

# 2021 Maine Cancer Snapshot

A PRODUCT OF THE MAINE CANCER REGISTRY

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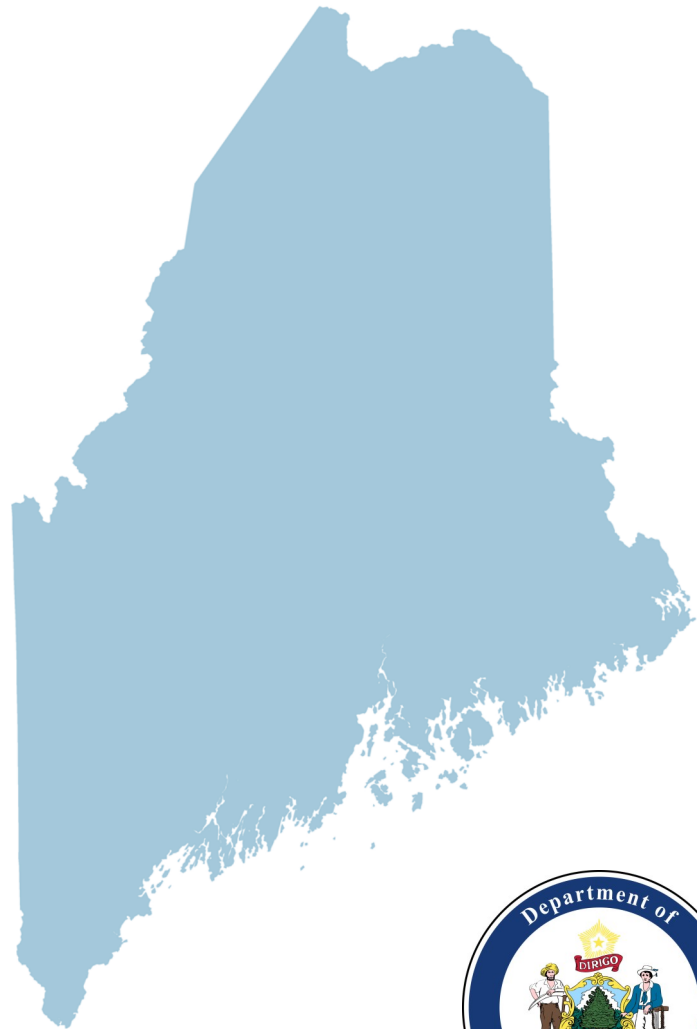
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### Maine Cancer Registry

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Maine Center for Disease Control  
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# Key Findings

FROM THE 2021 MAINE CANCER SNAPSHOT

**In 2018\*, 9,134 new malignant cancer cases were identified among Maine residents and there were 3,273 cancer deaths to Maine residents.**

- The overall cancer age-adjusted incidence rate for Maine is 465.0 per 100,000 compared with 436.9 for the U.S.
- Over the past 20 years, the overall cancer incidence rate in Maine has been decreasing yet remains higher than the U.S. Over that same time period the gap between the male and female rates has also narrowed, though the male rate remains higher.
- The four most common newly diagnosed cancers in Maine are lung and bronchus, female breast, prostate, and colon and rectum.
- Cancer incidence rates differ across Maine. Penobscot and Piscataquis counties have higher cancer incidence compared with the state rate.
- The 2018 age-adjusted cancer mortality rate in Maine was 161.2 which is significantly higher than the U.S. cancer mortality rate for 2018 (150.3).
- The overall cancer mortality rate has been decreasing in Maine over the past 20 years yet remains higher than the U.S. rate.
- The leading cause of cancer mortality are lung and bronchus, colon and rectum, pancreas, female breast, and prostate cancer.
- Cancer mortality rates differ across Maine. Piscataquis, Somerset, and Washington counties have significantly higher cancer mortality compared to the state rate.



\*The 2021 Maine Cancer Snapshot is based on new cancer cases diagnosed in 2018 (cancer incidence) and cancer deaths occurring in 2018 (cancer mortality). This time-lag is consistent with reporting standards used throughout the U.S. to ensure high quality data. The process requires time for a state cancer registry to receive cancer cases from multiple reporting sources (including vital records, hospital reporters, physician offices, and pathology labs), time for follow up and data corrections, as well as time to consolidate state data and perform quality control and analysis.

## Acknowledgements

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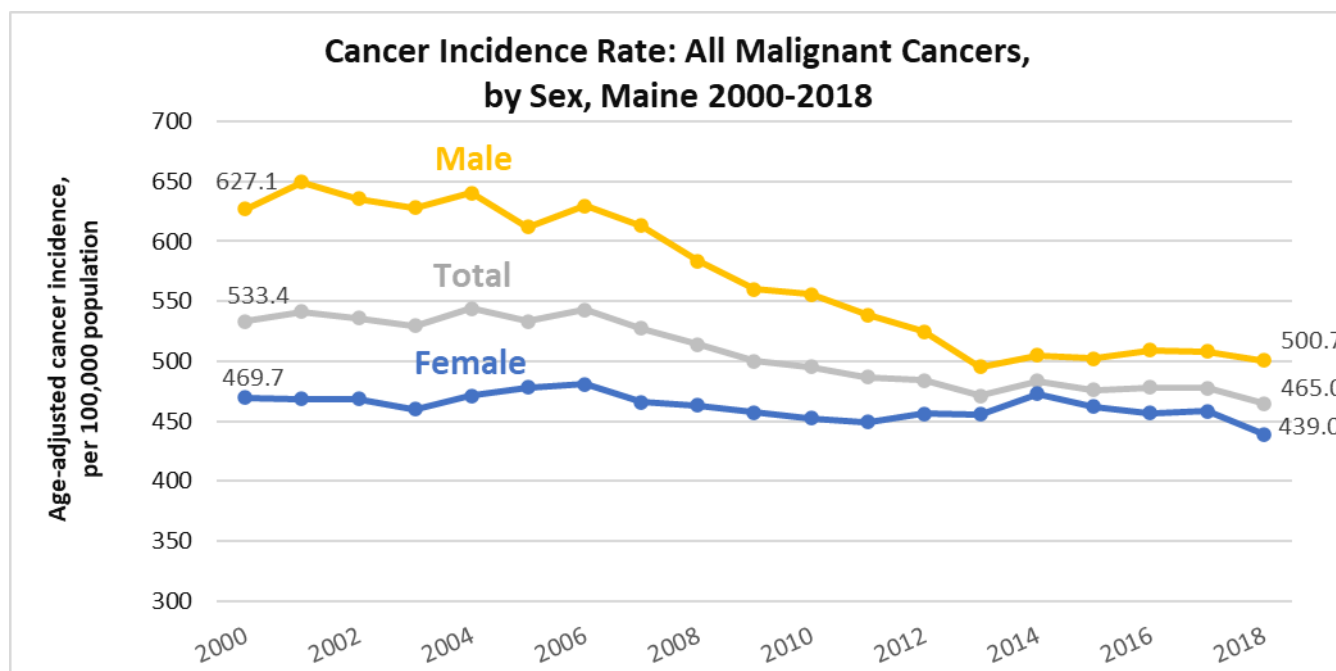
# Cancer Incidence

## 2021 MAINE CANCER SNAPSHOT

### Cancer Incidence Key Findings

- Over the past 20 years, the overall cancer incidence rate in Maine has decreased, yet Maine's rate has remained higher than the U.S. Over that same time period the gap between the male and female rates has also narrowed, with the male rate remaining higher.
- In Maine, rates of lung and bronchus, melanoma and urinary bladder cancer are significantly higher than the U.S.
- Over the past five years, the overall cancer incidence rate has been stable.
- Cancer incidence rates differ across the state of Maine. Penobscot and Piscataquis counties have higher cancer incidence compared with the rest of the state. Cumberland county has a lower rate compared to the rest of the state.

### Trends by Sex



Rates are per 100,000 population, age-adjusted to the Year 2000 U.S. standard population.  
Data source: Maine Cancer Registry, based on November 2020 NPCR-CSS data submission.

# Incidence: Top 10 Cancers, Maine 2018 Red Rate= ME is significantly higher than U.S.

Cancer Type	Maine (all sexes)				U.S. (White*)		
	Count	AA Rate	AA Lower 95% CI	AA Upper 95% CI	AA Rate	AA Lower 95% CI	AA Upper 95% CI
All Sites	9,134	<b>465.0</b>	455.0	475.2	<b>436.9</b>	436.2	437.7
Lung and Bronchus	1,438	<b>69.1</b>	65.4	72.9	<b>54.5</b>	54.3	54.8
Female Breast	1,217	<b>124.3</b>	116.9	132.1	<b>127.5</b>	126.9	128.1
Prostate	1,040	<b>98.2</b>	92.2	104.6	<b>98.8</b>	98.3	99.2
Colon and Rectum	647	<b>34.8</b>	32.1	37.8	<b>35.8</b>	35.6	36.0
Melanoma of the skin	534	<b>28.4</b>	25.9	31.1	<b>25.1</b>	25.0	25.3
Urinary Bladder	516	<b>25.2</b>	23.0	27.6	<b>19.6</b>	19.4	19.7
Non-Hodgkin Lymphoma	391	<b>19.8</b>	17.8	22.0	<b>18.9</b>	18.7	19.0
Kidney and Renal Pelvis	339	<b>17.5</b>	15.6	19.6	<b>17.1</b>	16.9	17.2
Uterus (Corpus Uteri and Uterus, NOS)	322	<b>29.9</b>	26.6	33.6	<b>26.5</b>	26.2	26.7
Leukemia	259	<b>14.2</b>	12.4	16.2	<b>13.7</b>	13.6	13.8
	Maine Females				U.S. (White*) Females		
All Sites	4,436	<b>439.0</b>	425.3	453.1	<b>418.1</b>	417.1	419.1
Female Breast	1,217	<b>124.3</b>	116.9	132.1	<b>127.5</b>	126.9	128.1
Lung and Bronchus	732	<b>66.6</b>	61.7	71.9	<b>50.3</b>	50.0	50.7
Uterus (Corpus Uteri and Uterus, NOS)	334	<b>31.0</b>	27.6	34.8	<b>27.3</b>	27.1	27.6
Colon and Rectum	314	<b>31.8</b>	28.1	35.8	<b>31.4</b>	31.1	31.7
Melanoma of the skin	260	<b>27.0</b>	23.6	30.8	<b>20.5</b>	20.3	20.8
Non-Hodgkin Lymphoma	174	<b>15.8</b>	13.5	18.5	<b>15.7</b>	15.5	15.9
Thyroid	138	<b>17.6</b>	14.5	21.0	<b>20.1</b>	19.8	20.3
Pancreas	129	<b>11.8</b>	9.7	14.2	<b>11.1</b>	11.0	11.3
Urinary Bladder	122	<b>11.1</b>	9.2	13.5	<b>8.4</b>	8.3	8.5
Kidney and Renal Pelvis	106	<b>10.2</b>	8.2	12.5	<b>11.8</b>	11.6	12.0
	Maine Males				U.S. (White*) Males		
All Sites	4,698	<b>500.7</b>	485.8	515.9	<b>466.6</b>	465.5	467.7
Prostate	1,040	<b>98.2</b>	92.2	104.6	<b>98.8</b>	98.3	99.2
Lung and Bronchus	706	<b>72.7</b>	67.3	78.6	<b>60.0</b>	59.6	60.4
Urinary Bladder	394	<b>42.4</b>	38.2	47.0	<b>33.5</b>	33.2	33.8
Colon and Rectum	333	<b>38.2</b>	34.0	42.8	<b>40.7</b>	40.4	41.1
Melanoma	274	<b>30.4</b>	26.7	34.4	<b>31.3</b>	31.0	31.6
Kidney and Renal Pelvis	233	<b>25.7</b>	22.3	29.5	<b>23.1</b>	22.8	23.3
Non-Hodgkin Lymphoma	217	<b>24.3</b>	21.0	28.0	<b>22.6</b>	22.4	22.8
Oral Cavity and Pharynx	184	<b>18.8</b>	16.1	21.9	<b>18.3</b>	18.1	18.6
Leukemia	154	<b>18.4</b>	15.4	21.7	<b>17.4</b>	17.2	17.6
Pancreas	137	<b>15.0</b>	12.5	17.9	<b>14.8</b>	14.6	15.0

Leading causes of cancer are ordered by descending Maine incidence counts.

AA: Age-adjusted to the Year 2000 U.S. standard population. Rates are per 100,000. 95% CI: 95% Confidence Interval.

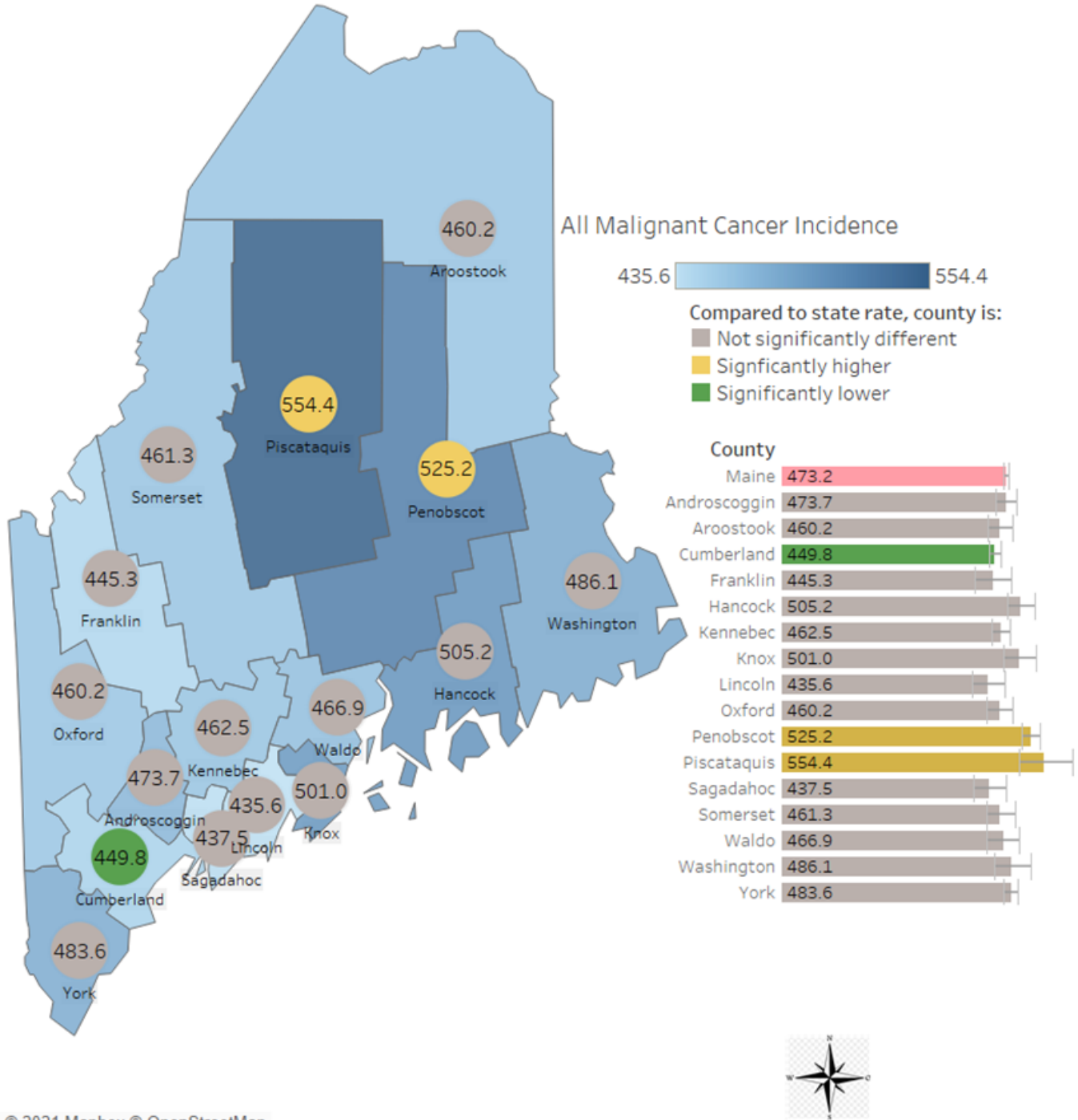
\*U.S. White, based on the CiNA (Cancer in North America) Analytic File, 1995-2018. See technical notes for a full definition.

Data sources: Maine data: Maine Cancer Registry; U.S data: NAACCR Incidence data; CiNA (Cancer in North America) Analytic File.

# Incidence by County

## All Malignant Cancer Incidence by County, Maine, 2016-2018

Age-adjusted Rate per 100,000 Population per Year



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Data Source: Maine Cancer Registry, based on November 2020 NPCR-CSS data submission. Rates are calculated per 100,000 population and age-adjusted to the year 2000 U.S. standard population. Map was created using Tableau and rates were mapped using quantiles method with 4 categories. Error bars on bar chart depict 95% confidence intervals.

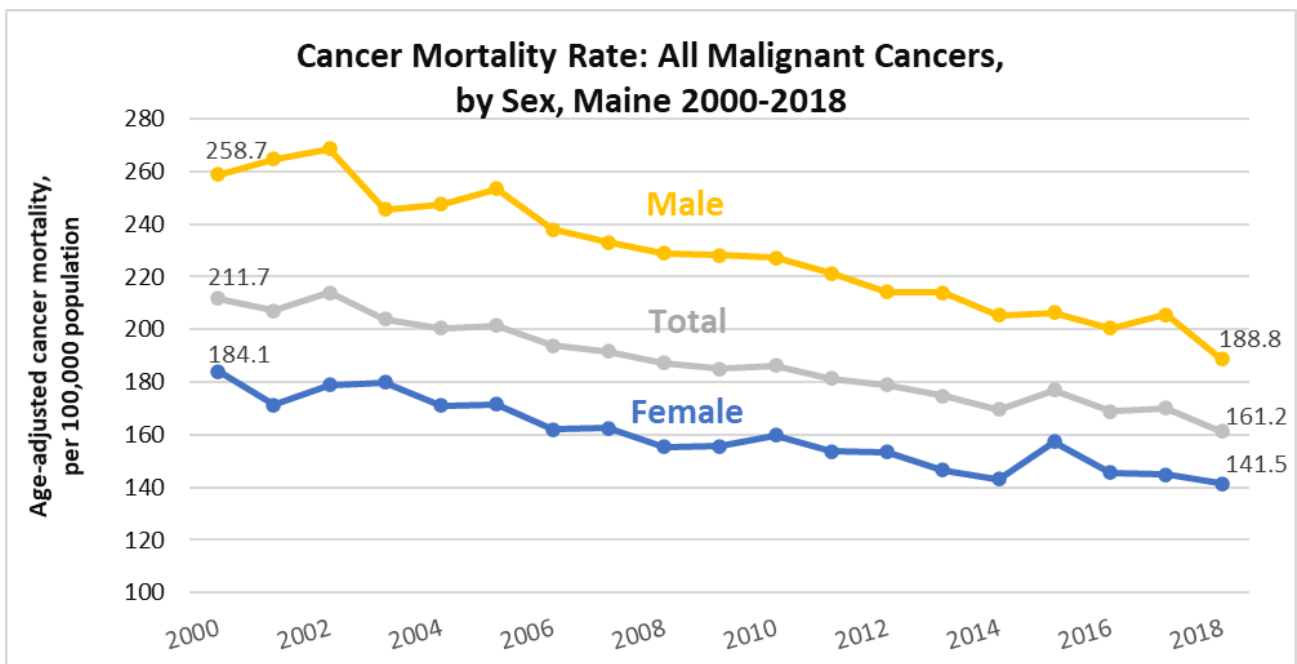
# Cancer Mortality

## 2021 MAINE CANCER SNAPSHOT

### Cancer Mortality Key Findings

- In 2018 there were 3,273 cancer deaths to Maine residents. The 2018 age-adjusted cancer mortality rate in Maine is 161.2 per 100,000, which is significantly higher than the U.S. cancer mortality rate (150.3).
- The overall cancer mortality rate has decreased from 211.7 per 100,000 to 161.2 in Maine over the past 20 years, yet the Maine rate remains significantly higher than the U.S. rate.
- Similar to incidence, males have a significantly higher mortality rate than females.
- The rate of lung and bronchus cancer mortality in Maine is significantly higher than the U.S. for both males and females.
- Piscataquis, Somerset, and Washington counties have significantly higher cancer mortality rates compared to the state overall.

### Trends by Sex

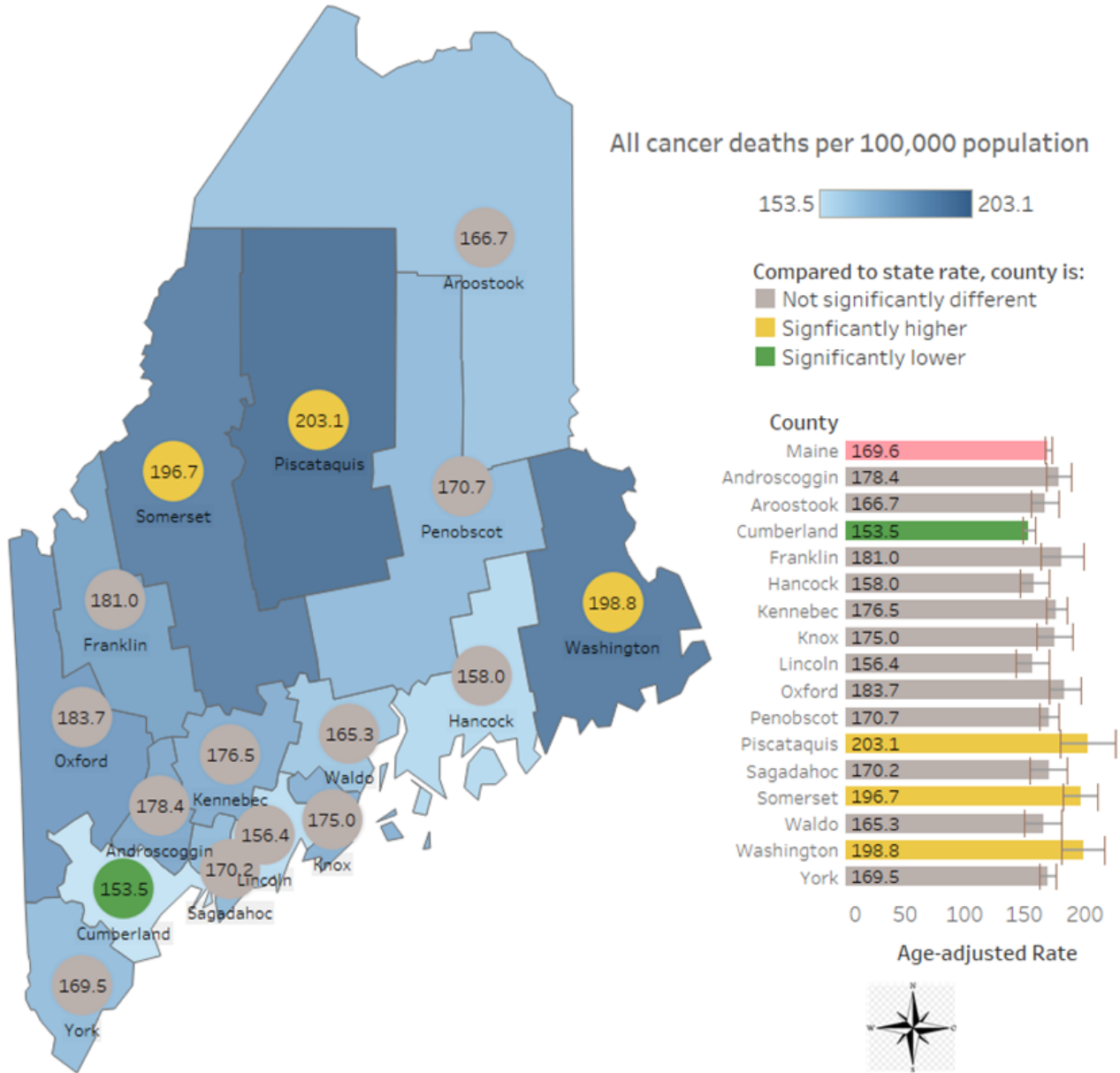


Data source: Maine Center for Disease Prevention. Data, Research, and Vital Statistics. 2021. Cancer deaths were identified using underlying cause-of-death codes C00-C97 (malignant neoplasms).



## All Malignant Cancer Mortality by County, Maine, 2014-2018

Age-adjusted Rate per 100,000 Population per Year



Data Source: Maine Mortality: Maine CDC's Data, Research, and Vital Statistics. Rates are calculated per 100,000 population and age-adjusted to the year 2000 U.S. standard population. Map was created using Tableau and rates were mapped using quantiles method with 4 categories. Error bars on bar chart depict 95% confidence intervals.

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## Additional Incidence and Mortality Data for Maine

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The following Maine CDC and U.S. dashboards provide additional options for detailed queries by cancer site. Click on headings below for more information.

### [Maine Shared Community Health Needs Assessment Dashboard](#)

This interactive dashboard shows Maine data for a variety of health behaviors, chronic diseases, and social determinants of health. Data are available for many demographic groups (sex, age, race) and subpopulations (rural residents, veterans), by county and public health district, and major cities.

### [U.S. Cancer Statistics Dataviz \(USCS\)](#)

This tool provides incidence and death counts, rates, and trend data; survival and prevalence estimates; and state-, county-, and congressional district data in a user-driven format. Cancer incidence and mortality trend data are presented from 1999 through 2018.

### [Maine Cancer Registry Website](#)

This website provides additional information about MCR, available reports, procedures for requesting data and resources related to cancer reporting in Maine.

### [Maine Cancer Plan](#)

A five year agenda for cancer prevention, screening, diagnosis, treatment and palliative care in Maine. From the Maine Cancer Coalition.

### [Maine Environmental Health Tracking Network Data Portal](#)

- This portal allows users to view health and environmental data by geographic region in Maine.
- Users can compare data across age groups, genders, regions, and time periods and make and download their own customized tables, charts, and maps.

### [North American Association of Central Cancer Registries \(NAACCR\) FastStats](#)

- NAACCR Cancer Maps (historically called CiNA+ on-line) is an interactive mapping tool for U.S. and Canadian cancer incidence statistics for the most current 5 years of data available.
- NAACCR CiNA Explorer Stats is an interactive, data visualization tool for quick access to key US and Canadian cancer statistics for major cancer sites by age, sex, stage, race/ethnicity, registry and data type for the most current 5 years of data available.

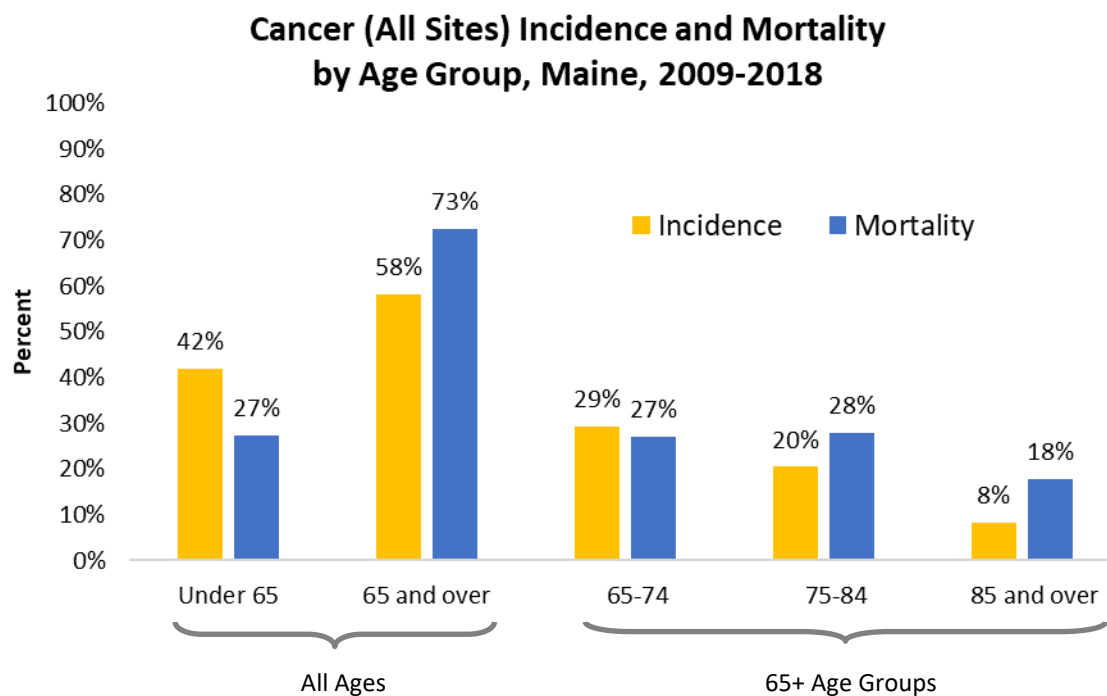
# Special Populations: Age 65+

## 2021 MAINE CANCER SNAPSHOT

### Age and Risk of Cancer Incidence and Mortality

Age is an important risk factor for developing and dying from cancer. In 2018 in Maine the majority of new cancer cases and cancer deaths occurred among Mainers 65 and older.

- While about 6 in 10 (58.1%) new cancer cases were among Mainers 65 years of age and older, more than 7 in 10 (72.6%) cancer deaths occurred in this age group.
- Nearly 20% of all cancer deaths occurred among Mainers 85 years of age and older, despite less than 10% (8.2%) of new cancer cases occurring in this age group.



#### Notes

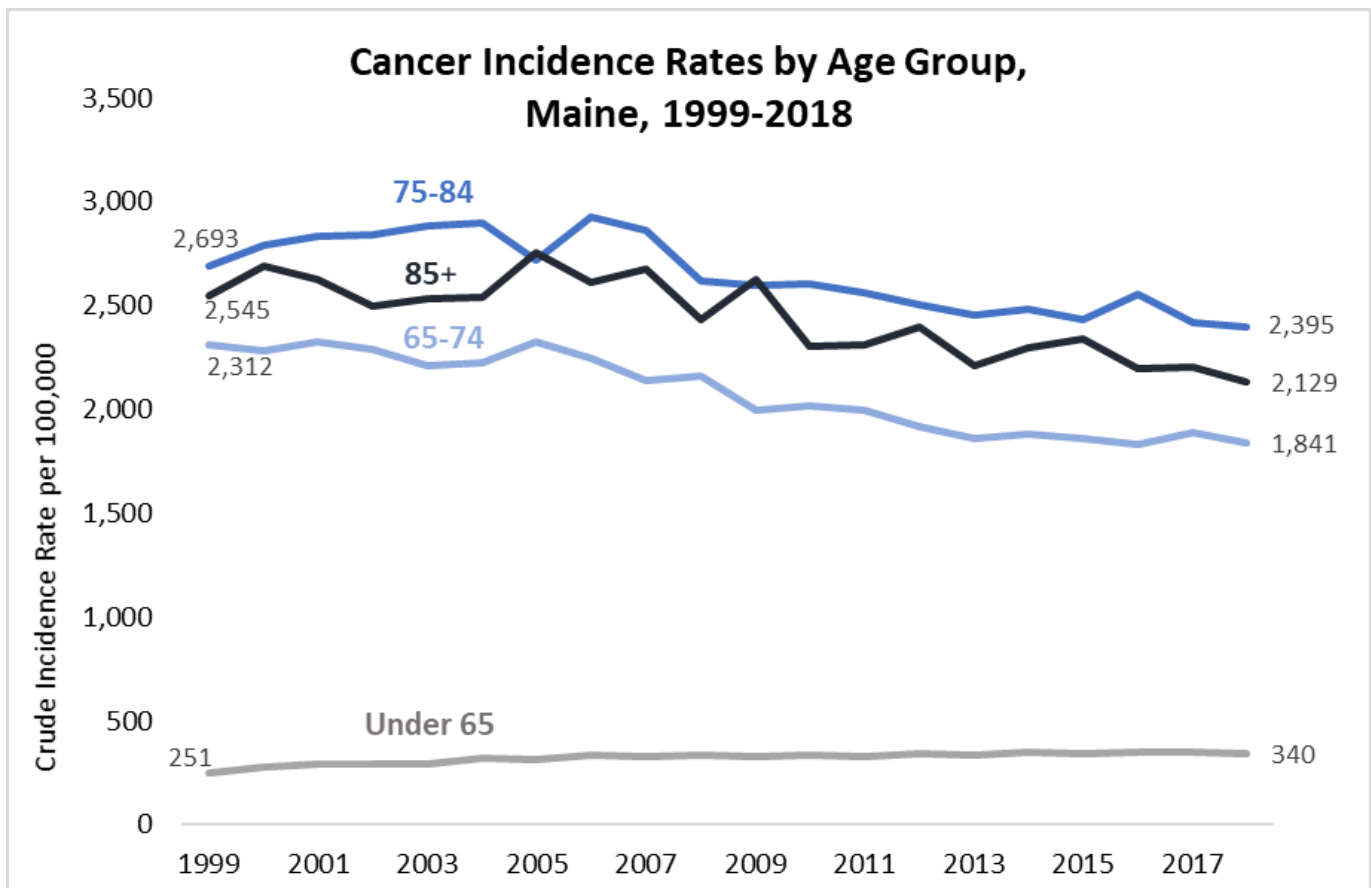
Data source: Incidence: Maine CDC Cancer Registry, based on November 2020 NPCR-CSS data submission. Maine Mortality: Maine Center for Disease Prevention. Data, Research, and Vital Statistics. 2021.

## Special Population: Age 65+

### Cancer Incidence Trends among Age 65+ Population

Over the past 20 years (1999-2018), cancer incidence rates have generally declined among Mainers age 65 and older.

- Among those 65-74 years of age, incidence rates declined significantly from 2,245.2 to 1,880.1 per 100,000 between 2006 and 2014; rates have somewhat plateaued since then.
- Among those 75-84 years of age, incidence rates declined significantly from 2,899.6 to 2,394.9 per 100,000 between 2004 and 2018.
- Among those age 85 and older, incidence rates declined significantly from 2,544.5 to 2,128.9 between 1999 and 2018.



#### Notes

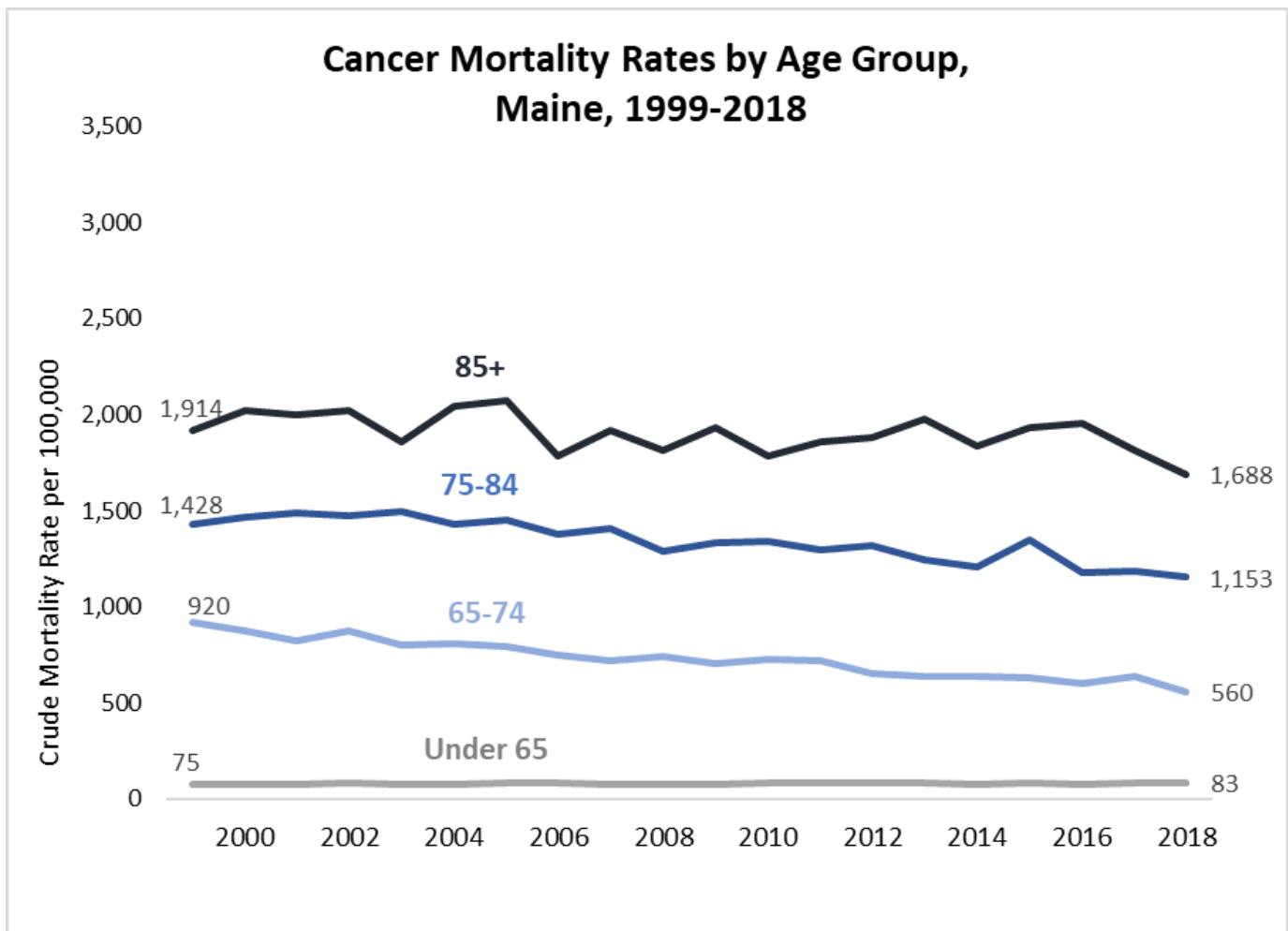
Data source: Maine Cancer Registry, based on November 2020 NPCR-CSS data submission.

## Special Population: Age 65+

### Cancer Mortality Trends among Age 65+ Population

Over the past 20 years (1999-2018), cancer mortality rates have declined significantly among Mainers age 65 and older

- Among those 65-74 years of age, mortality rates declined significantly from 920.0 to 560.1 per 100,000 between 1999 and 2018.
- Among those 75-84 years of age, mortality rates declined significantly from 1,427.8 to 1,152.6 per 100,000 between 1999 and 2018.
- Among those age 85 and older, mortality rates declined significantly from 1,914.1 to 1,687.7 between 1999 and 2018.



#### Notes

Data source: Maine Center for Disease Prevention. Data, Research, and Vital Statistics. 2021.

## Special Population: Age 65+

### Cancer Incidence and Mortality Rates by Age Group, Maine, 2009-2018

Incidence (New Cases)						
Age Group	Ten Year Count	Average Annual Number	% of Total	Total Population	Crude Rate per 100,000	95% CI
Under 65	36,528	3,653	41.9	10,758,382	339.5	336.1 - 343.0
65 and over	50,693	5,069	58.1	2,377,575	2,132.1	2,113.6 - 2,150.8
65-74	25,630	2,563	29.4	1,348,858	1,900.1	1,876.9 - 1,923.5
75-84	17,871	1,787	20.5	636,706	2,511.0	2,472.3 - 2,550.3
85 and over	7,192	719	8.2	313,386	2,294.9	2,242.2 - 2,348.6
<b>Total</b>	<b>87,221</b>	<b>8,722</b>	<b>100.0</b>	<b>13,135,957</b>	<b>664.0</b>	<b>659.6 - 668.4</b>
Mortality (Deaths)						
Under 65	8,911	891	27.4	10,907,333	81.7	80.0 - 83.4
65 and over	23,595	2,359	72.6	2,389,236	987.6	975.0 - 1,000.2
65-74	8,760	876	26.9	1,358,535	644.8	631.4 - 658.5
75-84	9,044	904	27.8	719,320	1,257.3	1,231.5 - 1,283.5
85 and over	5,791	579	17.8	311,381	1,859.8	1,812.2 - 1,908.3
<b>Total</b>	<b>32,506</b>	<b>3,251</b>	<b>100.0</b>	<b>13,296,569</b>	<b>244.8</b>	<b>242.2 - 247.5</b>

### Maine Cancer Incidence and Mortality Rates by Year and Age Group

Year	Incidence (New Cases) per 100,000				Mortality (Deaths) per 100,000			
	Under 65	65-74	75-84	85+	Under 65	65-74	75-84	85+
1999	251.0	2,312.1	2,693.0	2,544.5	75.3	920.0	1,427.8	1,914.1
2000	278.2	2,283.2	2,791.2	2,688.9	75.0	875.3	1,468.1	2,020.1
2001	289.4	2,328.1	2,833.0	2,628.2	73.8	821.0	1,485.5	1,995.9
2002	294.4	2,292.4	2,840.7	2,496.4	81.5	871.9	1,471.3	2,021.6
2003	294.2	2,211.0	2,883.8	2,534.2	79.2	803.9	1,492.8	1,858.4
2004	323.4	2,225.9	2,899.6	2,543.1	76.8	809.0	1,426.5	2,042.0
2005	311.7	2,328.4	2,719.9	2,757.3	82.1	795.0	1,448.7	2,075.4
2006	331.3	2,245.2	2,927.4	2,611.5	82.0	749.9	1,378.0	1,786.8
2007	329.8	2,140.4	2,862.1	2,677.4	78.0	723.5	1,410.5	1,914.2
2008	333.9	2,163.1	2,619.2	2,429.7	80.6	739.7	1,287.4	1,816.2
2009	330.1	1,993.7	2,596.4	2,623.4	78.6	708.9	1,330.4	1,935.6
2010	332.7	2,019.3	2,603.2	2,300.9	87.4	727.9	1,343.6	1,781.3
2011	330.1	1,995.4	2,559.1	2,307.6	81.0	720.6	1,298.3	1,859.0
2012	340.5	1,915.5	2,506.1	2,396.1	81.9	654.8	1,321.7	1,877.1
2013	335.2	1,858.8	2,451.6	2,213.5	80.9	636.6	1,244.5	1,977.8
2014	347.2	1,880.1	2,480.7	2,297.2	79.4	641.8	1,208.5	1,834.7
2015	343.3	1,860.3	2,435.7	2,337.9	81.9	631.8	1,348.2	1,929.7
2016	347.9	1,829.3	2,554.9	2,194.5	80.6	603.3	1,177.1	1,951.1
2017	349.5	1,885.5	2,421.0	2,203.3	83.2	640.3	1,188.5	1,815.0
2018	339.9	1,840.8	2,394.9	2,128.9	83.1	560.1	1,152.6	1,687.7

#### Notes

Data source: Incidence: Maine CDC Cancer Registry, based on November 2020 NPCR-CSS data submission. Maine Mortality-Maine Center for Disease Prevention. Data, Research, and Vital Statistics. 2021.

# Technical Notes

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## Maine Incidence and Mortality

**Case Definitions:** Incidence data presented in this report are based on SEER site recode ICD-O-3/WHO 2008 definitions, version 2008 and are determined by primary site and histology. The primary site reported is the site of origin and not the metastatic site. Incidence rates do not include recurrences. The number of cancers may include multiple primary cancers occurring in one patient.

Mortality case definitions for single cancers and “all sites” are based on the primary cancer site listed in the underlying cause of death and coded using the International Classification of Diseases, Tenth Edition (ICD-10).

**Rates:** Incidence and mortality rates are calculated per 100,000 population. The year 2000 U.S. standard population was used for age adjustment. Incidence counts and rates presented in this report were produced using the Surveillance, Epidemiology, and End Results (SEER) Program, Surveillance Research Program, National Cancer Institute, SEER\*Stat 8.3.8 software. Maine mortality counts and rates were produced using SAS 9.4. U.S. Mortality-Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2019 on CDC WONDER Online Database, released in 2020.

**Confidence Intervals and Statistical Significance:** Ninety-five percent confidence intervals are provided for all rates (except for tables in the Special Topic Section). If the 95 percent confidence intervals for two rates overlapped, the incidence rates were considered similar. If the confidence intervals did not overlap, the rates were considered to be significantly different. Maine rates that are significantly higher than the national rate and county rates that are significantly higher than the Maine rate are highlighted. All statistical comparisons in this report involving national estimates are based on rates for U.S. whites due to the predominantly white population in Maine.

**Rates by County:** The number of new cancer cases reported in a county varies from year to year, and some of this variation is due to chance. County level cancer rates are more likely to vary on an annual basis than state level rates. In addition, counties with smaller populations tend to have greater variation between time periods. In general, when there are less than 30 cancer cases per year in a geographic entity, it can be difficult to distinguish between normal variation and meaningful changes in cancer rates. In this report, multiple years of data are combined when producing the county rates. Although combining years can make the rates more reliable, caution must still be used when interpreting county rates because of small populations.



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