Maryland Department of Health & Mental Hygiene

# Annual Cancer Report

## Cigarette Restitution Fund Program

### Cancer Prevention, Education, Screening and Treatment Program


Robert L. Ehrlich, Jr.
Governor
State of Maryland

Michael S. Steele
Lieutenant Governor
State of Maryland

Nelson J. Sabatini
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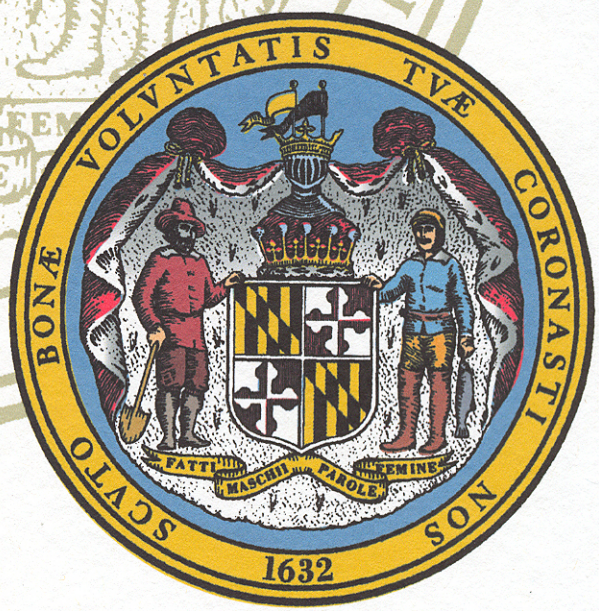


September, 2003

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 - Nelson J. Sabatini, Secretary

Dear Fellow Marylanders:

The Cigarette Restitution Fund (CRF) Program has become a vital resource and is one of my highest priorities for the Maryland Department of Health and Mental Hygiene. The program includes the Cancer Prevention, Education, Screening and Treatment Program whose mission involves actions to reduce the morbidity and mortality associated with cancer. Through the efforts and resulting actions of these components, we are making progress toward solutions, eliminating the burden, and reducing disparities of cancer.

An aging population challenges Maryland to recognize risk, define exposures, document and track affected populations, and integrate cooperating groups to provide the highest level of communication and information. Cancer is currently the second leading cause of death in Maryland and in the nation. Over 24,000 Marylanders were diagnosed with cancer in the year 2000, and more than 10,000 died from this disease. Maryland ranks eleventh in the nation in cancer mortality.

The enclosed 2003 Annual Cancer Report of the Cigarette Restitution Fund Program focuses on all cancer sites combined as well as 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 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).

I hope that you find this publication to be informative and useful as you join us in preventing and reducing cancer incidence and mortality. The Maryland community greatly appreciates your effort.

Sincerely,

Nelson J. Sabatini
Secretary

**Maryland Department of Health & Mental Hygiene**

# Annual Cancer Report

## *Cigarette Restitution Fund Program*

*Cancer Prevention, Education, Screening and Treatment Program*


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# Acknowledgements

The Maryland Department of Health and Mental Hygiene (DHMH), Center for Cancer Surveillance and Control, is pleased to present the Cigarette Restitution Fund Program's Annual Cancer Report for 2003. Our hope is that individuals, groups, and agencies, such as local health departments, community health coalitions, community-based organizations, policy makers, and the citizens of Maryland, will benefit from the information in this report and will find this report useful.

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

- Maryland Cancer Registry, DHMH, for providing data for the tables and graphs. Stacey Neloms provided coordination, and Ryan Colvin contributed special assistance by developing tables and resolving technical data issues.

- Division of Health Statistics, Maryland Vital Statistics Administration, DHMH, for providing mortality data and population estimates. Isabelle Horon, Dr.P.H., Robert Hayman, Ph.D., and their staff provided special assistance.

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- ORC Macro International, Inc., for providing 2000 cancer incidence data. Lynn Khoo, M.D., M.P.H., and staff developed the data.

- University of Maryland, Baltimore, Department of Epidemiology and Preventive Medicine, for providing Maryland Cancer Survey data. Eileen Steinberger, M.D., M.S., and Jane Uman, M.P.H., provided special assistance.

- Information Resources Management Administration, DHMH, for developing regional and county maps. Rashid Malik provided special assistance.

- 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 cancer patients and their families in Maryland. We hope that by the efforts of the Cigarette Restitution Fund Program, the burdens and challenges of cancer will be lightened for the individuals and families that we serve and are a part.

# Table of Contents

# I. Executive Summary

## A. Introduction

This publication is the Cigarette Restitution Fund Program (CRFP) Annual Cancer Report for 2003. The purpose of the Annual 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) to 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 provides $30 million annually 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 this 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 in this report. 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 greater incidence of and higher morbidity rates for cancer in minority populations (as defined in the CRFP law as women or individuals of African American, Hispanic, Native American, and Asian descent) and in rural areas, and 2) increase availability of and access to health care services for uninsured individuals and medically underserved populations.

The Annual 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 as compared to the Healthy People 2010 screening behaviors objectives.

## B. Major Highlights of the Report

1. Major findings for **overall** cancers:

- 24,551 cases of cancer were reported in Maryland in 2000 (excluding non-melanoma skin cancer).
- Cancer is the second leading cause of death in Maryland, responsible for 24% of all deaths.
- 10,241 cancer deaths occurred in 2000.
- Maryland is ranked 11$^{th}$ among states and the District of Columbia in total cancer mortality in 2000, dropping from 9$^{th}$ in 1999.
- Lung and bronchus, colon and rectum, female breast, and prostate cancers account for 52.8% of cancer deaths among all cancers.
- The 2000 mortality rate for Maryland (209.1 per 100,000 population) is statistically significantly higher than the U.S. rate (199.6 per 100,000 population). The Healthy People 2010 goal is to reduce cancer mortality to 159.9 per 100,000 population.
- In 2000, blacks had a statistically significantly higher mortality rate than whites (246.0 vs. 201.8 per 100,000 population) for all combined cancer sites.
- In 2000, males had a statistically significantly higher mortality rate than females (260.5 vs. 176.9 per 100,000 population) for all combined cancer sites.
- In 2000, there were 371 new cancer cases among individuals of Hispanic ethnicity for all sites combined with a corresponding incidence rate of 373.9 per 100,000 population.

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

- Lung cancer accounts for approximately 29% of all cancer deaths in Maryland and is the leading cause of cancer deaths in both men and women in Maryland.
- 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.

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, preferred among screening methods, or fecal occult blood testing with flexible sigmoidoscopy.

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

- Breast cancer is the most common reportable cancer among women and is 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.

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

- Prostate cancer is the most common reportable cancer among men and the third leading cause of cancer death among men after lung cancer and colorectal cancer.
- Prostate cancer incidence and mortality rates are significantly higher among black men than white men.

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) blocking lip balm, and screening for oral cancer targeted to individuals 40 years of age and older.

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

- Incidence and mortality rates of melanoma are statistically significantly higher among males than females and among whites than blacks.
- 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 cervical cancer incidence rate is statistically significantly higher among black women than white women.
- 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.

# II. All Cancer Sites Combined

***Incidence (New Cases)***

A total of 24,551 new cancer cases diagnosed in 2000 were reported to the Maryland Cancer Registry. The total age-adjusted cancer incidence rate for Maryland in 2000 was 486.0 per 100,000 population [479.9-492.1, 95% Confidence Interval (C.I.)]. The 2000 Maryland cancer incidence rate is statistically significantly higher than the 2000 U.S. rate of 472.9 per 100,000 population published by the National Cancer Institute, Surveillance Epidemiological End Results (SEER) Program.

***Mortality (Deaths)***

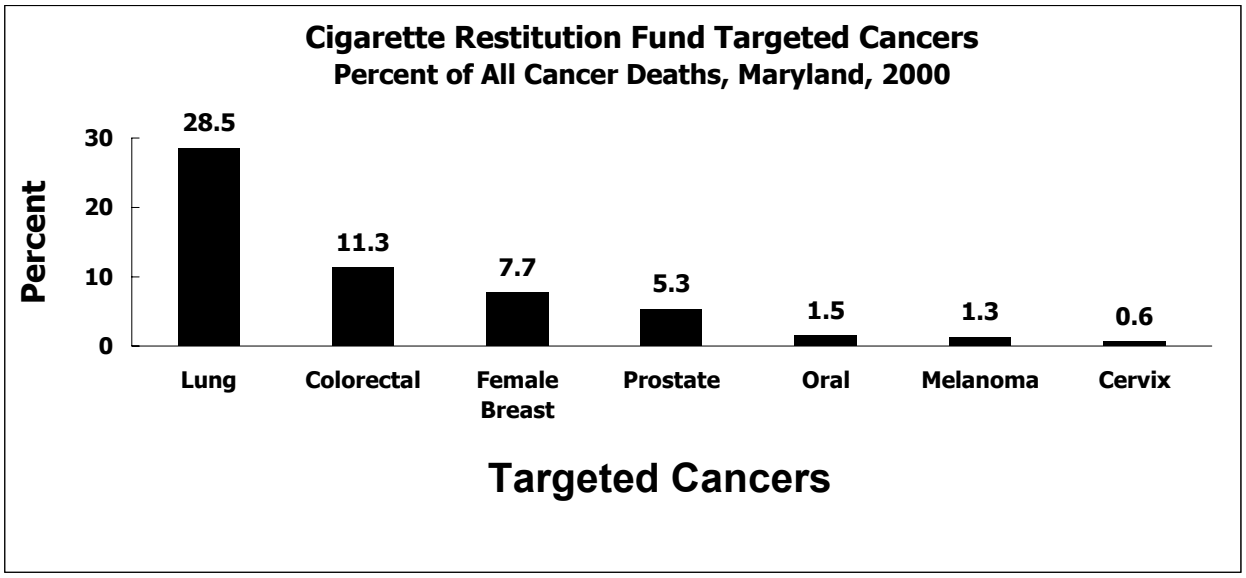
A total of 10,241 Maryland residents died from cancer in 2000. The overall Maryland cancer mortality rate for 2000 is 209.1 per 100,00 population (205.0-213.2, 95% C.I.). This rate is statistically significantly higher than the 2000 U.S. cancer mortality rate of 199.6 per 100,000 population. Currently, Maryland is ranked 11th highest among all states and the District of Columbia in total cancer mortality.

**Table 1.**
**Overall Cancer Incidence and Mortality Rates**
**by Gender and Race, Maryland and the United States, 2000**

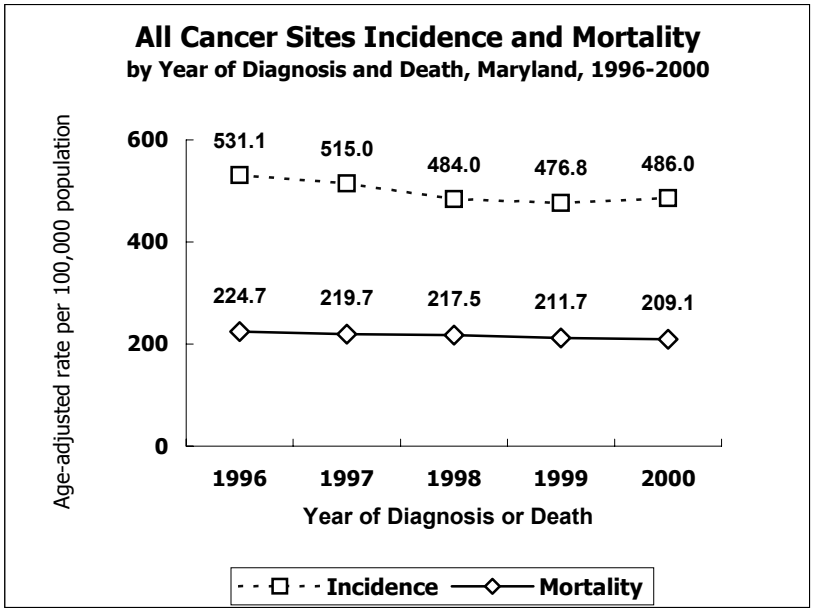
| *Incidence 2000* | *Total* | *Males* | *Females* | *Whites* | *Blacks* | *Other* |
|---|---|---|---|---|---|---|
| New Cases (#) | 24,551 | 12,699 | 11,846 | 17,894 | 5,358 | 717 |
| Incidence Rate* | 486.0 | 585.5 | 417.7 | 474.3 | 488.5 | 420.2 |
| U.S. SEER Rate* | 472.9 | 560.2 | 413.8 | 478.9 | 512.4 | NA |
| *Mortality 2000* | *Total* | *Males* | *Females* | *Whites* | *Blacks* | *Other* |
| MD Deaths (#) | 10,241 | 5,192 | 5,049 | 7,601 | 2,451 | 189 |
| MD Mortality Rate* | 209.1 | 260.5 | 176.9 | 201.8 | 246.0 | 123.7 |
| U.S. Mortality Rate* | 199.6 | 249.8 | 167.3 | 197.1 | 249.6 | NA |

Total includes cases with transexual, hermaphrodite, unknown gender, and unknown race
(see page 158)
* Rates are per 100,000 and are age-adjusted to 2000 U.S. standard population
NA: Data were not available
Source: Maryland Cancer Registry, 2000
Maryland Division of Health Statistics, 2000
SEER, National Cancer Institute, 2000

Cancer is the second leading cause of death in Maryland, accounting for 24% of all deaths. In 2000, the seven targeted cancers represented 56.2% of the 10,241 cancer deaths that occurred in Maryland. Lung and bronchus, colon and rectum, female breast, and prostate account for 52.8% of all cancer deaths.




Maryland Division of Health Statistics, 2000

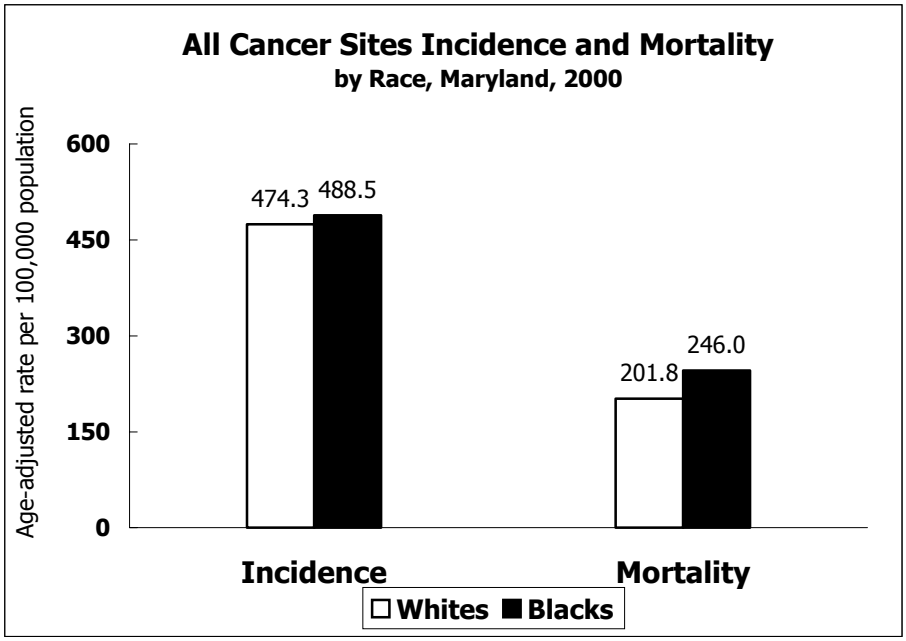



Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000

***Trend***

Total cancer incidence (new cases) rates in Maryland decreased an average of 2.5% per year from 1996 to 2000.

Total cancer mortality (death) rates decreased an average of 1.8% per year from 1996 to 2000.

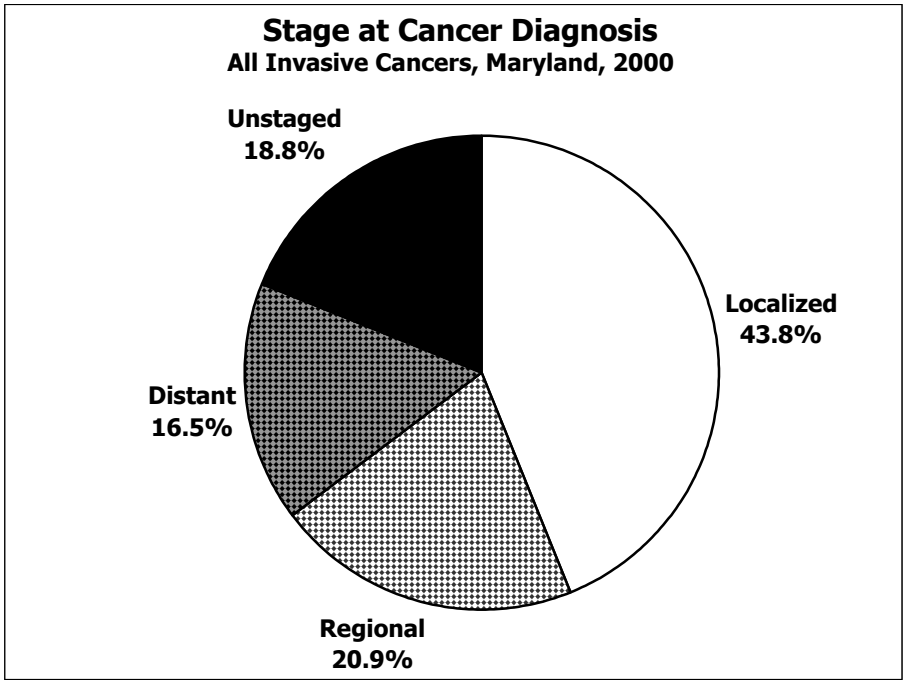



Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 2000
Maryland Division of Health Statistics, 2000

***Race-Specific Rates***

For all cancer sites combined, whites and blacks had similar incidence rates.

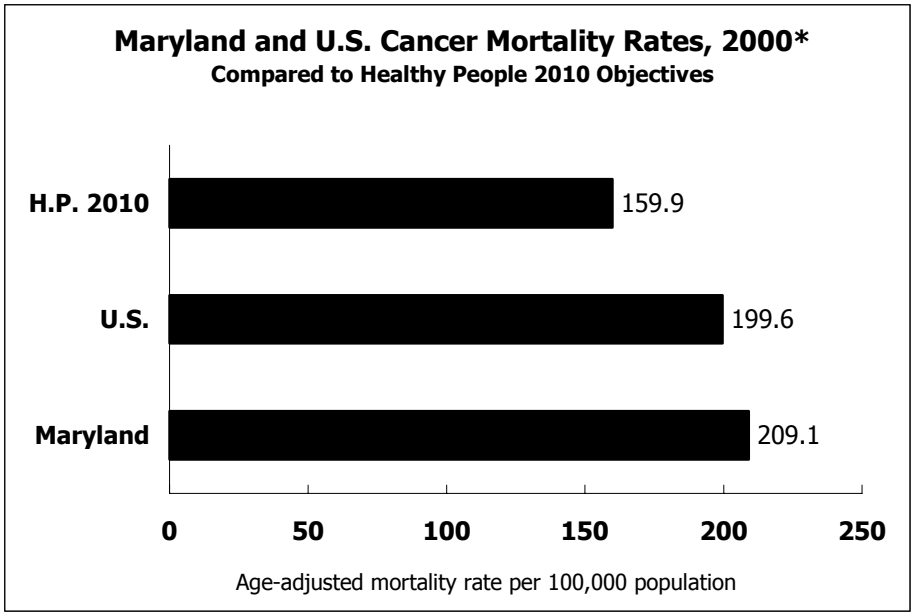
Blacks in Maryland experienced a statistically significantly higher mortality rate than whites in 2000.




Maryland Cancer Registry, 2000

***Stage at Diagnosis***

The stage of disease at diagnosis is an important predictor of cancer survival. Less than half (43.8%) of the new cancers diagnosed in 2000 were localized (early stage). This is the stage when most cancers are treatable.




***Healthy People 2010 Objectives***

The overall cancer mortality rate in 2000 for Maryland is 209.1 per 100,000 population. The Healthy People 2010 goal is to reduce cancer mortality to 159.9 per 100,000 population.

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

***Summary – Identification of Targeted Cancers***

The cancers targeted under the Cigarette Restitution Fund in 2004 will remain: 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 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 ultraviolet light

# Table 2.
# Number of Cancer Cases for All Cancer Sites by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | | |
|---|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other | Unknown |
| Maryland | 24,551 | 12,699 | 11,846 | 17,894 | 5,358 | 717 | 582 |
| | | | | | | | |
| Allegany | 437 | 246 | 191 | 427 | s | <6 | 0 |
| Anne Arundel | 2,245 | 1,188 | 1,056 | 1,877 | 271 | 35 | 62 |
| Baltimore City | 3,321 | 1,732 | 1,589 | 1,347 | 1,892 | 26 | 56 |
| Baltimore County | 4,307 | 2,205 | 2,101 | 3,626 | 516 | 85 | 80 |
| Calvert | 298 | 156 | 142 | 241 | 43 | <6 | s |
| Caroline | 153 | 82 | 71 | 128 | s | 0 | <6 |
| Carroll | 711 | 368 | 343 | 679 | s | <6 | 15 |
| Cecil | 396 | 212 | 184 | 370 | 12 | <6 | s |
| Charles | 467 | 238 | 229 | 355 | 91 | 11 | 10 |
| Dorchester | 206 | 109 | 97 | 161 | 45 | 0 | 0 |
| Frederick | 785 | 416 | 369 | 710 | 35 | 6 | 34 |
| Garrett | 156 | 85 | 71 | 156 | 0 | 0 | 0 |
| Harford | 995 | 532 | 463 | 904 | 65 | 7 | 19 |
| Howard | 880 | 423 | 457 | 696 | 128 | 40 | 16 |
| Kent | 99 | 52 | 47 | 91 | 8 | 0 | 0 |
| Montgomery | 3,742 | 1,860 | 1,880 | 2,868 | 418 | 334 | 122 |
| Prince George's | 2,985 | 1,575 | 1,409 | 1,256 | 1,513 | 123 | 93 |
| Queen Anne's | 179 | 98 | 81 | 149 | s | 0 | <6 |
| Saint Mary's | 363 | 193 | 170 | 311 | 45 | <6 | <6 |
| Somerset | 118 | 62 | 56 | 80 | s | <6 | 0 |
| Talbot | 229 | 123 | 106 | 198 | s | <6 | 0 |
| Washington | 724 | 369 | 355 | 689 | 22 | s | <6 |
| Wicomico | 395 | 191 | 203 | 305 | 75 | 9 | 6 |
| Worcester | 321 | 159 | 162 | 266 | 38 | 7 | 10 |
| Unknown | 39 | 25 | 14 | <6 | <6 | <6 | 27 |

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, 2000

# Table 3.
# All Cancer Sites Age-Adjusted Incidence Rates*
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 486.0 | 585.5 | 417.7 | 474.3 | 488.5 | 420.2 |
| | | | | | | |
| Allegany | 461.7 | 597.3 | 367.0 | 463.7 | ** | ** |
| Anne Arundel | 504.9 | 605.4 | 434.5 | 483.0 | 596.4 | 366.3 |
| Baltimore City | 505.8 | 645.5 | 415.4 | 496.9 | 501.3 | 287.9 |
| Baltimore County | 514.0 | 616.1 | 445.9 | 502.3 | 534.8 | 506.6 |
| Calvert | 484.3 | 575.2 | 419.6 | 453.6 | 531.4 | ** |
| Caroline | 487.2 | 569.4 | 415.8 | 478.6 | ** | 0.0 |
| Carroll | 505.3 | 609.1 | 436.8 | 498.6 | ** | ** |
| Cecil | 505.5 | 605.0 | 437.3 | 494.9 | ** | ** |
| Charles | 501.3 | 618.6 | 433.1 | 498.2 | 450.8 | ** |
| Dorchester | 520.2 | 625.4 | 447.7 | 523.4 | 524.0 | 0.0 |
| Frederick | 467.8 | 587.0 | 393.8 | 451.1 | 419.2 | ** |
| Garrett | 453.3 | 528.0 | 386.5 | 455.9 | 0.0 | 0.0 |
| Harford | 510.0 | 630.4 | 427.4 | 505.1 | 508.1 | ** |
| Howard | 454.6 | 510.2 | 417.0 | 450.4 | 498.7 | 287.6 |
| Kent | 376.3 | 436.0 | 330.2 | 410.7 | ** | 0.0 |
| Montgomery | 445.4 | 520.6 | 394.6 | 432.2 | 462.8 | 426.8 |
| Prince George's | 482.6 | 607.4 | 395.1 | 477.1 | 459.3 | 459.9 |
| Queen Anne's | 415.9 | 476.1 | 364.9 | 391.4 | 595.2 | 0.0 |
| Saint Mary's | 497.9 | 557.5 | 446.9 | 504.1 | 472.7 | ** |
| Somerset | 444.9 | 507.0 | 423.9 | 420.2 | 505.3 | ** |
| Talbot | 468.3 | 549.7 | 403.0 | 470.9 | 474.6 | ** |
| Washington | 506.4 | 585.6 | 463.8 | 502.1 | ** | ** |
| Wicomico | 463.2 | 507.2 | 423.0 | 451.1 | 464.6 | ** |
| Worcester | 490.1 | 507.4 | 482.3 | 471.8 | 447.3 | ** |

* 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, 2000

# Table 4.
# All Sites Cancer Cases and Age-Adjusted Incidence Rates* Among Hispanics
# Maryland and Jurisdictions, 2000

| Jurisdiction | Number | Rate |
|---|---|---|
| **Maryland** | 371 | 373.9 |
| | | |
| Allegany | 0 | 0.0 |
| Anne Arundel | 24 | ** |
| Baltimore City | 26 | 474.7 |
| Baltimore County | 33 | 497.7 |
| Calvert | <6 | ** |
| Caroline | <6 | ** |
| Carroll | <6 | ** |
| Cecil | 0 | 0.0 |
| Charles | <6 | ** |
| Dorchester | 0 | 0.0 |
| Frederick | <6 | ** |
| Garrett | <6 | ** |
| Harford | 14 | ** |
| Howard | 10 | ** |
| Kent | <6 | ** |
| Montgomery | 154 | 309.2 |
| Prince George's | 74 | 421.6 |
| Queen Anne's | <6 | ** |
| St. Mary's | <6 | ** |
| Somerset | 0 | 0.0 |
| Talbot | <6 | ** |
| Washington | 6 | ** |
| Wicomico | <6 | ** |
| Worcester | 6 | ** |
| | | |
| **Region** | **Number** | **Rate** |
| BALTIMORE METRO REGION | 108 | 482.4 |
| EASTERN SHORE REGION | 14 | ** |
| NATIONAL CAPITAL REGION | 228 | 336.5 |
| NORTHWEST REGION | 12 | ** |
| SOUTHERN REGION | 8 | ** |

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

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

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

Case numbers were prepared using MCR data and an algorithm to determine Hispanic ethnicity (see page 159)

Source: Maryland Cancer Registry, 2000

# Table 5.
# Number of Cancer Deaths for All Cancer Sites by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 10,241 | 5,192 | 5,049 | 7,601 | 2,451 | 189 |
| | | | | | | |
| Allegany | 210 | 123 | 87 | s | <6 | 0 |
| Anne Arundel | 897 | 454 | 443 | 769 | 118 | 10 |
| Baltimore City | 1,716 | 885 | 831 | 704 | 1,000 | 12 |
| Baltimore County | 1,852 | 920 | 932 | 1,610 | 218 | 24 |
| Calvert | 131 | 75 | 56 | 105 | s | <6 |
| Caroline | 83 | 41 | 42 | 64 | 19 | 0 |
| Carroll | 257 | 141 | 116 | 248 | s | <6 |
| Cecil | 176 | 90 | 86 | 169 | 7 | 0 |
| Charles | 205 | 109 | 96 | 156 | s | <6 |
| Dorchester | 83 | 50 | 33 | 70 | 13 | 0 |
| Frederick | 317 | 172 | 145 | 289 | s | <6 |
| Garrett | 59 | 33 | 26 | 59 | 0 | 0 |
| Harford | 358 | 192 | 166 | 327 | s | <6 |
| Howard | 318 | 152 | 166 | 257 | 49 | 12 |
| Kent | 43 | 23 | 20 | 36 | 7 | 0 |
| Montgomery | 1,297 | 598 | 699 | 1,062 | 146 | 89 |
| Prince George's | 1,174 | 584 | 590 | 547 | 599 | 28 |
| Queen Anne's | 101 | 50 | 51 | 85 | 16 | 0 |
| Saint Mary's | 134 | 78 | 56 | 116 | 18 | 0 |
| Somerset | 71 | 41 | 30 | 53 | s | <6 |
| Talbot | 90 | 53 | 37 | 76 | 14 | 0 |
| Washington | 321 | 152 | 169 | 316 | <6 | <6 |
| Wicomico | 196 | 96 | 100 | 149 | s | <6 |
| Worcester | 152 | 80 | 72 | 127 | 25 | 0 |

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

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

Source: Maryland Division of Health Statistics, 2000

# Table 6.
# All Cancer Sites Age-Adjusted Mortality Rates*
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 209.1 | 260.5 | 176.9 | 201.8 | 246.0 | 123.7 |
| | | | | | | |
| Allegany | 211.1 | 299.8 | 145.4 | 212.3 | ** | 0.0 |
| Anne Arundel | 217.2 | 263.5 | 189.4 | 211.2 | 290.7 | ** |
| Baltimore City | 259.3 | 343.0 | 208.1 | 240.4 | 274.2 | ** |
| Baltimore County | 216.9 | 267.2 | 185.7 | 213.2 | 267.1 | ** |
| Calvert | 229.6 | 311.2 | 175.3 | 214.9 | ** | ** |
| Caroline | 260.7 | 300.2 | 230.8 | 235.6 | ** | 0.0 |
| Carroll | 188.2 | 265.2 | 146.0 | 186.6 | ** | ** |
| Cecil | 238.9 | 290.6 | 211.4 | 240.1 | ** | 0.0 |
| Charles | 235.2 | 287.2 | 195.8 | 229.8 | 269.0 | ** |
| Dorchester | 202.5 | 287.8 | 136.7 | 219.2 | ** | 0.0 |
| Frederick | 198.3 | 261.6 | 158.1 | 191.5 | ** | ** |
| Garrett | 172.2 | 230.1 | 139.2 | 173.0 | 0.0 | 0.0 |
| Harford | 195.9 | 256.0 | 158.8 | 194.2 | 244.4 | ** |
| Howard | 186.0 | 224.2 | 165.1 | 184.6 | 234.3 | ** |
| Kent | 150.0 | ** | ** | 142.5 | ** | 0.0 |
| Montgomery | 157.9 | 179.6 | 144.7 | 157.6 | 177.5 | 129.7 |
| Prince George's | 211.0 | 263.6 | 180.0 | 210.0 | 219.4 | 112.4 |
| Queen Anne's | 240.9 | 252.3 | 226.9 | 229.4 | ** | 0.0 |
| Saint Mary's | 205.4 | 272.0 | 157.2 | 209.5 | ** | 0.0 |
| Somerset | 270.8 | 381.8 | 211.6 | 270.7 | ** | ** |
| Talbot | 173.7 | 242.7 | 127.1 | 167.1 | ** | 0.0 |
| Washington | 221.9 | 262.8 | 200.7 | 225.0 | ** | ** |
| Wicomico | 231.1 | 272.6 | 204.5 | 219.4 | 282.0 | ** |
| Worcester | 220.3 | 262.9 | 186.2 | 209.7 | ** | 0.0 |

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

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

Source: Maryland Division of Health Statistics, 2000

# Table 7.
# Number of Cancer Cases for All Cancer Sites
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | | |
|---|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Others | Unknown |
| Maryland | 120,021 | 61,309 | 58,697 | 88,659 | 25,174 | 3,070 | 3,118 |
| | | | | | | | |
| Allegany | 2,432 | 1,271 | 1,161 | 2,374 | 37 | 14 | 7 |
| Anne Arundel | 10,847 | 5,540 | 5,303 | 9,073 | 1,245 | 163 | 366 |
| Baltimore City | 17,885 | 9,189 | 8,696 | 8,088 | 9,336 | 156 | 305 |
| Baltimore County | 20,739 | 10,463 | 10,275 | 17,637 | 2,397 | 301 | 404 |
| Calvert | 1,437 | 773 | 664 | 1,169 | 203 | 18 | 47 |
| Caroline | 808 | 447 | 361 | 678 | 122 | <6 | <6 |
| Carroll | 3,387 | 1,809 | 1,578 | 3,191 | 74 | 27 | 95 |
| Cecil | 1,859 | 983 | 876 | 1,734 | 57 | 20 | 48 |
| Charles | 2,133 | 1,138 | 995 | 1,603 | 422 | 55 | 53 |
| Dorchester | 1,022 | 538 | 484 | 777 | 235 | <6 | s |
| Frederick | 3,833 | 2,006 | 1,827 | 3,391 | 216 | 37 | 189 |
| Garrett | 712 | 381 | 331 | 699 | 6 | <6 | s |
| Harford | 4,708 | 2,514 | 2,194 | 4,238 | 327 | 40 | 103 |
| Howard | 3,884 | 1,878 | 2,006 | 3,069 | 513 | 181 | 121 |
| Kent | 614 | 322 | 292 | 515 | 84 | <6 | s |
| Montgomery | 17,762 | 8,672 | 9,083 | 13,978 | 1,801 | 1,338 | 645 |
| Prince George's | 14,000 | 7,189 | 6,809 | 6,317 | 6,717 | 525 | 441 |
| Queen Anne's | 966 | 516 | 450 | 819 | 125 | <6 | s |
| Saint Mary's | 1,671 | 872 | 799 | 1,391 | 220 | 31 | 29 |
| Somerset | 703 | 401 | 302 | 515 | 172 | s | <6 |
| Talbot | 1,188 | 644 | 544 | 1,016 | 151 | 12 | 9 |
| Washington | 3,342 | 1,647 | 1,695 | 3,201 | 90 | 23 | 28 |
| Wicomico | 2,067 | 1,006 | 1,060 | 1,639 | 380 | 31 | 17 |
| Worcester | 1,621 | 872 | 749 | 1,349 | 208 | 34 | 30 |
| Unknown | 401 | 238 | 163 | 198 | 36 | 37 | 130 |

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, 1996-2000

# Table 8.
# All Cancer Sites Age-Adjusted Incidence Rates*
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Others |
| Maryland | 498.1 | 594.0 | 434.3 | 483.8 | 507.5 | 406.0 |
| | | | | | | |
| Allegany | 509.0 | 628.1 | 429.6 | 506.9 | 508.2 | ** |
| Anne Arundel | 520.9 | 604.1 | 465.4 | 510.2 | 484.4 | 349.5 |
| Baltimore City | 549.0 | 695.9 | 456.2 | 577.3 | 520.5 | 415.4 |
| Baltimore County | 502.1 | 588.1 | 447.5 | 481.0 | 663.9 | 362.1 |
| Calvert | 494.0 | 600.9 | 419.1 | 505.0 | 369.0 | ** |
| Caroline | 522.3 | 634.2 | 431.3 | 543.1 | 420.3 | ** |
| Carroll | 508.7 | 635.6 | 422.9 | 497.0 | 408.1 | 706.1 |
| Cecil | 506.9 | 585.1 | 447.8 | 501.4 | 320.9 | ** |
| Charles | 508.8 | 630.0 | 425.8 | 509.3 | 449.7 | 655.9 |
| Dorchester | 544.2 | 643.0 | 469.7 | 571.3 | 475.0 | ** |
| Frederick | 495.5 | 601.6 | 425.0 | 471.9 | 462.5 | 456.0 |
| Garrett | 435.2 | 513.8 | 379.1 | 430.0 | ** | ** |
| Harford | 517.2 | 636.1 | 437.0 | 517.7 | 432.0 | 268.3 |
| Howard | 452.5 | 517.7 | 412.6 | 440.9 | 442.9 | 391.0 |
| Kent | 493.2 | 554.4 | 441.3 | 534.6 | 302.5 | ** |
| Montgomery | 445.6 | 515.0 | 402.3 | 431.8 | 469.6 | 387.2 |
| Prince George's | 486.8 | 596.3 | 412.0 | 426.9 | 546.7 | 394.3 |
| Queen Anne's | 465.3 | 531.2 | 414.8 | 473.0 | 377.9 | ** |
| Saint Mary's | 493.1 | 551.6 | 446.0 | 505.1 | 383.1 | 705.8 |
| Somerset | 539.7 | 660.1 | 453.5 | 594.5 | 399.9 | ** |
| Talbot | 501.7 | 606.7 | 423.6 | 531.5 | 344.1 | ** |
| Washington | 478.9 | 538.9 | 446.5 | 476.2 | 492.3 | ** |
| Wicomico | 512.9 | 590.6 | 466.3 | 535.6 | 408.0 | 887.7 |
| Worcester | 558.8 | 652.5 | 487.0 | 588.2 | 360.4 | 6,019.2 |

* 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, 1996-2000

# Table 9.
# Number of Cancer Deaths for All Cancer Sites
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 50,777 | 26,087 | 24,690 | 37,944 | 12,111 | 722 |
| | | | | | | |
| Allegany | 1,043 | 548 | 495 | 1,025 | s | <6 |
| Anne Arundel | 4,378 | 2,283 | 2,095 | 3,813 | 521 | 44 |
| Baltimore City | 9,327 | 4,810 | 4,517 | 3,974 | 5,313 | 40 |
| Baltimore County | 8,904 | 4,462 | 4,442 | 7,958 | 876 | 70 |
| Calvert | 596 | 337 | 259 | 472 | s | <6 |
| Caroline | 343 | 183 | 160 | 276 | 67 | 0 |
| Carroll | 1,300 | 689 | 611 | 1,263 | s | <6 |
| Cecil | 849 | 470 | 379 | 806 | s | <6 |
| Charles | 965 | 502 | 463 | 748 | 206 | 11 |
| Dorchester | 457 | 267 | 190 | 338 | s | <6 |
| Frederick | 1,500 | 832 | 668 | 1,384 | 104 | 12 |
| Garrett | 298 | 166 | 132 | 298 | 0 | 0 |
| Harford | 1,830 | 955 | 875 | 1,685 | 139 | 6 |
| Howard | 1,521 | 768 | 753 | 1,255 | 215 | 51 |
| Kent | 259 | 142 | 117 | 214 | 45 | 0 |
| Montgomery | 6,323 | 3,045 | 3,278 | 5,285 | 706 | 332 |
| Prince George's | 5,894 | 2,996 | 2,898 | 2,896 | 2,873 | 125 |
| Queen Anne's | 423 | 220 | 203 | 356 | s | <6 |
| Saint Mary's | 672 | 374 | 298 | 546 | s | <6 |
| Somerset | 353 | 210 | 143 | 243 | s | <6 |
| Talbot | 474 | 261 | 213 | 385 | s | <6 |
| Washington | 1,471 | 734 | 737 | 1,442 | s | <6 |
| Wicomico | 920 | 458 | 462 | 723 | s | <6 |
| Worcester | 677 | 375 | 302 | 559 | 118 | 0 |

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

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

Source: Maryland Division of Health Statistics, 1996-2000

# Table 10.
# All Cancer Sites Age-Adjusted Mortality Rates*
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

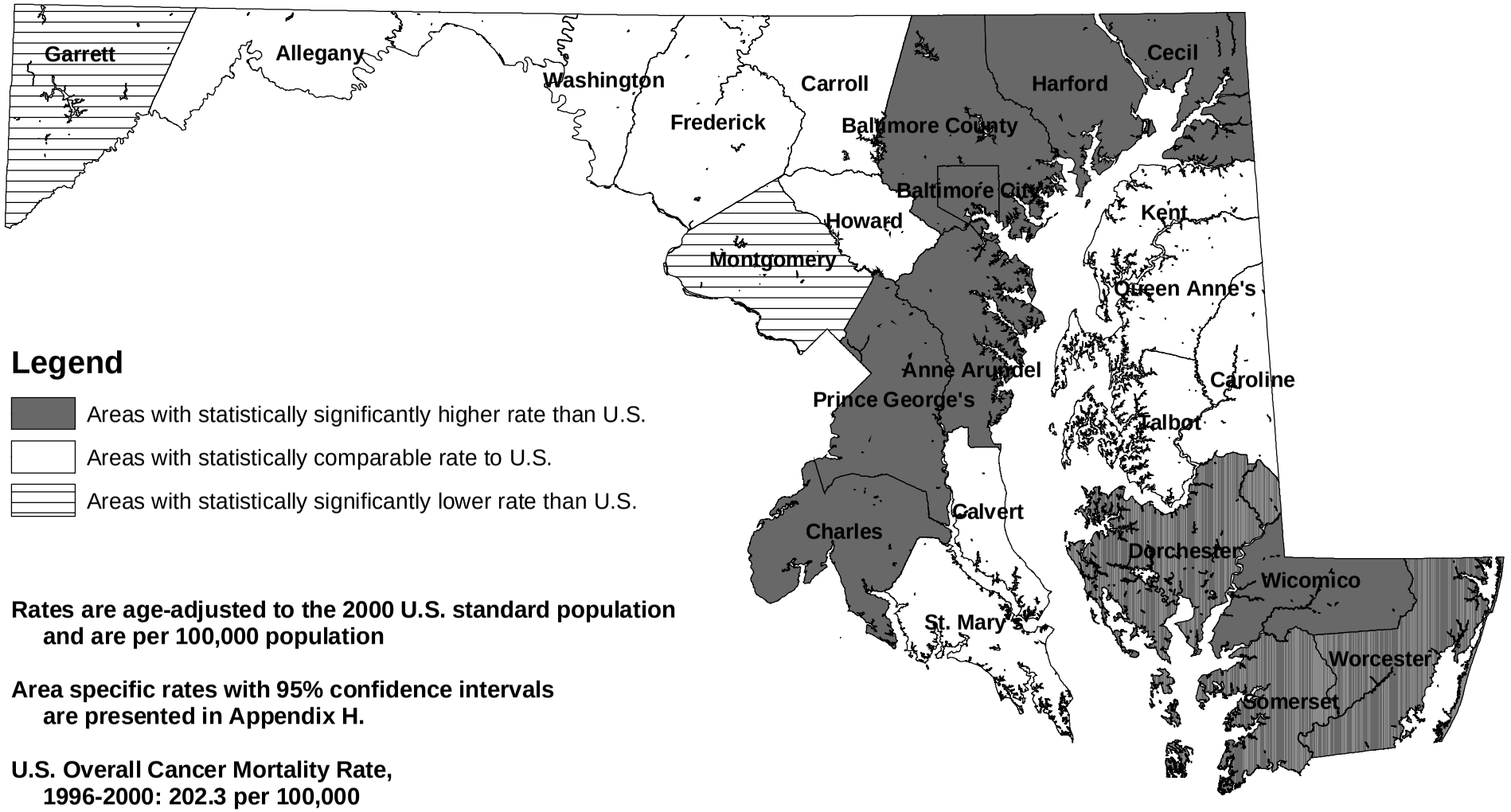
| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 216.3 | 272.0 | 181.3 | 207.2 | 266.9 | 109.1 |
| | | | | | | |
| Allegany | 206.3 | 273.4 | 163.2 | 206.7 | ** | ** |
| Anne Arundel | 225.4 | 280.4 | 190.2 | 228.5 | 220.8 | 105.1 |
| Baltimore City | 285.1 | 378.4 | 228.5 | 262.8 | 308.8 | 115.3 |
| Baltimore County | 212.6 | 263.2 | 182.2 | 209.6 | 276.0 | 98.4 |
| Calvert | 218.7 | 286.7 | 171.2 | 218.4 | 222.1 | ** |
| Caroline | 219.0 | 266.2 | 178.7 | 217.7 | 233.8 | 0.0 |
| Carroll | 200.0 | 259.6 | 161.6 | 200.9 | 184.3 | ** |
| Cecil | 243.0 | 310.1 | 198.0 | 244.2 | 232.8 | ** |
| Charles | 250.0 | 306.3 | 213.7 | 257.1 | 235.7 | ** |
| Dorchester | 236.4 | 324.6 | 171.9 | 238.8 | 243.4 | ** |
| Frederick | 203.5 | 266.3 | 158.6 | 201.4 | 242.9 | ** |
| Garrett | 178.9 | 231.5 | 144.5 | 180.1 | 0.0 | 0.0 |
| Harford | 213.8 | 269.6 | 179.6 | 218.4 | 190.2 | ** |
| Howard | 199.5 | 251.6 | 169.9 | 199.8 | 222.0 | 123.3 |
| Kent | 197.9 | 246.8 | 163.5 | 209.9 | 163.6 | 0.0 |
| Montgomery | 162.7 | 196.4 | 143.7 | 162.4 | 206.8 | 111.3 |
| Prince George's | 222.9 | 278.9 | 188.2 | 198.1 | 275.9 | 103.9 |
| Queen Anne's | 209.5 | 244.4 | 185.4 | 213.0 | 197.9 | ** |
| Saint Mary's | 210.7 | 260.1 | 172.6 | 210.3 | 224.3 | ** |
| Somerset | 266.6 | 359.2 | 200.7 | 269.6 | 264.1 | ** |
| Talbot | 188.8 | 249.4 | 149.1 | 188.1 | 191.8 | ** |
| Washington | 207.3 | 249.6 | 179.1 | 209.3 | 155.1 | ** |
| Wicomico | 227.8 | 280.6 | 195.6 | 233.3 | 213.2 | ** |
| Worcester | 226.7 | 286.2 | 182.7 | 233.6 | 203.2 | 0.0 |

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

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

Source: Maryland Division of Health Statistics, 1996-2000

# Maryland Overall Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rates, 1996-2000




## Legend

- Areas with statistically significantly higher rate than U.S.
- Areas with statistically comparable rate to U.S.
- Areas with statistically significantly lower rate than U.S.

**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. Overall Cancer Mortality Rate, 1996-2000: 202.3 per 100,000**

**Source: Maryland Division of Health Statistics, 1996-2000**

# III. Targeted Cancers

## A. Lung and Bronchus Cancer

***Incidence (New Cases)***

There were 3,538 new lung and bronchus cancer cases (called lung cancer) among Maryland residents in 2000. Lung cancer represents 14.4% of new cancers diagnosed in Maryland in 2000. The 2000 Maryland age-adjusted lung cancer incidence rate is 71.1 per 100,000 population (68.8-73.5, 95% C.I.) which is statistically significantly higher than the 2000 U.S. SEER lung cancer incidence rate of 62.3 per 100,000 population.

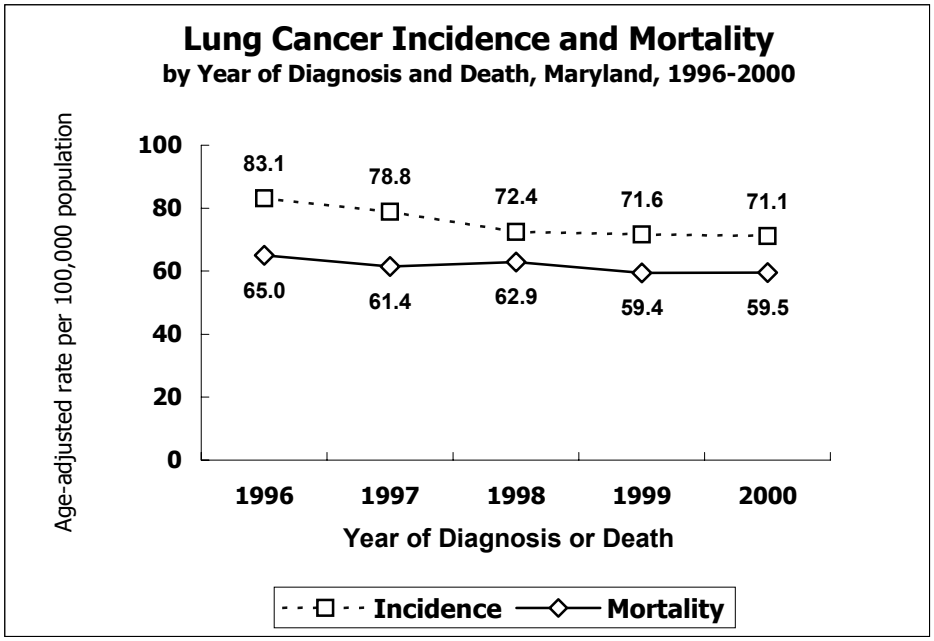
***Mortality (Deaths)***

There were 2,922 lung cancer deaths among Maryland residents in 2000. 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 2000 age-adjusted lung cancer mortality rate is 59.5 per 100,000 population (57.3-61.7, 95% C.I.) in Maryland. This rate is statistically significantly higher than the 2000 U.S. mortality rate for lung and bronchus cancer of 56.1 per 100,000 population. Maryland has the 18th highest lung cancer mortality rate among the states and the District of Columbia.

**Table 11.**
**Lung Cancer Incidence and Mortality Rates**
**by Gender and Race, Maryland and the United States, 2000**

| *Incidence 2000* | *Total* | *Males* | *Females* | *Whites* | *Blacks* | *Other* |
|---|---|---|---|---|---|---|
| New Cases (#) | 3,538 | 1,956 | 1,581 | 2,686 | 797 | 51 |
| Incidence Rate* | 71.1 | 91.4 | 56.2 | 71.0 | 75.6 | 36.6 |
| U.S. SEER Rate* | 62.3 | 79.8 | 49.8 | 62.6 | 78.5 | NA |
| *Mortality 2000* | *Total* | *Males* | *Females* | *Whites* | *Blacks* | *Other* |
| MD Deaths (#) | 2,922 | 1,620 | 1,302 | 2,222 | 662 | 38 |
| MD Mortality Rate* | 59.5 | 79.0 | 46.1 | 58.8 | 65.2 | 27.5 |
| U.S. Mortality Rate* | 56.1 | 76.9 | 41.2 | 56.2 | 64.2 | 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, 2000
Maryland Division of Health Statistics, 2000
SEER, National Cancer Institute, 2000

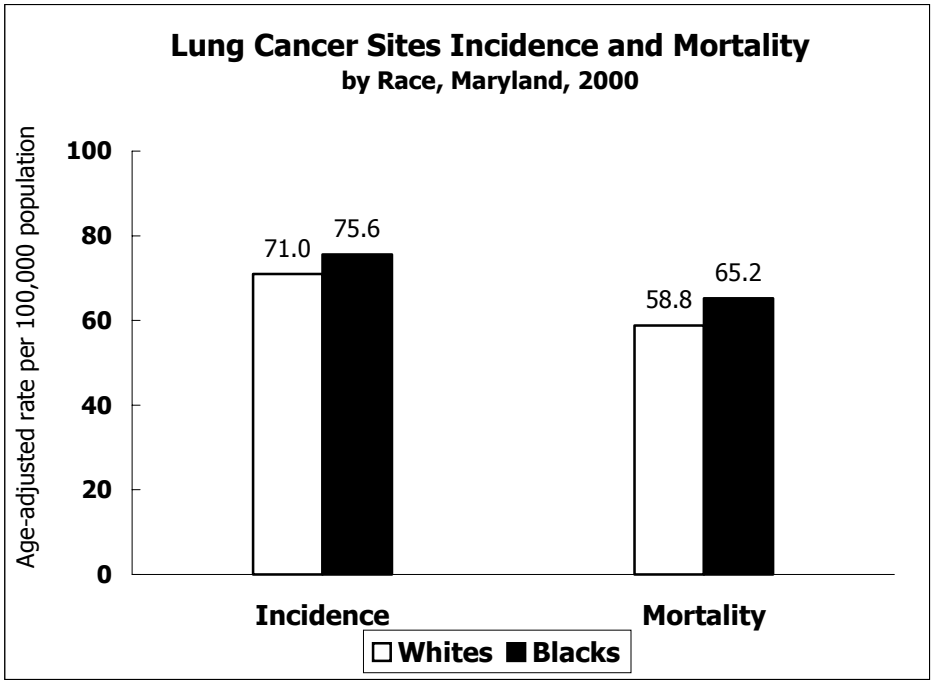



Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000

***Trends***

Lung cancer incidence rates have decreased an average of 4.0% per year from 1996 to 2000 in Maryland.

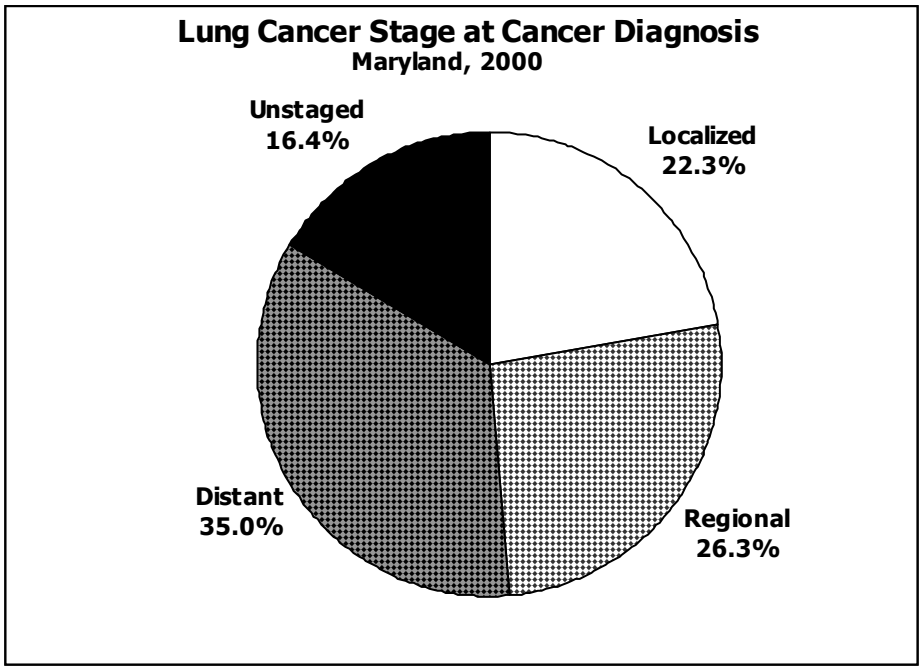
Lung cancer mortality began to decline in the 1990's. In Maryland, lung cancer death rates have decreased an average of 2.1% per year from 1996 to 2000.




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

***Race-Specific Rates***

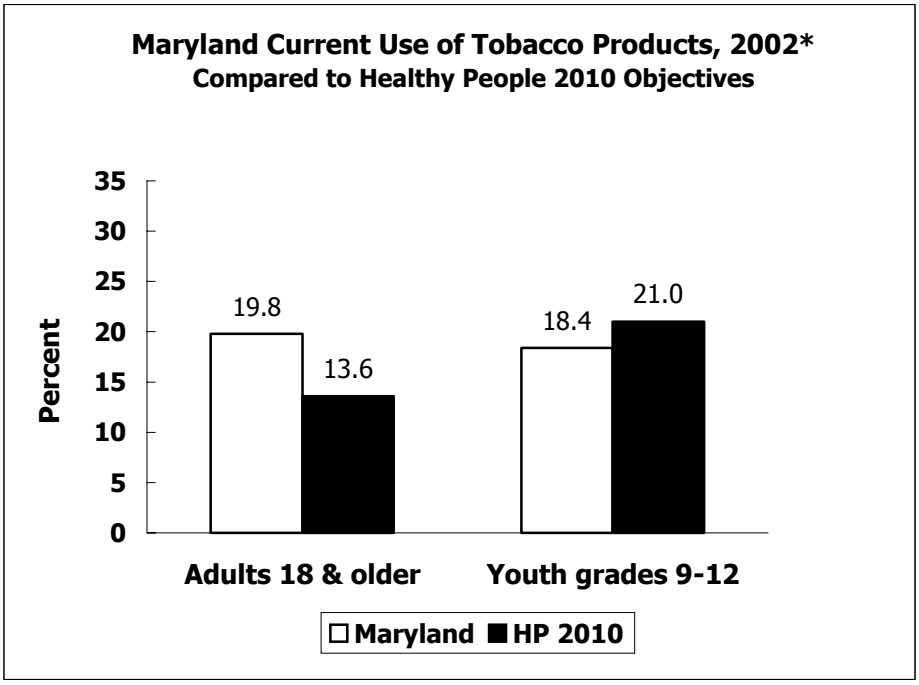
Both incidence and mortality rates were similar for whites and blacks in 2000 in Maryland.




Maryland Cancer Registry, 2000

***Stage at Diagnosis***

In 2000, 22.3% of lung cancer cases were diagnosed at the localized (early) stage in Maryland.




* Current use of cigarettes, smokeless or spit tobacco, and other tobacco products
MATS and MYTS, DHMH Center for Health Promotion, Education, and Tobacco Use Prevention, 2002
Healthy People 2010, U.S. Department of Health and Human Services, 2000

***Healthy People 2010 Objectives***

The Healthy People 2010 objectives are to reduce the percentage of adults (≥18 years) who use any tobacco product to 13.6%, and to reduce tobacco use by youth in grades 9-12 to 21%.

Based on DHMH surveys in 2002, the goal to reduce tobacco use by youths in Maryland was achieved when compared against the Healthy People 2010 objective for youth.

**Public Health Evidence (from National Cancer Institute [NCI], Physician Data Query [PDQ], 6/2003)**

## Primary Prevention

Cigarette smoking causes lung cancer, and 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 with increased lung cancer risk. Smoking avoidance and cessation would result in decreased mortality from primary lung cancers. A 30-50% reduction of lung cancer mortality has been noted after 10 years of smoking cessation. Long-term smoking avoidance results in decreased incidence of second primary lung tumors.

Environmental, or second-hand, tobacco smoke contains the same components as inhaled mainstream smoke, in lower concentrations. Environmental smoke is associated with increased lung cancer risk. Other risk factors for lung cancer include asbestos and radon exposure; asbestos exposure combined with smoking increases the risk of lung cancer more than either exposure alone. Epidemiological data show that high dietary intake of beta carotene-rich foods such as vegetables and fruits are associated with reduced lung cancer risk.

## Chemoprevention

Two randomized controlled clinical trials have studied beta-carotene supplements for chemoprevention of lung cancer. They have shown that pharmacological doses ($\geq$ 20 mg/day) of beta-carotene supplementation may, in fact, *increase* lung cancer incidence and mortality among high-intensity smokers (one or more packs per day).

## Screening

Current evidence does not support lung cancer screening. Screening for lung cancer with chest X-ray and/or sputum cytology in randomized, controlled trials has not demonstrated a reduction in cancer mortality. There are intensive efforts to improve lung cancer screening with newer technologies including low-dose helical computerized tomography (spiral CT) and molecular techniques. The harms of false positive test results and overdiagnosis must be weighed against any potential benefit. Before spiral CT is accepted into medical practice it is critical to determine whether it does more good than harm in a randomized controlled trial with lung cancer mortality as the endpoint. NCI is now conducting the Lung Screening Study comparing chest X-ray to spiral CT before such a randomized controlled trial is conducted.

***Public Health Intervention for Lung Cancer (CDC Best Practice Guidelines)***

- **Prevention of initiation of tobacco use among youth**
- **Cessation of tobacco use among adults and youth**
- **Reduction of exposure to environmental tobacco smoke**
- **Elimination of tobacco-related health disparities through:**

▪ ***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 (NCI, PDQ, 6/03)

✓ Effective smoking cessation programs for current tobacco users (individual/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:***

✓ Enforcement of laws and policies to reduce minors' access to tobacco products

✓ Enforcement of 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

# Table 12.
# Number of Lung and Bronchus Cancer Cases by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | | |
|---|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other | Unknown |
| Maryland | 3,538 | 1,956 | 1,581 | 2,686 | 797 | s | <6 |
| | | | | | | | |
| Allegany | 68 | 46 | 22 | s | <6 | 0 | 0 |
| Anne Arundel | 342 | 190 | 152 | 298 | s | <6 | 0 |
| Baltimore City | 589 | 333 | 256 | s | 337 | <6 | 0 |
| Baltimore County | 658 | 347 | 310 | 581 | 68 | 9 | 0 |
| Calvert | 47 | 26 | 21 | 37 | 10 | 0 | 0 |
| Caroline | 32 | 20 | 12 | 26 | 6 | 0 | 0 |
| Carroll | 103 | 56 | 47 | s | <6 | 0 | 0 |
| Cecil | 58 | 32 | 26 | s | <6 | 0 | 0 |
| Charles | 79 | 45 | 34 | 68 | 11 | 0 | 0 |
| Dorchester | 34 | 19 | 15 | s | <6 | 0 | 0 |
| Frederick | 102 | 54 | 48 | 92 | s | <6 | <6 |
| Garrett | 22 | 12 | 10 | 22 | 0 | 0 | 0 |
| Harford | 132 | 74 | 58 | 123 | s | <6 | 0 |
| Howard | 107 | 57 | 50 | 91 | s | <6 | 0 |
| Kent | 16 | 7 | 9 | s | <6 | 0 | 0 |
| Montgomery | 398 | 216 | 182 | 329 | 45 | s | <6 |
| Prince George's | 375 | 225 | 150 | 183 | 185 | 7 | 0 |
| Queen Anne's | 31 | 18 | 13 | 24 | 7 | 0 | 0 |
| St Mary's | 52 | 27 | 25 | 46 | 6 | 0 | 0 |
| Somerset | 23 | 13 | 10 | 13 | 10 | 0 | 0 |
| Talbot | 37 | 22 | 15 | s | <6 | 0 | 0 |
| Washington | 109 | 52 | 57 | s | <6 | 0 | 0 |
| Wicomico | 61 | 32 | 29 | 50 | 11 | 0 | 0 |
| Worcester | 62 | 33 | 29 | 53 | s | 0 | <6 |
| Unknown | <6 | 0 | <6 | 0 | 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, 2000

# Table 13.
# Lung and Bronchus Cancer Age-Adjusted Incidence Rates* by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 71.1 | 91.4 | 56.2 | 71.0 | 75.6 | 36.6 |
| | | | | | | |
| Allegany | 68.4 | 110.1 | ** | 68.9 | ** | 0.0 |
| Anne Arundel | 80.0 | 100.9 | 64.2 | 79.3 | 97.6 | ** |
| Baltimore City | 89.3 | 124.4 | 65.7 | 89.6 | 89.8 | ** |
| Baltimore County | 77.2 | 96.0 | 63.6 | 77.5 | 77.7 | ** |
| Calvert | 80.6 | 98.4 | ** | 74.7 | ** | 0.0 |
| Caroline | 101.7 | ** | ** | 96.7 | ** | 0.0 |
| Carroll | 75.3 | 95.6 | 61.5 | 74.5 | ** | 0.0 |
| Cecil | 76.7 | 94.2 | 63.8 | 75.8 | ** | 0.0 |
| Charles | 84.4 | 107.2 | 64.6 | 94.4 | ** | 0.0 |
| Dorchester | 82.0 | ** | ** | 89.6 | ** | 0.0 |
| Frederick | 63.2 | 78.1 | 53.4 | 60.9 | ** | ** |
| Garrett | ** | ** | ** | ** | 0.0 | 0.0 |
| Harford | 69.9 | 90.9 | 54.8 | 70.3 | ** | ** |
| Howard | 64.2 | 76.2 | 54.3 | 67.1 | ** | ** |
| Kent | ** | ** | ** | ** | ** | 0.0 |
| Montgomery | 48.9 | 62.0 | 39.0 | 49.9 | 53.3 | ** |
| Prince George's | 62.1 | 88.6 | 44.1 | 69.1 | 57.9 | ** |
| Queen Anne's | 69.3 | ** | ** | ** | ** | 0.0 |
| Saint Mary's | 75.1 | 80.0 | ** | 78.8 | ** | 0.0 |
| Somerset | ** | ** | ** | ** | ** | 0.0 |
| Talbot | 70.4 | ** | ** | 72.0 | ** | 0.0 |
| Washington | 75.5 | 82.7 | 69.3 | 74.2 | ** | 0.0 |
| Wicomico | 70.7 | 83.6 | 59.5 | 72.5 | ** | 0.0 |
| Worcester | 89.7 | 109.6 | 76.9 | 87.9 | ** | 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, 2000

# Table 14.
# Number of Lung and Bronchus Cancer Deaths by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 2,922 | 1,620 | 1,302 | 2,222 | 662 | 38 |
| | | | | | | |
| Allegany | 55 | 34 | 21 | s | <6 | 0 |
| Anne Arundel | 276 | 142 | 134 | 244 | s | <6 |
| Baltimore City | 526 | 303 | 223 | 238 | s | <6 |
| Baltimore County | 538 | 286 | 252 | 489 | s | <6 |
| Calvert | 46 | 25 | 21 | 36 | 10 | 0 |
| Caroline | 31 | 19 | 12 | 23 | 8 | 0 |
| Carroll | 79 | 42 | 37 | s | <6 | 0 |
| Cecil | 46 | 27 | 19 | s | <6 | 0 |
| Charles | 55 | 31 | 24 | 47 | s | <6 |
| Dorchester | 24 | 13 | 11 | s | <6 | 0 |
| Frederick | 87 | 56 | 31 | 78 | 9 | 0 |
| Garrett | 16 | 10 | 6 | 16 | 0 | 0 |
| Harford | 108 | 60 | 48 | 97 | s | <6 |
| Howard | 100 | 54 | 46 | 77 | s | <6 |
| Kent | 11 | s | <6 | s | <6 | 0 |
| Montgomery | 312 | 164 | 148 | 258 | 40 | 14 |
| Prince George's | 318 | 181 | 137 | 162 | 148 | 8 |
| Queen Anne's | 24 | 13 | 11 | 18 | 6 | 0 |
| Saint Mary's | 37 | 22 | 15 | 31 | 6 | 0 |
| Somerset | 24 | 12 | 12 | 16 | 8 | 0 |
| Talbot | 19 | s | <6 | s | <6 | 0 |
| Washington | 91 | 49 | 42 | s | <6 | 0 |
| Wicomico | 53 | 27 | 26 | 41 | 12 | 0 |
| Worcester | 46 | 25 | 21 | 39 | 7 | 0 |

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

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

Source: Maryland Division of Health Statistics, 2000

# Table 15.
# Lung and Bronchus Cancer Age-Adjusted Mortality Rates* by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 59.5 | 79.0 | 46.1 | 58.8 | 65.2 | 27.5 |
| | | | | | | |
| Allegany | 55.3 | 81.3 | ** | 54.9 | ** | 0.0 |
| Anne Arundel | 66.6 | 81.4 | 57.4 | 66.3 | 81.1 | ** |
| Baltimore City | 79.2 | 115.4 | 55.8 | 82.1 | 76.0 | ** |
| Baltimore County | 62.8 | 81.0 | 50.5 | 64.5 | 55.7 | ** |
| Calvert | 78.0 | ** | ** | 71.7 | ** | 0.0 |
| Caroline | 97.7 | ** | ** | ** | ** | 0.0 |
| Carroll | 58.3 | 72.7 | 47.8 | 58.5 | ** | 0.0 |
| Cecil | 59.5 | 69.7 | ** | 61.1 | ** | 0.0 |
| Charles | 59.9 | 75.6 | ** | 67.2 | ** | ** |
| Dorchester | ** | ** | ** | ** | ** | 0.0 |
| Frederick | 54.0 | 79.3 | 34.1 | 51.2 | ** | 0.0 |
| Garrett | ** | ** | ** | ** | 0.0 | 0.0 |
| Harford | 59.0 | 81.1 | 45.6 | 57.0 | ** | ** |
| Howard | 59.5 | 78.3 | 48.0 | 57.1 | ** | ** |
| Kent | ** | ** | ** | ** | ** | 0.0 |
| Montgomery | 38.6 | 49.5 | 31.3 | 38.8 | 49.2 | ** |
| Prince George's | 56.8 | 79.6 | 42.3 | 61.1 | 53.0 | ** |
| Queen Anne's | ** | ** | ** | ** | ** | 0.0 |
| Saint Mary's | 55.5 | ** | ** | 55.7 | ** | 0.0 |
| Somerset | ** | ** | ** | ** | ** | 0.0 |
| Talbot | ** | ** | ** | ** | ** | 0.0 |
| Washington | 62.6 | 83.3 | 49.2 | 62.9 | ** | 0.0 |
| Wicomico | 61.4 | 75.4 | 53.5 | 58.9 | ** | 0.0 |
| Worcester | 63.7 | ** | ** | 61.8 | ** | 0.0 |

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

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

Source: Maryland Division of Health Statistics, 2000

# Table 16.
# Number of Lung and Bronchus Cancer Cases by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | | |
|---|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Others | Unknown |
| Maryland | 17,923 | 10,023 | 7,897 | 13,853 | 3,781 | 256 | 33 |
| | | | | | | | |
| Allegany | 399 | 234 | 165 | 390 | 6 | <6 | <6 |
| Anne Arundel | 1,784 | 959 | 824 | 1,575 | 192 | s | <6 |
| Baltimore City | 3,256 | 1,857 | 1,399 | 1,546 | 1,686 | s | <6 |
| Baltimore County | 3,203 | 1,731 | 1,471 | 2,857 | 316 | s | <6 |
| Calvert | 230 | 136 | 94 | 191 | s | <6 | 0 |
| Caroline | 141 | 87 | 54 | 116 | s | <6 | 0 |
| Carroll | 444 | 264 | 180 | 423 | s | <6 | 0 |
| Cecil | 328 | 189 | 139 | 316 | s | <6 | 0 |
| Charles | 333 | 198 | 135 | 266 | s | <6 | 0 |
| Dorchester | 183 | 116 | 67 | 141 | 42 | 0 | 0 |
| Frederick | 486 | 314 | 172 | 447 | 34 | <6 | <6 |
| Garrett | 106 | 68 | 38 | s | <6 | 0 | 0 |
| Harford | 710 | 400 | 310 | 668 | s | <6 | 0 |
| Howard | 490 | 258 | 232 | 413 | 64 | s | <6 |
| Kent | 112 | 64 | 48 | 97 | s | <6 | 0 |
| Montgomery | 1,925 | 983 | 941 | 1,612 | 200 | 106 | 7 |
| Prince George's | 1,869 | 1,076 | 793 | 1,010 | 802 | s | <6 |
| Queen Anne's | 163 | 90 | 73 | 143 | s | <6 | 0 |
| Saint Mary's | 271 | 158 | 113 | 240 | s | <6 | 0 |
| Somerset | 141 | 94 | 47 | 105 | s | <6 | 0 |
| Talbot | 155 | 81 | 74 | 135 | s | <6 | 0 |
| Washington | 515 | 280 | 235 | 499 | 16 | 0 | 0 |
| Wicomico | 355 | 191 | 164 | 290 | 65 | 0 | 0 |
| Worcester | 296 | 177 | 119 | 246 | 46 | <6 | <6 |
| Unknown | 28 | 18 | 10 | s | <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, 1996-2000

# Table 17.
# Lung and Bronchus Cancer Age-Adjusted Incidence Rates* by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Others |
| Maryland | 75.3 | 98.5 | 58.7 | 75.2 | 79.3 | 39.9 |
| | | | | | | |
| Allegany | 79.4 | 111.5 | 55.3 | 79.2 | ** | ** |
| Anne Arundel | 88.7 | 108.3 | 74.3 | 91.3 | 78.0 | ** |
| Baltimore City | 99.5 | 141.4 | 72.4 | 108.2 | 94.2 | ** |
| Baltimore County | 75.6 | 96.5 | 61.2 | 74.5 | 93.3 | 32.7 |
| Calvert | 82.8 | 110.3 | 62.2 | 87.0 | 68.5 | ** |
| Caroline | 90.5 | 124.0 | 63.6 | 92.2 | ** | ** |
| Carroll | 68.8 | 95.1 | 49.9 | 67.8 | ** | ** |
| Cecil | 90.1 | 112.6 | 71.9 | 92.1 | ** | ** |
| Charles | 82.8 | 114.2 | 60.7 | 88.3 | 67.7 | ** |
| Dorchester | 94.2 | 135.7 | 64.0 | 100.6 | 81.9 | 0.0 |
| Frederick | 65.3 | 96.9 | 41.6 | 64.7 | 77.4 | ** |
| Garrett | 63.4 | 92.7 | 41.6 | 63.2 | ** | 0.0 |
| Harford | 80.5 | 105.7 | 63.6 | 84.0 | 53.2 | ** |
| Howard | 64.6 | 80.4 | 54.7 | 66.2 | 62.0 | ** |
| Kent | 84.3 | 106.9 | 64.6 | 93.1 | ** | ** |
| Montgomery | 49.5 | 59.9 | 42.0 | 49.8 | 57.0 | 36.8 |
| Prince George's | 68.0 | 91.7 | 51.2 | 67.6 | 70.7 | 45.4 |
| Queen Anne's | 77.4 | 90.8 | 66.0 | 82.0 | ** | ** |
| Saint Mary's | 83.0 | 103.6 | 66.1 | 91.1 | 49.7 | ** |
| Somerset | 107.8 | 154.0 | 66.8 | 118.7 | 82.6 | ** |
| Talbot | 62.6 | 75.2 | 53.1 | 66.9 | ** | ** |
| Washington | 72.8 | 91.5 | 59.3 | 72.7 | ** | 0.0 |
| Wicomico | 87.6 | 113.3 | 70.6 | 93.7 | 70.6 | 0.0 |
| Worcester | 97.7 | 129.6 | 70.6 | 102.2 | 76.6 | ** |

* 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, 1996-2000

# Table 18.
# Number of Lung and Bronchus Cancer Deaths by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 14,546 | 8,343 | 6,203 | 11,148 | 3,261 | 137 |
| | | | | | | |
| Allegany | 317 | 191 | 126 | 310 | 7 | 0 |
| Anne Arundel | 1,389 | 778 | 611 | 1,235 | 144 | 10 |
| Baltimore City | 2,829 | 1,676 | 1,153 | 1,272 | 1,547 | 10 |
| Baltimore County | 2,615 | 1,447 | 1,168 | 2,393 | 212 | 10 |
| Calvert | 186 | 102 | 84 | 156 | s | <6 |
| Caroline | 113 | 69 | 44 | 91 | 22 | 0 |
| Carroll | 359 | 210 | 149 | 350 | 9 | 0 |
| Cecil | 267 | 169 | 98 | 256 | s | <6 |
| Charles | 306 | 164 | 142 | 255 | s | <6 |
| Dorchester | 137 | 92 | 45 | 101 | 36 | 0 |
| Frederick | 429 | 288 | 141 | 395 | s | <6 |
| Garrett | 86 | 58 | 28 | 86 | 0 | 0 |
| Harford | 543 | 305 | 238 | 507 | s | <6 |
| Howard | 402 | 219 | 183 | 335 | 59 | 8 |
| Kent | 77 | 48 | 29 | 68 | 9 | 0 |
| Montgomery | 1,431 | 744 | 687 | 1,211 | 165 | 55 |
| Prince George's | 1,575 | 904 | 671 | 840 | 705 | 30 |
| Queen Anne's | 136 | 75 | 61 | 112 | s | <6 |
| Saint Mary's | 167 | 105 | 62 | 144 | s | <6 |
| Somerset | 119 | 82 | 37 | 84 | 35 | 0 |
| Talbot | 113 | 69 | 44 | 94 | 19 | 0 |
| Washington | 429 | 247 | 182 | 422 | 7 | 0 |
| Wicomico | 313 | 175 | 138 | 255 | 58 | 0 |
| Worcester | 208 | 126 | 82 | 176 | 32 | 0 |

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

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

Source: Maryland Division of Health Statistics, 1996-2000

# Table 19.
# Lung and Bronchus Cancer Age-Adjusted Mortality Rates* by Jurisdiction, Gender and Race, Maryland, 1996-2000

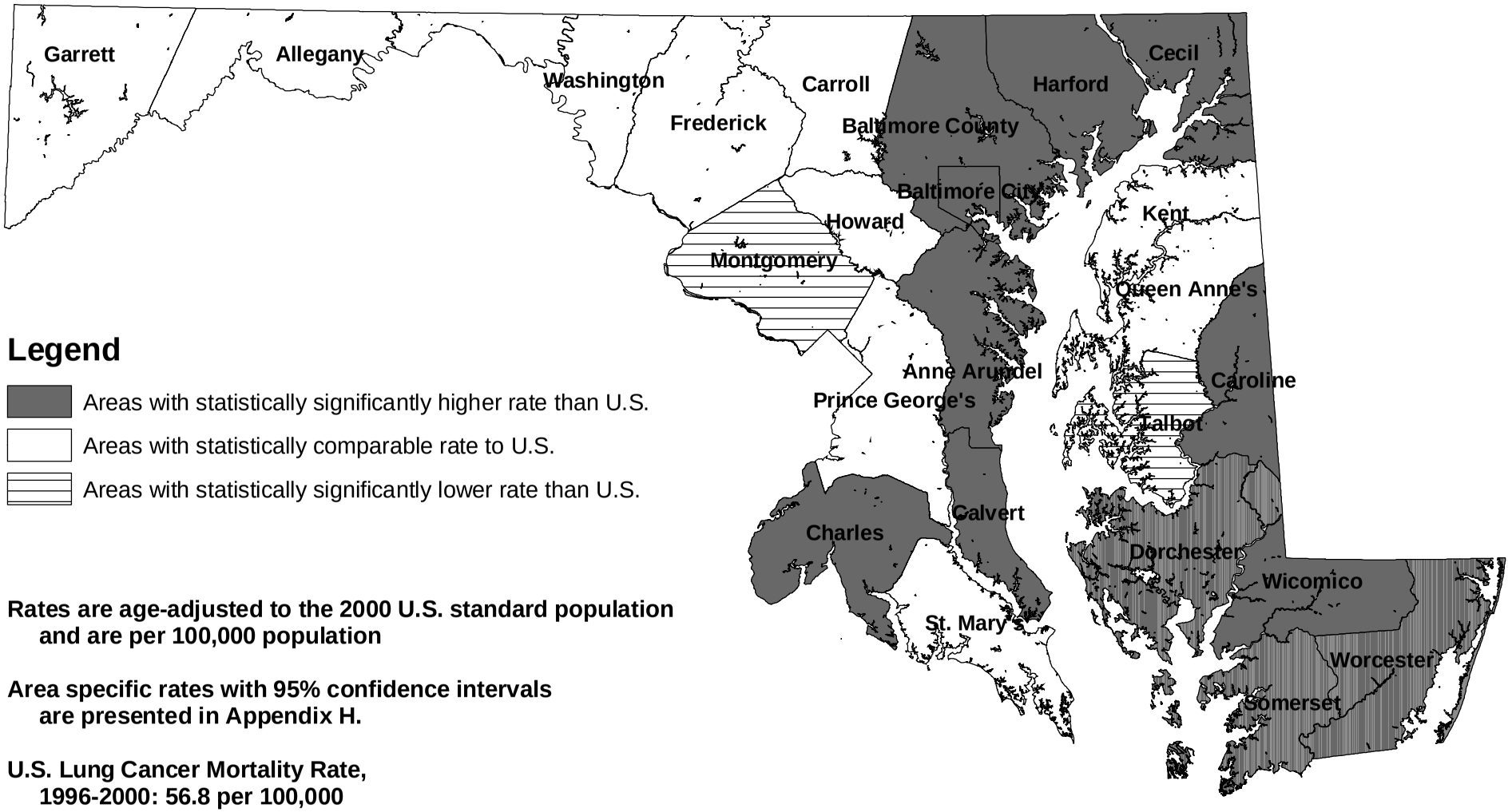
| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 61.6 | 84.2 | 45.9 | 60.5 | 70.5 | 22.5 |
| | | | | | | |
| Allegany | 62.3 | 91.6 | 41.7 | 62.0 | ** | 0.0 |
| Anne Arundel | 70.5 | 91.8 | 55.5 | 72.8 | 62.0 | ** |
| Baltimore City | 86.2 | 128.9 | 58.7 | 86.7 | 87.6 | ** |
| Baltimore County | 61.6 | 82.3 | 47.7 | 62.0 | 64.7 | ** |
| Calvert | 67.5 | 80.9 | 56.3 | 71.6 | 50.1 | ** |
| Caroline | 72.0 | 100.4 | 49.8 | 71.4 | ** | 0.0 |
| Carroll | 56.0 | 77.3 | 40.4 | 56.4 | ** | 0.0 |
| Cecil | 74.3 | 103.1 | 50.9 | 75.5 | ** | ** |
| Charles | 77.1 | 93.9 | 65.3 | 86.1 | 50.7 | ** |
| Dorchester | 71.6 | 110.2 | 43.3 | 71.4 | 75.0 | 0.0 |
| Frederick | 58.3 | 90.2 | 34.1 | 57.7 | 73.7 | ** |
| Garrett | 51.3 | 78.8 | 31.7 | 51.7 | 0.0 | 0.0 |
| Harford | 62.6 | 83.6 | 48.5 | 64.8 | 44.3 | ** |
| Howard | 54.2 | 72.8 | 43.3 | 54.7 | 63.0 | ** |
| Kent | 57.8 | 82.1 | 40.1 | 65.6 | ** | 0.0 |
| Montgomery | 37.1 | 47.0 | 30.4 | 37.3 | 49.2 | 20.3 |
| Prince George's | 58.9 | 80.8 | 44.1 | 56.2 | 67.0 | 27.0 |
| Queen Anne's | 64.9 | 76.1 | 55.0 | 64.6 | ** | ** |
| Saint Mary's | 51.9 | 72.3 | 36.2 | 55.7 | ** | ** |
| Somerset | 90.3 | 136.3 | 52.2 | 93.8 | 85.2 | 0.0 |
| Talbot | 45.2 | 64.8 | 31.6 | 46.6 | ** | 0.0 |
| Washington | 60.2 | 82.1 | 44.4 | 60.8 | ** | 0.0 |
| Wicomico | 77.3 | 104.3 | 58.7 | 82.1 | 61.6 | 0.0 |
| Worcester | 66.2 | 90.3 | 47.1 | 70.1 | 52.5 | 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 Division of Health Statistics, 1996-2000

# Maryland Lung Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rates, 1996-2000




**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, 1996-2000: 56.8 per 100,000**

**Source: Maryland Division of Health Statistics, 1996-2000**

# B. Colon and Rectum Cancer

***Incidence (New Cases)***

Cancer of the colon or rectum is often referred to as colorectal cancer. There were 2,778 new cases of colorectal cancer diagnosed among Maryland residents in 2000. Colorectal cancer cases represent 11.3% of 2000 new cancers. The age-adjusted colorectal cancer incidence rate in Maryland for 2000 is 56.2 per 100,000 population (54.1-58.4, 95% C.I.) which is statistically significantly higher than the 2000 U.S. SEER age-adjusted colorectal cancer incidence rate of 53.1 per 100,000 population.

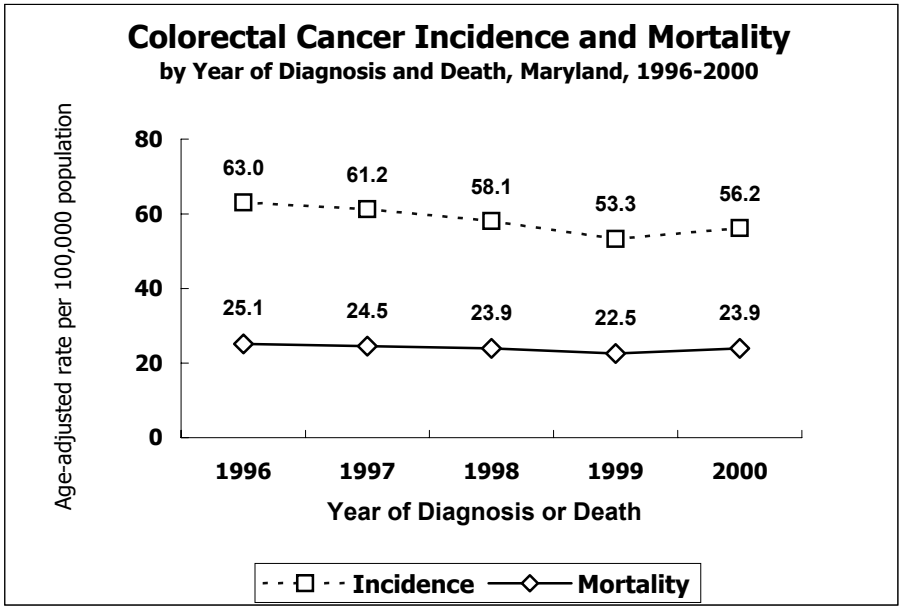
***Mortality (Deaths)***

A total of 1,158 persons died of colorectal cancer in 2000 in Maryland. Colorectal cancer accounts for 11.3% of all cancer deaths and is the 2nd leading cause of cancer deaths in Maryland. The age-adjusted colorectal cancer mortality rate in Maryland is 23.9 per 100,000 population (22.6-25.3, 95% C.I.). This rate is statistically significantly higher than the 2000 U.S. colorectal cancer mortality rate of 20.8 per 100,000 population. Maryland has the 3rd highest colorectal cancer mortality rate among the states and the District of Columbia.

**Table 20.**
**Colorectal Cancer Incidence and Mortality Rates**
**by Gender and Race, Maryland and the United States, 2000**

| *Incidence 2000* | *Total* | *Males* | *Females* | *Whites* | *Blacks* | *Other* |
|---|---|---|---|---|---|---|
| New Cases (#) | 2,778 | 1,426 | 1,351 | 2,017 | 615 | 92 |
| Incidence Rate* | 56.2 | 69.2 | 47.4 | 53.4 | 61.0 | 59.3 |
| U.S. SEER Rate* | 53.1 | 62.5 | 45.9 | 52.5 | 62.7 | NA |
| *Mortality 2000* | *Total* | *Males* | *Females* | *Whites* | *Blacks* | *Other* |
| MD Deaths (#) | 1,158 | 575 | 583 | 832 | 299 | 27 |
| MD Mortality Rate* | 23.9 | 29.4 | 20.2 | 22.1 | 31.1 | 19.2 |
| U.S. Mortality Rate* | 20.8 | 25.2 | 17.6 | 20.2 | 28.3 | NA |

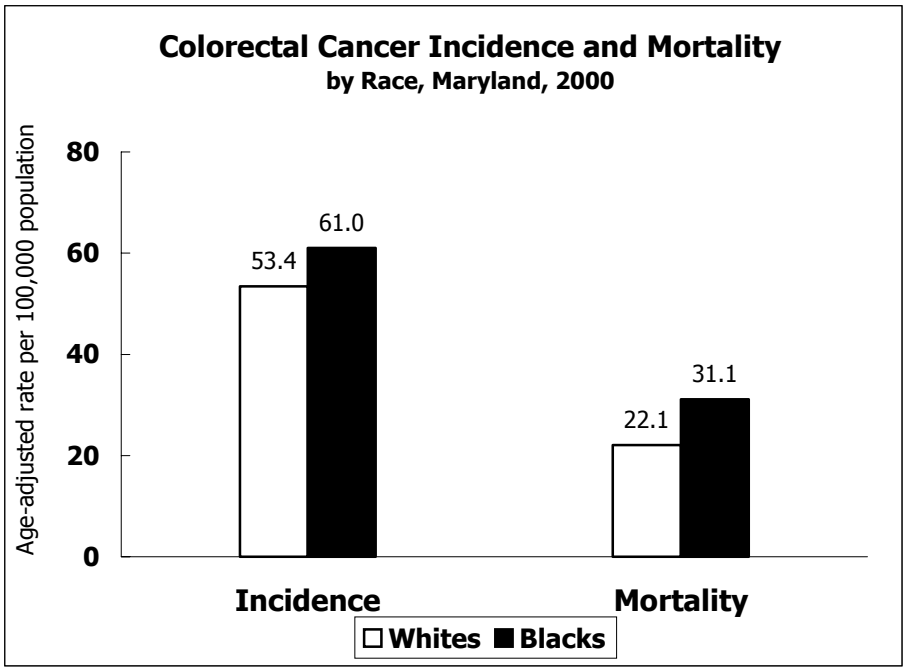
* Rates are per 100,000 and are age-adjusted to 2000 U.S. standard population
NA: Data were not available
Source: Maryland Cancer Registry, 2000
Maryland Division of Health Statistics, 2000
SEER, National Cancer Institute, 2000




Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000

***Trends***

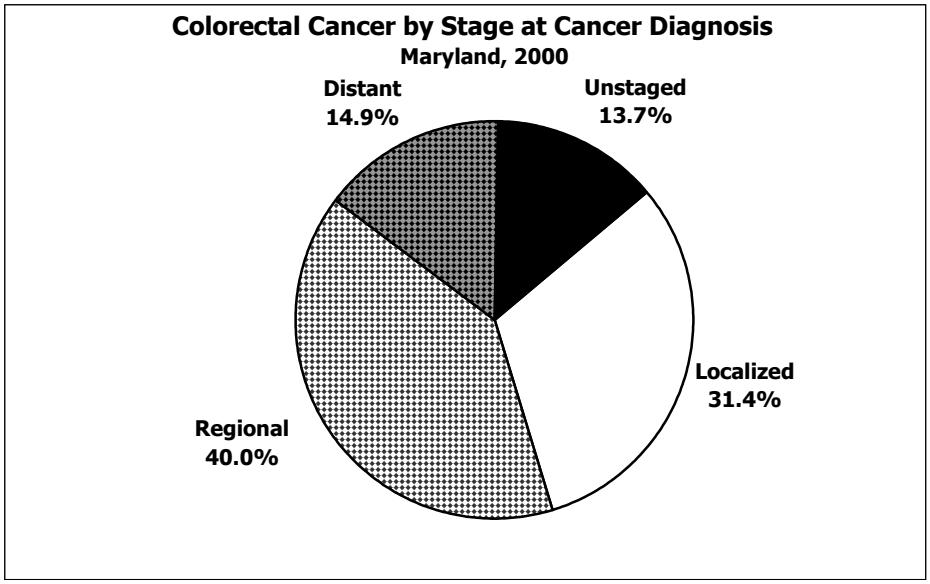
Both incidence and mortality rates for colorectal cancer have been declining. Incidence rates dropped an average of 3.6% per year from 1996 to 2000 with mortality rates dropping an average of 1.8% per year.




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

***Race-Specific Rates***

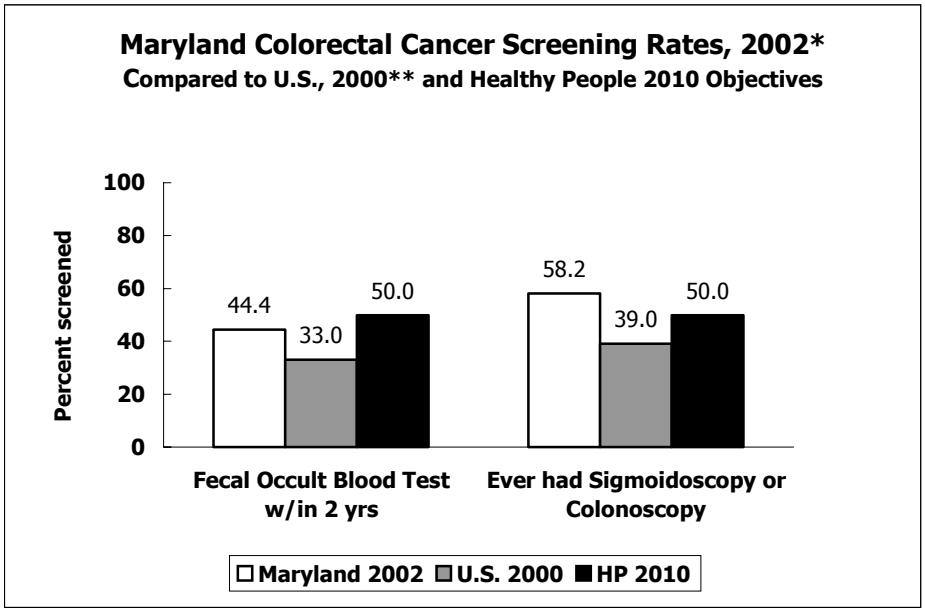
In 2000, blacks had both incidence and mortality rates statistically significantly higher than whites.




Maryland Cancer Registry, 2000

***Stage at Diagnosis***

In 2000, 31.4% of colorectal cancers were diagnosed at the localized (early) stage in Maryland.




***Healthy People 2010 Objectives***

Healthy People 2010 objectives for colorectal cancer are to increase to 50% the proportion of adults 50 years and older who received a fecal occult blood test (FOBT) in the preceding 2 years and those who received a sigmoidoscopy or colonoscopy.

* Adults 50 years of age and older
** The U.S. data are age-adjusted to 2000 U.S. standard population
Maryland Cancer Survey (MCS), DHMH Center for Cancer Surveillance and Control, 2002
National Health Interview Survey (NHIS), 2000
Healthy People 2010, U.S. Department of Health and Human Services, 2000

Of Maryland adults 50 years and older surveyed in 2002, 44.4% reported having had a home test kit for fecal occult blood testing within the preceding 2 years. This compares to 33.0% in the 2000 NHIS survey. In the 2002 MCS Survey, 58.2% reported having *ever* had a "sigmoidoscopy or colonoscopy," compared to 39.0% who, in the 2000 NHIS survey, said they had *ever* had a "proctoscopy or sigmoidoscopy."

## Public Health Evidence (from National Cancer Institute, PDQ, 6/2003 and the U.S. Preventive Services Task Force, 7/2002)

### Screening

The United States Preventive Services Task Force (USPSFT) strongly recommends that clinicians screen men and women 50 years of age and older for colorectal cancer. The USPSFT 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. 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, are effective in improving health outcome (July, 2002, USPSTF).

### Prevention

Studies suggest that colorectal cancer results from complex interactions between inherited susceptibility and environmental factors. It is hypothesized that adenomatous polyps (adenomas) are precursors for the vast majority of colorectal cancers. Colonoscopy with removal of adenomas may reduce the risk of colorectal cancer. Epidemiological, experimental (animal), and clinical studies suggest that diets high in total fat, protein, calories, alcohol, and meat (both red and white meat) and low in calcium and folate are associated with an increased incidence of colorectal cancer. Randomized controlled trials among those who had had adenomas demonstrated that wheat-bran fiber supplementation and diets low in fat (20% of total calories) and high in fiber, fruits, and vegetables, however, did not reduce the risk of adenoma recurrence during a 3-4 year period. Cigarette smoking is associated with an increased tendency to form adenomas and to develop colorectal cancer. Obesity is associated with a two-fold increase in colorectal cancer in premenopausal women. A sedentary lifestyle has been associated in some but not all studies with an increased risk of colorectal cancer.

### Chemoprevention

Nonsteroidal anti-inflammatory drugs (NSAIDS) 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, and may be associated with a reduced risk of colorectal cancer. The potential use of NSAIDS as a primary prevention measure is being studied. The potential preventive benefits must be balanced with the long-term risks such as gastrointestinal ulceration.

| **Public Health Intervention for Colorectal Cancer (DHMH Colorectal Cancer Medical Advisory Committee)** |
| --- |
| Early detection of colorectal cancer:<br>➢ For those at average risk, screen with colonoscopy, or with FOBT (three sample) and flexible sigmoidoscopy.<br>➢ For those unable or unwilling to undergo colonoscopy or sigmoidoscopy—FOBT (three samples) is an alternative initial screening method.<br>➢ DCBE is reserved as an alternative for situations where the patient and the provider discuss and determine that DCBE is indicated for the individual. |

# Table 21.
# Number of Colorectal Cancer Cases
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | | |
|---|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other | Unknown |
| Maryland | 2,778 | 1,426 | 1,351 | 2,017 | 615 | 92 | 54 |
| | | | | | | | |
| Allegany | 57 | 25 | 32 | s | <6 | 0 | 0 |
| Anne Arundel | 241 | 125 | 116 | 202 | 28 | s | <6 |
| Baltimore City | 370 | 177 | 193 | 158 | 203 | <6 | s |
| Baltimore County | 484 | 235 | 249 | 412 | 62 | <6 | s |
| Calvert | 41 | 19 | 22 | 31 | s | <6 | <6 |
| Caroline | 22 | 13 | 9 | s | <6 | 0 | 0 |
| Carroll | 80 | 40 | 40 | s | <6 | 0 | <6 |
| Cecil | 45 | 32 | 13 | s | <6 | 0 | 0 |
| Charles | 48 | 24 | 24 | 38 | 10 | 0 | 0 |
| Dorchester | 22 | 12 | 10 | s | <6 | 0 | 0 |
| Frederick | 104 | 68 | 36 | 97 | <6 | <6 | <6 |
| Garrett | 22 | 10 | 12 | 22 | 0 | 0 | 0 |
| Harford | 127 | 63 | 64 | 109 | s | 0 | <6 |
| Howard | 102 | 50 | 52 | 80 | 15 | <6 | <6 |
| Kent | 11 | s | <6 | s | <6 | 0 | 0 |
| Montgomery | 369 | 206 | 163 | 260 | 47 | 56 | 6 |
| Prince George's | 339 | 170 | 168 | 151 | 164 | 13 | 11 |
| Queen Anne's | 28 | 13 | 15 | s | <6 | 0 | 0 |
| St Mary's | 58 | 33 | 25 | 45 | s | 0 | <6 |
| Somerset | 16 | 7 | 9 | s | <6 | 0 | 0 |
| Talbot | 31 | 15 | 16 | 23 | 8 | 0 | 0 |
| Washington | 87 | 49 | 38 | 82 | <6 | <6 | 0 |
| Wicomico | 30 | 12 | 18 | s | <6 | 0 | 0 |
| Worcester | 34 | 16 | 18 | 26 | <6 | <6 | <6 |
| Unknown | 10 | s | <6 | <6 | 0 | <6 | s |

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, 2000

# Table 22.
# Colorectal Cancer Age-Adjusted Incidence Rates*
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 56.2 | 69.2 | 47.4 | 53.4 | 61.0 | 59.3 |
| | | | | | | |
| Allegany | 58.3 | ** | 58.3 | 59.2 | ** | 0.0 |
| Anne Arundel | 55.8 | 68.8 | 48.6 | 53.4 | 61.7 | ** |
| Baltimore City | 55.7 | 69.3 | 47.9 | 54.6 | 56.2 | ** |
| Baltimore County | 56.5 | 68.5 | 49.3 | 54.0 | 68.2 | ** |
| Calvert | 70.9 | ** | ** | 61.0 | ** | ** |
| Caroline | ** | ** | ** | ** | ** | 0.0 |
| Carroll | 58.6 | 70.9 | 50.1 | 59.0 | ** | 0.0 |
| Cecil | 57.1 | 89.3 | ** | 55.9 | ** | 0.0 |
| Charles | 56.9 | ** | ** | 58.9 | ** | 0.0 |
| Dorchester | ** | ** | ** | ** | ** | 0.0 |
| Frederick | 64.4 | 98.8 | 40.0 | 64.1 | ** | ** |
| Garrett | ** | ** | ** | ** | 0.0 | 0.0 |
| Harford | 68.5 | 82.0 | 60.6 | 64.0 | ** | 0.0 |
| Howard | 58.6 | 69.7 | 51.6 | 54.8 | ** | ** |
| Kent | ** | ** | ** | ** | ** | 0.0 |
| Montgomery | 44.4 | 58.7 | 33.9 | 38.8 | 56.9 | 68.8 |
| Prince George's | 59.4 | 72.5 | 50.4 | 57.9 | 56.7 | ** |
| Queen Anne's | 70.0 | ** | ** | ** | ** | 0.0 |
| Saint Mary's | 83.7 | 102.4 | ** | 76.0 | ** | 0.0 |
| Somerset | ** | ** | ** | ** | ** | 0.0 |
| Talbot | 61.0 | ** | ** | ** | ** | 0.0 |
| Washington | 59.9 | 77.7 | 46.7 | 58.2 | ** | ** |
| Wicomico | 34.9 | ** | ** | ** | ** | 0.0 |
| Worcester | 51.3 | ** | ** | ** | ** | ** |

* 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, 2000

# Table 23.
# Number of Colorectal Cancer Deaths
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 1,158 | 575 | 583 | 832 | 299 | 27 |
| | | | | | | |
| Allegany | 37 | 19 | 18 | 37 | 0 | 0 |
| Anne Arundel | 86 | 47 | 39 | 74 | s | <6 |
| Baltimore City | 193 | 85 | 108 | s | 119 | <6 |
| Baltimore County | 219 | 120 | 99 | 186 | s | <6 |
| Calvert | 12 | 6 | 6 | s | <6 | <6 |
| Caroline | 12 | 6 | 6 | s | <6 | 0 |
| Carroll | 31 | 11 | 20 | 31 | 0 | 0 |
| Cecil | 18 | 10 | 8 | s | <6 | 0 |
| Charles | 25 | 13 | 12 | 17 | 8 | 0 |
| Dorchester | 11 | s | <6 | s | <6 | 0 |
| Frederick | 35 | 21 | 14 | 31 | <6 | <6 |
| Garrett | 11 | s | <6 | 11 | 0 | 0 |
| Harford | 36 | 18 | 18 | s | <6 | 0 |
| Howard | 32 | 16 | 16 | s | <6 | 0 |
| Kent | <6 | <6 | <6 | <6 | 0 | 0 |
| Montgomery | 127 | 55 | 72 | 96 | 15 | 16 |
| Prince George's | 146 | 71 | 75 | 59 | s | <6 |
| Queen Anne's | 11 | <6 | s | s | <6 | 0 |
| Saint Mary's | 15 | 9 | 6 | 15 | 0 | 0 |
| Somerset | s | s | <6 | s | <6 | 0 |
| Talbot | 13 | 6 | 7 | s | <6 | 0 |
| Washington | 33 | 16 | 17 | s | <6 | 0 |
| Wicomico | 20 | 8 | 12 | s | <6 | 0 |
| Worcester | 22 | 13 | 9 | s | <6 | 0 |

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

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

Source: Maryland Division of Health Statistics, 2000

# Table 24.
# Colorectal Cancer Age-Adjusted Mortality Rates*
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Others |
| Maryland | 23.9 | 29.4 | 20.2 | 22.1 | 31.1 | 19.2 |
| | | | | | | |
| Allegany | 35.9 | ** | ** | 36.6 | 0.0 | 0.0 |
| Anne Arundel | 21.2 | 26.7 | 16.9 | 20.9 | ** | ** |
| Baltimore City | 29.2 | 33.7 | 26.5 | 24.4 | 33.9 | ** |
| Baltimore County | 25.3 | 35.6 | 19.0 | 23.9 | 37.5 | ** |
| Calvert | ** | ** | ** | ** | ** | ** |
| Caroline | ** | ** | ** | ** | ** | 0.0 |
| Carroll | 22.5 | ** | ** | 23.1 | 0.0 | 0.0 |
| Cecil | ** | ** | ** | ** | ** | 0.0 |
| Charles | ** | ** | ** | ** | ** | 0.0 |
| Dorchester | ** | ** | ** | ** | ** | 0.0 |
| Frederick | 22.3 | ** | ** | 21.1 | ** | ** |
| Garrett | ** | ** | ** | ** | 0.0 | 0.0 |
| Harford | 21.2 | ** | ** | 20.9 | ** | 0.0 |
| Howard | 20.6 | ** | ** | 21.0 | ** | 0.0 |
| Kent | ** | ** | ** | ** | 0.0 | 0.0 |
| Montgomery | 15.4 | 16.3 | 14.5 | 14.2 | ** | ** |
| Prince George's | 27.3 | 33.0 | 23.8 | 23.2 | 32.0 | ** |
| Queen Anne's | ** | ** | ** | ** | ** | 0.0 |
| Saint Mary's | ** | ** | ** | ** | 0.0 | 0.0 |
| Somerset | ** | ** | ** | ** | ** | 0.0 |
| Talbot | ** | ** | ** | ** | ** | 0.0 |
| Washington | 22.7 | ** | ** | 22.7 | ** | 0.0 |
| Wicomico | ** | ** | ** | ** | ** | 0.0 |
| Worcester | ** | ** | ** | ** | ** | 0.0 |

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

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

Source: Maryland Division of Health Statistics, 2000

# Table 25.
# Number of Colorectal Cancer Cases
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | | |
|---|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Others | Unknown |
| Maryland | 13,717 | 6,819 | 6,897 | 10,191 | 2,959 | 353 | 214 |
| | | | | | | | |
| Allegany | 337 | 164 | 173 | 328 | 6 | <6 | <6 |
| Anne Arundel | 1,135 | 598 | 537 | 943 | 136 | 21 | 35 |
| Baltimore City | 2,104 | 967 | 1,137 | 1,010 | 1,062 | 15 | 17 |
| Baltimore County | 2,485 | 1,225 | 1,260 | 2,147 | 284 | 30 | 24 |
| Calvert | 169 | 96 | 73 | 136 | 28 | <6 | <6 |
| Caroline | 119 | 66 | 53 | 103 | 16 | 0 | 0 |
| Carroll | 381 | 192 | 189 | 368 | 7 | <6 | <6 |
| Cecil | 198 | 111 | 87 | 188 | 7 | <6 | <6 |
| Charles | 223 | 105 | 118 | 170 | 45 | <6 | s |
| Dorchester | 140 | 68 | 72 | 111 | s | 0 | <6 |
| Frederick | 465 | 245 | 220 | 410 | 40 | <6 | s |
| Garrett | 93 | 48 | 45 | s | 0 | 0 | <6 |
| Harford | 494 | 272 | 222 | 433 | 56 | <6 | <6 |
| Howard | 390 | 184 | 206 | 306 | 55 | 20 | 9 |
| Kent | 62 | 28 | 34 | 51 | 11 | 0 | 0 |
| Montgomery | 1,810 | 896 | 914 | 1,416 | 194 | 171 | 29 |
| Prince George's | 1,671 | 812 | 858 | 784 | 797 | 56 | 34 |
| Queen Anne's | 126 | 59 | 67 | 108 | s | 0 | <6 |
| Saint Mary's | 211 | 114 | 97 | 170 | 35 | <6 | <6 |
| Somerset | 88 | 54 | 34 | 70 | s | <6 | 0 |
| Talbot | 154 | 83 | 71 | 118 | s | 0 | <6 |
| Washington | 409 | 204 | 205 | 394 | s | <6 | 0 |
| Wicomico | 209 | 88 | 121 | 171 | s | <6 | 0 |
| Worcester | 188 | 105 | 83 | 143 | 33 | s | <6 |
| Unknown | 56 | 35 | 21 | 22 | <6 | s | 23 |

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, 1996-2000

# Table 26.
# Colorectal Cancer Age-Adjusted Incidence Rates*
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Others |
| Maryland | 58.3 | 68.9 | 50.6 | 55.6 | 64.4 | 51.0 |
| | | | | | | |
| Allegany | 67.4 | 80.0 | 58.0 | 66.9 | ** | ** |
| Anne Arundel | 57.4 | 69.3 | 48.7 | 55.8 | 55.0 | ** |
| Baltimore City | 64.1 | 75.2 | 57.2 | 65.6 | 62.0 | ** |
| Baltimore County | 59.5 | 70.7 | 51.3 | 56.6 | 86.8 | 35.3 |
| Calvert | 62.4 | 79.1 | 48.6 | 61.7 | 56.5 | ** |
| Caroline | 76.3 | 94.0 | 60.1 | 81.6 | ** | 0.0 |
| Carroll | 58.5 | 70.3 | 49.4 | 58.5 | ** | ** |
| Cecil | 55.0 | 65.4 | 45.3 | 55.3 | ** | ** |
| Charles | 56.6 | 57.4 | 54.6 | 58.0 | 49.5 | ** |
| Dorchester | 71.9 | 84.2 | 63.1 | 77.0 | 57.7 | 0.0 |
| Frederick | 62.5 | 76.3 | 52.8 | 59.6 | 89.9 | ** |
| Garrett | 55.2 | 65.0 | 47.5 | 54.4 | 0.0 | 0.0 |
| Harford | 57.1 | 73.3 | 45.9 | 55.7 | 76.2 | ** |
| Howard | 50.4 | 56.7 | 46.0 | 48.4 | 53.9 | ** |
| Kent | 46.8 | 47.2 | 46.1 | 49.4 | ** | 0.0 |
| Montgomery | 46.4 | 56.0 | 39.9 | 43.4 | 56.2 | 52.8 |
| Prince George's | 63.1 | 72.4 | 56.4 | 53.9 | 73.5 | 51.9 |
| Queen Anne's | 63.5 | 67.5 | 61.2 | 66.4 | ** | 0.0 |
| Saint Mary's | 65.6 | 75.5 | 56.5 | 64.9 | 62.8 | ** |
| Somerset | 65.9 | 90.4 | 44.7 | 75.6 | ** | ** |
| Talbot | 62.8 | 77.4 | 52.9 | 58.4 | 79.2 | 0.0 |
| Washington | 57.7 | 66.8 | 49.7 | 57.3 | ** | ** |
| Wicomico | 51.8 | 51.6 | 50.2 | 55.2 | 36.9 | ** |
| Worcester | 61.8 | 75.3 | 49.4 | 58.1 | 56.4 | ** |

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

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

Source: Maryland Cancer Registry, 1996-2000

# Table 27.
# Number of Colorectal Cancer Deaths
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 5,541 | 2,727 | 2,814 | 4,088 | 1,368 | 85 |
| | | | | | | |
| Allegany | 143 | 74 | 69 | s | <6 | 0 |
| Anne Arundel | 447 | 240 | 207 | 388 | s | <6 |
| Baltimore City | 1,002 | 469 | 533 | 425 | 571 | 6 |
| Baltimore County | 1,009 | 486 | 523 | 906 | 93 | 10 |
| Calvert | 68 | 33 | 35 | 52 | s | <6 |
| Caroline | 48 | 25 | 23 | s | <6 | 0 |
| Carroll | 148 | 68 | 80 | 145 | <6 | <6 |
| Cecil | 74 | 39 | 35 | 68 | <6 | <6 |
| Charles | 103 | 56 | 47 | 78 | s | <6 |
| Dorchester | 47 | 27 | 20 | 33 | 14 | 0 |
| Frederick | 179 | 91 | 88 | 164 | s | <6 |
| Garrett | 45 | 22 | 23 | 45 | 0 | 0 |
| Harford | 187 | 96 | 91 | 164 | s | <6 |
| Howard | 151 | 79 | 72 | 124 | s | <6 |
| Kent | 27 | 16 | 11 | 19 | 8 | 0 |
| Montgomery | 665 | 319 | 346 | 542 | 80 | 43 |
| Prince George's | 668 | 320 | 348 | 309 | 350 | 9 |
| Queen Anne's | 37 | 13 | 24 | 30 | 7 | 0 |
| Saint Mary's | 76 | 43 | 33 | 64 | s | <6 |
| Somerset | 35 | 20 | 15 | 25 | 10 | 0 |
| Talbot | 60 | 39 | 21 | 40 | 20 | 0 |
| Washington | 161 | 76 | 85 | s | <6 | 0 |
| Wicomico | 84 | 36 | 48 | 61 | 23 | 0 |
| Worcester | 77 | 40 | 37 | 64 | 13 | 0 |

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

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

Source: Maryland Division of Health Statistics, 1996-2000

# Table 28.
# Colorectal Cancer Age-Adjusted Mortality Rates*
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

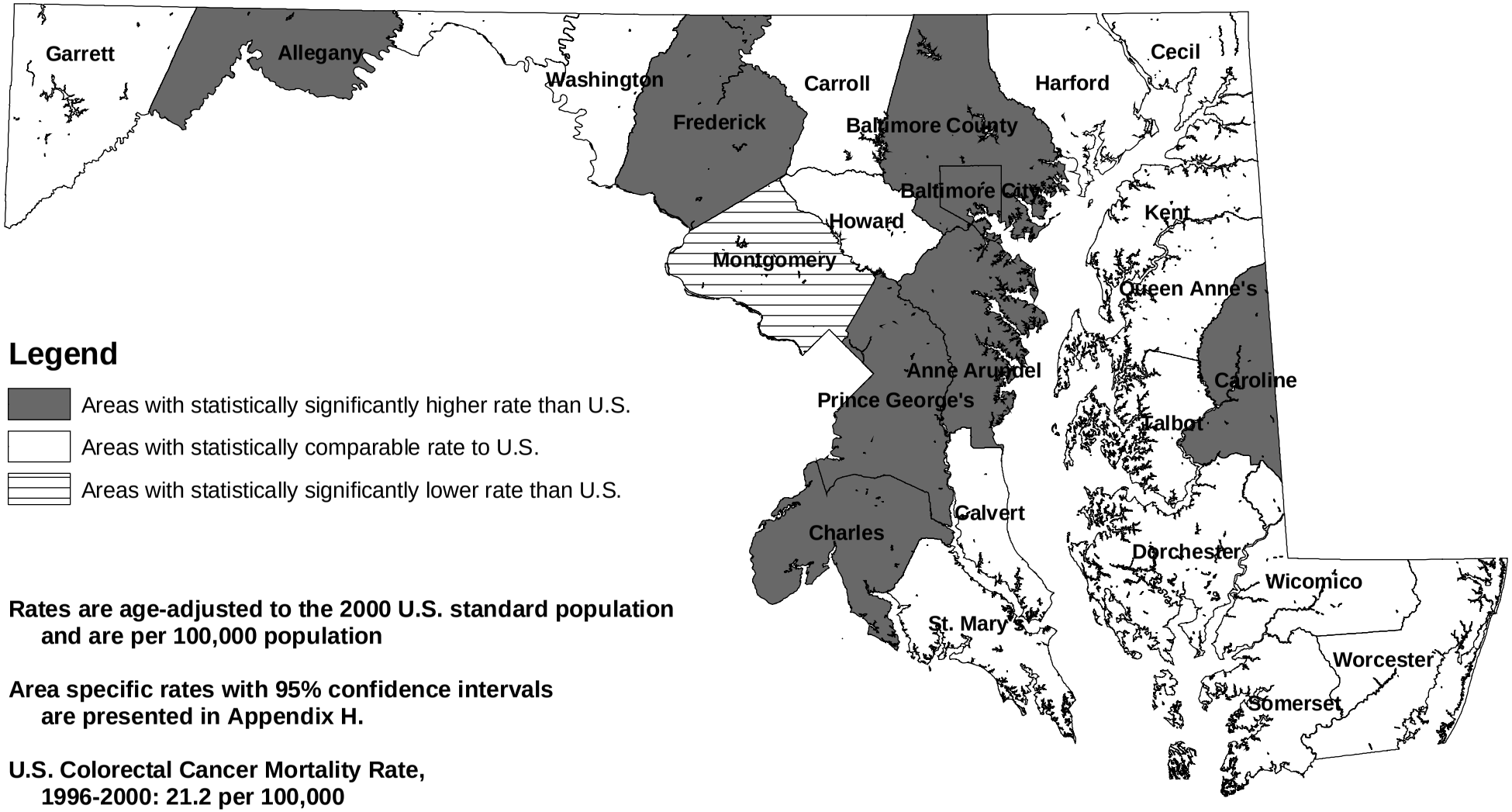
| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 24.0 | 29.0 | 20.4 | 22.4 | 31.5 | 14.2 |
| | | | | | | |
| Allegany | 28.1 | 38.1 | 22.0 | 28.1 | ** | 0.0 |
| Anne Arundel | 24.0 | 30.8 | 19.2 | 24.3 | 23.6 | ** |
| Baltimore City | 30.6 | 37.2 | 26.2 | 26.7 | 34.3 | ** |
| Baltimore County | 24.0 | 29.2 | 20.7 | 23.6 | 30.5 | ** |
| Calvert | 26.7 | 30.1 | 23.8 | 26.1 | ** | ** |
| Caroline | 30.8 | ** | ** | 34.4 | ** | 0.0 |
| Carroll | 22.8 | 26.0 | 20.4 | 23.1 | ** | ** |
| Cecil | 21.4 | 23.7 | 18.7 | 20.8 | ** | ** |
| Charles | 28.1 | 34.6 | 22.8 | 28.2 | ** | ** |
| Dorchester | 23.7 | 34.1 | ** | 22.9 | ** | 0.0 |
| Frederick | 24.8 | 30.5 | 20.7 | 24.3 | ** | ** |
| Garrett | 27.2 | ** | ** | 27.4 | 0.0 | 0.0 |
| Harford | 22.4 | 27.5 | 19.0 | 21.8 | ** | ** |
| Howard | 20.6 | 26.2 | 16.8 | 20.7 | ** | ** |
| Kent | 20.1 | ** | ** | ** | ** | 0.0 |
| Montgomery | 17.3 | 20.9 | 14.7 | 16.6 | 25.2 | 15.8 |
| Prince George's | 26.6 | 30.4 | 23.6 | 21.7 | 35.8 | ** |
| Queen Anne's | 19.3 | ** | ** | 18.9 | ** | 0.0 |
| Saint Mary's | 24.3 | 30.0 | 19.2 | 25.0 | ** | ** |
| Somerset | 26.1 | ** | ** | ** | ** | 0.0 |
| Talbot | 23.9 | 36.1 | ** | 19.7 | ** | 0.0 |
| Washington | 22.5 | 25.5 | 19.8 | 22.8 | ** | 0.0 |
| Wicomico | 20.9 | 21.9 | 19.2 | 19.7 | ** | 0.0 |
| Worcester | 26.2 | 32.7 | 21.6 | 27.0 | ** | 0.0 |

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

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

Source: Maryland Division of Health Statistics, 1996-2000

# Maryland Colorectal Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rates, 1996-2000




**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, 1996-2000: 21.2 per 100,000**

**Source: Maryland Division of Health Statistics, 1996-2000**

# C. Female Breast Cancer

***Incidence (New Cases)***

Breast cancer is the most common reportable cancer among women. A total of 3,781 women in Maryland were diagnosed with breast cancer in 2000. Female breast cancers represent 15.4% of all cancers in 2000. The 2000 age-adjusted incidence rate in Maryland is 133.0 per 100,000 women (128.8-137.3, 95% C.I.); this is similar to the 2000 SEER age-adjusted incidence rate for breast cancer of 135.1 per 100,000 women.

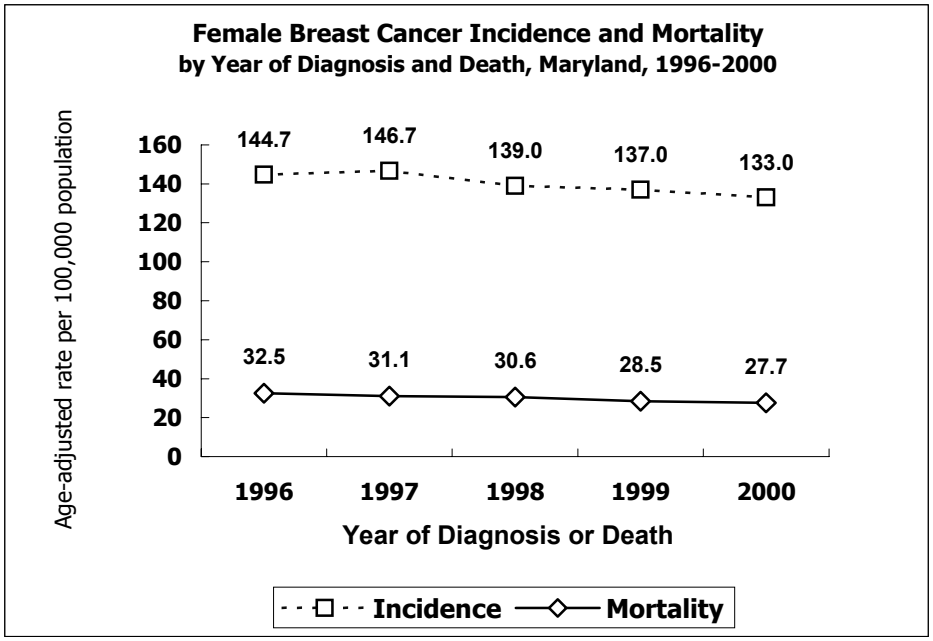
***Mortality (Deaths)***

In 2000, a total of 793 women died of breast cancer in Maryland. Female breast cancer accounts for 7.7% of all cancer deaths in Maryland. Breast cancer is the second leading cause of cancer death among women after lung cancer in Maryland. The age-adjusted mortality rate in Maryland is 27.7 per 100,000 women (25.8-29.7, 95% C.I.). This rate is equivalent to the 2000 U.S. mortality rate for breast cancer of 26.7 per 100,000 population of women. Maryland women rank 8th highest for female breast cancer mortality among the states and the District of Columbia.

**Table 29.**
**Female Breast Incidence and Mortality Rates**
**by Race, Maryland and the United States, 2000**

| *Incidence 2000* | *Total* | *Whites* | *Blacks* | *Other* |
|---|---|---|---|---|
| New Cases (#) | 3,781 | 2,810 | 821 | 120 |
| Incidence Rate* | 133.0 | 137.2 | 117.7 | 110.4 |
| U.S. SEER Rate* | 135.1 | 140.9 | 116.3 | NA |
| *Mortality 2000* | *Total* | *Whites* | *Blacks* | *Other* |
| MD Deaths (#) | 793 | 556 | 221 | 16 |
| MD Mortality Rate* | 27.7 | 25.9 | 34.2 | ** |
| U.S. Mortality Rate* | 26.7 | 26.3 | 34.6 | NA |

* Rates are per 100,000 and are age-adjusted to 2000 U.S. standard population
** Rates based on cells with 25 or fewer non-zero cases are not presented per DHMH/MCR Data Use Policy
NA: Data were not available
Source: Maryland Cancer Registry, 2000
Maryland Division of Health Statistics, 2000
SEER, National Cancer Institute, 2000

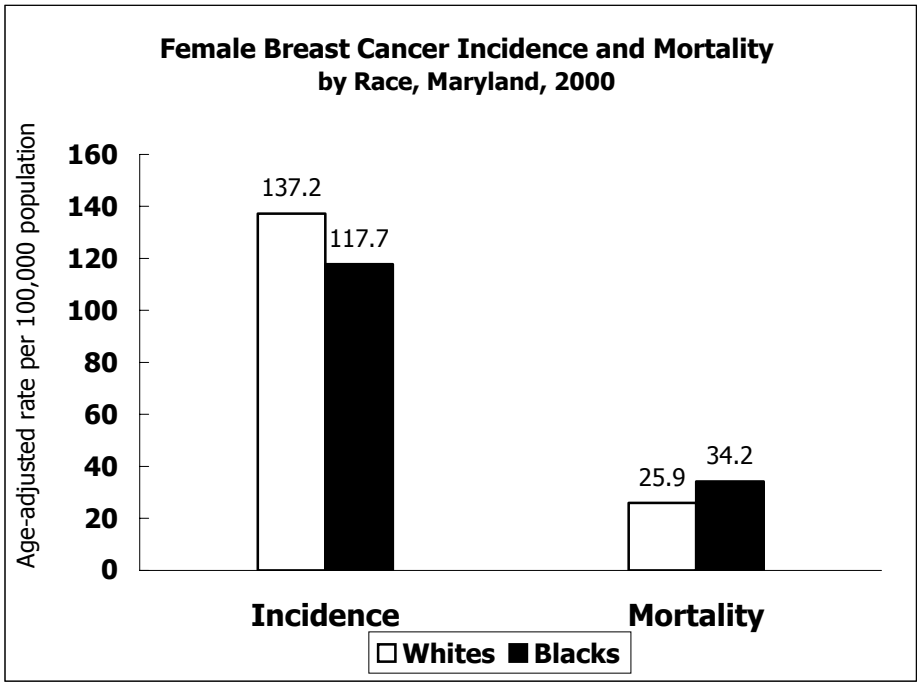



Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000

***Trends***

From 1996 to 2000, there has been a decrease of 2.3% annually in breast cancer incidence among Maryland women.

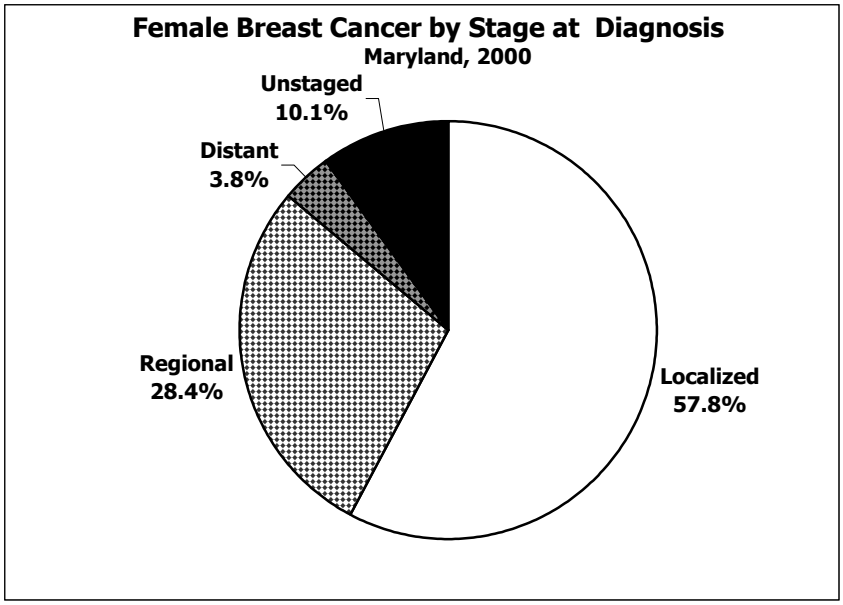
Similarly, breast cancer mortality has been decreasing an average of 4.0% per year between 1996 and 2000.




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

***Race-Specific Rates***

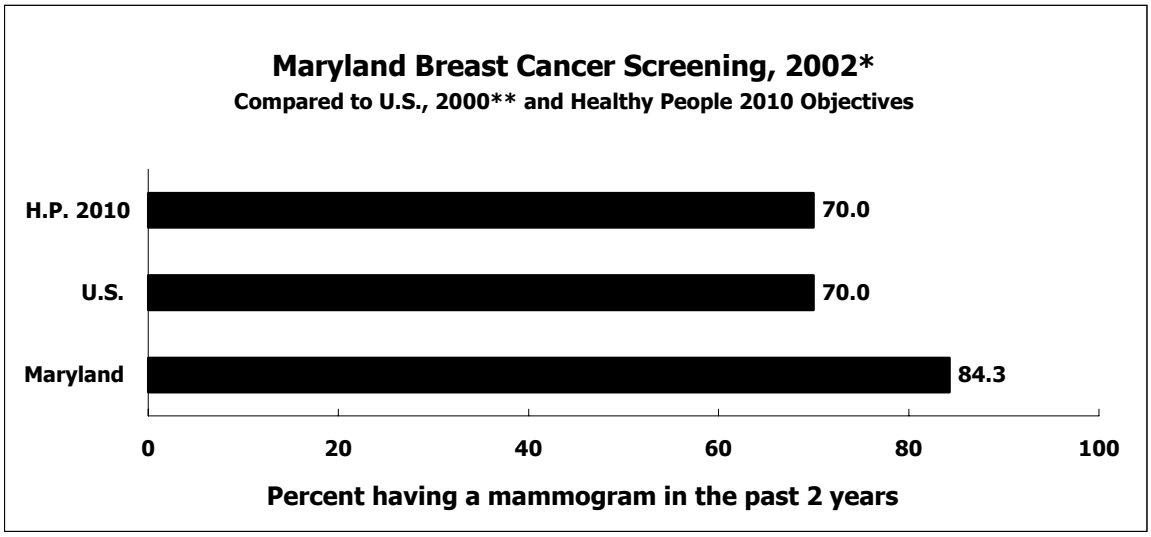
White women had a statistically significantly higher incidence of breast cancer while black women had a statistically significantly higher mortality rate than white women.




Maryland Cancer Registry, 2000

### *Stage of Disease at Diagnosis*

In 2000, 57.8% of female breast cancer cases were diagnosed at the localized (early) stage.




* Women 40 years of age and older
** The U.S. data are age-adjusted to 2000 U.S. standard population
Maryland Cancer Survey, DHMH Center for Cancer Surveillance and Control, 2002
National Health Interview Survey, 2000
Healthy People 2010, U.S. Department of Health and Human Services, 2000

## *Healthy People Objectives*

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

In 2002, 84.3% of Maryland women 40 years and older reported receiving a mammogram within the previous 2 years (MCS), exceeding the Healthy People 2010 goal of 70%. This rate is higher than 81.6% of women 40 years and older in Maryland in 2000, and 80.9% in 1999 (BRFSS).

## Public Health Evidence (from National Cancer Institute, PDQ, 6/2003, and the U.S. Preventive Services Task Force, 2/2002 and 7/2002)

**Screening**

The United States Preventive Services Task Force (USPSTF) updated its recommendations on mammography, and found fair evidence that mammography screening every 12-33 months significantly reduces mortality from breast cancer. Evidence is strongest for women aged 50-69, the age group generally included in screening trials. For women aged 40-49, the evidence that screening mammography reduces mortality from breast cancer is weaker, and the absolute benefit of mammography is smaller than it is for older women. The precise age at which the benefits from screening mammography justify the potential harms is a subjective judgment and should take into account patient preferences. 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 (February, 2002, USPSTF).

**Chemoprevention**

A randomized controlled trial has shown that tamoxifen lowers the risk of developing breast cancer in women who are at elevated risk of developing the disease. However, tamoxifen may also increase the risk of developing endometrial cancer, stroke, and blood clots in the veins and lungs. 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 (July, 2002, USPSTF). 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 as a preventive measure. Other drugs, such as raloxifene are being studied for their potential usefulness as breast cancer prevention measures. A clinical trial (STAR) comparing the efficacy of tamoxifen and raloxifene for reducing the risk of breast cancer among high risk post-menopausal women is currently underway.

**Primary Prevention**

Obesity is a risk factor for breast cancer, especially after menopause (NEJM 2003; 348: 1625-38). An ongoing trial, the Women's Health Initiative, has a low-fat dietary intervention arm that will assess the impact of a low-fat diet on cancer, heart disease, and other health outcomes. Studies suggest that exercise at certain ages is associated with reduced breast cancer risk. Exposure to alcohol may be associated with increased breast cancer risk.

Postmenopausal hormone replacement therapy (HRT), also called hormone therapy (HT), with estrogen alone or in combination with progesterone is associated with increased risk of developing breast cancer. This risk may be proportionate to duration of use and worse for combination therapy. 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)** |
| --- |
| ➢ Screen using mammography and a clinical breast examination by a health professional every 1-2 years for women aged 40 and older. |

# Table 30.
# Number of Female Breast Cancer Cases by Jurisdiction and Race, Maryland, 2000

| Jurisdiction | Total | Race | | | |
|---|---|---|---|---|---|
| | | Whites | Blacks | Other | Unknown |
| Maryland | 3,781 | 2,810 | 821 | 120 | 30 |
| | | | | | |
| Allegany | 52 | s | <6 | 0 | 0 |
| Anne Arundel | 343 | 303 | 34 | <6 | <6 |
| Baltimore City | 421 | 165 | 250 | <6 | <6 |
| Baltimore County | 629 | 529 | 85 | s | <6 |
| Calvert | 44 | 40 | <6 | <6 | 0 |
| Caroline | 22 | s | <6 | 0 | 0 |
| Carroll | 102 | 99 | <6 | 0 | <6 |
| Cecil | 54 | 51 | <6 | <6 | 0 |
| Charles | 75 | 48 | 20 | <6 | <6 |
| Dorchester | 22 | s | <6 | 0 | 0 |
| Frederick | 142 | 135 | s | <6 | 0 |
| Garrett | 21 | 21 | 0 | 0 | 0 |
| Harford | 140 | 129 | s | 0 | <6 |
| Howard | 178 | 139 | 30 | 9 | 0 |
| Kent | 7 | 7 | 0 | 0 | 0 |
| Montgomery | 710 | 576 | 74 | 51 | 9 |
| Prince George's | 490 | 199 | 264 | s | <6 |
| Queen Anne's | 18 | s | <6 | 0 | 0 |
| St Mary's | 48 | 42 | <6 | <6 | 0 |
| Somerset | 16 | 9 | 7 | 0 | 0 |
| Talbot | 31 | 27 | <6 | <6 | 0 |
| Washington | 94 | 90 | <6 | <6 | 0 |
| Wicomico | 71 | 57 | 11 | <6 | <6 |
| Worcester | 48 | 40 | <6 | <6 | <6 |
| Unknown | <6 | 0 | <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, 2000

# Table 31.
# Female Breast Cancer Age-Adjusted Incidence Rates* by Jurisdiction and Race, Maryland, 2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 133.0 | 137.2 | 117.7 | 110.4 |
| | | | | |
| Allegany | 108.1 | 104.1 | ** | 0.0 |
| Anne Arundel | 139.0 | 141.3 | 122.7 | ** |
| Baltimore City | 114.7 | 118.2 | 111.3 | ** |
| Baltimore County | 137.0 | 137.7 | 140.7 | ** |
| Calvert | 120.9 | 128.8 | ** | ** |
| Caroline | ** | ** | ** | 0.0 |
| Carroll | 128.0 | 128.4 | ** | 0.0 |
| Cecil | 127.8 | 126.0 | ** | ** |
| Charles | 131.7 | 113.5 | ** | ** |
| Dorchester | ** | ** | ** | 0.0 |
| Frederick | 149.2 | 152.9 | ** | ** |
| Garrett | ** | ** | 0.0 | 0.0 |
| Harford | 125.0 | 126.8 | ** | 0.0 |
| Howard | 147.8 | 148.6 | 168.1 | ** |
| Kent | ** | ** | 0.0 | 0.0 |
| Montgomery | 149.0 | 156.8 | 123.8 | 104.2 |
| Prince George's | 130.9 | 141.5 | 118.4 | ** |
| Queen Anne's | ** | ** | ** | 0.0 |
| Saint Mary's | 121.5 | 127.4 | ** | ** |
| Somerset | ** | ** | ** | 0.0 |
| Talbot | 123.6 | 123.1 | ** | ** |
| Washington | 126.2 | 124.9 | ** | ** |
| Wicomico | 148.5 | 149.7 | ** | ** |
| Worcester | 148.2 | 142.5 | ** | ** |

* 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, 2000

# Table 32.
# Number of Female Breast Cancer Deaths by Jurisdiction and Race, Maryland, 2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 793 | 556 | 221 | 16 |
| | | | | |
| Allegany | 11 | 11 | 0 | 0 |
| Anne Arundel | 71 | 58 | s | <6 |
| Baltimore City | 122 | 46 | 76 | 0 |
| Baltimore County | 150 | 122 | s | <6 |
| Calvert | <6 | <6 | 0 | 0 |
| Caroline | 8 | s | <6 | 0 |
| Carroll | 13 | s | <6 | 0 |
| Cecil | 12 | 12 | 0 | 0 |
| Charles | 16 | s | <6 | 0 |
| Dorchester | <6 | <6 | 0 | 0 |
| Frederick | 26 | 23 | <6 | <6 |
| Garrett | <6 | <6 | 0 | 0 |
| Harford | 27 | s | <6 | 0 |
| Howard | 27 | 19 | <6 | <6 |
| Kent | <6 | <6 | <6 | 0 |
| Montgomery | 110 | 91 | s | <6 |
| Prince George's | 105 | 39 | s | <6 |
| Queen Anne's | 7 | 7 | 0 | 0 |
| Saint Mary's | <6 | <6 | <6 | 0 |
| Somerset | <6 | <6 | 0 | 0 |
| Talbot | 7 | <6 | <6 | 0 |
| Washington | 29 | 29 | 0 | 0 |
| Wicomico | 20 | 9 | s | <6 |
| Worcester | 11 | s | <6 | 0 |

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

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

Source: Maryland Division of Health Statistics, 2000

# Table 33.
# Female Breast Cancer Age-Adjusted Mortality Rates*
# by Jurisdiction and Race, Maryland, 2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 27.7 | 25.9 | 34.2 | ** |
| | | | | |
| Allegany | ** | ** | 0.0 | 0.0 |
| Anne Arundel | 29.6 | 27.8 | ** | ** |
| Baltimore City | 31.5 | 27.0 | 34.5 | 0.0 |
| Baltimore County | 30.9 | 29.2 | 47.4 | ** |
| Calvert | ** | ** | 0.0 | 0.0 |
| Caroline | ** | ** | ** | 0.0 |
| Carroll | ** | ** | ** | 0.0 |
| Cecil | ** | ** | 0.0 | 0.0 |
| Charles | ** | ** | ** | 0.0 |
| Dorchester | ** | ** | 0.0 | 0.0 |
| Frederick | 28.4 | ** | ** | ** |
| Garrett | ** | ** | 0.0 | 0.0 |
| Harford | 24.9 | 26.2 | ** | 0.0 |
| Howard | 25.7 | ** | ** | ** |
| Kent | ** | ** | ** | 0.0 |
| Montgomery | 22.6 | 23.3 | ** | ** |
| Prince George's | 29.4 | 26.9 | 30.7 | ** |
| Queen Anne's | ** | ** | 0.0 | 0.0 |
| Saint Mary's | ** | ** | ** | 0.0 |
| Somerset | ** | ** | 0.0 | 0.0 |
| Talbot | ** | ** | ** | 0.0 |
| Washington | 35.5 | 36.5 | 0.0 | 0.0 |
| Wicomico | ** | ** | ** | ** |
| 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 Division of Health Statistics, 2000

# Table 34.
# Number of Female Breast Cancer Cases by Jurisdiction and Race, Maryland, 1996-2000

| Jurisdiction | Total | Race | | | |
|---|---|---|---|---|---|
| | | Whites | Blacks | Others | Unknown |
| Maryland | 18,827 | 14,173 | 3,903 | 547 | 204 |
| | | | | | |
| Allegany | 317 | 312 | <6 | <6 | 0 |
| Anne Arundel | 1,775 | 1,543 | 188 | 26 | 18 |
| Baltimore City | 2,426 | 1,165 | 1,227 | 22 | 12 |
| Baltimore County | 3,163 | 2,702 | 387 | 51 | 23 |
| Calvert | 205 | 173 | 26 | <6 | <6 |
| Caroline | 118 | 106 | s | <6 | 0 |
| Carroll | 500 | 483 | <6 | <6 | 7 |
| Cecil | 248 | 238 | 6 | <6 | <6 |
| Charles | 319 | 230 | 72 | s | <6 |
| Dorchester | 140 | 111 | s | 0 | <6 |
| Frederick | 631 | 585 | 36 | <6 | s |
| Garrett | 117 | 114 | 0 | <6 | <6 |
| Harford | 631 | 579 | 46 | <6 | <6 |
| Howard | 732 | 578 | 107 | s | <6 |
| Kent | 91 | 75 | 16 | 0 | 0 |
| Montgomery | 3,393 | 2,753 | 345 | 228 | 67 |
| Prince George's | 2,333 | 978 | 1,221 | 106 | 28 |
| Queen Anne's | 131 | 113 | s | 0 | <6 |
| Saint Mary's | 227 | 188 | 28 | 11 | 0 |
| Somerset | 87 | 66 | s | <6 | 0 |
| Talbot | 188 | 167 | s | <6 | 0 |
| Washington | 469 | 457 | <6 | s | 0 |
| Wicomico | 336 | 265 | 60 | s | <6 |
| Worcester | 206 | 171 | 28 | <6 | <6 |
| Unknown | 44 | 21 | <6 | <6 | 14 |

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

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

Source: Maryland Cancer Registry, 1996-2000

# Table 35.
# Female Breast Cancer Age-Adjusted Incidence Rates* by Jurisdiction and Race, Maryland, 1996-2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Others |
| Maryland | 140.0 | 143.4 | 125.3 | 113.2 |
| | | | | |
| Allegany | 121.6 | 121.6 | ** | ** |
| Anne Arundel | 153.2 | 156.8 | 129.1 | 79.0 |
| Baltimore City | 132.1 | 162.8 | 114.5 | ** |
| Baltimore County | 142.4 | 140.2 | 168.3 | 104.7 |
| Calvert | 126.6 | 136.8 | 82.1 | ** |
| Caroline | 145.3 | 164.3 | ** | ** |
| Carroll | 134.4 | 134.7 | ** | ** |
| Cecil | 125.9 | 127.9 | ** | ** |
| Charles | 131.3 | 128.0 | 130.1 | ** |
| Dorchester | 143.4 | 158.3 | 105.1 | 0.0 |
| Frederick | 145.8 | 146.5 | 129.4 | ** |
| Garrett | 134.9 | 132.8 | 0.0 | ** |
| Harford | 123.4 | 127.1 | 102.8 | ** |
| Howard | 141.9 | 143.2 | 133.3 | 135.0 |
| Kent | 143.7 | 155.5 | ** | 0.0 |
| Montgomery | 150.9 | 154.9 | 129.3 | 103.3 |
| Prince George's | 134.1 | 122.5 | 144.3 | 122.1 |
| Queen Anne's | 120.1 | 123.5 | ** | 0.0 |
| Saint Mary's | 126.4 | 130.1 | 90.6 | ** |
| Somerset | 136.1 | 153.6 | ** | ** |
| Talbot | 153.9 | 169.3 | ** | ** |
| Washington | 126.9 | 127.6 | ** | ** |
| Wicomico | 150.3 | 156.3 | 112.5 | ** |
| Worcester | 139.2 | 146.5 | 92.9 | ** |

* 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, 1996-2000

# Table 36.
# Number of Female Breast Cancer Deaths
# by Jurisdiction and Race, Maryland, 1996-2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 4,071 | 2,959 | 1,064 | 48 |
| | | | | |
| Allegany | 55 | s | <6 | 0 |
| Anne Arundel | 360 | 303 | s | <6 |
| Baltimore City | 718 | 318 | 400 | 0 |
| Baltimore County | 682 | 607 | s | <6 |
| Calvert | 29 | s | <6 | 0 |
| Caroline | 23 | s | <6 | 0 |
| Carroll | 82 | s | <6 | 0 |
| Cecil | 65 | s | <6 | 0 |
| Charles | 67 | 44 | 23 | 0 |
| Dorchester | 28 | s | <6 | 0 |
| Frederick | 119 | 108 | s | <6 |
| Garrett | 23 | 23 | 0 | 0 |
| Harford | 134 | 121 | s | <6 |
| Howard | 137 | 105 | 24 | 8 |
| Kent | 17 | s | <6 | 0 |
| Montgomery | 611 | 510 | 85 | 16 |
| Prince George's | 537 | 218 | 308 | 11 |
| Queen Anne's | 27 | s | <6 | 0 |
| Saint Mary's | 47 | 37 | 10 | 0 |
| Somerset | 22 | s | <6 | 0 |
| Talbot | 35 | 28 | 7 | 0 |
| Washington | 124 | s | <6 | 0 |
| Wicomico | 86 | 59 | s | <6 |
| Worcester | 43 | s | <6 | 0 |

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

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

Source: Maryland Division of Health Statistics, 1996-2000

# Table 37.
# Female Breast Cancer Age-Adjusted Mortality Rates*
# by Jurisdiction and Race, Maryland, 1996-2000

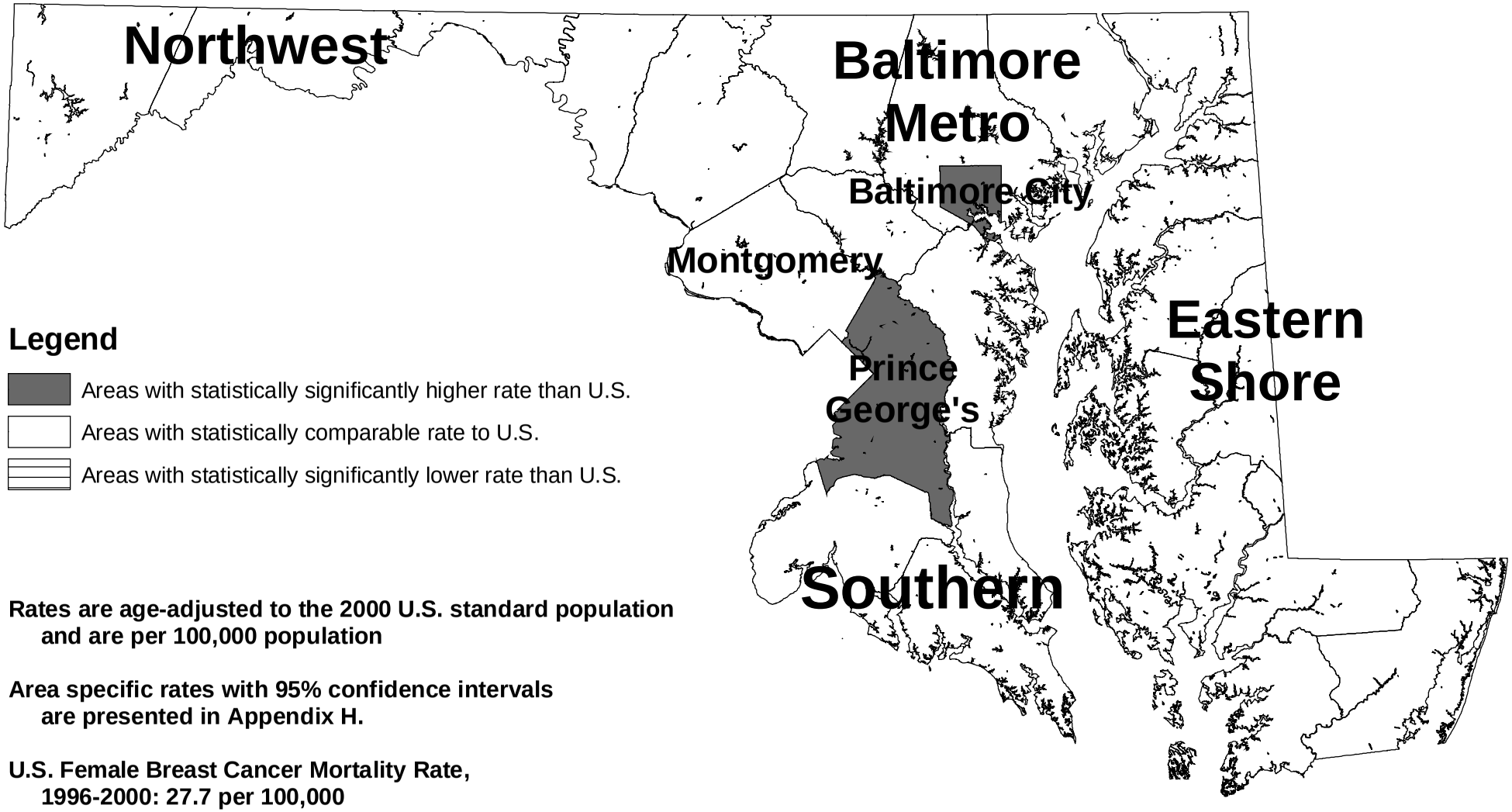
| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 30.0 | 28.6 | 36.6 | 10.0 |
| | | | | |
| Allegany | 17.4 | 17.3 | ** | 0.0 |
| Anne Arundel | 31.9 | 31.6 | 36.6 | ** |
| Baltimore City | 37.4 | 36.8 | 37.9 | 0.0 |
| Baltimore County | 28.8 | 28.8 | 36.8 | ** |
| Calvert | 18.2 | ** | ** | 0.0 |
| Caroline | ** | ** | ** | 0.0 |
| Carroll | 22.5 | 22.5 | ** | 0.0 |
| Cecil | 33.4 | 33.7 | ** | 0.0 |
| Charles | 29.7 | 25.6 | ** | 0.0 |
| Dorchester | 25.8 | ** | ** | 0.0 |
| Frederick | 28.4 | 27.7 | ** | ** |
| Garrett | ** | ** | 0.0 | 0.0 |
| Harford | 26.9 | 27.2 | ** | ** |
| Howard | 29.0 | 28.2 | ** | ** |
| Kent | ** | ** | ** | 0.0 |
| Montgomery | 26.9 | 27.5 | 36.0 | ** |
| Prince George's | 32.7 | 26.4 | 41.0 | ** |
| Queen Anne's | 24.6 | ** | ** | 0.0 |
| Saint Mary's | 25.9 | 25.1 | ** | 0.0 |
| Somerset | ** | ** | ** | 0.0 |
| Talbot | 25.4 | 24.9 | ** | 0.0 |
| Washington | 31.4 | 31.4 | ** | 0.0 |
| Wicomico | 37.7 | 33.9 | 49.2 | ** |
| Worcester | 25.4 | 28.8 | ** | 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 Division of Health Statistics, 1996-2000

# Maryland Female Breast Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rates, 1996-2000




**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. Female Breast Cancer Mortality Rate, 1996-2000: 27.7 per 100,000**

**Source: Maryland Division of Health Statistics, 1996-2000**

# D. Prostate Cancer

***Incidence (New Cases)***

A total of 4,080 cases of prostate cancer were diagnosed among men during 2000 in Maryland. Prostate cancer is the most common reportable cancer among men. Excluding non-melanoma skin cancer, prostate cancer accounts for 16.6% of all reportable cancers in 2000. The age-adjusted prostate cancer incidence rate in Maryland for 2000 is 187.2 per 100,000 men (181.3-193.1, 95% C.I.); this is statistically significantly higher than the 2000 U.S. SEER age-adjusted incidence rate for prostate cancer of 176.9 per 100,000 men.

***Mortality (Deaths)***

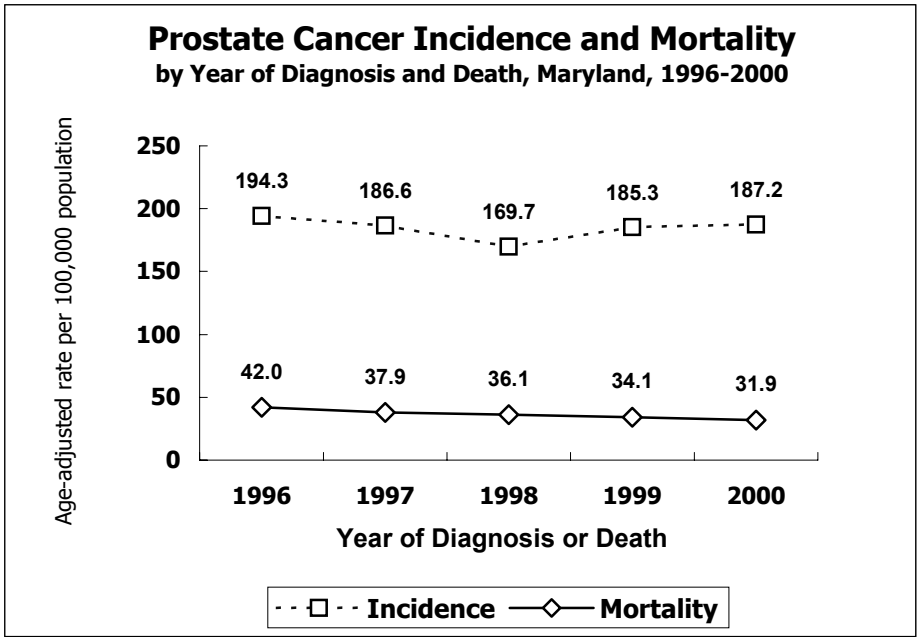
Prostate cancer is the 3rd leading cause of cancer deaths in Maryland among men after colon and rectum cancer. In 2000, 541 men died of prostate cancer in Maryland; this accounts for 5.3% of all cancer deaths in Maryland. The age-adjusted mortality rate for prostate cancer is 31.9 per 100,000 men (29.2-34.8, 95% C.I.). This rate is similar to the 2000 U.S. mortality rate for prostate cancer of 30.6 per 100,000 men. Maryland has the 10th highest mortality rate for prostate cancer among the states and the District of Columbia.

**Table 38.**
**Prostate Cancer Incidence and Mortality Rates**
**by Race, Maryland and the United States, 2000**

| *Incidence 2000* | *Total* | *Whites* | *Blacks* |
|---|---|---|---|
| New Cases (#) | 4,080 | 2,702 | 1,059 |
| Incidence Rate* | 187.2 | 161.8 | 239.0 |
| U.S. SEER Rate* | 176.9 | 170.6 | 278.1 |
| *Mortality 2000* | *Total* | *Whites* | *Blacks* |
| MD Deaths (#) | 541 | 365 | 174 |
| MD Mortality Rate* | 31.9 | 26.8 | 62.4 |
| U.S. Mortality Rate* | 30.6 | 27.9 | 69.2 |

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

Source: Maryland Cancer Registry, 2000
Maryland Division of Health Statistics, 2000
SEER, National Cancer Institute, 2000

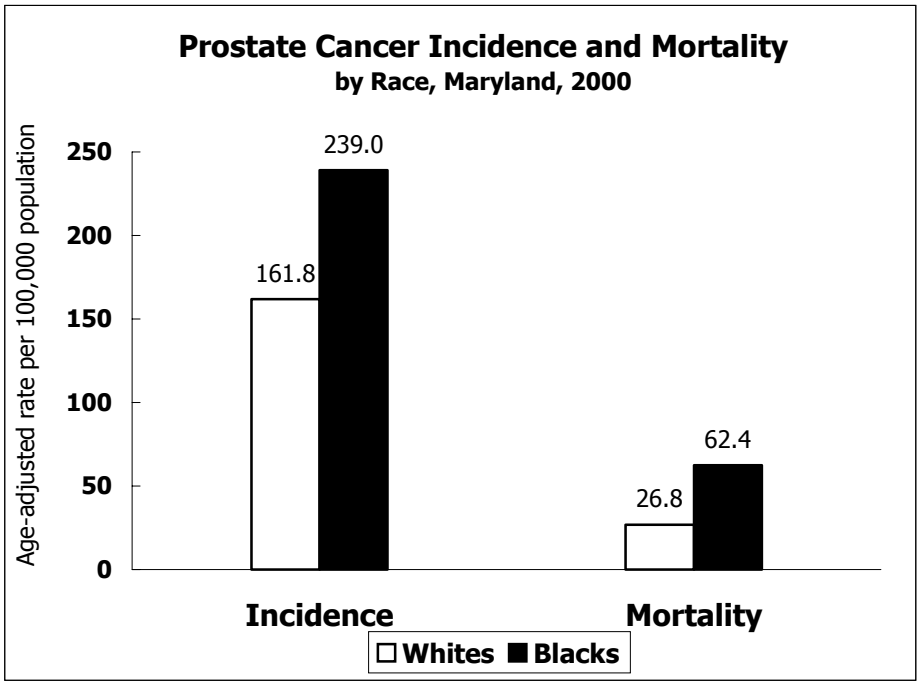



Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000

***Trends***

Prostate cancer incidence rates have decreased an average of 0.8% per year from 1996 to 2000 in Maryland.

Prostate cancer mortality rates declined an average of 6.4% per year among men from 1996 to 2000.

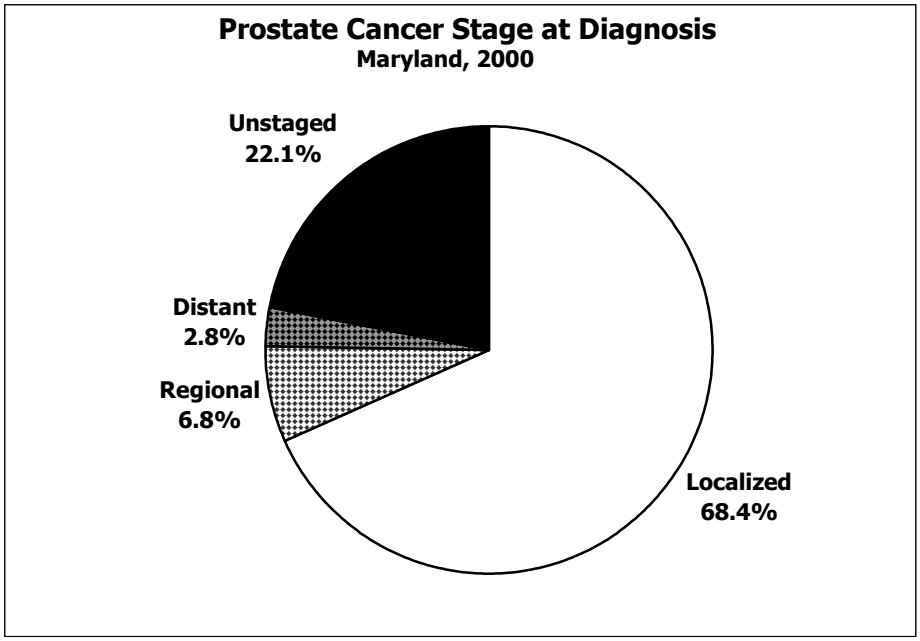



Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 2000
Maryland Division of Health Statistics, 2000

***Race-Specific Rates***

The prostate cancer incidence rate for black men was statistically significantly higher than for white men in 2000.

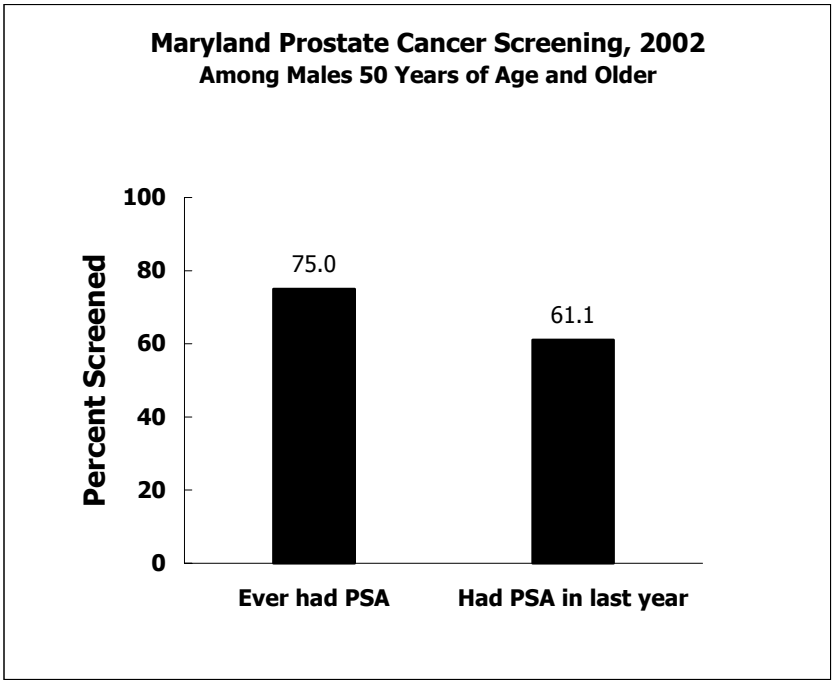
The 2000 prostate cancer mortality rate for black men was statistically significantly higher than the corresponding rate for white men. In fact, the prostate cancer mortality rate was more than twice as high among black men than among white men.




Maryland Cancer Registry, 2000

## ***Stage at Diagnosis***

During 2000, 68.4% of prostate cancer cases were diagnosed at the localized (early) stage in Maryland.




No comparable national data are available
There are no Healthy People 2010 prostate cancer screening guidelines
Maryland Cancer Survey, DHMH Center for Cancer Surveillance and Control, 2002

## ***Healthy People 2010 Objectives***

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

In 2000, 75.0% of Maryland men 50 years of age and older reported that they have *ever* had a prostate specific antigen (PSA) test, and 61.1% of men 50 years and older had a PSA in the past year. This figure is higher than the 1999 measure of 58.0% of men having a PSA in the last year.

## Public Health Evidence (from National Cancer Institute, PDQ, 6/2003)

### Screening

Digital rectal examination (DRE) and the serum prostate specific antigen (PSA) test are two commonly used methods of detecting prostate cancer. There is insufficient evidence to establish whether a decrease in mortality from prostate cancer occurs with screening by DRE or PSA. Clinical trials investigating the benefit of DRE and PSA are underway. While some observational studies of cohorts of men among whom prostate cancer screening was performed have witnessed a decline in prostate cancer mortality, these observations have not been consistent in all populations or within a given population.

Although potential harms of screening for prostate cancer can be established (such as the complications of therapeutic intervention, e.g., incontinence, urethral stricture, sexual dysfunction, morbidity associated with surgery), the presence or magnitude of potential benefits cannot. Therefore, the net benefit of screening cannot be determined.

### Primary Prevention

A diet high in fat may increase the risk of prostate cancer. Increased dietary intake of fruits and vegetables has been associated with a reduced risk of prostate cancer in some studies.

### Chemoprevention

Several agents, including finasteride, dutasteride, difluoromethylornithine (DFMO), isoflavonoids, selenium, vitamins D and E, and lycopene, may reduce the risk of prostate cancer, but further studies are needed to confirm this.

**Public Health Intervention for Prostate Cancer (American Cancer Society: Guidelines for the early detection of cancer: *CA Cancer J. Clin*. 2003, Jan-Feb; 53(1):27-43, and DHMH Prostate Cancer Medical Advisory Committee)**

- 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 50-70 years of age who have at least a 10-year life expectancy. High risk men (African Americans, men with one or more first degree relatives diagnosed with prostate cancer) should begin testing at age 45.

# Table 39.
# Number of Prostate Cancer Cases
# by Jurisdiction and Race, Maryland, 2000

| Jurisdiction | Total | Race | | | |
|---|---|---|---|---|---|
| | | Whites | Blacks | Other | Unknown |
| Maryland | 4,080 | 2,702 | 1,059 | 95 | 224 |
| | | | | | |
| Allegany | 66 | s | <6 | 0 | 0 |
| Anne Arundel | 347 | 280 | 51 | <6 | s |
| Baltimore City | 516 | 157 | 319 | <6 | s |
| Baltimore County | 742 | 573 | 109 | 12 | 48 |
| Calvert | 47 | 30 | 10 | 0 | 7 |
| Caroline | 18 | s | <6 | 0 | 0 |
| Carroll | 94 | 88 | <6 | 0 | <6 |
| Cecil | 62 | 56 | <6 | 0 | <6 |
| Charles | 84 | 58 | 22 | <6 | <6 |
| Dorchester | 20 | s | <6 | 0 | 0 |
| Frederick | 124 | 95 | 6 | 0 | 23 |
| Garrett | 35 | 35 | 0 | 0 | 0 |
| Harford | 165 | 152 | 8 | <6 | <6 |
| Howard | 137 | 109 | s | <6 | 0 |
| Kent | 14 | 14 | 0 | 0 | 0 |
| Montgomery | 643 | 472 | 95 | 47 | 29 |
| Prince George's | 619 | 204 | 356 | 19 | 40 |
| Queen Anne's | 21 | s | <6 | 0 | 0 |
| St Mary's | 48 | 40 | 8 | 0 | 0 |
| Somerset | 22 | 17 | <6 | <6 | 0 |
| Talbot | 36 | 30 | <6 | <6 | 0 |
| Washington | 102 | s | <6 | <6 | <6 |
| Wicomico | 57 | 36 | 18 | <6 | <6 |
| Worcester | 49 | 45 | <6 | 0 | <6 |
| Unknown | 12 | <6 | <6 | 0 | s |

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, 2000

# Table 40.
# Prostate Cancer Age-Adjusted Incidence Rates*
# by Jurisdiction and Race, Maryland, 2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 187.2 | 161.8 | 239.0 | 155.3 |
| | | | | |
| Allegany | 154.1 | 154.5 | ** | 0.0 |
| Anne Arundel | 170.6 | 156.1 | 256.2 | ** |
| Baltimore City | 191.9 | 134.5 | 216.6 | ** |
| Baltimore County | 205.1 | 180.9 | 280.5 | ** |
| Calvert | 178.2 | 125.9 | ** | 0.0 |
| Caroline | ** | ** | ** | 0.0 |
| Carroll | 157.7 | 152.7 | ** | 0.0 |
| Cecil | 181.9 | 172.4 | ** | 0.0 |
| Charles | 211.6 | 182.0 | ** | ** |
| Dorchester | ** | ** | ** | 0.0 |
| Frederick | 182.9 | 147.2 | ** | 0.0 |
| Garrett | 212.0 | 213.1 | 0.0 | 0.0 |
| Harford | 192.9 | 189.1 | ** | ** |
| Howard | 168.3 | 168.6 | ** | ** |
| Kent | ** | ** | 0.0 | 0.0 |
| Montgomery | 180.8 | 165.0 | 268.6 | 172.3 |
| Prince George's | 231.2 | 170.8 | 256.0 | ** |
| Queen Anne's | ** | ** | ** | 0.0 |
| Saint Mary's | 137.6 | 131.3 | ** | 0.0 |
| Somerset | ** | ** | ** | ** |
| Talbot | 152.0 | 144.1 | ** | ** |
| Washington | 163.4 | 164.5 | ** | ** |
| Wicomico | 152.8 | 118.7 | ** | ** |
| Worcester | 149.7 | 156.8 | ** | 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, 2000

# Table 41.
# Number of Prostate Cancer Deaths
# by Jurisdiction and Race, Maryland, 2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 541 | 365 | s | <6 |
| | | | | |
| Allegany | 12 | 12 | 0 | 0 |
| Anne Arundel | 37 | s | <6 | 0 |
| Baltimore City | 112 | 30 | 82 | 0 |
| Baltimore County | 98 | 84 | 14 | 0 |
| Calvert | 11 | s | <6 | 0 |
| Caroline | <6 | <6 | <6 | 0 |
| Carroll | 16 | 16 | 0 | 0 |
| Cecil | 17 | s | <6 | 0 |
| Charles | 12 | <6 | s | 0 |
| Dorchester | <6 | <6 | <6 | 0 |
| Frederick | 14 | s | <6 | 0 |
| Garrett | <6 | <6 | 0 | 0 |
| Harford | 21 | s | <6 | 0 |
| Howard | 8 | s | <6 | 0 |
| Kent | <6 | <6 | 0 | 0 |
| Montgomery | 59 | 49 | 10 | 0 |
| Prince George's | 52 | s | 30 | <6 |
| Queen Anne's | <6 | <6 | <6 | 0 |
| Saint Mary's | 7 | <6 | <6 | 0 |
| Somerset | <6 | <6 | 0 | 0 |
| Talbot | 6 | <6 | <6 | 0 |
| Washington | 19 | 19 | 0 | 0 |
| Wicomico | 10 | s | <6 | 0 |
| Worcester | 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 Division of Health Statistics, 2000

# Table 42.
# Prostate Cancer Age-Adjusted Mortality Rates*
# by Jurisdiction and Race, Maryland, 2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 31.9 | 26.8 | 62.4 | ** |
| | | | | |
| Allegany | ** | ** | 0.0 | 0.0 |
| Anne Arundel | 28.0 | 26.6 | ** | 0.0 |
| Baltimore City | 48.1 | 25.9 | 71.5 | 0.0 |
| Baltimore County | 31.2 | 29.3 | ** | 0.0 |
| Calvert | ** | ** | ** | 0.0 |
| Caroline | ** | ** | ** | 0.0 |
| Carroll | ** | ** | 0.0 | 0.0 |
| Cecil | ** | ** | ** | 0.0 |
| Charles | ** | ** | ** | 0.0 |
| Dorchester | ** | ** | ** | 0.0 |
| Frederick | ** | ** | ** | 0.0 |
| Garrett | ** | ** | 0.0 | 0.0 |
| Harford | ** | ** | ** | 0.0 |
| Howard | ** | ** | ** | 0.0 |
| Kent | ** | ** | 0.0 | 0.0 |
| Montgomery | 19.6 | 19.2 | ** | 0.0 |
| Prince George's | 31.2 | ** | 49.5 | ** |
| Queen Anne's | ** | ** | ** | 0.0 |
| Saint Mary's | ** | ** | ** | 0.0 |
| Somerset | ** | ** | 0.0 | 0.0 |
| Talbot | ** | ** | ** | 0.0 |
| Washington | ** | ** | 0.0 | 0.0 |
| Wicomico | ** | ** | ** | 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 Division of Health Statistics, 2000

# Table 43.
# Number of Prostate Cancer Cases
# by Jurisdiction and Race, Maryland, 1996-2000

| Jurisdiction | Total | Race | | | |
|---|---|---|---|---|---|
| | | Whites | Blacks | Others | Unknown |
| Maryland | 19,020 | 12,441 | 4,766 | 400 | 1,414 |
| | | | | | |
| Allegany | 345 | 331 | 9 | <6 | <6 |
| Anne Arundel | 1,580 | 1,233 | 213 | 25 | 109 |
| Baltimore City | 2,725 | 936 | 1,572 | 28 | 189 |
| Baltimore County | 3,221 | 2,482 | 471 | 35 | 233 |
| Calvert | 230 | 160 | 40 | <6 | s |
| Caroline | 113 | 88 | s | <6 | <6 |
| Carroll | 519 | 465 | s | <6 | 41 |
| Cecil | 276 | 227 | s | <6 | 34 |
| Charles | 410 | 278 | 106 | 13 | 13 |
| Dorchester | 141 | 89 | 47 | <6 | <6 |
| Frederick | 550 | 400 | s | <6 | 111 |
| Garrett | 117 | s | 0 | 0 | <6 |
| Harford | 765 | 634 | 66 | 8 | 57 |
| Howard | 584 | 423 | 92 | 12 | 57 |
| Kent | 88 | 62 | 13 | <6 | s |
| Montgomery | 3,077 | 2,297 | 406 | 156 | 219 |
| Prince George's | 2,606 | 912 | 1,399 | 80 | 215 |
| Queen Anne's | 134 | 109 | 19 | <6 | <6 |
| Saint Mary's | 220 | 168 | 45 | <6 | <6 |
| Somerset | 92 | 61 | s | <6 | 0 |
| Talbot | 218 | 178 | 32 | <6 | s |
| Washington | 421 | 393 | 14 | <6 | s |
| Wicomico | 258 | 179 | 70 | <6 | <6 |
| Worcester | 220 | 182 | 29 | <6 | s |
| Unknown | 110 | 38 | 13 | 9 | 50 |

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, 1996-2000

## Table 44.
## Prostate Cancer Age-Adjusted Incidence Rates*
## by Jurisdiction and Race, Maryland, 1996-2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Others |
| Maryland | 184.6 | 155.0 | 243.8 | 137.4 |
| | | | | |
| Allegany | 165.6 | 162.0 | ** | ** |
| Anne Arundel | 172.5 | 156.4 | 192.2 | ** |
| Baltimore City | 205.1 | 156.2 | 224.5 | 182.0 |
| Baltimore County | 176.8 | 150.9 | 321.6 | 105.2 |
| Calvert | 177.2 | 155.6 | 157.6 | ** |
| Caroline | 160.0 | 153.4 | ** | ** |
| Carroll | 186.7 | 173.9 | ** | ** |
| Cecil | 168.4 | 146.7 | ** | ** |
| Charles | 240.5 | 217.9 | 272.8 | ** |
| Dorchester | 163.3 | 137.2 | 216.9 | ** |
| Frederick | 172.2 | 133.3 | 175.9 | ** |
| Garrett | 153.4 | 153.1 | 0.0 | 0.0 |
| Harford | 197.4 | 177.4 | 249.7 | ** |
| Howard | 165.4 | 144.3 | 200.5 | ** |
| Kent | 143.4 | 128.5 | ** | ** |
| Montgomery | 182.8 | 164.6 | 302.4 | 118.7 |
| Prince George's | 218.0 | 140.2 | 297.6 | 143.0 |
| Queen Anne's | 127.5 | 122.4 | ** | ** |
| Saint Mary's | 141.2 | 132.4 | 176.8 | ** |
| Somerset | 148.1 | 142.7 | 160.1 | ** |
| Talbot | 196.1 | 196.7 | 167.4 | ** |
| Washington | 138.7 | 133.5 | ** | ** |
| Wicomico | 152.0 | 137.4 | 187.9 | ** |
| Worcester | 156.2 | 159.1 | 114.7 | ** |

* 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, 1996-2000

# Table 45.
# Number of Prostate Cancer Deaths
# by Jurisdiction and Race, Maryland, 1996-2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 2,974 | 1,957 | 996 | 21 |
| | | | | |
| Allegany | 47 | 47 | 0 | 0 |
| Anne Arundel | 208 | 174 | s | <6 |
| Baltimore City | 624 | s | 446 | <6 |
| Baltimore County | 483 | 409 | 74 | 0 |
| Calvert | 40 | 27 | 13 | 0 |
| Caroline | 19 | s | <6 | 0 |
| Carroll | 75 | 69 | 6 | 0 |
| Cecil | 66 | 58 | 8 | 0 |
| Charles | 64 | 40 | 24 | 0 |
| Dorchester | 37 | 22 | 15 | 0 |
| Frederick | 78 | 71 | s | <6 |
| Garrett | 17 | 17 | 0 | 0 |
| Harford | 115 | 100 | 15 | 0 |
| Howard | 85 | 61 | s | <6 |
| Kent | 17 | 11 | 6 | 0 |
| Montgomery | 376 | 308 | 58 | 10 |
| Prince George's | 343 | s | 200 | <6 |
| Queen Anne's | 18 | 12 | 6 | 0 |
| Saint Mary's | 40 | 28 | 12 | 0 |
| Somerset | 22 | 11 | 11 | 0 |
| Talbot | 32 | s | <6 | 0 |
| Washington | 81 | s | <6 | 0 |
| Wicomico | 47 | 34 | 13 | 0 |
| Worcester | 40 | 23 | 17 | 0 |

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

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

Source: Maryland Division of Health Statistics, 1996-2000

# Table 46.
# Prostate Cancer Age-Adjusted Mortality Rates*
# by Jurisdiction and Race, Maryland, 1996-2000

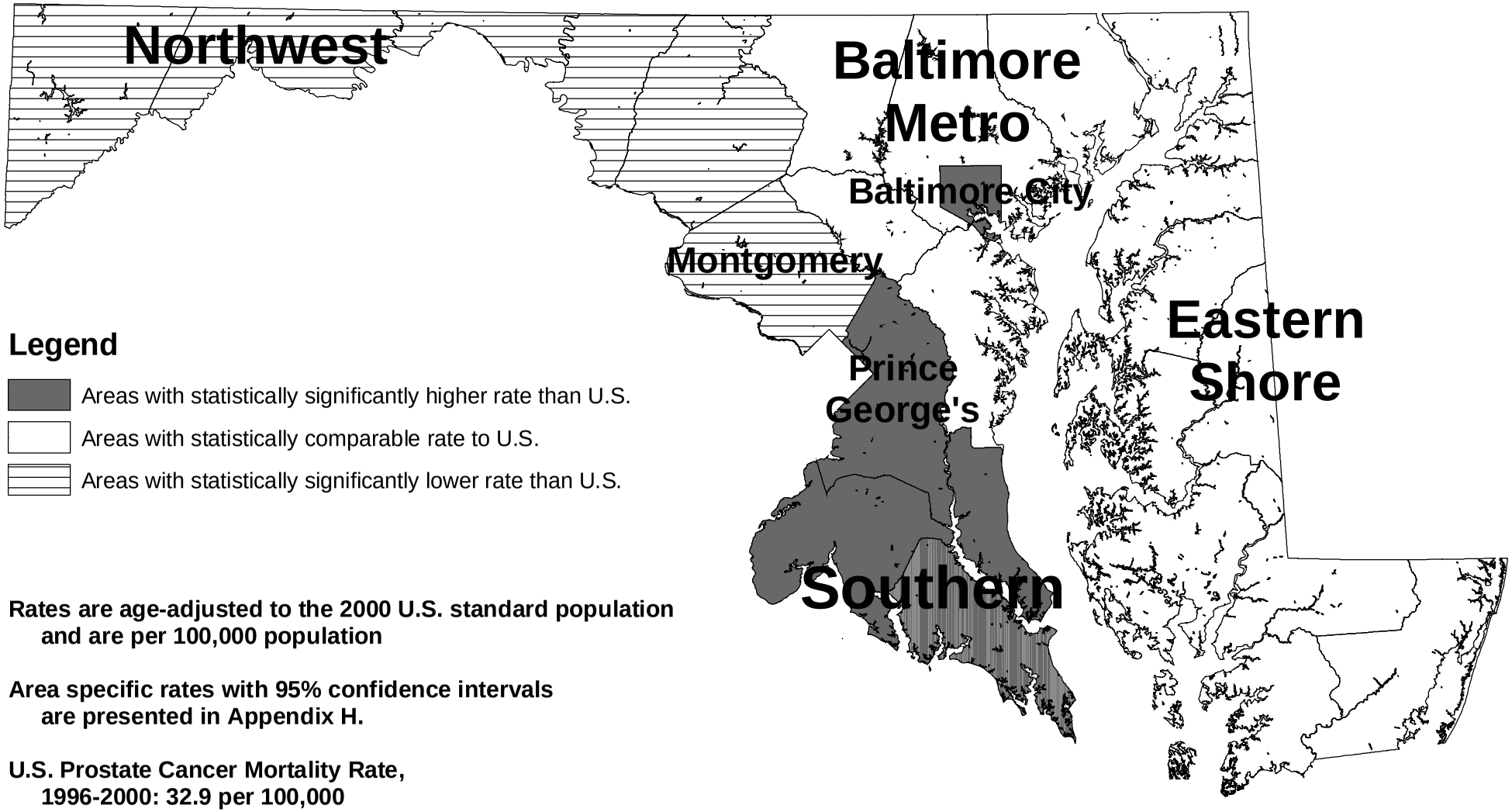
| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 36.3 | 29.7 | 73.8 | ** |
| | | | | |
| Allegany | 25.3 | 25.8 | 0.0 | 0.0 |
| Anne Arundel | 32.5 | 31.5 | 40.6 | ** |
| Baltimore City | 53.8 | 29.7 | 82.4 | ** |
| Baltimore County | 31.1 | 28.6 | 74.1 | 0.0 |
| Calvert | 43.5 | 38.1 | ** | 0.0 |
| Caroline | ** | ** | ** | 0.0 |
| Carroll | 32.1 | 31.2 | ** | 0.0 |
| Cecil | 54.4 | 50.7 | ** | 0.0 |
| Charles | 56.7 | 47.7 | ** | 0.0 |
| Dorchester | 47.9 | ** | ** | 0.0 |
| Frederick | 28.8 | 28.1 | ** | ** |
| Garrett | ** | ** | 0.0 | 0.0 |
| Harford | 39.4 | 37.3 | ** | 0.0 |
| Howard | 36.6 | 31.6 | ** | ** |
| Kent | ** | ** | ** | 0.0 |
| Montgomery | 28.0 | 26.2 | 70.2 | ** |
| Prince George's | 42.6 | 28.6 | 79.2 | ** |
| Queen Anne's | ** | ** | ** | 0.0 |
| Saint Mary's | 32.2 | 26.1 | ** | 0.0 |
| Somerset | ** | ** | ** | 0.0 |
| Talbot | 30.6 | 33.0 | ** | 0.0 |
| Washington | 31.1 | 30.5 | ** | 0.0 |
| Wicomico | 33.5 | 31.3 | ** | 0.0 |
| Worcester | 32.9 | ** | ** | 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 Division of Health Statistics, 1996-2000

# Maryland Prostate Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rates, 1996-2000




**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, 1996-2000: 32.9 per 100,000**

**Source: Maryland Division of Health Statistics, 1996-2000**

# E. Oral Cancer

***Incidence (New Cases)***

A total of 573 cases of oral cavity and pharynx cancer (called oral cancer) were diagnosed in Maryland in 2000. The age-adjusted incidence rate for oral cancer in Maryland in 2000 is 11.1 per 100,000 population (10.2-12.0, 95% C.I.) which is similar to the 2000 SEER age-adjusted oral cancer incidence rate of 10.6 per 100,000 population.

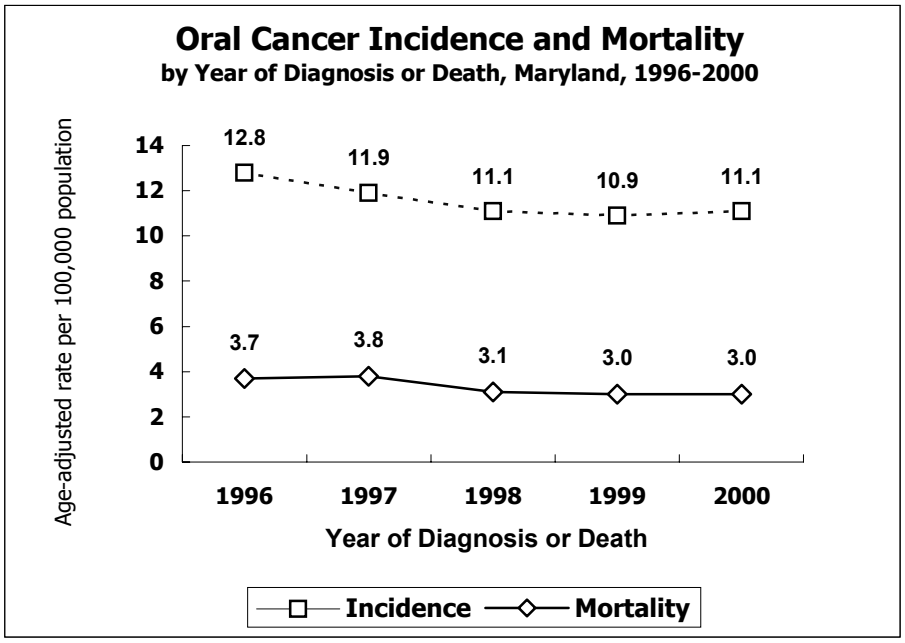
***Mortality (Deaths)***

In 2000, 152 persons in Maryland died of oral cancer. The age-adjusted mortality rate of 3.0 per 100,000 population (2.6-3.5, 95% C.I.) in Maryland is similar to the 2000 U.S. oral cancer mortality rate of 2.7. Maryland ranks 10th highest for oral cancer mortality among the states and the District of Columbia.

**Table 47.**
**Oral Cancer Incidence and Mortality Rates**
**by Gender and Race, Maryland and the United States, 2000**

| *Incidence 2000* | *Total* | *Males* | *Females* | *Whites* | *Blacks* |
|---|---|---|---|---|---|
| New Cases (#) | 573 | 400 | 173 | 405 | 137 |
| Incidence Rate* | 11.1 | 17.2 | 6.1 | 10.7 | 11.0 |
| U.S. SEER Rate* | 10.6 | 15.9 | 6.2 | 10.5 | 11.6 |
| *Mortality 2000* | *Total* | *Males* | *Females* | *Whites* | *Blacks* |
| MD Deaths (#) | 152 | 121 | 31 | 100 | 48 |
| MD Mortality Rate* | 3.0 | 5.4 | 1.1 | 2.6 | 4.4 |
| U.S. Mortality Rate* | 2.7 | 4.1 | 1.6 | 2.5 | 4.1 |

* Rates are per 100,000 and are age-adjusted to 2000 U.S. standard population
Source: Maryland Cancer Registry, 2000
Maryland Division of Health Statistics, 2000
SEER, National Cancer Institute, 2000

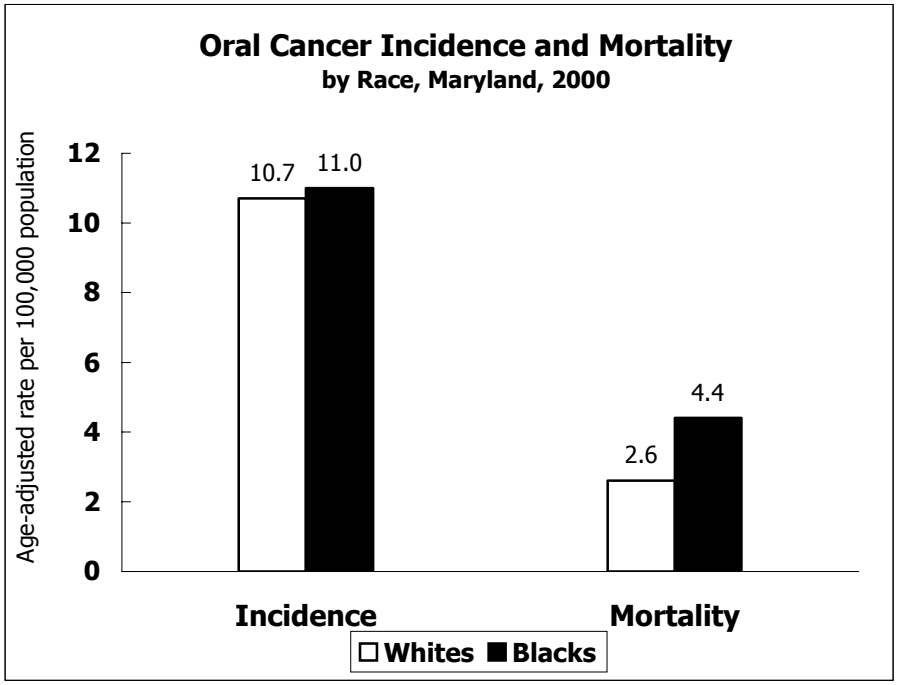



Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000

***Trends***

The incidence of oral cancer has decreased an average of 3.7% per year from 1996 to 2000 in Maryland.

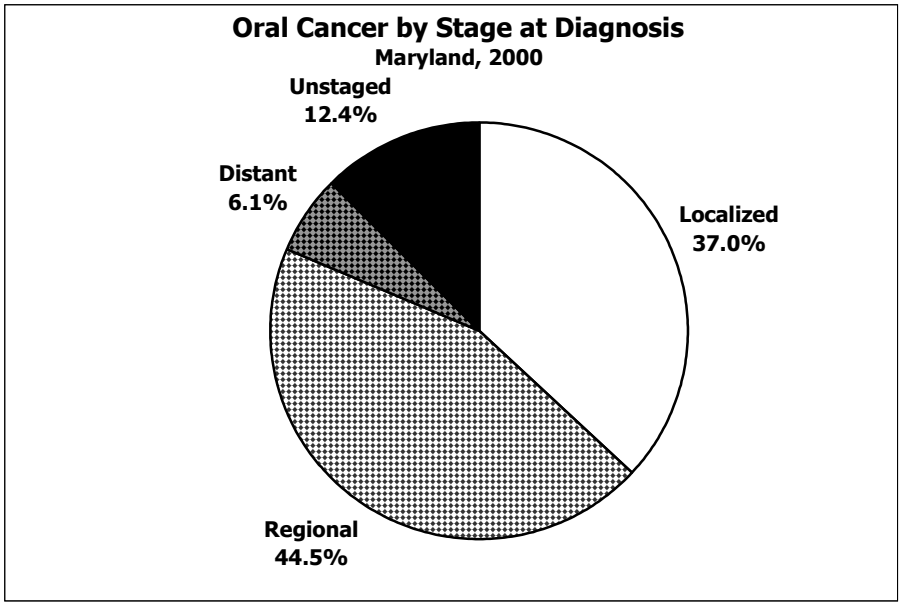
Mortality rates for oral cancer overall declined an average of 6.4% per year from 1996 to 2000.




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

***Race-Specific Rates***

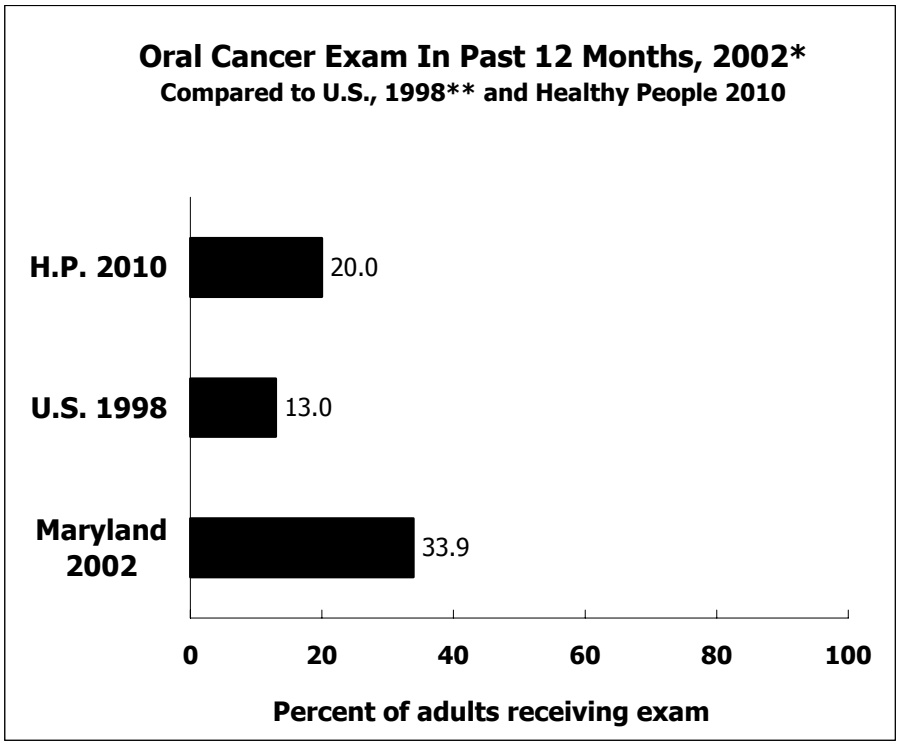
Incidence and mortality rates for oral cancer for blacks and whites were not statistically significantly different.




Maryland Cancer Registry, 2000

## ***Stage at Diagnosis***

Of the 573 cases of oral cancer in 2000, 37.0% were diagnosed at the localized (early) stage.




## ***Healthy People 2010 Objectives***

The Healthy People 2010 objective for oral cancer is to increase to 20% the proportion of adults 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 2002 Maryland Cancer Survey, 33.9% of persons 40 years of age and older in Maryland reported they had an oral cancer exam in the past year.

* Adults 40 years of age and older
** The U.S. data are age-adjusted to 2000 U.S. standard population
Maryland Cancer Survey, DHMH Center for Cancer Surveillance and Control, 2002
National Health Interview Survey, 1998
Healthy People 2010, U.S. Department of Health and Human Services, 2000

## Public Health Evidence (from National Cancer Institute, PDQ, 6/2003)

### 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.

Avoiding or stopping smoking and avoiding or stopping the use of other tobacco products will decrease the risk of oral cancer. A 50% reduction of oral cancer risk has been noted after 3 to 5 years of smoking cessation and a return to non-smoker risk noted after 10 years of cessation. A diet high in fruits and fiber is associated with a decreased risk of oral and pharyngeal cancer, particularly among smokers.

### Screening

Oral cancer occurs in a region of the body that is generally accessible to physical examination by the patient, dentist, and physician. Screening involves inspecting the floor of the mouth, the ventrolateral aspect of the tongue, the soft palate complex, and the face, head and neck, lips, labial and buccal mucosa, and gingival tissue.

There is insufficient evidence to establish that screening would result in a decrease in mortality from oral cancer.

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

# Table 48.
# Number of Oral Cancer Cases
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | | |
|---|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other | Unknown |
| Maryland | 573 | 400 | 173 | 405 | 137 | 19 | 12 |
| | | | | | | | |
| Allegany | 13 | s | <6 | 13 | 0 | 0 | 0 |
| Anne Arundel | 68 | 48 | 20 | 58 | 10 | 0 | 0 |
| Baltimore City | 109 | 83 | 26 | 46 | 59 | <6 | <6 |
| Baltimore County | 90 | 55 | 35 | 75 | 15 | 0 | 0 |
| Calvert | 7 | <6 | <6 | 7 | 0 | 0 | 0 |
| Caroline | <6 | <6 | <6 | <6 | 0 | 0 | <6 |
| Carroll | 13 | s | <6 | s | 0 | 0 | <6 |
| Cecil | 7 | s | <6 | 7 | 0 | 0 | 0 |
| Charles | 7 | s | <6 | s | 0 | 0 | <6 |
| Dorchester | 6 | <6 | <6 | <6 | <6 | 0 | 0 |
| Frederick | 7 | <6 | <6 | 7 | 0 | 0 | 0 |
| Garrett | <6 | <6 | 0 | <6 | 0 | 0 | 0 |
| Harford | 20 | 13 | 7 | 20 | 0 | 0 | 0 |
| Howard | 11 | s | <6 | 7 | <6 | <6 | <6 |
| Kent | <6 | <6 | 0 | <6 | 0 | 0 | 0 |
| Montgomery | 87 | 55 | 32 | 65 | s | 12 | <6 |
| Prince George's | 63 | 46 | 17 | 24 | 34 | <6 | <6 |
| Queen Anne's | 11 | s | <6 | s | <6 | 0 | 0 |
| St Mary's | 15 | s | <6 | s | <6 | 0 | 0 |
| Somerset | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Talbot | <6 | <6 | 0 | <6 | 0 | 0 | 0 |
| Washington | 15 | s | <6 | s | <6 | 0 | 0 |
| Wicomico | 6 | 6 | 0 | <6 | <6 | <6 | 0 |
| Worcester | 8 | <6 | <6 | s | 0 | 0 | <6 |
| Unknown | 0 | 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, 2000

# Table 49.
# Oral Cancer Age-Adjusted Incidence Rates*
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 11.1 | 17.2 | 6.1 | 10.7 | 11.0 | ** |
| | | | | | | |
| Allegany | ** | ** | ** | ** | 0.0 | 0.0 |
| Anne Arundel | 15.1 | 24.4 | ** | 14.6 | ** | 0.0 |
| Baltimore City | 16.9 | 29.9 | 6.8 | 17.9 | 15.0 | ** |
| Baltimore County | 11.0 | 15.1 | 7.7 | 10.8 | ** | 0.0 |
| Calvert | ** | ** | ** | ** | 0.0 | 0.0 |
| Caroline | ** | ** | ** | ** | 0.0 | 0.0 |
| Carroll | ** | ** | ** | ** | 0.0 | 0.0 |
| Cecil | ** | ** | ** | ** | 0.0 | 0.0 |
| Charles | ** | ** | ** | ** | 0.0 | 0.0 |
| Dorchester | ** | ** | ** | ** | ** | 0.0 |
| Frederick | ** | ** | ** | ** | 0.0 | 0.0 |
| Garrett | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Harford | ** | ** | ** | ** | 0.0 | 0.0 |
| Howard | ** | ** | ** | ** | ** | ** |
| Kent | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Montgomery | 10.0 | 14.1 | 6.8 | 9.6 | ** | ** |
| Prince George's | 9.3 | 15.6 | ** | ** | 8.2 | ** |
| Queen Anne's | ** | ** | ** | ** | ** | 0.0 |
| Saint Mary's | ** | ** | ** | ** | ** | 0.0 |
| Somerset | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Talbot | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Washington | ** | ** | ** | ** | ** | 0.0 |
| Wicomico | ** | ** | 0.0 | ** | ** | ** |
| Worcester | ** | ** | ** | ** | 0.0 | 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, 2000

# Table 50.
# Number of Oral Cancer Deaths
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 152 | 121 | 31 | 100 | s | <6 |
| | | | | | | |
| Allegany | <6 | <6 | <6 | <6 | 0 | 0 |
| Anne Arundel | 15 | s | <6 | 9 | 6 | 0 |
| Baltimore City | 43 | s | <6 | 17 | 26 | 0 |
| Baltimore County | 20 | s | <6 | 17 | <6 | <6 |
| Calvert | <6 | <6 | 0 | <6 | 0 | 0 |
| Caroline | 0 | 0 | 0 | 0 | 0 | 0 |
| Carroll | <6 | <6 | <6 | <6 | 0 | 0 |
| Cecil | <6 | <6 | 0 | <6 | 0 | 0 |
| Charles | 7 | 7 | 0 | <6 | <6 | 0 |
| Dorchester | <6 | <6 | <6 | <6 | 0 | 0 |
| Frederick | <6 | <6 | <6 | <6 | 0 | 0 |
| Garrett | 0 | 0 | 0 | 0 | 0 | 0 |
| Harford | <6 | <6 | <6 | <6 | <6 | 0 |
| Howard | 8 | <6 | <6 | 8 | 0 | 0 |
| Kent | 0 | 0 | 0 | 0 | 0 | 0 |
| Montgomery | 18 | 12 | 6 | 13 | <6 | <6 |
| Prince George's | 12 | s | <6 | s | <6 | 0 |
| Queen Anne's | 0 | 0 | 0 | 0 | 0 | 0 |
| Saint Mary's | <6 | <6 | 0 | <6 | 0 | 0 |
| Somerset | <6 | <6 | 0 | 0 | <6 | 0 |
| Talbot | <6 | <6 | 0 | <6 | 0 | 0 |
| Washington | <6 | <6 | <6 | <6 | 0 | 0 |
| Wicomico | <6 | <6 | <6 | 0 | <6 | 0 |
| Worcester | <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 Division of Health Statistics, 2000

# Table 51.
# Oral Cancer Age-Adjusted Mortality Rates*
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 3.0 | 5.4 | 1.1 | 2.6 | 4.4 | ** |
| | | | | | | |
| Allegany | ** | ** | ** | ** | 0.0 | 0.0 |
| Anne Arundel | ** | ** | ** | ** | ** | 0.0 |
| Baltimore City | 6.6 | 14.2 | ** | ** | 6.6 | 0.0 |
| Baltimore County | ** | ** | ** | ** | ** | ** |
| Calvert | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Caroline | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Carroll | ** | ** | ** | ** | 0.0 | 0.0 |
| Cecil | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Charles | ** | ** | 0.0 | ** | ** | 0.0 |
| Dorchester | ** | ** | ** | ** | 0.0 | 0.0 |
| Frederick | ** | ** | ** | ** | 0.0 | 0.0 |
| Garrett | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Harford | ** | ** | ** | ** | ** | 0.0 |
| Howard | ** | ** | ** | ** | 0.0 | 0.0 |
| Kent | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Montgomery | ** | ** | ** | ** | ** | ** |
| Prince George's | ** | ** | ** | ** | ** | 0.0 |
| Queen Anne's | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Saint Mary's | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Somerset | ** | ** | 0.0 | 0.0 | ** | 0.0 |
| Talbot | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Washington | ** | ** | ** | ** | 0.0 | 0.0 |
| Wicomico | ** | ** | ** | 0.0 | ** | 0.0 |
| Worcester | ** | ** | 0.0 | ** | 0.0 | 0.0 |

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

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

Source: Maryland Division of Health Statistics, 2000

# Table 52.
# Number of Oral Cancer Cases
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | | |
|---|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Others | Unknown |
| Maryland | 2,813 | 1,916 | 897 | 2,002 | 669 | 81 | 61 |
| | | | | | | | |
| Allegany | 59 | 42 | 17 | s | <6 | 0 | 0 |
| Anne Arundel | 270 | 183 | 87 | 218 | 44 | <6 | <6 |
| Baltimore City | 515 | 374 | 141 | 197 | 306 | <6 | s |
| Baltimore County | 472 | 302 | 170 | 388 | 65 | 9 | 10 |
| Calvert | 39 | 21 | 18 | 33 | <6 | 0 | <6 |
| Caroline | 16 | s | <6 | s | <6 | 0 | <6 |
| Carroll | 73 | 58 | 15 | s | 0 | 0 | <6 |
| Cecil | 48 | 37 | 11 | s | 0 | <6 | <6 |
| Charles | 48 | 33 | 15 | 42 | <6 | <6 | <6 |
| Dorchester | 28 | 18 | 10 | 24 | <6 | <6 | 0 |
| Frederick | 68 | 46 | 22 | s | <6 | <6 | <6 |
| Garrett | 9 | s | <6 | 9 | 0 | 0 | 0 |
| Harford | 102 | 67 | 35 | 97 | <6 | <6 | <6 |
| Howard | 66 | 41 | 25 | 46 | 11 | s | <6 |
| Kent | 13 | s | <6 | s | <6 | 0 | 0 |
| Montgomery | 353 | 209 | 144 | 271 | 31 | 37 | 14 |
| Prince George's | 326 | 224 | 102 | 149 | 159 | 11 | 7 |
| Queen Anne's | 34 | 24 | 10 | s | <6 | 0 | 0 |
| Saint Mary's | 55 | 45 | 10 | 44 | s | <6 | <6 |
| Somerset | 12 | s | <6 | s | <6 | 0 | <6 |
| Talbot | 33 | 26 | 7 | s | <6 | 0 | 0 |
| Washington | 76 | 56 | 20 | 69 | s | 0 | <6 |
| Wicomico | 43 | 32 | 11 | 31 | s | <6 | 0 |
| Worcester | 46 | 35 | 11 | 39 | <6 | 0 | <6 |
| Unknown | 9 | <6 | <6 | 6 | 0 | <6 | <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, 1996-2000

# Table 53.
# Oral Cancer Age-Adjusted Incidence Rates*
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Others |
| Maryland | 11.5 | 17.5 | 6.7 | 10.9 | 12.2 | 8.8 |
| | | | | | | |
| Allegany | 13.0 | 21.8 | ** | 13.0 | ** | 0.0 |
| Anne Arundel | 12.7 | 19.0 | 7.7 | 12.1 | 16.0 | ** |
| Baltimore City | 16.3 | 27.7 | 7.6 | 15.6 | 16.2 | ** |
| Baltimore County | 11.6 | 17.0 | 7.6 | 10.9 | 15.8 | ** |
| Calvert | 13.4 | ** | ** | 14.2 | ** | 0.0 |
| Caroline | ** | ** | ** | ** | ** | 0.0 |
| Carroll | 10.8 | 18.3 | ** | 11.0 | 0.0 | 0.0 |
| Cecil | 12.7 | 19.9 | ** | 12.9 | 0.0 | ** |
| Charles | 10.5 | 14.7 | ** | 12.4 | ** | ** |
| Dorchester | 15.6 | ** | ** | ** | ** | ** |
| Frederick | 8.8 | 13.1 | ** | 9.1 | ** | ** |
| Garrett | ** | ** | ** | ** | 0.0 | 0.0 |
| Harford | 10.9 | 15.6 | 7.2 | 11.6 | ** | ** |
| Howard | 7.4 | 9.4 | ** | 6.5 | ** | ** |
| Kent | ** | ** | ** | ** | ** | 0.0 |
| Montgomery | 8.8 | 11.7 | 6.4 | 8.4 | 7.6 | 9.0 |
| Prince George's | 10.6 | 16.0 | 6.1 | 10.0 | 11.0 | ** |
| Queen Anne's | 16.2 | ** | ** | 18.4 | ** | 0.0 |
| Saint Mary's | 15.8 | 27.1 | ** | 15.4 | ** | ** |
| Somerset | ** | ** | ** | ** | ** | 0.0 |
| Talbot | 14.5 | 25.7 | ** | 16.9 | ** | 0.0 |
| Washington | 11.0 | 18.0 | ** | 10.3 | ** | 0.0 |
| Wicomico | 10.7 | 17.8 | ** | 10.1 | ** | ** |
| Worcester | 16.0 | 26.4 | ** | 17.1 | ** | 0.0 |

* Rates are per 100,00 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, 1996-2000

# Table 54.
# Number of Oral Cancer Deaths
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 783 | 547 | 236 | 537 | 234 | 12 |
| | | | | | | |
| Allegany | 17 | 10 | 7 | 17 | 0 | 0 |
| Anne Arundel | 64 | 47 | 17 | 52 | 12 | 0 |
| Baltimore City | 189 | 153 | 36 | s | 112 | <6 |
| Baltimore County | 117 | 71 | 46 | 103 | s | <6 |
| Calvert | 11 | s | <6 | s | <6 | 0 |
| Caroline | <6 | <6 | 0 | <6 | <6 | 0 |
| Carroll | 13 | s | <6 | 13 | 0 | 0 |
| Cecil | 14 | s | <6 | s | <6 | 0 |
| Charles | 26 | 19 | 7 | 15 | 11 | 0 |
| Dorchester | <6 | <6 | <6 | <6 | <6 | 0 |
| Frederick | 19 | 13 | 6 | s | <6 | 0 |
| Garrett | <6 | <6 | <6 | <6 | 0 | 0 |
| Harford | 25 | 17 | 8 | s | <6 | 0 |
| Howard | 23 | 12 | 11 | 18 | <6 | <6 |
| Kent | <6 | <6 | 0 | <6 | 0 | 0 |
| Montgomery | 76 | 43 | 33 | 62 | 8 | 6 |
| Prince George's | 102 | 72 | 30 | 51 | s | <6 |
| Queen Anne's | <6 | <6 | <6 | <6 | 0 | 0 |
| Saint Mary's | 8 | s | <6 | <6 | <6 | 0 |
| Somerset | <6 | <6 | 0 | <6 | <6 | 0 |
| Talbot | 12 | s | <6 | s | <6 | 0 |
| Washington | 22 | 15 | 7 | s | <6 | 0 |
| Wicomico | 13 | 7 | 6 | s | <6 | 0 |
| Worcester | 9 | s | <6 | s | <6 | 0 |

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

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

Source: Maryland Division of Health Statistics, 1996-2000

# Table 55.
# Oral Cancer Age-Adjusted Mortality Rates*
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

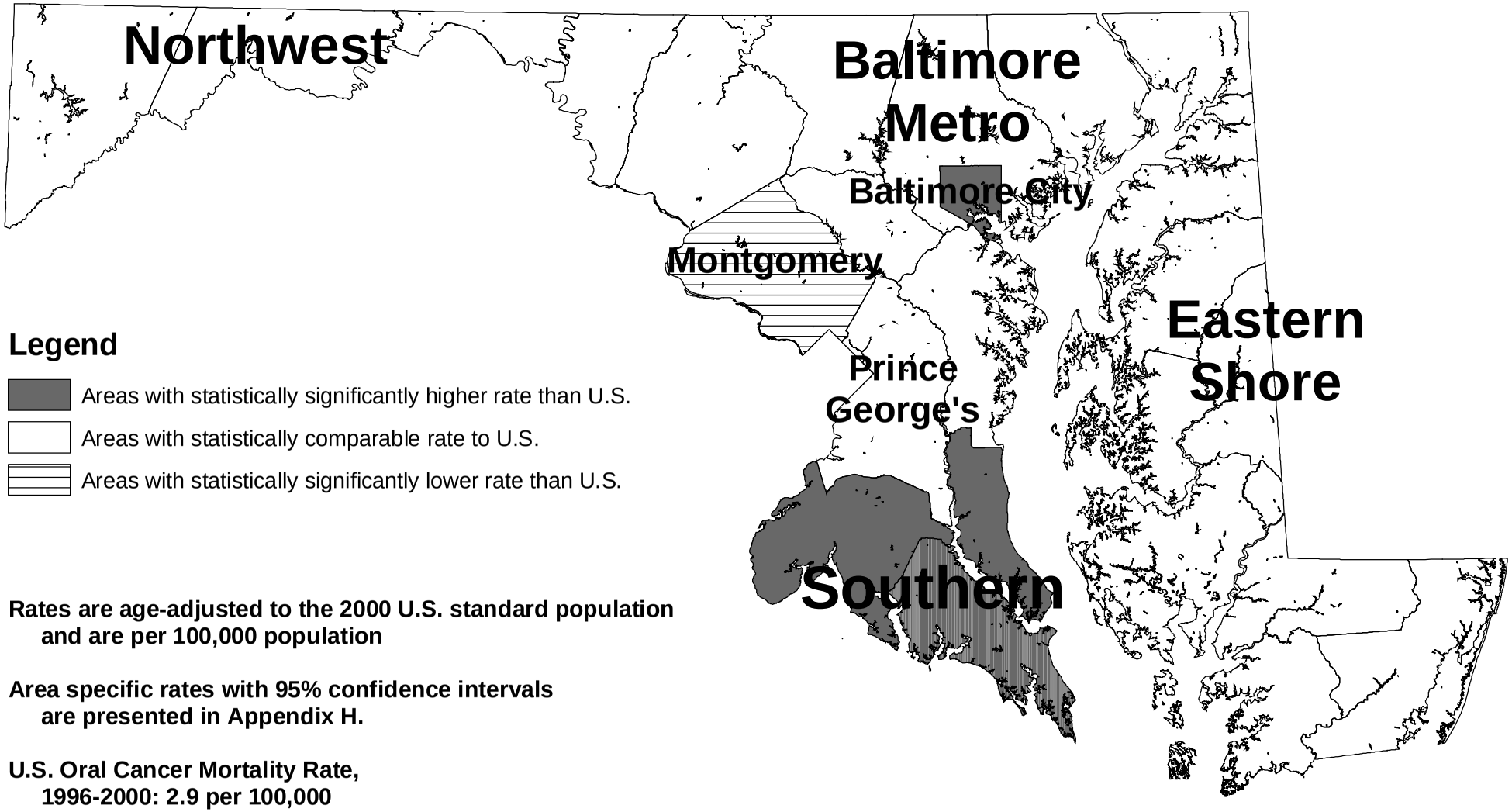
| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 3.3 | 5.4 | 1.7 | 2.9 | 4.7 | ** |
| | | | | | | |
| Allegany | ** | ** | ** | ** | 0.0 | 0.0 |
| Anne Arundel | 3.4 | 5.8 | ** | 3.2 | ** | 0.0 |
| Baltimore City | 5.9 | 11.6 | 1.8 | 5.3 | 6.2 | ** |
| Baltimore County | 2.8 | 4.3 | 1.9 | 2.7 | ** | ** |
| Calvert | ** | ** | ** | ** | ** | 0.0 |
| Caroline | ** | ** | 0.0 | ** | ** | 0.0 |
| Carroll | ** | ** | ** | ** | 0.0 | 0.0 |
| Cecil | ** | ** | ** | ** | ** | 0.0 |
| Charles | 5.8 | ** | ** | ** | ** | 0.0 |
| Dorchester | ** | ** | ** | ** | ** | 0.0 |
| Frederick | ** | ** | ** | ** | ** | 0.0 |
| Garrett | ** | ** | ** | ** | 0.0 | 0.0 |
| Harford | ** | ** | ** | ** | ** | 0.0 |
| Howard | ** | ** | ** | ** | ** | ** |
| Kent | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Montgomery | 2.0 | 2.7 | 1.4 | 1.9 | ** | ** |
| Prince George's | 3.6 | 5.7 | 2.0 | 3.4 | 3.8 | ** |
| Queen Anne's | ** | ** | ** | ** | 0.0 | 0.0 |
| Saint Mary's | ** | ** | ** | ** | ** | 0.0 |
| Somerset | ** | ** | 0.0 | ** | ** | 0.0 |
| Talbot | ** | ** | ** | ** | ** | 0.0 |
| Washington | ** | ** | ** | ** | ** | 0.0 |
| Wicomico | ** | ** | ** | ** | ** | 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 Division of Health Statistics, 1996-2000

# Maryland Oral Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rates, 1996-2000




**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, 1996-2000: 2.9 per 100,000**

**Source: Maryland Division of Health Statistics, 1996-2000**

# F. Melanoma of the Skin

***Incidence (New Cases)***

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. Melanoma is the rarest and most serious type of skin cancer (NCI, PDQ).

In 2000, a total of 902 persons in Maryland were diagnosed with melanoma of the skin. The age-adjusted incidence rate for melanoma for 2000 is 17.2 per 100,000 population (16.1-18.4, 95% C.I.). The Maryland rate is similar to the 2000 U.S. SEER age-adjusted incidence rate of 17.7 per 100,000 population for melanoma.

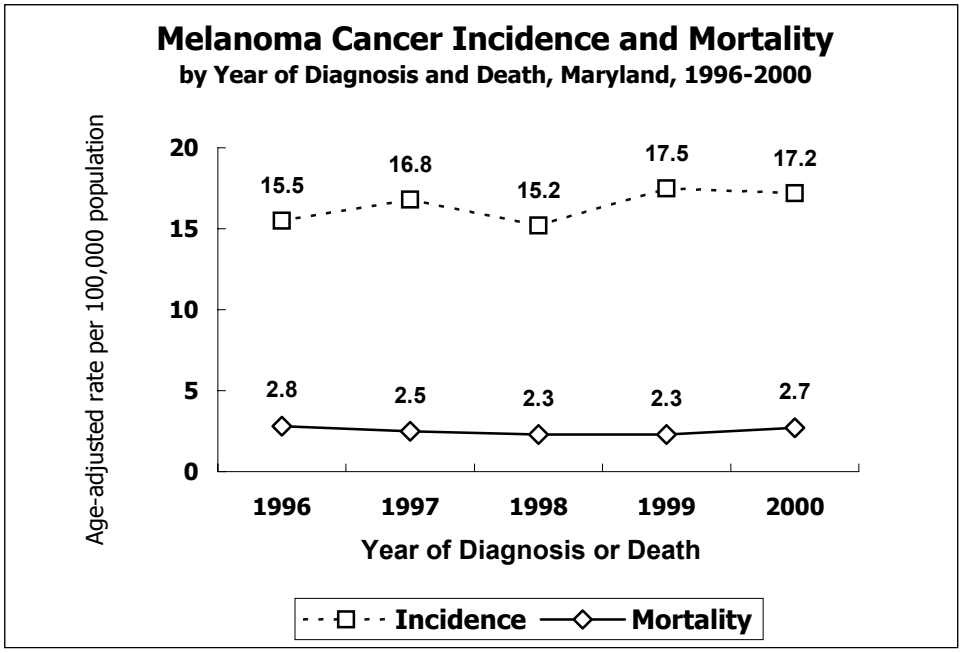
***Mortality (Deaths)***

In 2000, a total of 132 persons died of melanoma in Maryland. The age-adjusted mortality rate for melanoma in Maryland is 2.7 per 100,000 population (2.2-3.2, 95% C.I.). This rate is the same as the 2000 U.S. melanoma mortality rate of 2.7 per 100,000 population. Maryland is ranked 41st for melanoma mortality among the states and the District of Columbia.

**Table 56.**
**Melanoma Cancer Incidence and Mortality Rates**
**by Gender and Race, Maryland and the United States, 2000**

| *Incidence 2000* | *Total* | *Males* | *Females* | *Whites* | *Blacks* |
|---|---|---|---|---|---|
| New Cases (#) | 902 | 526 | 376 | 754 | 7 |
| Incidence Rate* | 17.2 | 22.8 | 13.2 | 20.2 | ** |
| U.S. SEER Rate* | 17.7 | 22.5 | 14.4 | 20.9 | - |
| *Mortality 2000* | *Total* | *Males* | *Females* | *Whites* | *Blacks* |
| MD Deaths (#) | 132 | 84 | 48 | 124 | 7 |
| MD Mortality Rate* | 2.7 | 4.0 | 1.7 | 3.3 | ** |
| U.S. Mortality Rate* | 2.7 | 3.8 | 1.8 | 3.0 | 0.5 |

* 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
\- Statistic not shown in SEER; rate based on less than 25 cases
Source: Maryland Cancer Registry, 2000
Maryland Division of Health Statistics, 2000
SEER, National Cancer Institute, 2000

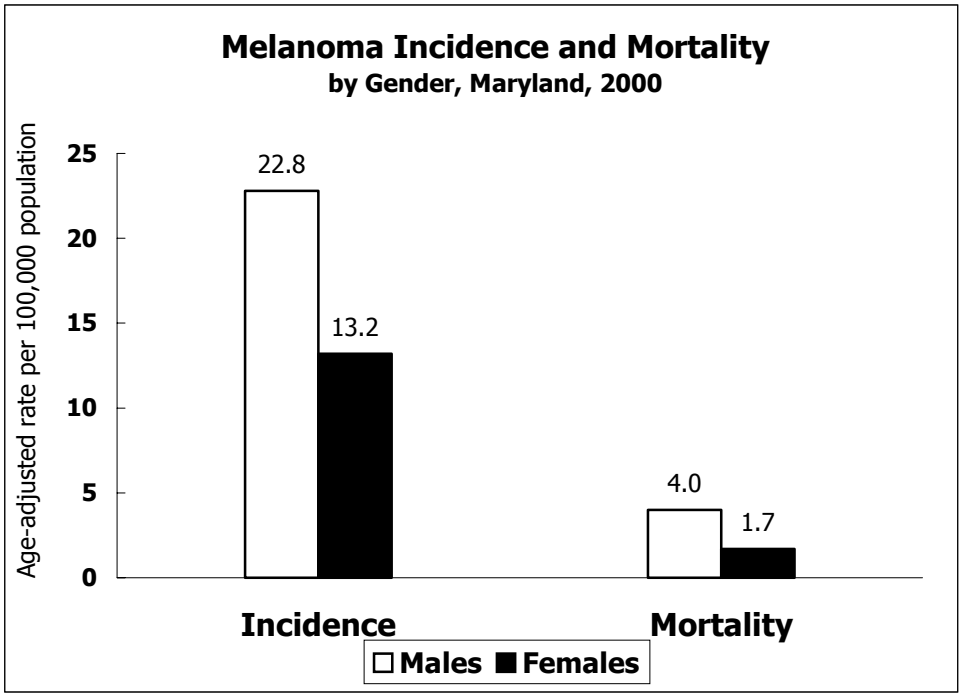



Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000

## ***Trend***

Melanoma incidence rates have increased an average of 2.5% per year from 1996 to 2000 in Maryland.

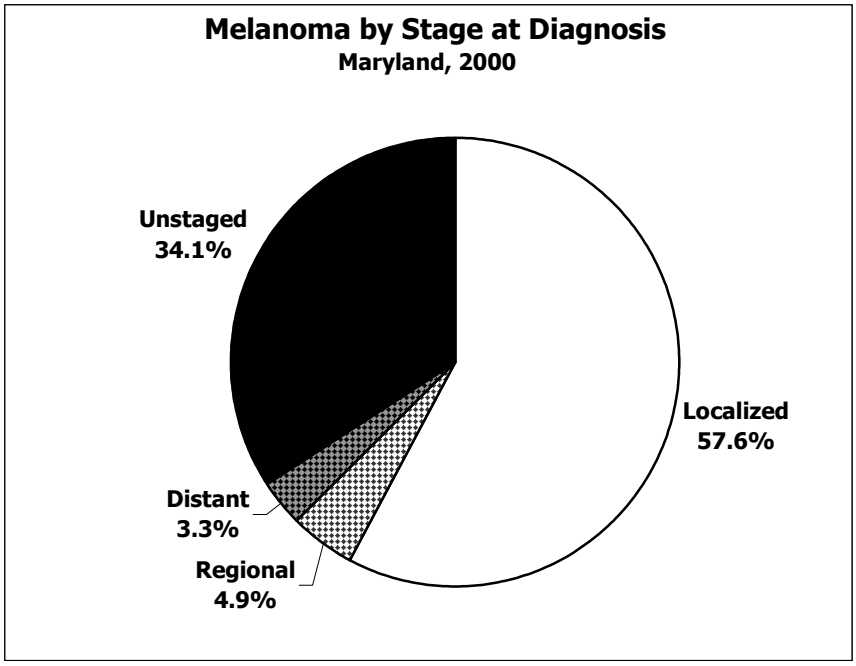
Melanoma mortality rates dropped an average of 1.6% per year in Maryland from 1996 to 2000.




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

## ***Gender-Specific Rates***

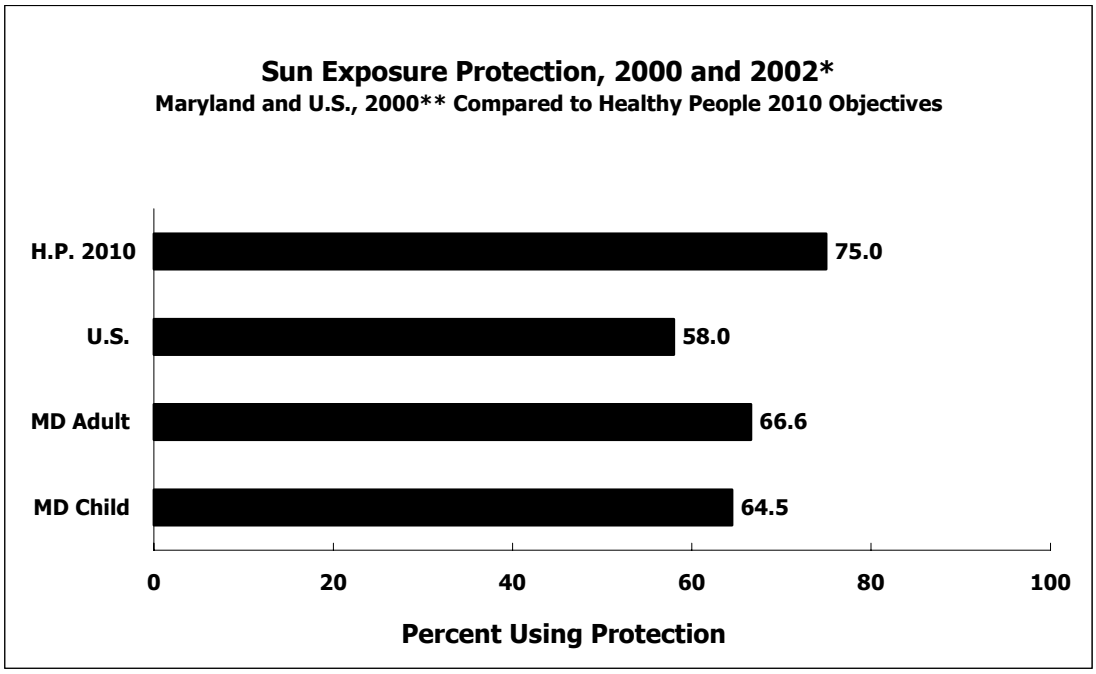
Males had statistically significantly higher incidence and mortality rates for melanoma than females. The mortality rate was more than double for males than for females.




Maryland Cancer Registry, 2000

## ***Stage at Diagnosis***

Of the 902 melanoma cases diagnosed in 2000, 57.6% were detected at the localized (early) stage. This present figure may be underrepresented due to the high percent of unstaged melanoma (34.1%).




*Adult 18 years of age or older; Maryland child under the age of 13 years
** The U.S. data are age-adjusted to 2000 U.S. standard population
BRFSS, Maryland DHMH Office of Surveillance and Assessment, 2000 (child data)
Maryland Cancer Survey, DHMH Center for Cancer Surveillance and Control, 2002 (adult data)
National Health Interview Survey, 2000
Healthy People 2010, U.S. Department of Health and Human Services, 2000

## ***Healthy People 2010 Objectives***

The Healthy People 2010 objective is to increase to 75% the percentage of persons 18 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).

In 2002, 66.6% of Maryland adults over age 40 reported using one or more of the first three measures listed above (MCS). In 2000, parents reported that 64.5% of Maryland children under age 13 when outdoors on a sunny day for an hour or more always or nearly always had their skin protected from the sun with protection such as sunscreen or sunblock or wearing hats or protective clothing (BRFSS).

## Public Health Evidence (National Cancer Institute, PDQ, 6/2003)

### Primary Prevention

Avoidance of sunburns, especially in childhood and adolescence, may reduce the incidence of melanoma. Sunburn can be avoided by reducing exposure to high-intensity ultraviolet (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.

Evidence suggests that reduction of exposure to UV radiation will reduce the incidence of non-melanoma skin cancer (basal cell and squamous cell cancer).

### Screening

There is insufficient evidence to determine whether a decrease in mortality from melanoma occurs with routine examination of the skin (by self or provider). There is also insufficient evidence to establish whether other theoretical benefits (such as decreased morbidity from less aggressive treatments) or harms associated with incorrect diagnosis occur.

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

# Table 57.
# Number of Melanoma Cancer Cases
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 902 | 526 | 376 | 754 | 7 | 10 |
| | | | | | | |
| Allegany | 7 | <6 | <6 | 7 | 0 | 0 |
| Anne Arundel | 100 | 63 | 37 | s | <6 | <6 |
| Baltimore City | 50 | 34 | 16 | 49 | 0 | 0 |
| Baltimore County | 169 | 90 | 79 | 149 | <6 | <6 |
| Calvert | 14 | 8 | 6 | 13 | 0 | 0 |
| Caroline | 11 | s | <6 | 11 | 0 | 0 |
| Carroll | 38 | 27 | 11 | s | 0 | <6 |
| Cecil | 14 | 7 | 7 | 12 | 0 | 0 |
| Charles | 15 | s | <6 | 13 | 0 | 0 |
| Dorchester | 8 | <6 | <6 | 8 | 0 | 0 |
| Frederick | 35 | 23 | 12 | 34 | 0 | 0 |
| Garrett | <6 | 0 | <6 | <6 | 0 | 0 |
| Harford | 54 | 27 | 27 | 46 | 0 | 0 |
| Howard | 43 | 19 | 24 | 39 | 0 | 0 |
| Kent | <6 | <6 | <6 | <6 | 0 | 0 |
| Montgomery | 152 | 92 | 60 | 109 | <6 | <6 |
| Prince George's | 54 | 38 | 16 | 37 | <6 | <6 |
| Queen Anne's | 8 | <6 | <6 | 7 | 0 | 0 |
| Saint Mary's | 15 | s | <6 | 13 | 0 | 0 |
| Somerset | <6 | <6 | <6 | <6 | 0 | 0 |
| Talbot | 11 | <6 | s | 11 | 0 | 0 |
| Washington | 31 | 18 | 13 | 30 | 0 | 0 |
| Wicomico | 36 | 20 | 16 | 34 | 0 | 0 |
| Worcester | 19 | 11 | 8 | s | 0 | <6 |
| Unknown | <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, 2000

# Table 58.
# Melanoma Cancer Age-Adjusted Incidence Rates* by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 17.2 | 22.8 | 13.2 | 20.2 | ** | ** |
| | | | | | | |
| Allegany | ** | ** | ** | ** | 0.0 | 0.0 |
| Anne Arundel | 20.6 | 27.8 | 14.5 | 17.4 | ** | ** |
| Baltimore City | 7.6 | 13.1 | ** | 18.6 | 0.0 | 0.0 |
| Baltimore County | 20.8 | 24.6 | 18.0 | 22.7 | ** | ** |
| Calvert | ** | ** | ** | ** | 0.0 | 0.0 |
| Caroline | ** | ** | ** | ** | 0.0 | 0.0 |
| Carroll | 25.2 | 37.5 | ** | 21.3 | 0.0 | ** |
| Cecil | ** | ** | ** | ** | 0.0 | 0.0 |
| Charles | ** | ** | ** | ** | 0.0 | 0.0 |
| Dorchester | ** | ** | ** | ** | 0.0 | 0.0 |
| Frederick | 18.7 | ** | ** | 19.6 | 0.0 | 0.0 |
| Garrett | ** | 0.0 | ** | ** | 0.0 | 0.0 |
| Harford | 26.0 | 28.1 | 23.9 | 24.5 | 0.0 | 0.0 |
| Howard | 20.4 | ** | ** | 23.7 | 0.0 | 0.0 |
| Kent | ** | ** | ** | ** | 0.0 | 0.0 |
| Montgomery | 17.6 | 24.3 | 12.7 | 16.4 | ** | ** |
| Prince George's | 8.9 | 15.2 | ** | 14.0 | ** | ** |
| Queen Anne's | ** | ** | ** | ** | 0.0 | 0.0 |
| Saint Mary's | ** | ** | ** | ** | 0.0 | 0.0 |
| Somerset | ** | ** | ** | ** | 0.0 | 0.0 |
| Talbot | ** | ** | ** | ** | 0.0 | 0.0 |
| Washington | 21.9 | ** | ** | 22.9 | 0.0 | 0.0 |
| Wicomico | 42.8 | ** | ** | 52.6 | 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, 2000

# Table 59.
# Number of Melanoma Cancer Deaths
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 132 | 84 | 48 | 124 | s | <6 |
| | | | | | | |
| Allegany | <6 | <6 | 0 | <6 | 0 | 0 |
| Anne Arundel | 9 | s | <6 | 9 | 0 | 0 |
| Baltimore City | 9 | s | <6 | s | <6 | 0 |
| Baltimore County | 27 | 15 | 12 | s | <6 | 0 |
| Calvert | <6 | <6 | <6 | <6 | 0 | 0 |
| Caroline | <6 | 0 | <6 | <6 | 0 | 0 |
| Carroll | 7 | <6 | <6 | 7 | 0 | 0 |
| Cecil | <6 | <6 | <6 | <6 | 0 | 0 |
| Charles | <6 | <6 | 0 | <6 | 0 | 0 |
| Dorchester | 0 | 0 | 0 | 0 | 0 | 0 |
| Frederick | <6 | <6 | 0 | <6 | 0 | 0 |
| Garrett | <6 | <6 | <6 | <6 | 0 | 0 |
| Harford | <6 | <6 | <6 | <6 | 0 | 0 |
| Howard | <6 | <6 | <6 | <6 | 0 | 0 |
| Kent | <6 | <6 | 0 | <6 | 0 | 0 |
| Montgomery | 22 | 13 | 9 | s | 0 | <6 |
| Prince George's | 14 | s | <6 | s | <6 | 0 |
| Queen Anne's | 0 | 0 | 0 | 0 | 0 | 0 |
| Saint Mary's | <6 | <6 | <6 | <6 | 0 | 0 |
| Somerset | <6 | 0 | <6 | <6 | 0 | 0 |
| Talbot | <6 | <6 | <6 | <6 | 0 | 0 |
| Washington | <6 | <6 | <6 | <6 | 0 | 0 |
| Wicomico | <6 | <6 | 0 | <6 | 0 | 0 |
| Worcester | <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 Division of Health Statistics, 2000

# Table 60.
# Melanoma Cancer Age-Adjusted Mortality Rates*
# by Jurisdiction, Gender and Race, Maryland, 2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 2.7 | 4.0 | 1.7 | 3.3 | ** | ** |
| | | | | | | |
| Allegany | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Anne Arundel | ** | ** | ** | ** | 0.0 | 0.0 |
| Baltimore City | ** | ** | ** | ** | ** | 0.0 |
| Baltimore County | 3.1 | ** | ** | 3.4 | ** | 0.0 |
| Calvert | ** | ** | ** | ** | 0.0 | 0.0 |
| Caroline | ** | 0.0 | ** | ** | 0.0 | 0.0 |
| Carroll | ** | ** | ** | ** | 0.0 | 0.0 |
| Cecil | ** | ** | ** | ** | 0.0 | 0.0 |
| Charles | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Dorchester | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Frederick | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Garrett | ** | ** | ** | ** | 0.0 | 0.0 |
| Harford | ** | ** | ** | ** | 0.0 | 0.0 |
| Howard | ** | ** | ** | ** | 0.0 | 0.0 |
| Kent | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Montgomery | ** | ** | ** | ** | 0.0 | ** |
| Prince George's | ** | ** | ** | ** | ** | 0.0 |
| Queen Anne's | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Saint Mary's | ** | ** | ** | ** | 0.0 | 0.0 |
| Somerset | ** | 0.0 | ** | ** | 0.0 | 0.0 |
| Talbot | ** | ** | ** | ** | 0.0 | 0.0 |
| Washington | ** | ** | ** | ** | 0.0 | 0.0 |
| Wicomico | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Worcester | ** | ** | 0.0 | ** | 0.0 | 0.0 |

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

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

Source: Maryland Division of Health Statistics, 2000

# Table 61
# Number of Melanoma Cancer Cases
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | | |
|---|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Others | Unknown |
| Maryland | 4,113 | 2,343 | 1,769 | 3,493 | 50 | 64 | 506 |
| | | | | | | | |
| Allegany | 59 | 31 | 28 | 59 | 0 | 0 | 0 |
| Anne Arundel | 495 | 283 | 212 | 364 | <6 | s | 115 |
| Baltimore City | 279 | 162 | 117 | 242 | s | <6 | 27 |
| Baltimore County | 746 | 401 | 345 | 676 | 7 | 13 | 50 |
| Calvert | 58 | 26 | 32 | 49 | 0 | <6 | s |
| Caroline | 39 | 25 | 14 | 39 | 0 | 0 | 0 |
| Carroll | 176 | 112 | 64 | 154 | <6 | <6 | 17 |
| Cecil | 74 | 34 | 40 | 70 | 0 | <6 | <6 |
| Charles | 66 | 39 | 27 | 53 | <6 | 0 | s |
| Dorchester | 25 | 13 | 12 | 25 | 0 | 0 | 0 |
| Frederick | 166 | 107 | 59 | 141 | <6 | 0 | s |
| Garrett | 20 | 9 | 11 | s | <6 | 0 | 0 |
| Harford | 231 | 117 | 114 | 211 | <6 | 0 | s |
| Howard | 194 | 105 | 89 | 163 | <6 | <6 | s |
| Kent | 28 | 18 | 10 | s | <6 | 0 | 0 |
| Montgomery | 667 | 397 | 269 | 517 | <6 | s | 131 |
| Prince George's | 219 | 133 | 86 | 168 | s | <6 | 35 |
| Queen Anne's | 43 | 25 | 18 | s | 0 | 0 | <6 |
| Saint Mary's | 63 | 40 | 23 | s | 0 | 0 | <6 |
| Somerset | 25 | 12 | 13 | 22 | 0 | <6 | <6 |
| Talbot | 50 | 25 | 25 | s | 0 | 0 | <6 |
| Washington | 160 | 96 | 64 | 150 | 0 | 0 | 10 |
| Wicomico | 119 | 65 | 54 | 110 | <6 | <6 | s |
| Worcester | 90 | 57 | 33 | 78 | 0 | <6 | s |
| Unknown | 21 | 11 | 10 | 10 | 0 | s | <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, 1996-2000

# Table 62.
# Melanoma Cancer Age-Adjusted Incidence Rates*
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Others |
| Maryland | 16.4 | 21.5 | 13.0 | 19.1 | 1.0 | 7.9 |
| | | | | | | |
| Allegany | 14.4 | 16.0 | 13.1 | 14.9 | 0.0 | 0.0 |
| Anne Arundel | 21.9 | 28.5 | 17.5 | 19.0 | ** | ** |
| Baltimore City | 8.6 | 12.6 | 6.3 | 18.4 | ** | ** |
| Baltimore County | 18.6 | 22.8 | 16.1 | 19.9 | ** | ** |
| Calvert | 18.1 | 20.1 | 17.7 | 19.3 | 0.0 | ** |
| Caroline | 25.8 | ** | ** | 32.0 | 0.0 | 0.0 |
| Carroll | 24.2 | 34.3 | 16.1 | 22.1 | ** | ** |
| Cecil | 19.4 | 20.9 | 19.9 | 19.4 | 0.0 | ** |
| Charles | 13.2 | 17.7 | 9.8 | 14.3 | ** | 0.0 |
| Dorchester | ** | ** | ** | ** | 0.0 | 0.0 |
| Frederick | 20.2 | 29.8 | 12.8 | 18.4 | ** | 0.0 |
| Garrett | ** | ** | ** | ** | ** | 0.0 |
| Harford | 22.7 | 24.6 | 21.0 | 23.3 | ** | 0.0 |
| Howard | 19.1 | 23.8 | 16.1 | 20.2 | ** | ** |
| Kent | 25.9 | ** | ** | 32.8 | ** | 0.0 |
| Montgomery | 16.0 | 21.9 | 11.9 | 15.8 | ** | ** |
| Prince George's | 7.2 | 10.3 | 4.9 | 11.3 | ** | ** |
| Queen Anne's | 21.7 | ** | ** | 23.0 | 0.0 | 0.0 |
| Saint Mary's | 17.1 | 22.1 | ** | 19.3 | 0.0 | 0.0 |
| Somerset | ** | ** | ** | ** | 0.0 | ** |
| Talbot | 25.1 | ** | ** | 31.2 | 0.0 | 0.0 |
| Washington | 23.5 | 30.3 | 19.1 | 23.3 | 0.0 | 0.0 |
| Wicomico | 29.8 | 39.4 | 25.1 | 36.6 | ** | ** |
| Worcester | 33.7 | 44.3 | 24.9 | 37.9 | 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, 1996-2000

# Table 63.
# Number of Melanoma Cancer Deaths
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 603 | 375 | 228 | 582 | s | <6 |
| | | | | | | |
| Allegany | 11 | s | <6 | 11 | 0 | 0 |
| Anne Arundel | 57 | 44 | 13 | s | <6 | 0 |
| Baltimore City | 53 | 26 | 27 | s | <6 | 0 |
| Baltimore County | 110 | 63 | 47 | s | <6 | 0 |
| Calvert | 14 | s | <6 | 14 | 0 | 0 |
| Caroline | <6 | 0 | <6 | <6 | 0 | 0 |
| Carroll | 33 | 18 | 15 | 33 | 0 | 0 |
| Cecil | 18 | 10 | 8 | 18 | 0 | 0 |
| Charles | 10 | s | <6 | 10 | 0 | 0 |
| Dorchester | <6 | <6 | 0 | <6 | 0 | 0 |
| Frederick | 22 | s | <6 | 22 | 0 | 0 |
| Garrett | <6 | <6 | <6 | <6 | 0 | 0 |
| Harford | 25 | 13 | 12 | 25 | 0 | 0 |
| Howard | 27 | 16 | 11 | 27 | 0 | 0 |
| Kent | <6 | <6 | 0 | <6 | 0 | 0 |
| Montgomery | 103 | 67 | 36 | 99 | <6 | <6 |
| Prince George's | 43 | 29 | 14 | 36 | 7 | 0 |
| Queen Anne's | 7 | <6 | <6 | 7 | 0 | 0 |
| Saint Mary's | 12 | s | <6 | 12 | 0 | 0 |
| Somerset | <6 | <6 | <6 | <6 | 0 | 0 |
| Talbot | 9 | s | <6 | 9 | 0 | 0 |
| Washington | 15 | 8 | 7 | 15 | 0 | 0 |
| Wicomico | 12 | s | <6 | s | <6 | 0 |
| Worcester | 9 | <6 | <6 | 9 | 0 | 0 |

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

Source: Maryland Division of Health Statistics, 1996-2000

# Table 64.
# Melanoma Cancer Age-Adjusted Mortality Rates*
# by Jurisdiction, Gender and Race, Maryland, 1996-2000

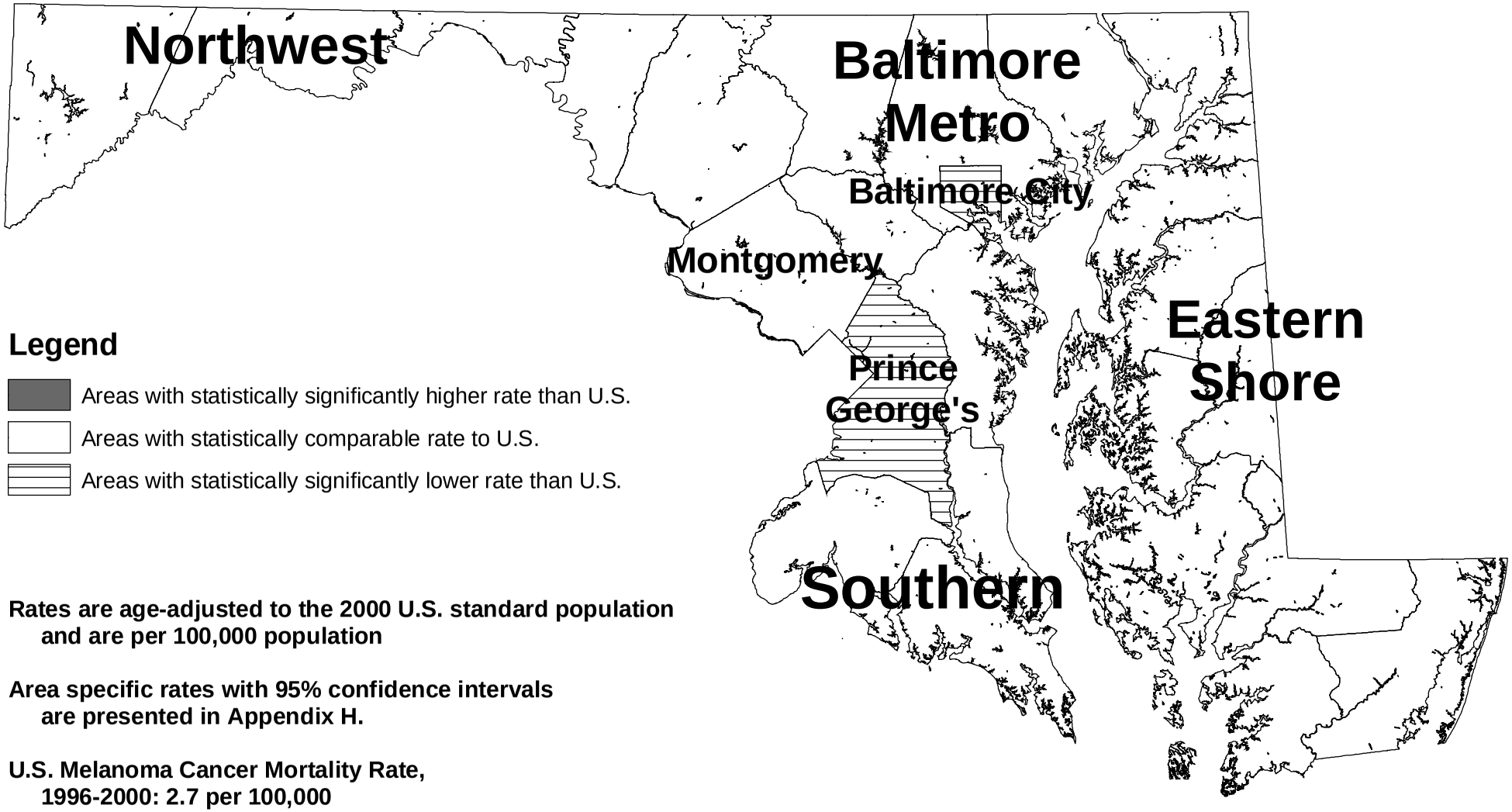
| Jurisdiction | Total | Gender | | Race | | |
|---|---|---|---|---|---|---|
| | | Males | Females | Whites | Blacks | Other |
| Maryland | 2.5 | 3.7 | 1.7 | 3.2 | ** | ** |
| | | | | | | |
| Allegany | ** | ** | ** | ** | 0.0 | 0.0 |
| Anne Arundel | 2.7 | 4.7 | ** | 3.1 | ** | 0.0 |
| Baltimore City | 1.6 | 2.0 | 1.4 | 3.5 | ** | 0.0 |
| Baltimore County | 2.7 | 3.7 | 2.0 | 3.0 | ** | 0.0 |
| Calvert | ** | ** | ** | ** | 0.0 | 0.0 |
| Caroline | ** | 0.0 | ** | ** | 0.0 | 0.0 |
| Carroll | 4.9 | ** | ** | 5.0 | 0.0 | 0.0 |
| Cecil | ** | ** | ** | ** | 0.0 | 0.0 |
| Charles | ** | ** | ** | ** | 0.0 | 0.0 |
| Dorchester | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Frederick | ** | ** | ** | ** | 0.0 | 0.0 |
| Garrett | ** | ** | ** | ** | 0.0 | 0.0 |
| Harford | ** | ** | ** | ** | 0.0 | 0.0 |
| Howard | 2.8 | ** | ** | 3.5 | 0.0 | 0.0 |
| Kent | ** | ** | 0.0 | ** | 0.0 | 0.0 |
| Montgomery | 2.6 | 4.1 | 1.6 | 3.1 | ** | ** |
| Prince George's | 1.5 | 2.7 | ** | 2.4 | ** | 0.0 |
| Queen Anne's | ** | ** | ** | ** | 0.0 | 0.0 |
| Saint Mary's | ** | ** | ** | ** | 0.0 | 0.0 |
| Somerset | ** | ** | ** | ** | 0.0 | 0.0 |
| Talbot | ** | ** | ** | ** | 0.0 | 0.0 |
| Washington | ** | ** | ** | ** | 0.0 | 0.0 |
| Wicomico | ** | ** | ** | ** | ** | 0.0 |
| Worcester | ** | ** | ** | ** | 0.0 | 0.0 |

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

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

Source: Maryland Division of Health Statistics, 1996-2000

# Maryland Melanoma Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rates, 1996-2000




**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, 1996-2000: 2.7 per 100,000**

**Source: Maryland Division of Health Statistics, 1996-2000**

# G. Cervical Cancer

***Incidence (New Cases)***

A total of 226 women in Maryland were diagnosed with cervical cancer in 2000. The age-adjusted incidence rate for cervical cancer in Maryland for 2000 is 7.9 per 100,000 population of women (6.9-9.0, 95% C.I.). This rate is similar to the 2000 U.S. SEER age-adjusted cervical cancer incidence rate of 7.6 per 100,000 population of women.

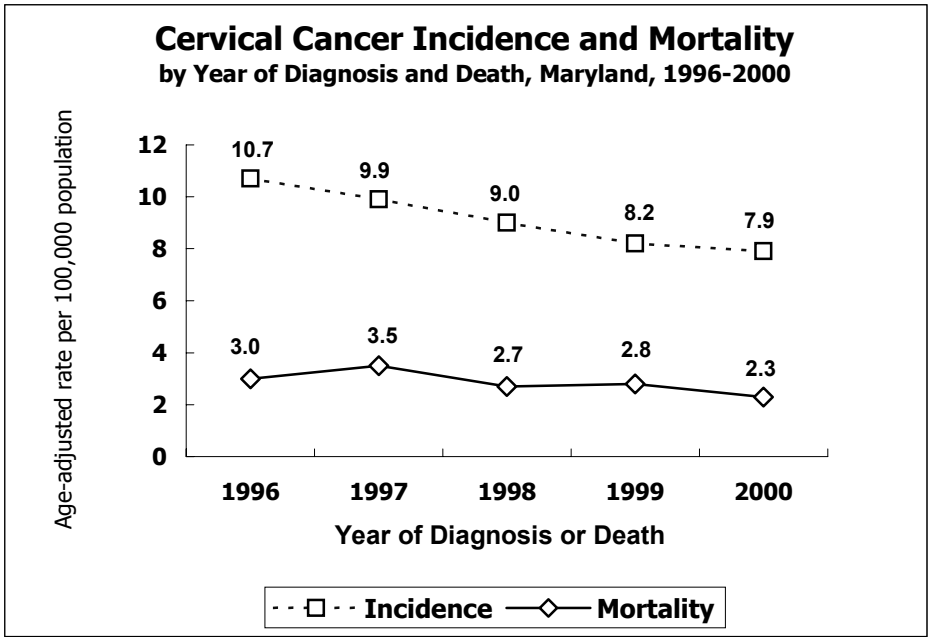
***Mortality (Deaths)***

In 2000, a total of 66 women died of cervical cancer in Maryland. The age-adjusted cervical cancer mortality rate in Maryland is 2.3 per 100,000 women (1.8-2.9, 95% C.I.). This rate is similar to the 2000 U.S. cervical cancer mortality rate of 2.8 per 100,000 population of women. Maryland women rank 28th highest for cervical cancer mortality rate among the states and the District of Columbia.

**Table 65.**
**Cervical Cancer Incidence and Mortality Rates**
**by Race, Maryland and the United States, 2000**

| *Incidence 2000* | *Total* | *Whites* | *Blacks* |
|---|---|---|---|
| New Cases (#) | 226 | 124 | 78 |
| Incidence Rate* | 7.9 | 6.4 | 10.7 |
| U.S. SEER Rate* | 7.6 | 7.2 | 10.1 |
| *Mortality 2000* | *Total* | *Whites* | *Blacks* |
| MD Deaths (#) | 66 | 42 | 23 |
| MD Mortality Rate* | 2.3 | 2.1 | ** |
| U.S. Mortality Rate* | 2.8 | 2.5 | 5.5 |

* 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, 2000
Maryland Division of Health Statistics, 2000
SEER, National Cancer Institute, 2000

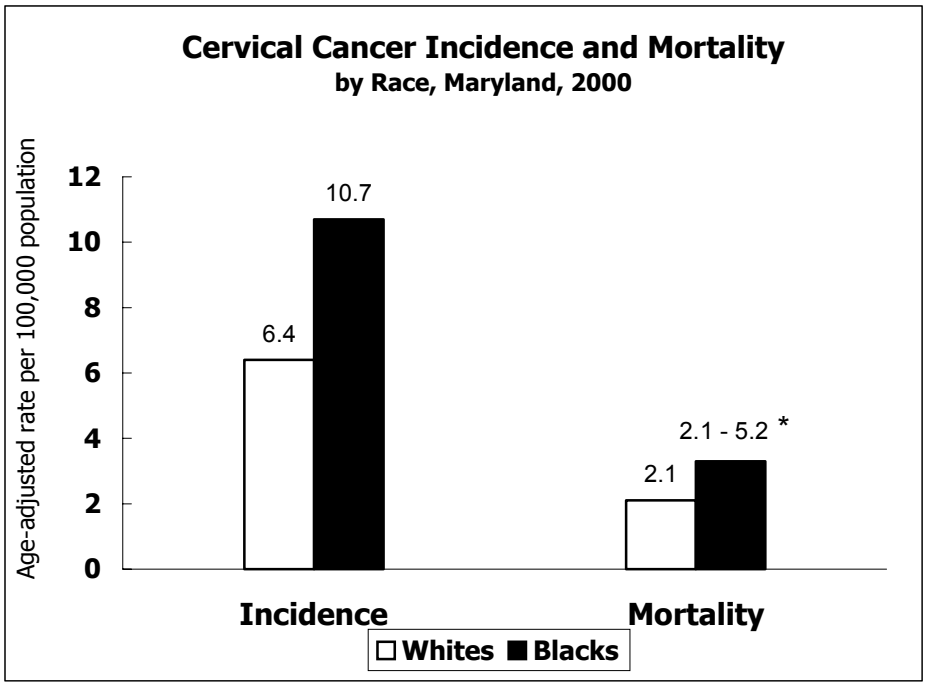



Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000

***Trend***

Cervical cancer incidence rates have decreased an average of 7.6% per year from 1996 to 2000 in Maryland.

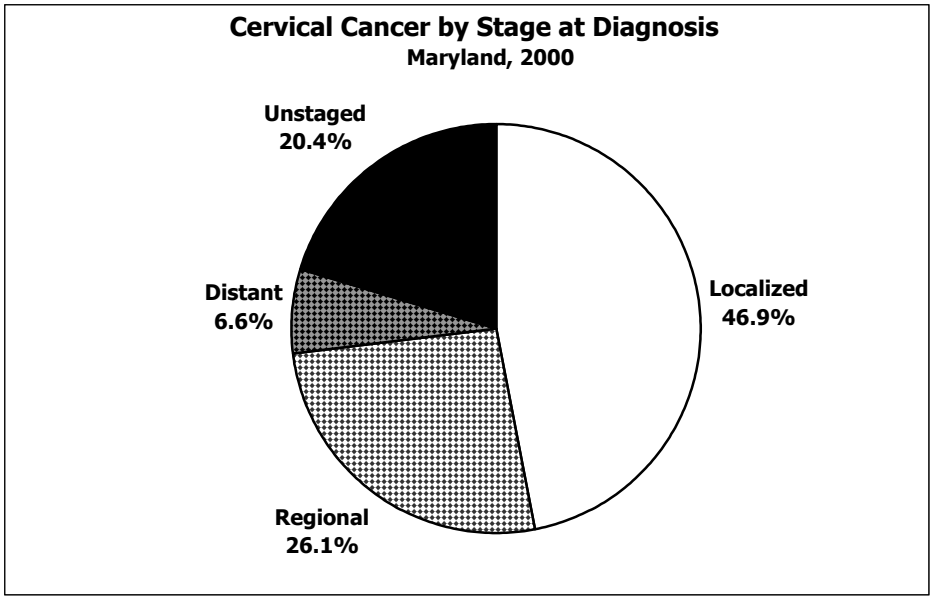
Mortality rates have also decreased an average of 7.3% per year from 1996 to 2000 in Maryland.




Rates are age-adjusted to 2000 U.S. standard population
Maryland Cancer Registry, 2000
Maryland Division of Health Statistics, 2000
* Confidence interval shown in place of rate for mortality data in blacks because the data are unstable due to the small number of deaths reported to MCR and per DHMH/MCR Data Use Policy

***Race-Specific Rates***

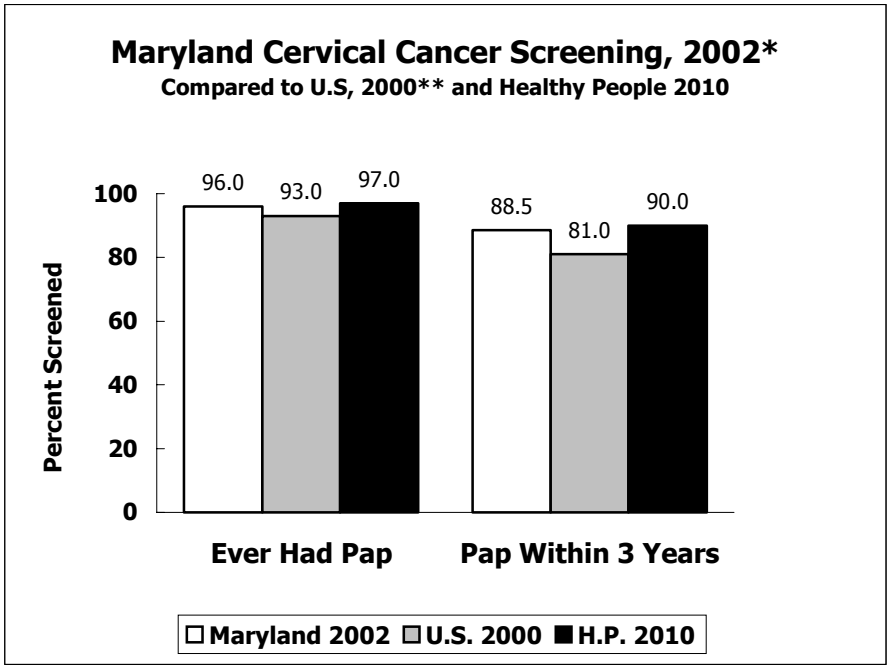
Incidence rates for black women were statistically significantly higher than for whites, whereas the mortality rates were similar for both white and black women in Maryland in 2000.




Maryland Cancer Registry, 2000

## ***Stage at Diagnosis***

In 2000, 46.9% of all cervical cancer cases were diagnosed in the localized (early) stage.




## ***Healthy People 2010 Objectives***

The Healthy People 2010 objectives for cervical cancer are to increase the percent of women 18 years and older who have *ever* had a Pap test to 97%, and to increase the percent of women 18 years and older who have had a Pap test within the preceding 3 years to 90%.

* Women 18 years of age and older
** The U.S. data are age-adjusted to 2000 U.S. standard population
BRFSS, Maryland DHMH Office Surveillance and Assessment, 2002
National Health Interview Survey, 2000
Healthy People 2010, U.S. Department of Health and Human Services, 2000

In the 2002 BRFSS survey, 96.0% of Maryland women 18 years and older report *ever* having a Pap smear compared to 94.9% in 2000 and 94.2% in 1999. In 2002, 88.5% of women 18 years and older said they had had their Pap smear within the preceding 3 years compared to 87.8% in 2000 and 87.2% in 1999.

## Public Health Evidence (from National Cancer Institute, PDQ, 6/2003 and U.S. Preventive Services Task Force [USPSTF], 1/2003)

### Screening

Evidence strongly suggests that regular screening using the Pap smear test decreases incidence and mortality due to cervical cancer. Early detection, using cervical cytology, is currently the only practical means of detecting cervical cancer in localized or premalignant stages. Women who have not had regular Pap tests are at increased risk of cervical cancer. Receiving regular Pap tests is the most important step in detecting and preventing cervical cancer among women with a cervix. Cervical cancer screening should begin within three years after a woman begins having sexual intercourse, but no later than at 21 years old. The upper age limit at which such screening ceases to be effective is unknown but the USPSTF recommends against routinely screening women older than age 65 if they have had adequate recent screening with normal Pap smears and are not otherwise at high risk for cervical cancer.

The use of human papilloma virus (HPV) testing for primary population-based screening is not recommended due to low specificity, particularly among young sexually active women. An HPV test may be used as a secondary test following an atypical squamous cells of undetermined significance (ASC-US) or abnormal Pap test result, allowing the focus of work-up and treatment of those women who are most likely to progress to advanced disease. The American Society for Colposcopy and Cervical Pathology recommends an HPV high-risk panel test be performed after a Pap test with the result of ASC-US.

### Primary Prevention

Cervical infection with the HPV is the primary causative infectious agent for cervical cancer. However, HPV is very common, and only a small percentage of women infected with HPV will develop cervical cancer. HPV types 16 and 18 are most often associated with invasive cervical cancer. Women who have sexual intercourse before age 16 and women who have many sexual partners are at greater risk of HPV infection and developing cervical cancer. Women who are infected with the human immunodeficiency virus (HIV) are at increased risk for development of cervical cancer. Exposure to cigarette smoke is associated with increased risk. Education regarding risk factors for cervical cancer may lead to behavioral modification resulting in diminished exposure.

Vaccines that would immunize against HPV infection are in clinical trials. Preliminary evidence suggests a vaccine against HPV-16 using empty-viral capsids, called “virus-like particles,” reduces the risk of acquiring transient and persistent HPV-16 infections and cervical neoplasia. Vaccines for HPV-16 and other oncogenic strains may offer a primary prevention strategy for cervical cancer.

| **Public Health Intervention for Cervical Cancer (NCI, PDQ and USPSTF)** |
| --- |
| Early detection of cervical cancer:<br><br>➢ Screen using the Pap test for all women who have a cervix, within three years after onset of sexual activity or by age 21 if not sexually active. |

# Table 66.
# Number of Cervical Cancer Cases
# by Jurisdiction and Race, Maryland, 2000

| Jurisdiction | Total | Race | | | |
|---|---|---|---|---|---|
| | | Whites | Blacks | Other | Unknown |
| Maryland | 226 | 124 | 78 | 12 | 12 |
| | | | | | |
| Allegany | <6 | <6 | 0 | 0 | 0 |
| Anne Arundel | 16 | 8 | <6 | <6 | <6 |
| Baltimore City | 45 | s | 34 | 0 | <6 |
| Baltimore County | 26 | 16 | s | <6 | 0 |
| Calvert | <6 | <6 | 0 | 0 | 0 |
| Caroline | <6 | <6 | 0 | 0 | 0 |
| Carroll | <6 | <6 | 0 | 0 | 0 |
| Cecil | 9 | s | 0 | 0 | <6 |
| Charles | <6 | <6 | 0 | <6 | 0 |
| Dorchester | <6 | <6 | 0 | 0 | 0 |
| Frederick | 10 | 10 | 0 | 0 | 0 |
| Garrett | <6 | <6 | 0 | 0 | 0 |
| Harford | 8 | s | <6 | 0 | 0 |
| Howard | 7 | <6 | <6 | 0 | 0 |
| Kent | <6 | <6 | 0 | 0 | 0 |
| Montgomery | 31 | 17 | <6 | 6 | <6 |
| Prince George's | 37 | 12 | 20 | <6 | <6 |
| Queen Anne's | <6 | <6 | 0 | 0 | 0 |
| Saint Mary's | <6 | <6 | 0 | 0 | 0 |
| Somerset | <6 | <6 | 0 | 0 | 0 |
| Talbot | 6 | <6 | <6 | 0 | 0 |
| Washington | <6 | <6 | <6 | 0 | 0 |
| Wicomico | <6 | <6 | 0 | 0 | 0 |
| Worcester | <6 | <6 | <6 | 0 | 0 |
| Unknown | 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, 2000

# Table 67.
# Cervical Cancer Age-Adjusted Incidence Rates*
# by Jurisdiction and Race, Maryland, 2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 7.9 | 6.4 | 10.7 | ** |
| | | | | |
| Allegany | ** | ** | 0.0 | 0.0 |
| Anne Arundel | ** | ** | ** | ** |
| Baltimore City | 12.5 | ** | 15.2 | 0.0 |
| Baltimore County | 6.1 | ** | ** | ** |
| Calvert | ** | ** | 0.0 | 0.0 |
| Caroline | ** | ** | 0.0 | 0.0 |
| Carroll | ** | ** | 0.0 | 0.0 |
| Cecil | ** | ** | 0.0 | 0.0 |
| Charles | ** | ** | 0.0 | ** |
| Dorchester | ** | ** | 0.0 | 0.0 |
| Frederick | ** | ** | 0.0 | 0.0 |
| Garrett | ** | ** | 0.0 | 0.0 |
| Harford | ** | ** | ** | 0.0 |
| Howard | ** | ** | ** | 0.0 |
| Kent | ** | ** | 0.0 | 0.0 |
| Montgomery | 6.5 | ** | ** | ** |
| Prince George's | 8.8 | ** | ** | ** |
| Queen Anne's | ** | ** | 0.0 | 0.0 |
| Saint Mary's | ** | ** | 0.0 | 0.0 |
| Somerset | ** | ** | 0.0 | 0.0 |
| Talbot | ** | ** | ** | 0.0 |
| Washington | ** | ** | ** | 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, 2000

# Table 68.
# Number of Cervical Cancer Deaths
# by Jurisdiction and Race, Maryland, 2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 66 | 42 | s | <6 |
| | | | | |
| Allegany | 0 | 0 | 0 | 0 |
| Anne Arundel | <6 | <6 | 0 | 0 |
| Baltimore City | 20 | 7 | 13 | 0 |
| Baltimore County | 7 | s | <6 | 0 |
| Calvert | <6 | 0 | <6 | 0 |
| Caroline | <6 | 0 | <6 | 0 |
| Carroll | 0 | 0 | 0 | 0 |
| Cecil | <6 | <6 | 0 | 0 |
| Charles | <6 | <6 | <6 | 0 |
| Dorchester | 0 | 0 | 0 | 0 |
| Frederick | <6 | <6 | 0 | 0 |
| Garrett | 0 | 0 | 0 | 0 |
| Harford | <6 | <6 | 0 | 0 |
| Howard | <6 | <6 | <6 | 0 |
| Kent | 0 | 0 | 0 | 0 |
| Montgomery | <6 | <6 | 0 | <6 |
| Prince George's | 7 | <6 | <6 | 0 |
| Queen Anne's | <6 | <6 | 0 | 0 |
| Saint Mary's | 0 | 0 | 0 | 0 |
| Somerset | <6 | <6 | 0 | 0 |
| Talbot | <6 | <6 | <6 | 0 |
| Washington | <6 | <6 | 0 | 0 |
| Wicomico | <6 | <6 | 0 | 0 |
| Worcester | 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 Division of Health Statistics, 2000

# Table 69.
# Cervical Cancer Age-Adjusted Mortality Rates*
# by Jurisdiction and Race, Maryland, 2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 2.3 | 2.1 | ** | ** |
| | | | | |
| Allegany | 0.0 | 0.0 | 0.0 | 0.0 |
| Anne Arundel | ** | ** | 0.0 | 0.0 |
| Baltimore City | ** | ** | ** | 0.0 |
| Baltimore County | ** | ** | ** | 0.0 |
| Calvert | ** | 0.0 | ** | 0.0 |
| Caroline | ** | 0.0 | ** | 0.0 |
| Carroll | 0.0 | 0.0 | 0.0 | 0.0 |
| Cecil | ** | ** | 0.0 | 0.0 |
| Charles | ** | ** | ** | 0.0 |
| Dorchester | 0.0 | 0.0 | 0.0 | 0.0 |
| Frederick | ** | ** | 0.0 | 0.0 |
| Garrett | 0.0 | 0.0 | 0.0 | 0.0 |
| Harford | ** | ** | 0.0 | 0.0 |
| Howard | ** | ** | ** | 0.0 |
| Kent | 0.0 | 0.0 | 0.0 | 0.0 |
| Montgomery | ** | ** | 0.0 | ** |
| Prince George's | ** | ** | ** | 0.0 |
| Queen Anne's | ** | ** | 0.0 | 0.0 |
| Saint Mary's | 0.0 | 0.0 | 0.0 | 0.0 |
| Somerset | ** | ** | 0.0 | 0.0 |
| Talbot | ** | ** | ** | 0.0 |
| Washington | ** | ** | 0.0 | 0.0 |
| Wicomico | ** | ** | 0.0 | 0.0 |
| Worcester | 0.0 | 0.0 | 0.0 | 0.0 |

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

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

Source: Maryland Division of Health Statistics, 2000

# Table 70.
# Number of Cervical Cancer Cases
# by Jurisdiction and Race, Maryland, 1996-2000

| Jurisdiction | Total | Race | | | |
|---|---|---|---|---|---|
| | | Whites | Blacks | Others | Unknown |
| Maryland | 1,253 | 756 | 375 | 65 | 57 |
| | | | | | |
| Allegany | 26 | s | 0 | 0 | <6 |
| Anne Arundel | 101 | 68 | 20 | 6 | 7 |
| Baltimore City | 238 | 79 | 151 | <6 | <6 |
| Baltimore County | 147 | 101 | 35 | <6 | s |
| Calvert | 15 | s | <6 | 0 | 0 |
| Caroline | 9 | s | <6 | 0 | 0 |
| Carroll | 32 | s | <6 | 0 | <6 |
| Cecil | 22 | s | <6 | <6 | <6 |
| Charles | 29 | 17 | <6 | <6 | <6 |
| Dorchester | 7 | <6 | <6 | 0 | 0 |
| Frederick | 50 | s | 0 | <6 | 0 |
| Garrett | 6 | 6 | 0 | 0 | 0 |
| Harford | 43 | 35 | s | 0 | <6 |
| Howard | 37 | 24 | 9 | <6 | <6 |
| Kent | <6 | <6 | <6 | 0 | 0 |
| Montgomery | 164 | 105 | 20 | 28 | 11 |
| Prince George's | 176 | 55 | 98 | 13 | 10 |
| Queen Anne's | 9 | s | <6 | 0 | <6 |
| Saint Mary's | 23 | 19 | <6 | 0 | <6 |
| Somerset | 10 | s | <6 | 0 | 0 |
| Talbot | 10 | s | <6 | 0 | 0 |
| Washington | 36 | s | <6 | 0 | <6 |
| Wicomico | 32 | 24 | s | <6 | <6 |
| Worcester | 18 | s | <6 | 0 | 0 |
| Unknown | 9 | <6 | 0 | <6 | <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, 1996-2000

# Table 71.
# Cervical Cancer Age-Adjusted Incidence Rates*
# by Jurisdiction and Race, Maryland, 1996-2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Others |
| Maryland | 9.1 | 7.9 | 11.2 | 12.7 |
| | | | | |
| Allegany | 12.0 | ** | 0.0 | 0.0 |
| Anne Arundel | 8.2 | 6.6 | ** | ** |
| Baltimore City | 13.1 | 11.9 | 13.6 | ** |
| Baltimore County | 7.0 | 5.8 | 12.5 | ** |
| Calvert | ** | ** | ** | 0.0 |
| Caroline | ** | ** | ** | 0.0 |
| Carroll | 8.7 | 8.5 | ** | 0.0 |
| Cecil | ** | ** | ** | ** |
| Charles | 10.3 | ** | ** | ** |
| Dorchester | ** | ** | ** | 0.0 |
| Frederick | 11.3 | 11.9 | 0.0 | ** |
| Garrett | ** | ** | 0.0 | 0.0 |
| Harford | 8.0 | 7.4 | ** | 0.0 |
| Howard | 6.2 | ** | ** | ** |
| Kent | ** | ** | ** | 0.0 |
| Montgomery | 7.1 | 6.0 | ** | 12.4 |
| Prince George's | 9.4 | 7.3 | 10.5 | ** |
| Queen Anne's | ** | ** | ** | 0.0 |
| Saint Mary's | ** | ** | ** | 0.0 |
| Somerset | ** | ** | ** | 0.0 |
| Talbot | ** | ** | ** | 0.0 |
| Washington | 10.6 | 10.3 | ** | 0.0 |
| Wicomico | 15.2 | ** | ** | ** |
| 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, 1996-2000

# Table 72.
# Number of Cervical Cancer Deaths
# by Jurisdiction and Race, Maryland, 1996-2000

| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 388 | 227 | 150 | 11 |
| | | | | |
| Allegany | 9 | 9 | 0 | 0 |
| Anne Arundel | 20 | s | <6 | 0 |
| Baltimore City | 106 | s | 70 | <6 |
| Baltimore County | 33 | 25 | s | <6 |
| Calvert | <6 | <6 | <6 | <6 |
| Caroline | <6 | <6 | <6 | 0 |
| Carroll | 8 | s | <6 | 0 |
| Cecil | 8 | <6 | <6 | 0 |
| Charles | 9 | 6 | <6 | <6 |
| Dorchester | 7 | s | <6 | 0 |
| Frederick | 11 | 11 | 0 | 0 |
| Garrett | <6 | <6 | 0 | 0 |
| Harford | 14 | s | <6 | 0 |
| Howard | 15 | 11 | <6 | <6 |
| Kent | <6 | <6 | <6 | 0 |
| Montgomery | 35 | 25 | s | <6 |
| Prince George's | 48 | s | 30 | <6 |
| Queen Anne's | <6 | <6 | 0 | 0 |
| Saint Mary's | <6 | <6 | <6 | 0 |
| Somerset | <6 | <6 | <6 | 0 |
| Talbot | 6 | <6 | <6 | 0 |
| Washington | 19 | s | <6 | 0 |
| Wicomico | 11 | s | <6 | 0 |
| Worcester | 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 Division of Health Statistics, 1996-2000

## Table 73.
## Cervical Cancer Age-Adjusted Mortality Rates* by Jurisdiction and Race, Maryland, 1996-2000

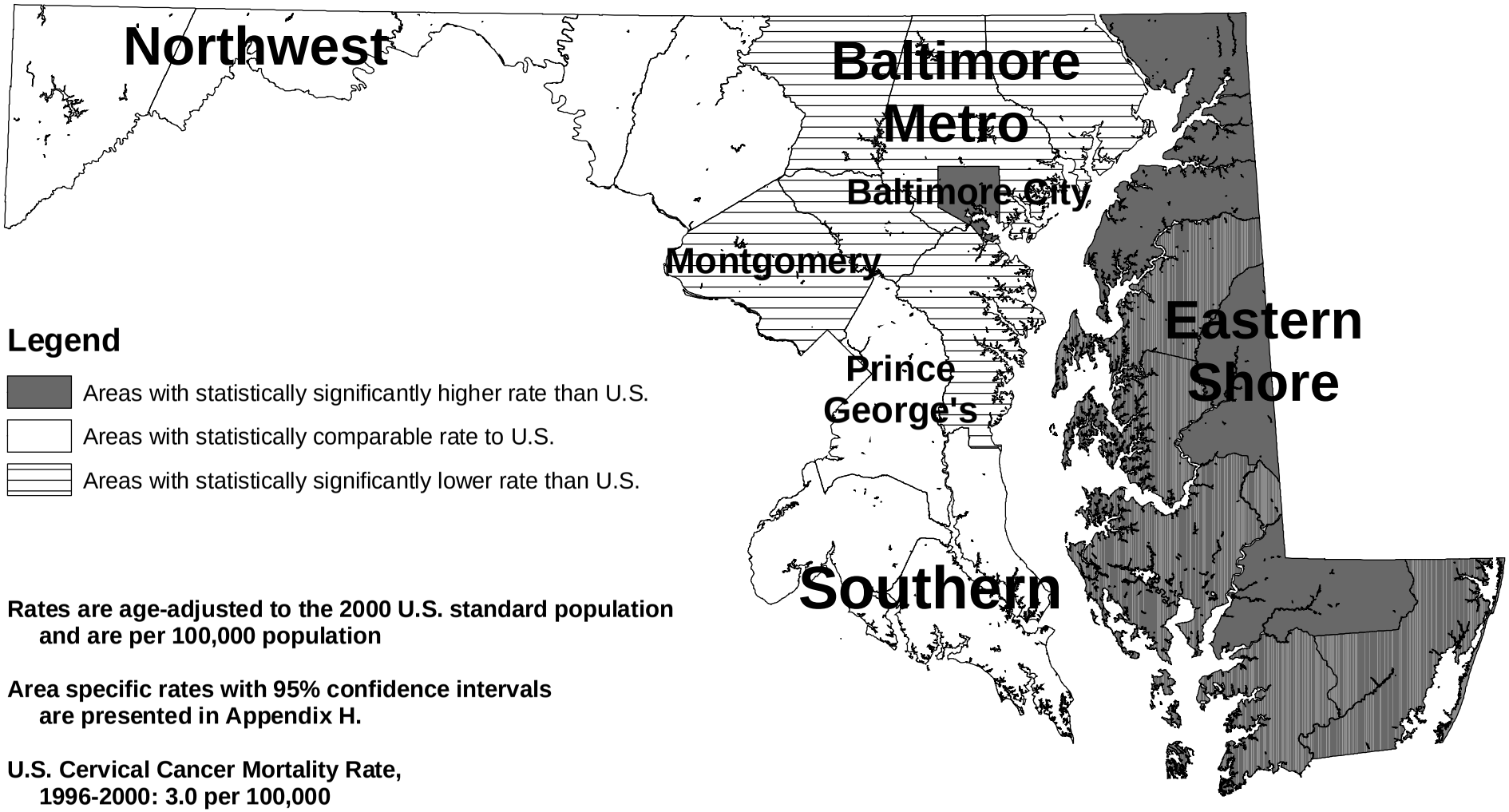
| Jurisdiction | Total | Race | | |
|---|---|---|---|---|
| | | Whites | Blacks | Other |
| Maryland | 2.9 | 2.3 | 4.8 | ** |
| | | | | |
| Allegany | ** | ** | 0.0 | 0.0 |
| Anne Arundel | ** | ** | ** | 0.0 |
| Baltimore City | 5.9 | 4.9 | 6.4 | ** |
| Baltimore County | 1.5 | ** | ** | ** |
| Calvert | ** | ** | ** | ** |
| Caroline | ** | ** | ** | 0.0 |
| Carroll | ** | ** | ** | 0.0 |
| Cecil | ** | ** | ** | 0.0 |
| Charles | ** | ** | ** | ** |
| Dorchester | ** | ** | ** | 0.0 |
| Frederick | ** | ** | 0.0 | 0.0 |
| Garrett | ** | ** | 0.0 | 0.0 |
| Harford | ** | ** | ** | 0.0 |
| Howard | ** | ** | ** | ** |
| Kent | ** | ** | ** | 0.0 |
| Montgomery | 1.5 | ** | ** | ** |
| Prince George's | 2.6 | ** | 3.2 | ** |
| Queen Anne's | ** | ** | 0.0 | 0.0 |
| Saint Mary's | ** | ** | ** | 0.0 |
| Somerset | ** | ** | ** | 0.0 |
| Talbot | ** | ** | ** | 0.0 |
| Washington | ** | ** | ** | 0.0 |
| Wicomico | ** | ** | ** | 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 Division of Health Statistics, 1996-2000

# Maryland Cervical Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rates, 1996-2000




**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, 1996-2000: 3.0 per 100,000**

**Source: Maryland Division of Health Statistics, 1996-2000**

# IV. County-Specific Data

### Incidence and Mortality Data by County

Five-year combined incidence and mortality data for 1996 to 2000 by jurisdiction, presented with the 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 (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Allegany County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 2,432 | 509.0 | 498.1 | 480.4 | 1,043 | 206.3 | 216.3 | 202.3 |
| Lung and Bronchus | 399 | 79.4 | 75.3 | 65.5 | 317 | 62.3 | 61.6 | 56.8 |
| Colorectal | 337 | 67.4 | 58.3 | 55.1 | 143 | 28.1 | 24.0 | 21.2 |
| Female Breast | 317 | 121.6 | 140.0 | 137.1 | 55 | 17.4 | 30.0 | 27.7 |
| Prostate | 345 | 165.6 | 184.6 | 172.8 | 47 | 25.3 | 36.3 | 32.9 |
| Oral | 59 | 13.0 | 11.5 | 11.1 | 17 | ** | 3.3 | 2.9 |
| Melanoma | 59 | 14.4 | 16.4 | 17.5 | 11 | ** | 2.5 | 2.7 |
| Cervical | 26 | 12.0 | 9.1 | 8.7 | 9 | ** | 2.9 | 3.0 |

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, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 75.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Anne Arundel County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 10,847 | 520.9 | 498.1 | 480.4 | 4,378 | 225.4 | 216.3 | 202.3 |
| Lung and Bronchus | 1,784 | 88.7 | 75.3 | 65.5 | 1,389 | 70.5 | 61.6 | 56.8 |
| Colorectal | 1,135 | 57.4 | 58.3 | 55.1 | 447 | 24.0 | 24.0 | 21.2 |
| Female Breast | 1,775 | 153.2 | 140.0 | 137.1 | 360 | 31.9 | 30.0 | 27.7 |
| Prostate | 1,580 | 172.5 | 184.6 | 172.8 | 208 | 32.5 | 36.3 | 32.9 |
| Oral | 270 | 12.7 | 11.5 | 11.1 | 64 | 3.4 | 3.3 | 2.9 |
| Melanoma | 495 | 21.9 | 16.4 | 17.5 | 57 | 2.7 | 2.5 | 2.7 |
| Cervical | 101 | 8.2 | 9.1 | 8.7 | 20 | ** | 2.9 | 3.0 |

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, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 76.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Baltimore City, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | City Number | City Rate | MD Rate | U.S. SEER Rate | City Number | City Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 17,885 | 549.0 | 498.1 | 480.4 | 9,327 | 285.1 | 216.3 | 202.3 |
| Lung and Bronchus | 3,256 | 99.5 | 75.3 | 65.5 | 2,829 | 86.2 | 61.6 | 56.8 |
| Colorectal | 2,104 | 64.1 | 58.3 | 55.1 | 1,002 | 30.6 | 24.0 | 21.2 |
| Female Breast | 2,426 | 132.1 | 140.0 | 137.1 | 718 | 37.4 | 30.0 | 27.7 |
| Prostate | 2,725 | 205.1 | 184.6 | 172.8 | 624 | 53.8 | 36.3 | 32.9 |
| Oral | 515 | 16.3 | 11.5 | 11.1 | 189 | 5.9 | 3.3 | 2.9 |
| Melanoma | 279 | 8.6 | 16.4 | 17.5 | 53 | 1.6 | 2.5 | 2.7 |
| Cervical | 238 | 13.1 | 9.1 | 8.7 | 106 | 5.9 | 2.9 | 3.0 |

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

Source: Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 77.
# Incidence (1995-99) and Mortality Rates* (1996-2000) by Type of Cancer
# Baltimore County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 20,739 | 502.1 | 498.1 | 480.4 | 8,904 | 212.6 | 216.3 | 202.3 |
| Lung and Bronchus | 3,203 | 75.6 | 75.3 | 65.5 | 2,615 | 61.6 | 61.6 | 56.8 |
| Colorectal | 2,485 | 59.5 | 58.3 | 55.1 | 1,009 | 24.0 | 24.0 | 21.2 |
| Female Breast | 3,163 | 142.4 | 140.0 | 137.1 | 682 | 28.8 | 30.0 | 27.7 |
| Prostate | 3,221 | 176.8 | 184.6 | 172.8 | 483 | 31.1 | 36.3 | 32.9 |
| Oral | 472 | 11.6 | 11.5 | 11.1 | 117 | 2.8 | 3.3 | 2.9 |
| Melanoma | 746 | 18.6 | 16.4 | 17.5 | 110 | 2.7 | 2.5 | 2.7 |
| Cervical | 147 | 7.0 | 9.1 | 8.7 | 33 | 1.5 | 2.9 | 3.0 |

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

Source: Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 78.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Calvert County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 1,437 | 494.0 | 498.1 | 480.4 | 596 | 218.7 | 216.3 | 202.3 |
| Lung and Bronchus | 230 | 82.8 | 75.3 | 65.5 | 186 | 67.5 | 61.6 | 56.8 |
| Colorectal | 169 | 62.4 | 58.3 | 55.1 | 68 | 26.7 | 24.0 | 21.2 |
| Female Breast | 205 | 126.6 | 140.0 | 137.1 | 29 | 18.2 | 30.0 | 27.7 |
| Prostate | 230 | 177.2 | 184.6 | 172.8 | 40 | 43.5 | 36.3 | 32.9 |
| Oral | 39 | 13.4 | 11.5 | 11.1 | 11 | ** | 3.3 | 2.9 |
| Melanoma | 58 | 18.1 | 16.4 | 17.5 | 14 | ** | 2.5 | 2.7 |
| Cervical | 15 | ** | 9.1 | 8.7 | <6 | ** | 2.9 | 3.0 |

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

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

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

Source: Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 79.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Caroline County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 808 | 522.3 | 498.1 | 480.4 | 343 | 219.0 | 216.3 | 202.3 |
| Lung and Bronchus | 141 | 90.5 | 75.3 | 65.5 | 113 | 72.0 | 61.6 | 56.8 |
| Colorectal | 119 | 76.3 | 58.3 | 55.1 | 48 | 30.8 | 24.0 | 21.2 |
| Female Breast | 118 | 145.3 | 140.0 | 137.1 | 23 | ** | 30.0 | 27.7 |
| Prostate | 113 | 160.0 | 184.6 | 172.8 | 19 | ** | 36.3 | 32.9 |
| Oral | 16 | ** | 11.5 | 11.1 | <6 | ** | 3.3 | 2.9 |
| Melanoma | 39 | 25.8 | 16.4 | 17.5 | <6 | ** | 2.5 | 2.7 |
| Cervical | 9 | ** | 9.1 | 8.7 | <6 | ** | 2.9 | 3.0 |

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

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

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

Source: Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 80.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Carroll County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 3,387 | 508.7 | 498.1 | 480.4 | 1,300 | 200.0 | 216.3 | 202.3 |
| Lung and Bronchus | 444 | 68.8 | 75.3 | 65.5 | 359 | 56.0 | 61.6 | 56.8 |
| Colorectal | 381 | 58.5 | 58.3 | 55.1 | 148 | 22.8 | 24.0 | 21.2 |
| Female Breast | 500 | 134.4 | 140.0 | 137.1 | 82 | 22.5 | 30.0 | 27.7 |
| Prostate | 519 | 186.7 | 184.6 | 172.8 | 75 | 32.1 | 36.3 | 32.9 |
| Oral | 73 | 10.8 | 11.5 | 11.1 | 13 | ** | 3.3 | 2.9 |
| Melanoma | 176 | 24.2 | 16.4 | 17.5 | 33 | 4.9 | 2.5 | 2.7 |
| Cervical | 32 | 8.7 | 9.1 | 8.7 | 8 | ** | 2.9 | 3.0 |

* 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, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 81.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Cecil County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 1,859 | 506.9 | 498.1 | 480.4 | 849 | 243.0 | 216.3 | 202.3 |
| Lung and Bronchus | 328 | 90.1 | 75.3 | 65.5 | 267 | 74.3 | 61.6 | 56.8 |
| Colorectal | 198 | 55.0 | 58.3 | 55.1 | 74 | 21.4 | 24.0 | 21.2 |
| Female Breast | 248 | 125.9 | 140.0 | 137.1 | 65 | 33.4 | 30.0 | 27.7 |
| Prostate | 276 | 168.4 | 184.6 | 172.8 | 66 | 54.4 | 36.3 | 32.9 |
| Oral | 48 | 12.7 | 11.5 | 11.1 | 14 | ** | 3.3 | 2.9 |
| Melanoma | 74 | 19.4 | 16.4 | 17.5 | 18 | ** | 2.5 | 2.7 |
| Cervical | 22 | ** | 9.1 | 8.7 | 8 | ** | 2.9 | 3.0 |

* 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, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 82.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Charles County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 2,133 | 508.8 | 498.1 | 480.4 | 965 | 250.0 | 216.3 | 202.3 |
| Lung and Bronchus | 333 | 82.8 | 75.3 | 65.5 | 306 | 77.1 | 61.6 | 56.8 |
| Colorectal | 223 | 56.6 | 58.3 | 55.1 | 103 | 28.1 | 24.0 | 21.2 |
| Female Breast | 319 | 131.3 | 140.0 | 137.1 | 67 | 29.7 | 30.0 | 27.7 |
| Prostate | 410 | 240.5 | 184.6 | 172.8 | 64 | 56.7 | 36.3 | 32.9 |
| Oral | 48 | 10.5 | 11.5 | 11.1 | 26 | 5.8 | 3.3 | 2.9 |
| Melanoma | 66 | 13.2 | 16.4 | 17.5 | 10 | ** | 2.5 | 2.7 |
| Cervical | 29 | 10.3 | 9.1 | 8.7 | 9 | ** | 2.9 | 3.0 |

* 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, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 83.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Dorchester County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 1,022 | 544.2 | 498.1 | 480.4 | 457 | 236.4 | 216.3 | 202.3 |
| Lung and Bronchus | 183 | 94.2 | 75.3 | 65.5 | 137 | 71.6 | 61.6 | 56.8 |
| Colorectal | 140 | 71.9 | 58.3 | 55.1 | 47 | 23.7 | 24.0 | 21.2 |
| Female Breast | 140 | 143.4 | 140.0 | 137.1 | 28 | 25.8 | 30.0 | 27.7 |
| Prostate | 141 | 163.3 | 184.6 | 172.8 | 37 | 47.9 | 36.3 | 32.9 |
| Oral | 28 | 15.6 | 11.5 | 11.1 | <6 | ** | 3.3 | 2.9 |
| Melanoma | 25 | ** | 16.4 | 17.5 | <6 | ** | 2.5 | 2.7 |
| Cervical | 7 | ** | 9.1 | 8.7 | 7 | ** | 2.9 | 3.0 |

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

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

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

Source: Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 84.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Frederick County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 3,833 | 495.5 | 498.1 | 480.4 | 1,500 | 203.5 | 216.3 | 202.3 |
| Lung and Bronchus | 486 | 65.3 | 75.3 | 65.5 | 429 | 58.3 | 61.6 | 56.8 |
| Colorectal | 465 | 62.5 | 58.3 | 55.1 | 179 | 24.8 | 24.0 | 21.2 |
| Female Breast | 631 | 145.8 | 140.0 | 137.1 | 119 | 28.4 | 30.0 | 27.7 |
| Prostate | 550 | 172.2 | 184.6 | 172.8 | 78 | 28.8 | 36.3 | 32.9 |
| Oral | 68 | 8.8 | 11.5 | 11.1 | 19 | ** | 3.3 | 2.9 |
| Melanoma | 166 | 20.2 | 16.4 | 17.5 | 22 | ** | 2.5 | 2.7 |
| Cervical | 50 | 11.3 | 9.1 | 8.7 | 11 | ** | 2.9 | 3.0 |

* 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, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 85.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Garrett County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 712 | 435.2 | 498.1 | 480.4 | 298 | 178.9 | 216.3 | 202.3 |
| Lung and Bronchus | 106 | 63.4 | 75.3 | 65.5 | 86 | 51.3 | 61.6 | 56.8 |
| Colorectal | 93 | 55.2 | 58.3 | 55.1 | 45 | 27.2 | 24.0 | 21.2 |
| Female Breast | 117 | 134.9 | 140.0 | 137.1 | 23 | ** | 30.0 | 27.7 |
| Prostate | 117 | 153.4 | 184.6 | 172.8 | 17 | ** | 36.3 | 32.9 |
| Oral | 9 | ** | 11.5 | 11.1 | <6 | ** | 3.3 | 2.9 |
| Melanoma | 20 | ** | 16.4 | 17.5 | <6 | ** | 2.5 | 2.7 |
| Cervical | 6 | ** | 9.1 | 8.7 | <6 | ** | 2.9 | 3.0 |

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

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

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

Source: Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 86.
# Incidence (1995-99) and Mortality Rates* (1996-2000) by Type of Cancer
# Harford County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 4,708 | 517.2 | 498.1 | 480.4 | 1,830 | 213.8 | 216.3 | 202.3 |
| Lung and Bronchus | 710 | 80.5 | 75.3 | 65.5 | 543 | 62.6 | 61.6 | 56.8 |
| Colorectal | 494 | 57.1 | 58.3 | 55.1 | 187 | 22.4 | 24.0 | 21.2 |
| Female Breast | 631 | 123.4 | 140.0 | 137.1 | 134 | 26.9 | 30.0 | 27.7 |
| Prostate | 765 | 197.4 | 184.6 | 172.8 | 115 | 39.4 | 36.3 | 32.9 |
| Oral | 102 | 10.9 | 11.5 | 11.1 | 25 | ** | 3.3 | 2.9 |
| Melanoma | 231 | 22.7 | 16.4 | 17.5 | 25 | ** | 2.5 | 2.7 |
| Cervical | 43 | 8.0 | 9.1 | 8.7 | 14 | ** | 2.9 | 3.0 |

* 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, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 87.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Howard County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 3,884 | 452.5 | 498.1 | 480.4 | 1,521 | 199.5 | 216.3 | 202.3 |
| Lung and Bronchus | 490 | 64.6 | 75.3 | 65.5 | 402 | 54.2 | 61.6 | 56.8 |
| Colorectal | 390 | 50.4 | 58.3 | 55.1 | 151 | 20.6 | 24.0 | 21.2 |
| Female Breast | 732 | 141.9 | 140.0 | 137.1 | 137 | 29.0 | 30.0 | 27.7 |
| Prostate | 584 | 165.4 | 184.6 | 172.8 | 85 | 36.6 | 36.3 | 32.9 |
| Oral | 66 | 7.4 | 11.5 | 11.1 | 23 | ** | 3.3 | 2.9 |
| Melanoma | 194 | 19.1 | 16.4 | 17.5 | 27 | 2.8 | 2.5 | 2.7 |
| Cervical | 37 | 6.2 | 9.1 | 8.7 | 15 | ** | 2.9 | 3.0 |

* 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, 1996-2000
Maryland Division of Health Statistics, 1965-2000
SEER, National Cancer Institute, 1996-2000

# Table 88.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Kent County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 614 | 493.2 | 498.1 | 480.4 | 259 | 197.9 | 216.3 | 202.3 |
| Lung and Bronchus | 112 | 84.3 | 75.3 | 65.5 | 77 | 57.8 | 61.6 | 56.8 |
| Colorectal | 62 | 46.8 | 58.3 | 55.1 | 27 | 20.1 | 24.0 | 21.2 |
| Female Breast | 91 | 143.7 | 140.0 | 137.1 | 17 | ** | 30.0 | 27.7 |
| Prostate | 88 | 143.4 | 184.6 | 172.8 | 17 | ** | 36.3 | 32.9 |
| Oral | 13 | ** | 11.5 | 11.1 | <6 | ** | 3.3 | 2.9 |
| Melanoma | 28 | 25.9 | 16.4 | 17.5 | <6 | ** | 2.5 | 2.7 |
| Cervical | <6 | ** | 9.1 | 8.7 | <6 | ** | 2.9 | 3.0 |

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

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

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

Source: Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 89.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Montgomery County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 17,762 | 445.6 | 498.1 | 480.4 | 6,323 | 162.7 | 216.3 | 202.3 |
| Lung and Bronchus | 1,925 | 49.5 | 75.3 | 65.5 | 1,431 | 37.1 | 61.6 | 56.8 |
| Colorectal | 1,810 | 46.4 | 58.3 | 55.1 | 665 | 17.3 | 24.0 | 21.2 |
| Female Breast | 3,393 | 150.9 | 140.0 | 137.1 | 611 | 26.9 | 30.0 | 27.7 |
| Prostate | 3,077 | 182.8 | 184.6 | 172.8 | 376 | 28.0 | 36.3 | 32.9 |
| Oral | 353 | 8.8 | 11.5 | 11.1 | 76 | 2.0 | 3.3 | 2.9 |
| Melanoma | 667 | 16.0 | 16.4 | 17.5 | 103 | 2.6 | 2.5 | 2.7 |
| Cervical | 164 | 7.1 | 9.1 | 8.7 | 35 | 1.5 | 2.9 | 3.0 |

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

Source: Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

## Table 90.
## Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
## Prince George's County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 14,000 | 486.8 | 498.1 | 480.4 | 5,894 | 222.9 | 216.3 | 202.3 |
| Lung and Bronchus | 1,869 | 68.0 | 75.3 | 65.5 | 1,575 | 58.9 | 61.6 | 56.8 |
| Colorectal | 1,671 | 63.1 | 58.3 | 55.1 | 668 | 26.6 | 24.0 | 21.2 |
| Female Breast | 2,333 | 134.1 | 140.0 | 137.1 | 537 | 32.7 | 30.0 | 27.7 |
| Prostate | 2,606 | 218.0 | 184.6 | 172.8 | 343 | 42.6 | 36.3 | 32.9 |
| Oral | 326 | 10.6 | 11.5 | 11.1 | 102 | 3.6 | 3.3 | 2.9 |
| Melanoma | 219 | 7.2 | 16.4 | 17.5 | 43 | 1.5 | 2.5 | 2.7 |
| Cervical | 176 | 9.4 | 9.1 | 8.7 | 48 | 2.6 | 2.9 | 3.0 |

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

Source: Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 91.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Queen Anne's County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 966 | 465.3 | 498.1 | 480.4 | 423 | 209.5 | 216.3 | 202.3 |
| Lung and Bronchus | 163 | 77.4 | 75.3 | 65.5 | 136 | 64.9 | 61.6 | 56.8 |
| Colorectal | 126 | 63.5 | 58.3 | 55.1 | 37 | 19.3 | 24.0 | 21.2 |
| Female Breast | 131 | 120.1 | 140.0 | 137.1 | 27 | 24.6 | 30.0 | 27.7 |
| Prostate | 134 | 127.5 | 184.6 | 172.8 | 18 | 25.5 | 36.3 | 32.9 |
| Oral | 34 | 16.2 | 11.5 | 11.1 | <6 | ** | 3.3 | 2.9 |
| Melanoma | 43 | 21.7 | 16.4 | 17.5 | 7 | ** | 2.5 | 2.7 |
| Cervical | 9 | ** | 9.1 | 8.7 | <6 | ** | 2.9 | 3.0 |

* 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, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 92.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Saint Mary's County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 1,671 | 493.1 | 498.1 | 480.4 | 672 | 210.7 | 216.3 | 202.3 |
| Lung and Bronchus | 271 | 83.0 | 75.3 | 65.5 | 167 | 51.9 | 61.6 | 56.8 |
| Colorectal | 211 | 65.6 | 58.3 | 55.1 | 76 | 24.3 | 24.0 | 21.2 |
| Female Breast | 227 | 126.4 | 140.0 | 137.1 | 47 | 25.9 | 30.0 | 27.7 |
| Prostate | 220 | 141.2 | 184.6 | 172.8 | 40 | 32.2 | 36.3 | 32.9 |
| Oral | 55 | 15.8 | 11.5 | 11.1 | 8 | ** | 3.3 | 2.9 |
| Melanoma | 63 | 17.1 | 16.4 | 17.5 | 12 | ** | 2.5 | 2.7 |
| Cervical | 23 | ** | 9.1 | 8.7 | <6 | ** | 2.9 | 3.0 |

* 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, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 93.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Somerset County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 703 | 539.7 | 498.1 | 480.4 | 353 | 266.6 | 216.3 | 202.3 |
| Lung and Bronchus | 141 | 107.8 | 75.3 | 65.5 | 119 | 90.3 | 61.6 | 56.8 |
| Colorectal | 88 | 65.9 | 58.3 | 55.1 | 35 | 26.1 | 24.0 | 21.2 |
| Female Breast | 87 | 136.1 | 140.0 | 137.1 | 22 | ** | 30.0 | 27.7 |
| Prostate | 92 | 148.1 | 184.6 | 172.8 | 22 | ** | 36.3 | 32.9 |
| Oral | 12 | ** | 11.5 | 11.1 | <6 | ** | 3.3 | 2.9 |
| Melanoma | 25 | ** | 16.4 | 17.5 | <6 | ** | 2.5 | 2.7 |
| Cervical | 10 | ** | 9.1 | 8.7 | <6 | ** | 2.9 | 3.0 |

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

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

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

Source: Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 94.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Talbot County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 1,188 | 501.7 | 498.1 | 480.4 | 474 | 188.8 | 216.3 | 202.3 |
| Lung and Bronchus | 155 | 62.6 | 75.3 | 65.5 | 113 | 45.2 | 61.6 | 56.8 |
| Colorectal | 154 | 62.8 | 58.3 | 55.1 | 60 | 23.9 | 24.0 | 21.2 |
| Female Breast | 188 | 153.9 | 140.0 | 137.1 | 35 | 25.4 | 30.0 | 27.7 |
| Prostate | 218 | 196.1 | 184.6 | 172.8 | 32 | 30.6 | 36.3 | 32.9 |
| Oral | 33 | 14.5 | 11.5 | 11.1 | 12 | ** | 3.3 | 2.9 |
| Melanoma | 50 | 25.1 | 16.4 | 17.5 | 9 | ** | 2.5 | 2.7 |
| Cervical | 10 | ** | 9.1 | 8.7 | 6 | ** | 2.9 | 3.0 |

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

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

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

Source: Maryland Cancer Registry, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 95.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Washington County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 3,342 | 478.9 | 498.1 | 480.4 | 1,471 | 207.3 | 216.3 | 202.3 |
| Lung and Bronchus | 515 | 72.8 | 75.3 | 65.5 | 429 | 60.2 | 61.6 | 56.8 |
| Colorectal | 409 | 57.7 | 58.3 | 55.1 | 161 | 22.5 | 24.0 | 21.2 |
| Female Breast | 469 | 126.9 | 140.0 | 137.1 | 124 | 31.4 | 30.0 | 27.7 |
| Prostate | 421 | 138.7 | 184.6 | 172.8 | 81 | 31.1 | 36.3 | 32.9 |
| Oral | 76 | 11.0 | 11.5 | 11.1 | 22 | ** | 3.3 | 2.9 |
| Melanoma | 160 | 23.5 | 16.4 | 17.5 | 15 | ** | 2.5 | 2.7 |
| Cervical | 36 | 10.6 | 9.1 | 8.7 | 19 | ** | 2.9 | 3.0 |

* 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, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 96.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Wicomico County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 2,067 | 512.9 | 498.1 | 480.4 | 920 | 227.8 | 216.3 | 202.3 |
| Lung and Bronchus | 355 | 87.6 | 75.3 | 65.5 | 313 | 77.3 | 61.6 | 56.8 |
| Colorectal | 209 | 51.8 | 58.3 | 55.1 | 84 | 20.9 | 24.0 | 21.2 |
| Female Breast | 336 | 150.3 | 140.0 | 137.1 | 86 | 37.7 | 30.0 | 27.7 |
| Prostate | 258 | 152.0 | 184.6 | 172.8 | 47 | 33.5 | 36.3 | 32.9 |
| Oral | 43 | 10.7 | 11.5 | 11.1 | 13 | ** | 3.3 | 2.9 |
| Melanoma | 119 | 29.8 | 16.4 | 17.5 | 12 | ** | 2.5 | 2.7 |
| Cervical | 32 | 15.2 | 9.1 | 8.7 | 11 | ** | 2.9 | 3.0 |

* 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, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Table 97.
# Incidence (1996-2000) and Mortality Rates* (1996-2000) by Type of Cancer
# Worcester County, Maryland, and U.S.

| Type of Cancer | Incidence (1996-2000) | | | | Mortality (1996-2000) | | | |
|---|---|---|---|---|---|---|---|---|
| | County Number | County Rate | MD Rate | U.S. SEER Rate | County Number | County Rate | MD Rate | U.S. SEER Rate |
| All Cancers | 1,621 | 558.8 | 498.1 | 480.4 | 677 | 226.7 | 216.3 | 202.3 |
| Lung and Bronchus | 296 | 97.7 | 75.3 | 65.5 | 208 | 66.2 | 61.6 | 56.8 |
| Colorectal | 188 | 61.8 | 58.3 | 55.1 | 77 | 26.2 | 24.0 | 21.2 |
| Female Breast | 206 | 139.2 | 140.0 | 137.1 | 43 | 25.4 | 30.0 | 27.7 |
| Prostate | 220 | 156.2 | 184.6 | 172.8 | 40 | 32.9 | 36.3 | 32.9 |
| Oral | 46 | 16.0 | 11.5 | 11.1 | 9 | ** | 3.3 | 2.9 |
| Melanoma | 90 | 33.7 | 16.4 | 17.5 | 9 | ** | 2.5 | 2.7 |
| Cervical | 18 | ** | 9.1 | 8.7 | 6 | ** | 2.9 | 3.0 |

* 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, 1996-2000
Maryland Division of Health Statistics, 1996-2000
SEER, National Cancer Institute, 1996-2000

# Appendix A

# Cigarette Restitution Fund
# Annual Cancer Report Requirements

# Cigarette Restitution Fund Annual 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 creates 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 thereafter.

The law requires that the survey includes:

(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 Annual Cancer Report as follows:

| ***Required Component of the Annual Cancer Report*** | ***Location of Information in this Report*** |
|---|---|
| 1. Number and percent of individuals having each targeted cancer, both statewide and in each jurisdiction. | Tables 1, 2, 3, 4, 7, 8, 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, 57, 58, 61, 62, 65, 66, 67, 70, 71, 74-97 |
| 2. Number and percent 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:<br>Lung cancer: Tables 11, 12, 13, 16, 17<br>High incidence and effective detection:<br>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:<br>1. Compares Maryland incidence and mortality rates to that of the U.S.;<br>2. Shows 5-year mortality trends and 5-year combined data;<br>3. Presents 5-year combined incidence data;<br>4. Shows stage of disease at diagnosis;<br>5. Lists appropriate Healthy People 2010 objective(s) for each targeted cancer and identifies where Maryland and the U.S. currently are in meeting the respective objective(s);<br>6. Describes the current evidence for screening, primary prevention and chemoprevention for each targeted cancer, based on scientific literature; and<br>7. Describes the recommended public health intervention for each targeted cancer based on the evidence referenced above.<br><br>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

# Annual Cancer Report Format

# Annual Cancer Report Format

*1. Selection of Targeted Cancers*

Under the Cigarette Restitution Fund's Cancer Prevention, Education, Screening and Treatment Program, DHMH 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 combined cancer sites reported in Maryland and the seven specific cancer sites targeted by the Cancer Prevention, Education, Screening and Treatment Program.

For each targeted cancer site and all sites combined, the number of new cancers, cancer deaths, and age-adjusted cancer incidence and mortality rates are presented by race, gender, and jurisdiction. All sites incidence is presented also by Hispanic ethnicity. All rates are age-adjusted to the 2000 U.S. standard population. For each targeted cancer site, trends in incidence and mortality, race-specific incidence and mortality rates, 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 mortality. A section with county-specific data portrays 5-year incidence and mortality data along with Maryland and U.S. rates.

Additionally, Maryland 2000 incidence and mortality rates with 95% confidence intervals (95% C.I.) were compared to U.S. 2000 data from the Surveillance, Epidemiology and End Results (SEER) Program Cancer Statistics Review (1996-2000). 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. Incidence data on Hispanics have been added for all sites combined using a prescribed methodology for estimating Hispanic ethnicity. See Appendix C, Section D.7 (Data Considerations--Race and Ethnicity), for more information.

Figures (graphs and maps) are also used to display data. Graphs are used to display data on incidence and mortality from 1996-2000 with the estimated annual percentage change (EAPC) (see Appendix D, (Glossary), for more information on EAPC); incidence and mortality by race or gender; stage of diagnosis; and behaviors of persons in Maryland as compared to persons in the U.S. Maps portray Maryland mortality data as compared to the U.S. for the combined years 1996-2000 by geographical area. Maps denote areas with mortality rates statistically significantly higher and lower than that of the U.S.

# Appendix C

## Annual Cancer Report Data Sources, References, and Data Considerations

# Annual 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, the Division of Health Statistics, the Office of Surveillance and Assessment, Center for Health Promotion, Education and Tobacco Use Prevention, and the Center for Cancer Surveillance and Control.

### *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 are calculated for the year 2000, in which the most complete data are available and includes all cases reported to the MCR as of November 2002.

#### *a. Registry Data Sources*

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, West Virginia, and the District of Columbia. Information on Maryland residents diagnosed or treated for cancer in these states is included in this report.

#### *b. MCR Data Quality and Completeness of Case Ascertainment*

MCR 2000 incidence data achieved the "gold" certification for high quality from the North American Association of Central Cancer Registries (NAACCR) certification program. MCR has been awarded the “gold” status three years in a row, for the year 1998, 1999, and 2000 data. MCR data were evaluated using the following criteria: data completeness, data quality, and timeliness.

### *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 these data to calculate cancer mortality rates.

### *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 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 survey 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 Behavioral Risk Factor Surveillance Systems (BRFSS) survey. Unlike the BRFSS, the MCS focuses on people age 40 years and over, who have the highest risk of developing cancer.

*5. Maryland Youth Tobacco Survey and Maryland Adult Tobacco Survey*

The Maryland Youth Tobacco Survey (MYTS) and the Maryland Adult Tobacco Survey (MATS) are administered biennially for the purpose of gathering attitude, usage, and exposure information regarding tobacco products 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 surveys were conducted in the fall of 2002. Over 66,000 students in eligible Maryland public middle and high schools completed MYTS survey questionnaires statewide. At the same time, approximately 25,000 Maryland adults age 18 or older participated in a computer assisted telephone survey.

Both the MYTS and the MATS surveys are managed by the Center for Health Promotion, Education, and Tobacco Use Prevention. Complete data for the MYTS and MATS are published on September 1 in the year following survey administration. 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.

**B. National Data Sources**

National statistics 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), the National Center for Health Statistics (NCHS), and the National Cancer Institute (NCI).

*1. National Health Interview Survey (NHIS)*

The National Health Interview Survey (NHIS) is a continuous in-person interview survey conducted on a random sample of households in the United States. The survey gathers information on the amount, distribution, and effects of illness and disability in the United States.

It is conducted and managed by the National Center for Health Statistics (NCHS). The NCHS Web site is www.cdc.gov/nchs.

*2. Healthy People 2010*

Healthy People 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 Healthy People 2010. Healthy People 2010 objectives now have a year 2000 baseline; beginning with the baseline year, NHIS or other data being compared against the Healthy People 2010 objectives are age adjusted to the 2000 U.S. population. The Healthy People initiative is under the Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services. Further information can be found on the web site at www.health.gov/healthypeople.

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

The Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute is an authoritative source of information on cancer incidence, stage, and survival in the United States. Staff of the National Cancer Institute 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 United States. The data are collected from 11 cancer registries throughout the United States and are estimated to represent approximately 14% 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 mortality data reported by SEER are provided by the National Center for Health Statistics. 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://www.seer.cancer.gov/csr/1975_2000/sections.html. Further information about SEER can also be found on the Web site at www.seer.cancer.gov.

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

*1. National Cancer Institute Physician Data Query (PDQ*)

Information provided in the chapters under the sections for "Public Health Evidence" and "Public Health Intervention" was taken primarily from the National Cancer Institute Physician Data Query (PDQ® CancerNet™) Web site. 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. The information is reviewed by a scientific editorial board and is updated as new research becomes available. Each statement listed in the PDQ is based on research with certain levels of evidence. The levels of evidence used by the National Cancer Institute PDQ, in order of strongest evidence to weakest evidence, are as follows:

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

More information about NCI PDQ can be accessed at:
http://www.cancer.gov/cancer_information/pdq

This reference is used throughout the report for consistency in interpreting the results of scientific literature. For additional information, the Web site is www.cancernet.nci.nih.gov.

Definitions include:

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

*5. 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.

*6. Additional Medical Literature 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/research_data/stat_nat_data/bpfactsheet.htm.

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.

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Prostate Cancer: Smith, R.A., Cokkinides, V., Eyre, H.J. American Cancer Society Guidelines for the Early Detection of Cancer (Jan-Feb 2003). *CA Cancer J. Clin.,* 53(1):27-43. http://caonline.amcancersoc.org/cgi/content/full/53/1/27.

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.

Cervical Cancer: Wright, T.C., Thomas, C., Steward, M., Twiggs, L.B., Wilkinson, E.J., 2001 Consensus Guidelines for the Management of Women With Cervical Cytological Abnormalities (2002). *Journal of the American Medical Association*, 287:16, 2120-29.

## D. Data Considerations

### *1. Data Confidentiality*

The Maryland Department of Health and Mental Hygiene (DHMH) regards all data received, processed, and reported to and by the Maryland Cancer Registry (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.

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." Rates based on 25 or fewer cases are presented with asterisks (**) because the rates are unstable and do not provide reliable information.

*2. Gender*

Gender is now reported to the MCR as: a) male, b) female, c) hermaphrodite, d) transsexual, and e) unknown. The totals shown in the count for number of cancer cases may not equal the sum of males and females because of cases in these other gender categories.

*3. Rate Analysis*

Incidence rates presented in this report were calculated using Maryland resident cancer cases diagnosed from January 1, 2000 through December 31, 2000, and reported to the MCR as of November 2002. The mortality data consist of deaths that occurred between January 1, 2000 and December 31, 2000.

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. Federal agencies have adopted the year 2000 U.S. standard population as the new 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 new standard replaces prior standards based on the 1940 or 1970 standard population for the nation.

The age structure of the U.S. population has changed considerably between 1970 and 2000, with the 2000 population having a larger proportion of older persons than the 1970 population standard. Given that age is the most important risk factor for cancer, using the year 2000 U.S. standard population results in higher overall age-adjusted cancer incidence and mortality rates.

Because cancer incidence and mortality rates presented in this report have been standardized to the 2000 U.S. standard population, they may differ from similar rates presented for the same year in prior Cigarette Restitution Fund annual reports and other reports. Please note that the new standard may affect trends and narrow race differentials in age-adjusted death rates. Additional information on age-adjustment can be found at http://www.cdc.gov/nchs/data/statnt/statnt20.pdf.

Incidence and mortality rates are not presented for cells based on 25 or fewer cases. Rates based on numbers of this size are unstable and do not provide reliable information.

The Estimate Annual Percent Change (EAPC) was calculated for incidence and mortality over time (from 1996 to 2000). See Appendix D, Glossary, for the definition of EAPC.

*4. Confidence Intervals and Statistical Significance*

A confidence interval is a range of values within which the true rate is expected to fall. If the confidence interval of a Maryland rate includes the U.S. (SEER) rate, Maryland and the U.S. are considered comparable or not statistically significantly different. All rates presented in this report were calculated at the 95 percent confidence level. For example, the 2000 U.S. SEER-reported lung cancer incidence rate was 62.3 per 100,000 population. Maryland's rate is 71.1 per 100,000.

The 95% confidence interval for this rate is 68.8 to 73.5. We have, therefore, a 95% degree of certainty that the true (real) rate is between 68.8 and 73.5 per 100,000 age-adjusted population. The way the test is applied for deciding whether two rates are different and the direction of the difference involves looking for overlapping ranges. If any part of the confidence interval for the two populations overlaps, there is no difference. If no overlapping occurs, then the two groups are statistically significantly different. The numerically larger non-overlapping category is statistically significantly higher. A slightly modified formula worked for SEER data because only a particular U.S. rate was available for representing the confidence interval. The way the method for testing confidence intervals for statistical significance was applied is different for SEER data because only a specific rate is known--not the confidence interval itself. Because U.S. data were based on a large sample, the range for the confidence interval is narrow. A small confidence interval enables the rate as a single data point to be used in place of a confidence interval. For additional information regarding the formula used to calculate the confidence level, refer to the National Cancer Institute/SEER Web site: http://seer.cancer.gov/seerstat/WebHelp/Rate_Algorithms.htm.

*5. Year 2000 U.S. Population Standard*

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.

The age structure of the U.S. population has changed considerably between 1970 and 2000, and incidence and mortality for the years 1996-2000 presented in this report are all adjusted to the 2000 U.S. population and will differ from rates for the same year in prior reports. The CRF Annual Report began using the 2000 U.S. population base for age-adjusting of rates beginning with the published report in 2001. The 2000 population has a larger proportion of older persons than the 1970 population standard. Given that age is the most important risk factor for cancer, using the year 2000 standard results in higher overall age-adjusted cancer incidence and mortality rates.

6. *National Comparison Data*

Maryland and county incidence and mortality rates are compared to 2000 SEER incidence rates and 2000 U.S. mortality rates (NCHS). In addition, the SEER program does not provide rates for "other" races, so comparisons are not presented.

Maryland's mortality ranking among the 50 states and the District of Columbia for all cancers 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, 1996-2000.

*7. 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. Because information on ethnicity was not reliably reported to the MCR in 2000, it is not included in this report. The present report does, however, include one table (see Table 4, page 11) depicting Hispanic cancer incidence. Only year 2000 new cases and incidence rates were included. The table shows overall counts and incidence rates by county and region for all cancer sites combined.

Hispanic ethnicity data as presented in Table 4 are derived from two sources using Maryland data from the MCR. The first method examines the ethnicity variable as recorded in the MCR that is obtained through chart abstraction/documentation from the reporting source. The second method estimates Hispanic ethnicity via analysis of a person's surname, maiden name, birthplace, and racial coding.

*8. Healthy People 2010 Objectives/BRFSS/MCS*

When behavioral risk behaviors are being compared to Healthy People 2010 objectives, measures change for cancer-related behaviors (e.g., screening tests) and the recommendations for their use. The Behavioral Risk Factor Surveillance System (BRFSS) and Maryland Cancer Survey (MCS) questions that measure screening and other health behaviors are also being updated to reflect changes in how risk behavior needs to be measured.

In addition, the Healthy People 2010 objectives may change over time to reflect new health-related behavior and screening recommendations. Comparisons in this report are made between the Healthy People 2010 objectives (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 Healthy People 2010, Maryland BRFSS and MCS data are both age-adjusted to the current Maryland population--not to the year 2000 U.S. standard population.

*9. Appendices*

Please refer to additional appendices for Cigarette Restitution Fund Program Annual Cancer Report requirements, report format, technical notes and definitions, Maryland population counts, U.S. standard population for 2000, International Classification of Diseases (ICD) codes for cancer, and Maryland counts, rates, and confidence intervals for mortality data from 1996-2000.

# 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: www.cdc.gov/nchs/data/statnt/statnt20.pdf and www.cdc.gov/nchs/products/pubs/workpap/ageadjust.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.

- **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 trend data and corresponding EAPCs are presented for the years 1996 through 2000.

- **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 2000. Cancer incidence data are also presented in aggregated form as the average annual incidence for the years 1996 through 2000.

- **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 2000. Data for cancer mortality are also presented in an aggregated form as the average annual mortality for the years 1996 through 2000.

- **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.

- **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:** stage of disease at diagnosis was unable to be classified or not reported to the cancer registry.

# Appendix E

# Maryland Population Estimates, 2000

# Maryland Population Estimates by County, 2000

| | Total All Genders | Total Male | Total Female | Total White | White Male | White Female | Total Black | Black Male | Black Female |
|---|---|---|---|---|---|---|---|---|---|
| **Maryland** | **5,296,486** | **2,557,794** | **2,738,692** | **3,391,308** | **1,656,409** | **1,734,899** | **1,477,411** | **689,991** | **787,420** |
| **Baltimore Metro** | **2,512,431** | **1,208,036** | **1,304,395** | **1,683,195** | **820,075** | **863,120** | **696,402** | **322,318** | **374,084** |
| Anne Arundel County | 489,656 | 243,677 | 245,979 | 397,789 | 197,799 | 199,990 | 66,428 | 33,370 | 33,058 |
| Baltimore City | 651,154 | 303,687 | 347,467 | 205,982 | 99,478 | 106,504 | 418,951 | 191,076 | 227,875 |
| Baltimore County | 754,292 | 357,347 | 396,945 | 561,132 | 267,634 | 293,498 | 151,600 | 69,211 | 82,389 |
| Carroll County | 150,897 | 74,470 | 76,427 | 144,399 | 71,093 | 73,306 | 3,433 | 1,870 | 1,563 |
| Harford County | 218,590 | 107,081 | 111,509 | 189,678 | 93,134 | 96,544 | 20,260 | 9,821 | 10,439 |
| Howard County | 247,842 | 121,774 | 126,068 | 184,215 | 90,937 | 93,278 | 35,730 | 16,970 | 18,760 |
| **Eastern Shore** | **395,903** | **193,430** | **202,473** | **318,202** | **155,525** | **162,677** | **66,206** | **31,979** | **34,227** |
| Caroline County | 29,772 | 14,571 | 15,201 | 24,322 | 11,949 | 12,373 | 4,398 | 2,047 | 2,351 |
| Cecil County | 85,951 | 42,594 | 43,357 | 80,272 | 39,752 | 40,520 | 3,361 | 1,701 | 1,660 |
| Dorchester County | 30,674 | 14,510 | 16,164 | 21,302 | 10,200 | 11,102 | 8,708 | 3,973 | 4,735 |
| Kent County | 19,197 | 9,192 | 10,005 | 15,288 | 7,354 | 7,934 | 3,343 | 1,506 | 1,837 |
| Queen Anne's County | 40,563 | 20,195 | 20,368 | 36,120 | 17,997 | 18,123 | 3,560 | 1,738 | 1,822 |
| Somerset County | 24,747 | 13,213 | 11,534 | 13,949 | 7,071 | 6,878 | 10,172 | 5,825 | 4,347 |
| Talbot County | 33,812 | 16,125 | 17,687 | 27,720 | 13,225 | 14,495 | 5,193 | 2,441 | 2,752 |
| Wicomico County | 84,644 | 40,335 | 44,309 | 61,438 | 29,384 | 32,054 | 19,717 | 9,157 | 10,560 |
| Worcester County | 46,543 | 22,695 | 23,848 | 37,791 | 18,593 | 19,198 | 7,754 | 3,591 | 4,163 |
| **National Capital** | **1,674,856** | **801,672** | **873,184** | **782,448** | **381,369** | **401,079** | **634,806** | **292,901** | **341,905** |
| Montgomery County | 873,341 | 418,622 | 454,719 | 565,719 | 272,407 | 293,312 | 132,256 | 60,375 | 71,881 |
| Prince George's County | 801,515 | 383,050 | 418,465 | 216,729 | 108,962 | 107,767 | 502,550 | 232,526 | 270,024 |
| **Northwest** | **431,976** | **215,516** | **216,460** | **391,978** | **191,765** | **200,213** | **26,810** | **17,189** | **9,621** |
| Allegany County | 74,930 | 37,319 | 37,611 | 69,702 | 33,576 | 36,126 | 4,006 | 3,115 | 891 |
| Frederick County | 195,277 | 96,079 | 99,198 | 174,432 | 85,591 | 88,841 | 12,429 | 6,296 | 6,133 |
| Garrett County | 29,846 | 14,708 | 15,138 | 29,496 | 14,524 | 14,972 | 128 | 82 | 46 |
| Washington County | 131,923 | 67,410 | 64,513 | 118,348 | 58,074 | 60,274 | 10,247 | 7,696 | 2,551 |
| **Southern** | **281,320** | **139,140** | **142,180** | **215,485** | **107,675** | **107,810** | **53,187** | **25,604** | **27,583** |
| Calvert County | 74,563 | 36,767 | 37,796 | 62,578 | 31,105 | 31,473 | 9,773 | 4,686 | 5,087 |
| Charles County | 120,546 | 58,878 | 61,668 | 82,587 | 40,830 | 41,757 | 31,411 | 15,005 | 16,406 |
| St. Mary's County | 86,211 | 43,495 | 42,716 | 70,320 | 35,740 | 34,580 | 12,003 | 5,913 | 6,090 |

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: U.S. Department of the Census web site, www.census.gov

# 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: SEER, National Cancer Institute

# Appendix G

# SEER Definitions (ICD Codes) of Site Categories

**ICD-O-2 and ICD-10 Codes Used to Classify Primary Sites**
**(SEER Definitions)**

| Cancer Site | ICD-O-2 Codes (Incidence) | ICD-10 Codes (Mortality) |
|---|---|---|
| Oral Cavity and Pharynx | C00.0-C14.8* | Same as ICD-O-2 code |
| Esophagus | C15.0-C15.9* | Same as ICD-O-2 code |
| Stomach | C16.0-C16.9* | Same as ICD-O-2 code |
| Colon, excluding rectum | C18.0-C18.9, C19.9, C20.9, C26.0* | Same as ICD-O-2 code |
| Liver and intrahepatic bile duct | C22.0-C22.1* | C22.0-C22.9 |
| Pancreas | C25.0-C25.9* | Same as ICD-O-2 code |
| Larynx | C32.0-C32.9* | Same as ICD-O-2 code |
| Lung and bronchus | C34.0-C34.9* | Same as ICD-O-2 code |
| Bone and joint | C40.0-C41.9* | Same as ICD-O-2 code |
| Soft tissue, including heart | C38.0, C47.0-C47.9, C49.0-C49.9* | C38.0, C45.2, C47.0-C47.9, C49.0-C49.9 |
| Melanomas of the skin | C44.0-C44.9 (only types 8720-8790) | C43.0-C43.9 |
| Breast | C50.0-C50.9* | Same as ICD-O-2 code |
| Cervix | C53.0-C53.9* | Same as ICD-O-2 code |
| Uterus | C54.0-C54.9, C55.9* | Same as ICD-O-2 code |
| Ovary | C56.9* | Same as ICD-O-2 code |
| Prostate | C61.9* | Same as ICD-O-2 code |
| Testis | C62.0-C62.9* | Same as ICD-O-2 code |
| Bladder | C67.0-C67.9* | Same as ICD-O-2 code |
| Kidney and renal pelvis | C64.9, C65.9* | Same as ICD-O-2 code |
| Eye | C69.0-C69.9* | Same as ICD-O-2 code |
| Brain and other nervous system | C70.0-C72.9* | Same as ICD-O-2 code |
| Thyroid | C73.9* | Same as ICD-O-2 code |
| Leukemia | types 9800-9941 | C90.1, C91.0-C95.9 |
| Hodgkin's disease | types 9650-9667 | C81.0-C81.9 |
| Non-Hodgkin's lymphoma | types 9590-9595, 9670-9717 | C82.0-C85.9, C96.3 |
| Multiple Myeloma | types 9731-9732 | C90.1, C90.2 |
| Ill defined and unspecified sites | types 9720-9723, 9740, 9741, 9950, 9760-9764, 9950-9989<br>C76.0-C76.8, C80.9 (only types 8000-9589)<br>C42.0-C42.4 (only types 8000-9589)<br>C77.0-C77.9 (only types 8000-9589) | C26.1, C45.7, C45.9, C76.0-C78.9, C80.9, C88.0-C88.9, C96.0-C96.2, C96.7, C96.9, C97.9 |

*Sites exclude ICD-O-2 morphology types 9590-9989.

# Appendix H

# Maryland Cancer Mortality (1996-2000): Rates and Confidence Intervals

**All Cancer Sites Mortality**
**Number of Cancer Deaths and Age-Adjusted Mortality Rates***
**by Geographical Area, Maryland, 1996-2000**

| Geographical Area | Number of Deaths | Mortality Rates* | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower CI | Upper CI |
| | | | | |
| Maryland | 50,777 | 216.3 | 214.4 | 218.2 |
| | | | | |
| Northwest Region | 4,312 | 203.2 | 197.1 | 209.3 |
| Allegany | 1,043 | 206.3 | 193.8 | 219.6 |
| Frederick | 1,500 | 203.5 | 193.3 | 214.2 |
| Garrett | 298 | 178.9 | 159.1 | 200.9 |
| Washington | 1,471 | 207.3 | 196.8 | 218.2 |
| | | | | |
| Baltimore Metropolitan Area** | 17,933 | 213.3 | 210.1 | 216.4 |
| Anne Arundel | 4,378 | 225.4 | 218.6 | 232.3 |
| Baltimore City | 9,327 | 285.1 | 279.3 | 290.9 |
| Baltimore County | 8,904 | 212.6 | 208.2 | 217.1 |
| Carroll | 1,300 | 200.0 | 189.2 | 211.2 |
| Harford | 1,830 | 213.8 | 203.9 | 224.0 |
| Howard | 1,521 | 199.5 | 189.2 | 210.2 |
| | | | | |
| National Capital Area | | | | |
| Montgomery | 6,323 | 162.7 | 158.7 | 166.8 |
| Prince George's | 5,894 | 222.9 | 217.0 | 228.9 |
| | | | | |
| Southern Region | 2,233 | 228.1 | 218.5 | 238.0 |
| Calvert | 596 | 218.7 | 201.2 | 237.5 |
| Charles | 965 | 250.0 | 234.0 | 267.0 |
| Saint Mary's | 672 | 210.7 | 194.9 | 227.4 |
| | | | | |
| Eastern Shore | 4,755 | 224.3 | 217.9 | 230.8 |
| Caroline | 343 | 219.0 | 196.4 | 243.8 |
| Cecil | 849 | 243.0 | 226.7 | 260.2 |
| Dorchester | 457 | 236.4 | 215.0 | 259.8 |
| Kent | 259 | 197.9 | 174.2 | 224.6 |
| Queen Anne's | 423 | 209.5 | 189.8 | 231.0 |
| Somerset | 353 | 266.6 | 239.3 | 296.5 |
| Talbot | 474 | 188.8 | 171.9 | 207.6 |
| Wicomico | 920 | 227.8 | 213.4 | 243.1 |
| Worcester | 677 | 226.7 | 209.6 | 245.1 |

* 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 Division of Health Statistics, 1996-2000

**Lung and Bronchus Mortality**
**Number of Cancer Deaths and Age-Adjusted Mortality Rates***
**by Geographical Area, Maryland, 1996-2000**

| Geographical Area | Number of Deaths | Mortality Rates* | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower CI | Upper CI |
| | | | | |
| Maryland | 14,546 | 61.6 | 60.6 | 62.6 |
| | | | | |
| Northwest Region | 1,261 | 59.4 | 56.2 | 62.8 |
| Allegany | 317 | 62.3 | 55.6 | 69.8 |
| Frederick | 429 | 58.3 | 52.9 | 64.2 |
| Garrett | 86 | 51.3 | 41.0 | 63.8 |
| Washington | 429 | 60.2 | 54.6 | 66.2 |
| | | | | |
| Baltimore Metropolitan Area** | 5,308 | 62.6 | 60.9 | 64.3 |
| Anne Arundel | 1,389 | 70.5 | 66.8 | 74.4 |
| Baltimore City | 2,829 | 86.2 | 83.0 | 89.4 |
| Baltimore County | 2,615 | 61.6 | 59.3 | 64.0 |
| Carroll | 359 | 56.0 | 50.3 | 62.1 |
| Harford | 543 | 62.6 | 57.4 | 68.2 |
| Howard | 402 | 54.2 | 48.9 | 60.0 |
| | | | | |
| National Capital Area | | | | |
| Montgomery | 1,431 | 37.1 | 35.2 | 39.0 |
| Prince George's | 1,575 | 58.9 | 56.0 | 62.0 |
| | | | | |
| Southern Region | 659 | 66.3 | 61.2 | 71.6 |
| Calvert | 186 | 67.5 | 58.0 | 78.2 |
| Charles | 306 | 77.1 | 68.6 | 86.7 |
| Saint Mary's | 167 | 51.9 | 44.3 | 60.5 |
| | | | | |
| Eastern Shore | 1,483 | 69.2 | 65.8 | 72.9 |
| Caroline | 113 | 72.0 | 59.4 | 87.0 |
| Cecil | 267 | 74.3 | 65.5 | 83.9 |
| Dorchester | 137 | 71.6 | 60.0 | 85.3 |
| Kent | 77 | 57.8 | 45.5 | 73.2 |
| Queen Anne's | 136 | 64.9 | 54.4 | 77.2 |
| Somerset | 119 | 90.3 | 74.7 | 108.6 |
| Talbot | 113 | 45.2 | 37.2 | 55.3 |
| Wicomico | 313 | 77.3 | 68.9 | 86.4 |
| Worcester | 208 | 66.2 | 57.4 | 76.5 |

* 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 Division of Health Statistics, 1996-2000

**Colon and Rectum Cancer Mortality**
**Number of Cancer Deaths and Age-Adjusted Mortality Rates***
**by Geographical Area, Maryland, 1996-2000**

| Geographical Area | Number of Deaths | Mortality Rates* | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower CI | Upper CI |
| | | | | |
| Maryland | 5,541 | 24.0 | 23.3 | 24.6 |
| | | | | |
| Northwest Region | 528 | 24.8 | 22.8 | 27.1 |
| Allegany | 143 | 28.1 | 23.6 | 33.4 |
| Frederick | 179 | 24.8 | 21.3 | 28.7 |
| Garrett | 45 | 27.2 | 19.8 | 36.9 |
| Washington | 161 | 22.5 | 19.1 | 26.3 |
| | | | | |
| Baltimore Metropolitan Area** | 1,942 | 23.5 | 22.5 | 24.6 |
| Anne Arundel | 447 | 24.0 | 21.8 | 26.4 |
| Baltimore City | 1,002 | 30.6 | 28.7 | 32.6 |
| Baltimore County | 1009 | 24.0 | 22.6 | 25.6 |
| Carroll | 148 | 22.8 | 19.2 | 26.8 |
| Harford | 187 | 22.4 | 19.3 | 26.0 |
| Howard | 151 | 20.6 | 17.4 | 24.3 |
| | | | | |
| National Capital Area | | | | |
| Montgomery | 665 | 17.3 | 16.0 | 18.6 |
| Prince George's | 668 | 26.6 | 24.6 | 28.8 |
| | | | | |
| Southern Region | 247 | 26.4 | 23.1 | 30.0 |
| Calvert | 68 | 26.7 | 20.6 | 34.1 |
| Charles | 103 | 28.1 | 22.8 | 34.3 |
| Saint Mary's | 76 | 24.3 | 19.1 | 30.6 |
| | | | | |
| Eastern Shore | 489 | 23.1 | 21.1 | 25.2 |
| Caroline | 48 | 30.8 | 22.7 | 41.3 |
| Cecil | 74 | 21.4 | 16.7 | 27.0 |
| Dorchester | 47 | 23.7 | 17.4 | 32.2 |
| Kent | 27 | 20.1 | 13.2 | 30.3 |
| Queen Anne's | 37 | 19.3 | 13.5 | 27.1 |
| Somerset | 35 | 26.1 | 18.1 | 37.0 |
| Talbot | 60 | 23.9 | 18.2 | 31.8 |
| Wicomico | 84 | 20.9 | 16.7 | 26.0 |
| Worcester | 77 | 26.2 | 20.6 | 33.3 |

* 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 Division of Health Statistics, 1996-2000

**Female Breast Cancer Mortality**
**Number of Cancer Deaths and Age-Adjusted Mortality Rates***
**by Geographical Area, Maryland, 1996-2000**

| Geographical Area | Number of Deaths | Mortality Rates* | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower CI | Upper CI |
| Maryland | 4,071 | 30.0 | 29.1 | 31.0 |
| | | | | |
| Northwest Region | 321 | 26.7 | 23.8 | 29.8 |
| | | | | |
| Baltimore Metro Region** | 1,395 | 29.0 | 27.5 | 30.5 |
| Baltimore City | 718 | 37.4 | 34.7 | 40.3 |
| | | | | |
| Montgomery County | 611 | 26.9 | 24.8 | 29.2 |
| Prince George's County | 537 | 32.7 | 30.0 | 35.7 |
| | | | | |
| Southern Region | 143 | 25.0 | 21.1 | 29.6 |
| | | | | |
| Eastern Shore Region | 346 | 29.9 | 26.8 | 33.3 |

* 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 Division of Health Statistics, 1996-2000

## Prostate Cancer Mortality
## Number of Cancer Deaths and Age-Adjusted Mortality Rates*
## by Geographical Area, Maryland, 1996-2000

| Geographical Area | Number of Deaths | Mortality Rates* | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower CI | Upper CI |
| Maryland | 2,974 | 36.3 | 34.9 | 37.6 |
| | | | | |
| Northwest Region | 223 | 28.6 | 24.9 | 32.8 |
| | | | | |
| Baltimore Metro Region** | 966 | 32.7 | 30.5 | 34.9 |
| Baltimore City | 624 | 53.8 | 49.6 | 58.4 |
| | | | | |
| Montgomery County | 376 | 28.0 | 25.1 | 31.0 |
| Prince George's County | 343 | 42.6 | 37.9 | 47.9 |
| | | | | |
| Southern Region | 144 | 43.4 | 36.2 | 51.8 |
| | | | | |
| Eastern Shore Region | 298 | 37.0 | 32.8 | 41.6 |

* 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 Division of Health Statistics, 1996-2000

## Oral Cancer Mortality
## Number of Cancer Deaths and Age-Adjusted Mortality Rates*
## by Geographical Area, Maryland, 1996-2000

| Geographical Area | Number of Deaths | Mortality Rates* | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower CI | Upper CI |
| Maryland | 783 | 3.3 | 3.1 | 3.5 |
| | | | | |
| Northwest Region | 61 | 2.9 | 2.2 | 3.7 |
| | | | | |
| Baltimore Metro Region** | 242 | 2.9 | 2.5 | 3.3 |
| Baltimore City | 189 | 5.9 | 5.1 | 6.8 |
| | | | | |
| Montgomery County | 76 | 2.0 | 1.5 | 2.5 |
| Prince George's County | 102 | 3.6 | 2.9 | 4.5 |
| | | | | |
| Southern Region | 45 | 4.2 | 3.1 | 5.7 |
| | | | | |
| Eastern Shore Region | 68 | 3.2 | 2.5 | 4.1 |

* 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 Division of Health Statistics, 1996-2000

**Melanoma Cancer Mortality**
**Number of Cancer Deaths and Age-Adjusted Mortality Rates***
**by Geographical Area, Maryland, 1996-2000**

| Geographical Area | Number of Deaths | Mortality Rates* | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower CI | Upper CI |
| Maryland | 603 | 2.5 | 2.3 | 2.7 |
| | | | | |
| Northwest Region | 51 | 2.4 | 1.8 | 3.2 |
| | | | | |
| Baltimore Metro Region** | 252 | 2.9 | 2.6 | 3.3 |
| Baltimore City | 53 | 1.6 | 1.2 | 2.1 |
| | | | | |
| Montgomery County | 103 | 2.6 | 2.1 | 3.2 |
| Prince George's County | 43 | 1.5 | 1.1 | 2.1 |
| | | | | |
| Southern Region | 36 | 3.3 | 2.3 | 4.7 |
| | | | | |
| Eastern Shore Region | 65 | 3.2 | 2.4 | 4.0 |

* 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 Division of Health Statistics, 1996-2000

## Cervical Cancer Mortality
## Number of Cancer Deaths and Age-Adjusted Mortality Rates*
## by Geographical Area, Maryland, 1996-2000

| Geographical Area | Number of Deaths | Mortality Rates* | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower CI | Upper CI |
| Maryland | 388 | 2.9 | 2.6 | 3.2 |
| | | | | |
| Northwest Region | 41 | 3.6 | 2.6 | 5.0 |
| | | | | |
| Baltimore Metro Region** | 90 | 1.9 | 1.5 | 2.3 |
| Baltimore City | 106 | 5.9 | 4.8 | 7.1 |
| | | | | |
| Montgomery County | 35 | 1.5 | 1.0 | 2.1 |
| Prince George's County | 48 | 2.6 | 1.9 | 3.5 |
| | | | | |
| Southern Region | 17 | 3.1 | 1.8 | 5.0 |
| | | | | |
| Eastern Shore Region | 51 | 4.6 | 3.4 | 6.1 |

* 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 Division of Health Statistics, 1996-2000

**PLEASE COMPLETE ONLINE REPORT EVALUATION FORM HERE**

THANK YOU.

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