusted to the year 2000 U.S. standard population) and data from the Maryland BRFSS and MCS, which is weighted to the age of Maryland population in that year. Unlike U.S. data used for HP 2010, Maryland BRFSS and MCS data are both age-adjusted to the current Maryland population--not to the year 2000 U.S. standard population. Further information about specific health targets for HP 2010 can be found at: http://wonder.cdc.gov/DATA2010/obj.htm.

8. Appendices

Please refer to additional appendices for Cigarette Restitution Fund Program Cancer Report requirements (Appendix A), report format (Appendix B), technical terms and definitions (Appendix D), Maryland population counts (Appendix E), U.S. standard population for 2000 (Appendix F), International Classification of Diseases (ICD) codes for cancer (Appendix G), Maryland rates and confidence intervals for incidence and mortality data from 1998-2002 (Appendix H), Maryland Trend in Age-Adjusted Cancer Incidence and Mortality Rates by Cancer

Site and Year, 1998-2002 (Appendix I), and Maryland Trend in Cancer Stage of Disease at Diagnosis Year for Each Cancer Site, 1998-2002 (Appendix J).

Appendix D

Glossary

Glossary

- **Age-Adjustment:** Age is the most important risk factor for the incidence of most cancers. Cancer rates derived from populations that differ in underlying age structure are not comparable. Therefore, age-adjustment is a statistical technique that allows for the comparison of rates among populations having different age distributions by weighting the age-specific rates in each population to one standard population. Additional information on age-adjustment can be found on the following Web sites: http://www.cdc.gov/nchs/data/statnt/statnt20.pdf and http://www.cdc.gov/nchs/datawh/nchsdefs/ageadjustment.htm.

- **Ascertainment:** Ascertainment refers to the quality assurance procedures Maryland Cancer Registry staff use for insuring completeness of cancer cases in the registry database. These activities include a review of disease indices from all reporting hospitals to identify possible missed cases, a random sample of records from reporting facilities, and review of death certificate data to identify cancer cases not previously reported.

- **Cancer:** A disease characterized by the uncontrolled, abnormal growth of cells in different parts of the body that can spread to other parts of the body.

- **Chemoprevention:** Chemoprevention is the use of drugs, vitamins, or other agents to try to reduce the risk of cancer or to delay the development or recurrence of cancer.

- **Estimated Annual Percentage Change (EAPC) (5-year trend data):** EAPC is measure of the annual percent increase or decrease in cancer rates over time. It is an estimated average change per year over a defined time span. For the purpose of this report, 5-year incidence and mortality trend data and corresponding EAPCs are presented for the years 1998 through 2002. In addition, EAPCs were used for analyzing trends by race and gender by establishing which trend line had the greatest change. A more detailed description of the method can be found at: http://seer.cancer.gov/seerstat/WebHelp/seerstat.htm#EAPC_Calculation. Select Equations and Algorithms and then on Trend Algorithms.

- **Incidence:** Incidence is the number of new cases of a given cancer or other event during a defined period, usually one year. For the purpose of this report, cancer incidence refers to the number of new cases diagnosed during calendar year 2002. Cancer incidence data are also presented in aggregated form as the average annual incidence for the years 1998 through 2002.

- **Invasive cancer:** A stage of cancer in which cancer cells have spread to healthy tissue adjacent to the tumor. It may still be considered localized if it has not spread to other parts of the body. Stage data presented in this report involve a diagnosis of invasive cancer: localized, regional, or distant. A diagnosis "in situ" is noninvasive and would not be included in the staging data.

- **Morphology Code:** In cancer, a number describing the characteristic of a cell, tissue, or organ described by its shape or anatomical structure, used for evaluating whether pathology exists and its extent (e.g., staging).

- **Mortality:** Mortality refers to the number of deaths during a defined time, usually one year. For the purposes of this report, cancer mortality data are presented for calendar year 2002. Data for cancer mortality are also presented in an aggregated form as the average annual mortality for the years 1999 through 2002.

- **Primary prevention:** Primary prevention is preventing cancer before it has developed such as through avoiding carcinogens (e.g., avoiding tobacco, promoting a healthy lifestyle through exercise and diet), preventing the harmful effects of carcinogens (e.g., using sunscreen), and detecting and removing precancerous lesions (e.g., removing polyps in the colon).

- **Rate:** A rate is an estimate of the burden of a given disease on a defined population in a specified period of time. A crude rate is calculated by dividing the number of cases (events) by the population at risk during a given time period. Cancer incidence and mortality rates are usually presented per 100,000 population during a given time period. No crude rates are given in this report; all rates are age-adjusted. Incidence rate is the number of new cases during a specific period (usually one year) divided by the population at risk, standardized to a population of 100,000. Mortality rate is the number of deaths for a given period divided by the population at risk per 100,000 population. All rates presented in this report are age-adjusted to the 2000 U.S. standard population.

- **Region:** Following are definitions for the regional categories:

  <u>BALTIMORE METRO REGION</u>
  Anne Arundel, Baltimore City, Baltimore County, Carroll, Harford, Howard

  Note: Baltimore Metro Region does not include Baltimore City when used in Appendix H and for the incidence and mortality maps.

  <u>EASTERN SHORE REGION</u>
  Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, Worcester

  <u>NATIONAL CAPITAL REGION</u>
  Montgomery, Prince George's

  <u>NORTHWEST REGION</u>
  Allegany, Frederick, Garrett, Washington

  <u>SOUTHERN REGION</u>
  Calvert, Charles, Saint Mary's

- **Screening:** Screening is checking for disease when there are no symptoms resulting in detection of malignancies in situ or in an early stage.

- **Stage at Diagnosis:** The extent to which the cancer has spread from the organ of origin at the time of diagnosis. The stage information used in this report is based on the SEER Summary Stage Guidelines:

    1. **In situ:** the cancerous cells have not invaded the tissue basement membrane. In situ cancers are not considered malignant (with the exception of bladder cancers) and are not included in incidence rate calculations.
    2. **Localized:** the tumor is confined to the organ of origin.
    3. **Regional:** the tumor has spread to adjacent organs or tissue. Regional lymph nodes may also be involved.
    4. **Distant:** the tumor has spread beyond the adjacent organs or tissues. Distant lymph nodes, organs and/or tissues may also be involved.
    5. **Unstaged:** the stage of disease at diagnosis was unable to be classified (often due to insufficient information) or not reported to the cancer registry.

Appendix E

Maryland Population Estimates, 2002

Maryland Population Estimates by County, 2002

	Total All Genders	Total Male	Total Female	Total White	White Male	White Female	Total Black	Black Male	Black Female
Maryland	**5,458,137**	**2,639,040**	**2,819,097**	**3,618,687**	**1,774,743**	**1,843,944**	**1,564,150**	**732,111**	**832,039**
Baltimore Metro	**2,559,155**	**1,231,550**	**1,327,605**	**1,745,290**	**852,651**	**892,639**	**722,488**	**334,747**	**387,741**
Anne Arundel County	503,388	251,015	252,373	417,999	208,405	209,594	69,641	35,150	34,491
Baltimore City	638,614	297,217	341,397	206,136	100,018	106,118	419,174	190,696	228,478
Baltimore County	770,298	365,220	405,078	571,239	272,989	298,250	169,025	77,564	91,461
Carroll County	159,025	78,606	80,419	153,091	75,531	77,560	3,863	2,082	1,781
Harford County	227,713	111,790	115,923	200,818	98,800	102,018	22,120	10,775	11,345
Howard County	260,117	127,702	132,415	196,007	96,908	99,099	38,665	18,480	20,185
Eastern Shore	**408,300**	**199,176**	**209,124**	**336,731**	**164,500**	**172,231**	**66,521**	**32,164**	**34,357**
Caroline County	30,300	14,801	15,499	25,765	12,679	13,086	4,188	1,950	2,238
Cecil County	90,335	44,670	45,665	85,837	42,431	43,406	3,465	1,747	1,718
Dorchester County	30,451	14,364	16,087	21,554	10,292	11,262	8,560	3,900	4,660
Kent County	19,613	9,409	10,204	16,245	7,870	8,375	3,200	1,454	1,746
Queen Anne's County	42,835	21,252	21,583	38,874	19,312	19,562	3,485	1,709	1,776
Somerset County	25,555	13,539	12,016	14,680	7,411	7,269	10,612	5,992	4,620
Talbot County	34,263	16,301	17,962	28,746	13,705	15,041	5,150	2,404	2,746
Wicomico County	86,318	41,220	45,098	64,288	30,813	33,475	20,358	9,576	10,782
Worcester County	48,630	23,620	25,010	40,742	19,987	20,755	7,503	3,432	4,071
National Capital	**1,743,240**	**836,745**	**906,495**	**892,871**	**439,923**	**452,948**	**685,561**	**317,872**	**367,689**
Montgomery County	910,156	437,190	472,966	645,564	313,508	332,056	139,693	64,139	75,554
Prince George's County	833,084	399,555	433,529	247,307	126,415	120,892	545,868	253,733	292,135
Northwest	**447,452**	**223,087**	**224,365**	**411,568**	**201,612**	**209,956**	**28,995**	**18,151**	**10,844**
Allegany County	74,203	36,825	37,378	69,689	33,441	36,248	4,038	3,139	899
Frederick County	209,125	102,843	106,282	190,290	93,514	96,776	13,954	6,968	6,986
Garrett County	29,878	14,768	15,110	29,614	14,618	14,996	173	111	62
Washington County	134,246	68,651	65,595	121,975	60,039	61,936	10,830	7,933	2,897
Southern	**299,990**	**148,482**	**151,508**	**232,227**	**116,057**	**116,170**	**60,585**	**29,177**	**31,408**
Calvert County	80,906	39,856	41,050	69,665	34,526	35,139	10,137	4,844	5,293
Charles County	129,040	63,228	65,812	87,108	43,247	43,861	38,017	18,206	19,811
St. Mary's County	90,044	45,398	44,646	75,454	38,284	37,170	12,431	6,127	6,304

Race groupings do not include: a) individuals who have identified themselves as belonging to an "Other" race category, and b) individuals reporting membership in more than one race at the same time.

Source: Maryland Vital Statistics Administration, Division of Health Statistics, 2002

Appendix F

U.S. Standard Population, 2000

2000 U.S. Standard Population

Age Group (years)	2000 Population
00-04	69,135
05-09	72,533
10-14	73,032
15-19	72,169
20-24	66,478
25-29	64,529
30-34	71,044
35-39	80,762
40-44	81,851
45-49	72,118
50-54	62,716
55-59	48,454
60-64	38,793
65-69	34,264
70-74	31,773
75-79	26,999
80-84	17,842
85+	15,508
Total	1,000,000

Source: National Center for Health Statistics, SEER, 2000

Appendix G

SEER Definitions (ICD Codes) of Site Categories

International Classification of Diseases for Oncology, Third Edition (ICD-O-3) Codes Used for Cancer Incidence and International Classification of Diseases, 10th Revision (ICD-10) Codes Used for Cancer Mortality

Cancer Site	Incidence (ICD-O-3)		Mortality (ICD-10)
	Topography (Site)	Histology	
All Cancer Sites	C00.0 – C80.9	Includes all invasive cancers except basal and squamous cell skin cancers, and includes in situ cancer of the urinary bladder	C00 – C97
Lung and Bronchus	C34.0 - C34.9	Excludes codes 9590-9989	C34
Colon and Rectum	C18.0 – C20.9, C26.0	Excludes codes 9590-9989	C18 – C20, C26
Female Breast	C50.0 - C50.9 (female only)	Excludes codes 9590-9989	C50 (female only)
Prostate	C61.9	Excludes codes 9590-9989	C61
Oral Cavity and Pharynx	C00.0 - C14.8	Excludes codes 9590-9989	C00 – C14
Melanoma of the Skin	C44.0 - C44.9	Includes only codes 8720-8790	C43
Cervix	C53.0 - C53.9	Excludes codes 9590-9989	C53

Note: Most cancer mortality (ICD-10) codes are similar to cancer incidence (ICD-O-3) topography (site) codes.

Appendix H

Maryland Cancer Incidence Rates And Confidence Intervals, 1998-2002; Maryland Cancer Mortality Rates And Confidence Intervals, 1999-2002

All Cancer Sites Incidence
Age-Adjusted Incidence Rates
by Geographical Area, Maryland, 1998-2002

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland			
Northwest Region			
Allegany			
Frederick			
Garrett			
Washington			
Baltimore Metropolitan Area			
Anne Arundel			
Baltimore City			
Baltimore County			
Carroll			
Harford			
Howard			
National Capital Area			
Montgomery			
Prince George's			
Southern Region			
Calvert			
Charles			
Saint Mary's			
Eastern Shore			
Caroline			
Cecil			
Dorchester			
Kent			
Queen Anne's			
Somerset			
Talbot			
Wicomico			
Worcester			

Data not yet available

See Executive Summary (pages 1 & 2).

Lung and Bronchus Incidence
Age-Adjusted Incidence Rates*
by Geographical Area, Maryland, 1998-2002

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	68.0	66.9	69.0
Northwest Region			
Allegany	78.3	70.6	86.8
Frederick	63.9	58.5	69.7
Garrett	64.4	53.0	77.8
Washington	69.8	63.9	76.2
Baltimore Metropolitan Area			
Anne Arundel	74.4	70.7	78.2
Baltimore City	90.5	87.3	93.9
Baltimore County	74.5	72.0	77.2
Carroll	60.5	54.8	66.7
Harford	74.0	68.6	79.8
Howard	58.1	53.0	63.6
National Capital Area			
Montgomery	42.4	40.5	44.5
Prince George's	56.2	53.4	59.1
Southern Region			
Calvert	80.6	70.5	91.8
Charles	66.9	59.3	75.3
Saint Mary's	74.6	65.7	84.5
Eastern Shore			
Caroline	78.3	65.1	93.6
Cecil	76.2	67.7	85.6
Dorchester	92.3	79.5	107.1
Kent	74.3	60.7	91.2
Queen Anne's	72.7	61.8	85.5
Somerset	99.6	83.4	118.6
Talbot	65.0	55.4	76.6
Wicomico	88.7	80.0	98.1
Worcester	93.3	83.1	104.7

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

Source: Maryland Cancer Registry, 1998-2002

Colon and Rectum Incidence
Age-Adjusted Incidence Rates*
by Geographical Area, Maryland, 1998-2002

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	53.3	52.2	54.0
Northwest Region			
Allegany	60.7	53.9	68.3
Frederick	60.9	55.6	66.6
Garrett	53.4	43.1	65.9
Washington	56.2	50.8	61.9
Baltimore Metropolitan Area			
Anne Arundel	53.1	50.0	56.3
Baltimore City	57.6	55.1	60.3
Baltimore County	58.1	55.8	60.4
Carroll	53.5	48.2	59.4
Harford	51.8	47.3	56.8
Howard	50.5	45.8	55.6
National Capital Area			
Montgomery	39.8	37.9	41.8
Prince George's	50.9	48.2	53.7
	57.5	53.0	62.4
Southern Region			
Calvert	56.9	48.6	66.5
Charles	51.1	44.4	58.6
Saint Mary's	66.6	58.1	76.1
Eastern Shore			
Caroline	70.2	57.7	84.7
Cecil	54.8	47.6	62.9
Dorchester	67.3	56.3	80.2
Kent	51.6	40.4	66.1
Queen Anne's	61.7	51.4	73.9
Somerset	57.5	45.3	72.6
Talbot	63.7	54.2	75.1
Wicomico	51.2	44.7	58.5
Worcester	58.7	50.7	68.1

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

Source: Maryland Cancer Registry, 1998-2002

Female Breast Cancer Incidence
Age-Adjusted Incidence Rates*
by Geographical Area, Maryland, 1998-2002

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	128.2	126.3	130.0
Northwest Region	129.5	123.1	136.2
Baltimore Metro Region**	134.7	131.5	137.9
Baltimore City	124.3	119.3	129.6
Montgomery County	129.3	124.8	134.0
Prince George's County	115.5	110.6	120.6
Southern Region	115.9	107.7	124.5
Eastern Shore Region	124.9	118.5	131.5

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

** Region does not include data for Baltimore City

Source: Maryland Cancer Registry, 1998-2002

Prostate Cancer Incidence
Age-Adjusted Incidence Rates*
by Geographical Area, Maryland, 1998-2002

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	179.3	176.7	181.8
Northwest Region	169.3	161.0	177.9
Baltimore Metro Region**	179.9	175.7	184.3
Baltimore City	197.4	189.9	205.3
Montgomery County	173.6	167.5	179.9
Prince George's County	190.5	182.6	198.7
Southern Region	166.3	154.7	178.8
Eastern Shore Region	154.5	146.9	162.5

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

** Region does not include data for Baltimore City

Source: Maryland Cancer Registry, 1998-2002

Oral Cancer Incidence
Age-Adjusted Incidence Rates*
by Geographical Area, Maryland, 1998-2002

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	10.3	9.9	10.7
Northwest Region	9.0	7.8	10.3
Baltimore Metro Region**	10.3	9.7	11.0
Baltimore City	15.7	14.3	17.1
Montgomery County	7.9	7.1	8.8
Prince George's County	8.3	7.3	9.4
Southern Region	10.7	8.9	12.8
Eastern Shore Region	11.5	10.1	13.0

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

** Region does not include data for Baltimore City

Source: Maryland Cancer Registry, 1998-2002

Melanoma Incidence
Age-Adjusted Incidence Rates
by Geographical Area, Maryland, 1998-2002

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland			
Northwest Region			
Baltimore Metro Region**			
Baltimore City			
Montgomery County			
Prince George's County			
Southern Region			
Eastern Shore Region			

Data not yet available

See Executive Summary (pages 1 & 2).

Cervical Cancer Incidence
Age-Adjusted Incidence Rates
by Geographical Area, Maryland, 1998-2002

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland			
Northwest Region			
Baltimore Metro Region**			
Baltimore City			
Montgomery County			
Prince George's County			
Southern Region			
Eastern Shore Region			

Data not yet available

See Executive Summary (pages 1 & 2).

All Cancer Sites Mortality
Number of Cancer Deaths and Age-Adjusted Mortality Rates*
by Geographical Area, Maryland, 1999-2002

Geographical Area	Mortality Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	206.0	204.0	208.0
Northwest Region			
Allegany	198.5	184.7	212.3
Frederick	193.1	182.5	203.7
Garrett	185.6	163.0	208.2
Washington	206.9	195.2	218.6
Baltimore Metropolitan Area			
Anne Arundel	213.5	206.5	220.5
Baltimore City	267.3	261.0	273.6
Baltimore County	215.4	210.5	220.3
Carroll	202.1	190.3	213.9
Harford	197.1	187.1	207.1
Howard	167.6	158.0	177.2
National Capital Area			
Montgomery	145.3	141.2	149.4
Prince George's	215.9	209.9	221.9
Southern Region			
Calvert	227.6	208.5	246.7
Charles	226.2	210.5	241.9
Saint Mary's	205.4	188.4	222.4
Eastern Shore			
Caroline	241.8	214.8	268.8
Cecil	228.9	211.9	245.9
Dorchester	239.2	215.4	263.0
Kent	189.0	163.7	214.3
Queen Anne's	209.2	187.5	230.9
Somerset	237.0	207.7	266.3
Talbot	193.3	174.5	212.1
Wicomico	229.8	213.8	245.8
Worcester	213.5	196.2	230.8

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

Source: CDC WONDER, 1999-2002

Lung and Bronchus Mortality
Number of Cancer Deaths and Age-Adjusted Mortality Rates*
by Geographical Area, Maryland, 1999-2002

Geographical Area	Mortality Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	58.1	57.0	59.2
Northwest Region			
Allegany	57.0	49.6	64.4
Frederick	50.0	44.6	55.4
Garrett	50.4	38.7	62.1
Washington	59.2	53.0	65.4
Baltimore Metropolitan Area			
Anne Arundel	63.2	59.4	67.0
Baltimore City	81.3	77.8	84.8
Baltimore County	64.0	61.3	66.7
Carroll	55.8	49.6	62.0
Harford	60.9	55.4	66.4
Howard	45.0	40.0	50.0
National Capital Area			
Montgomery	32.7	30.8	34.6
Prince George's	56.1	53.0	59.2
Southern Region			
Calvert	71.3	60.6	82.0
Charles	59.9	51.9	67.9
Saint Mary's	54.9	46.2	63.6
Eastern Shore			
Caroline	76.5	61.4	91.6
Cecil	67.9	58.8	77.0
Dorchester	76.0	62.6	89.4
Kent	58.9	44.9	72.9
Queen Anne's	59.6	48.1	71.1
Somerset	79.2	62.4	96.0
Talbot	50.1	40.6	59.6
Wicomico	72.3	63.3	81.3
Worcester	66.0	56.5	75.5

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

Source: CDC WONDER, 1999-2002

Colon and Rectum Cancer Mortality
Number of Cancer Deaths and Age-Adjusted Mortality Rates*
by Geographical Area, Maryland, 1999-2002

Geographical Area	Mortality Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	22.5	21.8	23.2
Northwest Region			
Allegany	24.1	19.4	28.8
Frederick	23.2	19.5	26.9
Garrett	26.9	18.2	35.6
Washington	22.8	18.9	26.7
Baltimore Metropolitan Area			
Anne Arundel	20.0	17.8	22.2
Baltimore City	29.1	27.0	31.2
Baltimore County	23.6	22.0	25.2
Carroll	23.2	19.2	27.2
Harford	21.5	18.1	24.9
Howard	17.4	14.2	20.6
National Capital Area			
Montgomery	14.4	13.1	15.7
Prince George's	25.8	23.7	27.9
Southern Region			
Calvert	25.3	18.8	31.8
Charles	27.0	21.5	32.5
Saint Mary's	26.5	20.4	32.6
Eastern Shore			
Caroline	31.4	21.7	41.1
Cecil	24.8	19.2	30.4
Dorchester	30.1	21.8	38.4
Kent	16.9	9.3	24.5
Queen Anne's	23.7	16.2	31.2
Somerset	20.5	11.9	29.1
Talbot	22.6	16.2	29.0
Wicomico	25.3	20.0	30.6
Worcester	23.0	17.2	28.8

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

Source: CDC WONDER, 1999-2002

Female Breast, Prostate, Oral, Melanoma, and Cervical Cancer Mortality
Number of Cancer Deaths and Age-Adjusted Mortality Rates*
by Geographical Area, Maryland, 1999-2002

Geographical Area	Mortality Rates*				
	Female Breast	Prostate	Oral	Melanoma	Cervix
Maryland	28.2	32.1	2.9	2.6	2.6
Northwest Region					
Allegany	22.4	31.4	3.2	3.8	1.2
Frederick	24.5	26.4	1.6	2.3	4.2
Garrett	26.9	35.5	1.4	2.4	2.9
Washington	31.3	27.7	2.1	2.0	3.6
Baltimore Metropolitan Area					
Anne Arundel	30.6	26.0	3.1	3.2	2.0
Baltimore City	36.1	50.3	5.5	1.4	4.9
Baltimore County	29.0	28.2	2.9	3.0	2.1
Carroll	24.1	35.3	1.5	4.7	1.8
Harford	21.6	29.2	2.3	2.6	1.1
Howard	24.0	25.4	2.4	1.5	1.3
National Capital Area					
Montgomery	22.6	22.8	2.0	2.9	1.5
Prince George's	29.7	38.9	2.7	1.7	3.0
Southern Region					
Calvert	21.9	46.7	3.1	5.9	0.5
Charles	33.1	32.1	5.2	1.8	4.4
Saint Mary's	18.1	26.2	2.3	4.3	2.6
Eastern Shore					
Caroline	37.7	38.3	0.0	3.9	1.1
Cecil	27.9	45.1	2.4	4.0	2.8
Dorchester	22.6	48.5	3.2	0.6	6.9
Kent	17.2	25.6	4.4	6.9	0.0
Queen Anne's	27.4	23.5	4.8	4.7	1.1
Somerset	21.6	36.1	1.7	1.8	4.1
Talbot	32.7	38.6	3.3	4.3	3.3
Wicomico	40.0	36.0	1.7	2.9	3.1
Worcester	25.2	25.8	3.7	2.0	4.3

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

Source: CDC WONDER, 1999-2002

Appendix I

Maryland Annual Trend in Cancer Annual Incidence and Mortality Rates 1998-2002

Maryland Annual Trend in Cancer Annual Incidence and Mortality Rates 1998-2002

Table 1: Age-Adjusted Cancer Annual Incidence Rates by Cancer Site Maryland and U.S., 1998-2002

Cancer Site	Age-Adjusted Cancer Annual Incidence Rates							
	1998	1999	2000	2001	2002	MD % Change 1998 - 2002	MD Trend	U.S. SEER % Change 1998-2002
All Cancer Sites	484.0	476.8	486.0	444.4	NA	-2.3 (1998-2001)	↓	-0.5% (1998-2001)
Lung	72.4	71.6	71.1	62.5	65.6	-3.3%	↓	-2.1%
Colorectal	58.1	53.3	56.2	52.5	48.9	-3.5%	↓	-2.2%
Breast	139.0	137.0	133.0	121.6	120.1	-4.0%	↓	-1.4%
Prostate	169.7	185.3	187.2	170.7	187.7	1.2%	↑	0.8%
Oral	11.1	10.9	11.1	9.4	9.7	-4.1%	↓	-0.6%
Melanoma	15.2	17.5	17.2	18.6	NA	6.1 (1998-2001)	↑	3.0% (1998-2001)
Cervical	9.0	8.2	7.9	7.0	NA	-7.6 (1998-2001)	↓	-4.9% (1998-2001)

Rates are age-adjusted to 2000 U.S. standard population

NA: Data not available

Percent change reflects Estimated Annual Percent Change (EAPC)

Source: Maryland Cancer Registry, 1998-2002

SEER, National Cancer Institute, 1998-2002

Table 2: Age-Adjusted Cancer Annual Mortality Rates by Cancer Site Maryland and U.S., 1998-2002

Cancer Site	Age-Adjusted Cancer Annual Mortality Rates							
	1998	1999	2000	2001	2002	MD % Change 1998 - 2002	MD Trend	U.S. SEER % Change 1998-2002
All Cancer Sites	217.5	211.7	209.1	202.2	200.9	-2.0%	↓	-1.0%
Lung	62.9	59.4	59.5	56.8	57.3	-2.3%	↓	-0.8%
Colorectal	23.9	22.5	23.9	21.6	21.0	-3.0%	↓	-1.9%
Breast	30.6	28.5	27.7	27.3	29.2	-1.4%	↓	-1.7%
Prostate	36.1	34.1	31.9	31.3	30.9	-3.9%	↓	-3.7%
Oral	3.1	3.0	3.0	2.8	3.0	-1.3%	↓	-2.1%
Melanoma	2.3	2.3	2.7	2.7	2.8	5.7%	↑	-1.1%
Cervical	2.7	2.8	2.3	2.8	2.5	-1.5%	↓	-3.9%

Rates are age-adjusted to 2000 U.S. standard population

Percent change reflects Estimated Annual Percent Change (EAPC)

Source: Maryland Division of Health Statistics, 1998-2001

CDC WONDER, 2002

SEER, National Cancer Institute, 1998-2002

Table 3: All Cancer Sites Annual Incidence Rates by Race and Gender
Maryland, 1998-2002

Race and Gender	Age-Adjusted Cancer Annual Incidence Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2001
White Male	534.0	538.6	553.3	512.3	NA	-1.0
Black Male	597.6	591.0	620.0	532.1	NA	-3.0
White Female	427.2	413.6	420.0	395.2	NA	-2.2
Black Female	387.5	361.6	390.7	351.2	NA	-2.2

Rates are age-adjusted to 2000 U.S. standard population

NA: Data not available

Percent change reflects Estimated Annual Percent Change (EAPC)

Source: Maryland Cancer Registry, 1998-2001

Table 4: All Cancer Sites Annual Mortality Rates by Race and Gender
Maryland, 1998-2002

Race and Gender	Age-Adjusted Cancer Annual Mortality Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
White Male	257.4	253.5	248.6	239.8	235.2	-2.3%
Black Male	345.5	343.3	332.2	328.4	318.3	-2.1%
White Female	182.4	172.2	173.4	168.9	166.4	-2.0%
Black Female	219.0	190.6	196.4	194.2	197.8	-1.8%

Rates are age-adjusted to 2000 U.S. standard population

Percent change reflects Estimated Annual Percent Change (EAPC)

Source: Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Table 5: Lung Cancer Annual Incidence Rates by Race and Gender
Maryland, 1998-2002

Race and Gender	Age-Adjusted Cancer Annual Incidence Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
White Male	91.7	89.6	87.3	77.3	79.5	-4.2%
Black Male	103.5	104.1	110.6	87.6	87.7	-4.9%
White Female	58.9	57.5	58.4	52.8	56.5	-1.7%
Black Female	51.7	52.0	51.4	48.1	52.1	-0.6%

Rates are age-adjusted to 2000 U.S. standard population

Percent change reflects Estimated Annual Percent Change (EAPC)

Source: Maryland Cancer Registry, 1998-2002

Table 6: Lung Cancer Annual Mortality Rates by Race and Gender
Maryland, 1998-2002

Race and Gender	Age-Adjusted Cancer Annual Mortality Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
White Male	82.2	77.7	75.7	72.5	72.2	-3.2%
Black Male	102.0	103.2	99.0	97.4	88.0	-3.5%
White Female	48.1	44.8	47.3	45.8	44.9	-1.1%
Black Female	48.9	42.2	43.5	40.5	49.0	-0.4%

Rates are age-adjusted to 2000 U.S. standard population

Percent change reflects Estimated Annual Percent Change (EAPC)

Source: Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Table 7: Colorectal Cancer Annual Incidence Rates by Race and Gender
Maryland, 1998-2002

Race and Gender	Age-Adjusted Cancer Annual Incidence Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
White Male	65.0	61.0	66.6	58.5	54.9	-3.7%
Black Male	73.3	65.3	67.7	56.0	60.9	-5.1%
White Female	47.9	42.0	43.8	46.0	41.9	-1.8%
Black Female	54.3	46.7	55.8	48.1	49.8	-1.4%

Rates are age-adjusted to 2000 U.S. standard population
Percent change reflects Estimated Annual Percent Change (EAPC)
Source: Maryland Cancer Registry, 1998-2002

Table 8: Colorectal Cancer Annual Mortality Rates by Race and Gender
Maryland, 1998-2002

Race and Gender	Age-Adjusted Cancer Annual Mortality Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
White Male	25.6	24.9	27.6	25.1	23.7	-1.5%
Black Male	34.2	37.9	39.5	35.0	34.7	-0.5%
White Female	19.9	18.3	18.7	17.6	16.8	-3.7%
Black Female	25.1	25.0	27.5	25.3	22.6	-2.0%

Rates are age-adjusted to 2000 U.S. standard population
Percent change reflects Estimated Annual Percent Change (EAPC)
Source: Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Table 9: Female Breast Cancer Annual Incidence Rates by Race
Maryland, 1998-2002

Race	Age-Adjusted Cancer Annual Incidence Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
White	138.4	135.5	136.9	123.4	125.9	-2.8%
Black	115.9	121.3	116.6	109.4	108.7	-2.3%

Rates are age-adjusted to 2000 U.S. standard population
Percent change reflects Estimated Annual Percent Change (EAPC)
Source: Maryland Cancer Registry, 1998-2002

Table 10: Female Breast Cancer Annual Mortality Rates by Race
Maryland, 1998-2002

Race	Age-Adjusted Cancer Annual Mortality Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
White	28.7	27.0	26.0	26.4	27.3	-1.2%
Black	39.6	33.8	34.1	33.5	36.1	-1.9%

Rates are age-adjusted to 2000 U.S. standard population
Percent change reflects Estimated Annual Percent Change (EAPC)
Source: Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Table 11: Prostate Cancer Annual Incidence Rates by Race
Maryland, 1998-2002

Race	Age-Adjusted Cancer Annual Incidence Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
White	138.4	155.2	161.3	153.0	173.2	4.4%
Black	219.7	226.1	236.5	210.0	259.7	2.6%

Rates are age-adjusted to 2000 U.S. standard population
Percent change reflects Estimated Annual Percent Change (EAPC)
Source: Maryland Cancer Registry, 1998-2002

Table 12: Prostate Cancer Annual Mortality Rates by Race
Maryland, 1998-2002

Race	Age-Adjusted Cancer Annual Mortality Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
White	30.1	28.6	26.9	25.2	23.5	-6.0%
Black	67.1	68.1	61.4	65.3	71.4	0.8%

Rates are age-adjusted to 2000 U.S. standard population
Percent change reflects Estimated Annual Percent Change (EAPC)
Source: Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Table 13: Oral Cancer Annual Incidence Rates by Race and Gender
Maryland, 1998-2002

Race and Gender	Age-Adjusted Cancer Annual Incidence Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
White Male	15.1	15.4	15.9	12.8	15.1	-1.8%
Black Male	18.1	17.4	18.9	16.7	15.5	-3.5%
White Female	6.6	5.6	6.2	5.4	5.4	-4.3%
Black Female	6.3	6.4	4.7	5.5	4.8	-6.7%

Rates are age-adjusted to 2000 U.S. standard population
Percent change reflects Estimated Annual Percent Change (EAPC)
Source: Maryland Cancer Registry, 1998-2002

Table 14: Oral Cancer Annual Mortality Rates by Race and Gender
Maryland, 1998-2002

Race and Gender	Age-Adjusted Cancer Annual Mortality Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
White Male	3.9	4.0	4.4	3.8	3.7	-1.6%
Black Male	8.3	7.9	9.5	8.1	6.4	-4.8%
White Female	2.0	1.7	1.1	1.1	2.0	-4.3%
Black Female	1.1	1.3	0.8	2.2	1.9	17.6%

Rates are age-adjusted to 2000 U.S. standard population
Percent change reflects Estimated Annual Percent Change (EAPC)
Source: Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Table 15: Melanoma Annual Incidence Rates by Gender
Maryland, 1998-2002

Gender	Age-Adjusted Cancer Annual Incidence Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2001
Male	17.1	22.1	22.8	23.7	NA	10.6%
Female	9.8	14.5	13.2	14.9	NA	12.3%

Rates are age-adjusted to 2000 U.S. standard population

NA: Data not available

Percent change reflects Estimated Annual Percent Change (EAPC)

Source: Maryland Cancer Registry, 1998-2001

Table 16: Melanoma Annual Mortality Rates by Gender
Maryland, 1998-2002

Gender	Age-Adjusted Cancer Annual Mortality Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
Male	3.3	3.3	4.1	3.9	4.6	8.7%
Female	1.6	1.6	1.7	1.8	1.4	-1.5%

Rates are age-adjusted to 2000 U.S. standard population

Percent change reflects Estimated Annual Percent Change (EAPC)

Source: Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Table 17: Cervical Cancer Annual Incidence Rates by Race
Maryland, 1998-2002

Race	Age-Adjusted Cancer Annual Incidence Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2001
White	7.7	6.5	6.4	5.4	NA	-10.2%
Black	10.7	10.4	10.6	8.2	NA	-7.5%

Rates are age-adjusted to 2000 U.S. standard population

NA: Data not available

Percent change reflects Estimated Annual Percent Change (EAPC)

Source: Maryland Cancer Registry, 1998-2001

Table 18: Cervical Cancer Annual Mortality Rates by Race
Maryland, 1998-2002

Race	Age-Adjusted Cancer Annual Mortality Rates					
	1998	1999	2000	2001	2002	% Change 1998 - 2002
White	1.9	2.4	2.1	2.4	1.7	-2.2%
Black	5.2	3.8	3.3	4.6	4.8	0.3%

Rates are age-adjusted to 2000 U.S. standard population

Percent change reflects Estimated Annual Percent Change (EAPC)

Source: Maryland Division of Health Statistics, 1998-2001
CDC WONDER, 2002

Appendix J

Maryland Trend in Cancer Stage of Disease at Diagnosis by Year for Each Cancer Site, 1998-2002

Maryland Trend In Cancer Stage of Disease at Diagnosis by Year for each Cancer Site, 1998-2002

Table 1: All Cancer Sites by Percent of Stage of Cancer at Diagnosis and Year Maryland, 1998-2002

Stage					
	1998	1999	2000	2001	2002
	%	%	%	%	%
Local	41.3	41.4	43.8	41.9	NA
Regional	21.9	20.8	20.9	20.6	NA
Distant	17.1	16.5	16.5	16.7	NA
Unstaged	19.7	21.4	18.8	20.8	NA

Source: Maryland Cancer Registry, 1998-2001

Table 2: Lung Cancer by Percent of Stage of Cancer at Diagnosis and Year Maryland, 1998-2002

Stage					
	1998	1999	2000	2001	2002
	%	%	%	%	%
Local	22.3	21.0	22.3	19.8	18.6
Regional	27.7	26.7	26.3	28.3	26.2
Distant	35.9	35.8	35.0	36.1	37.9
Unstaged	14.1	16.6	16.4	15.7	17.3

Source: Maryland Cancer Registry, 1998-2002

Table 3: Colorectal Cancer by Percent of Stage of Cancer at Diagnosis and Year Maryland, 1998-2002

Stage					
	1998	1999	2000	2001	2002
	%	%	%	%	%
Local	32.8	30.4	31.4	30.1	33.9
Regional	40.1	37.8	40.0	38.4	35.0
Distant	15.3	17.8	14.9	14.6	15.2
Unstaged	11.8	14.1	13.7	16.9	15.9

Source: Maryland Cancer Registry, 1998-2002

Table 4: Breast Cancer by Percent of Stage of Cancer at Diagnosis and Year Maryland, 1998-2002

Stage					
	1998	1999	2000	2001	2002
	%	%	%	%	%
Local	59.2	58.4	57.8	56.4	59.5
Regional	26.4	26.4	28.4	28.2	27.3
Distant	4.4	3.2	3.8	3.7	3.7
Unstaged	10.0	12.0	10.1	11.7	9.5

Source: Maryland Cancer Registry, 1998-2002

Table 5: Prostate Cancer by Percent of Stage of Cancer at Diagnosis and Year Maryland, 1998-2002

Stage					
	1998	1999	2000	2001	2002
	%	%	%	%	%
Local	58.2	58.4	68.4	62.2	60.9
Regional	8.5	7.2	6.8	5.8	5.7
Distant	3.5	2.8	2.8	2.5	2.6
Unstaged	29.8	31.5	22.1	29.5	30.8

Source: Maryland Cancer Registry, 1998-2002

Table 6: Oral Cancer by Percent of Stage of Cancer at Diagnosis and Year Maryland, 1998-2002

Stage					
	1998	1999	2000	2001	2002
	%	%	%	%	%
Local	36.4	34.7	37.0	34.6	35.5
Regional	41.0	44.7	44.5	43.9	42.7
Distant	5.9	5.0	6.1	4.8	6.1
Unstaged	16.8	15.6	12.4	16.7	15.7

Source: Maryland Cancer Registry, 1998-2002

Table 7: Melanoma Cancer by Percent of Stage of Cancer at Diagnosis and Year Maryland, 1998-2002

Stage					
	1998	1999	2000	2001	2002
	%	%	%	%	%
Local	47.7	43.6	57.6	51.4	NA
Regional	6.1	7.0	4.9	5.7	NA
Distant	3.2	2.5	3.3	3.0	NA
Unstaged	43.1	47.0	34.1	40.0	NA

Source: Maryland Cancer Registry, 1998-2001

Table 8: Cervical Cancer by Percent of Stage of Cancer at Diagnosis and Year Maryland, 1998-2002

Stage					
	1998	1999	2000	2001	2002
	%	%	%	%	%
Local	51.6	40.3	46.9	42.4	NA
Regional	23.4	28.3	26.1	24.4	NA
Distant	7.7	9.7	6.6	6.8	NA
Unstaged	17.3	21.7	20.4	26.3	NA

Source: Maryland Cancer Registry, 1998-2001

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