Maryland Department of Health

2024 Cancer Report

Cigarette Restitution Fund Program

Cancer Prevention, Education, Screening and Treatment Program
Health-General Article, Section 13-1104(e)

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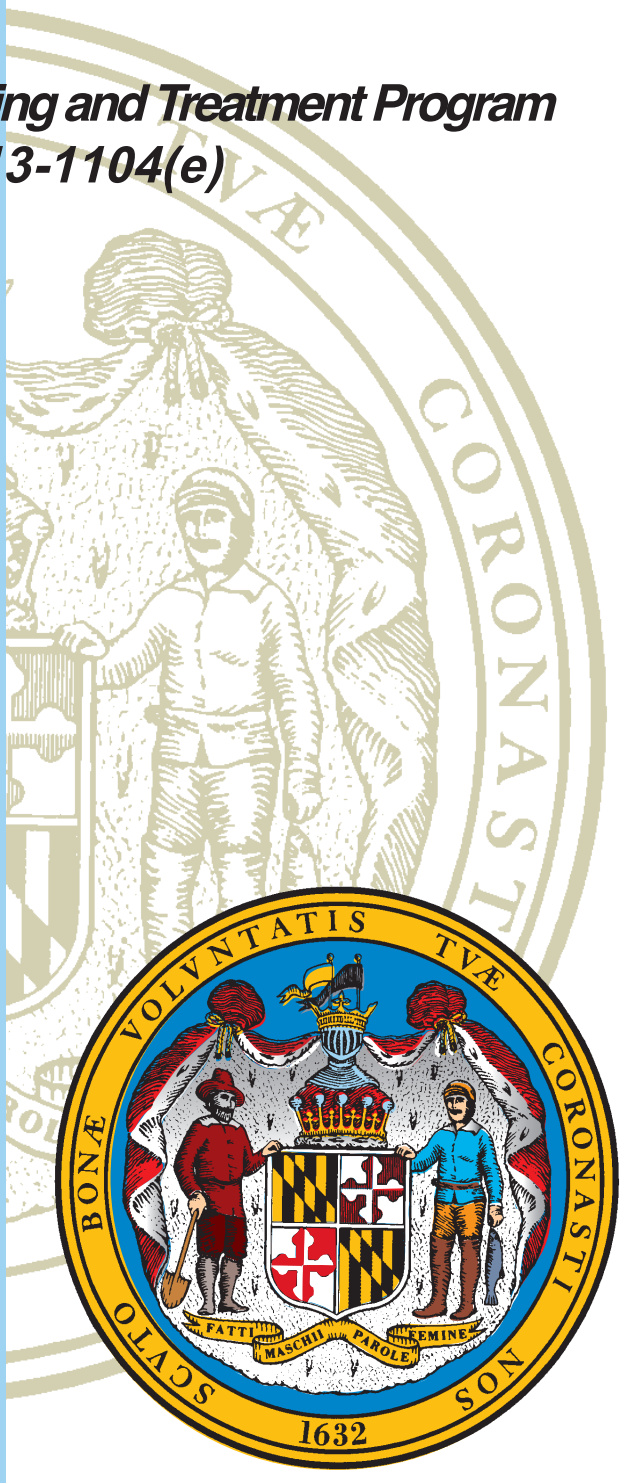

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Maryland Department of Health

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Acknowledgments

The Maryland Department of Health, Center for Cancer Prevention and Control (CCPC) is pleased to present the Cigarette Restitution Fund Program 2024 Cancer Report. Our hope is that individuals, groups, and agencies, such as local health departments, statewide academic health centers, community health coalitions, other community organizations, Marylanders, and policy makers, will benefit from this report.

We thank the following for their contributions to this document:

- Maryland Cancer Registry, CCPC, for providing incidence data. We acknowledge the State of Maryland, the Maryland Cigarette Restitution Fund, and the National Program of Cancer Registries (NPCR) of the Centers for Disease Control and Prevention (CDC) (Cooperative Agreement #5NU58DP007114) for the funds that helped support the availability of the cancer registry data.

- Bradley Knight, MPH, Center for Chronic Disease Prevention and Control, for data from the Maryland Behavioral Risk Factor Surveillance System (BRFSS).

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

Dedication

We dedicate this report to all persons whose lives have been touched by cancer. We hope to illustrate the progress and challenges related to cancer prevention, diagnosis, and treatment in Maryland.

Maryland
DEPARTMENT OF HEALTH

Table of Contents

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Glossary

- **Age-adjustment:** Age is the most important risk factor for the incidence of most cancers. However, cancer rates derived from populations that differ in underlying age distributions are not comparable. Age-adjustment is a statistical technique that allows for the comparison of rates among populations with 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 websites:

  - http://seer.cancer.gov/seerstat/tutorials/aarates/definition.html
  - http://www.cdc.gov/nchs/data/statnt/statnt20.pdf

- **Annual percent change (APC):** A measure of the annual percent increase or decrease in cancer rates over time, which is used for analyzing trends. This measure assumes that cancer rates change at a constant percentage of the rate of the previous year. Rates that change at a constant percentage every year change linearly on a log scale. A more detailed description of this method can be found at:

  https://surveillance.cancer.gov/help/joinpoint/setting-parameters/method-and-parameters-tab/apc-aapc-tau-confidence-intervals/average-annual-percent-change-aapc

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

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

- **Confidence interval (CI):** Describes the range of uncertainty around a point estimate (e.g., an incidence or mortality rate) and serves as an indicator of the precision or stability of a rate. CIs are useful in defining a range within which the typical rate for a geographic area can be expected to lie. Most CIs are, by convention, calculated at the 95% level, which means that 95% of hypothetically observed CIs generated will contain the true value of interest. The smaller the number of events upon which a rate is based, the wider the confidence interval will be.

- **Incidence:** The number of new cases of a given cancer or other event during a defined time period, usually one year. For the purposes of this report, cancer incidence refers to the number of new cases diagnosed during the calendar year 2021. Cancer incidence data are also presented in aggregated form, as the average annual incidence for the 5-year period from 2017 through 2021.

- **International Classification of Diseases (ICD):** The ICD is the international standard diagnostic classification for all general epidemiological, health management, and clinical use. It is used to classify diseases and other health problems recorded on many types of health and vital records, including death certificates.

- **International Classification of Diseases for Oncology (ICD-O):** The ICD-O is the classification system used by tumor or cancer registries to code the site and the histology of the cancer, usually from a pathology report.

- **Invasive cancer:** Cancer that has spread beyond the layer of cells where it first began and has grown into nearby tissues. It may still be considered local stage if it has not spread to other parts of the body. Stage data presented in this report involves a diagnosis of invasive cancer: local, regional, or distant. A diagnosis of *in situ* is non-invasive and is not included in the staging data, except for *in situ* bladder cancer for all sites cancer data.

- **Mortality:** The number of deaths during a defined time period, usually one year. For the purposes of this report, cancer mortality refers to the number of new cancer deaths during the individual calendar year 2021. Cancer mortality data are also presented in an aggregated form, as the average annual mortality for the 5-year period from 2017 through 2021.

- **Primary prevention: Measures** that can be taken that aim to prevent cancer before it develops. Examples include the avoidance of carcinogens (e.g., cigarettes, 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).

- **Race bridging:** Refers to the process of making data collected using one set of race categories consistent with data collected using a different set of race categories. This consistency allows estimation and comparison of race-specific statistics at a given point in time or over a period of time. More specifically, race bridging is a method used to make systems sufficiently comparable to permit estimation and analysis of race-specific statistics. Race-bridging algorithms are generally applied to population data, which are used in this report for calculating rates and for describing race categories of Maryland population estimates.

- **Rate:** An estimate of the burden of a given disease on a defined population at risk over a specified period of time. A crude rate is calculated by dividing the number of cases or deaths (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. An incidence rate is the number of new cases during a specific period (usually one year) divided by the population at risk per 100,000 population. A mortality rate is the number of deaths for a given period divided by the population at risk per 100,000 population. All rates presented in this report are age-adjusted to the 2000 U.S. standard population.

- **Region:** The following are the five geographic areas in Maryland as used in this report:

  Baltimore Metropolitan Area
  Anne Arundel, Baltimore, Carroll, Harford, and Howard counties and Baltimore City.

  Note: The Baltimore Metropolitan Area does not include Baltimore City when used in Appendix G.

  Eastern Shore Region
  Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester counties

  National Capital Area
  Montgomery and Prince George's counties

  Northwest Region
  Allegany, Frederick, Garrett, and Washington counties

  Southern Region
  Calvert, Charles, and St. Mary's counties

- **Screening:** Checking for disease when there are no symptoms, resulting in detection of pre-cancer, cancer *in situ*, or cancer at an early stage.

- **Stage at diagnosis:** Cancer stage is 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 U.S. Surveillance Epidemiology and End Results (SEER) Summary Stage Guidelines:

  1. ***In situ*:** The cancerous cells have not invaded the tissue basement membrane and there is no stromal invasion. *In situ* cancers are not considered malignant (with the exception of bladder cancers) and are not included in incidence rate calculations.
  2. **Local:** The tumor is confined to the organ of origin.
  3. **Regional:** The tumor has spread to adjacent organs or tissue. Regional lymph nodes may also be involved.
  4. **Distant:** The tumor has spread beyond the adjacent organs or tissues. Distant lymph nodes, organs, and/or tissues may also be involved.
  5. **Unstaged:** The stage of disease at diagnosis was unable to be classified (often due to insufficient information) or was not reported to the cancer registry.

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I. Executive Summary

A. Introduction

This publication is the Cigarette Restitution Fund Program (CRFP) 2024 Cancer Report which is required biennially by Health General Article §13-1104, Annotated Code of Maryland. The primary purpose of this report is to assist local health departments and local community health coalitions in planning and implementing comprehensive cancer prevention, education, screening, and treatment programs. The data and the "Public Health Intervention" recommendations are intended to guide local health departments, Statewide Academic Health Centers, community health coalitions, community organizations, and policy makers as they determine how to best allocate limited resources for maximum benefit, with the goal of reducing cancer mortality and eliminating racial disparities.

The CRFP was established in 2000 to provide for the distribution of funds received as a result of multi-state litigation against the tobacco industry. §13-1104 also established the Cancer Prevention, Education, Screening, and Treatment Program (CPEST) within the Maryland Department of Health (MDH), whose primary goal is to reduce mortality and morbidity rates for cancer and tobacco-related diseases throughout Maryland. In Fiscal Year (FY) 2024, the CRFP provided approximately $27 million to CPEST to combat cancer.

§13-1104 further requires MDH to identify the types of cancers that may be targeted under the CPEST Program. In addition to overall cancers presented in this report, MDH has selected seven targeted cancers that are presented individually: lung and bronchus, colon and rectum, female breast, prostate, oral, melanoma of the skin, and cervix. These seven cancers have been targeted as they can be prevented, detected early and treated, or are a major cause of cancer death.

Additionally, §13-1104 requires Maryland jurisdictions to develop plans to: 1) eliminate the higher incidence and mortality rates of cancer in minority populations (as defined in statute 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 healthcare services for medically underserved populations and uninsured or underinsured individuals.

This report includes information on cancer incidence, mortality, stage of disease at diagnosis, public health evidence for prevention and screening, recommended areas for public health intervention, and Maryland screening behaviors compared to the Centers for Disease Control and Prevention's Healthy People 2030 and the Maryland Comprehensive Cancer Control Plan (MCCCP) targets for cancer prevention and screening. Further efforts to prevent and control cancer in Maryland can be found in the MCCCP at https://phpa.health.maryland.gov/cancer/cancerplan/Pages/publications.aspx.

B. Major Highlights of the Report for the State of Maryland

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

- In 2021, a total of 33,945 new cases of cancer were diagnosed in Maryland.
- From 2012 to 2021, the annual overall cancer incidence rate in Maryland and the U.S. decreased slightly by 0.2% per year.
- From 2017 to 2021, incidence rates for all cancer sites decreased among White Marylanders, Black Marylanders, and Asian/Pacific Islander Marylanders. It increased among Hispanic Marylanders and American Indian/Alaska Native Marylanders.
- In 2021, a total of 10,540 Maryland residents died from cancer.
- The 2021 age-adjusted all cancer mortality rate in Maryland was statistically significantly lower than the all cancer mortality rate in the U.S.
- In both the U.S. and Maryland, the total age-adjusted cancer mortality rate for Black individuals is statistically significantly higher than the cancer mortality rate for White individuals. However, the mortality rates for both groups in Maryland are statistically significantly lower than their rates in the U.S. overall.
- From 2012 to 2021, all cancer sites mortality rates in the U.S. decreased at a rate of 1.7% per year, and in Maryland decreased at a rate of 2.0% per year.
- The COVID-19 pandemic resulted in lower cancer incidence rates in 2020 due to delays and reductions in cancer screening and diagnosis.[1] The data show that 2020 was a temporary, anomalous year.[1] Although 2020 data were included in the multi-year analyses in this report, the inclusion of 2020 data in multi-year analyses may result in biased estimates, including less precise annual percent change (APC).[2]

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

- Lung cancer is the leading cause of cancer death in both men and women in Maryland, accounting for 21.8% of all cancer deaths in 2021.
- From 2017 to 2021, overall lung cancer incidence and mortality rates decreased statewide.
- Incidence rates increased among Hispanic Marylanders from 2017-2021.
- A higher proportion of lung cancer cases were diagnosed at the distant stage than at the local or regional stage for all racial groups. From 2017 to 2021, over half (55.6%) of American Indian/Alaska Native lung cancer cases were diagnosed at the distant stage.
- Although having previously met both the 7.5% 2025 MCCCP target and 7.4% Healthy People 2030 goal of high-risk adults screened for lung cancer, in 2022 Maryland did not meet either goal with only 2.9% having been screened.

3. Major findings for **colon and rectum** (colorectal) cancer:

- From 2017 to 2021, colorectal cancer incidence rates decreased in Maryland at a rate

1. Impact of COVID on the April 2023 SEER Data Release. 2023. SEER. https://seer.cancer.gov/data/covid-impact-apr2023.html.
2. Impact of COVID on the April 2024 SEER Data Release. 2024. SEER. https://seer.cancer.gov/data/covid-impact.html.

of 2.1% per year, and in the U.S. at a rate of 1.1% per year, while mortality rates decreased 1.4% per year for both the Maryland and the U.S.

- From 2017 to 2021, Black Marylanders had consistently higher colorectal cancer mortality rates than all other racial groups.
- The percent of Maryland adults ages 50 years and older who were up to date for colorectal cancer screening in 2022 (77.3%) is just shy of the 2025 MCCCP target of 80.0%.
- As of 2022, only Black Marylanders have met the 2025 MCCCP target to increase the total percentage of Maryland adults aged 50 years and older who are up to date with their colorectal cancer screening to 80.0%.

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

- Breast cancer is the second leading cause of cancer death among women in Maryland after lung cancer.
- The overall incidence for female breast cancer increased from 2017 to 2021, while the mortality rates decreased.
- From 2017 to 2021, the female breast cancer mortality rates were highest in Black women compared to other racial groups.
- From 2017 to 2021, over half of all female breast cancer cases were diagnosed at the local stage for all racial groups. Black and Hispanic women had the largest percentages of cases diagnosed at the regional and distant stage compared to other racial and ethnic groups.
- In 2022, 83.2% of Maryland women ages 50 to 74 years reported receiving a mammogram within the past two years meeting the Heathy People 2030 goal and almost meeting the 2025 MCCCP target.
- In 2022, Black women met both the Healthy People 2030 and 2025 MCCCP targets for women screened for breast cancer. White women met the Healthy People 2030 goal, but not the 2025 MCCCP target. Hispanic and Multiracial women did not meet either goal.

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

- Prostate cancer is the second leading cause of cancer death among men in Maryland after lung cancer.
- Overall, incidence rates for prostate cancer increased from 2017 to 2021, while mortality rates decreased.
- Black men in Maryland had statistically significantly higher incidence and mortality rates than all other racial groups in Maryland in 2021.
- From 2017 to 2021, mortality rates decreased 4.5% per year among White men but increased 3.9% per year among Black men.

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

- From 2017 to 2021, the oral cancer incidence rate in Maryland decreased overall.
- Over the 5-year period from 2017 to 2021, White individuals had consistently higher

oral cancer incidence rates than all other racial groups in Maryland.
- From 2017 to 2021, oral cancer mortality rates decreased at a rate of 0.7% per year for White Marylanders and increased 2.3% per year for Black Marylanders.
- From 2017 to 2021, most oral cancers in Maryland were diagnosed at the regional stage for all racial groups. American Indian/Alaska Native Marylanders had the highest proportion of cases diagnosed at the distant stage (16.7%), while Black Marylanders had the lowest proportion of cases diagnosed at the local stage (24.6%).

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

- Melanoma incidence rates in Maryland decreased at a rate of 0.3% per year from 2017 to 2021. The annual incidence rates decreased 0.7% among males but increased 0.1% among females.
- In 2021, melanoma incidence rates were 59.5% higher among males than females in Maryland.
- From 2017 to 2021, overall melanoma mortality rates increased among males and decreased among females.
- In 2021, 53.3% of Maryland adults indicated they used at least one sun protective measure "always" or "nearly always," which is below the 2025 MCCCP target of 63.9%.

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

- Cervical cancer incidence rates among Maryland women decreased at a rate of 4.1% per year from 2017 to 2021, while mortality rates decreased at a rate of 0.9% per year.
- From 2017 to 2021, Black women had consistently higher cervical cancer mortality rates than White women in Maryland.
- From 2017 to 2021 mortality rates increased at a rate of 3.8% per year for White women while rates for Black women decreased at a rate of 4.3% per year.
- From 2017 to 2021, American Indian/Alaska Native women and Black women had the greatest proportion of cervical cancer cases diagnosed at distant stage at 33.3% and 21.6%, respectively.

C. Major Changes to this Report from the 2022 Cancer Report

- This report presents Maryland and U.S. incidence and mortality data for 2021 and 5-year aggregate data for 2017 to 2021 for all cancers in the report.
- This report expands the race/ethnicity categories reported to non-Hispanic White (White), non-Hispanic Black (Black), Hispanic, non-Hispanic Asian or Pacific Islander (Asian/Pacific Islander or API), and non-Hispanic American Indian or Alaska Native (American Indian/Alaska Native or AIAN). In prior reports, the White and Black counts and rates included both Hispanic and non-Hispanic individuals; therefore, the White and Black counts and rates in this report should not be compared to the White and Black counts and rates previously reported.
- This report presents incidence, mortality, and stage at diagnosis stratified by all

races/ethnicities for 2017 to 2021.

- The Maryland mortality data for 2017 to 2021 was obtained from the Maryland Department of Health Vital Statistics Administration, as opposed to the National Center for Health Statistics (NCHS) Underlying Cause of Death file in CDC Wide-ranging Online Data for Epidemiologist Research (CDC WONDER) and the NCHS Compressed Mortality File (CMF) in CDC WONDER used in previous reports. The NCHS CMF was discontinued in CDC WONDER after 2016, and the NCHS Underlying Cause of Death file no longer provides county-level estimates in their new single-race 2018-2022 data file.
- For stage at diagnosis, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018, 2019, 2020, and 2021.
- Tobacco use was removed from the report, and instead was replaced with lung cancer screening targets.
- Compared to prior reports, this report contains two new appendices. Appendix K shows Maryland and U.S. incidence and mortality rates, stratified by race/ethnicity with confidence intervals for all cancer sites and targeted cancers, except for melanoma which is stratified by gender. Appendix L shows the distribution of cancer stage at diagnosis by race/ethnicity based on 5-year data (2017-2021).

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II. All Cancer Sites

Incidence (New Cases)

A total of 33,945 new cases of cancer diagnosed in 2021 in Maryland residents were reported to the Maryland Cancer Registry (MCR). The total age-adjusted cancer incidence rate for Maryland was 440.4 per 100,000 population 2021. The 2021 Maryland cancer incidence rate is statistically similar to the 2021 U.S. SEER rate of 439.7 per 100,000 population.

In Maryland, White individuals had a statistically significantly higher all sites cancer incidence rate (467.0 per 100,000) than all other racial and ethnic groups in 2021. Black Marylanders had the second highest all sites cancer incidence rate (439.8 per 100,000), statistically significantly higher than the rates for Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native Marylanders. For Maryland and U.S. 2021 incidence rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 1.

Mortality (Deaths)

Cancer is the second leading cause of death in Maryland, accounting for 18.0% of all deaths in 2021. A total of 10,540 Maryland residents died from cancer in 2021. The Maryland mortality rate for all cancer sites was 136.4 per 100,000 population 2021. This rate is statistically significantly lower than the 2021 U.S. mortality rate for all cancer sites of 144.2 per 100,000 population. Maryland ranks 40th highest among all states and the District of Columbia in total cancer mortality in 2021.

At 152.2 deaths per 100,000, Black individuals had a statistically significantly higher all sites cancer mortality rate than other racial and ethnic groups in Maryland in 2021. White Marylanders had the second highest all sites cancer mortality rate, statistically significantly higher than Hispanic and Asian/Pacific Islander individuals. The 2021 all sites cancer mortality rate for American Indian/Alaska Native Marylanders is not reportable. For Maryland and U.S. 2021 mortality rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 2.

Table 1
All Cancer Sites Incidence and Mortality Rates
by Gender and Race/Ethnicity, Maryland (MD) and the United States, 2021

Incidence 2021	*Total**	*Male*	*Female*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD New Cases (count)	33,945	16,950	16,990	21,210	9,637	1,261	1,384	69
MD Incidence Rate	440.4	476.3	418.2	467.0	439.8	278.9	279.8	286.1
U.S. SEER Rate	439.7	472.8	420.2	471.4	459.4	341.4	312.9	387.7
Mortality 2021	*Total*	*Male*	*Female*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD Deaths (count)	10,540	5,356	5,184	6,544	3,152	333	483	18
MD Mortality Rate	136.4	161.6	119.9	135.9	152.2	87.8	101.3	**
U.S. Mortality Rate	144.2	170.8	125.0	149.8	164.3	105.5	93.2	129.2

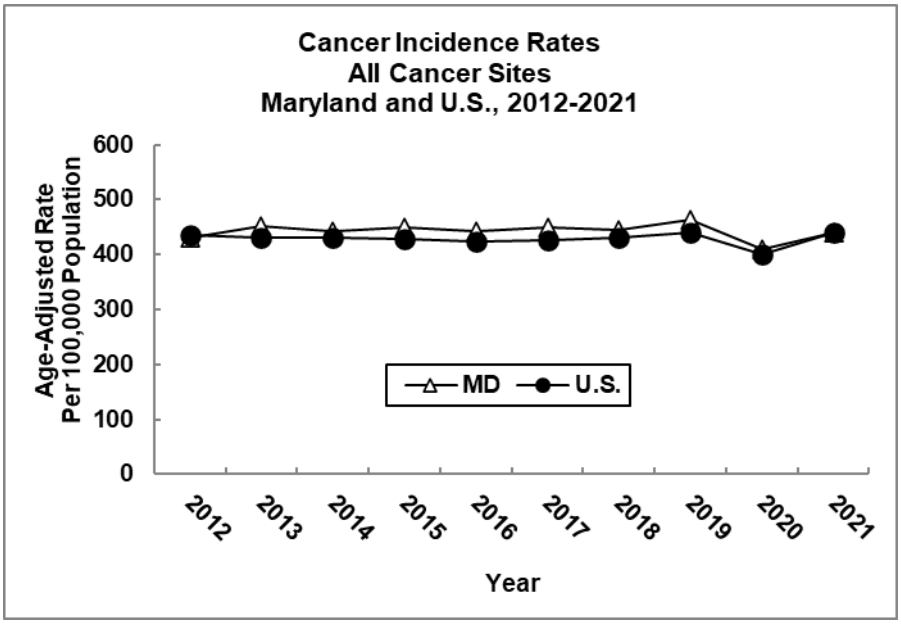
Rates are per 100,000 population and are age-adjusted to 2000 U.S. standard population

All race rates and counts, except Hispanic, are non-Hispanic/Latino

* Total also includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

** MD mortality rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat
Maryland Department of Health Vital Statistics Administration
SEER Mortality All Cause of Death Data

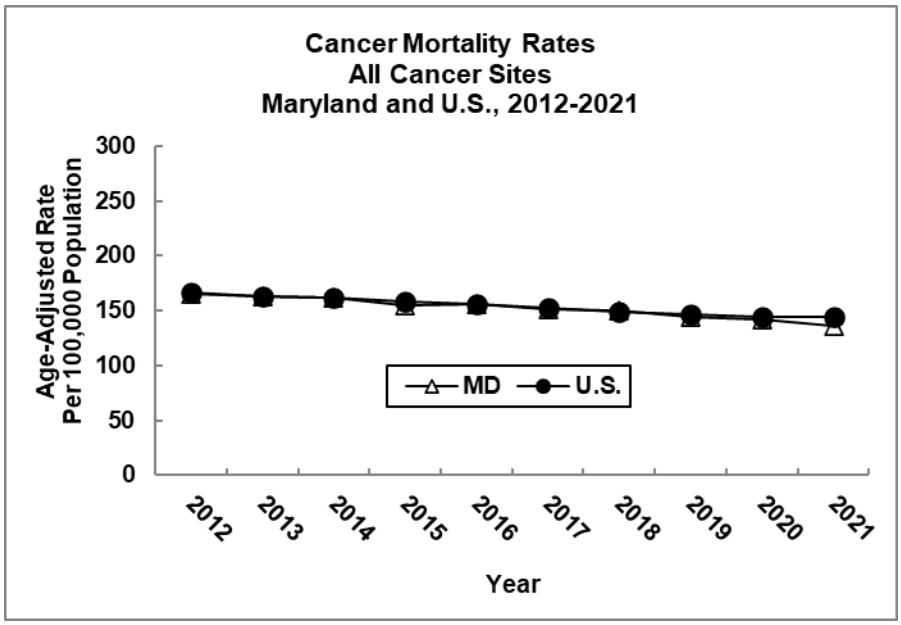


Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat

Maryland vs. U.S., All Cancer Sites Incidence Rates, All Age Groups

All cancer sites incidence rates declined in both the U.S. and Maryland over the 10-year period from 2012 to 2021. Incidence rates for all cancer sites decreased at a rate of 0.2% per year in both the U.S. and Maryland.

See Appendix J, Table 1.

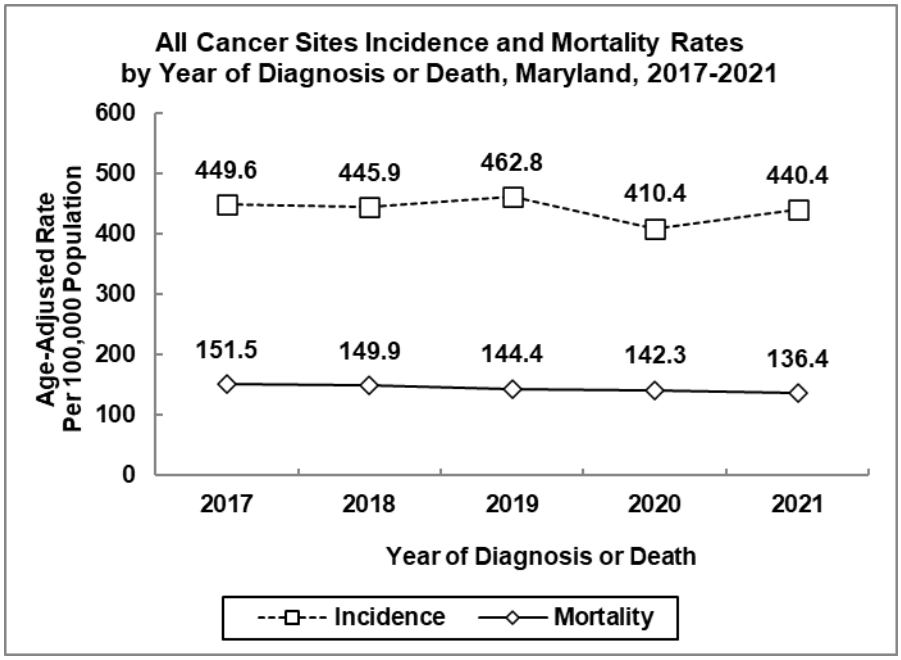


Source: Maryland Department of Health Vital Statistics Administration, 2021 (MD)
NCHS Underlying Cause of Death in CDC WONDER, 2017-2020 (MD)
NCHS Compressed Mortality File in CDC WONDER, 2012-2016 (MD)
SEER Mortality All Cause of Death Data (U.S.)

Maryland vs. U.S., All Cancer Sites Mortality Rates, All Age Groups

Maryland cancer mortality rates have declined since 2012. From 2012 to 2021, all cancer sites mortality rates in the U.S. have decreased at a rate of 1.7% per year and in Maryland decreased at a rate of 2.0% per year.

See Appendix J, Table 2.



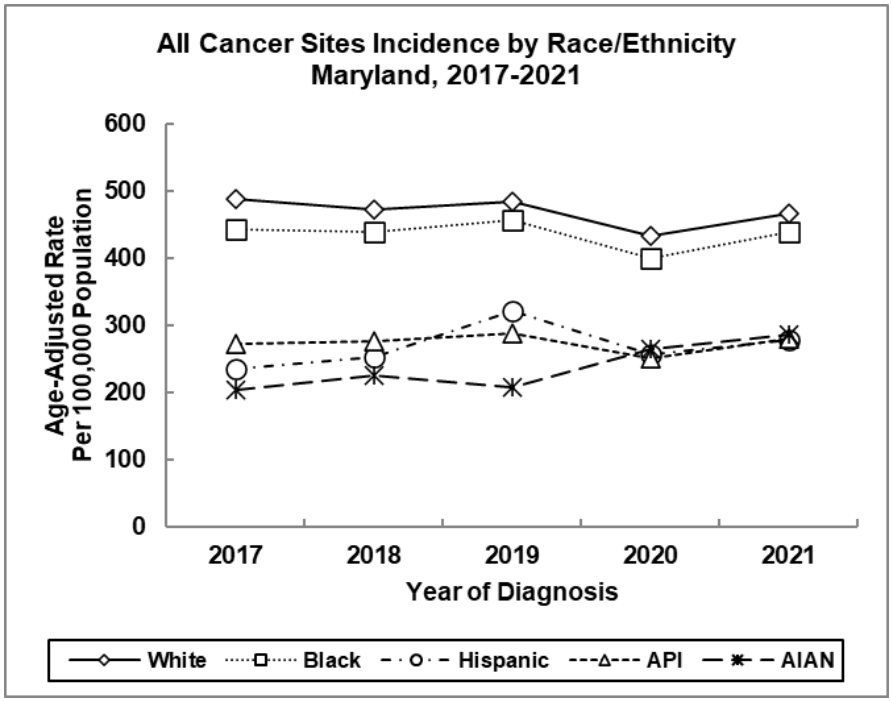
Source: Maryland Cancer Registry
Maryland Department of Health Vital Statistics Administration, 2021
NCHS Underlying Cause of Death in CDC WONDER, 2017-2020

Incidence and Mortality Trends

In Maryland, the incidence rate for all cancer sites decreased at a rate of 1.2% per year from 2017 to 2021.

During the same timeframe, cancer mortality rates decreased at a rate of 2.6% per year.

See Appendix H, Tables 1 and 2.

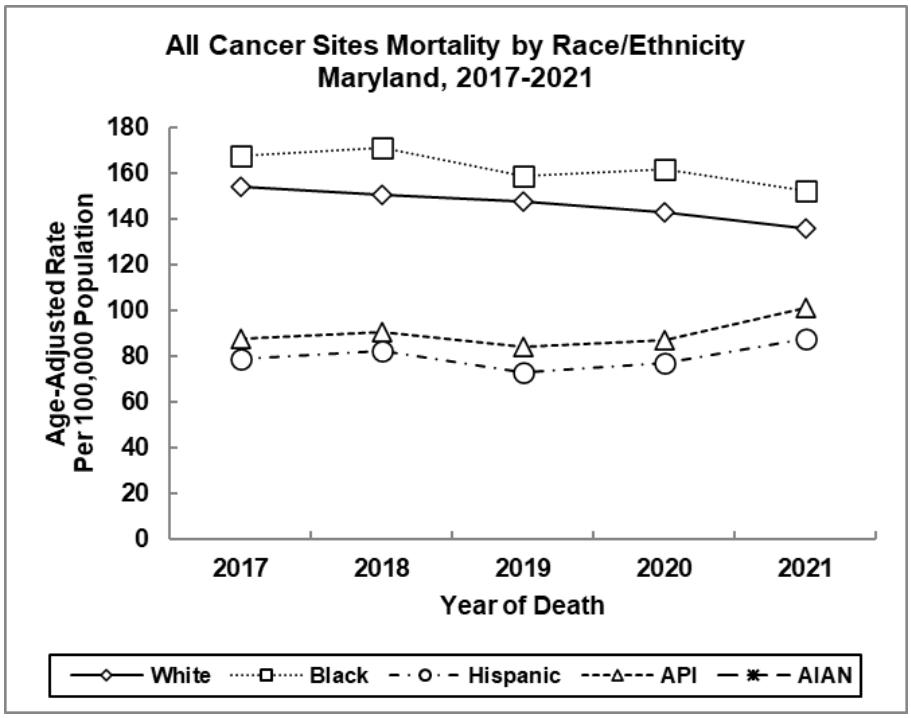


Source: Maryland Cancer Registry

Incidence Trends by Race/Ethnicity

In Maryland, from 2017 to 2021, the incidence rate for all cancer sites was lower among Black, Asian/Pacific Islander, and American Indian/Alaska Native individuals compared to White individuals. From 2017 to 2021, incidence rates for all cancer sites decreased at a rate of 1.7% per year among White Marylanders, 1.1% among Black Marylanders, and 0.5% among Asian/Pacific Islander Marylanders. It increased 3.6% per year among Hispanic Marylanders and 8.9% per year among American Indian/Alaska Native Marylanders.

See Appendix H, Table 3.

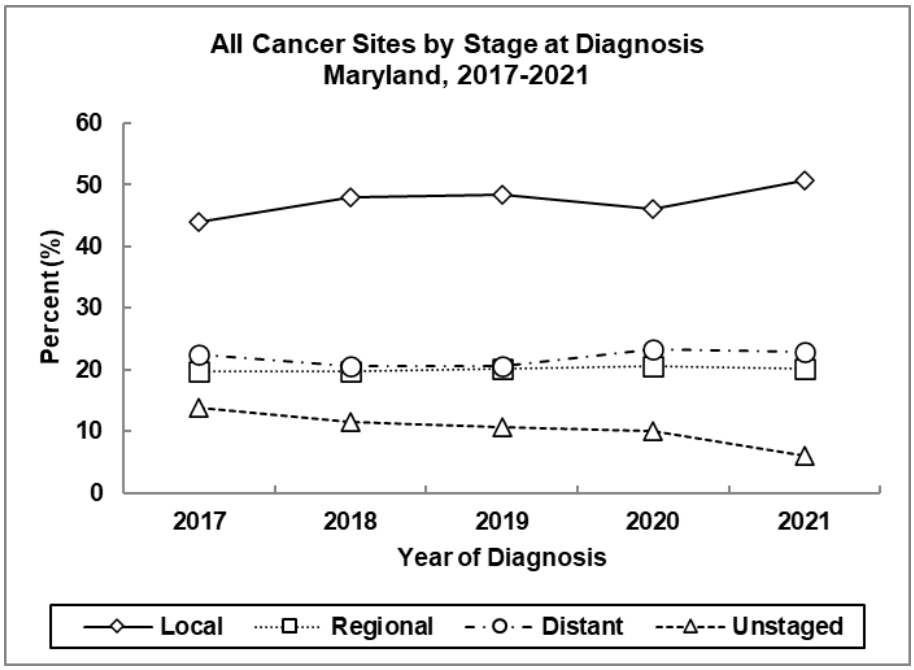


Source: Maryland Department of Health Vital Statistics Administration

Mortality Trends by Race/Ethnicity

From 2017 to 2021, Black Marylanders had higher mortality rates for all cancer sites compared to all other groups. However, both Black and White Marylanders' cancer mortality rates decreased at a rate of 2.4% and 2.9% per year, respectively. The mortality rates for all cancer sites increased 1.4% per year among Hispanic Marylanders and 2.4% per year among Asian/Pacific Islander Marylanders. The mortality rates for American Indian/Alaska Native Marylanders were suppressed from 2017 to 2021.

See Appendix H, Table 5.

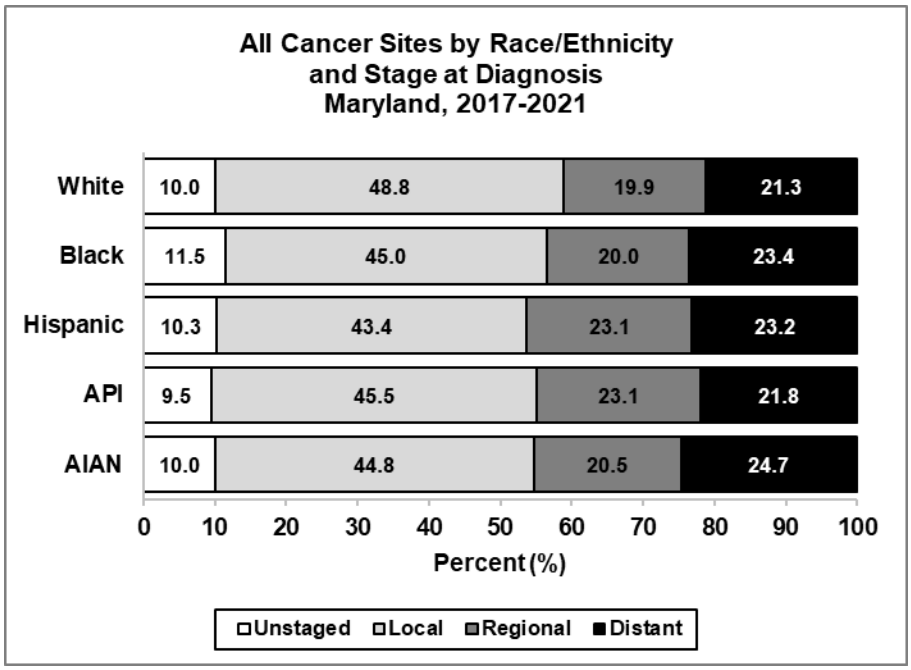


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis

Of all cancers diagnosed in Maryland in 2021, 50.8% were found at the local (early) stage, 20.2% at the regional stage, and 23.0% at the distant (late) stage. In 2021, 6.0% of all cancers were reported as unstaged in Maryland. Since 2017, the proportion of all cancers reported as unstaged decreased by 16.6% per year.

See Appendix I, Table 1.

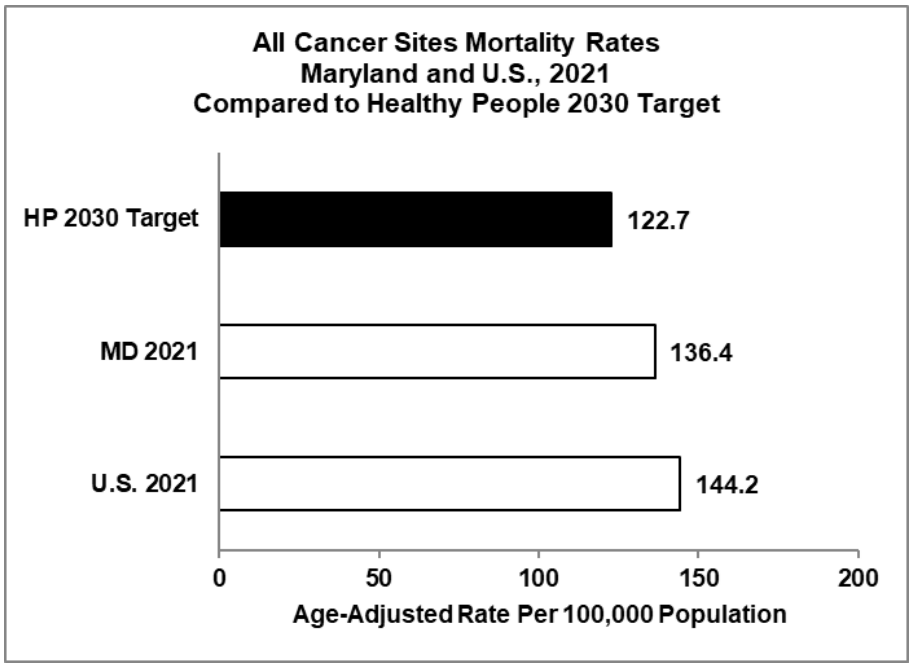


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis by Race/Ethnicity

A higher proportion of cancer cases were diagnosed at the local stage than at the regional or distant stage for all racial groups. American Indian/Alaska Native Marylanders had the highest proportion of distant stage at diagnosis, at 24.7% compared to other racial groups.

See Appendix L, Table 1.



Source: Healthy People 2030, U.S. Department of Health and Human Services
Maryland Department of Health Vital Statistics Administration, 2021 (MD)
SEER Mortality All Cause of Death Data (U.S.)

Mortality Rates Compared to Healthy People (HP) 2030 Target

In 2021, the mortality rate for all cancer sites in Maryland was 136.4 per 100,000 population, which was lower than the U.S. rate of 144.2 per 100,000 population. Both the Maryland and U.S. 2021 mortality rates were higher than the Heathy People 2030 target of 122.7 per 100,000 population.

Table 2
Number of Cases for All Cancer Sites by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	33,945	16,950	16,990	21,210	9,637	1,261	1,384	69
Allegany	492	272	220	458	14	<6	<6	0
Anne Arundel	3,265	1,656	1,608	2,571	490	91	75	9
Baltimore City	3,058	1,522	1,535	958	1,966	54	43	7
Baltimore	5,410	2,610	2,800	3,633	1,460	98	156	14
Calvert	629	341	288	534	80	8	<6	0
Caroline	230	98	132	194	30	<6	<6	0
Carroll	1,153	607	546	1,070	50	12	14	<6
Cecil	606	333	273	558	35	<6	6	0
Charles	822	403	419	395	393	14	14	<6
Dorchester	252	133	119	178	70	0	<6	0
Frederick	1,564	773	791	1,300	140	71	39	6
Garrett	186	103	83	183	0	0	0	0
Harford	1,596	809	786	1,347	181	22	34	<6
Howard	1,544	758	785	951	310	62	191	<6
Kent	153	95	58	137	14	<6	0	<6
Montgomery	5,211	2,543	2,668	3,067	945	490	609	7
Prince George's	4,322	2,081	2,241	849	2,966	275	145	9
Queen Anne's	343	164	179	304	29	<6	7	<6
St. Mary's	576	289	287	458	95	10	11	<6
Somerset	137	82	55	100	34	<6	0	0
Talbot	335	165	170	281	39	9	<6	<6
Washington	890	448	441	796	65	14	13	0
Wicomico	599	334	265	428	146	13	10	<6
Worcester	427	237	190	372	46	<6	<6	0

Total includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 3
All Cancer Sites Age-Adjusted Incidence Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	440.4	476.3	418.2	467.0	439.8	278.9	279.8	286.1
Allegany	505.3	578.3	454.4	503.2	**	**	**	0.0
Anne Arundel	456.3	492.1	433.1	469.7	446.1	309.9	244.1	**
Baltimore City	451.7	518.2	407.6	487.4	441.2	243.4	330.9	**
Baltimore	487.2	520.4	468.9	495.8	528.2	322.4	273.9	**
Calvert	525.1	589.4	479.6	553.9	467.8	**	**	0.0
Caroline	524.1	477.7	590.1	537.2	521.6	**	**	0.0
Carroll	487.8	540.2	451.6	489.1	677.7	**	**	**
Cecil	448.9	507.1	405.6	457.6	452.8	**	**	0.0
Charles	419.2	448.6	401.5	434.6	438.2	**	**	**
Dorchester	510.7	566.1	467.0	482.5	642.0	0.0	**	0.0
Frederick	466.9	487.2	459.6	481.8	492.5	379.0	236.8	**
Garrett	400.7	449.9	360.8	403.2	0.0	0.0	0.0	0.0
Harford	468.5	506.1	440.5	474.8	485.1	257.6	360.7	**
Howard	392.0	406.2	384.8	395.2	439.1	405.9	278.7	**
Kent	493.9	628.0	375.2	515.1	**	**	0.0	**
Montgomery	395.1	414.5	385.5	430.8	438.6	292.0	283.2	**
Prince George's	385.1	422.5	365.9	475.8	385.5	225.8	290.6	**
Queen Anne's	463.4	436.4	493.8	453.0	606.1	**	**	**
St. Mary's	451.2	452.2	450.8	449.6	548.0	**	**	**
Somerset	444.6	536.8	394.2	459.2	400.7	**	0.0	0.0
Talbot	495.3	514.4	482.5	473.7	562.6	**	**	**
Washington	431.9	450.4	428.2	440.2	430.9	**	**	0.0
Wicomico	475.2	575.8	400.1	478.6	492.2	**	**	**
Worcester	448.5	505.3	400.6	454.2	500.5	**	**	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 4
Number of Deaths for All Cancer Sites by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	10,540	5,356	5,184	6,544	3,152	333	483	18
Allegany	148	78	70	147	<6	<6	<6	<6
Anne Arundel	995	509	486	792	149	27	s	<6
Baltimore City	1,187	603	584	296	847	18	23	<6
Baltimore	1,648	815	833	1,159	403	24	58	<6
Calvert	170	100	70	144	24	<6	<6	<6
Caroline	77	48	29	67	8	<6	<6	<6
Carroll	364	190	174	342	11	<6	s	<6
Cecil	211	112	99	196	14	<6	<6	<6
Charles	277	139	138	141	121	7	6	<6
Dorchester	77	45	32	63	s	<6	<6	<6
Frederick	393	189	204	331	33	12	14	<6
Garrett	84	50	34	83	<6	<6	<6	<6
Harford	497	278	219	421	57	7	10	<6
Howard	403	196	207	257	72	15	58	<6
Kent	57	29	28	52	<6	<6	<6	<6
Montgomery	1,356	653	703	766	253	137	198	<6
Prince George's	1,385	680	705	289	969	65	57	<6
Queen Anne's	108	57	51	97	8	<6	<6	<6
St. Mary's	211	108	103	161	34	7	7	<6
Somerset	65	33	32	48	15	<6	<6	<6
Talbot	123	58	65	101	19	<6	<6	<6
Washington	340	183	157	314	19	<6	<6	<6
Wicomico	223	123	100	154	60	<6	6	<6
Worcester	141	80	61	123	17	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 5
All Cancer Sites Age-Adjusted Mortality Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	136.4	161.6	119.9	135.9	152.2	87.8	101.3	**
Allegany	146.6	171.1	131.5	153.3	**	**	**	**
Anne Arundel	139.8	166.5	122.6	141.1	147.3	105.2	88.0	**
Baltimore City	176.9	223.6	147.5	147.8	191.9	**	188.9	**
Baltimore	143.4	169.2	127.8	143.0	160.3	92.5	111.1	**
Calvert	144.2	187.0	110.4	149.2	146.0	**	**	**
Caroline	174.8	261.7	116.5	181.2	**	**	**	**
Carroll	153.0	180.5	133.1	153.1	**	**	**	**
Cecil	165.9	191.6	147.3	171.7	**	**	**	**
Charles	149.2	174.7	131.3	148.1	156.5	**	**	**
Dorchester	146.1	192.1	113.0	158.5	**	**	**	**
Frederick	117.2	131.2	110.8	116.7	144.2	**	**	**
Garrett	170.7	221.4	125.3	168.7	**	**	**	**
Harford	146.6	189.0	115.1	145.0	161.7	**	**	**
Howard	106.0	117.2	98.3	105.7	112.8	**	91.7	**
Kent	151.6	164.2	145.9	165.3	**	**	**	**
Montgomery	101.1	113.3	93.3	97.1	130.8	89.9	91.6	**
Prince George's	128.7	153.9	114.8	147.4	133.2	67.1	109.3	**
Queen Anne's	143.6	155.6	134.7	142.0	**	**	**	**
St. Mary's	168.6	184.8	156.0	160.0	209.9	**	**	**
Somerset	204.9	235.6	191.3	208.6	**	**	**	**
Talbot	158.1	153.7	163.9	148.4	**	**	**	**
Washington	158.9	194.9	136.1	160.9	**	**	**	**
Wicomico	174.6	219.1	143.3	166.5	202.4	**	**	**
Worcester	135.6	161.1	116.2	131.4	**	**	**	**

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

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 6
Number of Cases for All Cancer Sites by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	163,955	81,620	82,319	105,128	45,514	5,473	6,333	259
Allegany	2,602	1,361	1,241	2,451	116	12	12	0
Anne Arundel	15,571	7,776	7,794	12,484	2,229	382	381	28
Baltimore City	15,774	7,723	8,049	4,929	10,295	269	193	22
Baltimore	25,487	12,272	13,210	18,121	6,067	408	722	40
Calvert	2,677	1,433	1,244	2,286	338	26	25	<6
Caroline	1,019	502	517	858	135	14	7	0
Carroll	5,439	2,844	2,595	5,139	164	47	68	<6
Cecil	3,142	1,627	1,515	2,916	173	21	24	<6
Charles	3,897	1,936	1,959	2,054	1,663	62	77	16
Dorchester	1,171	611	560	828	319	9	6	<6
Frederick	6,795	3,405	3,389	5,766	556	245	175	9
Garrett	882	455	427	870	<6	<6	<6	<6
Harford	7,900	3,939	3,960	6,733	865	101	159	13
Howard	7,547	3,723	3,822	5,044	1,371	212	827	16
Kent	753	432	321	651	97	<6	<6	<6
Montgomery	24,473	11,725	12,747	14,938	4,040	2,228	2,838	41
Prince George's	20,631	9,933	10,698	4,166	14,366	1,204	603	37
Queen Anne's	1,634	869	765	1,474	130	7	14	<6
St. Mary's	2,907	1,526	1,381	2,341	463	s	55	<6
Somerset	766	423	343	545	204	12	<6	0
Talbot	1,577	804	773	1,380	158	18	8	<6
Washington	4,502	2,257	2,244	4,073	332	52	35	<6
Wicomico	3,087	1,631	1,456	2,272	701	44	53	7
Worcester	2,274	1,200	1,074	2,008	240	15	9	<6

Total includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 7
All Cancer Sites Age-Adjusted Incidence Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	441.6	479.4	417.2	468.8	435.2	269.8	273.4	236.1
Allegany	522.1	565.3	498.8	528.4	763.3	**	**	0.0
Anne Arundel	451.5	483.4	431.2	465.1	440.1	293.4	280.5	282.2
Baltimore City	464.8	525.4	426.4	496.2	464.9	281.8	290.9	191.4
Baltimore	474.3	507.7	454.2	487.9	468.8	292.8	267.7	270.3
Calvert	464.6	521.1	422.3	492.7	424.5	218.1	221.5	**
Caroline	468.6	483.1	462.4	479.2	473.6	**	**	0.0
Carroll	485.7	534.4	450.9	489.9	460.3	252.9	322.3	**
Cecil	482.6	515.4	458.4	496.4	470.4	126.6	291.3	**
Charles	425.7	464.5	398.8	442.7	425.1	261.3	230.5	220.7
Dorchester	484.8	528.4	449.4	455.8	580.9	**	**	**
Frederick	438.2	471.2	419.0	446.9	449.3	315.9	259.7	**
Garrett	390.3	409.6	376.5	394.4	**	**	**	**
Harford	485.1	523.6	460.2	493.0	483.3	279.2	346.2	**
Howard	402.3	422.2	389.3	430.2	427.2	291.4	265.2	428.2
Kent	466.1	559.5	391.4	480.1	473.0	**	**	**
Montgomery	381.4	398.0	374.0	423.9	398.8	278.4	276.6	333.6
Prince George's	396.3	433.3	375.3	449.1	390.5	241.0	244.8	174.0
Queen Anne's	458.6	487.6	435.6	471.2	560.6	**	**	**
St. Mary's	459.2	493.5	429.4	468.9	528.5	271.8	282.3	**
Somerset	479.7	540.5	448.4	514.4	489.1	**	**	0.0
Talbot	467.1	501.3	441.7	475.7	444.4	215.7	**	**
Washington	454.5	475.1	445.8	456.6	485.2	229.5	226.1	**
Wicomico	499.5	573.3	446.0	515.5	502.6	305.8	302.9	**
Worcester	492.6	527.7	467.1	504.0	525.5	**	**	**

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 8
Number of Deaths for All Cancer Sites by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	53,826	27,351	26,474	34,430	15,919	1,368	1,981	75
Allegany	831	459	372	812	18	<6	<6	<6
Anne Arundel	4,999	2,584	2,415	4,036	741	86	126	<6
Baltimore City	6,261	3,185	3,076	1,690	4,436	50	68	10
Baltimore	8,726	4,322	4,404	6,439	1,972	91	206	11
Calvert	903	479	424	752	126	15	7	<6
Caroline	378	212	166	323	47	<6	<6	<6
Carroll	1,698	903	795	1,621	44	9	22	<6
Cecil	1,109	618	491	1,030	60	6	8	<6
Charles	1,340	683	657	782	502	19	26	11
Dorchester	441	245	196	320	116	<6	<6	<6
Frederick	2,030	1,065	965	1,766	158	45	54	<6
Garrett	320	183	137	319	<6	<6	<6	<6
Harford	2,435	1,263	1,172	2,095	261	26	50	<6
Howard	2,021	997	1,024	1,367	384	45	219	<6
Kent	266	145	121	229	35	<6	<6	<6
Montgomery	7,045	3,361	3,683	4,336	1,207	603	890	<6
Prince George's	7,091	3,472	3,619	1,521	4,995	314	243	13
Queen Anne's	524	278	246	481	39	<6	<6	<6
St. Mary's	1,019	541	478	811	164	12	26	<6
Somerset	322	181	141	233	86	<6	<6	<6
Talbot	528	271	257	445	74	<6	<6	<6
Washington	1,648	887	761	1,527	96	12	10	<6
Wicomico	1,143	614	529	837	273	18	12	<6
Worcester	748	403	345	658	85	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 9
All Cancer Sites Age-Adjusted Mortality Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	144.8	171.0	126.9	146.0	162.0	79.9	90.4	66.2
Allegany	156.5	192.4	128.5	163.0	**	**	**	**
Anne Arundel	146.9	173.8	128.0	147.8	162.5	81.2	99.4	**
Baltimore City	186.2	231.0	157.1	169.6	203.6	63.8	114.8	**
Baltimore	155.6	183.8	137.8	157.3	165.3	75.6	86.2	**
Calvert	160.1	189.9	137.7	164.5	170.5	**	**	**
Caroline	173.3	223.2	137.5	176.3	176.9	**	**	**
Carroll	151.1	183.5	128.0	152.8	132.7	**	112.2	**
Cecil	175.5	211.6	145.8	179.3	178.0	**	**	**
Charles	155.9	185.6	135.7	164.0	154.2	**	77.4	**
Dorchester	173.6	212.7	143.5	170.6	200.0	**	**	**
Frederick	132.1	160.1	113.6	134.1	151.4	68.0	98.0	**
Garrett	131.8	166.8	103.4	135.0	**	**	**	**
Harford	150.0	179.7	129.4	151.1	163.8	78.4	115.4	**
Howard	113.9	127.6	103.7	118.5	131.7	81.8	78.7	**
Kent	142.0	176.8	115.5	144.2	144.4	**	**	**
Montgomery	107.4	119.2	99.8	111.9	129.1	84.7	88.6	**
Prince George's	143.9	170.8	127.3	147.7	145.9	79.0	98.9	**
Queen Anne's	142.8	162.9	126.7	149.7	169.3	**	**	**
St. Mary's	166.0	185.8	149.3	166.0	204.7	**	143.3	**
Somerset	195.4	238.0	167.1	204.1	212.2	**	**	**
Talbot	135.0	153.9	120.7	129.1	190.7	**	**	**
Washington	160.2	192.6	136.1	159.9	166.9	**	**	**
Wicomico	181.9	225.2	150.8	181.4	203.1	**	**	**
Worcester	147.5	173.2	127.6	148.6	177.6	**	**	**

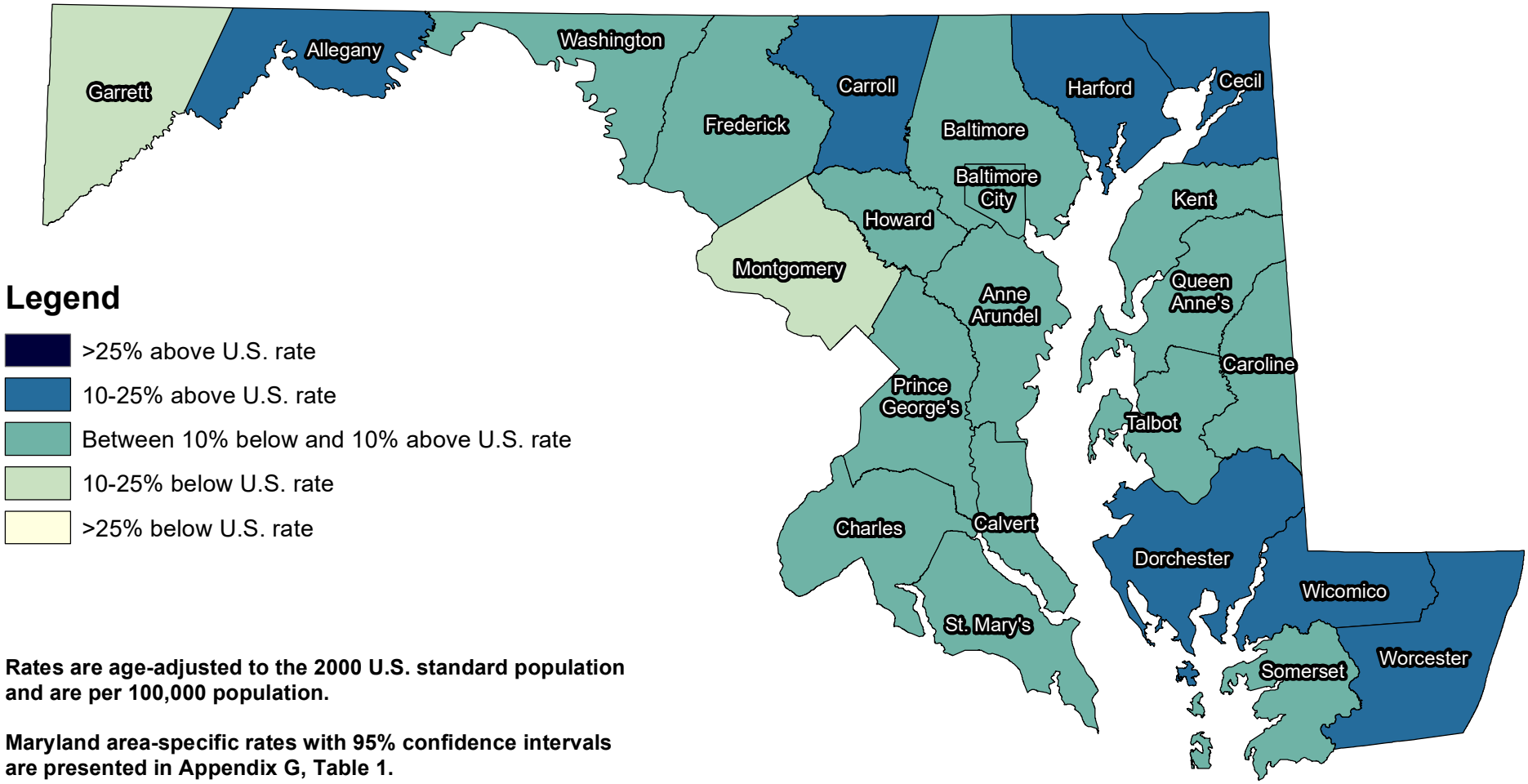
* Rates are per 100,000 population and age-adjusted to 2000 U.S. standard population

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Maryland All Sites Cancer Incidence Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

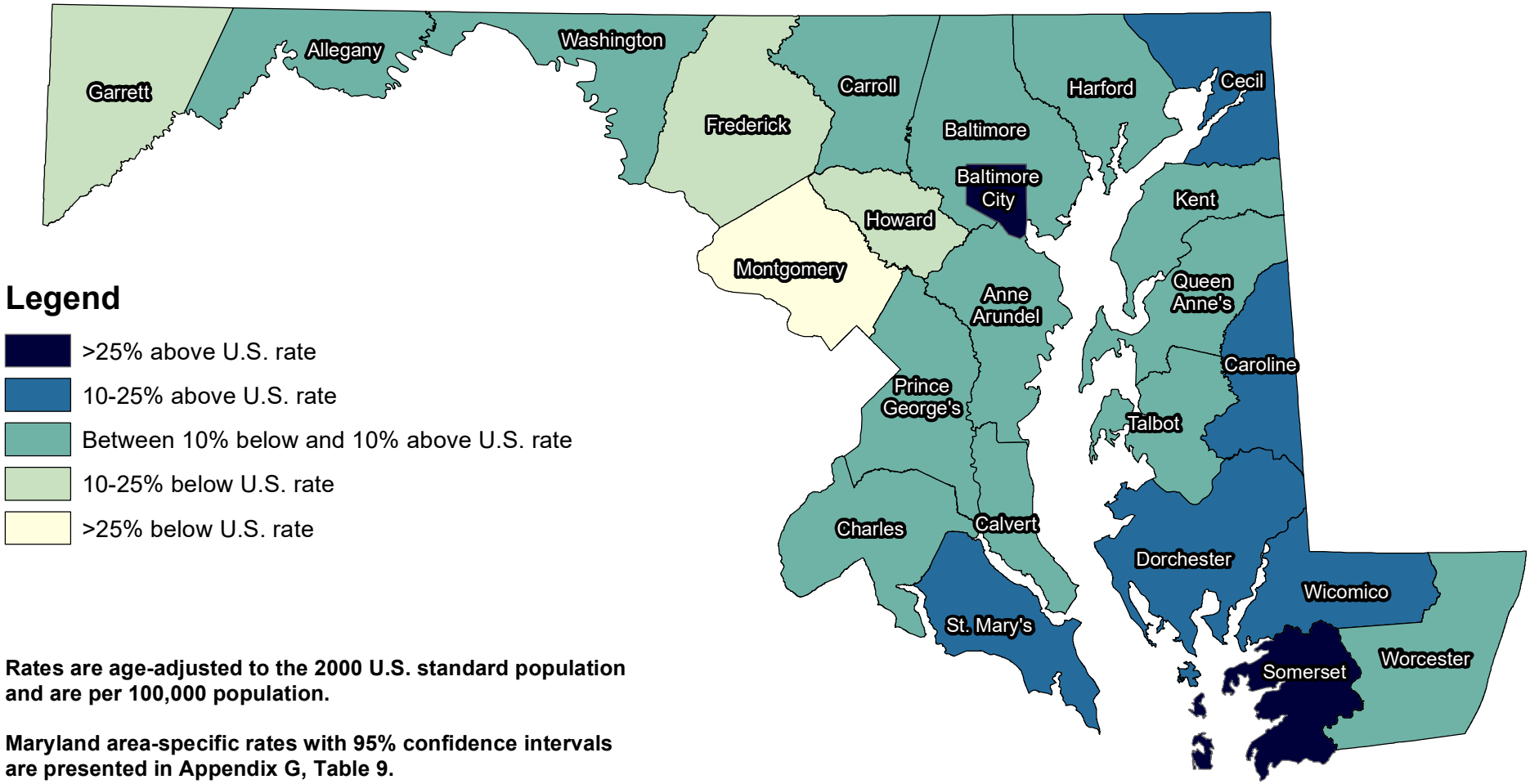
Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 1.

U.S. all sites cancer incidence rate, 2017-2021: 436.6 / 100,000

Maryland all sites cancer incidence rate, 2017-2021: 441.6 / 100,000

Sources: Maryland Cancer Registry
U.S. SEER, SEER*Stat Database

Maryland All Sites Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 9.

U.S. all sites cancer mortality rate, 2017-2021: 148.4 / 100,000

Maryland all sites cancer mortality rate, 2017-2021: 144.8 / 100,000

Sources: Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

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III. Targeted Cancers

A. Lung and Bronchus Cancer

Incidence (New Cases)

There were 3,685 new cases of lung and bronchus cancer (collectively called lung cancer) reported among Maryland residents in 2021. The 2021 Maryland age-adjusted lung cancer incidence rate was 45.8 per 100,000 population, which is statistically significantly higher than the 2021 U.S. SEER lung cancer incidence rate of 43.8 per 100,000 population.

The 2021 lung cancer incidence rate among White Marylanders is statistically significantly higher than all other racial and ethnic groups, at 51.0 per 100,000. Black Marylanders had the second highest lung cancer incidence rate, statistically significantly higher than the rates for Hispanic and Asian/Pacific Islander Marylanders. The lung cancer incidence rate for American Indian/Alaska Native Marylanders is not reportable. For Maryland and U.S. 2021 incidence rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 1.

Mortality (Deaths)

There were 2,294 lung cancer deaths among Maryland residents in 2021. In 2021, lung cancer accounted for 21.8% of all cancer deaths in Maryland and was the leading cause of cancer death in both men and women. Maryland had the 36th highest lung cancer mortality rate among the states and the District of Columbia in 2021. The 2021 age-adjusted lung cancer mortality rate was 29.0 per 100,000 population in Maryland. This rate is statistically significantly lower than the 2021 U.S. mortality rate for lung cancer of 31.3 per 100,000 population.

Lung cancer mortality rates in 2021 were highest among White and Black Marylanders, at 31.1 per 100,000 and 29.2 per 100,000 respectively; these rates are statistically significantly higher than the lung cancer mortality rates for Hispanic and Asian/Pacific Islander Marylanders. The lung cancer mortality rate for American Indian/Alaska Native Marylanders is not reportable. For Maryland and U.S. 2021 mortality rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 2.

Table 10
Lung Cancer Incidence and Mortality Rates
by Gender and Race/Ethnicity, Maryland (MD) and the United States, 2021

Incidence 2021	*Total**	*Male*	*Female*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD New Cases (count)	3,685	1,728	1,957	2,528	951	74	105	8
MD Incidence Rate	45.8	49.3	43.8	51.0	43.1	19.0	21.8	**
U.S. SEER Rate	43.8	48.4	40.4	49.7	49.0	22.7	31.9	41.6
Mortality 2021	*Total*	*Male*	*Female*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD Deaths (count)	2,294	1,226	1,068	1,538	620	41	86	8
MD Mortality Rate	29.0	35.9	23.9	31.1	29.2	11.1	18.2	**
U.S. Mortality Rate	31.3	37.2	26.7	34.2	32.8	14.2	18.2	28.1

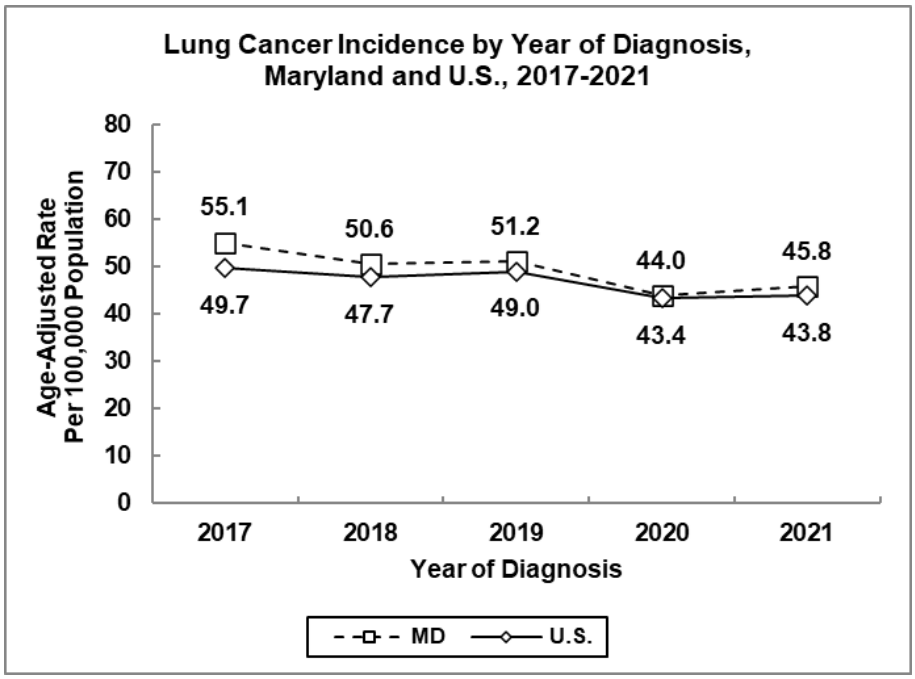
Rates are per 100,000 population and are age-adjusted to 2000 U.S. standard population

All race rates and counts, except Hispanic, are non-Hispanic/Latino

* Total also includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

** MD incidence rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures; MD mortality rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat
Maryland Department of Health Vital Statistics Administration
SEER Mortality All Cause of Death Data

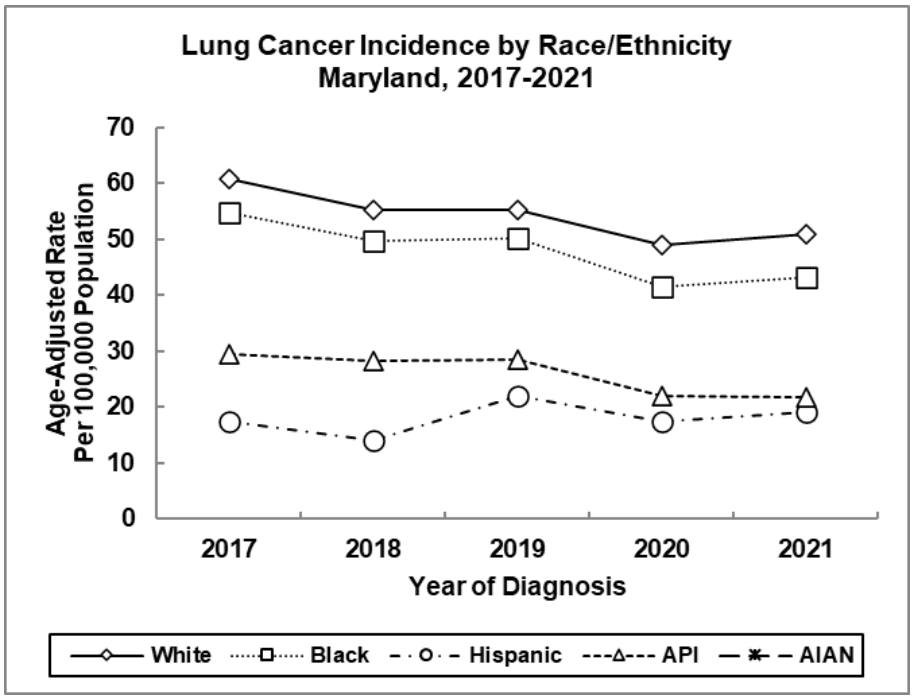


Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat

Maryland vs. U.S., Incidence Rates

Lung cancer incidence rates decreased in Maryland at a rate of 5.0% per year and at a rate of 3.4% per year in the U.S from 2017 to 2021.

See Appendix H, Table 1.

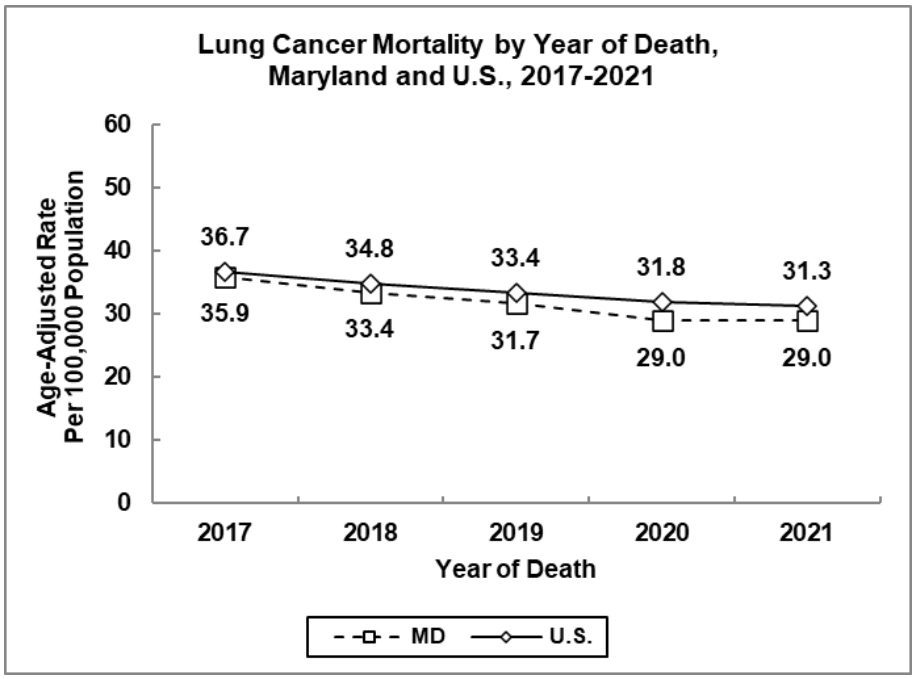


Source: Maryland Cancer Registry

Incidence Trends by Race/Ethnicity

Between 2017 and 2021, the lung cancer incidence rates were lower among Black, Asian/Pacific Islander, and American Indian/Alaska Native individuals compared to White individuals in Maryland. From 2017 to 2021, lung cancer incidence rates decreased at a rate of 4.6% per year among White Marylanders, 6.4% per year among Black Marylanders, and 8.2% per year among Asian/Pacific Islander Marylanders. It increased 4.0% per year among Hispanic Marylanders. Lung cancer incidence rates for American Indian/Alaska Native Marylanders were suppressed from 2017 to 2021.

See Appendix H, Table 3.

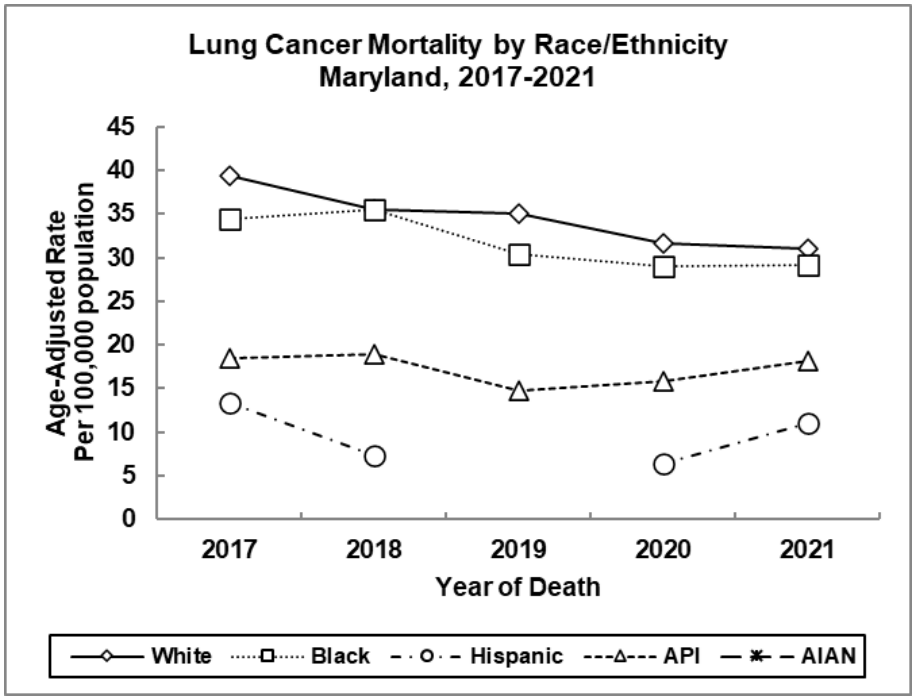


Source: Maryland Department of Health Vital Statistics Administration, 2021 (MD)
NCHS Underlying Cause of Death in CDC WONDER, 2017-2020
SEER Mortality All Cause of Death Data (U.S.)

Maryland vs. U.S., Mortality Rates

Lung cancer mortality rates decreased in Maryland at a rate of 5.5% per year and in the U.S. at a rate of 4.0% per year from 2017 to 2021.

See Appendix H, Table 2.

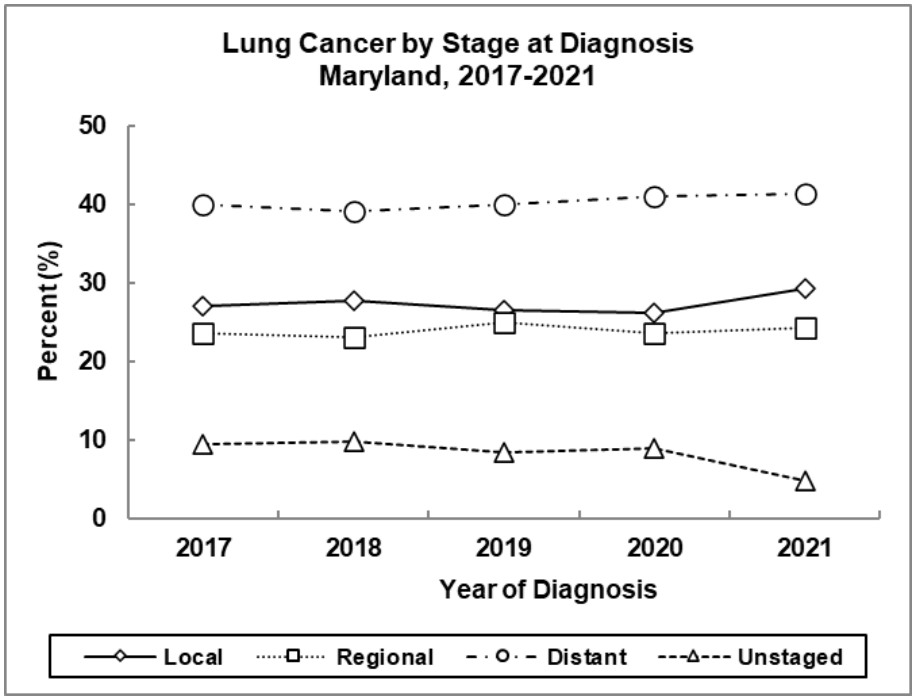


Source: Maryland Department of Health Vital Statistics Administration

Mortality Trends by Race/Ethnicity

From 2017 to 2021, Black and White Marylanders had consistently higher lung cancer mortality rates than all other groups. However, both Black and White Marylanders' lung cancer mortality rates decreased, at a rate of 5.2% per year and 5.8% per year, respectively. The mortality rates for lung cancer decreased 2.1% per year among Asian/Pacific Islander Marylanders in the same time frame. The mortality rates for American Indian/Alaska Native Marylanders from 2017 to 2021 and for Hispanic Marylanders in 2019 were suppressed.

See Appendix H, Table 5.

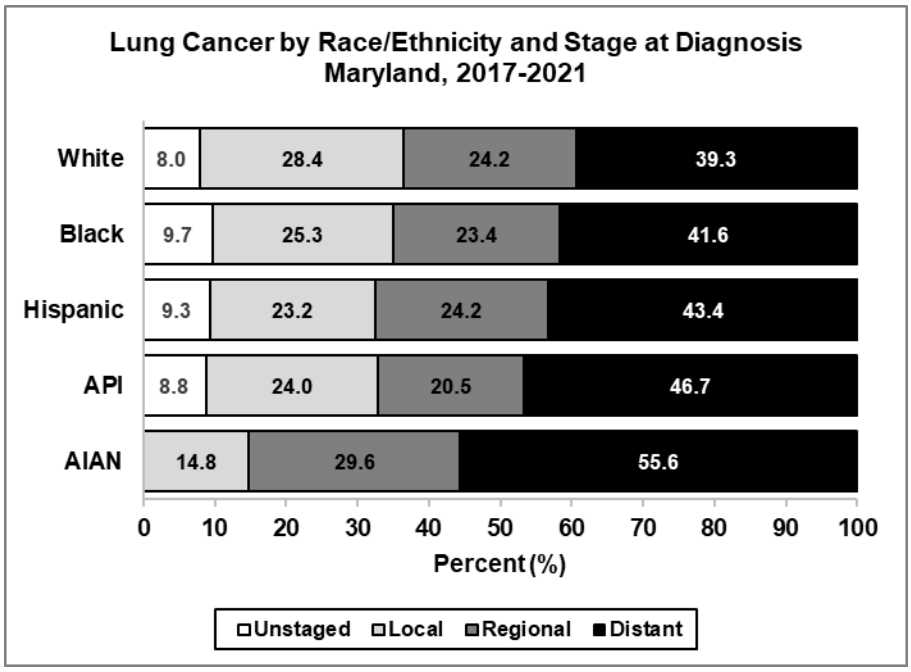


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis

A higher proportion of lung cancer cases were diagnosed at the distant stage than at the local or regional stage. In 2021, 29.4% of lung cancer cases in Maryland were diagnosed at the local stage, 24.3% at the regional stage, and 41.4% at the distant stage. The proportion of lung cancers reported as unstaged decreased 13.0% per year from 2017 to 2021.

See Appendix I, Table 2.

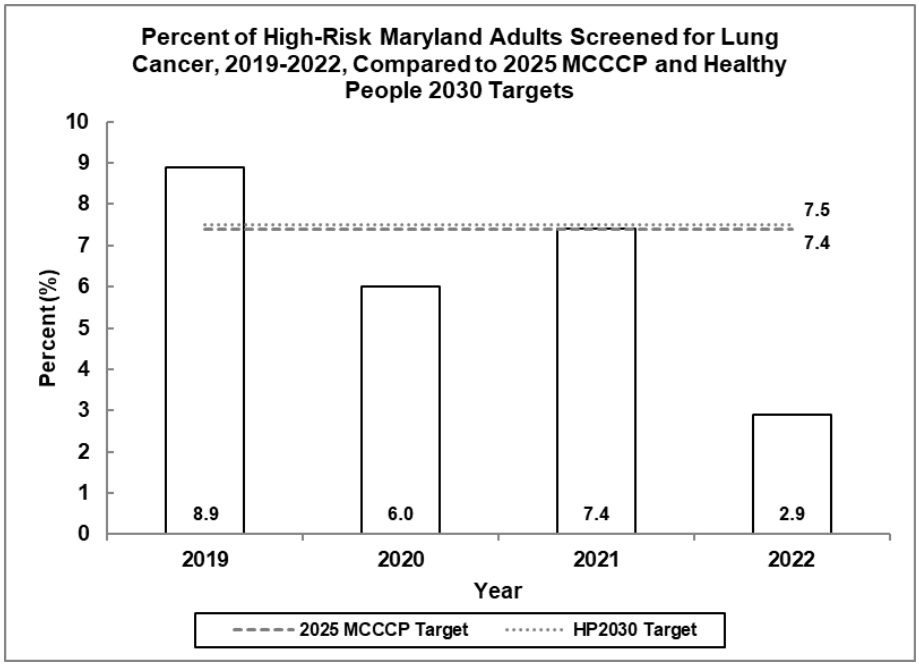


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis by Race/Ethnicity

A higher proportion of lung cancer cases were diagnosed at the distant stage than at the local or regional stage for all racial groups. From 2017 to 2021, over half (55.6%) of American Indian/Alaska Native lung cancer cases were diagnosed at the distant stage.

See Appendix L, Table 2.



Source: American Lung Association, State of Lung Cancer Report, 2020, 2021, 2022, 2023
Healthy People 2030, U.S. Department of Health and Human Services
Maryland Comprehensive Cancer Control Plan, 2021-2025

Lung Cancer Screening

Although having previously met both the 7.5% 2025 MCCCP and 7.4% Healthy People 2030 goals of high-risk adults screened for lung cancer, in 2022 Maryland did not meet either goal with only 2.9% having been screened according the American Lung Association.

Public Health Evidence for Lung Cancer Prevention and Screening (adapted from the National Cancer Institute Physician Data Query [PDQ] and the United States Preventive Services Task Force [USPSTF])

Prevention

Avoiding risk factors may help prevent cancer. The following are risk factors for lung cancer:

- Cigarette, cigar, and pipe smoking.
- Being exposed to secondhand tobacco smoke.
- Having a family history of lung cancer.
- HIV infection.
- Environmental risk factors:
  - Radiation exposure e.g., atomic bomb radiation, radiation therapy to the chest, imaging tests such as CT scans, and radon.
  - Workplace exposure e.g., asbestos, arsenic, chromium, nickel, beryllium, cadmium, tar, and soot.
  - Exposure to high levels of air pollution.
- Taking beta carotene supplements, especially in heavy smokers.

Increasing protective factors may help prevent cancer. The following are protective factors for lung cancer:

- Not smoking.
- Quitting smoking.
- Lower exposure to workplace risk factors.
- Lower exposure to radon.

It is not clear if the following decrease the risk of lung cancer:

- Diet.
- Physical activity.

The following do not decrease the risk of lung cancer:

- Nonsmokers taking beta carotene supplements.
- Taking vitamin E supplements.

Screening

Screening with low-dose spiral computed tomography (LDCT) scans has been shown to decrease the risk of dying from lung cancer in heavy smokers. The USPSTF recommends annual screening for lung cancer with LDCT in adults ages 50 to 80 years old who have a 20 pack-year* or more smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.

Chest x-ray and sputum cytology are two other screening tests that have been used to check for signs of lung cancer. Screening with chest x-ray, sputum cytology, or both of these tests does not decrease the risk of dying from lung cancer.

The risks of lung cancer screening include the following:

- False-negative test results can occur (the screening test results may appear to be normal even though lung cancer is present). A person who receives a false-negative test result may delay seeking medical care even if there are symptoms.
- False-positive test results can occur (the screening test results may appear to be abnormal even though no cancer is present). A false-positive test result can cause anxiety and is usually followed by more tests (such as biopsy), which also have risks. A biopsy to diagnose lung cancer can cause part of the lung to collapse. Sometimes surgery is needed to reinflate the lung. Harms from diagnostic tests may happen more often in patients who have medical problems caused by heavy or long-term smoking.
- Chest x-rays and LDCT scans expose the chest to radiation. Radiation exposure from chest x-rays and LDCT scans may increase the risk of cancer. Younger people and people at low risk for lung cancer are more likely to develop lung cancer caused by radiation exposure from screening than to be spared death from lung cancer.
- Screening may not improve a person's health or help a person live longer if the person has lung cancer that has already spread to other places in the body. Overdiagnosis can occur (the screening test results lead to the diagnosis and treatment of a disease that may have never caused symptoms or become life-threatening). It is unknown if the treatment of these cancers would help a person live longer than if no treatment were given, and treatments for cancer may have serious side effects. Harms of treatment may happen more often in people who have medical problems caused by heavy or long-term smoking.

Maryland Department of Health Medical Advisory Committee Public Health Intervention for Lung Cancer
• Annual screening for lung cancer with LDCT in adults ages 50 to 80 years old who smoke or formerly smoke and have ≥ 20 pack-year smoking history.

Individuals should discuss the risk factors for lung cancer, ways to prevent lung cancer, and screening tests with their healthcare provider.

* A pack-year is a way to measure the amount a person has smoked over a long period of time. It is calculated by multiplying the number of packs of cigarettes smoked per day by the number of years the person has smoked. For example, one pack-year is equal to smoking one pack per day for one year, or two packs per day for half a year, and so on.

Note: For information on the Lung Cancer Prevention and Screening PDQ, please see Appendix C.

Table 11
Number of Cases for Lung and Bronchus Cancer by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	3,685	1,728	1,957	2,528	951	74	105	8
Allegany	57	33	24	55	<6	0	0	0
Anne Arundel	370	171	199	310	45	<6	6	<6
Baltimore City	446	205	241	147	290	<6	<6	<6
Baltimore	660	307	353	507	129	9	11	<6
Calvert	79	39	40	69	9	0	0	0
Caroline	27	8	19	22	<6	0	0	0
Carroll	146	72	74	136	7	<6	<6	0
Cecil	85	36	49	83	<6	0	0	0
Charles	77	45	32	45	31	0	0	0
Dorchester	31	12	19	24	7	0	0	0
Frederick	158	61	97	138	11	6	<6	<6
Garrett	16	9	7	16	0	0	0	0
Harford	208	96	112	181	23	<6	<6	0
Howard	108	47	61	77	14	<6	12	<6
Kent	16	<6	11	14	<6	0	0	0
Montgomery	375	182	193	227	61	29	54	0
Prince George's	381	162	219	105	250	10	10	<6
Queen Anne's	38	14	24	36	<6	0	0	0
St. Mary's	80	42	38	68	8	<6	<6	0
Somerset	26	15	11	16	10	0	0	0
Talbot	40	16	24	34	<6	0	0	0
Washington	113	72	41	102	9	0	<6	0
Wicomico	85	44	41	61	22	<6	0	0
Worcester	47	25	22	43	<6	0	0	0

Total includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 12
Lung and Bronchus Cancer Age-Adjusted Incidence Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	45.8	49.3	43.8	51.0	43.1	19.0	21.8	**
Allegany	51.9	66.0	38.4	52.6	**	0.0	0.0	0.0
Anne Arundel	50.1	53.8	48.3	52.9	41.2	**	**	**
Baltimore City	62.9	71.7	57.6	71.3	61.2	**	**	**
Baltimore	55.9	60.2	54.1	61.5	48.7	**	**	**
Calvert	65.3	70.2	61.8	69.4	**	0.0	0.0	0.0
Caroline	57.8	**	80.8	59.0	**	0.0	0.0	0.0
Carroll	59.9	67.2	55.4	60.0	**	**	**	0.0
Cecil	59.3	53.1	67.1	63.6	**	0.0	0.0	0.0
Charles	40.0	53.7	28.6	45.1	39.2	0.0	0.0	0.0
Dorchester	53.9	**	61.6	55.7	**	0.0	0.0	0.0
Frederick	46.3	41.0	51.9	47.2	**	**	**	**
Garrett	29.5	**	**	30.0	0.0	0.0	0.0	0.0
Harford	59.4	63.3	57.3	59.6	70.5	**	**	0.0
Howard	27.7	27.1	28.4	31.6	**	**	**	**
Kent	46.9	**	**	**	**	0.0	0.0	0.0
Montgomery	27.5	30.5	25.5	29.4	29.0	19.7	24.7	0.0
Prince George's	33.6	34.8	33.4	53.7	32.1	**	**	**
Queen Anne's	47.0	**	58.7	49.4	**	0.0	0.0	0.0
St. Mary's	58.4	61.6	55.5	62.1	**	**	**	0.0
Somerset	79.4	**	**	62.1	**	0.0	0.0	0.0
Talbot	51.6	47.1	55.3	49.0	**	0.0	0.0	0.0
Washington	51.2	70.6	35.4	51.2	**	0.0	**	0.0
Wicomico	62.7	72.9	56.1	60.4	69.0	**	0.0	0.0
Worcester	44.9	51.5	39.4	47.2	**	0.0	0.0	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 13
Number of Deaths for Lung and Bronchus Cancer by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	2,294	1,226	1,068	1,538	620	41	86	8
Allegany	30	18	12	s	<6	<6	<6	<6
Anne Arundel	226	129	97	198	23	<6	<6	<6
Baltimore City	295	149	146	74	212	<6	<6	<6
Baltimore	394	214	180	288	93	<6	7	<6
Calvert	42	22	20	38	<6	<6	<6	<6
Caroline	27	16	11	24	<6	<6	<6	<6
Carroll	80	41	39	75	<6	<6	<6	<6
Cecil	45	30	15	44	<6	<6	<6	<6
Charles	62	33	29	37	22	<6	<6	<6
Dorchester	22	12	10	18	<6	<6	<6	<6
Frederick	87	46	41	73	7	<6	6	<6
Garrett	19	9	10	s	<6	<6	<6	<6
Harford	131	71	60	110	16	<6	<6	<6
Howard	83	43	40	66	9	<6	7	<6
Kent	12	<6	s	11	<6	<6	<6	<6
Montgomery	225	113	112	136	28	21	39	<6
Prince George's	239	122	117	62	158	9	9	<6
Queen Anne's	22	9	13	s	<6	<6	<6	<6
St. Mary's	48	27	21	37	10	<6	<6	<6
Somerset	13	s	s	10	<6	<6	<6	<6
Talbot	30	12	18	28	<6	<6	<6	<6
Washington	75	46	29	70	<6	<6	<6	<6
Wicomico	54	34	20	41	12	<6	<6	<6
Worcester	33	19	14	27	<6	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 14
Lung and Bronchus Cancer Age-Adjusted Mortality Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	29.0	35.9	23.9	31.1	29.2	11.1	18.2	**
Allegany	28.0	**	**	29.5	**	**	**	**
Anne Arundel	31.4	42.2	23.7	34.4	22.4	**	**	**
Baltimore City	42.9	53.1	35.7	37.1	45.9	**	**	**
Baltimore	33.7	42.8	27.6	34.7	35.0	**	**	**
Calvert	34.1	39.6	29.4	37.4	**	**	**	**
Caroline	62.8	**	**	66.1	**	**	**	**
Carroll	32.9	39.3	28.4	32.8	**	**	**	**
Cecil	32.9	48.1	**	35.2	**	**	**	**
Charles	35.2	43.2	28.7	38.9	32.9	**	**	**
Dorchester	42.3	**	**	**	**	**	**	**
Frederick	25.6	30.9	22.2	25.1	**	**	**	**
Garrett	**	**	**	**	**	**	**	**
Harford	37.6	46.6	30.2	36.6	**	**	**	**
Howard	21.2	24.6	18.4	26.3	**	**	**	**
Kent	**	**	**	**	**	**	**	**
Montgomery	16.5	19.0	14.5	16.8	14.9	14.2	17.6	**
Prince George's	21.6	26.2	18.5	31.0	21.1	**	**	**
Queen Anne's	30.4	**	**	33.8	**	**	**	**
St. Mary's	37.7	44.7	31.9	35.7	**	**	**	**
Somerset	**	**	**	**	**	**	**	**
Talbot	41.2	**	**	45.2	**	**	**	**
Washington	34.0	47.7	23.6	34.6	**	**	**	**
Wicomico	42.2	60.4	28.1	42.9	**	**	**	**
Worcester	28.6	**	**	25.8	**	**	**	**

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

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 15
Number of Cases for Lung and Bronchus Cancer by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	18,849	8,969	9,877	13,045	4,879	302	580	27
Allegany	367	207	160	349	18	0	0	0
Anne Arundel	1,877	875	1,002	1,594	226	17	34	<6
Baltimore City	2,512	1,194	1,318	794	1,671	19	21	<6
Baltimore	3,407	1,534	1,871	2,639	666	32	62	<6
Calvert	337	158	179	307	26	<6	<6	0
Caroline	134	68	66	113	19	<6	0	0
Carroll	629	338	291	606	15	<6	<6	0
Cecil	472	250	222	459	s	0	<6	<6
Charles	444	223	220	290	139	<6	13	0
Dorchester	155	82	73	111	s	0	<6	0
Frederick	716	331	385	636	45	19	14	<6
Garrett	92	52	40	92	0	0	0	0
Harford	999	485	514	873	96	10	19	0
Howard	594	277	317	435	80	14	61	<6
Kent	104	45	59	86	s	0	<6	0
Montgomery	1,861	842	1,019	1,202	259	118	265	<6
Prince George's	1,872	855	1,017	498	1,250	46	63	<6
Queen Anne's	180	92	88	163	17	0	0	0
St. Mary's	379	197	182	325	45	<6	6	0
Somerset	129	69	60	87	39	<6	<6	0
Talbot	185	79	106	157	24	0	<6	0
Washington	632	334	298	584	42	<6	<6	0
Wicomico	462	230	232	358	92	6	6	0
Worcester	287	144	143	254	s	<6	0	<6

Total includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 16
Lung and Bronchus Cancer Age-Adjusted Incidence Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	49.2	53.3	46.4	54.2	47.7	18.1	25.8	23.2
Allegany	66.5	81.2	54.4	67.3	140.3	0.0	0.0	0.0
Anne Arundel	53.2	55.7	51.7	56.2	47.5	19.5	28.7	**
Baltimore City	71.9	82.6	64.9	77.2	73.2	26.0	34.3	**
Baltimore	60.2	62.8	58.7	64.9	53.4	29.1	24.2	**
Calvert	58.8	62.8	57.0	65.8	34.3	**	**	0.0
Caroline	58.6	64.5	55.4	59.4	64.5	**	0.0	0.0
Carroll	53.6	63.6	45.7	54.8	**	**	**	0.0
Cecil	69.6	79.5	62.1	74.3	**	0.0	**	**
Charles	50.0	58.6	43.6	59.2	41.4	**	**	0.0
Dorchester	58.4	68.0	50.7	57.2	69.1	0.0	**	0.0
Frederick	45.2	46.9	44.6	46.5	41.1	32.2	**	**
Garrett	34.9	39.7	29.8	36.2	0.0	0.0	0.0	0.0
Harford	59.2	65.4	54.5	60.4	58.9	**	42.8	0.0
Howard	32.0	33.2	31.3	36.0	27.9	**	22.1	**
Kent	58.2	55.6	60.6	56.9	71.8	0.0	**	0.0
Montgomery	28.1	28.9	27.6	31.1	27.4	16.3	25.5	**
Prince George's	36.8	40.3	34.6	49.0	34.9	11.0	25.1	**
Queen Anne's	47.6	49.6	46.1	48.9	71.8	0.0	0.0	0.0
St. Mary's	58.9	62.5	55.6	63.5	51.6	**	**	0.0
Somerset	75.8	82.8	69.1	69.6	102.1	**	**	0.0
Talbot	49.8	44.6	54.3	49.1	63.1	0.0	**	0.0
Washington	60.6	70.1	52.7	61.0	78.6	**	**	0.0
Wicomico	71.9	80.2	66.3	76.1	68.5	**	**	0.0
Worcester	54.6	58.2	52.2	55.8	62.1	**	0.0	**

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 17
Number of Deaths for Lung and Bronchus Cancer by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	11,960	6,076	5,883	8,286	3,126	137	371	28
Allegany	207	118	89	203	<6	<6	<6	<6
Anne Arundel	1,169	590	579	1,018	123	8	17	<6
Baltimore City	1,556	800	756	456	1,069	8	18	<6
Baltimore	2,109	1,013	1,096	1,639	417	10	34	<6
Calvert	210	93	117	190	15	<6	<6	<6
Caroline	105	58	47	88	16	<6	<6	<6
Carroll	407	233	174	397	6	<6	<6	<6
Cecil	322	189	133	310	8	<6	<6	<6
Charles	288	148	140	190	85	<6	<6	<6
Dorchester	120	68	52	90	29	<6	<6	<6
Frederick	431	225	206	387	26	<6	12	<6
Garrett	60	34	26	s	<6	<6	<6	<6
Harford	611	324	287	535	58	<6	15	<6
Howard	359	178	181	277	43	<6	34	<6
Kent	70	32	38	s	11	<6	<6	<6
Montgomery	1,182	557	624	781	166	60	171	<6
Prince George's	1,276	649	627	333	863	30	45	<6
Queen Anne's	125	64	61	117	s	<6	<6	<6
St. Mary's	254	134	120	212	36	<6	s	<6
Somerset	93	47	46	70	22	<6	<6	<6
Talbot	117	51	66	100	16	<6	<6	<6
Washington	401	213	188	376	23	<6	<6	<6
Wicomico	299	158	141	232	63	<6	<6	<6
Worcester	189	100	89	167	19	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 18
Lung and Bronchus Cancer Age-Adjusted Mortality Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	31.7	37.3	27.7	34.5	31.6	8.7	17.2	24.3
Allegany	38.3	47.9	30.2	40.1	**	**	**	**
Anne Arundel	34.0	38.9	30.5	36.6	27.1	**	**	**
Baltimore City	45.3	57.4	37.2	44.9	47.7	**	**	**
Baltimore	37.3	42.4	33.9	39.7	34.4	**	13.6	**
Calvert	36.9	38.3	36.5	41.2	**	**	**	**
Caroline	47.6	59.2	39.5	47.8	**	**	**	**
Carroll	35.4	46.7	26.9	36.7	**	**	**	**
Cecil	49.4	63.2	38.3	52.2	**	**	**	**
Charles	34.1	40.9	29.4	39.7	27.9	**	**	**
Dorchester	46.1	56.7	37.6	47.1	46.5	**	**	**
Frederick	27.6	32.8	23.9	28.6	25.3	**	**	**
Garrett	23.9	26.5	20.4	24.6	**	**	**	**
Harford	37.4	46.3	30.7	38.0	38.0	**	**	**
Howard	20.5	22.7	18.5	23.8	15.9	**	13.2	**
Kent	36.2	37.7	35.6	35.3	**	**	**	**
Montgomery	17.8	19.6	16.4	19.6	18.6	9.1	17.0	**
Prince George's	25.7	31.5	21.8	31.2	25.0	6.9	17.8	**
Queen Anne's	33.1	36.2	30.7	35.2	**	**	**	**
St. Mary's	40.8	44.5	37.5	42.4	45.2	**	**	**
Somerset	55.0	59.3	52.7	59.5	56.4	**	**	**
Talbot	30.3	27.2	33.1	29.6	**	**	**	**
Washington	38.7	45.4	33.3	39.1	45.7	**	**	**
Wicomico	47.0	56.6	39.5	49.2	48.7	**	**	**
Worcester	34.9	40.4	30.4	35.3	**	**	**	**

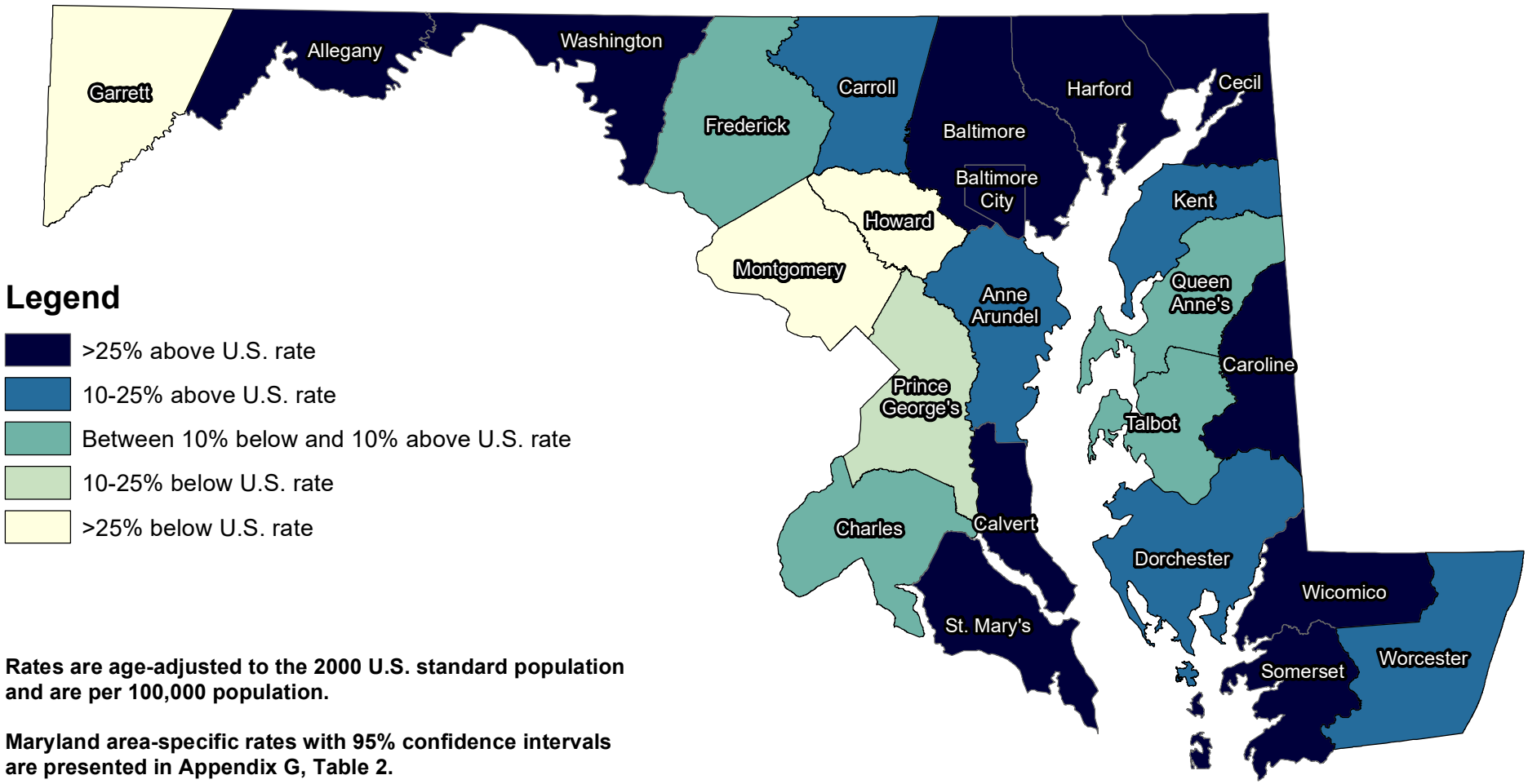
* Rates are per 100,000 population and age-adjusted to 2000 U.S. standard population

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Maryland Lung Cancer Incidence Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

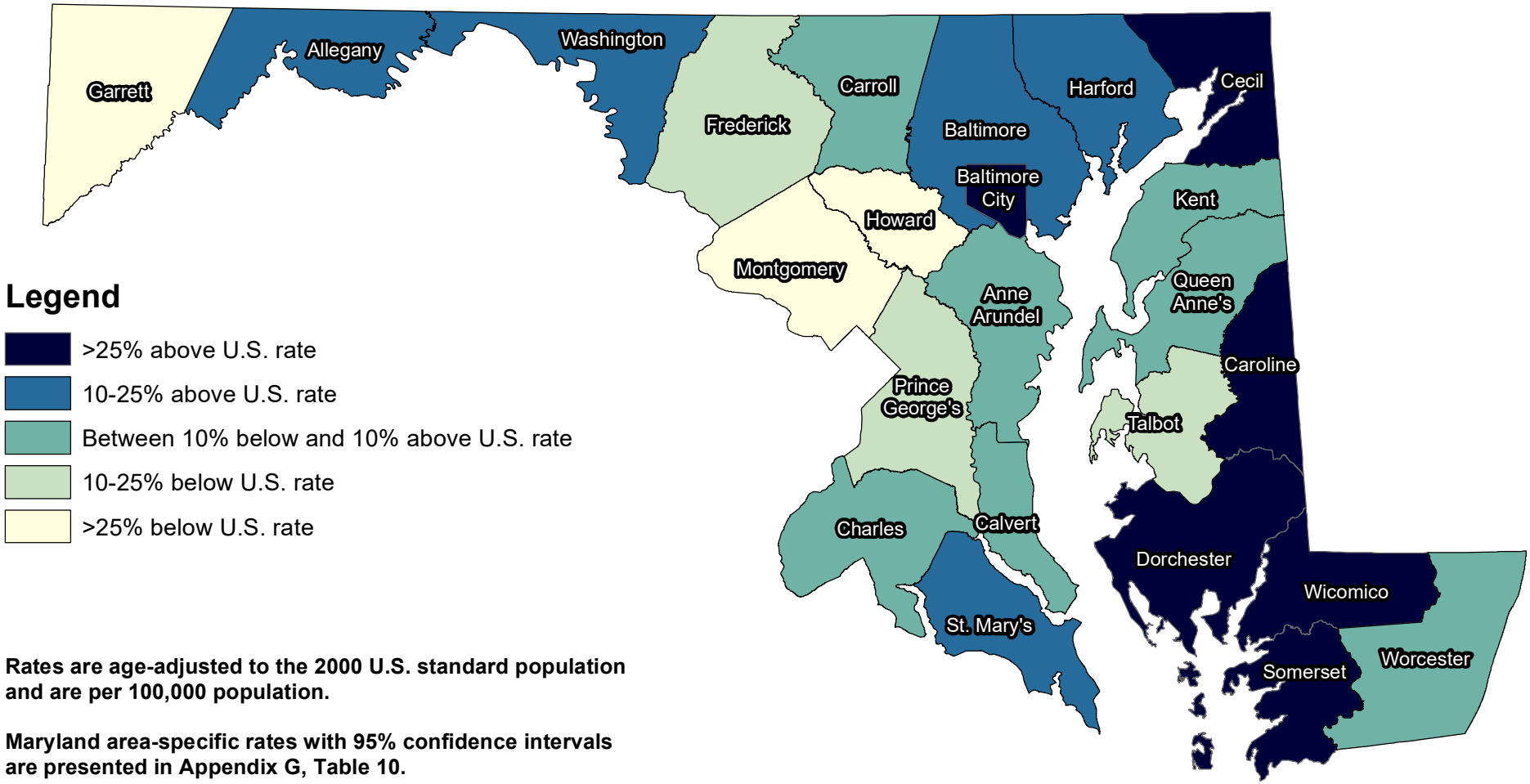
Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 2.

U.S. lung cancer incidence rate, 2017-2021: 46.8 / 100,000

Maryland lung cancer incidence rate, 2017-2021: 49.2/ 100,000

Sources: Maryland Cancer Registry
U.S. SEER, SEER*Stat Database

Maryland Lung Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 10.

U.S. lung cancer mortality rate, 2017-2021: 33.8 / 100,000

Maryland lung cancer mortality rate, 2017-2021: 31.7 / 100,000

Sources: Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

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B. Colorectal Cancer

Incidence (New Cases)

In 2021, there were 2,558 new cases of cancer of the colon or rectum (collectively called colorectal cancer) reported among Maryland residents. The age-adjusted colorectal cancer incidence rate in Maryland for 2021 was 34.5 per 100,000 population, which is statistically significantly lower than the 2021 U.S. SEER age-adjusted colorectal cancer incidence rate of 36.7 per 100,000 population.

Colorectal cancer incidence rates in 2021 were highest among White and Black Marylanders, at 35.4 per 100,000 and 35.5 per 100,000 respectively; these rates are statistically similar to each other but higher than the colorectal cancer incidence rate for Hispanic Marylanders. The colorectal cancer incidence rate for Asian/Pacific Islander Marylanders, which has a wider confidence interval due to lower counts, is statistically similar to all groups. However, the 2021 colorectal cancer incidence rate for American Indian/Alaska Native Marylanders is not reportable. For Maryland and U.S. 2021 incidence rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 1.

Mortality (Deaths)

A total of 983 persons died of colorectal cancer in 2021 in Maryland. In 2021, colorectal cancer accounted for 9.3% of all cancer deaths and was the second leading cause of cancer death in Maryland. The age-adjusted colorectal cancer mortality rate in Maryland was 12.9 per 100,000 population. This rate is similar to the 2021 U.S. colorectal cancer mortality rate of 12.8 per 100,000 population. Maryland had the 25th highest colorectal cancer mortality rate among the states and the District of Columbia in 2021.

Colorectal cancer mortality rates in 2021 were highest among White and Black Marylanders, at 12.5 per 100,000 and 14.9 per 100,000 respectively; these rates are statistically similar but higher than the colorectal cancer mortality rates for Hispanic and Asian/Pacific Islander Marylanders. The colorectal cancer mortality rate for American Indian/Alaska Native Marylanders is not reportable. For Maryland and U.S. 2021 mortality rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 2.

Table 19
Colorectal Cancer Incidence and Mortality Rates
by Gender and Race/Ethnicity, Maryland (MD) and the United States, 2021

Incidence 2021	*Total**	*Male*	*Female*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD New Cases (count)	2,558	1,315	1,242	1,544	739	107	146	8
MD Incidence Rate	34.5	38.7	31.0	35.4	35.5	24.7	29.7	**
U.S. SEER Rate	36.7	41.3	32.8	37.2	43.5	32.1	30.9	46.7
Mortality 2021	*Total*	*Male*	*Female*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD Deaths (count)	983	517	466	580	304	s	58	<6
MD Mortality Rate	12.9	15.6	10.9	12.5	14.9	9.9	11.9	**
U.S. Mortality Rate	12.8	15.2	10.7	12.8	16.5	10.7	9.3	13.0

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

All race rates and counts, except Hispanic, are non-Hispanic/Latino

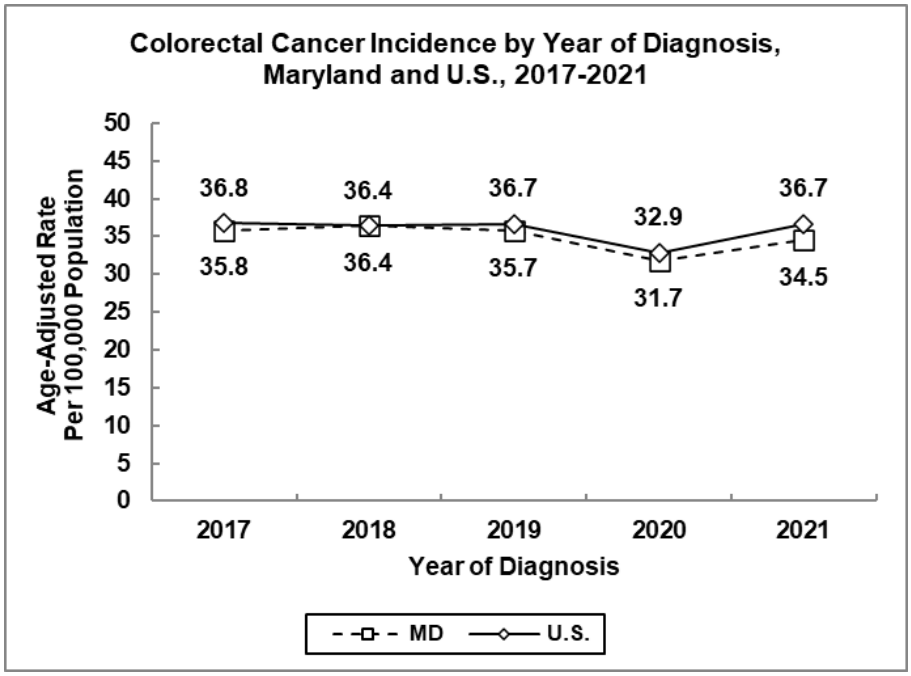
* Total also includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

** MD incidence rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures; MD mortality rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat
Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

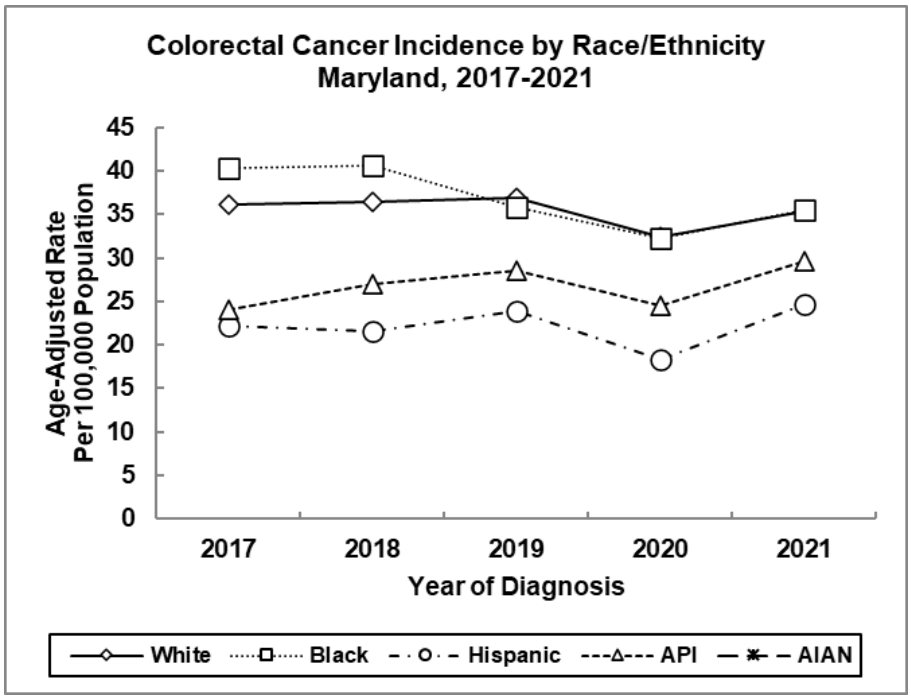


Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat

Maryland vs. U.S., Incidence Rates

Colorectal cancer incidence rates decreased in Maryland at a rate of 2.1% per year, and in the U.S. at a rate of 1.1% per year from 2017 to 2021.

See Appendix H, Table 1.

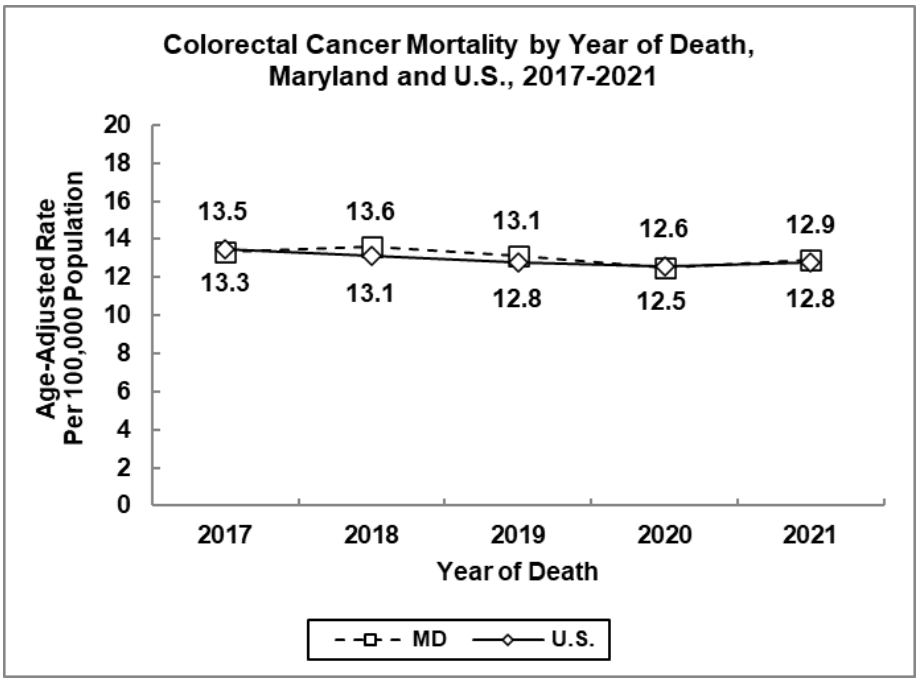


Source: Maryland Cancer Registry

Incidence Trends by Race/Ethnicity

From 2017 to 2021, the colorectal cancer incidence rates were lower among Hispanic and Asian/Pacific Islander individuals compared to White and Black individuals in Maryland. From 2017 to 2021, colorectal cancer incidence rates decreased at a rate of 1.6% per year among White Marylanders and 4.7% per year among Black Marylanders. It increased 0.5% per year among Hispanic Marylanders and 3.3% per year among Asian/Pacific Islander Marylanders. Colorectal cancer incidence rates for American Indian/ Alaska Native Marylanders were suppressed from 2017 to 2021.

See Appendix H, Table 3.

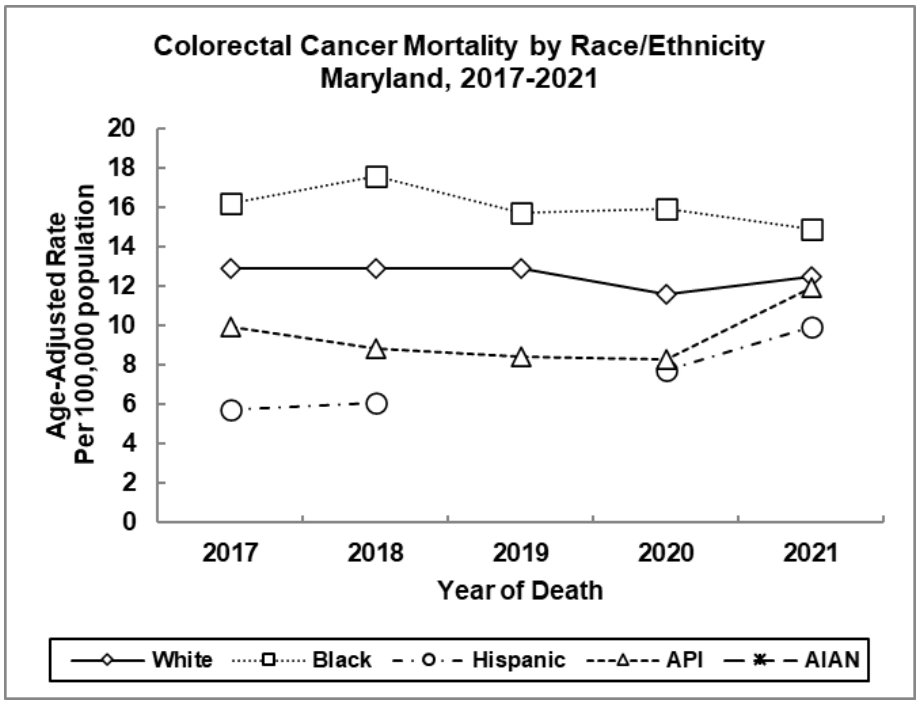


Source: Maryland Department of Health Vital Statistics Administration, 2021 (MD)
NCHS Underlying Cause of Death in CDC WONDER, 2017-2020
SEER Mortality All Cause of Death Data (U.S.)

Maryland vs. U.S., Mortality Rates

Mortality rates for colorectal cancer decreased 1.4% per year in both Maryland and the U.S.

See Appendix H, Table 2.

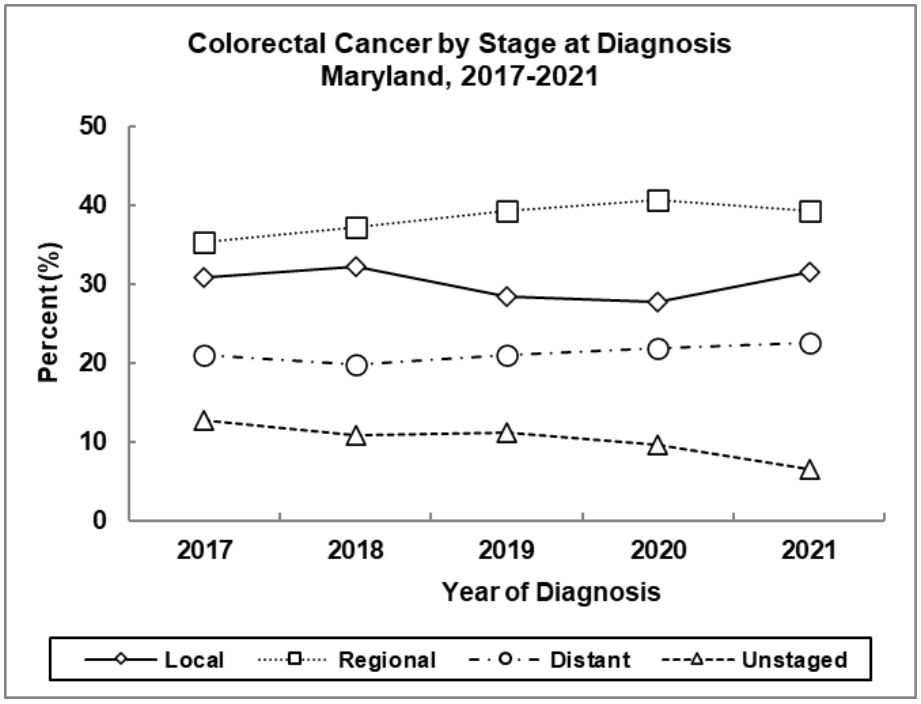


Source: Maryland Department of Health Vital Statistics Administration

Mortality Trends by Race/Ethnicity

From 2017 to 2021, Black Marylanders had consistently higher colorectal cancer mortality rates than all other groups. However, both Black and White Marylanders' colorectal cancer mortality rates decreased, at a rate of 2.7% per year and 1.7% per year, respectively. The mortality rates for colorectal cancer increased 3.1% per year among Asian/Pacific Islander Marylanders in the same time frame. The mortality rates for American Indian/Alaska Native Marylanders from 2017 to 2021 and for Hispanic Marylanders in 2019 were suppressed.

See Appendix H, Table 5.

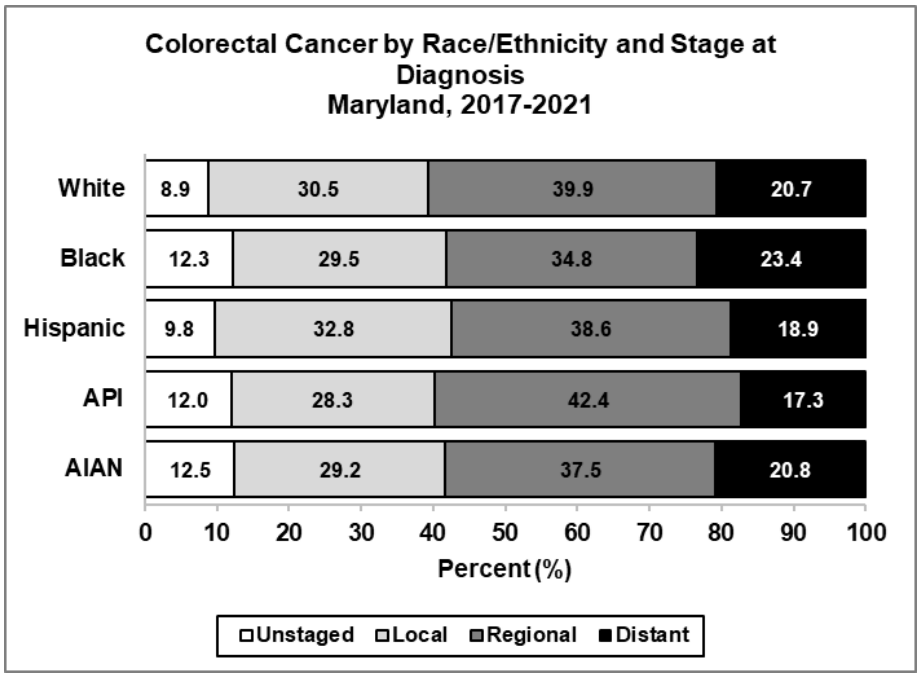


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis

In 2021, 31.5% of colorectal cancers diagnosed in Maryland were detected at the local stage, 39.4% at the regional stage, and 22.6% at the distant stage. In 2021, 6.5% of colorectal cancers diagnosed were reported as unstaged. The proportion of colorectal cancers reported as unstaged decreased 13.8% per year from 2017 to 2021.

See Appendix I, Table 3.

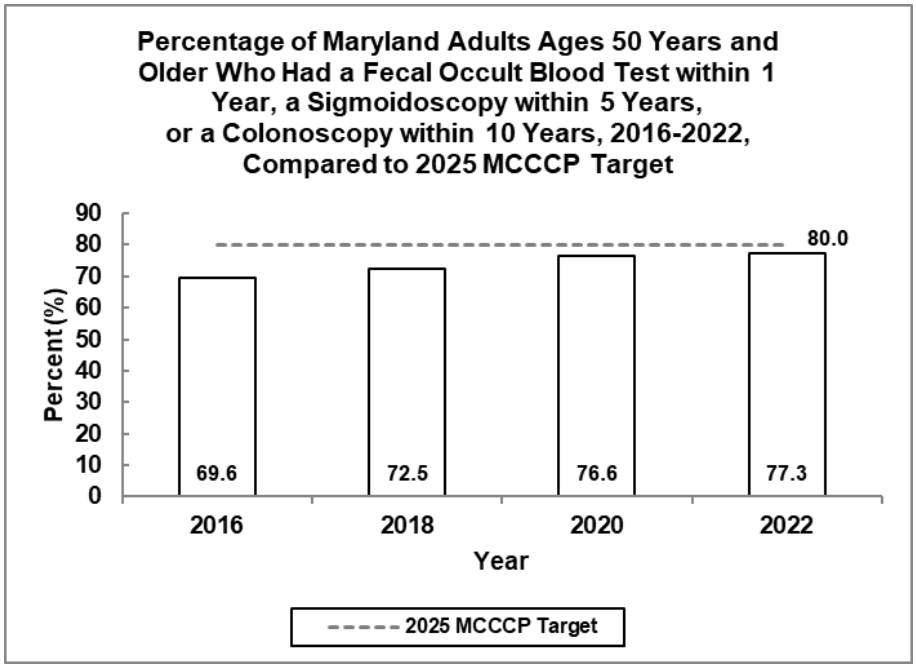


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis by Race/Ethnicity

From 2017 to 2021, a higher proportion of colorectal cancer cases were diagnosed at the regional stage than at the local or distant stage for all racial groups. A higher proportion of Black Marylanders were diagnosed with colorectal cancer at the distant stage compared to other groups and Maryland overall.

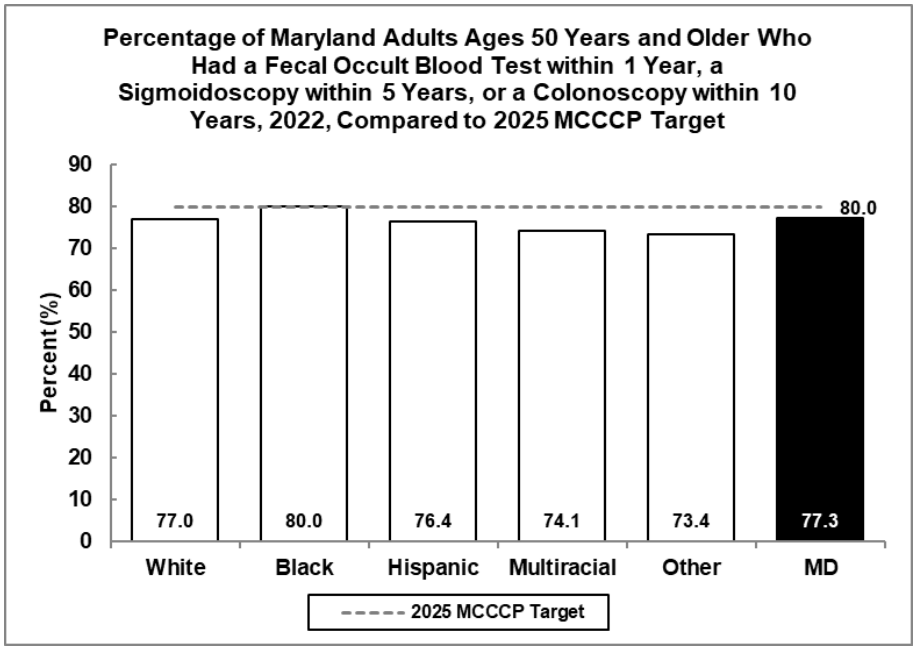
See Appendix L, Table 3.



Source: Maryland Behavioral Risk Factor Surveillance System, 2016, 2018, 2020, 2022
Maryland Comprehensive Cancer Control Plan, 2021-2025

Up-to-Date Screening for Colorectal Cancer

The 2025 MCCCP target for colorectal cancer screening aims to increase the proportion of adults age 50 years and older who are up-to-date on their colorectal cancer screening. The percent of Maryland adults ages 50 years and older who were up-to-date for colorectal cancer screening in 2022 (77.3%) is just shy of the 2025 MCCCP target of 80.0%.



Source: Maryland Behavioral Risk Factor Surveillance System, 2022
Maryland Comprehensive Cancer Control Plan, 2021-2025

Up-to-Date Screening for Colorectal Cancer by Race/Ethnicity

As of 2022, only Black Marylanders have met the 2025 MCCCP target to increase the total percentage of Maryland adults aged 50 years and older who are up-to-date with their colorectal cancer screening to 80.0%.

Public Health Evidence for Colorectal Cancer Prevention and Screening (adapted from the National Cancer Institute Physician Data Query [PDQ] and the United States Preventive Services Task Force [USPSTF])

Prevention

Avoiding risk factors may help prevent cancer. The following risk factors increase the risk of colorectal cancer:

- Age, as most cases are diagnosed after age 50.
- Family history of colorectal cancer.
- Personal history of previous colorectal cancer, high-risk adenomas, ovarian cancer, or inflammatory bowel disease (such as ulcerative colitis or Crohn's disease).
- Inherited risk, such as some gene changes associated with familial adenomatous polyposis, or hereditary nonpolyposis colon cancer.
- Alcohol use.
- Cigarette smoking.
- Race, as African Americans have an increased risk of colorectal cancer and death from colorectal cancer compared to other races.
- Obesity.

Increasing protective factors may help prevent cancer. The following protective factors decrease the risk of colorectal cancer:

- Regular physical activity.
- Taking aspirin daily for at least two years, with a decrease in risk beginning 10 to 20 years after patients start taking aspirin. The risks of aspirin use include an increased risk of stroke and bleeding in the stomach and intestines.
- Combination hormone replacement therapy (HRT) that includes both estrogen and progestin lowers the risk of invasive colorectal cancer in postmenopausal women. However, in women who take combination HRT and do develop colorectal cancer, the cancer is more likely to be advanced when diagnosed, and the risk of dying from colorectal cancer is not decreased. The possible harms of combination HRT include an increased risk of breast cancer, heart disease, and blood clots.
- Removing colorectal polyps that are larger than one centimeter.

It is not clear if the following affect the risk of colorectal cancer:

- Nonsteroidal anti-inflammatory drugs (NSAIDs) other than aspirin.
- Calcium.
- Diet. The evidence for how diet increases or decreases colorectal cancer risk is not yet clear.

The following factors do not affect the risk of colorectal cancer:

- HRT with estrogen only.
- Statin medicines that lower blood cholesterol.

Screening

Studies show that some screening tests for colorectal cancer help find cancer at an early stage and may decrease the number of deaths from the disease. Five types of tests are used to screen for colorectal cancer:

- Fecal occult blood tests (FOBT), which are guaiac FOBT or immunochemical FOBT/fecal immunochemical test (FIT).
- Sigmoidoscopy.
- Colonoscopy.
- Virtual colonoscopy, or computed tomography colonography (CT colonography).
- DNA stool test.

Studies have shown that screening for colorectal cancer using digital rectal exam does not decrease the number of deaths from the disease.

Risks for colorectal cancer screening exist:

- False-negative tests results can occur (the screening test results may appear to be normal even though colorectal cancer is present). A person who receives a false-negative test result may delay seeking medical care even if there are symptoms.
- False-positive test results can occur (the screening test results may appear to be abnormal even though no cancer is present). A false-positive test result can cause anxiety and is usually followed by more tests (such as biopsy), which also have risks.
- Serious problems caused by colonoscopy are rare, but can include tears in the lining of the colon and bleeding. Sedation is used to decrease the discomfort from the procedure, but may cause heart and lung problems, such as irregular heartbeat, heart attack, or trouble breathing.
- There are fewer complications with a sigmoidoscopy than with a colonoscopy. Although tears in the lining of the colon and bleeding can occur, these are less common with sigmoidoscopy than with colonoscopy. There is usually no sedation with sigmoidoscopy, lowering the risk of complications.
- Virtual colonoscopy has fewer possible physical harms than either colonoscopy or sigmoidoscopy. The harms of being exposed to radiation from x-rays used in virtual colonoscopy are not known.
- The results of an FOBT or DNA stool test may appear to be abnormal even though no cancer is found. A positive test result may lead to more testing, including colonoscopy.

The USPSTF recommends screening for colorectal cancer starting at age 45 years old and continuing until age 75 years old. The USPSTF recommends that clinicians selectively offer screening for colorectal cancer in adults aged 76 to 85 years. In determining whether colorectal cancer screening is appropriate in individual cases, patients and clinicians should consider the patient's overall health, prior screening history, and preferences.

Maryland Department of Health Medical Advisory Committee Public Health Intervention for Colorectal Cancer
• As stated by the USPSTF, colorectal cancer screening is recommended for individuals ages 45 to 75 years old. Screening may begin earlier for individuals with certain risk factors for colorectal cancer. Individuals ages 76 to 85 years may be screened if the

healthcare provider recommends screening after taking into account comorbidities, longevity, and past colorectal cancer screening results.

Individuals should discuss the risk factors for colorectal cancer, ways to prevent colorectal cancer, and screening tests with their healthcare provider.

Note: For information on the Colorectal Cancer Prevention and Screening PDQ, please see Appendix C.

Table 20
Number of Cases for Colorectal Cancer by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	2,558	1,315	1,242	1,544	739	107	146	8
Allegany	46	29	17	41	<6	0	<6	0
Anne Arundel	225	109	115	174	42	<6	6	0
Baltimore City	222	111	111	65	147	<6	<6	<6
Baltimore	419	208	211	282	107	10	15	<6
Calvert	28	16	12	23	<6	0	0	0
Caroline	20	7	13	16	<6	0	0	0
Carroll	100	55	45	91	6	<6	<6	0
Cecil	47	33	14	45	<6	0	0	0
Charles	71	38	33	28	41	0	<6	0
Dorchester	20	13	7	12	8	0	0	0
Frederick	106	58	48	87	11	<6	<6	0
Garrett	11	<6	s	11	0	0	0	0
Harford	111	52	59	95	11	<6	<6	<6
Howard	119	64	55	65	16	7	28	0
Kent	10	<6	s	8	<6	0	0	<6
Montgomery	398	211	187	210	80	42	62	0
Prince George's	350	165	185	75	223	32	13	<6
Queen Anne's	25	6	19	22	<6	0	<6	0
St. Mary's	50	24	26	44	6	0	0	0
Somerset	12	s	<6	12	0	0	0	0
Talbot	18	12	6	16	<6	0	0	0
Washington	65	35	30	56	s	<6	<6	0
Wicomico	50	33	17	38	9	0	<6	0
Worcester	28	16	12	25	<6	0	0	0

Total includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 21
Colorectal Cancer Age-Adjusted Incidence Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	34.5	38.7	31.0	35.4	35.5	24.7	29.7	**
Allegany	51.2	67.7	37.0	49.2	**	0.0	**	0.0
Anne Arundel	33.1	33.6	31.8	33.5	38.8	**	**	0.0
Baltimore City	34.3	39.0	31.1	34.4	34.6	**	**	**
Baltimore	39.1	43.8	35.5	39.2	41.0	**	**	**
Calvert	25.0	30.4	**	26.6	**	0.0	0.0	0.0
Caroline	46.9	**	**	45.6	**	0.0	0.0	0.0
Carroll	43.6	52.8	35.6	43.1	**	**	**	0.0
Cecil	34.4	51.2	**	36.7	**	0.0	0.0	0.0
Charles	37.5	40.2	34.6	31.5	46.0	0.0	**	0.0
Dorchester	47.8	**	**	**	**	0.0	0.0	0.0
Frederick	32.8	38.1	28.5	34.2	**	**	**	0.0
Garrett	**	**	**	**	0.0	0.0	0.0	0.0
Harford	33.7	33.1	33.6	35.3	**	**	**	**
Howard	30.8	35.7	26.6	28.5	22.7	**	42.0	0.0
Kent	**	**	**	**	**	0.0	0.0	**
Montgomery	31.0	35.6	27.2	31.4	39.1	27.0	28.6	0.0
Prince George's	32.4	34.7	31.1	40.5	31.4	30.3	**	**
Queen Anne's	35.9	**	54.9	33.1	**	0.0	**	0.0
St. Mary's	40.2	39.7	39.0	44.2	**	0.0	0.0	0.0
Somerset	**	**	**	**	0.0	0.0	0.0	0.0
Talbot	27.8	**	**	27.4	**	0.0	0.0	0.0
Washington	31.1	36.1	27.8	29.9	**	**	**	0.0
Wicomico	41.8	60.0	27.6	45.9	**	0.0	**	0.0
Worcester	27.8	37.4	**	27.0	**	0.0	0.0	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 22
Number of Deaths for Colorectal Cancer by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	983	517	466	580	304	s	58	<6
Allegany	14	s	<6	s	<6	<6	<6	<6
Anne Arundel	76	33	43	51	16	<6	7	<6
Baltimore City	125	67	58	29	91	<6	<6	<6
Baltimore	146	77	69	100	31	<6	10	<6
Calvert	14	8	6	10	<6	<6	<6	<6
Caroline	6	<6	<6	s	<6	<6	<6	<6
Carroll	32	14	18	28	<6	<6	<6	<6
Cecil	21	14	7	19	<6	<6	<6	<6
Charles	30	17	13	17	11	<6	<6	<6
Dorchester	<6	<6	<6	<6	<6	<6	<6	<6
Frederick	40	20	20	32	<6	<6	<6	<6
Garrett	8	s	<6	s	<6	<6	<6	<6
Harford	59	31	28	52	<6	<6	<6	<6
Howard	26	12	14	12	7	<6	<6	<6
Kent	6	<6	<6	s	<6	<6	<6	<6
Montgomery	129	64	65	73	28	12	16	<6
Prince George's	136	70	66	30	87	10	s	<6
Queen Anne's	9	<6	<6	7	<6	<6	<6	<6
St. Mary's	19	11	8	16	<6	<6	<6	<6
Somerset	6	<6	<6	<6	<6	<6	<6	<6
Talbot	13	s	<6	11	<6	<6	<6	<6
Washington	33	17	16	29	<6	<6	<6	<6
Wicomico	19	s	<6	12	6	<6	<6	<6
Worcester	11	s	<6	10	<6	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 23
Colorectal Cancer Age-Adjusted Mortality Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	12.9	15.6	10.9	12.5	14.9	9.9	11.9	**
Allegany	**	**	**	**	**	**	**	**
Anne Arundel	10.8	10.6	11.1	9.4	**	**	**	**
Baltimore City	19.1	26.2	14.7	13.7	21.9	**	**	**
Baltimore	12.8	16.4	10.1	12.7	12.7	**	**	**
Calvert	**	**	**	**	**	**	**	**
Caroline	**	**	**	**	**	**	**	**
Carroll	14.3	**	**	13.0	**	**	**	**
Cecil	17.7	**	**	**	**	**	**	**
Charles	15.3	**	**	**	**	**	**	**
Dorchester	**	**	**	**	**	**	**	**
Frederick	11.7	13.2	10.7	11.1	**	**	**	**
Garrett	**	**	**	**	**	**	**	**
Harford	17.6	21.2	14.5	18.2	**	**	**	**
Howard	6.7	**	**	**	**	**	**	**
Kent	**	**	**	**	**	**	**	**
Montgomery	10.1	10.9	9.3	10.3	14.4	**	**	**
Prince George's	12.5	15.4	10.6	16.0	12.1	**	**	**
Queen Anne's	**	**	**	**	**	**	**	**
St. Mary's	**	**	**	**	**	**	**	**
Somerset	**	**	**	**	**	**	**	**
Talbot	**	**	**	**	**	**	**	**
Washington	15.6	**	**	15.5	**	**	**	**
Wicomico	**	**	**	**	**	**	**	**
Worcester	**	**	**	**	**	**	**	**

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

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 24
Number of Cases for Colorectal Cancer by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	12,605	6,368	6,236	7,730	3,715	461	618	24
Allegany	214	118	96	203	7	<6	<6	0
Anne Arundel	1,145	566	578	883	200	25	35	0
Baltimore City	1,249	616	633	382	826	23	s	<6
Baltimore	1,967	992	975	1,363	499	31	65	7
Calvert	192	100	92	163	s	0	<6	0
Caroline	87	37	50	70	13	<6	0	0
Carroll	426	213	213	402	14	<6	6	0
Cecil	233	129	104	218	13	0	<6	0
Charles	319	163	156	149	153	<6	11	0
Dorchester	113	59	54	81	25	0	0	<6
Frederick	498	265	233	416	47	20	13	0
Garrett	78	45	33	s	0	0	0	<6
Harford	639	319	320	539	80	s	11	<6
Howard	560	284	276	323	115	23	93	<6
Kent	53	30	23	41	s	0	0	<6
Montgomery	1,843	938	905	1,018	332	190	280	<6
Prince George's	1,713	834	879	359	1,156	115	63	7
Queen Anne's	121	54	67	107	12	0	<6	0
St. Mary's	234	122	112	184	41	<6	<6	0
Somerset	51	32	19	35	s	<6	<6	0
Talbot	102	49	53	90	9	0	<6	0
Washington	345	175	170	302	37	<6	<6	0
Wicomico	230	127	103	171	52	<6	6	0
Worcester	151	80	71	131	20	0	0	0

Total includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 25
Colorectal Cancer Age-Adjusted Incidence Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	34.8	38.8	31.6	35.4	36.8	22.1	26.8	22.1
Allegany	44.3	51.2	39.0	45.2	**	**	**	0.0
Anne Arundel	34.3	36.4	32.3	34.1	39.8	19.7	27.8	0.0
Baltimore City	37.7	43.4	33.8	38.8	38.6	23.9	27.5	**
Baltimore	37.5	43.1	33.2	37.7	39.7	22.2	24.0	**
Calvert	34.2	37.6	32.0	36.0	38.5	0.0	**	0.0
Caroline	43.4	39.9	46.7	42.3	**	**	0.0	0.0
Carroll	38.4	42.3	35.1	38.8	**	**	**	0.0
Cecil	36.6	40.7	32.4	37.8	**	0.0	**	0.0
Charles	35.5	38.6	32.5	32.5	40.6	**	**	0.0
Dorchester	52.3	61.3	44.1	49.8	49.2	0.0	0.0	**
Frederick	32.5	36.6	28.8	32.6	34.4	21.8	**	0.0
Garrett	36.7	46.1	27.5	37.1	0.0	0.0	0.0	**
Harford	40.1	44.2	37.4	40.4	46.6	**	**	**
Howard	30.8	33.6	28.2	29.7	35.7	26.4	30.1	**
Kent	34.3	42.0	27.3	32.9	**	0.0	0.0	**
Montgomery	29.0	32.2	26.3	29.9	33.4	23.7	27.1	**
Prince George's	34.0	37.8	31.3	40.0	33.1	22.0	26.6	**
Queen Anne's	34.1	31.7	36.3	34.1	**	0.0	**	**
St. Mary's	37.3	41.1	34.0	37.2	46.6	**	**	0.0
Somerset	32.6	42.4	26.0	33.6	**	**	**	0.0
Talbot	34.5	39.9	29.4	37.0	**	0.0	**	0.0
Washington	34.8	38.0	32.2	33.2	53.7	**	**	0.0
Wicomico	39.4	48.4	32.4	42.3	37.5	**	**	0.0
Worcester	31.0	35.6	27.0	30.7	41.5	0.0	0.0	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 26
Number of Deaths for Colorectal Cancer by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	4,828	2,504	2,324	2,911	1,565	131	213	<6
Allegany	74	43	31	72	<6	<6	<6	<6
Anne Arundel	425	213	212	312	75	8	27	<6
Baltimore City	565	282	283	142	410	7	s	<6
Baltimore	761	388	373	537	197	s	18	<6
Calvert	80	50	30	54	24	<6	<6	<6
Caroline	32	15	17	27	<6	<6	<6	<6
Carroll	160	75	85	151	6	<6	<6	<6
Cecil	91	50	41	79	10	<6	<6	<6
Charles	121	66	55	66	48	<6	<6	<6
Dorchester	39	25	14	23	15	<6	<6	<6
Frederick	179	88	91	151	15	7	s	<6
Garrett	41	26	15	s	<6	<6	<6	<6
Harford	239	128	111	202	30	<6	6	<6
Howard	166	81	85	100	41	<6	21	<6
Kent	28	16	12	25	<6	<6	<6	<6
Montgomery	642	321	321	381	125	s	86	<6
Prince George's	691	372	319	138	487	35	30	<6
Queen Anne's	37	22	15	30	s	<6	<6	<6
St. Mary's	81	45	36	69	10	<6	<6	<6
Somerset	20	7	13	s	<6	<6	<6	<6
Talbot	38	21	17	32	s	<6	<6	<6
Washington	158	88	70	142	12	<6	<6	<6
Wicomico	102	52	50	75	24	<6	<6	<6
Worcester	58	30	28	48	s	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 27
Colorectal Cancer Age-Adjusted Mortality Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	13.1	15.6	11.2	12.6	16.0	6.9	9.5	**
Allegany	14.8	18.4	12.4	15.5	**	**	**	**
Anne Arundel	12.5	14.2	11.3	11.6	16.9	**	19.6	**
Baltimore City	17.1	21.0	14.5	14.2	19.4	**	**	**
Baltimore	13.7	16.7	11.5	13.5	16.3	**	**	**
Calvert	13.8	18.4	9.6	11.5	32.1	**	**	**
Caroline	15.9	17.4	14.0	16.2	**	**	**	**
Carroll	14.1	14.7	13.7	13.9	**	**	**	**
Cecil	15.1	18.0	12.9	14.7	**	**	**	**
Charles	13.7	16.7	11.4	13.9	13.3	**	**	**
Dorchester	16.5	23.6	10.9	13.9	**	**	**	**
Frederick	11.4	12.5	10.4	11.2	**	**	**	**
Garrett	16.6	24.7	11.1	17.1	**	**	**	**
Harford	14.7	17.8	12.4	14.5	19.3	**	**	**
Howard	9.3	10.4	8.5	8.7	13.9	**	7.4	**
Kent	16.3	20.1	13.5	17.4	**	**	**	**
Montgomery	9.9	11.1	8.9	10.3	13.1	6.4	8.6	**
Prince George's	13.9	17.8	11.1	14.2	14.2	7.3	12.1	**
Queen Anne's	10.8	13.5	8.3	9.7	**	**	**	**
St. Mary's	13.2	15.8	10.8	14.1	**	**	**	**
Somerset	12.6	8.7	16.8	**	**	**	**	**
Talbot	10.4	13.4	7.9	9.7	**	**	**	**
Washington	15.3	19.1	12.1	15.0	**	**	**	**
Wicomico	17.0	20.1	14.7	17.4	17.7	**	**	**
Worcester	11.7	13.7	10.1	10.6	**	**	**	**

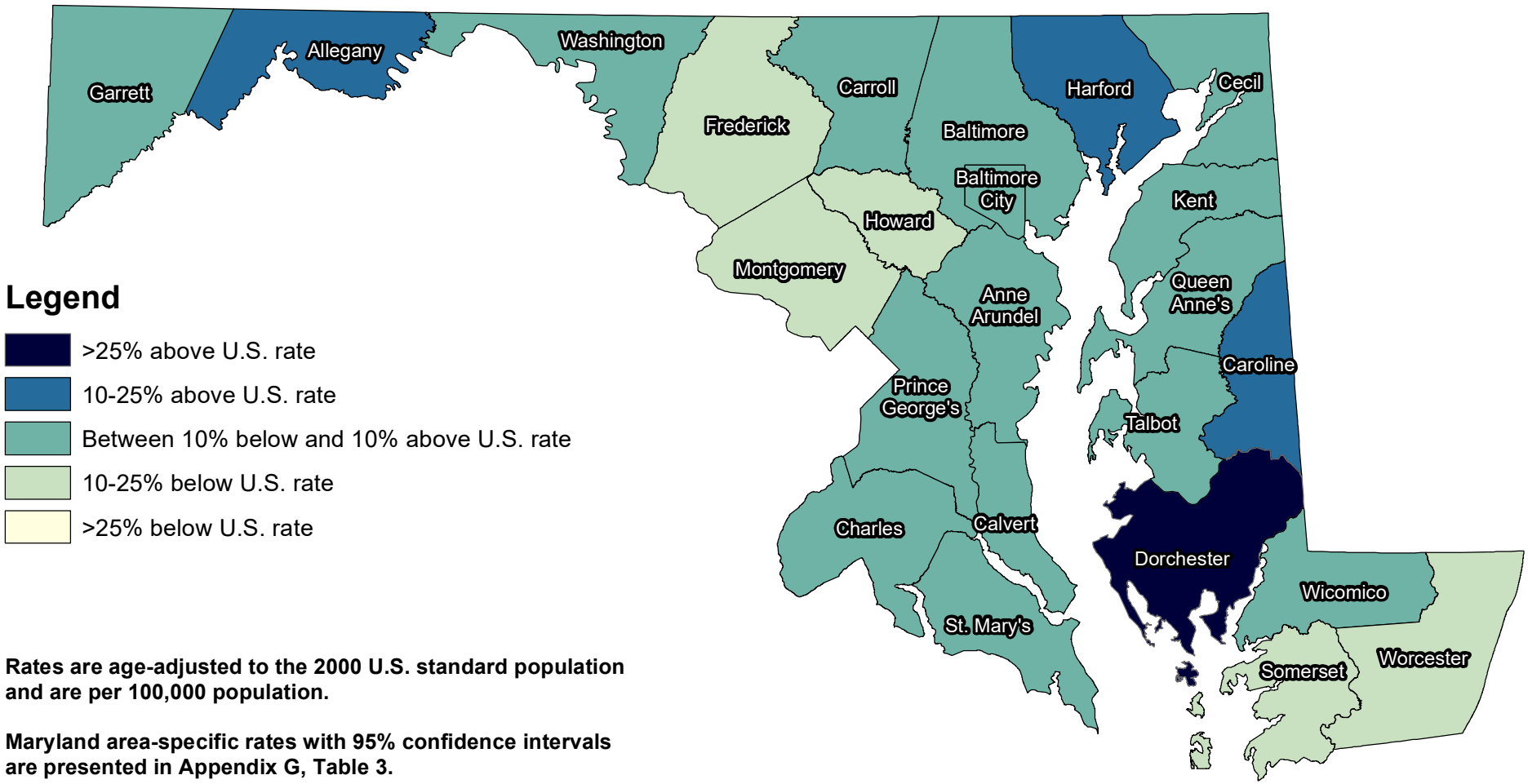
* Rates are per 100,000 population and age-adjusted to 2000 U.S. standard population

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Maryland Colorectal Cancer Incidence Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

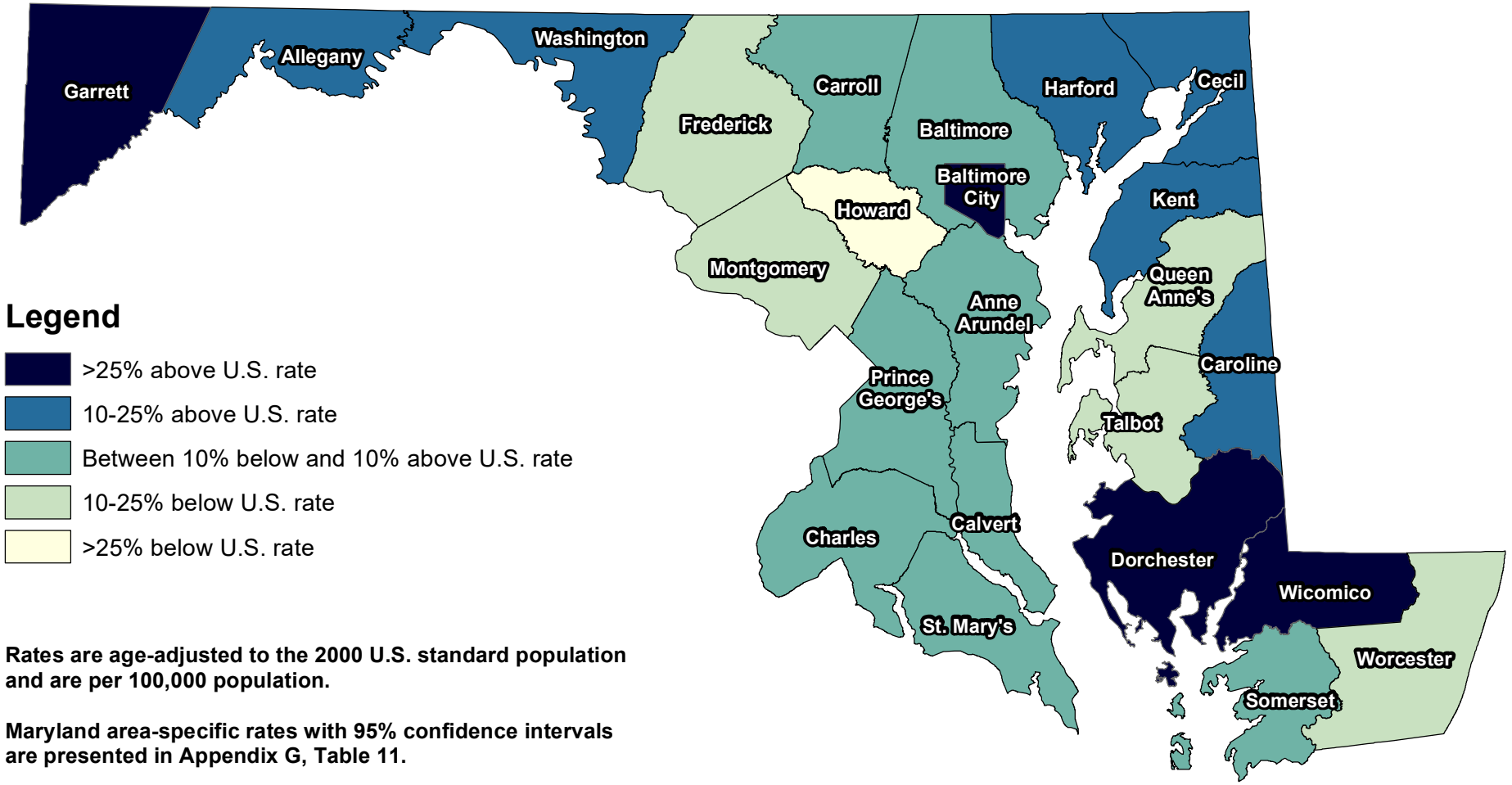
Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 3.

U.S. colorectal cancer incidence rate, 2017-2021: 36.4 / 100,000

Maryland colorectal cancer incidence rate, 2017-2021: 34.8 / 100,000

Sources: Maryland Cancer Registry
U.S. SEER, SEER*Stat Database

Maryland Colorectal Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 11.

U.S. colorectal cancer mortality rate, 2017-2021: 13.1 / 100,000

Maryland colorectal cancer mortality rate, 2017-2021: 13.1 / 100,000

Sources: Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

C. Female Breast Cancer

Incidence (New Cases)

In 2021, a total of 5,615 cases of breast cancer were reported among Maryland women. The 2021 age-adjusted incidence rate in Maryland was 141.3 per 100,000 women, which is statistically significantly higher than the 2021 U.S. SEER age-adjusted female breast cancer incidence rate of 135.0 per 100,000 women.

In Maryland, female breast cancer incidence rates in 2021 were highest among White and Black women, at 148.9 per 100,000 and 143.7 per 100,000 respectively; these rates are statistically similar to each other but higher than the female breast cancer incidence rates for Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native Marylanders. There are no statistically significant differences among these three groups with the lowest female breast cancer incidence rates. For Maryland and U.S. 2021 incidence rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 1.

Mortality (Deaths)

In 2021, a total of 796 women died of breast cancer in Maryland. Female breast cancer accounted for 15.4% of cancer deaths among women and 7.6% of all cancer deaths in Maryland in 2021. Breast cancer is the second leading cause of cancer death among women in Maryland after lung cancer. Maryland had the 32nd highest female breast cancer mortality rate among the states and the District of Columbia in 2021. The 2021 age-adjusted mortality rate for female breast cancer in Maryland was 18.9 per 100,000 women. This rate is statistically similar to the U.S. female breast cancer mortality rate of 19.1 per 100,000 women.

At 23.0 deaths per 100,000, Black women had a statistically significantly higher female breast cancer mortality rate than other racial and ethnic groups in Maryland in 2021. There were no statistically significant differences in breast cancer mortality among White, Hispanic, and Asian/Pacific Islander women. The female breast cancer mortality rate for American Indian/Alaska Native Marylanders is not reportable. For Maryland and U.S. 2021 mortality rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 2.

Table 28
Female Breast Cancer Incidence and Mortality Rates
by Race/Ethnicity, Maryland (MD) and the United States, 2021

Incidence 2021	*Total**	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD New Cases (count)	5,615	3,304	1,758	235	270	16
MD Incidence Rate	141.3	148.9	143.7	94.6	100.2	130.9
U.S. SEER Rate	135.0	144.7	132.6	105.2	123.2	114.6
Mortality 2021	*Total*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD Deaths (count)	796	443	281	s	39	<6
MD Mortality Rate	18.9	17.7	23.0	13.1	14.2	**
U.S. Mortality Rate	19.1	19.2	25.7	13.6	12.0	14.8

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

All race rates and counts, except Hispanic, are non-Hispanic/Latino

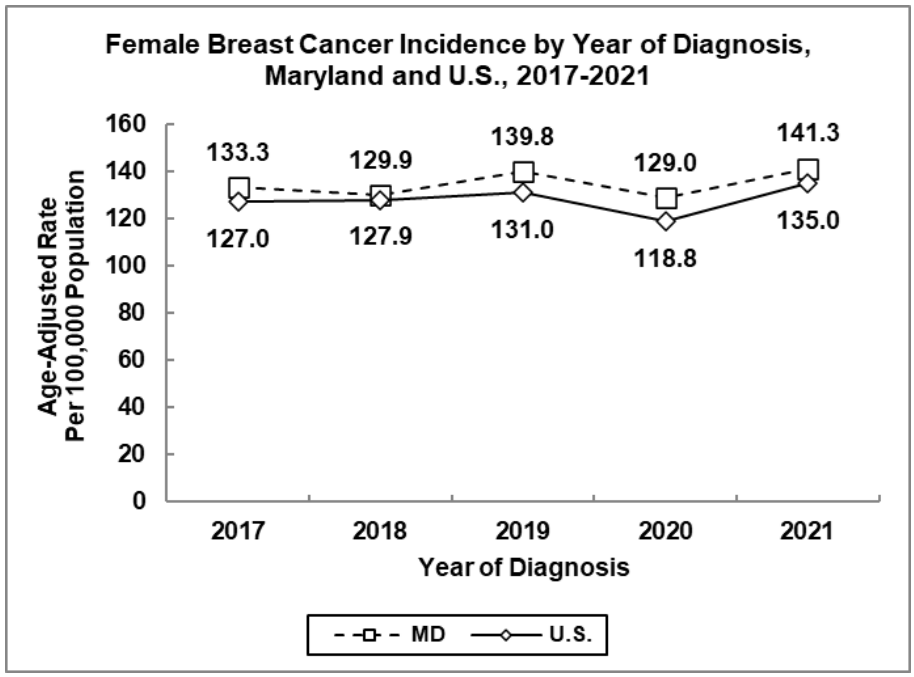
* Total includes unknown race/ethnicity and unknown jurisdiction

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

** MD mortality rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat
Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

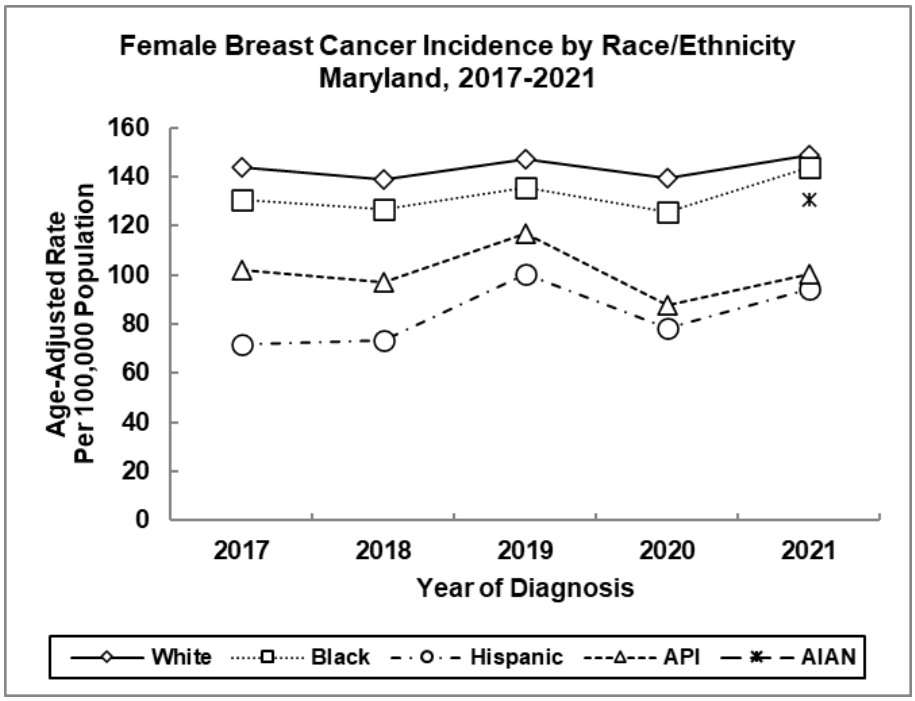


Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat

Maryland vs. U.S., Incidence Rates

From 2017 to 2021, incidence rates for female breast cancer increased in Maryland at a rate of 1.1% per year and in the U.S. at a rate of 0.5% per year.

See Appendix H, Table 1.

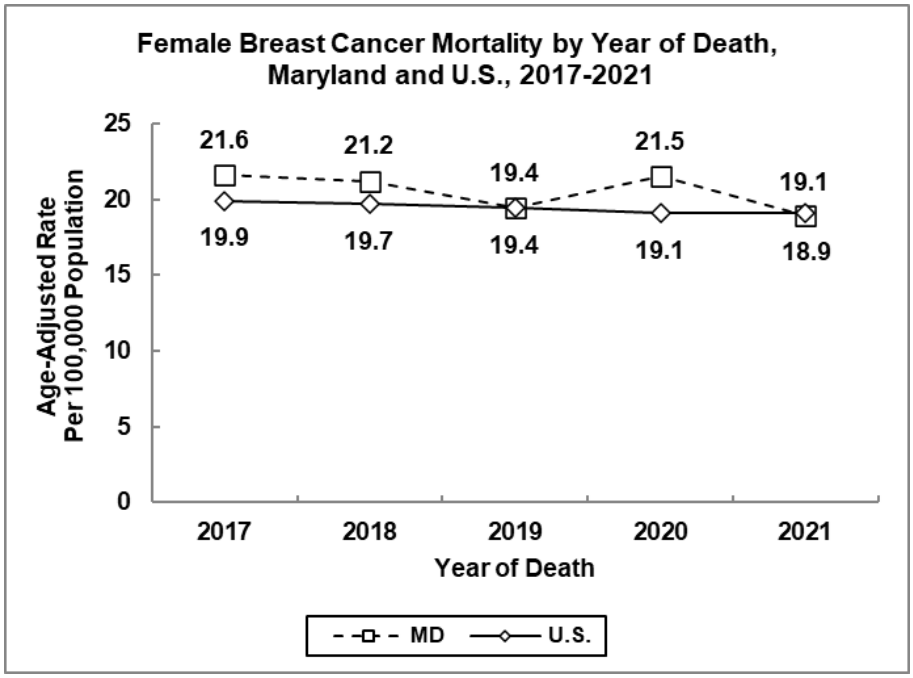


Source: Maryland Cancer Registry

Incidence Trends by Race/Ethnicity

Female breast cancer incidence rates increased at a rate of 0.7% per year among White females, 1.8% per year among Black females, and 6.5% per year among Hispanic females in Maryland from 2017 to 2021. Female breast cancer incidence rates decreased 1.3% per year among Asian/ Pacific Islander females in Maryland during the same time period. Breast cancer incidence rates among American Indian/Alaska Native females were suppressed from 2017 to 2020.

See Appendix H, Table 3.

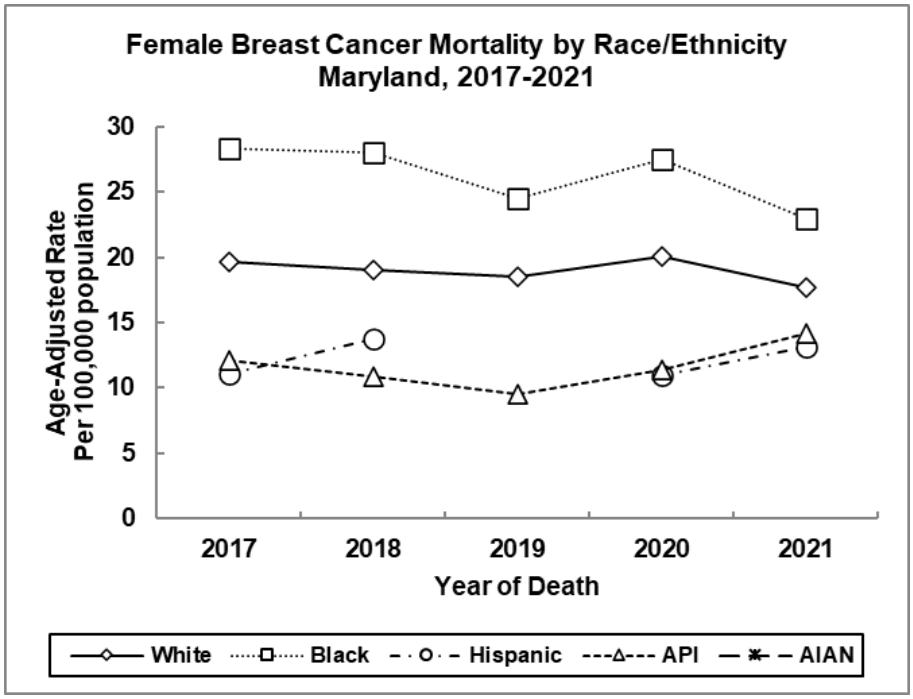


Source: Maryland Department of Health Vital Statistics Administration, 2021 (MD)
NCHS Underlying Cause of Death in CDC WONDER, 2017-2020
SEER Mortality All Cause of Death Data (U.S.)

Maryland vs. U.S., Mortality Rates

From 2017 to 2021, female breast cancer mortality rates decreased in Maryland at a rate of 2.5% per year, and in the U.S. at a rate of 1.1% per year.

See Appendix H, Table 2.

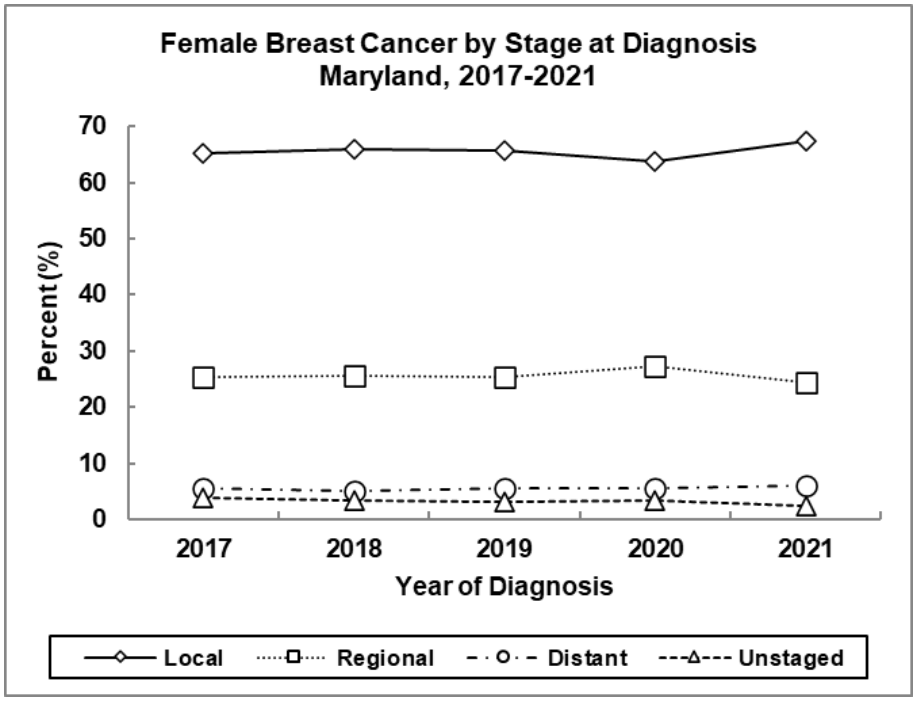


Source: Maryland Department of Health Vital Statistics Administration

Mortality Trends by Race/Ethnicity

From 2017 to 2021, female breast cancer mortality rates were highest in Black women compared to other racial groups. From 2017 to 2021, female breast cancer mortality rates decreased at a rate of 1.6% per year among White women and 4.2% per year among Black women. Female breast cancer mortality rates increased at a rate of 3.7% per year among Asian/ Pacific Islander women in Maryland during the same time frame. Female breast cancer mortality rates for American Indian/Alaska Native women from 2017 to 2021 and Hispanic women in 2019 were suppressed.

See Appendix H, Table 5.

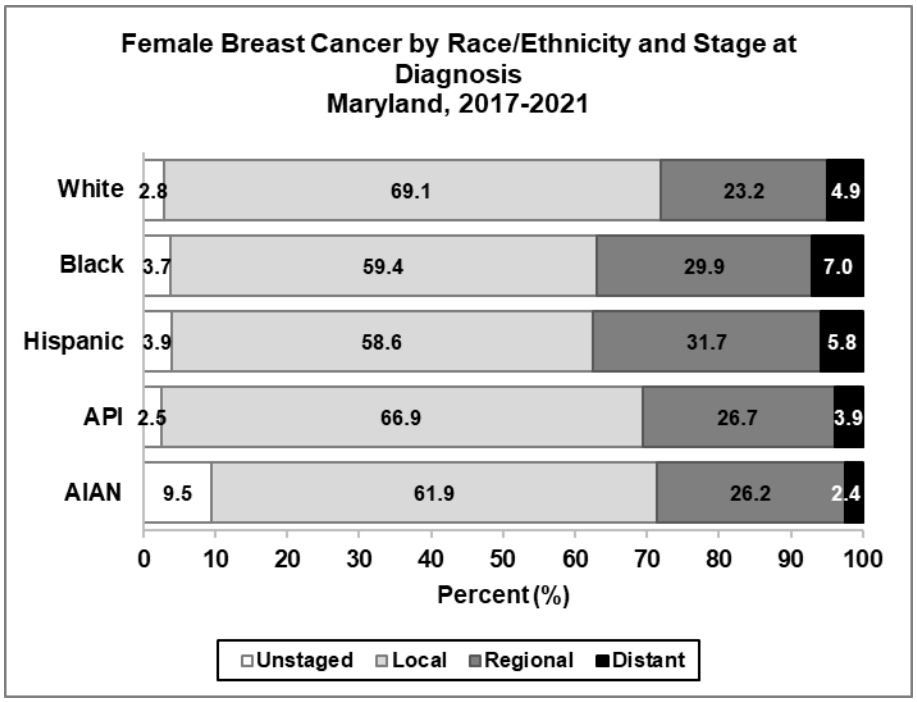


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis

In 2021, 67.4% of all female breast cancer cases in Maryland were diagnosed at the local stage, 24.3% were found at the regional stage, and 6.0% were diagnosed at the distant stage. The proportion of female breast cancers reported as unstaged in 2021 was 2.3%. Unstaged breast cancer diagnoses decreased 9.8% per year from 2017 to 2021.

See Appendix I, Table 4.

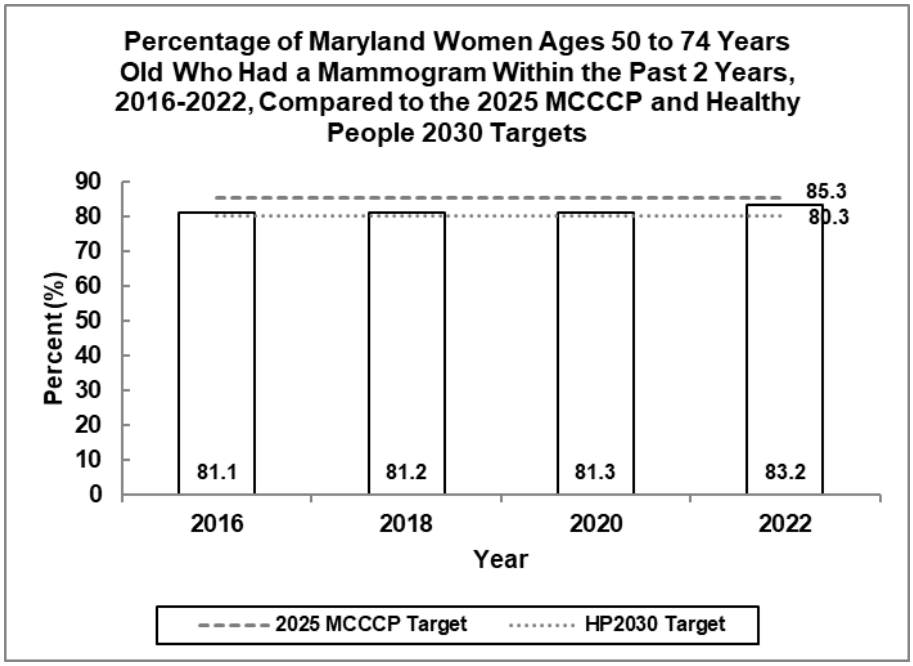


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis by Race/Ethnicity

From 2017 to 2021, over half of all female breast cancer cases were diagnosed at the local stage for all racial groups. Black and Hispanic women had the largest percentages of cases diagnosed at the regional and distant stage compared to other racial groups.

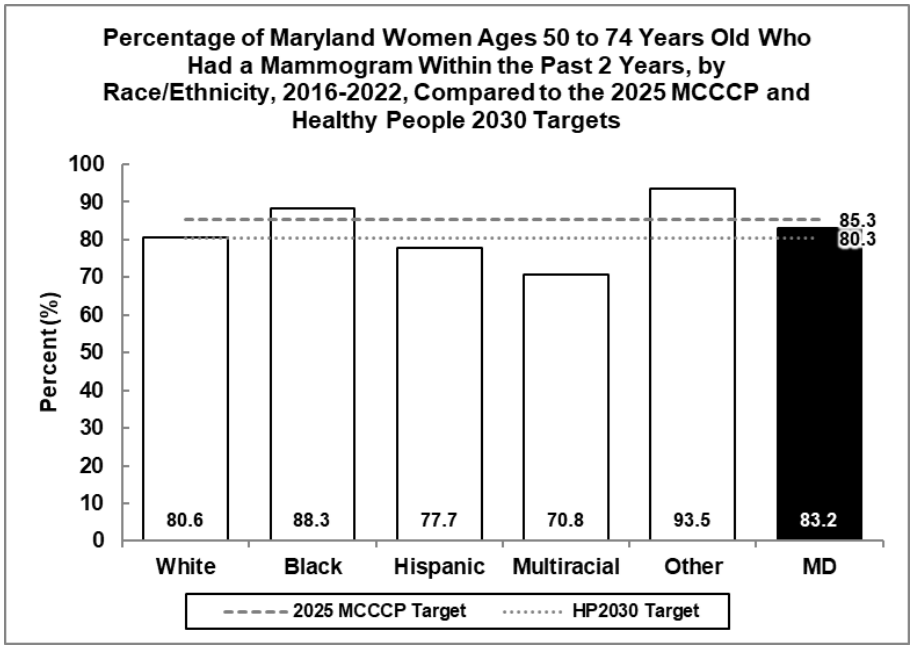
See Appendix L, Table 4.



Source: Maryland Behavioral Risk Factor Surveillance System, 2016, 2018, 2020, 2022
Maryland Comprehensive Cancer Control Plan, 2021-2025
Healthy People 2030, U.S. Department of Health and Human Services

Breast Cancer Screening

The Healthy People 2030 target for the proportion of women who had a breast cancer screening based on the most recent guidelines is 80.3%, while the 2025 MCCCP target is 85.3%. Maryland women have consistently met or surpassed the Healthy People 2030 target and are close to meeting the 2025 MCCCP target. In 2022, 83.2% of Maryland women ages 50 to 74 years reported receiving a mammogram within the past two years.



Source: Maryland Behavioral Risk Factor Surveillance System, 2016, 2018, 2020, 2022
Maryland Comprehensive Cancer Control Plan, 2021-2025
Healthy People 2030, U.S. Department of Health and Human Services

Breast Cancer Screening by Race/ Ethnicity

In 2022, Black women met both the Healthy People 2030 and 2025 MCCCP targets for women screened for breast cancer. White women met the Healthy People 2030 goal, but have not yet met the 2025 MCCCP target. Hispanic and Multiracial women have not yet met either target.

Public Health Evidence for Breast Cancer Prevention and Screening (adapted from the National Cancer Institute Physician Data Query [PDQ] and the United States Preventive Services Task Force [USPSTF])

Prevention

Avoiding risk factors may help prevent cancer. The following are risk factors for breast cancer:

- Older age.
- A personal history of invasive breast cancer, ductal carcinoma in situ, lobular carcinoma in situ, or a personal history of benign (noncancer) breast disease.
- A family history of breast cancer in a first-degree relative (sister, mother, or daughter).
- Inherited changes in the *BRCA1* and *BRCA2* genes or in certain other genes.
- Having dense breast tissue.
- Reproductive history resulting in greater exposure of breast tissue to estrogen (e.g., starting menstruation before age 12, starting menopause at a later age, becoming pregnant for the first time after age 35, or never becoming pregnant).
- Taking hormone therapy for symptoms of menopause.
- Radiation therapy to the breast or chest.
- Obesity.
- Drinking alcohol.

Increasing protective factors may help prevent cancer. The following are protective factors for breast cancer:

- Reproductive history resulting in less exposure of breast tissue to estrogen (e.g., having an early pregnancy, breast-feeding).
- Taking estrogen-only hormone therapy after hysterectomy, selective estrogen receptor modulators (e.g., tamoxifen, raloxifene), or aromatase inhibitors (e.g., anastrozole, letrozole) and inactivators (e.g., exemestane). Even though these drugs may decrease the risk of breast cancer, they are also associated with side-effects and other risks.
- Risk-reducing or prophylactic mastectomy for women who have high risk of breast cancer.
- Ovarian ablation (treatments that stop or lower the amount of estrogen made by the ovaries).
- Getting enough exercise.

It is not clear whether the following affect the risk of breast cancer:

- Hormonal contraceptives.
- Environmental exposures (e.g., exposure to chemicals).

The following have little or no effect on the risk of breast cancer:

- Having an abortion.
- Making diet changes such as eating less fat or more fruits and vegetables.
- Taking vitamins, including fenretinide (a type of vitamin A).
- Cigarette smoking, both active and passive (inhaling secondhand smoke).
- Using underarm deodorant or antiperspirant.
- Taking statins (cholesterol-lowering drugs).
- Taking bisphosphonates (drugs used to treat osteoporosis and hypercalcemia) by mouth or by intravenous infusion.

- Changes in circadian rhythm (physical, mental, and behavioral changes that are mainly affected by darkness and light in 24 hour cycles).

Screening

Mammography is the most common screening test for breast cancer. Women ages 50 to 69 years old who have screening mammograms have a lower chance of dying from breast cancer than women who do not have screening mammograms. Fewer women are dying of breast cancer in the United States, but it is not known whether the lower risk of dying is because the cancer was found early by screening or whether the treatments are better.

The harms of mammography include the following:
- False-positive test results can occur (the screening test results may appear to be abnormal even though no cancer is present). False-positive results can lead to more testing and may cause anxiety.
- False-negative test results can occur (the screening test results may appear to be normal even though breast cancer is present). A woman who has a false-negative test result may delay seeking medical care even if she has symptoms. About one in five cancers are missed by mammography.
- Finding breast cancer may lead to breast cancer treatment and side effects, but it may not improve a woman's health or help her live longer.
- Mammography exposes the breast to low doses of radiation.
- There may be pain or discomfort during a mammogram.

Magnetic resonance imaging (MRI) may be used to screen women who have a high risk of breast cancer. Factors that put women at high risk include the following:
- Certain gene changes, such as changes in the *BRCA1* or *BRCA2* genes.
- A family history (first degree relative, such as a mother, daughter, or sister) with breast cancer.
- Certain genetic syndromes, such as Li-Fraumeni or Cowden syndrome.

An MRI is more likely than mammography to find a breast mass that is not cancer.

Whether a woman should be screened for breast cancer and the screening test to use depends on certain factors. Women with risk factors for breast cancer, such as certain changes in the *BRCA1* or *BRCA2* gene or certain genetic syndromes may be screened at a younger age and more often. Women who have had radiation treatment to the chest, especially at a young age, may start routine breast cancer screening at an earlier age. The benefits and risks of mammograms and MRIs for these women have not been studied.

As of April 2024, the USPSTF recommends biennial screening mammography for women ages 40 to 74 years old. In addition to false-positive results that might lead to unnecessary biopsies, some breast cancers found only by screening mammography may never cause health problems or become life-threatening. Finding these cancers that may never cause health problems is known as overdiagnosis. When these cancers are found, having treatment may cause serious side effects and may not lead to a longer, healthier life.

Breast cancer screening has not been shown to benefit the following women:

- In elderly women who, if diagnosed with breast cancer through screening, will usually die of other causes. Screening mammograms for those aged 66 to 79 years may find cancer in a very small percentage of women, but most of these cancers are low risk.
- In women with an average risk of developing breast cancer, screening mammography before age 40 has not shown any benefit.
- In women who are not expected to live for a long time and have other diseases or conditions, as finding and treating early stage breast cancer may reduce their quality of life without helping them live longer.

Maryland Department of Health Medical Advisory Committee Public Health Intervention for Breast Cancer
Breast cancer screening with mammography is recommended for women ages 40 years and older.

Individuals should discuss the risk factors for breast cancer, ways to prevent breast cancer, and screening tests with their healthcare provider.

Note: For information on the Breast Cancer Prevention and Screening PDQ, please see Appendix C.

Table 29
Number of Cases for Female Breast Cancer by Jurisdiction and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	5,615	3,304	1,758	235	270	16
Allegany	63	s	0	0	<6	0
Anne Arundel	497	383	81	18	12	<6
Baltimore City	474	149	301	9	9	<6
Baltimore	852	527	272	15	33	<6
Calvert	101	90	8	<6	<6	0
Caroline	35	30	<6	<6	0	0
Carroll	175	160	7	<6	<6	0
Cecil	80	71	7	<6	<6	0
Charles	146	66	75	<6	<6	0
Dorchester	33	23	s	0	<6	0
Frederick	261	214	31	8	s	<6
Garrett	27	27	0	0	0	0
Harford	242	198	34	6	<6	0
Howard	297	169	78	13	34	<6
Kent	15	12	<6	0	0	0
Montgomery	1,003	593	171	97	131	<6
Prince George's	795	117	593	47	27	<6
Queen Anne's	61	53	6	0	0	<6
St. Mary's	95	75	s	<6	0	<6
Somerset	15	s	8	<6	0	0
Talbot	59	48	7	<6	0	0
Washington	134	117	11	<6	<6	0
Wicomico	79	57	18	<6	<6	0
Worcester	60	52	8	0	0	0

Total includes cases reported as unknown race/ethnicity and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 30
Female Breast Cancer Age-Adjusted Incidence Rates* by Jurisdiction and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	141.3	148.9	143.7	94.6	100.2	130.9
Allegany	124.3	125.9	0.0	0.0	**	0.0
Anne Arundel	135.2	140.9	133.9	125.7	**	**
Baltimore City	131.2	161.9	118.9	**	**	**
Baltimore	149.1	151.0	166.1	**	109.3	**
Calvert	168.0	189.3	**	**	**	0.0
Caroline	158.3	164.8	**	**	0.0	0.0
Carroll	150.8	149.0	**	**	**	0.0
Cecil	118.1	114.1	**	**	**	0.0
Charles	138.7	149.9	149.5	**	**	0.0
Dorchester	127.2	124.3	**	0.0	**	0.0
Frederick	152.2	156.6	199.6	**	**	**
Garrett	123.2	126.1	0.0	0.0	0.0	0.0
Harford	136.0	135.8	162.4	**	**	0.0
Howard	146.8	141.7	196.0	**	88.4	**
Kent	**	**	**	0.0	0.0	0.0
Montgomery	148.3	173.4	141.1	102.7	114.5	**
Prince George's	131.1	139.6	137.9	75.9	104.8	**
Queen Anne's	167.2	166.4	**	0.0	0.0	**
St. Mary's	152.4	152.1	196.0	**	0.0	**
Somerset	**	**	**	**	0.0	0.0
Talbot	190.3	170.1	**	**	0.0	0.0
Washington	135.0	131.6	**	**	**	0.0
Wicomico	123.1	129.0	114.9	**	**	0.0
Worcester	120.4	120.9	**	0.0	0.0	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 31
Number of Deaths for Female Breast Cancer by Jurisdiction and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	796	443	281	s	39	<6
Allegany	9	s	<6	<6	<6	<6
Anne Arundel	61	45	10	<6	<6	<6
Baltimore City	84	21	59	<6	<6	<6
Baltimore	115	73	32	<6	7	<6
Calvert	12	10	<6	<6	<6	<6
Caroline	<6	<6	<6	<6	<6	<6
Carroll	22	s	<6	<6	<6	<6
Cecil	19	15	<6	<6	<6	<6
Charles	24	s	12	<6	<6	<6
Dorchester	<6	<6	<6	<6	<6	<6
Frederick	22	20	<6	<6	<6	<6
Garrett	8	s	<6	<6	<6	<6
Harford	28	23	<6	<6	<6	<6
Howard	37	22	12	<6	<6	<6
Kent	<6	<6	<6	<6	<6	<6
Montgomery	116	62	25	s	16	<6
Prince George's	138	20	104	7	6	<6
Queen Anne's	8	s	<6	<6	<6	<6
St. Mary's	23	19	<6	<6	<6	<6
Somerset	8	<6	<6	<6	<6	<6
Talbot	<6	<6	<6	<6	<6	<6
Washington	26	22	<6	<6	<6	<6
Wicomico	15	9	<6	<6	<6	<6
Worcester	9	7	<6	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 32
Female Breast Cancer Age-Adjusted Mortality Rates* by Jurisdiction and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	18.9	17.7	23.0	13.1	14.2	**
Allegany	**	**	**	**	**	**
Anne Arundel	15.7	15.0	**	**	**	**
Baltimore City	21.7	21.2	21.3	**	**	**
Baltimore	17.8	15.1	20.8	**	**	**
Calvert	**	**	**	**	**	**
Caroline	**	**	**	**	**	**
Carroll	17.3	18.8	**	**	**	**
Cecil	**	**	**	**	**	**
Charles	23.0	**	**	**	**	**
Dorchester	**	**	**	**	**	**
Frederick	12.1	13.4	**	**	**	**
Garrett	**	**	**	**	**	**
Harford	15.0	15.0	**	**	**	**
Howard	17.9	17.6	**	**	**	**
Kent	**	**	**	**	**	**
Montgomery	15.6	15.4	20.5	**	**	**
Prince George's	23.4	17.8	25.9	**	**	**
Queen Anne's	**	**	**	**	**	**
St. Mary's	36.8	**	**	**	**	**
Somerset	**	**	**	**	**	**
Talbot	**	**	**	**	**	**
Washington	23.7	20.3	**	**	**	**
Wicomico	**	**	**	**	**	**
Worcester	**	**	**	**	**	**

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

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 33
Number of Cases for Female Breast Cancer by Jurisdiction and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	26,061	15,869	7,798	939	1,307	42
Allegany	346	339	<6	<6	<6	0
Anne Arundel	2,429	1,888	378	82	77	<6
Baltimore City	2,274	731	1,459	36	40	6
Baltimore	4,083	2,711	1,139	65	155	8
Calvert	392	331	47	7	9	0
Caroline	128	106	19	<6	<6	0
Carroll	818	772	19	11	14	0
Cecil	405	361	30	10	<6	0
Charles	639	286	327	6	15	<6
Dorchester	143	101	40	0	<6	0
Frederick	1,057	878	106	38	31	<6
Garrett	137	135	0	0	<6	0
Harford	1,213	1,015	137	25	30	<6
Howard	1,370	876	270	40	172	<6
Kent	85	73	s	<6	0	0
Montgomery	4,441	2,638	746	391	610	<6
Prince George's	3,698	639	2,739	185	111	<6
Queen Anne's	232	213	10	<6	<6	<6
St. Mary's	422	335	68	9	7	<6
Somerset	95	61	29	<6	<6	0
Talbot	236	199	29	<6	<6	0
Washington	664	599	46	11	8	0
Wicomico	399	296	89	<6	8	<6
Worcester	311	271	38	<6	0	0

Total includes cases reported as unknown race/ethnicity and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 34
Female Breast Cancer Age-Adjusted Incidence Rates* by Jurisdiction and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	134.7	143.6	132.9	84.1	100.8	69.3
Allegany	144.3	148.0	**	**	**	0.0
Anne Arundel	135.1	139.6	132.0	112.2	93.5	**
Baltimore City	125.4	151.1	118.5	77.9	102.6	**
Baltimore	145.2	147.2	150.0	83.8	105.3	**
Calvert	134.6	144.1	117.2	**	**	0.0
Caroline	112.3	114.1	127.8	**	**	0.0
Carroll	145.3	147.6	107.7	**	**	0.0
Cecil	121.5	120.8	156.7	**	**	0.0
Charles	128.9	126.5	142.8	**	**	**
Dorchester	113.9	108.0	137.0	0.0	**	0.0
Frederick	132.6	136.1	158.7	84.2	74.9	**
Garrett	120.0	122.6	0.0	0.0	**	0.0
Harford	143.4	146.1	133.9	117.5	116.2	**
Howard	139.1	151.4	144.8	89.6	96.9	**
Kent	113.4	118.1	**	**	0.0	0.0
Montgomery	133.1	155.4	129.2	87.7	107.5	**
Prince George's	129.4	145.9	132.4	69.4	83.8	**
Queen Anne's	133.6	141.1	**	**	**	**
St. Mary's	132.1	134.9	150.7	**	**	**
Somerset	127.8	120.7	136.7	**	**	0.0
Talbot	150.7	149.5	170.0	**	**	0.0
Washington	136.2	135.8	143.6	**	**	0.0
Wicomico	126.2	133.3	118.9	**	**	**
Worcester	137.7	141.4	160.1	**	0.0	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 35
Number of Deaths for Female Breast Cancer by Jurisdiction and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	4,157	2,357	1,522	123	148	<6
Allegany	44	s	<6	<6	<6	<6
Anne Arundel	365	274	70	13	s	<6
Baltimore City	443	108	326	<6	6	<6
Baltimore	646	412	202	9	21	<6
Calvert	74	58	14	<6	<6	<6
Caroline	26	22	<6	<6	<6	<6
Carroll	115	111	<6	<6	<6	<6
Cecil	71	61	9	<6	<6	<6
Charles	107	52	51	<6	<6	<6
Dorchester	22	15	s	<6	<6	<6
Frederick	137	114	14	<6	6	<6
Garrett	25	s	<6	<6	<6	<6
Harford	184	153	26	<6	<6	<6
Howard	167	107	47	<6	11	<6
Kent	12	9	<6	<6	<6	<6
Montgomery	621	361	133	68	s	<6
Prince George's	711	121	548	17	24	<6
Queen Anne's	33	s	<6	<6	<6	<6
St. Mary's	81	62	16	<6	<6	<6
Somerset	21	13	s	<6	<6	<6
Talbot	31	23	s	<6	<6	<6
Washington	114	101	11	<6	<6	<6
Wicomico	67	46	17	<6	<6	<6
Worcester	40	32	s	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 36
Female Breast Cancer Age-Adjusted Mortality Rates* by Jurisdiction and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	20.5	19.0	26.3	11.7	11.7	**
Allegany	14.2	15.0	**	**	**	**
Anne Arundel	19.4	18.5	25.3	**	**	**
Baltimore City	23.6	21.0	25.8	**	**	**
Baltimore	20.8	18.2	27.6	**	15.3	**
Calvert	24.7	24.1	**	**	**	**
Caroline	21.2	21.3	**	**	**	**
Carroll	19.0	19.3	**	**	**	**
Cecil	21.6	21.0	**	**	**	**
Charles	22.3	22.3	24.6	**	**	**
Dorchester	15.4	**	**	**	**	**
Frederick	16.7	16.6	**	**	**	**
Garrett	18.8	19.5	**	**	**	**
Harford	20.6	20.5	25.1	**	**	**
Howard	16.8	17.6	25.3	**	**	**
Kent	**	**	**	**	**	**
Montgomery	17.5	18.3	23.6	15.6	10.3	**
Prince George's	25.2	22.4	27.4	**	17.3	**
Queen Anne's	19.0	21.9	**	**	**	**
St. Mary's	26.4	25.9	**	**	**	**
Somerset	22.7	**	**	**	**	**
Talbot	13.2	11.3	**	**	**	**
Washington	21.3	19.8	**	**	**	**
Wicomico	20.1	19.4	**	**	**	**
Worcester	17.0	15.8	**	**	**	**

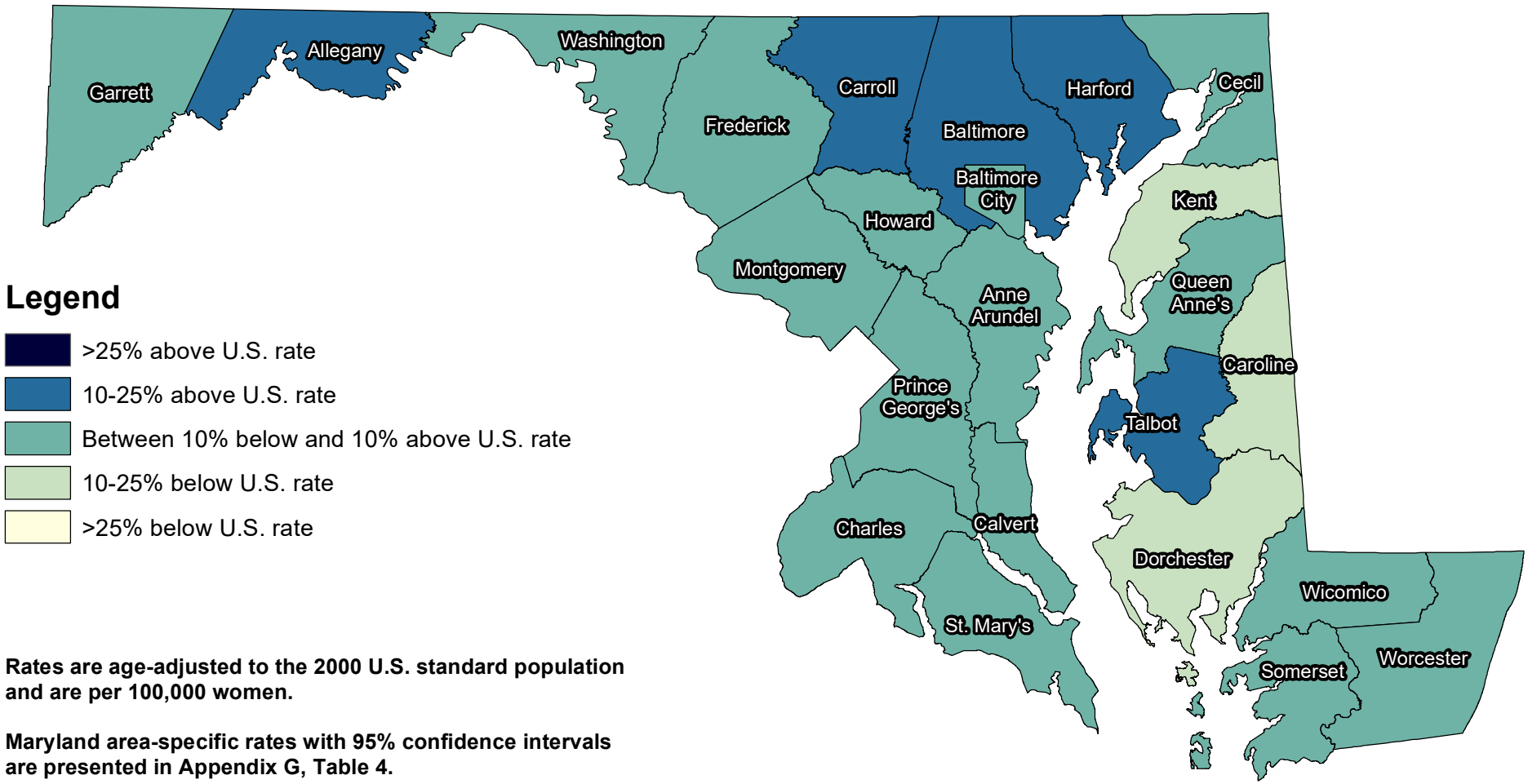
* Rates are per 100,000 women and age-adjusted to 2000 U.S. standard population

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Maryland Female Breast Cancer Incidence Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

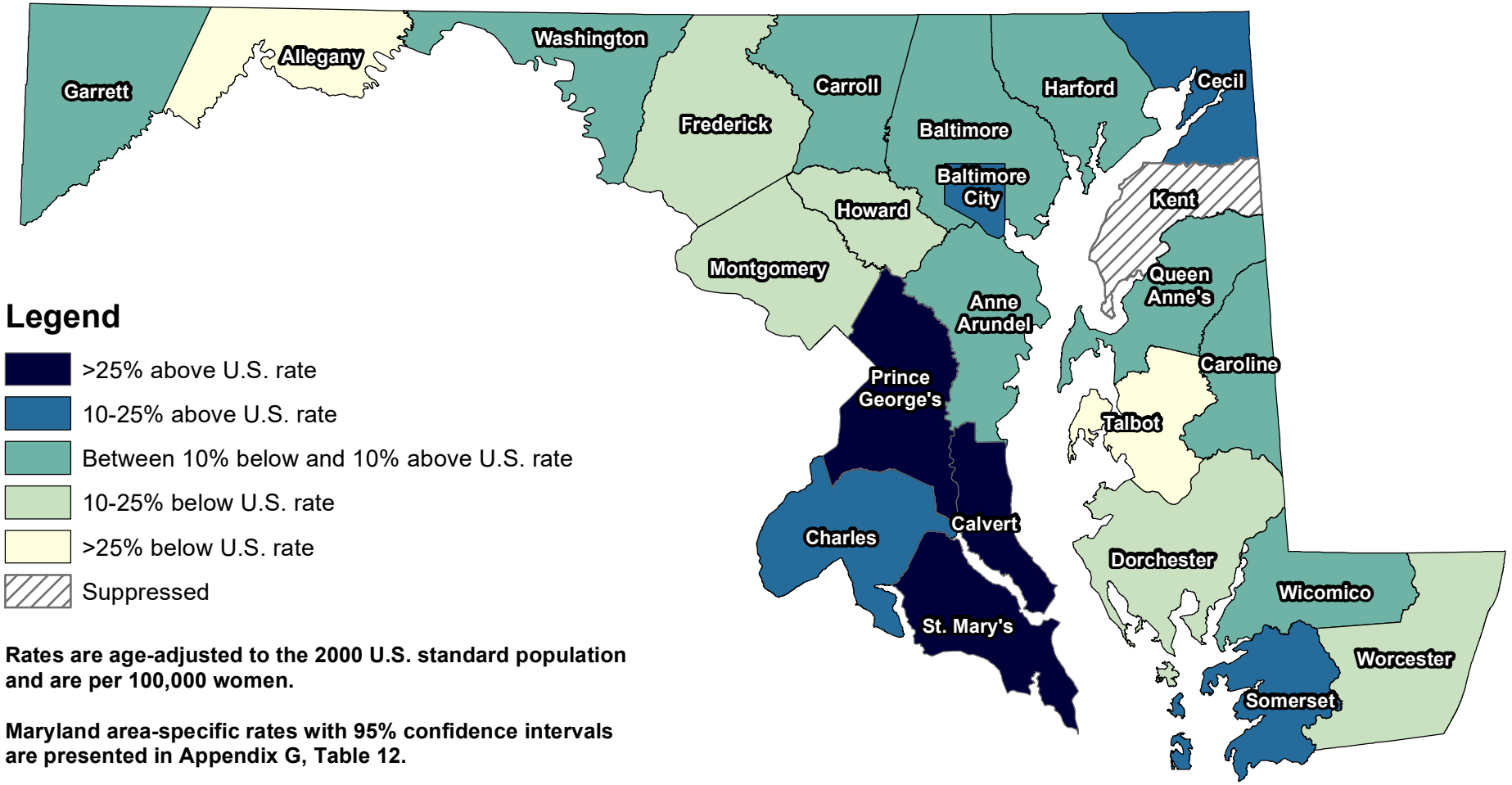
Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 4.

U.S. female breast cancer incidence rate, 2017-2021: 129.6 / 100,000

Maryland female breast cancer incidence rate, 2017-2021: 134.7 / 100,000

Sources: Maryland Cancer Registry
U.S. SEER, SEER*Stat Database

Maryland Female Breast Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 12.

U.S. female breast cancer mortality rate, 2017-2021: 19.6 / 100,000

Maryland female breast cancer mortality rate, 2017-2021: 20.5 / 100,000

Sources: Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

Note: Rates based on case counts of 0-19 are suppressed per MDH/CCPC Data Use Policy and Procedures.

D. Prostate Cancer

Incidence (New Cases)

In 2021, a total of 5,384 cases of prostate cancer were reported among men in Maryland. The age-adjusted prostate cancer incidence rate in Maryland for 2021 was 139.9 per 100,000 men, which is statistically significantly higher than the 2021 U.S. SEER age-adjusted prostate cancer incidence rate of 121.2 per 100,000 men.

In Maryland, Black men had a statistically significantly higher prostate cancer incidence rate (201.9 per 100,000) than all other racial and ethnic groups in 2021. White men had the second highest prostate cancer incidence rate (120.7 per 100,000), statistically significantly higher than Hispanic and Asian/Pacific Islander men. The 2021 prostate cancer incidence rate for American Indian/Alaska Native Marylanders is not reportable. For Maryland and U.S. 2021 incidence rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 1.

Mortality (Deaths)

Prostate cancer is the second leading cause of cancer death among men in Maryland after lung cancer. In 2021, 568 men died of prostate cancer in Maryland, accounting for 5.4% of all cancer deaths and 10.6% of cancer deaths among men in Maryland. Maryland had the 38th highest prostate cancer mortality rate among the states and the District of Columbia in 2021. The 2021 age-adjusted mortality rate for prostate cancer in Maryland was 18.5 per 100,000 men. This rate is statistically similar to the 2021 U.S. prostate cancer mortality rate of 18.8 per 100,000 men.

In Maryland, Black men had a prostate cancer mortality rate more than double the rate for White men, at 36.3 per 100,000 and 14.0 per 100,000 respectively, in 2021; this difference is statistically significant. Prostate cancer mortality rates for Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native men are not reportable. For Maryland and U.S. 2021 mortality rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 2.

Table 37
Prostate Cancer Incidence and Mortality Rates
by Race/Ethnicity, Maryland (MD) and the United States, 2021

Incidence 2021	*Total**	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD New Cases (count)	5,384	2,899	2,004	150	168	9
MD Incidence Rate	139.9	120.7	201.9	78.7	70.6	**
U.S. SEER Rate	121.2	118.2	203.7	87.1	65.5	77.9
Mortality 2021	*Total*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD Deaths (count)	568	285	250	15	s	<6
MD Mortality Rate	18.5	14.0	36.3	**	**	**
U.S. Mortality Rate	18.8	18.1	35.4	15.2	8.5	14.6

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

All race rates and counts, except Hispanic, are non-Hispanic/Latino

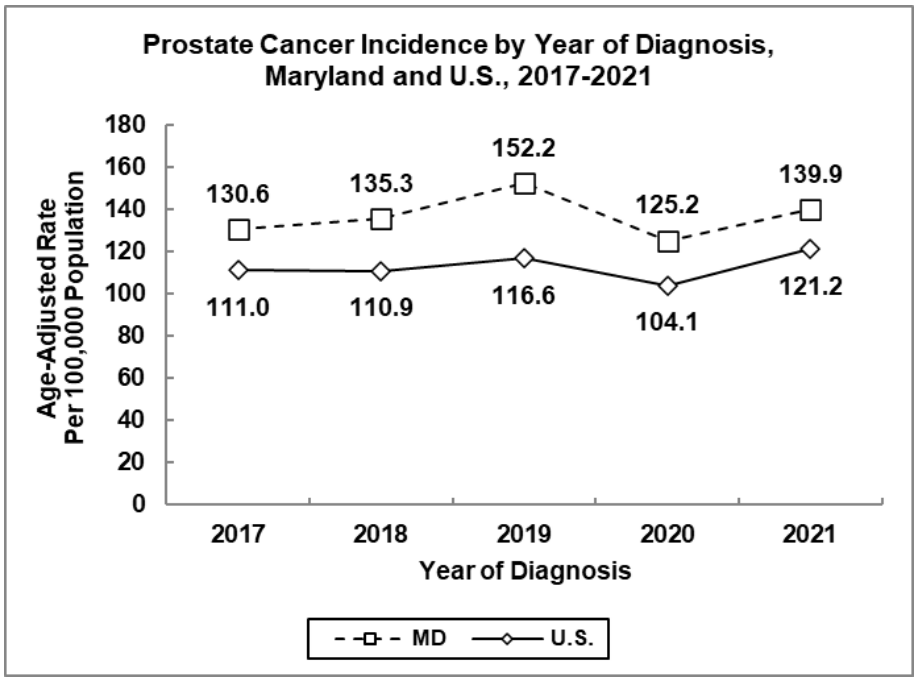
* Total includes unknown race/ethnicity and unknown jurisdiction

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

** MD incidence rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures; MD mortality rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat
Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

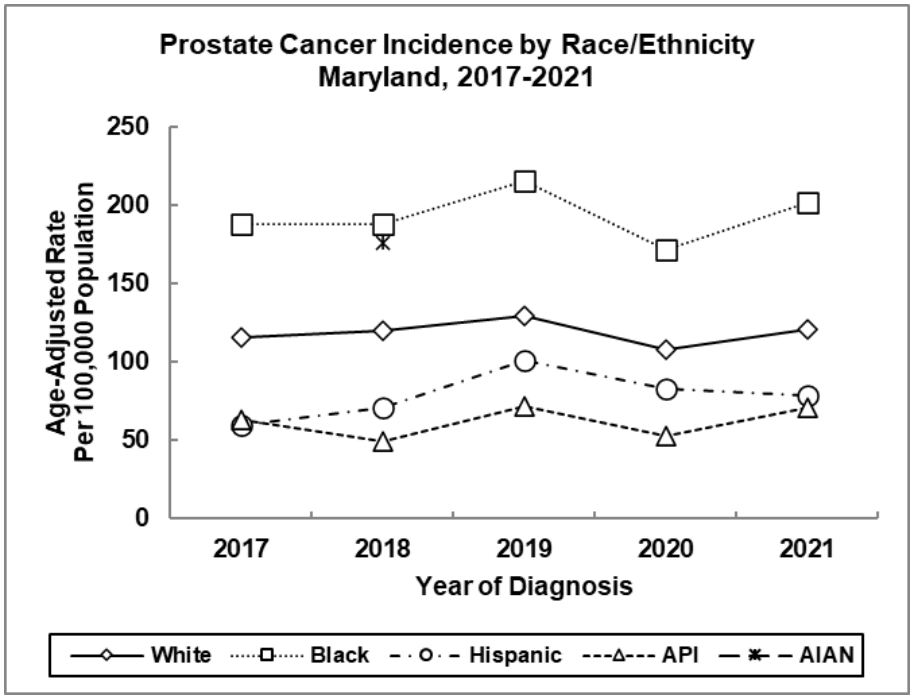


Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat

Maryland vs. U.S., Incidence Rates

The prostate cancer incidence rate increased in Maryland at a rate of 0.6% per year and in the U.S. at a rate of 1.1% per year from 2017 to 2021. From 2017 to 2021, Maryland had consistently higher prostate cancer incidence rates than the U.S.

See Appendix H, Table 1.

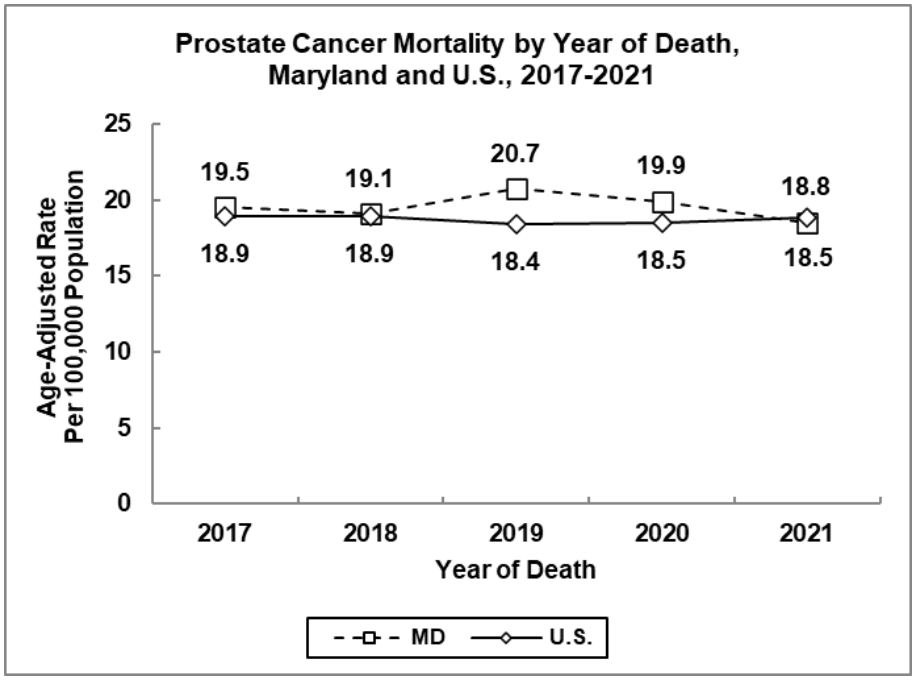


Source: Maryland Cancer Registry

Incidence Trends by Race/Ethnicity

From 2017 to 2021, Black men consistently had higher prostate cancer incidence rates than other racial groups. During this 5-year period, incidence rates decreased only among White men, by 0.2% per year. The incidence rates increased 0.5% per year among Black men, 7.4% per year among Hispanic men, and 3.0% per year among Asian/Pacific Islander men. The prostate cancer incidence rates among American Indian/Alaska Native men in Maryland were suppressed in 2017 and from 2019 to 2021.

See Appendix H, Table 3.

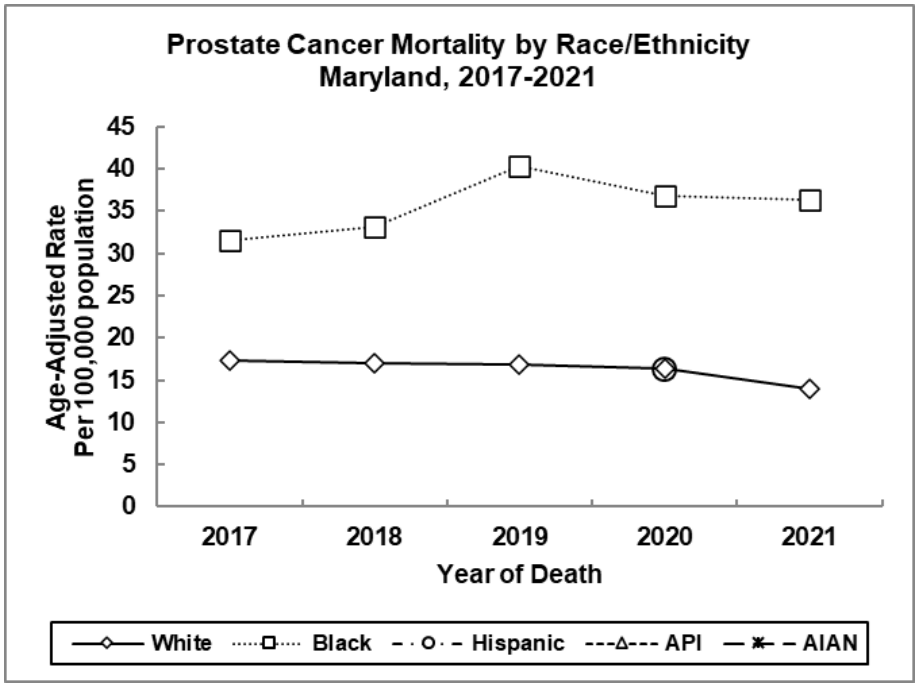


Source: Maryland Department of Health Vital Statistics Administration, 2021 (MD)
NCHS Underlying Cause of Death in CDC WONDER, 2017-2020
SEER Mortality All Cause of Death Data (U.S.)

Maryland vs. U.S., Mortality Rates

From 2017 to 2021, the prostate cancer mortality rates decreased in Maryland at a rate of 0.6% per year and in the U.S. at a rate of 0.3% per year.

See Appendix H, Table 2.

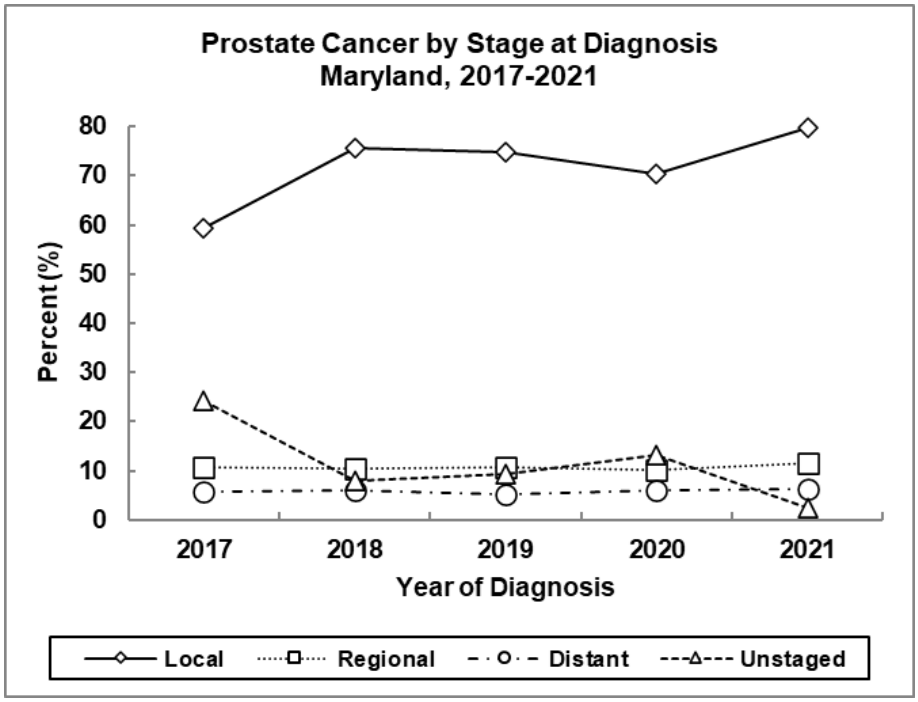


Source: Maryland Department of Health Vital Statistics Administration

Mortality Trends by Race/Ethnicity

From 2017 to 2021, Black men consistently had higher prostate cancer mortality rates than White men. During this 5-year period, mortality rates decreased 4.5% per year among White men, while they increased 3.9% per year among Black men. The prostate cancer mortality rates among Asian/Pacific Islander men and American Indian/Alaska Native men were suppressed from 2017 to 2021, and among Hispanic men from 2017 to 2019 and in 2021.

See Appendix H, Table 5.

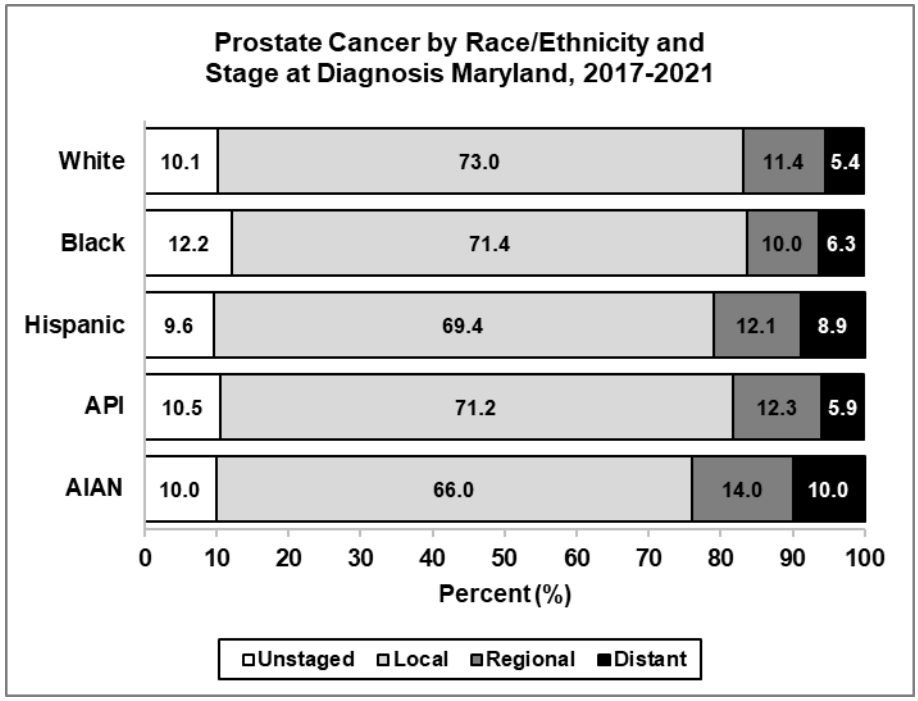


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis

Of prostate cancers diagnosed in Maryland in 2021, most (79.9%) were detected at the local stage, 11.5% were found at the regional stage, and 6.2% were diagnosed at the distant stage. In 2021, 2.4% of prostate cancers were reported as unstaged. Unstaged prostate cancer diagnoses decreased 33.8% per year from 2017 to 2021.

See Appendix I, Table 5.

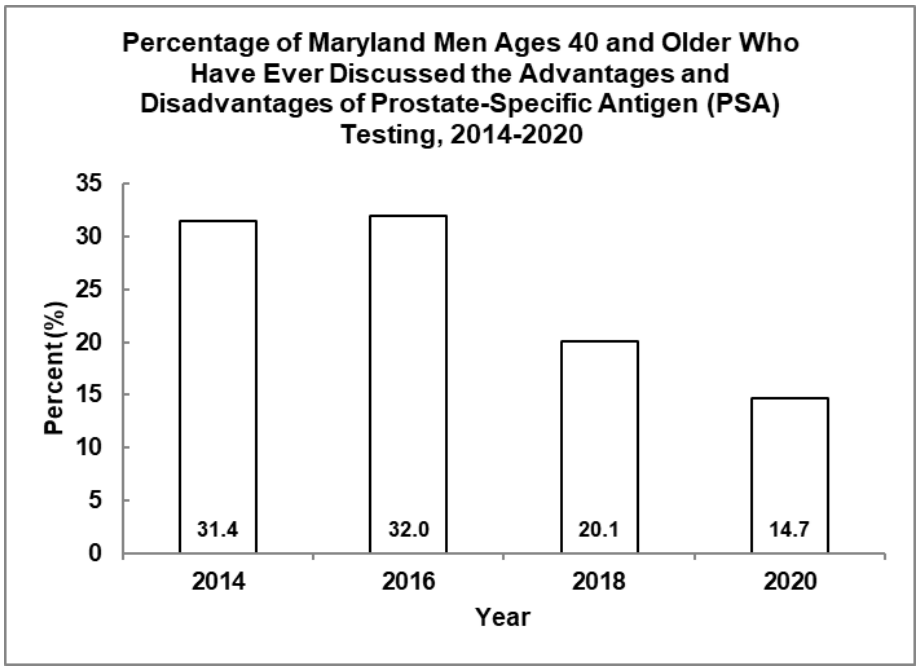


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis by Race/Ethnicity

From 2017 to 2021 most prostate cancers were diagnosed at the local stage for all racial groups. American Indian/Alaska Native and Hispanic men in Maryland had the largest proportion of prostate cancers diagnosed at the regional and distant stage.

See Appendix L, Table 5.



Source: Maryland Behavioral Risk Factor Surveillance System, 2014, 2016, 2018, 2020

Prostate-Specific Antigen Test

In 2020, only 14.7% of Maryland men ages 40 years and older reported that they had discussed both the advantages and the disadvantages of a PSA test with a healthcare provider.

Public Health Evidence for Prostate Cancer Prevention and Screening (adapted from the National Cancer Institute Physician Data Query [PDQ] and the United States Preventive Services Task Force [USPSTF])

Prevention

Avoiding risk factors may help prevent cancer. The following risk factors may increase the risk of prostate cancer:

- Age, as the chance of developing prostate cancer increases as men get older.
- Family history of prostate cancer.
- Race, as prostate cancer occurs more often in African American men than in White men.
- Hormones (dihydrotestosterone).
- Vitamin E taken alone.
- Dietary supplements of folic acid, the manufactured form of folate, also known as vitamin B9.
- A diet high in dairy foods and calcium.

Increasing protective factors may help prevent cancer. The following protective factors may decrease the risk of prostate cancer:

- A diet with enough folate, the natural form of vitamin B9 found in a wide variety of foods, [especially fruits, vegetables, beans, and eggs]
- Taking male sex hormone-lowering drugs finasteride or dutasteride has been shown to reduce the risk for prostate cancer, but it is not known if these drugs reduce the risk of death from prostate cancer.

The following have been proven not to affect the risk of prostate cancer, or their effects on prostate cancer risk are unknown:

- Selenium, a mineral found naturally in some foods, and vitamin E.
- Diet.
- Multivitamins.
- Lycopene, a plant nutrient that gives tomatoes, watermelon, and some other fruits their red or pink color.

Screening

There is no standard or routine screening test for prostate cancer. Digital rectal exams and prostate-specific antigen (PSA) tests are currently being used or studied to screen for prostate cancer. Studies are being done to find ways to make PSA testing more accurate for early prostate cancer detection.

The USPSTF is in the process of updating its guidance for prostate cancer screening but currently recommends that, for men ages 55 to 69 years old, the decision to undergo periodic PSA–based screening for prostate cancer should be an individual one. Before deciding whether to be screened, men should have an opportunity to discuss the potential benefits and harms of screening with their clinician and to incorporate their values and preferences in the decision. Screening offers a small potential benefit of reducing the chance of death from prostate cancer in some men. However, many men will experience potential harms of screening, including false-positive results that require additional testing and possible prostate biopsy; overdiagnosis and overtreatment; and treatment complications, such as incontinence and erectile dysfunction. In determining whether

this service is appropriate in individual cases, patients and clinicians should consider the balance of benefits and harms on the basis of family history, race/ethnicity, comorbid medical conditions, patient values about the benefits and harms of screening and treatment-specific outcomes, and other health needs. Clinicians should not screen men who do not express a preference for screening. The USPSTF recommends against PSA-based screening for prostate cancer in men ages 70 years and older.

Maryland Department of Health Public Health Intervention for Prostate Cancer
The decision to be screened for prostate cancer should be an individual one involving shared decision-making. If a patient raises the issue of PSA screening, or the clinician believes his individual circumstances warrant consideration of PSA screening, the clinician should discuss thoroughly with the patient the benefits and harms so he can make an informed decision. The decision to start or continue PSA screening should reflect the patient's understanding of the possible benefits and expected harms and should respect his preferences.

Individuals should discuss the risk factors for prostate cancer, ways to prevent prostate cancer, and screening tests with their healthcare provider.

Note: For information on the Prostate Cancer Prevention and Screening PDQ, please see Appendix C.

Table 38
Number of Cases for Prostate Cancer by Jurisdiction and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	5,384	2,899	2,004	150	168	9
Allegany	75	57	<6	0	0	0
Anne Arundel	484	347	112	10	11	<6
Baltimore City	462	118	319	<6	<6	0
Baltimore	826	460	297	16	17	<6
Calvert	111	82	s	<6	0	0
Caroline	21	17	<6	0	0	0
Carroll	192	177	11	<6	0	0
Cecil	66	54	10	0	<6	0
Charles	135	45	86	<6	0	0
Dorchester	35	20	14	0	0	0
Frederick	253	199	37	11	6	0
Garrett	33	31	0	0	0	0
Harford	222	176	36	<6	6	0
Howard	284	158	85	7	28	0
Kent	36	32	<6	0	0	0
Montgomery	890	501	231	62	72	<6
Prince George's	805	103	613	32	16	<6
Queen Anne's	47	37	s	0	<6	0
St. Mary's	70	52	s	0	<6	0
Somerset	17	13	<6	0	0	0
Talbot	29	25	<6	0	0	0
Washington	92	76	13	0	<6	0
Wicomico	89	44	42	<6	<6	0
Worcester	59	48	9	0	<6	0

Total includes cases reported as unknown race/ethnicity and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 39
Prostate Cancer Age-Adjusted Incidence Rates* by Jurisdiction and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	139.9	120.7	201.9	78.7	70.6	**
Allegany	152.3	121.8	**	0.0	0.0	0.0
Anne Arundel	131.1	118.5	222.5	**	**	**
Baltimore City	147.6	119.2	162.1	**	**	0.0
Baltimore	152.8	123.7	247.6	110.6	59.0	**
Calvert	172.9	154.9	336.7	**	0.0	0.0
Caroline	94.2	87.9	**	0.0	0.0	0.0
Carroll	156.7	153.8	**	**	0.0	0.0
Cecil	87.6	79.9	**	0.0	**	0.0
Charles	137.0	90.9	202.7	**	0.0	0.0
Dorchester	131.4	100.5	**	0.0	0.0	0.0
Frederick	146.9	141.4	252.9	**	**	0.0
Garrett	138.3	131.2	0.0	0.0	0.0	0.0
Harford	123.4	114.3	193.3	**	**	0.0
Howard	139.9	120.3	270.8	**	83.9	0.0
Kent	196.3	203.7	**	0.0	0.0	0.0
Montgomery	135.6	131.6	243.2	89.1	68.2	**
Prince George's	152.7	108.1	176.8	57.3	63.8	**
Queen Anne's	114.5	96.9	**	0.0	**	0.0
St. Mary's	100.9	90.3	205.1	0.0	**	0.0
Somerset	97.8	**	**	0.0	0.0	0.0
Talbot	91.1	93.5	**	0.0	0.0	0.0
Washington	83.7	78.2	**	0.0	**	0.0
Wicomico	134.1	92.1	288.9	**	**	0.0
Worcester	113.7	106.3	**	0.0	**	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 40
Number of Deaths for Prostate Cancer by Jurisdiction and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	568	285	250	15	s	<6
Allegany	<6	<6	<6	<6	<6	<6
Anne Arundel	46	31	14	<6	<6	<6
Baltimore City	73	10	62	<6	<6	<6
Baltimore	90	55	32	<6	<6	<6
Calvert	8	7	<6	<6	<6	<6
Caroline	<6	<6	<6	<6	<6	<6
Carroll	17	16	<6	<6	<6	<6
Cecil	7	6	<6	<6	<6	<6
Charles	13	<6	9	<6	<6	<6
Dorchester	<6	<6	<6	<6	<6	<6
Frederick	21	14	<6	<6	<6	<6
Garrett	6	s	<6	<6	<6	<6
Harford	17	15	<6	<6	<6	<6
Howard	24	17	<6	<6	<6	<6
Kent	<6	<6	<6	<6	<6	<6
Montgomery	66	36	19	<6	<6	<6
Prince George's	101	8	84	<6	<6	<6
Queen Anne's	<6	<6	<6	<6	<6	<6
St. Mary's	14	11	<6	<6	<6	<6
Somerset	<6	<6	<6	<6	<6	<6
Talbot	7	<6	<6	<6	<6	<6
Washington	18	17	<6	<6	<6	<6
Wicomico	7	<6	<6	<6	<6	<6
Worcester	10	9	<6	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 41
Prostate Cancer Age-Adjusted Mortality Rates* by Jurisdiction and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	18.5	14.0	36.3	**	**	**
Allegany	**	**	**	**	**	**
Anne Arundel	16.6	13.5	**	**	**	**
Baltimore City	29.5	**	41.0	**	**	**
Baltimore	19.2	15.4	42.1	**	**	**
Calvert	**	**	**	**	**	**
Caroline	**	**	**	**	**	**
Carroll	**	**	**	**	**	**
Cecil	**	**	**	**	**	**
Charles	**	**	**	**	**	**
Dorchester	**	**	**	**	**	**
Frederick	16.7	**	**	**	**	**
Garrett	**	**	**	**	**	**
Harford	**	**	**	**	**	**
Howard	15.4	**	**	**	**	**
Kent	**	**	**	**	**	**
Montgomery	12.2	10.6	**	**	**	**
Prince George's	26.2	**	34.0	**	**	**
Queen Anne's	**	**	**	**	**	**
St. Mary's	**	**	**	**	**	**
Somerset	**	**	**	**	**	**
Talbot	**	**	**	**	**	**
Washington	**	**	**	**	**	**
Wicomico	**	**	**	**	**	**
Worcester	**	**	**	**	**	**

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

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 42
Number of Cases for Prostate Cancer by Jurisdiction and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	25,045	14,001	9,218	637	674	50
Allegany	314	277	28	<6	<6	0
Anne Arundel	2,088	1,544	440	38	46	6
Baltimore City	2,194	518	1,573	30	17	<6
Baltimore	3,562	2,209	1,144	47	73	6
Calvert	425	317	102	<6	<6	<6
Caroline	133	111	22	0	0	0
Carroll	824	757	45	7	6	0
Cecil	376	332	39	<6	<6	0
Charles	638	264	350	10	<6	<6
Dorchester	169	99	65	<6	<6	0
Frederick	897	729	126	25	14	0
Garrett	126	122	0	<6	0	0
Harford	1,007	789	168	6	22	<6
Howard	1,335	846	349	29	90	<6
Kent	124	104	s	<6	0	0
Montgomery	3,859	2,271	924	291	291	10
Prince George's	3,778	501	2,965	115	62	10
Queen Anne's	259	216	39	<6	<6	0
St. Mary's	381	281	90	<6	7	<6
Somerset	96	56	s	<6	<6	0
Talbot	227	203	23	0	0	0
Washington	515	446	63	<6	<6	<6
Wicomico	423	245	161	<6	9	<6
Worcester	300	253	44	<6	<6	0

Total includes cases reported as unknown race/ethnicity and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 43
Prostate Cancer Age-Adjusted Incidence Rates* by Jurisdiction and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	136.7	118.8	193.0	79.5	61.8	89.0
Allegany	123.4	116.2	355.8	**	**	0.0
Anne Arundel	119.4	108.7	185.0	75.3	79.3	**
Baltimore City	140.8	102.9	161.1	85.4	65.0	**
Baltimore	137.5	117.5	198.9	83.8	54.8	**
Calvert	138.0	124.1	256.6	**	**	**
Caroline	116.5	116.4	152.4	0.0	0.0	0.0
Carroll	140.2	134.9	260.8	**	**	0.0
Cecil	106.4	102.8	200.0	**	**	0.0
Charles	138.5	106.4	184.1	**	**	**
Dorchester	133.8	102.7	234.1	**	**	0.0
Frederick	113.7	107.1	224.9	89.1	**	0.0
Garrett	108.0	105.9	0.0	**	0.0	0.0
Harford	119.9	109.4	189.9	**	94.7	**
Howard	139.2	129.9	250.5	117.3	61.5	**
Kent	134.5	131.3	179.3	**	0.0	0.0
Montgomery	123.6	122.1	208.4	91.4	59.1	**
Prince George's	152.9	101.6	172.8	59.0	51.4	**
Queen Anne's	132.8	123.2	338.1	**	**	0.0
St. Mary's	115.8	105.4	201.4	**	**	**
Somerset	112.1	92.9	174.4	**	**	0.0
Talbot	135.6	140.2	136.9	0.0	0.0	0.0
Washington	100.3	95.1	166.0	**	**	**
Wicomico	137.7	107.8	245.8	**	**	**
Worcester	122.9	116.2	198.7	**	**	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 44
Number of Deaths for Prostate Cancer by Jurisdiction and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	2,930	1,617	1,175	62	65	8
Allegany	39	37	<6	<6	<6	<6
Anne Arundel	268	206	55	<6	<6	<6
Baltimore City	372	59	308	<6	<6	<6
Baltimore	464	314	140	<6	7	<6
Calvert	42	34	s	<6	<6	<6
Caroline	17	14	<6	<6	<6	<6
Carroll	72	66	<6	<6	<6	<6
Cecil	43	39	<6	<6	<6	<6
Charles	76	36	37	<6	<6	<6
Dorchester	24	17	s	<6	<6	<6
Frederick	100	75	19	<6	<6	<6
Garrett	19	s	<6	<6	<6	<6
Harford	108	84	21	<6	<6	<6
Howard	107	70	27	<6	<6	<6
Kent	17	13	<6	<6	<6	<6
Montgomery	371	212	103	s	30	<6
Prince George's	478	74	372	16	12	<6
Queen Anne's	18	16	<6	<6	<6	<6
St. Mary's	53	42	8	<6	<6	<6
Somerset	17	s	9	<6	<6	<6
Talbot	42	34	s	<6	<6	<6
Washington	78	71	s	<6	<6	<6
Wicomico	63	41	21	<6	<6	<6
Worcester	42	36	x	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 45
Prostate Cancer Age-Adjusted Mortality Rates* by Jurisdiction and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	19.7	16.3	35.8	11.8	7.5	**
Allegany	17.2	17.4	**	**	**	**
Anne Arundel	19.9	18.7	37.4	**	**	**
Baltimore City	29.6	14.6	40.9	**	**	**
Baltimore	20.3	17.5	39.0	**	**	**
Calvert	18.9	18.6	**	**	**	**
Caroline	**	**	**	**	**	**
Carroll	16.2	16.0	**	**	**	**
Cecil	16.1	16.4	**	**	**	**
Charles	24.2	18.8	38.4	**	**	**
Dorchester	21.1	**	**	**	**	**
Frederick	17.2	14.9	**	**	**	**
Garrett	**	**	**	**	**	**
Harford	16.5	14.9	42.0	**	**	**
Howard	14.9	14.7	27.2	**	**	**
Kent	**	**	**	**	**	**
Montgomery	13.5	12.4	32.3	11.9	7.2	**
Prince George's	26.8	16.5	32.3	**	**	**
Queen Anne's	**	**	**	**	**	**
St. Mary's	21.0	20.7	**	**	**	**
Somerset	**	**	**	**	**	**
Talbot	21.8	20.0	**	**	**	**
Washington	17.6	17.4	**	**	**	**
Wicomico	25.2	22.2	44.2	**	**	**
Worcester	17.5	16.9	**	**	**	**

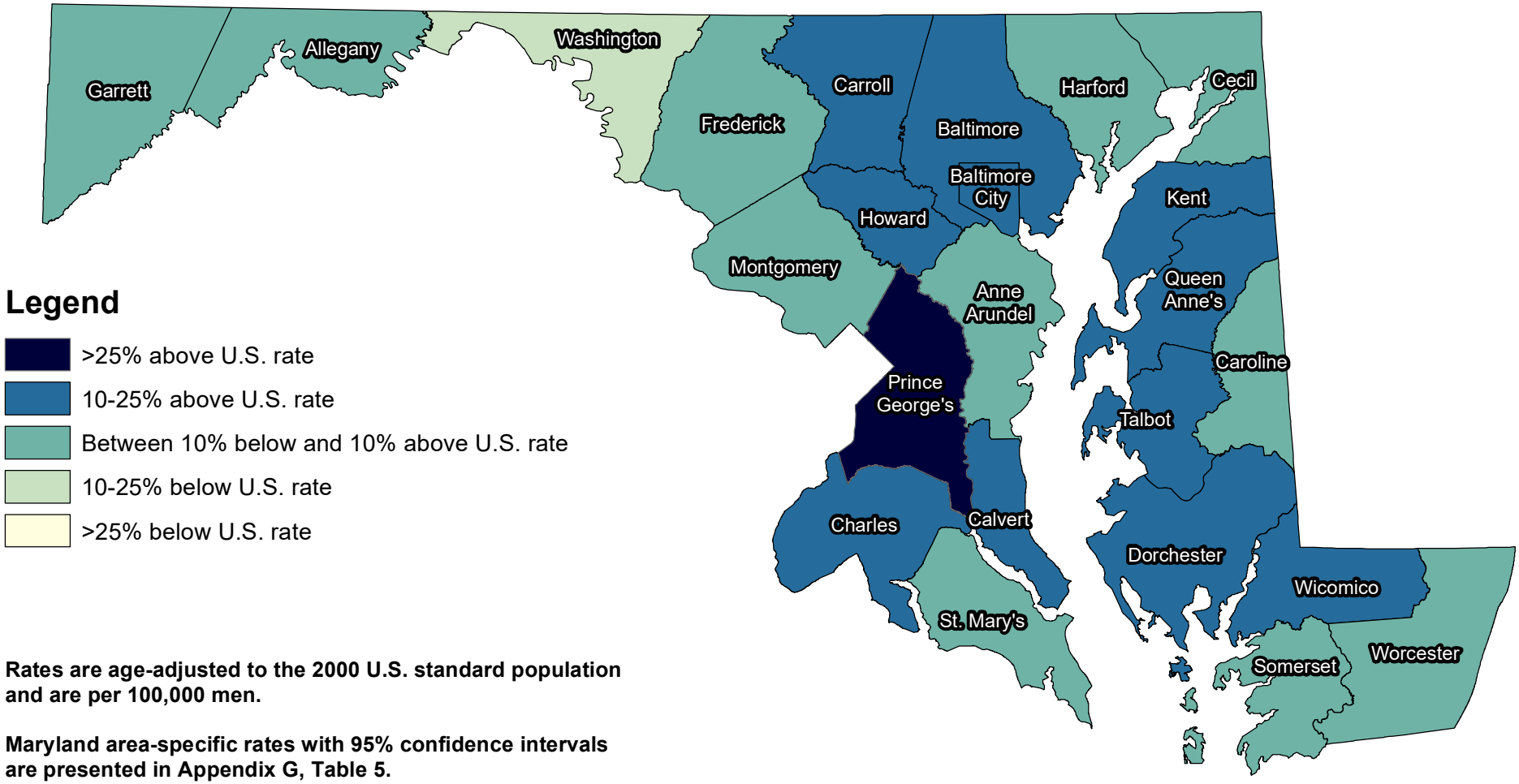
* Rates are per 100,000 men and age-adjusted to 2000 U.S. standard population

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Maryland Prostate Cancer Incidence Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

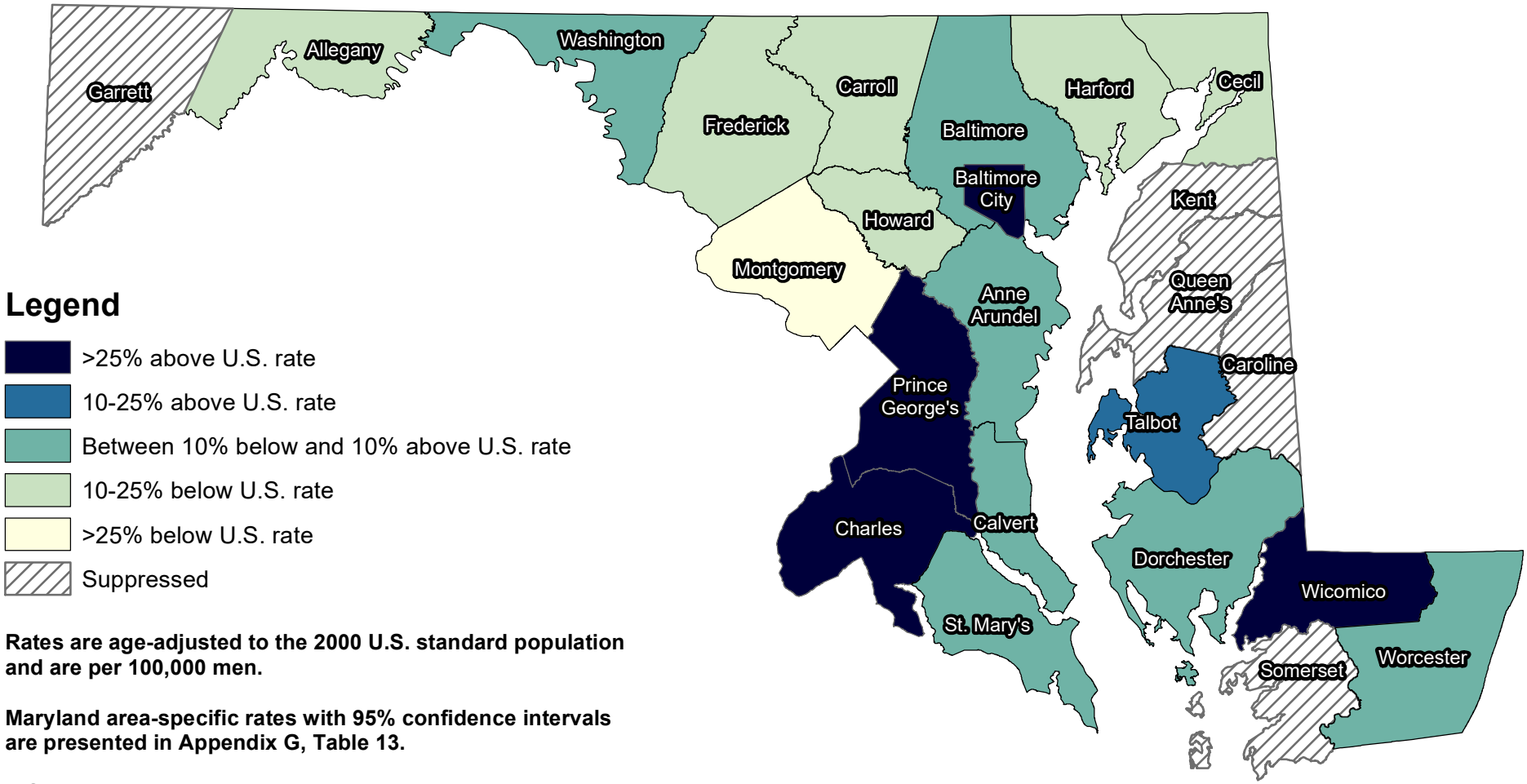
Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 5.

U.S. prostate cancer incidence rate, 2017-2021: 115.4 / 100,000

Maryland prostate cancer incidence rate, 2017-2021: 136.7 / 100,000

Sources: Maryland Cancer Registry
U.S. SEER, SEER*Stat Database

Maryland Prostate Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



Legend

- >25% above U.S. rate
- 10-25% above U.S. rate
- Between 10% below and 10% above U.S. rate
- 10-25% below U.S. rate
- >25% below U.S. rate
- Suppressed

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

Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 13.

U.S. prostate cancer mortality rate, 2017-2021: 19.7 / 100,000

Maryland prostate cancer mortality rate, 2017-2021: 19.2 / 100,000

Sources: Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

Note: Rates based on case counts of 0-19 are suppressed per MDH/CCPC Data Use Policy and Procedures.

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E. Oral Cancer

Incidence (New Cases)

In 2021, a total of 889 cases of cancer of the oral cavity and pharynx (collectively called oral cancer) were reported in Maryland. The age-adjusted incidence rate for oral cancer in Maryland in 2021 was 11.3 per 100,000 population, which is statistically similar to the 2021 U.S. SEER age-adjusted oral cancer incidence rate of 11.5 per 100,000 population.

In Maryland, no new cases of oral cancer were reported among American Indian/Alaska Native individuals in 2021. White Marylanders had the highest oral cancer incidence rate at 14.1 per 100,000; this is statistically significantly higher than all other racial/ethnic groups. There are no statistically significant differences in the oral cancer incidence rates for Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native individuals in Maryland in 2021. For Maryland and U.S. 2021 incidence rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 1.

Mortality (Deaths)

In 2021, 186 persons in Maryland died of oral cancer. The 2021 age-adjusted mortality rate for oral cancer in Maryland was 2.4 per 100,000 population, accounting for 1.8% of Maryland cancer deaths in 2021. This rate is statistically similar to the 2021 U.S. oral cancer mortality rate of 2.7 per 100,000 population. Maryland had the 39th highest oral cancer mortality rate among the states and the District of Columbia in 2021.

In Maryland, White and Black individuals had statistically similar oral cancer mortality rates in 2021, at 2.7 per 100,000 and 2.0 per 100,000 respectively. Oral cancer mortality rates in 2021 for Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native Marylanders are not reportable. For Maryland and U.S. 2021 mortality rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 2.

Table 46
Oral Cancer Incidence and Mortality Rates
by Gender and Race/Ethnicity, Maryland (MD) and the United States, 2021

Incidence 2021	*Total**	*Male*	*Female*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD New Cases (count)	889	654	235	651	163	25	44	0
MD Incidence Rate	11.3	18.0	5.7	14.1	7.3	5.7	8.6	0.0
U.S. SEER Rate	11.5	17.0	6.7	13.6	8.4	6.4	8.7	12.2
Mortality 2021	*Total*	*Male*	*Female*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD Deaths (count)	186	139	47	129	43	<6	11	<6
MD Mortality Rate	2.4	4.1	1.1	2.7	2.0	**	**	**
U.S. Mortality Rate	2.7	4.2	1.4	2.9	2.5	1.6	2.1	1.8

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

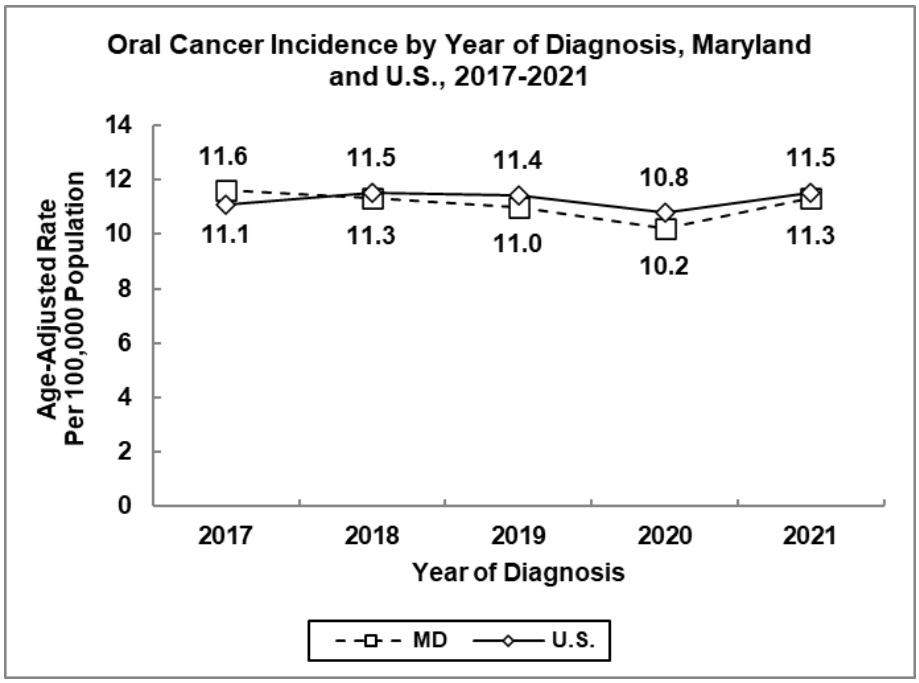
All race rates and counts, except Hispanic, are non-Hispanic/Latino

* Total also includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

** MD mortality rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat
Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

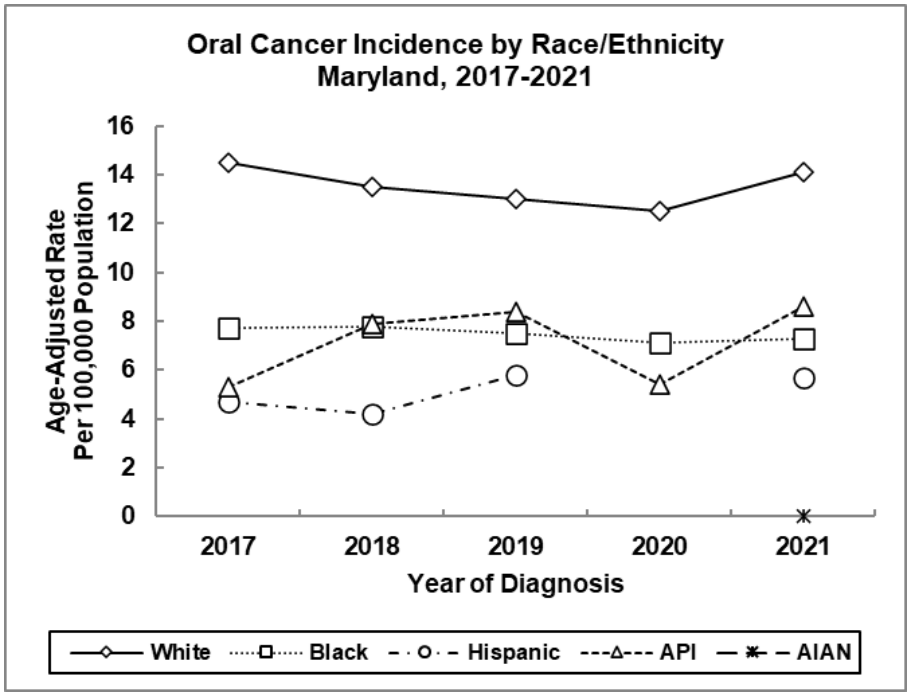


Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat

Maryland vs. U.S., Incidence Rates

From 2017 to 2021, the incidence of oral cancer in Maryland decreased at a rate of 1.5% per year while in the U.S. it increased 0.1% per year.

See Appendix H, Table 1.

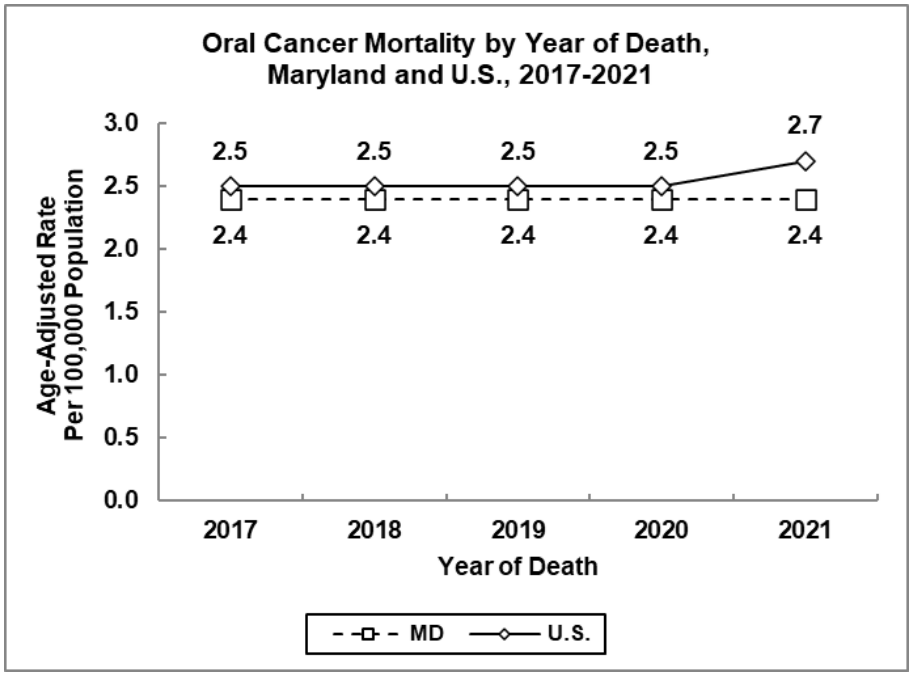


Source: Maryland Cancer Registry

Incidence Trends by Race/Ethnicity

Over the 5-year period from 2017 to 2021, White individuals had consistently higher oral cancer incidence rates than all other racial groups in Maryland. From 2017 to 2021, oral cancer incidence rates in Maryland decreased at a rate of 1.3% per year for White individuals and 2.0% per year for Black individuals, while they increased 6.1% per year for Asian/Pacific Islander individuals. Oral cancer incidence rates were suppressed for American Indian/ Alaska Native Marylanders from 2017 to 2020, and for Hispanic Marylanders in 2020.

See Appendix H, Table 3.

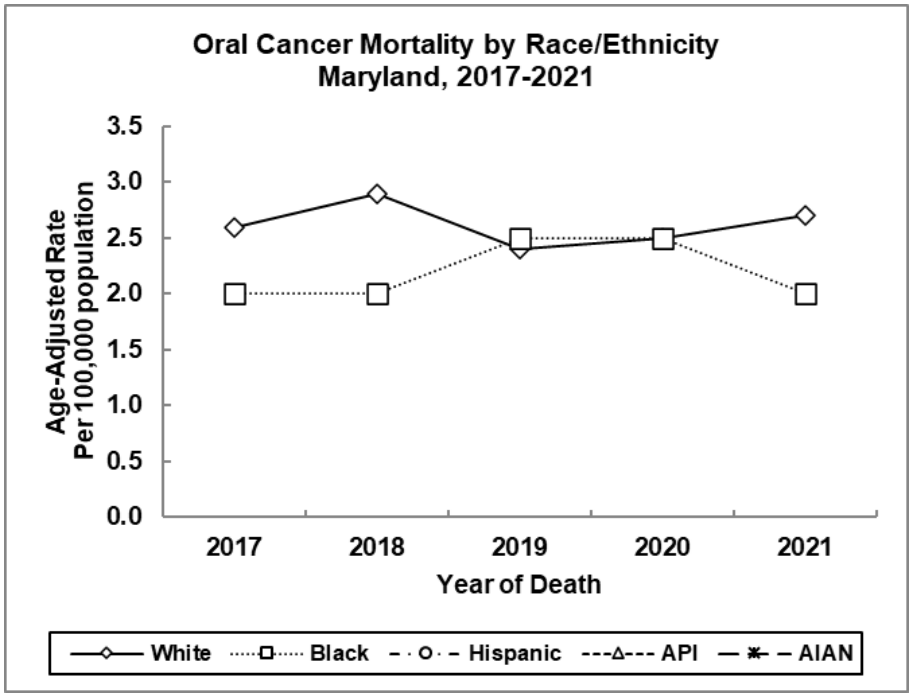


Source: Maryland Department of Health Vital Statistics Administration, 2021 (MD)
NCHS Underlying Cause of Death in CDC WONDER, 2017-2020
SEER Mortality All Cause of Death Data (U.S.)

Maryland vs. U.S., Mortality Rates

Over the 5-year period from 2017 to 2021, oral cancer mortality rates in the U.S. were slightly higher than in Maryland. From 2017 to 2021, oral cancer mortality rates in Maryland remained stagnant, while they increased 1.6% per year in the U.S.

See Appendix H, Table 2.

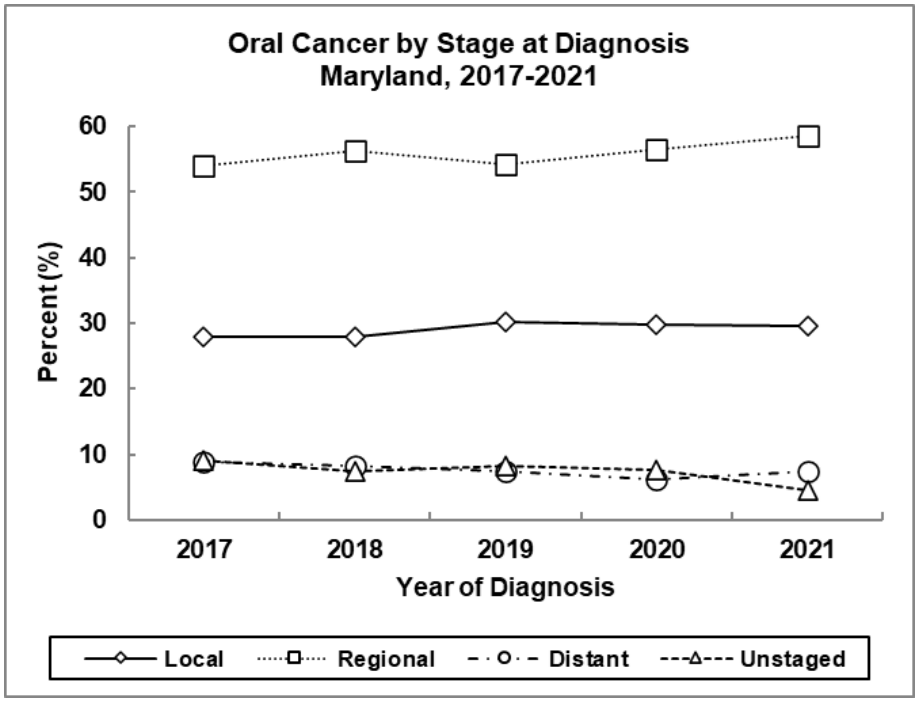


Source: Maryland Department of Health Vital Statistics Administration

Mortality Trends by Race/Ethnicity

From 2017 to 2021, oral cancer mortality rates decreased at a rate of 0.7% per year for White Marylanders and increased 2.3% per year for Black Marylanders. The morality rates for Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native Marylanders were suppressed from 2017 to 2021.

See Appendix H, Table 5.

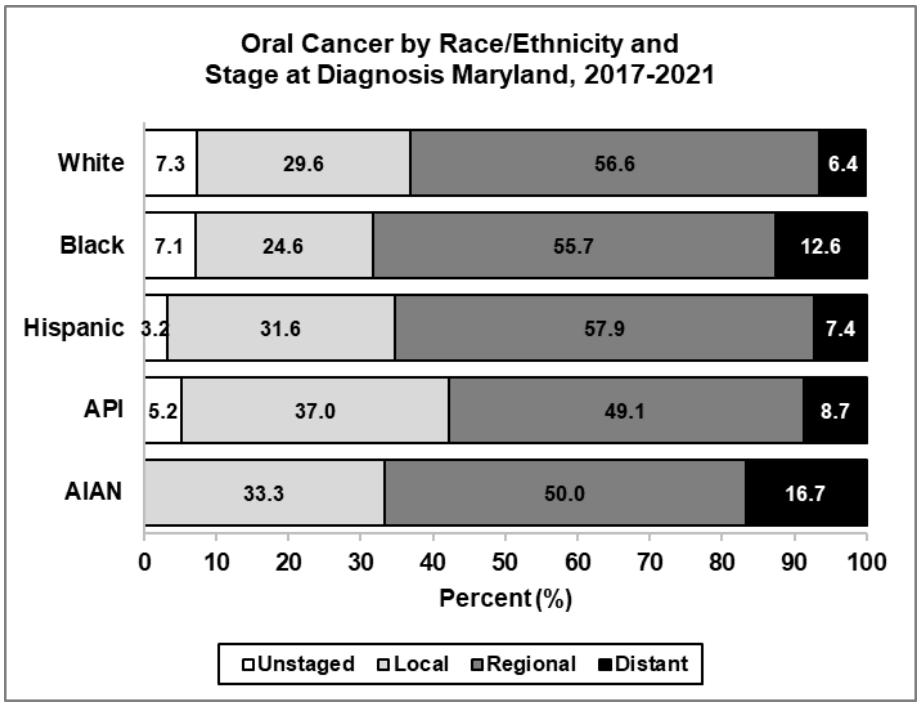


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis

In 2021, 29.5% of oral cancers in Maryland were diagnosed at the local stage, 58.5% were diagnosed at the regional stage, and 7.5% were diagnosed at the distant stage. In 2021, 4.5% of oral cancers were reported as unstaged. From 2017 to 2021, the proportion of oral cancers reported as unstaged decreased at a rate of 13.0% per year.

See Appendix I, Table 6.

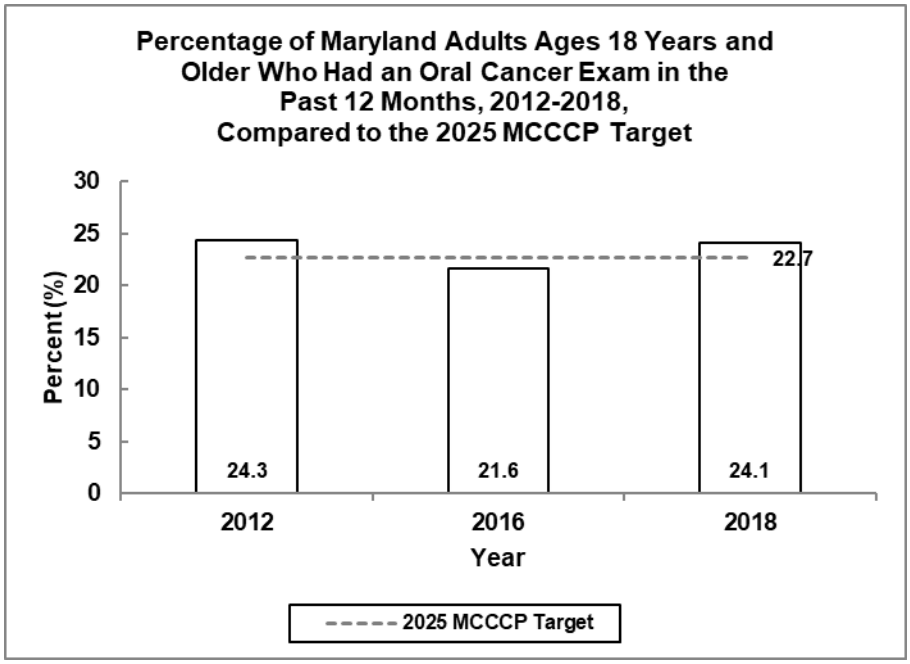


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis by Race/Ethnicity

From 2017 to 2021, most oral cancers in Maryland were diagnosed at the regional stage for all racial groups. American Indian/Alaska Native Marylanders had the highest proportion of cases diagnosed at the distant stage (16.7%), while Black Marylanders had the lowest proportion of cases diagnosed at the local stage (24.6%).

See Appendix L, Table 6.



Source: Maryland Behavioral Risk Factor Surveillance System, 2012, 2016, 2018
Maryland Comprehensive Cancer Control Plan, 2021-2025

Oral Cancer Screening

Although there is no current Healthy People 2030 target for oral cancer screening, the 2025 MCCCP target was to increase the proportion of adults ages 18 years and older who report having an oral cancer screening examination in the past 12 months to 22.7%. In 2018, 24.1% of Maryland adults reported that they had an oral cancer exam in the past year, surpassing the 2025 MCCCP target.

Public Health Evidence for Oral Cancer (adapted from the National Cancer Institute Physician Data Query [PDQ] and the United States Preventive Services Task Force [USPSTF])

Prevention

Avoiding risk factors may help prevent cancer. The following are risk factors for oral cancer (cancer of the oral cavity, which includes the mouth; lips; the roof of the mouth; tongue and the bottom of the mouth under the tongue; gums; and teeth and the oropharynx, which is the part of the throat at the back of the mouth):

- Tobacco use.
- Alcohol use.
- Tobacco *and* alcohol use (the risk is higher in people who use both tobacco and alcohol than it is in people who use only tobacco or only alcohol).
- Betel nut or betel quid chewing.
- Personal history of head and neck cancer.
- Being infected with certain types of human papillomavirus (HPV), especially HPV-16.

Increasing protective factors may help prevent cancer. The following is a protective factor for oral cancer:

- Quitting smoking.

It is not clear whether avoiding these risk factors will decrease the risk of oral cancer:

- Some studies show that when people stop drinking alcohol, their risk of oral cavity cancer decreases within about 20 years.
- Getting an HPV vaccination greatly lessens the risk of oral HPV infection, but it is not yet known whether getting an HPV vaccination at any age will decrease the risk of oropharyngeal cancer from HPV infection.

Screening

The USPSTF concluded that the current evidence is insufficient to assess the balance of benefits and harms of screening for oral cancer in asymptomatic adults by primary care providers. However, dental care providers and otolaryngologists may conduct a comprehensive examination of the oral cavity and pharynx during the clinical encounter.

There are no standard or routine screening tests for oral cancer, and no studies have shown that screening for oral cancer would lower the risk of dying from this disease. A dentist or medical doctor may check the oral cavity during a routine check-up. The exam will include looking for areas of concern, including leukoplakia (an abnormal white patch of cells) and erythroplakia (an abnormal red patch of cells). Leukoplakia and erythroplakia lesions on the mucous membranes may become cancerous.

If areas of concern are seen in the mouth, the following procedures may be used to find abnormal tissue that might become oral cavity cancer:

- Toluidine blue stain: A procedure in which lesions in the mouth are coated with a blue dye. Areas that stain darker are more likely to be cancer or become cancer.

- Fluorescence staining: A procedure in which lesions in the mouth are viewed using a special light. After the patient uses a fluorescent mouth rinse, normal tissue looks different from abnormal tissue when seen under the light.
- Exfoliative cytology: A procedure to collect cells from the oral cavity. A piece of cotton, a brush, or a small wooden stick is used to gently scrape cells from the lips, tongue, or mouth. The cells are viewed under a microscope to find out if they are abnormal.
- Brush biopsy: The removal of cells using a brush that is designed to collect cells from all layers of a lesion. The cells are viewed under a microscope to find out if they are abnormal.

More than half of oral cancers have already spread to lymph nodes or other areas by the time they are found.

Maryland Department of Health Office of Oral Health Public Health Interventions for Oral Cancer
• Have an oral exam once a year and ask the dental provider for an oral cancer exam during the visit. • Avoid tobacco products. • Limit alcohol consumption. • Use lip balm that has an SPF of at least 15. • Eat a variety of fruits and vegetables. • Be aware of sexual behaviors leading to HPV exposure and talk to a medical or dental provider about how the HPV vaccine might prevent oropharyngeal cancer.

Individuals should discuss the risk factors for oral cancer, ways to prevent oral cancer, and screening tests with their healthcare provider.

Note: For information on the Oral Cancer Prevention and Screening PDQ, please see Appendix C.

Table 47
Number of Cases for Oral Cancer by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	889	654	235	651	163	25	44	0
Allegany	14	8	6	s	<6	0	0	0
Anne Arundel	90	70	20	78	7	<6	<6	0
Baltimore City	74	49	25	s	42	<6	<6	0
Baltimore	144	99	45	108	25	<6	9	0
Calvert	18	14	<6	s	<6	0	0	0
Caroline	<6	<6	<6	<6	0	0	0	0
Carroll	26	17	9	s	<6	0	<6	0
Cecil	24	20	<6	s	<6	0	<6	0
Charles	14	11	<6	10	<6	0	0	0
Dorchester	8	8	0	s	<6	0	0	0
Frederick	42	32	10	36	<6	<6	<6	0
Garrett	9	7	<6	9	0	0	0	0
Harford	56	45	11	48	<6	<6	<6	0
Howard	37	28	9	27	<6	0	<6	0
Kent	6	<6	<6	6	0	0	0	0
Montgomery	114	79	35	76	14	9	14	0
Prince George's	95	72	23	33	47	8	7	0
Queen Anne's	8	<6	<6	8	0	0	0	0
St. Mary's	14	12	<6	s	<6	0	0	0
Somerset	11	9	<6	s	<6	0	0	0
Talbot	10	<6	<6	10	0	0	0	0
Washington	37	31	6	35	<6	0	0	0
Wicomico	22	17	<6	17	<6	<6	<6	0
Worcester	9	6	<6	s	<6	0	0	0

Total includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 48
Oral Cancer Age-Adjusted Incidence Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	11.3	18.0	5.7	14.1	7.3	5.7	8.6	0.0
Allegany	**	**	**	**	**	0.0	0.0	0.0
Anne Arundel	12.2	20.1	5.3	13.3	**	**	**	0.0
Baltimore City	11.2	17.2	6.3	14.8	9.9	**	**	0.0
Baltimore	13.1	19.7	7.8	14.9	9.3	**	**	0.0
Calvert	14.3	**	**	16.5	**	0.0	0.0	0.0
Caroline	**	**	**	**	0.0	0.0	0.0	0.0
Carroll	9.9	13.6	**	9.8	**	0.0	**	0.0
Cecil	15.7	27.7	**	16.0	**	0.0	**	0.0
Charles	**	**	**	**	**	0.0	0.0	0.0
Dorchester	**	**	0.0	**	**	0.0	0.0	0.0
Frederick	12.0	18.6	**	12.8	**	**	**	0.0
Garrett	**	**	**	**	0.0	0.0	0.0	0.0
Harford	16.0	26.2	**	16.8	**	**	**	0.0
Howard	9.1	14.6	**	10.5	**	0.0	**	0.0
Kent	**	**	**	**	0.0	0.0	0.0	0.0
Montgomery	8.5	12.9	4.8	10.7	**	**	**	0.0
Prince George's	8.4	15.1	3.6	18.9	5.8	**	**	0.0
Queen Anne's	**	**	**	**	0.0	0.0	0.0	0.0
St. Mary's	**	**	**	**	**	0.0	0.0	0.0
Somerset	**	**	**	**	**	0.0	0.0	0.0
Talbot	**	**	**	**	0.0	0.0	0.0	0.0
Washington	17.4	30.5	**	18.5	**	0.0	0.0	0.0
Wicomico	18.7	32.8	**	20.1	**	**	**	0.0
Worcester	**	**	**	**	**	0.0	0.0	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 49
Number of Deaths for Oral Cancer by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	186	139	47	129	43	<6	11	<6
Allegany	<6	<6	<6	<6	<6	<6	<6	<6
Anne Arundel	23	17	6	16	<6	<6	<6	<6
Baltimore City	24	17	7	7	16	<6	<6	<6
Baltimore	31	22	9	23	6	<6	<6	<6
Calvert	<6	<6	<6	<6	<6	<6	<6	<6
Caroline	<6	<6	<6	<6	<6	<6	<6	<6
Carroll	6	s	<6	s	<6	<6	<6	<6
Cecil	<6	<6	<6	<6	<6	<6	<6	<6
Charles	<6	<6	<6	<6	<6	<6	<6	<6
Dorchester	<6	<6	<6	<6	<6	<6	<6	<6
Frederick	<6	<6	<6	<6	<6	<6	<6	<6
Garrett	<6	<6	<6	<6	<6	<6	<6	<6
Harford	14	s	<6	13	<6	<6	<6	<6
Howard	<6	<6	<6	<6	<6	<6	<6	<6
Kent	<6	<6	<6	<6	<6	<6	<6	<6
Montgomery	25	19	6	15	<6	<6	<6	<6
Prince George's	16	s	<6	<6	10	<6	<6	<6
Queen Anne's	<6	<6	<6	<6	<6	<6	<6	<6
St. Mary's	<6	<6	<6	<6	<6	<6	<6	<6
Somerset	<6	<6	<6	<6	<6	<6	<6	<6
Talbot	<6	<6	<6	<6	<6	<6	<6	<6
Washington	7	<6	<6	6	<6	<6	<6	<6
Wicomico	<6	<6	<6	<6	<6	<6	<6	<6
Worcester	<6	<6	<6	<6	<6	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 50
Oral Cancer Age-Adjusted Mortality Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	2.4	4.1	1.1	2.7	2.0	**	**	**
Allegany	**	**	**	**	**	**	**	**
Anne Arundel	3.3	**	**	**	**	**	**	**
Baltimore City	3.9	**	**	**	**	**	**	**
Baltimore	2.6	4.2	**	2.6	**	**	**	**
Calvert	**	**	**	**	**	**	**	**
Caroline	**	**	**	**	**	**	**	**
Carroll	**	**	**	**	**	**	**	**
Cecil	**	**	**	**	**	**	**	**
Charles	**	**	**	**	**	**	**	**
Dorchester	**	**	**	**	**	**	**	**
Frederick	**	**	**	**	**	**	**	**
Garrett	**	**	**	**	**	**	**	**
Harford	**	**	**	**	**	**	**	**
Howard	**	**	**	**	**	**	**	**
Kent	**	**	**	**	**	**	**	**
Montgomery	1.8	**	**	**	**	**	**	**
Prince George's	**	**	**	**	**	**	**	**
Queen Anne's	**	**	**	**	**	**	**	**
St. Mary's	**	**	**	**	**	**	**	**
Somerset	**	**	**	**	**	**	**	**
Talbot	**	**	**	**	**	**	**	**
Washington	**	**	**	**	**	**	**	**
Wicomico	**	**	**	**	**	**	**	**
Worcester	**	**	**	**	**	**	**	**

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

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 51
Number of Cases for Oral Cancer by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	4,212	2,981	1,230	3,125	785	95	173	6
Allegany	82	51	31	78	<6	0	0	0
Anne Arundel	450	336	114	392	36	8	12	<6
Baltimore City	366	248	118	142	215	<6	<6	0
Baltimore	646	446	200	510	97	8	24	<6
Calvert	83	63	20	77	<6	0	<6	0
Caroline	28	23	<6	23	<6	0	0	0
Carroll	153	106	47	145	<6	0	<6	0
Cecil	93	70	23	90	<6	0	<6	0
Charles	110	84	26	72	33	0	<6	0
Dorchester	34	26	8	29	<6	0	0	0
Frederick	207	153	54	184	9	<6	8	0
Garrett	26	17	9	26	0	0	0	0
Harford	206	147	59	185	13	<6	<6	0
Howard	170	117	53	128	16	<6	24	0
Kent	25	18	7	22	<6	0	0	0
Montgomery	552	352	199	369	67	48	62	<6
Prince George's	418	296	122	142	235	19	18	<6
Queen Anne's	49	40	9	49	0	0	0	0
St. Mary's	85	61	24	73	s	<6	0	0
Somerset	27	19	8	23	<6	0	0	0
Talbot	48	36	12	46	<6	0	0	0
Washington	172	132	40	160	s	0	<6	<6
Wicomico	110	85	25	98	8	<6	<6	0
Worcester	61	46	15	56	<6	0	<6	0

Total includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 52
Oral Cancer Age-Adjusted Incidence Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	11.1	16.9	6.1	13.5	7.5	4.8	7.1	**
Allegany	16.5	21.2	11.9	16.4	**	0.0	0.0	0.0
Anne Arundel	12.5	19.7	6.1	13.9	7.2	**	**	**
Baltimore City	10.8	16.7	6.3	14.0	9.9	**	**	0.0
Baltimore	11.9	18.0	6.9	13.7	7.7	**	8.1	**
Calvert	13.0	20.4	6.2	14.6	**	0.0	**	0.0
Caroline	12.5	21.5	**	12.9	**	0.0	0.0	0.0
Carroll	12.7	18.1	7.4	12.7	**	0.0	**	0.0
Cecil	13.2	20.3	6.6	14.1	**	0.0	**	0.0
Charles	11.6	19.4	5.5	14.7	8.1	0.0	**	0.0
Dorchester	12.8	19.9	**	15.5	**	0.0	0.0	0.0
Frederick	12.8	20.0	6.3	13.5	**	**	**	0.0
Garrett	12.4	14.6	**	12.8	0.0	0.0	0.0	0.0
Harford	12.2	18.6	6.6	12.9	**	**	**	0.0
Howard	8.6	12.7	5.1	10.4	4.9	**	7.2	0.0
Kent	15.4	23.0	**	16.9	**	0.0	0.0	0.0
Montgomery	8.5	11.8	5.6	10.3	6.5	6.0	5.9	**
Prince George's	8.0	13.2	4.3	15.3	6.5	4.1	7.6	**
Queen Anne's	12.8	20.7	**	14.5	0.0	0.0	0.0	0.0
St. Mary's	12.6	18.1	7.3	13.9	**	**	0.0	0.0
Somerset	16.1	25.4	**	20.0	**	0.0	0.0	0.0
Talbot	12.9	20.2	**	14.3	**	0.0	0.0	0.0
Washington	17.1	27.0	8.2	17.8	**	0.0	**	**
Wicomico	18.2	30.5	8.1	22.9	**	**	**	0.0
Worcester	13.2	20.7	**	14.1	**	0.0	**	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 53
Number of Deaths for Oral Cancer by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	917	671	246	625	226	16	46	<6
Allegany	17	s	<6	s	<6	<6	<6	<6
Anne Arundel	90	65	25	71	14	<6	<6	<6
Baltimore City	123	88	35	42	80	<6	<6	<6
Baltimore	142	104	38	111	26	<6	<6	<6
Calvert	15	s	<6	s	<6	<6	<6	<6
Caroline	7	<6	<6	<6	<6	<6	<6	<6
Carroll	29	21	8	27	<6	<6	<6	<6
Cecil	14	s	<6	s	<6	<6	<6	<6
Charles	28	s	<6	17	s	<6	<6	<6
Dorchester	12	s	<6	s	<6	<6	<6	<6
Frederick	31	22	9	29	<6	<6	<6	<6
Garrett	6	<6	<6	s	<6	<6	<6	<6
Harford	41	31	10	38	<6	<6	<6	<6
Howard	33	22	11	21	<6	<6	7	<6
Kent	<6	<6	<6	<6	<6	<6	<6	<6
Montgomery	111	76	35	70	13	s	20	<6
Prince George's	102	79	23	27	64	<6	7	<6
Queen Anne's	8	<6	<6	s	<6	<6	<6	<6
St. Mary's	18	s	<6	13	<6	<6	<6	<6
Somerset	<6	<6	<6	<6	<6	<6	<6	<6
Talbot	8	s	<6	s	<6	<6	<6	<6
Washington	35	27	8	32	<6	<6	<6	<6
Wicomico	22	s	<6	19	<6	<6	<6	<6
Worcester	19	s	<6	18	<6	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 54
Oral Cancer Age-Adjusted Mortality Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	2.4	4.0	1.2	2.6	2.2	**	2.0	**
Allegany	**	**	**	**	**	**	**	**
Anne Arundel	2.6	4.1	1.3	2.6	**	**	**	**
Baltimore City	3.6	6.0	1.8	4.1	3.7	**	**	**
Baltimore	2.5	4.2	1.2	2.7	2.0	**	**	**
Calvert	**	**	**	**	**	**	**	**
Caroline	**	**	**	**	**	**	**	**
Carroll	2.6	4.1	**	2.5	**	**	**	**
Cecil	**	**	**	**	**	**	**	**
Charles	3.2	5.7	**	**	**	**	**	**
Dorchester	**	**	**	**	**	**	**	**
Frederick	1.9	2.9	**	2.1	**	**	**	**
Garrett	**	**	**	**	**	**	**	**
Harford	2.5	4.5	**	2.7	**	**	**	**
Howard	1.8	2.6	**	1.7	**	**	**	**
Kent	**	**	**	**	**	**	**	**
Montgomery	1.7	2.7	0.9	1.8	**	**	2.0	**
Prince George's	2.1	3.8	0.8	2.4	1.9	**	**	**
Queen Anne's	**	**	**	**	**	**	**	**
St. Mary's	**	**	**	**	**	**	**	**
Somerset	**	**	**	**	**	**	**	**
Talbot	**	**	**	**	**	**	**	**
Washington	3.3	5.5	**	3.2	**	**	**	**
Wicomico	3.4	**	**	**	**	**	**	**
Worcester	**	**	**	**	**	**	**	**

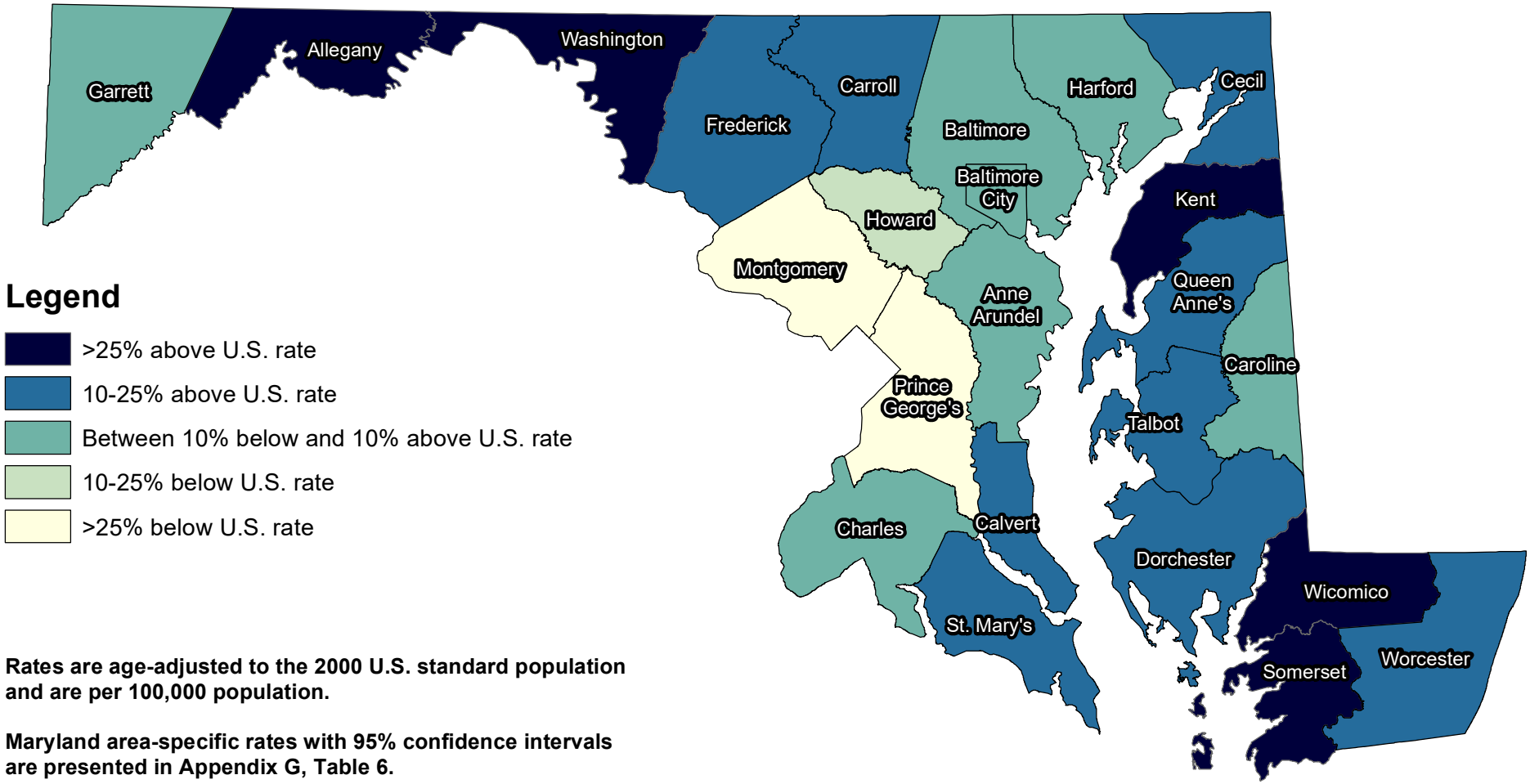
* Rates are per 100,000 population and age-adjusted to 2000 U.S. standard population

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Maryland Oral Cancer Incidence Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

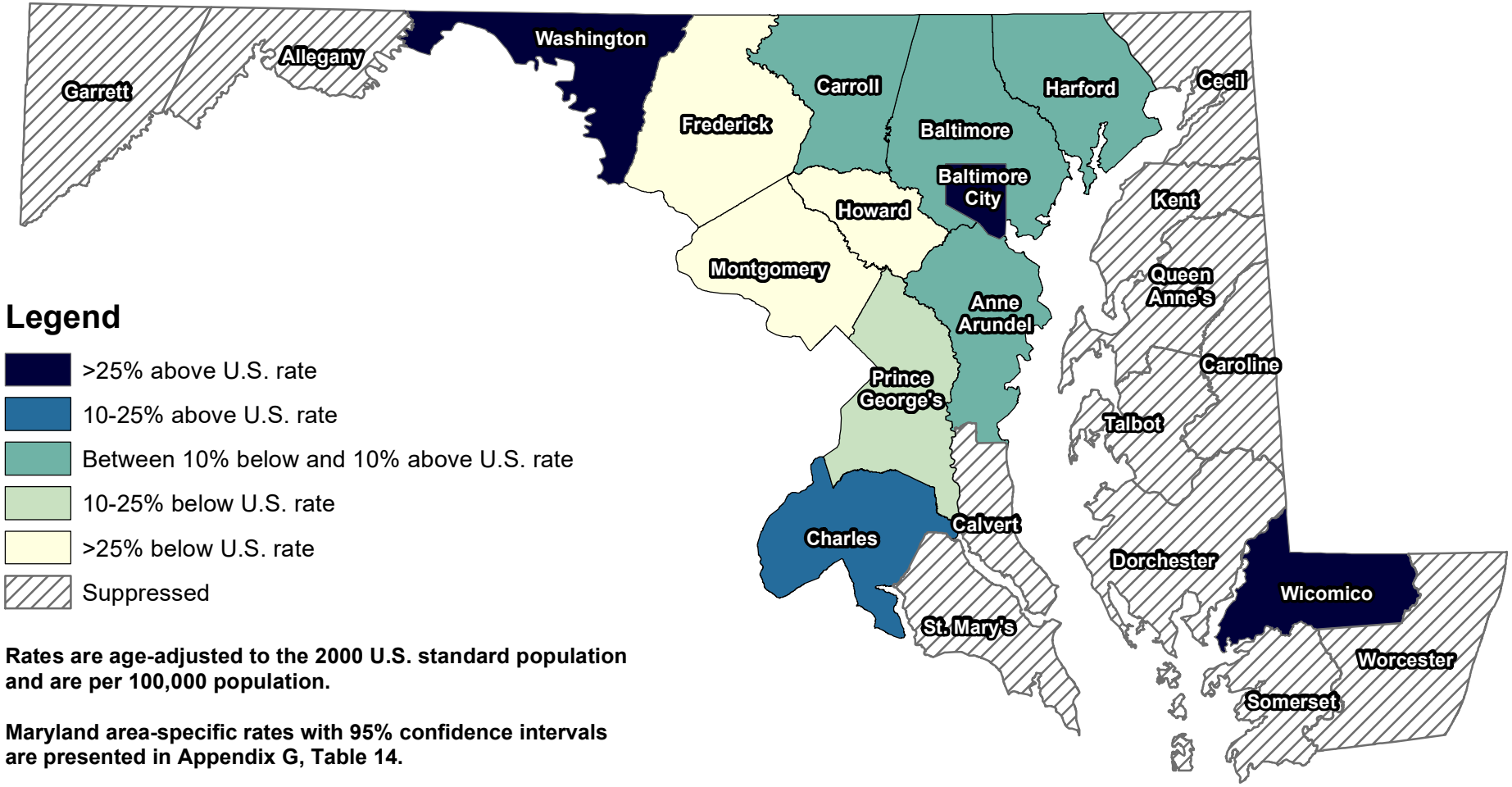
Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 6.

U.S. oral cancer incidence rate, 2017-2021: 11.4 / 100,000

Maryland oral cancer incidence rate, 2017-2021: 11.1 / 100,000

Sources: Maryland Cancer Registry
U.S. SEER, SEER*Stat Database

Maryland Oral Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 14.

U.S. oral cancer mortality rate, 2017-2021: 2.6 / 100,000

Maryland oral cancer mortality rate, 2017-2021: 2.4 / 100,000

Sources: Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

Note: Rates based on case counts of 0-19 are suppressed per MDH/CCPC Data Use Policy and Procedures.

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F. Melanoma of the Skin

There are three major types of skin cancer: basal cell carcinoma, squamous cell carcinoma, and melanoma. Basal cell and squamous cell carcinoma are the most common forms of skin cancer and are not reportable to the MCR. Melanoma is less frequent but is the most serious type of skin cancer and is reportable to the MCR.

Incidence (New Cases)

In 2021, a total of 1,930 cases of melanoma of the skin were reported in Maryland. The age-adjusted incidence rate for melanoma in 2021 was 25.5 per 100,000 population, which is statistically similar to the 2021 U.S. SEER age-adjusted melanoma incidence rate of 24.6 per 100,000 population.

In Maryland, men had a statistically significantly higher melanoma incidence rate than women in 2021, at 32.7 per 100,000 compared to 20.5 per 100,000 respectively. For Maryland and U.S. 2021 incidence rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 1.

Mortality (Deaths)

In 2021, a total of 133 persons died of melanoma in Maryland. The 2021 age-adjusted mortality rate for melanoma in Maryland was 1.7 per 100,000 population. This rate is statistically similar to the 2021 U.S. melanoma of the skin mortality rate of 2.0 per 100,000 population. Maryland had the 36th highest melanoma cancer mortality rate among the states and the District of Columbia in 2021.

In Maryland, men had a melanoma mortality rate more than double the rate for women, at 2.5 and 1.2 respectively, in 2021; this difference is statistically significant. For Maryland and U.S. 2021 mortality rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 2.

Table 55
Melanoma Incidence and Mortality Rates
by Gender and Race/Ethnicity, Maryland (MD) and the United States, 2021

Incidence 2021	*Total**	*Male*	*Female*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD New Cases (count)	1,930	1,121	809	1,838	11	22	6	0
MD Incidence Rate	25.5	32.7	20.5	42.1	**	5.5	**	0.0
U.S. SEER Rate	24.6	31.2	19.9	35.4	1.1	5.2	1.3	9.8
Mortality 2021	*Total*	*Male*	*Female*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD Deaths (count)	133	81	52	126	<6	<6	<6	<6
MD Mortality Rate	1.7	2.5	1.2	2.7	**	**	**	**
U.S. Mortality Rate	2.0	2.9	1.3	2.6	0.3	0.7	0.2	0.7

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

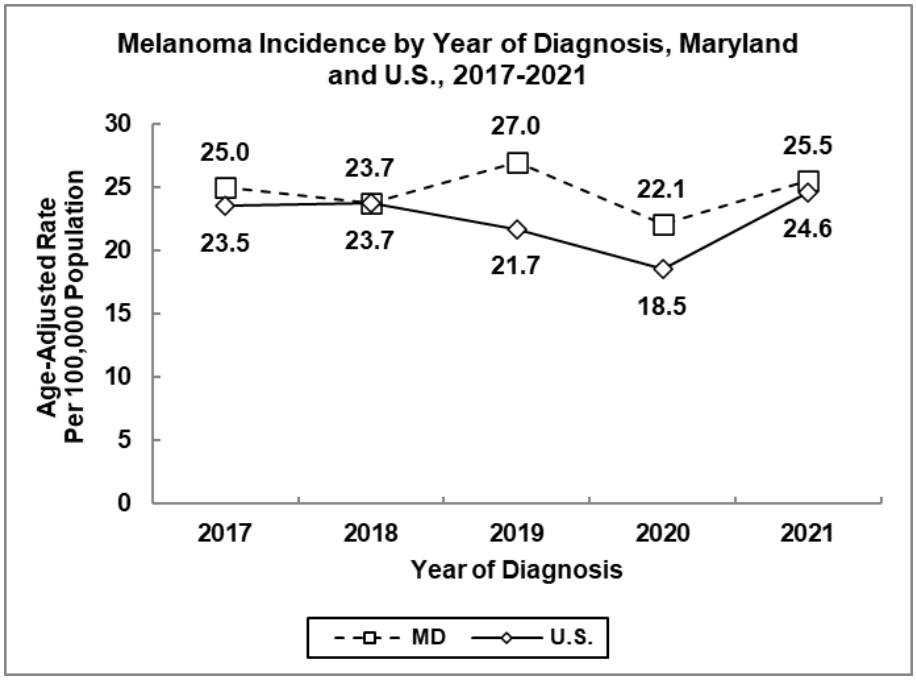
All race rates and counts, except Hispanic, are non-Hispanic/Latino

* Total also includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6= Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

** MD incidence rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures; MD mortality rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat
Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

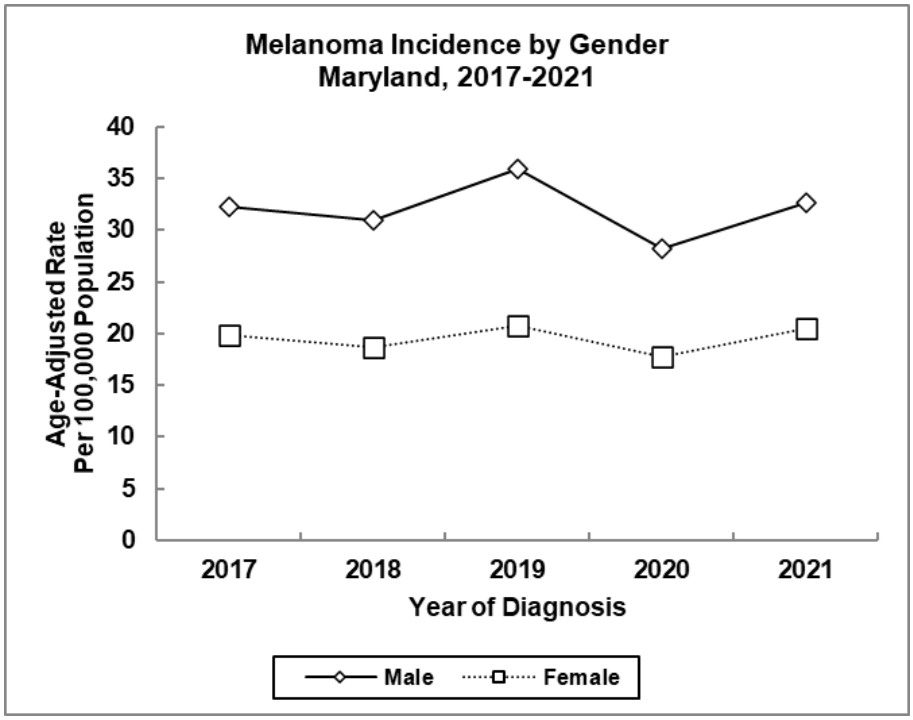


Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat

Maryland vs. U.S., Incidence Rates

Melanoma incidence rates in Maryland decreased at a rate of 0.3% per year from 2017 to 2021. During the same time period, U.S. melanoma incidence rates decreased 1.5% per year.

See Appendix H, Table 1.



Source: Maryland Cancer Registry

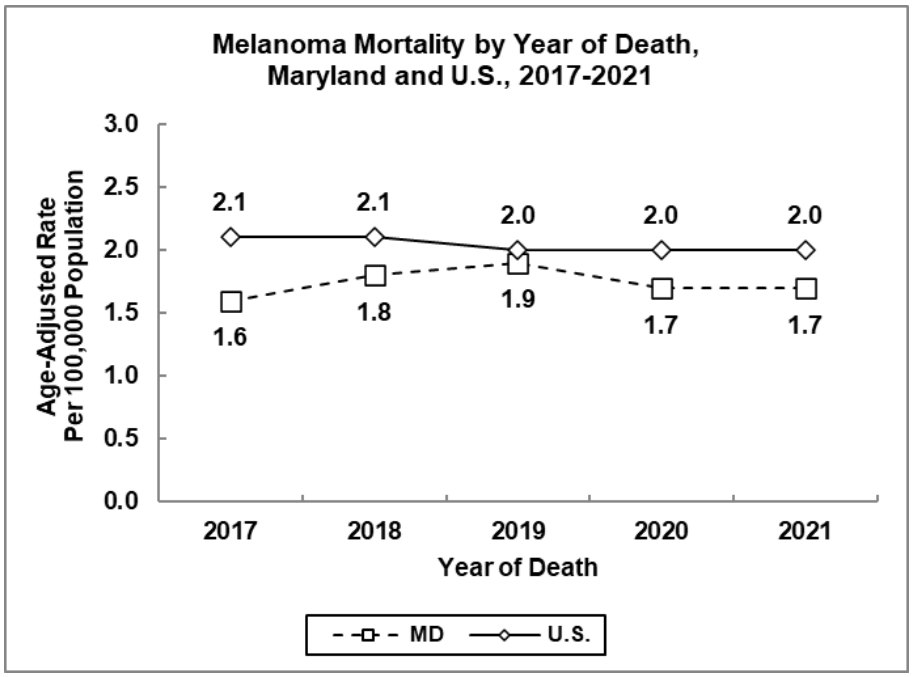
Incidence Trends by Gender

Over the 5-year period from 2017 to 2021, males had consistently higher melanoma incidence rates than females in Maryland.

From 2017 to 2021, melanoma incidence decreased 0.7% among males, but increased 0.1% among females.

In 2021, melanoma incidence rates were 59.5% higher among males than females in Maryland.

See Appendix H, Table 4.

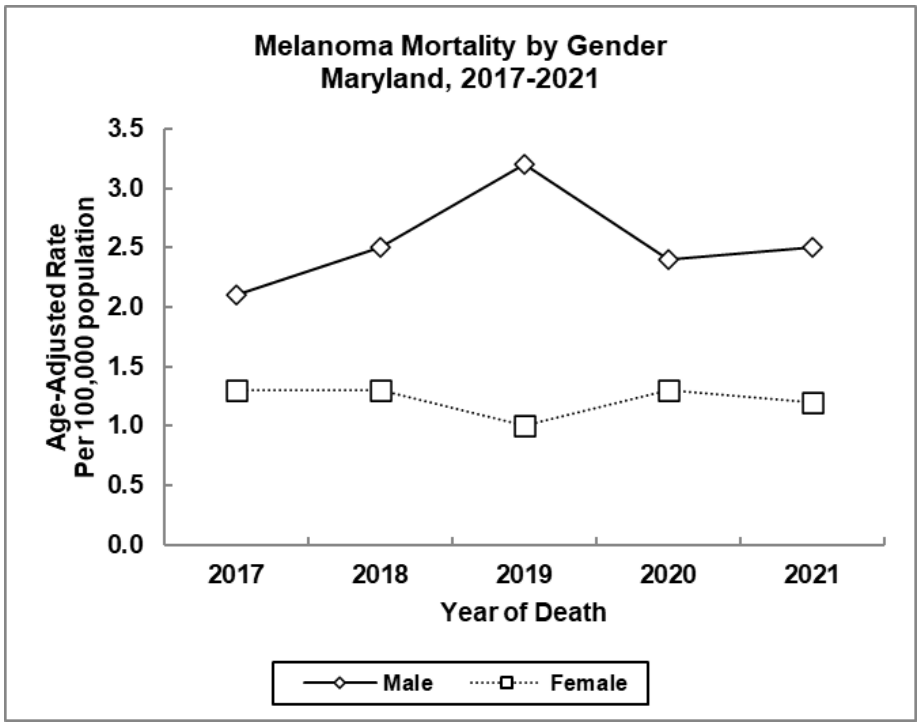


Source: Maryland Department of Health Vital Statistics Administration, 2021 (MD)
NCHS Underlying Cause of Death in CDC WONDER, 2017-2020
SEER Mortality All Cause of Death Data (U.S.)

Maryland vs. U.S., Mortality Rates

Melanoma mortality rates in Maryland increased at a rate of 0.6% per year from 2017 to 2021 in Maryland. Melanoma mortality rates in the U.S. decreased at a rate of 1.5% per year in the same time period.

See Appendix H, Table 6.



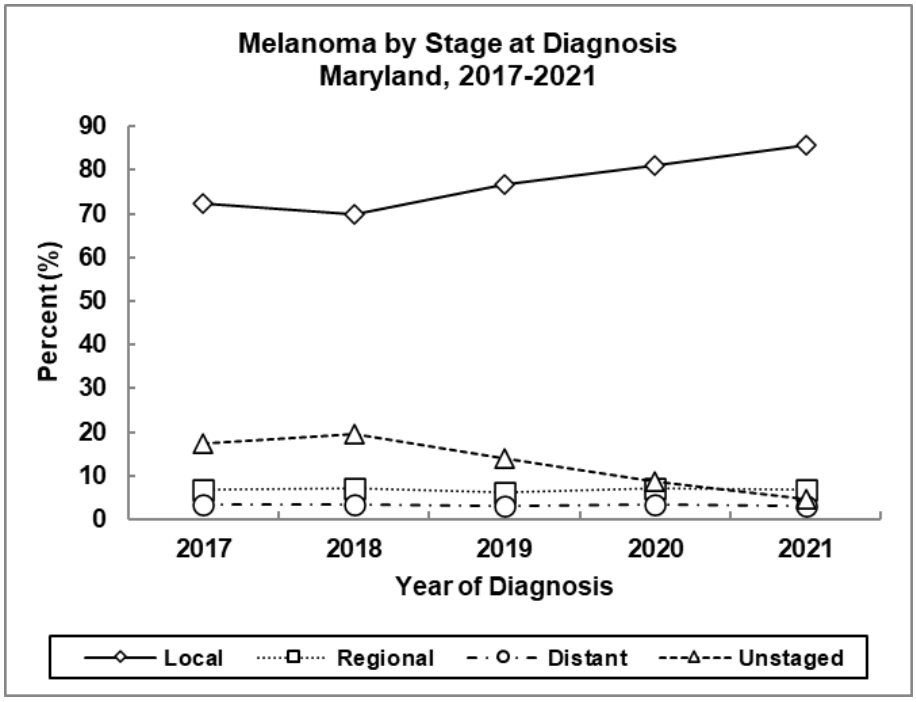
Source: NCHS Underlying Cause of Death in CDC WONDER, 2017-2020
Maryland Department of Health Vital Statistics Administration, 2021
U.S. SEER, SEER*Stat

Mortality Trends by Gender

From 2017 to 2021, males had consistently higher melanoma mortality rates than females.

Melanoma mortality rates in males increased at a rate of 3.1% per year from 2017 to 2021 in Maryland. Female melanoma mortality rates decreased at a rate of 1.6% per year in the same time period.

See Appendix H, Table 6.



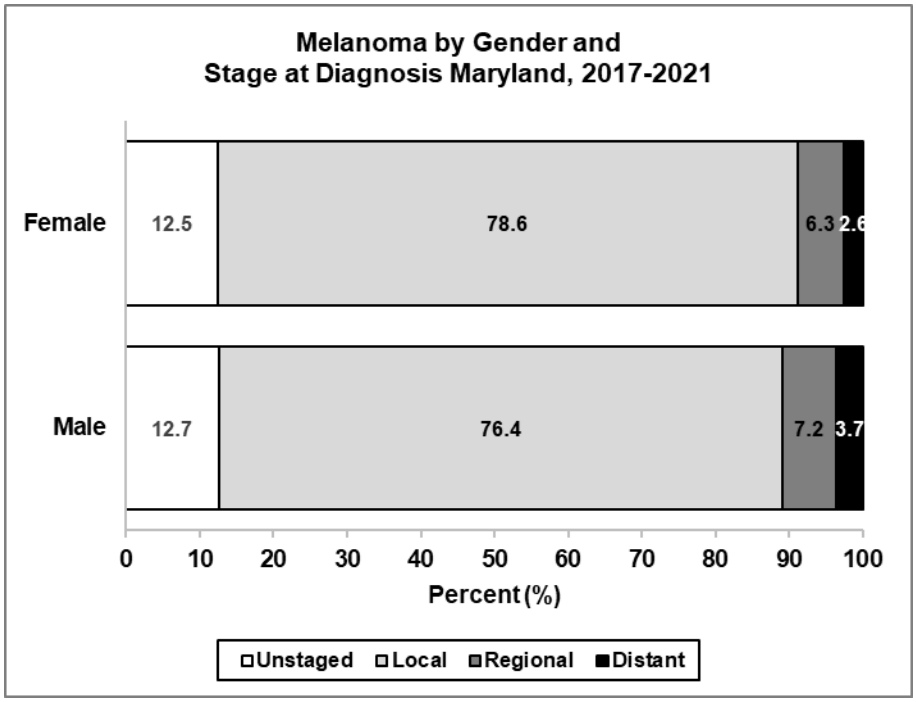
Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis

During the 5-year period from 2017 to 2021, the percent of new melanoma cases diagnosed at the local stage increased 5.0% per year.

In 2021, 85.6% of all melanoma was diagnosed at the local stage, 6.9% was found at the regional stage, and 3.0% was found at the distant stage. The proportion of melanoma reported as unstaged was 4.5%.

See Appendix I, Table 7.

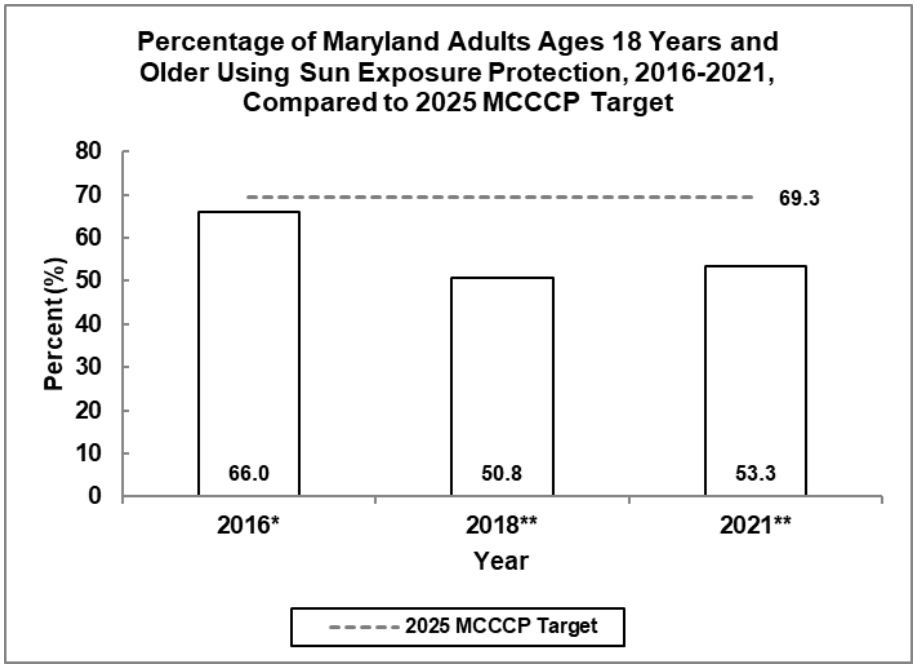


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis by Gender

From 2017 to 2021, most melanoma cancers in Maryland were diagnosed at the local stage for male and females. Males had slightly more cases diagnosed at the regional or distant stage (10.9%) than females (8.9%).

See Appendix L, Table 7.



Source: Maryland Behavioral Risk Factor Surveillance System, 2016, 2018, 2021

* The Maryland BRFSS 2016 estimate is based on adults who reported "always" or "almost always" using one or more of the following measures: limiting exposure to the sun between 10 am and 4 pm; using sunscreen lotion with a sun protection factor (SPF) of 15 or higher when outdoors; wearing a hat when outdoors on a sunny day; and/or wearing protective clothing when outdoors on a sunny day. These estimates exclude adults who reported not going out in the sun.

** The Maryland BRFSS question has been phrased differently than past years since the 2018 survey. The estimate indicated is based on adults who reported "always" or "almost always" using one or more of the following measures: limiting exposure to the sun when outside for more than an hour on a warm, sunny day; using sunscreen lotion with a sun protection factor (SPF) of 15 or higher when outdoors; wearing a hat when outdoors on a sunny day; and/or wearing protective clothing when outdoors on a sunny day. These estimates exclude adults who reported not going out in the sun.

Sun Exposure Protection

The 2025 MCCCP target aimed to increase the percentage of persons age 18 years and older who always, or almost always, use at least one sun protective measure to 69.3%.

In 2021, 53.3% of Maryland adults used at least one method of protection against sun exposure.

Public Health Evidence for Skin Cancer Prevention and Screening (adapted from the National Cancer Institute Physician Data Query [PDQ] and the United States Preventive Services Task Force [USPSTF])

Prevention

The most common types of skin cancer are squamous cell carcinoma and basal cell carcinoma. Squamous cell carcinoma and basal cell carcinoma are also called nonmelanoma skin cancers. Melanoma is a less common type of skin cancer that grows and spreads quickly.

Avoiding risk factors may help prevent cancer.

The following are risk factors for nonmelanoma skin cancer:

- Being exposed to natural sunlight or artificial sunlight (such as from tanning beds) over long periods of time.
- Having a fair complexion, which includes the following:
  - Fair skin that freckles and burns easily, does not tan, or tans poorly.
  - Blue or green or other light-colored eyes.
  - Red or blond hair.
- Having actinic keratosis.
- Past treatment with radiation.
- Having a weakened immune system.
- Being exposed to arsenic.

The following are risk factors for melanoma skin cancer:

- Having a fair complexion, which includes the following:
  - Fair skin that freckles and burns easily, does not tan, or tans poorly.
  - Blue or green or other light-colored eyes.
  - Red or blond hair.
- Being exposed to natural sunlight or artificial sunlight (such as from tanning beds) over long periods of time.
- Having a history of many blistering sunburns, especially as a child or teenager.
- Having many moles.
- Having a family history of unusual moles (atypical nevus syndrome).
- Having a family or personal history of melanoma.
- Being White.

Although having a fair complexion is a risk factor for nonmelanoma and melanoma skin cancer, people of all skin colors can get skin cancer.

It is not known if the following lower the risk of nonmelanoma skin cancer:

- Sunscreen use and avoiding sun exposure. It is not known if sunscreen use, avoiding sun exposure, or wearing protective clothing when outdoors decreases the risk of nonmelanoma skin cancer. This is because not enough studies have been done to prove this.
  However, skin experts suggest the following:
  - Use sunscreen that protects against UV radiation.

    - Avoid long periods of time in the sun, especially when the sun is at its strongest.
    - Wear long sleeve shirts, long pants, sun hats, and sunglasses, when outdoors.
- Taking the following chemopreventive agents: beta carotene, isotretinoin, selenium, celecoxib, alpha-difluoromethylornithine, nicotinamide (vitamin B3).

It is not known if the following lower the risk of melanoma:

- Sunscreen use. It has not been proven that using sunscreen to prevent sunburn can protect against melanoma caused by UV radiation.
- Receiving counseling or information about protecting the skin from the sun.

Screening

Screening for skin cancer may include examination by both the patient and the healthcare provider. As of April 2023, USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of visual skin examination by a clinician to screen for skin cancer in adults.

Public Health Interventions for Skin Cancer (From the Surgeon General's Call to Action to Prevent Skin Cancer)
• Wear protective clothing (e.g. long-sleeved shirts and long pants and skirts; clothes made from tightly woven fabric), a hat and sunglasses. • Seek shade (use umbrellas and shelters). • Avoid outdoor activities during times of peak sunlight, which are during the midday hours of 10 a.m. to 4 p.m (daylight savings) or 9 a.m. to 3 p.m. (standard time). • Use sunscreen with an SPF of 15 or higher. • Avoid indoor tanning and sunbathing.

Individuals should discuss the risk factors for skin cancer, ways to prevent skin cancer, and screening tests with their healthcare provider.

Note: For information on the Skin Cancer Prevention and Screening PDQ, please see Appendix C.

Table 56
Number of Cases for Melanoma by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	1,930	1,121	809	1,838	11	22	6	0
Allegany	27	18	9	27	0	0	0	0
Anne Arundel	269	148	121	252	0	<6	<6	0
Baltimore City	66	35	31	62	<6	<6	0	0
Baltimore	367	214	153	362	<6	0	0	0
Calvert	68	36	32	s	<6	0	0	0
Caroline	13	<6	9	11	0	<6	0	0
Carroll	72	40	32	70	0	<6	0	0
Cecil	36	16	20	35	0	0	0	0
Charles	26	17	9	26	0	0	0	0
Dorchester	13	8	<6	13	0	0	0	0
Frederick	112	67	45	108	0	<6	0	0
Garrett	16	10	6	16	0	0	0	0
Harford	141	84	57	136	0	<6	0	0
Howard	86	50	36	81	<6	0	<6	0
Kent	14	11	<6	14	0	0	0	0
Montgomery	288	165	123	255	<6	9	<6	0
Prince George's	60	38	22	54	<6	<6	<6	0
Queen Anne's	32	21	11	32	0	0	0	0
St. Mary's	29	20	9	29	0	0	0	0
Somerset	<6	<6	<6	<6	0	0	0	0
Talbot	26	17	9	24	0	0	0	0
Washington	69	35	34	68	0	0	0	0
Wicomico	30	21	9	30	0	0	0	0
Worcester	48	36	12	46	0	0	0	0

Total includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 57
Melanoma Age-Adjusted Incidence Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	25.5	32.7	20.5	42.1	**	5.5	**	0.0
Allegany	27.5	37.7	**	29.3	0.0	0.0	0.0	0.0
Anne Arundel	38.7	45.5	34.3	48.3	0.0	**	**	0.0
Baltimore City	9.7	11.9	8.4	30.8	**	**	0.0	0.0
Baltimore	33.4	44.2	25.2	51.2	**	0.0	0.0	0.0
Calvert	58.9	62.7	57.9	72.3	**	0.0	0.0	0.0
Caroline	**	**	**	**	0.0	**	0.0	0.0
Carroll	31.9	38.0	27.7	33.8	0.0	**	0.0	0.0
Cecil	26.2	24.4	29.7	27.8	0.0	0.0	0.0	0.0
Charles	13.3	19.2	**	28.7	0.0	0.0	0.0	0.0
Dorchester	**	**	**	**	0.0	0.0	0.0	0.0
Frederick	33.6	43.9	26.8	40.7	0.0	**	0.0	0.0
Garrett	32.3	**	**	32.9	0.0	0.0	0.0	0.0
Harford	41.8	54.7	32.6	49.0	0.0	**	0.0	0.0
Howard	22.3	27.3	17.9	37.1	**	0.0	**	0.0
Kent	**	**	**	**	0.0	0.0	0.0	0.0
Montgomery	21.9	27.6	18.1	36.7	**	**	**	0.0
Prince George's	5.6	8.3	3.7	32.5	**	**	**	0.0
Queen Anne's	42.5	54.7	**	47.0	0.0	0.0	0.0	0.0
St. Mary's	23.1	32.7	**	29.6	0.0	0.0	0.0	0.0
Somerset	**	**	**	**	0.0	0.0	0.0	0.0
Talbot	34.9	52.1	**	38.4	0.0	0.0	0.0	0.0
Washington	35.8	39.4	34.1	41.9	0.0	0.0	0.0	0.0
Wicomico	23.4	34.8	**	33.0	0.0	0.0	0.0	0.0
Worcester	53.3	77.0	**	60.6	0.0	0.0	0.0	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 58
Number of Deaths for Melanoma by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	133	81	52	126	<6	<6	<6	<6
Allegany	<6	<6	<6	<6	<6	<6	<6	<6
Anne Arundel	19	s	<6	s	<6	<6	<6	<6
Baltimore City	7	<6	<6	6	<6	<6	<6	<6
Baltimore	21	12	9	s	<6	<6	<6	<6
Calvert	<6	<6	<6	<6	<6	<6	<6	<6
Caroline	<6	<6	<6	<6	<6	<6	<6	<6
Carroll	7	<6	<6	s	<6	<6	<6	<6
Cecil	<6	<6	<6	<6	<6	<6	<6	<6
Charles	<6	<6	<6	<6	<6	<6	<6	<6
Dorchester	<6	<6	<6	<6	<6	<6	<6	<6
Frederick	7	<6	s	s	<6	<6	<6	<6
Garrett	<6	<6	<6	<6	<6	<6	<6	<6
Harford	7	<6	<6	6	<6	<6	<6	<6
Howard	<6	<6	<6	<6	<6	<6	<6	<6
Kent	<6	<6	<6	<6	<6	<6	<6	<6
Montgomery	17	10	7	14	<6	<6	<6	<6
Prince George's	6	<6	<6	<6	<6	<6	<6	<6
Queen Anne's	<6	<6	<6	<6	<6	<6	<6	<6
St. Mary's	<6	<6	<6	<6	<6	<6	<6	<6
Somerset	<6	<6	<6	<6	<6	<6	<6	<6
Talbot	<6	<6	<6	<6	<6	<6	<6	<6
Washington	6	<6	<6	s	<6	<6	<6	<6
Wicomico	<6	<6	<6	<6	<6	<6	<6	<6
Worcester	<6	<6	<6	<6	<6	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 59
Melanoma Age-Adjusted Mortality Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	1.7	2.5	1.2	2.7	**	**	**	**
Allegany	**	**	**	**	**	**	**	**
Anne Arundel	**	**	**	**	**	**	**	**
Baltimore City	**	**	**	**	**	**	**	**
Baltimore	1.9	**	**	2.8	**	**	**	**
Calvert	**	**	**	**	**	**	**	**
Caroline	**	**	**	**	**	**	**	**
Carroll	**	**	**	**	**	**	**	**
Cecil	**	**	**	**	**	**	**	**
Charles	**	**	**	**	**	**	**	**
Dorchester	**	**	**	**	**	**	**	**
Frederick	**	**	**	**	**	**	**	**
Garrett	**	**	**	**	**	**	**	**
Harford	**	**	**	**	**	**	**	**
Howard	**	**	**	**	**	**	**	**
Kent	**	**	**	**	**	**	**	**
Montgomery	**	**	**	**	**	**	**	**
Prince George's	**	**	**	**	**	**	**	**
Queen Anne's	**	**	**	**	**	**	**	**
St. Mary's	**	**	**	**	**	**	**	**
Somerset	**	**	**	**	**	**	**	**
Talbot	**	**	**	**	**	**	**	**
Washington	**	**	**	**	**	**	**	**
Wicomico	**	**	**	**	**	**	**	**
Worcester	**	**	**	**	**	**	**	**

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

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 60
Number of Cases for Melanoma by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	8,957	5,266	3,691	8,633	72	87	31	<6
Allegany	134	76	58	134	0	0	0	0
Anne Arundel	1,228	696	532	1,177	<6	14	<6	0
Baltimore City	367	218	149	349	10	<6	<6	0
Baltimore	1,539	903	636	1,517	8	<6	<6	<6
Calvert	222	138	84	218	<6	0	0	0
Caroline	44	21	23	41	0	<6	0	0
Carroll	441	257	184	434	<6	<6	<6	0
Cecil	197	106	91	195	0	0	0	0
Charles	124	76	48	110	<6	0	<6	0
Dorchester	54	29	25	54	0	0	0	0
Frederick	460	267	193	450	0	<6	0	0
Garrett	61	45	16	62	0	0	0	0
Harford	638	367	271	630	<6	<6	0	0
Howard	547	337	210	523	7	9	<6	0
Kent	60	41	19	60	0	0	0	0
Montgomery	1,322	782	540	1,218	15	41	11	<6
Prince George's	283	176	107	250	15	<6	<6	<6
Queen Anne's	147	87	60	147	0	0	0	0
St. Mary's	143	92	51	139	<6	<6	0	0
Somerset	44	23	21	44	0	0	0	0
Talbot	130	77	53	125	<6	0	0	0
Washington	276	149	127	273	0	0	0	0
Wicomico	166	107	59	164	0	<6	0	0
Worcester	237	150	87	233	<6	0	0	0

Total includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 61
Melanoma Age-Adjusted Incidence Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	24.7	32.0	19.5	40.3	0.7	4.5	1.3	**
Allegany	29.2	32.4	28.2	32.4	0.0	0.0	0.0	0.0
Anne Arundel	36.8	44.6	31.4	46.1	**	**	**	0.0
Baltimore City	11.0	15.1	8.2	35.0	**	**	**	0.0
Baltimore	29.1	38.7	22.4	43.0	**	**	**	**
Calvert	40.0	51.7	30.8	48.4	**	0.0	0.0	0.0
Caroline	21.2	20.1	22.1	24.2	0.0	**	0.0	0.0
Carroll	41.8	50.9	35.7	44.6	**	**	**	0.0
Cecil	31.3	34.4	29.3	34.5	0.0	0.0	0.0	0.0
Charles	13.3	18.6	9.4	23.9	**	0.0	**	0.0
Dorchester	21.9	25.2	19.4	30.2	0.0	0.0	0.0	0.0
Frederick	29.8	37.7	24.3	35.6	0.0	**	0.0	0.0
Garrett	28.5	45.7	15.2	29.9	0.0	0.0	0.0	0.0
Harford	40.0	50.5	33.2	47.7	**	**	0.0	0.0
Howard	29.0	38.5	21.3	45.1	**	**	**	0.0
Kent	41.0	58.7	26.0	50.1	0.0	0.0	0.0	0.0
Montgomery	20.6	26.6	16.2	35.5	**	5.4	**	**
Prince George's	5.8	8.5	3.9	28.0	**	**	**	**
Queen Anne's	44.6	50.7	39.8	51.1	0.0	0.0	0.0	0.0
St. Mary's	24.0	31.3	17.7	29.7	**	**	0.0	0.0
Somerset	28.3	31.1	29.5	44.1	0.0	0.0	0.0	0.0
Talbot	36.6	46.3	28.9	41.3	**	0.0	0.0	0.0
Washington	28.8	33.5	25.9	32.4	0.0	0.0	0.0	0.0
Wicomico	27.8	38.4	20.2	39.2	0.0	**	0.0	0.0
Worcester	53.2	65.6	43.7	62.0	**	0.0	0.0	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 62
Number of Deaths for Melanoma by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	638	390	248	598	24	12	<6	<6
Allegany	15	9	6	s	<6	<6	<6	<6
Anne Arundel	77	52	25	76	<6	<6	<6	<6
Baltimore City	25	13	12	20	<6	<6	<6	<6
Baltimore	124	84	40	120	<6	<6	<6	<6
Calvert	12	6	6	s	<6	<6	<6	<6
Caroline	8	s	<6	s	<6	<6	<6	<6
Carroll	32	19	13	s	<6	<6	<6	<6
Cecil	12	s	<6	s	<6	<6	<6	<6
Charles	17	s	<6	s	<6	<6	<6	<6
Dorchester	<6	<6	<6	<6	<6	<6	<6	<6
Frederick	40	18	22	s	<6	<6	<6	<6
Garrett	<6	<6	<6	<6	<6	<6	<6	<6
Harford	41	24	17	39	<6	<6	<6	<6
Howard	23	17	6	22	<6	<6	<6	<6
Kent	<6	<6	<6	<6	<6	<6	<6	<6
Montgomery	94	53	41	78	<6	<6	<6	<6
Prince George's	32	14	18	21	8	<6	<6	<6
Queen Anne's	9	<6	<6	s	<6	<6	<6	<6
St. Mary's	11	s	<6	s	<6	<6	<6	<6
Somerset	<6	<6	<6	<6	<6	<6	<6	<6
Talbot	10	<6	<6	s	<6	<6	<6	<6
Washington	23	13	10	s	<6	<6	<6	<6
Wicomico	9	s	<6	s	<6	<6	<6	<6
Worcester	10	s	<6	s	<6	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 63
Melanoma Age-Adjusted Mortality Rates* by Jurisdiction, Gender, and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Gender		Race/Ethnicity				
		Male	Female	White	Black	Hispanic	API	AIAN
Maryland	1.8	2.5	1.2	2.6	0.3	**	**	**
Allegany	**	**	**	**	**	**	**	**
Anne Arundel	2.3	3.6	1.3	2.9	**	**	**	**
Baltimore City	0.8	**	**	2.1	**	**	**	**
Baltimore	2.2	3.8	1.2	2.9	**	**	**	**
Calvert	**	**	**	**	**	**	**	**
Caroline	**	**	**	**	**	**	**	**
Carroll	3.1	**	**	3.3	**	**	**	**
Cecil	**	**	**	**	**	**	**	**
Charles	**	**	**	**	**	**	**	**
Dorchester	**	**	**	**	**	**	**	**
Frederick	2.7	**	2.7	3.2	**	**	**	**
Garrett	**	**	**	**	**	**	**	**
Harford	2.5	3.4	**	2.8	**	**	**	**
Howard	1.3	**	**	1.9	**	**	**	**
Kent	**	**	**	**	**	**	**	**
Montgomery	1.4	1.8	1.1	2.0	**	**	**	**
Prince George's	0.7	**	**	2.4	**	**	**	**
Queen Anne's	**	**	**	**	**	**	**	**
St. Mary's	**	**	**	**	**	**	**	**
Somerset	**	**	**	**	**	**	**	**
Talbot	**	**	**	**	**	**	**	**
Washington	2.4	**	**	2.6	**	**	**	**
Wicomico	**	**	**	**	**	**	**	**
Worcester	**	**	**	**	**	**	**	**

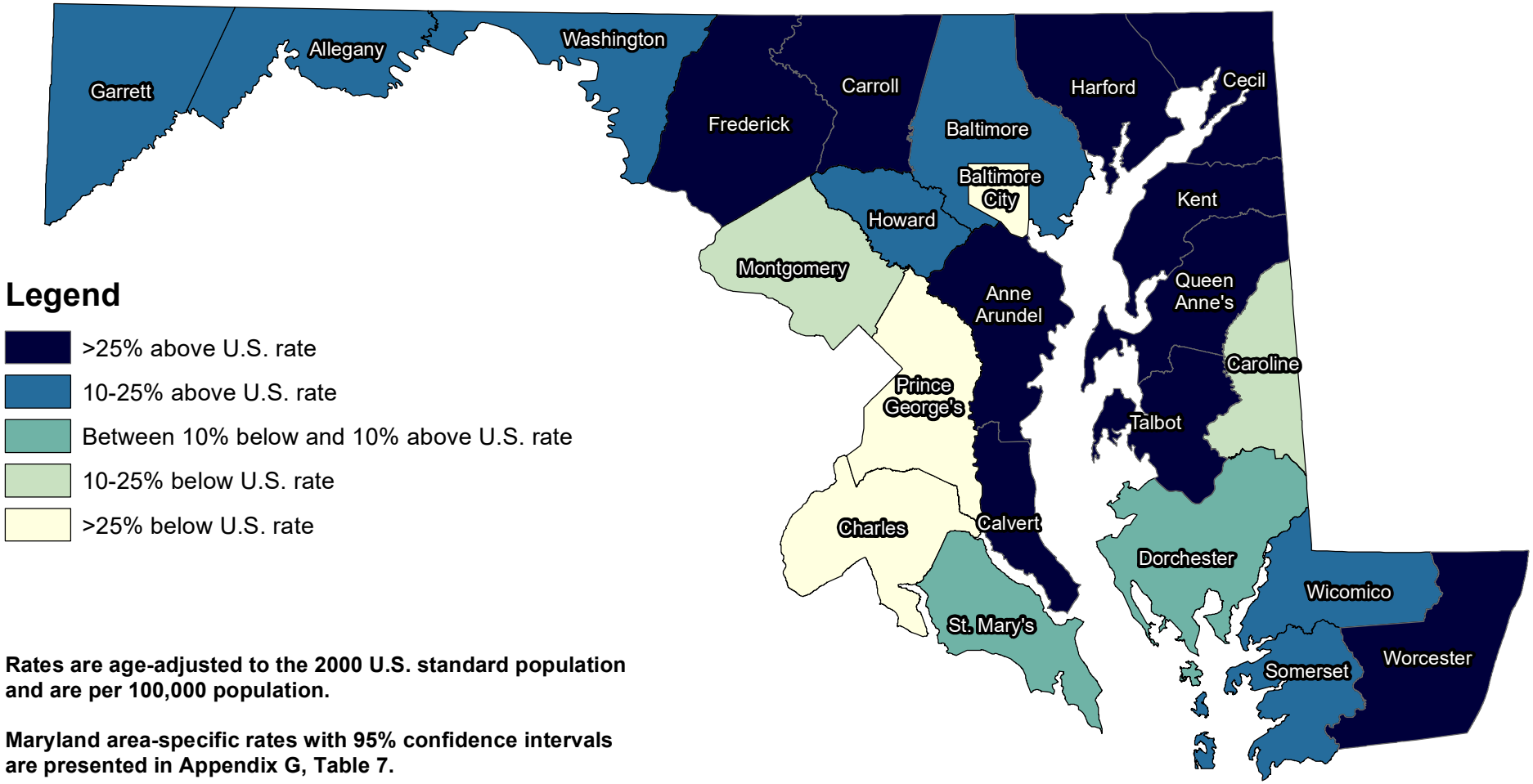
* Rates are per 100,000 population and age-adjusted to 2000 U.S. standard population

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Maryland Melanoma Cancer Incidence Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

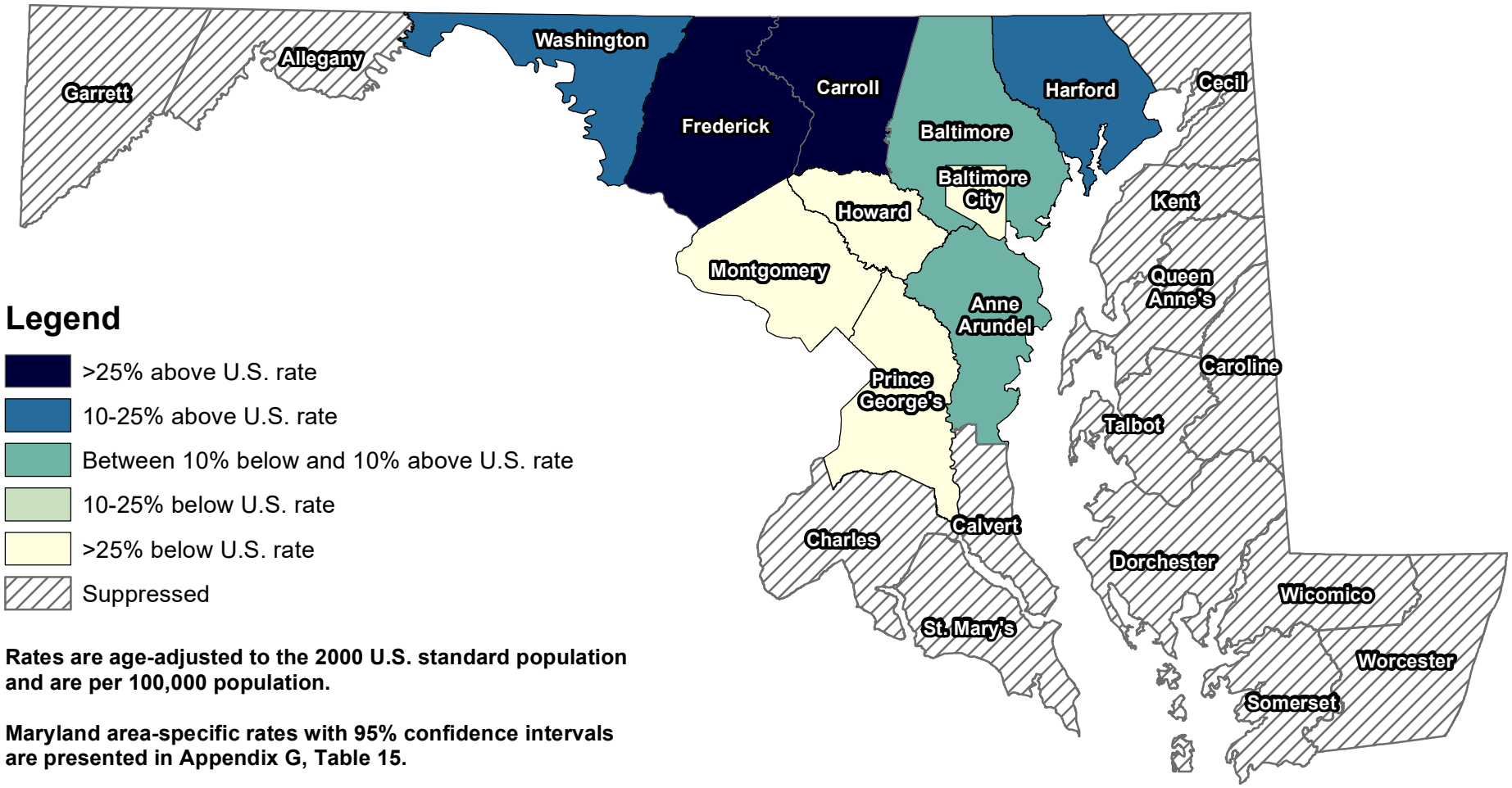
Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 7.

U.S. melanoma cancer incidence rate, 2017-2021: 23.8 / 100,000

Maryland melanoma cancer incidence rate, 2017-2021: 24.7 / 100,000

Sources: Maryland Cancer Registry
U.S. SEER, SEER*Stat Database

Maryland Melanoma Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 15.

U.S. melanoma cancer mortality rate, 2017-2021: 2.1 / 100,000

Maryland melanoma cancer mortality rate, 2017-2021: 1.8 / 100,000

Sources: Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

Note: Rates based on case counts of 0-19 are suppressed per MDH/CCPC Data Use Policy and Procedures.

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G. Cervical Cancer

Incidence (New Cases)

A total of 194 cases of cervical cancer among women in Maryland were reported in 2021. The age-adjusted incidence rate for cervical cancer in Maryland in 2021 was 5.7 per 100,000 women, which is statistically significantly lower than the 2021 U.S. SEER age-adjusted cervical cancer incidence rate of 7.4 per 100,000 women.

In Maryland, no new cervical cancer cases were reported among American Indian/Alaska Native women in 2021. All other racial/ethnic groups had cervical cancer incidence rates similar to the statewide rate of 5.7, with no statistically significant differences between the groups. For Maryland and U.S. 2021 incidence rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 1.

Mortality (Deaths)

In 2021, a total of 72 women died of cervical cancer in Maryland. The age-adjusted cervical cancer mortality rate in Maryland in 2021 was 1.9 per 100,000 women. This rate is statistically similar to the 2021 U.S. cervical cancer mortality rate of 2.3 per 100,000 women. Maryland had the 26th highest cervical cancer mortality rate among the states and the District of Columbia in 2021.

In Maryland, White and Black women had statistically similar cervical cancer mortality rates in 2021, at 1.4 per 100,000 and 2.4 per 100,000 respectively. 2021 cervical cancer mortality rates for Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native women are not reportable. For Maryland and U.S. 2021 mortality rates and 95% confidence intervals by race and ethnicity, see Appendix K, Table 2.

Table 64
Cervical Cancer Incidence and Mortality Rates
by Race/Ethnicity, Maryland (MD) and the United States, 2021

Incidence 2021	*Total**	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD New Cases (count)	194	83	72	24	12	0
MD Incidence Rate	5.7	4.8	6.6	8.2	**	0.0
U.S. SEER Rate	7.4	6.7	7.8	9.3	6.3	9.2
Mortality 2021	*Total*	*White*	*Black*	*Hispanic*	*API*	*AIAN*
MD Deaths (count)	72	30	29	8	<6	<6
MD Mortality Rate	1.9	1.4	2.4	**	**	**
U.S. Mortality Rate	2.3	2.2	3.2	2.3	1.9	3.8

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

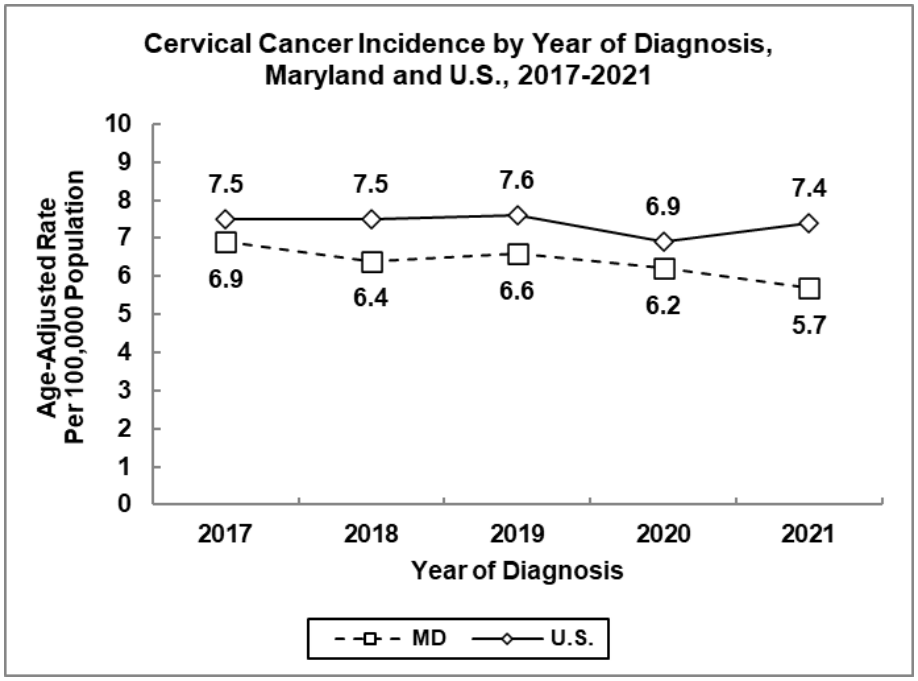
All race rates and counts, except Hispanic, are non-Hispanic/Latino

* Total also includes cases reported as transsexual, hermaphrodite, unknown gender, unknown race/ethnicity, and unknown jurisdiction

<6= Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

** MD incidence rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures; MD mortality rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat
Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

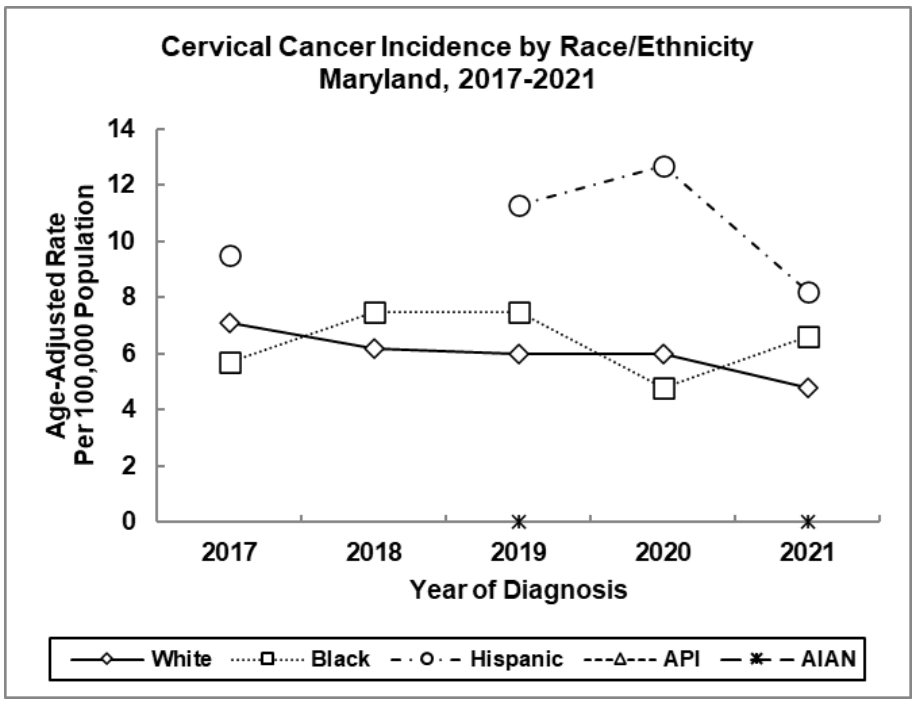


Source: Maryland Cancer Registry
U.S. SEER, SEER*Stat

Maryland vs. U.S., Incidence Rates

From 2017 to 2021, Maryland had consistently lower cervical cancer incidence rates than the U.S. Cervical cancer incidence rates among Maryland women decreased at a rate of 4.1% per year, and decreased 1.1% per year among women in the U.S. from 2017 to 2021.

See Appendix H, Table 1.



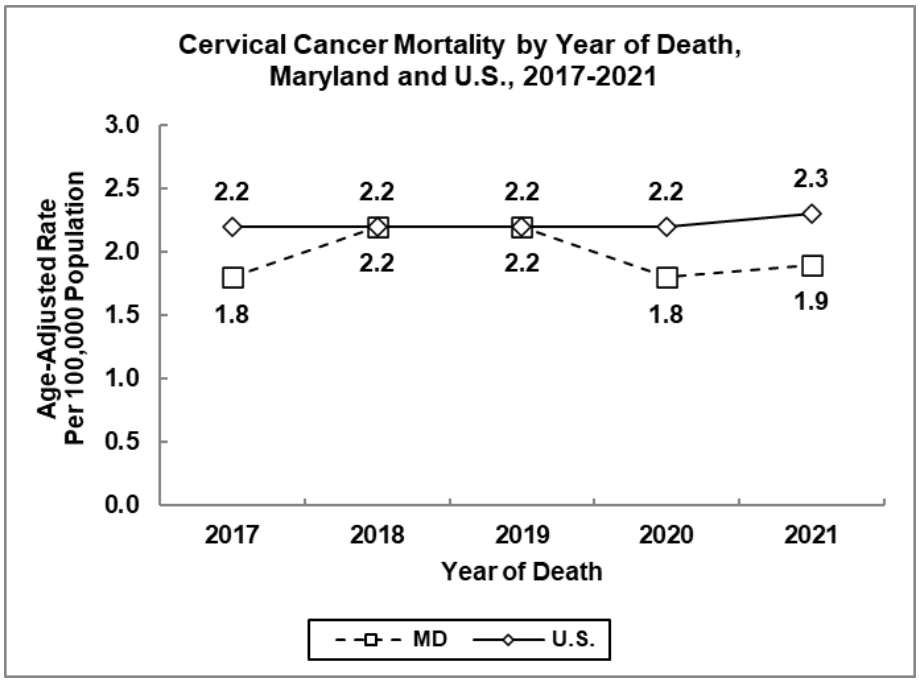
Source: Maryland Cancer Registry

Incidence Trends by Race/Ethnicity

From 2017 to 2021, cervical cancer incidence rates decreased among Black females at a rate of 1.5% per year and decreased at a rate of 7.8% per year among White females.

Cervical cancer incidence was suppressed for Hispanic women in 2018, American Indian/Alaska Native women in 2017, 2018, and 2020 and Asian/Pacific Islander women from 2017 to 2021.

See Appendix H, Table 3.

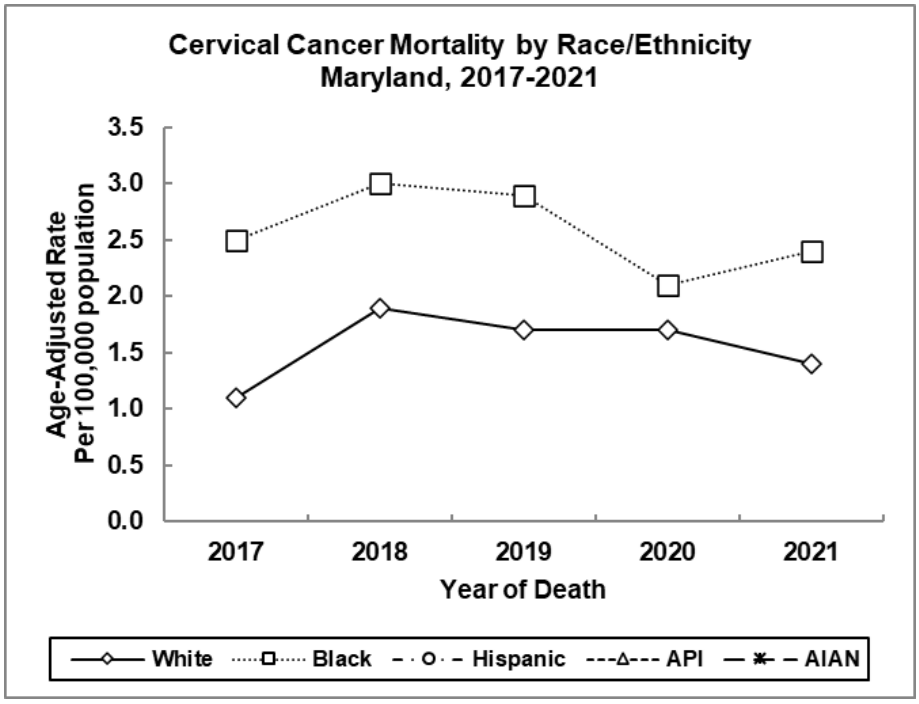


Source: Maryland Department of Health Vital Statistics Administration, 2021 (MD)
NCHS Underlying Cause of Death in CDC WONDER, 2017-2020
SEER Mortality All Cause of Death Data (U.S.)

Maryland vs. U.S., Mortality Rates

From 2017 to 2021, mortality rates increased at a rate of 0.9% per year for women in the U.S. while rates among women in Maryland decreased at a rate of 0.9% per year.

See Appendix H, Table 2.

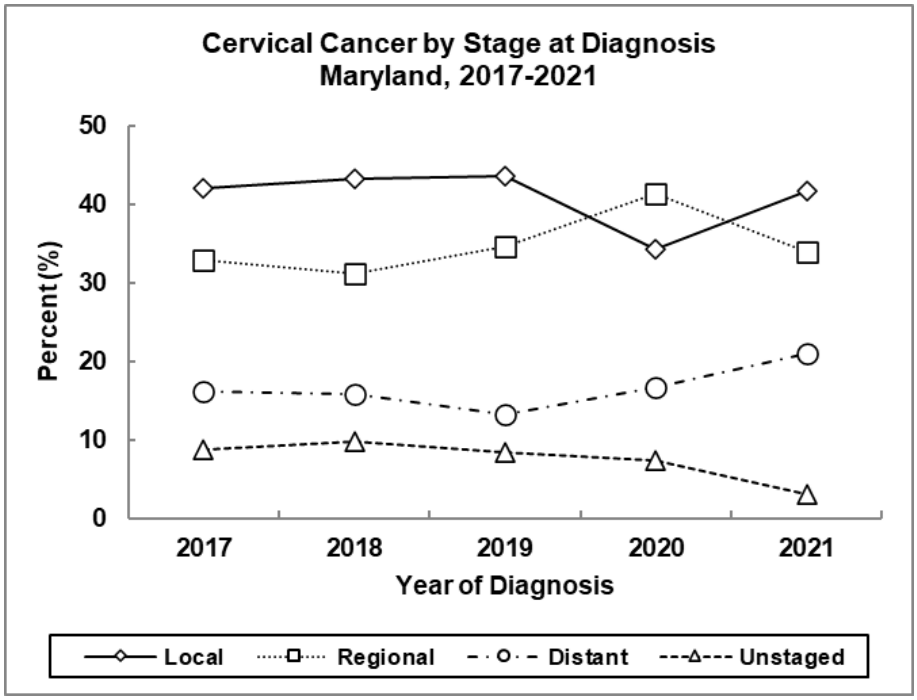


Source: Maryland Department of Health Vital Statistics Administration

Mortality Trends by Race/Ethnicity

From 2017 to 2021, Black women had consistently higher cervical cancer mortality rates than White women in Maryland. Mortality rates increased at a rate of 3.8% per year for White women while rates for Black women decreased at a rate of 4.3% per year. Cervical cancer mortality was suppressed for Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native women from 2017 to 2021 in Maryland.

See Appendix H, Table 5.

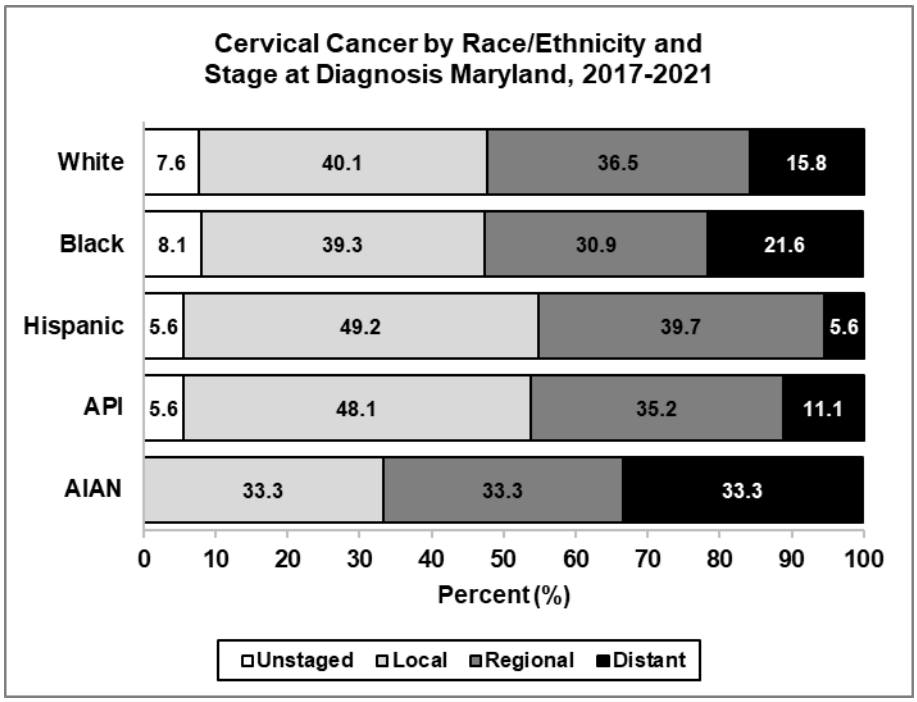


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis

In 2021, 41.8% of all cervical cancer cases in Maryland were diagnosed at the local stage, 34.0% were diagnosed at the regional stage, and 21.1% were found at the distant stage. The proportion of cervical cancer cases reported as unstaged decreased in 2021 to 3.1%.

See Appendix I, Table 8.

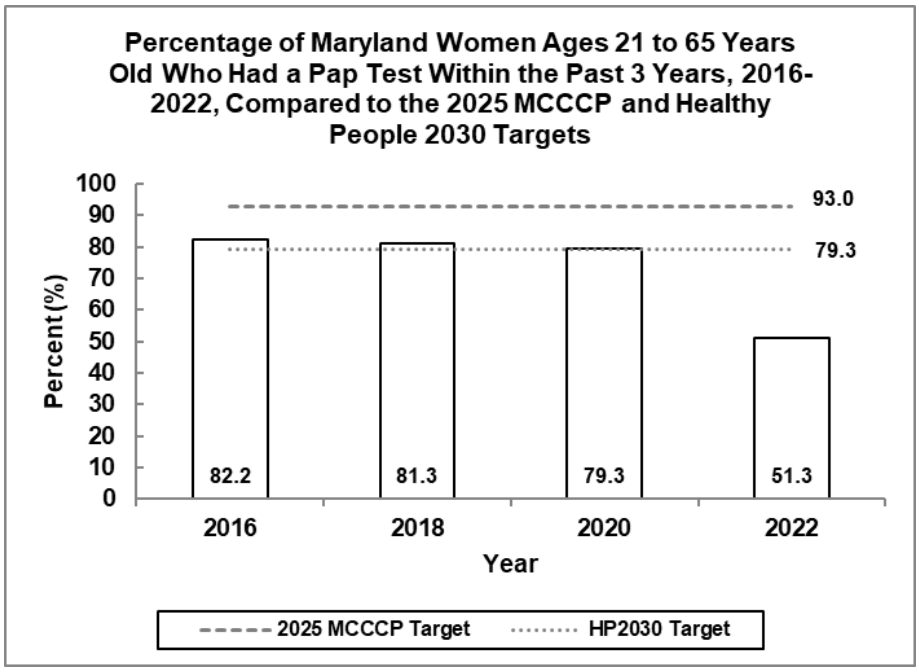


Source: Maryland Cancer Registry
Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Stage at Diagnosis by Race/ Ethnicity

From 2017 to 2021, American Indian/Alaska Native women and Black women had the greatest proportion of cervical cancer cases diagnosed at distant stage at 33.3% and 21.6%, respectively.

See Appendix L, Table 8.

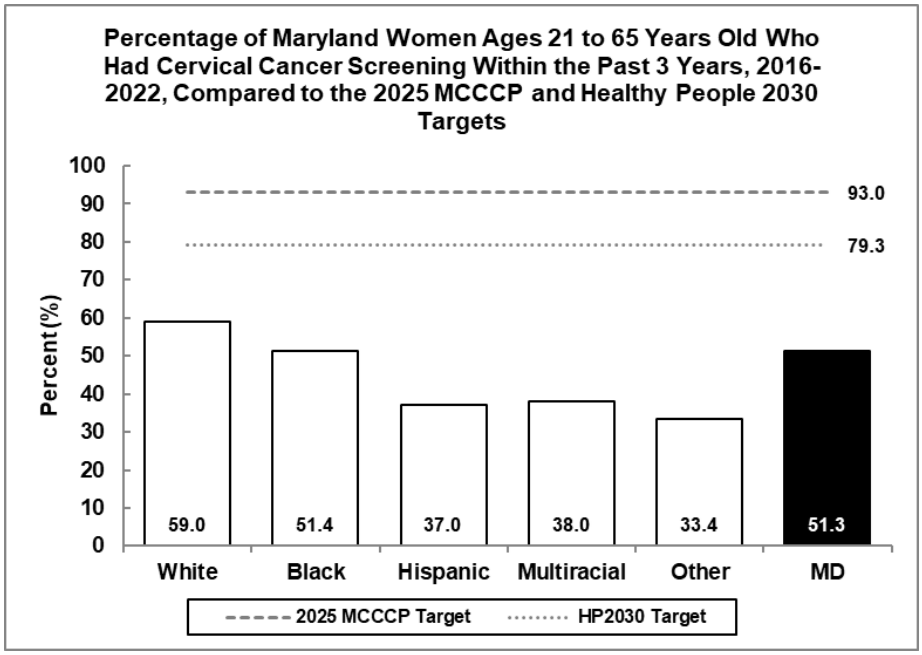


Source: Maryland Behavioral Risk Factor Surveillance System, 2016, 2018, 2020, 2022
Maryland Comprehensive Cancer Control Plan, 2021-2025
Healthy People 2030, U.S. Department of Health and Human Services

Note: In 2022 the BRFSS cervical cancer screening module was updated to ask first if a women had ever had a cervical cancer screening, while previously it had asked if a woman had ever had a Pap test first.

Cervical Cancer Screening

In 2022, 51.3% of Maryland women ages 21 to 65 years old reported they had a cervical cancer screening within the past three years. This is below the 2025 MCCCP target of 93.0% and the Healthy People 2030 target of 79.3%.



Source: Maryland Behavioral Risk Factor Surveillance System, 2022
Maryland Comprehensive Cancer Control Plan, 2021-2025
Healthy People 2030, U.S. Department of Health and Human Services

Note: In 2022 the BRFSS cervical cancer screening module was updated to ask first if a women had ever had a cervical cancer screening, while previously it had asked if a woman had ever had a Pap test first.

Cervical Cancer Screening by Race/ Ethnicity

In 2022, White women reported the highest percentage of having had a cervical cancer screening in the past three years. All groups, however, were below the 2025 MCCCP and Healthy People 2030 targets.

Public Health Evidence for Cervical Cancer Prevention and Screening (adapted from the National Cancer Institute Physician Data Query [PDQ]; the Advisory Committee on Immunization Practices [ACIP]; and the United States Preventive Services Task Force [USPSTF])

Prevention

Avoiding risk factors may help prevent cancer. The following are risk factors for cervical cancer:

- Human Papillomavirus (HPV) infection, especially HPV types 16 and 18. Most of the time, the body's immune system can fight the HPV infection before cancer forms. Only a very small number of women infected with HPV develop cervical cancer.
- Being exposed to a drug called diethylstilbestrol while in the mother's womb.

In women who are infected with HPV, there are other risk factors that add to the increased risk of cervical cancer:

- Having a weakened immune system.
- Being sexually active before age 18 or having had six or more sexual partners.
- Giving birth to many children (seven or more full-term pregnancies).
- Using oral contraceptives, also known as "the Pill", for a long time. Women who used oral contraceptives for five to nine years have a risk of cervical cancer that is three times greater than that of women who have never used oral contraceptives. The risk is four times greater after 10 or more years of use.
- Smoking cigarettes or breathing in secondhand smoke.

Increasing protective factors may help prevent cancer. The following protective factors decrease the risk of cervical cancer:

- Avoiding sexual activity.
- Using barrier protection (e.g., condom) during sexual activity.
- Getting a vaccine that protects against HPV infection. HPV vaccination greatly reduces the risk of cervical cancer, although these vaccines do not protect women who are already infected with HPV. HPV vaccines approved by the U.S. Food and Drug Administration have been shown to prevent infection with the types of HPV that cause most cervical cancers.

The ACIP recommends routine HPV vaccination at ages 11 or 12 years old, but vaccination can be given starting at age 9 years. ACIP also recommends catch-up HPV vaccination for all persons through age 26 years who are not adequately vaccinated. ACIP does not recommend catch up vaccination for all adults older than 26 years. Instead, ACIP recommends shared clinical decision-making regarding HPV vaccination for some adults aged 27 through 45 years who are not adequately vaccinated. HPV vaccines are not licensed for use in adults older than 45 years.

Screening

Regular screening of women between the ages of 21 and 65 years old with the Pap test (or Pap smear) decreases their chance of dying from cervical cancer. When both the HPV test and Pap test are done using cells from the sample removed during a Pap test, it is called a Pap/HPV co-test. Screening women aged 30 and older with both the Pap test and the HPV test every five years finds

more cervical changes that can lead to cancer than screening with the Pap test alone. Screening with both the Pap test and the HPV test lowers the number of cases of cervical cancer.

The USPSTF recommends screening for cervical cancer every three years with cervical cytology (Pap test) alone in women ages 21 to 29 years old. For women ages 30 to 65 years old, the USPSTF recommends screening every three years with cervical cytology alone or every five years with high-risk HPV (hrHPV) testing alone or every five years with hrHPV testing in combination with cytology (co-testing). The USPSTF recommends against screening for cervical cancer in women older than 65 years who have had adequate prior screening and are not otherwise at high risk for cervical cancer. The USPSTF recommends against screening for cervical cancer in women younger than 21 years, and also recommends against screening for cervical cancer in women who have had a hysterectomy with removal of the cervix and do not have a history of a high-grade precancerous lesion (i.e., cervical intraepithelial neoplasia [CIN] grade 2 or 3) or cervical cancer. An update by the USPSTF is currently in progress at the time of writing this report.

The risks of cervical cancer screening include the following:

- Unnecessary follow-up tests may be done. In women younger than 21 years, screening with the Pap test may show changes in the cells of the cervix that are not cancer. This may lead to unnecessary follow-up tests and possibly treatment. Women in this age group have a very low risk of cervical cancer and it is likely that any cell abnormalities will go away on their own.
- False-negative test results can occur (the screening test results may appear to be normal even though cervical precancer or cancer is present). A woman who receives a false-negative test result may delay seeking medical care even if she has symptoms.
- False-positive test results can occur (the screening test results may appear to be abnormal even though no precancer or cancer is present). This can cause anxiety and may lead to more tests and procedures (e.g., colposcopy), which also have risks.

Maryland Department of Health Medical Advisory Committee Public Health Intervention for Cervical Cancer
• For average risk individuals, ages 21 to 29 years old, screen for cervical cancer every three years with cervical cytology alone. • For average risk individuals, ages 30 to 65 years old, screen every three years with cervical cytology alone, every five years with high-risk HPV (hrHPV) testing alone, or every five years with hrHPV testing in combination with cytology (co-testing).

Individuals should discuss the risk factors for cervical cancer, ways to prevent cervical cancer, and screening tests with their healthcare provider.

Note: For information on the Cervical Cancer Prevention and Screening PDQ, please see Appendix C.

Table 65
Number of Cases for Cervical Cancer by Jurisdiction and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	194	83	72	24	12	0
Allegany	<6	<6	0	<6	0	0
Anne Arundel	21	11	<6	<6	<6	0
Baltimore City	19	<6	13	<6	0	0
Baltimore	31	17	s	<6	0	0
Calvert	<6	<6	0	0	0	0
Caroline	<6	<6	<6	0	0	0
Carroll	<6	<6	0	0	0	0
Cecil	<6	<6	0	0	0	0
Charles	<6	<6	<6	0	0	0
Dorchester	0	0	0	0	0	0
Frederick	7	<6	<6	<6	0	0
Garrett	<6	<6	0	0	0	0
Harford	6	<6	<6	0	0	0
Howard	7	<6	<6	0	<6	0
Kent	<6	<6	0	0	0	0
Montgomery	25	<6	9	<6	<6	0
Prince George's	34	<6	19	9	<6	0
Queen Anne's	0	0	0	0	0	0
St. Mary's	11	6	<6	0	0	0
Somerset	<6	<6	0	0	0	0
Talbot	0	0	0	0	0	0
Washington	<6	<6	<6	0	0	0
Wicomico	<6	<6	0	0	0	0
Worcester	<6	<6	0	0	<6	0

Total includes cases reported as unknown race/ethnicity and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 66
Cervical Cancer Age-Adjusted Incidence Rates* by Jurisdiction and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	5.7	4.8	6.6	8.2	**	0.0
Allegany	**	**	0.0	**	0.0	0.0
Anne Arundel	6.7	**	**	**	**	0.0
Baltimore City	5.8	**	**	**	0.0	0.0
Baltimore	6.6	6.0	**	**	0.0	0.0
Calvert	**	**	0.0	0.0	0.0	0.0
Caroline	**	**	**	0.0	0.0	0.0
Carroll	**	**	0.0	0.0	0.0	0.0
Cecil	**	**	0.0	0.0	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
Garrett	**	**	0.0	0.0	0.0	0.0
Harford	**	**	**	0.0	0.0	0.0
Howard	**	**	**	0.0	**	0.0
Kent	**	**	0.0	0.0	0.0	0.0
Montgomery	4.3	**	**	**	**	0.0
Prince George's	6.1	**	4.8	**	**	0.0
Queen Anne's	0.0	0.0	0.0	0.0	0.0	0.0
St. Mary's	**	**	**	0.0	0.0	0.0
Somerset	**	**	0.0	0.0	0.0	0.0
Talbot	0.0	0.0	0.0	0.0	0.0	0.0
Washington	**	**	**	0.0	0.0	0.0
Wicomico	**	**	0.0	0.0	0.0	0.0
Worcester	**	**	0.0	0.0	**	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 67
Number of Deaths for Cervical Cancer by Jurisdiction and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	72	30	29	8	<6	<6
Allegany	<6	<6	<6	<6	<6	<6
Anne Arundel	<6	<6	<6	<6	<6	<6
Baltimore City	10	<6	8	<6	<6	<6
Baltimore	7	<6	<6	<6	<6	<6
Calvert	<6	<6	<6	<6	<6	<6
Caroline	<6	<6	<6	<6	<6	<6
Carroll	<6	<6	<6	<6	<6	<6
Cecil	<6	<6	<6	<6	<6	<6
Charles	<6	<6	<6	<6	<6	<6
Dorchester	<6	<6	<6	<6	<6	<6
Frederick	<6	<6	<6	<6	<6	<6
Garrett	<6	<6	<6	<6	<6	<6
Harford	<6	<6	<6	<6	<6	<6
Howard	<6	<6	<6	<6	<6	<6
Kent	<6	<6	<6	<6	<6	<6
Montgomery	9	<6	<6	<6	<6	<6
Prince George's	15	<6	10	<6	<6	<6
Queen Anne's	<6	<6	<6	<6	<6	<6
St. Mary's	<6	<6	<6	<6	<6	<6
Somerset	<6	<6	<6	<6	<6	<6
Talbot	<6	<6	<6	<6	<6	<6
Washington	<6	<6	<6	<6	<6	<6
Wicomico	<6	<6	<6	<6	<6	<6
Worcester	<6	<6	<6	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration.

Table 68
Cervical Cancer Age-Adjusted Mortality Rates* by Jurisdiction and Race/Ethnicity, Maryland, 2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	1.9	1.4	2.4	**	**	**
Allegany	**	**	**	**	**	**
Anne Arundel	**	**	**	**	**	**
Baltimore City	**	**	**	**	**	**
Baltimore	**	**	**	**	**	**
Calvert	**	**	**	**	**	**
Caroline	**	**	**	**	**	**
Carroll	**	**	**	**	**	**
Cecil	**	**	**	**	**	**
Charles	**	**	**	**	**	**
Dorchester	**	**	**	**	**	**
Frederick	**	**	**	**	**	**
Garrett	**	**	**	**	**	**
Harford	**	**	**	**	**	**
Howard	**	**	**	**	**	**
Kent	**	**	**	**	**	**
Montgomery	**	**	**	**	**	**
Prince George's	**	**	**	**	**	**
Queen Anne's	**	**	**	**	**	**
St. Mary's	**	**	**	**	**	**
Somerset	**	**	**	**	**	**
Talbot	**	**	**	**	**	**
Washington	**	**	**	**	**	**
Wicomico	**	**	**	**	**	**
Worcester	**	**	**	**	**	**

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

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Table 69
Number of Cases for Cervical Cancer by Jurisdiction and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	1,077	526	356	126	54	<6
Allegany	13	s	0	<6	0	0
Anne Arundel	109	72	25	7	<6	0
Baltimore City	145	37	91	12	<6	<6
Baltimore	143	82	48	8	<6	0
Calvert	<6	<6	0	0	0	0
Caroline	10	8	<6	0	0	0
Carroll	27	27	0	0	0	0
Cecil	22	s	0	0	<6	0
Charles	30	9	16	<6	<6	<6
Dorchester	9	<6	<6	0	0	0
Frederick	38	29	<6	<6	<6	0
Garrett	<6	<6	0	0	0	0
Harford	44	38	<6	<6	<6	0
Howard	43	26	8	<6	<6	0
Kent	<6	<6	0	0	0	0
Montgomery	143	41	36	35	23	<6
Prince George's	172	21	100	45	<6	0
Queen Anne's	9	s	<6	<6	0	0
St. Mary's	23	15	s	0	<6	0
Somerset	<6	<6	<6	0	0	0
Talbot	9	s	0	<6	0	0
Washington	32	27	<6	<6	0	0
Wicomico	22	17	<6	<6	<6	0
Worcester	16	12	<6	<6	<6	0

Total includes cases reported as unknown race/ethnicity and unknown jurisdiction

<6 = Case counts of 1-5 are suppressed per MDH/MCR Data Use Policy

s = Case counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 70
Cervical Cancer Age-Adjusted Incidence Rates* by Jurisdiction and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	6.4	6.0	6.4	9.6	4.1	**
Allegany	**	**	0.0	**	0.0	0.0
Anne Arundel	6.9	6.6	8.5	**	**	0.0
Baltimore City	8.6	8.3	8.0	**	**	**
Baltimore	6.1	6.0	6.5	**	**	0.0
Calvert	**	**	0.0	0.0	0.0	0.0
Caroline	**	**	**	0.0	0.0	0.0
Carroll	6.0	6.7	0.0	0.0	0.0	0.0
Cecil	8.8	9.8	0.0	0.0	**	0.0
Charles	6.5	**	7.1	**	**	**
Dorchester	**	**	**	0.0	0.0	0.0
Frederick	5.3	5.3	**	**	**	0.0
Garrett	**	**	0.0	0.0	0.0	0.0
Harford	6.1	6.9	**	**	**	0.0
Howard	4.8	6.0	**	**	**	0.0
Kent	**	**	0.0	0.0	0.0	0.0
Montgomery	4.6	2.7	6.4	7.4	4.0	**
Prince George's	6.8	5.9	5.4	14.9	**	0.0
Queen Anne's	**	**	**	**	0.0	0.0
St. Mary's	7.3	**	**	0.0	**	0.0
Somerset	**	**	**	0.0	0.0	0.0
Talbot	**	**	0.0	**	0.0	0.0
Washington	8.4	8.3	**	**	0.0	0.0
Wicomico	8.4	10.8	**	**	**	0.0
Worcester	10.9	**	**	**	**	0.0

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry, SEER*Stat Static data as of January 29, 2024

Table 71
Number of Deaths for Cervical Cancer by Jurisdiction and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	368	165	151	32	18	<6
Allegany	6	s	<6	<6	<6	<6
Anne Arundel	29	21	6	<6	<6	<6
Baltimore City	72	15	52	<6	<6	<6
Baltimore	41	22	15	<6	<6	<6
Calvert	<6	<6	<6	<6	<6	<6
Caroline	<6	<6	<6	<6	<6	<6
Carroll	11	s	<6	<6	<6	<6
Cecil	<6	<6	<6	<6	<6	<6
Charles	14	<6	9	<6	<6	<6
Dorchester	<6	<6	<6	<6	<6	<6
Frederick	14	11	<6	<6	<6	<6
Garrett	<6	<6	<6	<6	<6	<6
Harford	11	9	<6	<6	<6	<6
Howard	11	7	<6	<6	<6	<6
Kent	<6	<6	<6	<6	<6	<6
Montgomery	43	13	11	12	s	<6
Prince George's	68	11	44	9	<6	<6
Queen Anne's	<6	<6	<6	<6	<6	<6
St. Mary's	<6	<6	<6	<6	<6	<6
Somerset	<6	<6	<6	<6	<6	<6
Talbot	<6	<6	<6	<6	<6	<6
Washington	11	7	<6	<6	<6	<6
Wicomico	9	7	<6	<6	<6	<6
Worcester	<6	<6	<6	<6	<6	<6

<6 = Death counts of 0-5 are suppressed per MDH/CCPC Mortality Data Suppression Policy

s = Death counts are suppressed to prevent disclosure of data in other cell(s) (See Appendix C for methods)

All race counts, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration.

Table 72
Cervical Cancer Age-Adjusted Mortality Rates* by Jurisdiction and Race/Ethnicity, Maryland, 2017-2021

Jurisdiction	Total	Race/Ethnicity				
		White	Black	Hispanic	API	AIAN
Maryland	2.0	1.6	2.6	2.9	**	**
Allegany	**	**	**	**	**	**
Anne Arundel	1.6	1.5	**	**	**	**
Baltimore City	4.2	**	4.4	**	**	**
Baltimore	1.5	1.3	**	**	**	**
Calvert	**	**	**	**	**	**
Caroline	**	**	**	**	**	**
Carroll	**	**	**	**	**	**
Cecil	**	**	**	**	**	**
Charles	**	**	**	**	**	**
Dorchester	**	**	**	**	**	**
Frederick	**	**	**	**	**	**
Garrett	**	**	**	**	**	**
Harford	**	**	**	**	**	**
Howard	**	**	**	**	**	**
Kent	**	**	**	**	**	**
Montgomery	1.3	**	**	**	**	**
Prince George's	2.5	**	2.2	**	**	**
Queen Anne's	**	**	**	**	**	**
St. Mary's	**	**	**	**	**	**
Somerset	**	**	**	**	**	**
Talbot	**	**	**	**	**	**
Washington	**	**	**	**	**	**
Wicomico	**	**	**	**	**	**
Worcester	**	**	**	**	**	**

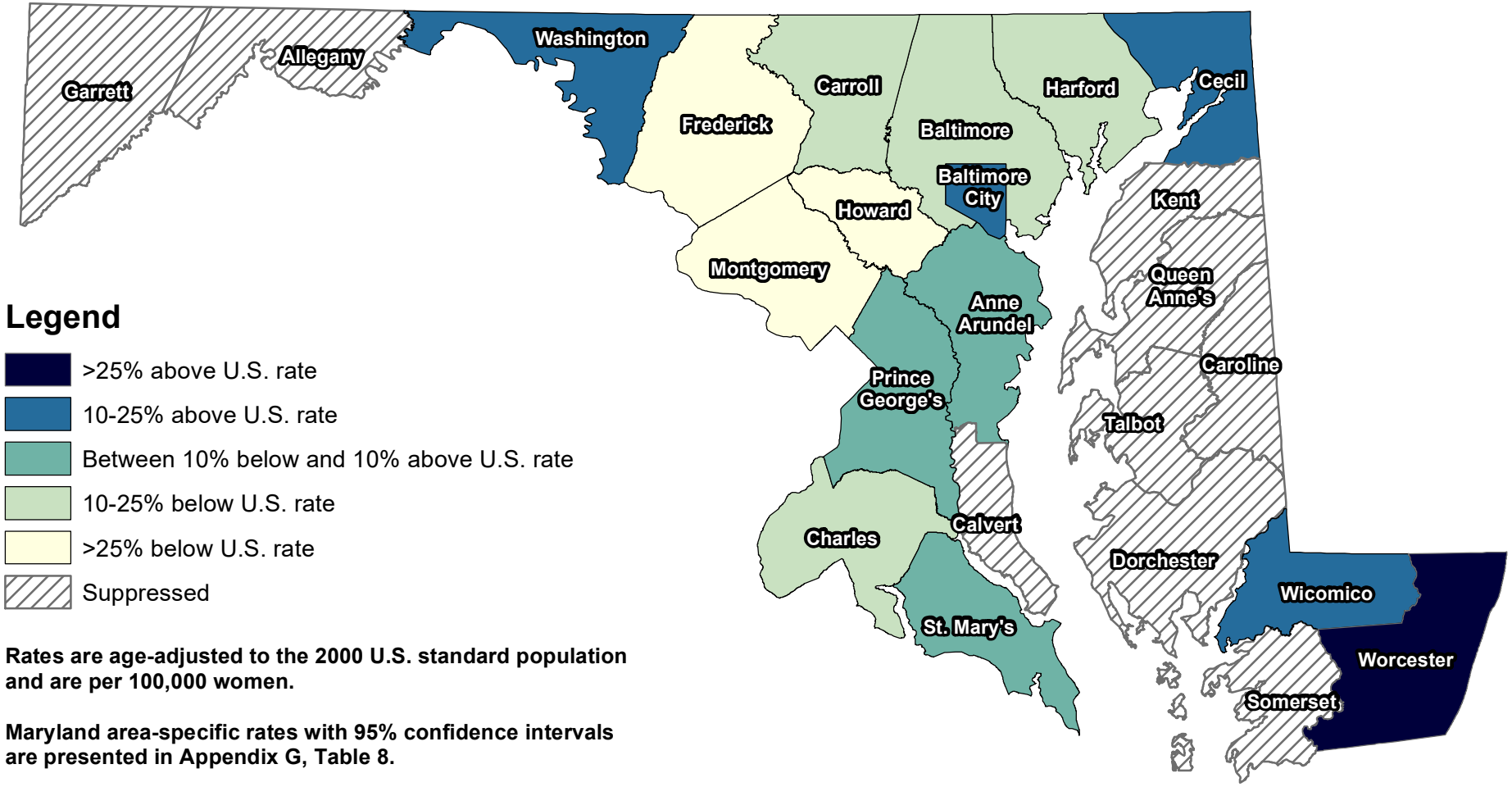
* Rates are per 100,000 women and age-adjusted to 2000 U.S. standard population

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Department of Health Vital Statistics Administration

Maryland Cervical Cancer Incidence Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 8.

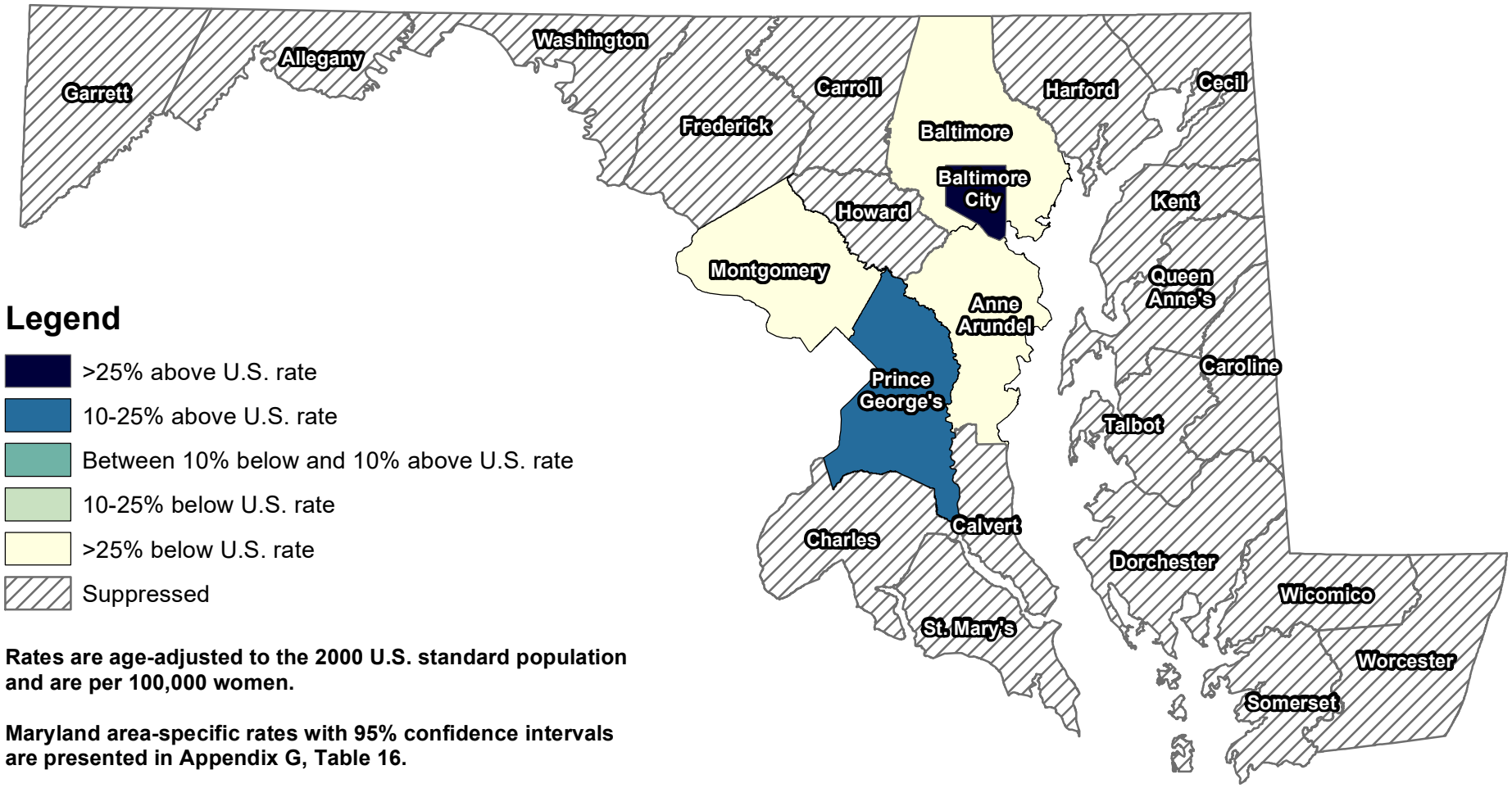
U.S. cervical cancer incidence rate, 2017-2021: 7.4 / 100,000

Maryland cervical cancer incidence rate, 2017-2021: 6.4 / 100,000

Sources: Maryland Cancer Registry
U.S. SEER, SEER*Stat Database

Note: Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures.

Maryland Cervical Cancer Mortality Rates by Geographical Area: Comparison to U.S. Rate, 2017-2021



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

Maryland area-specific rates with 95% confidence intervals are presented in Appendix G, Table 16.

U.S. cervical cancer mortality rate, 2017-2021: 2.2 / 100,000

Maryland cervical cancer mortality rate, 2017-2021: 2.0 / 100,000

Sources: Maryland Department of Health Vital Statistics Administration
U.S. SEER, Cancer Statistics Review

Note: Rates based on case counts of 0-19 are suppressed per MDH/CCPC Data Use Policy and Procedures.

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Appendix A

Cigarette Restitution Fund
Cancer Report Requirements

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Cigarette Restitution Fund Cancer Report Requirements

The Maryland General Assembly established the CRF to provide for the distribution of funds from the tobacco settlement (House Bill 1425, Chapter 17 of the Acts of 2000 and Senate Bill 896, Chapter 18 of the Acts of 2000). The law created the Tobacco Use Prevention and Cessation Program and the Cancer Prevention, Education, Screening and Treatment Program, and provides parameters on how the funds may be spent. Maryland Health General Article § 13-1104 requires MDH to conduct a baseline cancer study (2000) as well as cancer studies at least every other year thereafter.

§13-1104 requires that the study include:

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

This information is provided in this Cancer Report as follows:

Required Component of the Cancer Report	***Location of Information in this Report***
1. Number and percentage of individuals having all cancers and each targeted cancer, both Statewide and in each jurisdiction.	Tables 1, 2, 3, 6, 7, 10, 11, 12, 15, 16, 19, 20, 21, 24, 25, 28, 29, 30, 33, 34, 37, 38, 39, 42, 43, 46, 47, 48, 51, 52, 55, 56, 57, 60, 61, 64, 65, 66, 69, 70
2. Number and percentage of individuals within each minority population having each targeted cancer, both Statewide and in each jurisdiction.	Same as above.
3. Mortality rate for each targeted cancer, both Statewide and in each jurisdiction.	Tables 1, 4, 5, 8, 9, 10, 13, 14, 17, 18, 19, 22, 23, 26, 27, 28, 31, 32, 35, 36, 37, 40, 41, 44, 45, 46, 49, 50, 53, 54, 55, 58, 59, 62, 63, 64, 67, 68, 71, 72
4. Mortality rate for the different minority populations for each targeted cancer, both Statewide and in each county.	Same as above.
5. Number of identifiable cancers with a high incidence in the State for which there are effective methods of prevention and early detection, and treatment after detection.	High incidence and effective prevention: Lung cancer: Tables 10, 11, 12, 15, 16 High incidence and effective detection: Colorectal and breast cancer: Tables 19, 20, 21, 24, 25, 28, 29, 30, 33, 34

6. Other aspects of targeted and non-targeted cancers that MDH seeks to measure.	For all cancer sites and for each targeted cancer, the report: 1. Compares Maryland incidence and mortality rates to that of the U.S. 2. Delineates incidence and mortality trends by race/ethnicity. 3. Shows 5-year mortality trends and 5-year combined data. 4. Presents 5-year incidence trends and 5-year combined data. 5. Tracks stage of disease at diagnosis over a 5-year period. 6. Lists appropriate objective(s) and target(s) showing trend data for each targeted cancer and identifies Maryland's progress in meeting the respective objective(s). 7. Describes the evidence for screening, primary prevention, and chemoprevention for each targeted cancer, based on current scientific literature. 8. Describes the recommended public health intervention for each targeted cancer based on the evidence referenced above. This information is located throughout the report.
7. Other factors that MDH determines to be important for measuring rates of cancer in the State or for evaluating whether the program meets its objectives.	Same as above.

Appendix B

Cancer Report Format

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Cancer Report Format

1. Selection of Targeted Cancers

Under the CRF-CPEST Program, the MDH targets seven cancer sites: lung and bronchus, colon and rectum, female breast, prostate, oral, melanoma of the skin, and cervix. These cancers are targeted because they can be prevented or detected early and treated, or are a major cause of cancer death.

2. Report Format

Information provided in this report focuses on all cancer sites reported in Maryland and the seven specific cancer sites targeted by the CPEST Program. The main body of the 2024 CRF Cancer Report focuses on the most recent data (2021 and 5-year combined data for the period 2017 to 2021).

Section I of the 2024 CRF Cancer Report is an Executive Summary, including an introduction to the report, highlights of major findings for each cancer, and a brief description of major changes to this report from the last (2022) CRF Cancer Report.

Section II of the report describes overall cancer incidence and mortality in Maryland for all cancer sites combined. This section includes graphs comparing long-term trends (2012 to 2021) in overall cancer incidence and mortality rates for Maryland and the U.S.; 5-year incidence and mortality trends (2017 to 2021) for all cancer sites (overall and by race/ethnicity); and trends in stage for all cancers diagnosed in Maryland (2017 to 2021).

Section III presents cancer incidence and mortality data for the seven cancers targeted under the CRF Program. Each chapter includes a comparison of the Maryland 2021 incidence and mortality rates and U.S. rates in the overview text and table. Maryland mortality rankings among the 50 states and the District of Columbia, based on 2021 mortality rates, are also described. Graphics are included in each chapter to depict the following: trends in cancer incidence and mortality rates in both Maryland and the U.S. for the 5-year period 2017-2021; 5-year trends in cancer incidence and mortality rates by race/ethnicity (gender used for melanoma); 5-year trends in cancer stage at time of diagnosis; difference in stage at diagnosis by race/ethnicity; and prevalence of cancer screening and cancer-risk behaviors in Maryland compared to Healthy People 2030 targets or Maryland Comprehensive Cancer Control Plan 2021-2025 targets. Public health evidence and recommendations for public health intervention are also described for each targeted cancer. The number of new cancer cases, number of cancer deaths, and age-adjusted cancer incidence and mortality rates for each cancer are tabulated by gender (for lung and bronchus, colon and rectum, oral, and melanoma of the skin only), race (except for melanoma of the skin), and jurisdiction for 2021 and for the 5-year period from 2017 to 2021. All rates are age-adjusted to the 2000 U.S. standard population. Maps included in each cancer chapter display Maryland incidence and mortality rates compared to corresponding U.S. rates for the combined years 2017 to 2021 by geographical area (see Appendix G for map data).

Appendix A describes the statutory basis for the Cancer Report and includes a table addressing each required component and its location in this report. Appendix C describes the sources of data used to prepare the 2024 Cancer Report and specific data considerations (e.g., data confidentiality and statistical methods). Maryland population estimates for 2021 by race and gender are presented in Appendix D. The population data in these tables can be used as denominators for calculating crude incidence and mortality rates. Appendix E depicts the 2000 U.S. standard population organized by age groupings. Appendix F contains a listing of International Classification of Diseases for Oncology (ICD-O-3) codes for incidence, along with corresponding ICD-10 codes for mortality for the cancer sites included in the report. Appendix G presents age-adjusted incidence and mortality rates with 95% confidence intervals by Maryland geographical area (state, region, and jurisdiction). Appendix H tables display trends in cancer incidence and mortality rates, by cancer site and race/ethnicity (gender used for melanoma), over the 5-year period (2017 to 2021). Appendix I tables show the distribution of cancer stage at diagnosis for all cancer sites and the targeted cancers, by year, from 2017 to 2021. Appendix J tables depict trends in incidence and mortality rates for all cancer sites from 2012 to 2021 in Maryland and the U.S. Appendix K tables depict the 2021 incidence and mortality rates for all cancers in both the U.S. and Maryland with 95% confidence intervals, by race/ethnicity (except for melanoma, where it is by gender). Appendix L tables depict the stage at diagnosis for the combined period of 2017 to 2021 for cancer by race/ethnicity (except for melanoma, where it is by gender).

Appendix C

Cancer Data Sources, References, and Data Considerations

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2024 Cigarette Restitution Fund (CRF) Cancer Report
Sources, References, and Data Considerations

I. DATA SOURCES

Data and information presented in the 2024 Cigarette Restitution Fund (CRF) Cancer Report were obtained from a variety of sources, including:

- Maryland Department of Health (MDH)
  - Center for Cancer Prevention and Control (CCPC)
  - Center for Chronic Disease Prevention and Control
  - Center for Tobacco Prevention and Control
  - Vital Statistics Administration
  - Maryland Assessment Tool for Community Health (MATCH)
- National Cancer Institute (NCI, part of the National Institutes of Health)
- Centers for Disease Control and Prevention (CDC)

These sources and the types of information provided for the 2024 CRF Cancer Report are described in the following sections.

A. Cancer Incidence and Stage Data

1. Maryland Cancer Registry

The Maryland Cancer Registry (MCR), CCPC, MDH, is the source for all Maryland-specific cancer incidence and cancer stage data used in this report. The MCR is a computerized data system that collects and consolidates reports of all new cases of reportable cancers (excluding non-genital squamous cell or basal cell skin cancer) that are diagnosed and/or treated in Maryland and reported to the MCR. Incidence rates used in this report were calculated using cases reported to the MCR as of January 29, 2024, for the diagnosis year 2021.

Maryland cancer reporting law (Health-General Article §18-203 and 18-204) and regulations (Code of Maryland Regulations 10.14.01) mandate the collection of cancer information from Maryland-licensed hospitals, radiation therapy centers, diagnostic pathology laboratories, freestanding ambulatory care facilities, surgical centers, and physicians whose non-hospitalized cancer patients are not otherwise reported. The MCR has also signed the NAACCR National Interstate Data Exchange Agreement and at the point of reporting receives abstracts from 34 other states/jurisdictions: Alabama, Arkansas, California, Colorado, Delaware, Florida, Georgia, Idaho, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and the District of Columbia. Information on Maryland residents diagnosed and/or treated for cancer in these jurisdictions is included in this report.

2. Surveillance, Epidemiology, and End Results Program

The Surveillance, Epidemiology, and End Results (SEER) Program, managed by the NCI, is an authoritative source of information on cancer incidence, stage, and survival in the U.S.

The SEER Program, which began in 1973 and provides incidence rates representative of the U.S., collects, analyzes, and publishes cancer incidence and survival data from population-based cancer registries participating in the program. Since 2000, SEER incidence data has been collected from 22 SEER registries throughout the U.S. (SEER 22 registry database) and covers approximately 47.9% of the U.S. population. The SEER Program includes select geographic areas based on their ability to operate and maintain a high-quality population-based cancer reporting system and for their epidemiologically significant population subgroups. The population covered by SEER is comparable to the general U.S. population with regards to measures of poverty and education; however, it is also selectively more urban and has a higher proportion of foreign-born persons than the general U.S. population.

SEER 22 incidence data are used in this report to compare national data with the most recent Maryland incidence data (2017-2021), as they provide the broadest population coverage currently available. All SEER incidence rates were obtained by the MCR from SEER*Stat (version 8.4.3), a statistical software tool for the analysis of SEER and other cancer-related databases. Additional information about SEER can be found at http://www.seer.cancer.gov.

The Maryland population estimates for 2021 presented in Appendix D were also obtained from SEER*Stat.

B. Cancer Mortality Data

Maryland mortality data for 2021 and the 5-year aggregate data (2017 to 2021) were acquired from Maryland Department of Health Vital Statistics Administration. Maryland mortality single year data for 2017 to 2020, when not stratified by race/ethnicity, presented in this report were obtained from the National Center for Health Statistics (NCHS) Underlying Causes of Death accessed using CDC WONDER. Data are based on death certificates for U.S. residents. Each death certificate identifies a single underlying cause of death and demographic data. Mortality data for the individual years 2012 to 2016 for Maryland were obtained from the 1999-2016 CMF using ICD Tenth Revision (ICD-10) codes. The U.S. mortality rates for single year 2012 to 2021 and 5-year aggregate data (2017 to 2021) were obtained from SEER, Cancer Statistics Review (CSR), which are provided by NCHS.

C. Behavioral and Risk Factor Data

The data on the prevalence of cancer screening and prevalence of various risk factors for cancer (e.g., sun exposure) in Maryland are obtained from several different sources, as described below.

1. Maryland Behavioral Risk Factor Surveillance System

The Maryland BRFSS is used as a source of data on the prevalence of cancer screening (e.g., mammograms) and cancer risk behaviors (e.g., sun exposure) in Maryland. The BRFSS is an annual telephone survey conducted on a random sample of Maryland adult residents and is managed by the Center for Chronic Disease Prevention and Control, Cancer and Chronic Disease Bureau at MDH. This survey provided risk behavior and cancer screening information for this report. Maryland data can be accessed at https://ibis.health.maryland.gov and Maryland and state-aggregated national data on health risk behavior can also be obtained from the CDC BRFSS website at http://www.cdc.gov/brfss.

2. Healthy People 2030

Healthy People (HP) 2030 is a collaboration of local and national governmental agencies and private organizations that have developed prevention-oriented national objectives to improve the health of Americans. The HP initiative is under the Office of Disease Prevention and Health Promotion at the U.S. Department of Health and Human Services (DHHS). The overarching HP 2030 goal for cancer prevention is to "reduce new cases of cancer and cancer-related illness, disability, and death." To achieve this goal, measurable objectives related to cancer screening and cancer risk behaviors were established, each with a specific quantitative target, and several of these targets are used as benchmarks by which Maryland's progress can be measured. The HP 2030 objectives were released in late 2020 and additional information can be found at http://www.healthypeople.gov.

3. Maryland Comprehensive Cancer Control Plan (MCCCP), 2021-2025

The MCCCP contains goals and targets to be met by the State by the end of a 5-year period (2021 to 2025), which serve as a guide for health professionals who are involved in planning, directing, implementing, evaluating, or performing research on cancer control in Maryland. Targets in this report are referred to as the 2025 MCCCP targets.

The 2021-2025 MCCCP was the coordinated effort of 49 stakeholders and several MDH offices and centers, with the aim of developing a cancer resource for individuals, healthcare providers, and organizations. The MCCCP is directed by CCPC, MDH, with broad input from a partnership of public and private stakeholders. Additional information can be found at https://phpa.health.maryland.gov/cancer/cancerplan/Pages/publications.aspx.

II. REFERENCES USED FOR PUBLIC HEALTH EVIDENCE AND PUBLIC HEALTH INTERVENTION SECTIONS

A. National Cancer Institute (NCI) Physician Data Query (PDQ)

The NCI PDQ cancer information summaries are comprehensive, evidence-based summaries on topics that cover adult and pediatric cancer treatment, supportive and palliative care, screening, prevention, genetics, and integrative, alternative, and complementary therapies. Information provided in the individual cancer chapters under the section "Public Health Evidence" was taken primarily from the NCI PDQ Patient Version websites. Links to the Health Professional version of the NCI PDQ are available below. Contents of the NCI PDQ are often quoted verbatim and sometimes paraphrased, and NCI PDQ definitions are included in the Glossary.

The NCI PDQ Editorial Boards are responsible for producing and maintaining comprehensive, evidence-based cancer information summaries. There are six NCI PDQ Editorial Boards, and each board is comprised of experts in cancer-related specialties. Each Editorial Board meets regularly to review and update the cancer information summaries on the basis of newly published research results. Each PDQ Editorial Board is supported by a corresponding Editorial Advisory Board that reviews the PDQ cancer information summaries on a regular basis and makes recommendations for changes to be considered by the corresponding core Editorial Board.

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

Levels of Evidence
http://www.cancer.gov/publications/pdq/levels-evidence/screening-prevention

Prevention and Screening
https://www.cancer.gov/publications/pdq/information-summaries/prevention
https://www.cancer.gov/publications/pdq/information-summaries/screening

Lung Cancer
Patient Version
PDQ® Screening and Prevention Editorial Board. *Lung Cancer Prevention (PDQ®) – Patient Version.* Bethesda, MD: National Cancer Institute. Updated 10/24/2023. Available at https://www.cancer.gov/types/lung/patient/lung-prevention-pdq. Accessed April 29, 2024. [PMID: 26389497]

PDQ® Screening and Prevention Editorial Board. *Lung Cancer Screening (PDQ®) – Patient Version*. Bethesda, MD: National Cancer Institute. Updated 10/24/2023. Available at https://www.cancer.gov/types/lung/patient/lung-screening-pdq. Accessed April 29, 2024. [PMID: 26389428]

Health Professional Version
PDQ Lung Cancer Prevention – available at https://www.cancer.gov/types/lung/hp/lung-prevention-pdq

PDQ Lung Cancer Screening – available at https://www.cancer.gov/types/lung/hp/lung-screening-pdq

Colorectal Cancer
Patient Version
PDQ® Screening and Prevention Editorial Board. *Colorectal Cancer Prevention (PDQ®) - Patient Version*. Bethesda, MD: National Cancer Institute. Updated 10/25/2023. Available at https://www.cancer.gov/types/colorectal/patient/colorectal-prevention-pdq. Accessed April 29, 2024. [PMID: 26389376]

PDQ® Screening and Prevention Editorial Board. *Colorectal Cancer Screening (PDQ®) - Patient Version*. Bethesda, MD: National Cancer Institute. Updated 10/20/2023. Available at https://www.cancer.gov/types/colorectal/patient/colorectal-screening-pdq. Accessed April 29, 2024. [PMID: 26389230]

Health Professional Version
PDQ Colorectal Cancer Prevention – available at https://www.cancer.gov/types/colorectal/hp/colorectal-prevention-pdq

PDQ Colorectal Cancer Screening – available at https://www.cancer.gov/types/colorectal/hp/colorectal-screening-pdq

Female Breast Cancer
Patient Version
PDQ® Screening and Prevention Editorial Board. *Breast Cancer Prevention (PDQ®) - Patient Version*. Bethesda, MD: National Cancer Institute. Updated 6/26/2023. Available at https://www.cancer.gov/types/breast/patient/breast-prevention-pdq. Accessed April 29, 2024. [PMID: 26389410]

PDQ® Screening and Prevention Editorial Board. *Breast Cancer Screening (PDQ®) - Patient Version*. Bethesda, MD: National Cancer Institute. Updated 6/26/2023. Available at https://www.cancer.gov/types/breast/patient/breast-screening-pdq. Accessed April 29, 2024. [PMID: 26389160]

Health Professional Version
PDQ Breast Cancer Prevention – available at https://www.cancer.gov/types/breast/hp/breast-prevention-pdq

PDQ Breast Cancer Screening – available at https://www.cancer.gov/types/breast/hp/breast-screening-pdq

Prostate Cancer
Patient Version
PDQ® Screening and Prevention Editorial Board. *Prostate Cancer Prevention (PDQ®) - Patient Version*. Bethesda, MD: National Cancer Institute. Updated 10/23/2023. Available at https://www.cancer.gov/types/prostate/patient/prostate-prevention-pdq. Accessed April 29, 2024. [PMID: 26389260]

PDQ® Screening and Prevention Editorial Board. *Prostate Cancer Screening (PDQ®) - Patient Version*. Bethesda, MD: National Cancer Institute. Updated 10/20/2023. Available at https://www.cancer.gov/types/prostate/patient/prostate-screening-pdq. Accessed April 29, 2024. [PMID: 26389306]

Health Professional Version
PDQ Prostate Cancer Prevention – available at https://www.cancer.gov/types/prostate/hp/prostate-prevention-pdq

PDQ Prostate Cancer Screening – available at https://www.cancer.gov/types/prostate/hp/prostate-screening-pdq

Oral Cancer
Patient Version
PDQ® Screening and Prevention Editorial Board. *Oral Cavity, Oropharyngeal, Hypopharyngeal, and Laryngeal Cancers Prevention (PDQ®) - Patient Version*. Bethesda, MD: National Cancer Institute. Updated 6/30/2023. Available at https://www.cancer.gov/types/head-and-neck/patient/oral-prevention-pdq. Accessed April 29, 2024. [PMID: 26389257]

PDQ® Screening and Prevention Editorial Board. *Oral Cavity and Nasopharyngeal Cancers Screening (PDQ®) - Patient Version*. Bethesda, MD: National Cancer Institute. Updated 6/10/2022. Available at https://www.cancer.gov/types/head-and-neck/patient/oral-screening-pdq. Accessed April 29, 2024. [PMID: 26389441]

Health Professional Version
PDQ Oral Cavity, Oropharyngeal, Hypopharyngeal, and Laryngeal Cancers Prevention – available at https://www.cancer.gov/types/head-and-neck/hp/oral-prevention-pdq

PDQ Oral Cavity and Nasopharyngeal Cancers Screening – available at https://www.cancer.gov/types/head-and-neck/hp/oral-screening-pdq

Skin Cancer
Patient Version
PDQ® Screening and Prevention Editorial Board. *Skin Cancer Prevention (PDQ®) - Patient Version*. Bethesda, MD: National Cancer Institute. Updated 10/23/2023. Available at https://www.cancer.gov/types/skin/patient/skin-prevention-pdq. Accessed April 30, 2024. [PMID: 26389434]

PDQ® Screening and Prevention Editorial Board. *Skin Cancer Screening (PDQ®) - Patient Version*. Bethesda, MD: National Cancer Institute. Updated 3/30/2023. Available at https://www.cancer.gov/types/skin/patient/skin-screening-pdq. Accessed April 30, 2024. [PMID: 26389182]

Health Professional Version
PDQ Skin Cancer Prevention – available at https://www.cancer.gov/types/skin/hp/skin-prevention-pdq

PDQ Skin Cancer Screening – available at https://www.cancer.gov/types/skin/hp/skin-screening-pdq

Cervical Cancer
Patient Version (no patient version PDQ® available)
Cervical Cancer Causes, Risk Factors, and Prevention. Bethesda, MD: National Cancer Institute. Updated 8/18/2023. Available at https://www.cancer.gov/types/cervical/causes-risk-prevention. Accessed April 30, 2024. [PMID: 26389339]

Cervical Cancer Screening. Bethesda, MD: National Cancer Institute. Updated 4/27/2023. Available at https://www.cancer.gov/types/cervical/screening. Accessed April 30, 2024. [PMID: 26389215]

Health Professional Version
PDQ Cervical Cancer Prevention – available at https://www.cancer.gov/types/cervical/hp/cervical-prevention-pdq

PDQ Cervical Cancer Screening – available at https://www.cancer.gov/types/cervical/hp/cervical-screening-pdq

B. Maryland Department of Health Center for Cancer Prevention and Control Medical Advisory Committees

The Center for Cancer Prevention and Control convened Medical Advisory Committees to formulate guidelines for cancer screening, diagnosis, and/or treatment for use by programs funded by the Maryland Department of Health.

C. Additional Medical Literature

The USPSTF recommendations are used throughout the report and the contents of the USPSTF Recommendation Statements are often quoted verbatim and sometimes paraphrased. For additional information, the website is https://www.uspreventiveservicestaskforce.org/uspstf/

Lung Cancer
Final Recommendation Statement: Lung Cancer: Screening. U.S. Preventive Services Task Force. March 9, 2021. https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/lung-cancer-screening. Accessed April 30, 2024.

Colorectal Cancer
Final Recommendation Statement: Colorectal Cancer: Screening. U.S. Preventive Services Task Force. May 18, 2021. https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Accessed April 30, 2024.

Female Breast Cancer
Final Recommendation Statement: Breast Cancer: Screening. U.S. Preventive Services Task Force. April 30, 2024. https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/breast-cancer-screening. Accessed April 30, 2024.

Prostate Cancer
Final Recommendation Statement: Prostate Cancer: Screening. U.S. Preventive Services Task Force. May 8, 2018. https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/prostate-cancer-screening. Accessed April 30, 2024.

Oral Cancer
Final Recommendation Statement: Oral Cancer: Screening. U.S. Preventive Services Task Force. November 15, 2013. https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/oral-cancer-screening. Accessed April 30, 2024.

Oral Cancer Screening. Maryland Department of Health. https://health.maryland.gov/phpa/oralhealth/Documents/OralCancerEnglish.pdf. Accessed April 30, 2024.

Skin Cancer
Final Recommendation Statement: Skin Cancer: Screening. U.S. Preventive Services Task Force. April 18, 2023. https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/skin-cancer-screening. Accessed April 30, 2024.

U.S. Department of Health and Human Services. *The Surgeon General's Call to Action to Prevent Skin Cancer*. Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General; 2014. https://www.hhs.gov/sites/default/files/call-to-action-prevent-skin-cancer.pdf. Accessed April 30, 2024

Cervical Cancer
Final Recommendation Statement: Cervical Cancer: Screening. U.S. Preventive Services Task Force. August 21, 2018. https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/cervical-cancer-screening. Accessed April 29, 2024.

Meites E, Szilagyi PG, Chesson HW, Unger ER, Romero JR, Markowitz LE**.** Human Papillomavirus Vaccination for Adults: Updated Recommendations of the Advisory Committee on Immunization Practices *MMWR*. 2019;68(32);698-702.

III. DATA CONSIDERATIONS

A. Data Confidentiality

MDH regards all individual data reported to and received and processed by the MCR as confidential and ensures they are secured from unauthorized access and disclosure. The MCR manages and releases cancer information in accordance with Health-General Article, §§18-203 – 204 and §4-101 et seq., Annotated Code of Maryland, and Code of Maryland Regulations 10.14.01 ("Cancer Registry").

Because incidence data and mortality data come from different sources, separate suppression procedures are employed for release of non-confidential data. For the number of cancer cases collected by the MCR and for incidence rates calculated using case and population data, the following protocols apply: To ensure patient confidentiality and to comply with the *MCR Data Use Manual and Procedures* (July 2016; https://phpa.health.maryland.gov/cancer/Pages/mcr_data.aspx), cells with counts of 1-5 cases are suppressed and presented as "<6." Complementary suppression of case counts in additional cell(s) is used, denoted by "s," to prevent back-calculation of numbers in those cells with primary suppression. Age-adjusted incidence rates based on counts of 15 or fewer (non-zero) are presented with asterisks (**) because the rates are unstable and do not provide reliable information.

Mortality data for this report are from Maryland Department of Health Vital Statistics Administration. ICD-10 codes listed in Appendix F of this report were used for identifying the type of cancer for extraction. The following protocols are applied to mortality data in this report: Death counts of 0-5 are suppressed and denoted by "<6." Complementary suppression of death counts in additional cell(s) is used, as denoted by the letter "s," to prevent back-calculation of numbers in cells with primary suppression. Age-adjusted mortality rates based on counts of less than 20 (i.e., 0-19 deaths) are presented with asterisks (denoted by ** symbol) because the rates are unstable and do not provide reliable information. This threshold is more stringent than the criteria used in the *MDH/MCR Data Use Policy* for incidence rate suppression.

B. Gender

Gender is reported to the MCR as: a) male; b) female; c) hermaphrodite; d) transsexual; and e) unknown (not stated), but numbers and rates for only males and females are provided in this report. As a result, the totals shown in the count for number of cancer cases may not equal the sum of males and females because of cases in the other gender categories.

C. County

County is reported to the MCR as the jurisdiction of residence for each cancer case (i.e., one of the 24 jurisdictions in Maryland) or is categorized as unknown. As a result, the totals shown in the count for number of cancer cases may not equal the sum of the cancer cases across all 24 jurisdictions because of cases with unknown county.

D. Rate Analysis

Individual year incidence rates for 2021 were calculated using Maryland resident cancer cases diagnosed from January 1 through December 31 of that year and reported to the MCR as of January 29, 2024. The individual year mortality data for 2021 consists of deaths that occurred between January 1 and December 31 of that year. Multiple year incidence rates presented were calculated for 5-year rates using MCR 2017-2021 data. Corresponding mortality rates were extracted from Maryland Department of Health Vital Statistics Administration, as 5-year combined data from 2017 to 2021.

Age-adjustment, also called age-standardization, is a tool used to control for different and changing age distributions of populations in the U.S. (by states, regions, and counties), and to enable meaningful comparisons of rates over time and across these populations. Age-adjusted rates do not include cancer cases for which age has not been reported. Incidence and mortality rates in this report were calculated and age-adjusted using the 2000 U.S. standard population. Additional information on age-adjustment can be found at http://www.cdc.gov/nchs/data/statnt/statnt20.pdf.

The annual percent change (APC) is calculated for incidence and mortality trends and for tracking incidence and mortality rates by race and gender over time. See the Glossary for the definition of APC.

E. Confidence Intervals and Statistical Significance

Age-adjusted rates for specific geographic areas (e.g., national, states, regions, and counties) can be compared to determine whether differences in incidence or mortality exist between these areas. It is important to note however, that incidence and mortality rates, particularly those based on small numbers of events (cases or deaths) or small population sizes, can be highly variable from year to year. In these instances, two unadjusted rates cannot be compared side-by-side to determine whether they are statistically significantly different.

A confidence interval is used to describe the range of uncertainty around a point estimate (e.g., an incidence or mortality rate) and serves as an indicator of the precision or stability of a rate. Confidence intervals are useful in defining a range within which the typical rate for a geographic area can be expected to lie. Most confidence intervals are, by convention, calculated at the 95% level, which means that 95% of hypothetically observed confidence intervals generated will contain the true value of interest. The

smaller the number of events upon which a rate is based, the wider the confidence interval will be.

Confidence intervals for incidence and mortality rates are included in this report to facilitate comparisons between rates, such as the comparison of Maryland rates to U.S. rates. Confidence intervals for Maryland and SEER 18 incidence and mortality rates, provided by the MCR, are calculated from the SEER*Stat software. The following formula can be used to approximate the 95% CI for age-adjusted rates:

Lower limit = $R - [1.96 (R / \sqrt{n})]$

Upper limit = $R + [1.96 (R / \sqrt{n})]$

where R = age-adjusted cancer incidence or mortality rate and n = number of events (cancer cases or deaths).

When the confidence intervals around two rates (e.g., state and U.S. rates) do not overlap, it can be stated that there is a statistically significant difference between the rates. For example, Maryland's 2021 lung cancer mortality rate was 29.0 per 100,000, with a 95% confidence interval of 27.8-30.2. The 2021 U.S. SEER age-adjusted lung cancer mortality rate was 31.3 per 100,000 population, with a 95% confidence interval of 31.1-31.4. Since these confidence intervals do not overlap, the two rates are considered to be statistically significantly different (i.e., the difference between these rates is more than that expected by chance).

If the two confidence intervals overlap and if the rate for one area is included in the confidence interval of the other rate, then there is not a statistically significant difference between the rates. However, when there is overlap in the confidence intervals for two rates, and the rate for the comparison area is not included in the interval for the rate of interest, the two rates may or may not be statistically significantly different. In this situation, statistical testing methods described by NAACCR, Cancer in North America (May 2010) are used in this report to determine whether the differences between the two rates are statistically significant. An approximate confidence interval for the rate ratio of two age-adjusted rates can be calculated using the following formula:

$(R_1 / R_2)^{1 \pm z / x}$

where R_1 and R_2 are the age-adjusted rates being compared;
SE_1 and SE_2 are the standard errors for the respective rates;
z = 1.96 for 95% confidence intervals; and
$x = (R_1 - R_2) / \sqrt{(SE_1^2 + SE_2^2)}$

If the confidence interval for the rate ratio includes the value of one, then the two rates are not statistically significantly different (i.e., p-value greater than 0.05).
In this report, when two rates are not statistically significantly different, they are described as being "similar."

F. National Comparison Data

Maryland (Statewide) and county incidence and mortality rates are compared to U.S. SEER 18 incidence rates and U.S. mortality rates from NCHS (see Sections I.A and I.B).

Data used for Maryland cancer mortality ranking by cancer site are from the National Institutes of Health (NIH) National Cancer Institute (NCI) State Cancer Profiles death rates tables. Maryland's mortality ranking among the 50 states and the District of Columbia for all cancer sites combined and for specific targeted cancers is based 2021 age-adjusted rates. Because mortality rates describe the cancer burden better than incidence rates, only Maryland rankings for mortality are presented for each targeted cancer.

Maps included with this data display comparisons of Maryland incidence and mortality rates by geographical area to U.S. rates. For both incidence and mortality rate maps, the 5-year (2017 to 2021) U.S. rate was used as a basis for comparison with rates for Maryland jurisdictions. A ramp is used for grouping Maryland data into categories in reference to U.S. rates. The ramp groups data into five divisions: >25% above U.S. rate; 10-25% above U.S. rate; between 10% below and 10% above U.S. rate; 10-25% below U.S. rate; and >25% below U.S. rate. Note that 10-25% includes 10% and 25%, but less than 10% and more than 25% do not include the endpoints of the range.

G. Race and Hispanic Ethnicity

The MCR began requiring submission of more detailed data on race and ethnicity in August 1998. Incidence data provided by the MCR include the following race/ethnicity categories: non-Hispanic White (White), non-Hispanic Black (Black), Hispanic, non-Hispanic Asian or Pacific Islander (Asian/Pacific Islander), non-Hispanic American Indian or Alaska Native (American Indian/Alaska Native), and unknown (not stated).

Hispanic ethnicity is determined using the NAACCR Hispanic Identification Algorithm. This algorithm uses a combination of NAACCR variables to classify cases as Hispanic. "Hispanic" includes people reported to the MCR as Spanish/Hispanic origin plus those with "derived" Hispanic origin. The derivation is an algorithm based on the person having a Hispanic surname (last or maiden name) and their country of birth, race, and sex.

Mortality data (death counts and rates) in this report were obtained from the NCHS CMF in CDC WONDER, SEER CSR, and the Maryland Department of Health Vital Statistics Administration. Race data is based on information collected on death certificates. NCHS, in collaboration with the U.S. Census Bureau, developed a race-bridging methodology for assigning multiple-race groups to single-race categories. Race/ethnicity for data from 2017 to 2021 was categorized the same as incidence.

H. Healthy People 2030 Targets

In this 2024 CRF Cancer Report, quantitative HP 2030 targets are compared to Maryland data related to cancer risk behaviors and adherence to cancer screening recommendations. Specifically, HP 2030 targets are compared to data from the Maryland BRFSS. The data from these Maryland surveys are weighted to the age, race, and gender of the Maryland population and, unlike the national data that serve as the basis for HP 2030 targets, Maryland BRFSS data are not age-adjusted to the 2000 U.S. standard population.

Appendix D

Maryland Population Estimates, 2021

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Maryland Population Estimates by Jurisdiction, 2021

Jurisdiction	Total All Genders	Total Male	Total Female	Total White	White Male	White Female	Total Black	Black Male	Black Female	Total Hispanic	Hispanic Male	Hispanic Female	Total API	API Male	API Female	Total AIAN	AIAN Male	AIAN Female
Maryland	6,174,610	3,009,015	3,165,595	3,082,374	1,521,040	1,561,334	1,934,040	906,501	1,027,539	689,373	356,930	332,443	450,549	215,821	234,728	18,274	8,723	9,551
Baltimore Metropolitan Area	2,792,454	1,350,251	1,442,203	1,541,776	759,421	782,355	863,851	397,706	466,145	188,787	97,270	91,517	189,877	91,905	97,972	8,163	3,949	4,214
Anne Arundel County	592,052	293,611	298,441	392,844	195,528	197,316	114,388	55,694	58,694	53,299	27,603	25,696	29,789	13,927	15,862	1,732	859	873
Baltimore City	576,981	269,199	307,782	160,977	79,173	81,804	361,460	162,682	198,778	35,141	18,087	17,054	17,441	8,348	9,093	1,962	909	1,053
Baltimore County	850,634	405,129	445,505	468,214	226,158	242,056	267,861	121,535	146,326	53,657	27,700	25,957	58,274	28,491	29,783	2,628	1,245	1,383
Carroll County	174,208	87,013	87,195	154,141	76,658	77,483	7,386	4,013	3,373	7,516	3,915	3,601	4,800	2,227	2,573	365	200	165
Harford County	263,292	129,640	133,652	198,158	97,686	100,472	41,509	20,176	21,333	13,442	6,970	6,472	9,477	4,471	5,006	706	337	369
Howard County	335,287	165,659	169,628	167,442	84,218	83,224	71,247	33,606	37,641	25,732	12,995	12,737	70,096	34,441	35,655	770	399	371
Eastern Shore Region	460,163	225,696	234,467	344,058	168,458	175,600	80,389	39,239	41,150	25,381	13,073	12,308	9,000	4,249	4,751	1,335	677	658
Caroline County	33,413	16,384	17,029	25,238	12,323	12,915	4,850	2,271	2,579	2,814	1,537	1,277	393	194	199	118	59	59
Cecil County	104,096	51,966	52,130	88,389	44,041	44,348	8,404	4,176	4,228	5,160	2,755	2,405	1,832	836	996	311	158	153
Dorchester County	32,625	15,457	17,168	20,509	9,864	10,645	9,554	4,402	5,152	2,046	963	1,083	400	173	227	116	55	61
Kent County	19,254	9,291	9,963	15,157	7,290	7,867	2,861	1,322	1,539	925	531	394	270	123	147	41	25	16
Queen Anne's County	50,900	25,416	25,484	44,279	22,128	22,151	3,260	1,639	1,621	2,410	1,212	1,198	808	366	442	143	71	72
Somerset County	24,528	13,454	11,074	13,060	6,781	6,279	10,076	5,980	4,096	1,022	504	518	271	135	136	99	54	45
Talbot County	37,796	18,016	19,780	29,504	14,071	15,433	4,853	2,272	2,581	2,812	1,383	1,429	551	247	304	76	43	33
Wicomico County	104,181	49,576	54,605	64,680	30,784	33,896	29,595	13,895	15,700	6,101	3,080	3,021	3,524	1,685	1,839	281	132	149
Worcester County	53,370	26,136	27,234	43,242	21,176	22,066	6,936	3,282	3,654	2,091	1,108	983	951	490	461	150	80	70
National Capital Area	2,012,178	978,285	1,033,893	571,383	282,004	289,379	810,004	378,306	431,698	408,078	212,119	195,959	217,066	103,307	113,759	5,647	2,549	3,098
Montgomery County	1,055,924	515,381	540,543	456,952	224,382	232,570	208,930	99,031	109,899	212,728	107,753	104,975	175,013	83,140	91,873	2,301	1,075	1,226
Prince George's County	956,254	462,904	493,350	114,431	57,622	56,809	601,074	279,275	321,799	195,350	104,366	90,984	42,053	20,167	21,886	3,346	1,474	1,872
Northwest Region	532,055	268,211	263,844	405,982	200,893	205,089	59,280	33,468	25,812	43,968	22,758	21,210	21,679	10,511	11,168	1,146	581	565
Allegany County	67,691	35,579	32,112	59,639	29,800	29,839	5,671	4,448	1,223	1,427	899	528	836	375	461	118	57	61
Frederick County	280,410	139,165	141,245	198,021	97,733	100,288	32,535	16,360	16,175	31,995	16,370	15,625	17,160	8,339	8,821	699	363	336
Garrett County	28,757	14,342	14,415	27,816	13,867	13,949	368	204	164	363	188	175	158	61	97	52	22	30
Washington County	155,197	79,125	76,072	120,506	59,493	61,013	20,706	12,456	8,250	10,183	5,301	4,882	3,525	1,736	1,789	277	139	138
Southern Region	377,760	186,572	191,188	219,175	110,264	108,911	120,516	57,782	62,734	23,159	11,710	11,449	12,927	5,849	7,078	1,983	967	1,016
Calvert County	94,226	46,967	47,259	73,454	36,777	36,677	13,383	6,597	6,786	4,565	2,263	2,302	2,456	1,129	1,327	368	201	167
Charles County	168,870	81,799	87,071	60,345	30,102	30,243	88,816	42,147	46,669	11,956	6,015	5,941	6,602	2,989	3,613	1,151	546	605
St. Mary's County	114,664	57,806	56,858	85,376	43,385	41,991	18,317	9,038	9,279	6,638	3,432	3,206	3,869	1,731	2,138	464	220	244

Source: SEER*Stat static data as of May 5, 2024

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Appendix E

U.S. Standard Population, 2000

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2000 U.S. Standard Population

Age Group	2000 Population
Less than 01 years	3,794,901
01-04 years	15,191,619
05-09 years	19,919,840
10-14 years	20,056,779
15-19 years	19,819,518
20-24 years	18,257,225
25-29 years	17,722,067
30-34 years	19,511,370
35-39 years	22,179,956
40-44 years	22,479,229
45-49 years	19,805,793
50-54 years	17,224,359
55-59 years	13,307,234
60-64 years	10,654,272
65-69 years	9,409,940
70-74 years	8,725,574
75-79 years	7,414,559
80-84 years	4,900,234
85+ years	4,259,173
Total	**274,633,642**

Source: National Cancer Institute, SEER, 2000

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Appendix F

Definitions of International Classification of Diseases (ICD) Codes Used for Cancer Incidence and Mortality

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

Cancer Site	Incidence (ICD-O-3)		Mortality (ICD-10)
	Topography (Site)	Histology	
All Cancer Sites	C00.0-C80.9	Includes all invasive cancers of all sites, except basal and squamous cell skin cancers, and includes *in situ* cancer of the urinary bladder	C00-C97, D09.0
Lung and Bronchus	C34.0-C34.9	Excludes codes 9050-9055, 9140, and 9590-9989	C34
Colon and Rectum	C18.0-C20.9, C26.0	Excludes codes 9050-9055, 9140, and 9590-9989	C18-C20, C26.0
Female Breast	C50.0-C50.9 (female only)	Excludes codes 9050-9055, 9140, and 9590-9989	C50 (female only)
Prostate	C61.9	Excludes codes 9050-9055, 9140, and 9590-9990	C61
Oral Cavity and Pharynx	C00.0-C14.8	Excludes codes 9050-9055, 9140, and 9590-9989	C00-C14
Melanoma of the Skin	C44.0-C44.9	Includes only codes 8720-8790	C43
Cervix	C53.0-C53.9	Excludes codes 9050-9055, 9140, and 9590-9989	C53

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

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Appendix G

Maryland Cancer Incidence and Mortality Rates by Geographical Area, 2017-2021

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Appendix G

Table 1: All Cancer Sites Incidence
Age-Adjusted Incidence Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	441.6	439.5	443.8
Baltimore Metropolitan Area ^	460.2	456.5	463.9
Anne Arundel	451.5	444.3	458.8
Baltimore City	464.8	457.3	472.3
Baltimore	474.3	468.3	480.4
Carroll	485.7	472.4	499.3
Harford	485.1	474.1	496.2
Howard	402.3	393.1	411.7
Eastern Shore Region	478.8	470.9	486.8
Caroline	468.6	439.3	499.3
Cecil	482.6	465.2	500.5
Dorchester	484.8	455.5	515.5
Kent	466.1	429.6	505.4
Queen Anne's	458.6	435.6	482.7
Somerset	479.7	445.2	516.4
Talbot	467.1	441.2	494.3
Wicomico	499.5	481.4	518.1
Worcester	492.6	470.3	515.9
National Capital Area	388.0	384.3	391.7
Montgomery	381.4	376.5	386.3
Prince George's	396.3	390.8	401.9
Northwest Region	452.4	444.9	459.9
Allegany	522.1	501.4	543.5
Frederick	438.2	427.6	449.0
Garrett	390.3	363.4	419.0
Washington	454.5	441.0	468.4
Southern Region	446.5	437.3	455.8
Calvert	464.6	446.6	483.2
Charles	425.7	412.0	439.7
St. Mary's	459.2	442.2	476.6

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

^ Area rate does not include Baltimore City

Source: Maryland Cancer Registry, SEER*stat Static Data as of January 29, 2024

Appendix G

Table 2: Lung and Bronchus Cancer Incidence
Age-Adjusted Incidence Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	49.2	48.5	50.0
Baltimore Metropolitan Area ^	53.8	52.5	55.0
Anne Arundel	53.2	50.7	55.7
Baltimore City	71.9	69.0	74.8
Baltimore	60.2	58.2	62.3
Carroll	53.6	49.4	58.0
Harford	59.2	55.5	63.1
Howard	32.0	29.4	34.8
Eastern Shore Region	60.8	58.2	63.5
Caroline	58.6	48.9	69.8
Cecil	69.6	63.3	76.4
Dorchester	58.4	49.3	69.0
Kent	58.2	47.1	71.8
Queen Anne's	47.6	40.7	55.5
Somerset	75.8	63.0	90.6
Talbot	49.8	42.5	58.5
Wicomico	71.9	65.4	79.0
Worcester	54.6	48.2	61.8
National Capital Area	31.9	30.8	32.9
Montgomery	28.1	26.8	29.5
Prince George's	36.8	35.1	38.5
Northwest Region	52.3	49.9	54.8
Allegany	66.5	59.8	73.9
Frederick	45.2	41.9	48.7
Garrett	34.9	28.0	43.4
Washington	60.6	55.9	65.6
Southern Region	55.0	51.8	58.4
Calvert	58.8	52.5	65.6
Charles	50.0	45.3	55.0
St. Mary's	58.9	53.0	65.3

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

^ Area rate does not include Baltimore City

Source: Maryland Cancer Registry, SEER*stat Static Data as of January 29, 2024

Appendix G

Table 3: Colorectal Cancer Incidence
Age-Adjusted Incidence Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	34.8	34.2	35.4
Baltimore Metropolitan Area ^	36.2	35.1	37.2
Anne Arundel	34.3	32.3	36.4
Baltimore City	37.7	35.6	39.9
Baltimore	37.5	35.8	39.2
Carroll	38.4	34.8	42.4
Harford	40.1	37.0	43.5
Howard	30.8	28.2	33.5
Eastern Shore Region	36.9	34.7	39.3
Caroline	43.4	34.5	54.0
Cecil	36.6	31.8	41.8
Dorchester	52.3	42.5	63.9
Kent	34.3	24.9	46.7
Queen Anne's	34.1	28.1	41.2
Somerset	32.6	24.0	43.5
Talbot	34.5	27.1	43.5
Wicomico	39.4	34.3	45.1
Worcester	31.0	26.0	37.0
National Capital Area	31.1	30.1	32.2
Montgomery	29.0	27.7	30.4
Prince George's	34.0	32.3	35.7
Northwest Region	35.3	33.2	37.4
Allegany	44.3	38.3	51.0
Frederick	32.5	29.6	35.5
Garrett	36.7	28.6	46.6
Washington	34.8	31.2	38.8
Southern Region	35.6	33.1	38.4
Calvert	34.2	29.4	39.7
Charles	35.5	31.6	39.8
St. Mary's	37.3	32.6	42.5

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

^ Area rate does not include Baltimore City

Source: Maryland Cancer Registry, SEER*stat Static Data as of January 29, 2024

Appendix G

Table 4: Female Breast Cancer Incidence
Age-Adjusted Incidence Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	134.7	133.0	136.4
Baltimore Metropolitan Area ^	141.7	138.8	144.6
Anne Arundel	135.1	129.7	140.8
Baltimore City	125.4	120.1	130.9
Baltimore	145.2	140.5	149.9
Carroll	145.3	135.0	156.2
Harford	143.4	135.2	152.1
Howard	139.1	131.7	146.8
Eastern Shore Region	126.7	120.8	132.7
Caroline	112.3	93.1	134.6
Cecil	121.5	109.5	134.6
Dorchester	113.9	94.6	136.3
Kent	113.4	86.7	146.3
Queen Anne's	133.6	115.9	153.4
Somerset	127.8	101.5	159.1
Talbot	150.7	128.6	175.7
Wicomico	126.2	113.5	140.0
Worcester	137.7	120.7	156.8
National Capital Area	131.3	128.4	134.3
Montgomery	133.1	129.1	137.2
Prince George's	129.4	125.1	133.8
Northwest Region	135.0	129.2	141.0
Allegany	144.3	128.1	162.2
Frederick	132.6	124.5	141.1
Garrett	120.0	99.6	144.0
Washington	136.2	125.5	147.6
Southern Region	131.0	124.2	138.2
Calvert	134.6	121.1	149.2
Charles	128.9	118.8	139.6
St. Mary's	132.1	119.5	145.7

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

^ Area rate does not include Baltimore City

Source: Maryland Cancer Registry, SEER*stat Static Data as of January 29, 2024

Appendix G

Table 5: Prostate Cancer Incidence
Age-Adjusted Incidence Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	136.7	135.0	138.4
Baltimore Metropolitan Area ^	131.0	128.2	133.9
Anne Arundel	119.4	114.2	124.8
Baltimore City	140.8	134.7	147.0
Baltimore	137.5	132.9	142.2
Carroll	140.2	130.5	150.4
Harford	119.9	112.4	127.8
Howard	139.2	131.7	147.2
Eastern Shore Region	125.2	119.8	130.8
Caroline	116.5	97.1	139.1
Cecil	106.4	95.5	118.3
Dorchester	133.8	113.6	157.1
Kent	134.5	111.6	162.3
Queen Anne's	132.8	116.7	150.8
Somerset	112.1	90.2	138.1
Talbot	135.6	117.5	156.4
Wicomico	137.7	124.5	151.9
Worcester	122.9	108.9	138.8
National Capital Area	136.7	133.6	139.9
Montgomery	123.6	119.6	127.6
Prince George's	152.9	147.8	158.1
Northwest Region	110.8	105.8	116.1
Allegany	123.4	110.0	138.1
Frederick	113.7	106.1	121.6
Garrett	108.0	89.2	130.1
Washington	100.3	91.7	109.6
Southern Region	132.1	125.2	139.4
Calvert	138.0	124.7	152.3
Charles	138.5	127.5	150.2
St. Mary's	115.8	104.1	128.5

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

^ Area rate does not include Baltimore City

Source: Maryland Cancer Registry, SEER*stat Static Data as of January 29, 2024

Appendix G

Table 6: Oral Cancer Incidence
Age-Adjusted Incidence Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	11.1	10.7	11.4
Baltimore Metropolitan Area ^	11.7	11.1	12.3
Anne Arundel	12.5	11.3	13.7
Baltimore City	10.8	9.7	12.1
Baltimore	11.9	11.0	12.9
Carroll	12.7	10.8	15.0
Harford	12.2	10.5	14.0
Howard	8.6	7.4	10.1
Eastern Shore Region	14.4	13.0	15.8
Caroline	12.5	8.2	18.4
Cecil	13.2	10.6	16.3
Dorchester	12.8	8.6	18.5
Kent	15.4	9.5	24.3
Queen Anne's	12.8	9.4	17.3
Somerset	16.1	10.5	24.0
Talbot	12.9	9.2	17.9
Wicomico	18.2	14.8	22.1
Worcester	13.2	9.8	17.6
National Capital Area	8.3	7.7	8.8
Montgomery	8.5	7.8	9.3
Prince George's	8.0	7.3	8.9
Northwest Region	14.5	13.2	15.8
Allegany	16.5	13.0	20.8
Frederick	12.8	11.1	14.7
Garrett	12.4	7.8	19.1
Washington	17.1	14.6	19.9
Southern Region	12.2	10.8	13.8
Calvert	13.0	10.3	16.3
Charles	11.6	9.5	14.1
St. Mary's	12.6	10.0	15.7

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

^ Area rate does not include Baltimore City

Source: Maryland Cancer Registry, SEER*stat Static Data as of January 29, 2024

Appendix G

Table 7: Melanoma Incidence
Age-Adjusted Incidence Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	24.7	24.1	25.2
Baltimore Metropolitan Area ^	33.4	32.4	34.5
Anne Arundel	36.8	34.7	39.0
Baltimore City	11.0	9.8	12.2
Baltimore	29.1	27.6	30.7
Carroll	41.8	37.9	46.2
Harford	40.0	36.9	43.3
Howard	29.0	26.6	31.6
Eastern Shore Region	34.7	32.5	36.9
Caroline	21.2	15.2	28.8
Cecil	31.3	26.9	36.2
Dorchester	21.9	16.0	29.4
Kent	41.0	30.0	55.0
Queen Anne's	44.6	37.3	53.0
Somerset	28.3	20.3	38.7
Talbot	36.6	30.1	44.5
Wicomico	27.8	23.6	32.6
Worcester	53.2	45.8	61.7
National Capital Area	14.0	13.3	14.7
Montgomery	20.6	19.5	21.7
Prince George's	5.8	5.1	6.5
Northwest Region	29.3	27.4	31.3
Allegany	29.2	24.2	34.9
Frederick	29.8	27.0	32.7
Garrett	28.5	21.4	37.5
Washington	28.8	25.5	32.6
Southern Region	23.6	21.5	25.9
Calvert	40.0	34.7	45.8
Charles	13.3	11.0	16.0
St. Mary's	24.0	20.1	28.4

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

^ Area rate does not include Baltimore City

Source: Maryland Cancer Registry, SEER*stat Static Data as of January 29, 2024

Appendix G

Table 8: Cervical Cancer Incidence
Age-Adjusted Incidence Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Incidence Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	6.4	6.0	6.8
Baltimore Metropolitan Area ^	6.1	5.5	6.8
Anne Arundel	6.9	5.6	8.3
Baltimore City	8.6	7.2	10.2
Baltimore	6.1	5.1	7.3
Carroll	6.0	3.9	9.0
Harford	6.1	4.4	8.3
Howard	4.8	3.5	6.5
Eastern Shore Region	8.6	6.9	10.6
Caroline	**	**	**
Cecil	8.8	5.4	13.5
Dorchester	**	**	**
Kent	**	**	**
Queen Anne's	**	**	**
Somerset	**	**	**
Talbot	**	**	**
Wicomico	8.4	5.2	13.0
Worcester	10.9	5.7	19.0
National Capital Area	5.6	5.0	6.3
Montgomery	4.6	3.9	5.5
Prince George's	6.8	5.8	7.9
Northwest Region	6.5	5.2	8.1
Allegany	**	**	**
Frederick	5.3	3.7	7.4
Garrett	**	**	**
Washington	8.4	5.6	12.0
Southern Region	5.7	4.3	7.4
Calvert	**	**	**
Charles	6.5	4.3	9.4
St. Mary's	7.3	4.6	11.1

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy

^ Area rate does not include Baltimore City

Source: Maryland Cancer Registry, SEER*stat Static Data as of January 29, 2024

Appendix G

Table 9: All Cancer Sites Mortality
Age-Adjusted Mortality Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Mortality Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	144.8	143.6	146.1
Baltimore Metropolitan Area ^	146.4	144.4	148.5
Anne Arundel	146.9	142.8	151.1
Baltimore City	186.2	181.5	191.0
Baltimore	155.6	152.2	159.0
Carroll	151.1	143.8	158.6
Harford	150.0	144.0	156.2
Howard	113.9	108.9	119.1
Eastern Shore Region	162.5	158.1	167.0
Caroline	173.3	156.0	192.2
Cecil	175.5	165.0	186.5
Dorchester	173.6	157.1	191.5
Kent	142.0	124.7	161.8
Queen Anne's	142.8	130.6	156.1
Somerset	195.4	174.1	218.7
Talbot	135.0	122.8	148.4
Wicomico	181.9	171.3	193.1
Worcester	147.5	136.4	159.5
National Capital Area	123.3	121.3	125.4
Montgomery	107.4	104.9	110.0
Prince George's	143.9	140.5	147.4
Northwest Region	144.2	140.1	148.4
Allegany	156.5	145.8	167.9
Frederick	132.1	126.3	138.1
Garrett	131.8	117.2	148.0
Washington	160.2	152.4	168.3
Southern Region	160.1	154.5	165.8
Calvert	160.1	149.6	171.2
Charles	155.9	147.4	164.7
St. Mary's	166.0	155.8	176.8

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

^ Area rate does not include Baltimore City

Source: Maryland Department of Health Vital Statistics Administration

Appendix G

Table 10: Lung and Bronchus Cancer Mortality
Age-Adjusted Mortality Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Mortality Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	31.7	31.2	32.3
Baltimore Metropolitan Area ^	33.9	32.9	34.9
Anne Arundel	34.0	32.1	36.1
Baltimore City	45.3	43.0	47.6
Baltimore	37.3	35.7	39.0
Carroll	35.4	32.0	39.2
Harford	37.4	34.5	40.6
Howard	20.5	18.4	22.7
Eastern Shore Region	41.7	39.6	44.0
Caroline	47.6	38.8	58.0
Cecil	49.4	44.0	55.3
Dorchester	46.1	38.0	55.8
Kent	36.2	28.1	46.9
Queen Anne's	33.1	27.5	39.8
Somerset	55.0	44.2	68.0
Talbot	30.3	24.8	37.1
Wicomico	47.0	41.7	52.7
Worcester	34.9	30.0	40.6
National Capital Area	21.2	20.4	22.1
Montgomery	17.8	16.8	18.9
Prince George's	25.7	24.3	27.2
Northwest Region	32.3	30.4	34.3
Allegany	38.3	33.2	44.1
Frederick	27.6	25.0	30.4
Garrett	23.9	18.1	31.4
Washington	38.7	35.0	42.8
Southern Region	36.8	34.2	39.6
Calvert	36.9	32.0	42.5
Charles	34.1	30.1	38.4
St. Mary's	40.8	35.8	46.2

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

^ Area rate does not include Baltimore City

Source: Maryland Department of Health Vital Statistics Administration

Appendix G

Table 11: Colorectal Cancer Mortality
Age-Adjusted Mortality Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Mortality Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	13.1	12.7	13.5
Baltimore Metropolitan Area ^	12.9	12.3	13.6
Anne Arundel	12.5	11.4	13.8
Baltimore City	17.1	15.7	18.6
Baltimore	13.7	12.7	14.8
Carroll	14.1	11.9	16.5
Harford	14.7	12.9	16.8
Howard	9.3	8.0	10.9
Eastern Shore Region	14.0	12.7	15.4
Caroline	15.9	10.8	22.7
Cecil	15.1	12.0	18.6
Dorchester	16.5	11.5	23.2
Kent	16.3	10.5	24.9
Queen Anne's	10.8	7.5	15.2
Somerset	12.6	7.6	20.0
Talbot	10.4	7.1	15.0
Wicomico	17.0	13.8	20.8
Worcester	11.7	8.7	15.8
National Capital Area	11.7	11.1	12.3
Montgomery	9.9	9.2	10.8
Prince George's	13.9	12.9	15.0
Northwest Region	13.5	12.2	14.8
Allegany	14.8	11.5	18.8
Frederick	11.4	9.7	13.2
Garrett	16.6	11.8	23.1
Washington	15.3	13.0	18.0
Southern Region	13.6	12.0	15.4
Calvert	13.8	10.8	17.3
Charles	13.7	11.3	16.5
St. Mary's	13.2	10.4	16.5

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

^ Area rate does not include Baltimore City

Source: Maryland Department of Health Vital Statistics Administration

Appendix G

Table 12: Female Breast Cancer Mortality
Age-Adjusted Mortality Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Mortality Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	20.5	19.9	21.1
Baltimore Metropolitan Area ^	19.7	18.7	20.8
Anne Arundel	19.4	17.4	21.5
Baltimore City	23.6	21.4	26.0
Baltimore	20.8	19.1	22.6
Carroll	19.0	15.6	23.1
Harford	20.6	17.7	24.0
Howard	16.8	14.3	19.7
Eastern Shore Region	18.4	16.4	20.7
Caroline	21.2	13.8	31.7
Cecil	21.6	16.7	27.5
Dorchester	15.4	9.3	24.6
Kent	**	**	**
Queen Anne's	19.0	12.9	27.3
Somerset	22.7	13.5	36.8
Talbot	13.2	8.8	20.3
Wicomico	20.1	15.4	25.8
Worcester	17.0	11.4	24.7
National Capital Area	20.9	19.8	22.1
Montgomery	17.5	16.1	19.0
Prince George's	25.2	23.4	27.2
Northwest Region	18.1	16.1	20.3
Allegany	14.2	10.1	19.9
Frederick	16.7	14.0	19.9
Garrett	18.8	12.0	29.3
Washington	21.3	17.4	25.9
Southern Region	24.2	21.3	27.4
Calvert	24.7	19.3	31.4
Charles	22.3	18.2	27.1
St. Mary's	26.4	20.8	32.9

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

** Rates based on death counts of 0-19 deaths are suppressed per MDH/CCPC Mortality Data Suppression Policy

^ Area rate does not include Baltimore City

Source: Maryland Department of Health Vital Statistics Administration

Appendix G

Table 13: Prostate Cancer Mortality
Age-Adjusted Mortality Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Mortality Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	19.7	19.0	20.4
Baltimore Metropolitan Area ^	18.7	17.5	19.9
Anne Arundel	19.9	17.6	22.5
Baltimore City	29.6	26.6	32.9
Baltimore	20.3	18.5	22.3
Carroll	16.2	12.6	20.5
Harford	16.5	13.4	20.0
Howard	14.9	12.1	18.1
Eastern Shore Region	19.4	17.1	21.8
Caroline	**	**	**
Cecil	16.1	11.5	21.9
Dorchester	21.1	13.4	32.2
Kent	**	**	**
Queen Anne's	**	**	**
Somerset	**	**	**
Talbot	21.8	15.7	30.6
Wicomico	25.2	19.2	32.4
Worcester	17.5	12.5	24.3
National Capital Area	18.8	17.5	20.1
Montgomery	13.5	12.2	15.0
Prince George's	26.8	24.3	29.4
Northwest Region	17.3	15.1	19.7
Allegany	17.2	12.2	23.8
Frederick	17.2	13.9	21.0
Garrett	**	**	**
Washington	17.6	13.9	22.1
Southern Region	21.8	18.5	25.4
Calvert	18.9	13.4	25.8
Charles	24.2	18.9	30.5
St. Mary's	21.0	15.7	27.5

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

** Rates based on death counts of 0-19 deaths are suppressed per MDH/CCPC Mortality Data Suppression Policy

^ Area rate does not include Baltimore City

Source: Maryland Department of Health Vital Statistics Administration

Appendix G

Table 14: Oral Cancer Mortality
Age-Adjusted Mortality Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Mortality Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	2.4	2.3	2.6
Baltimore Metropolitan Area ^	2.4	2.2	2.7
Anne Arundel	2.6	2.1	3.2
Baltimore City	3.6	3.0	4.4
Baltimore	2.5	2.1	3.0
Carroll	2.6	1.7	3.8
Harford	2.5	1.8	3.5
Howard	1.8	1.2	2.5
Eastern Shore Region	2.8	2.3	3.5
Caroline	**	**	**
Cecil	**	**	**
Dorchester	**	**	**
Kent	**	**	**
Queen Anne's	**	**	**
Somerset	**	**	**
Talbot	**	**	**
Wicomico	3.4	2.1	5.3
Worcester	**	**	**
National Capital Area	1.8	1.6	2.1
Montgomery	1.7	1.4	2.1
Prince George's	2.1	1.7	2.5
Northwest Region	2.6	2.1	3.2
Allegany	**	**	**
Frederick	1.9	1.3	2.8
Garrett	**	**	**
Washington	3.3	2.3	4.6
Southern Region	2.8	2.1	3.6
Calvert	**	**	**
Charles	3.2	2.1	4.7
St. Mary's	**	**	**

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

** Rates based on death counts of 0-19 deaths are suppressed per MDH/CCPC Mortality Data Suppression Policy

^ Area rate does not include Baltimore City

Source: Maryland Department of Health Vital Statistics Administration

Appendix G

Table 15: Melanoma Mortality
Age-Adjusted Mortality Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Mortality Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	1.8	1.6	1.9
Baltimore Metropolitan Area ^	2.2	2.0	2.5
Anne Arundel	2.3	1.8	2.9
Baltimore City	0.8	0.5	1.2
Baltimore	2.2	1.8	2.7
Carroll	3.1	2.1	4.4
Harford	2.5	1.8	3.4
Howard	1.3	0.8	2.0
Eastern Shore Region	2.2	1.7	2.9
Caroline	**	**	**
Cecil	**	**	**
Dorchester	**	**	**
Kent	**	**	**
Queen Anne's	**	**	**
Somerset	**	**	**
Talbot	**	**	**
Wicomico	**	**	**
Worcester	**	**	**
National Capital Area	1.1	0.9	1.4
Montgomery	1.4	1.1	1.7
Prince George's	0.7	0.5	1.0
Northwest Region	2.5	2.0	3.2
Allegany	**	**	**
Frederick	2.7	1.9	3.7
Garrett	**	**	**
Washington	2.4	1.5	3.6
Southern Region	2.1	1.5	2.8
Calvert	**	**	**
Charles	**	**	**
St. Mary's	**	**	**

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

** Rates based on death counts of 0-19 deaths are suppressed per MDH/CCPC Mortality Data Suppression Policy

^ Area rate does not include Baltimore City

Source: Maryland Department of Health Vital Statistics Administration

Appendix G

Table 16: Cervical Cancer Mortality
Age-Adjusted Mortality Rates
by Geographical Area, Maryland, 2017-2021

Geographical Area	Mortality Rates*	95% Confidence Interval	
		Lower CI	Upper CI
Maryland	2.0	1.8	2.2
Baltimore Metropolitan Area ^	1.5	1.2	1.9
Anne Arundel	1.6	1.1	2.4
Baltimore City	4.2	3.3	5.4
Baltimore	1.5	1.1	2.1
Carroll	**	**	**
Harford	**	**	**
Howard	**	**	**
Eastern Shore Region	2.1	1.3	3.1
Caroline	**	**	**
Cecil	**	**	**
Dorchester	**	**	**
Kent	**	**	**
Queen Anne's	**	**	**
Somerset	**	**	**
Talbot	**	**	**
Wicomico	**	**	**
Worcester	**	**	**
National Capital Area	1.9	1.5	2.2
Montgomery	1.3	0.9	1.8
Prince George's	2.5	1.9	3.2
Northwest Region	1.9	1.3	2.8
Allegany	**	**	**
Frederick	**	**	**
Garrett	**	**	**
Washington	**	**	**
Southern Region	1.9	1.2	3.0
Calvert	**	**	**
Charles	**	**	**
St. Mary's	**	**	**

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

** Rates based on death counts of 0-19 deaths are suppressed per MDH/CCPC Mortality Data Suppression Policy

^ Area rate does not include Baltimore City

Source: Maryland Department of Health Vital Statistics Administration

Appendix H

Trends in Cancer Incidence and Mortality Rates in Maryland by Cancer Site, Race/Ethnicity or Gender, and Year, 2017-2021

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Appendix H. Trends in Cancer Incidence and Mortality Rates in Maryland by Cancer Site, Race/Ethnicity or Gender, and Year, 2017-2021

Table 1: Cancer Incidence Rates by Cancer Site and Year Maryland, 2017-2021

Cancer Site	2017	2018	2019	2020	2021	APC 2017-2021	MD Trend
All Cancer Sites	449.6	445.9	462.8	410.4	440.4	-1.2%	↓
Lung	55.1	50.6	51.2	44.0	45.8	-5.0%	↓
Colorectal	35.8	36.4	35.7	31.7	34.5	-2.1%	↓
Female Breast	133.3	129.9	139.8	129.0	141.3	1.1%	↑
Prostate	130.6	135.3	152.2	125.2	139.9	0.6%	↑
Oral	11.6	11.3	11.0	10.2	11.3	-1.5%	↓
Melanoma	25.0	23.7	27.0	22.1	25.5	-0.3%	↓
Cervical	6.9	6.4	6.6	6.2	5.7	-4.1%	↓

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

APC = Annual Percent Change (%)

Source: Maryland Cancer Registry

Table 2: Cancer Mortality Rates by Cancer Site and Year Maryland, 2017-2021

Cancer Site	2017	2018	2019	2020	2021	APC 2017-2021	MD Trend
All Cancer Sites	151.5	149.9	144.4	142.3	136.4	-2.6%	↓
Lung	35.9	33.4	31.7	29.0	29.0	-5.5%	↓
Colorectal	13.3	13.6	13.1	12.5	12.9	-1.4%	↓
Female Breast	21.6	21.2	19.4	21.5	18.9	-2.5%	↓
Prostate	19.5	19.1	20.7	19.9	18.5	-0.6%	↓
Oral	2.4	2.4	2.4	2.4	2.4	0.0%	-
Melanoma	1.6	1.8	1.9	1.7	1.7	0.6%	↑
Cervical	1.8	2.2	2.2	1.8	1.9	-0.9%	↓

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

APC = Annual Percent Change (%)

Source: Maryland Department of Health Vital Statistics Administration

Appendix H. Trends in Cancer Incidence and Mortality Rates in Maryland by Cancer Site, Race/Ethnicity or Gender, and Year, 2017-2021

Table 3: Cancer Incidence Rates by Race/Ethnicity and Year Maryland, 2017-2021

Cancer Site	Race	2017	2018	2019	2020	2021	APC 2017-2021
All Cancer Sites	White	487.4	472.7	484.8	433.3	467.0	-1.7%
	Black	442.6	439.4	456.3	398.8	439.8	-1.1%
	Hispanic	235.4	252.6	320.8	256.4	278.9	3.6%
	API	273.0	276.9	288.0	250.4	279.8	-0.5%
	AIAN	203.1	224.9	208.1	265.3	286.1	8.9%
Lung	White	60.8	55.3	55.2	48.9	51.0	-4.6%
	Black	54.9	49.6	50.2	41.5	43.1	-6.4%
	Hispanic	17.3	14.1	22.0	17.3	19.0	4.0%
	API	29.4	28.3	28.6	21.9	21.8	-8.2%
	AIAN	**	**	**	**	**	**
Colorectal	White	36.2	36.5	36.9	32.4	35.4	-1.6%
	Black	40.3	40.7	35.8	32.3	35.5	-4.7%
	Hispanic	22.2	21.6	23.9	18.3	24.7	0.5%
	API	24.1	27.0	28.6	24.5	29.7	3.3%
	AIAN	**	**	**	**	**	**
Female Breast	White	143.9	139.1	147.3	139.4	148.9	0.7%
	Black	131.0	127.1	135.5	125.8	143.7	1.8%
	Hispanic	71.6	73.2	100.4	78.5	94.6	6.5%
	API	101.8	97.2	116.8	88.0	100.2	-1.3%
	AIAN	**	**	**	**	130.9	**
Prostate	White	115.8	119.9	129.7	108.0	120.7	-0.2%
	Black	188.3	187.5	215.4	171.7	201.9	0.5%
	Hispanic	59.8	70.5	101.2	83.0	78.7	7.4%
	API	63.3	49.1	72.0	53.1	70.6	3.0%
	AIAN	**	176.2	**	**	**	**
Oral	White	14.5	13.5	13.0	12.5	14.1	-1.3%
	Black	7.7	7.8	7.5	7.1	7.3	-2.0%
	Hispanic	4.7	4.2	5.8	**	5.7	**
	API	5.3	7.9	8.4	5.4	8.6	6.1%
	AIAN	**	**	**	**	0.0	**
Cervix	White	7.1	6.2	6.0	6.0	4.8	-7.8%
	Black	5.7	7.5	7.5	4.8	6.6	-1.5%
	Hispanic	9.5	**	11.3	12.7	8.2	**
	API	**	**	**	**	**	**
	AIAN	**	**	0.0	**	0.0	**

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

APC = Annual Percent Change (%)

Source: Maryland Cancer Registry

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy

Table 4: Melanoma Incidence Rates by Gender and Year Maryland, 2017-2021

Cancer Site	Gender	2017	2018	2019	2020	2021	APC 2017-2021
Melanoma	Male	32.3	30.9	35.9	28.2	32.7	-0.7%
	Female	19.8	18.7	20.7	17.7	20.5	0.1%

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

APC = Annual Percent Change (%)

Source: Maryland Cancer Registry

Appendix H. Trends in Cancer Incidence and Mortality Rates in Maryland by Cancer Site, Race/Ethnicity or Gender, and Year, 2017-2021

Table 5: Mortality Rates by Race/Ethnicity and Year Maryland, 2017-2021

Cancer Site	Race	2017	2018	2019	2020	2021	APC 2017-2021
All Cancer Sites	White	153.8	150.4	147.4	143.0	135.9	-2.9%
	Black	167.3	170.9	159.0	161.5	152.2	-2.4%
	Hispanic	78.9	82.3	73.0	76.7	87.8	1.4%
	API	87.8	90.7	84.2	86.7	101.3	2.4%
	AIAN	**	**	**	**	**	**
Lung	White	39.4	35.6	35.1	31.6	31.1	-5.8%
	Black	34.4	35.5	30.4	29.0	29.2	-5.2%
	Hispanic	13.3	7.3	**	6.4	11.1	**
	API	18.5	18.9	14.8	15.8	18.2	-2.1%
	AIAN	**	**	**	**	**	**
Colorectal	White	12.9	12.9	12.9	11.6	12.5	-1.7%
	Black	16.2	17.6	15.7	15.9	14.9	-2.7%
	Hispanic	5.7	6.1	**	7.7	9.9	**
	API	9.9	8.8	8.4	8.3	11.9	3.1%
	AIAN	**	**	**	**	**	**
Female Breast	White	19.7	19.0	18.5	20.1	17.7	-1.6%
	Black	28.3	28.0	24.5	27.5	23.0	-4.2%
	Hispanic	11.1	13.8	**	11.0	13.1	**
	API	12.1	10.9	9.5	11.4	14.2	3.7%
	AIAN	**	**	**	**	**	**
Prostate	White	17.3	17.0	16.9	16.4	14.0	-4.5%
	Black	31.6	33.2	40.4	36.8	36.3	3.9%
	Hispanic	**	**	**	16.3	**	**
	API	**	**	**	**	**	**
	AIAN	**	**	**	**	**	**
Oral	White	2.6	2.9	2.4	2.5	2.7	-0.7%
	Black	2.0	2.0	2.5	2.5	2.0	2.3%
	Hispanic	**	**	**	**	**	**
	API	**	**	**	**	**	**
	AIAN	**	**	**	**	**	**
Cervix	White	1.1	1.9	1.7	1.7	1.4	3.8%
	Black	2.5	3.0	2.9	2.1	2.4	-4.3%
	Hispanic	**	**	**	**	**	**
	API	**	**	**	**	**	**
	AIAN	**	**	**	**	**	**

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

APC = Annual Percent Change (%)

Source: Maryland Department of Health Vital Statistics Administration

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

Table 6: Melanoma Mortality Rates by Gender and Year Maryland, 2017-2021

Cancer Site	Gender	2017	2018	2019	2020	2021	APC 2017-2021
Melanoma	Male	2.1	2.5	3.2	2.4	2.5	3.1%
	Female	1.3	1.3	1.0	1.3	1.2	-1.6%

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

APC = Annual Percent Change (%)

Source: Maryland Department of Health Vital Statistics Administration

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Appendix I

Trends in Cancer Stage of Disease at Diagnosis in Maryland by Cancer Site and Year, 2017-2021

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Appendix I

Table 1: All Cancer Sites
Distribution of Cancer Stage at Diagnosis by Year
Maryland, 2017-2021

Stage	2017	2018	2019	2020	2021
	%	%	%	%	%
Local	43.9%	48.1%	48.4%	46.2%	50.8%
Regional	19.8%	19.7%	20.2%	20.6%	20.2%
Distant	22.5%	20.6%	20.6%	23.3%	23.0%
Unstaged	13.8%	11.6%	10.8%	10.0%	6.0%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018, 2019, 2020, and 2021

Table 2: Lung Cancer
Distribution of Cancer Stage at Diagnosis by Year
Maryland, 2017-2021

Stage	2017	2018	2019	2020	2021
	%	%	%	%	%
Local	27.0%	27.8%	26.5%	26.2%	29.4%
Regional	23.6%	23.1%	25.0%	23.7%	24.3%
Distant	40.0%	39.2%	40.1%	41.0%	41.4%
Unstaged	9.4%	9.9%	8.4%	9.0%	4.9%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018, 2019, 2020, and 2021

Table 3: Colorectal Cancer
Distribution of Cancer Stage at Diagnosis by Year
Maryland, 2017-2021

Stage	2017	2018	2019	2020	2021
	%	%	%	%	%
Local	30.8%	32.2%	28.4%	27.7%	31.5%
Regional	35.3%	37.2%	39.4%	40.8%	39.4%
Distant	21.1%	19.8%	21.0%	21.9%	22.6%
Unstaged	12.8%	10.9%	11.2%	9.6%	6.5%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018, 2019, 2020, and 2021

Table 4: Female Breast Cancer
Distribution of Cancer Stage at Diagnosis by Year
Maryland, 2017-2021

Stage	2017	2018	2019	2020	2021
	%	%	%	%	%
Local	65.2%	66.0%	65.7%	63.8%	67.4%
Regional	25.4%	25.7%	25.7%	27.4%	24.3%
Distant	5.6%	5.0%	5.6%	5.5%	6.0%
Unstaged	3.9%	3.3%	3.0%	3.4%	2.3%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018, 2019, 2020, and 2021

Appendix I

Table 5: Prostate Cancer
Distribution of Cancer Stage at Diagnosis by Year
Maryland, 2017-2021

Stage	2017	2018	2019	2020	2021
	%	%	%	%	%
Local	59.3%	75.7%	74.7%	70.5%	79.9%
Regional	10.7%	10.4%	10.8%	10.3%	11.5%
Distant	5.8%	6.0%	5.2%	6.1%	6.2%
Unstaged	24.3%	7.9%	9.3%	13.1%	2.4%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018, 2019, 2020, and 2021

Table 6: Oral Cancer
Distribution of Cancer Stage at Diagnosis by Year
Maryland, 2017-2021

Stage	2017	2018	2019	2020	2021
	%	%	%	%	%
Local	27.9%	27.9%	30.2%	29.7%	29.5%
Regional	54.1%	56.4%	54.2%	56.5%	58.5%
Distant	8.8%	8.3%	7.5%	6.2%	7.5%
Unstaged	9.1%	7.5%	8.2%	7.6%	4.5%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018, 2019, 2020, and 2021

Table 7: Melanoma
Distribution of Cancer Stage at Diagnosis by Year
Maryland, 2017-2021

Stage	2017	2018	2019	2020	2021
	%	%	%	%	%
Local	72.3%	69.9%	76.8%	81.1%	85.6%
Regional	6.8%	7.2%	6.2%	7.1%	6.9%
Distant	3.5%	3.4%	3.2%	3.3%	3.0%
Unstaged	17.5%	19.6%	13.8%	8.6%	4.5%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018, 2019, 2020, and 2021

Table 8: Cervical Cancer
Distribution of Cancer Stage at Diagnosis by Year
Maryland, 2017-2021

Stage	2017	2018	2019	2020	2021
	%	%	%	%	%
Local	42.1%	43.3%	43.6%	34.4%	41.8%
Regional	32.9%	31.2%	34.7%	41.4%	34.0%
Distant	16.2%	15.8%	13.3%	16.7%	21.1%
Unstaged	8.8%	9.8%	8.4%	7.4%	3.1%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018, 2019, 2020, and 2021

Appendix J

Trends in All Cancer Sites Incidence and Mortality Rates in Maryland and U.S. by Year, 2012-2021

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Appendix J. Trends in All Cancer Sites Incidence and Mortality Rates in Maryland and U.S. by Year, 2012-2021

Table 1: All Cancer Sites Incidence Rates by Year
Maryland and U.S., 2012-2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	APC 2012-2021	Trend
Maryland	432.1	452.2	442.0	449.3	443.6	449.6	445.9	462.8	410.4	440.4	-0.2%	↓
U.S.	436.7	431.0	428.6	429.5	424.1	427.0	431.4	440.1	401.1	439.7	-0.2%	↓

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

APC = Annual Percent Change (%)

Sources: Maryland Cancer Registry

U.S. SEER, SEER*Stat Database

Table 2: All Cancer Sites Mortality Rates by Year
Maryland and U.S., 2012-2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	APC 2012-2021	Trend
Maryland	165.7	162.9	161.8	155.1	156.5	151.5	149.9	144.4	142.3	136.4	-2.0%	↓
U.S.	166.4	163.0	161.3	158.7	155.9	152.6	149.0	146.0	143.8	144.2	-1.7%	↓

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

APC = Annual Percent Change (%)

Sources: Maryland Department of Health Vital Statistics Administration, 2021 (MD)

NCHS Underlying Cause of Death in CDC WONDER, 2017-2020 (MD)

NCHS Compressed Mortality File in CDC WONDER, 2012-2016 (MD)

SEER Mortality All Cause of Death Data (U.S.)

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Appendix K

Maryland and U.S. Incidence and Mortality by Cancer and Race/Ethnicity or Gender, 2021

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Appendix K

Table 1: Maryland and U.S. Cancer Incidence Age-Adjusted Incidence Rates by Race/Ethnicity or Gender, 2021

Race/Ethnicity or Gender	MD Incidence Rates	95% Confidence Interval		U.S. Incidence Rates	95% Confidence Interval	
		Lower CI	Upper CI		Lower CI	Upper CI
All Cancer Sites	440.4	435.6	445.3	439.7	438.4	441.0
White	467.0	460.5	473.7	471.4	469.6	473.1
Black	439.8	430.8	449.0	459.4	455.2	463.7
Hispanic/Latino	278.9	262.1	296.4	341.4	338.5	344.3
Asian/Pacific Islander	279.8	265.1	295.1	312.9	309.7	316.1
American Indian/Alaska Native	286.1	219.9	367.6	387.7	373.6	402.3
Lung	45.8	44.3	47.4	43.8	43.4	44.2
White	51.0	49.0	53.1	49.7	49.2	50.3
Black	43.1	40.3	46.1	49.0	47.5	50.4
Hispanic/Latino	19.0	14.6	24.2	22.7	21.9	23.5
Asian/Pacific Islander	21.8	17.7	26.4	31.9	30.9	33.0
American Indian/Alaska Native	**	**	**	41.6	37.1	46.5
Colorectal	34.5	33.1	35.9	36.7	36.4	37.1
White	35.4	33.6	37.4	37.2	36.7	37.8
Black	35.5	32.9	38.2	43.5	42.2	44.8
Hispanic/Latino	24.7	19.8	30.4	32.1	31.2	33.0
Asian/Pacific Islander	29.7	25.1	35.1	30.9	29.9	31.9
American Indian/Alaska Native	**	**	**	46.7	41.8	52.1
Female Breast	141.3	137.5	145.2	135.0	134.0	136.0
White	148.9	143.5	154.5	144.7	143.3	146.2
Black	143.7	136.9	150.9	132.6	129.5	135.7
Hispanic/Latino	94.6	82.3	108.1	105.2	103.1	107.3
Asian/Pacific Islander	100.2	88.5	113.1	123.2	120.5	126.0
American Indian/Alaska Native	130.9	72.5	220.9	114.6	104.1	125.8
Prostate	139.9	136.1	143.8	121.2	120.2	122.1
White	120.7	116.2	125.3	118.2	117.1	119.4
Black	201.9	192.7	211.5	203.7	199.5	208.0
Hispanic/Latino	78.7	65.2	93.8	87.1	84.8	89.3
Asian/Pacific Islander	70.6	60.2	82.4	65.5	63.3	67.7
American Indian/Alaska Native	**	**	**	77.9	68.9	87.8
Oral	11.3	10.6	12.1	11.5	11.3	11.8
White	14.1	13.0	15.3	13.6	13.4	13.9
Black	7.3	6.2	8.6	8.4	7.9	9.0
Hispanic/Latino	5.7	3.5	8.6	6.4	6.0	6.8
Asian/Pacific Islander	8.6	6.2	11.6	8.7	8.1	9.2
American Indian/Alaska Native	0.0	0.0	0.0	12.2	9.8	15.0
Cervix	5.7	4.9	6.6	7.4	7.2	7.7
White	4.8	3.7	6.0	6.7	6.4	7.1
Black	6.6	5.1	8.4	7.8	7.1	8.6
Hispanic/Latino	8.2	5.2	12.3	9.3	8.7	9.9
Asian/Pacific Islander	**	**	**	6.3	5.7	7.0
American Indian/Alaska Native	0.0	0.0	0.0	9.2	6.3	12.9
Melanoma	25.5	24.4	26.7	24.6	24.3	25.0
Male	32.7	30.8	34.8	31.2	30.7	31.7
Female	20.5	19.0	22.0	19.9	19.5	20.3

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

** Rates based on case counts of 1-15 are suppressed per MDH/MCR Data Use Policy and Procedures

All race rates, except Hispanic, are non-Hispanic/Latino

Source: Maryland Cancer Registry

Appendix K

Table 2: Maryland and U.S. Cancer Mortality Age-Adjusted Mortality Rates by Race/Ethnicity or Gender, 2021

Race/Ethnicity or Gender	MD Mortality Rates	95% Confidence Interval		U.S. Mortality Rates	95% Confidence Interval	
		Lower CI	Upper CI		Lower CI	Upper CI
All Cancer Sites	136.4	133.7	139.1	144.2	143.8	144.5
White	135.9	132.5	139.3	149.8	149.4	150.3
Black	152.2	146.7	157.8	164.3	163.0	165.5
Hispanic/Latino	87.8	77.7	98.7	105.5	104.4	106.5
Asian/Pacific Islander	101.3	92.4	110.9	93.2	91.9	94.5
American Indian/Alaska Native	**	**	**	129.2	124.9	133.7
Lung	29.0	27.8	30.2	31.3	31.1	31.4
White	31.1	29.5	32.7	34.2	34.0	34.5
Black	29.2	26.8	31.7	32.8	32.3	33.4
Hispanic/Latino	11.1	7.7	15.3	14.2	13.8	14.6
Asian/Pacific Islander	18.2	14.5	22.5	18.2	17.7	18.8
American Indian/Alaska Native	**	**	**	28.1	26.2	30.2
Colorectal	12.9	12.1	13.8	12.8	12.7	12.9
White	12.5	11.4	13.6	12.8	12.7	13.0
Black	14.9	13.3	16.8	16.5	16.1	16.9
Hispanic/Latino	9.9	6.8	13.8	10.7	10.4	11.0
Asian/Pacific Islander	11.9	9.0	15.4	9.3	8.9	9.8
American Indian/Alaska Native	**	**	**	13.0	11.6	14.4
Female Breast	18.9	17.6	20.4	19.1	18.9	19.2
White	17.7	16.0	19.5	19.2	19.0	19.5
Black	23.0	20.3	26.0	25.7	25.1	26.4
Hispanic/Latino	13.1	8.7	18.9	13.6	13.2	14.1
Asian/Pacific Islander	14.2	10.1	19.6	12.0	11.4	12.6
American Indian/Alaska Native	**	**	**	14.8	12.9	16.9
Prostate	18.5	17.0	20.2	18.8	18.6	19.0
White	14.0	12.4	15.8	18.1	17.8	18.3
Black	36.3	31.7	41.4	35.4	34.4	36.4
Hispanic/Latino	**	**	**	15.2	14.6	15.9
Asian/Pacific Islander	**	**	**	8.5	7.9	9.2
American Indian/Alaska Native	**	**	**	14.6	12.3	17.1
Oral	2.4	2.1	2.8	2.7	2.6	2.7
White	2.7	2.2	3.2	2.9	2.8	3.0
Black	2.0	1.5	2.8	2.5	2.3	2.6
Hispanic/Latino	**	**	**	1.6	1.4	1.7
Asian/Pacific Islander	**	**	**	2.1	2.0	2.3
American Indian/Alaska Native	**	**	**	1.8	1.3	2.3
Cervix	1.9	1.5	2.4	2.3	2.2	2.4
White	1.4	0.9	2.0	2.2	2.1	2.3
Black	2.4	1.6	3.5	3.2	3.0	3.4
Hispanic/Latino	**	**	**	2.3	2.2	2.5
Asian/Pacific Islander	**	**	**	1.9	1.6	2.1
American Indian/Alaska Native	**	**	**	3.8	2.8	5.0
Melanoma	1.7	1.5	2.1	2.0	2.0	2.0
Male	2.5	2.0	3.1	2.9	2.9	3.0
Female	1.2	0.9	1.7	1.3	1.2	1.3

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

** Rates based on death counts of 0-19 are suppressed per MDH/CCPC Mortality Data Suppression Policy

All race rates, except Hispanic, are non-Hispanic/Latino

Sources: Maryland Department of Health Vital Statistics Administration (MD)
SEER Mortality All Cause of Death Data (U.S.)

Appendix L

Distribution of Cancer Stage at Diagnosis by Race/Ethnicity or Gender, 2017-2021

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Appendix L

Table 1: All Cancer Sites
Distribution of Cancer Stage at Diagnosis by Race/Ethnicity
Maryland, 2017-2021

Stage	White	Black	Hispanic	API	AIAN
	%	%	%	%	%
Local	48.8%	45.0%	43.4%	45.5%	44.8%
Regional	19.9%	20.0%	23.1%	23.1%	20.5%
Distant	21.3%	23.4%	23.2%	21.8%	24.7%
Unstaged	10.0%	11.5%	10.3%	9.5%	10.0%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Table 2: Lung Cancer
Distribution of Cancer Stage at Diagnosis by Race/Ethnicity
Maryland, 2017-2021

Stage	White	Black	Hispanic	API	AIAN
	%	%	%	%	%
Local	28.4%	25.3%	23.2%	24.0%	14.8%
Regional	24.2%	23.4%	24.2%	20.5%	29.6%
Distant	39.3%	41.6%	43.4%	46.7%	55.6%
Unstaged	8.0%	9.7%	9.3%	8.8%	0.0%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Table 3: Colorectal Cancer
Distribution of Cancer Stage at Diagnosis by Race/Ethnicity
Maryland, 2017-2021

Stage	White	Black	Hispanic	API	AIAN
	%	%	%	%	%
Local	30.5%	29.5%	32.8%	28.3%	29.2%
Regional	39.9%	34.8%	38.6%	42.4%	37.5%
Distant	20.7%	23.4%	18.9%	17.3%	20.8%
Unstaged	8.9%	12.3%	9.8%	12.0%	12.5%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Table 4: Female Breast Cancer
Distribution of Cancer Stage at Diagnosis by Race/Ethnicity
Maryland, 2017-2021

Stage	White	Black	Hispanic	API	AIAN
	%	%	%	%	%
Local	69.1%	59.4%	58.6%	66.9%	61.9%
Regional	23.2%	29.9%	31.7%	26.7%	26.2%
Distant	4.9%	7.0%	5.8%	3.9%	2.4%
Unstaged	2.8%	3.7%	3.9%	2.5%	9.5%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Table 5: Prostate Cancer
Distribution of Cancer Stage at Diagnosis by Race/Ethnicity
Maryland, 2017-2021

Stage	White	Black	Hispanic	API	AIAN
	%	%	%	%	%
Local	73.0%	71.4%	69.4%	71.2%	66.0%
Regional	11.4%	10.0%	12.1%	12.3%	14.0%
Distant	5.4%	6.3%	8.9%	5.9%	10.0%
Unstaged	10.1%	12.2%	9.6%	10.5%	10.0%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Table 6: Oral Cancer
Distribution of Cancer Stage at Diagnosis by Race/Ethnicity
Maryland, 2017-2021

Stage	White	Black	Hispanic	API	AIAN
	%	%	%	%	%
Local	29.6%	24.6%	31.6%	37.0%	33.3%
Regional	56.6%	55.7%	57.9%	49.1%	50.0%
Distant	6.4%	12.6%	7.4%	8.7%	16.7%
Unstaged	7.3%	7.1%	3.2%	5.2%	0.0%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Table 7: Melanoma
Distribution of Cancer Stage at Diagnosis by Gender
Maryland, 2017-2021

Stage	Male	Female
	%	%
Local	76.4%	78.6%
Regional	7.2%	6.3%
Distant	3.7%	2.6%
Unstaged	12.7%	12.5%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

Table 8: Cervical Cancer
Distribution of Cancer Stage at Diagnosis by Race/Ethnicity
Maryland, 2017-2021

Stage	White	Black	Hispanic	API	AIAN
	%	%	%	%	%
Local	40.1%	39.3%	49.2%	48.1%	33.3%
Regional	36.5%	30.9%	39.7%	35.2%	33.3%
Distant	15.8%	21.6%	5.6%	11.1%	33.3%
Unstaged	7.6%	8.1%	5.6%	5.6%	0.0%

Source: Maryland Cancer Registry

Note: Due to a methodology change, SEER Summary Stage 2000 was used in 2017 and Summary Stage 2018 was used in 2018 to 2021

For comments or questions about these data contact:

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