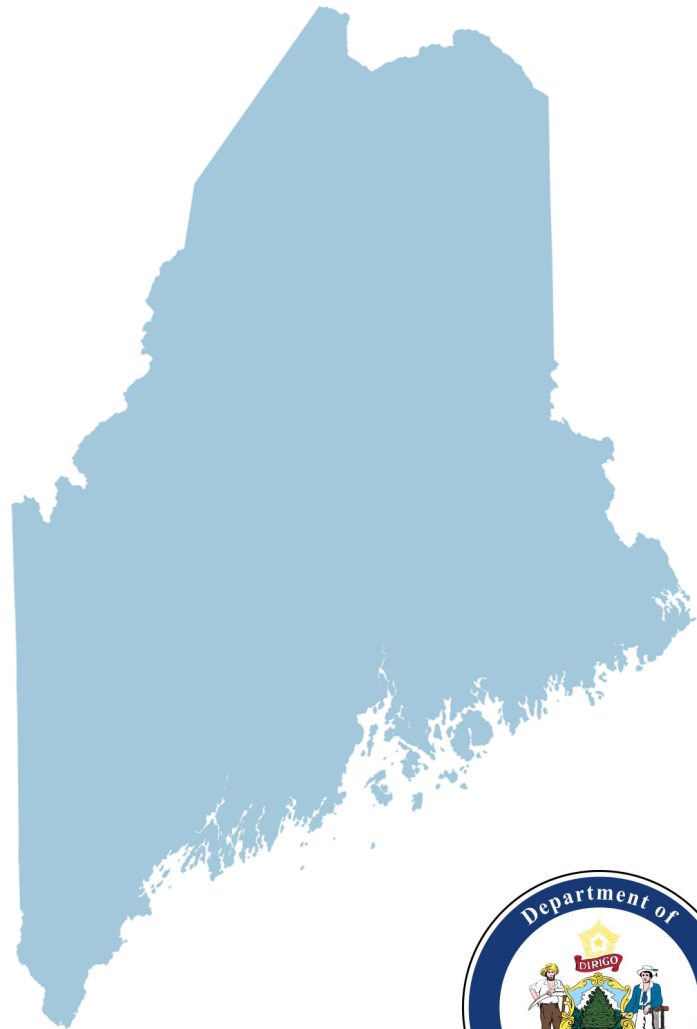


2024 Maine Cancer Snapshot

A REPORT BY THE MAINE CANCER REGISTRY

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Maine Cancer Registry
Maine Department of Health and
Human Services
Maine Center for Disease Control
and Prevention

Tel (207) 287-5272
TTY users call Maine relay 711



Key Findings

2024 MAINE CANCER SNAPSHOT

Among Maine residents in 2021*, there were 9,985 new malignant cancer cases and 3,383 cancer deaths.

Cancer Incidence

- The overall cancer age-adjusted incidence rate for Maine is 483.2 per 100,000 compared with 439.1 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.
- Washington, Penobscot, and Hancock counties have higher overall cancer incidence rates compared to the state rate.



Cancer Mortality

- The 2021 age-adjusted overall cancer mortality rate in Maine is 160.3 per 100,000, which is significantly higher than the U.S. cancer mortality rate (146.6).
- 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 causes of cancer mortality are cancers of the lung and bronchus, pancreas, colon and rectum, prostate, and female breast.
- Piscataquis, Somerset, and Washington counties have significantly higher overall cancer mortality rates compared to the state rate.

*The 2024 Maine Cancer Snapshot is based on new cancer cases diagnosed in 2021 (cancer incidence) and cancer deaths occurring in 2021 (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. See cautionary note about 2020 incidence on page 3.

[†]These differences are not due to Maine's older population because age-adjustment removes the impact of age from the rates.

Acknowledgements

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Suggested Citation: 2024 Maine Cancer Snapshot, 2024. Maine Department of Health and Human Services, Maine Cancer Registry. August 2024.

The Maine Cancer Registry wishes to thank the cancer registrars and reporters at hospitals and physician offices throughout Maine as well as our staff Kathy Boris and Jacqueline Neas.

Support for this report was provided in part by National Program of Cancer Registries, Centers for Disease Control and Prevention, Cooperative Agreement number 5 NU58DP007113-02-00 and by the Maine Department of Health and Human Services. This report was supported in part by an appointment to the Applied Epidemiology Fellowship Program administered by the Council of State and Territorial Epidemiologists (CSTE) and funded by the Centers for Disease Control and Prevention (CDC) Cooperative Agreement Number 1NU38OT000297-03-00.

Cancer Incidence

2024 MAINE CANCER SNAPSHOT

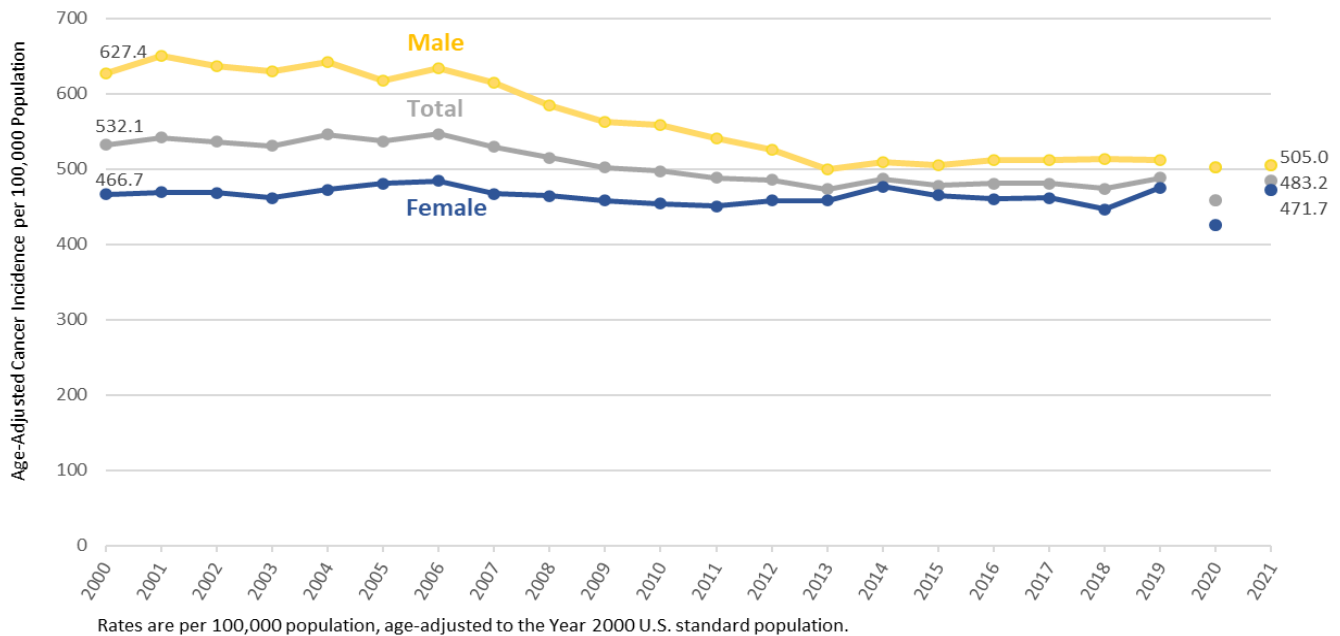
Cancer Incidence Key Findings

- 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, female breast, melanoma of the skin, oral cavity and pharynx, and urinary bladder cancer are significantly higher than the U.S.
- Penobscot, Washington, and Hancock counties have higher overall cancer incidence rates compared to the state overall. Cumberland County has a lower rate compared to the state .

The COVID-19 pandemic led to delays and reductions in cancer screenings and diagnoses. This may have contributed to the decline in new cancer cases for many sites in 2020. Nationally, the numbers of new cases diagnosed in 2021 are still a little lower than expected for some cancer types but have returned to pre-pandemic counts for other cancer types. In Maine, some cancer types still have slightly lower case counts and other cancer types have returned to or now exceed pre-pandemic counts.

Trends by Sex

Figure 1: Cancer Incidence Rate: All Malignant Cancers, by Sex, Maine, 2000-2021



Data source: Incidence: Maine Cancer Registry, based on November 2023 NPCR-CSS data submission. 2020 data is displayed but was not included in the trend analysis due to the COVID-19 pandemic impact.

Incidence: Top 10 Cancers, Maine 2021 Red Rate = Maine is significantly higher than U.S.

Cancer Type	Maine (all sexes)				U.S.		
	Count	AA Rate	AA Lower 95% CL	AA Upper 95% CL	AA Rate	AA Lower 95% CL	AA Upper 95% CL
All Sites	9,958	483.2	473.2	493.4	439.1	438.4	439.7
Female Breast	1,465	145.9	137.8	154.2	133.8	133.3	134.3
Lung and Bronchus	1,417	62.7	59.4	66.2	49.1	48.9	49.3
Prostate	1,263	111.6	105.3	118.2	114.7	114.2	115.2
Colon and Rectum	706	35.3	32.6	38.2	36.0	35.8	36.2
Urinary Bladder	564	25.8	23.6	28.1	18.1	18.0	18.3
Melanoma of the Skin	503	26.8	24.3	29.4	23.0	22.8	23.1
Non-Hodgkin Lymphoma	362	17.8	15.9	19.9	17.8	17.7	17.9
Kidney and Renal Pelvis	356	17.3	15.5	19.4	17.0	16.9	17.2
Uterus (Corpus Uteri and Uterus, NOS)	333	31.3	27.8	35.2	28.3	28.0	28.5
Oral Cavity and Pharynx	311	14.3	12.6	16.1	11.9	11.8	12.0
		Maine Females			U.S. Females		
All Sites	4,863	471.7	457.4	486.3	420.9	420.0	421.8
Female Breast	1,465	145.9	137.8	154.2	133.8	133.3	134.3
Lung and Bronchus	676	57.0	52.6	61.8	45.5	45.2	45.8
Colon and Rectum	348	32.9	29.3	36.9	32.0	31.7	32.2
Uterus (Corpus Uteri and Uterus, NOS)	333	31.3	27.8	35.2	28.3	28.0	28.5
Melanoma of the Skin	229	25.3	21.8	29.1	18.9	18.7	19.1
Thyroid	186	25.2	21.5	29.4	18.5	18.3	18.7
Non-Hodgkin Lymphoma	165	15.5	13.0	18.3	14.8	14.6	15.0
Pancreas	136	11.5	9.6	13.8	11.8	11.7	12.0
Urinary Bladder	131	11.4	9.4	13.7	7.8	7.7	7.9
Kidney and Renal Pelvis	128	12.2	10.0	14.7	11.8	11.7	12.0
		Maine Males			U.S. Males		
All Sites	5,089	505.0	490.5	519.8	470.0	469.0	471.0
Prostate	1,263	111.6	105.3	118.2	114.7	114.2	115.2
Lung and Bronchus	740	69.8	64.6	75.2	54.1	53.7	54.4
Urinary Bladder	433	43.8	39.6	48.4	31.2	31.0	31.5
Colon and Rectum	358	37.8	33.8	42.2	40.7	40.4	41.0
Melanoma of the Skin	274	29.1	25.6	33.0	28.6	28.3	28.8
Kidney and Renal Pelvis	227	22.9	19.9	26.3	22.9	22.7	23.2
Oral Cavity and Pharynx	214	21.0	18.2	24.3	17.9	17.7	18.1
Non-Hodgkin Lymphoma	196	20.9	17.9	24.2	21.5	21.3	21.7
Leukemia	181	20.1	17.1	23.5	17.1	16.9	17.3
Pancreas	160	15.8	13.3	18.6	15.2	15.1	15.4

Leading cancer types are ordered by descending Maine incidence counts.

AA: Age-adjusted to the year 2000 U.S. standard population. Rates are per 100,000. 95% CL: 95% Confidence Limit.

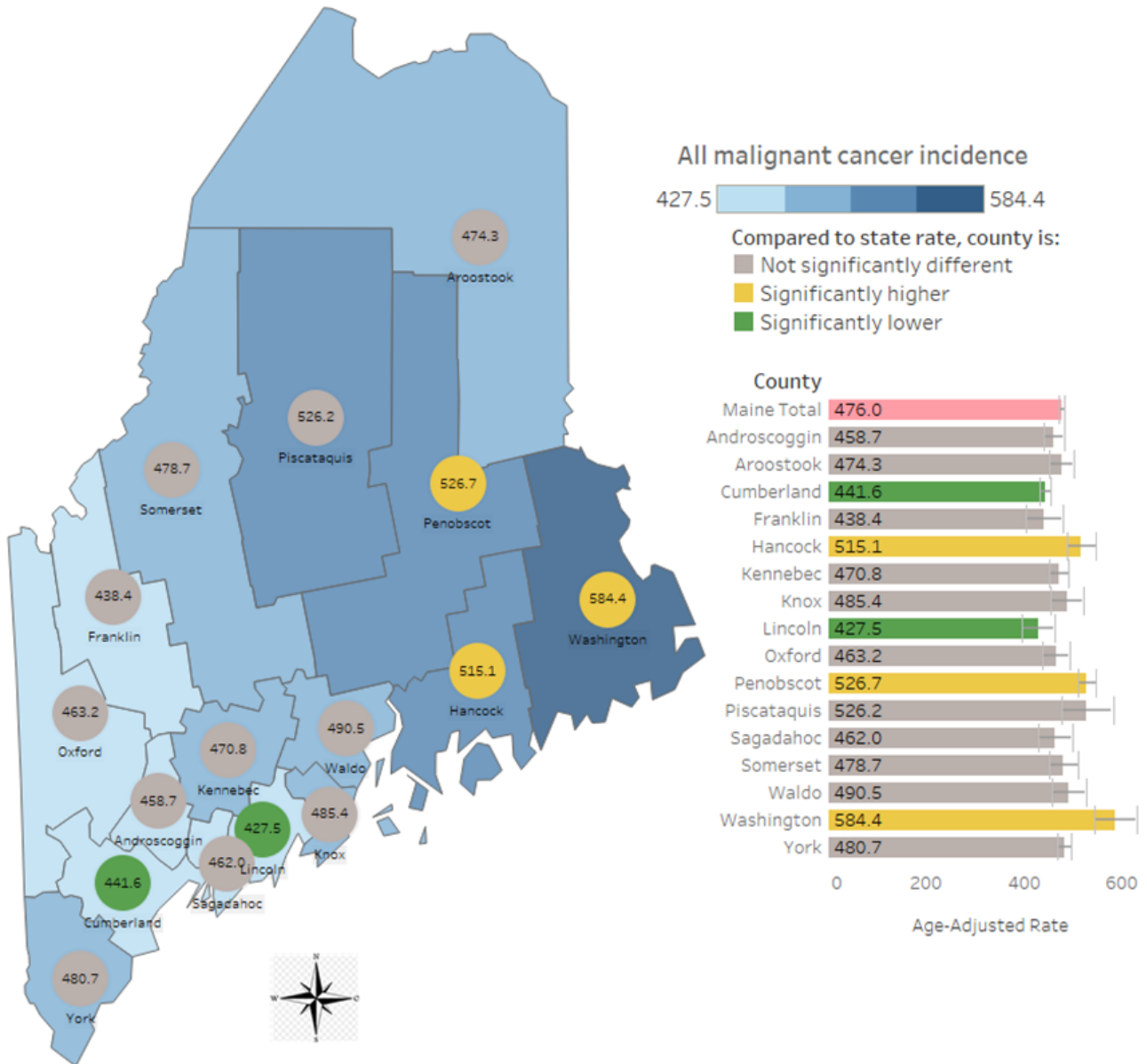
Data sources: Maine data: Maine Cancer Registry. U.S. data: NPCR and SEER Incidence analytic file - U.S. Cancer Statistics

Public Use Database. See technical notes for a full definition.

Incidence by County

All Malignant Cancer Incidence by County, Maine, 2019-2021

Age-adjusted Rate per 100,000 Population per Year



Data Source: Maine Cancer Registry, based on November 2023 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 the stepped display method with 4 steps. Error bars on bar chart depict 95% confidence intervals.

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Cancer Mortality

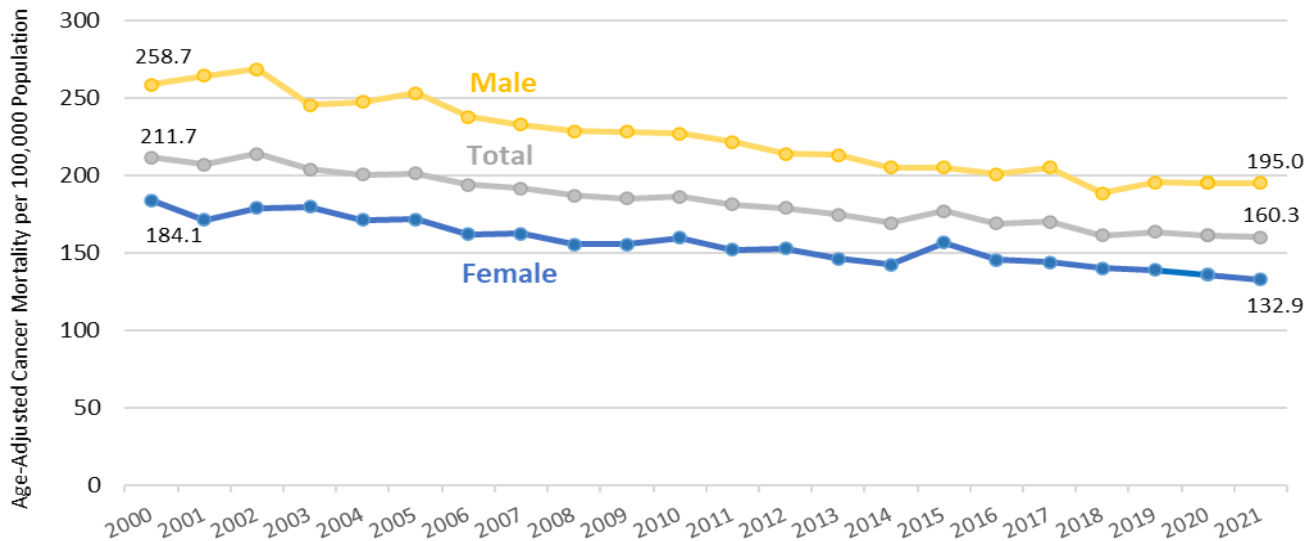
2024 MAINE CANCER SNAPSHOT

Cancer Mortality Key Findings

- In 2021 there were 3,383 cancer deaths among Maine residents. The 2021 age-adjusted cancer mortality rate in Maine is 160.3 per 100,000, which is significantly higher than the U.S. cancer mortality rate (146.6).
- The overall cancer mortality rate has decreased from 211.7 per 100,000 to 160.3 in Maine over the past 20 years, yet the Maine rate remains significantly higher than the U.S. rate.
- 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 overall cancer mortality rates compared to the state overall. Cumberland county has a lower rate compared to the state overall.

Trends by Sex

Figure 2: Cancer Mortality Rate: All Malignant Cancers, by Sex, Maine, 2000-2021



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

Data source: Maine Center for Disease Prevention. Data, Research, and Vital Statistics. 2023. Cancer deaths were identified using underlying cause-of-death codes C00-C97 (malignant neoplasms).

Mortality: Top 10 Cancers, Maine 2021

Red Rate= Maine is significantly higher than U.S.

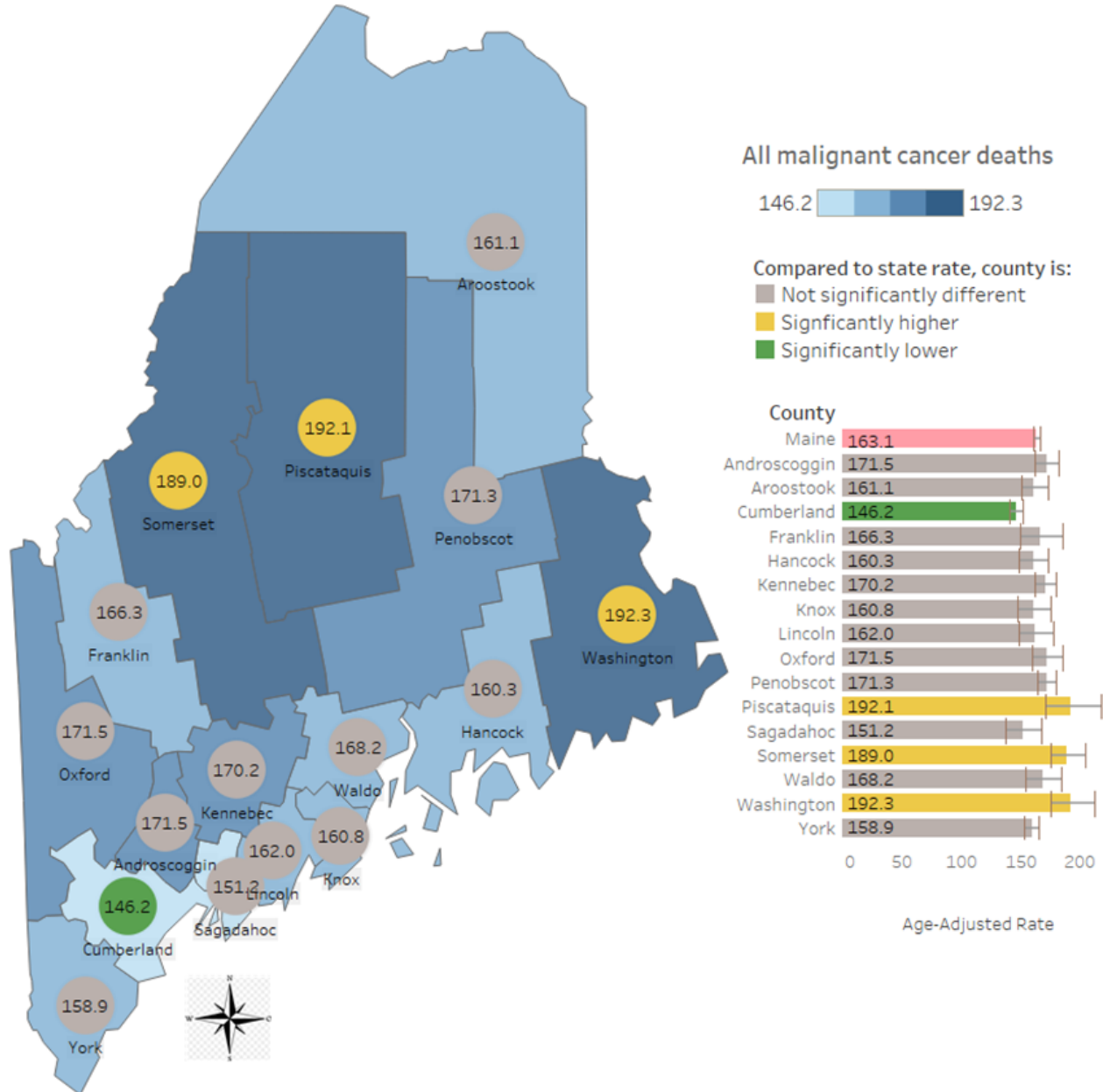
Cancer Type	Maine (all sexes)				U.S.		
	Count	AA Rate	AA Lower 95% CL	AA Upper 95% CL	AA Rate	AA Lower 95% CL	AA Upper 95% CL
All Sites	3,383	160.3	154.7	165.9	146.6	146.2	146.9
Lung and Bronchus	828	38.1	35.4	40.7	31.7	31.6	31.9
Pancreas	277	12.7	11.1	14.2	11.4	11.3	11.5
Colon and Rectum	259	12.9	11.2	14.5	13.0	12.9	13.1
Prostate	212	24.4	21.0	27.8	19.0	18.8	19.2
Female Breast	167	15.1	12.7	17.5	19.4	19.2	19.6
Esophagus	136	6.3	5.2	7.4	3.7	3.7	3.8
Non-Hodgkin Lymphoma	128	6.2	5.1	7.3	5.0	4.9	5.0
Leukemia	126	6.4	5.3	7.6	5.8	5.8	5.9
Liver and Intrahepatic Bile Duct	114	5.3	4.3	6.3	6.7	6.6	6.8
Urinary Bladder	108	5.1	4.1	6.0	4.2	4.1	4.2
	Maine Females				U.S. Females		
All Sites	1,524	132.9	126.0	139.8	127.7	127.2	128.1
Lung and Bronchus	391	33.8	30.3	37.3	27.3	27.1	27.5
Breast	167	15.1	12.7	17.5	19.4	19.2	19.6
Pancreas	133	11.1	9.1	13.0	10.0	9.9	10.1
Colon and Rectum	117	10.8	8.7	12.8	11.0	10.9	11.1
Uterus (Corpus Uteri and Uterus, NOS)	64	5.4	4.1	6.9	5.3	5.2	5.4
Ovary	61	5.4	4.1	6.9	6.0	5.9	6.1
Non-Hodgkin Lymphoma	60	5.3	4.0	6.8	3.8	3.7	3.9
Leukemia	58	5.2	4.0	6.7	4.4	4.3	4.5
Brain and Other Nervous System	43	4.0	2.9	5.4	3.6	3.5	3.7
Liver and Intrahepatic Bile Duct	35	3.1	2.1	4.3	4.4	4.3	4.4
	Maine Males				U.S. Males		
All Sites	1,859	195.0	185.8	204.3	172.0	171.4	172.6
Lung and Bronchus	437	43.3	39.1	47.6	37.4	37.2	37.7
Prostate	212	24.4	21.0	27.8	19.0	18.8	19.2
Pancreas	144	14.5	12.1	17.0	13.1	12.9	13.2
Colon and Rectum	142	15.3	12.7	18.0	13.0	12.9	13.1
Esophagus	108	11.0	8.8	13.1	6.4	6.3	6.6
Urinary Bladder	85	9.2	7.4	11.4	7.1	7.0	7.2
Liver and Intrahepatic Bile Duct	79	7.7	6.1	9.5	9.4	9.3	9.6
Non-Hodgkin Lymphoma	68	7.3	5.7	9.3	6.5	6.4	6.6
Leukemia	68	7.7	6.0	9.7	7.7	7.5	7.8
Oral Cavity and Pharynx	65	6.4	5.0	8.2	4.2	4.1	4.3

Leading types of cancer mortality are ordered by descending Maine counts. AA: Age-adjusted to the year 2000 U.S. standard population. Rates are per 100,000. 95% CL: 95% Confidence Limit. Data source: Maine Center for Disease Control, Data, Research, and Vital Statistics. U.S. data from National Center for Health Statistics using CDC WONDER Online Database, Underlying Cause of Death by Single Race 2018, released in 2024. Cancer deaths were identified using cause-of-death codes C00-C97 (malignant neoplasms).

Mortality by County

All Malignant Cancer Mortality by County, Maine, 2017-2021

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 the stepped display method with 4 steps. Error bars on bar chart depict 95% confidence intervals.

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Additional Incidence and Mortality Data for Maine

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 Cancer Registry (MCR) Website

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

Maine Cancer Plan 2021-2025

A five-year agenda for cancer prevention, screening, diagnosis, treatment, palliative, and end-of-life care in Maine. From the Maine's Impact Cancer Network (the state's cancer coalition).

Maine Shared Community Health Needs Assessment (CHNA) 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.

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) Online Cancer Data

NAACCR Cancer Maps (historically called CiNA+ online) is an interactive mapping tool for U.S. and Canadian cancer incidence statistics for the most current five years of available data.

NAACCR CiNA Explorer Stats is an interactive data visualization tool for quick access to key U.S. and Canadian cancer statistics for major cancer sites by age, sex, stage, race/ethnicity, registry, and data type for the most current five years of available data.

U.S. Cancer Statistics Data Visualizations Tool

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 2021.

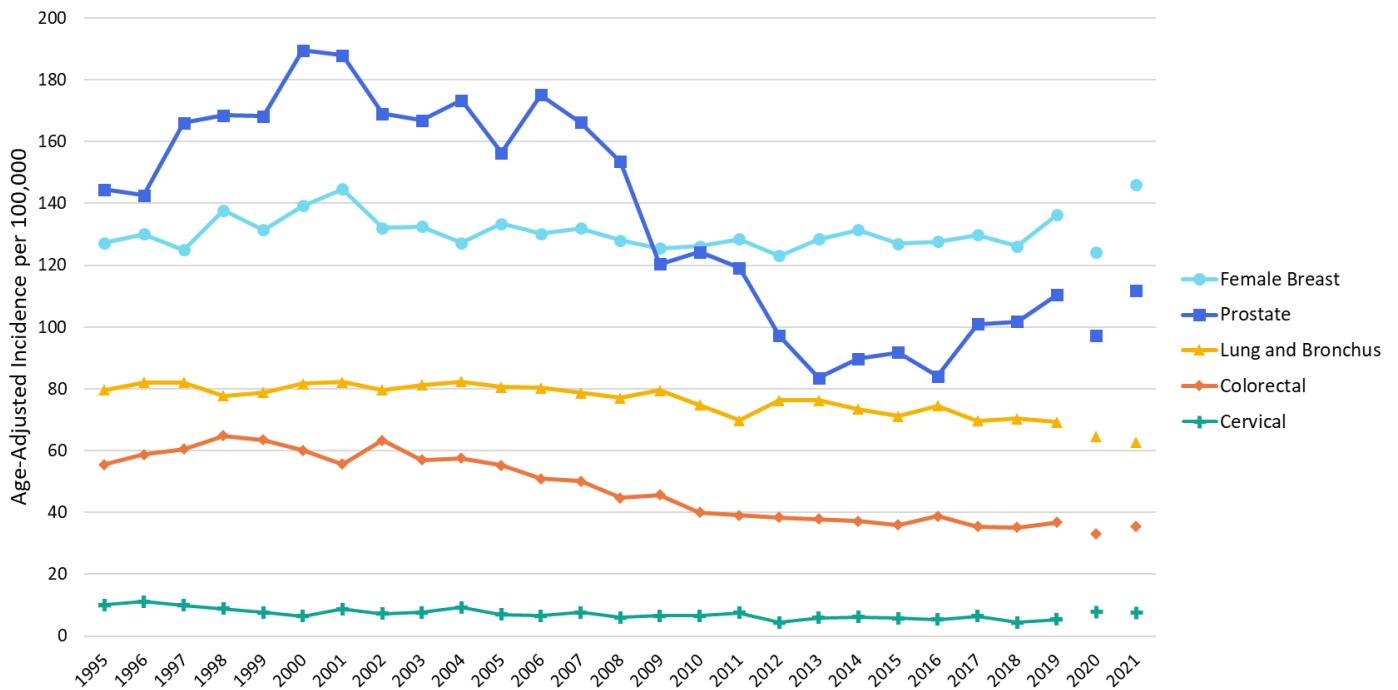
Special Topic: Trends in Selected Cancer Incidence Rates

2024 MAINE CANCER SNAPSHOT

Screenable cancers include cancers of the breast, cervix, colon and rectum (colorectal), lung and bronchus, and prostate. Understanding cancer incidence trends for screenable cancers and examining trends by sex and age groups can help cancer prevention and control programs identify intervention opportunities. In addition, the COVID-19 pandemic impacted cancer incidence by disrupting cancer screening, diagnosis, and care. Maine data suggest that while incidence decreased in 2020, some common cancers (female breast, prostate, and colorectal) have returned to or exceed pre-pandemic levels in 2021.

- Maine’s trends in breast, cervical, colorectal, lung, and prostate cancer incidence between 1995 and 2021 were analyzed using SEER*Stat software. We analyzed overall trends with Joinpoint software and excluded 2020 from trend analysis to align with National Cancer Institute guidance (Howlader et al. 2021). Data points from 2019, 2020, and 2021 are not connected in graphs to reflect this.
- For screenable cancers, age-adjusted prostate and breast cancer had the highest incidence rates in Maine from 1995-2021 (Figure 1).

Figure 1. Trends in Cancer Incidence Rates, Maine, 1995-2021



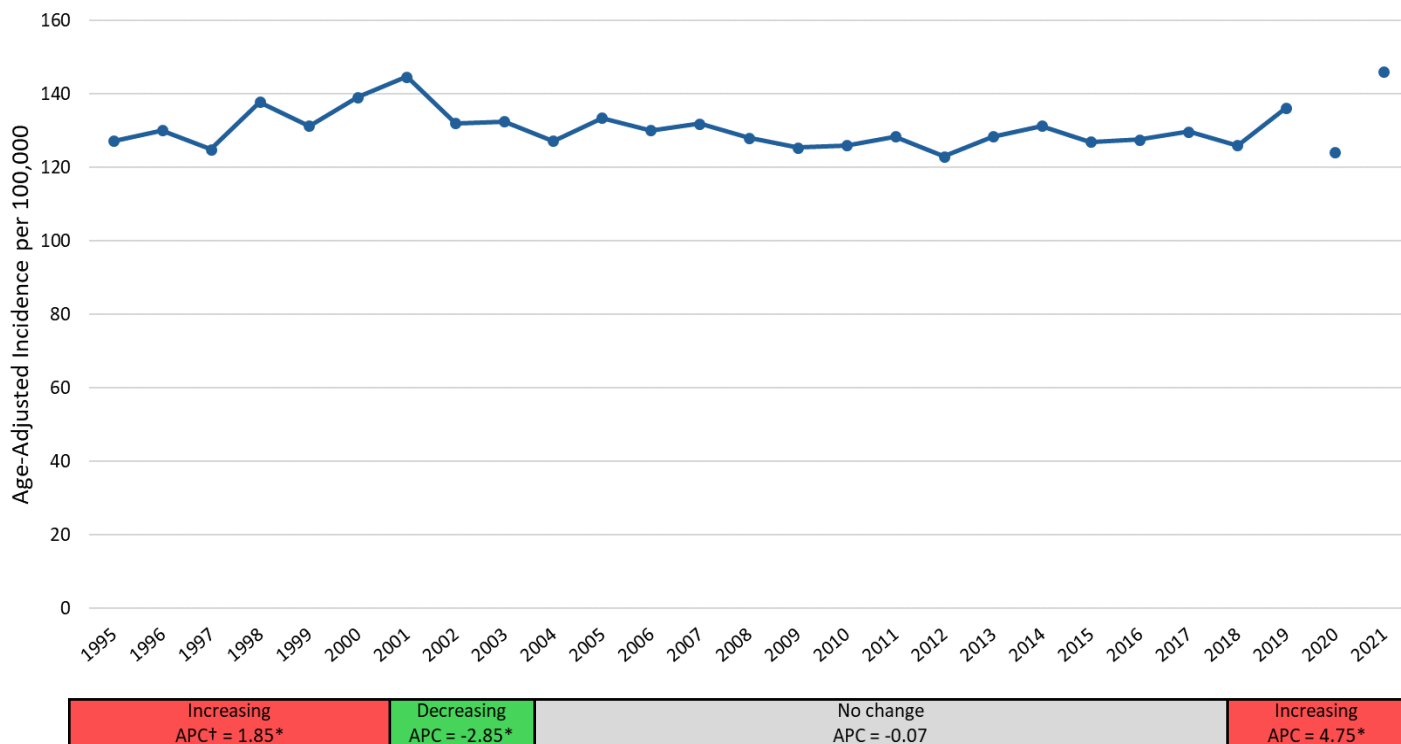
Data source: Incidence: Maine Cancer Registry, based on November 2023 NPCR-CSS data submission. 2020 data is displayed but was not included in the trend analysis due to the COVID-19 pandemic impact. The year 2000 U.S. standard population was used for age adjustment.

Special Topic: Trends in Selected Cancer Incidence Rates

Female Breast Cancer Incidence in Maine

- Female breast cancer incidence in Maine has stayed **relatively constant** from 2005 to 2019.
- Analyses indicate an increase in female breast cancer incidence since 2019, but this trend should be interpreted with caution due to the impact of the COVID-19 pandemic on health care access in 2020 and the continued impact COVID-19 may have on cancer diagnosis and accessing care. (Figure 2).
- Female breast cancer incidence in 2021 is higher than pre-pandemic levels after a lower than expected number of cases in 2020.

Figure 2. Trends in Female Breast Cancer Incidence Rates, Maine, 1995-2021



Notes

† Annual Percent Change.

* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level.

2020 data is displayed but was not included in the overall trend analysis due to the COVID-19 pandemic impact on cancer.

The year 2000 U.S. standard population was used for age adjustment.

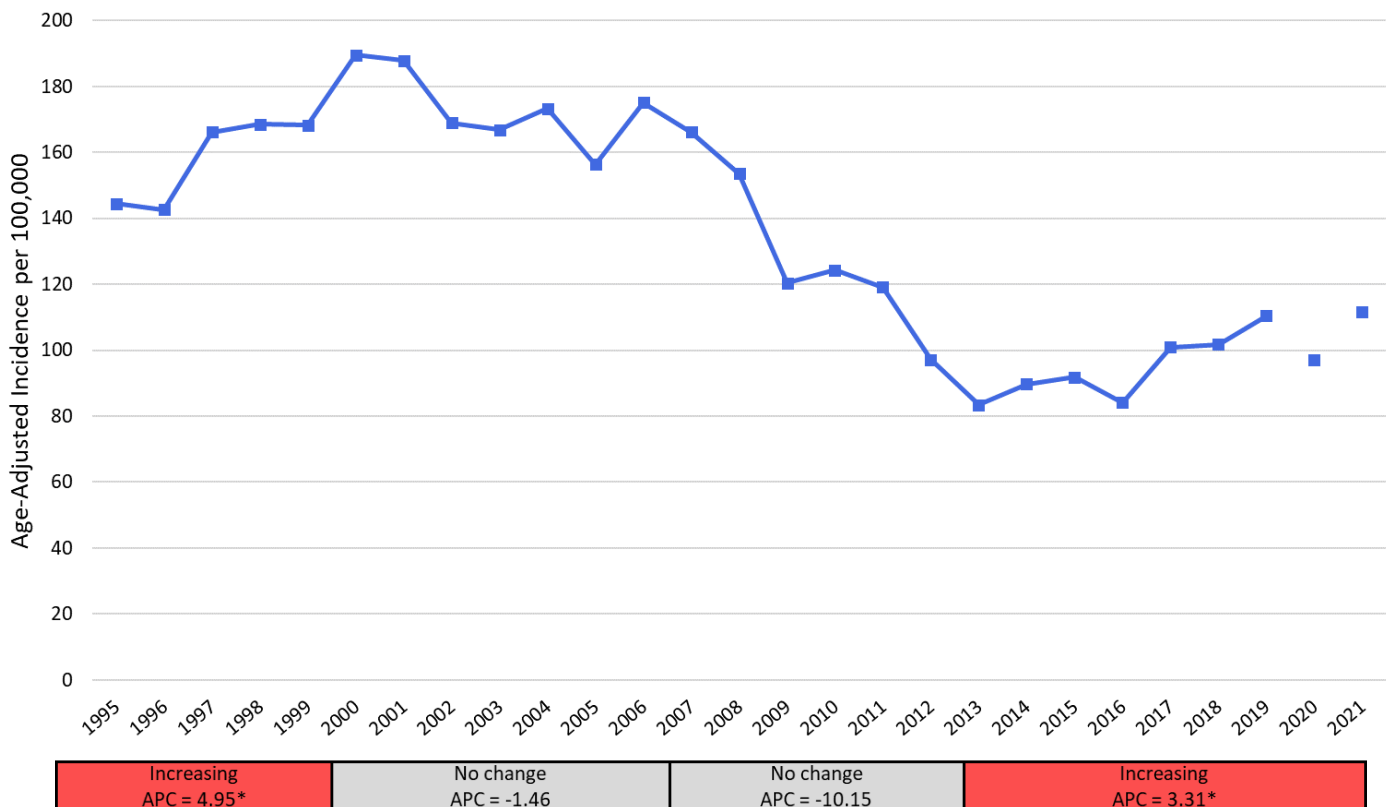
Data source: Incidence: Maine Cancer Registry, based on November 2023 NPCR-CSS data submission.

Special Topic: Trends in Selected Cancer Incidence Rates

Prostate Cancer Incidence in Maine

- From 2000 to 2013, age-adjusted prostate cancer incidence declined in Maine, though this decline was not statistically significant.
- There has been a **steady, significant increase** in prostate cancer incidence since 2014 (Figure 3). Prostate cancer incidence in 2021 appears to have returned to pre-pandemic levels after a lower than expected number of new diagnoses in 2020, likely due to the impact of the COVID-19 pandemic on health care access, care, and diagnosis in 2020.

Figure 3. Trends in Prostate Cancer Incidence Rates, Maine, 1995-2021



Notes

* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level.

2020 data is displayed but was not included in the trend analysis due to the COVID-19 pandemic impact.

The year 2000 U.S. standard population was used for age adjustment.

Data source: Incidence: Maine Cancer Registry, based on November 2023 NPCR-CSS data submission.

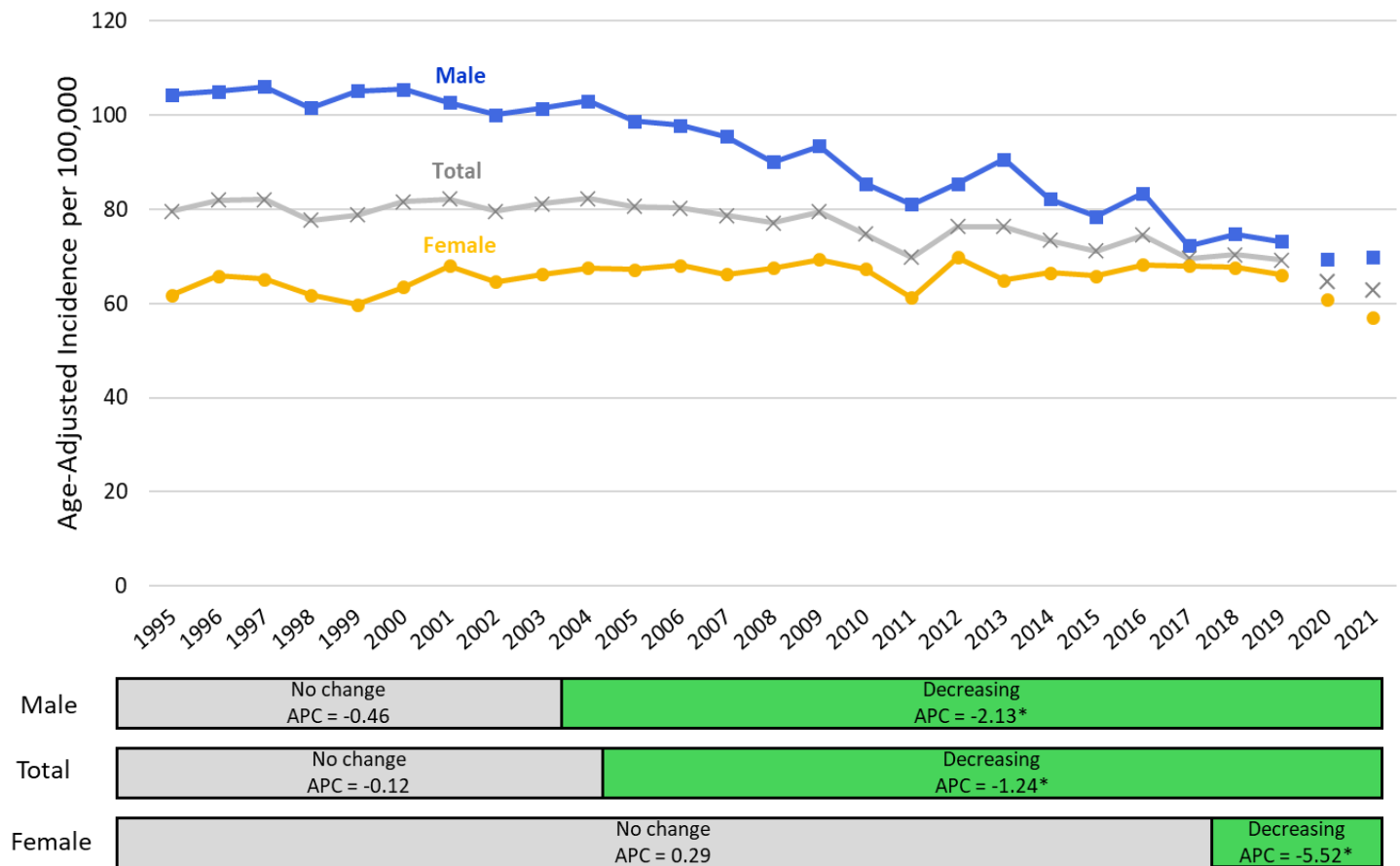
Special Topic: Trends in Selected Cancer Incidence Rates

Lung Cancer Incidence in Maine

Throughout the 1995-2021 period, the age-adjusted lung cancer incidence rate was **substantially higher among Maine males than females, but that gap has narrowed over time** as rates among males have declined while rates among females have remained steady (Figure 4).

- Lung cancer incidence declined in 2020 and 2021 and has not returned to pre-pandemic levels. Trends in lung cancer should be interpreted with caution due to the impact of the COVID-19 pandemic on health care access in 2020 and the continued impact COVID-19 may have on care and diagnosis.
- In 2021, the age-adjusted incidence rate among males remains significantly higher than the incidence rate among females.

Figure 4. Trends in Lung Cancer Incidence Rates by Sex, Maine, 1995-2021



Notes

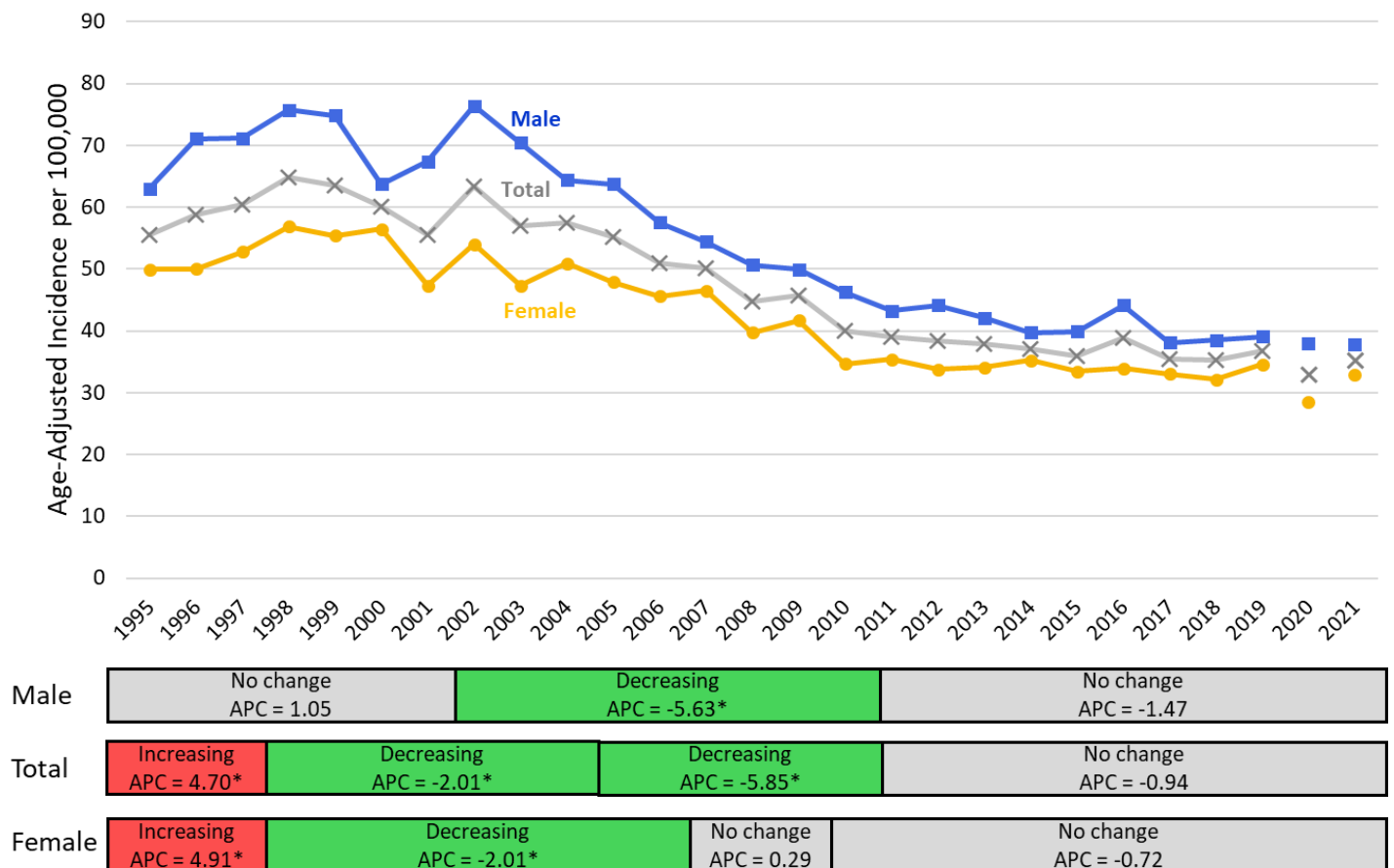
* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level.
 2020 data is displayed but was not included in the overall trend analysis due to the COVID-19 pandemic impact on cancer.
 The year 2000 U.S. standard population was used for age adjustment.

Special Topic: Trends in Selected Cancer Incidence Rates

Colorectal Cancer Incidence in Maine

- From 1995 to the late 2000s, the age-adjusted colorectal cancer incidence rates decreased among Maine males and females.
- For the last 10 years, **incidence has not significantly changed among males or females** (Figure 5).
- Colorectal cancer incidence in 2021 appears to have returned to pre-pandemic levels after a lower than expected number of new diagnoses in 2020.

Figure 5. Trends in Colorectal Cancer Incidence Rates by Sex, Maine, 1995-2021



Notes

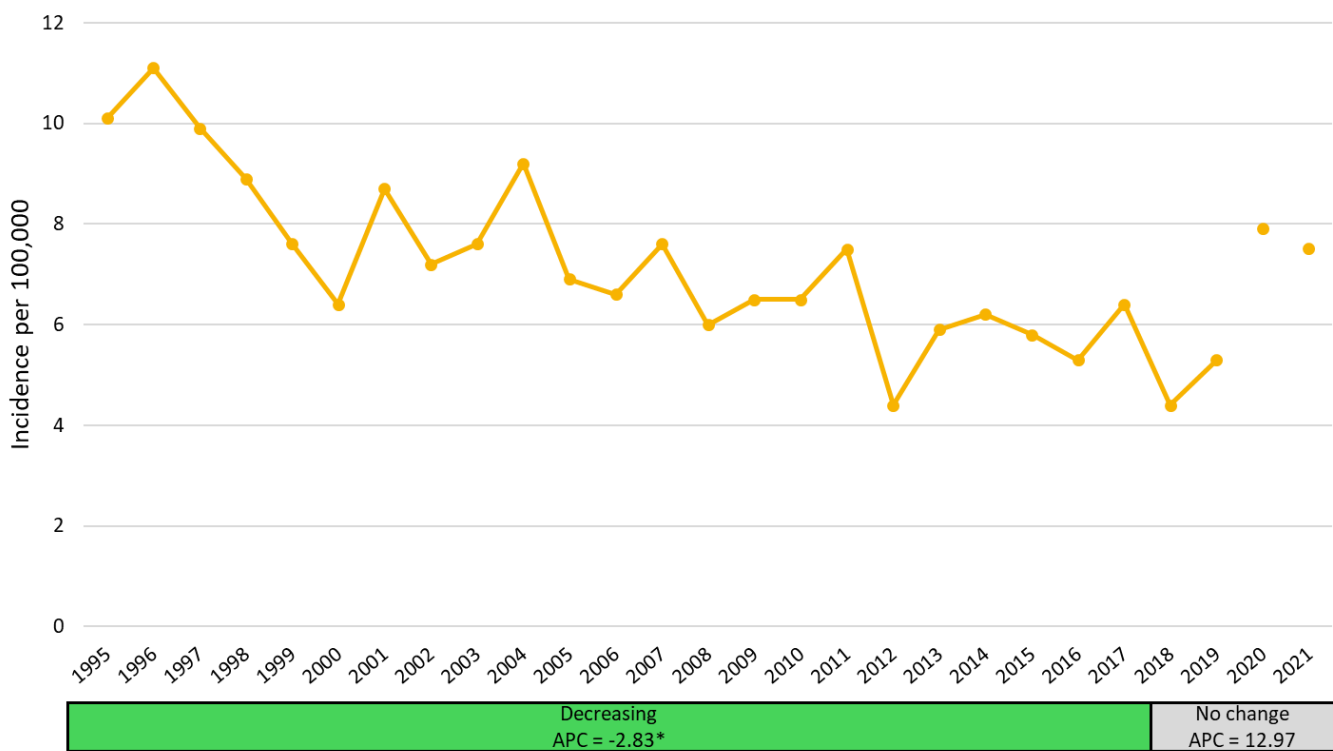
* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level.
 2020 data is displayed but was not included in the trend analysis due to the COVID-19 pandemic impact.
 The year 2000 U.S. standard population was used for age adjustment. Data source: Incidence: Maine Cancer Registry, based on November 2023 NPCR-CSS data submission.

Special Topic: Trends in Selected Cancer Incidence Rates

Cervical Cancer Incidence in Maine

- Cervical cancer incidence has **steadily decreased** from 1995 to 2019 and incidence has neither increased nor decreased significantly since 2019 (Figure 6).
- Analyses indicate no significant change in cervical cancer incidence since 2018, but trends should be interpreted with caution due to the exclusion of 2020 data following trend analysis recommendations to account for the impact of the COVID-19 pandemic (Figure 6).

Figure 6. Trends in Cervical Cancer Incidence Rates, Maine, 1995-2021



Notes

* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level.

2020 data is displayed but was not included in the trend analysis due to the COVID-19 pandemic impact.

The year 2000 U.S. standard population was used for age adjustment. Data source: Incidence: Maine Cancer Registry, based on November 2023 NPCR-CSS data submission.

Special Topic: Trends in Selected Cancer Incidence Rates

Table 1: Trends in Female Breast Cancer Incidence Rates (per 100,000), Maine, 1995-2021

Year	Female Breast		
	Count	AA Rate	AA 95% CI
1995	898	127.2	118.9-135.9
1996	937	130.1	121.8-138.8
1997	913	125.0	116.9-133.5
1998	1,020	137.8	129.4-146.7
1999	995	131.4	123.2-139.9
2000	1,077	139.2	130.9-147.9
2001	1,129	144.7	136.4-153.5
2002	1,048	132.1	124.1-140.4
2003	1,075	132.5	124.6-140.8
2004	1,053	127.3	119.6-135.3
2005	1,109	133.5	125.7-141.7
2006	1,110	130.2	122.5-138.2
2007	1,139	131.9	124.2-140.0
2008	1,130	128.1	120.6-136.0
2009	1,103	125.5	118.0-133.4
2010	1,130	126.1	118.6-133.9
2011	1,149	128.5	120.9-136.5
2012	1,135	123.0	115.6-130.7
2013	1,175	128.5	120.9-136.5
2014	1,223	131.4	123.8-139.5
2015	1,191	127.0	119.4-135.0
2016	1,203	127.6	120.0-135.6
2017	1,269	129.8	122.3-137.7
2018	1,234	126.1	118.7-133.9
2019	1,347	136.3	128.5-144.4
2020	1,255	124.1	116.8-131.8
2021	1,465	145.9	137.8-154.2

Notes

Data source: Maine Cancer Registry, based on November 2023 NPCR-CSS data submission. *2020 data is displayed but was not included in the trend analysis due to the COVID-19 pandemic impact.*

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

Special Topic: Trends in Selected Cancer Incidence Rates

Table 2: Trends in Prostate Cancer Incidence Rates (per 100,000), Maine, 1995-2021

Year	Prostate		
	Count	AA Rate	AA 95% CI
1995	828	144.5	134.7-154.9
1996	831	142.6	132.9-152.8
1997	978	166.1	155.7-177.0
1998	1,011	168.5	158.1-179.4
1999	1,035	168.2	158.0-178.9
2000	1,187	189.5	178.7-200.7
2001	1,213	187.9	177.3-198.9
2002	1,122	169.0	159.2-179.4
2003	1,129	166.9	157.2-177.0
2004	1,230	173.3	163.6-183.4
2005	1,127	156.4	147.3-166.0
2006	1,297	175.1	165.5-185.1
2007	1,281	166.2	157.0-175.7
2008	1,221	153.6	144.9-162.7
2009	985	120.4	112.8-128.3
2010	1,049	124.3	116.7-132.3
2011	1,035	119.1	111.7-126.8
2012	886	97.2	90.7-104.0
2013	780	83.5	77.6-89.8
2014	854	89.8	83.7-96.3
2015	898	91.8	86.7-98.3
2016	847	84.1	78.4-90.3
2017	1,027	101.0	94.7-107.7
2018	1,081	101.8	95.6-108.3
2019	1,185	110.4	104.0-117.1
2020	1,055	97.0	91.1-103.4
2021	1,263	111.6	105.3-118.2

Notes

Data source: Maine Cancer Registry, based on November 2023 NPCR-CSS data submission. 2020 data is displayed but was not included in the trend analysis due to the COVID-19 pandemic impact.

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

Special Topic: Trends in Selected Cancer Incidence Rates

Table 3: Trends in Colorectal Cancer Incidence Rates (per 100,000) By Sex, Maine, 1995-2021

Year	All sexes			Male			Female		
	Count	AA Rate	AA 95% CI	Count	AA Rate	AA 95% CI	Count	AA Rate	AA 95% CI
1995	739	55.5	51.6-59.7	349	63.0	56.4-70.1	390	49.9	45.0-55.2
1996	791	58.8	54.8-63.1	393	71.1	64.1-78.6	398	50.0	45.2-55.3
1997	827	60.5	56.5-64.8	409	71.2	64.4-78.6	418	52.8	47.8-58.2
1998	895	64.8	60.6-69.2	437	75.7	68.6-83.2	458	56.9	51.8-62.5
1999	898	63.5	59.4-67.9	447	74.8	67.9-82.2	451	55.4	50.4-60.9
2000	867	60.1	56.2-64.2	393	63.7	57.5-70.5	474	56.5	51.5-61.9
2001	816	55.6	51.9-59.6	414	67.4	61.0-74.4	401	47.3	42.7-52.2
2002	945	63.3	59.3-67.5	483	76.4	69.6-83.6	462	54.0	49.2-59.3
2003	863	57.0	53.2-60.9	456	70.4	64.0-77.3	407	47.3	42.8-52.2
2004	889	57.5	53.8-61.5	442	64.4	58.4-70.8	447	50.9	46.3-56.0
2005	863	55.2	51.6-59.1	435	63.7	57.8-70.1	428	47.9	43.5-52.8
2006	815	50.9	47.4-54.5	405	57.5	51.9-63.5	410	45.6	41.2-50.4
2007	817	50.1	46.7-53.7	390	54.4	49.0-60.2	427	46.5	42.2-51.3
2008	745	44.7	41.5-48.1	376	50.7	45.6-56.2	369	39.7	35.6-44.1
2009	769	45.7	42.5-49.2	376	49.9	44.9-55.4	393	41.7	37.6-46.2
2010	677	40.0	37.0-43.2	357	46.3	41.5-51.6	320	34.7	30.9-38.9
2011	658	39.1	36.1-42.3	326	43.2	38.5-48.3	332	35.4	31.6-39.6
2012	669	38.4	35.5-41.6	350	44.1	39.4-49.1	319	33.8	30.1-37.9
2013	694	37.9	35.1-41.0	361	42.1	37.8-46.9	333	34.1	30.4-38.2
2014	677	37.1	34.2-40.1	331	39.7	35.4-44.4	346	35.2	31.4-39.3
2015	675	36.0	33.3-39.0	345	39.9	35.6-44.6	330	33.4	29.8-37.5
2016	709	38.8	35.9-41.9	371	44.1	39.6-49.1	337	33.9	30.2-37.9
2017	658	35.4	32.7-38.4	333	38.1	33.9-42.6	324	33.0	29.3-37.1
2018	655	35.2	32.4-38.1	338	38.5	34.3-43.1	317	32.1	28.5-36.1
2019	706	36.8	34.0-39.8	350	39.1	34.9-43.7	356	34.6	30.9-38.8
2020	635	33.0	30.3-35.9	340	37.9	33.7-42.4	295	28.4	25.0-32.1
2021	706	35.3	32.6-38.2	358	37.8	33.8-42.2	348	32.9	29.3-36.9

Notes

Data source: Maine Cancer Registry, based on November 2023 NPCR-CSS data submission. 2020 data is displayed but was not included in the trend analysis due to the COVID-19 pandemic impact.

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

Special Topic: Trends in Selected Cancer Incidence Rates

Table 4: Trends in Lung and Bronchus Cancer Incidence Rates (per 100,000) By Sex, Maine, 1995-2021

Year	All Sexes			Male			Female		
	Count	AA Rate	AA 95% CI	Count	AA Rate	AA 95% CI	Count	AA Rate	AA 95% CI
1995	1,056	79.6	74.8-84.5	603	104.4	96.1-113.2	453	61.8	56.2-67.9
1996	1,113	82.0	77.2-87.0	615	105.1	96.8-113.9	498	65.9	60.2-72.0
1997	1,130	82.1	77.3-87.0	628	106.1	97.8-114.8	501	65.2	59.6-71.3
1998	1,078	77.7	73.1-82.5	605	101.6	93.5-110.2	473	61.8	56.3-67.7
1999	1,110	78.8	74.2-83.6	641	105.2	97.1-113.8	469	59.8	54.5-65.6
2000	1,173	81.6	77.0-86.4	665	105.5	97.6-114.0	508	63.5	58.1-69.4
2001	1,201	82.2	77.6-87.0	652	102.7	94.9-111.0	549	68.0	62.4-74.0
2002	1,184	79.6	75.1-84.3	652	100.1	92.5-108.2	532	64.6	59.2-70.4
2003	1,224	81.2	76.7-85.9	670	101.4	93.8-109.5	554	66.2	60.7-72.0
2004	1,272	82.3	77.8-86.9	700	103.0	95.4-111.0	572	67.5	62.0-73.3
2005	1,265	80.6	76.2-85.2	686	98.7	91.3-106.5	579	67.2	61.8-73.0
2006	1,279	80.3	75.9-84.9	686	97.8	90.5-105.5	593	68.1	62.7-74.0
2007	1,290	78.7	74.5-83.2	693	95.5	88.4-103.0	597	66.2	60.9-71.8
2008	1,283	77.1	72.9-81.5	674	90.1	83.3-97.3	609	67.5	62.1-73.2
2009	1,345	79.5	75.3-84.0	705	93.4	86.5-100.7	640	69.4	64.1-75.2
2010	1,296	74.8	70.7-79.1	665	85.4	78.9-92.3	631	67.3	62.1-73.0
2011	1,231	69.8	65.9-73.9	643	81.1	74.8-87.8	588	61.2	56.3-66.5
2012	1,380	76.3	72.3-80.6	700	85.4	79.0-92.1	679	69.8	64.6-75.5
2013	1,409	76.3	72.2-80.5	762	90.6	84.2-97.5	647	65.0	59.9-70.4
2014	1,377	73.4	69.4-77.5	713	82.2	76.1-88.7	664	66.5	61.4-71.9
2015	1,373	71.1	67.3-75.1	691	78.5	72.6-84.9	682	65.8	60.9-71.2
2016	1,478	74.5	70.6-78.6	774	83.4	77.5-89.8	704	68.2	63.1-73.7
2017	1,411	69.6	65.9-73.5	685	72.3	66.8-78.2	726	68.0	63.0-73.4
2018	1,464	70.4	66.7-74.2	725	74.7	69.2-80.6	739	67.7	62.7-73.0
2019	1,488	69.2	65.6-72.9	738	73.2	67.8-78.9	750	66.1	61.3-71.2
2020	1,426	64.5	61.1-68.1	710	69.4	64.2-75.0	716	60.7	56.2-65.5
2021	1,417	62.7	59.4-66.2	740	69.8	64.6-75.2	676	57.0	52.6-61.8

Notes

Data source: Maine Cancer Registry, based on November 2023 NPCR-CSS data submission. *2020 data is displayed but was not included in the overall trend analysis due to the COVID-19 pandemic impact on cancer.*

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

Special Topic: Trends in Selected Cancer Incidence Rates

**Table 5: Trends in Cervical Cancer Incidence Rates (per 100,000),
Maine, 1995-2021**

Year	Cervical		
	Count	AA Rate	AA 95% CI
1995	70	10.1	7.8-12.8
1996	71	11.1	8.6-14.0
1997	66	9.9	7.6-12.6
1998	62	8.9	6.8-11.4
1999	55	7.6	5.7-10.0
2000	46	6.4	4.7-8.6
2001	64	8.7	6.7-11.2
2002	51	7.2	5.3-9.5
2003	55	7.6	5.7-9.9
2004	67	9.2	7.1-11.8
2005	47	6.9	5.0-9.2
2006	49	6.6	4.8-8.8
2007	56	7.6	5.7-10.0
2008	46	6.0	4.4-8.2
2009	48	6.5	4.7-8.7
2010	48	6.5	4.7-8.7
2011	53	7.5	5.5-9.9
2012	31	4.4	2.9-6.3
2013	45	5.9	4.2-8.1
2014	49	6.2	4.5-8.3
2015	39	5.8	4.0-8.0
2016	40	5.3	3.7-7.4
2017	48	6.4	4.6-8.7
2018	33	4.4	2.9-6.3
2019	40	5.3	3.7-7.4
2020	55	7.9	5.8-10.5
2021	52	7.5	5.5-10.0

Notes

Data source: Maine Cancer Registry, based on November 2023 NPCR-CSS data submission. 2020 data is displayed but was not included in the trend analysis due to the COVID-19 pandemic impact.

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

Technical Notes

Maine Cancer Incidence and Mortality

Case Definitions: Incidence data presented in this report are based on the Surveillance, Epidemiology, and End Results (SEER) Program site recode ICD-O-3/WHO 2008 definitions, Version 2008 and are determined by primary site and histology available from [Site Recode ICD-O-3/WHO 2008 - SEER Data Reporting Tools \(cancer.gov\)](https://seer.cancer.gov/site-recode/). 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) and coded using the SEER Cause of Death Recode 1969+ (03/01/2018) available from [SEER Cause of Death Recode 1969+ \(03/01/2018\) \(cancer.gov\)](https://seer.cancer.gov/cause-of-death/).

Malignant Behavior Coding: To align with SEER methodology, the MCR now uses "Behavior code ICD-O-3" rather than the "Behavior recode for analysis" field in SEER*Stat and any published statistics.

Rates: Incidence and mortality rates were 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 8.4.1 software. Maine incidence counts and rates were produced from the Maine Cancer Registry dataset based on November 2023 data submission file; U.S. incidence counts and rates produced from the National Program of Cancer Registries and Surveillance, Epidemiology and End Results Program SEER*Stat Database: NPCR and SEER Incidence - U.S. Cancer Statistics Public Use Research Database, 2023 Submission (2001-2021). United States Department of Health and Human Services, Centers for Disease Control and Prevention, and National Cancer Institute. Released June 2024. Accessed at www.cdc.gov/cancer/uscs/public-use.

Maine mortality counts and rates were produced using SAS 9.4. U.S. mortality data were retrieved from the Centers for Disease Control and Prevention, National Center for Health Statistics using the CDC WONDER Online Database, 2018-2022: Underlying Cause of Death by Single-Race Categories, released in 2024.

Confidence Intervals: Ninety-five percent confidence intervals are provided for all rates.

Statistical Significance: For Maine comparison to U.S. data and Maine county comparisons to Maine rates, incidence rates were considered similar if the 95 percent confidence intervals for two rates overlapped. 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 are highlighted in red text. County rates significantly higher or lower than the Maine rate are displayed on the maps.

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.

Beginning in 2022, the MCR uses the SEER field “County at DX Analysis”, the county of the patient’s residence at the time of diagnosis, derived from geocoded county data when available, instead of “County at DX”.

COVID-19: In 2020, the COVID-19 pandemic disrupted access to medical care and contributed to delays in hospital reporting of cancer cases. This resulted in a drop in cancer diagnoses for the year 2020. This drop reflects changes in medical screening and care and should not be interpreted as a reduction in the underlying cancer burden. Nationally, the number of new cases diagnosed in 2021 are still less than expected for some cancer types but have returned to pre-pandemic counts for other cancer types.

Technical Notes—Trends in Screenable Cancers

Trend Analysis: The trend analysis referenced under the Special Topic figures is based on Joinpoint regression analysis. Joinpoint is a software developed by the National Cancer Institute that allows one to test trends over a time period, if a trend has changed and the significance of a given change. If a trend has changed, Joinpoint allows multiple segments to be fitted to a graph and to test the significance of a given segment (increasing, decreasing or not significantly different from 0). Joinpoint also calculates the Annual Percent Change (APC) which allows assessment of how much trends change over time. If Joinpoint identified a significant increase or decrease, the progress was noted under the figure with the APC shaded in red or green, respectively. If the analysis noted that the rate was stable (APC not significantly different from zero) in the latest segment, then the APC was included under the figure shaded in gray. Our trend analyses followed National Cancer Institute guidance that recommends against including 2020 data in regression models for analysis of cancer incidence trends due to the lower than expected case counts that year as a result of the COVID-19 pandemic (Howlader. 2021).

References:

Howlader et al. How to Handle 2020 and 2021 Incidence Rates in the Joinpoint Trend Model? Surveillance Research Program, NCI, Technical Report #2024-01.

Joinpoint Regression Program, Version 5.0.2 - May 2023; Statistical Methodology and Applications Branch, Surveillance Research Program, National Cancer Institute.



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