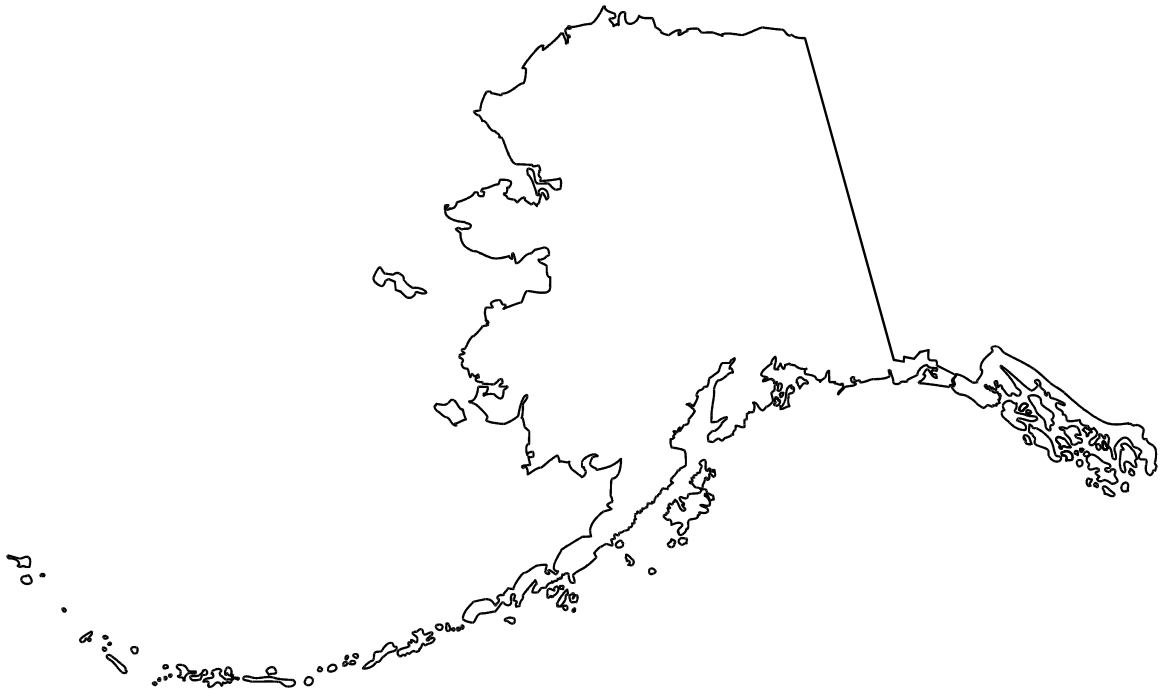


# Cancer in Alaska – 2022



**Alaska Cancer Registry  
Health Analytics & Vital Records Section  
Alaska Department of Health**

**August 2025**

# Cancer in Alaska – 2022

August 2025

A Publication of the  
Alaska Cancer Registry



State of Alaska  
Mike Dunleavy, Governor

Department of Health  
Heidi Hedberg, Commissioner

Division of Public Health  
Lindsey Kato, Director

# Alaska Cancer Registry

## August 2025

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### Acknowledgements

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# Table of Contents

|  |    |
|--|----|
| Cancer in Alaska – 2022 .....                                      | ii |
| Executive Summary.....   | i  |
| Introduction .....   | 1  |
| Resources .....  | 3  |
| Data Sources .....   | 4  |
| Definitions .....  | 6  |
| Cancer Incidence Rankings .....                                    | 9  |
| Site-specific Cancer Summaries .....                               | 12 |
| All Cancer Sites.....  | 14 |
| Bladder.....   | 16 |
| Brain and Other Central Nervous System (CNS)—Benign Cases .....    | 18 |
| Brain and Other Central Nervous System (CNS)—Malignant Cases ..... | 20 |
| Breast (Female).....   | 22 |
| Colorectal.....  | 24 |
| Esophagus .....  | 26 |
| Kidney and Renal Pelvis .....                                      | 28 |
| Leukemia.....  | 30 |
| Liver.....   | 32 |
| Lung and Bronchus.....   | 34 |
| Melanoma of the Skin .....   | 36 |
| Myeloma .....  | 38 |
| Non-Hodgkin’s Lymphoma (NHL).....                                  | 40 |
| Oral Cavity and Pharynx.....                                       | 42 |
| Ovary .....  | 44 |
| Pancreas.....  | 46 |
| Prostate.....  | 48 |
| Stomach .....  | 50 |
| Thyroid .....  | 52 |
| Uterus.....  | 54 |

## Executive Summary

This report summarizes the most recently available information about cancer incidence rates in Alaska. Many partners in Alaska are working to reduce cancer risk, find cancers earlier, improve treatment, increase the number of people who survive cancer and improve the quality of life for cancer survivors. Information included in this report about the burden of cancer overall and specific cancers serves as a valuable resource for the planning and evaluation of these efforts.

Data are from the Alaska Cancer Registry (ACR), a population-based cancer surveillance system that is funded by the Centers for Disease Control and Prevention. ACR collects data on all newly diagnosed cases of cancer for the State of Alaska. ACR collects a wide variety of information to determine cancer incidence, mortality, treatment and survival. The data are used to:

- Determine the incidence of cancer in Alaska with respect to geographic and demographic characteristics
- Monitor trends over time
- Monitor early detection, evaluate the effectiveness of cancer control programs and identify areas in need of public health interventions
- Determine how Alaska compares with the rest of the Nation
- Serve as a resource for health planners, medical professionals, researchers and others concerned about cancer

In 2022, ACR data showed:

- There were 3,401 new malignant cases of cancer diagnosed and 1,076 cancer deaths in Alaska.
- Breast cancer was the most diagnosed cancer among women (527 cases) and prostate cancer was the most diagnosed cancer among men (516 cases).
- Among both men and women, lung and bronchus cancer was the second most common cancer diagnosed (394 cases), and colorectal cancer was the third most common (306 cases).
- Overall cancer incidence has decreased in Alaska between 1996-2022, most notably by an average of 3.4% per year between 2009-2012, and then more gradually between 2012-2022. Cancer incidence rates have also declined in the United States by an average of 0.5% per year between 2001 and 2022.
- Significant declines in cancer incidence have occurred between 1996 and 2022 in Alaska for female breast, bladder, colorectal, leukemia, lung and bronchus, non-Hodgkin lymphoma, ovarian, prostate, and stomach cancers, as well as smaller but still significant decreases for malignant brain and other CNS, esophageal, and myeloma cancers.
- Alaska incidence rates for melanoma of the skin, oral cavity and pharynx, pancreatic and uterine cancer have increased during the same time period (1996-2022).
- In more recent trends, the incidence rates for kidney, liver, thyroid and benign brain and other CNS cancers have decreased in the past 4 to 8 years, even though they have increased overall since 1996.
- While the Alaska incidence of prostate cancer has decreased overall between 1996-2022, it has been increasing by an average of 4.2% per year in the past 10 years (2013-2022).

## Introduction

The Alaska Annual Cancer Report summarizes the most recently available information about cancer incidence rates in Alaska. This report can be used by Alaska's Comprehensive Cancer Control Partnership stakeholders – clinical and public health professionals as well as other health advocacy partners and the public – to support continued planning and evaluation of cancer prevention and control efforts.

### *What is cancer?*

Cancer is a group of diseases, all of which involve uncontrolled growth and spread of abnormal cells.<sup>1</sup> There are over 100 different types of cancer.

The human body is made up of billions of cells. Normally, body cells grow, divide, and die in an orderly fashion. Cancer cells, however, continue to grow and divide and can spread to other parts of the body. These cells accumulate and form tumors (lumps) that compress, invade, and destroy normal tissue. If cells break away from such a tumor, they can travel through the bloodstream or the lymph system to other areas of the body. There, they may settle and form “colony” tumors. In their new location, the cancer cells continue growing. The spread of a tumor to a new site is called metastasis. Not all tumors are cancerous. Benign tumors do not metastasize and, with very rare exceptions, are not life-threatening.

When cancer spreads, it is still named after the body part where it started. For example, if prostate cancer spreads to the bones, it is still prostate cancer, and if breast cancer spreads to the lungs it is still called breast cancer. However, it is possible for a person to develop multiple unrelated types of cancer in different parts of the body over their lifetime.

Cancer is also classified by its appearance under a microscope, known as “histology”. Different types of cancer vary in their rates of growth, patterns of spread, and responses to different types of treatment. That's why people with cancer need treatment that is aimed at their specific form of the disease.

Most cancer falls into five major histology groups. Within each group there are subtypes.

- **Carcinoma** is a cancer that develops from cells that cover the surface of the body (skin), glands (breast, prostate), and internal organs (lung, stomach, and intestines). Eighty to ninety percent of all cancers fall into this category.
- **Sarcoma** is a cancer that occurs in connective tissues such as bones, tendons, cartilage, fat, and muscle.
- **Leukemia** is a cancer that develops from cells in bone marrow that make blood and circulates through other tissues. Leukemia does not usually form a tumor.
- **Lymphoma** is a cancer that develops from cells in the immune system. Hodgkin lymphoma and non-Hodgkin lymphoma are in this group.
- **Myeloma** is a cancer that develops in the plasma cells of bone marrow.

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<sup>1</sup> For more discussion, see American Cancer Society, 2019. *After Diagnosis: A Guide for Patients and Families*. Available at: <https://www.cancer.org/treatment/understanding-your-diagnosis.html> (last accessed 1/30/2023)

### ***Who is at risk for cancer?***

Everyone. In the United States, an estimated 40 out of 100 men and 39 out of 100 women will develop cancer during their lifetimes.<sup>2</sup> Today, millions of people are living with cancer or have been cured of the disease. The sooner a cancer is found, and the sooner treatment begins, the better the person's chances are of a cure.

Although there are certain specific childhood cancers that have an expected early age peak and then are rarely seen in the rest of the population, the occurrence of cancer generally increases with age; most cancers occur among middle-aged or older adults. The term "lifetime risk" is the probability that an individual, over the course of a lifetime, will develop cancer or die from it. The American Cancer Society (ACS) has published lifetime risks of developing specific cancers by age and gender,<sup>3</sup> estimating:

- One in 8 men will develop prostate cancer
- One in 8 women will develop breast cancer
- One in 17 men and one in 18 women will develop lung or bronchus cancer
- One in 24 men and one in 26 women will develop colorectal cancer

### ***What causes cancer?***

An estimated 70% or more of the most common types of cancers are due to behavioral, occupational, and environmental factors.<sup>4</sup> These cover external factors that affect us, and include tobacco, diet, exercise, viruses, radiation, chemicals in the workplace, and not just what is thought of as the environmental pollution of air, water, and food. Research indicates that genes play a role, but the currently known genetic "markers" alone account for only a small proportion of cancers.

Tobacco use, alcohol consumption, unhealthy diet, physical inactivity and air pollution are risk factors for cancer. Some chronic infections are risk factors for cancer, including *Helicobacter pylori*, human papillomavirus (HPV), hepatitis B virus, hepatitis C virus, and Epstein-Barr virus. Around one-third of deaths from cancer are due to tobacco use, high body mass index, alcohol consumption, low fruit and vegetable intake, and lack of physical activity.<sup>5</sup>

Between 30% and 50% of cancers can currently be prevented by avoiding risk factors and implementing existing evidence-based prevention strategies. The cancer burden can also be reduced through early detection of cancer and appropriate treatment and care of patients who develop cancer. Early diagnosis and screening are the two components of early detection. Although screening is not possible for all cancer types, it is particularly effective for colorectal and cervical cancers and can assist in early detection and reducing mortality for cancers of the breast, colon, rectum, cervix, lung and prostate. Many cancers have a high chance of cure if diagnosed early and treated appropriately. Cancer mortality is reduced when cases are detected and treated early.<sup>6</sup>

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<sup>2</sup> American Cancer Society (ACS), 2025. *Cancer Facts and Figures 2025*. Available at <https://www.cancer.org/research/cancer-facts-statistics.html> (last accessed 6/11/2025).

<sup>3</sup> Ibid., page 11.

<sup>4</sup> Wu S., Powers S., Zhu W., and Hannun YA, 2016. Substantial contribution to extrinsic risk factors to cancer development. *Nature*, Jan 7; 529(7584): 43-47.

<sup>5</sup> World Health Organization. Cancer Key Facts. Revised February 2025. Available at: <https://www.who.int/en/news-room/fact-sheets/detail/cancer> (last accessed 6/11/2025).

<sup>6</sup> Ibid.



## Resources

Information about specific cancer prevention, detection, and control programs within the Alaska Department of Health (DOH) can be found at the following websites:

Alaska Cancer Registry

<https://health.alaska.gov/dph/VitalStats/Pages/cancer/registry.aspx>

Alaska Comprehensive Cancer Control Program

<https://health.alaska.gov/dph/Chronic/Pages/Cancer/default.aspx>

Alaska Cancer Partnership

<https://health.alaska.gov/dph/Chronic/Pages/Cancer/partnership/default.aspx>

Alaska Breast and Cervical Screening Assistance Program

<https://health.alaska.gov/en/services/breast-and-cervical-cancer-screening/>

## Data Sources

### **Alaska Cancer Registry**

Most data in this report are from the Alaska Cancer Registry (ACR), a population-based cancer surveillance system that is funded by the Centers for Disease Control and Prevention (CDC), National Program of Cancer Registries. ACR is housed within the Alaska Department of Health and Social Services (DHSS), Division of Public Health (DPH).

ACR collects data on all newly diagnosed cases of cancer for the State of Alaska, including a wide variety of information to determine cancer incidence, mortality, and survival.

The data are used to:

- Determine the incidence of cancer in Alaska with respect to geographic and demographic characteristics
- Monitor trends over time, looking for unusual patterns
- Monitor early detection, evaluate the effectiveness of cancer control programs and identify areas in need of public health interventions
- Determine how Alaska compares with the rest of the U.S.
- Serve as a resource for health planners, medical professionals, researchers and others concerned about cancer

### ***Regulations and confidentiality***

ACR was established in January 1996 by Alaska Administrative Code (7 AAC 27.011) and has operated under several statutes and regulations required for compliance with state law and federal quality control guidelines since that time. The regulations require all hospitals, health care facilities and health care practitioners screening, diagnosing or providing treatment for cancer patients diagnosed on or after January 1, 1996, to report information on newly diagnosed cancer cases to the Alaska Division of Public Health. ACR uses quality control methods to assure that cases are not duplicated in the cancer database. ACR has interstate agreements with most other state health departments to ensure that information about Alaska residents diagnosed or treated in other states are shared with ACR.

Alaska law demands strict confidentiality and the protection of the identity of both cancer patients and sources reporting to ACR. An additional law protects facilities and physicians from any liability for their reporting to the registry program. Registry personnel are held to the highest standards of data confidentiality. Access to the ACR office and its data is restricted. Any research study involving data with unique identifiers must be reviewed by an Institutional Review Board, which protects rights to privacy and informed consent, with final approval resting with DHSS.

### ***Quality assurance***

ACR is a member of the North American Association of Central Cancer Registries (NAACCR), which sets standards for data definition, quality and completeness of reporting. Each year, NAACCR provides an objective evaluation of state central cancer registry data for completeness, quality and timeliness. For 24 of the last 26 years, ACR has met the “Gold Standard”, the highest level of certification available. In 2025, ACR met the Gold Standard for cancer data collected for the diagnosis year 2022, the data included in this report.

**Data collected**

ACR collects information on all in situ and malignant cancers (those with behavior codes 2 or 3 in the *International Classification of Disease for Oncology*, 3rd Ed.), as well as benign brain cancers diagnosed as of 2004 and later. Three cancers are exempt from reporting because they are rarely fatal, are easily treated at a physician's office, and usually do not require hospitalization. These are:

- Carcinoma in situ of the cervix
- Basal and squamous cell skin cancers (unless these are at an external genital area)

The specific information required to be reported on each cancer case includes demographic data (date of birth, sex, ethnicity, race, residence, etc.) and information on each primary tumor, including site, histology, staging and first course of cancer-directed treatment.

For more information on Alaska's cancer surveillance and ACR, visit

<https://health.alaska.gov/en/education/alaska-cancer-registry/>

**Mortality Data**

Information on Alaska residents who died from cancer was obtained from the Alaska Bureau of Vital Statistics, DPH. Only Alaska residents are included in mortality data.

For more information on Alaska's mortality data, visit

<https://health.alaska.gov/en/education/alaska-health-data/>

**U.S. Cancer Rates**

National cancer incidence rates are age-adjusted and come from the United States Cancer Statistics (USCS). The USCS data represents the combined data sets of the two U.S. cancer registry programs: National Program of Cancer Registries of CDC and the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute (NCI). These federal programs fund cancer registries in all 50 states, the District of Columbia, and the U.S. Pacific Island Jurisdiction.

For more information on U.S. cancer rates, visit

<https://www.cdc.gov/united-states-cancer-statistics/index.html>

**Alaska Population Estimates**

The calculation of incidence rates requires population numbers by age, sex, and race. This information was available within NCI's cancer statistical program, SEER\*Stat, which was used to produce the statistics for this report. SEER\*Stat incorporated U.S. population data (including annual Alaska population estimates) from the U.S. Census Bureau's Population Estimates Program and the National Center for Health Statistics.

For more information on single year of age population estimates by county visit

<https://seer.cancer.gov/popdata/singleages.html>

## Definitions

### ***Age-adjusted Rates***

A “crude” cancer rate is calculated by taking the number of cancer cases for a given population and dividing it by the total number of people in that population. However, cancer incidence and mortality rates in this report are calculated using the direct method and age-adjusted to the standard 2000 U.S. population; they are expressed as number of cases per 100,000 persons.

Age adjustment (sometimes called age standardization) is a statistical process that allows communities and states with different age structures to be compared. Age adjustment removes the influence of the differences in age distributions that occur from one population to another. Since the risk of developing cancer is strongly associated with age, a geographic area with a high proportion of elderly residents could not be accurately compared with a younger-age populated area unless rates were adjusted to a standard reference population – the older community group would always naturally have a higher cancer rate even if the two communities had the same cancer risk.

Effectively, rates for a specific age group in the population of interest are multiplied by the number of people in the same age group in a standard population (in this case, the U.S. 2000 population). Age adjustment is an internationally approved statistical method to remove confounding caused by age.

### ***Alaska Regions***

For each specific cancer profile, 5-year (2018-2022) cancer rates are presented for 10 Behavioral Health Systems Regions in a chart and include a 95% confidence interval, with a line showing the overall state (5-year) estimate. Rates and counts are not shown when there were fewer than 6 cases within the 5-year period.

### ***Confidence Intervals and Rate Ratios***

Upper and lower confidence intervals for age-adjusted incidence rates were calculated using the method of Tiwari et al.<sup>7</sup> The “margin of error” is a common term for the “plus or minus” value around a point estimate, which in total represents the confidence interval. The confidence interval helps to understand the size of uncertainty of the “true value” in a population. Readers are advised to consider the precision of point estimates.

Our report uses 95% confidence intervals. If there is no bias in the data collection system, there is a 95% chance (95 times out of 100 time) that the confidence interval around an estimate will include the true value.

Uncertainty in our estimates occurs because the number of cases of cancer diagnosed is likely to change each year based on random variation. For example, perhaps 2 cases of stomach cancer were diagnosed in early January of the current year instead of December of the previous year because the physicians (or the patients) were on vacation at the end of the previous year. Therefore, the incidence of stomach cancer in the previous year would appear slightly lower than it might have been otherwise. The effect of random variation can be much greater when numbers of cases are small: if the 2 stomach cancers were 2 of only 4 for the entire year, then attributing those cases to the current year instead of the previous

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<sup>7</sup> Tiwari RC, Clegg LX, Zou Z. Efficient interval estimation for age-adjusted cancer rates. *Stat Methods Med Res* 2006 Dec;15(6):547-69.

year more drastically affects the estimate of stomach cancer incidence than if those cases were 2 of 40 stomach cancers for the year.

Rate ratios are used as another way to compare rates between groups and test statistical significance. For more information on rate ratios and confidence intervals provided by SEER\*Stat, visit <https://seer.cancer.gov/help/seerstat/rate-session/rate-statistic-tab>.

### ***Incidence***

An incident case is defined as a newly diagnosed primary cancer. A primary cancer, or site, is the cancer of origin, as opposed to a cancer that has spread, or metastasized, from another site. Since individuals can have more than one primary cancer, diagnosed either sequentially or at the same time, the number of incident cases may be greater than the number of persons who were diagnosed with cancer.

This report includes all cancer cases newly diagnosed in 2022. Only Alaska residents are included in the incidence data. Incidence data are presented as the number of cases and age-adjusted incidence rates.

The Alaska Cancer Registry follows standard protocols so that its incidence rates can be compared with those from other registries and the U.S. These include the following:

- Most cancers are grouped by the organ where they arise. The organ of origination is called the primary site.
- Rates are reported only for malignant cancers (those that have penetrated the basement membrane). There are two exceptions to this general rule. For cancer of the bladder, in situ cases are included with invasive cases because generally in situ bladder cancer is as aggressive as malignant bladder cancer. In addition, this report includes a 2-page summary for benign brain cancer.
- Basal cell and squamous cell carcinomas of the skin are excluded unless they occur at an external genital area. In these instances, they are considered cancers of the organs where they are located, not skin cancers.
- Cancers of the lymphatic, hematopoietic, and reticuloendothelial systems are grouped by their histology (e.g., leukemia, lymphoma), not by the anatomical sites where they occur. For example, lymphomas of the breast are grouped with non-Hodgkin lymphomas rather than with breast cancers.

### ***Mortality***

Deaths are attributed to cancer only if the underlying cause of death is listed as cancer.

### ***Race and Ethnicity***

Five-year (2018-2022) cancer incidence and death rates are presented by race group, regardless of ethnicity. The race groups are White (Caucasian), Black (African-American, African, and people of African descent), Alaska Natives (this also includes a small number of American Indians who are residents of Alaska), and Asian/Pacific Islanders (all Asian, Native Hawaiian and other Pacific Islander races combined). Some cancer cases are reported with “unknown race.” Since this represents a relatively small number of cases (less than 2%) and it is not possible to calculate rates for a group with an undefined population, statistics by race for “unknown race” are not presented but are included in the total.

Five-year (2018-2022) cancer incidence and death rates are also presented by Hispanic ethnicity, which is separate from reporting by race but is included in the same data table. People who report Hispanic

ethnicity may be of any race group and therefore may also be included in the reported race groups. The comparison group for Hispanic residents of Alaska is non-Hispanic residents of Alaska—however, data are not shown for that group.

***Stage at Time of Diagnosis***

“Staging” measures the extent of disease at the time of initial diagnosis. Summary staging attempts to group cases with similar prognoses into categories of:

- *In situ*: non-invasive
- *Localized*: cancer confined to the primary site
- *Regional*: direct extension of tumor to adjacent organs, tissues, or lymph nodes
- *Distant*: metastasis to tissues or lymph nodes remote from the primary site
- *Unknown*: There is not enough information to determine stage (also referred to as “unstaged”).

## Cancer Incidence Rankings

The first section of this report summarizes the leading cancer types in Alaska in 2022.

The leading 25 cancers in the total population are shown. These are the cancers with the greatest number of incident cases diagnosed among Alaskans within the past year. Therefore, they also make up the largest percentages of all cancers diagnosed among Alaskans within the year.

### 25 Highest Ranked Cancer Sites by Percent of Total Cancer Cases

#### 2022 Cancer Incidence Rate and Count of Alaska Residents

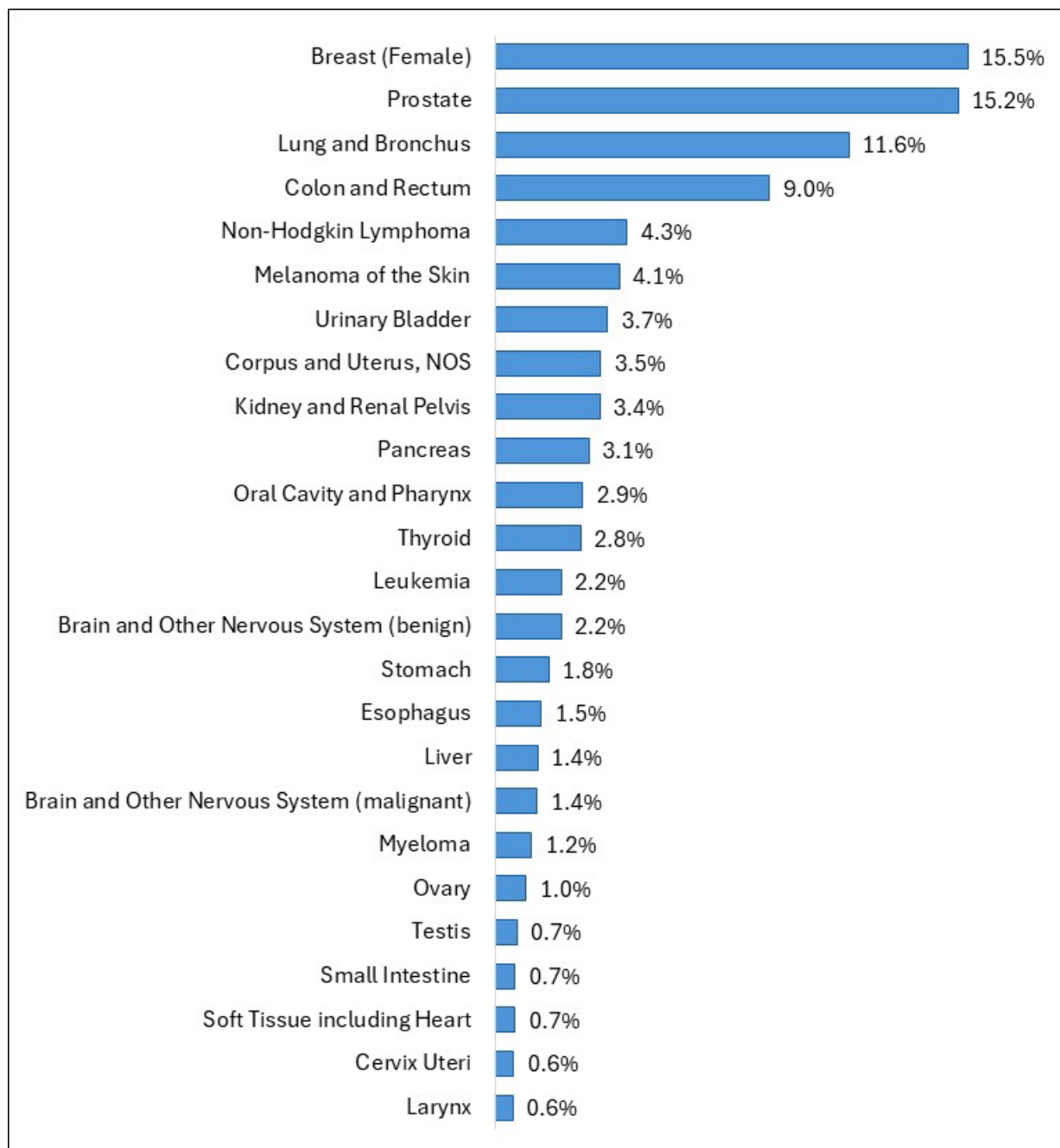
| Cancer Site                                | Rate  | Count | % of Cases |
|--|-------|-------|------------|
| All Sites                                  | 433.8 | 3,401 |            |
| Breast (Female)                            | 138.9 | 527   | 15.5%      |
| Prostate                                   | 121.2 | 516   | 15.2%      |
| Lung and Bronchus                          | 48.6  | 394   | 11.6%      |
| Colon and Rectum                           | 40.8  | 306   | 9.0%       |
| Non-Hodgkin Lymphoma                       | 19.5  | 147   | 4.3%       |
| Melanoma of the Skin                       | 18.3  | 139   | 4.1%       |
| Urinary Bladder                            | 17.5  | 126   | 3.7%       |
| Corpus and Uterus, NOS                     | 30.1  | 118   | 3.5%       |
| Kidney and Renal Pelvis                    | 15.0  | 117   | 3.4%       |
| Pancreas                                   | 13.0  | 105   | 3.1%       |
| Oral Cavity and Pharynx                    | 11.8  | 98    | 2.9%       |
| Thyroid                                    | 12.9  | 96    | 2.8%       |
| Leukemia                                   | 10.3  | 74    | 2.2%       |
| Brain and Other Nervous System (benign)    | 9.4   | 74    | 2.2%       |
| Stomach                                    | 7.8   | 60    | 1.8%       |
| Esophagus                                  | 6.5   | 52    | 1.5%       |
| Liver                                      | 5.8   | 48    | 1.4%       |
| Brain and Other Nervous System (malignant) | 6.0   | 47    | 1.4%       |
| Myeloma                                    | 5.4   | 41    | 1.2%       |
| Ovary                                      | 9.6   | 35    | 1.0%       |
| Testis                                     | 7.0   | 25    | 0.7%       |
| Small Intestine                            | 3.0   | 23    | 0.7%       |
| Soft Tissue including Heart                | 3.0   | 23    | 0.7%       |
| Cervix Uteri                               | 5.9   | 21    | 0.6%       |
| Larynx                                     | 2.5   | 20    | 0.6%       |

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

incidence rates are for malignant cases with the exception of in situ bladder cases, which are included with malignant Bladder cancer, and benign Brain and Other Nervous System cancer, which is included as a separate category.

## 25 Highest Ranked Cancer Sites by Percent of Total Cancer Cases

### 2022 Cancer Incidence of Alaska Residents



All incidence rates are for malignant cases with the exception of in situ bladder cases, which are included with malignant Bladder cancer, and benign Brain and Other Nervous System cancer, which is included as a separate category.



The leading 10 cancers are also provided for men and women separately, because some cancers are only or mainly observed among men or women specifically (e.g., breast cancer among women or prostate cancer among men). Gender-specific rankings were based on the rate per 100,000 per male or female population; occasionally, the number of cases would suggest a slightly different rank-order, but the general conclusions would be the same.

## 10 Highest Ranked Cancers by Age-adjusted Rate among Males, Alaska 2022

| Ranking | Cancer Types, Male      | Rate  | Count |
|---------|-------------------------|-------|-------|
| 1       | Prostate                | 121.2 | 516   |
| 2       | Lung and Bronchus       | 50.4  | 203   |
| 3       | Colon and Rectum        | 45.9  | 174   |
| 4       | Urinary Bladder         | 29.4  | 98    |
| 5       | Kidney and Renal Pelvis | 21.7  | 82    |
| 6       | Non-Hodgkin Lymphoma    | 21.7  | 80    |
| 7       | Melanoma of the Skin    | 20.4  | 78    |
| 8       | Oral Cavity and Pharynx | 14.8  | 62    |
| 9       | Pancreas                | 13.1  | 55    |
| 10      | Leukemia                | 11.8  | 43    |

Rates are per 100,000 and age-adjusted to the 2000 U.S. gender-specific population. All incidence rates are for malignant cases with the exception of in situ bladder cases, which are included with malignant Bladder cancer, and benign Brain and Other Nervous System cancer, which is included as a separate category.

## 10 Highest Ranked Cancers by Age-adjusted Rate among Females, Alaska 2022

| Ranking | Cancer Types, Female                    | Rate  | Count |
|---------|---|-------|-------|
| 1       | Breast                                  | 138.9 | 527   |
| 2       | Lung and Bronchus                       | 47.6  | 191   |
| 3       | Colon and Rectum                        | 36.0  | 132   |
| 4       | Corpus and Uterus, NOS                  | 30.1  | 118   |
| 5       | Thyroid                                 | 19.9  | 69    |
| 6       | Non-Hodgkin Lymphoma                    | 17.7  | 67    |
| 7       | Melanoma of the Skin                    | 16.8  | 61    |
| 8       | Pancreas                                | 12.7  | 50    |
| 9       | Brain and Other Nervous System (benign) | 12.1  | 48    |
| 10      | Oral Cavity and Pharynx                 | 8.9   | 36    |

Rates are per 100,000 and age-adjusted to the 2000 U.S. gender-specific population. All incidence rates are for malignant cases with the exception of in situ bladder cases, which are included with malignant Bladder cancer, and benign Brain and Other Nervous System cancer, which is included as a separate category.

## Site-specific Cancer Summaries

In this section, cancer data are presented in two-page summaries by type of cancer, for overall cancers and for the leading 20 cancers. See the Definitions section of this report for additional detail about terms or methods for reporting in this section.

Each two-page summary includes charts or tables presenting:

- For the total population, and by gender and race/ethnicity:
  - Incidence rates
  - Mortality rates
  - Numbers of new cases (incidence)
  - Numbers of deaths (mortality)
- Incidence rates by Behavioral Health Region (5-year average rate)
- Stage at diagnosis
- Incidence trend for Alaska (1996-2022) and the U.S. (2001-2022)

Each two-page summary also includes a description of the cancer type and a summary of findings from the data presented. When comparing groups to a reference group, we use the term “statistically significant” when the rate ratio p-value is less than 0.05. Unless otherwise noted, only these statistically significant results are described in text as being “higher” or “lower” than other groups. This includes when findings from comparisons of incidence and mortality data are described in text for males and females, among race groups, or by ethnicity (Hispanic vs non-Hispanic). The 95% confidence intervals and rate ratios are not presented in the summaries.

For comparison of region rates against the state rate, we report difference from the overall state rate instead of a reference region. This method may slightly underestimate the difference between region and state rates, because the region’s data are also included in the state rate.

### **Cancer Risk Factors**

Information in the discussion points about cancer risk factors was summarized from

American Cancer Society (ACS). *Cancer Facts and Figures 2022*. Atlanta, GA: American Cancer Society; 2022. Available online at <http://www.cancer.org/research/cancerfactsstatistics/index> (last accessed 12/08/22).

### **Small Populations and Few Events**

Data based on small populations and a small number of events require careful analysis. Alaska’s population is divided into many small groups where variation is expected and may be attributed to chance. Incidence rates that are based on fewer than 6 cases are considered unstable because they have a large standard error. Also, it may be possible to identify an individual person in a small population when there are fewer than 6 cases. For these reasons, we suppress counts and rates when there are fewer than 6 cases in accordance with the national standard used by NAACCR and indicate this suppression by using a caret symbol (^). For mortality rates, the national default is to suppress where there are fewer than 10 deaths. When suppression of a rate is required for one gender, the count or number for that rate is also suppressed for both genders to prevent back calculation from the total.

Note that rates based on fewer than 20 occurrences are statistically unreliable and should be used with caution.

### ***Alaska and United States comparisons***

We compared the confidence intervals for Alaska's annual incidence rates with the U.S. rate. Differences between Alaska and the U.S. are only mentioned in the text when the U.S. rate is outside the 95% confidence interval of the Alaska rate consistently for three or more years in a row. This method may slightly overestimate differences between Alaska and U.S. rates because it does not consider the confidence interval around the U.S. rate. However, typically the U.S. confidence interval is very narrow.

### ***Alaska trend analysis***

Alaska trend data are presented to identify changes in patterns of cancer that need additional investigation.

Each specific cancer profile in this report shows annual age-adjusted incidence rates per each type of cancer in Alaska as a line graph, with Alaska's rates shown as a solid line. The shaded area surrounding that line is the 95% confidence interval for the annual rate. U.S. rates are shown as a dotted line for comparison.

Note to readers: the simple trend examination for Alaska's overall population that is included in this report will not detect subgroup trend differences or shifts (e.g., variations in trend patterns by gender, age, or race).

Trends for Alaska's age-adjusted cancer incidence rates were assessed using the Joinpoint Regression Program, Version 5.4.0.0, April, 2025; Statistical Research and Applications Branch, National Cancer Institute (NCI). Software available at <https://surveillance.cancer.gov/joinpoint/>.

The software identifies "joinpoints" (points of inflection where trends have significantly changed). The program starts with the minimum number of joinpoints (e.g., 0 joinpoints, or a straight line), and tests whether more joinpoints are statistically significant and must be added to the model (up to the maximum allowed number). The joinpoint maximum is 3 for this report.

For each joinpoint time segment, the estimated annual percentage change (APC) was calculated by fitting a least squares regression line to the natural logarithm of the rates. This APC can be interpreted as the average percent increase or decrease in cancer incidence during that period. When the APC is statistically significant as different from zero (e.g., significantly different from a flat line) we describe the trend as "increasing" or "decreasing", and if not significantly changing we describe the trend as "stable" during the period.

## All Cancer Sites

Cancer is a group of diseases characterized by the uncontrolled growth and spread of abnormal cells that can result in death if not treated. Although the causes of cancer development are not completely understood, numerous factors are known to increase risk, including many that are potentially modifiable. Excluding non-melanoma skin cancer, at least 42% of newly diagnosed cancers in the US – about 805,600 cases in 2022 – are potentially avoidable, including the 19% of cancers caused by smoking and at least 18% caused by a combination of excess body weight, alcohol consumption, poor nutrition, and physical inactivity. In general, environmental factors—defined broadly to include tobacco use, diet, obesity, sun exposure, and infectious diseases like hepatitis and HPV, as well as chemicals and radiation—cause an estimated 75% to 80% of all cancer cases in the United States.

- In Alaska, overall cancer incidence was higher among people who identify as Alaska Native than those who identify as White, and lower among those who identify as Asian or Pacific Islander.
- Cancer mortality was higher among males than females, and among those who identify as Alaska Native (compared to those who identify as White), and lower among those who identify as Asian or Pacific Islander.
- Both cancer incidence and mortality were lower among those who identify as Hispanic compared to those who did not identify as Hispanic.
- Cancer incidence is higher than the state average in Anchorage, and lower than the state average in Northwest, Southeast Northern, and Southwest regions of Alaska.
- The incidence of all cancer in Alaska decreased by 0.4% per year between 1996-2009, then decreased more sharply by 3.4% per year between 2009-2012, followed by a gradual decrease of 0.1% per year between 2012-2022. Nationally, all cancer incidence decreased by 0.5% per year between 2001-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 445.3          | 162.1          | 1,768        | 579           |
| Female | 432.4          | 135.0          | 1,633        | 497           |
| Total  | 433.8          | 146.7          | 3,401        | 1,076         |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 424.8          | 144.7          | 12,242       | 3,820         |
| Alaska Native          | 537.8          | 206.2          | 2,738        | 951           |
| Black                  | 388.3          | 151.8          | 455          | 143           |
| Asian/Pacific Islander | 285.1          | 104.3          | 852          | 276           |
| Hispanic <sup>1</sup>  | 329.3          | 104.5          | 444          | 104           |
| Total <sup>2</sup>     | 432.7          | 150.2          | 16,436       | 5,190         |

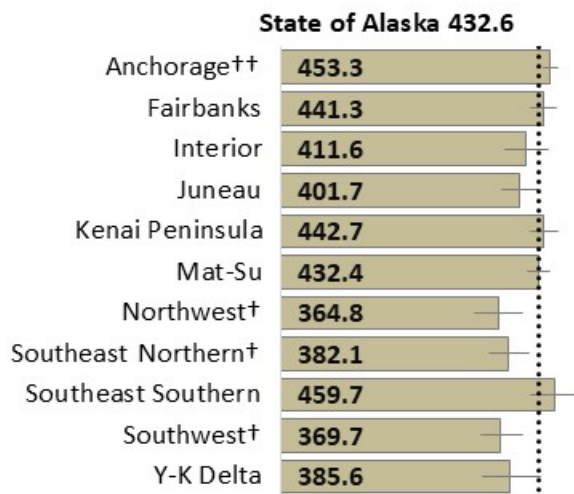
Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

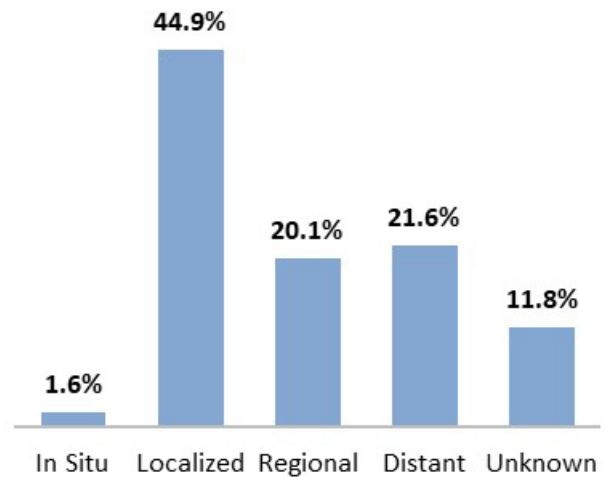
## All Cancer Sites

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.  
 † Region estimate is lower than the state estimate.  
 †† Region estimate is higher than the state estimate.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.

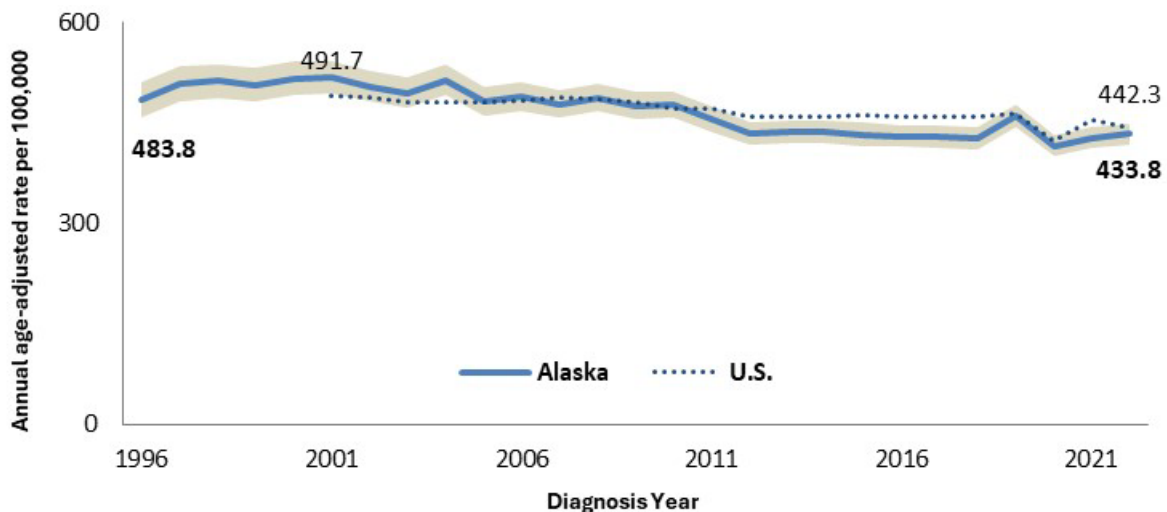
**Localized:** Cancer is limited to the place where it started.

**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.

**Distant:** Cancer has spread to distant parts of the body.

**Unknown:** There is not enough information to determine the stage.

### All Cancers Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Bladder

Bladder cancer is a disease in which cells in the urinary bladder grow out of control. The bladder is made up of several different layers, each having their own type of cells. Bladder cancer is most often found, and starts, in the innermost lining of the bladder, known as urothelial carcinoma or transitional cell carcinoma (TCC). Bladder cancer can spread to other parts of the body if the cells continue to grow. The risk of bladder cancer increases with age and is more commonly found in men than in women. Modifiable risk factors include smoking, certain workplace exposures, being exposed to water contaminated with arsenic, and not drinking enough fluids.

- Bladder cancer was the 7<sup>th</sup> most diagnosed cancer in Alaska in 2022, 3.7% of total cancer cases.
- Men are four times more likely than women in Alaska to develop bladder cancer.
- In Alaska, people who identify as White had a significantly higher incidence rate of bladder cancer compared to those who identify as Alaska Native or Asian/Pacific Islander.
- Bladder cancer incidence is higher than the state average in the Kenai Peninsula and in Southeast Southern Alaska, and lower than the state average in Anchorage and Northwest Alaska.
- The incidence of bladder cancer in Alaska decreased by 1.2% per year between 1996-2022. Nationally, the rate declined by 0.4% per year between 2001-2015, and by 2.1% per year between 2015-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 29.4           | 8.0            | 98           | 25            |
| Female | 7.2            | 2.9*           | 28           | 10            |
| Total  | 17.5           | 5.2            | 126          | 35            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 18.4           | 4.0            | 643          | 122           |
| Alaska Native          | 20.5           | 4.5            | 550          | 107           |
| Black                  | 11.1           | 2.8*           | 53           | 11            |
| Asian/Pacific Islander | 9.8*           | ^              | 9            | ^             |
| Hispanic <sup>1</sup>  | 7.2*           | ^              | 18           | ^             |
| Total <sup>2</sup>     | 12.9*          | ^              | 13           | ^             |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

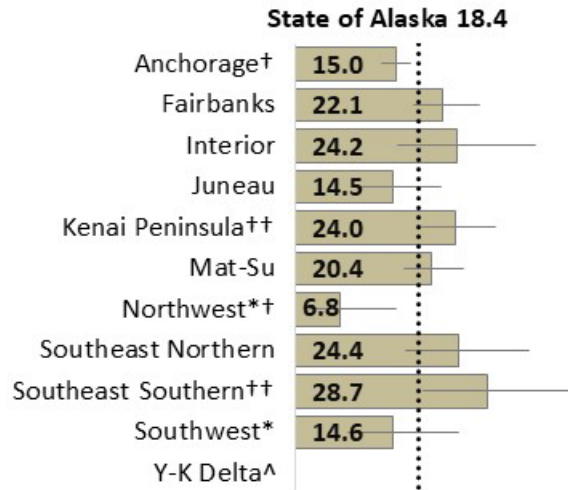
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

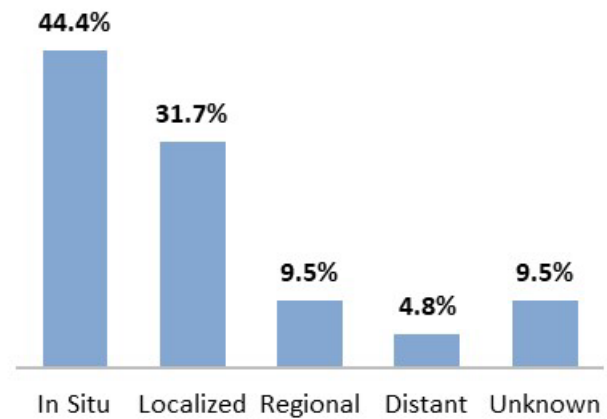
## Bladder Cancer

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.  
 † Region estimate is lower than the state estimate.  
 †† Region estimate is higher than the state estimate.  
 \* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.  
 ^ Statistic not displayed due to fewer than 6 cases.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.  
**Localized:** Cancer is limited to the place where it started.  
**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.  
**Distant:** Cancer has spread to distant parts of the body.  
**Unknown:** There is not enough information to determine the stage.

### Bladder Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Brain and Other Central Nervous System (CNS)—Benign Cases

Brain and other CNS tumors are masses that form in the brain or spinal cord when healthy cells grow out of control. Benign tumors are non-cancerous, usually slow-growing, and do not spread to other parts of the body. Risk factors include radiation exposure, family history of certain genetic syndromes, and having a weakened immune system.

- Benign brain and other CNS cancer tied with leukemia as the 13<sup>th</sup> most diagnosed cancer in Alaska in 2022, 2.2% of total cancer cases.
- Females were 1.7 times more likely to develop brain and other CNS benign tumors compared to males.
- People who identify as Alaska Native were more likely to develop brain and other CNS benign tumors compared to those who identify as White. Those who identify as Hispanic were more than 2 times less likely than non-Hispanic people to develop brain and other CNS benign tumors (4.5 vs 12.1).
- The incidence of benign brain and other CNS cancer is higher than the state average (11.8) in Anchorage (14.2) and lower than the state average in Mat-Su (7.7).
- The incidence of benign brain and other CNS cancer in Alaska increased by 2.2% per year between 2004-2018, and then decreased by 7.6% per year between 2018 and 2022. Nationally, the rate increased by 5.5% per year between 2004-2009, and by 1.1% per year between 2009-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 7.0            | 0.0            | 26           | 0             |
| Female | 12.1           | 0.0            | 48           | 0             |
| Total  | 9.4            | 0.0            | 74           | 0             |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for benign Brain & CNS cases only.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 10.6           | 0.0            | 297          | 0             |
| Alaska Native          | 18.0           | 0.0            | 94           | 0             |
| Black                  | 12.5*          | 0.0            | 12           | 0             |
| Asian/Pacific Islander | 10.6           | 0.0            | 31           | 0             |
| Hispanic <sup>1</sup>  | 4.5*           | 0.0            | 9            | 0             |
| Total <sup>2</sup>     | 11.8           | 0.0            | 440          | 0             |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for benign Brain & CNS cases only.

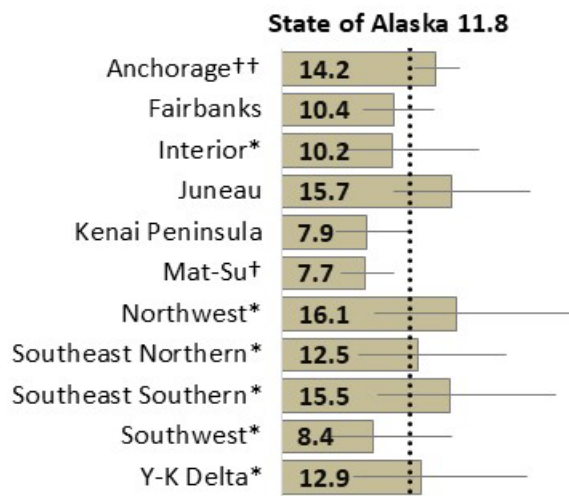
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.



## Brain and Other Central Nervous System (CNS)—Benign Cases

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022

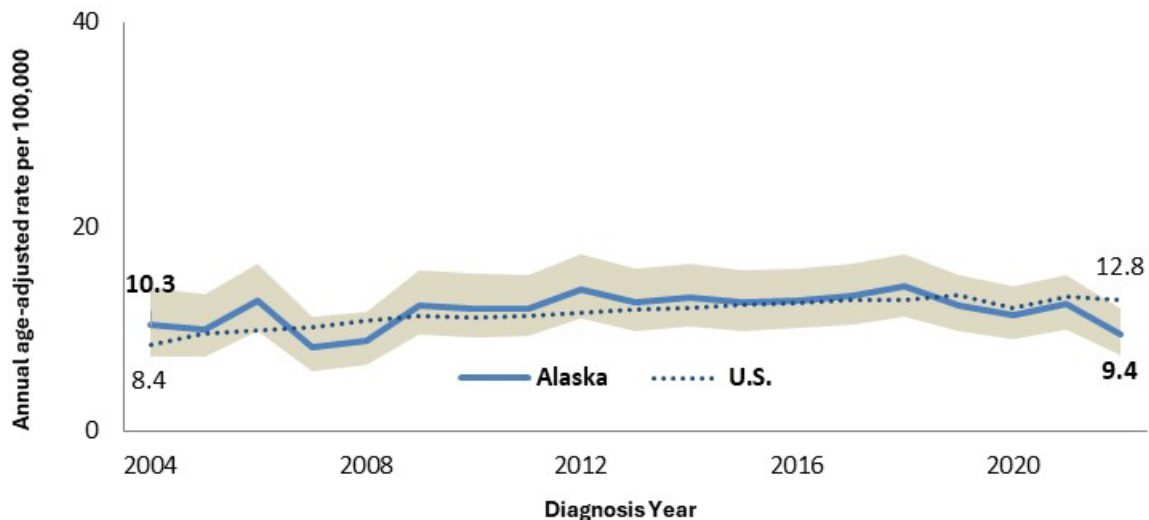


### Stage at Diagnosis, 2022

Cases presented here are benign; stage at diagnosis is only presented for malignant cases.

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for benign cases only.  
 † Region estimate is lower than the state estimate.  
 †† Region estimate is higher than the state estimate.  
 \* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### Benign Brain/CNS Incidence Trend, Alaska (2004 - 2022) and U.S. (2004 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for benign cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Brain and Other Central Nervous System (CNS)—Malignant Cases

Brain and other CNS malignant cases are when healthy cells grow out of control, and form a mass, in the brain or spinal cord. Malignant tumors are cancerous, grow quickly, and can spread to other parts of the body. Risk factors include radiation exposure and family history of certain genetic syndromes.

- Brain and other CNS—Malignant cases were ranked the 18<sup>th</sup> most diagnosed cancer in Alaska in 2022, 1.4% of cancer cases.
- In 2022, there were no significant differences between males and females for incidence or mortality rates of malignant brain and other CNS cases.
- There were no significant differences by race or ethnicity for 5-year incidence or mortality rates of malignant brain and other CNS cases.
- The incidence of malignant brain and other CNS cancer is higher than the state average (5.9) in in Mat-Su (8.4).
- The incidence of malignant brain and other CNS cancer in Alaska decreased slightly but significantly by 0.15% per year between 1996-2022. Nationally, the rate increased 0.6% per year from 2001-2005, then decreased by 0.5% per year between 2005-2018, and then decreased by 1.6% per year between 2018-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 5.1            | 4.4*           | 22           | 17            |
| Female | 6.9            | 3.1*           | 25           | 11            |
| Total  | 6.0            | 3.9            | 47           | 28            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 6.5            | 5.0            | 184          | 142           |
| Alaska Native          | 4.9            | 3.5*           | 30           | 15            |
| Black                  | 5.0*           | ^              | 6            | ^             |
| Asian/Pacific Islander | ^              | ^              | ^            | ^             |
| Hispanic <sup>1</sup>  | 3.0*           | ^              | 6            | ^             |
| Total <sup>2</sup>     | 5.9            | 4.4            | 227          | 161           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

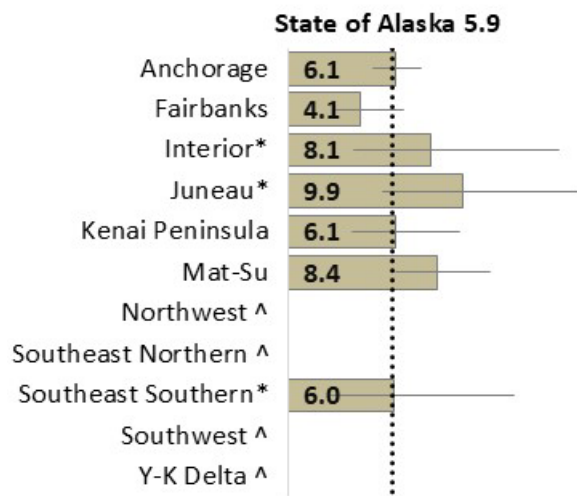
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

## Brain and Other Central Nervous System (CNS)— Malignant Cases

Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.

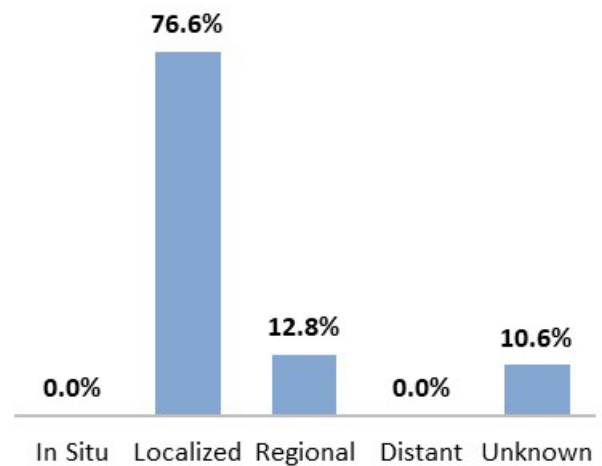
† Region estimate is lower than the state estimate.

†† Region estimate is higher than the state estimate.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.

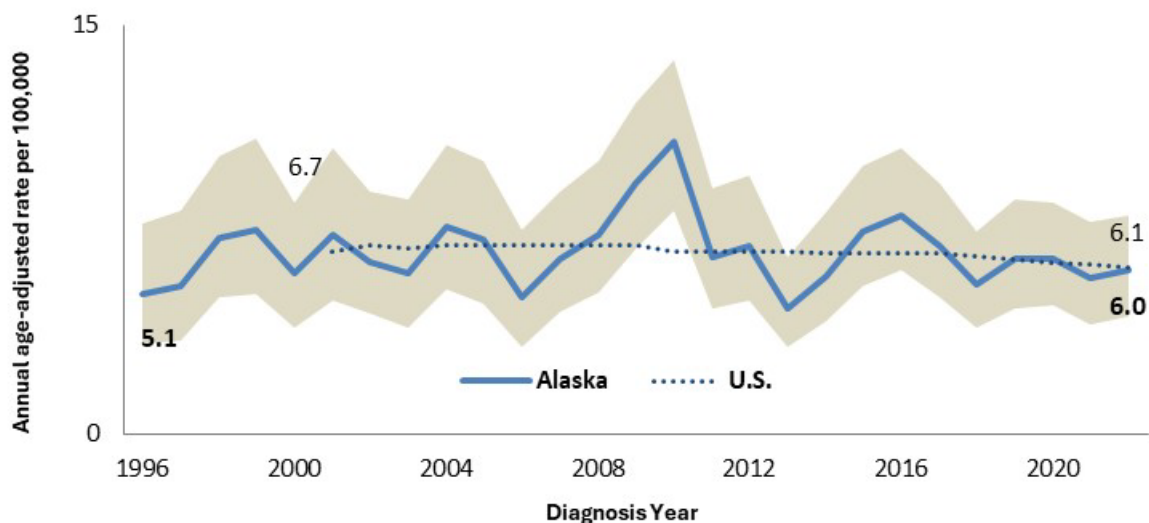
**Localized:** Cancer is limited to the place where it started.

**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.

**Distant:** Cancer has spread to distant parts of the body.

**Unknown:** There is not enough information to determine the stage.

Brain/CNS Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ .

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Breast (Female)

Breast cancer is a disease where cells in either one, or both, breasts grow out of control. Breast cancer mostly affects women, but men can also develop breast cancer. The breast is an organ that is located on top of your chest muscles and is made up of different parts: lobules, ducts, nipple, areola, blood vessels, lymph, fat, and connective tissues. Breast cancer can spread to other parts of the body when cancer cells get into the blood or lymph system. Women between the age of 50 to 74 years old, and at average risk, should receive a mammogram every two-years for breast cancer screening.

Modifiable risk factors include overweight or obesity after menopause, physical activity, drinking alcohol, taking hormones, and having a first pregnancy after age 30. Nonmodifiable risk factors include age, genetic mutations (BRCA1 and BRCA2 genes), radiation therapy to the chest or breasts, and a family history of breast or ovarian cancer

- Breast cancer was the most diagnosed cancer in Alaska in 2022, 15.5% of total cancer cases.
- People who identify as Alaska Native were more likely to develop breast cancer than those who identify as White. Alaskans identifying as Asian/Pacific Islander were less likely to develop breast cancer or die from it, compared to those who identify as White.
- The incidence of breast cancer is higher than the state average (130.4) in Fairbanks (161.1) and lower than the state average in Northwest (89.5) and the Y-K Delta (46.1).
- The incidence of female breast cancer in Alaska decreased by 0.4 per year between 1996-2022. Nationally, the rate decreased by 2.8% per year between 2001-2004 but increased by 0.5% per year between 2004-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | n/a            | n/a            | n/a          | n/a           |
| Female | 138.9          | 16.2           | 527          | 61            |
| Total  | 138.9          | 16.2           | 527          | 61            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 130.0          | 17.9           | 1,794        | 242           |
| Alaska Native          | 150.3          | 18.8           | 407          | 46            |
| Black                  | 111.6          | 20.7*          | 62           | 10            |
| Asian/Pacific Islander | 98.0           | 10.5*          | 173          | 17            |
| Hispanic <sup>1</sup>  | 104.1          | ^              | 81           | ^             |
| Total <sup>2</sup>     | 130.4          | 17.3           | 2,445        | 315           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

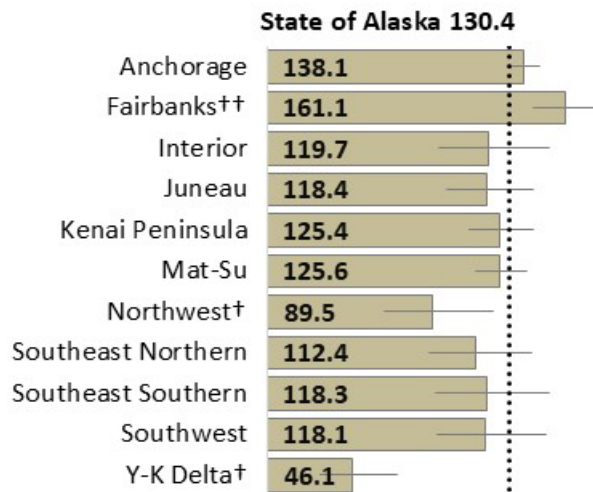
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

## Breast (Female)

Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022

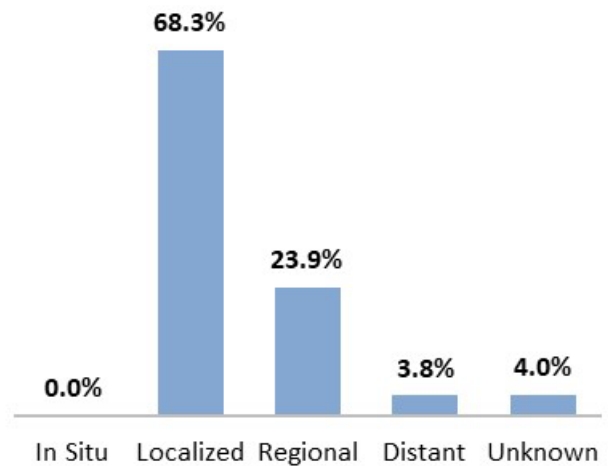


Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.

† Region estimate is lower than the state estimate.

†† Region estimate is higher than the state estimate.

Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.

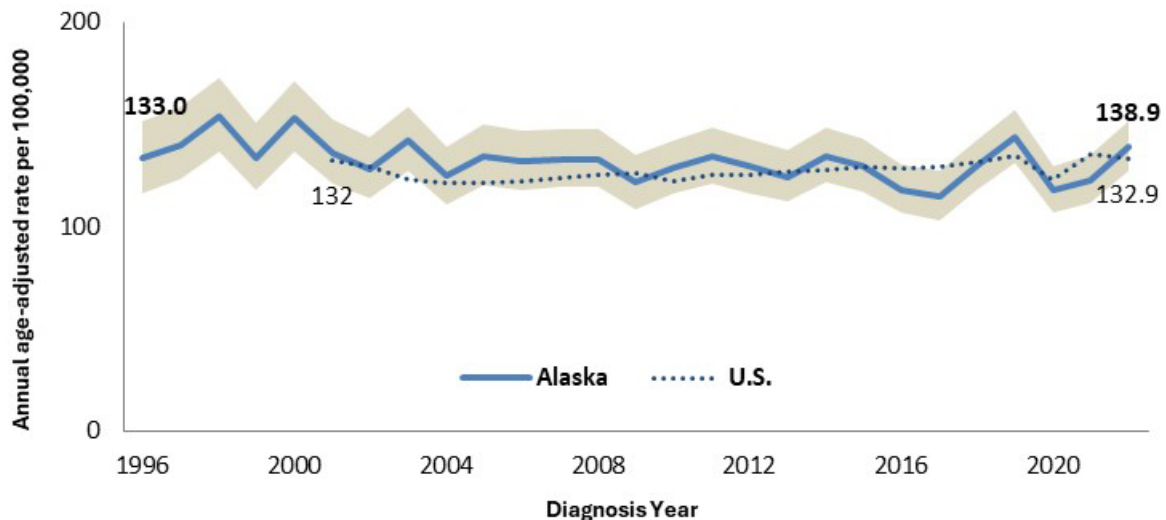
**Localized:** Cancer is limited to the place where it started.

**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.

**Distant:** Cancer has spread to distant parts of the body.

**Unknown:** There is not enough information to determine the stage.

Breast (Female) Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ .

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Colorectal

Colorectal cancer, commonly referred to as colon cancer, is a disease in which cells in the colon or rectum grow uncontrollably. The colon is also known as the large intestine or large bowel. The rectum is the passageway that connects the colon to the anus. Sometimes abnormal growths, called polyps, form in the colon or rectum. Over time, some polyps may turn into cancer. Screening tests can find polyps so that they can be removed before turning into cancer or help to detect colorectal cancer at an early stage for treatment.

The risk of colorectal cancer increases with age. Modifiable risk factors include obesity, physical activity, smoking, moderate to heavy alcohol use, and diets high in red meats and processed meats, as well as low intake of fruit and vegetables

- Colorectal cancer was the 4<sup>th</sup> most diagnosed cancer in Alaska in 2022, 9.0% of cancer cases.
- People who identify as Alaska Native were more than twice as likely to develop and to die from colorectal cancer than those identifying as White. Alaskans who identify as Asian/Pacific Islander were less likely than White Alaskans to develop or die from colorectal cancer.
- The incidence of colorectal cancer in the Y-K Delta (88.0) is more than twice as high as the state average (41.1).
- The incidence of colorectal cancer in Alaska decreased by 1.8% per year between 1996-2022. Nationally, the rate declined by 2.9% per year between 2001-2012, and then continued to decrease by 1.1% per year between 2012-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 45.9           | 13.0           | 174          | 51            |
| Female | 36.0           | 12.4           | 132          | 43            |
| Total  | 40.8           | 12.9           | 306          | 94            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 36.4           | 12.2           | 1,005        | 313           |
| Alaska Native          | 80.8           | 30.9           | 392          | 136           |
| Black                  | 32.4           | ^              | 36           | ^             |
| Asian/Pacific Islander | 21.5           | 7.5*           | 65           | 19            |
| Hispanic <sup>1</sup>  | 29.9           | ^              | 40           | ^             |
| Total <sup>2</sup>     | 41.1           | 14.2           | 1,502        | 477           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

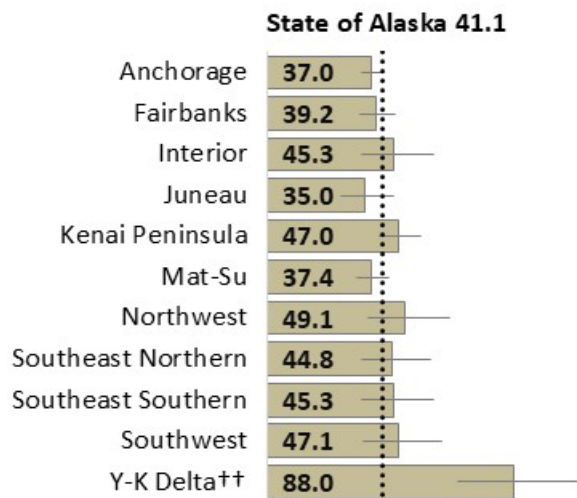
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

## Colorectal

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022

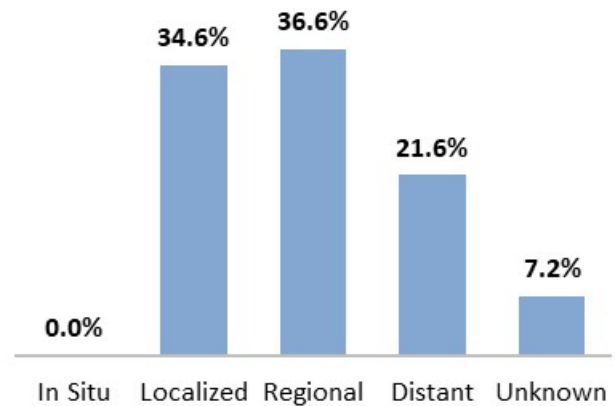


Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.

† Region estimate is lower than the state estimate.

†† Region estimate is higher than the state estimate.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.

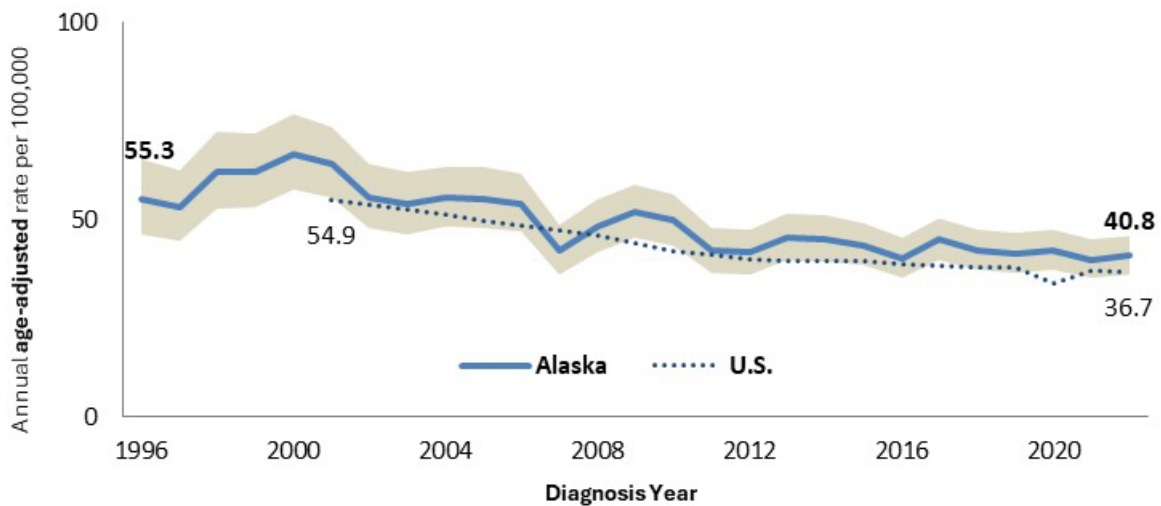
**Localized:** Cancer is limited to the place where it started.

**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.

**Distant:** Cancer has spread to distant parts of the body.

**Unknown:** There is not enough information to determine the stage.

### Colorectal Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ .

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.



## Esophagus

Esophageal cancer, also known as cancer of the esophagus, is a type of cancer that starts in the cells of a person's esophagus. The esophagus is a muscular tube that connects your mouth to the stomach. There are two types of esophageal cancer identified by the type of cell the cancer starts in: squamous cell carcinoma and adenocarcinoma.

The risk of esophageal cancer increases with age—most diagnosed after 55 years of age. Males are more likely to develop esophageal cancer compared to females. Other risk factors include using tobacco products (cigarettes, cigars, pipes, and chewing tobacco), having gastroesophageal reflux disease (GERD), Barrett's esophagus, being obese, previous history of lung, mouth, or throat cancer, and a diet low in fruits and vegetables.

- Esophageal cancer was the 16<sup>th</sup> most diagnosed cancer in Alaska in 2022, 1.5% of all cancer cases.
- There were no significant differences in esophageal cancer incidence and mortality rates by gender, race or ethnicity.
- The 5-year incidence of esophageal cancer is higher than the state average (5.6) in Mat-Su (8.1).
- The incidence of esophageal cancer in Alaska has decreased slightly but significantly by 0.15% per year between 1996-2022. Nationally, the rate has decreased by 0.6% per year between 2001-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 7.8            | 6.7            | 33           | ^             |
| Female | 5.0            | ^              | 19           | ^             |
| Total  | 6.5            | 4.2            | 52           | 35            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths. Number of cases or deaths for both sex categories must also be suppressed to prevent back calculation from the total.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 5.6            | 4.7            | 169          | 132           |
| Alaska Native          | 6.8            | 3.9            | 37           | 21            |
| Black                  | ^              | ^              | ^            | ^             |
| Asian/Pacific Islander | 3.2*           | ^              | 8            | ^             |
| Hispanic <sup>1</sup>  | ^              | ^              | ^            | ^             |
| Total <sup>2</sup>     | 5.6            | 4.4            | 218          | 161           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

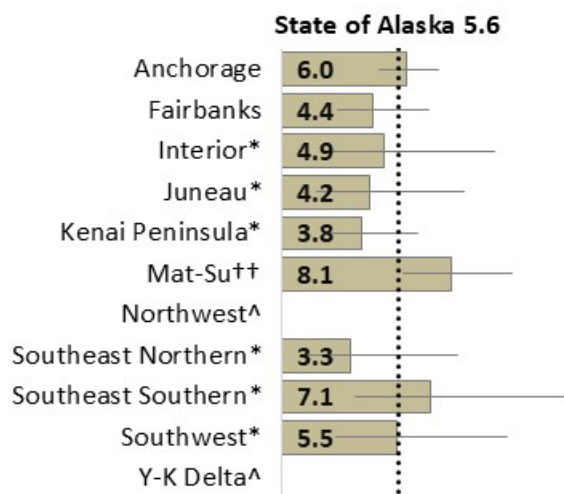
\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.



## Esophagus

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.

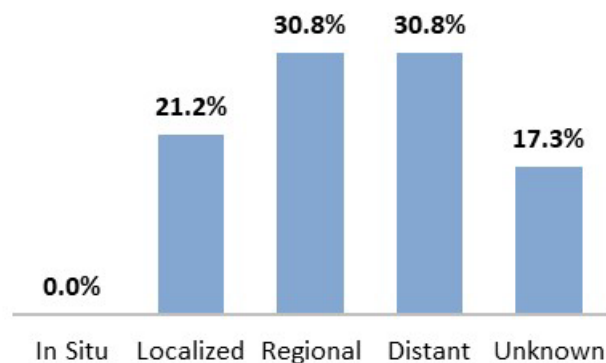
† Region estimate is lower than the state estimate.

†† Region estimate is higher than the state estimate.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.

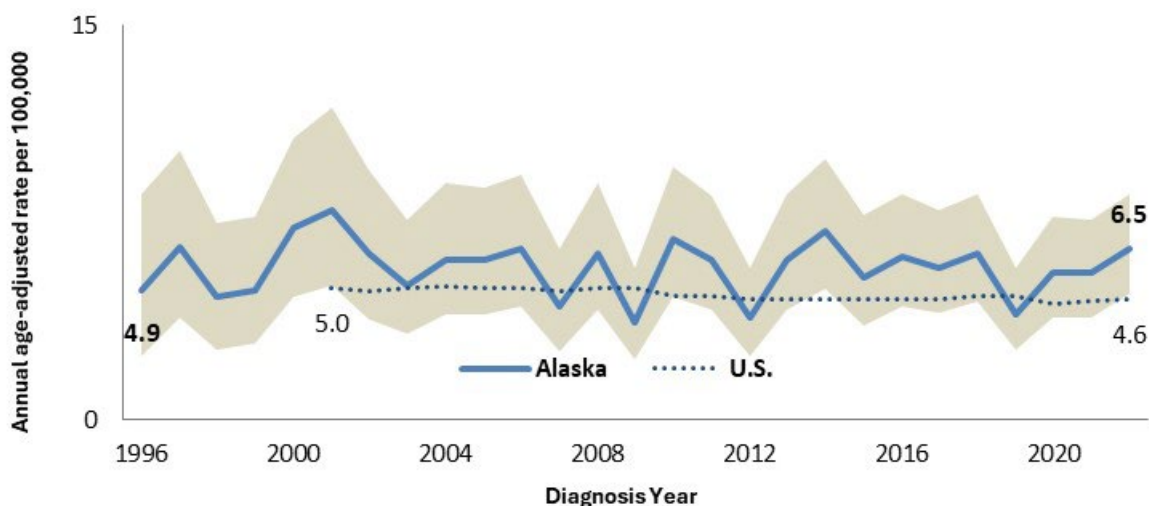
**Localized:** Cancer is limited to the place where it started.

**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.

**Distant:** Cancer has spread to distant parts of the body.

**Unknown:** There is not enough information to determine the stage.

### Esophageal Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ .

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Kidney and Renal Pelvis

Kidney and renal pelvis cancer is a type of cancer that starts in the kidneys. The body has two kidneys, one on each side, that produce urine and flush the body of waste. The renal pelvis is the middle of the kidney that collects the urine and moves it to the ureters where the urine collects in the bladder until it leaves the body.

Risk factors include being overweight or obese, smoking, kidney stones, being exposed to trichloroethylene, high blood pressure, chronic Hepatitis C infection, certain genetic conditions, and having a sickle cell trait associated with renal medullary carcinoma.

- Kidney and renal pelvis cancer was the 9<sup>th</sup> most diagnosed cancer in Alaska in 2019, 3.4% of total cancer cases.
- Men were more likely than women to develop kidney and renal pelvis cancer.
- People who identify as Alaska Native were more likely to develop kidney and renal pelvis cancer than those who identify as White, and those who identify as Asian/Pacific Islander were less likely than White Alaskans to develop kidney and renal pelvis cancer.
- The 5-year incidence rate of kidney and renal pelvis cancer was higher in Southeast Southern region (30.0) than the state average (18.6).
- The incidence of kidney and renal pelvis cancer in Alaska increased by 1.7% per year between 1996-2020, and then decreased by 13.1% 2020-2022. Nationally, the rate increased by 3.3% per year between 2001-2007, and then increased by 0.5% per year between 2007-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 21.7           | 6.2            | 82           | 21            |
| Female | 9.1            | 3.0*           | 35           | 10            |
| Total  | 15.0           | 4.5            | 117          | 31            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 17.1           | 3.7            | 494          | 101           |
| Alaska Native          | 31.8           | 4.7            | 167          | 20            |
| Black                  | 21.5           | ^              | 23           | ^             |
| Asian/Pacific Islander | 7.1            | ^              | 22           | ^             |
| Hispanic <sup>1</sup>  | 14.6           | ^              | 22           | ^             |
| Total <sup>2</sup>     | 18.6           | 3.7            | 710          | 129           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

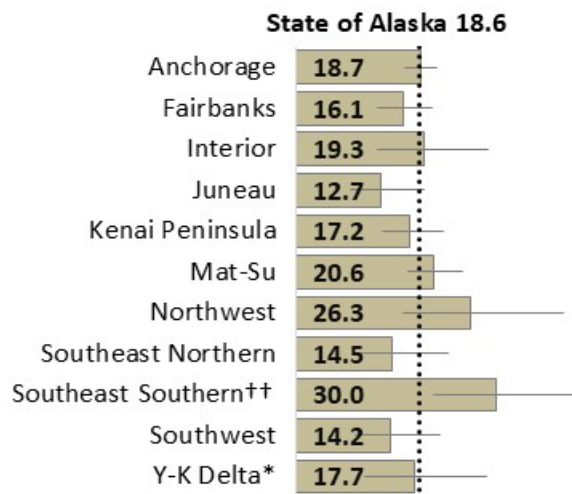
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

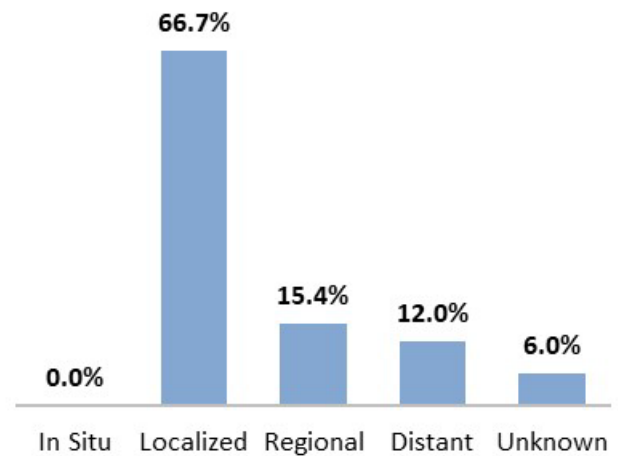
## Kidney and Renal Pelvis

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



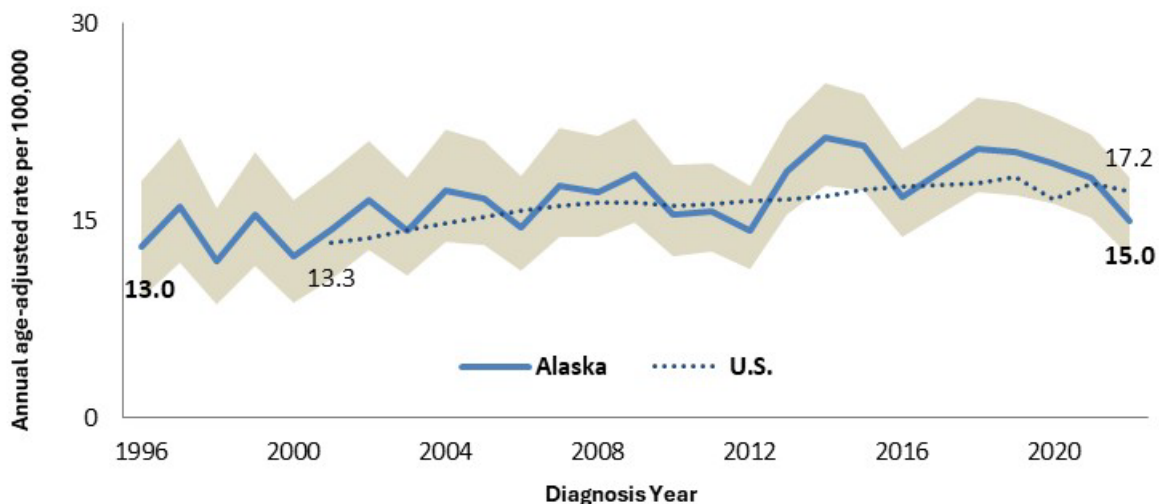
Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.  
 † Region estimate is lower than the state estimate.  
 ++Region estimate is higher than the state estimate.  
 \* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.  
**Localized:** Cancer is limited to the place where it started.  
**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.  
**Distant:** Cancer has spread to distant parts of the body.  
**Unknown:** There is not enough information to determine the stage.

### Kidney Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute ([NCI])). Most recent rate reported is for 2022 nationally and for Alaska.

## Leukemia

Leukemia is a term for cancers of the cells or tissues that form our blood. Leukemia most commonly affects white blood cells (WBCs)—best known for their ability in fighting infections—but can also involve other types of blood cells. When a person develops leukemia, the body produces an excessive amount of abnormal white blood cells that impacts the body's number of healthy WBCs, red blood cells, and platelets. Leukemia is characterized by its progression—fast growing (acute) or slow growing (chronic)—and what type of cell it starts in—myeloid cells or lymphoid cells.

Risk factors for leukemia include exposure to high levels of radiation or chemotherapy, certain chemicals, smoking, rare genetic syndromes, myelodysplastic syndromes, and a family history.

- Leukemia tied with benign brain and other CNS cancer as the 13<sup>th</sup> most diagnosed cancer in Alaska in 2022, 2.2% of total cancer cases.
- There were no significant differences by gender in leukemia incidence or mortality.
- Those who identify as Asian/Pacific Islander were less likely than White Alaskans to develop leukemia.
- There was no difference by region in the 5-year incidence of leukemia.
- Nearly all leukemia cases are in the distant stage at diagnosis.
- The incidence of leukemia in Alaska decreased by 0.9% per year between 1996-2022. Nationally, the leukemia incidence rate increased by 0.5% per year between 2001-2008 and then by 2.0% between 2008-2014, although it decreased by 1.4% per year 2014-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 11.8           | 5.6            | 43           | 17            |
| Female | 8.7            | 4.4            | 31           | 15            |
| Total  | 10.3           | 5.0            | 74           | 32            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 12.4           | 6.0            | 325          | 142           |
| Alaska Native          | 12.5           | 4.1            | 69           | 20            |
| Black                  | 12.0*          | ^              | 16           | ^             |
| Asian/Pacific Islander | 7.2            | 5.6*           | 22           | 15            |
| Hispanic <sup>1</sup>  | 6.9*           | ^              | 12           | ^             |
| Total <sup>2</sup>     | 12.1           | 5.8            | 436          | 182           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

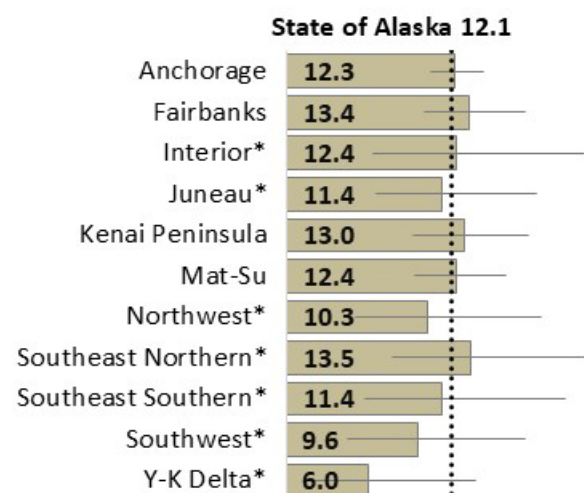
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

## Leukemia

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



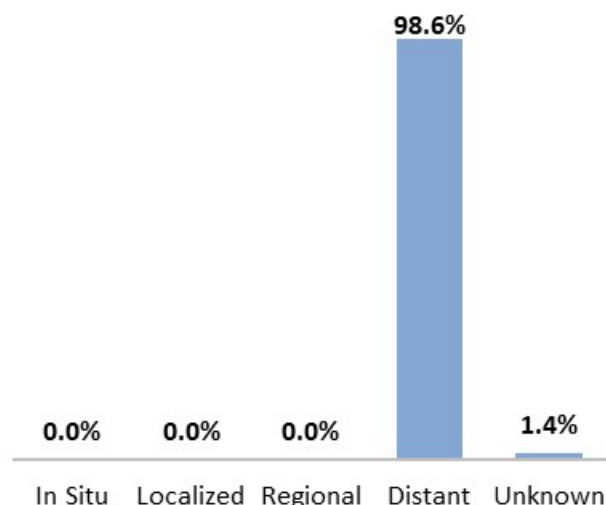
Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.

† Region estimate is lower than the state estimate.

†† Region estimate is higher than the state estimate.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.

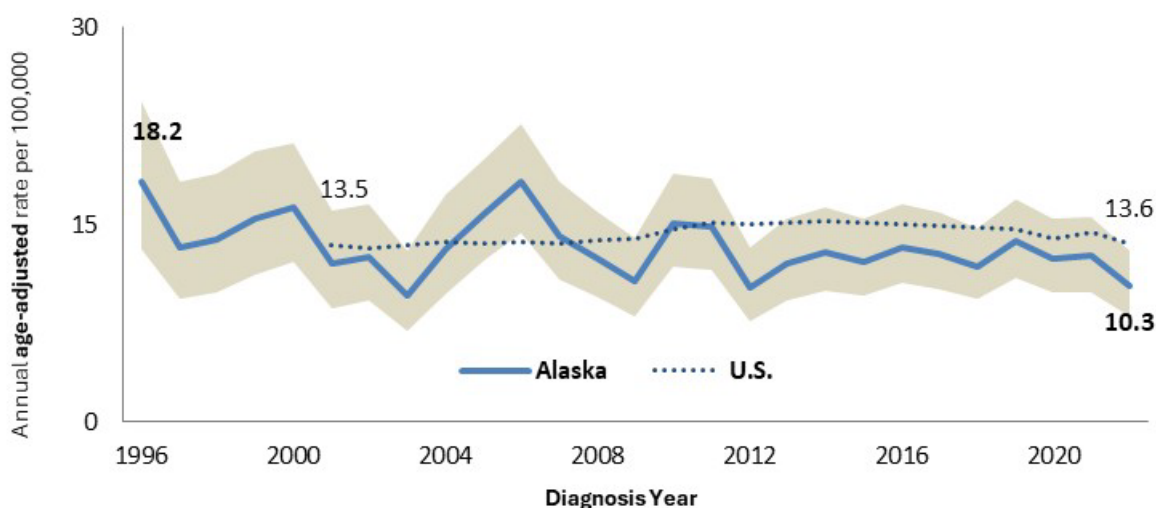
**Localized:** Cancer is limited to the place where it started.

**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.

**Distant:** Cancer has spread to distant parts of the body.

**Unknown:** There is not enough information to determine the stage.

### Leukemia Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ .

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Liver

Liver cancer is a type of cancer that starts in the cells of your liver. The liver is an organ that sits in the upper-right portion of your abdomen, underneath your diaphragm and above the stomach. The liver has many functions, including removing toxins from the blood supply, maintaining blood sugar, and controlling the blood clotting process.

Risk factors include chronic viral hepatitis, cirrhosis, certain inherited metabolic diseases, heavy alcohol use, smoking, obesity, and type 2 diabetes.

- Liver cancer was the 17<sup>th</sup> most diagnosed cancer in Alaska in 2022, 1.4% of total cancer cases.
- Males were nearly three times more likely to develop liver cancer compared females.
- People who identify as Alaska Native were more likely to develop liver cancer and to die from liver cancer than those who identify as White. Those who identify as Asian/Pacific Islander were more likely to develop liver cancer than those identifying as White.
- There was no difference by region in the 5-year incidence of liver cancer.
- The incidence of liver cancer in Alaska increased by 1.5% per year between 1996-2019, but recently decreased by 10.0% per year between 2019-2022. Nationally, the rate increased by 4.9% per year between 2001-2008, by 2.3% per year between 2008-2016, and then began to decrease by 2.5% per year between 2016-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 8.8            | 7.1            | 37           | ^             |
| Female | 2.8*           | ^              | 11           | ^             |
| Total  | 5.8            | 4.2            | 48           | 35            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths. Number of cases or deaths for both sex categories must also be suppressed to prevent back calculation from the total.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 6.0            | 4.3            | 193          | 133           |
| Alaska Native          | 13.5           | 7.3            | 72           | 34            |
| Black                  | 9.5*           | ^              | 12           | ^             |
| Asian/Pacific Islander | 11.2           | 5.3*           | 31           | 14            |
| Hispanic <sup>1</sup>  | 10.9*          | ^              | 14           | ^             |
| Total <sup>2</sup>     | 7.5            | 4.9            | 311          | 190           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

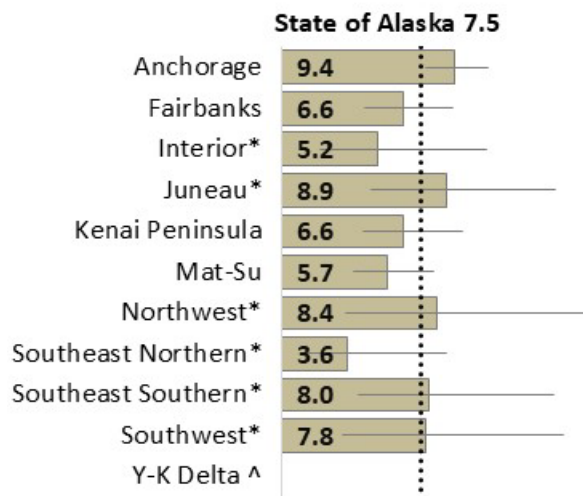
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

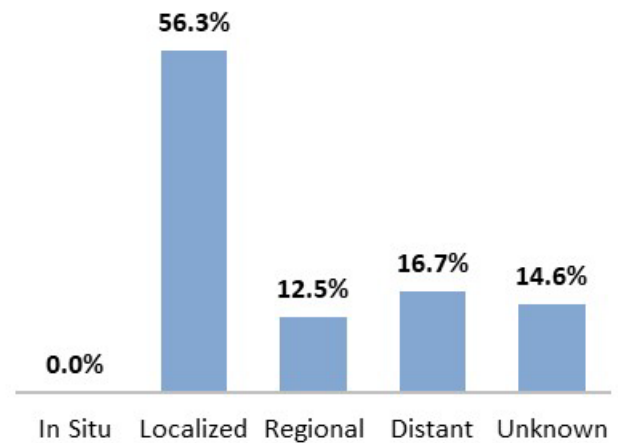
## Liver

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.  
 † Region estimate is lower than the state estimate.  
 †† Region estimate is higher than the state estimate.  
 \* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.

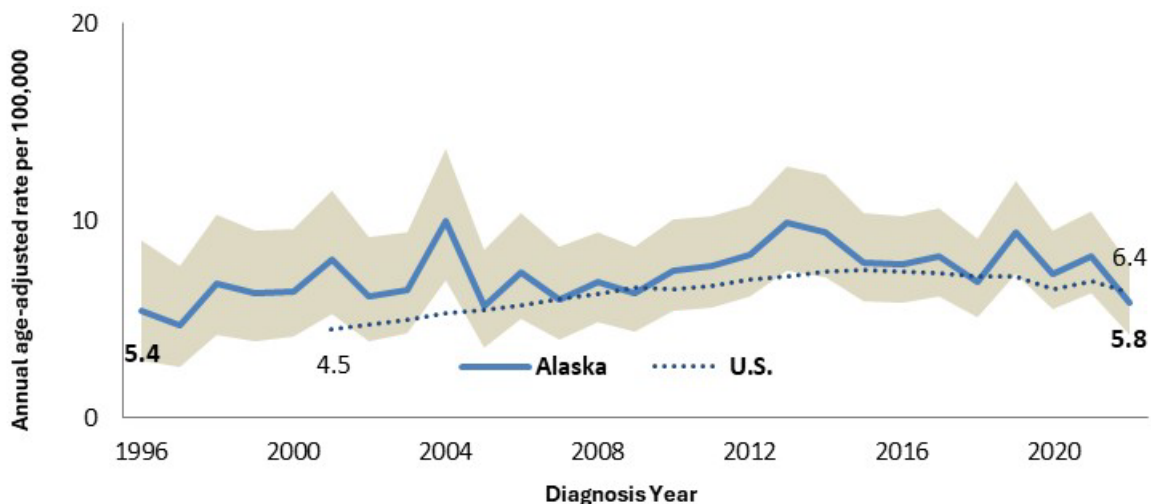
**Localized:** Cancer is limited to the place where it started.

**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.

**Distant:** Cancer has spread to distant parts of the body.

**Unknown:** There is not enough information to determine the stage.

### Liver Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute ([NCI])). Most recent rate reported is for 2022 nationally and for Alaska.



## Lung and Bronchus

Lung and Bronchus Cancer, commonly referred to as lung cancer, begins in the cells lining the bronchi and other parts of the lungs—the bronchioles and alveoli. The body has two lungs that sit inside your chest that help you to breathe by inhaling oxygen and releasing carbon dioxide when you exhale. Lung cancer is the leading cause of cancer deaths globally.

Risk factors include smoking tobacco, secondhand smoke, exposure to radon or asbestos, workplace cancer-causing agents, and exposure to arsenic in drinking water. Nonmodifiable risk factors include air pollution, family history of lung cancer, and previous radiation therapy to the lungs

- Lung cancer was the 3<sup>rd</sup> most diagnosed cancer in Alaska in 2022, 11.6% of total cancer cases.
- Alaskans who identify as Alaska Native had higher rates of developing (84.7 per 100,000) and dying (51.3 per 100,000) from lung cancer compared to those who identify as White. Those identifying as Asian/Pacific Islander were less likely to develop lung cancer than White Alaskans. Alaskans of any race who identify as Hispanic were less likely to develop or die of lung cancer than those who did not identify as Hispanic.
- The 5-year incidence rate of lung cancer was higher in Northwest Alaska (77.1) than the state average (51.6), and lower than the state average in Fairbanks (42.5) and Southeast Northern (34.5) region.
- The incidence of lung cancer in Alaska decreased slightly by 0.25% per year between 1996-2005, and then decreased by 2.6% per year between 2005-2022. Nationally, after decreasing slightly by 0.3% per year between 2001-2006, the rate decreased by 1.7% per year between 2006-2018, and by 3.6% per year between 2018-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 50.4           | 30.2           | 203          | 115           |
| Female | 47.6           | 30.8           | 191          | 118           |
| Total  | 48.6           | 30.3           | 394          | 233           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 48.1           | 30.1           | 1,387        | 821           |
| Alaska Native          | 84.7           | 51.3           | 403          | 239           |
| Black                  | 38.4           | 20.6*          | 46           | 19            |
| Asian/Pacific Islander | 33.3           | 22.9           | 94           | 60            |
| Hispanic <sup>1</sup>  | 29.5           | 17.4*          | 35           | 16            |
| Total <sup>2</sup>     | 51.7           | 32.1           | 1,935        | 1,139         |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

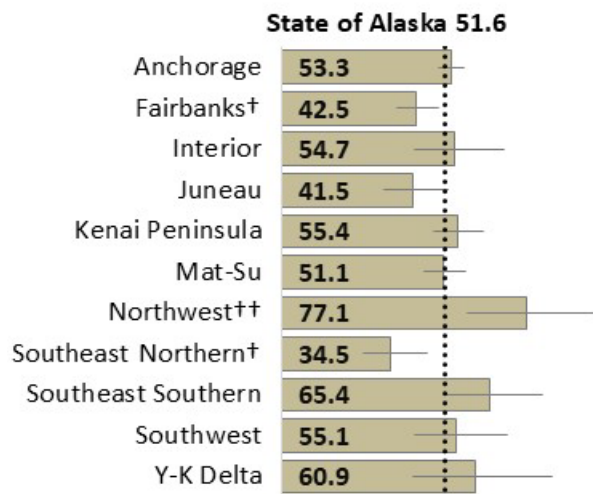
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.



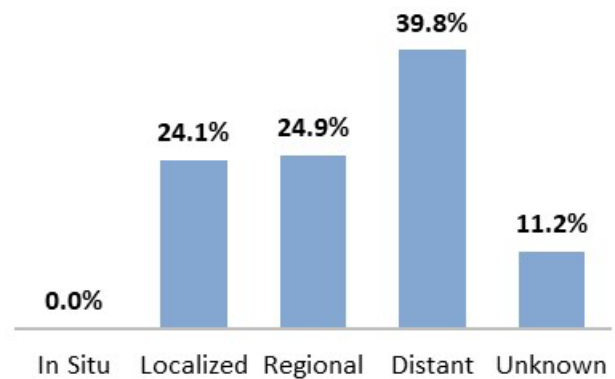
## Lung and Bronchus

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.  
 † Region estimate is lower than the state estimate.  
 †† Region estimate is higher than the state estimate.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.

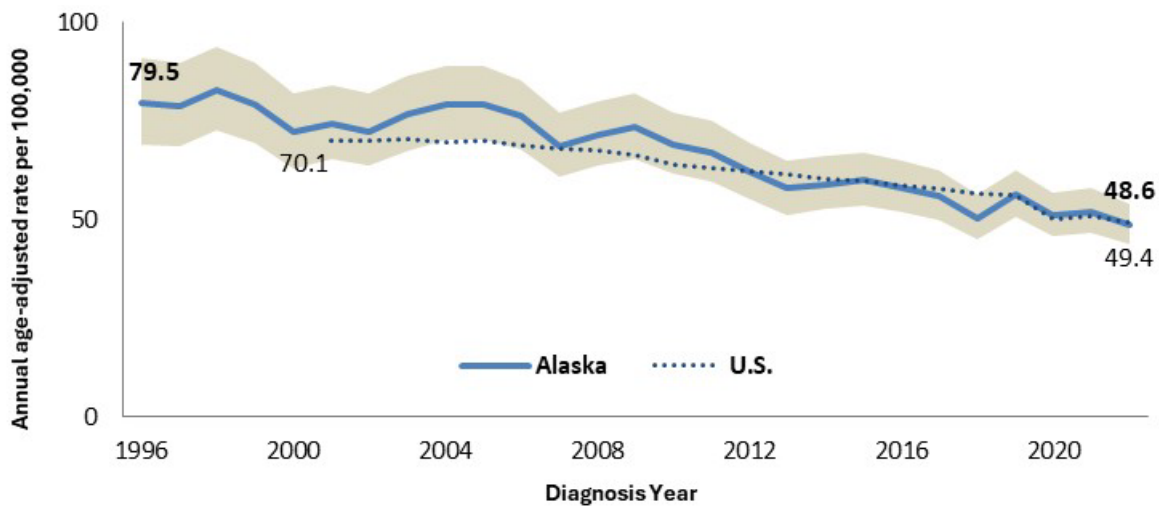
**Localized:** Cancer is limited to the place where it started.

**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.

**Distant:** Cancer has spread to distant parts of the body.

**Unknown:** There is not enough information to determine the stage.

### Lung Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Melanoma of the Skin

Melanoma is a type of skin cancer that develops in skin cells called melanocytes. Melanocytes make a pigment called melanin which gives your skin its color. When melanocytes start to grow out of control you can develop Melanoma.

Melanoma is a serious type of skin cancer because it is more likely to spread to other body parts if not diagnosed and treated early. Melanoma most commonly develops on the chest, back, legs, neck, and face. You can reduce your risk of developing Melanoma by limiting your exposure to ultraviolet rays (UV). Melanoma risk factors include UV ray exposure, having fair skin, moles, prior history of skin cancer, and having a first-degree family history.

- Melanoma is the 6<sup>th</sup> most diagnosed cancer in Alaska in 2022, 4.1% of total cancer cases.
- Alaskans who identify as White were more likely to develop melanoma than those who identify as Alaska Native. Alaskans of any race who identify as Hispanic were less likely to develop or die of melanoma than those who did not identify as Hispanic.
- The 5-year incidence rate of melanoma cancer was higher in Anchorage (19.7) and Mat-Su (20.5) than the state average (16.2), and lower than the state average in the Kenai Peninsula (9.5).
- The incidence of melanoma in Alaska increased by 1.7% per year between 1996-2022, although it is lower than the national rate. Nationally, the rate increased by 2.0% per year between 2001-2017, then decreased by 2.4% per year between 2017-2020, and then increased again by 4.7% per year between 2020-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 20.4           | ^              | 78           | ^             |
| Female | 16.8           | ^              | 61           | ^             |
| Total  | 18.3           | 2.1            | 139          | 15            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 19.5           | 2.1            | 546          | 56            |
| Alaska Native          | 5.7            | ^              | 32           | ^             |
| Black                  | ^              | ^              | ^            | ^             |
| Asian/Pacific Islander | ^              | ^              | ^            | ^             |
| Hispanic <sup>1</sup>  | 8.5            | ^              | 12           | ^             |
| Total <sup>2</sup>     | 16.2           | 1.7            | 606          | 58            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

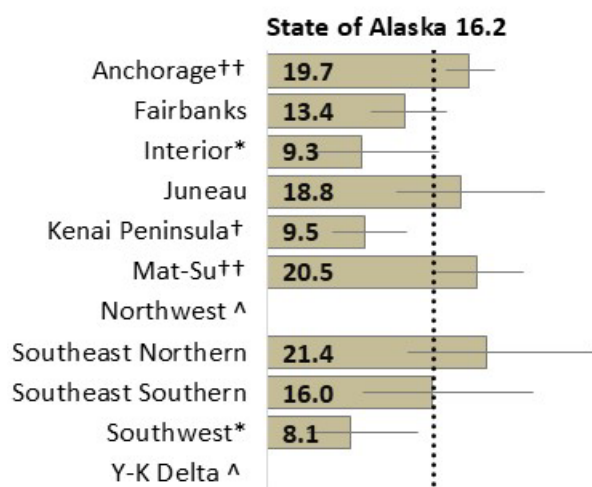
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

## Melanoma of the Skin

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.

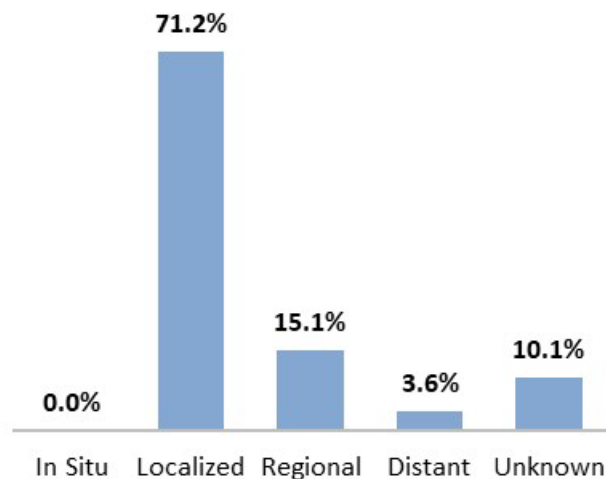
† Region estimate is lower than the state estimate.

†† Region estimate is higher than the state estimate.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.

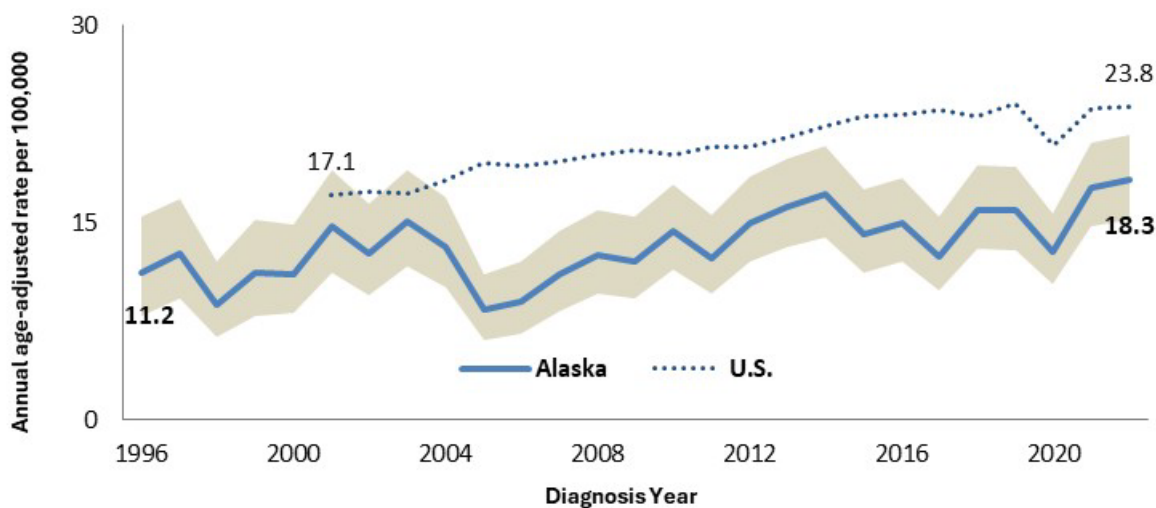
**Localized:** Cancer is limited to the place where it started.

**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.

**Distant:** Cancer has spread to distant parts of the body.

**Unknown:** There is not enough information to determine the stage.

### Melanoma Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ .

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute ([NCI])). Most recent rate reported is for 2022 nationally and for Alaska.

## Myeloma

Myeloma is a type of cancer that starts in your bone marrow—the blood-producing tissue inside your bones—and affects plasma cells. Plasma cells are a type of white blood cell that makes antibodies and helps a person fight an infection when they are sick.

The risk of myeloma increases with age. Males are more likely to develop myeloma compared to females. Other risk factors include family history of myeloma, personal history of monoclonal gammopathy of undetermined significance (MGUS), obesity, and exposure to radiation.

- Myeloma was ranked the 19<sup>th</sup> most diagnosed cancer in Alaska in 2022, 1.2% of total cancer cases.
- There were no significant differences by gender, race or ethnicity.
- There was no difference by region in the 5-year incidence of myeloma cancer.
- The incidence of myeloma in Alaska has decreased slightly by 0.04% per year between 1996-2022. Nationally, the rate has increased by 0.5% per year between 2001-2007, then more sharply by 3.4% between 2007-2011, and by 1.1% between 2011-2018; more recently, incidence decreased by 2.0% between 2018-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 7.2            | 3.3            | 27           | ^             |
| Female | 3.6*           | ^              | 14           | ^             |
| Total  | 5.4            | 2.6            | 41           | 17            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths. Number of cases or deaths for both sex categories must also be suppressed to prevent back calculation from the total.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 5.8            | 2.4            | 166          | 59            |
| Alaska Native          | 5.5            | ^              | 27           | ^             |
| Black                  | 10.1*          | ^              | 10           | ^             |
| Asian/Pacific Islander | 5.1*           | ^              | 14           | ^             |
| Hispanic <sup>1</sup>  | ^              | ^              | ^            | ^             |
| Total <sup>2</sup>     | 5.8            | 2.4            | 218          | 79            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

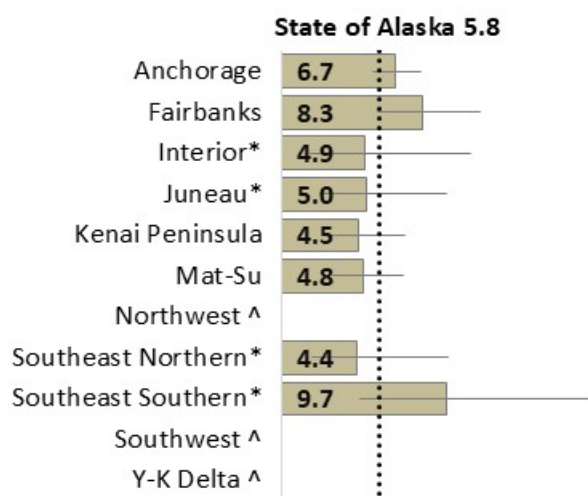
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

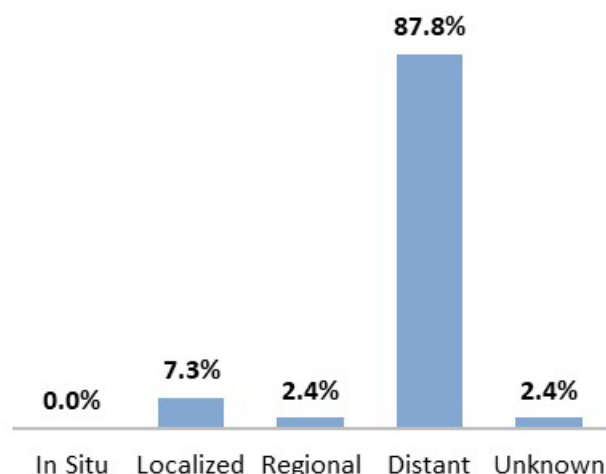
# Myeloma

## Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



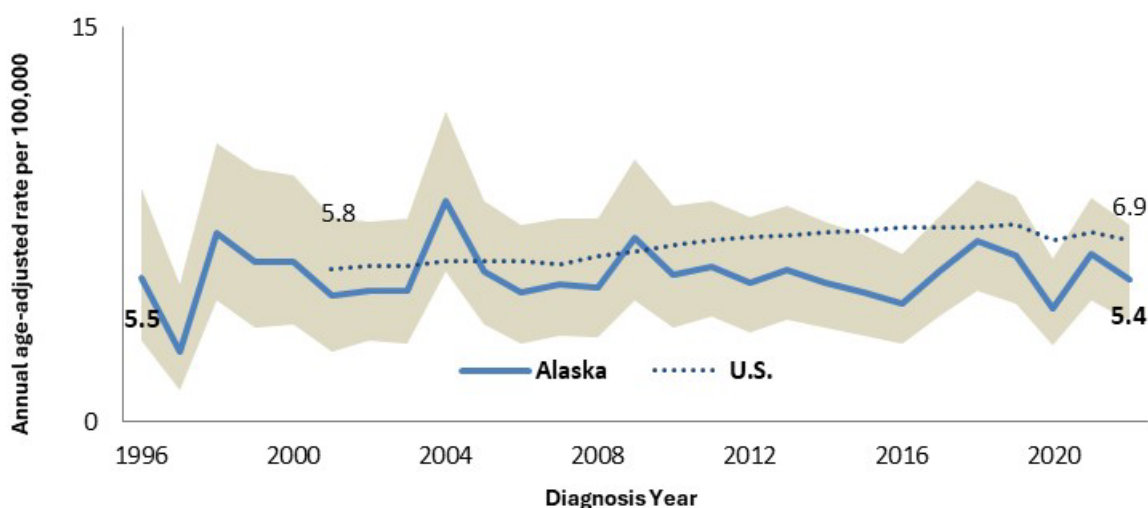
Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.  
 † Region estimate is lower than the state estimate.  
 †† Region estimate is higher than the state estimate.  
 \* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.  
 ^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

## Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.  
**Localized:** Cancer is limited to the place where it started.  
**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.  
**Distant:** Cancer has spread to distant parts of the body.  
**Unknown:** There is not enough information to determine the stage.

## Myeloma Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute ([NCI])). Most recent rate reported is for 2022 nationally and for Alaska.

## Non-Hodgkin's Lymphoma (NHL)

Non-Hodgkin's Lymphoma (NHL), commonly referred to as lymphoma, is a type of cancer that starts in white blood cells also known as lymphocytes. NHL affects the lymphatic system which is a part of the immune system that helps to fight off infection and disease.

The risk of NHL increases with age with most cases occurring after 60 years old. Having a first-degree relative with NHL also increases your risk. Other risk factors include certain chemical exposures, radiation, and having a weakened immune system

- NHL was the 5<sup>th</sup> most diagnosed cancer in Alaska in 2022, 4.3% of total cancer cases.
- Alaskans who identify as White were more likely to develop NHL than those who identify as Alaska Native or Asian/Pacific Islander. White Alaskans were also more likely to die from NHL compared to Alaska Native people.
- The 5-year incidence of NHL was higher than the state average (18.3) in the Kenai Peninsula (23.5) and lower than the state average in the Y-K Delta (7.4).
- The incidence of NHL in Alaska decreased by 0.7% per year between 1996-2022. Nationally, the rate increased by 1.2% per year between 2001-2004, decreased slightly by 0.15% per year between 2004-2018 and then decreased by 2.5% per year between 2018-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 21.7           | 5.5*           | 80           | 15            |
| Female | 17.7           | 4.2*           | 67           | 15            |
| Total  | 19.5           | 4.7            | 147          | 30            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 19.6           | 6.2            | 537          | 155           |
| Alaska Native          | 13.6           | 3.0*           | 69           | 14            |
| Black                  | 13.5*          | ^              | 15           | ^             |
| Asian/Pacific Islander | 13.4           | ^              | 39           | ^             |
| Hispanic <sup>1</sup>  | 17.4           | ^              | 21           | ^             |
| Total <sup>2</sup>     | 18.3           | 5.5            | 666          | 180           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

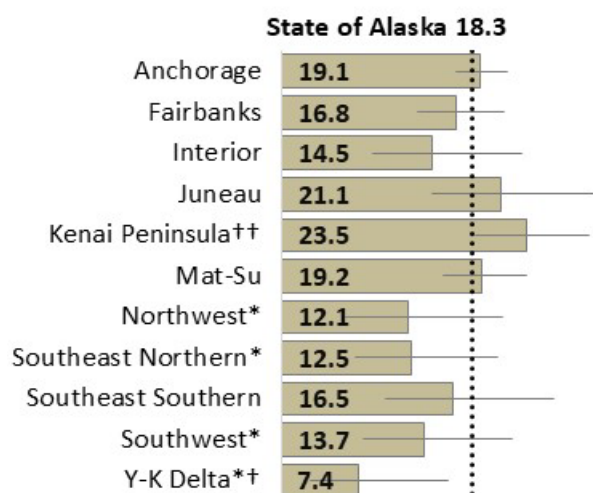
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

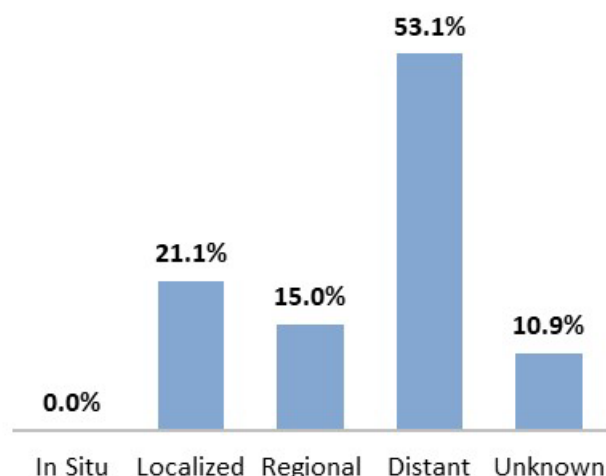
## Non-Hodgkin's Lymphoma (NHL)

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



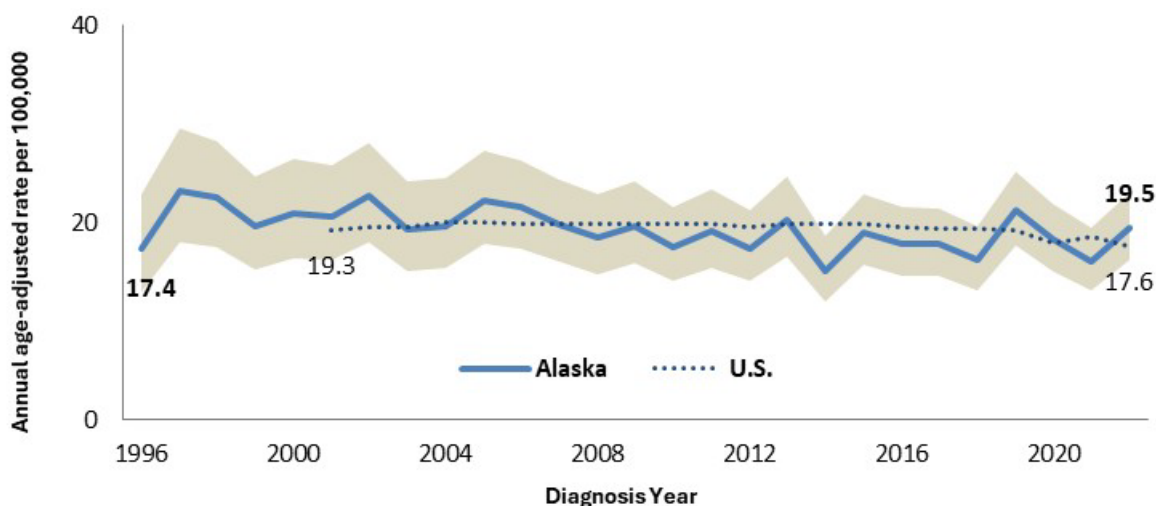
Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.  
† Region estimate is lower than the state estimate.  
†† Region estimate is higher than the state estimate.  
\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.  
**Localized:** Cancer is limited to the place where it started.  
**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.  
**Distant:** Cancer has spread to distant parts of the body.  
**Unknown:** There is not enough information to determine the stage.

### NHL Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.



## Oral Cavity and Pharynx

Oral cavity and pharynx cancer affects the mouth, throat, and pharynx regions. Cancers in these regions can begin in the lips, teeth, gums, roof of the mouth, tongue, cheeks, neck, or throat.

The risk of oral cavity and pharynx cancer increases with age. Other risk factors include use of any tobacco products and alcohol, ultraviolet (UV) light exposure, human papillomavirus (HPV) infection, and certain occupational industries that expose workers to wood dust, formaldehyde, asbestos, nickel, and other chemicals that increase the risk of oral cavity and pharynx cancer.

- Oral Cavity and Pharynx cancer was the 11<sup>th</sup> most diagnosed cancer in Alaska in 2022, 2.9% of total cancer cases.
- Males were more likely than females to both develop and to die of oral cavity and pharynx cancer.
- People who identify as Alaska Native were more likely to develop and to die of oral cavity and pharynx cancer than those who identify as White.
- There was no difference by region in the 5-year incidence of oral cavity and pharynx cancer.
- The incidence of oral cancer in Alaska decreased by 5.1% per year between 1996-2002, and then increased by 1.1% per year between 2002-2022. Nationally, the oral cancer rate increased by 0.9% per year between 2001-2018, and then decreased by 0.5% per year between 2018-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 14.8           | 3.5*           | 62           | ^             |
| Female | 8.9            | ^              | 36           | ^             |
| Total  | 11.8           | 2.4            | 98           | 21            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths. Number of cases or deaths for both sex categories must also be suppressed to prevent back calculation from the total.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 12.9           | 2.6            | 395          | 70            |
| Alaska Native          | 16.6           | 5.7            | 93           | 33            |
| Black                  | ^              | ^              | ^            | ^             |
| Asian/Pacific Islander | 8.7            | ^              | 27           | ^             |
| Hispanic <sup>1</sup>  | 11.1*          | ^              | 16           | ^             |
| Total <sup>2</sup>     | 13.1           | 2.9            | 525          | 110           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

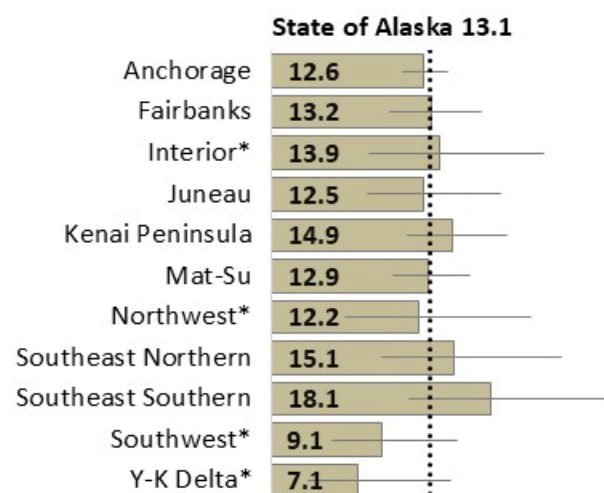
\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.



## Oral Cavity and Pharynx

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.

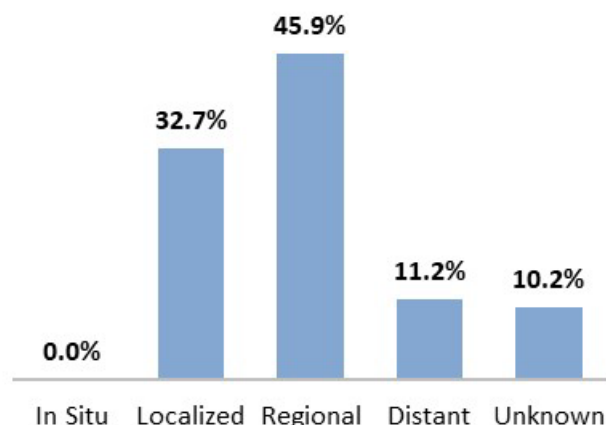
† Region estimate is lower than the state estimate.

†† Region estimate is higher than the state estimate.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.

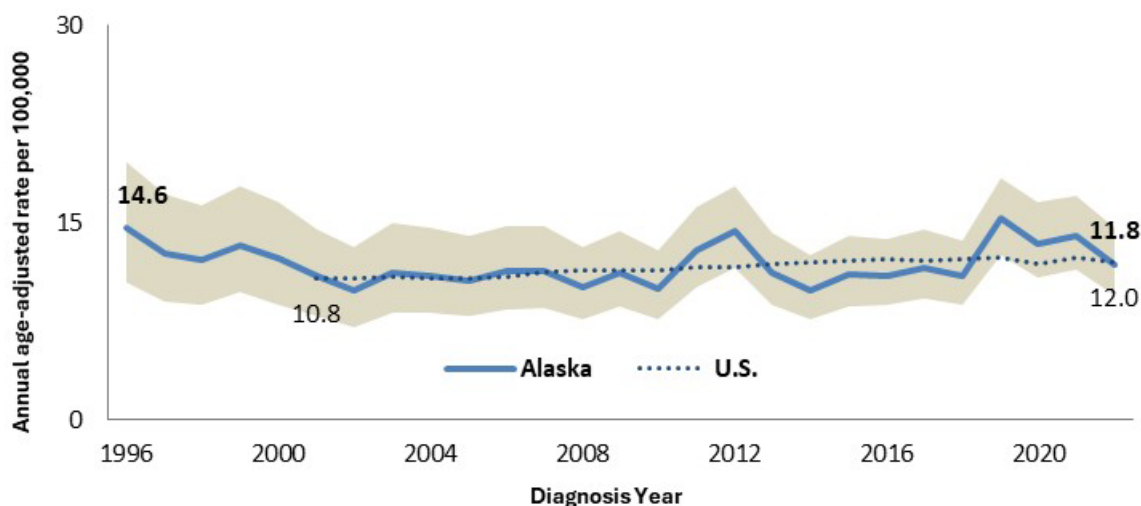
**Localized:** Cancer is limited to the place where it started.

**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.

**Distant:** Cancer has spread to distant parts of the body.

**Unknown:** There is not enough information to determine the stage.

### Oral Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ .

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Ovary

Ovarian cancer develops when cells in the ovary grow out of control. The ovaries are reproductive glands that make eggs for reproduction, secrete both estrogen and progesterone, and are found on either side of the uterus. Non-cancerous ovarian tumors do not spread outside of the ovaries, whereas, cancerous, also known as malignant, tumors can spread to other parts of the body.

The risk of ovarian cancer increases with age and for females who have a family history of ovarian, breast, or colorectal cancer. Some other risk factors include being overweight or obese, post-menopausal hormone replacement therapy, age of menstruation (started and ended), and endometriosis.

- Ovarian cancer was the 20<sup>th</sup> most diagnosed cancer in Alaska in 2022, 1% of total cancer cases. It ranked 10<sup>th</sup> in females, affecting 9.6 per 100,000 Alaskan women.
- There were no significant differences by race or by ethnicity.
- There was no difference by region in the 5-year incidence of ovarian cancer.
- The incidence of ovarian cancer in Alaska decreased by 1.9% per year between 1996-2022. Nationally, the rate declined by 1.7% per year between 2001-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | n/a            | n/a            | n/a          | n/a           |
| Female | 9.6            | 6.6            | 35           | 24            |
| Total  | 9.6            | 6.6            | 35           | 24            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

n/a - means not applicable; ovarian cancer occurs among females.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 8.9            | 6.2            | 119          | 83            |
| Alaska Native          | 6.3            | 4.2            | 18           | 12            |
| Black                  | ^              | ^              | ^            | ^             |
| Asian/Pacific Islander | 9.5            | ^              | 14           | ^             |
| Hispanic <sup>1</sup>  | 7.5            | ^              | 8            | ^             |
| Total <sup>2</sup>     | 8.8            | 5.7            | 158          | 103           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

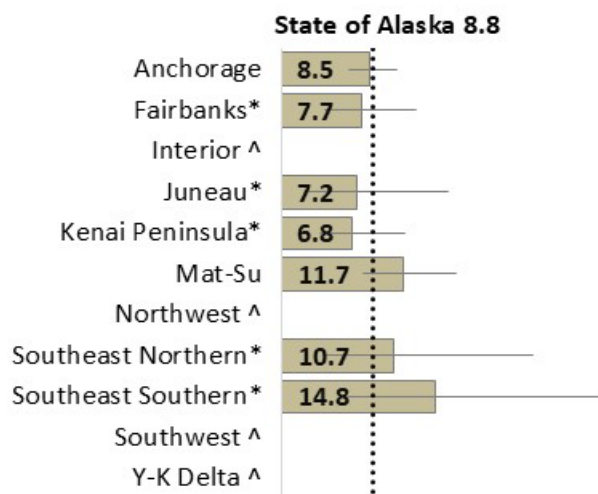
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

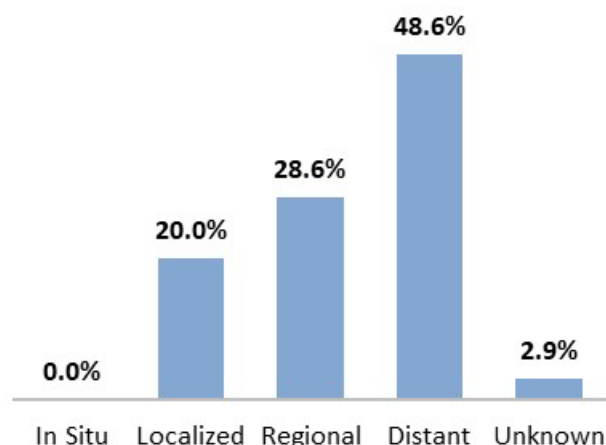
^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

## Ovary

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



### Stage at Diagnosis, 2022



Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.

† Region estimate is lower than the state estimate.

†† Region estimate is higher than the state estimate.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

**In situ:** abnormal cells are present but have not spread to nearby tissue.

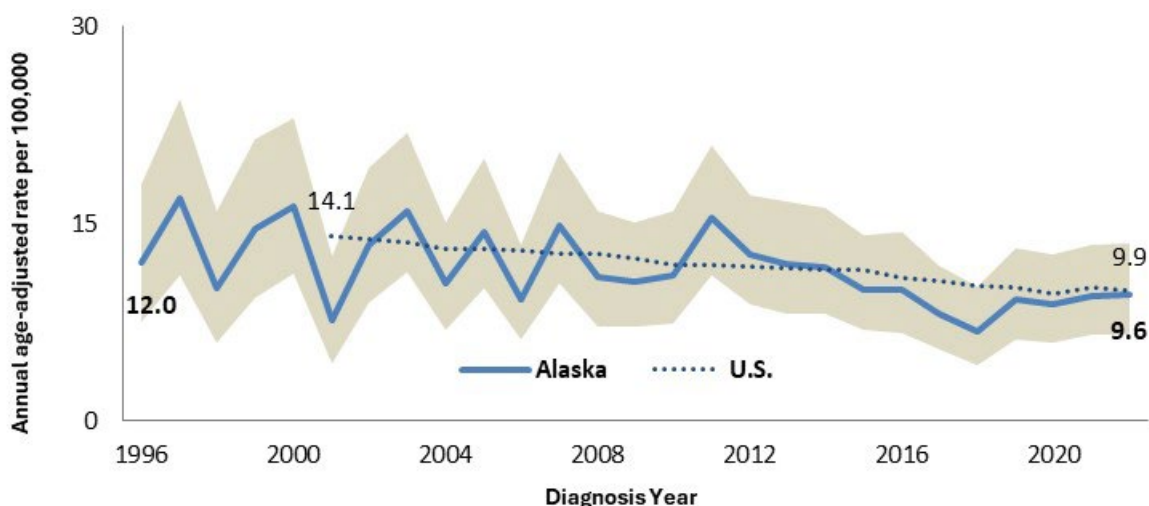
**Localized:** Cancer is limited to the place where it started.

**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.

**Distant:** Cancer has spread to distant parts of the body.

**Unknown:** There is not enough information to determine the stage.

### Ovarian Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ .

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Pancreas

Pancreatic cancer is a disease that begins in the pancreas. The pancreas is an organ located in your abdomen behind the lower part of your stomach and helps to digest food and manage your blood sugar. The most common type of pancreatic cancer starts in the cells that make up the inner lining of your pancreatic ducts. These ducts help to carry digestive enzymes outside of the pancreas.

The risk of pancreatic cancer increases with age. Other risk factors include smoking, diabetes, pancreatitis, obesity, and a family history.

- Pancreatic cancer was the 10<sup>th</sup> most diagnosed cancer in Alaska in 2022, 3.1% of total cancer cases.
- Alaskans who identify as Asian/Pacific Islander were less likely to develop pancreatic cancer than those who identify as White. People who identify as Alaska Native were more likely to die from pancreatic cancer than those who identify as White.
- There was no difference by region in the 5-year incidence of pancreatic cancer.
- The incidence of pancreatic cancer in Alaska increased by 0.5% between 1996-2022. Nationally, the rate increased by 1.2% per year between 2001-2019, and then decreased by 0.5% per year between 2019-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 13.1           | 9.9            | 55           | 40            |
| Female | 12.7           | 10.4           | 50           | 41            |
| Total  | 13.0           | 10.2           | 105          | 81            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 12.8           | 9.5            | 370          | 266           |
| Alaska Native          | 16.0           | 13.9           | 80           | 70            |
| Black                  | 19.4           | 16.6*          | 21           | 19            |
| Asian/Pacific Islander | 6.9            | 6.1*           | 21           | 18            |
| Hispanic <sup>1</sup>  | 15.6*          | ^              | 17           | ^             |
| Total <sup>2</sup>     | 13.0           | 10.1           | 495          | 373           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

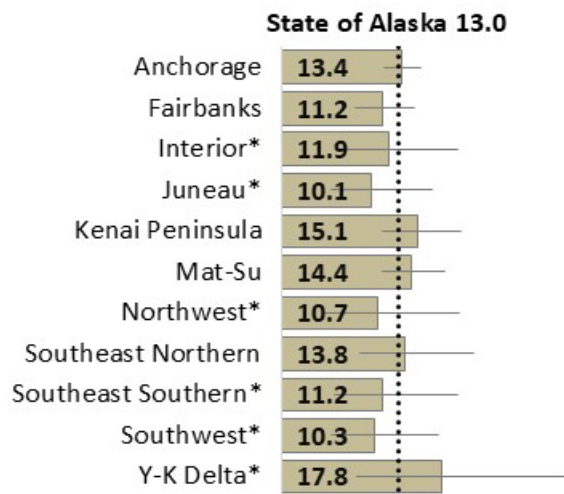
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

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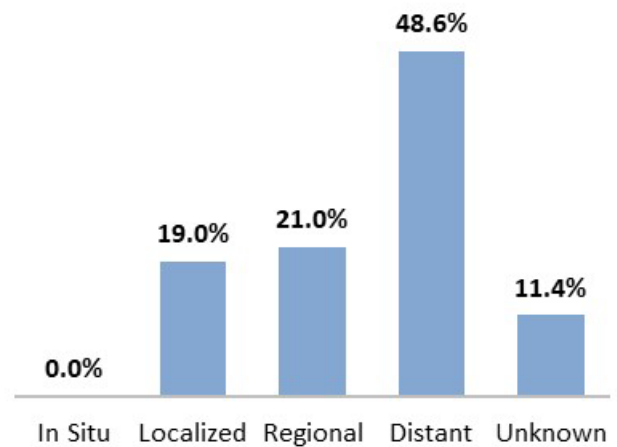
## Pancreas

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.  
 † Region estimate is lower than the state estimate.  
 †† Region estimate is higher than the state estimate.  
 \* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.

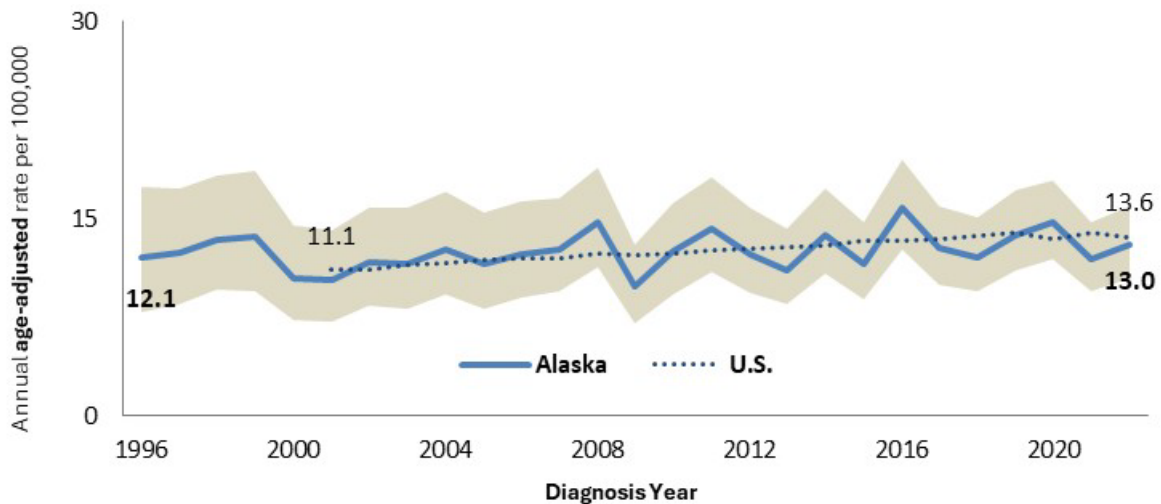
**Localized:** Cancer is limited to the place where it started.

**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.

**Distant:** Cancer has spread to distant parts of the body.

**Unknown:** There is not enough information to determine the stage.

### Pancreatic Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Prostate

Prostate cancer is a disease that affects only males and begins when cells in the prostate gland grow out of control. The prostate is a gland that is located below the bladder and in front of the rectum and is part of the male reproductive system. The prostate gland makes a fluid that is part of semen.

The risk of prostate cancer increases with age and for those who have a family history. African American men have an increased risk of getting, or dying from, prostate cancer.

- Prostate cancer was the 2<sup>nd</sup> most diagnosed cancer in Alaska in 2022, 15.2% of total cancer cases. It ranked first in males, affecting 121.2 per 100,000 Alaskan men.
- Alaskans who identify as Black were more likely to develop prostate cancer than those identifying as White. People who identify as Alaska Native or Asian/Pacific Islander were less likely to develop prostate cancer than those identifying as White, and those who identified as Hispanic were less likely than non-Hispanics to develop prostate cancer.
- The 5-year incidence of prostate cancer was higher than the state average (107.7) in Anchorage (127.9) and Fairbanks (130.0). Prostate cancer incidence was lower than the state average in Northwest (25.1), Southeast Northern (67.7) and Southeast Southern regions (81.5).
- From 1996-2009 the incidence of prostate cancer in Alaska decreased by 2.0% per year and then decreased by 13.3% per year between 2009-2013. However, from 2013-2022, the incidence of prostate cancer increased by 4.2% per year. Nationally, the incidence of prostate cancer declined by 1.1% per year between 2001-2008, and then decreased by 6.3% per year between 2008-2014, but increased by 1.6% per year between 2014-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 121.2          | 22.4           | 516          | 65            |
| Female | n/a            | n/a            | n/a          | n/a           |
| Total  | 121.2          | 22.4           | 516          | 65            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 110.3          | 22.6           | 1,813        | 239           |
| Alaska Native          | 83.9           | 26.0           | 200          | 36            |
| Black                  | 181.3          | 34.3*          | 117          | 10            |
| Asian/Pacific Islander | 49.1           | ^              | 63           | ^             |
| Hispanic <sup>1</sup>  | 76.1           | ^              | 44           | ^             |
| Total <sup>2</sup>     | 107.7          | 22.5           | 2,238        | 292           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

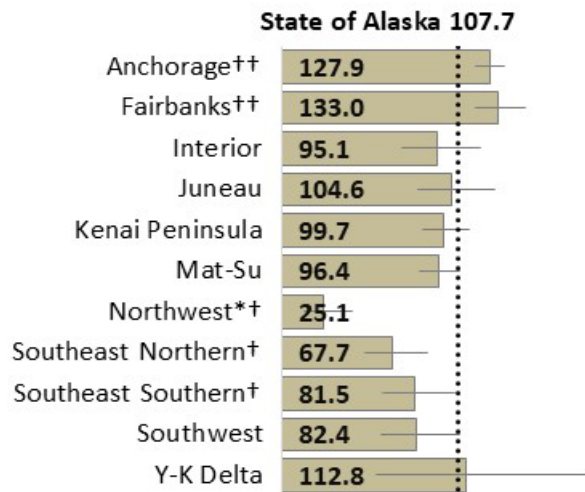
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

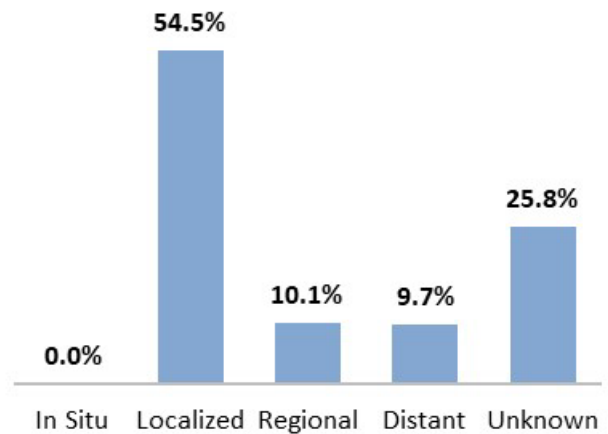
## Prostate

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



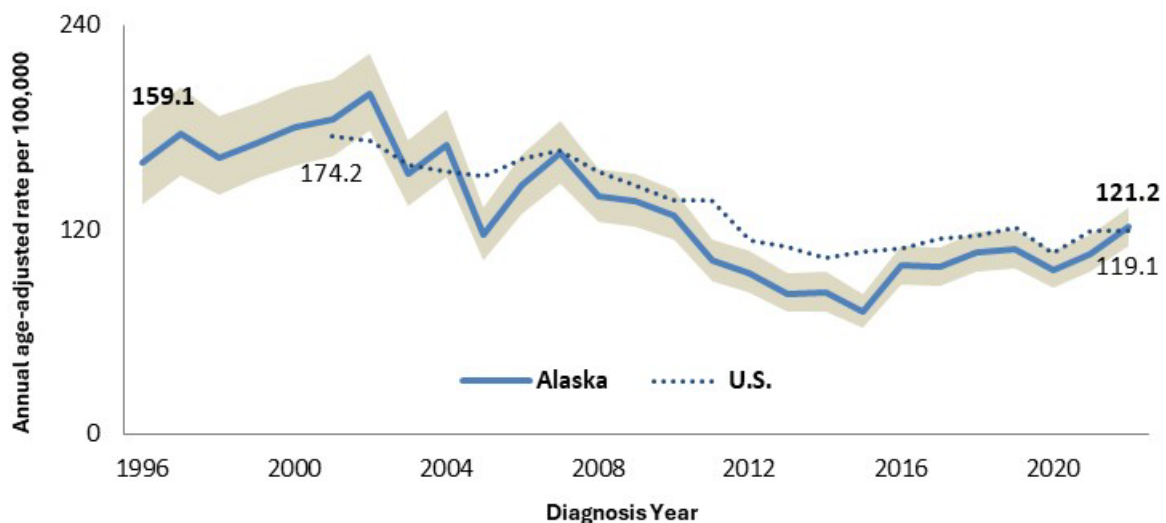
Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.  
 † Region estimate is lower than the state estimate.  
 †† Region estimate is higher than the state estimate.  
 \* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.  
**Localized:** Cancer is limited to the place where it started.  
**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.  
**Distant:** Cancer has spread to distant parts of the body.  
**Unknown:** There is not enough information to determine the stage.

### Prostate Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.



## Stomach

Stomach cancer, also known as gastric cancer, is a type of cancer that starts in your stomach. The stomach is an organ located in your abdomen and is a major part of your digestive system.

Stomach cancer is usually slow growing over many years and classified by what cells, or where in the stomach, the cancer begins. The stomach has five layers (innermost to outermost): mucosa, submucosa, muscularis propria, subserosa, and serosa. Cancer becomes more advanced as it grows from the innermost layer (mucosa) into the deeper layers.

The risk of stomach cancer increases with age. Other factors include H pylori infection, being overweight or obese, smoking, diet high in salty and smoked foods, gastroesophageal reflux, and family history of either stomach cancer or certain genetic syndromes.

- Stomach cancer was the 15<sup>th</sup> most diagnosed cancer in Alaska in 2022, 1.8% of cancer cases.
- People who identify as Alaska Native or Asian/Pacific Islander were more likely to develop stomach cancer or to die of stomach cancer than those who identify as White.
- The 5-year incidence of stomach cancer was higher than the state average (7.3) in Northwest (27.7) and Southwest (30.5). Stomach cancer incidence was lower than the state average in Mat-Su (4.7).
- From 1996-2022 the incidence of stomach cancer in Alaska decreased by 1.0% per year. Nationwide, the incidence of stomach cancer decreased by 0.8% per year between 2001-2020, but increased by 5.0% per year between 2020-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 9.8            | 5.3            | 39           | ^             |
| Female | 5.8            | ^              | 21           | ^             |
| Total  | 7.8            | 3.8            | 60           | 28            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths. Number of cases or deaths for both sex categories must also be suppressed to prevent back calculation from the total.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 4.6            | 2.0            | 133          | 58            |
| Alaska Native          | 20.5           | 11.2           | 104          | 56            |
| Black                  | 8.0*           | ^              | 10           | ^             |
| Asian/Pacific Islander | 9.5            | 6.7*           | 24           | 17            |
| Hispanic <sup>1</sup>  | 6.8*           | ^              | 8            | ^             |
| Total <sup>2</sup>     | 7.3            | 3.8            | 272          | 139           |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

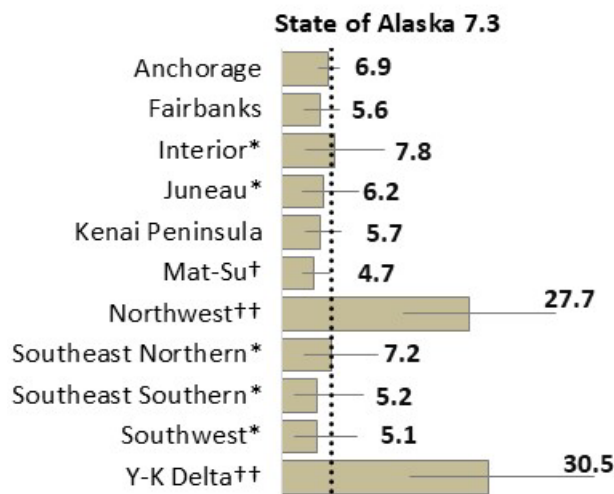
\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.



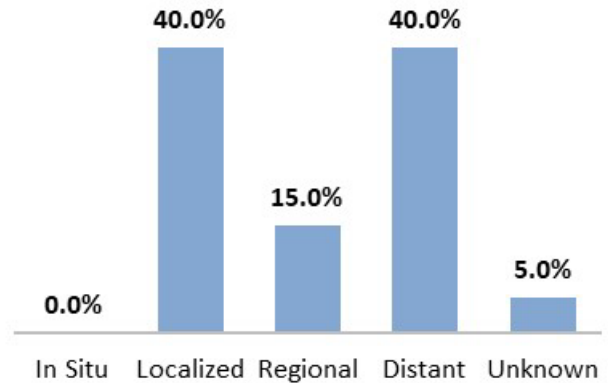
## Stomach

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



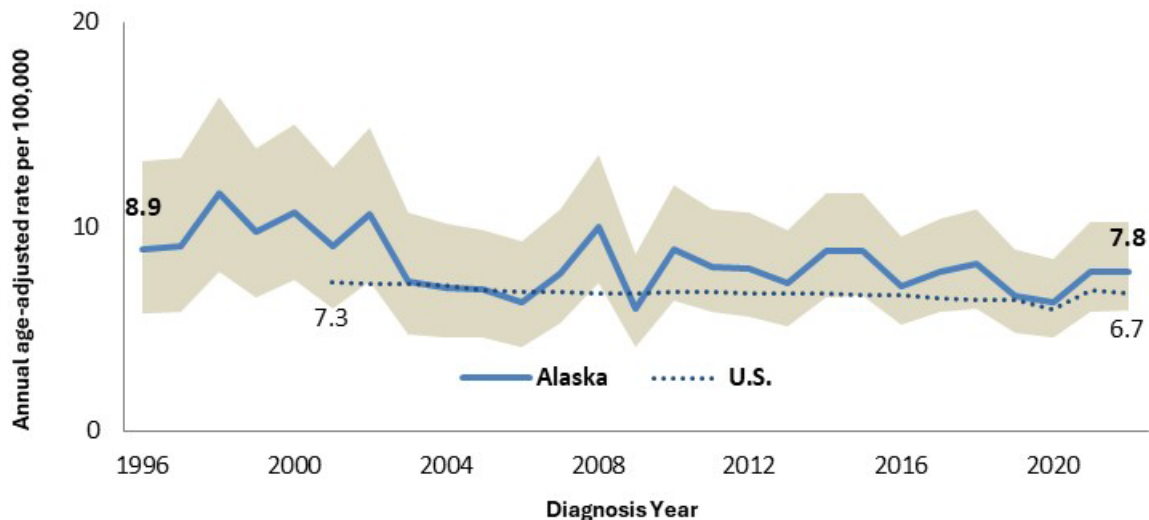
Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.  
 † Region estimate is lower than the state estimate.  
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### Stage at Diagnosis, 2022



**In situ:** abnormal cells are present but have not spread to nearby tissue.  
**Localized:** Cancer is limited to the place where it started.  
**Regional:** Cancer has spread to nearby lymph nodes, tissues, or organs.  
**Distant:** Cancer has spread to distant parts of the body.  
**Unknown:** There is not enough information to determine the stage.

### Stomach Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Thyroid

Thyroid cancer is a disease where cells in the thyroid gland grow out of control. The thyroid gland is located at the front of your neck, below what is commonly known as your “Adam’s apple.” The thyroid gland is responsible for making hormones that regulate your heart rate, metabolism, blood pressure, and body temperature.

The thyroid gland has two main types of cells: follicular cells and C cells. The type of thyroid cancer a person develops depends on what cells are affected.

Risk factors include exposure to radiation, being overweight or obese, or having iodine in your diet. Nonmodifiable risk factors include gender and age, certain hereditary conditions, and a family history of thyroid cancer.

- Thyroid cancer was the 12<sup>th</sup> most diagnosed cancer in Alaska in 2022, 2.8% of total cancer cases.
- Females were three times more likely than males to develop thyroid cancer.
- Alaskans who identify as Black are less likely to develop thyroid cancer than those identifying as White.
- There was no difference by region in the 5-year incidence of thyroid cancer.
- The incidence of thyroid cancer in Alaska increased by 2.79% per year between 1996-2014, and then decreased by 2.1% per year between 2014-2022. Nationally, the rate increased by 7.3% per year between 2001-2009 and increased more gradually by 1.8% per year between 2009-2014, but then decreased by 2.7% per year between 2014-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | 6.7            | ^              | 27           | ^             |
| Female | 19.9           | ^              | 69           | ^             |
| Total  | 12.9           | ^              | 96           | ^             |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 11.3           | 0.6*           | 306          | 17            |
| Alaska Native          | 13.6           | ^              | 72           | ^             |
| Black                  | 3.3*           | ^              | 6            | ^             |
| Asian/Pacific Islander | 10.6           | ^              | 35           | ^             |
| Hispanic <sup>1</sup>  | 6.9*           | ^              | 15           | ^             |
| Total <sup>2</sup>     | 11.3           | 0.5            | 423          | 20            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

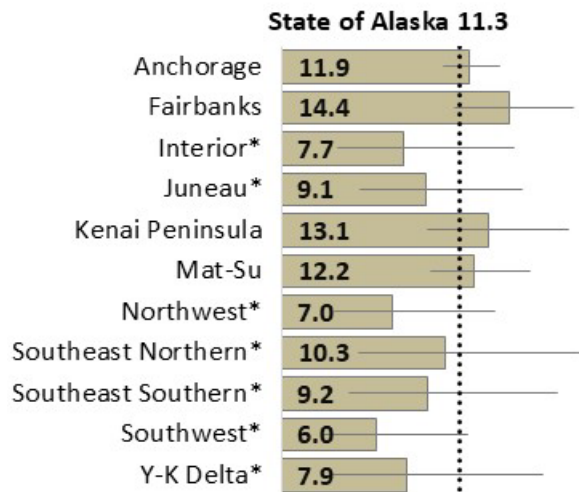
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

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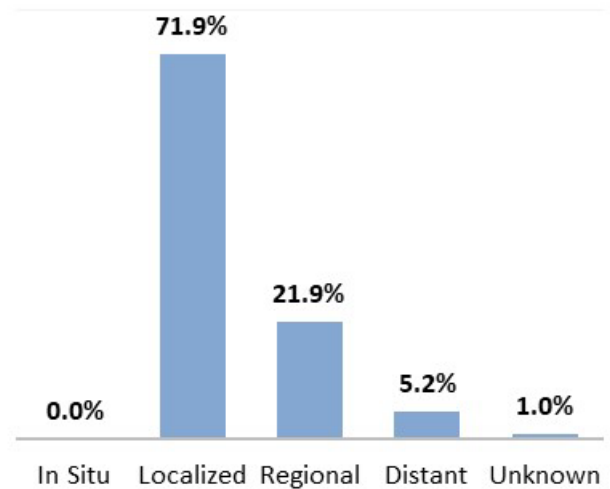
## Thyroid

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



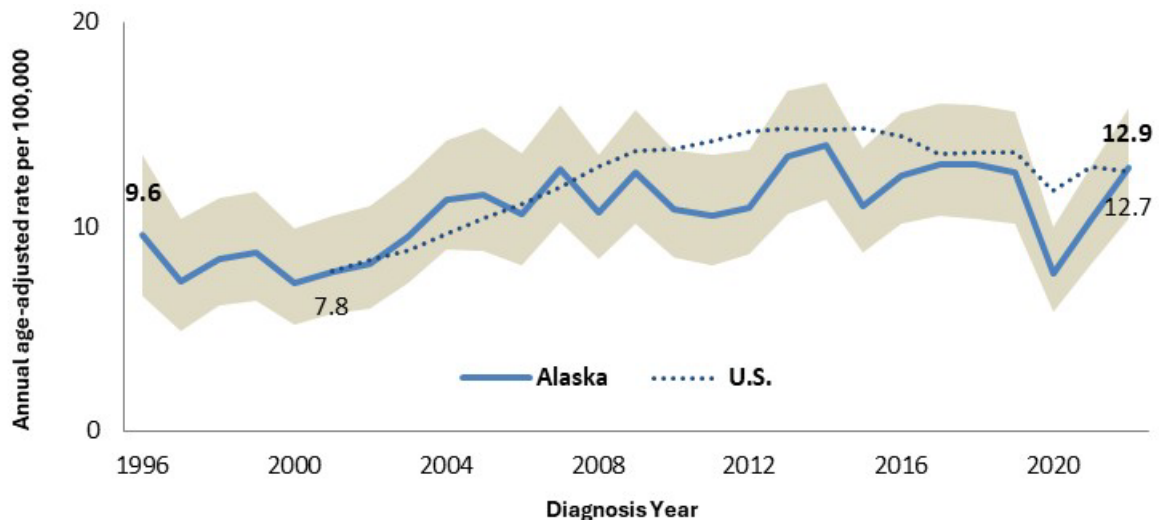
Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only.  
† Region estimate is lower than the state estimate.  
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### Stage at Diagnosis, 2022



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**Distant:** Cancer has spread to distant parts of the body.  
**Unknown:** There is not enough information to determine the stage.

### Thyroid Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.

## Uterus

Uterine cancer is a type of cancer that develops in the body of the uterus. There are two types of uterine cancer: endometrial cancer and uterine sarcoma.

Endometrial cancer starts in the innermost lining of the uterus and is the most common cancer of the reproductive system. Uterine sarcoma starts in the muscle wall of the uterus, also known as the myometrium, and is a rare type of cancer.

The risk of uterine cancer increases with age, most cases occurring after 50 years of age. Other risk factors include diets high in animal fat, being overweight or obese, and a family history.

- Uterine cancer was the 8<sup>th</sup> most diagnosed cancer in Alaska in 2022, 3.5% of total cancer cases. It ranked 4th in females, affecting 30.1 per 100,000 Alaskan women.
- Alaskans who identify as White were more likely to develop uterine cancer than those who identify as Alaska Native.
- The 5-year incidence of uterine cancer is higher in Anchorage (35.1) compared to the state average (29.4).
- The incidence of uterine cancer in Alaska increased by 1.5% per year between 1996-2022. Nationally, the rate increased by 1.2% per year between 2001-2017, and then decreased by 0.2% per year between 2017-2022.

### Incidence and Mortality Summary by Sex, 2022

| Sex    | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|--------|----------------|----------------|--------------|---------------|
| Male   | n/a            | n/a            | n/a          | n/a           |
| Female | 30.1           | ^              | 118          | ^             |
| Total  | 30.1           | ^              | 118          | ^             |

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\* Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution.

^ Statistic not displayed due to fewer than 6 incidence cases or fewer than 10 deaths.

### 5-Year Incidence and Mortality Summary by Race/Ethnicity, 2018-2022

| Race/Ethnicity         | Incidence Rate | Mortality Rate | No. Of Cases | No. Of Deaths |
|------------------------|----------------|----------------|--------------|---------------|
| White                  | 29.8           | 3.5            | 430          | 46            |
| Alaska Native          | 19.7           | ^              | 56           | ^             |
| Black                  | 23.5           | ^              | 14           | ^             |
| Asian/Pacific Islander | 39.0           | 6.3            | 68           | 11            |
| Hispanic <sup>1</sup>  | 24.8           | ^              | 17           | ^             |
| Total <sup>2</sup>     | 29.4           | 3.6            | 570          | 66            |

Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. All incidence rates are for malignant cases only.

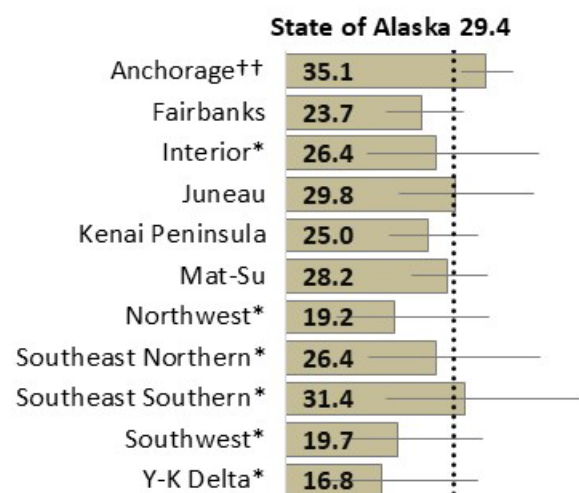
<sup>1</sup> Hispanic persons can be of any race. <sup>2</sup> Total includes cases of unknown race and excludes the Hispanic count value.

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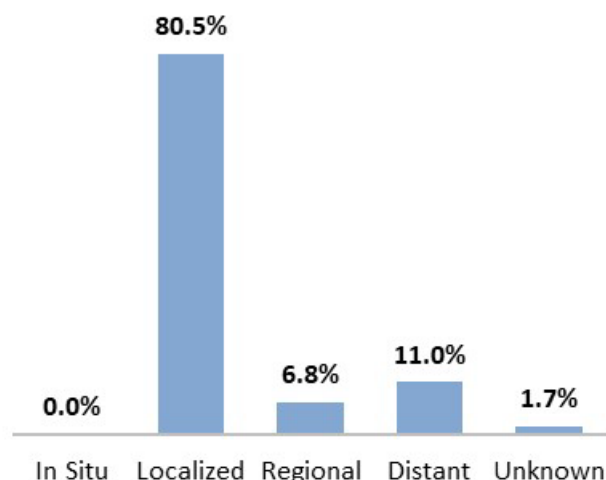
## Uterus

### Incidence Rate by Alaska Behavioral Health Systems Region, 2018-2022



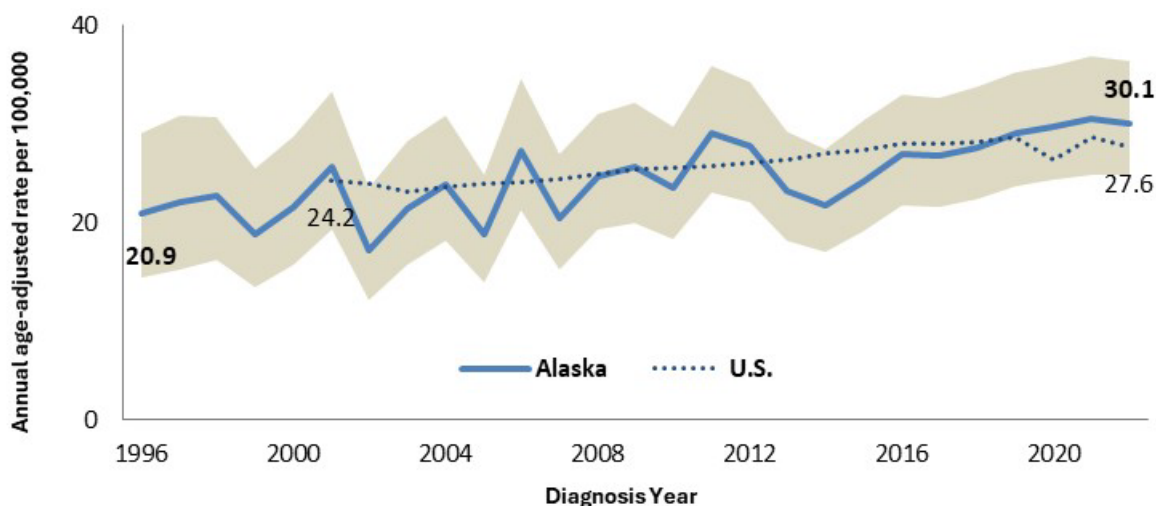
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† Region estimate is lower than the state estimate.  
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### Stage at Diagnosis, 2022



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**Distant:** Cancer has spread to distant parts of the body.  
**Unknown:** There is not enough information to determine the stage.

### Uterine Cancer Incidence Trend, Alaska (1996 - 2022) and U.S. (2001 - 2022)



Shading shows 95% confidence interval for Alaska's annual rates. 95% confidence interval for U.S. rates is about  $\pm 0.3$ . Rates are per 100,000 and age-adjusted to the 2000 U.S. Population. Incidence rates are for malignant cases only. National data source: United States Cancer Statistics (Centers for Disease Control and Prevention [CDC] and the National Cancer Institute [NCI]). Most recent rate reported is for 2022 nationally and for Alaska.