



ALASKA NATIVE  
EPIDEMIOLOGY  
CENTER

# Cancer in Alaska Native People

1969-2008

40-Year Report

# Cancer in Alaska Native People

## 1969-2008

### 40-Year Report

**Janet J. Kelly, MS, MPH**  
**Teresa L. Schade**  
**B. Michael Starkey**  
**Sadie White**  
**Ramkumar Ashokkumar, MS**  
**Anne P. Lanier, MD, MPH**



**Alaska Native Tumor Registry**  
**Alaska Native Epidemiology Center**  
**Division of Community Health Services**  
**Alaska Native Tribal Health Consortium**  
**April 2012**

*This report is available at the Alaska Native Epidemiology Center Website:*  
<http://anthctoday.org/epicenter/>

*For additional information concerning cancer data of Alaska Native people, please contact:*  
*Alaska Native Tumor Registry Office 907 729-3949*

# Cancer in Alaska Native People

1969-2008

40-Year Report

## *Alaska Native Tumor Registry*

|                           |    |
|---------------------------|----|
| Contact information ..... | i  |
| Acknowledgements .....    | ii |
| Introduction .....        | 1  |
| Methods .....             | 1  |
| Highlights .....          | 4  |
| References .....          | 5  |

### Tables and Charts

|                                                                 |     |
|-----------------------------------------------------------------|-----|
| Five-year cancer incidence counts and rates, 2004-2008 .....    | 6   |
| Cancer disparities .....                                        | 11  |
| 15-year cancer incidence counts and rates, 1994-2008 .....      | 15  |
| Age-specific cancer incidence counts and rates, 1994-2008 ..... | 23  |
| • Compared to US whites .....                                   | 28  |
| 40-year trends, 1969-2008 .....                                 | 51  |
| • Compared to US whites .....                                   | 58  |
| Cancer incidence by Service Unit, 1994-2008 .....               | 81  |
| • Leading cancers.....                                          | 82  |
| • Incidence rates.....                                          | 97  |
| • Cancer incidence trends 1969-2008 .....                       | 101 |
| Five-year cancer mortality rates, 2004-2008 .....               | 106 |
| 15-year cancer mortality rates, 1994-2008 .....                 | 110 |
| • Leading cancer deaths compared to US whites .....             | 112 |
| • Age-specific cancer mortality rates 1994-2008 .....           | 118 |
| Cancer mortality trends 1994-2008 .....                         | 121 |
| Appendices .....                                                | 126 |
| • SEER site recode .....                                        | 127 |
| • Glossary of cancer terms .....                                | 130 |

# Acknowledgements

The authors wish to express thanks to the many tumor registrars, medical records personnel and IT staff at health care facilities, and others throughout the state who helped assure the completeness and accuracy of these data. We could not have produced this report without the continued support from staff of the Alaska Native Medical Center Tumor Registry, the Alaska Cancer Registry, the New Mexico Tumor Registry, and the Washington State Cancer Registry.



Funding for the SEER Alaska Native Tumor Registry is provided through an Interagency Agreement No. Y1-PC-0064-01 with the National Cancer Institute, Surveillance, Epidemiology and End Results (SEER) Program.

## **Introduction**

Cancer is the leading cause of death among Alaska Native (AN) people (1). Prior to the mid 1900's, cancer was considered a rare disease among AN people, but since that time, cancer incidence has increased dramatically. Currently, over 400 AN people are diagnosed with cancer annually. Cancer incidence rates are high among AN people and many types of cancer exceed the rates of cancer in the US white (USW) population (2).

The Alaska Native Tumor Registry (ANTR) has collected and maintained complete cancer incidence data since 1969, and staging data since 1984. The ANTR is a participant in the National Cancer Institute Surveillance, Epidemiology and End Results (SEER) Program (3). This report encompasses 40 years of cancer incidence data. Changes over time in cancer rates and disease disparities are based on comparisons of AN and USW cancer rates. The most recent incidence rates are based on data available for the years 2004-2008. Cancer incidence in greater detail are presented over a 15-year period, 1994-2008. Included in this report are incidence rates for all cancers by age groups, by five year time periods and by Indian Health Service geographic designations, Service Units. Cancer mortality rates and comparisons are similarly presented.

## **Methods**

Data are from the Alaska Native Tumor Registry (ANTR), a population-based registry which includes AN people living in Alaska at the time of cancer diagnosis from 1969 to 2008 and who met eligibility requirements for Indian Health Service benefits. Tumor data and demographic information were gathered from electronic medical records, patient medical charts, pathology reports and provider dictations from medical facilities across the state. Cancers described in this report include all invasive cancers, as well as benign and borderline brain and central nervous system cancers (beginning with 2004 diagnoses), and *in situ* bladder cancer. Site of cancer

origin, cell type, behavior and grade coding follow the International Classification of Diseases for Oncology, second and third editions. Cancer sites of origin are grouped according to SEER site groups (see Appendix). 89% of cancers were histologically confirmed; less than 1 % of the cases were identified from death certificates only. Abstracting followed strict coding and staging guidelines established by the SEER program, and data were processed through a standard set of computerized edits. Data quality is monitored through periodic record review and through other data quality improvement activities.

Alaska Native population estimates for years 1970-1980 are based on extrapolations of the 1970 and 1980 US Census counts, and years 1981-2008 from the National Center for Health Statistics (NCHS) bridged population series for AN, available from the SEER Stat website. Service Unit population estimates were calculated using total Service Unit population counts reported by Indian Health Service Alaska Area Office and applying age and sex distributions of the 2000 Census for Alaska Native people.

For comparison with US white incidence and mortality rates, AN rates are age-adjusted to the 2000 US Census standard population by 10-year age groups using the direct method and expressed as per 100,000. Age-specific incidence rates are unadjusted. Cancer incidence rates by Service Unit are expressed as per 100,000 population and are based on aggregated data for four ten-year periods: 1969-1978, 1979-1988, 1989-1998, and 1999-2008. Comparisons of Service Unit 15-year rates were done using an odds ratio with 95% confidence limits calculated by the Cornfield method. Confidence intervals not including one are considered to indicate statistically significantly different rates. Mantel-Haenszel Chi-square probability (p) values indicating a statistical significance level of less than 0.05 for Service Unit rates are also presented.

AN and US incidence and mortality rates were produced using SEER Stat (4). A statistically significant difference between rates was defined as non-overlapping 95% confidence intervals for each comparison rate.

## **Highlights**

### Alaska Native Tumor Registry 1969-2008

#### *Cancer Incidence*

- **Cancer incidence rates continue to increase** among Alaska Native women, but may be decreasing among Alaska Native men.
- Site-specific rates are **increasing** for cancers of the lung (men and women), all cancers combined (women), and corpus/uterus.
- Rates are **declining** for cancers of the oral cavity/pharynx (men), nasopharynx (men), esophagus (men), and colon/rectum (men and women).
- Frequently diagnosed cancers are cancers of the lung, colon/rectum, breast and prostate, comprising more than 55% of newly diagnosed cancers.

#### *Compared to US White Cancer Rates*

- Cancer incidence rates in Alaska Native people are **10% higher** than US white rates (491 vs. 466 per 100,000). Rates are **20% higher in Alaska Native women**, although similar to US whites among Alaska Native men.
- Compared to US whites, cancer incidence rates in Alaska Native people are **higher** for: nasopharynx, esophagus, stomach, colorectal, pancreas, biliary tract, lung, and kidney.
- In contrast incidence rates in Alaska Native people are **lower** than US whites for corpus/uterus, melanoma, urinary bladder, Hodgkin and non-Hodgkin lymphoma, thyroid and lymphocytic leukemia.

#### *Cancer Mortality*

- **Cancer remains the leading cause of death** among Alaska Native people. The all-cancer mortality rate has exceeded the US white cancer mortality rate for more than 30 years. There have not been any significant declines.
- The leading cause of cancer death is lung cancer; where the mortality rate is 40% **higher** in Alaska Native people than US whites.
- The mortality rate for colorectal cancer is declining.

## REFERENCES

1. Day G, Holck P, Provost E. Alaska Native Mortality Update: 2004-2008. Anchorage: Alaska Native Tribal Health Consortium; 2011.
2. Lanier A, Kelly J, Maxwell J, McEvoy T, Homan C. Cancer in Alaska Native People, 1969-2003. *Alaska Med* 2006;48(2):30-59.
3. National Cancer Institute. About the SEER Program (<http://www.seer.cancer.gov/about/>). National Cancer Institute, Surveillance, Epidemiology and End Results (SEER) Program; 2011.
4. Surveillance, Epidemiology, and End Results (SEER) Program ([www.seer.cancer.gov](http://www.seer.cancer.gov)). SEER\*Stat Database: Incidence - SEER 13 Regs Research Data, Nov 2010 Sub (1992-2009) <Katrina/Rita Population Adjustment> - Linked To County Attributes - Total U.S., 1969-2010 Counties. National Cancer Institute, DCCPS, Surveillance Research Program, Cancer Statistics Branch; released April 2012, based on the November 2011 submission.



## Alaska Native Tumor Registry

# Five-Year Cancer Incidence Rates, 2004-2008

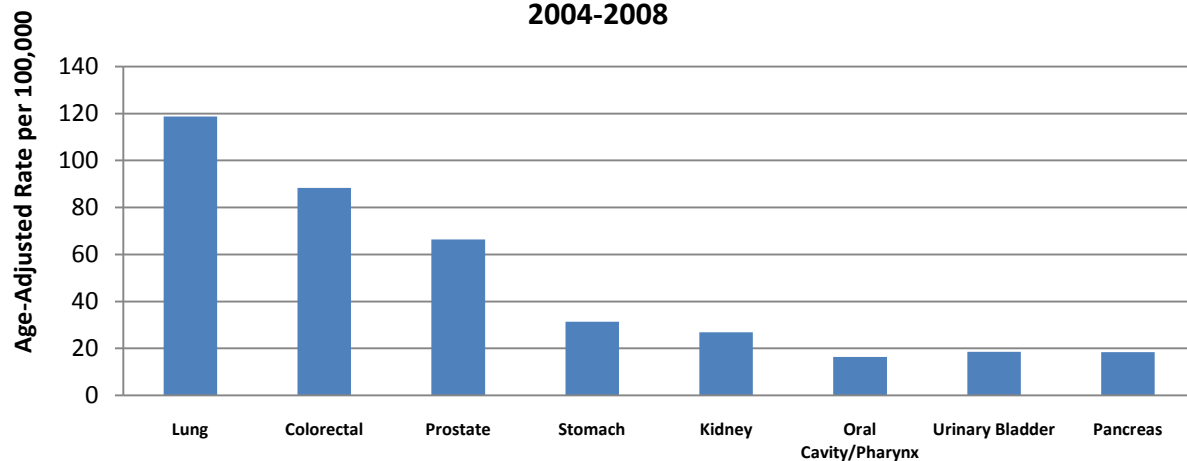
**Leading Cancers Among Alaska Native Men and Women, 2004-2008**  
**Numbers and Age-Adjusted Rates per 100,000**

| <b>Men</b>              |               |              | <b>Women</b>           |               |                |
|-------------------------|---------------|--------------|------------------------|---------------|----------------|
|                         | <b>Number</b> | <b>Rate</b>  |                        | <b>Number</b> | <b>Rate</b>    |
| <b>All Sites</b>        | <b>827</b>    | <b>499.6</b> | <b>All Sites</b>       | <b>992</b>    | <b>493.7 *</b> |
| 1 Lung                  | 175           | 118.8 *      | 1 Breast               | 277           | 127.9          |
| 2 Colorectal            | 148           | 88.3 *       | 2 Colorectal           | 164           | 87.3 *         |
| 3 Prostate              | 108           | 66.4 δ       | 3 Lung                 | 137           | 76.5 *         |
| 4 Stomach               | 53            | 31.4 *       | 4 Corpus and Uterus    | 38            | 17.6 δ         |
| 5 Kidney                | 44            | 26.8         | 5 Kidney               | 30            | 15.1           |
| 6 Oral Cavity/Pharynx   | 32            | 16.3         | 6 Stomach              | 29            | 14.7 *         |
| 7 Urinary Bladder       | 30            | 18.6 δ       | 7 Non-Hodgkin Lymphoma | 29            | 14.6           |
| 8 Pancreas              | 29            | 18.4         | 8 Ovary                | 28            | 14.0           |
| 9 Leukemia              | 26            | 13.8         | 9 Cervix Uteri         | 28            | 11.5           |
| 10 Non-Hodgkin Lymphoma | 22            | 13.6 δ       | 10 Pancreas            | 25            | 14.2           |

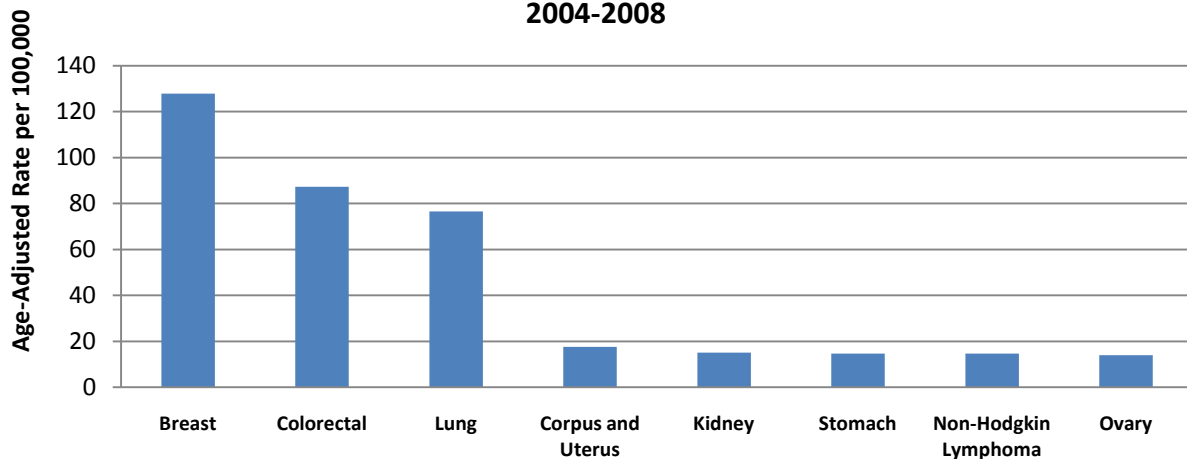
\* Statically higher than US White rate.

δ Statically lower than US White rate.

**Average Annual Cancer Incidence Rates among Alaska Native Men,  
2004-2008**



**Average Annual Cancer Incidence Rates among Alaska Native Women,  
2004-2008**



**Average Annual Age-Adjusted Cancer Incidence Rates per 100,000**  
**Alaska Native and US White, 2004-2008**

|                                | Alaska Native Men and Women |          |          |       | US White Men and Women |          |          | AN/US      |
|--------------------------------|-----------------------------|----------|----------|-------|------------------------|----------|----------|------------|
|                                | Rate                        | Lower CI | Upper CI | Count | Rate                   | Lower CI | Upper CI | Rate Ratio |
| All Sites                      | 491.4 *                     | 468.0    | 515.7    | 1819  | 465.8                  | 464.8    | 466.9    | 1.1        |
| Oral Cavity and Pharynx        | 13.0                        | 9.6      | 17.2     | 53    | 10.4                   | 10.3     | 10.6     | 1.3        |
| Nasopharynx                    | 4.2 *                       | 2.5      | 6.8      | 18    | 0.4                    | 0.4      | 0.4      | 10.5       |
| Digestive System               | 156.7 *                     | 143.4    | 170.9    | 559   | 83.0                   | 82.5     | 83.4     | 1.9        |
| Esophagus                      | 8.8 *                       | 5.9      | 12.6     | 31    | 4.6                    | 4.5      | 4.7      | 1.9        |
| Stomach                        | 21.7 *                      | 17.1     | 27.2     | 82    | 6.9                    | 6.8      | 7.0      | 3.1        |
| Colon and Rectum               | 87.9 *                      | 77.9     | 98.6     | 312   | 45.1                   | 44.8     | 45.4     | 1.9        |
| Colon excluding Rectum         | 66.5 *                      | 57.7     | 76.0     | 228   | 32.7                   | 32.4     | 33.0     | 2.0        |
| Rectosigmoid Junction          | 6.3 *                       | 4.0      | 9.5      | 24    | 3.3                    | 3.2      | 3.3      | 1.9        |
| Rectum                         | 15.1 *                      | 11.4     | 19.5     | 60    | 9.1                    | 9.0      | 9.3      | 1.7        |
| Liver                          | 8.2                         | 5.4      | 11.8     | 31    | 5.5                    | 5.4      | 5.6      | 1.5        |
| Gallbladder                    | 2.7                         | 1.1      | 5.2      | 8     | 1.1                    | 1.1      | 1.2      | 2.5        |
| Other Biliary                  | 4.0 *                       | 2.0      | 7.0      | 12    | 1.8                    | 1.7      | 1.8      | 2.2        |
| Pancreas                       | 16.1 *                      | 12.0     | 21.2     | 54    | 11.8                   | 11.6     | 11.9     | 1.4        |
| Respiratory System             | 98.7 *                      | 87.9     | 110.3    | 327   | 62.9                   | 62.5     | 63.3     | 1.6        |
| Larynx                         | 2.8                         | 1.4      | 5.0      | 12    | 3.2                    | 3.1      | 3.3      | 0.9        |
| Lung and Bronchus              | 94.8 *                      | 84.2     | 106.2    | 312   | 57.8                   | 57.5     | 58.2     | 1.6        |
| Bones and Joints               | 1.3                         | 0.4      | 2.9      | 6     | 1.0                    | 0.9      | 1.0      | 1.3        |
| Soft Tissue including Heart    | 3.2                         | 1.7      | 5.6      | 14    | 3.3                    | 3.2      | 3.4      | 1.0        |
| Melanoma of the Skin           | 1.4                         | 0.6      | 3.1      | 7     | 24.6 *                 | 24.4     | 24.9     | 0.1        |
| Other Non-Epithelial Skin      | 2.2                         | 0.9      | 4.2      | 8     | 2.7                    | 2.7      | 2.8      | 0.8        |
| Breast                         | 67.6                        | 59.7     | 76.3     | 279   | 68.3                   | 67.9     | 68.7     | 1.0        |
| Urinary System                 | 31.7                        | 25.9     | 38.4     | 113   | 37.6                   | 37.3     | 37.9     | 0.8        |
| Urinary Bladder                | 11.3                        | 7.9      | 15.5     | 39    | 22.4                   | 22.1     | 22.6     | 0.5        |
| Kidney and Renal Pelvis        | 20.4 *                      | 15.8     | 25.9     | 74    | 14.3                   | 14.1     | 14.5     | 1.4        |
| Eye and Orbit                  | 0.9                         | 0.1      | 2.8      | 2     | 0.9                    | 0.9      | 0.9      | 1.0        |
| Brain and Other Nervous System | 5.4                         | 3.5      | 8.0      | 26    | 7.1                    | 6.9      | 7.2      | 0.8        |
| Endocrine System               | 7.7                         | 5.2      | 10.8     | 36    | 12.4 *                 | 12.2     | 12.5     | 0.6        |
| Thyroid                        | 6.9                         | 4.5      | 9.9      | 32    | 11.7 *                 | 11.5     | 11.8     | 0.6        |
| Lymphoma                       | 14.5                        | 10.6     | 19.2     | 54    | 24.2 *                 | 23.9     | 24.4     | 0.6        |
| Hodgkin Lymphoma               | 0.5                         | 0.1      | 1.6      | 3     | 3.0 *                  | 2.9      | 3.1      | 0.2        |
| Non-Hodgkin Lymphoma           | 14.0                        | 10.2     | 18.7     | 51    | 21.1 *                 | 20.9     | 21.4     | 0.7        |
| Myeloma                        | 5.1                         | 3.1      | 7.8      | 21    | 5.3                    | 5.2      | 5.5      | 1.0        |
| Leukemia                       | 10.9                        | 7.8      | 14.8     | 48    | 13.4                   | 13.3     | 13.6     | 0.8        |
| Lymphocytic Leukemia           | 2.5                         | 1.2      | 4.6      | 13    | 7.2 *                  | 7.0      | 7.3      | 0.3        |
| Myeloid and Monocytic Leukemia | 7.7                         | 5.1      | 11.1     | 31    | 5.7                    | 5.6      | 5.8      | 1.4        |
| Acute Myeloid Leukemia         | 3.1                         | 1.6      | 5.4      | 13    | 3.6                    | 3.5      | 3.7      | 0.9        |
| Chronic Myeloid Leukemia       | 3.3                         | 1.7      | 5.6      | 14    | 1.6                    | 1.6      | 1.7      | 2.1        |
| Miscellaneous                  | 11.8                        | 8.2      | 16.3     | 38    | 8.7                    | 8.5      | 8.8      | 1.4        |

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

\*Rate is statistically different from comparison rate; confidence intervals are 95%.

**Average Annual Age-Adjusted Cancer Incidence Rates per 100,000**  
**Alaska Native and US White, 2004-2008**

|                                | Alaska Native Men |          |          |       | US White Men |          |          | AN/US      |
|--------------------------------|-------------------|----------|----------|-------|--------------|----------|----------|------------|
|                                | Rate              | Lower CI | Upper CI | Count | Rate         | Lower CI | Upper CI | Rate Ratio |
| All Sites                      | 499.6             | 463.0    | 538.1    | 827   | 534.4        | 532.7    | 536.2    | 0.9        |
| Oral Cavity and Pharynx        | 16.3              | 10.7     | 23.8     | 32    | 15.4         | 15.1     | 15.7     | 1.1        |
| Nasopharynx                    | 4.3 *             | 1.9      | 8.3      | 9     | 0.5          | 0.5      | 0.6      | 8.6        |
| Digestive System               | 173.9 *           | 152.8    | 196.9    | 292   | 100.9        | 100.1    | 101.6    | 1.7        |
| Esophagus                      | 8.2               | 4.5      | 13.8     | 15    | 7.9          | 7.7      | 8.1      | 1.0        |
| Stomach                        | 31.4 *            | 22.5     | 42.3     | 53    | 9.6          | 9.4      | 9.9      | 3.3        |
| Colon and Rectum               | 88.3 *            | 73.6     | 104.8    | 148   | 52.1         | 51.5     | 52.7     | 1.7        |
| Colon excluding Rectum         | 61.7 *            | 49.2     | 76.1     | 98    | 36.5         | 36.0     | 37.0     | 1.7        |
| Rectosigmoid Junction          | 8.9 *             | 4.9      | 14.8     | 16    | 3.9          | 3.8      | 4.1      | 2.3        |
| Rectum                         | 17.7              | 12.0     | 25.2     | 34    | 11.7         | 11.4     | 12.0     | 1.5        |
| Liver                          | 11.3              | 6.3      | 18.3     | 20    | 8.7          | 8.5      | 8.9      | 1.3        |
| Gallbladder                    | 2.9               | 0.7      | 7.3      | 4     | 0.8          | 0.7      | 0.8      | 3.6        |
| Other Biliary                  | 5.2               | 1.9      | 10.7     | 7     | 2.2          | 2.1      | 2.3      | 2.4        |
| Pancreas                       | 18.4              | 11.8     | 26.9     | 29    | 13.5         | 13.2     | 13.8     | 1.4        |
| Respiratory System             | 125.2 *           | 106.5    | 145.9    | 186   | 76.5         | 75.8     | 77.2     | 1.6        |
| Larynx                         | 4.3               | 1.9      | 8.4      | 9     | 5.6          | 5.4      | 5.8      | 0.8        |
| Lung and Bronchus              | 118.8 *           | 100.5    | 139.0    | 175   | 68.0         | 67.3     | 68.6     | 1.7        |
| Bones and Joints               | 1.3               | 0.4      | 4.1      | 4     | 1.1          | 1.0      | 1.2      | 1.2        |
| Soft Tissue including Heart    | 2.4               | 0.9      | 5.6      | 6     | 4.0          | 3.9      | 4.2      | 0.6        |
| Melanoma of the Skin           | 1.3               | 0.3      | 4.1      | 3     | 31.0 *       | 30.6     | 31.4     | 0.0        |
| Other Non-Epithelial Skin      | 2.1               | 0.5      | 5.5      | 4     | 4.1          | 4.0      | 4.3      | 0.5        |
| Breast                         | 1.5               | 0.2      | 4.9      | 2     | 1.2          | 1.1      | 1.3      | 1.3        |
| Male Genital System            | 73.9              | 60.6     | 89.0     | 124   | 160.8 *      | 159.8    | 161.7    | 0.5        |
| Prostate                       | 66.4              | 53.8     | 80.9     | 108   | 153.0 *      | 152.0    | 153.9    | 0.4        |
| Testis                         | 3.9               | 2.0      | 7.4      | 12    | 6.7          | 6.5      | 6.9      | 0.6        |
| Urinary System                 | 45.4              | 35.0     | 57.8     | 74    | 60.5 *       | 59.9     | 61.1     | 0.8        |
| Urinary Bladder                | 18.6              | 12.3     | 26.9     | 30    | 39.7 *       | 39.2     | 40.2     | 0.5        |
| Kidney and Renal Pelvis        | 26.8              | 18.8     | 36.7     | 44    | 19.5         | 19.1     | 19.8     | 1.4        |
| Eye and Orbit                  | 2.1               | 0.3      | 6.6      | 2     | 1.0          | 1.0      | 1.1      | 2.1        |
| Brain and Other Nervous System | 4.2               | 1.8      | 8.4      | 9     | 8.3          | 8.1      | 8.6      | 0.5        |
| Endocrine System               | 7.5               | 3.5      | 13.6     | 14    | 6.8          | 6.6      | 7.0      | 1.1        |
| Thyroid                        | 6.9               | 3.0      | 13.0     | 12    | 6.0          | 5.8      | 6.1      | 1.2        |
| Lymphoma                       | 14.5              | 8.7      | 22.3     | 25    | 28.9 *       | 28.5     | 29.3     | 0.5        |
| Hodgkin Lymphoma               | 0.9               | 0.2      | 3.5      | 3     | 3.3          | 3.2      | 3.5      | 0.3        |
| Non-Hodgkin Lymphoma           | 13.6              | 7.9      | 21.3     | 22    | 25.5 *       | 25.2     | 25.9     | 0.5        |
| Myeloma                        | 4.3               | 2.0      | 8.4      | 9     | 6.9          | 6.7      | 7.1      | 0.6        |
| Leukemia                       | 13.8              | 8.2      | 21.3     | 26    | 17.3         | 17.0     | 17.6     | 0.8        |
| Lymphocytic Leukemia           | 3.8               | 1.5      | 7.9      | 9     | 9.5 *        | 9.2      | 9.7      | 0.4        |
| Myeloid and Monocytic Leukemia | 9.5               | 4.9      | 16.3     | 16    | 7.1          | 6.9      | 7.3      | 1.3        |
| Acute Myeloid Leukemia         | 3.0               | 1.0      | 6.9      | 6     | 4.4          | 4.2      | 4.6      | 0.7        |
| Chronic Myeloid Leukemia       | 3.6               | 1.3      | 7.7      | 7     | 2.2          | 2.1      | 2.3      | 1.6        |
| Miscellaneous                  | 10.1              | 5.2      | 17.2     | 15    | 9.8          | 9.5      | 10.0     | 1.0        |

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

\*Rate is statistically different from comparison rate; confidence intervals are 95%.

**Average Annual Age-Adjusted Cancer Incidence Rates per 100,000**  
**Alaska Native and US White, 2004-2008**

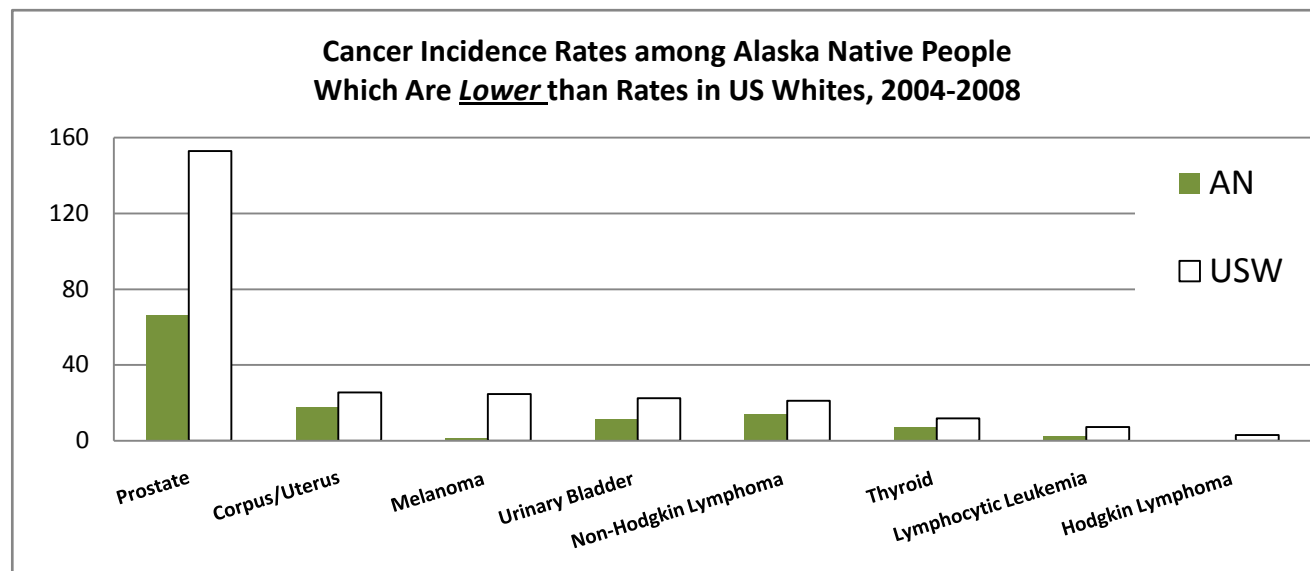
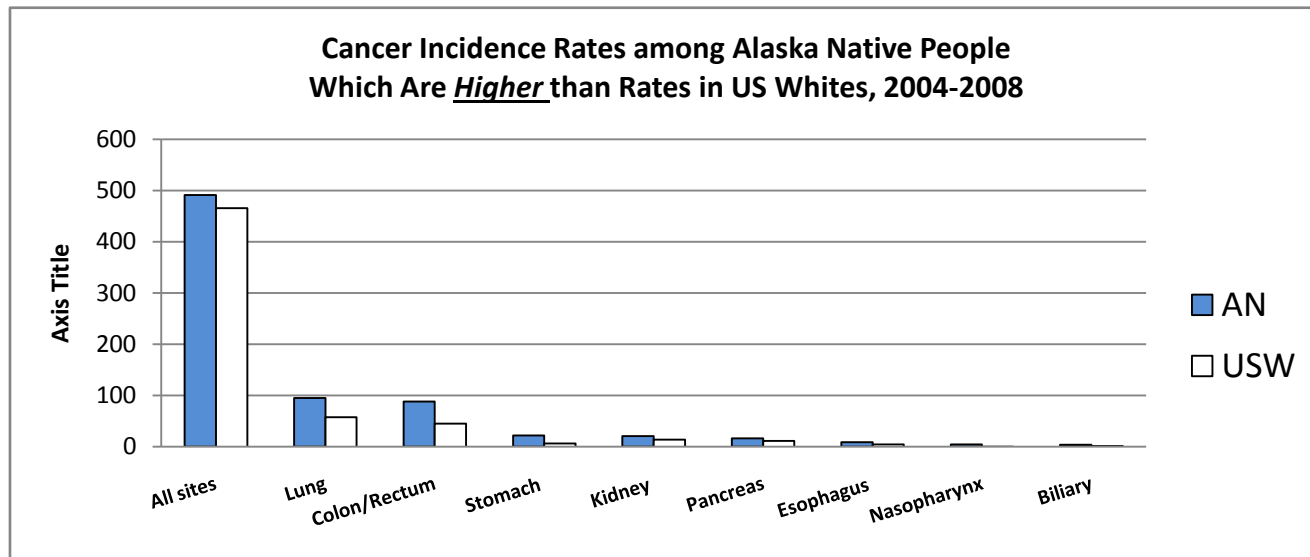
|                                | Alaska Native Women |          |          |       | US White Women |          |          | AN/US      |
|--------------------------------|---------------------|----------|----------|-------|----------------|----------|----------|------------|
|                                | Rate                | Lower CI | Upper CI | Count | Rate           | Lower CI | Upper CI | Rate Ratio |
| All Sites                      | 493.7 *             | 462.5    | 526.4    | 992   | 419.2          | 417.8    | 420.6    | 1.2        |
| Oral Cavity and Pharynx        | 10.3                | 6.2      | 15.8     | 21    | 6.1            | 5.9      | 6.3      | 1.7        |
| Nasopharynx                    | 4.1 *               | 1.8      | 7.9      | 9     | 0.2            | 0.2      | 0.3      | 20.5       |
| Digestive System               | 142.6 *             | 125.5    | 161.2    | 267   | 68.4           | 67.8     | 68.9     | 2.1        |
| Esophagus                      | 8.9 *               | 5.0      | 14.5     | 16    | 1.9            | 1.8      | 2.0      | 4.7        |
| Stomach                        | 14.7 *              | 9.7      | 21.2     | 29    | 4.7            | 4.6      | 4.9      | 3.1        |
| Colon and Rectum               | 87.3 *              | 74.1     | 102.0    | 164   | 39.4           | 39.0     | 39.9     | 2.2        |
| Colon excluding Rectum         | 70.5 *              | 58.6     | 84.0     | 130   | 29.7           | 29.3     | 30.1     | 2.4        |
| Rectosigmoid Junction          | 4.1                 | 1.7      | 8.0      | 8     | 2.7            | 2.6      | 2.8      | 1.5        |
| Rectum                         | 12.6 *              | 8.1      | 18.6     | 26    | 7.0            | 6.9      | 7.2      | 1.8        |
| Liver                          | 5.7                 | 2.7      | 10.2     | 11    | 2.7            | 2.6      | 2.8      | 2.1        |
| Gallbladder                    | 2.5                 | 0.6      | 6.1      | 4     | 1.4            | 1.3      | 1.5      | 1.8        |
| Other Biliary                  | 3.0                 | 0.9      | 6.9      | 5     | 1.4            | 1.4      | 1.5      | 2.1        |
| Pancreas                       | 14.2                | 9.1      | 20.9     | 25    | 10.3           | 10.1     | 10.6     | 1.4        |
| Respiratory System             | 78.3 *              | 65.7     | 92.6     | 141   | 52.8           | 52.3     | 53.3     | 1.5        |
| Larynx                         | 1.5                 | 0.3      | 4.2      | 3     | 1.2            | 1.1      | 1.2      | 1.3        |
| Lung and Bronchus              | 76.5 *              | 63.9     | 90.6     | 137   | 50.6           | 50.1     | 51.1     | 1.5        |
| Bones and Joints               | 1.1                 | 0.1      | 3.8      | 2     | 0.9            | 0.8      | 0.9      | 1.2        |
| Soft Tissue including Heart    | 3.7                 | 1.5      | 7.4      | 8     | 2.8            | 2.7      | 2.9      | 1.3        |
| Melanoma of the Skin           | 1.6                 | 0.4      | 4.3      | 4     | 20.2 *         | 19.9     | 20.5     | 0.1        |
| Other Non-Epithelial Skin      | 2.2                 | 0.6      | 5.4      | 4     | 1.7            | 1.6      | 1.8      | 1.3        |
| Breast                         | 127.9               | 113.0    | 144.2    | 277   | 128.1          | 127.3    | 128.9    | 1.0        |
| Female Genital System          | 48.1                | 39.0     | 58.5     | 104   | 50.4           | 50.0     | 50.9     | 1.0        |
| Cervix Uteri                   | 11.5                | 7.6      | 16.8     | 28    | 7.5            | 7.3      | 7.7      | 1.5        |
| Corpus and Uterus, NOS         | 17.6                | 12.4     | 24.3     | 38    | 25.5 *         | 25.1     | 25.8     | 0.7        |
| Ovary                          | 14.0                | 9.1      | 20.4     | 28    | 13.6           | 13.3     | 13.8     | 1.0        |
| Urinary System                 | 20.0                | 14.0     | 27.6     | 39    | 20.2           | 19.9     | 20.5     | 1.0        |
| Urinary Bladder                | 4.9                 | 2.2      | 9.4      | 9     | 9.5            | 9.3      | 9.7      | 0.5        |
| Kidney and Renal Pelvis        | 15.1                | 10.0     | 21.7     | 30    | 10.1           | 9.8      | 10.3     | 1.5        |
| Eye and Orbit                  | 0                   | 0        | 1.7      | 0     | 0.8            | 0.7      | 0.9      | 0          |
| Brain and Other Nervous System | 6.6                 | 3.8      | 10.7     | 17    | 5.9            | 5.8      | 6.1      | 1.1        |
| Endocrine System               | 8.6                 | 5.3      | 13.3     | 22    | 18.1 *         | 17.8     | 18.4     | 0.5        |
| Thyroid                        | 7.6                 | 4.6      | 12.0     | 20    | 17.5 *         | 17.2     | 17.8     | 0.4        |
| Lymphoma                       | 14.6                | 9.6      | 21.1     | 29    | 20.3           | 20.0     | 20.6     | 0.7        |
| Hodgkin Lymphoma               | 0                   | 0        | 1.7      | 0     | 2.8 *          | 2.7      | 2.9      | 0          |
| Non-Hodgkin Lymphoma           | 14.6                | 9.6      | 21.1     | 29    | 17.5           | 17.3     | 17.8     | 0.8        |
| Myeloma                        | 5.7                 | 2.9      | 9.9      | 12    | 4.2            | 4.0      | 4.3      | 1.4        |
| Leukemia                       | 9.1                 | 5.6      | 14.0     | 22    | 10.5           | 10.2     | 10.7     | 0.9        |
| Lymphocytic Leukemia           | 1.5                 | 0.4      | 4.0      | 4     | 5.3 *          | 5.2      | 5.5      | 0.3        |
| Myeloid and Monocytic Leukemia | 6.7                 | 3.6      | 11.1     | 15    | 4.6            | 4.5      | 4.8      | 1.5        |
| Acute Myeloid Leukemia         | 3.2                 | 1.2      | 6.7      | 7     | 3.0            | 2.9      | 3.1      | 1.1        |
| Chronic Myeloid Leukemia       | 3.1                 | 1.2      | 6.5      | 7     | 1.2            | 1.2      | 1.3      | 2.6        |
| Miscellaneous                  | 13.3 *              | 8.3      | 20.0     | 23    | 7.8            | 7.6      | 8.0      | 1.7        |

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

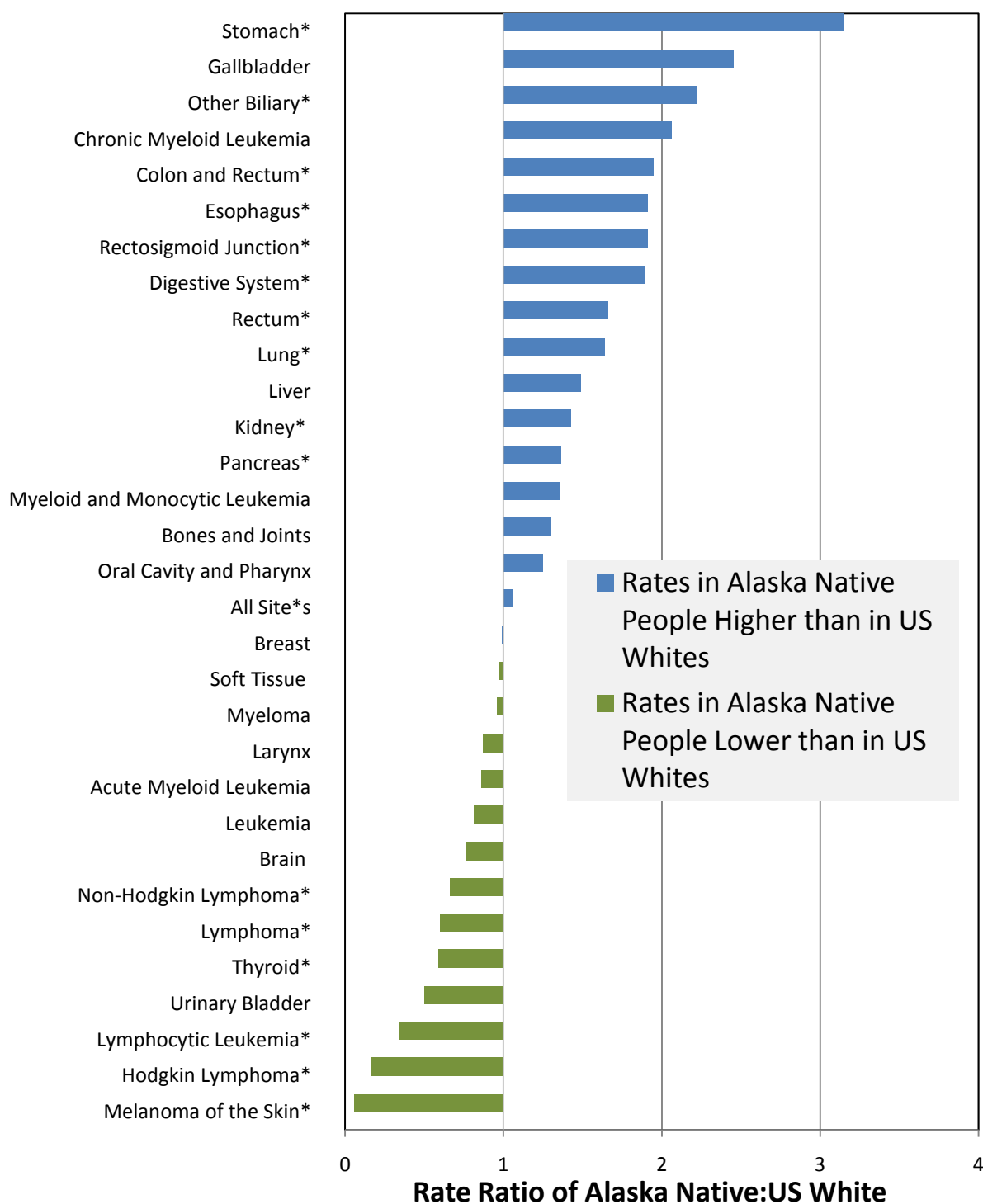
\*Rate is statistically different from comparison rate; confidence intervals are 95%.

**Cancer Incidence Rates among Alaska Native People Which Are Higher and Lower than US White Rates  
Men and Women Combined, 2004-2008**

| Higher than US White Rate |                    |       | Lower Than US White Rate |                    |         |
|---------------------------|--------------------|-------|--------------------------|--------------------|---------|
|                           | Alaska Native Rate | USW   |                          | Alaska Native Rate | USW     |
| All sites                 | 491.4 *            | 465.8 | Prostate                 | 66.4               | 153.0 * |
| Lung                      | 94.8 *             | 57.8  | Corpus/Uterus            | 17.6               | 25.5 *  |
| Colon/Rectum              | 87.9 *             | 45.1  | Melanoma                 | 1.4                | 24.6 *  |
| Stomach                   | 21.7 *             | 6.9   | Urinary Bladder          | 11.3               | 22.4 *  |
| Kidney                    | 20.4 *             | 14.3  | Non-Hodgkin Lymphoma     | 14.0               | 21.1 *  |
| Pancreas                  | 16.1 *             | 11.9  | Thyroid                  | 6.9                | 11.7 *  |
| Esophagus                 | 8.8 *              | 4.6   | Lymphocytic Leukemia     | 2.5                | 7.2 *   |
| Nasopharynx               | 4.2 *              | 0.4   | Hodgkin Lymphoma         | 0.5                | 3.0 *   |
| Biliary                   | 4.0 *              | 1.8   |                          |                    |         |

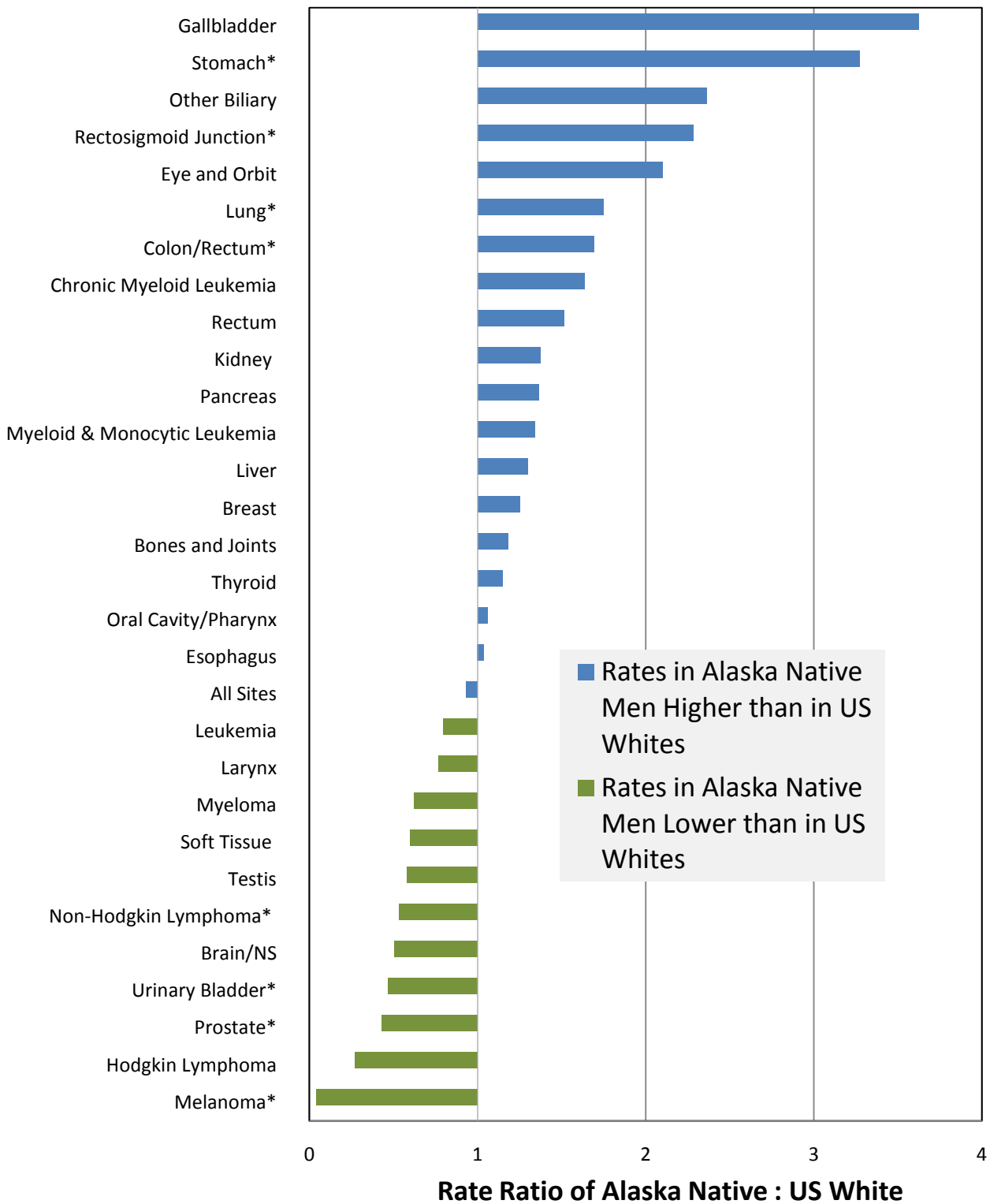


# Age-Adjusted Cancer Incidence Rate Ratios Alaska Native : US White Men and Women, 2004-2008



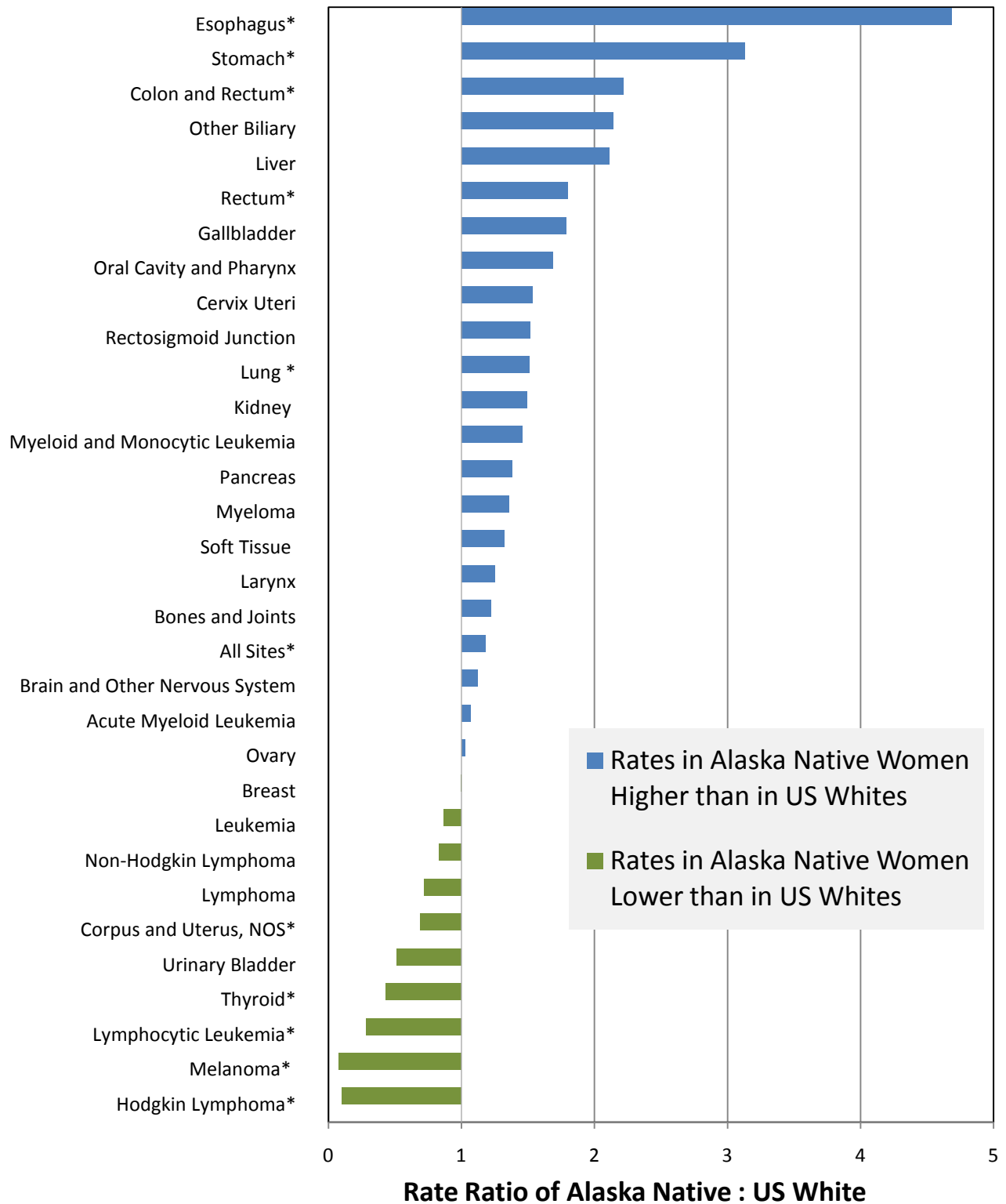
\* Rates in Alaska Native people are statistically different from US white rates;  $p < 0.05$ .  
Rate ratio for nasopharynx= 0.5\*, not shown but included in oral cavity/pharynx group.

## Age-Adjusted Cancer Incidence Rate Ratios Alaska Native: US White Men, 2004-2008



\* Rates in Alaska Native people are statistically different from US white rates;  $p < 0.05$ .  
Rate ratio for nasopharynx alone = 8.6\*, not shown but included in oral cavity/pharynx group.

## Age-Adjusted Cancer Incidence Rate Ratios Alaska Native : US White Women, 2004-2008



\* Rates in Alaska Native people are statistically different from US white rates;  $p < 0.05$ .  
Rate ratio for nasopharynx= 20.5\*, not shown but included in oral cavity/pharynx group.



## Alaska Native Tumor Registry

# 15-Year Cancer Incidence Rates, 1994-2008

**Annual Number of Invasive Cancers  
Alaska Native Men and Women, 1994-2008**

| Year                           | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| All Sites                      | 237  | 237  | 251  | 287  | 289  | 316  | 290  | 322  | 320  | 332  | 395  | 382  | 354  | 344  | 344  |
| Oral Cavity and Pharynx        | 17   | 7    | 8    | 9    | 13   | 17   | 9    | 11   | 6    | 15   | 8    | 13   | 14   | 10   | 8    |
| Nasopharynx                    | 8    | 2    | 2    | 4    | 4    | 7    | 2    | 3    | 4    | 8    | 3    | 3    | 8    | 0    | 4    |
| Digestive System               | 70   | 71   | 60   | 109  | 97   | 117  | 90   | 110  | 102  | 99   | 131  | 108  | 109  | 112  | 99   |
| Esophagus                      | 4    | 4    | 3    | 7    | 5    | 2    | 4    | 7    | 7    | 3    | 8    | 5    | 12   | 3    | 3    |
| Stomach                        | 10   | 8    | 12   | 14   | 15   | 17   | 14   | 9    | 22   | 9    | 16   | 16   | 14   | 22   | 14   |
| Colon and Rectum               | 40   | 45   | 39   | 63   | 55   | 77   | 47   | 66   | 50   | 58   | 71   | 67   | 61   | 59   | 54   |
| Colon excluding Rectum         | 24   | 36   | 28   | 39   | 41   | 56   | 31   | 43   | 32   | 47   | 58   | 47   | 47   | 40   | 36   |
| Rectosigmoid Junction          | 2    | 4    | 2    | 6    | 4    | 6    | 2    | 4    | 4    | 2    | 3    | 8    | 3    | 6    | 4    |
| Rectum                         | 14   | 5    | 9    | 18   | 10   | 15   | 14   | 19   | 14   | 9    | 10   | 12   | 11   | 13   | 14   |
| Liver                          | 5    | 7    | 1    | 5    | 4    | 4    | 2    | 8    | 6    | 4    | 11   | 3    | 5    | 4    | 8    |
| Gallbladder                    | 1    | 0    | 0    | 3    | 3    | 5    | 2    | 3    | 2    | 4    | 2    | 1    | 3    | 1    | 1    |
| Other Biliary                  | 3    | 0    | 0    | 0    | 3    | 1    | 3    | 2    | 2    | 4    | 4    | 3    | 1    | 3    | 1    |
| Pancreas                       | 7    | 5    | 5    | 12   | 8    | 7    | 16   | 7    | 8    | 11   | 10   | 9    | 7    | 15   | 13   |
| Respiratory System             | 51   | 53   | 51   | 56   | 54   | 46   | 52   | 57   | 59   | 58   | 73   | 70   | 62   | 58   | 64   |
| Larynx                         | 0    | 0    | 3    | 1    | 2    | 4    | 1    | 1    | 4    | 2    | 2    | 1    | 2    | 3    | 4    |
| Lung and Bronchus              | 51   | 53   | 44   | 51   | 50   | 40   | 49   | 55   | 55   | 56   | 70   | 68   | 60   | 55   | 59   |
| Bones and Joints               | 1    | 0    | 2    | 0    | 0    | 0    | 1    | 1    | 3    | 0    | 1    | 3    | 1    | 1    | 0    |
| Soft Tissue including Heart    | 0    | 2    | 2    | 2    | 2    | 2    | 2    | 1    | 3    | 1    | 1    | 4    | 2    | 3    | 4    |
| Melanoma of the Skin           | 2    | 2    | 0    | 2    | 1    | 1    | 0    | 2    | 0    | 1    | 2    | 2    | 0    | 2    | 1    |
| Other Non-Epithelial Skin      | 0    | 1    | 1    | 2    | 1    | 0    | 0    | 1    | 1    | 1    | 2    | 2    | 1    | 1    | 2    |
| Breast                         | 35   | 48   | 49   | 36   | 49   | 32   | 59   | 50   | 47   | 63   | 65   | 59   | 48   | 53   | 54   |
| Urinary System                 | 16   | 10   | 14   | 16   | 16   | 24   | 16   | 16   | 18   | 23   | 26   | 24   | 18   | 22   | 23   |
| Urinary Bladder                | 3    | 2    | 6    | 4    | 3    | 10   | 6    | 8    | 4    | 5    | 12   | 8    | 5    | 6    | 8    |
| Kidney and Renal Pelvis        | 13   | 8    | 7    | 12   | 13   | 14   | 10   | 8    | 13   | 17   | 14   | 16   | 13   | 16   | 15   |
| Eye and Orbit                  | 1    | 0    | 0    | 0    | 1    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 1    |
| Brain and Other Nervous System | 2    | 1    | 2    | 1    | 6    | 4    | 0    | 1    | 4    | 1    | 6    | 7    | 3    | 8    | 2    |
| Endocrine System               | 2    | 4    | 4    | 5    | 3    | 10   | 8    | 6    | 8    | 6    | 6    | 10   | 9    | 5    | 6    |
| Thyroid                        | 2    | 4    | 4    | 4    | 3    | 10   | 8    | 5    | 8    | 6    | 6    | 9    | 9    | 4    | 4    |
| Lymphoma                       | 3    | 2    | 7    | 12   | 6    | 11   | 9    | 12   | 8    | 9    | 9    | 12   | 15   | 12   | 6    |
| Hodgkin Lymphoma               | 1    | 1    | 1    | 1    | 0    | 0    | 1    | 1    | 0    | 1    | 0    | 0    | 1    | 2    | 0    |
| Non-Hodgkin Lymphoma           | 2    | 1    | 6    | 11   | 6    | 11   | 8    | 11   | 8    | 8    | 9    | 12   | 14   | 10   | 6    |
| Myeloma                        | 1    | 2    | 1    | 0    | 2    | 1    | 6    | 1    | 4    | 3    | 7    | 5    | 3    | 3    | 3    |
| Leukemia                       | 6    | 3    | 8    | 7    | 5    | 9    | 3    | 5    | 8    | 2    | 11   | 12   | 10   | 5    | 10   |
| Lymphocytic Leukemia           | 5    | 2    | 2    | 3    | 3    | 4    | 1    | 2    | 4    | 1    | 3    | 4    | 2    | 2    | 2    |
| Myeloid and Monocytic Leukemia | 1    | 1    | 6    | 3    | 2    | 5    | 1    | 2    | 4    | 1    | 8    | 7    | 7    | 1    | 8    |
| Acute Myeloid Leukemia         | 1    | 1    | 4    | 2    | 2    | 2    | 1    | 2    | 3    | 1    | 3    | 2    | 4    | 1    | 3    |
| Chronic Myeloid Leukemia       | 0    | 0    | 2    | 1    | 0    | 3    | 0    | 0    | 1    | 0    | 5    | 4    | 2    | 0    | 3    |
| Miscellaneous                  | 6    | 7    | 5    | 5    | 3    | 6    | 9    | 5    | 9    | 9    | 7    | 7    | 7    | 9    | 8    |

**Annual Number of Invasive Cancers**  
**Alaska Native Men, 1994-2008**

| Year                           | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| All Sites                      | 117  | 109  | 120  | 151  | 126  | 151  | 126  | 149  | 154  | 160  | 172  | 183  | 152  | 154  | 166  |
| Oral Cavity and Pharynx        | 8    | 5    | 5    | 7    | 11   | 14   | 7    | 2    | 5    | 11   | 2    | 11   | 6    | 8    | 5    |
| Nasopharynx                    | 5    | 2    | 2    | 3    | 3    | 6    | 1    | 1    | 3    | 6    | 1    | 2    | 4    | 0    | 2    |
| Digestive System               | 39   | 44   | 33   | 61   | 42   | 60   | 41   | 54   | 51   | 53   | 67   | 62   | 52   | 55   | 56   |
| Esophagus                      | 4    | 4    | 1    | 4    | 1    | 2    | 3    | 6    | 6    | 1    | 2    | 3    | 7    | 0    | 3    |
| Stomach                        | 6    | 7    | 9    | 9    | 9    | 7    | 8    | 6    | 12   | 5    | 14   | 11   | 6    | 14   | 8    |
| Colon and Rectum               | 23   | 26   | 20   | 36   | 20   | 39   | 21   | 29   | 18   | 31   | 27   | 36   | 29   | 27   | 29   |
| Colon excluding Rectum         | 11   | 21   | 15   | 23   | 15   | 27   | 13   | 14   | 11   | 22   | 23   | 22   | 20   | 16   | 17   |
| Rectosigmoid Junction          | 2    | 2    | 1    | 3    | 1    | 4    | 1    | 3    | 4    | 2    | 1    | 4    | 3    | 4    | 4    |
| Rectum                         | 10   | 3    | 4    | 10   | 4    | 8    | 7    | 12   | 3    | 7    | 3    | 10   | 6    | 7    | 8    |
| Liver                          | 1    | 5    | 0    | 4    | 2    | 1    | 2    | 5    | 5    | 2    | 7    | 1    | 4    | 3    | 5    |
| Gallbladder                    | 0    | 0    | 0    | 2    | 2    | 1    | 0    | 2    | 1    | 1    | 0    | 1    | 2    | 1    | 0    |
| Other Biliary                  | 2    | 0    | 0    | 0    | 0    | 1    | 1    | 0    | 2    | 3    | 3    | 1    | 1    | 1    | 1    |
| Pancreas                       | 3    | 2    | 3    | 3    | 5    | 6    | 5    | 4    | 6    | 6    | 7    | 6    | 0    | 8    | 8    |
| Respiratory System             | 36   | 31   | 34   | 39   | 34   | 26   | 31   | 33   | 31   | 35   | 39   | 34   | 33   | 37   | 43   |
| Larynx                         | 0    | 0    | 2    | 0    | 2    | 2    | 1    | 0    | 3    | 2    | 2    | 0    | 1    | 3    | 3    |
| Lung and Bronchus              | 36   | 31   | 29   | 35   | 32   | 24   | 29   | 32   | 28   | 33   | 36   | 34   | 32   | 34   | 39   |
| Bones and Joints               | 1    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 3    | 0    | 0    | 2    | 1    | 1    | 0    |
| Soft Tissue including Heart    | 0    | 2    | 1    | 1    | 1    | 0    | 2    | 1    | 0    | 1    | 0    | 3    | 1    | 1    | 1    |
| Melanoma of the Skin           | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 1    | 1    | 0    | 0    | 1    |
| Other Non-Epithelial Skin      | 0    | 0    | 1    | 2    | 1    | 0    | 0    | 1    | 0    | 1    | 2    | 1    | 1    | 0    | 0    |
| Breast                         | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 1    | 0    | 0    | 0    | 2    | 0    |
| Male Genital System            | 15   | 12   | 25   | 15   | 16   | 19   | 17   | 28   | 31   | 30   | 25   | 25   | 24   | 20   | 30   |
| Prostate                       | 11   | 10   | 22   | 14   | 14   | 18   | 15   | 24   | 25   | 25   | 23   | 21   | 18   | 19   | 27   |
| Testis                         | 3    | 2    | 3    | 1    | 0    | 1    | 2    | 4    | 5    | 5    | 1    | 4    | 4    | 1    | 2    |
| Urinary System                 | 7    | 5    | 9    | 10   | 11   | 13   | 13   | 13   | 13   | 16   | 17   | 17   | 11   | 14   | 15   |
| Urinary Bladder                | 3    | 2    | 4    | 3    | 3    | 7    | 5    | 7    | 2    | 5    | 10   | 7    | 3    | 5    | 5    |
| Kidney and Renal Pelvis        | 4    | 3    | 4    | 7    | 8    | 6    | 8    | 6    | 11   | 10   | 7    | 10   | 8    | 9    | 10   |
| Eye and Orbit                  | 0    | 0    | 0    | 0    | 1    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 1    |
| Brain and Other Nervous System | 0    | 1    | 2    | 1    | 2    | 2    | 0    | 0    | 4    | 0    | 1    | 4    | 1    | 2    | 1    |
| Endocrine System               | 1    | 0    | 1    | 1    | 0    | 3    | 0    | 1    | 1    | 1    | 3    | 4    | 4    | 2    | 1    |
| Thyroid                        | 1    | 0    | 1    | 0    | 0    | 3    | 0    | 0    | 1    | 1    | 3    | 3    | 4    | 2    | 0    |
| Lymphoma                       | 1    | 1    | 2    | 6    | 3    | 6    | 6    | 9    | 5    | 4    | 4    | 7    | 6    | 6    | 2    |
| Hodgkin Lymphoma               | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 1    | 0    | 1    | 0    | 0    | 1    | 2    | 0    |
| Non-Hodgkin Lymphoma           | 1    | 1    | 2    | 5    | 3    | 6    | 6    | 8    | 5    | 3    | 4    | 7    | 5    | 4    | 2    |
| Myeloma                        | 0    | 1    | 1    | 0    | 0    | 0    | 2    | 0    | 1    | 0    | 3    | 2    | 2    | 1    | 1    |
| Leukemia                       | 2    | 2    | 6    | 5    | 2    | 5    | 0    | 3    | 6    | 1    | 6    | 7    | 7    | 2    | 4    |
| Lymphocytic Leukemia           | 2    | 1    | 2    | 3    | 0    | 0    | 0    | 1    | 3    | 1    | 2    | 2    | 2    | 2    | 1    |
| Myeloid and Monocytic Leukemia | 0    | 1    | 4    | 1    | 2    | 5    | 0    | 1    | 3    | 0    | 4    | 5    | 4    | 0    | 3    |
| Acute Myeloid Leukemia         | 0    | 1    | 3    | 1    | 2    | 2    | 0    | 1    | 3    | 0    | 2    | 1    | 1    | 0    | 2    |
| Chronic Myeloid Leukemia       | 0    | 0    | 1    | 0    | 0    | 3    | 0    | 0    | 0    | 0    | 2    | 3    | 2    | 0    | 0    |
| Miscellaneous                  | 5    | 5    | 0    | 3    | 2    | 3    | 5    | 3    | 3    | 5    | 2    | 3    | 3    | 2    | 5    |

**Annual Number of Invasive Cancers  
Alaska Native Women, 1994-2008**

| Year                           | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| All Sites                      | 120  | 128  | 131  | 136  | 163  | 165  | 164  | 173  | 166  | 172  | 223  | 199  | 202  | 190  | 178  |
| Oral Cavity and Pharynx        | 9    | 2    | 3    | 2    | 2    | 3    | 2    | 9    | 1    | 4    | 6    | 2    | 8    | 2    | 3    |
| Nasopharynx                    | 3    | 0    | 0    | 1    | 1    | 1    | 1    | 2    | 1    | 2    | 2    | 1    | 4    | 0    | 2    |
| Digestive System               | 31   | 27   | 27   | 48   | 55   | 57   | 49   | 56   | 51   | 46   | 64   | 46   | 57   | 57   | 43   |
| Esophagus                      | 0    | 0    | 2    | 3    | 4    | 0    | 1    | 1    | 1    | 2    | 6    | 2    | 5    | 3    | 0    |
| Stomach                        | 4    | 1    | 3    | 5    | 6    | 10   | 6    | 3    | 10   | 4    | 2    | 5    | 8    | 8    | 6    |
| Colon and Rectum               | 17   | 19   | 19   | 27   | 35   | 38   | 26   | 37   | 32   | 27   | 44   | 31   | 32   | 32   | 25   |
| Colon excluding Rectum         | 13   | 15   | 13   | 16   | 26   | 29   | 18   | 29   | 21   | 25   | 35   | 25   | 27   | 24   | 19   |
| Rectosigmoid Junction          | 0    | 2    | 1    | 3    | 3    | 2    | 1    | 1    | 0    | 0    | 2    | 4    | 0    | 2    | 0    |
| Rectum                         | 4    | 2    | 5    | 8    | 6    | 7    | 7    | 7    | 11   | 2    | 7    | 2    | 5    | 6    | 6    |
| Liver                          | 4    | 2    | 1    | 1    | 2    | 3    | 0    | 3    | 1    | 2    | 4    | 2    | 1    | 1    | 3    |
| Gallbladder                    | 1    | 0    | 0    | 1    | 1    | 4    | 2    | 1    | 1    | 3    | 2    | 0    | 1    | 0    | 1    |
| Other Biliary                  | 1    | 0    | 0    | 0    | 3    | 0    | 2    | 2    | 0    | 1    | 1    | 2    | 0    | 2    | 0    |
| Pancreas                       | 4    | 3    | 2    | 9    | 3    | 1    | 11   | 3    | 2    | 5    | 3    | 3    | 7    | 7    | 5    |
| Respiratory System             | 15   | 22   | 17   | 17   | 20   | 20   | 21   | 24   | 28   | 23   | 34   | 36   | 29   | 21   | 21   |
| Larynx                         | 0    | 0    | 1    | 1    | 0    | 2    | 0    | 1    | 1    | 0    | 0    | 1    | 1    | 0    | 1    |
| Lung and Bronchus              | 15   | 22   | 15   | 16   | 18   | 16   | 20   | 23   | 27   | 23   | 34   | 34   | 28   | 21   | 20   |
| Bones and Joints               | 0    | 0    | 2    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 1    | 1    | 0    | 0    | 0    |
| Soft Tissue including Heart    | 0    | 0    | 1    | 1    | 1    | 2    | 0    | 0    | 3    | 0    | 1    | 1    | 1    | 2    | 3    |
| Melanoma of the Skin           | 0    | 2    | 0    | 2    | 1    | 1    | 0    | 2    | 0    | 0    | 1    | 1    | 0    | 2    | 0    |
| Other Non-Epithelial Skin      | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 1    | 0    | 1    | 2    |
| Breast                         | 35   | 48   | 49   | 36   | 49   | 32   | 59   | 49   | 47   | 62   | 65   | 59   | 48   | 51   | 54   |
| Female Genital System          | 9    | 12   | 12   | 10   | 14   | 17   | 8    | 15   | 9    | 11   | 15   | 19   | 28   | 19   | 23   |
| Cervix Uteri                   | 2    | 3    | 4    | 2    | 5    | 8    | 2    | 4    | 1    | 5    | 3    | 5    | 8    | 4    | 8    |
| Corpus and Uterus, NOS         | 1    | 2    | 4    | 3    | 6    | 6    | 3    | 7    | 3    | 4    | 7    | 5    | 11   | 6    | 9    |
| Ovary                          | 5    | 5    | 4    | 5    | 2    | 2    | 3    | 3    | 3    | 1    | 3    | 7    | 7    | 7    | 4    |
| Urinary System                 | 9    | 5    | 5    | 6    | 5    | 11   | 3    | 3    | 5    | 7    | 9    | 7    | 7    | 8    | 8    |
| Urinary Bladder                | 0    | 0    | 2    | 1    | 0    | 3    | 1    | 1    | 2    | 0    | 2    | 1    | 2    | 1    | 3    |
| Kidney and Renal Pelvis        | 9    | 5    | 3    | 5    | 5    | 8    | 2    | 2    | 2    | 7    | 7    | 6    | 5    | 7    | 5    |
| Eye and Orbit                  | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Brain and Other Nervous System | 2    | 0    | 0    | 0    | 4    | 2    | 0    | 1    | 0    | 1    | 5    | 3    | 2    | 6    | 1    |
| Endocrine System               | 1    | 4    | 3    | 4    | 3    | 7    | 8    | 5    | 7    | 5    | 3    | 6    | 5    | 3    | 5    |
| Thyroid                        | 1    | 4    | 3    | 4    | 3    | 7    | 8    | 5    | 7    | 5    | 3    | 6    | 5    | 2    | 4    |
| Lymphoma                       | 2    | 1    | 5    | 6    | 3    | 5    | 3    | 3    | 3    | 5    | 5    | 5    | 9    | 6    | 4    |
| Hodgkin Lymphoma               | 1    | 1    | 1    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Non-Hodgkin Lymphoma           | 1    | 0    | 4    | 6    | 3    | 5    | 2    | 3    | 3    | 5    | 5    | 5    | 9    | 6    | 4    |
| Myeloma                        | 1    | 1    | 0    | 0    | 2    | 1    | 4    | 1    | 3    | 3    | 4    | 3    | 1    | 2    | 2    |
| Leukemia                       | 4    | 1    | 2    | 2    | 3    | 4    | 3    | 2    | 2    | 1    | 5    | 5    | 3    | 3    | 6    |
| Lymphocytic Leukemia           | 3    | 1    | 0    | 0    | 3    | 4    | 1    | 1    | 1    | 0    | 1    | 2    | 0    | 0    | 1    |
| Myeloid and Monocytic Leukemia | 1    | 0    | 2    | 2    | 0    | 0    | 1    | 1    | 1    | 1    | 4    | 2    | 3    | 1    | 5    |
| Acute Myeloid Leukemia         | 1    | 0    | 1    | 1    | 0    | 0    | 1    | 1    | 0    | 1    | 1    | 1    | 3    | 1    | 1    |
| Chronic Myeloid Leukemia       | 0    | 0    | 1    | 1    | 0    | 0    | 0    | 0    | 1    | 0    | 3    | 1    | 0    | 0    | 3    |
| Miscellaneous                  | 1    | 2    | 5    | 2    | 1    | 3    | 4    | 2    | 6    | 4    | 5    | 4    | 4    | 7    | 3    |

**Average Annual Age-Adjusted Cancer Incidence Rates per 100,000**  
**Alaska Native and US White, 1994-2008**

|                                | Alaska Native Men and Women |          |          |       | US White Men and Women |          |          | AN/US |
|--------------------------------|-----------------------------|----------|----------|-------|------------------------|----------|----------|-------|
|                                | Rate                        | Lower CI | Upper CI | Count | Rate                   | Lower CI | Upper CI |       |
| All Sites                      | 495.5 *                     | 480.5    | 510.7    | 4700  | 477.0                  | 476.3    | 477.6    | 1.0   |
| Oral Cavity and Pharynx        | 16.1 *                      | 13.7     | 18.9     | 165   | 10.8                   | 10.7     | 10.9     | 1.5   |
| Nasopharynx                    | 6.3 *                       | 4.8      | 8.2      | 62    | 0.4                    | 0.4      | 0.4      | 15.8  |
| Digestive System               | 167.1 *                     | 158.2    | 176.3    | 1484  | 86.4                   | 86.1     | 86.7     | 1.9   |
| Esophagus                      | 9.0 *                       | 7.0      | 11.3     | 77    | 4.5                    | 4.4      | 4.5      | 2.0   |
| Stomach                        | 22.3 *                      | 19.2     | 25.7     | 212   | 7.4                    | 7.3      | 7.4      | 3.0   |
| Colon and Rectum               | 97.2 *                      | 90.4     | 104.3    | 852   | 50.1                   | 49.9     | 50.4     | 1.9   |
| Colon excluding Rectum         | 71.7 *                      | 65.8     | 77.9     | 605   | 36.4                   | 36.2     | 36.5     | 2.0   |
| Rectosigmoid Junction          | 6.1 *                       | 4.6      | 7.9      | 60    | 4.1                    | 4.0      | 4.1      | 1.5   |
| Rectum                         | 19.4 *                      | 16.6     | 22.6     | 187   | 9.7                    | 9.6      | 9.8      | 2.0   |
| Liver                          | 7.9 *                       | 6.1      | 10.1     | 77    | 4.6                    | 4.5      | 4.6      | 1.7   |
| Gallbladder                    | 4.2 *                       | 2.8      | 5.9      | 31    | 1.2                    | 1.1      | 1.2      | 3.5   |
| Other Biliary                  | 3.7 *                       | 2.4      | 5.3      | 30    | 1.6                    | 1.6      | 1.6      | 2.3   |
| Pancreas                       | 15.9 *                      | 13.2     | 18.8     | 140   | 11.3                   | 11.2     | 11.4     | 1.4   |
| Respiratory System             | 100.2 *                     | 93.3     | 107.4    | 864   | 66.8                   | 66.6     | 67.1     | 1.5   |
| Larynx                         | 2.9                         | 1.9      | 4.1      | 30    | 3.6                    | 3.5      | 3.7      | 0.8   |
| Lung and Bronchus              | 95.2 *                      | 88.5     | 102.3    | 816   | 61.3                   | 61.1     | 61.6     | 1.6   |
| Bones and Joints               | 1.1                         | 0.6      | 2.0      | 14    | 1.0                    | 0.9      | 1.0      | 1.1   |
| Soft Tissue including Heart    | 2.4                         | 1.6      | 3.5      | 31    | 3.1                    | 3.0      | 3.1      | 0.8   |
| Melanoma of the Skin           | 1.4                         | 0.8      | 2.2      | 18    | 22.0 *                 | 21.8     | 22.1     | 0.1   |
| Other Non-Epithelial Skin      | 1.7                         | 0.9      | 2.8      | 16    | 3.1 *                  | 3.1      | 3.2      | 0.5   |
| Breast                         | 69.4                        | 64.3     | 74.8     | 747   | 72.8                   | 72.6     | 73.1     | 1.0   |
| Urinary System                 | 31.2                        | 27.4     | 35.2     | 282   | 36.1 *                 | 35.9     | 36.3     | 0.9   |
| Urinary Bladder                | 10.5                        | 8.3      | 13.0     | 90    | 22.5 *                 | 22.3     | 22.6     | 0.5   |
| Kidney and Renal Pelvis        | 20.3 *                      | 17.3     | 23.6     | 189   | 12.7                   | 12.6     | 12.8     | 1.6   |
| Eye and Orbit                  | 0.6                         | 0.1      | 1.4      | 5     | 0.9                    | 0.9      | 1.0      | 0.7   |
| Brain and Other Nervous System | 3.4                         | 2.5      | 4.7      | 48    | 7.1 *                  | 7.0      | 7.2      | 0.5   |
| Endocrine System               | 6.9                         | 5.5      | 8.5      | 92    | 9.7 *                  | 9.6      | 9.8      | 0.7   |
| Thyroid                        | 6.5                         | 5.1      | 8.1      | 86    | 9.0 *                  | 8.9      | 9.1      | 0.7   |
| Lymphoma                       | 12.8                        | 10.6     | 15.4     | 133   | 23.8 *                 | 23.6     | 23.9     | 0.5   |
| Hodgkin Lymphoma               | 0.7                         | 0.3      | 1.3      | 10    | 3.0 *                  | 2.9      | 3.0      | 0.2   |
| Non-Hodgkin Lymphoma           | 12.1                        | 9.9      | 14.6     | 123   | 20.8 *                 | 20.7     | 21.0     | 0.6   |
| Myeloma                        | 4.1                         | 2.9      | 5.5      | 42    | 5.4                    | 5.3      | 5.5      | 0.8   |
| Leukemia                       | 8.1                         | 6.4      | 10.0     | 104   | 13.7 *                 | 13.6     | 13.8     | 0.6   |
| Lymphocytic Leukemia           | 2.5                         | 1.7      | 3.6      | 40    | 7.0 *                  | 6.9      | 7.1      | 0.4   |
| Myeloid and Monocytic Leukemia | 5.1                         | 3.8      | 6.8      | 57    | 5.9                    | 5.8      | 6.0      | 0.9   |
| Acute Myeloid Leukemia         | 2.8                         | 1.8      | 4.0      | 32    | 3.7                    | 3.7      | 3.8      | 0.8   |
| Chronic Myeloid Leukemia       | 1.9                         | 1.1      | 2.9      | 21    | 1.7                    | 1.7      | 1.8      | 1.1   |
| Miscellaneous                  | 12.2                        | 9.8      | 15.0     | 102   | 10.2                   | 10.2     | 10.3     | 1.2   |

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

\*Rates are significantly different from comparison group; confidence intervals are 95%.

**Average Annual Age-Adjusted Cancer Incidence Rates per 100,000**  
**Alaska Native and US White, 1994-2008**

|                                | Alaska Native Men |          |          |       | US White Men |          |          | AN/US      |
|--------------------------------|-------------------|----------|----------|-------|--------------|----------|----------|------------|
|                                | Rate              | Lower CI | Upper CI | Count | Rate         | Lower CI | Upper CI | Rate Ratio |
| All Sites                      | 521.7             | 497.7    | 546.3    | 2190  | 554.6        | 553.5    | 555.7    | 0.9        |
| Oral Cavity and Pharynx        | 22.0 *            | 17.7     | 26.9     | 107   | 15.9         | 15.8     | 16.1     | 1.4        |
| Nasopharynx                    | 8.7 *             | 6.1      | 12.0     | 41    | 0.6          | 0.5      | 0.6      | 14.5       |
| Digestive System               | 188.9 *           | 174.3    | 204.1    | 770   | 105.7        | 105.2    | 106.1    | 1.8        |
| Esophagus                      | 11.7 *            | 8.4      | 15.7     | 47    | 7.6          | 7.5      | 7.8      | 1.5        |
| Stomach                        | 30.8 *            | 25.2     | 37.2     | 131   | 10.6         | 10.4     | 10.7     | 2.9        |
| Colon and Rectum               | 101.0 *           | 90.5     | 112.2    | 411   | 58.8         | 58.5     | 59.2     | 1.7        |
| Colon excluding Rectum         | 70.5 *            | 61.6     | 80.3     | 270   | 41.3         | 41.0     | 41.5     | 1.7        |
| Rectosigmoid Junction          | 8.2 *             | 5.8      | 11.4     | 39    | 5.1          | 5.0      | 5.2      | 1.6        |
| Rectum                         | 22.2 *            | 17.7     | 27.4     | 102   | 12.5         | 12.3     | 12.7     | 1.8        |
| Liver                          | 10.9 *            | 7.6      | 15.1     | 47    | 7.2          | 7.1      | 7.3      | 1.5        |
| Gallbladder                    | 4.5 *             | 2.2      | 7.7      | 13    | 0.8          | 0.7      | 0.8      | 5.6        |
| Other Biliary                  | 4.5 *             | 2.4      | 7.4      | 16    | 2.0          | 1.9      | 2.1      | 2.3        |
| Pancreas                       | 18.4 *            | 14.0     | 23.5     | 72    | 12.9         | 12.7     | 13.1     | 1.4        |
| Respiratory System             | 129.5 *           | 117.6    | 142.1    | 516   | 84.9         | 84.5     | 85.3     | 1.5        |
| Larynx                         | 4.1               | 2.5      | 6.3      | 21    | 6.4          | 6.2      | 6.5      | 0.6        |
| Lung and Bronchus              | 122.5 *           | 110.9    | 134.8    | 484   | 75.5         | 75.1     | 75.9     | 1.6        |
| Bones and Joints               | 1.4               | 0.5      | 3.1      | 9     | 1.1          | 1.1      | 1.1      | 1.3        |
| Soft Tissue including Heart    | 1.9               | 1.1      | 3.4      | 15    | 3.8 *        | 3.7      | 3.8      | 0.5        |
| Melanoma of the Skin           | 0.9               | 0.3      | 2.2      | 6     | 27.6 *       | 27.4     | 27.8     | 0.0        |
| Other Non-Epithelial Skin      | 2.1               | 0.9      | 4.0      | 10    | 4.9 *        | 4.8      | 5.0      | 0.4        |
| Breast                         | 0.9               | 0.2      | 2.3      | 4     | 1.2          | 1.1      | 1.2      | 0.8        |
| Male Genital System            | 81.5              | 72.1     | 91.7     | 332   | 170.6 *      | 170.0    | 171.2    | 0.5        |
| Prostate                       | 74.1              | 65.0     | 83.9     | 286   | 163.2 *      | 162.6    | 163.8    | 0.5        |
| Testis                         | 4.7               | 3.3      | 6.6      | 38    | 6.3          | 6.2      | 6.4      | 0.7        |
| Urinary System                 | 44.7              | 37.9     | 52.3     | 184   | 58.8 *       | 58.5     | 59.2     | 0.8        |
| Urinary Bladder                | 17.8              | 13.6     | 22.9     | 71    | 39.9 *       | 39.6     | 40.2     | 0.4        |
| Kidney and Renal Pelvis        | 26.3 *            | 21.2     | 32.2     | 111   | 17.5         | 17.3     | 17.7     | 1.5        |
| Eye and Orbit                  | 1.2               | 0.3      | 3.1      | 4     | 1.1          | 1.1      | 1.2      | 1.1        |
| Brain and Other Nervous System | 3.4               | 2.0      | 5.5      | 21    | 8.4 *        | 8.3      | 8.5      | 0.4        |
| Endocrine System               | 4.0               | 2.3      | 6.5      | 23    | 5.5          | 5.4      | 5.6      | 0.7        |
| Thyroid                        | 3.6               | 1.9      | 6.0      | 19    | 4.7          | 4.6      | 4.8      | 0.8        |
| Lymphoma                       | 13.9              | 10.4     | 18.1     | 68    | 28.7 *       | 28.5     | 29.0     | 0.5        |
| Hodgkin Lymphoma               | 0.8               | 0.3      | 2.0      | 6     | 3.3 *        | 3.2      | 3.4      | 0.2        |
| Non-Hodgkin Lymphoma           | 13.1              | 9.7      | 17.3     | 62    | 25.4 *       | 25.2     | 25.6     | 0.5        |
| Myeloma                        | 2.7               | 1.4      | 4.7      | 14    | 6.9 *        | 6.8      | 7.0      | 0.4        |
| Leukemia                       | 10.0              | 7.1      | 13.5     | 58    | 17.8 *       | 17.6     | 18.0     | 0.6        |
| Lymphocytic Leukemia           | 2.7               | 1.5      | 4.5      | 22    | 9.4 *        | 9.2      | 9.5      | 0.3        |
| Myeloid and Monocytic Leukemia | 6.8               | 4.4      | 10.1     | 33    | 7.5          | 7.4      | 7.6      | 0.9        |
| Acute Myeloid Leukemia         | 3.7               | 2.0      | 6.0      | 19    | 4.6          | 4.5      | 4.7      | 0.8        |
| Chronic Myeloid Leukemia       | 2.1               | 1.0      | 3.9      | 11    | 2.3          | 2.2      | 2.3      | 0.9        |
| Miscellaneous                  | 12.6              | 9.0      | 17.0     | 49    | 11.6         | 11.5     | 11.8     | 1.1        |

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

\*Rates are significantly different from comparison group; confidence intervals are 95% for rates.

**Average Annual Age-Adjusted Cancer Incidence Rates per 100,000**  
**Alaska Native and US White, 1994-2008**

|                                | Alaska Native Women |          |          |       | US White Women |          |          | AN/US      |
|--------------------------------|---------------------|----------|----------|-------|----------------|----------|----------|------------|
|                                | Rate                | Lower CI | Upper CI | Count | Rate           | Lower CI | Upper CI | Rate Ratio |
| All Sites                      | 483.4 *             | 463.9    | 503.5    | 2510  | 425.7          | 424.8    | 426.5    | 1.1        |
| Oral Cavity and Pharynx        | 11.0 *              | 8.2      | 14.3     | 58    | 6.4            | 6.3      | 6.5      | 1.7        |
| Nasopharynx                    | 4.1 *               | 2.5      | 6.4      | 21    | 0.2            | 0.2      | 0.3      | 20.5       |
| Digestive System               | 150.4 *             | 139.2    | 162.3    | 714   | 71.2           | 70.9     | 71.5     | 2.1        |
| Esophagus                      | 6.6 *               | 4.4      | 9.5      | 30    | 1.9            | 1.9      | 2.0      | 3.5        |
| Stomach                        | 15.7 *              | 12.3     | 19.6     | 81    | 4.9            | 4.8      | 5.0      | 3.2        |
| Colon and Rectum               | 94.2 *              | 85.3     | 103.7    | 441   | 43.4           | 43.1     | 43.6     | 2.2        |
| Colon excluding Rectum         | 73.2 *              | 65.3     | 81.7     | 335   | 32.6           | 32.4     | 32.9     | 2.2        |
| Rectosigmoid Junction          | 4.1                 | 2.5      | 6.2      | 21    | 3.3            | 3.2      | 3.4      | 1.2        |
| Rectum                         | 17.0 *              | 13.4     | 21.1     | 85    | 7.5            | 7.4      | 7.6      | 2.3        |
| Liver                          | 5.7 *               | 3.8      | 8.3      | 30    | 2.4            | 2.3      | 2.4      | 2.4        |
| Gallbladder                    | 4.2 *               | 2.4      | 6.6      | 18    | 1.5            | 1.4      | 1.5      | 2.8        |
| Other Biliary                  | 3.1 *               | 1.7      | 5.2      | 14    | 1.3            | 1.3      | 1.4      | 2.4        |
| Pancreas                       | 14.2 *              | 10.9     | 18.0     | 68    | 9.9            | 9.8      | 10.1     | 1.4        |
| Respiratory System             | 75.8 *              | 67.9     | 84.4     | 348   | 53.7           | 53.4     | 54.0     | 1.4        |
| Larynx                         | 1.7                 | 0.8      | 3.2      | 9     | 1.4            | 1.3      | 1.4      | 1.2        |
| Lung and Bronchus              | 72.7 *              | 64.9     | 81.1     | 332   | 51.3           | 51.0     | 51.6     | 1.4        |
| Bones and Joints               | 0.9                 | 0.3      | 2.1      | 5     | 0.8            | 0.8      | 0.9      | 1.1        |
| Soft Tissue including Heart    | 2.7                 | 1.5      | 4.5      | 16    | 2.6            | 2.5      | 2.6      | 1.0        |
| Melanoma of the Skin           | 1.8                 | 0.9      | 3.2      | 12    | 18.1 *         | 17.9     | 18.2     | 0.1        |
| Other Non-Epithelial Skin      | 1.3                 | 0.5      | 2.8      | 6     | 1.6            | 1.6      | 1.7      | 0.8        |
| Breast                         | 132.0               | 122.4    | 142.1    | 743   | 135.1          | 134.6    | 135.5    | 1.0        |
| Female Genital System          | 38.5                | 33.4     | 44.1     | 221   | 52.6 *         | 52.3     | 52.9     | 0.7        |
| Cervix Uteri                   | 9.6                 | 7.3      | 12.3     | 64    | 8.5            | 8.4      | 8.6      | 1.1        |
| Corpus and Uterus, NOS         | 14.0                | 11.0     | 17.6     | 77    | 25.8 *         | 25.6     | 26.0     | 0.5        |
| Ovary                          | 11.3                | 8.6      | 14.7     | 61    | 14.5           | 14.3     | 14.7     | 0.8        |
| Urinary System                 | 20.0                | 16.1     | 24.5     | 98    | 19.2           | 19.0     | 19.4     | 1.0        |
| Urinary Bladder                | 4.3                 | 2.5      | 6.8      | 19    | 9.8 *          | 9.7      | 9.9      | 0.4        |
| Kidney and Renal Pelvis        | 15.4 *              | 12.1     | 19.4     | 78    | 8.8            | 8.7      | 9.0      | 1.8        |
| Eye and Orbit                  | 0.1                 | 0.0      | 0.8      | 1     | 0.8            | 0.7      | 0.8      | 0.1        |
| Brain and Other Nervous System | 3.5                 | 2.3      | 5.3      | 27    | 6.0 *          | 5.9      | 6.1      | 0.6        |
| Endocrine System               | 9.9                 | 7.7      | 12.6     | 69    | 13.9 *         | 13.7     | 14.1     | 0.7        |
| Thyroid                        | 9.6                 | 7.4      | 12.3     | 67    | 13.3 *         | 13.2     | 13.5     | 0.7        |
| Lymphoma                       | 11.8                | 9.0      | 15.2     | 65    | 19.8 *         | 19.6     | 19.9     | 0.6        |
| Hodgkin Lymphoma               | 0.6                 | 0.1      | 1.5      | 4     | 2.7 *          | 2.6      | 2.7      | 0.2        |
| Non-Hodgkin Lymphoma           | 11.2                | 8.5      | 14.6     | 61    | 17.1 *         | 16.9     | 17.3     | 0.7        |
| Myeloma                        | 5.3                 | 3.5      | 7.6      | 28    | 4.3            | 4.2      | 4.4      | 1.2        |
| Leukemia                       | 6.7                 | 4.8      | 9.1      | 46    | 10.5 *         | 10.4     | 10.7     | 0.6        |
| Lymphocytic Leukemia           | 2.3                 | 1.3      | 3.9      | 18    | 5.1 *          | 5.0      | 5.2      | 0.5        |
| Myeloid and Monocytic Leukemia | 3.9                 | 2.4      | 5.9      | 24    | 4.8            | 4.7      | 4.8      | 0.8        |
| Acute Myeloid Leukemia         | 2.0                 | 1.0      | 3.6      | 13    | 3.1            | 3.0      | 3.2      | 0.6        |
| Chronic Myeloid Leukemia       | 1.7                 | 0.8      | 3.1      | 10    | 1.3            | 1.2      | 1.3      | 1.3        |
| Miscellaneous                  | 11.7                | 8.6      | 15.4     | 53    | 9.2            | 9.1      | 9.3      | 1.3        |

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

\*Rates are significantly different from comparison group; confidence intervals are 95%.

# Number of Invasive Cancers by Age, Alaska Native People, 1994-2008

## Men and Women

| Age Group                        | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80+ | Total |
|----------------------------------|-----|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| All Sites                        | 60  | 39    | 114   | 263   | 597   | 1,017 | 1,191 | 1,004 | 415 | 4700  |
| Oral Cavity and Pharynx          | 1   | 1     | 4     | 9     | 23    | 46    | 49    | 24    | 8   | 165   |
| Nasopharynx                      | 0   | 1     | 0     | 4     | 5     | 17    | 21    | 9     | 5   | 62    |
| Digestive System                 | 2   | 4     | 11    | 65    | 155   | 320   | 375   | 379   | 173 | 1484  |
| Esophagus                        | 0   | 0     | 0     | 0     | 4     | 18    | 24    | 21    | 10  | 77    |
| Stomach                          | 0   | 0     | 3     | 27    | 32    | 37    | 50    | 45    | 18  | 212   |
| Colon and Rectum                 | 0   | 0     | 3     | 28    | 83    | 193   | 216   | 228   | 101 | 852   |
| Colon excluding Rectum           | 0   | 0     | 1     | 16    | 50    | 113   | 160   | 181   | 84  | 605   |
| Rectosigmoid Junction            | 0   | 0     | 0     | 1     | 8     | 17    | 20    | 10    | 4   | 60    |
| Rectum                           | 0   | 0     | 2     | 11    | 25    | 63    | 36    | 37    | 13  | 187   |
| Liver                            | 2   | 3     | 5     | 3     | 9     | 18    | 17    | 11    | 9   | 77    |
| Gallbladder                      | 0   | 0     | 0     | 1     | 0     | 4     | 9     | 9     | 8   | 31    |
| Other Biliary                    | 0   | 0     | 0     | 0     | 1     | 8     | 6     | 9     | 6   | 30    |
| Pancreas                         | 0   | 0     | 0     | 4     | 15    | 30    | 34    | 43    | 14  | 140   |
| Respiratory System               | 0   | 0     | 1     | 7     | 56    | 161   | 284   | 267   | 88  | 864   |
| Larynx                           | 0   | 0     | 0     | 0     | 1     | 12    | 12    | 5     | 0   | 30    |
| Lung and Bronchus                | 0   | 0     | 0     | 5     | 54    | 147   | 268   | 258   | 84  | 816   |
| Bones and Joints                 | 3   | 2     | 0     | 0     | 3     | 2     | 1     | 2     | 1   | 14    |
| Soft Tissue including Heart      | 3   | 3     | 5     | 5     | 4     | 5     | 3     | 1     | 2   | 31    |
| Melanoma of the Skin             | 0   | 0     | 5     | 2     | 4     | 5     | 1     | 1     | 0   | 18    |
| Breast                           | 0   | 0     | 9     | 68    | 180   | 218   | 160   | 88    | 24  | 747   |
| Urinary System                   | 2   | 1     | 4     | 11    | 28    | 64    | 72    | 73    | 27  | 282   |
| Urinary Bladder                  | 0   | 0     | 1     | 4     | 7     | 15    | 27    | 24    | 12  | 90    |
| Kidney and Renal Pelvis          | 2   | 1     | 3     | 7     | 21    | 49    | 44    | 47    | 15  | 189   |
| Eye and Orbit                    | 2   | 0     | 0     | 0     | 0     | 0     | 1     | 0     | 2   | 5     |
| Brain and Other Nervous System   | 10  | 3     | 6     | 8     | 8     | 3     | 7     | 3     | 0   | 48    |
| Endocrine System                 | 2   | 8     | 16    | 20    | 22    | 9     | 9     | 4     | 2   | 92    |
| Thyroid                          | 1   | 7     | 14    | 19    | 22    | 9     | 8     | 4     | 2   | 86    |
| Other Endocrine including Thymus | 1   | 1     | 2     | 1     | 0     | 0     | 1     | 0     | 0   | 6     |
| Lymphoma                         | 4   | 4     | 7     | 13    | 26    | 30    | 22    | 16    | 11  | 133   |
| Hodgkin Lymphoma                 | 1   | 0     | 3     | 1     | 2     | 2     | 1     | 0     | 0   | 10    |
| Non-Hodgkin Lymphoma             | 3   | 4     | 4     | 12    | 24    | 28    | 21    | 16    | 11  | 123   |
| Myeloma                          | 0   | 0     | 1     | 1     | 7     | 11    | 15    | 6     | 1   | 42    |
| Leukemia                         | 27  | 8     | 6     | 13    | 6     | 17    | 12    | 10    | 5   | 104   |
| Lymphocytic Leukemia             | 20  | 3     | 3     | 3     | 0     | 6     | 3     | 0     | 2   | 40    |
| Myeloid and Monocytic Leukemia   | 6   | 4     | 2     | 9     | 5     | 10    | 8     | 10    | 3   | 57    |
| Acute Myeloid Leukemia           | 4   | 4     | 1     | 4     | 3     | 4     | 6     | 4     | 2   | 32    |
| Chronic Myeloid Leukemia         | 1   | 0     | 1     | 5     | 2     | 5     | 2     | 5     | 0   | 21    |
| Miscellaneous                    | 3   | 2     | 0     | 1     | 11    | 19    | 18    | 28    | 20  | 102   |

# Number of Invasive Cancers by Age, Alaska Native People, 1994-2008

## Men

| Age Group                        | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80+ | Total |
|----------------------------------|-----|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| All Sites                        | 33  | 19    | 37    | 96    | 221   | 441   | 616   | 524   | 203 | 2190  |
| Oral Cavity and Pharynx          | 0   | 0     | 1     | 7     | 18    | 31    | 31    | 15    | 4   | 107   |
| Nasopharynx                      | 0   | 0     | 0     | 3     | 5     | 11    | 13    | 7     | 2   | 41    |
| Digestive System                 | 1   | 3     | 4     | 33    | 80    | 181   | 204   | 184   | 80  | 770   |
| Esophagus                        | 0   | 0     | 0     | 0     | 2     | 12    | 16    | 11    | 6   | 47    |
| Stomach                          | 0   | 0     | 0     | 11    | 22    | 27    | 31    | 28    | 12  | 131   |
| Colon and Rectum                 | 0   | 0     | 2     | 18    | 31    | 103   | 113   | 104   | 40  | 411   |
| Colon excluding Rectum           | 0   | 0     | 1     | 12    | 16    | 53    | 76    | 79    | 33  | 270   |
| Rectosigmoid Junction            | 0   | 0     | 0     | 0     | 5     | 11    | 14    | 8     | 1   | 39    |
| Rectum                           | 0   | 0     | 1     | 6     | 10    | 39    | 23    | 17    | 6   | 102   |
| Liver                            | 1   | 2     | 2     | 2     | 8     | 12    | 8     | 7     | 5   | 47    |
| Gallbladder                      | 0   | 0     | 0     | 0     | 0     | 1     | 4     | 4     | 4   | 13    |
| Other Biliary                    | 0   | 0     | 0     | 0     | 1     | 4     | 4     | 3     | 4   | 16    |
| Pancreas                         | 0   | 0     | 0     | 2     | 9     | 14    | 19    | 21    | 7   | 72    |
| Respiratory System               | 0   | 0     | 1     | 6     | 35    | 99    | 172   | 156   | 47  | 516   |
| Larynx                           | 0   | 0     | 0     | 0     | 1     | 10    | 7     | 3     | 0   | 21    |
| Lung and Bronchus                | 0   | 0     | 0     | 5     | 33    | 89    | 162   | 151   | 44  | 484   |
| Bones and Joints                 | 3   | 2     | 0     | 0     | 2     | 0     | 0     | 1     | 1   | 9     |
| Soft Tissue including Heart      | 1   | 3     | 3     | 3     | 3     | 1     | 1     | 0     | 0   | 15    |
| Melanoma of the Skin             | 0   | 0     | 1     | 1     | 2     | 1     | 1     | 0     | 0   | 6     |
| Breast                           | 0   | 0     | 0     | 0     | 1     | 0     | 1     | 2     | 0   | 4     |
| Male Genital System              | 1   | 0     | 16    | 15    | 20    | 53    | 111   | 78    | 38  | 332   |
| Prostate                         | 0   | 0     | 0     | 1     | 12    | 53    | 108   | 77    | 35  | 286   |
| Testis                           | 1   | 0     | 16    | 14    | 7     | 0     | 0     | 0     | 0   | 38    |
| Urinary System                   | 1   | 1     | 0     | 6     | 22    | 36    | 54    | 49    | 15  | 184   |
| Urinary Bladder                  | 0   | 0     | 0     | 3     | 5     | 12    | 25    | 19    | 7   | 71    |
| Kidney and Renal Pelvis          | 1   | 1     | 0     | 3     | 17    | 24    | 28    | 29    | 8   | 111   |
| Eye and Orbit                    | 1   | 0     | 0     | 0     | 0     | 0     | 1     | 0     | 2   | 4     |
| Brain and Other Nervous System   | 4   | 1     | 2     | 4     | 3     | 1     | 3     | 3     | 0   | 21    |
| Endocrine System                 | 2   | 3     | 3     | 4     | 3     | 2     | 3     | 2     | 1   | 23    |
| Thyroid                          | 1   | 2     | 1     | 4     | 3     | 2     | 3     | 2     | 1   | 19    |
| Other Endocrine including Thymus | 1   | 1     | 2     | 0     | 0     | 0     | 0     | 0     | 0   | 4     |
| Lymphoma                         | 2   | 2     | 2     | 7     | 14    | 15    | 14    | 8     | 4   | 68    |
| Hodgkin Lymphoma                 | 1   | 0     | 1     | 0     | 2     | 2     | 0     | 0     | 0   | 6     |
| Non-Hodgkin Lymphoma             | 1   | 2     | 1     | 7     | 12    | 13    | 14    | 8     | 4   | 62    |
| Myeloma                          | 0   | 0     | 0     | 1     | 4     | 3     | 4     | 2     | 0   | 14    |
| Leukemia                         | 16  | 4     | 3     | 7     | 5     | 7     | 6     | 6     | 4   | 58    |
| Lymphocytic Leukemia             | 12  | 2     | 2     | 1     | 0     | 2     | 2     | 0     | 1   | 22    |
| Myeloid and Monocytic Leukemia   | 4   | 1     | 1     | 5     | 5     | 5     | 3     | 6     | 3   | 33    |
| Acute Myeloid Leukemia           | 3   | 1     | 0     | 3     | 3     | 2     | 3     | 2     | 2   | 19    |
| Chronic Myeloid Leukemia         | 0   | 0     | 1     | 2     | 2     | 3     | 0     | 3     | 0   | 11    |
| Miscellaneous                    | 1   | 0     | 0     | 0     | 7     | 11    | 8     | 16    | 6   | 49    |

# Number of Invasive Cancers by Age, Alaska Native People, 1994-2008

## Women

| Age Group                        | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80+ | Total |
|----------------------------------|-----|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| All Sites                        | 27  | 20    | 77    | 167   | 376   | 576   | 575   | 480   | 212 | 2510  |
| Oral Cavity and Pharynx          | 1   | 1     | 3     | 2     | 5     | 15    | 18    | 9     | 4   | 58    |
| Nasopharynx                      | 0   | 1     | 0     | 1     | 0     | 6     | 8     | 2     | 3   | 21    |
| Digestive System                 | 1   | 1     | 7     | 32    | 75    | 139   | 171   | 195   | 93  | 714   |
| Esophagus                        | 0   | 0     | 0     | 0     | 2     | 6     | 8     | 10    | 4   | 30    |
| Stomach                          | 0   | 0     | 3     | 16    | 10    | 10    | 19    | 17    | 6   | 81    |
| Colon and Rectum                 | 0   | 0     | 1     | 10    | 52    | 90    | 103   | 124   | 61  | 441   |
| Colon excluding Rectum           | 0   | 0     | 0     | 4     | 34    | 60    | 84    | 102   | 51  | 335   |
| Rectosigmoid Junction            | 0   | 0     | 0     | 1     | 3     | 6     | 6     | 2     | 3   | 21    |
| Rectum                           | 0   | 0     | 1     | 5     | 15    | 24    | 13    | 20    | 7   | 85    |
| Liver                            | 1   | 1     | 3     | 1     | 1     | 6     | 9     | 4     | 4   | 30    |
| Gallbladder                      | 0   | 0     | 0     | 1     | 0     | 3     | 5     | 5     | 4   | 18    |
| Other Biliary                    | 0   | 0     | 0     | 0     | 0     | 4     | 2     | 6     | 2   | 14    |
| Pancreas                         | 0   | 0     | 0     | 2     | 6     | 16    | 15    | 22    | 7   | 68    |
| Respiratory System               | 0   | 0     | 0     | 1     | 21    | 62    | 112   | 111   | 41  | 348   |
| Larynx                           | 0   | 0     | 0     | 0     | 0     | 2     | 5     | 2     | 0   | 9     |
| Lung and Bronchus                | 0   | 0     | 0     | 0     | 21    | 58    | 106   | 107   | 40  | 332   |
| Bones and Joints                 | 0   | 0     | 0     | 0     | 1     | 2     | 1     | 1     | 0   | 5     |
| Soft Tissue including Heart      | 2   | 0     | 2     | 2     | 1     | 4     | 2     | 1     | 2   | 16    |
| Melanoma of the Skin             | 0   | 0     | 4     | 1     | 2     | 4     | 0     | 1     | 0   | 12    |
| Breast                           | 0   | 0     | 9     | 68    | 179   | 218   | 159   | 86    | 24  | 743   |
| Female Genital System            | 0   | 3     | 22    | 22    | 42    | 54    | 48    | 18    | 12  | 221   |
| Cervix Uteri                     | 0   | 1     | 16    | 17    | 14    | 10    | 1     | 3     | 2   | 64    |
| Corpus and Uterus, NOS           | 0   | 1     | 1     | 4     | 13    | 24    | 24    | 7     | 3   | 77    |
| Ovary                            | 0   | 1     | 3     | 1     | 12    | 15    | 17    | 6     | 6   | 61    |
| Urinary System                   | 1   | 0     | 4     | 5     | 6     | 28    | 18    | 24    | 12  | 98    |
| Urinary Bladder                  | 0   | 0     | 1     | 1     | 2     | 3     | 2     | 5     | 5   | 19    |
| Kidney and Renal Pelvis          | 1   | 0     | 3     | 4     | 4     | 25    | 16    | 18    | 7   | 78    |
| Eye and Orbit                    | 1   | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 1     |
| Brain and Other Nervous System   | 6   | 2     | 4     | 4     | 5     | 2     | 4     | 0     | 0   | 27    |
| Endocrine System                 | 0   | 5     | 13    | 16    | 19    | 7     | 6     | 2     | 1   | 69    |
| Thyroid                          | 0   | 5     | 13    | 15    | 19    | 7     | 5     | 2     | 1   | 67    |
| Other Endocrine including Thymus | 0   | 0     | 0     | 1     | 0     | 0     | 1     | 0     | 0   | 2     |
| Lymphoma                         | 2   | 2     | 5     | 6     | 12    | 15    | 8     | 8     | 7   | 65    |
| Hodgkin Lymphoma                 | 0   | 0     | 2     | 1     | 0     | 0     | 1     | 0     | 0   | 4     |
| Non-Hodgkin Lymphoma             | 2   | 2     | 3     | 5     | 12    | 15    | 7     | 8     | 7   | 61    |
| Myeloma                          | 0   | 0     | 1     | 0     | 3     | 8     | 11    | 4     | 1   | 28    |
| Leukemia                         | 11  | 4     | 3     | 6     | 1     | 10    | 6     | 4     | 1   | 46    |
| Lymphocytic Leukemia             | 8   | 1     | 1     | 2     | 0     | 4     | 1     | 0     | 1   | 18    |
| Myeloid and Monocytic Leukemia   | 2   | 3     | 1     | 4     | 0     | 5     | 5     | 4     | 0   | 24    |
| Acute Myeloid Leukemia           | 1   | 3     | 1     | 1     | 0     | 2     | 3     | 2     | 0   | 13    |
| Chronic Myeloid Leukemia         | 1   | 0     | 0     | 3     | 0     | 2     | 2     | 2     | 0   | 10    |
| Miscellaneous                    | 2   | 2     | 0     | 1     | 4     | 8     | 10    | 12    | 14  | 53    |

**Average Annual Age-Specific Cancer Incidence Rates among Alaska Native People, 1994-2008**  
**Men and Women**

|                                | 0-9  | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69  | 70-79  | 80+    |
|--------------------------------|------|-------|-------|-------|-------|-------|--------|--------|--------|
| All Sites                      | 17.8 | 11.8  | 51.2  | 116.0 | 289.1 | 770.1 | 1594.0 | 2389.6 | 2395.7 |
| Oral Cavity and Pharynx        | 0.3  | 0.3   | 1.8   | 4.0   | 11.2  | 34.8  | 65.6   | 56.9   | 44.8   |
| Nasopharynx                    | 0    | 0.3   | 0     | 1.8   | 2.5   | 12.8  | 28.1   | 20.9   | 27.5   |
| Digestive System               | 0.6  | 1.2   | 4.8   | 28.7  | 75.2  | 242.1 | 503.1  | 905.1  | 1002.1 |
| Esophagus                      | 0    | 0     | 0     | 0     | 1.9   | 13.6  | 32.8   | 49.3   | 56.6   |
| Stomach                        | 0    | 0     | 1.3   | 12.0  | 15.5  | 28.1  | 67.3   | 108.2  | 105.2  |
| Colon and Rectum               | 0    | 0     | 1.3   | 12.4  | 40.3  | 146.0 | 288.3  | 545.5  | 586.6  |
| Colon excluding Rectum         | 0    | 0     | 0.4   | 7.1   | 24.2  | 85.5  | 214.4  | 431.1  | 489.2  |
| Rectosigmoid Junction          | 0    | 0     | 0     | 0.5   | 3.9   | 12.9  | 26.3   | 22.3   | 22.0   |
| Rectum                         | 0    | 0     | 0.9   | 4.8   | 12.2  | 47.6  | 47.6   | 92.1   | 75.4   |
| Liver                          | 0.6  | 0.9   | 2.1   | 1.3   | 4.4   | 13.6  | 22.9   | 27.7   | 52.6   |
| Gallbladder                    | 0    | 0     | 0     | 0.4   | 0     | 3.0   | 12.7   | 22.2   | 46.3   |
| Other Biliary                  | 0    | 0     | 0     | 0     | 0.5   | 6.1   | 7.9    | 21.5   | 33.1   |
| Pancreas                       | 0    | 0     | 0     | 1.8   | 7.2   | 22.7  | 46.1   | 100.8  | 80.1   |
| Respiratory System             | 0    | 0     | 0.5   | 3.1   | 27.2  | 122.2 | 379.4  | 632.6  | 508.2  |
| Larynx                         | 0    | 0     | 0     | 0     | 0.5   | 9.1   | 15.9   | 10.5   | 0      |
| Lung and Bronchus              | 0    | 0     | 0     | 2.2   | 26.2  | 111.6 | 358.3  | 613.1  | 486.2  |
| Bones and Joints               | 0.9  | 0.6   | 0     | 0     | 1.5   | 1.5   | 1.4    | 4.2    | 5.5    |
| Soft Tissue including Heart    | 0.9  | 0.9   | 2.3   | 2.1   | 1.9   | 3.8   | 3.9    | 2.1    | 11.8   |
| Melanoma of the Skin           | 0    | 0     | 2.3   | 0.8   | 1.9   | 3.8   | 1.4    | 2.1    | 0      |
| Other Non-Epithelial Skin      | 0    | 0     | 0.5   | 1.4   | 0.9   | 0     | 4.1    | 13.3   | 5.5    |
| Breast                         | 0    | 0     | 4.1   | 30.2  | 87.0  | 164.9 | 213.1  | 209.6  | 138.3  |
| Urinary System                 | 0.6  | 0.3   | 1.8   | 4.9   | 13.6  | 48.5  | 96.3   | 175.5  | 156.3  |
| Urinary Bladder                | 0    | 0     | 0.4   | 1.7   | 3.4   | 11.4  | 36.3   | 58.9   | 67.6   |
| Kidney and Renal Pelvis        | 0.6  | 0.3   | 1.3   | 3.2   | 10.2  | 37.1  | 58.6   | 111.8  | 88.7   |
| Eye and Orbit                  | 0.6  | 0     | 0     | 0     | 0     | 0     | 1.4    | 0      | 11.0   |
| Brain and Other Nervous System | 3.0  | 0.9   | 2.7   | 3.5   | 3.9   | 2.3   | 9.5    | 7.6    | 0      |
| Endocrine System               | 0.6  | 2.4   | 7.2   | 8.6   | 10.6  | 6.8   | 12.0   | 9.1    | 11.8   |
| Thyroid                        | 0.3  | 2.1   | 6.2   | 8.2   | 10.6  | 6.8   | 10.6   | 9.1    | 11.8   |
| Lymphoma                       | 1.2  | 1.2   | 3.2   | 5.8   | 12.6  | 22.7  | 29.7   | 40.1   | 65.9   |
| Hodgkin Lymphoma               | 0.3  | 0     | 1.3   | 0.4   | 0.9   | 1.5   | 1.4    | 0      | 0      |
| Non-Hodgkin Lymphoma           | 0.9  | 1.2   | 1.9   | 5.4   | 11.6  | 21.2  | 28.2   | 40.1   | 65.9   |
| Myeloma                        | 0    | 0     | 0.5   | 0.5   | 3.4   | 8.3   | 19.7   | 14.6   | 5.5    |
| Leukemia                       | 8.0  | 2.4   | 2.6   | 5.8   | 2.9   | 12.9  | 16.1   | 23.6   | 28.3   |
| Lymphocytic Leukemia           | 5.9  | 0.9   | 1.3   | 1.3   | 0     | 4.6   | 3.9    | 0      | 11.0   |
| Myeloid and Monocytic Leukemia | 1.8  | 1.2   | 0.9   | 4.0   | 2.4   | 7.6   | 10.7   | 23.6   | 17.3   |
| Acute Myeloid Leukemia         | 1.2  | 1.2   | 0.5   | 1.8   | 1.5   | 3.0   | 8.0    | 9.7    | 11.0   |
| Chronic Myeloid Leukemia       | 0.3  | 0     | 0.4   | 2.2   | 0.9   | 3.8   | 2.7    | 11.2   | 0      |
| Miscellaneous                  | 0.9  | 0.6   | 0     | 0.5   | 5.3   | 14.4  | 24.1   | 66.0   | 115.5  |

Rates are per 100,000 population.

# **Average Annual Age-Specific Cancer Incidence Rates among Alaska Native People, 1994-2008**

## **Men**

|                                | 0-9  | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69  | 70-79  | 80+    |
|--------------------------------|------|-------|-------|-------|-------|-------|--------|--------|--------|
| All Sites                      | 18.9 | 11.1  | 32.4  | 84.6  | 217.1 | 682.2 | 1716.9 | 2739.9 | 3134.8 |
| Oral Cavity and Pharynx        | 0    | 0     | 0.9   | 6.3   | 17.8  | 47.8  | 87.2   | 76.3   | 59.9   |
| Nasopharynx                    | 0    | 0     | 0     | 2.7   | 5.0   | 16.9  | 37.2   | 35.1   | 27.2   |
| Digestive System               | 0.6  | 1.8   | 3.3   | 29.0  | 78.7  | 279.3 | 570.3  | 970.5  | 1253.2 |
| Esophagus                      | 0    | 0     | 0     | 0     | 2.0   | 18.5  | 46.2   | 54.9   | 81.5   |
| Stomach                        | 0    | 0     | 0     | 9.4   | 21.7  | 41.7  | 86.4   | 145.3  | 196.3  |
| Colon and Rectum               | 0    | 0     | 1.7   | 16.0  | 30.5  | 159.1 | 312.5  | 548.0  | 626.6  |
| Colon excluding Rectum         | 0    | 0     | 0.8   | 10.8  | 15.8  | 81.8  | 211.6  | 416.3  | 520.4  |
| Rectosigmoid Junction          | 0    | 0     | 0     | 0     | 4.9   | 17.0  | 38.5   | 39.6   | 13.6   |
| Rectum                         | 0    | 0     | 0.9   | 5.2   | 9.9   | 60.3  | 62.4   | 92.0   | 92.6   |
| Liver                          | 0.6  | 1.2   | 1.6   | 1.7   | 7.9   | 18.5  | 22.2   | 41.6   | 84.6   |
| Gallbladder                    | 0    | 0     | 0     | 0     | 0     | 1.5   | 11.5   | 21.5   | 65.4   |
| Other Biliary                  | 0    | 0     | 0     | 0     | 1.0   | 6.2   | 11.1   | 16.9   | 54.3   |
| Pancreas                       | 0    | 0     | 0     | 1.8   | 8.8   | 21.5  | 55.2   | 111.8  | 111.7  |
| Respiratory System             | 0    | 0     | 0.9   | 5.3   | 34.4  | 153.4 | 476.2  | 808.8  | 716.1  |
| Larynx                         | 0    | 0     | 0     | 0     | 1.0   | 15.4  | 19.2   | 13.6   | 0      |
| Lung and Bronchus              | 0    | 0     | 0     | 4.4   | 32.5  | 138.0 | 449.3  | 784.4  | 675.4  |
| Bones and Joints               | 1.8  | 1.1   | 0     | 0     | 2.0   | 0     | 0      | 4.5    | 13.6   |
| Soft Tissue including Heart    | 0.5  | 1.8   | 2.7   | 2.6   | 3.0   | 1.5   | 3.0    | 0      | 0      |
| Melanoma of the Skin           | 0    | 0     | 0.9   | 0.8   | 2.0   | 1.5   | 3.0    | 0      | 0      |
| Other Non-Epithelial Skin      | 0    | 0     | 0.9   | 1.8   | 1.9   | 0     | 5.6    | 9.1    | 13.6   |
| Breast                         | 0    | 0     | 0     | 0     | 1.0   | 0     | 2.6    | 9.1    | 0      |
| Male Genital System            | 0.5  | 0     | 13.9  | 12.8  | 19.6  | 82.5  | 309.5  | 401.9  | 577.2  |
| Prostate                       | 0    | 0     | 0     | 0.9   | 11.8  | 82.5  | 300.5  | 395.8  | 530.9  |
| Testis                         | 0.5  | 0     | 13.9  | 11.9  | 6.8   | 0     | 0      | 0      | 0      |
| Urinary System                 | 0.6  | 0.6   | 0     | 5.4   | 21.6  | 55.8  | 150.9  | 260.4  | 237.1  |
| Urinary Bladder                | 0    | 0     | 0     | 2.7   | 5.0   | 18.6  | 70.1   | 101.1  | 106.2  |
| Kidney and Renal Pelvis        | 0.6  | 0.6   | 0     | 2.8   | 16.7  | 37.2  | 77.8   | 153.1  | 130.9  |
| Eye and Orbit                  | 0.6  | 0     | 0     | 0     | 0     | 0     | 3.0    | 0      | 27.2   |
| Brain and Other Nervous System | 2.4  | 0.6   | 1.8   | 3.5   | 3.0   | 1.6   | 8.6    | 16.9   | 0      |
| Endocrine System               | 1.2  | 1.7   | 2.7   | 3.5   | 3.0   | 3.1   | 8.6    | 10.7   | 19.1   |
| Thyroid                        | 0.6  | 1.2   | 0.9   | 3.5   | 3.0   | 3.1   | 8.6    | 10.7   | 19.1   |
| Lymphoma                       | 1.1  | 1.1   | 1.7   | 6.4   | 13.7  | 23.2  | 38.5   | 46.2   | 65.4   |
| Hodgkin Lymphoma               | 0.6  | 0     | 0.8   | 0     | 1.9   | 3.1   | 0      | 0      | 0      |
| Non-Hodgkin Lymphoma           | 0.6  | 1.1   | 0.9   | 6.4   | 11.8  | 20.1  | 38.5   | 46.2   | 65.4   |
| Myeloma                        | 0    | 0     | 0     | 0.9   | 3.9   | 4.6   | 11.5   | 10.7   | 0      |
| Leukemia                       | 9.1  | 2.4   | 2.5   | 6.3   | 4.9   | 10.9  | 16.2   | 32.2   | 59.9   |
| Lymphocytic Leukemia           | 6.8  | 1.2   | 1.7   | 0.8   | 0     | 3.1   | 5.1    | 0      | 13.6   |
| Myeloid and Monocytic Leukemia | 2.3  | 0.6   | 0.8   | 4.5   | 4.9   | 7.7   | 8.1    | 32.2   | 46.3   |
| Acute Myeloid Leukemia         | 1.7  | 0.6   | 0     | 2.7   | 3.0   | 3.1   | 8.1    | 10.7   | 27.2   |
| Chronic Myeloid Leukemia       | 0    | 0     | 0.8   | 1.8   | 1.9   | 4.7   | 0      | 15.3   | 0      |
| Miscellaneous                  | 0.6  | 0     | 0     | 0     | 6.9   | 17.1  | 22.2   | 82.5   | 92.6   |

Rates are per 100,000 population.

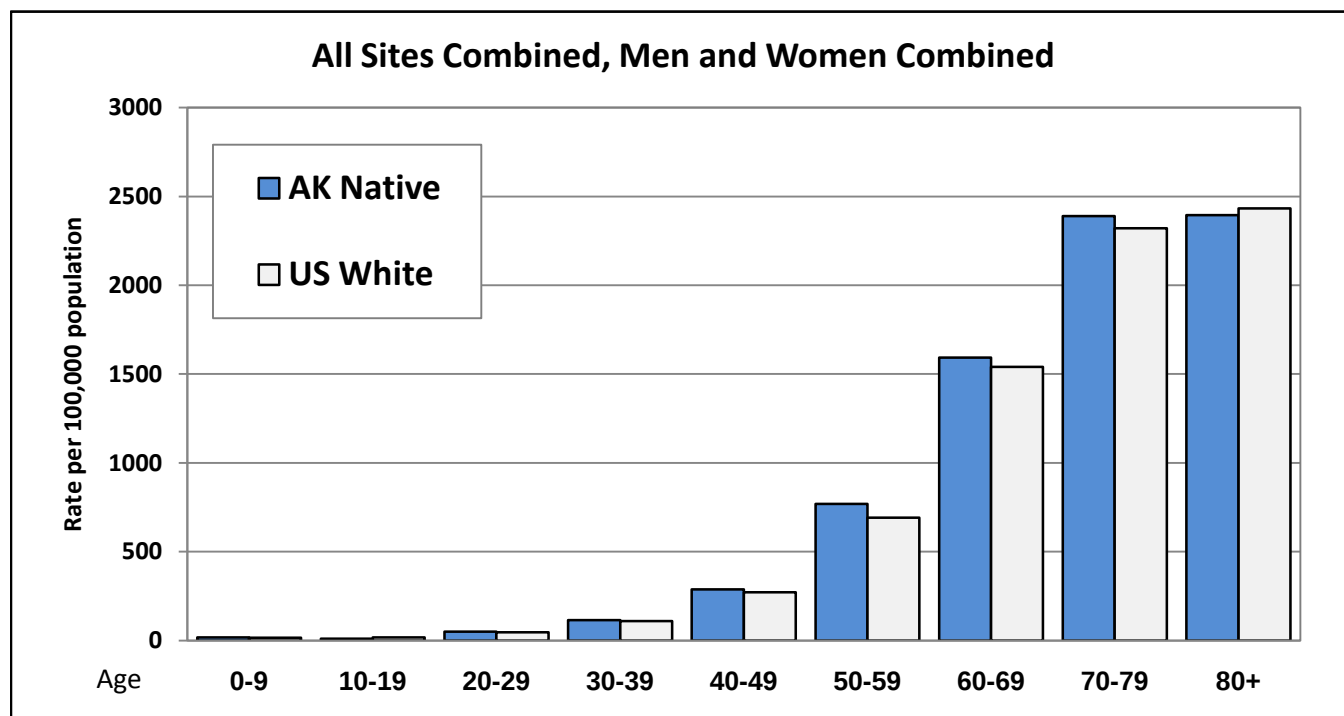
# **Average Annual Age-Specific Cancer Incidence Rates among Alaska Native People, 1994-2008**

## **Women**

|                                | 0-9  | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69  | 70-79  | 80+    |
|--------------------------------|------|-------|-------|-------|-------|-------|--------|--------|--------|
| All Sites                      | 16.6 | 12.5  | 71.0  | 147.1 | 359.5 | 854.7 | 1482.7 | 2098.1 | 1968.3 |
| Oral Cavity and Pharynx        | 0.6  | 0.6   | 2.7   | 1.7   | 4.8   | 22.3  | 45.8   | 40.4   | 37.1   |
| Nasopharynx                    | 0    | 0.6   | 0     | 0.9   | 0     | 8.9   | 19.9   | 8.9    | 27.8   |
| Digestive System               | 0.6  | 0.6   | 6.4   | 28.4  | 71.8  | 206.2 | 441.7  | 851.6  | 863.5  |
| Esophagus                      | 0    | 0     | 0     | 0     | 1.9   | 8.9   | 20.7   | 44.3   | 37.2   |
| Stomach                        | 0    | 0     | 2.8   | 14.4  | 9.6   | 14.9  | 49.6   | 77.0   | 55.7   |
| Colon and Rectum               | 0    | 0     | 1.0   | 8.8   | 49.8  | 133.4 | 265.8  | 543.6  | 566.5  |
| Colon excluding Rectum         | 0    | 0     | 0     | 3.5   | 32.5  | 89.0  | 217.3  | 443.9  | 473.6  |
| Rectosigmoid Junction          | 0    | 0     | 0     | 0.9   | 2.9   | 8.9   | 15.0   | 7.8    | 27.8   |
| Rectum                         | 0    | 0     | 1.0   | 4.4   | 14.4  | 35.5  | 33.5   | 91.9   | 65.0   |
| Liver                          | 0.6  | 0.6   | 2.7   | 0.8   | 1.0   | 8.9   | 23.4   | 16.7   | 37.1   |
| Gallbladder                    | 0    | 0     | 0     | 0.8   | 0     | 4.4   | 13.6   | 22.7   | 37.1   |
| Other Biliary                  | 0    | 0     | 0     | 0     | 0     | 5.9   | 4.9    | 25.6   | 18.5   |
| Pancreas                       | 0    | 0     | 0     | 1.7   | 5.7   | 23.8  | 38.2   | 92.3   | 64.9   |
| Respiratory System             | 0    | 0     | 0     | 0.9   | 20.2  | 92.2  | 289.3  | 485.4  | 380.7  |
| Larynx                         | 0    | 0     | 0     | 0     | 0     | 3.0   | 12.8   | 7.8    | 0      |
| Lung and Bronchus              | 0    | 0     | 0     | 0     | 20.2  | 86.3  | 273.7  | 469.8  | 371.5  |
| Bones and Joints               | 0    | 0     | 0     | 0     | 1.0   | 3.0   | 2.7    | 3.9    | 0      |
| Soft Tissue including Heart    | 1.2  | 0     | 1.9   | 1.7   | 0.9   | 5.9   | 4.9    | 3.9    | 18.6   |
| Melanoma of the Skin           | 0    | 0     | 3.8   | 0.8   | 1.9   | 5.9   | 0      | 3.9    | 0      |
| Other Non-Epithelial Skin      | 0    | 0     | 0     | 0.9   | 0     | 0     | 2.7    | 16.7   | 0      |
| Breast                         | 0    | 0     | 8.5   | 60.2  | 171.1 | 323.2 | 409.8  | 376.1  | 222.8  |
| Female Genital System          | 0    | 1.9   | 20.2  | 19.3  | 40.2  | 80.2  | 123.8  | 80.9   | 111.3  |
| Cervix Uteri                   | 0    | 0.6   | 14.7  | 14.8  | 13.3  | 14.8  | 2.5    | 13.8   | 18.5   |
| Corpus and Uterus, NOS         | 0    | 0.6   | 1.0   | 3.7   | 12.5  | 35.7  | 61.9   | 32.6   | 27.8   |
| Ovary                          | 0    | 0.6   | 2.8   | 0.9   | 11.5  | 22.3  | 43.9   | 24.5   | 55.7   |
| Urinary System                 | 0.6  | 0     | 3.6   | 4.4   | 5.8   | 41.6  | 45.8   | 105.4  | 111.4  |
| Urinary Bladder                | 0    | 0     | 0.9   | 0.8   | 1.9   | 4.4   | 4.9    | 23.8   | 46.3   |
| Kidney and Renal Pelvis        | 0.6  | 0     | 2.8   | 3.6   | 3.9   | 37.1  | 40.9   | 77.7   | 65.1   |
| Eye and Orbit                  | 0.6  | 0     | 0     | 0     | 0     | 0     | 0      | 0      | 0      |
| Brain and Other Nervous System | 3.7  | 1.2   | 3.7   | 3.5   | 4.8   | 3.0   | 10.4   | 0      | 0      |
| Endocrine System               | 0    | 3.2   | 11.9  | 13.7  | 18.0  | 10.3  | 15.3   | 7.8    | 9.3    |
| Thyroid                        | 0    | 3.2   | 11.9  | 12.9  | 18.0  | 10.3  | 12.6   | 7.8    | 9.3    |
| Lymphoma                       | 1.2  | 1.3   | 4.7   | 5.2   | 11.5  | 22.2  | 21.2   | 35.5   | 65.1   |
| Hodgkin Lymphoma               | 0    | 0     | 1.8   | 0.8   | 0     | 0     | 2.7    | 0      | 0      |
| Non-Hodgkin Lymphoma           | 1.2  | 1.3   | 2.9   | 4.4   | 11.5  | 22.2  | 18.5   | 35.5   | 65.1   |
| Myeloma                        | 0    | 0     | 1.0   | 0     | 2.9   | 11.9  | 27.6   | 17.7   | 9.3    |
| Leukemia                       | 6.7  | 2.4   | 2.8   | 5.4   | 0.9   | 14.9  | 15.8   | 16.7   | 9.3    |
| Lymphocytic Leukemia           | 4.9  | 0.6   | 0.9   | 1.8   | 0     | 5.9   | 2.7    | 0      | 9.3    |
| Myeloid and Monocytic Leukemia | 1.2  | 1.8   | 1.0   | 3.6   | 0     | 7.4   | 13.1   | 16.7   | 0      |
| Acute Myeloid Leukemia         | 0.6  | 1.8   | 1.0   | 0.9   | 0     | 3.0   | 7.9    | 8.9    | 0      |
| Chronic Myeloid Leukemia       | 0.6  | 0     | 0     | 2.6   | 0     | 3.0   | 5.2    | 7.8    | 0      |
| Miscellaneous                  | 1.2  | 1.3   | 0     | 0.9   | 3.8   | 11.9  | 25.9   | 52.2   | 130.0  |

Rates are per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



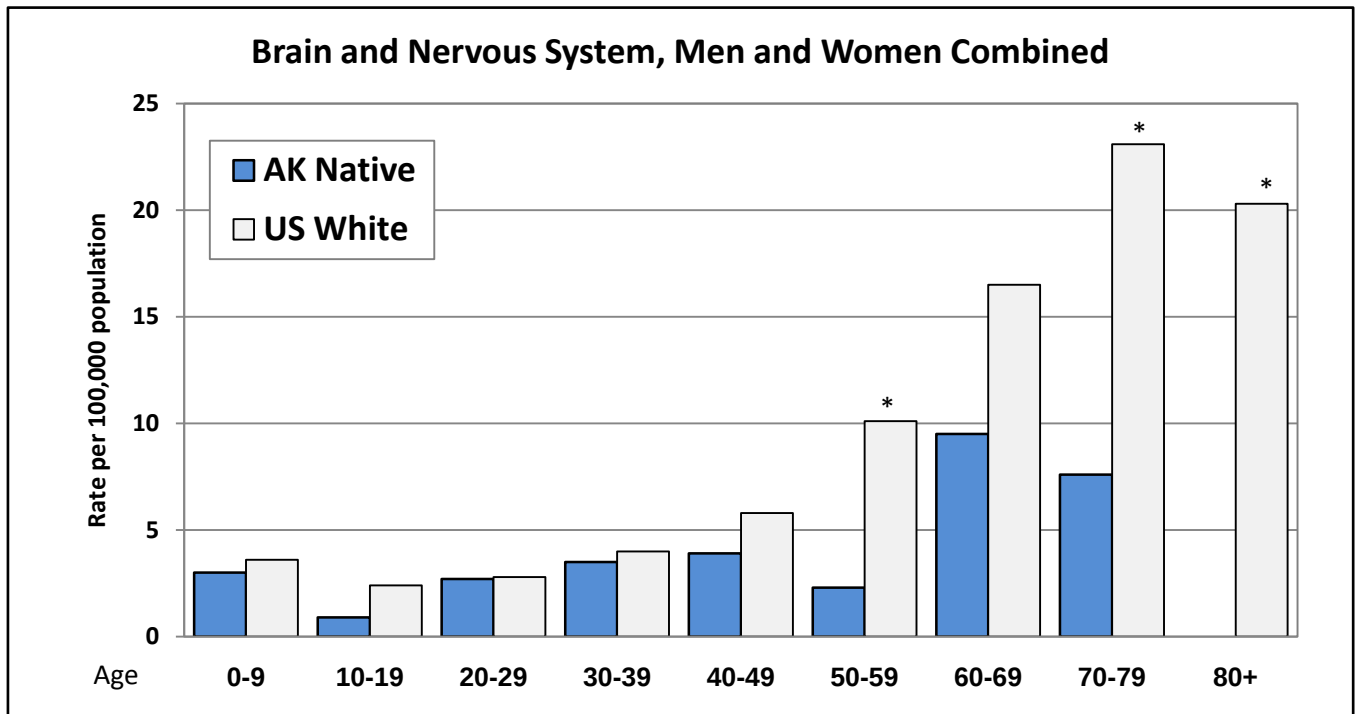
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### All Sites Combined

| Age          | Men           |              |              | Women         |                |              |
|--------------|---------------|--------------|--------------|---------------|----------------|--------------|
|              | Alaska Native | US White     |              | Alaska Native | US White       |              |
|              | Number        | Rate         | Rate         | Number        | Rate           | Rate         |
| 0-9          | 33            | 18.9         | 17.9         | 27            | 16.6           | 15.5         |
| 10-19        | 19            | 11.1         | 19.0         | 20            | 12.5           | 17.1         |
| 20-29        | 37            | 32.4         | 43.5         | 77            | 71.0           | 51.2         |
| 30-39        | 96            | 84.6         | 84.9         | 167           | 147.1          | 137.2        |
| 40-49        | 221           | 217.1        | 202.5        | 376           | 359.5          | 344.0        |
| 50-59        | 441           | 682.2        | 692.3        | 576           | 854.7 *        | 692.3        |
| 60-69        | 616           | 1716.9       | 1866.2       | 575           | 1482.7 *       | 1248.5       |
| 70-79        | 524           | 2739.9       | 2998.5       | 480           | 2098.1 *       | 1803.8       |
| 80+          | 203           | 3134.8       | 3297.9       | 212           | 1968.3         | 1988.2       |
| <b>Total</b> | <b>2190</b>   | <b>521.7</b> | <b>554.6</b> | <b>2510</b>   | <b>483.4 *</b> | <b>425.7</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



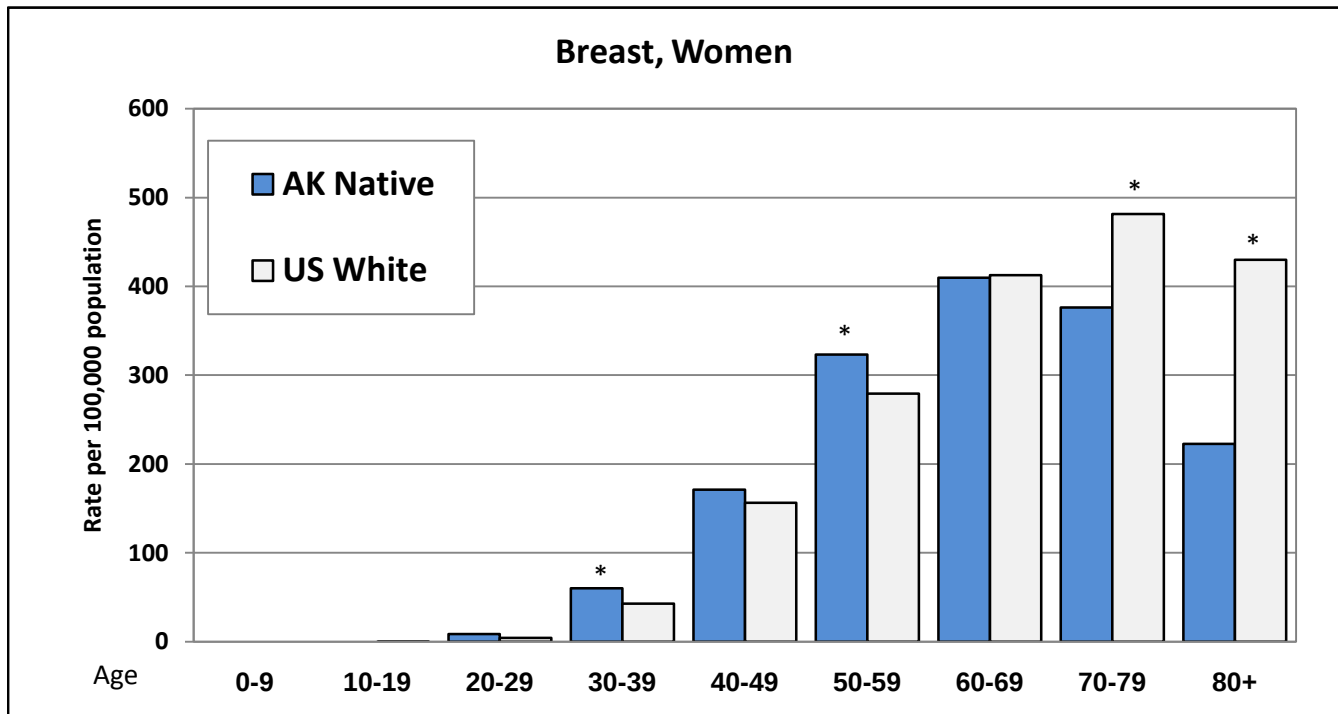
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Brain and Nervous System

| Men          |               |            |            | Women        |               |            |            |
|--------------|---------------|------------|------------|--------------|---------------|------------|------------|
| Age          | Alaska Native |            | US White   | Age          | Alaska Native |            | US White   |
|              | Number        | Rate       | Rate       |              | Number        | Rate       | Rate       |
| 0-9          | 4             | 2.4        | 3.9        | 0-9          | 6             | 3.7        | 3.4        |
| 10-19        | 1             | 0.6        | 2.6        | 10-19        | 2             | 1.2        | 2.2        |
| 20-29        | 2             | 1.8        | 3.1        | 20-29        | 4             | 3.7        | 2.5        |
| 30-39        | 4             | 3.5        | 4.4        | 30-39        | 4             | 3.5        | 3.5        |
| 40-49        | 3             | 3.0        | 6.8        | 40-49        | 5             | 4.8        | 4.8        |
| 50-59        | 1             | 1.6        | 12.2 *     | 50-59        | 2             | 3.0        | 8.0        |
| 60-69        | 3             | 8.6        | 20.1       | 60-69        | 4             | 10.4       | 13.2       |
| 70-79        | 3             | 16.9       | 28.0       | 70-79        | 0             | 0          | 19.3 *     |
| 80+          | 0             | 0          | 26.4 *     | 80+          | 0             | 0          | 17.2 *     |
| <b>Total</b> | <b>21</b>     | <b>3.4</b> | <b>8.4</b> | <b>Total</b> | <b>27</b>     | <b>3.5</b> | <b>6.0</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

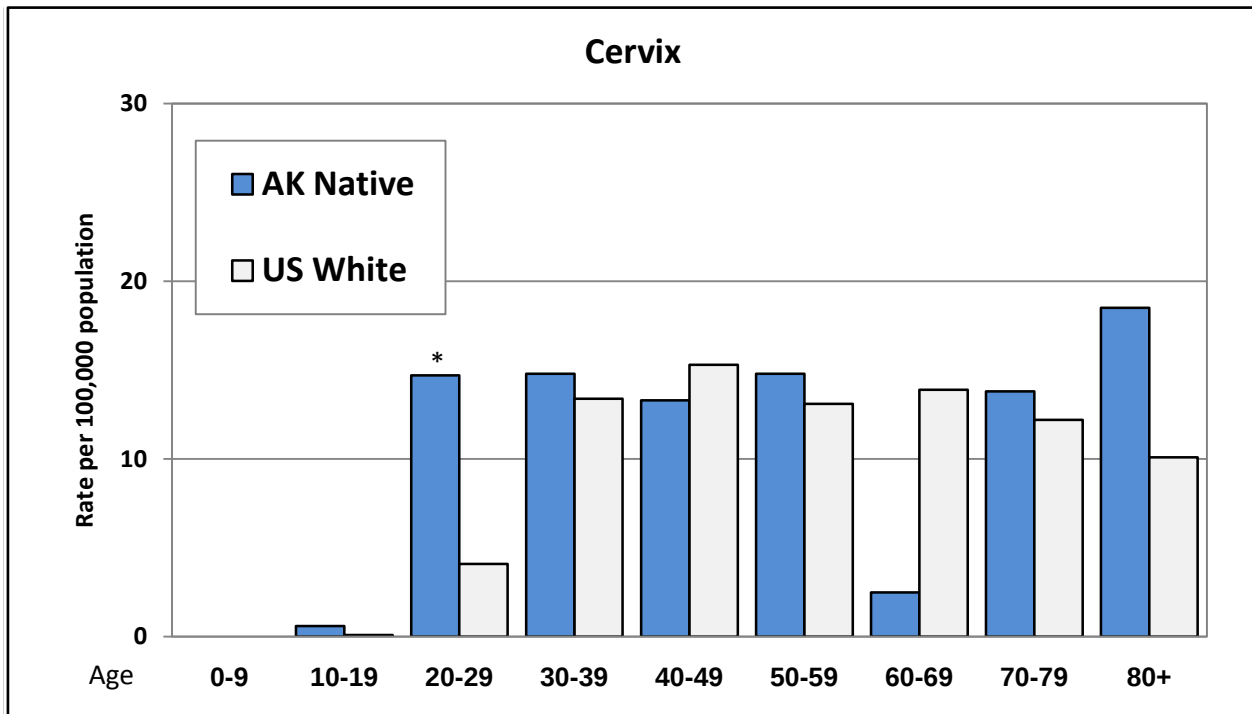


## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

| Breast        |          |            |            |               |              |              |
|---------------|----------|------------|------------|---------------|--------------|--------------|
| Men           |          |            |            | Women         |              |              |
| Alaska Native |          | US White   |            | Alaska Native |              | US White     |
| Age           | Number   | Rate       | Rate       | Number        | Rate         | Rate         |
| 0-9           | 0        | 0          | 0          | 0             | 0            | 0            |
| 10-19         | 0        | 0          | 0          | 0             | 0            | 0.1          |
| 20-29         | 0        | 0          | 0          | 9             | 8.5          | 4.3          |
| 30-39         | 0        | 0          | 0.1        | 68            | 60.2 *       | 43.1         |
| 40-49         | 1        | 1.0        | 0.5        | 179           | 171.1        | 156.4        |
| 50-59         | 0        | 0          | 1.5        | 218           | 323.2 *      | 279.5        |
| 60-69         | 1        | 2.6        | 4.0        | 159           | 409.8        | 412.5        |
| 70-79         | 2        | 9.1        | 5.9        | 86            | 376.1        | 481.5 *      |
| 80+           | 0        | 0          | 8.1        | 24            | 222.8        | 429.9 *      |
| <b>Total</b>  | <b>4</b> | <b>0.9</b> | <b>1.2</b> | <b>743</b>    | <b>132.0</b> | <b>135.1</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



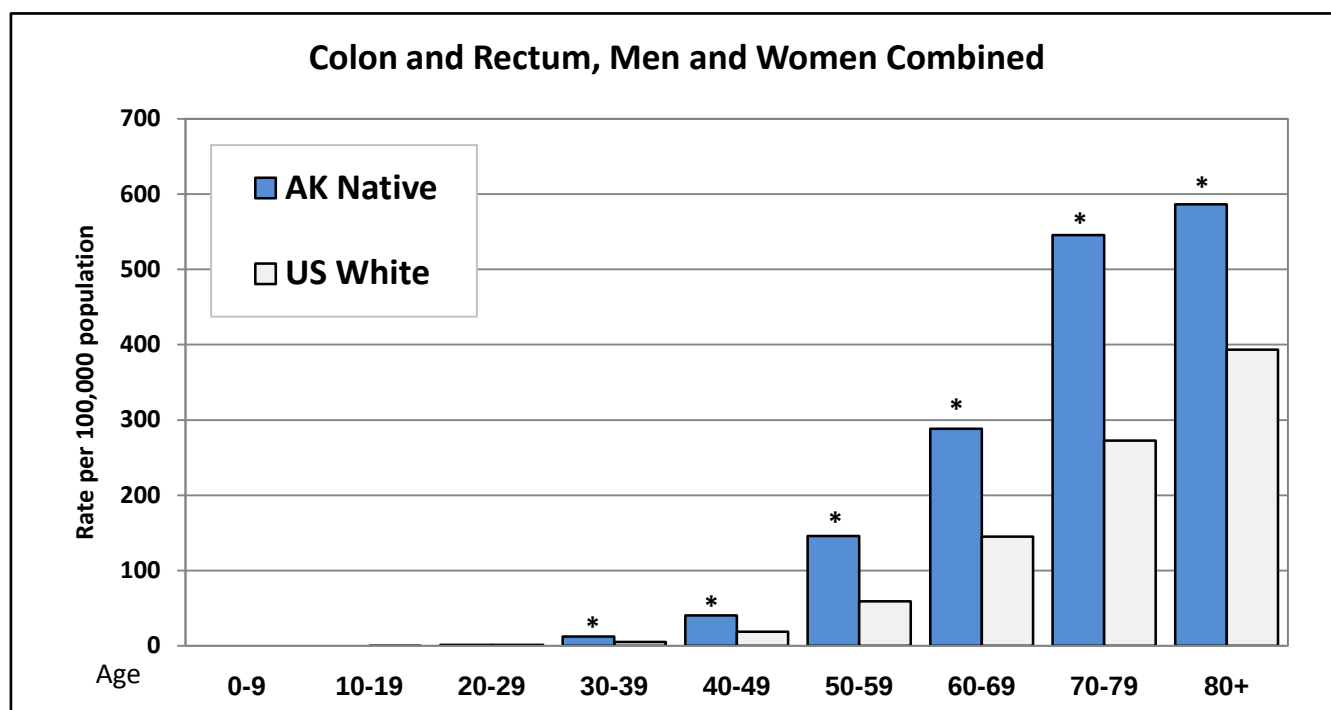
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Cervix

| Age          | Alaska Native |            | US White   |
|--------------|---------------|------------|------------|
|              | Number        | Rate       | Rate       |
| 0-9          | 0             | 0          | 0          |
| 10-19        | 1             | 0.6        | 0.1        |
| 20-29        | 16            | 14.7 *     | 4.1        |
| 30-39        | 17            | 14.8       | 13.4       |
| 40-49        | 14            | 13.3       | 15.3       |
| 50-59        | 10            | 14.8       | 13.1       |
| 60-69        | 1             | 2.5        | 13.9       |
| 70-79        | 3             | 13.8       | 12.2       |
| 80+          | 2             | 18.5       | 10.1       |
| <b>Total</b> | <b>64</b>     | <b>9.6</b> | <b>8.5</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



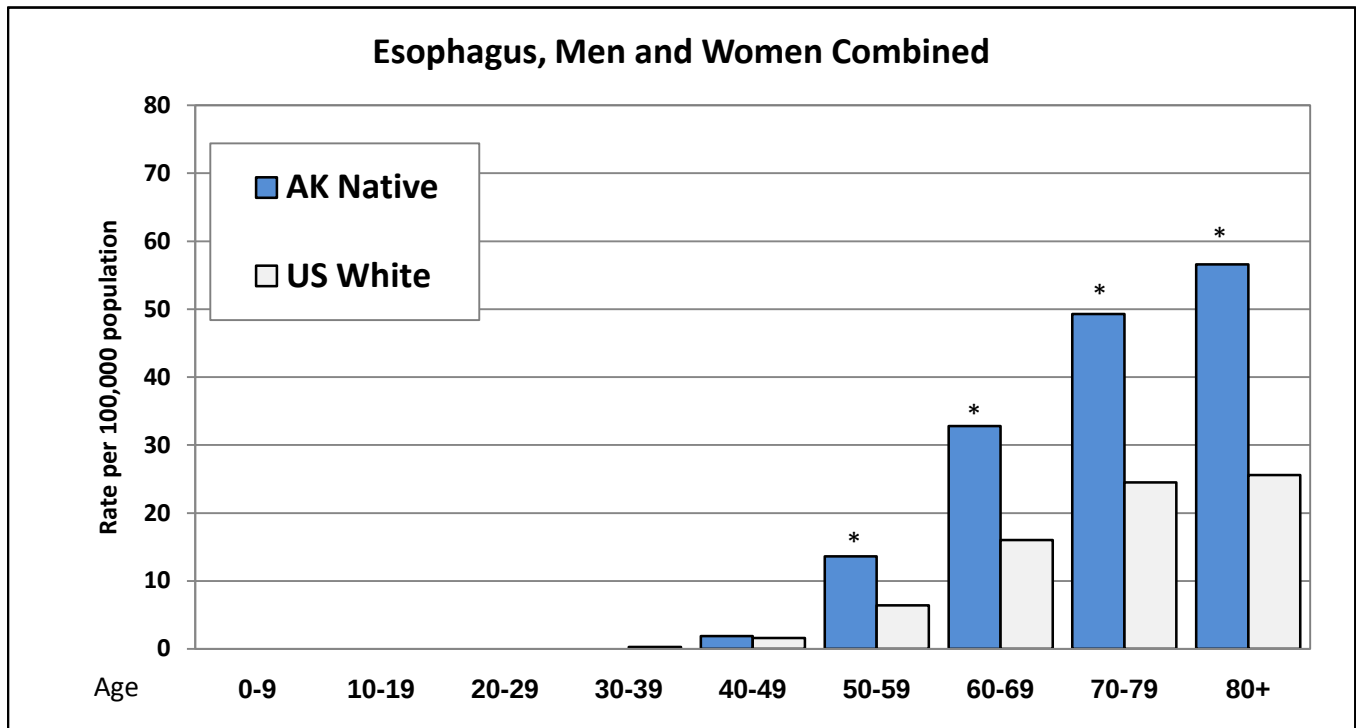
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Colon and Rectum

| Age          | Men           |                |             | Women         |               |             |
|--------------|---------------|----------------|-------------|---------------|---------------|-------------|
|              | Alaska Native | US White       |             | Alaska Native | US White      |             |
|              | Number        | Rate           | Rate        | Number        | Rate          | Rate        |
| 0-9          | 0             | 0              | 0           | 0             | 0             | 0           |
| 10-19        | 0             | 0              | 0.2         | 0             | 0             | 0.1         |
| 20-29        | 2             | 1.7            | 1.3         | 1             | 1.0           | 1.2         |
| 30-39        | 18            | 16.0 *         | 5.7         | 10            | 8.8           | 4.9         |
| 40-49        | 31            | 30.5 *         | 19.9        | 52            | 49.8 *        | 17.3        |
| 50-59        | 103           | 159.1 *        | 69.3        | 90            | 133.4 *       | 49.1        |
| 60-69        | 113           | 312.5 *        | 175.1       | 103           | 265.8 *       | 117.6       |
| 70-79        | 104           | 548.0 *        | 324.7       | 124           | 543.6 *       | 233.1       |
| 80+          | 40            | 626.6 *        | 454.3       | 61            | 566.5 *       | 361.3       |
| <b>Total</b> | <b>411</b>    | <b>101.0 *</b> | <b>58.8</b> | <b>441</b>    | <b>94.2 *</b> | <b>43.4</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



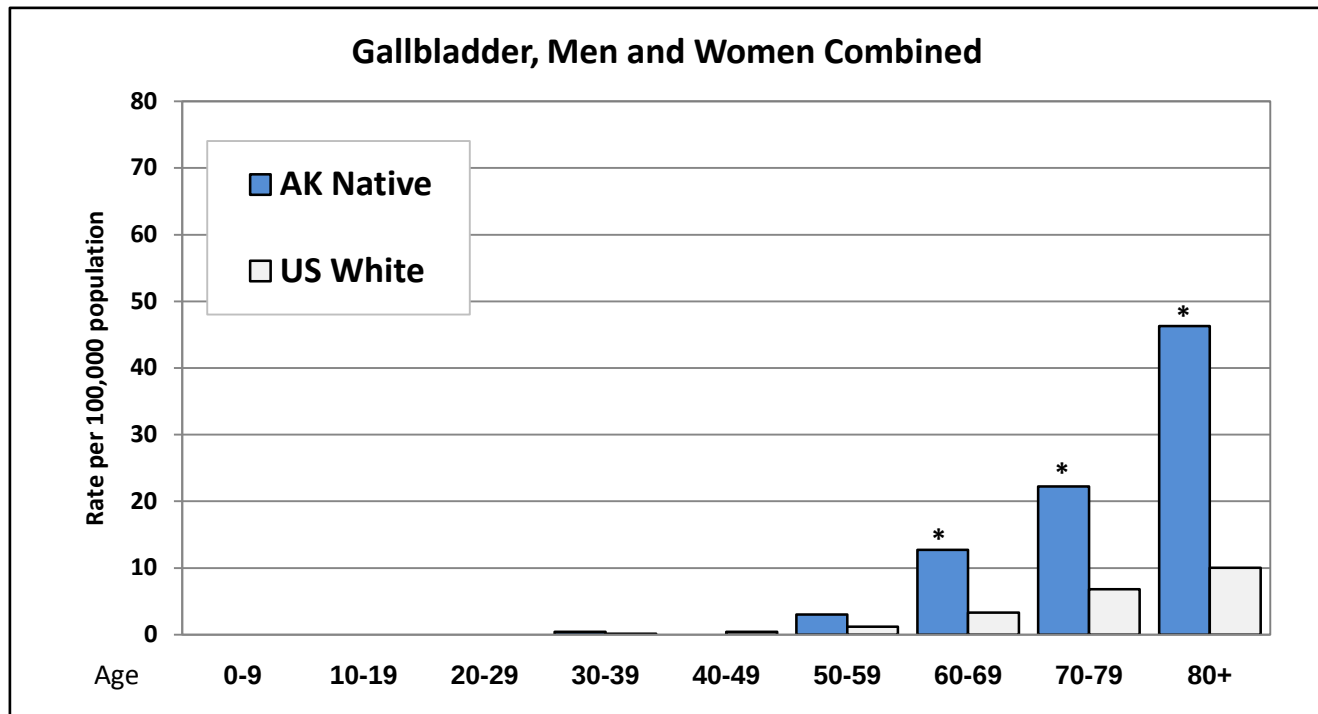
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Esophagus

| Age          | Men                     |                       |                  | Women                   |                       |                  |
|--------------|-------------------------|-----------------------|------------------|-------------------------|-----------------------|------------------|
|              | Alaska Native<br>Number | Alaska Native<br>Rate | US White<br>Rate | Alaska Native<br>Number | Alaska Native<br>Rate | US White<br>Rate |
| 0-9          | 0                       | 0                     | 0                | 0                       | 0                     | 0                |
| 10-19        | 0                       | 0                     | 0                | 0                       | 0                     | 0                |
| 20-29        | 0                       | 0                     | 0                | 0                       | 0                     | 0                |
| 30-39        | 0                       | 0                     | 0.5              | 0                       | 0                     | 0.1              |
| 40-49        | 2                       | 2.0                   | 2.7              | 2                       | 1.9                   | 0.5              |
| 50-59        | 12                      | 18.5                  | 10.9             | 6                       | 8.9 *                 | 2.0              |
| 60-69        | 16                      | 46.2                  | 27.4             | 8                       | 20.7 *                | 5.7              |
| 70-79        | 11                      | 54.9                  | 41.2             | 10                      | 44.3 *                | 11.7             |
| 80+          | 6                       | 81.5                  | 45.3             | 4                       | 37.2                  | 15.1             |
| <b>Total</b> | <b>47</b>               | <b>11.7*</b>          | <b>7.6</b>       | <b>30</b>               | <b>6.6 *</b>          | <b>1.9</b>       |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



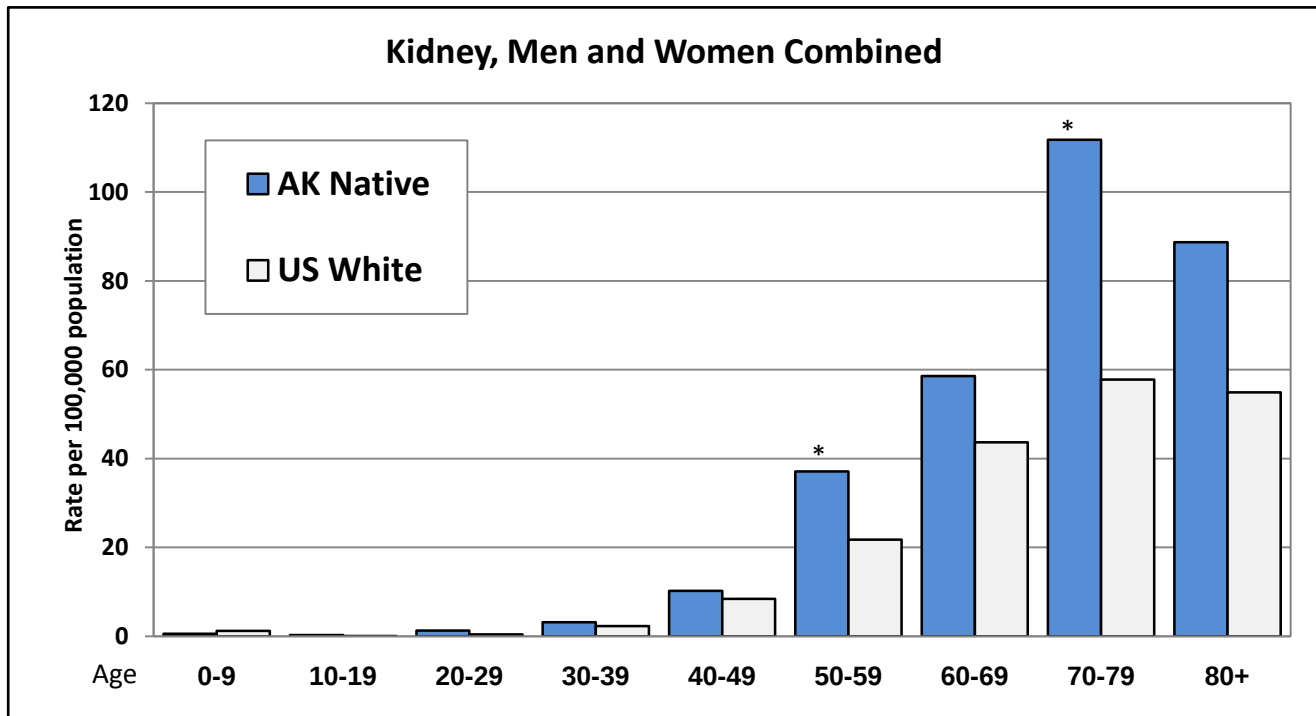
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Gallbladder

| Age          | Men                     |                       |                  | Women                   |                       |                  |
|--------------|-------------------------|-----------------------|------------------|-------------------------|-----------------------|------------------|
|              | Alaska Native<br>Number | Alaska Native<br>Rate | US White<br>Rate | Alaska Native<br>Number | Alaska Native<br>Rate | US White<br>Rate |
| 0-9          | 0                       | 0                     | 0                | 8                       | 0                     | 0                |
| 10-19        | 0                       | 0                     | 0                | 1                       | 0                     | 0                |
| 20-29        | 0                       | 0                     | 0                | 1                       | 0                     | 0                |
| 30-39        | 0                       | 0                     | 0.1              | 2                       | 0.8                   | 0.1              |
| 40-49        | 0                       | 0                     | 0.2              | 0                       | 0                     | 0.5              |
| 50-59        | 1                       | 1.5                   | 0.6              | 4                       | 4.4                   | 1.7              |
| 60-69        | 4                       | 11.5 *                | 1.9              | 1                       | 13.6                  | 4.6              |
| 70-79        | 4                       | 21.5 *                | 4.7              | 0                       | 22.7                  | 8.4              |
| 80+          | 4                       | 65.4 *                | 7.7              | 1                       | 37.1                  | 11.2             |
| <b>Total</b> | <b>13</b>               | <b>4.5 *</b>          | <b>0.8</b>       | <b>18</b>               | <b>4.2 *</b>          | <b>1.5</b>       |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

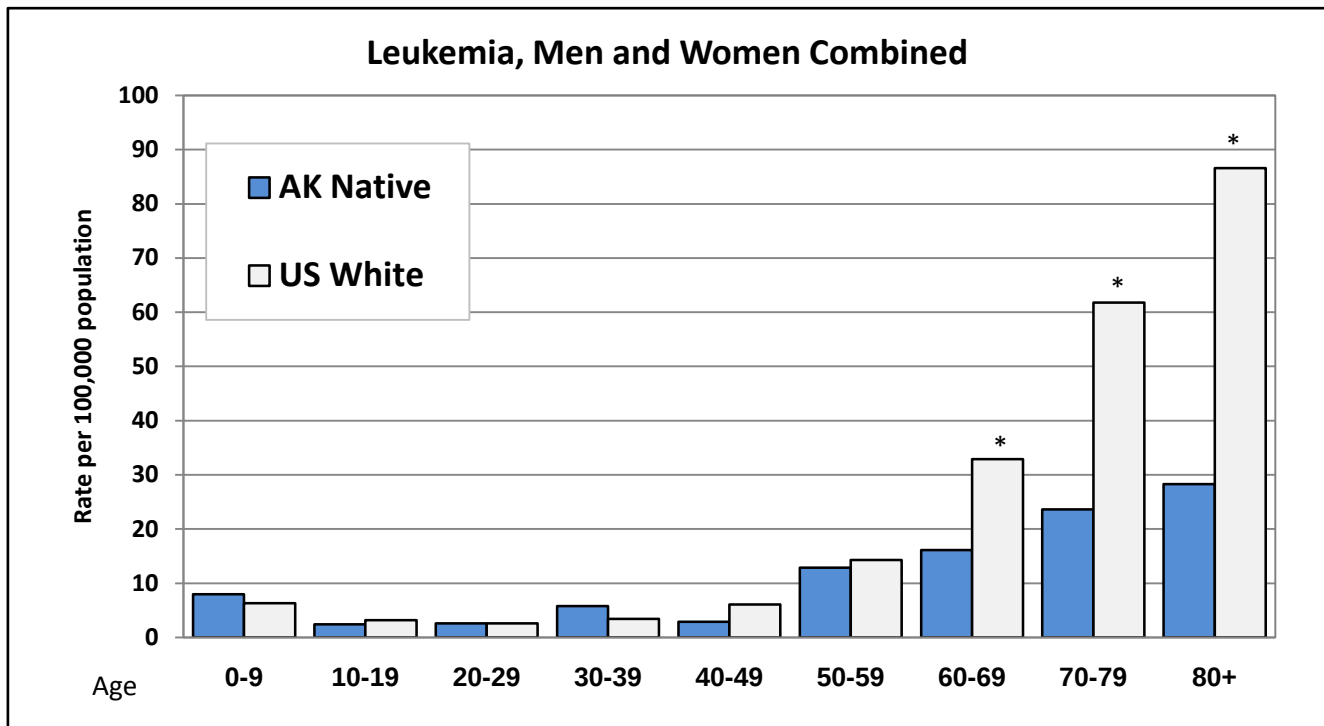
### Kidney

| Age          | Men           |               |             | Women         |               |            |
|--------------|---------------|---------------|-------------|---------------|---------------|------------|
|              | Alaska Native | US White      |             | Alaska Native | US White      |            |
|              | Number        | Rate          | Rate        | Number        | Rate          | Rate       |
| 0-9          | 1             | 0.6           | 1.1         | 1             | 0.6           | 1.3        |
| 10-19        | 1             | 0.6           | 0.1         | 0             | 0             | 0.2        |
| 20-29        | 0             | 0             | 0.5         | 3             | 2.8 *         | 0.4        |
| 30-39        | 3             | 2.8           | 2.6         | 4             | 3.6           | 1.9        |
| 40-49        | 17            | 16.7          | 10.9        | 4             | 3.9           | 5.8        |
| 50-59        | 24            | 37.2          | 29.2        | 25            | 37.1 *        | 14.7       |
| 60-69        | 28            | 77.8          | 60.0        | 16            | 40.9          | 29.0       |
| 70-79        | 29            | 153.1 *       | 82.0        | 18            | 77.7 *        | 39.3       |
| 80+          | 8             | 130.9         | 83.0        | 7             | 65.1          | 40.3       |
| <b>Total</b> | <b>111</b>    | <b>26.3 *</b> | <b>17.5</b> | <b>78</b>     | <b>15.4 *</b> | <b>8.8</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008

### Alaska Native and US White Populations



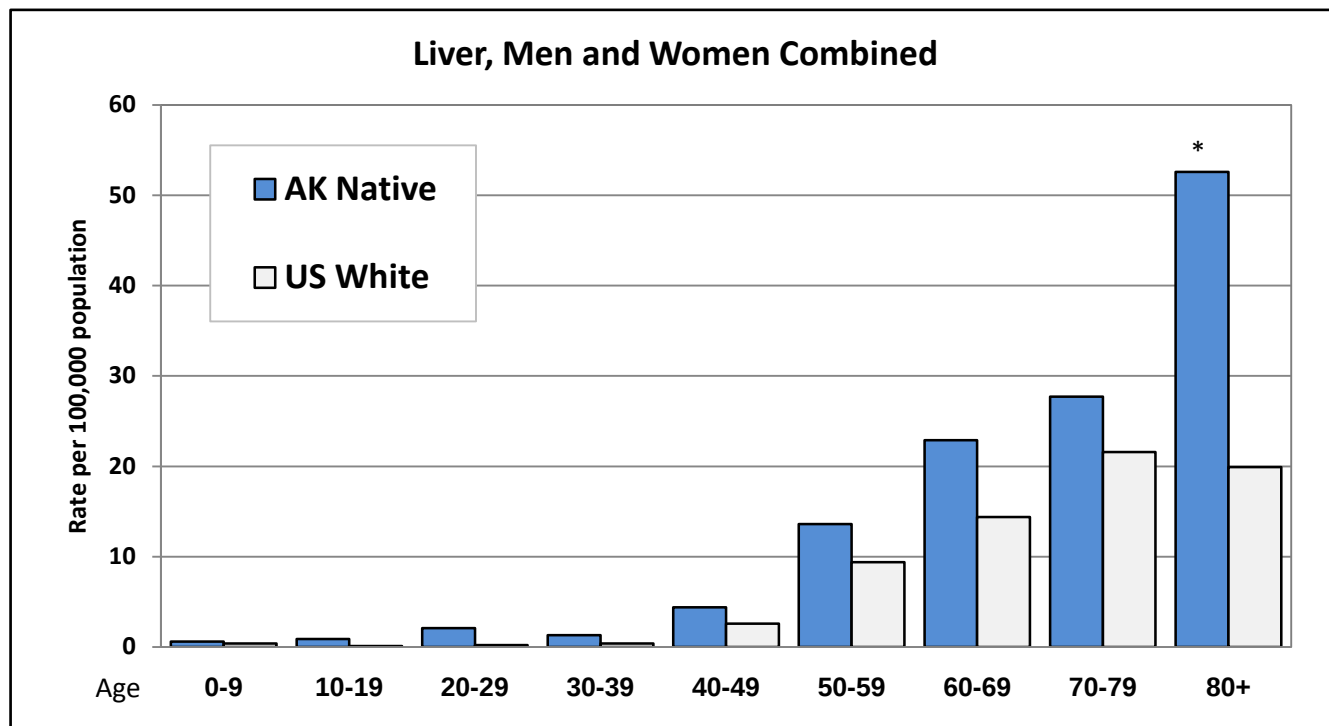
## Age-Specific Cancer Incidence Rates, 1994-2008

### Alaska Native and US White Populations

#### Leukemia

| Age          | Men           |             |               | Women         |            |               |
|--------------|---------------|-------------|---------------|---------------|------------|---------------|
|              | Alaska Native | US White    |               | Alaska Native | US White   |               |
|              | Number        | Rate        | Rate          | Number        | Rate       | Rate          |
| 0-9          | 16            | 9.1         | 6.8           | 11            | 6.7        | 5.7           |
| 10-19        | 4             | 2.4         | 3.7           | 4             | 2.4        | 2.7           |
| 20-29        | 3             | 2.5         | 2.9           | 3             | 2.8        | 2.3           |
| 30-39        | 7             | 6.3         | 4.0           | 6             | 5.4        | 2.8           |
| 40-49        | 5             | 4.9         | 7.1           | 1             | 0.9        | 5.1           |
| 50-59        | 7             | 10.9        | 17.5          | 10            | 14.9       | 11.2          |
| 60-69        | 6             | 16.2        | 42.9 *        | 6             | 15.8       | 23.9          |
| 70-79        | 6             | 32.2        | 84.8 *        | 4             | 16.7       | 44.3          |
| 80+          | 4             | 59.9        | 125.9         | 1             | 9.3        | 66.7 *        |
| <b>Total</b> | <b>58</b>     | <b>10.0</b> | <b>17.8 *</b> | <b>46</b>     | <b>6.7</b> | <b>10.5 *</b> |

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



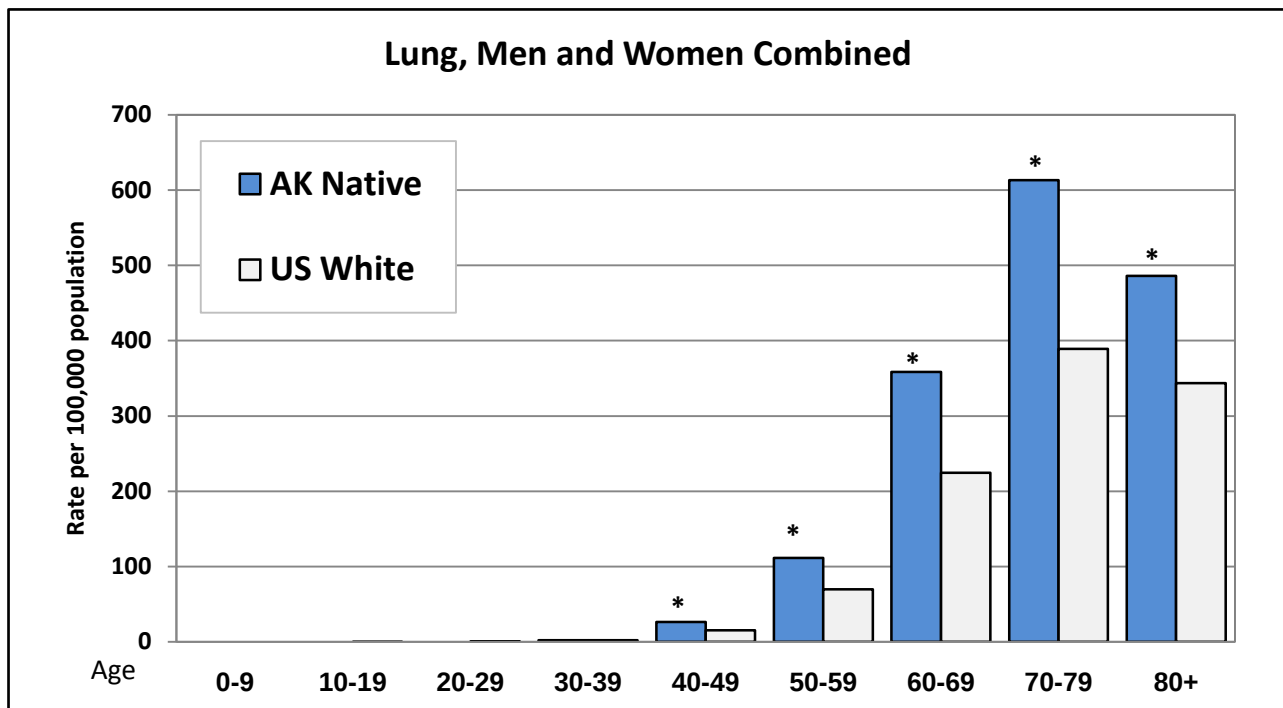
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Liver

| Age          | Men           |              |            | Women         |              |            |
|--------------|---------------|--------------|------------|---------------|--------------|------------|
|              | Alaska Native | US White     |            | Alaska Native | US White     |            |
|              | Number        | Rate         | Rate       | Number        | Rate         | Rate       |
| 0-9          | 1             | 0.6          | 0.4        | 1             | 0.6          | 0.3        |
| 10-19        | 2             | 1.2          | 0.1        | 1             | 0.6          | 0.1        |
| 20-29        | 2             | 1.6          | 0.2        | 3             | 2.7 *        | 0.1        |
| 30-39        | 2             | 1.7          | 0.5        | 1             | 0.8          | 0.2        |
| 40-49        | 8             | 7.9          | 4.3        | 1             | 1.0          | 0.9        |
| 50-59        | 12            | 18.5         | 15.6       | 6             | 8.9          | 3.2        |
| 60-69        | 8             | 22.2         | 22.4       | 9             | 23.4 *       | 7.1        |
| 70-79        | 7             | 41.6         | 33.1       | 4             | 16.7         | 12.8       |
| 80+          | 5             | 84.6         | 31.3       | 4             | 37.1         | 13.9       |
| <b>Total</b> | <b>47</b>     | <b>10.9*</b> | <b>7.2</b> | <b>30</b>     | <b>5.7 *</b> | <b>2.4</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



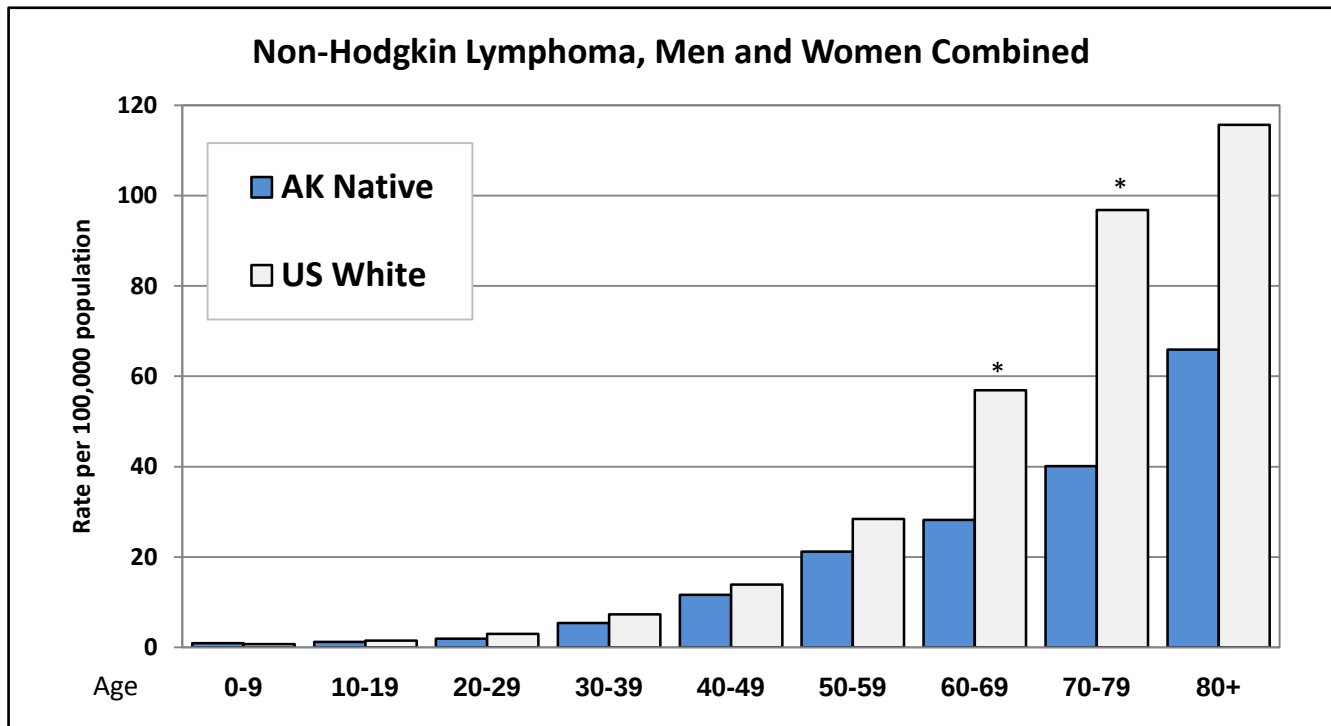
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Lung

| Age          | Men           |                |             | Women         |               |             |
|--------------|---------------|----------------|-------------|---------------|---------------|-------------|
|              | Alaska Native | US White       |             | Alaska Native | US White      |             |
|              | Number        | Rate           | Rate        | Number        | Rate          | Rate        |
| 0-9          | 0             | 0              | 0           | 0             | 0             | 0           |
| 10-19        | 0             | 0              | 0.1         | 0             | 0             | 0.1         |
| 20-29        | 0             | 0              | 0.4         | 0             | 0             | 0.4         |
| 30-39        | 5             | 4.4 *          | 2.3         | 0             | 0             | 2.4         |
| 40-49        | 33            | 32.5 *         | 15.8        | 21            | 20.2 *        | 15.4        |
| 50-59        | 89            | 138.0 *        | 76.8        | 58            | 86.3 *        | 62.8        |
| 60-69        | 162           | 449.3 *        | 261.1       | 106           | 273.7 *       | 192.1       |
| 70-79        | 151           | 784.4 *        | 484.4       | 107           | 469.8 *       | 317.0       |
| 80+          | 44            | 675.4 *        | 496.6       | 40            | 371.5 *       | 264.7       |
| <b>Total</b> | <b>484</b>    | <b>122.5 *</b> | <b>75.5</b> | <b>332</b>    | <b>72.7 *</b> | <b>51.3</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

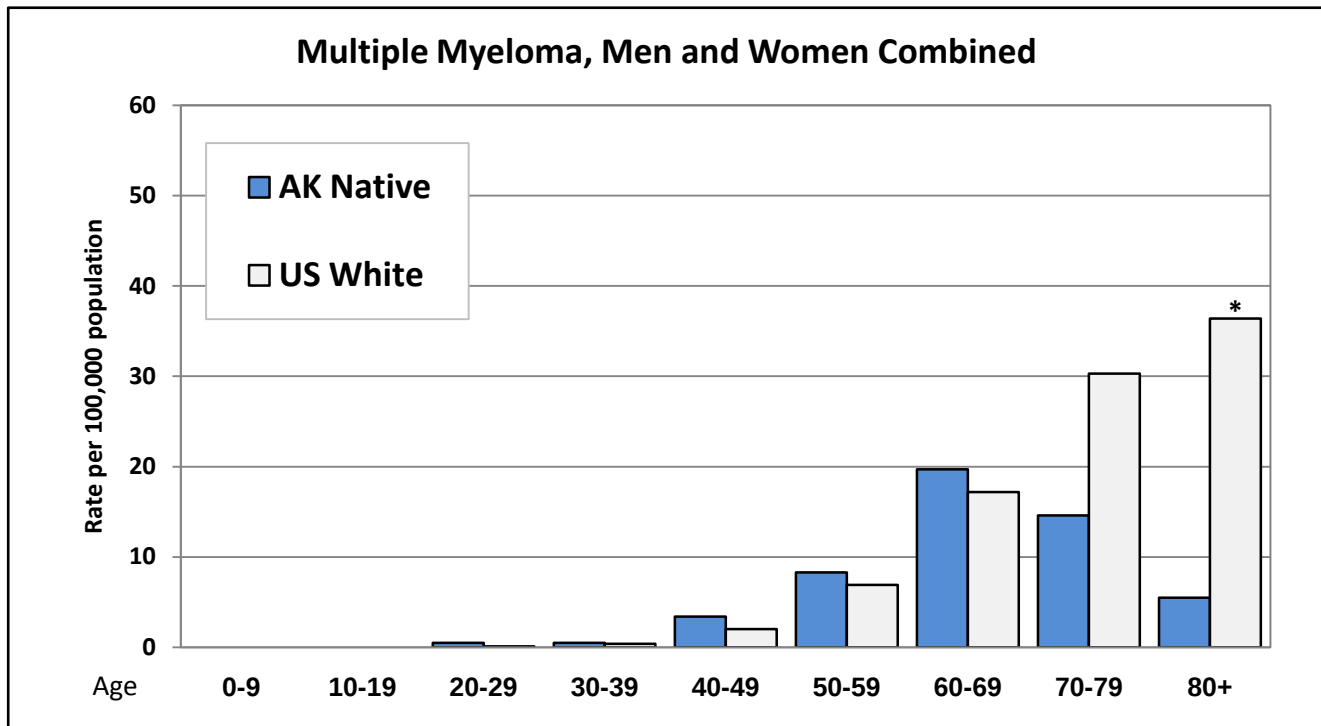
### Non-Hodgkin Lymphoma

| Age          | Men           |             |             | Women         |             |             |
|--------------|---------------|-------------|-------------|---------------|-------------|-------------|
|              | Alaska Native | US White    |             | Alaska Native | US White    |             |
|              | Number        | Rate        | Rate        | Number        | Rate        | Rate        |
| 0-9          | 1             | 0.6         | 1.0         | 2             | 1.2         | 0.5         |
| 10-19        | 2             | 1.1         | 1.9         | 2             | 1.3         | 1.0         |
| 20-29        | 1             | 0.9         | 3.7         | 3             | 2.9         | 2.2         |
| 30-39        | 7             | 6.4         | 9.7         | 5             | 4.4         | 4.7         |
| 40-49        | 12            | 11.8        | 17.5        | 12            | 11.5        | 10.3        |
| 50-59        | 13            | 20.1        | 33.3        | 15            | 22.2        | 23.5        |
| 60-69        | 14            | 38.5        | 66.4 *      | 7             | 18.5        | 48.2 *      |
| 70-79        | 8             | 46.2        | 115.3 *     | 8             | 35.5        | 82.8 *      |
| 80+          | 4             | 65.4        | 149.8       | 7             | 65.1        | 98.2        |
| <b>Total</b> | <b>62</b>     | <b>13.1</b> | <b>25.4</b> | <b>61</b>     | <b>11.2</b> | <b>17.1</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008

### Alaska Native and US White Populations



## Age-Specific Cancer Incidence Rates, 1994-2008

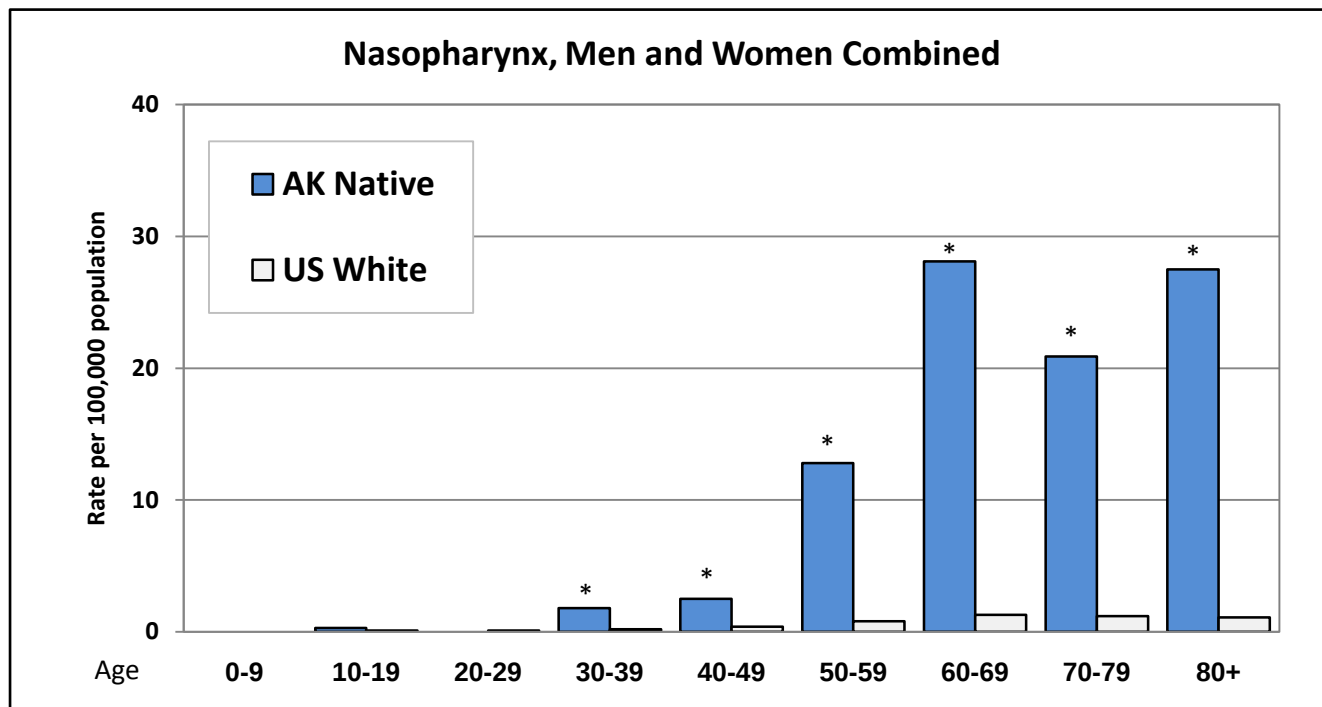
### Alaska Native and US White Populations

#### Multiple Myeloma

| Age          | Men           |            |            | Women         |            |            |
|--------------|---------------|------------|------------|---------------|------------|------------|
|              | Alaska Native | US White   |            | Alaska Native | US White   |            |
| Number       | Rate          | Rate       |            | Number        | Rate       | Rate       |
| 0-9          | 0             | 0          | 0          | 0             | 0          | 0          |
| 10-19        | 0             | 0          | 0          | 0             | 0          | 0          |
| 20-29        | 0             | 0          | 0.1        | 1             | 1.0        | 0          |
| 30-39        | 1             | 0.9        | 0.6        | 0             | 0          | 0.3        |
| 40-49        | 4             | 3.9        | 2.3        | 3             | 2.9        | 1.7        |
| 50-59        | 3             | 4.6        | 8.4        | 8             | 11.9       | 5.5        |
| 60-69        | 4             | 11.5       | 21.2       | 11            | 27.6       | 13.6       |
| 70-79        | 2             | 10.7       | 38.4       | 4             | 17.7       | 24.1       |
| 80+          | 0             | 0          | 51.0 *     | 1             | 9.3        | 28.9       |
| <b>Total</b> | <b>14</b>     | <b>2.7</b> | <b>6.9</b> | <b>28</b>     | <b>5.3</b> | <b>4.3</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



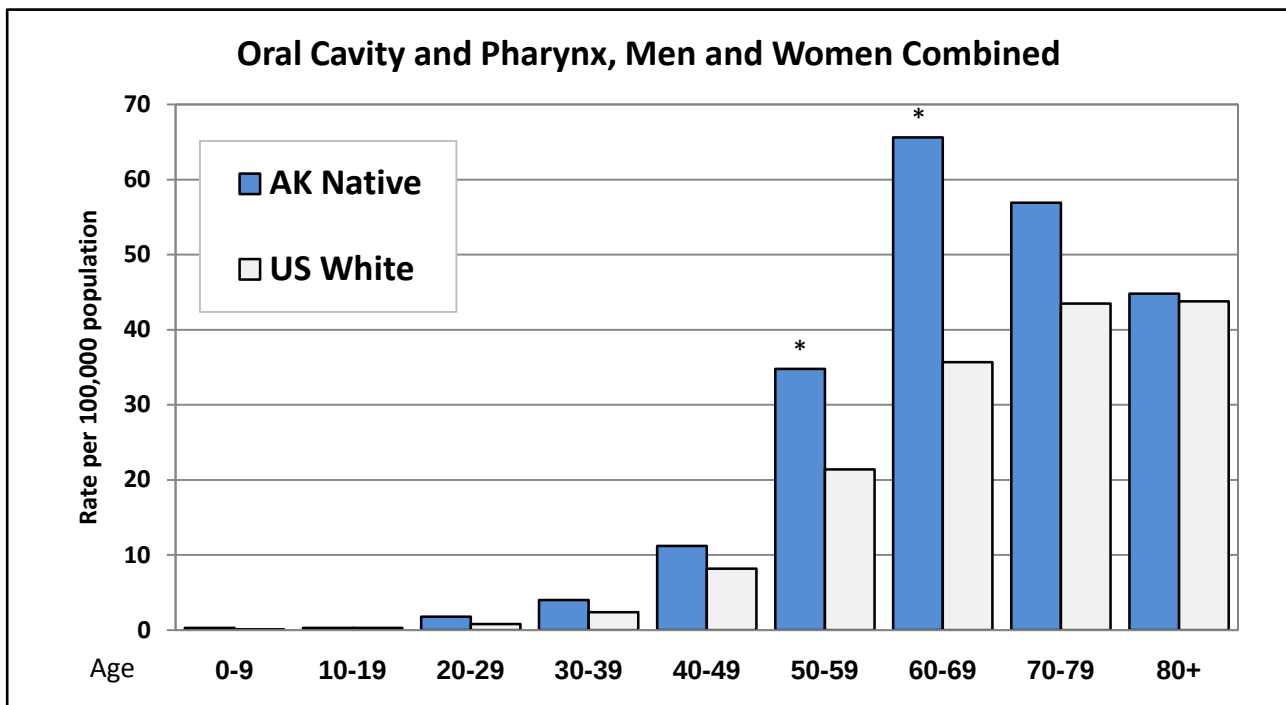
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Nasopharynx

| Age          | Men           |              |            | Women         |              |            |
|--------------|---------------|--------------|------------|---------------|--------------|------------|
|              | Alaska Native | US White     |            | Alaska Native | US White     |            |
|              | Number        | Rate         | Rate       | Number        | Rate         | Rate       |
| 0-9          | 0             | 0            | 0          | 0             | 0            | 0          |
| 10-19        | 0             | 0            | 0.1        | 1             | 0.6          | 0.1        |
| 20-29        | 0             | 0            | 0.1        | 0             | 0            | 0.1        |
| 30-39        | 3             | 2.7 *        | 0.2        | 1             | 0.9          | 0.1        |
| 40-49        | 5             | 5.0 *        | 0.5        | 0             | 0            | 0.2        |
| 50-59        | 11            | 16.9 *       | 1.3        | 6             | 8.9 *        | 0.4        |
| 60-69        | 13            | 37.2 *       | 1.7        | 8             | 19.9 *       | 0.9        |
| 70-79        | 7             | 35.1 *       | 1.6        | 2             | 8.9 *        | 0.8        |
| 80+          | 2             | 27.2 *       | 1.5        | 3             | 27.8 *       | 0.9        |
| <b>Total</b> | <b>41</b>     | <b>8.7 *</b> | <b>0.6</b> | <b>21</b>     | <b>4.1 *</b> | <b>0.2</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



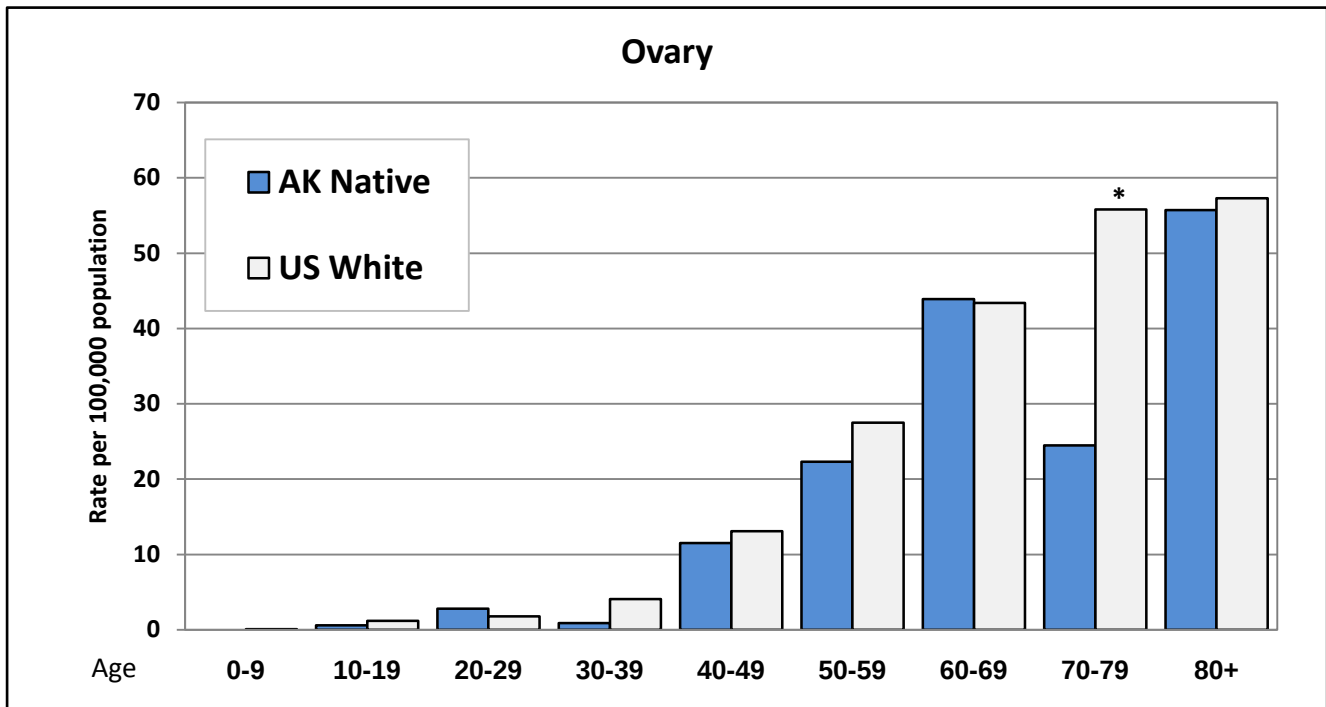
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Oral Cavity and Pharynx

| Men          |               |               |             | Women         |               |            |
|--------------|---------------|---------------|-------------|---------------|---------------|------------|
| Age          | Alaska Native |               | US White    | Alaska Native |               | US White   |
|              | Number        | Rate          |             | Number        | Rate          |            |
| 0-9          | 0             | 0             | 0.1         | 1             | 0.6           | 0.1        |
| 10-19        | 0             | 0             | 0.3         | 1             | 0.6           | 0.4        |
| 20-29        | 1             | 0.9           | 0.8         | 3             | 2.7           | 0.8        |
| 30-39        | 7             | 6.3           | 3.1         | 2             | 1.7           | 1.6        |
| 40-49        | 18            | 17.8          | 11.9        | 5             | 4.8           | 4.3        |
| 50-59        | 31            | 47.8          | 32.4        | 15            | 22.3 *        | 10.6       |
| 60-69        | 31            | 87.2 *        | 53.3        | 18            | 45.8 *        | 19.7       |
| 70-79        | 15            | 76.3          | 63.7        | 9             | 40.4          | 28.0       |
| 80+          | 4             | 59.9          | 66.6        | 4             | 37.1          | 32.0       |
| <b>Total</b> | <b>107</b>    | <b>22.0 *</b> | <b>15.9</b> | <b>58</b>     | <b>11.0 *</b> | <b>6.4</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



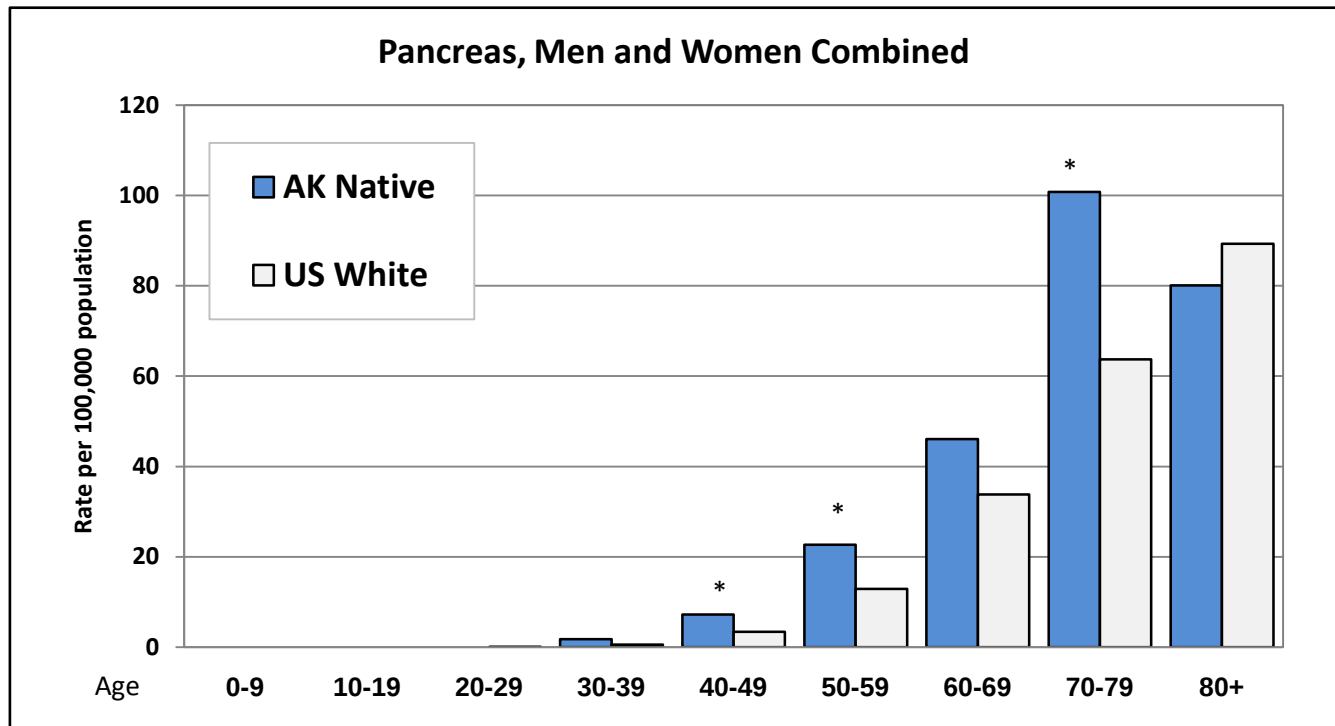
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Ovary

| Age          | Alaska Native |             | US White    |
|--------------|---------------|-------------|-------------|
|              | Number        | Rate        | Rate        |
| 0-9          | 0             | 0           | 0.1         |
| 10-19        | 1             | 0.6         | 1.2         |
| 20-29        | 3             | 2.8         | 1.8         |
| 30-39        | 1             | 0.9         | 4.1         |
| 40-49        | 12            | 11.5        | 13.1        |
| 50-59        | 15            | 22.3        | 27.5        |
| 60-69        | 17            | 43.9        | 43.4        |
| 70-79        | 6             | 24.5        | 55.8 *      |
| 80+          | 6             | 55.7        | 57.3        |
| <b>Total</b> | <b>61</b>     | <b>11.3</b> | <b>14.5</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



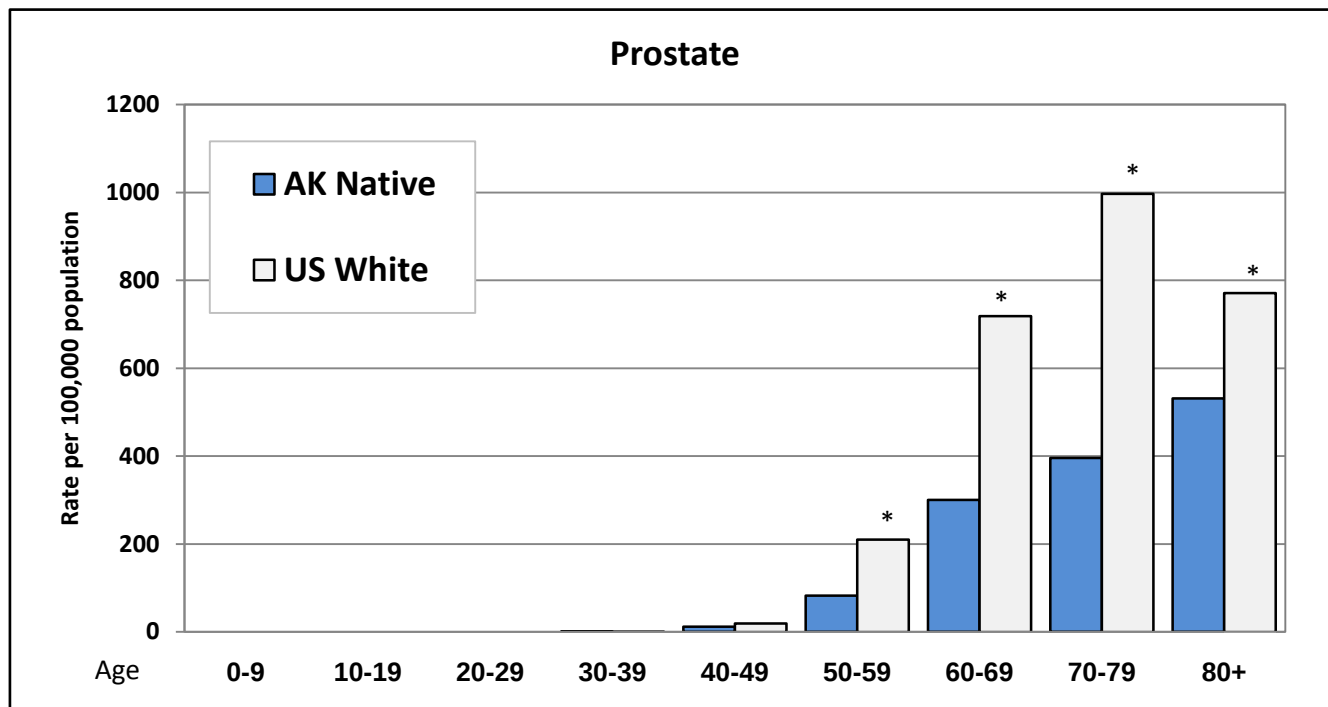
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Pancreas

| Age          | Men           |              |             | Women         |               |            |
|--------------|---------------|--------------|-------------|---------------|---------------|------------|
|              | Alaska Native | US White     |             | Alaska Native | US White      |            |
|              | Number        | Rate         | Rate        | Number        | Rate          | Rate       |
| 0-9          | 0             | 0            | 0           | 0             | 0             | 0          |
| 10-19        | 0             | 0            | 0           | 0             | 0             | 0          |
| 20-29        | 0             | 0            | 0.1         | 0             | 0             | 0.1        |
| 30-39        | 2             | 1.8          | 0.7         | 2             | 1.7           | 0.6        |
| 40-49        | 9             | 8.8          | 4.1         | 6             | 5.7           | 2.7        |
| 50-59        | 14            | 21.5         | 15.5        | 16            | 23.8 *        | 10.4       |
| 60-69        | 19            | 55.2         | 39.9        | 15            | 38.2          | 28.3       |
| 70-79        | 21            | 111.8        | 71.4        | 22            | 92.3          | 57.8       |
| 80+          | 7             | 111.7        | 99.2        | 7             | 64.9          | 83.9       |
| <b>Total</b> | <b>72</b>     | <b>18.4*</b> | <b>12.9</b> | <b>68</b>     | <b>14.2 *</b> | <b>9.9</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



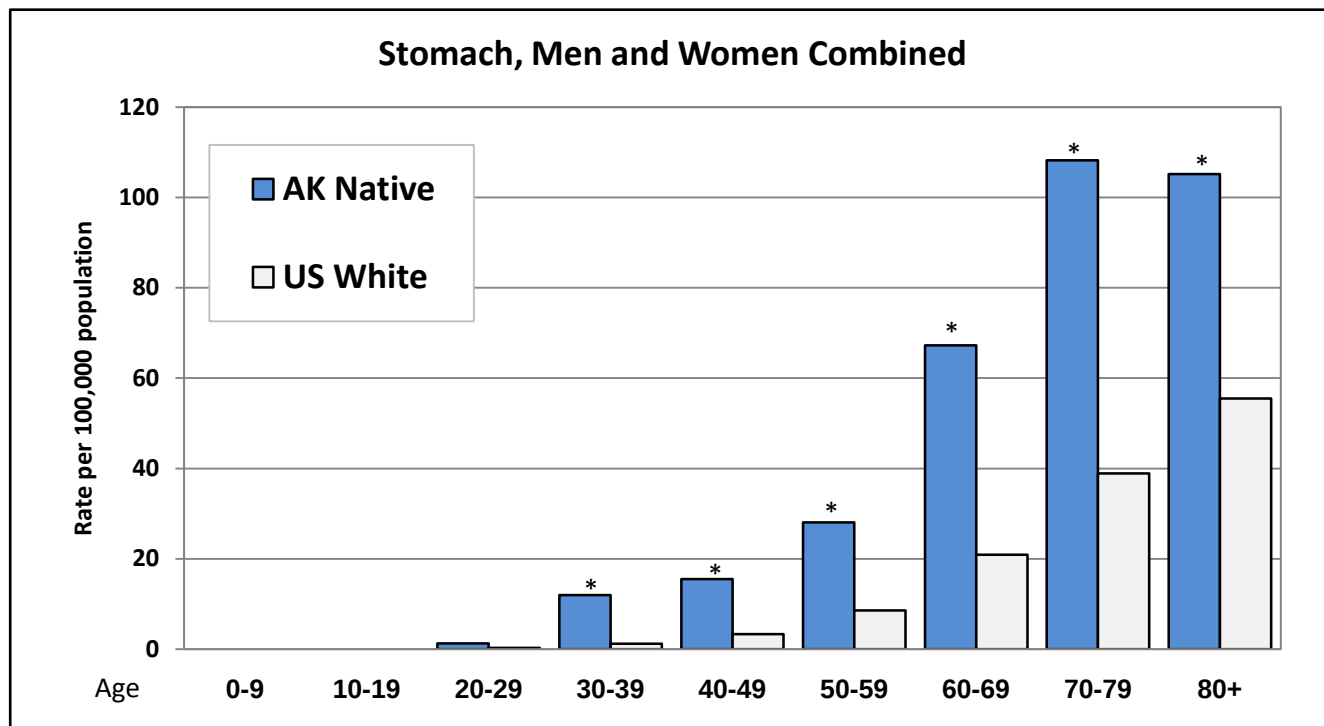
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Prostate

| Age          | Alaska Native |             | US White       |
|--------------|---------------|-------------|----------------|
|              | Number        | Rate        | Rate           |
| 0-9          | 0             | 0           | 0              |
| 10-19        | 0             | 0           | 0              |
| 20-29        | 0             | 0           | 0              |
| 30-39        | 1             | 0.9         | 0.4            |
| 40-49        | 12            | 11.8        | 19.4           |
| 50-59        | 53            | 82.5        | 210.2 *        |
| 60-69        | 108           | 300.5       | 718.2 *        |
| 70-79        | 77            | 395.8       | 997.1 *        |
| 80+          | 35            | 530.9       | 770.9 *        |
| <b>Total</b> | <b>286</b>    | <b>74.1</b> | <b>163.2 *</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



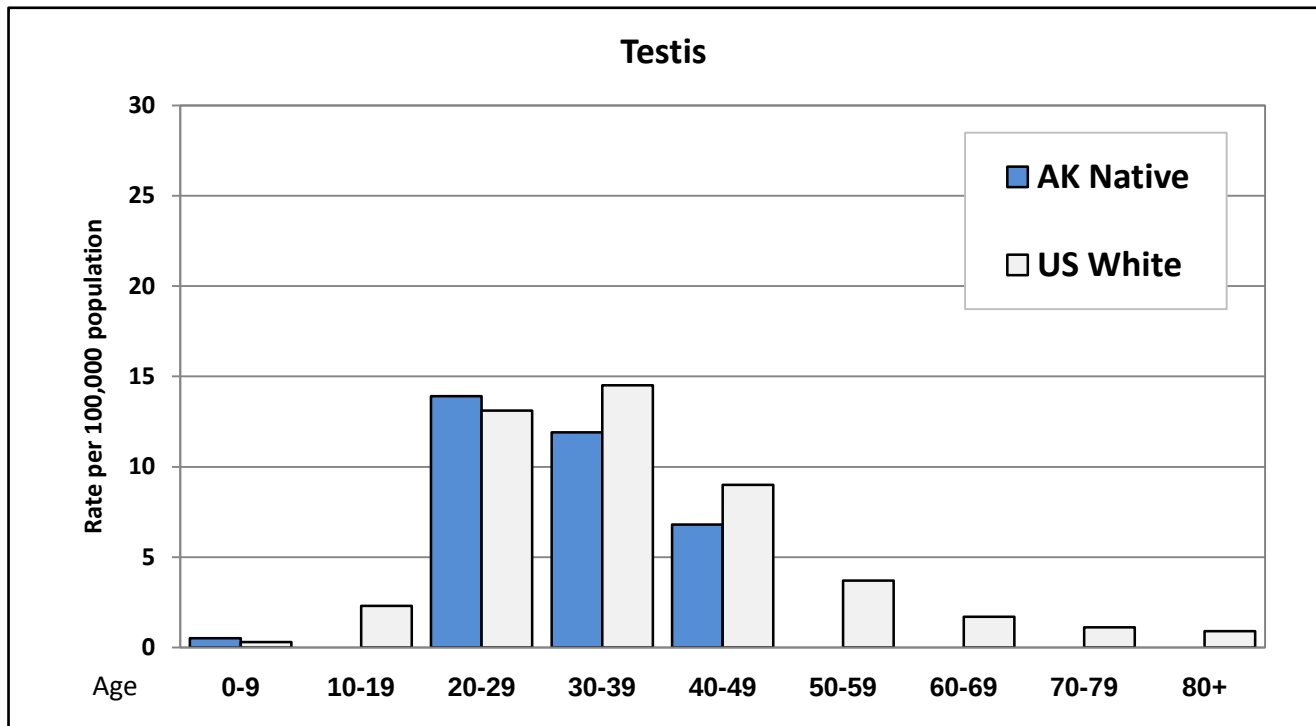
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Stomach

| Age          | Men           |               |             | Women         |               |            |
|--------------|---------------|---------------|-------------|---------------|---------------|------------|
|              | Alaska Native |               | US White    | Alaska Native |               | US White   |
|              | Number        | Rate          | Rate        | Number        | Rate          | Rate       |
| 0-9          | 0             | 0             | 0           | 0             | 0             | 0          |
| 10-19        | 0             | 0             | 0           | 0             | 0             | 0.1        |
| 20-29        | 0             | 0             | 0.3         | 3             | 2.8 *         | 0.3        |
| 30-39        | 11            | 9.4 *         | 1.4         | 16            | 14.4 *        | 1.1        |
| 40-49        | 22            | 21.7 *        | 4.1         | 10            | 9.6 *         | 2.6        |
| 50-59        | 27            | 41.7 *        | 11.7        | 10            | 14.9 *        | 5.5        |
| 60-69        | 31            | 86.4 *        | 30.6        | 19            | 49.6 *        | 12.1       |
| 70-79        | 28            | 145.3 *       | 57.7        | 17            | 77.0 *        | 24.6       |
| 80+          | 12            | 196.3 *       | 82.5        | 6             | 55.7          | 41.5       |
| <b>Total</b> | <b>131</b>    | <b>30.8 *</b> | <b>10.6</b> | <b>81</b>     | <b>15.7 *</b> | <b>4.9</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



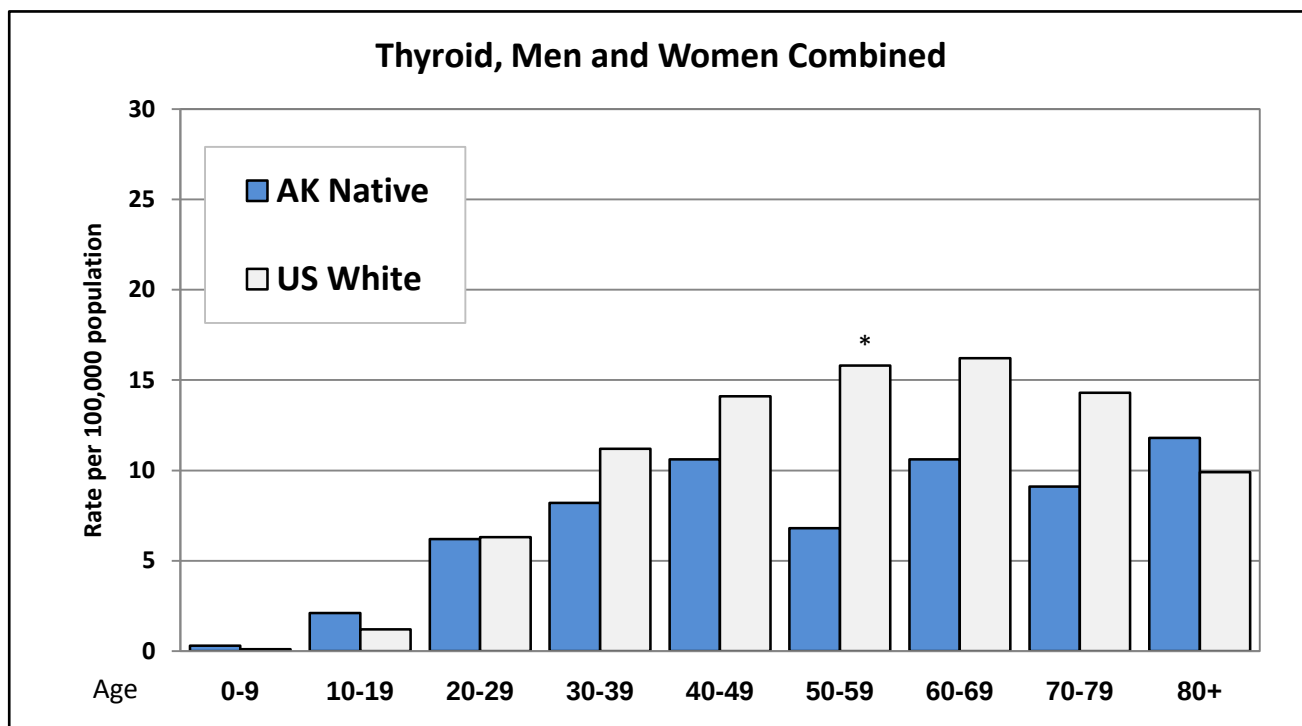
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Testis

| Age          | Alaska Native |            | US White   |
|--------------|---------------|------------|------------|
|              | Number        | Rate       | Rate       |
| 0-9          | 1             | 0.5        | 0.3        |
| 10-19        | 0             | 0          | 2.3        |
| 20-29        | 16            | 13.9       | 13.1       |
| 30-39        | 14            | 11.9       | 14.5       |
| 40-49        | 7             | 6.8        | 9.0        |
| 50-59        | 0             | 0          | 3.7        |
| 60-69        | 0             | 0          | 1.7        |
| 70-79        | 0             | 0          | 1.1        |
| 80+          | 0             | 0          | 0.9        |
| <b>Total</b> | <b>38</b>     | <b>4.7</b> | <b>6.3</b> |

All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



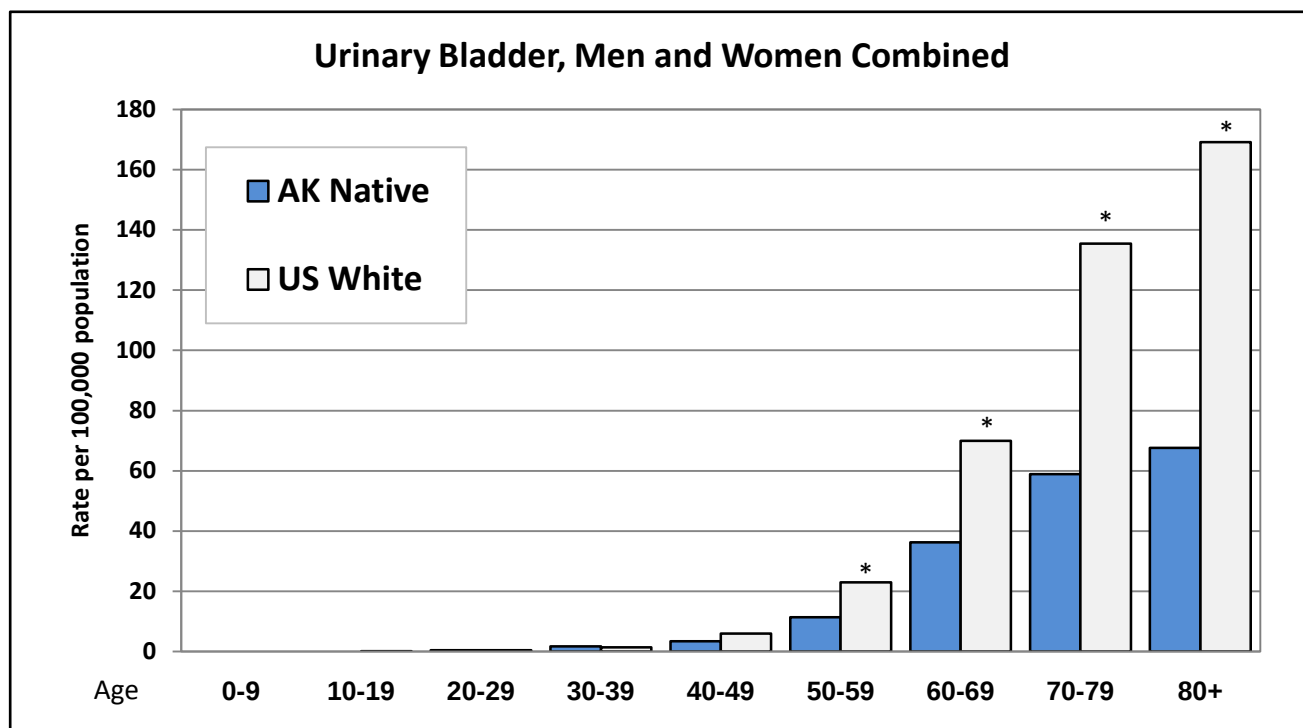
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Thyroid

| Age          | Men           |            |            | Women         |            |               |
|--------------|---------------|------------|------------|---------------|------------|---------------|
|              | Alaska Native | US White   |            | Alaska Native | US White   |               |
|              | Number        | Rate       | Rate       | Number        | Rate       | Rate          |
| 0-9          | 1             | 0.6        | 0          | 0             | 0          | 0.1           |
| 10-19        | 2             | 1.2        | 0.4        | 5             | 3.2        | 2.1           |
| 20-29        | 1             | 0.9        | 1.9        | 13            | 11.9       | 11.0          |
| 30-39        | 4             | 3.5        | 4.1        | 15            | 12.9       | 18.8          |
| 40-49        | 3             | 3.0        | 6.2        | 19            | 18.0       | 22.1          |
| 50-59        | 2             | 3.1        | 9.2        | 7             | 10.3       | 22.2 *        |
| 60-69        | 3             | 8.6        | 11.7       | 5             | 12.6       | 20.4          |
| 70-79        | 2             | 10.7       | 11.3       | 2             | 7.8        | 16.7          |
| 80+          | 1             | 19.1       | 8.1        | 1             | 9.3        | 10.9          |
| <b>Total</b> | <b>19</b>     | <b>3.6</b> | <b>4.7</b> | <b>67</b>     | <b>9.6</b> | <b>13.3 *</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



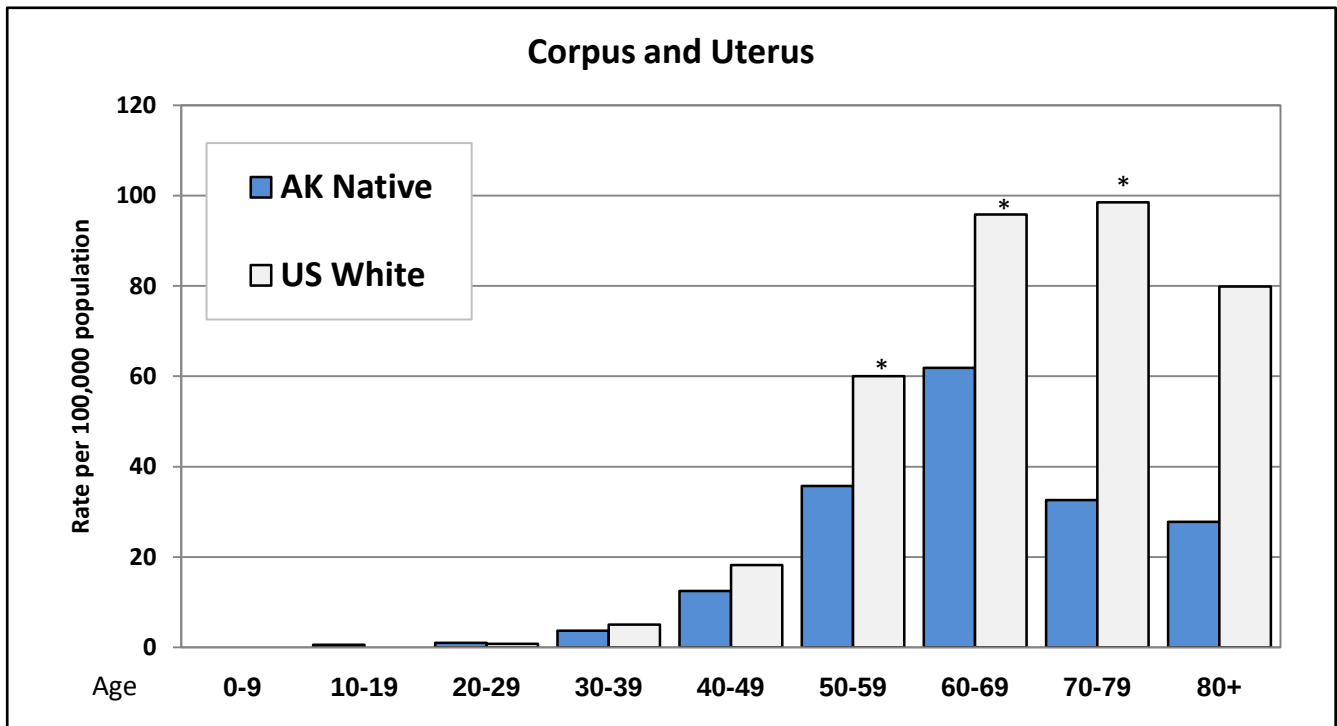
## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Urinary Bladder

| Age          | Men           |             |               | Women         |            |              |
|--------------|---------------|-------------|---------------|---------------|------------|--------------|
|              | Alaska Native | US White    |               | Alaska Native | US White   |              |
|              | Number        | Rate        | Rate          | Number        | Rate       | Rate         |
| 0-9          | 0             | 0           | 0             | 0             | 0          | 0            |
| 10-19        | 0             | 0           | 0.1           | 0             | 0          | 0            |
| 20-29        | 0             | 0           | 0.5           | 1             | 0.9        | 0.3          |
| 30-39        | 3             | 2.7         | 2.0           | 1             | 0.8        | 0.7          |
| 40-49        | 5             | 5.0         | 9.0           | 2             | 1.9        | 2.9          |
| 50-59        | 12            | 18.6        | 35.6 *        | 3             | 4.4        | 10.8         |
| 60-69        | 25            | 70.1        | 114.5 *       | 2             | 4.9        | 29.8 *       |
| 70-79        | 19            | 101.1       | 240.9 *       | 5             | 23.8       | 55.4         |
| 80+          | 7             | 106.2       | 349.8 *       | 5             | 46.3       | 76.4         |
| <b>Total</b> | <b>71</b>     | <b>17.8</b> | <b>39.9 *</b> | <b>19</b>     | <b>4.3</b> | <b>9.8 *</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.

## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations



## Age-Specific Cancer Incidence Rates, 1994-2008 Alaska Native and US White Populations

### Corpus and Uterus

| Age          | Alaska Native |             | US White      |
|--------------|---------------|-------------|---------------|
|              | Number        | Rate        | Rate          |
| 0-9          | 0             | 0           | 0             |
| 10-19        | 1             | 0.6         | 0             |
| 20-29        | 1             | 1.0         | 0.8           |
| 30-39        | 4             | 3.7         | 5.0           |
| 40-49        | 13            | 12.5        | 18.2          |
| 50-59        | 24            | 35.7        | 60.0 *        |
| 60-69        | 24            | 61.9        | 95.8 *        |
| 70-79        | 7             | 32.6        | 98.5 *        |
| 80+          | 3             | 27.8        | 79.9          |
| <b>Total</b> | <b>77</b>     | <b>14.0</b> | <b>25.8 *</b> |

\* Incidence rate is statistically higher than comparison rate,  $p < 0.05$ . All rates are expressed as per 100,000 population.



## Alaska Native Tumor Registry

# 40-Year Cancer Incidence Rates, 1969-2008

**Number of Invasive Cancers**  
**Alaska Native Men and Women 1969-2008**

| Five-Year Period :             | '69-'73 | 74-'78 | '79-'83 | 84-'88 | 89-'93 | 94-'98 | 99-'03 | 04-'08 |
|--------------------------------|---------|--------|---------|--------|--------|--------|--------|--------|
| All Sites                      | 396     | 489    | 624     | 842    | 1016   | 1,301  | 1,580  | 1,819  |
| Oral Cavity and Pharynx        | 27      | 34     | 24      | 37     | 46     | 54     | 58     | 53     |
| Nasopharynx                    | 12      | 24     | 12      | 18     | 24     | 20     | 24     | 18     |
| Digestive System               | 144     | 155    | 206     | 266    | 298    | 407    | 518    | 559    |
| Esophagus                      | 7       | 8      | 12      | 12     | 14     | 23     | 23     | 31     |
| Stomach                        | 18      | 21     | 32      | 39     | 49     | 59     | 71     | 82     |
| Colon and Rectum               | 73      | 84     | 105     | 151    | 177    | 242    | 298    | 312    |
| Colon excluding Rectum         | 47      | 61     | 82      | 116    | 142    | 168    | 209    | 228    |
| Rectosigmoid Junction          | 6       | 8      | 9       | 10     | 9      | 18     | 18     | 24     |
| Rectum                         | 20      | 15     | 14      | 25     | 26     | 56     | 71     | 60     |
| Liver                          | 10      | 13     | 15      | 16     | 14     | 22     | 24     | 31     |
| Gallbladder                    | 11      | 12     | 12      | 9      | 8      | 7      | 16     | 8      |
| Other Biliary                  | 5       | 1      | 0       | 8      | 8      | 6      | 12     | 12     |
| Pancreas                       | 13      | 14     | 18      | 25     | 23     | 37     | 49     | 54     |
| Respiratory System             | 45      | 72     | 103     | 181    | 182    | 265    | 272    | 327    |
| Larynx                         | 0       | 1      | 6       | 5      | 6      | 6      | 12     | 12     |
| Lung and Bronchus              | 43      | 69     | 95      | 173    | 174    | 249    | 255    | 312    |
| Bones and Joints               | 4       | 3      | 2       | 7      | 5      | 3      | 5      | 6      |
| Soft Tissue including Heart    | 4       | 5      | 2       | 4      | 3      | 8      | 9      | 14     |
| Melanoma of the Skin           | 1       | 2      | 2       | 2      | 4      | 7      | 4      | 7      |
| Other Non-Epithelial Skin      | 0       | 0      | 0       | 2      | 5      | 5      | 3      | 8      |
| Breast                         | 27      | 43     | 54      | 95     | 135    | 217    | 251    | 279    |
| Urinary System                 | 26      | 29     | 29      | 63     | 57     | 72     | 97     | 113    |
| Urinary Bladder                | 9       | 8      | 11      | 19     | 12     | 18     | 33     | 39     |
| Kidney and Renal Pelvis        | 17      | 20     | 17      | 44     | 43     | 53     | 62     | 74     |
| Eye and Orbit                  | 1       | 0      | 4       | 1      | 2      | 2      | 1      | 2      |
| Brain and Other Nervous System | 7       | 7      | 5       | 9      | 6      | 12     | 10     | 26     |
| Endocrine System               | 10      | 12     | 13      | 15     | 15     | 18     | 38     | 36     |
| Thyroid                        | 10      | 11     | 11      | 13     | 15     | 17     | 37     | 32     |
| Lymphoma                       | 8       | 8      | 23      | 19     | 24     | 30     | 49     | 54     |
| Hodgkin Lymphoma               | 0       | 1      | 4       | 3      | 5      | 4      | 3      | 3      |
| Non-Hodgkin Lymphoma           | 8       | 7      | 19      | 16     | 19     | 26     | 46     | 51     |
| Myeloma                        | 6       | 4      | 6       | 6      | 9      | 6      | 15     | 21     |
| Leukemia                       | 10      | 8      | 8       | 14     | 22     | 29     | 27     | 48     |
| Miscellaneous                  | 29      | 43     | 42      | 29     | 36     | 26     | 38     | 38     |

**Number of Invasive Cancers  
Alaska Native Men 1969-2008**

| <b>Five-Year Period :</b>      | <b>'69-'73</b> | <b>74-'78</b> | <b>'79-'83</b> | <b>84-'88</b> | <b>89-'93</b> | <b>94-'98</b> | <b>99-'03</b> | <b>04-'08</b> |
|--------------------------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|
| All Sites                      | 209            | 254           | 319            | 387           | 507           | 623           | 740           | 827           |
| Oral Cavity and Pharynx        | 14             | 22            | 9              | 23            | 33            | 36            | 39            | 32            |
| Nasopharynx                    | 9              | 17            | 6              | 12            | 20            | 15            | 17            | 9             |
| Digestive System               | 77             | 88            | 116            | 135           | 166           | 219           | 259           | 292           |
| Esophagus                      | 6              | 5             | 9              | 8             | 11            | 14            | 18            | 15            |
| Stomach                        | 12             | 17            | 25             | 26            | 37            | 40            | 38            | 53            |
| Colon and Rectum               | 36             | 45            | 49             | 67            | 90            | 125           | 138           | 148           |
| Colon excluding Rectum         | 22             | 29            | 39             | 48            | 75            | 85            | 87            | 98            |
| Rectosigmoid Junction          | 3              | 6             | 3              | 5             | 4             | 9             | 14            | 16            |
| Rectum                         | 11             | 10            | 7              | 14            | 11            | 31            | 37            | 34            |
| Liver                          | 9              | 10            | 13             | 11            | 10            | 12            | 15            | 20            |
| Gallbladder                    | 2              | 2             | 5              | 2             | 3             | 4             | 5             | 4             |
| Other Biliary                  | 2              | 1             | 0              | 7             | 5             | 2             | 7             | 7             |
| Pancreas                       | 8              | 7             | 9              | 12            | 7             | 16            | 27            | 29            |
| Respiratory System             | 36             | 58            | 75             | 103           | 116           | 174           | 156           | 186           |
| Larynx                         | 0              | 1             | 6              | 1             | 6             | 4             | 8             | 9             |
| Lung and Bronchus              | 34             | 55            | 67             | 99            | 109           | 163           | 146           | 175           |
| Bones and Joints               | 4              | 0             | 0              | 4             | 4             | 1             | 4             | 4             |
| Soft Tissue including Heart    | 4              | 4             | 0              | 2             | 2             | 5             | 4             | 6             |
| Melanoma of the Skin           | 0              | 1             | 1              | 0             | 1             | 2             | 1             | 3             |
| Other Non-Epithelial Skin      | 0              | 0             | 0              | 2             | 4             | 4             | 2             | 4             |
| Breast                         | 0              | 0             | 1              | 0             | 0             | 0             | 2             | 2             |
| Male Genital System            | 23             | 24            | 42             | 40            | 91            | 83            | 125           | 124           |
| Prostate                       | 16             | 15            | 35             | 30            | 77            | 71            | 107           | 108           |
| Testis                         | 4              | 8             | 6              | 8             | 11            | 9             | 17            | 12            |
| Urinary System                 | 15             | 17            | 17             | 35            | 33            | 42            | 68            | 74            |
| Urinary Bladder                | 7              | 6             | 8              | 14            | 9             | 15            | 26            | 30            |
| Kidney and Renal Pelvis        | 8              | 10            | 9              | 21            | 22            | 26            | 41            | 44            |
| Eye and Orbit                  | 0              | 0             | 3              | 0             | 0             | 1             | 1             | 2             |
| Brain and Other Nervous System | 3              | 5             | 3              | 5             | 4             | 6             | 6             | 9             |
| Endocrine System               | 0              | 5             | 5              | 4             | 1             | 3             | 6             | 14            |
| Thyroid                        | 0              | 4             | 3              | 2             | 1             | 2             | 5             | 12            |
| Lymphoma                       | 6              | 4             | 18             | 10            | 12            | 13            | 30            | 25            |
| Hodgkin Lymphoma               | 0              | 1             | 2              | 1             | 2             | 1             | 2             | 3             |
| Non-Hodgkin Lymphoma           | 6              | 3             | 16             | 9             | 10            | 12            | 28            | 22            |
| Myeloma                        | 4              | 4             | 4              | 2             | 6             | 2             | 3             | 9             |
| Leukemia                       | 8              | 5             | 5              | 8             | 12            | 17            | 15            | 26            |
| Miscellaneous                  | 15             | 17            | 20             | 14            | 22            | 15            | 19            | 15            |

**Number of Invasive Cancers  
Alaska Native Women 1969-2008**

| <b>Five-Year Period :</b>      | <b>'69-'73</b> | <b>74-'78</b> | <b>'79-'83</b> | <b>84-'88</b> | <b>89-'93</b> | <b>94-'98</b> | <b>99-'03</b> | <b>04-'08</b> |
|--------------------------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|
| All Sites                      | 187            | 235           | 305            | 455           | 509           | 678           | 840           | 992           |
| Oral Cavity and Pharynx        | 13             | 12            | 15             | 14            | 13            | 18            | 19            | 21            |
| Nasopharynx                    | 3              | 7             | 6              | 6             | 4             | 5             | 7             | 9             |
| Digestive System               | 67             | 67            | 90             | 131           | 132           | 188           | 259           | 267           |
| Esophagus                      | 1              | 3             | 3              | 4             | 3             | 9             | 5             | 16            |
| Stomach                        | 6              | 4             | 7              | 13            | 12            | 19            | 33            | 29            |
| Colon and Rectum               | 37             | 39            | 56             | 84            | 87            | 117           | 160           | 164           |
| Colon excluding Rectum         | 25             | 32            | 43             | 68            | 67            | 83            | 122           | 130           |
| Rectosigmoid Junction          | 3              | 2             | 6              | 5             | 5             | 9             | 4             | 8             |
| Rectum                         | 9              | 5             | 7              | 11            | 15            | 25            | 34            | 26            |
| Liver                          | 1              | 3             | 2              | 5             | 4             | 10            | 9             | 11            |
| Gallbladder                    | 9              | 10            | 7              | 7             | 5             | 3             | 11            | 4             |
| Other Biliary                  | 3              | 0             | 0              | 1             | 3             | 4             | 5             | 5             |
| Pancreas                       | 5              | 7             | 9              | 13            | 16            | 21            | 22            | 25            |
| Respiratory System             | 9              | 14            | 28             | 78            | 66            | 91            | 116           | 141           |
| Larynx                         | 0              | 0             | 0              | 4             | 0             | 2             | 4             | 3             |
| Lung and Bronchus              | 9              | 14            | 28             | 74            | 65            | 86            | 109           | 137           |
| Bones and Joints               | 0              | 3             | 2              | 3             | 1             | 2             | 1             | 2             |
| Soft Tissue including Heart    | 0              | 1             | 2              | 2             | 1             | 3             | 5             | 8             |
| Melanoma of the Skin           | 1              | 1             | 1              | 2             | 3             | 5             | 3             | 4             |
| Other Non-Epithelial Skin      | 0              | 0             | 0              | 0             | 1             | 1             | 1             | 4             |
| Breast                         | 27             | 43            | 53             | 95            | 135           | 217           | 249           | 277           |
| Female Genital System          | 24             | 40            | 59             | 52            | 76            | 57            | 60            | 104           |
| Cervix Uteri                   | 12             | 27            | 41             | 29            | 29            | 16            | 20            | 28            |
| Corpus and Uterus, NOS         | 3              | 3             | 5              | 6             | 15            | 16            | 23            | 38            |
| Ovary                          | 8              | 9             | 10             | 14            | 25            | 21            | 12            | 28            |
| Urinary System                 | 11             | 12            | 12             | 28            | 24            | 30            | 29            | 39            |
| Urinary Bladder                | 2              | 2             | 3              | 5             | 3             | 3             | 7             | 9             |
| Kidney and Renal Pelvis        | 9              | 10            | 8              | 23            | 21            | 27            | 21            | 30            |
| Eye and Orbit                  | 1              | 0             | 1              | 1             | 2             | 1             | 0             | 0             |
| Brain and Other Nervous System | 4              | 2             | 2              | 4             | 2             | 6             | 4             | 17            |
| Endocrine System               | 10             | 7             | 8              | 11            | 14            | 15            | 32            | 22            |
| Thyroid                        | 10             | 7             | 8              | 11            | 14            | 15            | 32            | 20            |
| Lymphoma                       | 2              | 4             | 5              | 9             | 12            | 17            | 19            | 29            |
| Hodgkin Lymphoma               | 0              | 0             | 2              | 2             | 3             | 3             | 1             | 0             |
| Non-Hodgkin Lymphoma           | 2              | 4             | 3              | 7             | 9             | 14            | 18            | 29            |
| Myeloma                        | 2              | 0             | 2              | 4             | 3             | 4             | 12            | 12            |
| Leukemia                       | 2              | 3             | 3              | 6             | 10            | 12            | 12            | 22            |
| Miscellaneous                  | 14             | 26            | 22             | 15            | 14            | 11            | 19            | 23            |

**Average Annual Age-Adjusted Cancer Incidence Rates per 100,000**  
**Alaska Native Men and Women 1969-2008**

| Five-Year Period :             | '69-'73 | 74-'78 | '79-'83 | 84-'88 | 89-'93 | 94-'98 | 99-'03 | 04-'08 |
|--------------------------------|---------|--------|---------|--------|--------|--------|--------|--------|
| All Sites                      | 370.7   | 373.0  | 410.4   | 453.8  | 472.9  | 487.7  | 509.5  | 491.4  |
| Oral Cavity and Pharynx        | 18.9    | 20.9   | 14.4    | 18.9   | 21.1   | 19.0   | 17.7   | 13.0   |
| Nasopharynx                    | 9.2     | 14.8   | 6.6     | 8.6    | 10.3   | 7.9    | 7.7    | 4.2    |
| Digestive System               | 161.9   | 132.2  | 144.5   | 155.3  | 151.7  | 164.9  | 181.3  | 156.7  |
| Esophagus                      | 9.4     | 7.1    | 9.0     | 8.1    | 7.1    | 9.6    | 8.7    | 8.8    |
| Stomach                        | 20.2    | 14.7   | 22.0    | 20.6   | 21.1   | 19.7   | 25.1   | 21.7   |
| Colon and Rectum               | 83.3    | 77.9   | 76.8    | 92.3   | 95.1   | 102.8  | 104.1  | 87.9   |
| Colon excluding Rectum         | 56.1    | 55.9   | 59.0    | 71.9   | 78.0   | 75.5   | 74.8   | 66.5   |
| Rectosigmoid Junction          | 7.5     | 6.5    | 6.2     | 6.1    | 5.1    | 6.2    | 5.6    | 6.3    |
| Rectum                         | 19.7    | 15.6   | 11.6    | 14.2   | 12.0   | 21.1   | 23.7   | 15.1   |
| Liver                          | 7.1     | 7.3    | 6.8     | 7.3    | 5.0    | 7.4    | 8.0    | 8.2    |
| Gallbladder                    | 16.4    | 11.8   | 9.5     | 6.1    | 4.1    | 3.6    | 6.3    | 2.7    |
| Other Biliary                  | 4.7     | 0.6    | 0.0     | 4.6    | 4.1    | 2.2    | 4.4    | 4.0    |
| Pancreas                       | 12.6    | 10.8   | 11.8    | 12.8   | 12.7   | 15.5   | 15.8   | 16.1   |
| Respiratory System             | 38.6    | 58.5   | 67.1    | 103.0  | 95.2   | 106.9  | 96.6   | 98.7   |
| Larynx                         | 0.0     | 0.6    | 3.2     | 2.1    | 2.7    | 2.2    | 3.5    | 2.8    |
| Lung and Bronchus              | 37.2    | 56.6   | 62.9    | 98.8   | 91.7   | 101.1  | 91.1   | 94.8   |
| Bones and Joints               | 3.8     | 1.7    | 0.4     | 2.9    | 1.4    | 0.8    | 1.4    | 1.3    |
| Soft Tissue including Heart    | 4.8     | 2.8    | 1.6     | 2.2    | 0.7    | 1.8    | 1.9    | 3.2    |
| Melanoma of the Skin           | 0.7     | 1.3    | 0.9     | 1.3    | 1.5    | 1.7    | 1.0    | 1.4    |
| Other Non-Epithelial Skin      | 0.0     | 0.0    | 0.0     | 1.3    | 2.6    | 1.8    | 1.2    | 2.2    |
| Breast                         | 19.4    | 26.7   | 31.8    | 45.4   | 55.0   | 73.7   | 68.4   | 67.6   |
| Urinary System                 | 22.3    | 21.4   | 22.5    | 37.3   | 27.1   | 28.5   | 32.8   | 31.7   |
| Urinary Bladder                | 8.2     | 7.4    | 9.5     | 10.3   | 6.4    | 7.0    | 12.5   | 11.3   |
| Kidney and Renal Pelvis        | 14.0    | 12.6   | 12.4    | 27.0   | 19.6   | 20.8   | 19.7   | 20.4   |
| Eye and Orbit                  | 0.2     | 0.0    | 1.1     | 0.1    | 0.2    | 0.3    | 0.3    | 0.9    |
| Brain and Other Nervous System | 2.0     | 2.9    | 2.0     | 2.3    | 1.5    | 2.2    | 2.4    | 5.4    |
| Endocrine System               | 4.6     | 7.2    | 6.6     | 6.3    | 4.3    | 4.7    | 8.3    | 7.7    |
| Thyroid                        | 4.6     | 6.6    | 5.6     | 5.6    | 4.3    | 4.5    | 8.1    | 6.9    |
| Lymphoma                       | 6.7     | 5.1    | 15.6    | 9.0    | 9.0    | 9.7    | 13.3   | 14.5   |
| Hodgkin Lymphoma               | 0.0     | 0.2    | 2.1     | 0.8    | 1.0    | 1.0    | 0.7    | 0.5    |
| Non-Hodgkin Lymphoma           | 6.7     | 4.9    | 13.5    | 8.2    | 8.0    | 8.7    | 12.6   | 14.0   |
| Myeloma                        | 4.3     | 3.9    | 4.3     | 3.2    | 4.2    | 2.1    | 4.6    | 5.1    |
| Leukemia                       | 8.4     | 3.5    | 3.2     | 5.1    | 4.9    | 7.2    | 5.6    | 10.9   |
| Miscellaneous                  | 35.1    | 37.2   | 33.5    | 17.8   | 17.9   | 9.4    | 14.9   | 11.8   |

Five year average-annual rates age-adjusted to the Census 2000 US Standard population.

**Average Annual Age-Adjusted Cancer Incidence Rates per 100,000**  
**Alaska Native Men 1969-2008**

| Five-Year Period :             | '69-'73 | 74-'78 | '79-'83 | 84-'88 | 89-'93 | 94-'98 | 99-'03 | 04-'08 |
|--------------------------------|---------|--------|---------|--------|--------|--------|--------|--------|
| All Sites                      | 404.0   | 384.0  | 437.4   | 452.6  | 521.5  | 527.8  | 546.6  | 499.6  |
| Oral Cavity and Pharynx        | 20.0    | 26.1   | 9.4     | 23.3   | 31.0   | 28.0   | 24.3   | 16.3   |
| Nasopharynx                    | 14.0    | 20.2   | 6.6     | 12.0   | 17.8   | 13.5   | 10.3   | 4.3    |
| Digestive System               | 172.0   | 137.0  | 158.8   | 169.0  | 173.7  | 190.5  | 205.1  | 173.9  |
| Esophagus                      | 17.6    | 9.1    | 12.8    | 12.8   | 12.6   | 12.4   | 15.4   | 8.2    |
| Stomach                        | 29.5    | 22.5   | 34.0    | 29.0   | 33.0   | 28.3   | 32.4   | 31.4   |
| Colon and Rectum               | 84.2    | 74.7   | 72.2    | 88.6   | 100.1  | 113.2  | 105.8  | 88.3   |
| Colon excluding Rectum         | 55.7    | 45.0   | 58.5    | 66.0   | 86.2   | 83.6   | 69.4   | 61.7   |
| Rectosigmoid Junction          | 8.8     | 8.8    | 2.8     | 4.6    | 4.0    | 6.2    | 9.1    | 8.9    |
| Rectum                         | 19.6    | 20.9   | 10.8    | 18.0   | 9.9    | 23.4   | 27.3   | 17.7   |
| Liver                          | 10.2    | 11.4   | 12.9    | 9.5    | 7.4    | 9.8    | 11.4   | 11.3   |
| Gallbladder                    | 7.4     | 5.4    | 8.6     | 2.8    | 4.0    | 5.1    | 5.6    | 2.9    |
| Other Biliary                  | 5.1     | 1.2    | 0.0     | 9.3    | 5.6    | 1.7    | 5.8    | 5.2    |
| Pancreas                       | 15.4    | 11.5   | 10.8    | 13.4   | 7.1    | 15.4   | 20.8   | 18.4   |
| Respiratory System             | 60.4    | 94.5   | 99.0    | 123.3  | 130.5  | 147.8  | 120.7  | 125.2  |
| Larynx                         | 0.0     | 1.2    | 6.4     | 0.9    | 5.5    | 2.8    | 5.0    | 4.3    |
| Lung and Bronchus              | 57.6    | 90.9   | 90.8    | 117.9  | 124.1  | 140.0  | 113.7  | 118.8  |
| Bones and Joints               | 7.5     | 0.0    | 0.0     | 2.8    | 2.3    | 0.2    | 2.7    | 1.3    |
| Soft Tissue including Heart    | 9.9     | 2.9    | 0.0     | 1.8    | 0.9    | 2.3    | 1.1    | 2.4    |
| Melanoma of the Skin           | 0.0     | 1.2    | 0.7     | 0.0    | 0.4    | 1.0    | 0.6    | 1.3    |
| Other Non-Epithelial Skin      | 0.0     | 0.0    | 0.0     | 2.7    | 4.8    | 2.8    | 1.9    | 2.1    |
| Breast                         | 0.0     | 0.0    | 1.1     | 0.0    | 0.0    | 0.0    | 1.0    | 1.5    |
| Male Genital System            | 47.2    | 43.1   | 62.6    | 47.7   | 97.0   | 80.2   | 91.3   | 73.9   |
| Prostate                       | 38.2    | 35.8   | 58.2    | 41.9   | 89.3   | 72.7   | 84.3   | 66.4   |
| Testis                         | 3.5     | 6.0    | 4.0     | 4.0    | 4.5    | 3.8    | 6.6    | 3.9    |
| Urinary System                 | 27.1    | 25.1   | 27.7    | 41.2   | 35.6   | 37.1   | 50.8   | 45.4   |
| Urinary Bladder                | 13.9    | 9.6    | 13.8    | 14.1   | 10.6   | 12.6   | 22.0   | 18.6   |
| Kidney and Renal Pelvis        | 13.1    | 12.8   | 13.8    | 27.1   | 22.6   | 22.9   | 28.1   | 26.8   |
| Eye and Orbit                  | 0.0     | 0.0    | 1.8     | 0.0    | 0.0    | 0.2    | 0.6    | 2.1    |
| Brain and Other Nervous System | 1.4     | 5.0    | 2.1     | 2.7    | 1.8    | 2.6    | 3.5    | 4.2    |
| Endocrine System               | 0.0     | 6.8    | 7.5     | 3.0    | 0.4    | 1.7    | 2.6    | 7.5    |
| Thyroid                        | 0.0     | 5.6    | 5.3     | 1.8    | 0.4    | 1.5    | 2.2    | 6.9    |
| Lymphoma                       | 8.2     | 4.7    | 24.7    | 11.5   | 9.4    | 10.4   | 15.8   | 14.5   |
| Hodgkin Lymphoma               | 0.0     | 0.4    | 1.8     | 0.4    | 0.8    | 0.5    | 1.1    | 0.9    |
| Non-Hodgkin Lymphoma           | 8.2     | 4.3    | 23.0    | 11.1   | 8.7    | 9.9    | 14.7   | 13.6   |
| Myeloma                        | 5.4     | 7.8    | 6.4     | 2.8    | 5.0    | 1.5    | 2.0    | 4.3    |
| Leukemia                       | 12.7    | 4.8    | 3.6     | 5.0    | 5.0    | 9.6    | 5.9    | 13.8   |
| Miscellaneous                  | 32.2    | 25.0   | 31.8    | 15.7   | 23.9   | 11.9   | 16.5   | 10.1   |

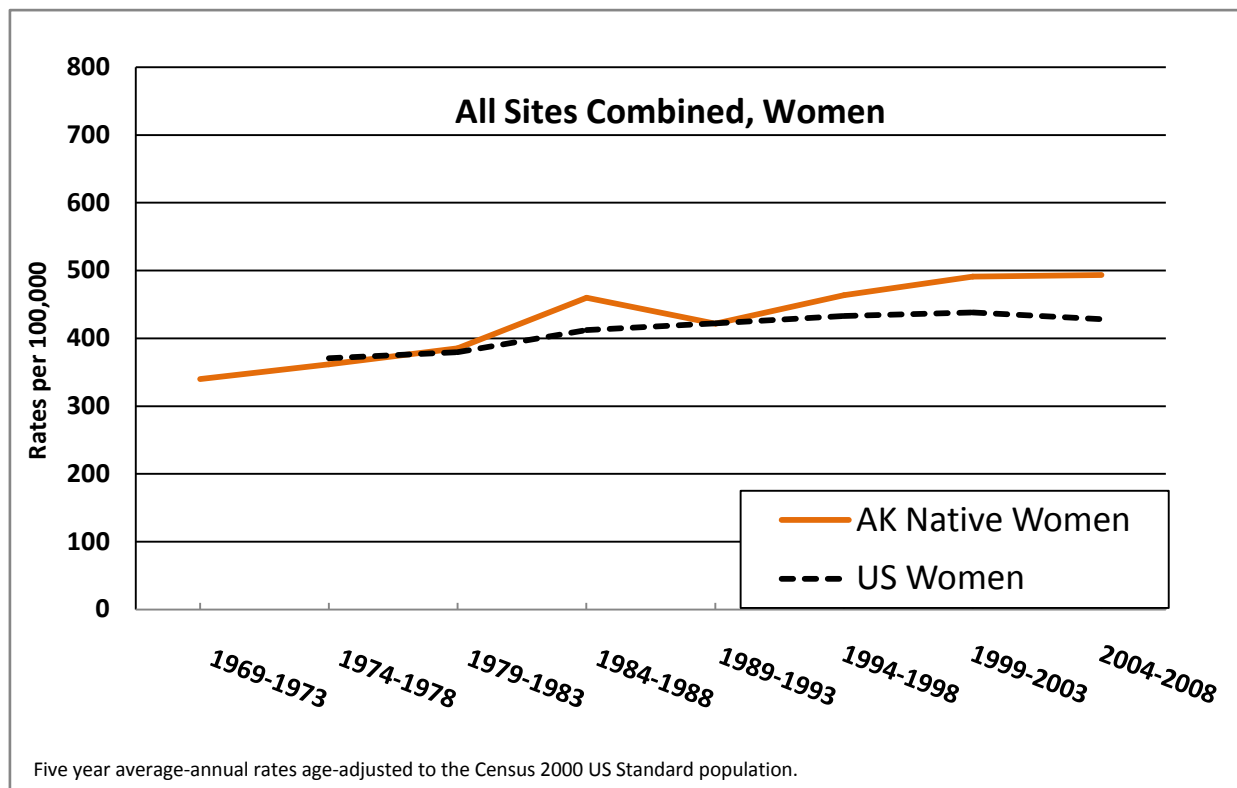
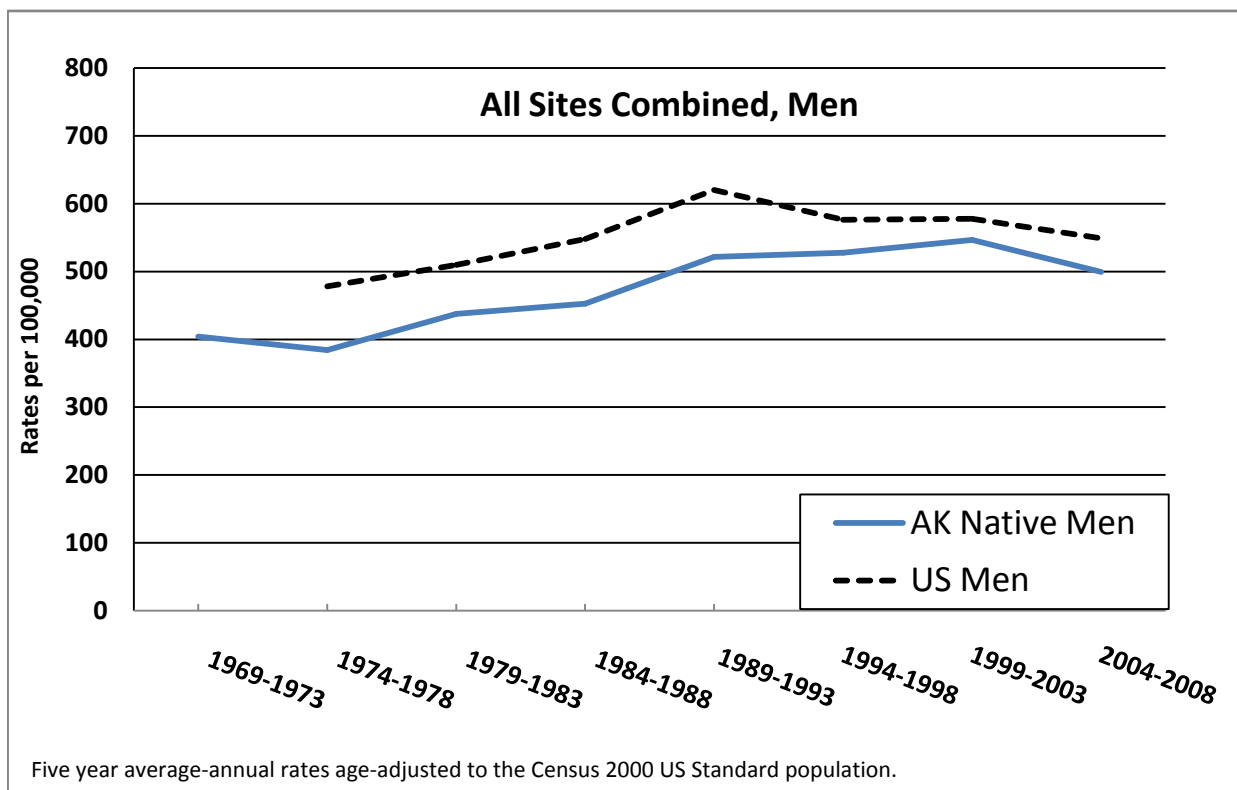
Five year average-annual rates age-adjusted to the Census 2000 US Standard population.

**Average Annual Age-Adjusted Cancer Incidence Rates per 100,000**  
**Alaska Native Women 1969-2008**

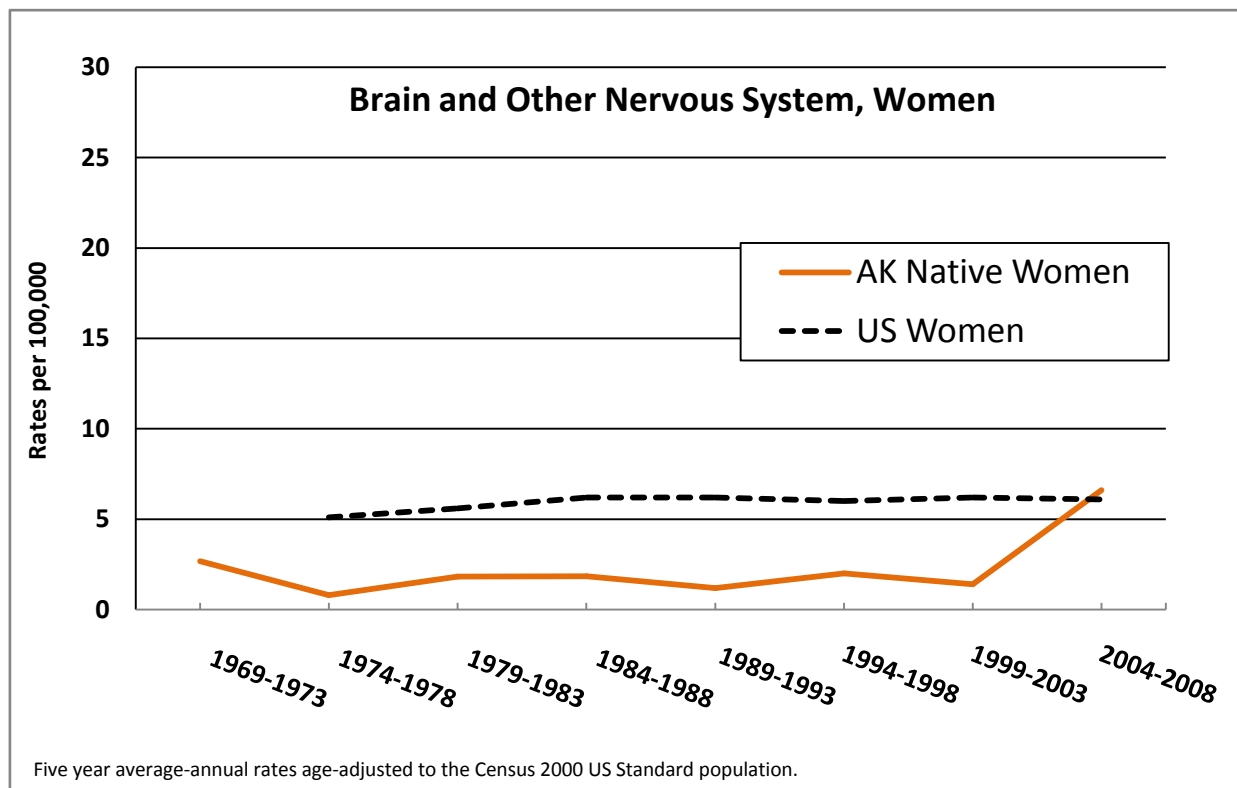
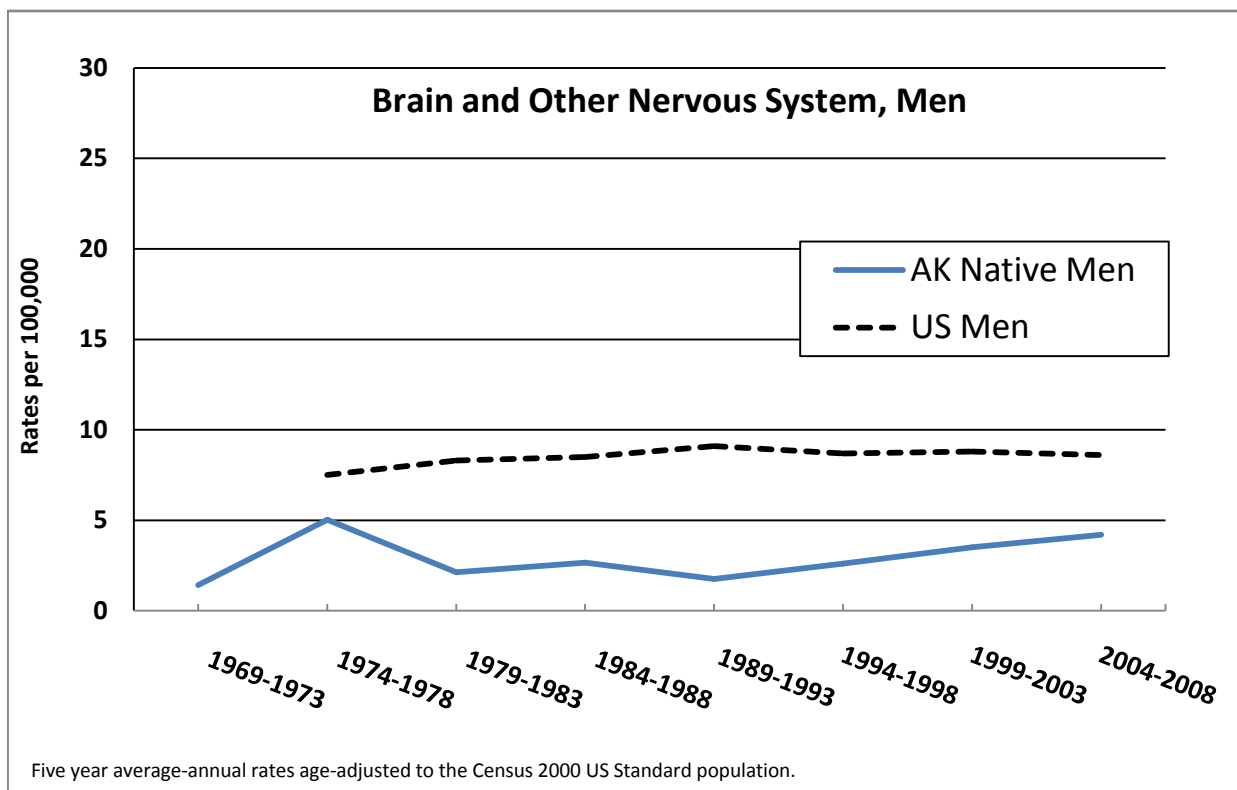
| <b>Five-Year Period :</b>      | <b>'69-'73</b> | <b>74-'78</b> | <b>'79-'83</b> | <b>84-'88</b> | <b>89-'93</b> | <b>94-'98</b> | <b>99-'03</b> | <b>04-'08</b> |
|--------------------------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|
| All Sites                      | 340.1          | 361.8         | 385.1          | 460.0         | 421.6         | 463.6         | 490.9         | 493.7         |
| Oral Cavity and Pharynx        | 17.8           | 15.5          | 19.3           | 14.4          | 11.5          | 11.4          | 11.6          | 10.3          |
| Nasopharynx                    | 4.3            | 9.1           | 6.5            | 5.5           | 3.2           | 3.4           | 5.0           | 4.1           |
| Digestive System               | 153.2          | 126.1         | 130.1          | 144.3         | 127.5         | 144.1         | 165.5         | 142.6         |
| Esophagus                      | 1.8            | 5.1           | 5.2            | 4.3           | 2.3           | 7.2           | 3.3           | 8.9           |
| Stomach                        | 11.8           | 6.4           | 10.1           | 13.0          | 9.5           | 11.7          | 20.5          | 14.7          |
| Colon and Rectum               | 83.7           | 80.4          | 81.4           | 96.1          | 87.7          | 93.9          | 103.5         | 87.3          |
| Colon excluding Rectum         | 58.0           | 66.1          | 59.5           | 78.0          | 68.7          | 69.1          | 80.2          | 70.5          |
| Rectosigmoid Junction          | 6.7            | 4.0           | 9.4            | 7.1           | 5.7           | 6.1           | 2.3           | 4.1           |
| Rectum                         | 19.0           | 10.3          | 12.4           | 11.1          | 13.3          | 18.7          | 20.9          | 12.6          |
| Liver                          | 3.4            | 3.0           | 0.8            | 5.3           | 2.7           | 5.8           | 5.6           | 5.7           |
| Gallbladder                    | 25.3           | 18.4          | 10.5           | 8.9           | 4.2           | 2.4           | 7.6           | 2.5           |
| Other Biliary                  | 4.7            | 0.0           | 0.0            | 0.5           | 2.8           | 2.7           | 3.5           | 3.0           |
| Pancreas                       | 9.7            | 10.2          | 12.7           | 12.5          | 16.8          | 16.2          | 12.4          | 14.2          |
| Respiratory System             | 15.8           | 21.7          | 35.7           | 84.9          | 62.8          | 71.3          | 76.8          | 78.3          |
| Larynx                         | 0.0            | 0.0           | 0.0            | 3.2           | 0.0           | 1.7           | 2.2           | 1.5           |
| Lung and Bronchus              | 15.8           | 21.7          | 35.7           | 81.6          | 62.0          | 67.5          | 72.6          | 76.5          |
| Bones and Joints               | 0.0            | 3.4           | 0.8            | 2.8           | 0.4           | 1.3           | 0.4           | 1.1           |
| Soft Tissue including Heart    | 0.0            | 2.6           | 3.1            | 2.5           | 0.4           | 1.3           | 2.4           | 3.7           |
| Melanoma of the Skin           | 1.5            | 1.4           | 1.1            | 2.5           | 2.4           | 2.4           | 1.4           | 1.6           |
| Other Non-Epithelial Skin      | 0.0            | 0.0           | 0.0            | 0.0           | 0.8           | 0.9           | 0.9           | 2.2           |
| Breast                         | 40.7           | 54.9          | 62.6           | 88.9          | 103.2         | 140.9         | 130.5         | 127.9         |
| Female Genital System          | 32.8           | 53.2          | 60.2           | 39.7          | 54.8          | 33.3          | 31.7          | 48.1          |
| Cervix Uteri                   | 14.6           | 37.6          | 38.5           | 18.9          | 17.4          | 7.6           | 9.7           | 11.5          |
| Corpus and Uterus, NOS         | 3.5            | 2.7           | 5.1            | 6.1           | 11.5          | 10.5          | 12.7          | 17.6          |
| Ovary                          | 11.3           | 10.3          | 14.1           | 12.4          | 19.2          | 12.9          | 6.7           | 14.0          |
| Urinary System                 | 17.5           | 17.6          | 17.2           | 33.4          | 19.2          | 21.8          | 18.6          | 20.0          |
| Urinary Bladder                | 2.6            | 5.2           | 5.2            | 6.4           | 2.8           | 2.2           | 5.4           | 4.9           |
| Kidney and Renal Pelvis        | 14.9           | 12.4          | 10.9           | 27.0          | 16.5          | 19.7          | 12.5          | 15.1          |
| Eye and Orbit                  | 0.4            | 0.0           | 0.4            | 0.3           | 0.5           | 0.3           | 0.0           | 0.0           |
| Brain and Other Nervous System | 2.7            | 0.8           | 1.8            | 1.8           | 1.2           | 2.0           | 1.4           | 6.6           |
| Endocrine System               | 9.2            | 7.8           | 6.0            | 9.2           | 8.0           | 7.7           | 13.8          | 8.6           |
| Thyroid                        | 9.2            | 7.8           | 6.0            | 9.2           | 8.0           | 7.7           | 13.8          | 7.6           |
| Lymphoma                       | 5.2            | 5.6           | 6.7            | 7.2           | 8.5           | 9.6           | 10.4          | 14.6          |
| Hodgkin Lymphoma               | 0.0            | 0.0           | 2.5            | 1.3           | 1.2           | 1.4           | 0.4           | 0.0           |
| Non-Hodgkin Lymphoma           | 5.2            | 5.6           | 4.2            | 5.9           | 7.4           | 8.1           | 10.1          | 14.6          |
| Myeloma                        | 2.8            | 0.0           | 2.2            | 3.7           | 3.2           | 2.7           | 7.0           | 5.7           |
| Leukemia                       | 3.8            | 2.2           | 2.8            | 5.2           | 4.7           | 5.4           | 5.1           | 9.1           |
| Miscellaneous                  | 36.7           | 49.1          | 35.2           | 19.3          | 12.6          | 7.3           | 13.2          | 13.3          |

Five year average-annual rates age-adjusted to the Census 2000 US Standard population.

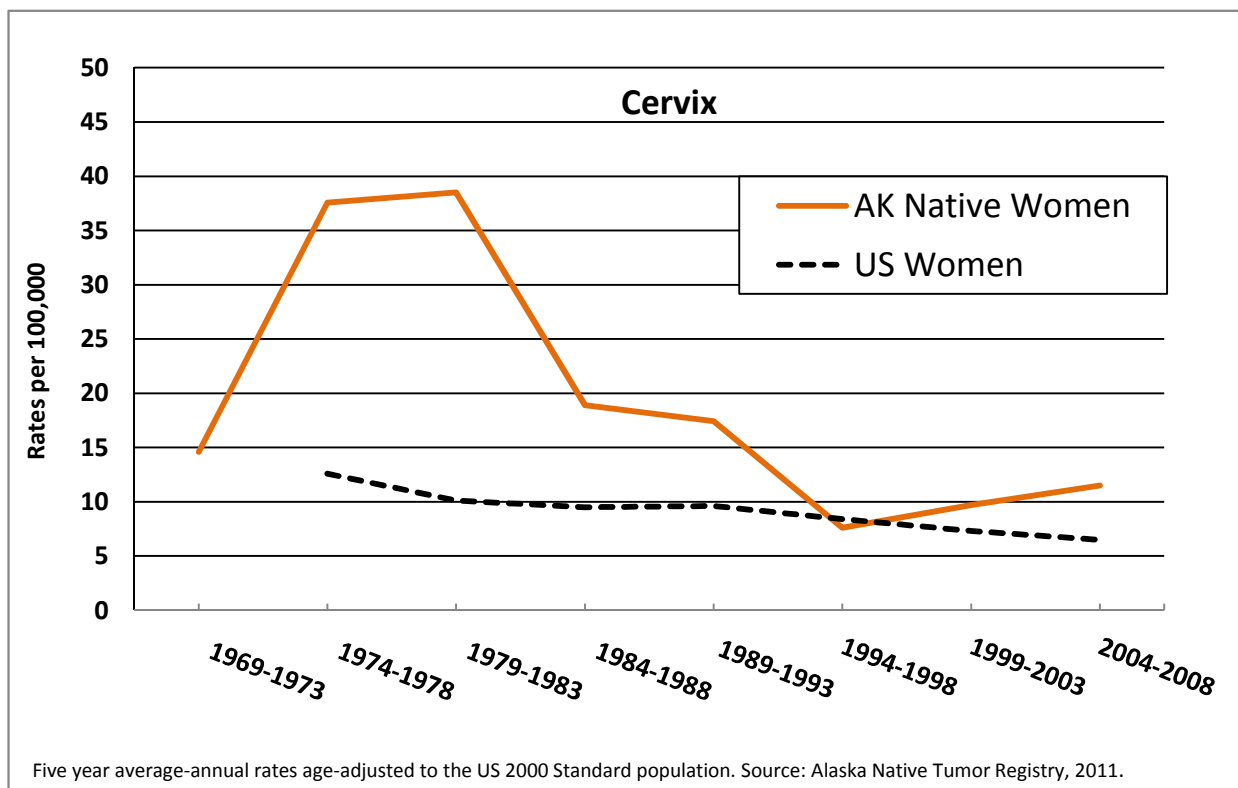
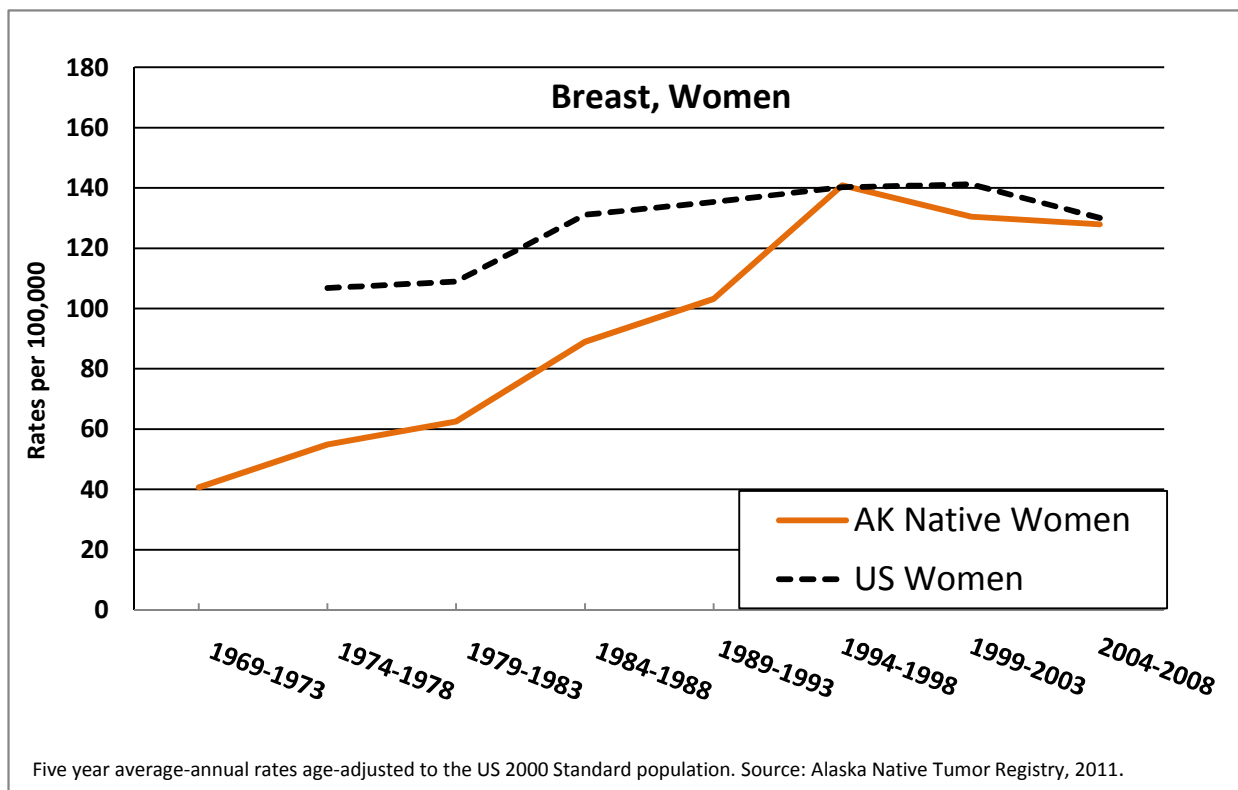
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



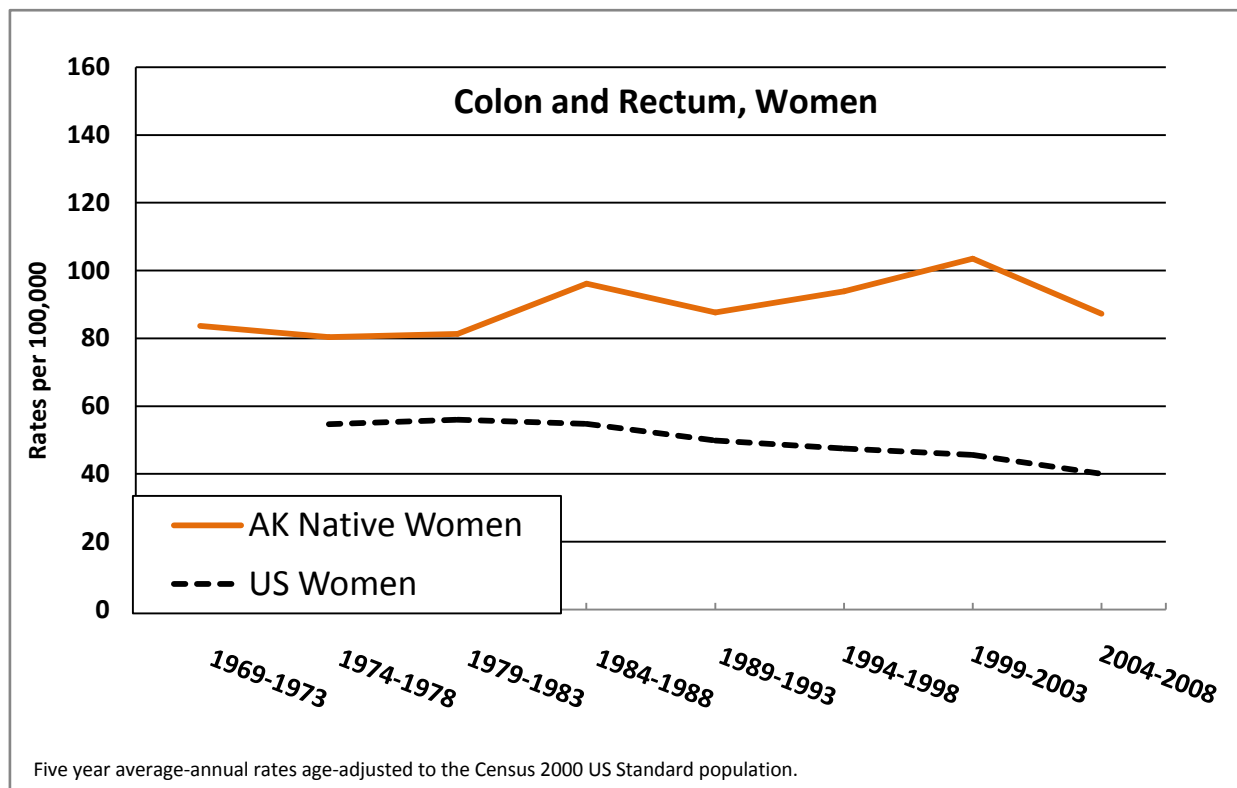
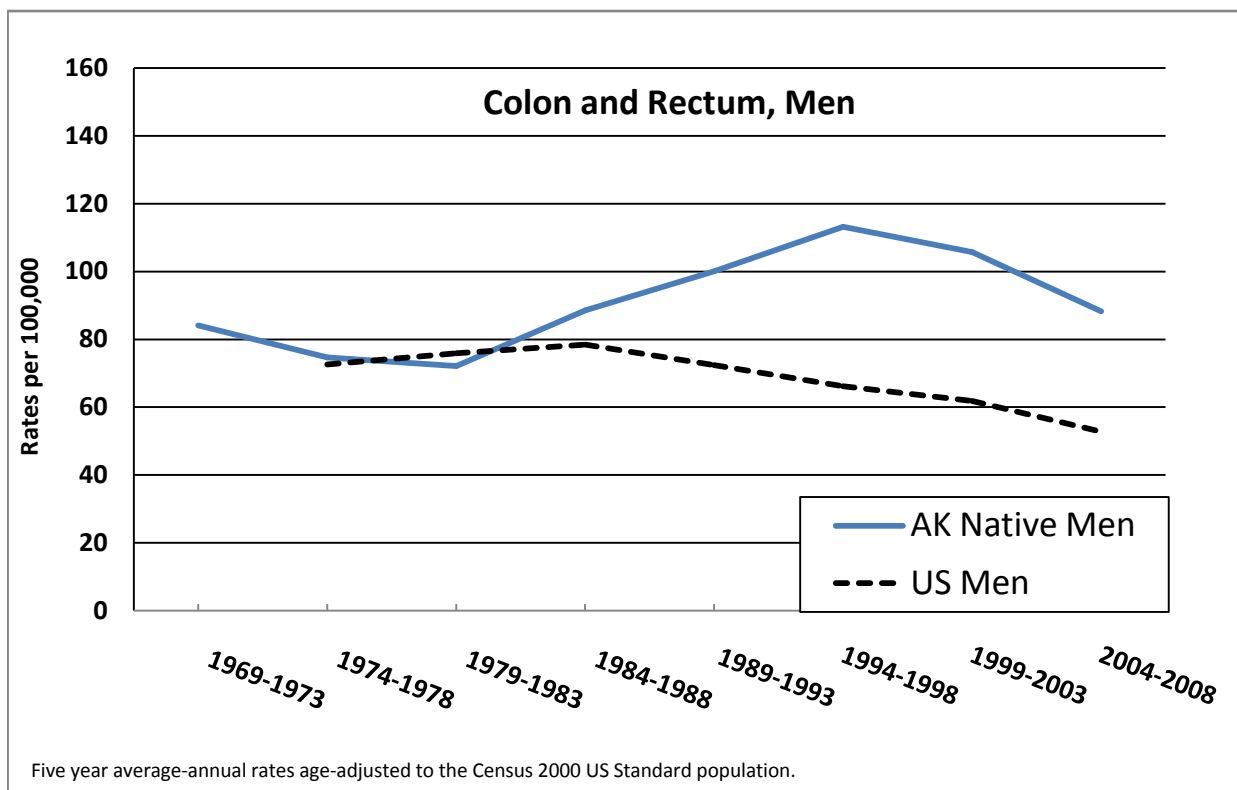
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



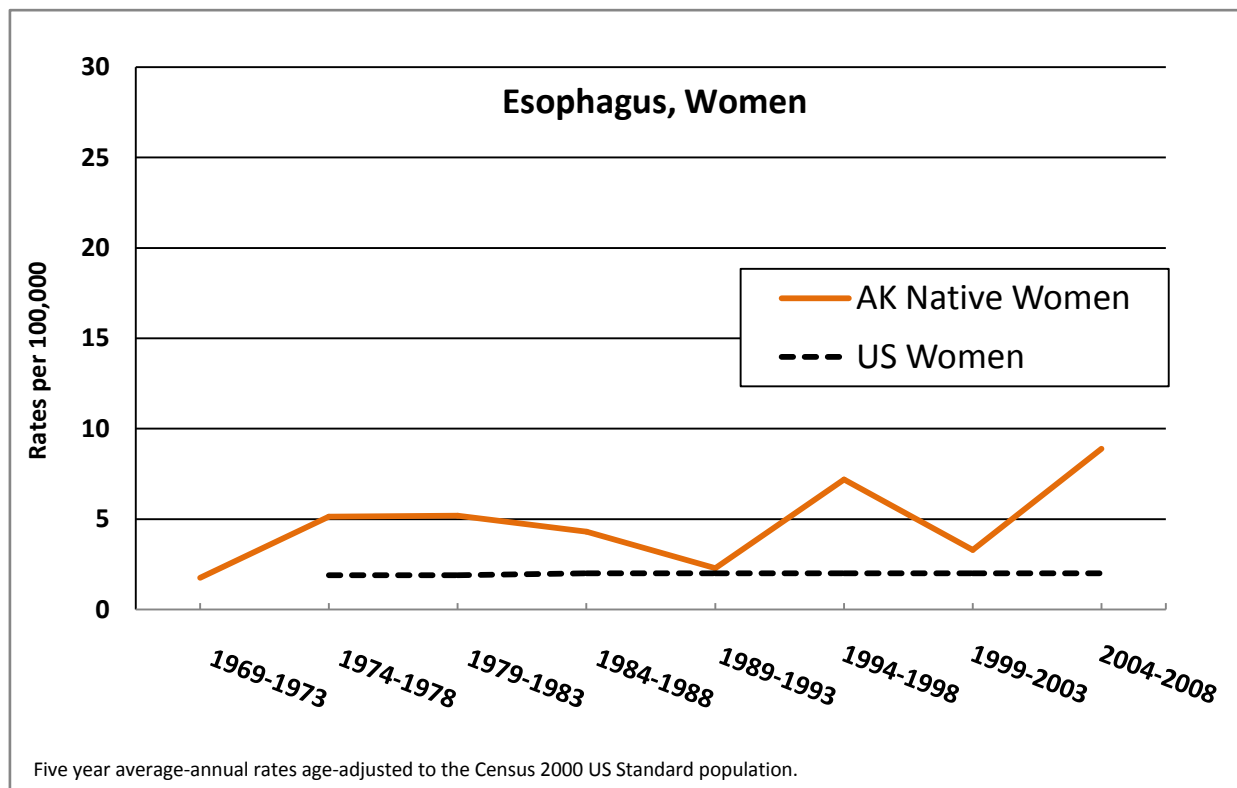
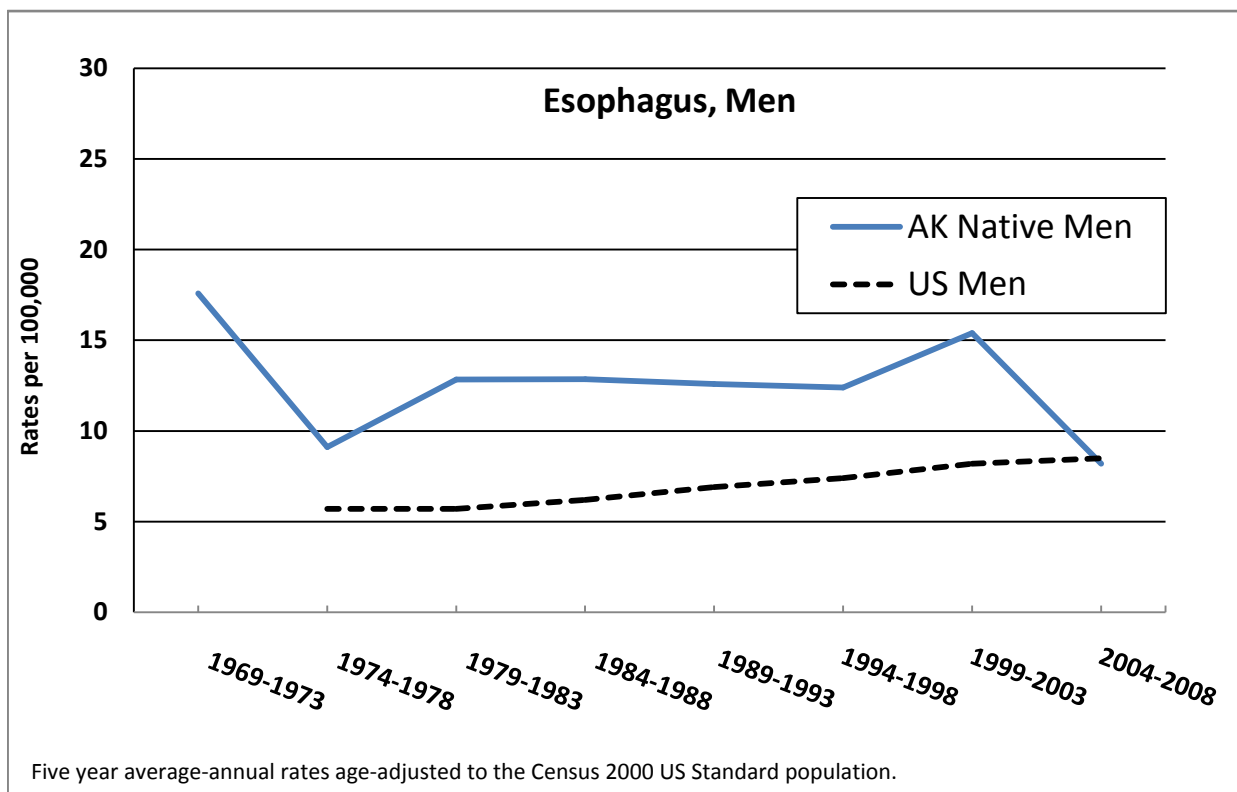
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



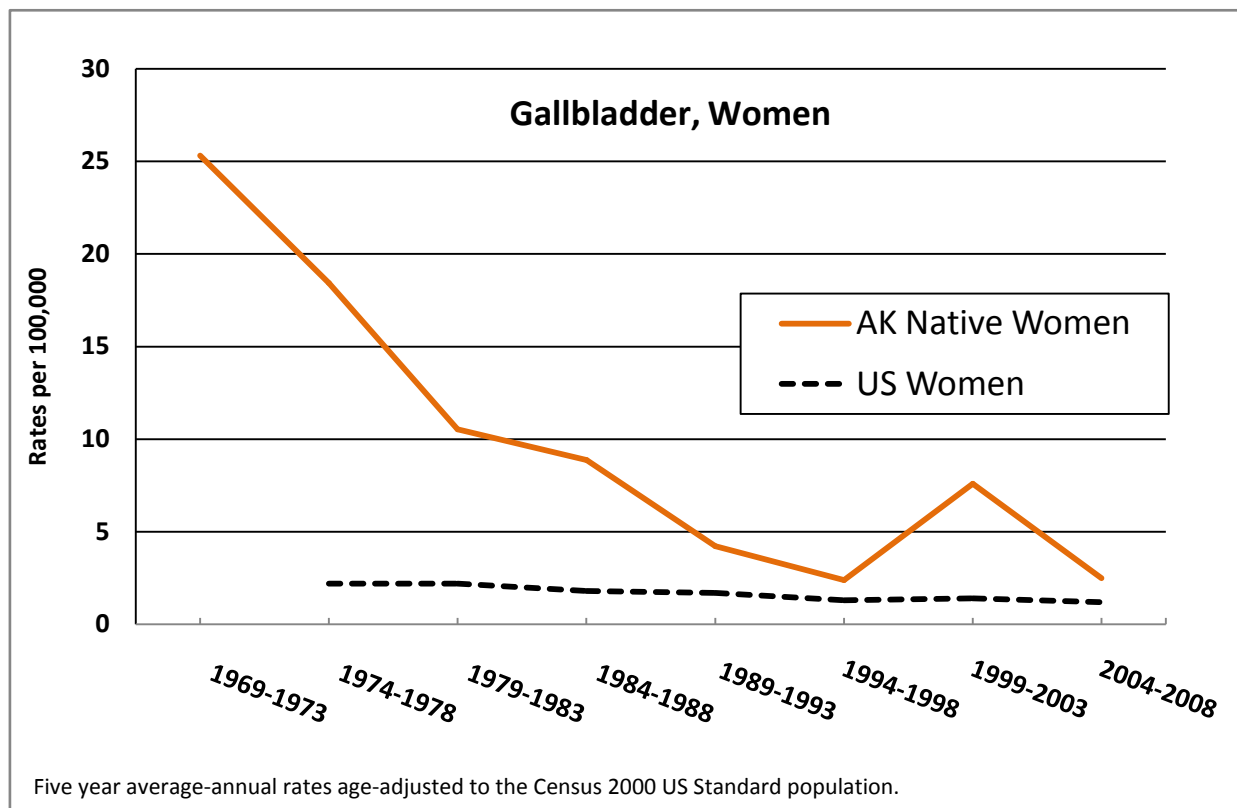
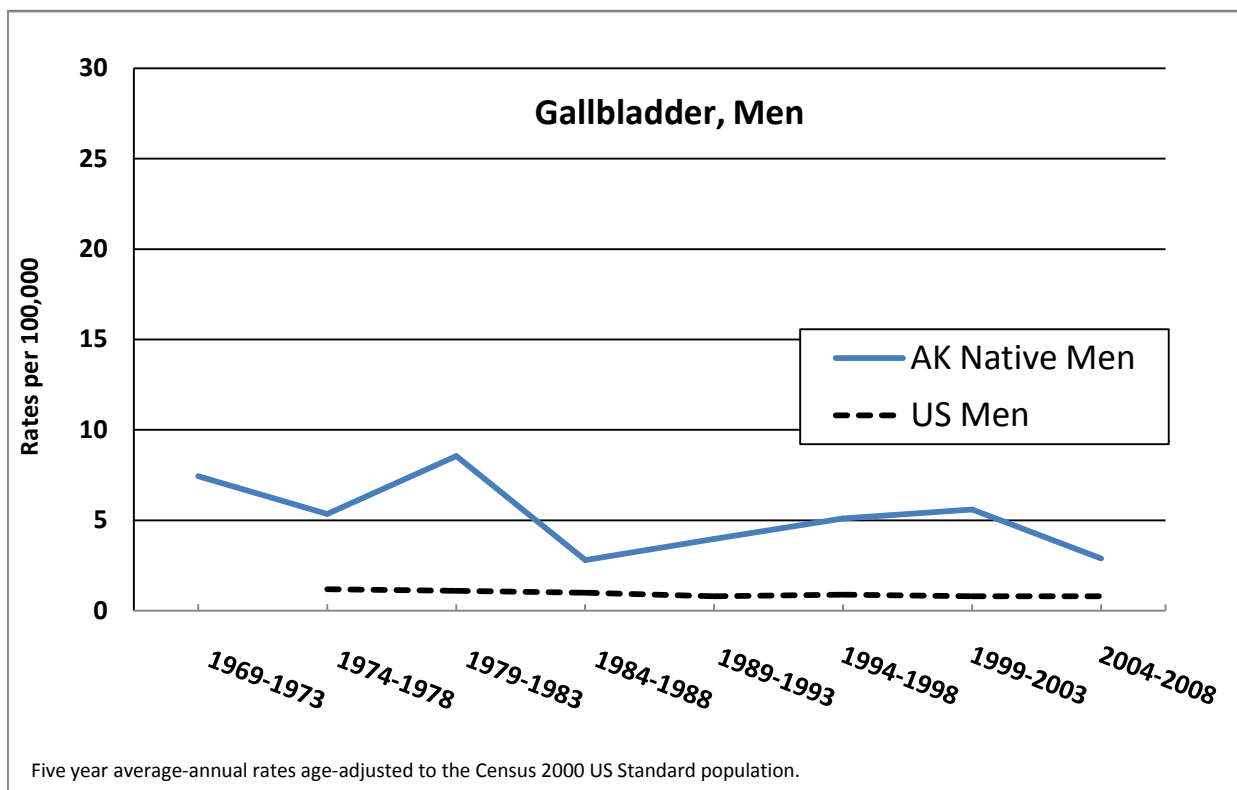
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



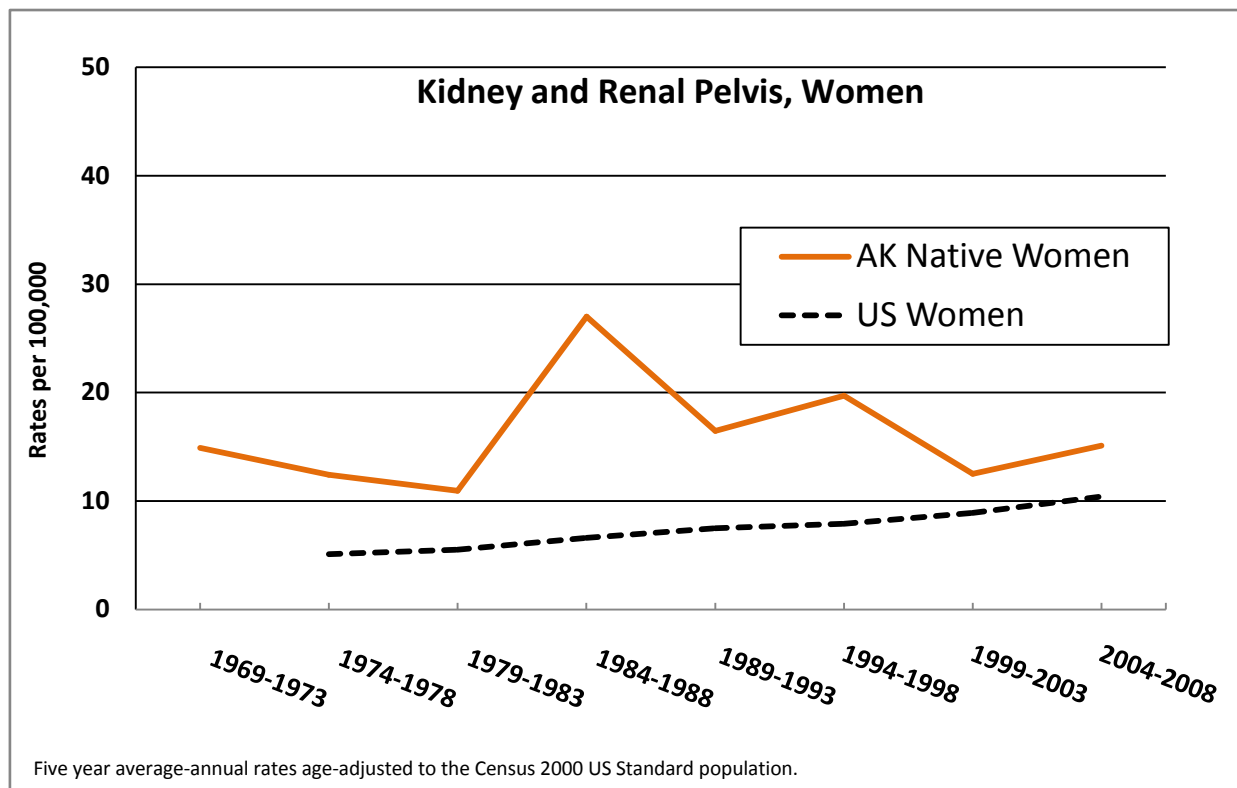
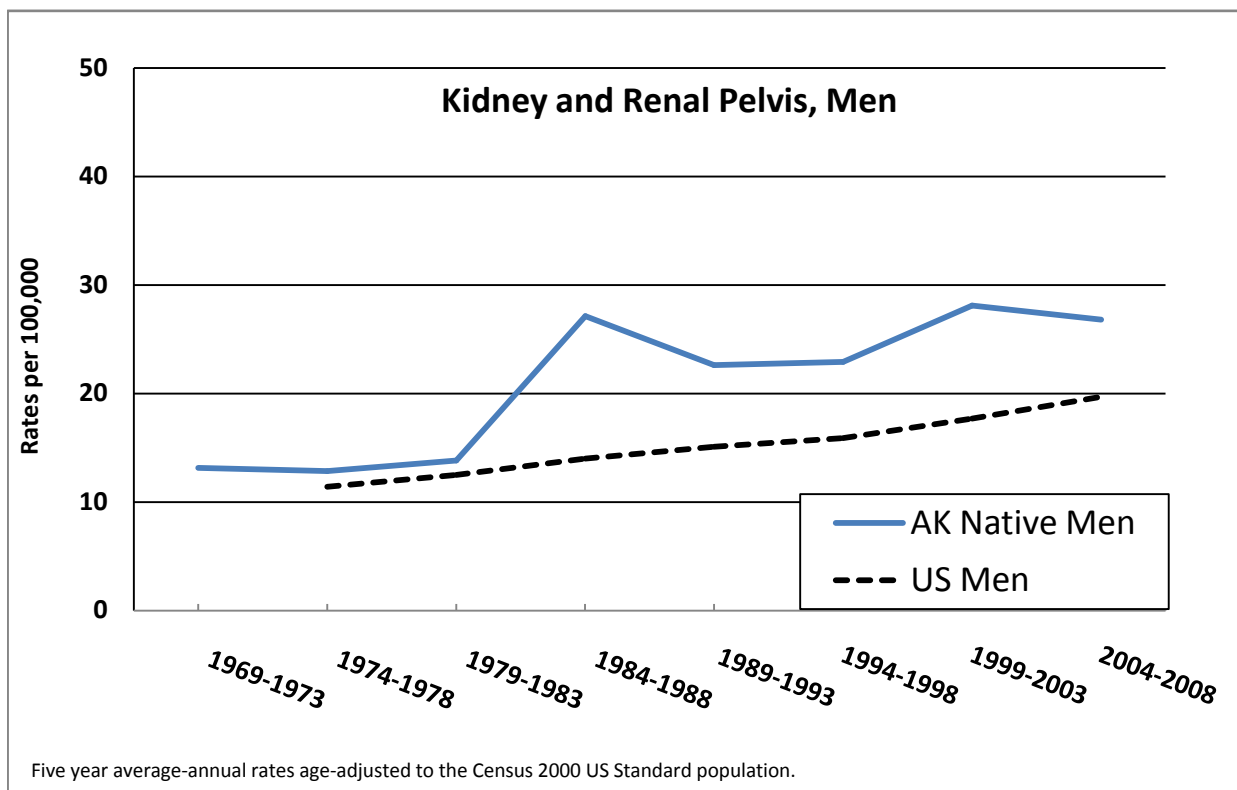
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



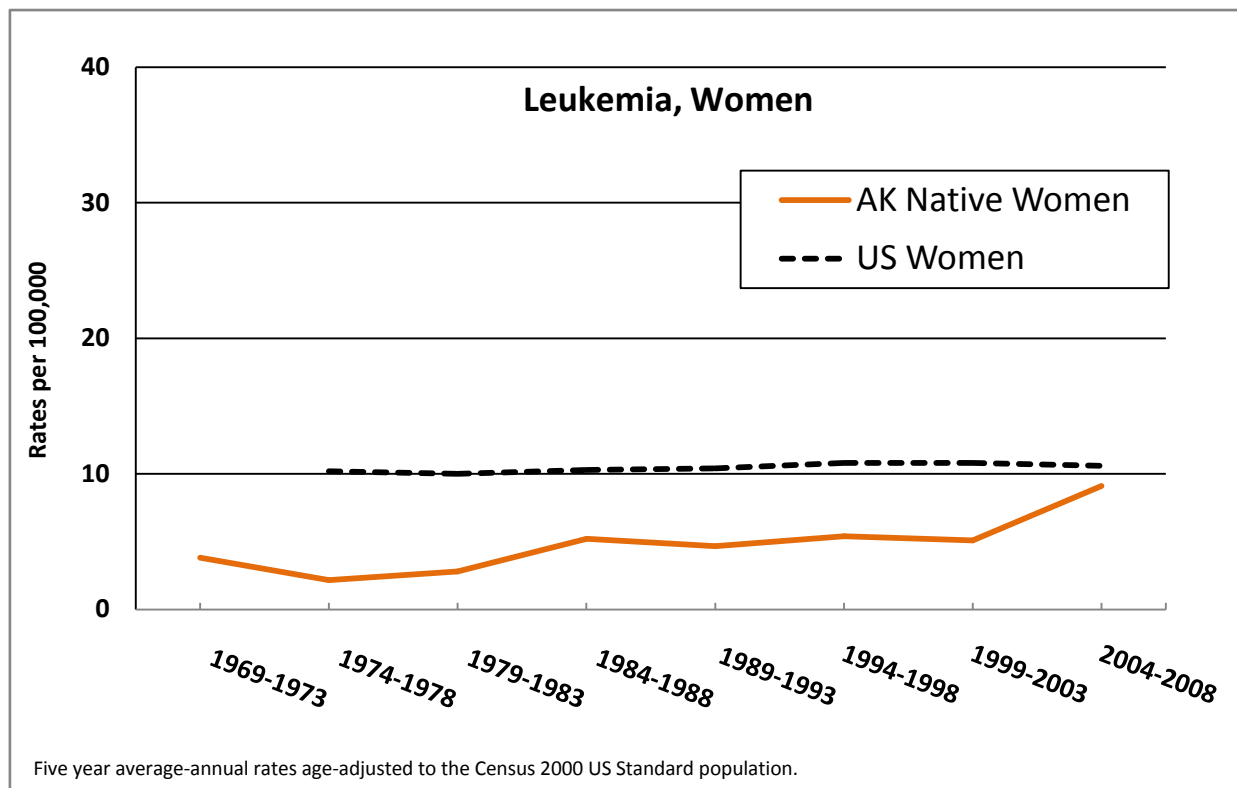
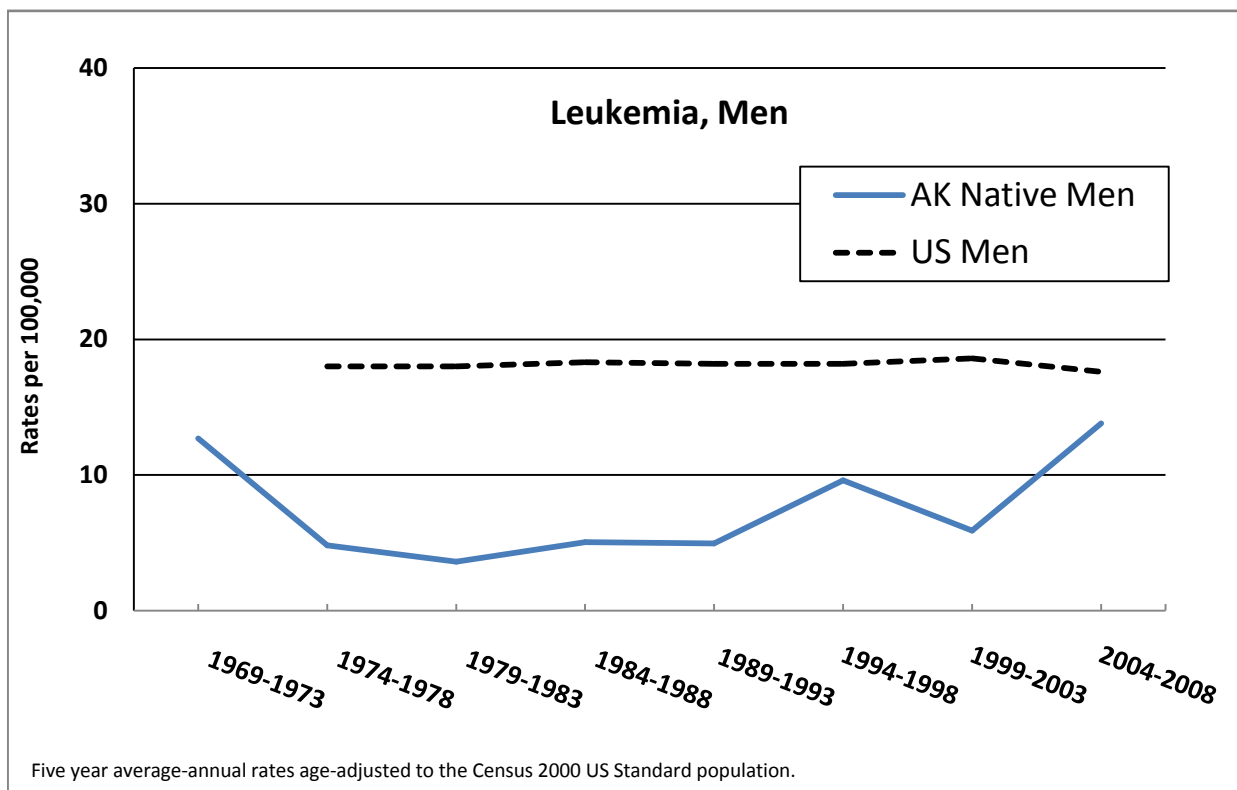
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



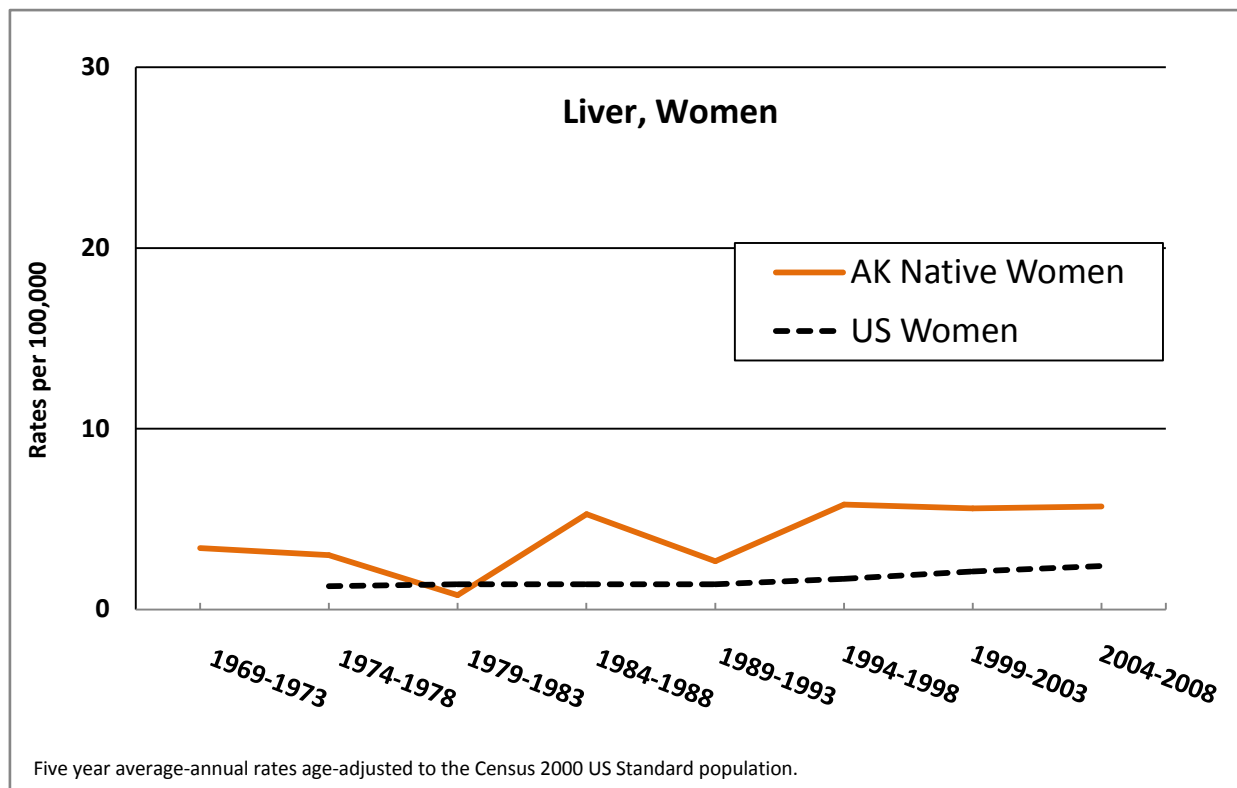
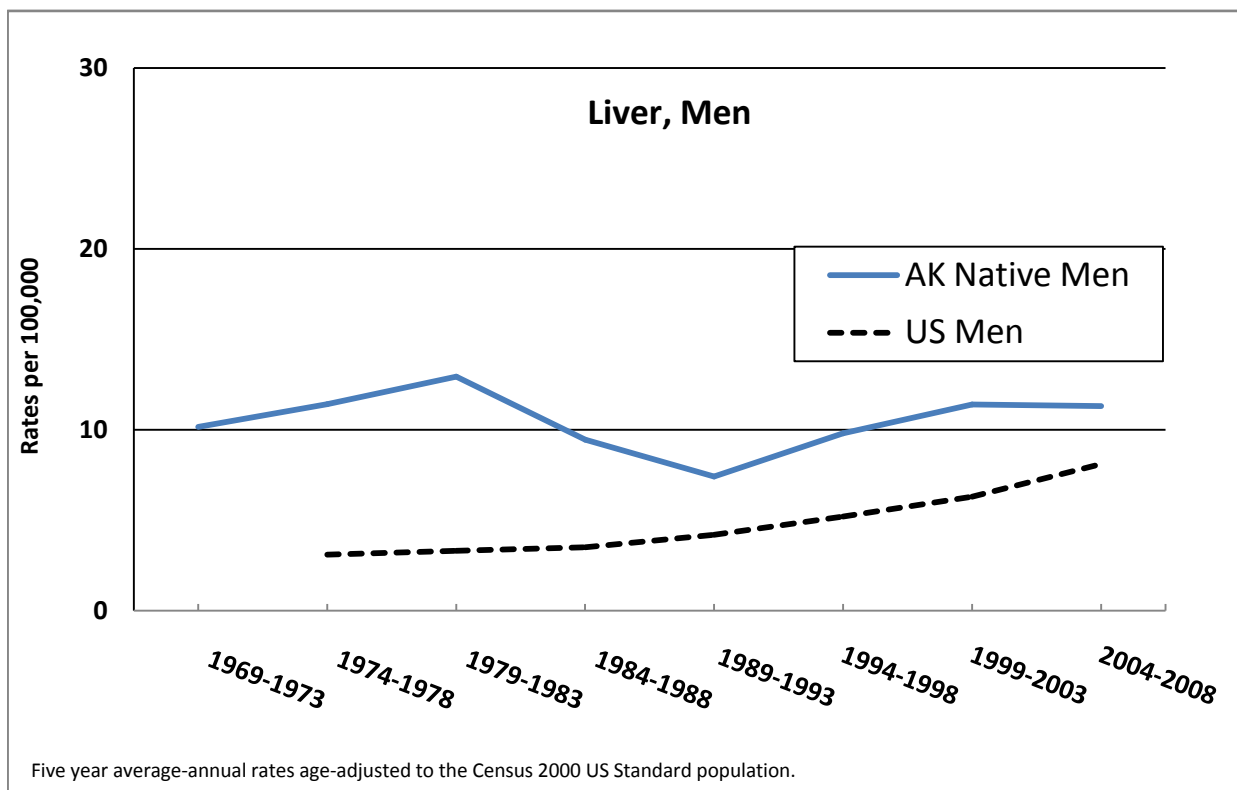
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



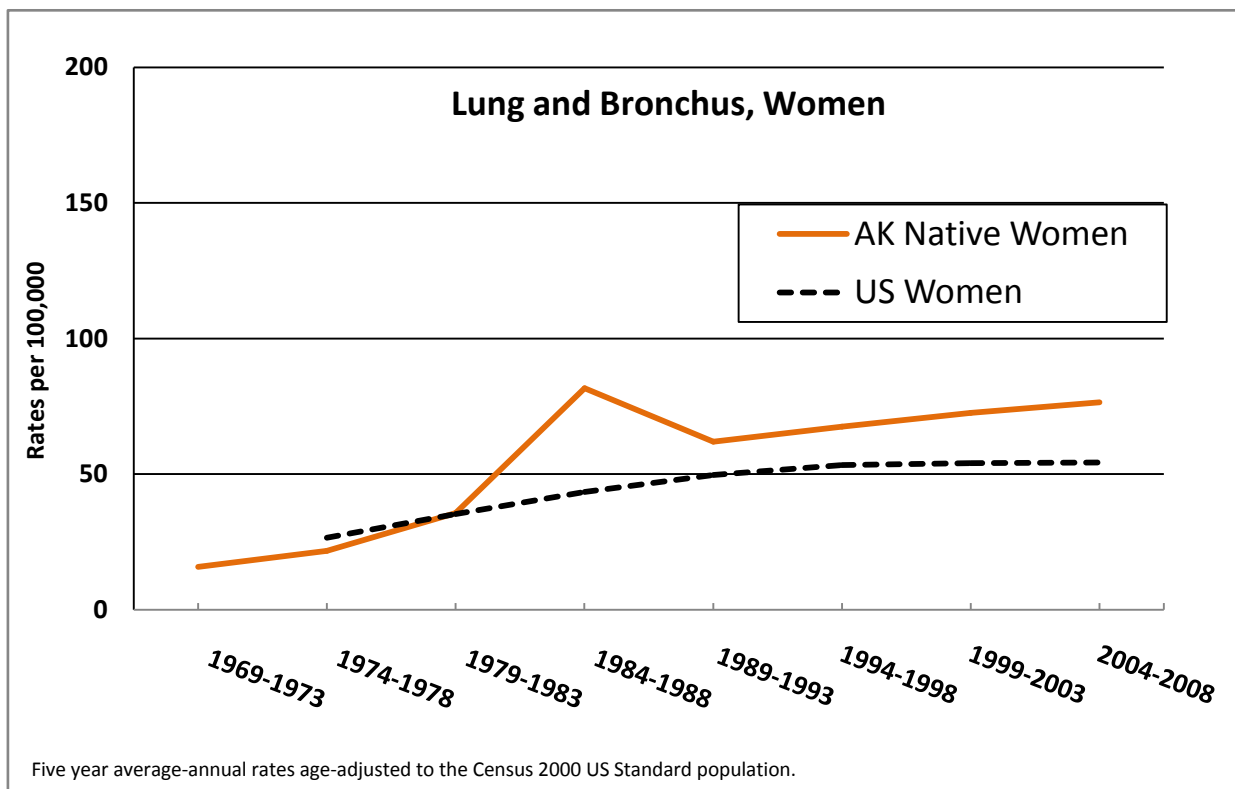
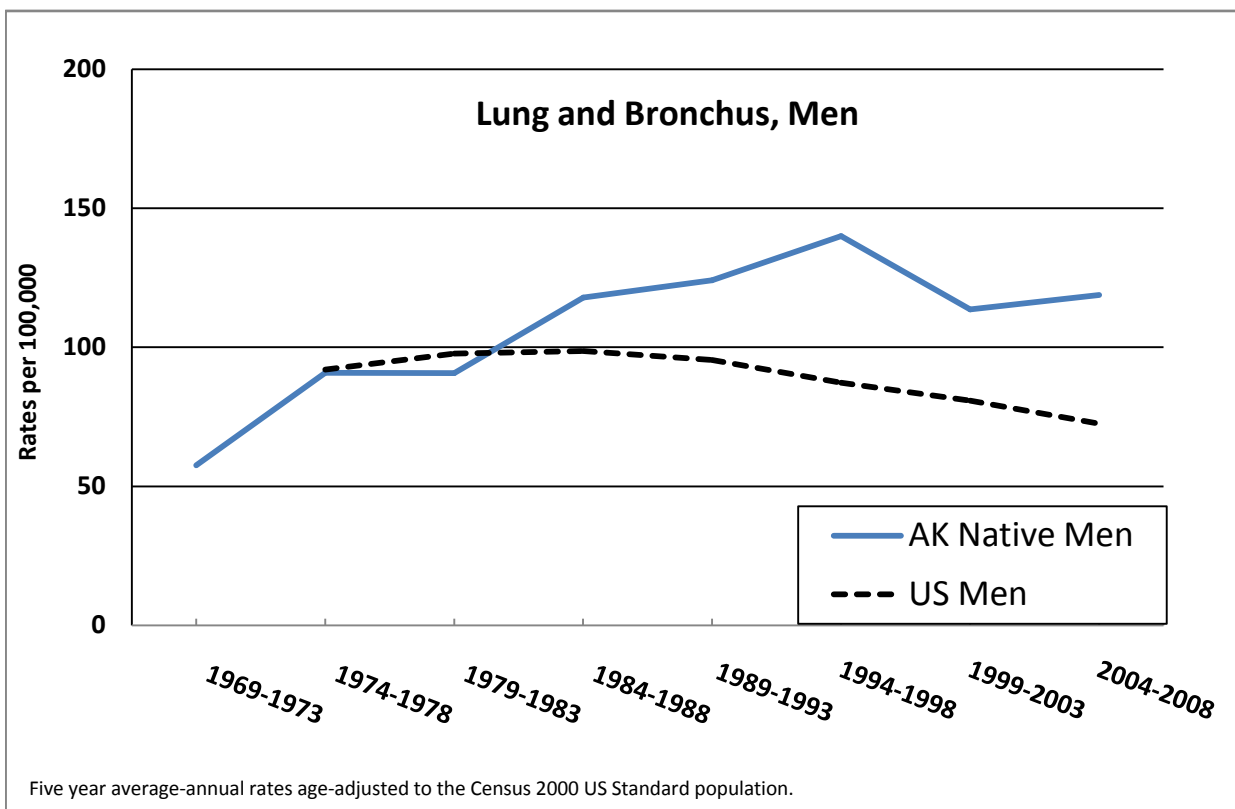
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



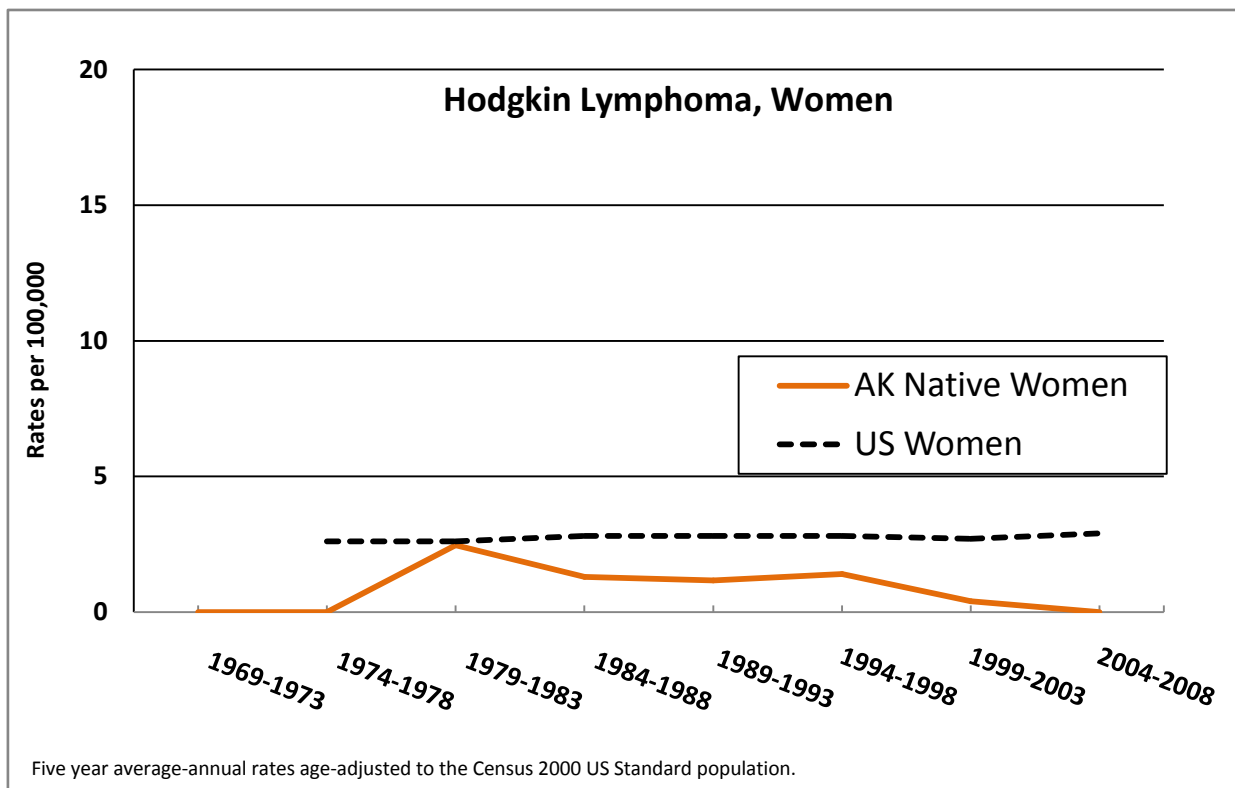
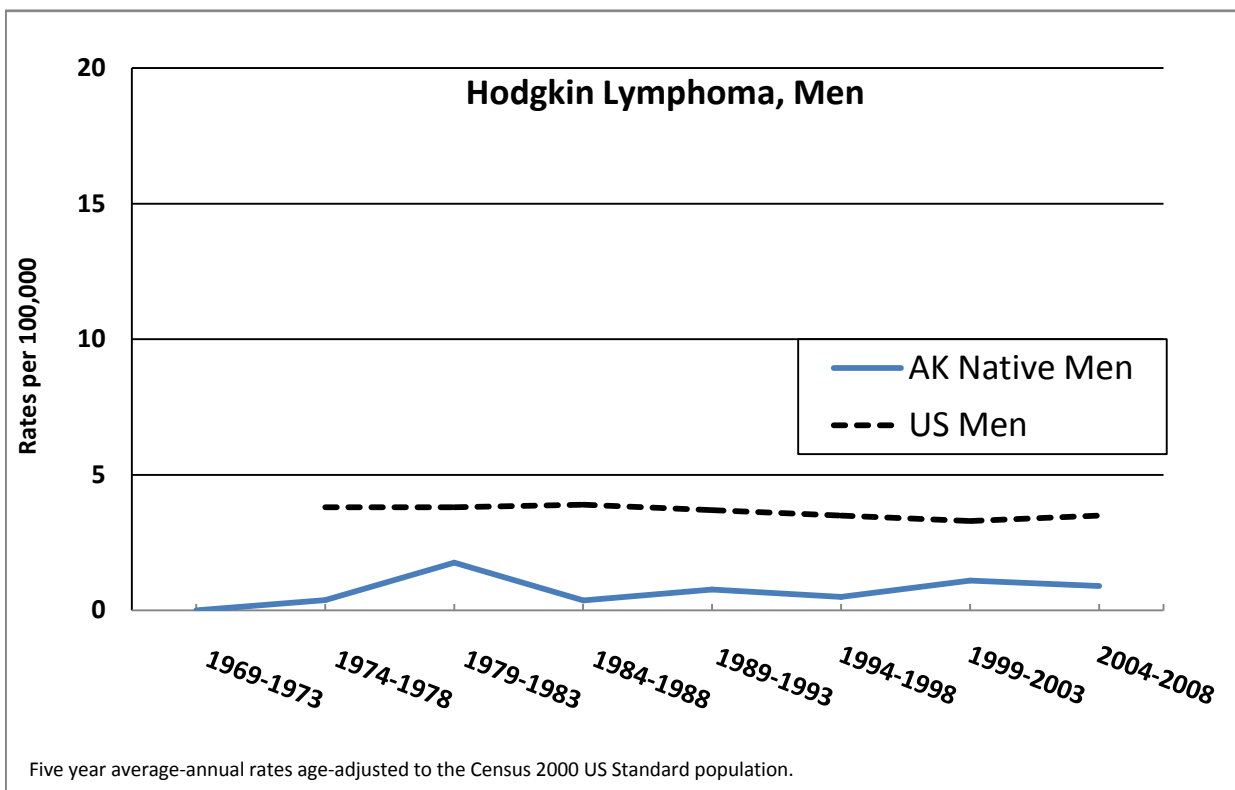
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



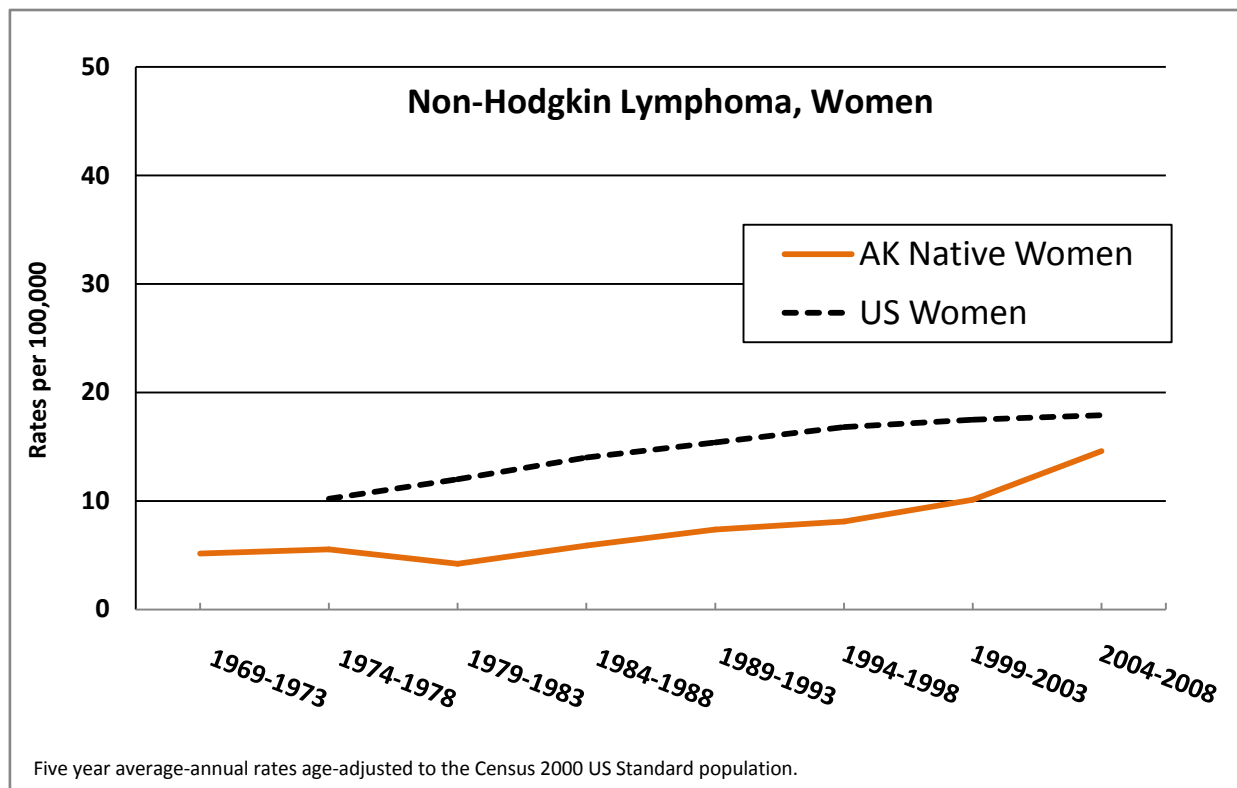
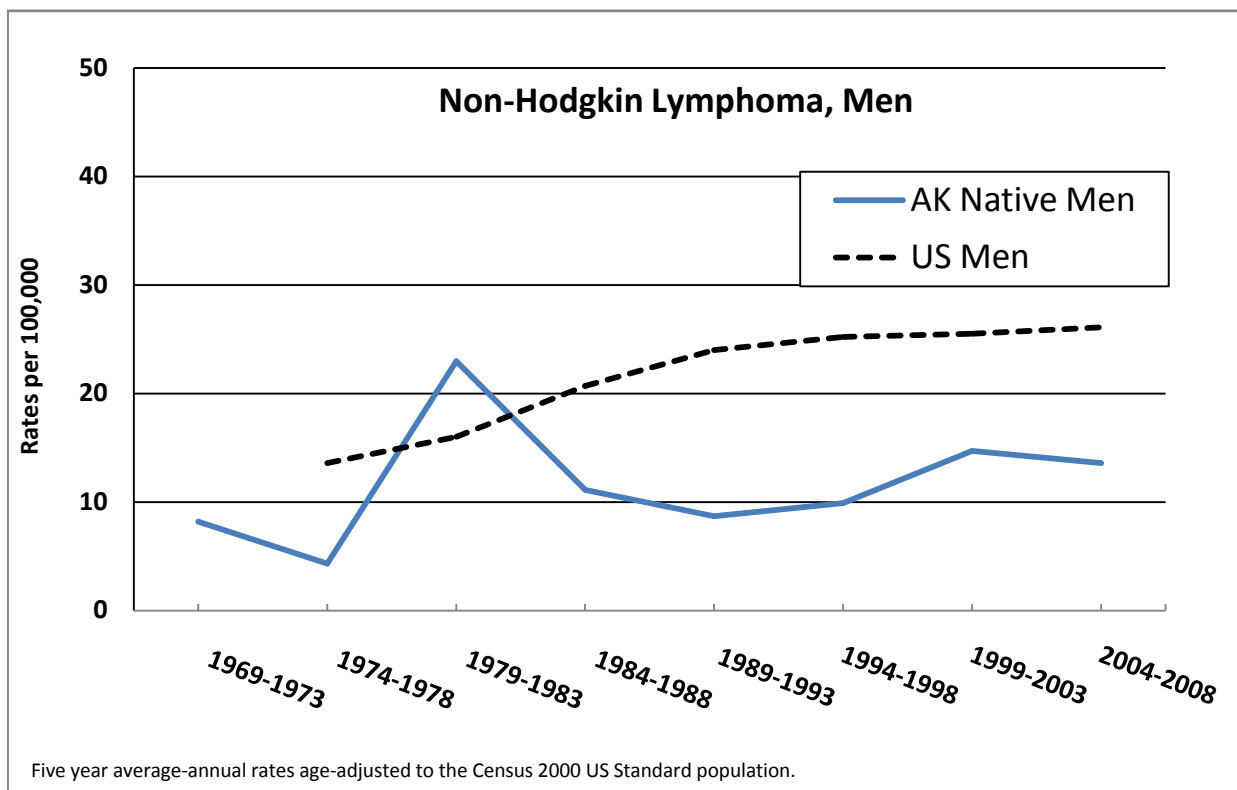
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



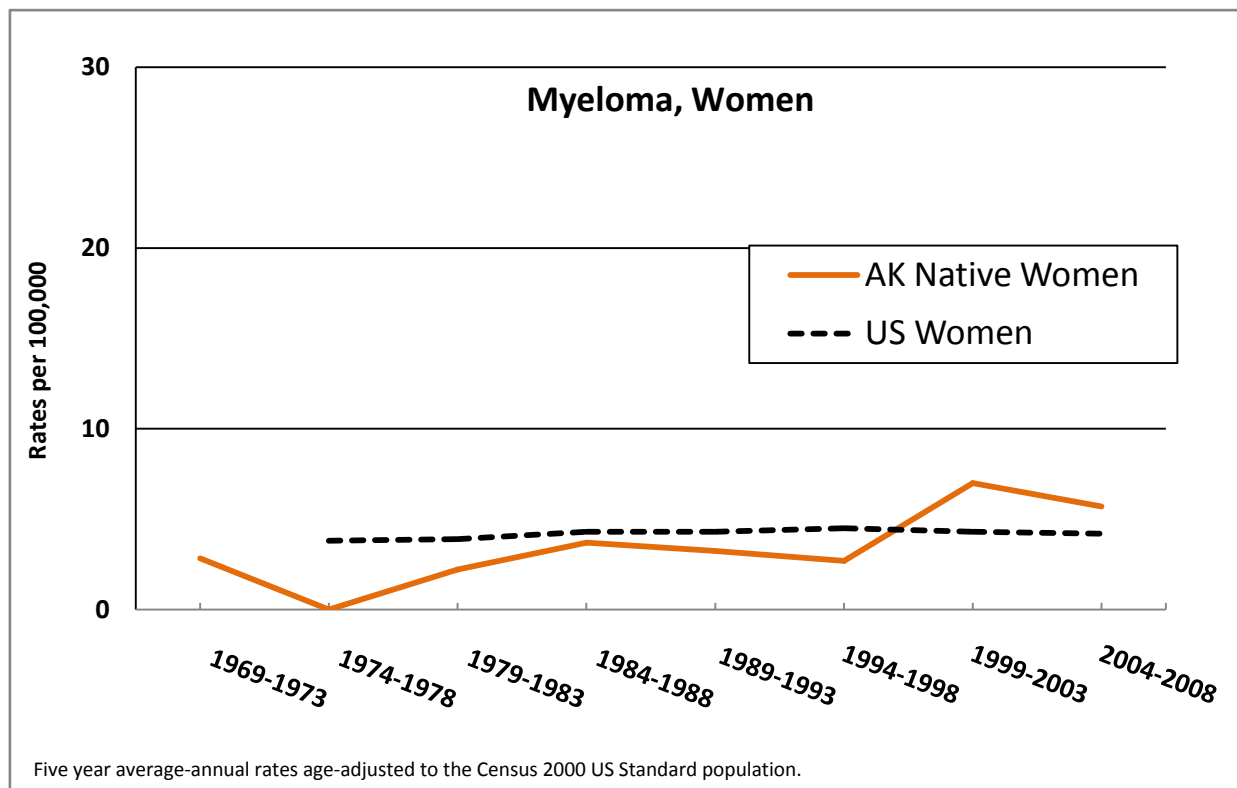
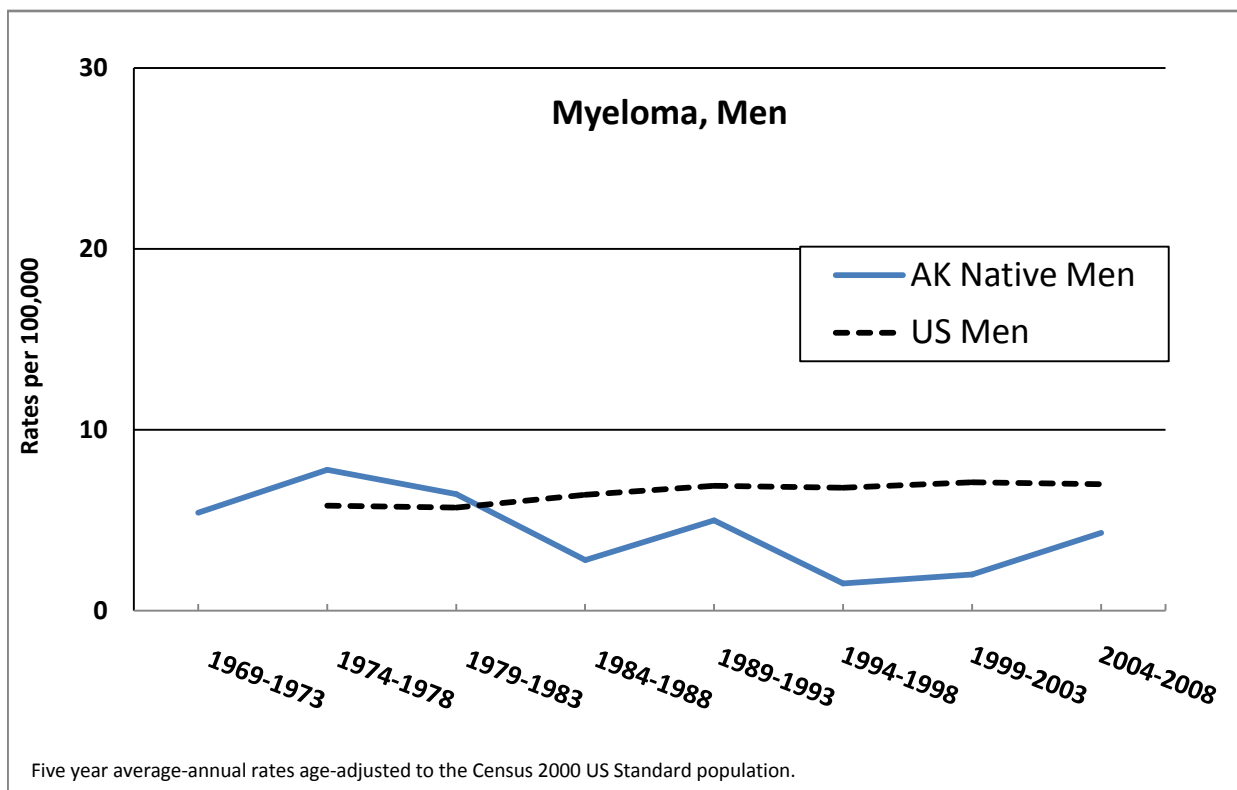
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



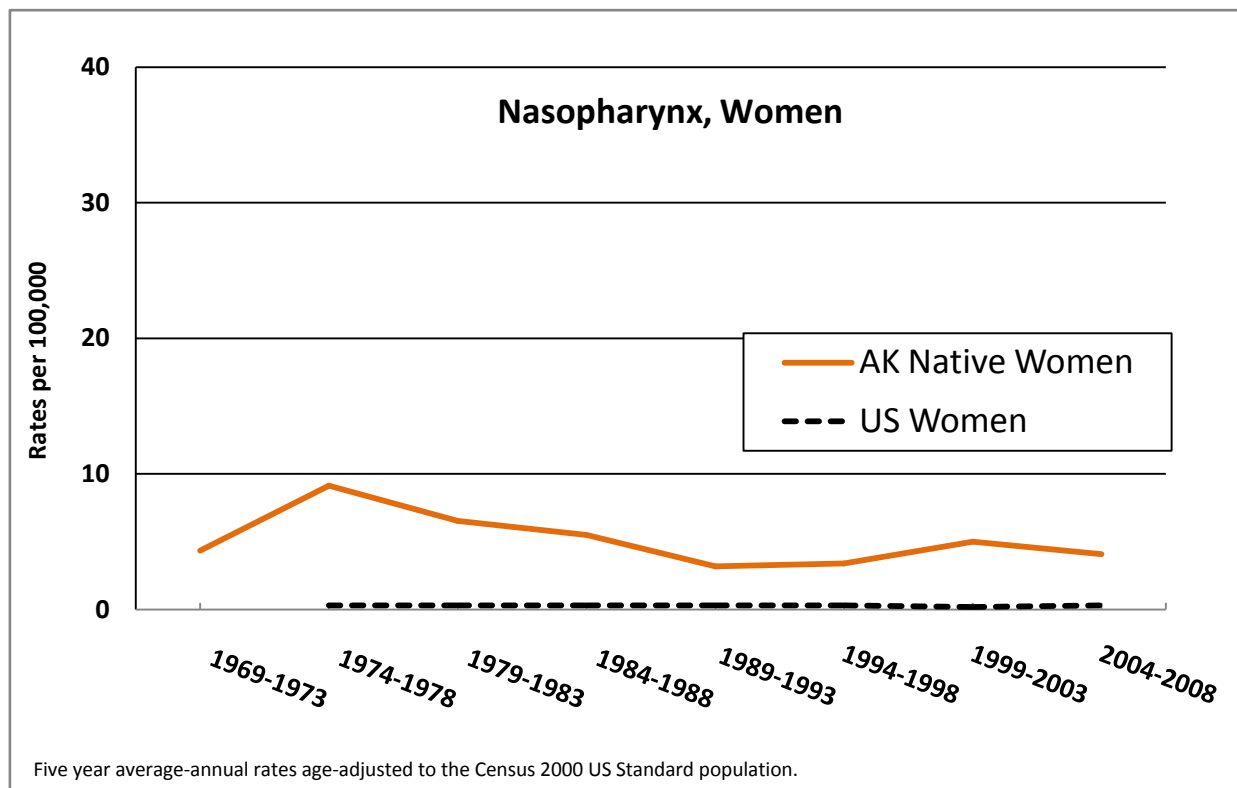
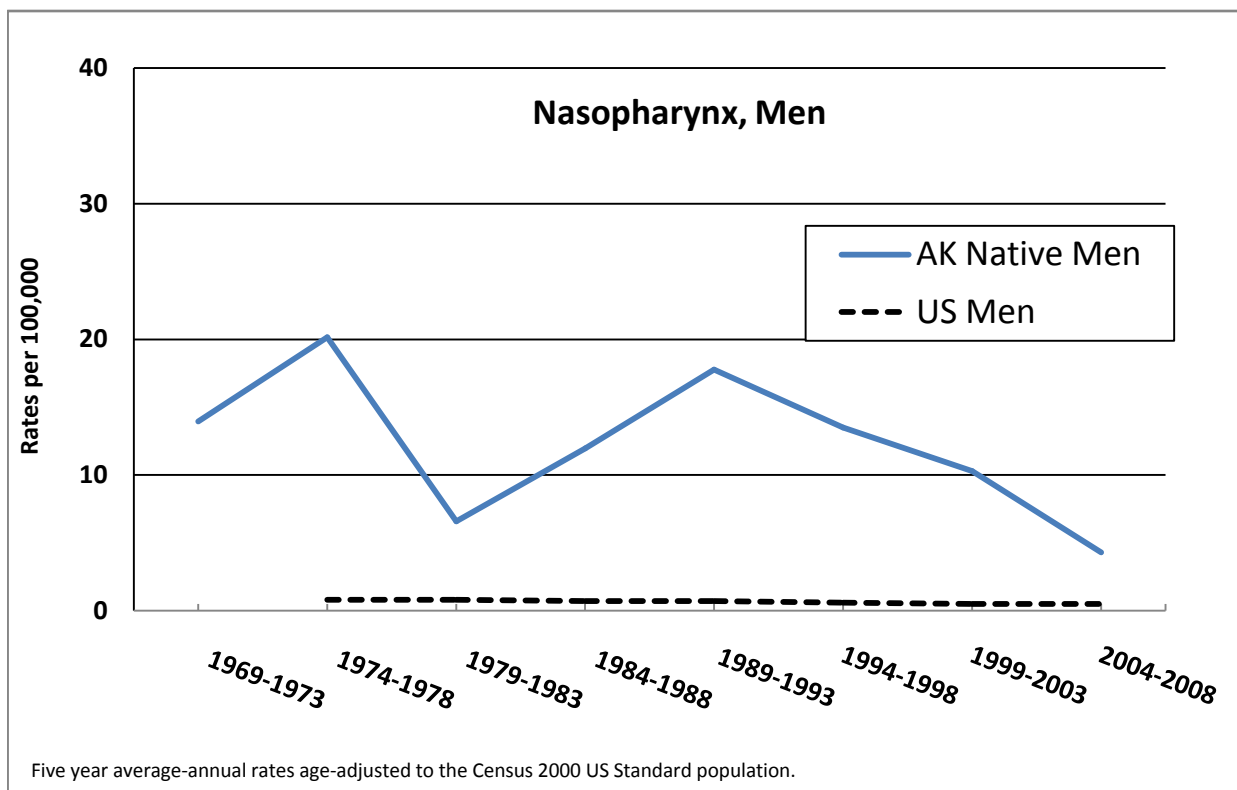
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



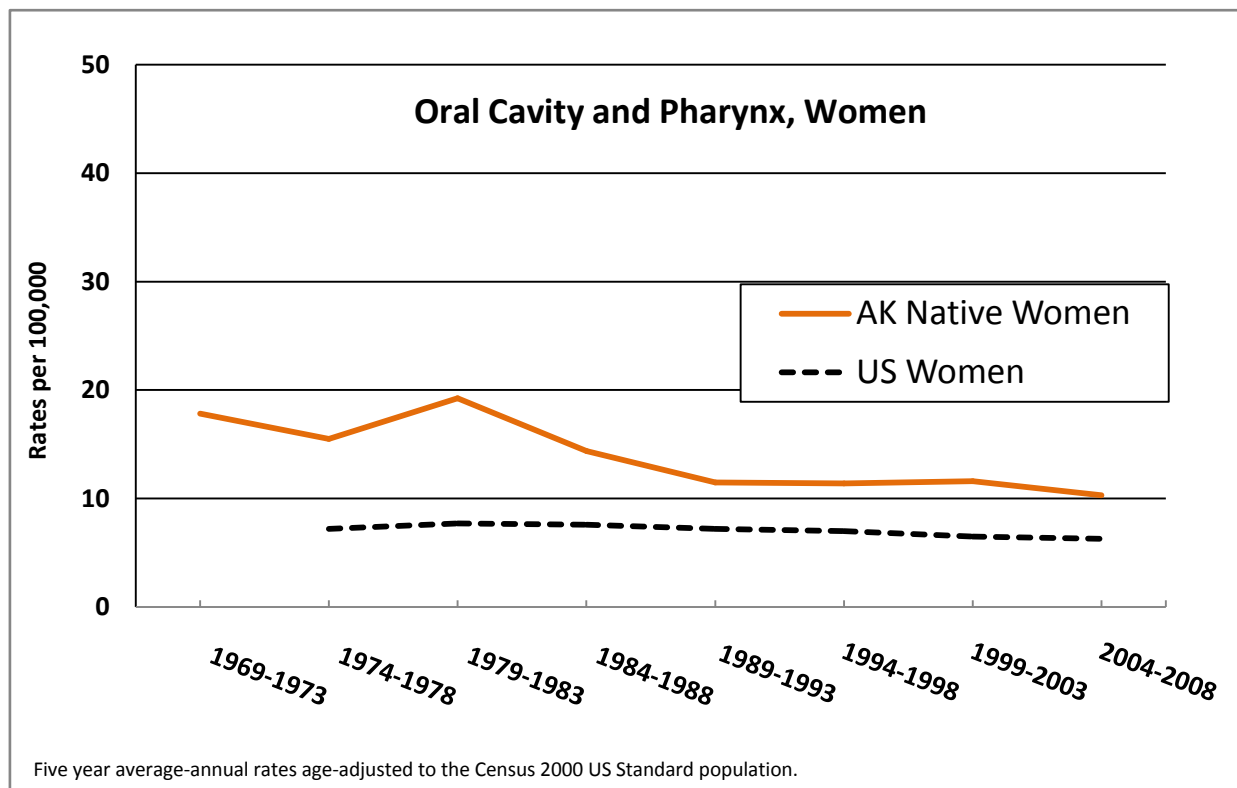
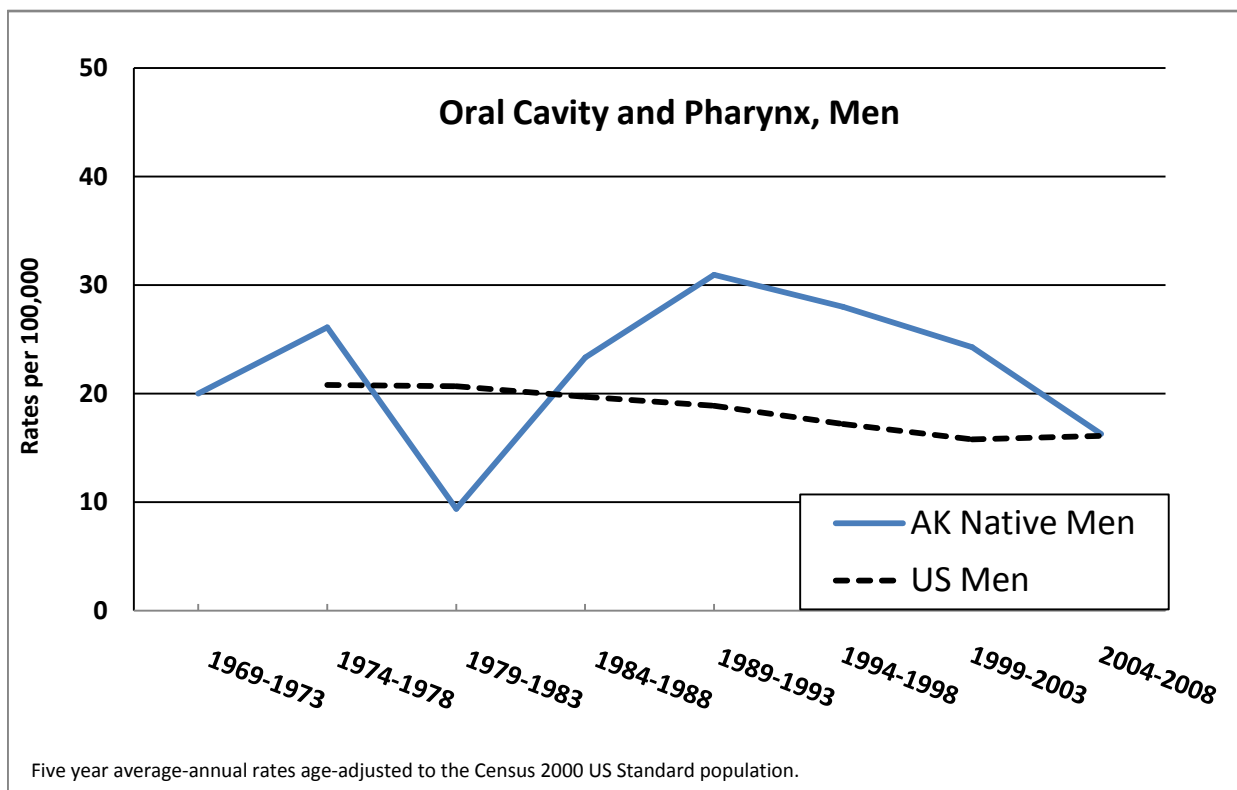
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



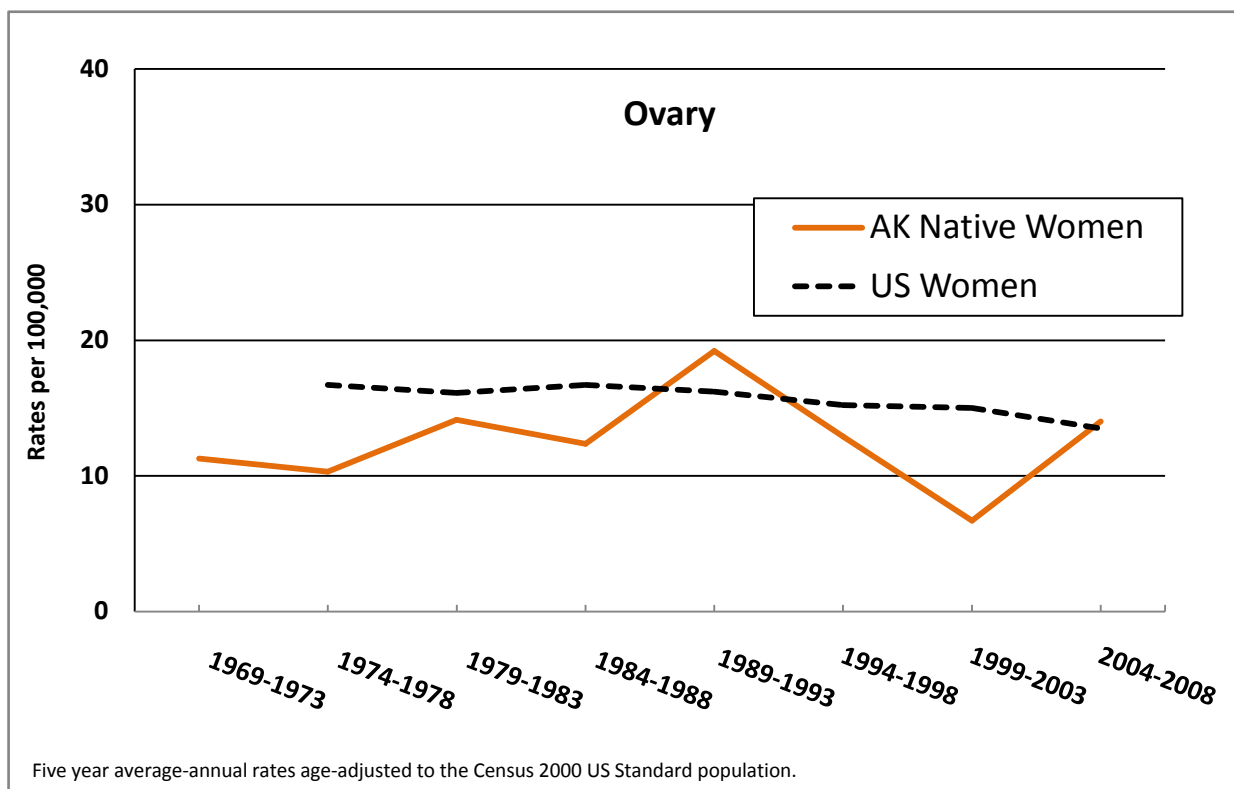
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



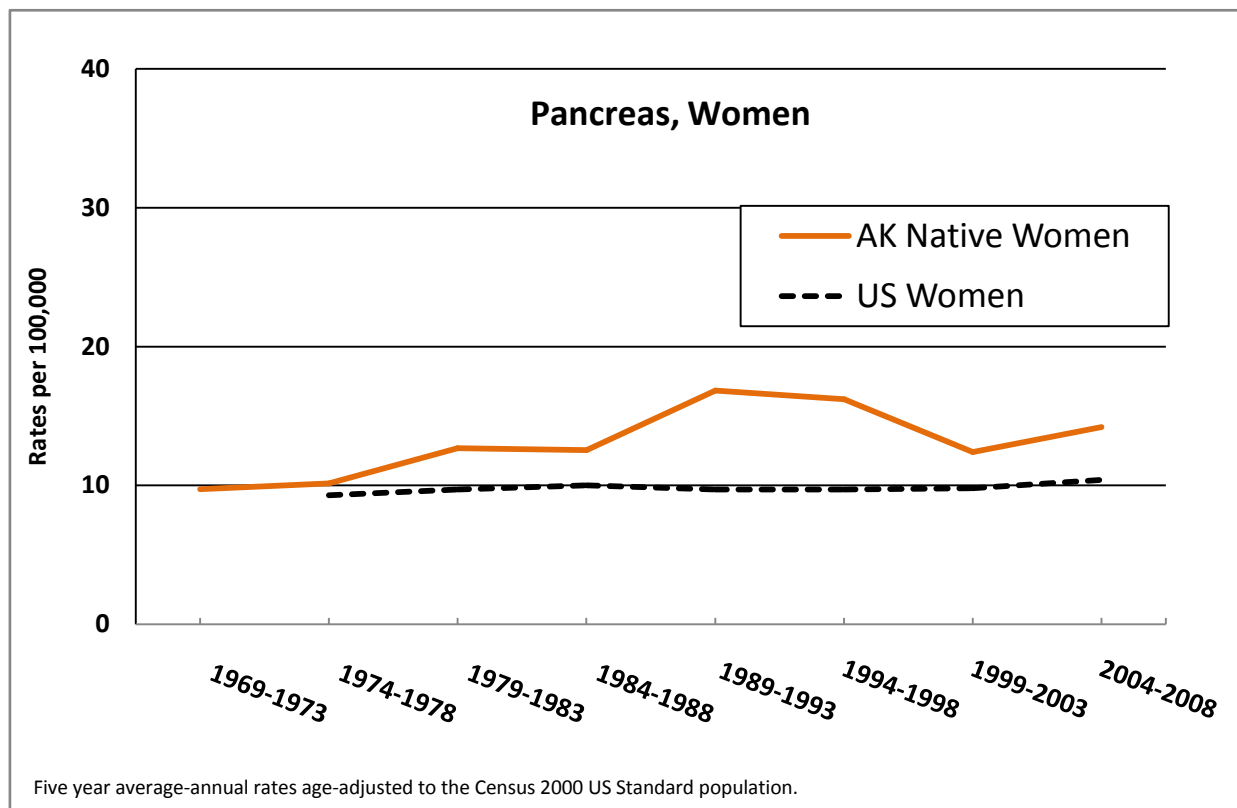
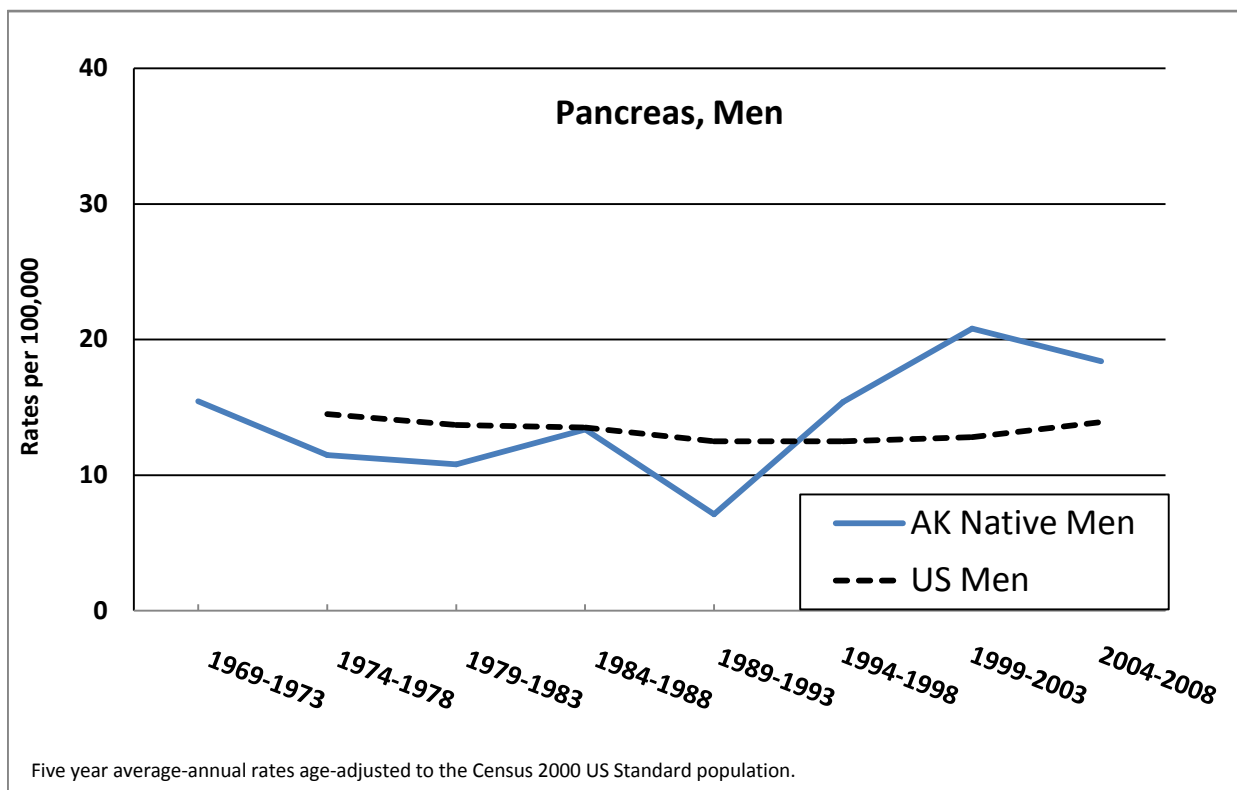
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



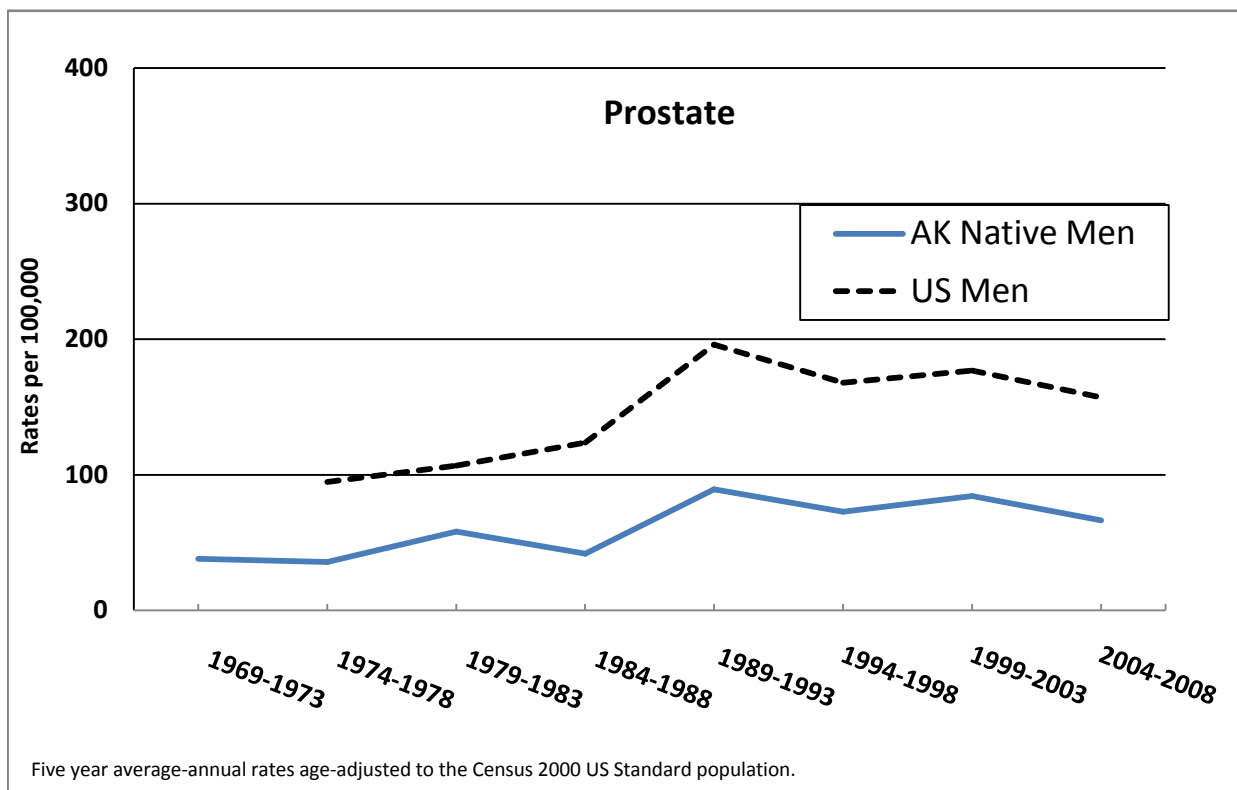
**Five-Year Average Annual Age-Adjusted Cancer Incidence Rates  
Alaska Native People, 1969-2008 and US Whites, 1974-2008**



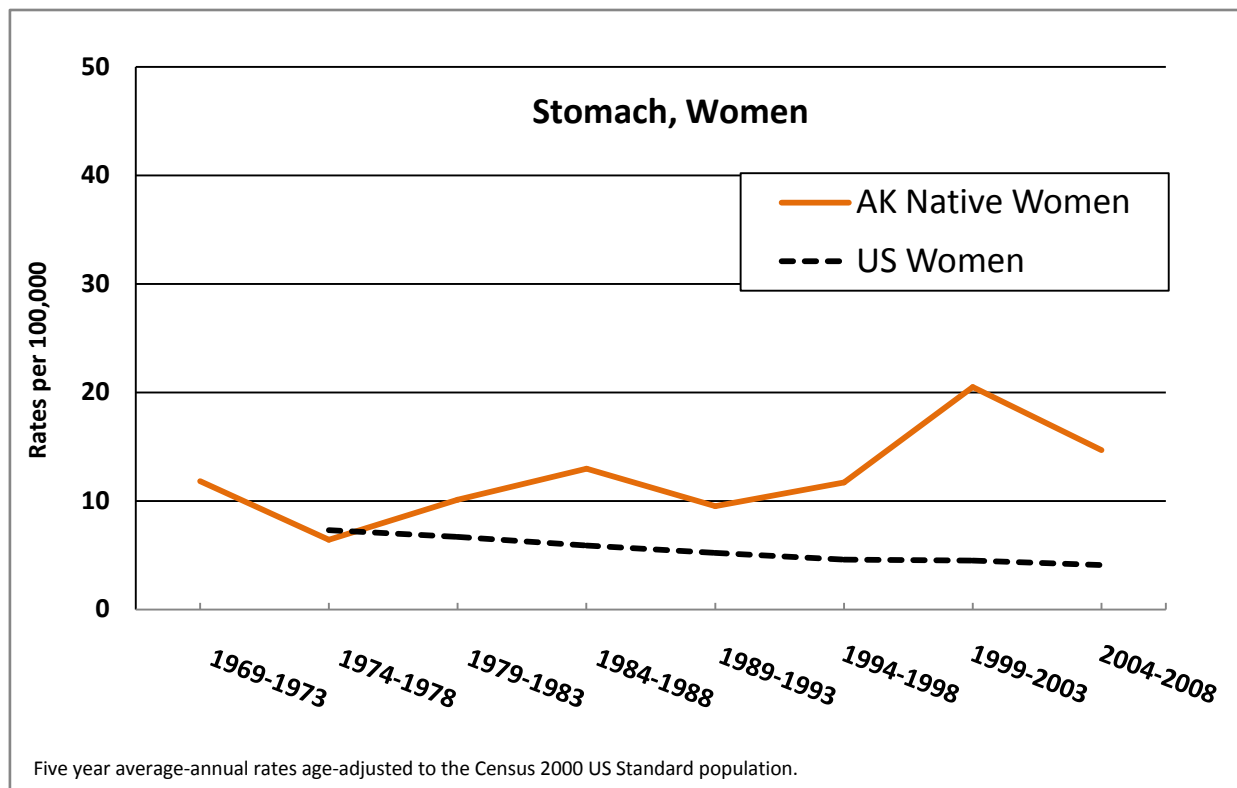
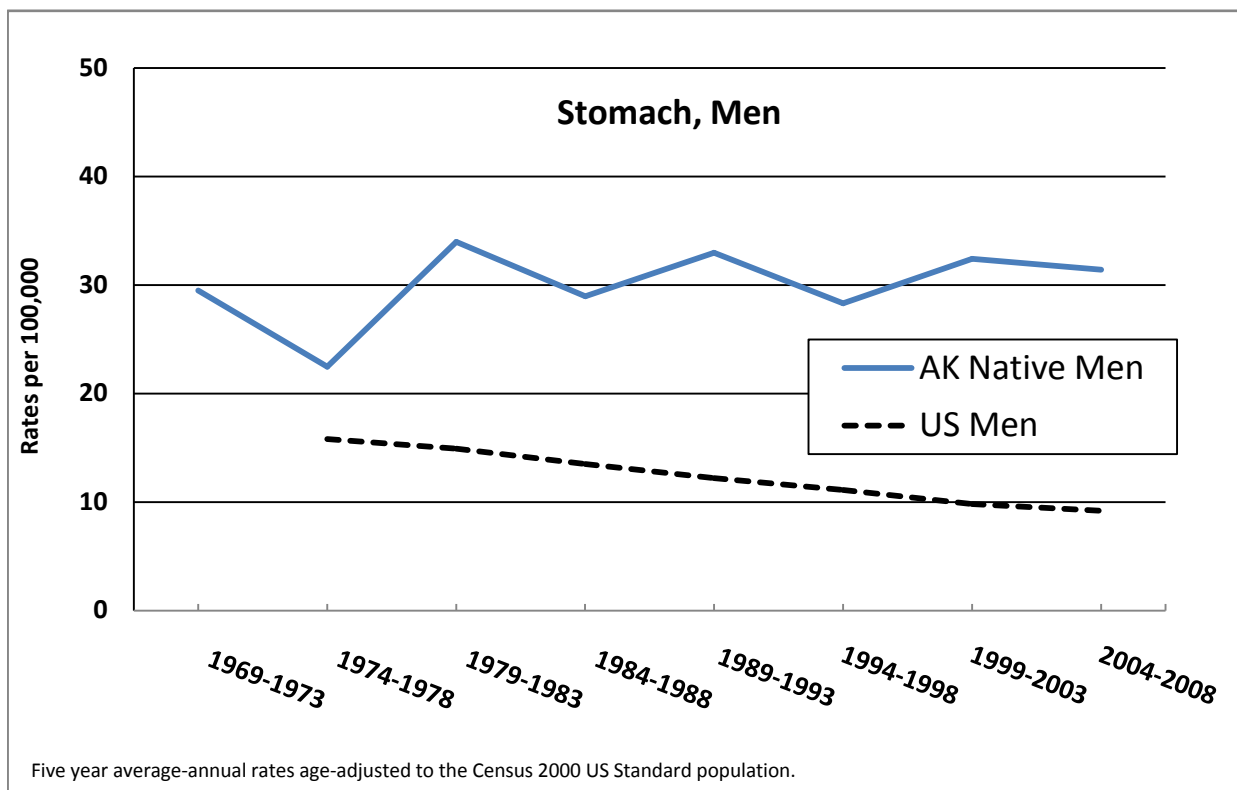
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



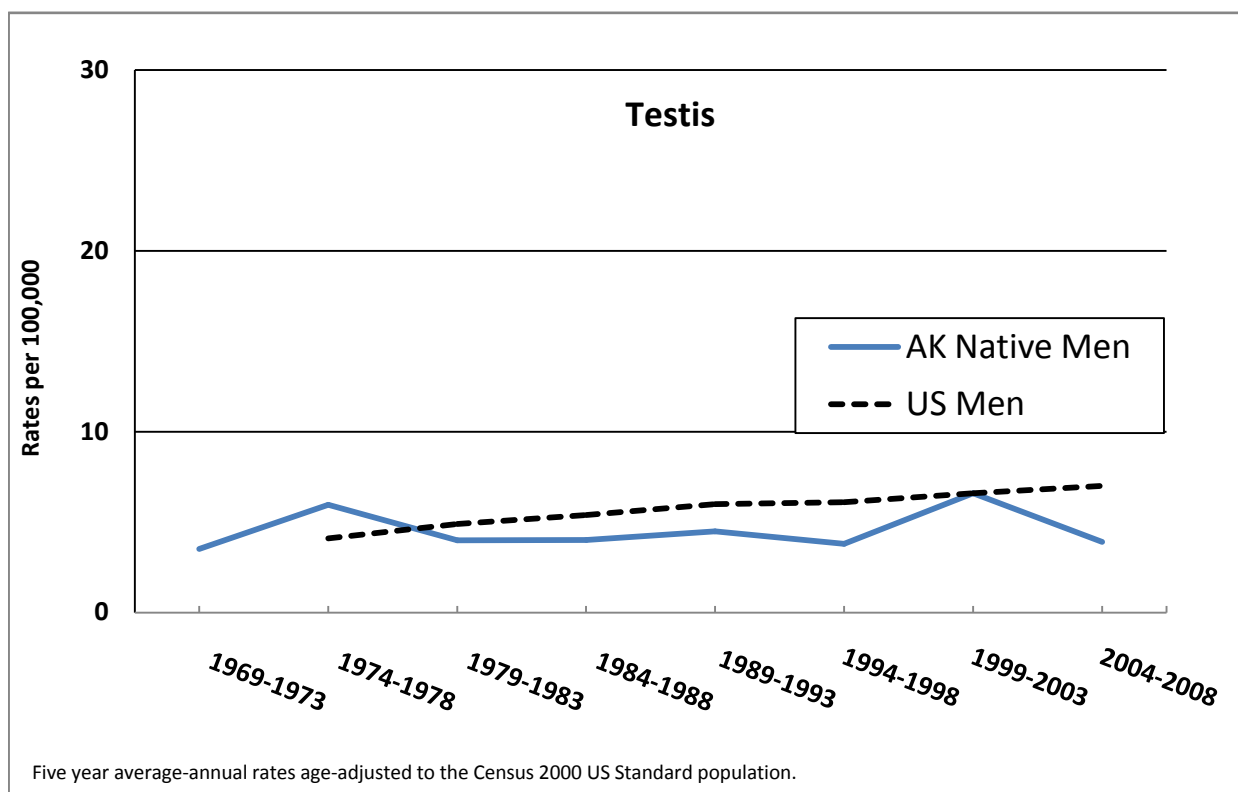
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



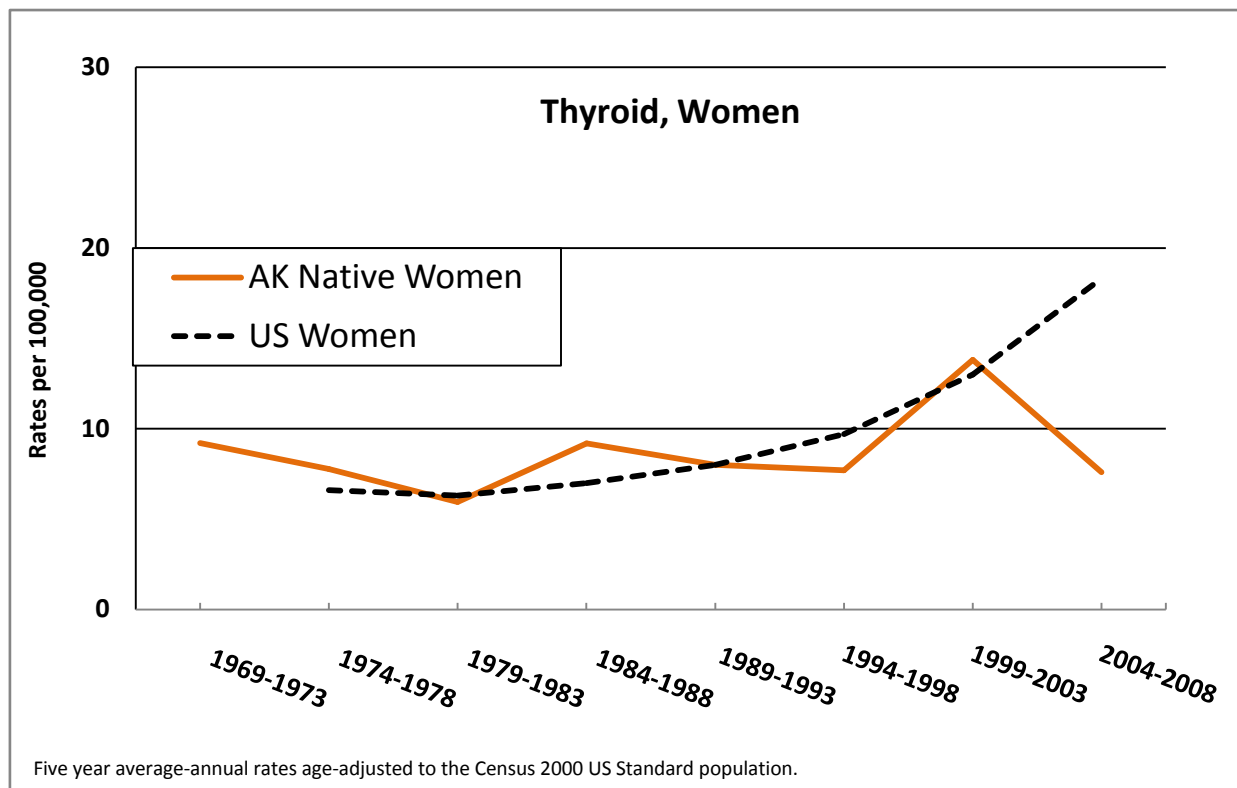
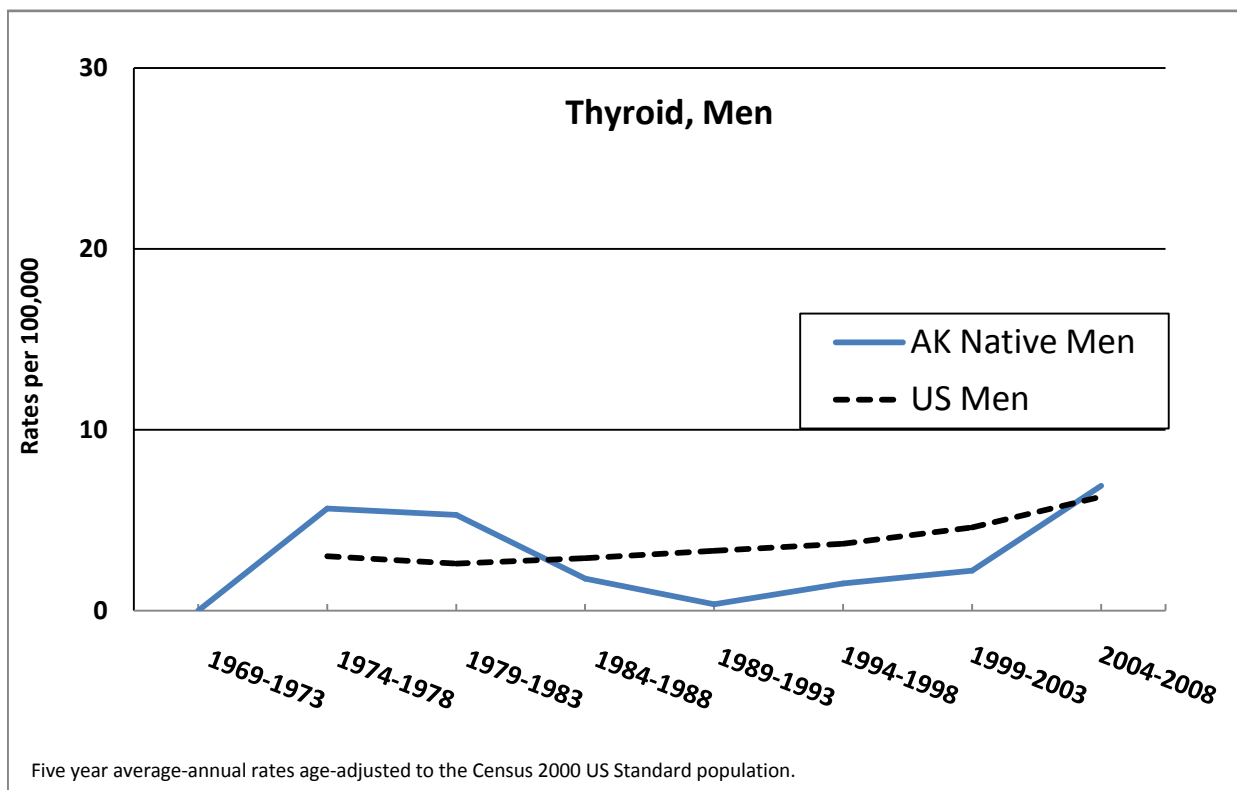
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



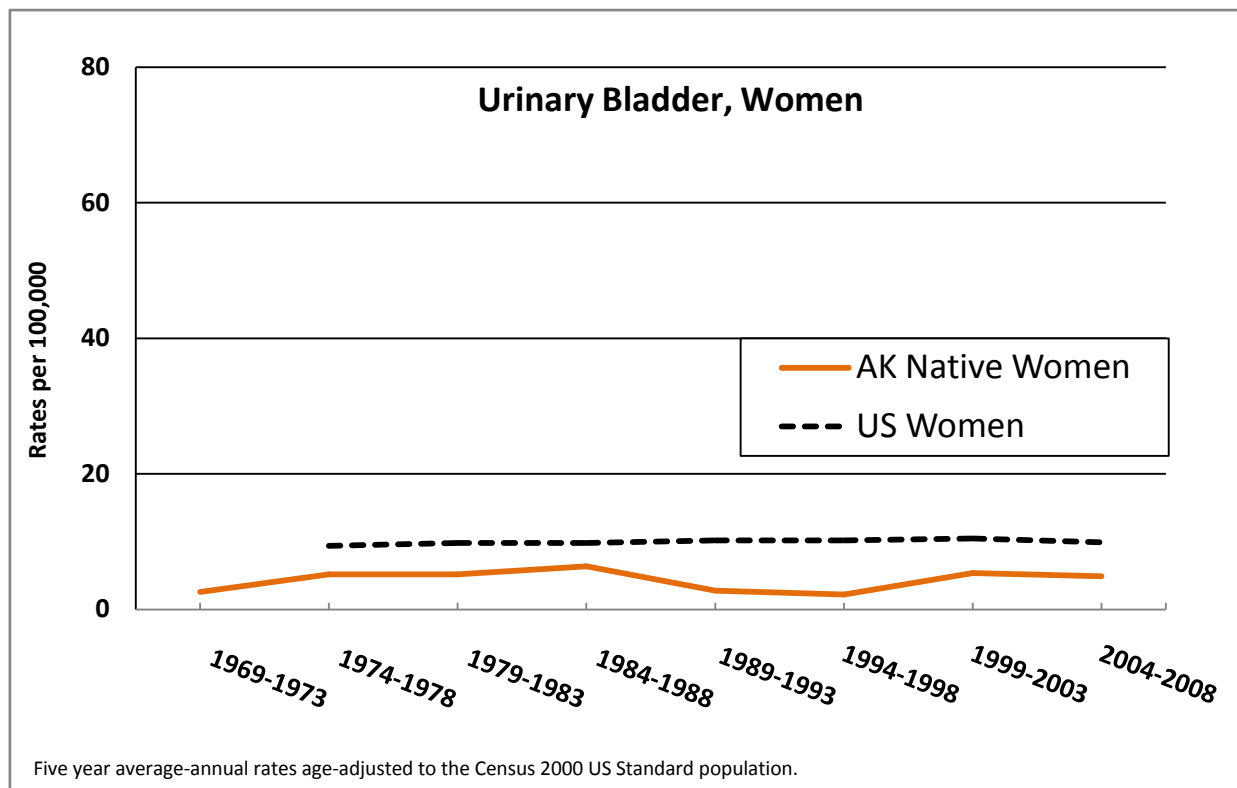
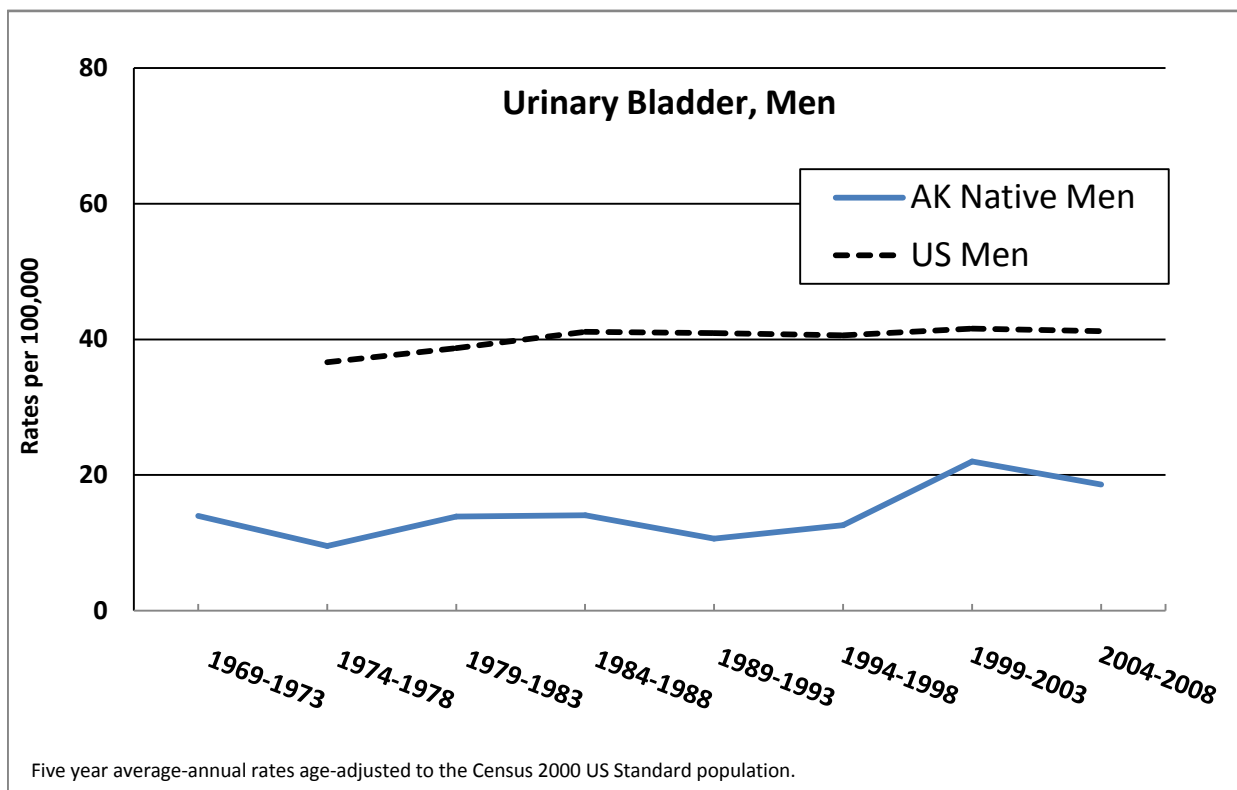
**Five-Year Average Annual Age-Adjusted Cancer Incidence Rates  
Alaska Native People, 1969-2008 and US Whites, 1974-2008**



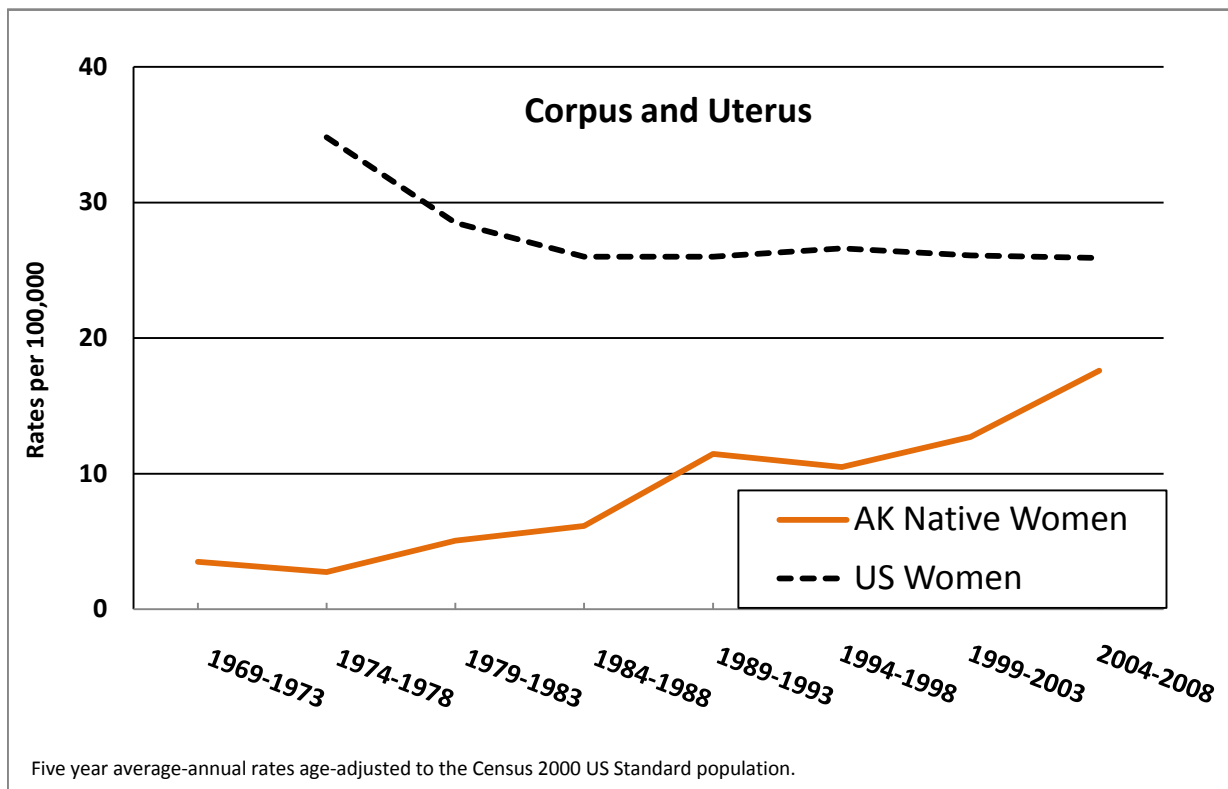
# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**



# **Five-Year Average Annual Age-Adjusted Cancer Incidence Rates Alaska Native People, 1969-2008 and US Whites, 1974-2008**





## Alaska Native Tumor Registry

# Service Unit Regions 15-Year Cancer Incidence Rates, 1994-2008

## Leading Cancers among Alaska Native Men and Women by Service Unit, 1994-2008

| Anchorage     |              |      |            |
|---------------|--------------|------|------------|
| Rank (N=1832) | Site         | No.  | % of Total |
| 1             | Breast       | 339  | 18.5       |
| 2             | Lung         | 329  | 18.0       |
| 3             | Colon/Rectum | 277  | 15.1       |
| 4             | Prostate     | 108  | 5.9        |
| 5             | Oral/Pharynx | 80   | 4.4        |
| 6             | Stomach      | 66   | 3.6        |
| 7             | Kidney       | 60   | 3.3        |
| 8             | Non-Hodgkin  | 51   | 2.8        |
| 9             | Pancreas     | 44   | 2.4        |
| 10            | Leukemia     | 42   | 2.3        |
| Total         |              | 1396 | 76.2       |

| Barrow       |              |     |            |
|--------------|--------------|-----|------------|
| Rank (N=180) | Site         | No. | % of Total |
| 1            | Lung         | 45  | 25.0       |
| 2            | Colon/Rectum | 38  | 21.1       |
| 3            | Breast       | 15  | 8.3        |
| 4            | Prostate     | 13  | 7.2        |
| 5            | Stomach      | 12  | 6.7        |
| 6            | Pancreas     | 8   | 4.4        |
| 7            | Kidney       | 8   | 4.4        |
| 8            | Cervix       | 4   | 2.2        |
| 9            | Thyroid      | 4   | 2.2        |
| 10           | Non-Hodgkin  | 4   | 2.2        |
| Total        |              | 151 | 83.9       |

| Bristol Bay  |                 |     |            |
|--------------|-----------------|-----|------------|
| Rank (N=210) | Site            | No. | % of Total |
| 1            | Colon/Rectum    | 52  | 24.8       |
| 2            | Lung            | 36  | 17.1       |
| 3            | Breast          | 21  | 10.0       |
| 4            | Prostate        | 13  | 6.2        |
| 5            | Pancreas        | 9   | 4.3        |
| 6            | Kidney          | 9   | 4.3        |
| 7            | Oral/Pharynx    | 8   | 3.8        |
| 8            | Stomach         | 8   | 3.8        |
| 9            | Esophagus       | 7   | 3.3        |
| 10           | Urinary Bladder | 7   | 3.3        |
| Total        |                 | 170 | 81.0       |

| Interior     |              |     |            |
|--------------|--------------|-----|------------|
| Rank (N=582) | Site         | No. | % of Total |
| 1            | Breast       | 110 | 18.9       |
| 2            | Lung         | 100 | 17.2       |
| 3            | Colon/Rectum | 93  | 16.0       |
| 4            | Prostate     | 47  | 8.1        |
| 5            | Kidney       | 34  | 5.8        |
| 6            | Oral/Pharynx | 24  | 4.1        |
| 7            | Stomach      | 20  | 3.4        |
| 8            | Pancreas     | 17  | 2.9        |
| 9            | Esophagus    | 15  | 2.6        |
| 10           | Thyroid      | 11  | 1.9        |
| Total        |              | 471 | 80.9       |

| Kotzebue     |                 |     |            |
|--------------|-----------------|-----|------------|
| Rank (N=238) | Site            | No. | % of Total |
| 1            | Colon/Rectum    | 53  | 22.3       |
| 2            | Lung            | 40  | 16.8       |
| 3            | Breast          | 28  | 11.8       |
| 4            | Stomach         | 26  | 10.9       |
| 5            | Kidney          | 16  | 6.7        |
| 6            | Prostate        | 7   | 2.9        |
| 7            | Leukemia        | 7   | 2.9        |
| 8            | Pancreas        | 6   | 2.5        |
| 9            | Urinary Bladder | 6   | 2.5        |
| 10           | Cervix          | 4   | 1.7        |
| Total        |                 | 193 | 81.1       |

| Mt. Edgecumbe |                 |     |            |
|---------------|-----------------|-----|------------|
| Rank (N=752)  | Site            | No. | % of Total |
| 1             | Breast          | 147 | 19.5       |
| 2             | Colon/Rectum    | 112 | 14.9       |
| 3             | Prostate        | 84  | 11.2       |
| 4             | Lung            | 79  | 10.5       |
| 5             | Non-Hodgkin     | 28  | 3.7        |
| 6             | Kidney          | 27  | 3.6        |
| 7             | Leukemia        | 23  | 3.1        |
| 8             | Urinary Bladder | 22  | 2.9        |
| 9             | Oral/Pharynx    | 21  | 2.8        |
| 10            | Stomach         | 20  | 2.7        |
| Total         |                 | 563 | 74.9       |

| Norton Sound |              |     |            |
|--------------|--------------|-----|------------|
| Rank (N=309) | Site         | No. | % of Total |
| 1            | Lung         | 76  | 24.6       |
| 2            | Colon/Rectum | 73  | 23.6       |
| 3            | Breast       | 32  | 10.4       |
| 4            | Stomach      | 22  | 7.1        |
| 5            | Oral/Pharynx | 11  | 3.6        |
| 6            | Pancreas     | 10  | 3.2        |
| 7            | Non-Hodgkin  | 8   | 2.6        |
| 8            | Esophagus    | 7   | 2.3        |
| 9            | Liver        | 7   | 2.3        |
| 10           | Prostate     | 6   | 1.9        |
| Total        |              | 252 | 81.6       |

| Yukon-Kuskokwim |              |     |            |
|-----------------|--------------|-----|------------|
| Rank (N=646)    | Site         | No. | % of Total |
| 1               | Colon/Rectum | 153 | 23.7       |
| 2               | Lung         | 117 | 18.1       |
| 3               | Breast       | 62  | 9.6        |
| 4               | Stomach      | 39  | 6.0        |
| 5               | Kidney       | 33  | 5.1        |
| 6               | Pancreas     | 28  | 4.3        |
| 7               | Oral/Pharynx | 16  | 2.5        |
| 8               | Non-Hodgkin  | 16  | 2.5        |
| 9               | Leukemia     | 16  | 2.5        |
| 10              | Liver        | 15  | 2.3        |
| Total           |              | 495 | 76.6       |

| All Men and Women |              |      |            |
|-------------------|--------------|------|------------|
| Rank (N=4749)     | Site         | No.  | % of Total |
| 1                 | Colon/Rectum | 851  | 17.9       |
| 2                 | Lung         | 822  | 17.3       |
| 3                 | Breast       | 754  | 15.9       |
| 4                 | Prostate     | 292  | 6.1        |
| 5                 | Stomach      | 213  | 4.5        |
| 6                 | Kidney       | 192  | 4.0        |
| 7                 | Oral/Pharynx | 165  | 3.5        |
| 8                 | Pancreas     | 140  | 2.9        |
| 9                 | Non-Hodgkin  | 122  | 2.6        |
| 10                | Leukemia     | 106  | 2.2        |
| Total             |              | 3657 | 77.0       |

## Leading Cancers among Alaska Native Men by Service Unit, 1994-2008

| Anchorage    |                 |     |       | Barrow       |                 |     |       | Bristol Bay  |                 |     |       |
|--------------|-----------------|-----|-------|--------------|-----------------|-----|-------|--------------|-----------------|-----|-------|
|              |                 |     | % of  |              |                 |     | % of  |              |                 |     | % of  |
| Rank (N=785) | Site            | No. | Total | Rank (N=105) | Site            | No. | Total | Rank (N=114) | Site            | No. | Total |
| 1            | Lung            | 174 | 22.2  | 1            | Lung            | 38  | 36.2  | 1            | Colon/Rectum    | 29  | 25.4  |
| 2            | Colon/Rectum    | 119 | 15.2  | 2            | Colon/Rectum    | 17  | 16.2  | 2            | Lung            | 20  | 17.5  |
| 3            | Prostate        | 108 | 13.8  | 3            | Prostate        | 13  | 12.4  | 3            | Prostate        | 13  | 11.4  |
| 4            | Oral/Pharynx    | 47  | 6.0   | 4            | Pancreas        | 6   | 5.7   | 4            | Oral/Pharynx    | 7   | 6.1   |
| 5            | Kidney          | 38  | 4.8   | 5            | Stomach         | 5   | 4.8   | 5            | Stomach         | 6   | 5.3   |
| 6            | Stomach         | 36  | 4.6   | 6            | Kidney          | 5   | 4.8   | 6            | Urinary Bladder | 6   | 5.3   |
| 7            | Urinary Bladder | 26  | 3.3   | 7            | Urinary Bladder | 3   | 2.9   | 7            | Kidney          | 5   | 4.4   |
| 8            | Leukemia        | 25  | 3.2   | 8            | Non-Hodgkin     | 3   | 2.9   | 8            | Esophagus       | 3   | 2.6   |
| 9            | Non-Hodgkin     | 22  | 2.8   | 9            | Esophagus       | 2   | 1.9   | 9            | Liver           | 3   | 2.6   |
| 10           | Liver           | 20  | 2.5   | 10           | Oral/Pharynx    | 1   | 1.0   | 10           | Pancreas        | 3   | 2.6   |
| Total        |                 | 615 | 78.3  | Total        |                 | 93  | 88.6  | Total        |                 | 95  | 83.3  |

| Interior     |              |     |       | Kotzebue     |                 |     |       | Mt. Edgecumbe |                 |     |       |
|--------------|--------------|-----|-------|--------------|-----------------|-----|-------|---------------|-----------------|-----|-------|
|              |              |     | % of  |              |                 |     | % of  |               |                 |     | % of  |
| Rank (N=265) | Site         | No. | Total | Rank (N=113) | Site            | No. | Total | Rank (N=353)  | Site            | No. | Total |
| 1            | Lung         | 57  | 21.5  | 1            | Colon/Rectum    | 27  | 23.9  | 1             | Prostate        | 84  | 23.8  |
| 2            | Colon/Rectum | 48  | 18.1  | 2            | Lung            | 24  | 21.2  | 2             | Colon/Rectum    | 68  | 19.3  |
| 3            | Prostate     | 47  | 17.7  | 3            | Stomach         | 15  | 13.3  | 3             | Lung            | 40  | 11.3  |
| 4            | Kidney       | 17  | 6.4   | 4            | Kidney          | 11  | 9.7   | 4             | Non-Hodgkin     | 18  | 5.1   |
| 5            | Oral/Pharynx | 16  | 6.0   | 5            | Prostate        | 7   | 6.2   | 5             | Urinary Bladder | 17  | 4.8   |
| 6            | Stomach      | 13  | 4.9   | 6            | Urinary Bladder | 6   | 5.3   | 6             | Kidney          | 17  | 4.8   |
| 7            | Esophagus    | 11  | 4.2   | 7            | Pancreas        | 3   | 2.7   | 7             | Oral/Pharynx    | 15  | 4.2   |
| 8            | Testis       | 10  | 3.8   | 8            | Leukemia        | 3   | 2.7   | 8             | Stomach         | 11  | 3.1   |
| 9            | Non-Hodgkin  | 6   | 2.3   | 9            | Oral/Pharynx    | 2   | 1.8   | 9             | Pancreas        | 11  | 3.1   |
| 10           | Liver        | 5   | 1.9   | 10           | Liver           | 2   | 1.8   | 10            | Leukemia        | 11  | 3.1   |
| Total        |              | 230 | 86.8  | Total        |                 | 100 | 88.5  | Total         |                 | 292 | 82.7  |

| Norton Sound |              |     |       | Yukon-Kuskokwim |                 |     |       | All Men       |                 |      |       |
|--------------|--------------|-----|-------|-----------------|-----------------|-----|-------|---------------|-----------------|------|-------|
|              |              |     | % of  |                 |                 |     | % of  |               |                 |      | % of  |
| Rank (N=164) | Site         | No. | Total | Rank (N=315)    | Site            | No. | Total | Rank (N=2214) | Site            | No.  | Total |
| 1            | Lung         | 50  | 30.5  | 1               | Lung            | 83  | 26.3  | 1             | Lung            | 486  | 22.0  |
| 2            | Colon/Rectum | 38  | 23.2  | 2               | Colon/Rectum    | 63  | 20.0  | 2             | Colon/Rectum    | 409  | 18.5  |
| 3            | Stomach      | 16  | 9.8   | 3               | Stomach         | 30  | 9.5   | 3             | Prostate        | 292  | 13.2  |
| 4            | Oral/Pharynx | 8   | 4.9   | 4               | Kidney          | 18  | 5.7   | 4             | Stomach         | 132  | 6.0   |
| 5            | Pancreas     | 7   | 4.3   | 5               | Pancreas        | 17  | 5.4   | 5             | Kidney          | 113  | 5.1   |
| 6            | Liver        | 6   | 3.7   | 6               | Prostate        | 14  | 4.4   | 6             | Oral/Pharynx    | 107  | 4.8   |
| 7            | Prostate     | 6   | 3.7   | 7               | Oral/Pharynx    | 11  | 3.5   | 7             | Urinary Bladder | 73   | 3.3   |
| 8            | Esophagus    | 5   | 3.0   | 8               | Liver           | 9   | 2.9   | 8             | Pancreas        | 72   | 3.3   |
| 9            | Leukemia     | 5   | 3.0   | 9               | Leukemia        | 9   | 2.9   | 9             | Non-Hodgkin     | 61   | 2.8   |
| 10           | Larynx       | 3   | 1.8   | 10              | Urinary Bladder | 7   | 2.2   | 10            | Leukemia        | 59   | 2.7   |
| Total        |              | 144 | 87.8  | Total           |                 | 261 | 82.9  | Total         |                 | 1804 | 81.5  |

## Leading Cancers among Alaska Native Women by Service Unit, 1994-2008

| Anchorage     |              |     |       | Barrow      |              |     |       | Bristol Bay |              |     |       |
|---------------|--------------|-----|-------|-------------|--------------|-----|-------|-------------|--------------|-----|-------|
|               |              |     | % of  |             |              |     | % of  |             |              |     | % of  |
| Rank (N=1047) | Site         | No. | Total | Rank (N=75) | Site         | No. | Total | Rank (N=96) | Site         | No. | Total |
| 1             | Breast       | 338 | 32.3  | 1           | Colon/Rectum | 21  | 28.0  | 1           | Colon/Rectum | 23  | 24.0  |
| 2             | Colon/Rectum | 158 | 15.1  | 2           | Breast       | 14  | 18.7  | 2           | Breast       | 21  | 21.9  |
| 3             | Lung         | 155 | 14.8  | 3           | Stomach      | 7   | 9.3   | 3           | Lung         | 16  | 16.7  |
| 4             | Corpus Uteri | 34  | 3.2   | 4           | Lung         | 7   | 9.3   | 4           | Pancreas     | 6   | 6.3   |
| 5             | Oral/Pharynx | 33  | 3.2   | 5           | Cervix       | 4   | 5.3   | 5           | Esophagus    | 4   | 4.2   |
| 6             | Thyroid      | 31  | 3.0   | 6           | Kidney       | 3   | 4.0   | 6           | Kidney       | 4   | 4.2   |
| 7             | Stomach      | 30  | 2.9   | 7           | Thyroid      | 3   | 4.0   | 7           | Non-Hodgkin  | 3   | 3.1   |
| 8             | Non-Hodgkin  | 29  | 2.8   | 8           | Oral/Pharynx | 2   | 2.7   | 8           | Stomach      | 2   | 2.1   |
| 9             | Ovary        | 25  | 2.4   | 9           | Pancreas     | 2   | 2.7   | 9           | Gallbladder  | 2   | 2.1   |
| 10            | Pancreas     | 24  | 2.3   | 10          | Ovary        | 2   | 2.7   | 10          | Liver        | 2   | 2.1   |
| Total         |              | 857 | 81.9  | Total       |              | 65  | 86.7  | Total       |              | 83  | 86.5  |

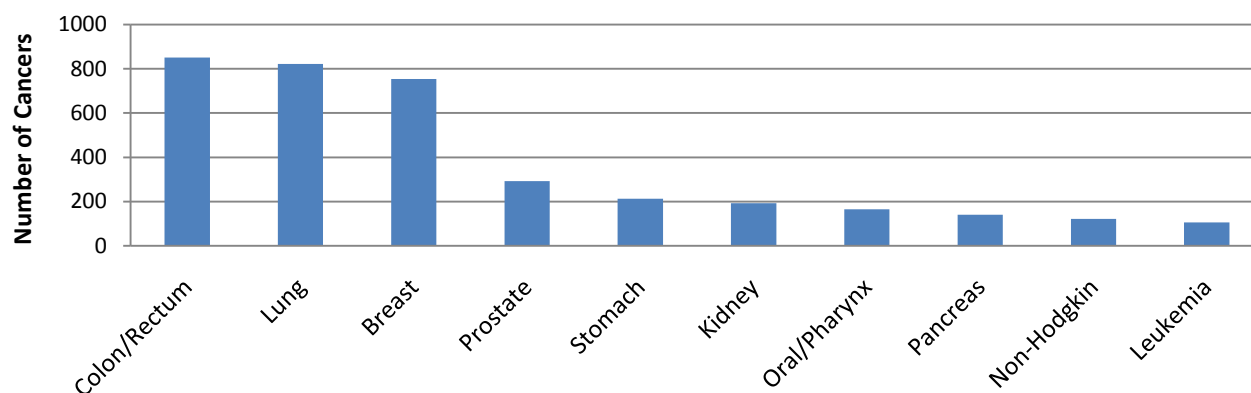
  

| Interior     |              |     |       | Kotzebue     |              |     |       | Mt. Edgecumbe |              |     |       |
|--------------|--------------|-----|-------|--------------|--------------|-----|-------|---------------|--------------|-----|-------|
|              |              |     | % of  |              |              |     | % of  |               |              |     | % of  |
| Rank (N=317) | Site         | No. | Total | Rank (N=125) | Site         | No. | Total | Rank (N=399)  | Site         | No. | Total |
| 1            | Breast       | 110 | 34.7  | 1            | Breast       | 28  | 22.4  | 1             | Breast       | 146 | 36.6  |
| 2            | Colon/Rectum | 45  | 14.2  | 2            | Colon/Rectum | 26  | 20.8  | 2             | Colon/Rectum | 44  | 11.0  |
| 3            | Lung         | 43  | 13.6  | 3            | Lung         | 16  | 12.8  | 3             | Lung         | 39  | 9.8   |
| 4            | Kidney       | 17  | 5.4   | 4            | Stomach      | 11  | 8.8   | 4             | Corpus Uteri | 18  | 4.5   |
| 5            | Pancreas     | 12  | 3.8   | 5            | Kidney       | 5   | 4     | 5             | Ovary        | 13  | 3.3   |
| 6            | Corpus Uteri | 10  | 3.2   | 6            | Cervix       | 4   | 3.2   | 6             | Leukemia     | 12  | 3.0   |
| 7            | Thyroid      | 10  | 3.2   | 7            | Corpus Uteri | 4   | 3.2   | 7             | Cervix       | 11  | 2.8   |
| 8            | Oral/Pharynx | 8   | 2.5   | 8            | Thyroid      | 4   | 3.2   | 8             | Kidney       | 10  | 2.5   |
| 9            | Stomach      | 7   | 2.2   | 9            | Leukemia     | 4   | 3.2   | 9             | Non-Hodgkin  | 10  | 2.5   |
| 10           | Cervix       | 6   | 1.9   | 10           | Pancreas     | 3   | 2.4   | 10            | Stomach      | 9   | 2.3   |
| Total        |              | 268 | 84.5  | Total        |              | 105 | 84.0  | Total         |              | 312 | 78.2  |

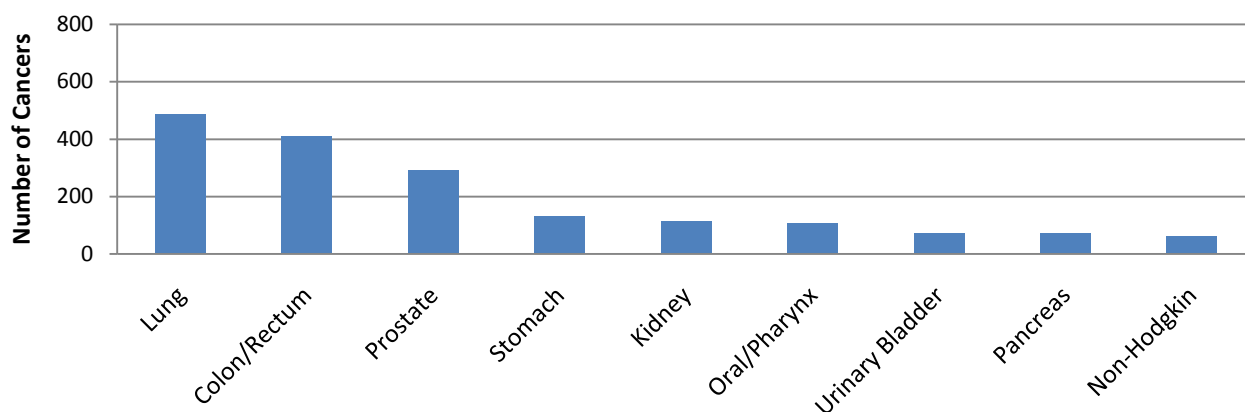
  

| Norton Sound |              |     |       | Yukon-Kuskokwim |              |     |       | All Women     |              |      |       |
|--------------|--------------|-----|-------|-----------------|--------------|-----|-------|---------------|--------------|------|-------|
|              |              |     | % of  |                 |              |     | % of  |               |              |      | % of  |
| Rank (N=145) | Site         | No. | Total | Rank (N=331)    | Site         | No. | Total | Rank (N=2535) | Site         | No.  | Total |
| 1            | Colon/Rectum | 35  | 24.1  | 1               | Colon/Rectum | 90  | 27.2  | 1             | Breast       | 750  | 29.6  |
| 2            | Breast       | 32  | 22.1  | 2               | Breast       | 61  | 18.4  | 2             | Colon/Rectum | 442  | 17.4  |
| 3            | Lung         | 26  | 17.9  | 3               | Lung         | 34  | 10.3  | 3             | Lung         | 336  | 13.3  |
| 4            | Stomach      | 6   | 4.1   | 4               | Kidney       | 15  | 4.5   | 4             | Stomach      | 81   | 3.2   |
| 5            | Non-Hodgkin  | 5   | 3.4   | 5               | Cervix       | 13  | 3.9   | 5             | Kidney       | 79   | 3.1   |
| 6            | Oral/Pharynx | 3   | 2.1   | 6               | Pancreas     | 11  | 3.3   | 6             | Corpus Uteri | 77   | 3.0   |
| 7            | Gallbladder  | 3   | 2.1   | 7               | Non-Hodgkin  | 10  | 3.0   | 7             | Pancreas     | 68   | 2.7   |
| 8            | Pancreas     | 3   | 2.1   | 8               | Stomach      | 9   | 2.7   | 8             | Thyroid      | 67   | 2.6   |
| 9            | Corpus Uteri | 3   | 2.1   | 9               | Ovary        | 9   | 2.7   | 9             | Cervix       | 61   | 2.4   |
| 10           | Ovary        | 3   | 2.1   | 10              | Brain/NS     | 8   | 2.4   | 10            | Ovary        | 61   | 2.4   |
| Total        |              | 119 | 82.1  | Total           |              | 260 | 78.5  | Total         |              | 2022 | 79.8  |

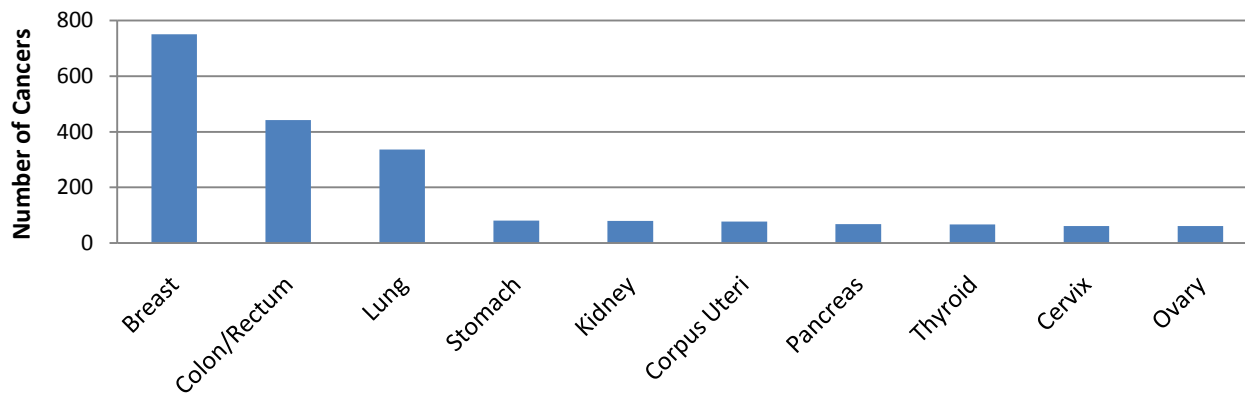
**Leading Cancers among Alaska Native Men & Women  
All Service Units, 1994-2008**



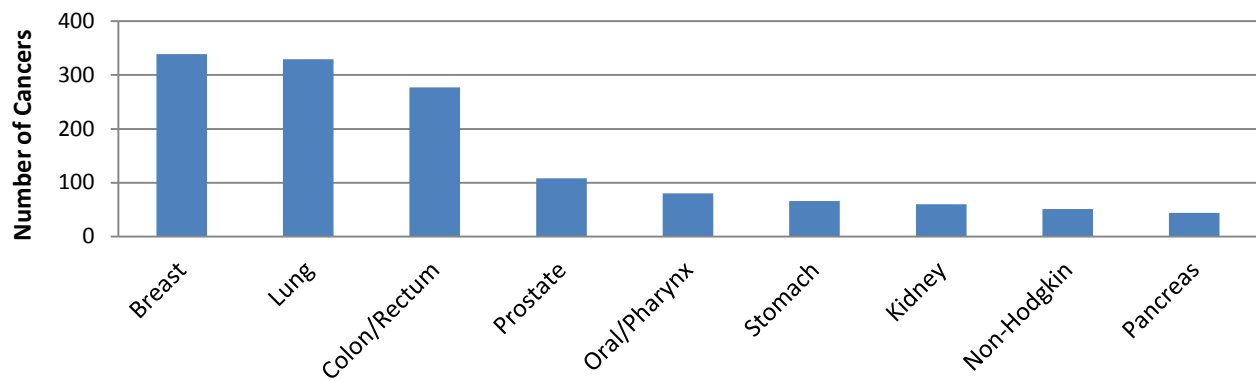
**Leading Cancers among Alaska Native Men  
All Service Units, 1994-2008**



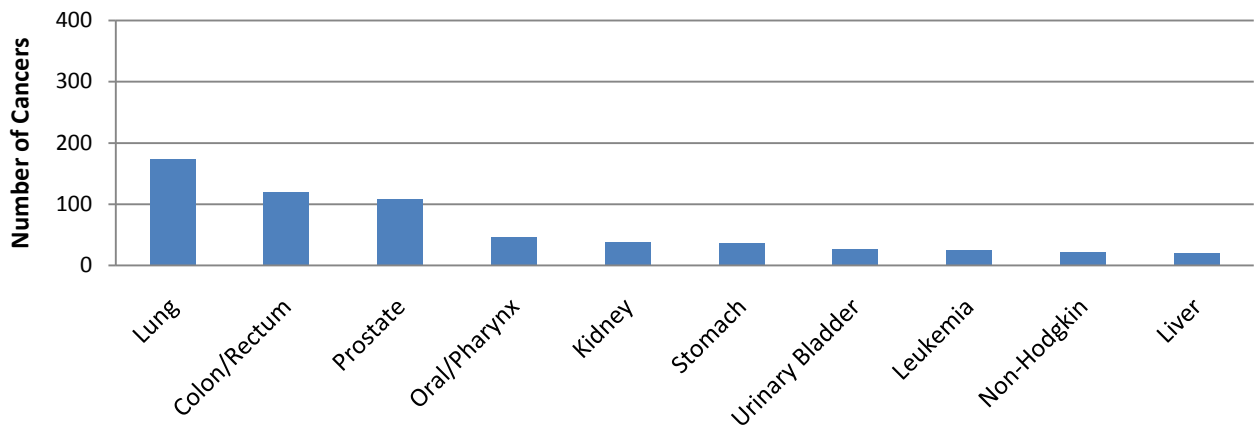
**Leading Cancers among Alaska Native Women  
All Service Units, 1994-2008**



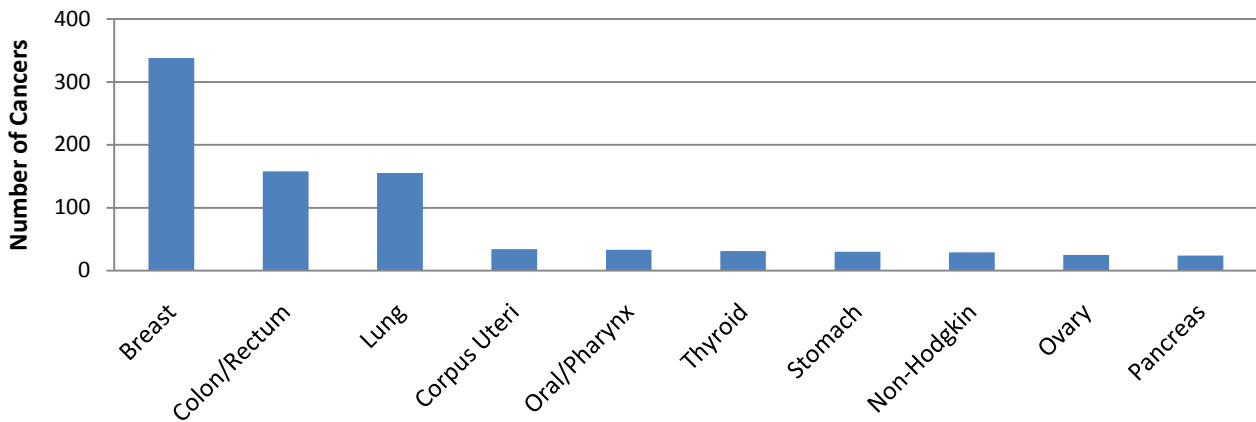
**Leading Cancers among Alaska Native Men & Women  
Anchorage Service Unit, 1994-2008**



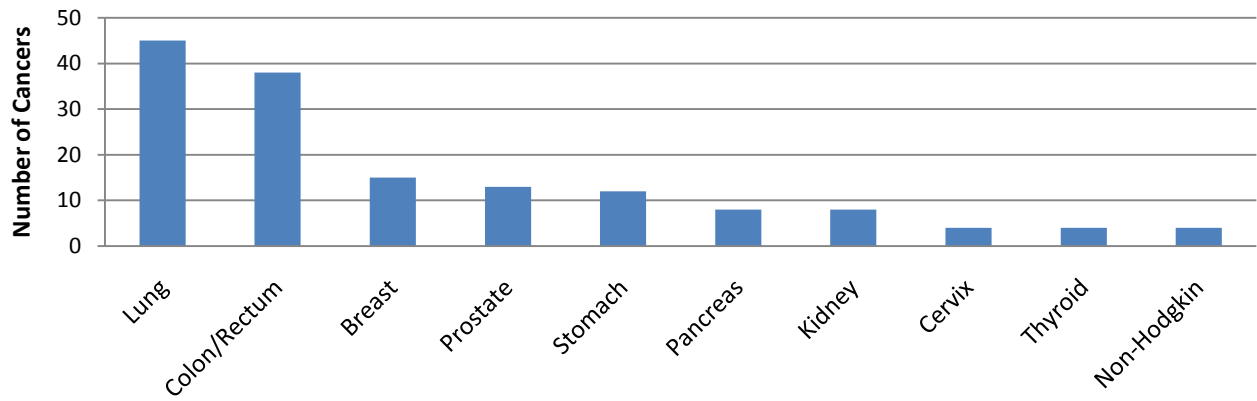
**Leading Cancers among Alaska Native Men  
Anchorage Service Unit, 1994-2008**



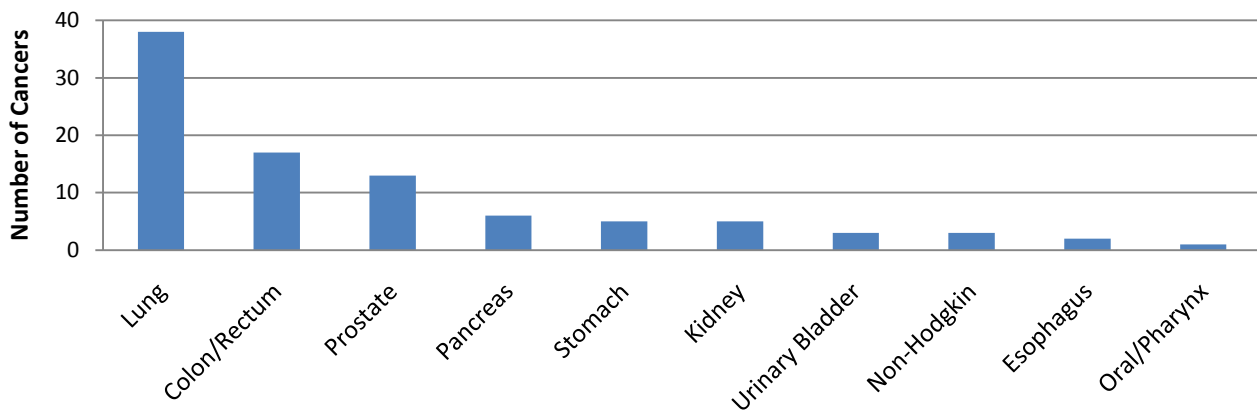
**Leading Cancers among Alaska Native Women  
Anchorage Service Unit, 1994-2008**



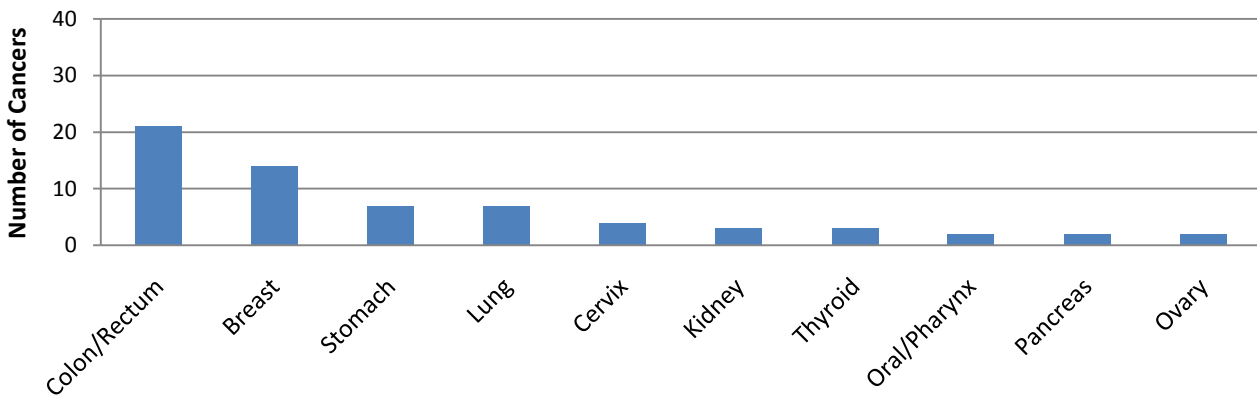
**Leading Cancers among Alaska Native Men & Women  
Barrow Service Unit, 1994-2008**



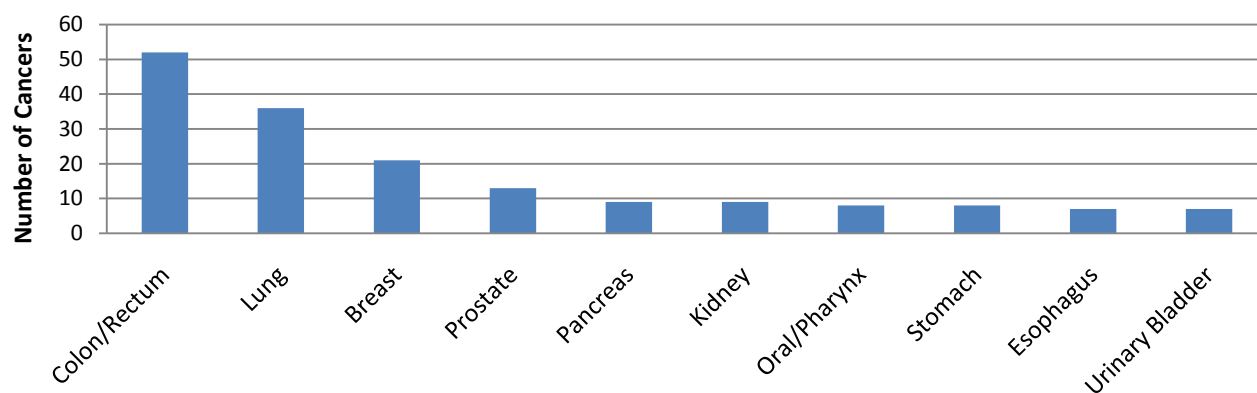
**Leading Cancers among Alaska Native Men  
Barrow Service Unit, 1994-2008**



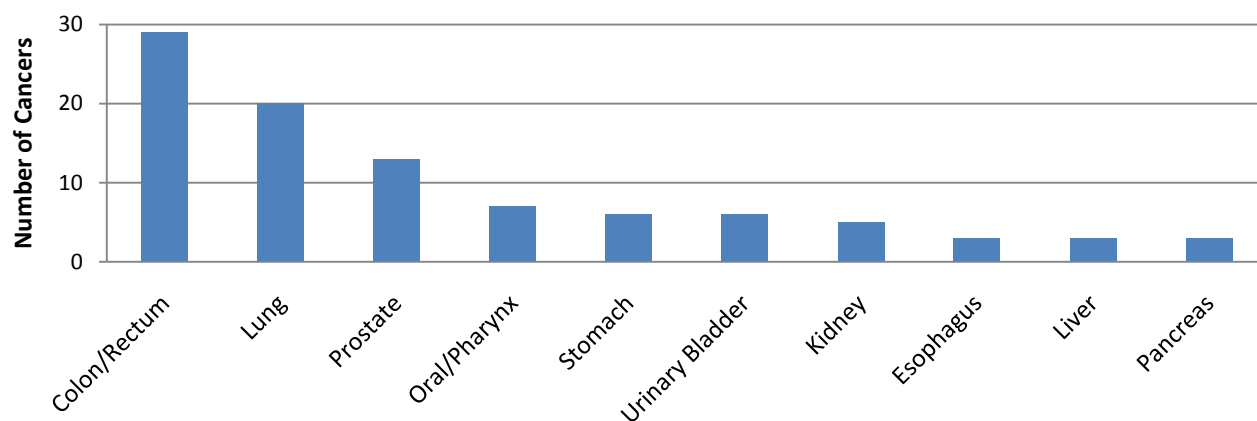
**Leading Cancers among Alaska Native Women  
Barrow Service Unit, 1994-2008**



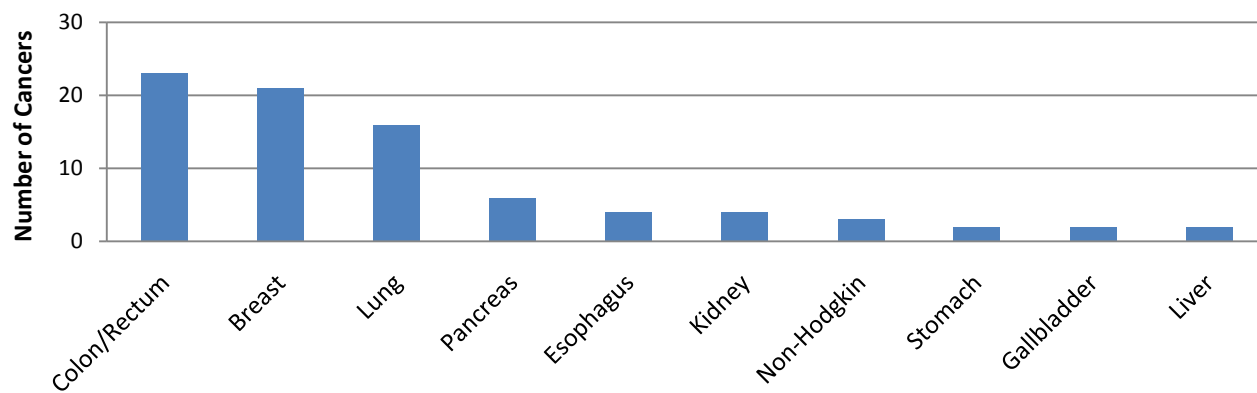
**Leading Cancers among Alaska Native Men & Women  
Bristol Bay Service Unit, 1994-2008**



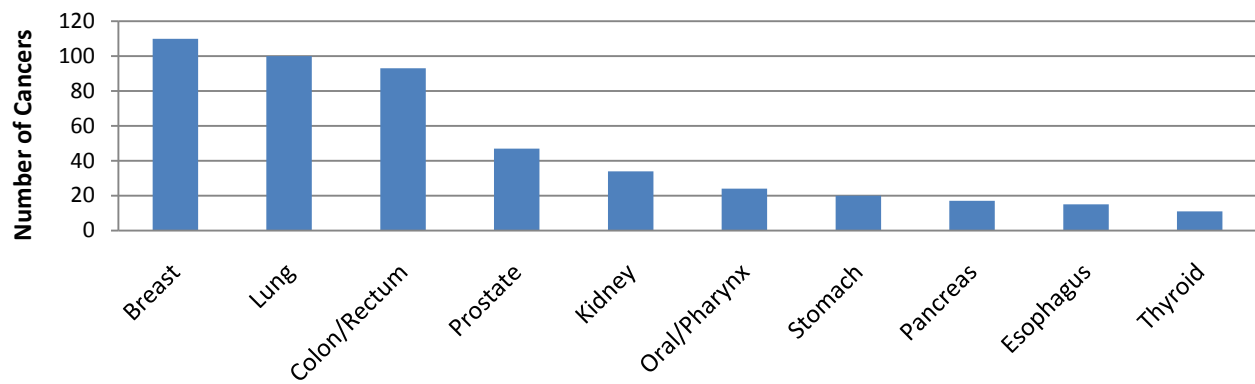
**Leading Cancers among Alaska Native Men  
Bristol Bay Service Unit, 1994-2008**



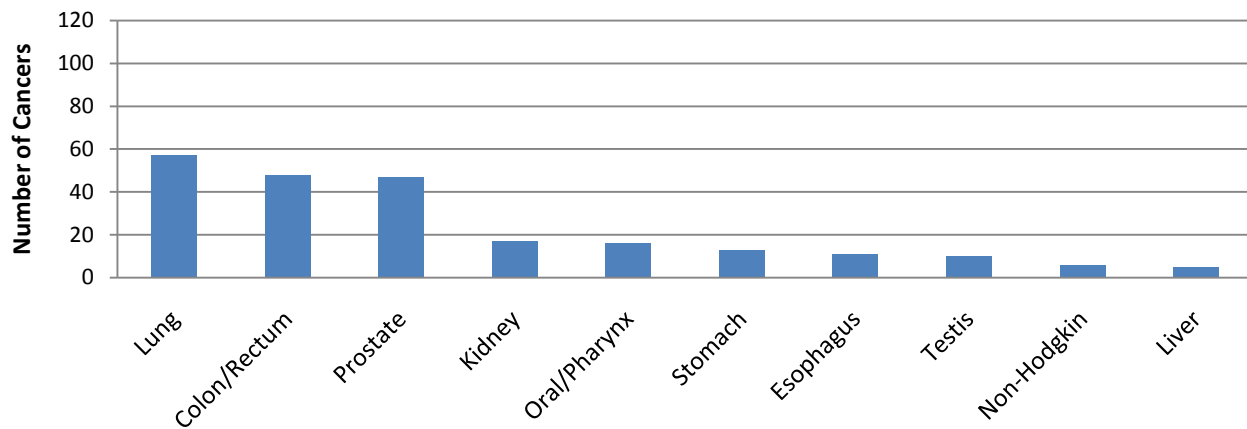
**Leading Cancers among Alaska Native Women  
Bristol Bay Service Unit, 1994-2008**



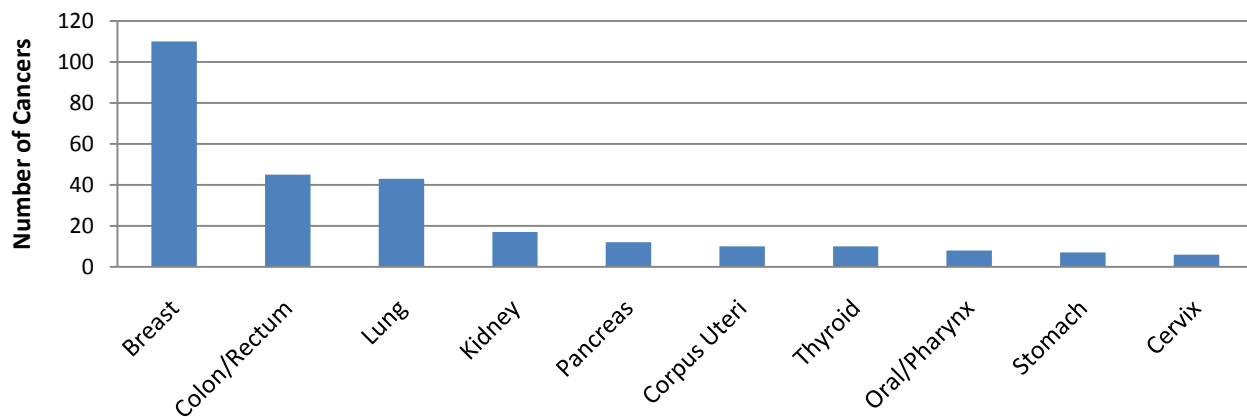
**Leading Cancers among Alaska Native Men & Women  
Interior Service Unit, 1994-2008**



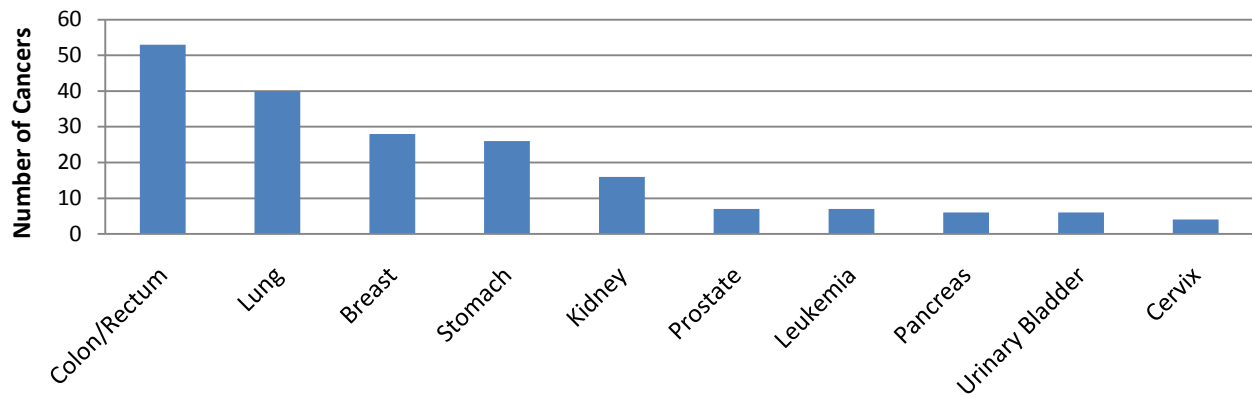
**Leading Cancers among Alaska Native Men  
Interior Service Unit, 1994-2008**



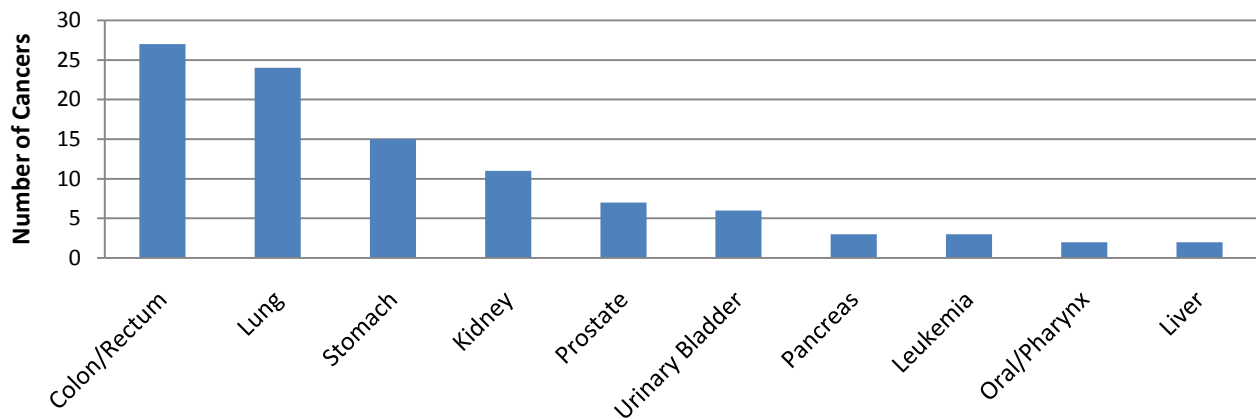
**Leading Cancers among Alaska Native Women  
Interior Service Unit, 1994-2008**



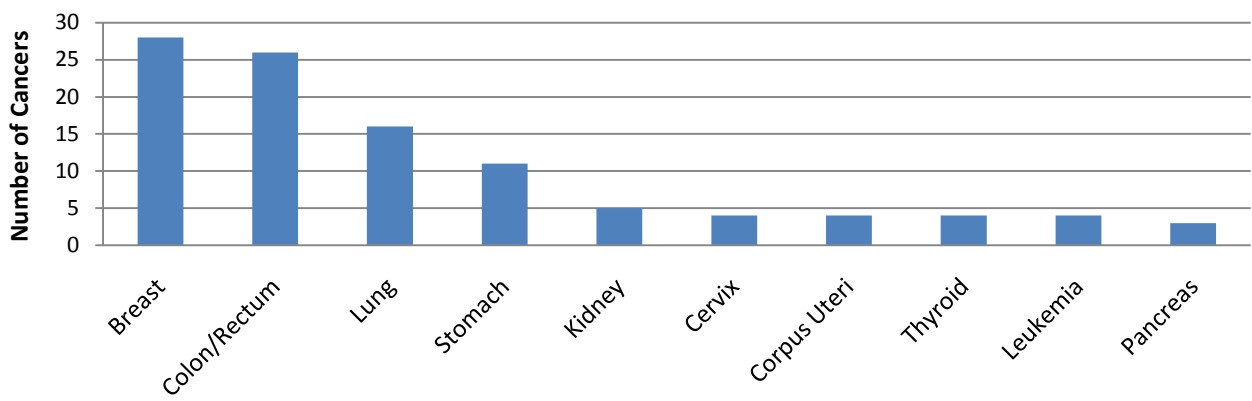
**Leading Cancers among Alaska Native Men & Women  
Kotzebue Service Unit, 1994-2008**



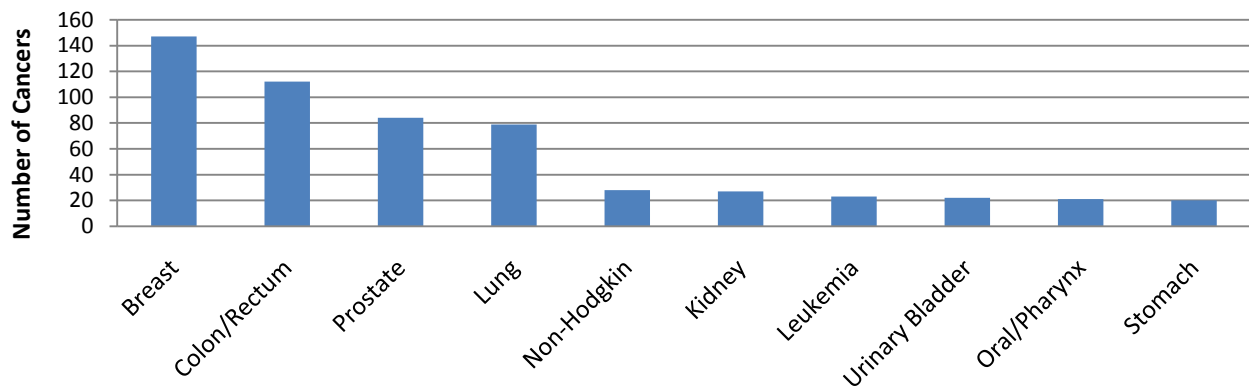
**Leading Cancers among Alaska Native Men  
Kotzebue Service Unit, 1994-2008**



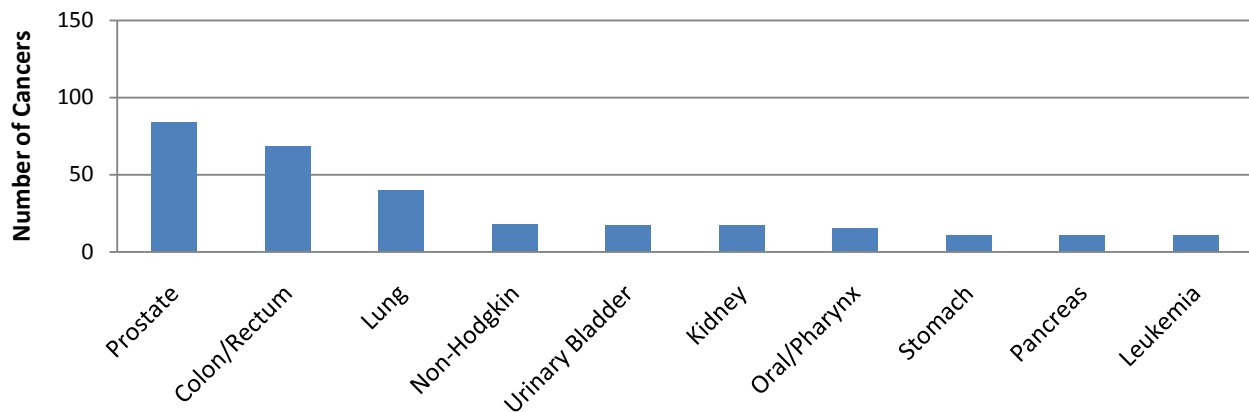
**Leading Cancers among Alaska Native Women  
Kotzebue Service Unit, 1994-2008**



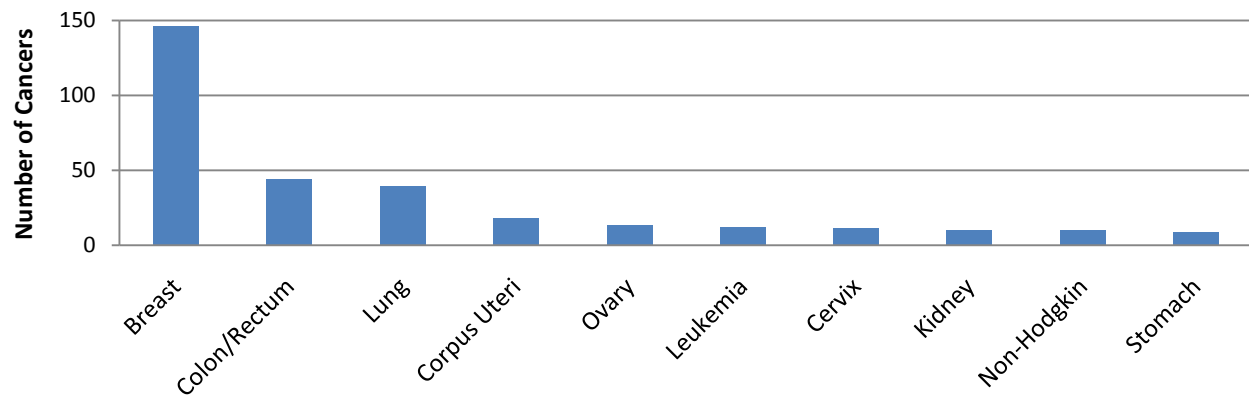
**Leading Cancers among Alaska Native Men & Women  
Mt. Edgecombe Service Unit, 1994-2008**



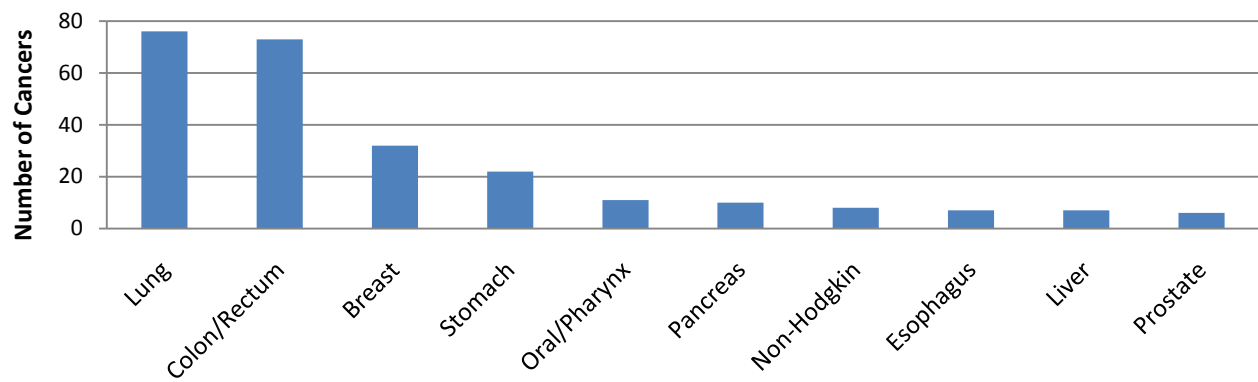
**Leading Cancers among Alaska Native Men  
Mt. Edgecombe Service Unit, 1994-2008**



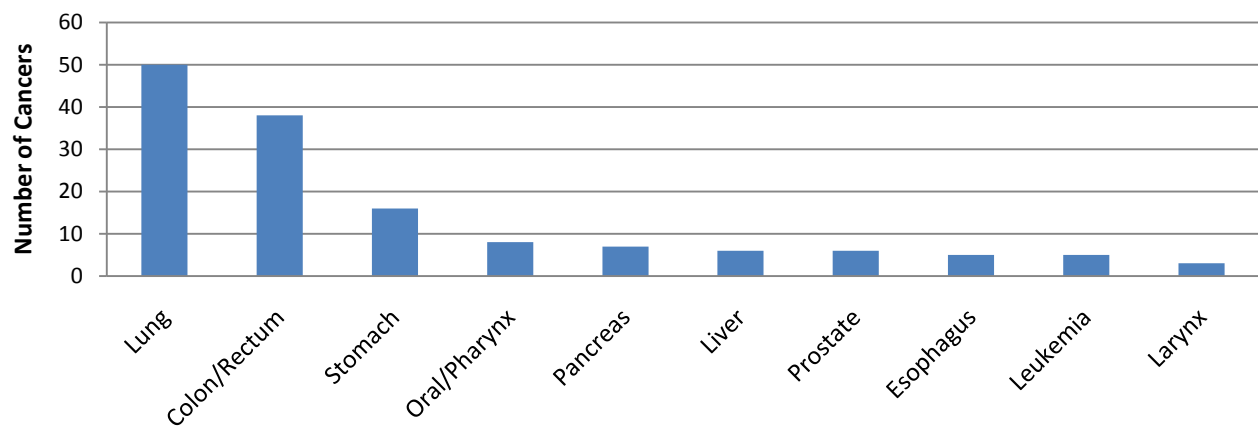
**Leading Cancers among Alaska Native Women  
Mt. Edgecombe Service Unit, 1994-2008**



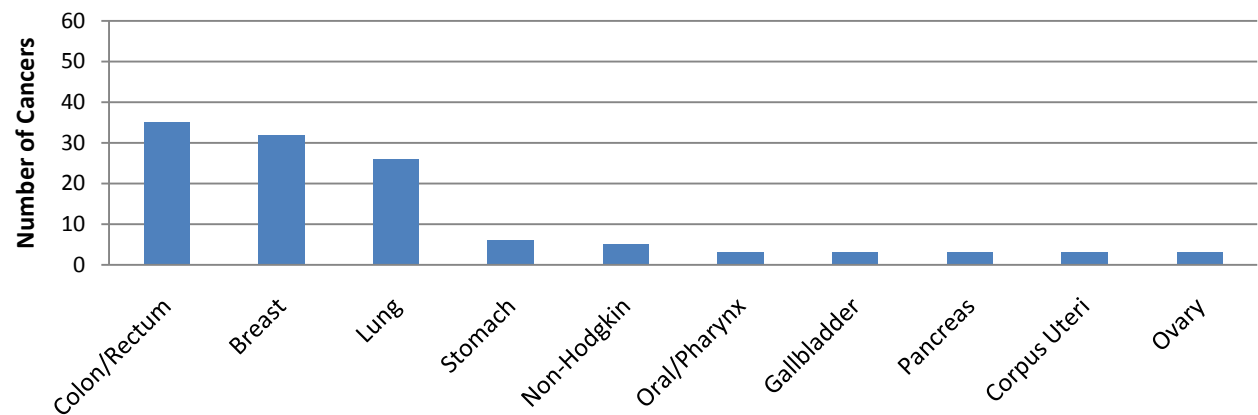
**Leading Cancers among Alaska Native Men & Women  
Norton Sound Service Unit, 1994-2008**



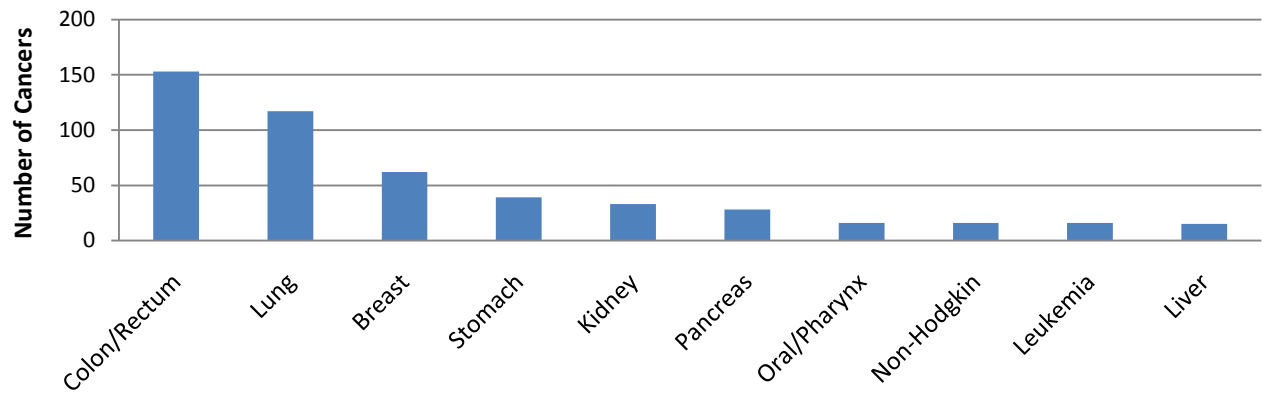
**Leading Cancers among Alaska Native Men  
Norton Sound Service Unit, 1994-2008**



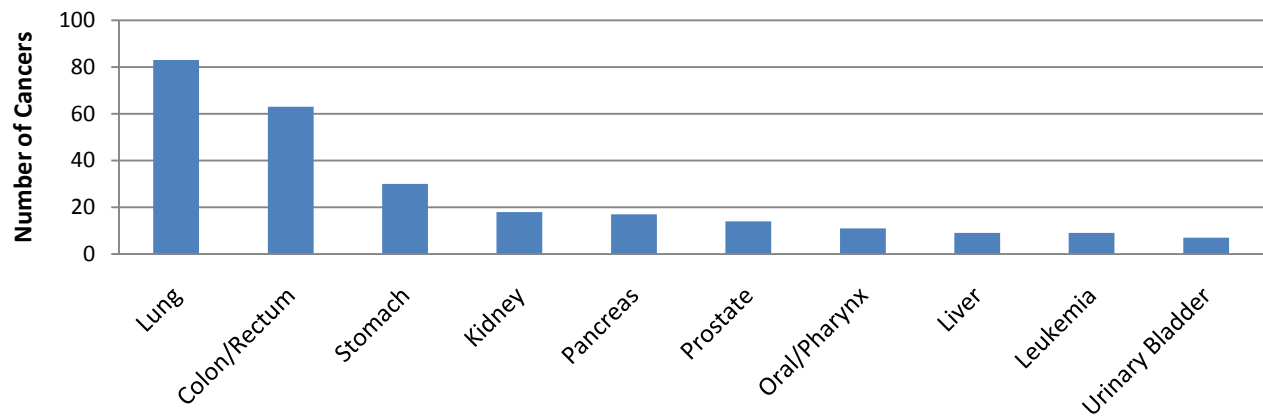
**Leading Cancers among Alaska Native Women  
Norton Sound Service Unit, 1994-2008**



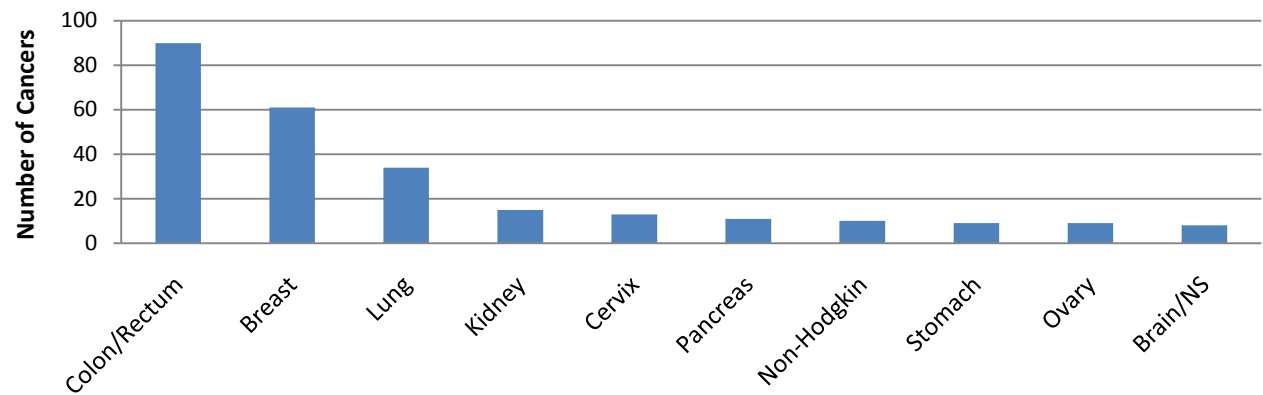
**Leading Cancers among Alaska Native Men & Women  
Yukon-Kuskokwim Service Unit, 1994-2008**



**Leading Cancers among Alaska Native Men  
Yukon-Kuskokwim, 1994-2008**



**Leading Cancers among Alaska Native Women  
Yukon-Kuskokwim Service Unit, 1994-2008**



**Number of Invasive Cancers  
1994-2008  
By Service Unit  
Men and Women Combined**

| Site                        | Anchorage | Barrow | Bristol Bay | Interior | Kotzebue | Mount<br>Edgecumbe | Norton<br>Sound | Yukon<br>Kuskokwim | Total |
|-----------------------------|-----------|--------|-------------|----------|----------|--------------------|-----------------|--------------------|-------|
| All Sites                   | 1832      | 180    | 210         | 582      | 238      | 752                | 309             | 646                | 4749  |
| Oral Cavity and Pharynx     | 80        | 3      | 8           | 24       | 2        | 21                 | 11              | 16                 | 165   |
| Salivary Gland              | 7         |        | 1           | 4        |          | 2                  | 1               | 2                  | 17    |
| Nasopharynx                 | 29        | 3      | 2           | 4        | 2        | 4                  | 9               | 9                  | 62    |
| Gum and Other Mouth         | 6         |        | 1           | 5        |          | 2                  |                 |                    | 14    |
| Digestive                   | 486       | 64     | 89          | 161      | 97       | 197                | 130             | 262                | 1486  |
| Esophagus                   | 22        | 2      | 7           | 15       |          | 16                 | 7               | 8                  | 77    |
| Stomach                     | 66        | 12     | 8           | 20       | 26       | 20                 | 22              | 39                 | 213   |
| Colon and Rectum            | 277       | 38     | 52          | 93       | 53       | 112                | 73              | 153                | 851   |
| Colon excluding Rectum      | 192       | 25     | 41          | 57       | 43       | 76                 | 49              | 120                | 603   |
| Rectosigmoid Junction       | 26        | 2      |             | 5        | 2        | 14                 | 10              | 2                  | 61    |
| Rectum                      | 59        | 11     | 11          | 31       | 8        | 22                 | 14              | 31                 | 187   |
| Liver                       | 34        | 1      | 3           | 8        | 3        | 8                  | 7               | 15                 | 79    |
| Gallbladder                 | 7         |        | 3           |          | 3        | 9                  | 4               | 5                  | 31    |
| Other Biliary               | 3         |        | 2           | 4        | 3        | 7                  | 3               | 7                  | 29    |
| Pancreas                    | 44        | 8      | 9           | 17       | 6        | 18                 | 10              | 28                 | 140   |
| Respiratory                 | 354       | 46     | 39          | 103      | 42       | 86                 | 80              | 121                | 871   |
| Lung and Bronchus           | 329       | 45     | 36          | 100      | 40       | 79                 | 76              | 117                | 822   |
| Larynx                      | 16        | 1      | 1           | 3        | 1        | 4                  | 4               | 1                  | 31    |
| Bones and Joints            | 7         | 1      |             |          |          | 2                  |                 | 4                  | 14    |
| Soft Tissue including Heart | 18        | 1      | 1           | 1        | 1        | 5                  | 2               | 2                  | 31    |
| Melanoma                    | 10        |        |             | 3        |          | 3                  | 1               | 1                  | 18    |
| Other Non-Epithelial Skin   | 8         | 1      |             | 1        | 1        | 4                  | 1               |                    | 16    |
| Breast                      | 339       | 15     | 21          | 110      | 28       | 147                | 32              | 62                 | 754   |
| Urinary System              | 91        | 11     | 16          | 43       | 22       | 51                 | 10              | 44                 | 288   |
| Urinary Bladder             | 30        | 3      | 7           | 9        | 6        | 22                 | 5               | 10                 | 92    |
| Kidney and Renal Pelvis     | 60        | 8      | 9           | 34       | 16       | 27                 | 5               | 33                 | 192   |
| Eye and Orbit               | 1         |        |             | 1        |          | 2                  |                 | 1                  | 5     |
| Brain and Nervous System    | 21        | 1      |             | 3        | 2        | 10                 | 2               | 9                  | 48    |
| Endocrine System            | 41        | 4      | 3           | 13       | 4        | 13                 | 3               | 11                 | 92    |
| Thyroid                     | 40        | 4      | 3           | 11       | 4        | 12                 | 3               | 9                  | 86    |
| Lymphoma                    | 56        | 4      | 5           | 9        | 3        | 31                 | 8               | 16                 | 132   |
| Hodgkin lymphoma            | 5         | 1      |             | 1        |          | 3                  |                 |                    | 10    |
| Non-Hodgkin lymphoma        | 51        | 3      | 5           | 8        | 3        | 28                 | 8               | 16                 | 122   |
| Multiple Myeloma            | 18        | 2      | 1           | 6        | 2        | 9                  | 3               | 2                  | 43    |
| Leukemia                    | 42        | 1      | 3           | 9        | 7        | 23                 | 5               | 16                 | 106   |
| Miscellaneous               | 40        | 6      | 8           | 12       | 7        | 15                 | 6               | 29                 | 123   |

**Number of Invasive Cancers  
1994-2008  
By Service Unit  
Men**

| Site                        | Anchorage | Barrow | Bristol Bay | Interior | Kotzebue | Mount<br>Edgecumbe | Norton<br>Sound | Yukon<br>Kuskokwim | Total |
|-----------------------------|-----------|--------|-------------|----------|----------|--------------------|-----------------|--------------------|-------|
| All Sites                   | 785       | 105    | 114         | 265      | 113      | 353                | 164             | 315                | 2214  |
| Oral Cavity and Pharynx     | 47        | 1      | 7           | 16       | 2        | 15                 | 8               | 11                 | 107   |
| Salivary Gland              | 2         |        | 1           | 1        |          | 1                  | 1               | 1                  | 7     |
| Nasopharynx                 | 17        | 1      | 2           | 3        | 2        | 3                  | 7               | 6                  | 41    |
| Gum and Other Mouth         | 3         |        | 1           | 3        |          | 2                  |                 |                    | 9     |
| Digestive                   | 232       | 31     | 48          | 85       | 50       | 117                | 77              | 131                | 771   |
| Esophagus                   | 13        | 2      | 3           | 11       |          | 9                  | 5               | 4                  | 47    |
| Stomach                     | 36        | 5      | 6           | 13       | 15       | 11                 | 16              | 30                 | 132   |
| Colon and Rectum            | 119       | 17     | 29          | 48       | 27       | 68                 | 38              | 63                 | 409   |
| Colon excluding Rectum      | 69        | 11     | 23          | 28       | 21       | 45                 | 26              | 44                 | 267   |
| Rectosigmoid Junction       | 16        | 2      |             | 4        | 1        | 9                  | 8               |                    | 40    |
| Rectum                      | 34        | 4      | 6           | 16       | 5        | 14                 | 4               | 19                 | 102   |
| Liver                       | 20        |        | 3           | 5        | 2        | 4                  | 6               | 9                  | 49    |
| Gallbladder                 | 3         |        | 1           |          | 2        | 5                  | 1               | 1                  | 13    |
| Other Biliary               | 2         |        |             | 3        | 1        | 4                  | 2               | 3                  | 15    |
| Pancreas                    | 20        | 6      | 3           | 5        | 3        | 11                 | 7               | 17                 | 72    |
| Respiratory                 | 190       | 39     | 23          | 60       | 25       | 43                 | 53              | 86                 | 519   |
| Lung and Bronchus           | 174       | 38     | 20          | 57       | 24       | 40                 | 50              | 83                 | 486   |
| Larynx                      | 10        | 1      | 1           | 3        | 1        | 2                  | 3               | 1                  | 22    |
| Bones and Joints            | 4         | 1      |             |          |          | 1                  |                 | 3                  | 9     |
| Soft Tissue including Heart | 9         | 1      |             |          | 1        | 1                  | 2               | 1                  | 15    |
| Melanoma                    | 5         |        |             |          |          | 1                  |                 |                    | 6     |
| Other Non-Epithelial Skin   | 5         | 1      |             |          | 1        | 3                  |                 |                    | 10    |
| Breast                      | 1         | 1      |             |          |          | 1                  |                 | 1                  | 4     |
| Male Genital                | 131       | 13     | 14          | 58       | 8        | 89                 | 6               | 19                 | 338   |
| Prostate                    | 108       | 13     | 13          | 47       | 7        | 84                 | 6               | 14                 | 292   |
| Testis                      | 20        |        |             | 10       | 1        | 4                  |                 | 3                  | 38    |
| Urinary System              | 64        | 8      | 11          | 22       | 17       | 36                 | 5               | 26                 | 189   |
| Urinary Bladder             | 26        | 3      | 6           | 5        | 6        | 17                 | 3               | 7                  | 73    |
| Kidney and Renal Pelvis     | 38        | 5      | 5           | 17       | 11       | 17                 | 2               | 18                 | 113   |
| Eye and Orbit               | 1         |        |             | 1        |          | 2                  |                 |                    | 4     |
| Brain and Nervous System    | 11        |        |             | 3        | 1        | 4                  | 1               | 1                  | 21    |
| Endocrine System            | 9         | 1      | 1           | 2        |          | 4                  | 1               | 5                  | 23    |
| Thyroid                     | 9         | 1      | 1           | 1        |          | 3                  | 1               | 3                  | 19    |
| Lymphoma                    | 25        | 3      | 2           | 7        | 1        | 20                 | 3               | 6                  | 67    |
| Hodgkin lymphoma            | 3         |        |             | 1        |          | 2                  |                 |                    | 6     |
| Non-Hodgkin lymphoma        | 22        | 3      | 2           | 6        | 1        | 18                 | 3               | 6                  | 61    |
| Multiple Myeloma            | 7         | 1      | 1           | 3        | 1        | 1                  |                 |                    | 14    |
| Leukemia                    | 25        | 1      | 1           | 4        | 3        | 11                 | 5               | 9                  | 59    |
| Miscellaneous               | 19        | 3      | 6           | 4        | 3        | 4                  | 3               | 16                 | 58    |

**Number of Invasive Cancers  
1994-2008  
By Service Unit  
Women**

| Site                        | Anchorage | Barrow | Bristol Bay | Interior | Kotzebue | Mount<br>Edgecumbe | Norton<br>Sound | Yukon<br>Kuskokwim | Total |
|-----------------------------|-----------|--------|-------------|----------|----------|--------------------|-----------------|--------------------|-------|
| All Sites                   | 1047      | 75     | 96          | 317      | 125      | 399                | 145             | 331                | 2535  |
| Oral Cavity and Pharynx     | 33        | 2      | 1           | 8        |          | 6                  | 3               | 5                  | 58    |
| Salivary Gland              | 5         |        |             | 3        |          | 1                  |                 | 1                  | 10    |
| Nasopharynx                 | 12        | 2      |             | 1        |          | 1                  | 2               | 3                  | 21    |
| Gum and Other Mouth         | 3         |        |             | 2        |          |                    |                 |                    | 5     |
| Digestive                   | 254       | 33     | 41          | 76       | 47       | 80                 | 53              | 131                | 715   |
| Esophagus                   | 9         |        | 4           | 4        |          | 7                  | 2               | 4                  | 30    |
| Stomach                     | 30        | 7      | 2           | 7        | 11       | 9                  | 6               | 9                  | 81    |
| Colon and Rectum            | 158       | 21     | 23          | 45       | 26       | 44                 | 35              | 90                 | 442   |
| Colon excluding Rectum      | 123       | 14     | 18          | 29       | 22       | 31                 | 23              | 76                 | 336   |
| Rectosigmoid Junction       | 10        |        |             | 1        | 1        | 5                  | 2               | 2                  | 21    |
| Rectum                      | 25        | 7      | 5           | 15       | 3        | 8                  | 10              | 12                 | 85    |
| Liver                       | 14        | 1      |             | 3        | 1        | 4                  | 1               | 6                  | 30    |
| Gallbladder                 | 4         |        | 2           |          | 1        | 4                  | 3               | 4                  | 18    |
| Other Biliary               | 1         |        | 2           | 1        | 2        | 3                  | 1               | 4                  | 14    |
| Pancreas                    | 24        | 2      | 6           | 12       | 3        | 7                  | 3               | 11                 | 68    |
| Respiratory                 | 164       | 7      | 16          | 43       | 17       | 43                 | 27              | 35                 | 352   |
| Lung and Bronchus           | 155       | 7      | 16          | 43       | 16       | 39                 | 26              | 34                 | 336   |
| Larynx                      | 6         |        |             |          |          | 2                  | 1               |                    | 9     |
| Bones and Joints            | 3         |        |             |          |          | 1                  |                 | 1                  | 5     |
| Soft Tissue including Heart | 9         |        | 1           | 1        |          | 4                  |                 | 1                  | 16    |
| Melanoma                    | 5         |        |             | 3        |          | 2                  | 1               | 1                  | 12    |
| Other Non-Epithelial Skin   | 3         |        |             | 1        |          | 1                  | 1               |                    | 6     |
| Breast                      | 338       | 14     | 21          | 110      | 28       | 146                | 32              | 61                 | 750   |
| Female Genital              | 89        | 7      | 2           | 25       | 12       | 44                 | 9               | 31                 | 219   |
| Cervix Uteri                | 21        | 4      |             | 6        | 4        | 11                 | 2               | 13                 | 61    |
| Corpus and Uterus, NOS      | 34        | 1      |             | 10       | 4        | 18                 | 3               | 7                  | 77    |
| Ovary                       | 25        | 2      | 2           | 4        | 3        | 13                 | 3               | 9                  | 61    |
| Urinary System              | 27        | 3      | 5           | 21       | 5        | 15                 | 5               | 18                 | 99    |
| Urinary Bladder             | 4         |        | 1           | 4        |          | 5                  | 2               | 3                  | 19    |
| Kidney and Renal Pelvis     | 22        | 3      | 4           | 17       | 5        | 10                 | 3               | 15                 | 79    |
| Eye and Orbit               |           |        |             |          |          |                    |                 | 1                  | 1     |
| Brain and Nervous System    | 10        | 1      |             |          | 1        | 6                  | 1               | 8                  | 27    |
| Endocrine System            | 32        | 3      | 2           | 11       | 4        | 9                  | 2               | 6                  | 69    |
| Thyroid                     | 31        | 3      | 2           | 10       | 4        | 9                  | 2               | 6                  | 67    |
| Lymphoma                    | 31        | 1      | 3           | 2        | 2        | 11                 | 5               | 10                 | 65    |
| Hodgkin lymphoma            | 2         | 1      |             |          |          | 1                  |                 |                    | 4     |
| Non-Hodgkin lymphoma        | 29        |        | 3           | 2        | 2        | 10                 | 5               | 10                 | 61    |
| Multiple Myeloma            | 11        | 1      |             | 3        | 1        | 8                  | 3               | 2                  | 29    |
| Leukemia                    | 17        |        | 2           | 5        | 4        | 12                 |                 | 7                  | 47    |
| Miscellaneous               | 21        | 3      | 2           | 8        | 4        | 11                 | 3               | 13                 | 65    |

**Average Annual Age-Adjusted Cancer Incidence Rates per 100,000**  
**1994-2008**  
**By Service Unit**  
**Men and Women Combined**

| Site                        | Anchorage | Barrow | Bristol Bay | Interior | Kotzebue | Mount<br>Edgecumbe | Norton<br>Sound | Yukon<br>Kuskokwim | Total |
|-----------------------------|-----------|--------|-------------|----------|----------|--------------------|-----------------|--------------------|-------|
| All Sites                   | 492.2     | 510.3  | 524.5       | 544.0    | 453.1    | 585.5              | 548.1           | 414.8              | 495.5 |
| Oral Cavity and Pharynx     | 20.3      | 9.3    | 17.3        | 20.7     | 4.5      | 15.9               | 20.3            | 8.5                | 16.1  |
| Salivary Gland              | 1.8       |        | 1.4         | 2.8      |          | 1.4                | 1.4             | 0.8                |       |
| Nasopharynx                 | 7.1       | 9.3    | 6.9         | 3.6      | 4.5      | 3.2                | 16.3            | 5.3                | 6.3   |
| Gum and Other Mouth         | 1.5       |        | 1.9         | 5.0      |          | 1.7                |                 |                    |       |
| Digestive                   | 142.4     | 195.9  | 232.3       | 158.2    | 188.1    | 160.9              | 229.6           | 176.8              | 167.1 |
| Esophagus                   | 6.8       | 6.7    | 18.0        | 14.4     |          | 13.3               | 12.6            | 6.9                | 9.0   |
| Stomach                     | 19.0      | 36.0   | 17.8        | 16.2     | 42.9     | 15.2               | 35.2            | 25.4               | 22.3  |
| Colon and Rectum            | 81.8      | 118.5  | 143.5       | 93.5     | 107.1    | 91.2               | 132.3           | 103.6              | 97.2  |
| Colon excluding Rectum      | 59.2      | 83.3   | 113.5       | 59.9     | 91.0     | 62.4               | 94.1            | 83.0               | 71.7  |
| Rectosigmoid Junction       | 7.1       | 5.2    |             | 4.7      | 3.4      | 11.0               | 16.2            | 1.8                | 6.1   |
| Rectum                      | 15.6      | 30.0   | 29.9        | 28.9     | 12.7     | 17.8               | 22.1            | 18.8               | 19.4  |
| Liver                       | 9.1       | 2.3    | 5.9         | 8.2      | 5.7      | 6.6                | 7.0             | 9.0                | 7.9   |
| Gallbladder                 | 2.5       |        | 10.4        |          | 6.2      | 7.8                | 9.4             | 3.1                | 4.2   |
| Other Biliary               | 1.1       |        | 3.8         | 4.3      | 7.0      | 6.7                | 5.5             | 4.9                | 3.7   |
| Pancreas                    | 12.9      | 23.3   | 20.9        | 17.3     | 13.7     | 15.6               | 19.8            | 19.6               | 15.9  |
| Respiratory                 | 106.9     | 136.9  | 104.9       | 105.6    | 90.1     | 73.4               | 161.4           | 88.2               | 100.2 |
| Lung and Bronchus           | 99.6      | 134.3  | 97.4        | 102.6    | 86.2     | 67.7               | 154.3           | 86.4               | 95.2  |
| Larynx                      | 4.3       | 2.6    | 1.9         | 3.0      | 2.7      | 2.8                | 7.0             | 0.6                | 2.9   |
| Bones and Joints            | 1.3       | 1.1    |             |          |          | 2.3                |                 | 1.9                | 1.1   |
| Soft Tissue including Heart | 3.9       | 1.6    | 1.6         | 0.8      | 1.2      | 2.6                | 1.7             | 0.6                | 2.4   |
| Melanoma                    | 1.9       |        |             | 2.5      |          | 1.9                | 1.4             | 0.4                | 1.4   |
| Other Non-Epithelial Skin   | 1.9       | 4.1    |             | 1.4      | 1.2      | 3.7                | 2.6             |                    | 1.7   |
| Breast                      | 80.3      | 40.8   | 47.3        | 96.6     | 47.0     | 104.1              | 47.3            | 31.4               | 69.4  |
| Urinary System              | 24.1      | 31.1   | 39.4        | 40.4     | 44.7     | 44.3               | 17.8            | 32.6               | 31.2  |
| Urinary Bladder             | 8.7       | 9.3    | 18.1        | 8.1      | 11.1     | 20.3               | 8.9             | 7.4                | 10.5  |
| Kidney and Renal Pelvis     | 15.0      | 21.8   | 21.3        | 32.3     | 33.6     | 22.6               | 8.9             | 24.3               | 20.3  |
| Eye and Orbit               | 0.4       |        |             | 0.9      |          | 1.5                |                 | 0.2                | 0.6   |
| Brain and Nervous System    | 4.1       | 1.1    |             | 2.3      | 1.5      | 5.1                | 3.3             | 3.1                | 3.4   |
| Endocrine System            | 8.4       | 6.4    | 5.0         | 7.5      | 4.1      | 7.2                | 3.4             | 4.9                | 6.9   |
| Thyroid                     | 8.2       | 6.4    | 5.0         | 6.2      | 4.1      | 6.9                | 3.4             | 4.2                | 6.5   |
| Lymphoma                    | 12.8      | 8.2    | 12.0        | 8.9      | 4.1      | 23.5               | 11.0            | 8.4                | 12.8  |
| Hodgkin lymphoma            | 0.8       | 2.6    |             | 0.8      |          | 1.5                |                 |                    | 0.7   |
| Non-Hodgkin lymphoma        | 12.0      | 5.6    | 12.0        | 8.1      | 4.1      | 22.0               | 11.0            | 8.4                | 12.1  |
| Multiple Myeloma            | 4.5       | 5.2    | 1.6         | 4.6      | 3.2      | 6.4                | 6.8             | 1.8                | 4.1   |
| Leukemia                    | 9.1       | 1.6    | 3.2         | 5.6      | 8.0      | 15.1               | 4.1             | 7.0                | 8.1   |
| Miscellaneous               | 11.9      | 15.8   | 19.1        | 11.6     | 17.0     | 12.9               | 11.9            | 20.2               | 12.2  |

**Average Annual Age-Adjusted Cancer Incidence Rates per 100,000  
1994-2008  
By Service Unit  
Men**

| Site                        | Anchorage | Barrow | Bristol Bay | Interior | Kotzebue | Mount<br>Edgecumbe | Norton<br>Sound | Yukon<br>Kuskokwim | Total |
|-----------------------------|-----------|--------|-------------|----------|----------|--------------------|-----------------|--------------------|-------|
| All Sites                   | 467.3     | 646.5  | 629.4       | 525.1    | 472.5    | 619.0              | 639.0           | 465.6              | 521.7 |
| Oral Cavity and Pharynx     | 25.2      | 5.3    | 32.6        | 29.1     | 9.8      | 22.0               | 34.1            | 11.1               | 22.0  |
| Salivary Gland              | 1.3       |        | 2.8         | 1.8      |          | 1.5                | 2.9             | 0.8                |       |
| Nasopharynx                 | 8.4       | 5.3    | 15.9        | 6.1      | 9.8      | 4.2                | 31.2            | 6.0                | 8.7   |
| Gum and Other Mouth         | 1.3       |        | 3.9         | 4.4      |          | 3.7                |                 |                    |       |
| Digestive                   | 149.9     | 200.5  | 262.3       | 166.8    | 200.1    | 205.7              | 277.1           | 188.5              | 188.9 |
| Esophagus                   | 9.6       | 14.8   | 11.5        | 21.3     |          | 15.2               | 20.5            | 7.4                | 11.7  |
| Stomach                     | 23.0      | 39.1   | 28.3        | 23.0     | 46.4     | 18.4               | 52.4            | 44.4               | 30.8  |
| Colon and Rectum            | 76.7      | 110.2  | 176.0       | 96.5     | 113.8    | 120.2              | 142.3           | 88.4               | 101.0 |
| Colon excluding Rectum      | 48.3      | 81.0   | 140.6       | 58.0     | 96.0     | 80.3               | 99.0            | 64.2               | 70.5  |
| Rectosigmoid Junction       | 10.0      | 10.6   |             | 8.1      | 3.5      | 14.3               | 29.1            |                    | 8.2   |
| Rectum                      | 18.4      | 18.7   | 35.4        | 30.5     | 14.2     | 25.6               | 14.3            | 24.1               | 22.2  |
| Liver                       | 11.9      |        | 12.0        | 9.6      | 8.8      | 6.5                | 12.0            | 12.6               | 10.9  |
| Gallbladder                 | 2.4       |        | 8.0         |          | 9.8      | 10.6               | 3.3             | 2.1                | 4.5   |
| Other Biliary               | 1.9       |        |             | 6.2      | 6.3      | 8.0                | 5.8             | 3.3                | 4.5   |
| Pancreas                    | 12.9      | 31.7   | 11.5        | 10.2     | 15.1     | 20.0               | 35.4            | 25.3               | 18.4  |
| Respiratory                 | 118.5     | 254.1  | 138.6       | 131.9    | 116.6    | 80.3               | 240.2           | 137.1              | 129.5 |
| Lung and Bronchus           | 109.0     | 248.8  | 122.3       | 125.4    | 110.3    | 74.9               | 228.6           | 134.5              | 122.5 |
| Larynx                      | 5.2       | 5.3    | 3.9         | 6.5      | 6.3      | 2.8                | 11.6            | 1.2                | 4.1   |
| Bones and Joints            | 1.2       | 2.1    |             |          |          | 2.6                |                 | 3.0                | 1.4   |
| Soft Tissue including Heart | 3.0       | 3.2    |             |          | 2.5      | 0.9                | 3.4             | 0.7                | 1.9   |
| Melanoma                    | 1.9       |        |             |          |          | 1.5                |                 |                    | 0.9   |
| Other Non-Epithelial Skin   | 2.3       | 9.5    |             |          | 2.5      | 5.6                |                 |                    | 2.1   |
| Breast                      | 0.9       | 5.3    |             |          |          | 1.0                |                 | 2.1                | 0.9   |
| Male Genital                | 79.6      | 78.0   | 81.6        | 120.0    | 40.7     | 161.9              | 25.9            | 29.9               | 81.5  |
| Prostate                    | 71.8      | 78.0   | 77.2        | 105.4    | 38.5     | 155.5              | 25.9            | 23.4               | 74.1  |
| Testis                      | 6.4       |        |             | 11.4     | 2.2      | 3.8                |                 | 2.4                | 4.7   |
| Urinary System              | 36.2      | 52.0   | 60.2        | 38.3     | 69.4     | 69.1               | 16.5            | 47.5               | 44.7  |
| Urinary Bladder             | 16.0      | 20.1   | 31.5        | 7.7      | 23.9     | 35.0               | 9.9             | 12.6               | 17.8  |
| Kidney and Renal Pelvis     | 20.2      | 31.9   | 28.7        | 30.6     | 45.4     | 31.2               | 6.6             | 32.8               | 26.3  |
| Eye and Orbit               | 0.9       |        |             | 1.8      |          | 3.2                |                 |                    | 1.2   |
| Brain and Nervous System    | 4.5       |        |             | 5.0      | 1.4      | 4.4                | 5.9             | 0.7                | 3.4   |
| Endocrine System            | 4.2       | 2.0    | 3.9         | 2.0      |          | 4.4                | 2.4             | 5.1                | 4.0   |
| Thyroid                     | 4.2       | 2.0    | 3.9         | 1.3      |          | 3.9                | 2.4             | 3.7                | 3.6   |
| Lymphoma                    | 11.6      | 11.2   | 11.9        | 13.1     | 3.1      | 32.1               | 7.5             | 6.7                | 13.9  |
| Hodgkin lymphoma            | 1.0       |        |             | 1.6      |          | 2.2                |                 |                    | 0.8   |
| Non-Hodgkin lymphoma        | 10.6      | 11.2   | 11.9        | 11.5     | 3.1      | 29.9               | 7.5             | 6.7                | 13.1  |
| Multiple Myeloma            | 3.5       | 5.3    | 3.2         | 4.5      | 3.5      | 2.6                |                 |                    | 2.7   |
| Leukemia                    | 12.4      | 3.2    | 2.8         | 4.6      | 7.1      | 14.3               | 8.2             | 9.3                | 10.0  |
| Miscellaneous               | 11.6      | 14.6   | 32.4        | 8.1      | 15.7     | 7.4                | 17.8            | 23.9               | 12.6  |

# Average Annual Age-Adjusted Cancer Incidence Rates per 100,000

## Women

| Site                        | Anchorage | Barrow | Bristol Bay | Interior | Kotzebue | Mount<br>Edgecumbe | Norton<br>Sound | Yukon<br>Kuskokwim | Total |
|-----------------------------|-----------|--------|-------------|----------|----------|--------------------|-----------------|--------------------|-------|
| All Sites                   | 521.6     | 392.3  | 438.3       | 560.4    | 439.6    | 563.7              | 475.4           | 378.6              | 483.4 |
| Oral Cavity and Pharynx     | 15.9      | 12.5   | 4.3         | 13.0     |          | 10.0               | 9.1             | 5.7                | 11.0  |
| Salivary Gland              | 2.2       |        |             | 3.9      |          | 1.2                |                 | 0.8                |       |
| Nasopharynx                 | 5.9       | 12.5   |             | 1.5      |          | 2.0                | 4.5             | 4.2                | 4.1   |
| Gum and Other Mouth         | 1.7       |        |             | 4.9      |          |                    |                 |                    |       |
| Digestive                   | 137.5     | 190.1  | 204.9       | 147.5    | 177.2    | 122.4              | 184.8           | 166.8              | 150.4 |
| Esophagus                   | 4.7       |        | 22.2        | 7.9      |          | 11.4               | 6.4             | 6.4                | 6.6   |
| Stomach                     | 15.7      | 34.5   | 8.6         | 10.1     | 38.1     | 12.5               | 18.9            | 9.7                | 15.7  |
| Colon and Rectum            | 86.7      | 124.0  | 117.0       | 88.8     | 101.6    | 66.6               | 122.1           | 116.0              | 94.2  |
| Colon excluding Rectum      | 69.2      | 85.3   | 91.8        | 60.0     | 87.6     | 47.4               | 87.8            | 98.7               | 73.2  |
| Rectosigmoid Junction       | 4.6       |        |             | 1.7      | 3.4      | 8.0                | 5.1             | 3.2                | 4.1   |
| Rectum                      | 12.9      | 38.7   | 25.3        | 27.1     | 10.7     | 11.3               | 29.2            | 14.1               | 17.0  |
| Liver                       | 6.9       | 4.5    |             | 6.6      | 3.4      | 6.5                | 2.0             | 6.0                | 5.7   |
| Gallbladder                 | 2.6       |        | 12.3        |          | 3.4      | 5.6                | 13.8            | 4.3                | 4.2   |
| Other Biliary               | 0.5       |        | 7.5         | 2.5      | 7.8      | 5.5                | 4.6             | 5.8                | 3.1   |
| Pancreas                    | 13.0      | 14.7   | 28.1        | 23.5     | 12.7     | 11.7               | 7.9             | 14.6               | 14.2  |
| Respiratory                 | 96.0      | 36.7   | 77.9        | 83.0     | 67.3     | 67.9               | 97.8            | 47.7               | 75.8  |
| Lung and Bronchus           | 90.8      | 36.7   | 77.9        | 83.0     | 65.1     | 61.8               | 94.6            | 46.6               | 72.7  |
| Larynx                      | 3.4       |        |             |          |          | 2.8                | 3.2             |                    | 1.7   |
| Bones and Joints            | 1.3       |        |             |          |          | 2.0                |                 | 1.0                | 0.9   |
| Soft Tissue including Heart | 4.6       |        | 3.1         | 1.5      |          | 4.2                |                 | 0.5                | 2.7   |
| Melanoma                    | 1.9       |        |             | 4.6      |          | 2.3                | 2.8             | 0.8                | 1.8   |
| Other Non-Epithelial Skin   | 1.6       |        |             | 2.5      |          | 2.0                | 4.6             |                    | 1.3   |
| Breast                      | 154.4     | 71.9   | 89.6        | 183.7    | 89.4     | 197.2              | 91.5            | 59.0               | 132.0 |
| Female Genital              | 40.8      | 27.7   | 6.8         | 40.1     | 38.2     | 56.8               | 26.6            | 29.1               | 38.5  |
| Cervix Uteri                | 8.3       | 12.2   |             | 8.3      | 11.6     | 10.6               | 5.6             | 11.7               | 9.6   |
| Corpus and Uterus, NOS      | 16.3      | 3.7    |             | 17.3     | 13.6     | 24.0               | 9.6             | 6.1                | 14.0  |
| Ovary                       | 12.0      | 11.8   | 6.8         | 6.9      | 10.0     | 19.3               | 9.2             | 8.9                | 11.3  |
| Urinary System              | 13.5      | 14.1   | 21.5        | 40.8     | 22.8     | 23.7               | 18.0            | 21.3               | 20.0  |
| Urinary Bladder             | 2.4       |        | 6.1         | 7.9      |          | 8.0                | 7.4             | 3.3                | 4.3   |
| Kidney and Renal Pelvis     | 10.4      | 14.1   | 15.3        | 32.9     | 22.8     | 15.6               | 10.6            | 18.0               | 15.4  |
| Eye and Orbit               |           |        |             |          |          |                    |                 | 0.5                | 0.1   |
| Brain and Nervous System    | 3.8       | 2.3    |             |          | 1.5      | 5.8                | 1.5             | 5.6                | 3.5   |
| Endocrine System            | 12.5      | 10.6   | 6.1         | 12.9     | 8.3      | 9.7                | 4.4             | 5.0                | 9.9   |
| Thyroid                     | 12.1      | 10.6   | 6.1         | 11.2     | 8.3      | 9.7                | 4.4             | 5.0                | 9.6   |
| Lymphoma                    | 13.9      | 5.1    | 12.3        | 4.9      | 5.1      | 16.1               | 13.9            | 9.9                | 11.8  |
| Hodgkin lymphoma            | 0.6       | 5.1    |             |          |          | 0.9                |                 |                    | 0.6   |
| Non-Hodgkin lymphoma        | 13.2      |        | 12.3        | 4.9      | 5.1      | 15.2               | 13.9            | 9.9                | 11.2  |
| Multiple Myeloma            | 5.4       | 5.1    |             | 4.7      | 3.0      | 10.4               | 12.4            | 3.2                | 5.3   |
| Leukemia                    | 6.5       |        | 3.7         | 6.6      | 8.7      | 15.6               |                 | 5.3                | 6.7   |
| Miscellaneous               | 12.0      | 16.1   | 8.0         | 14.6     | 18.0     | 17.5               | 8.1             | 17.1               | 11.7  |

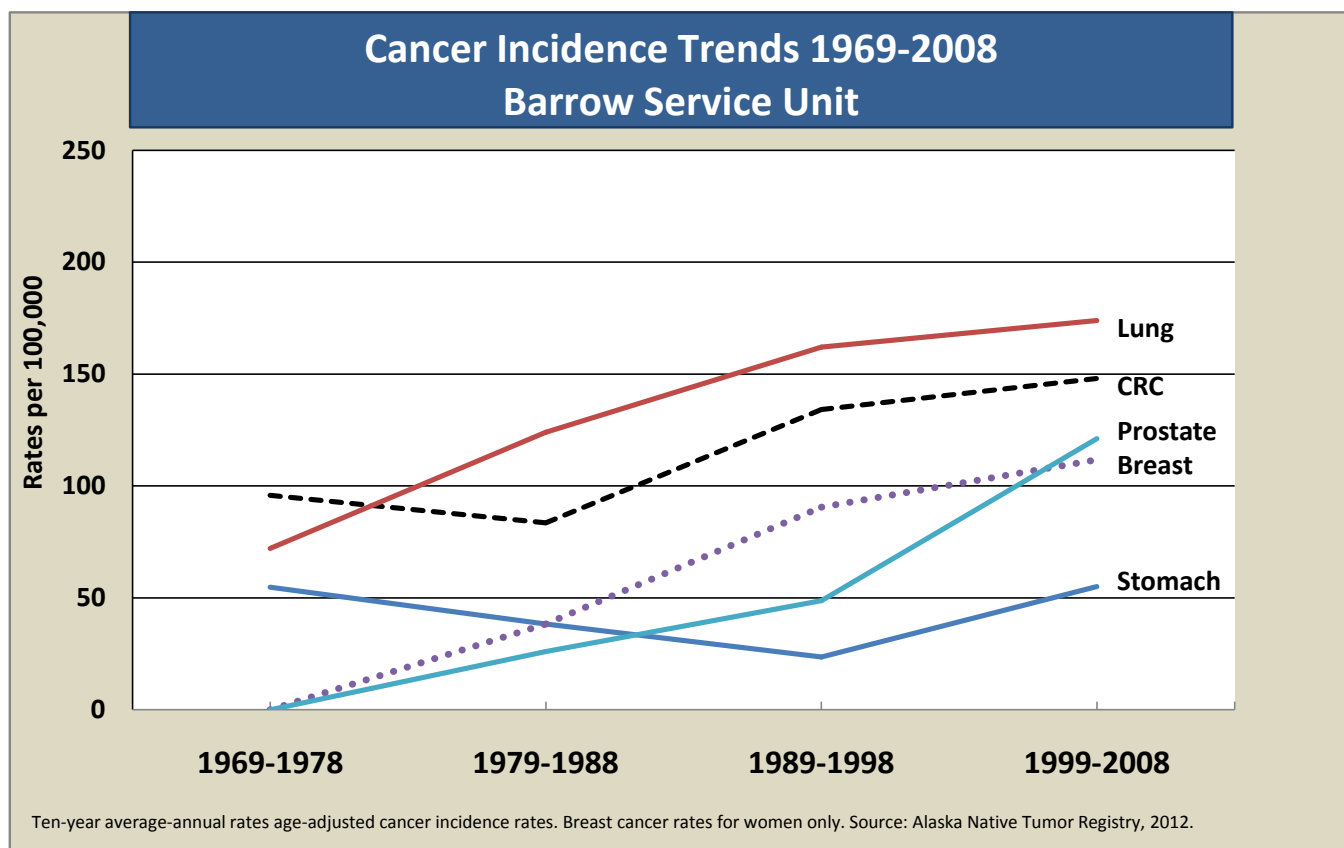
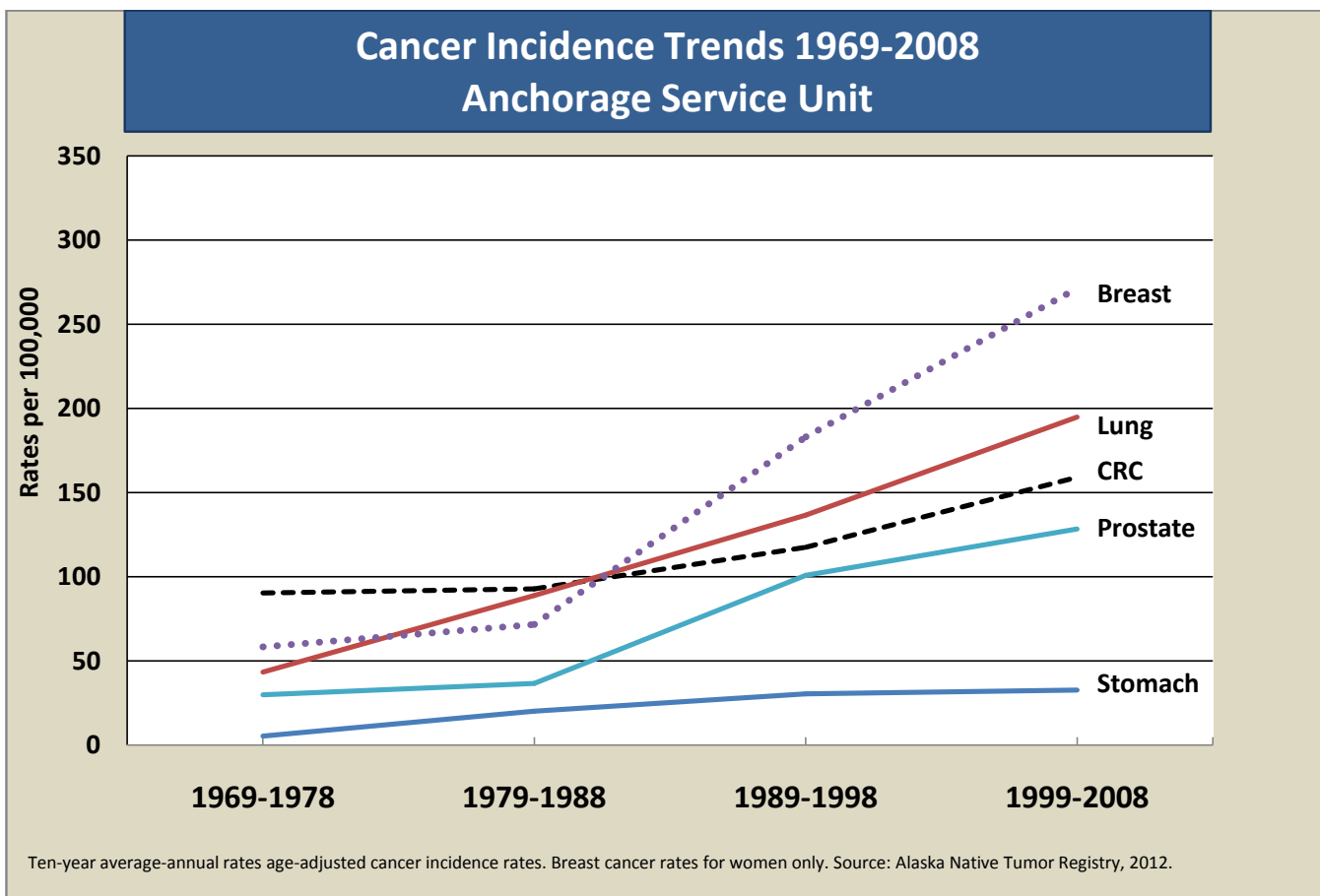
**Odds Ratios of Cancer Incidence Rates by IHS Alaska Area Service Units  
Compared to the Overall Alaska Native Cancer Rate, 1994-2008**  
Alaska Native Men and Women Combined

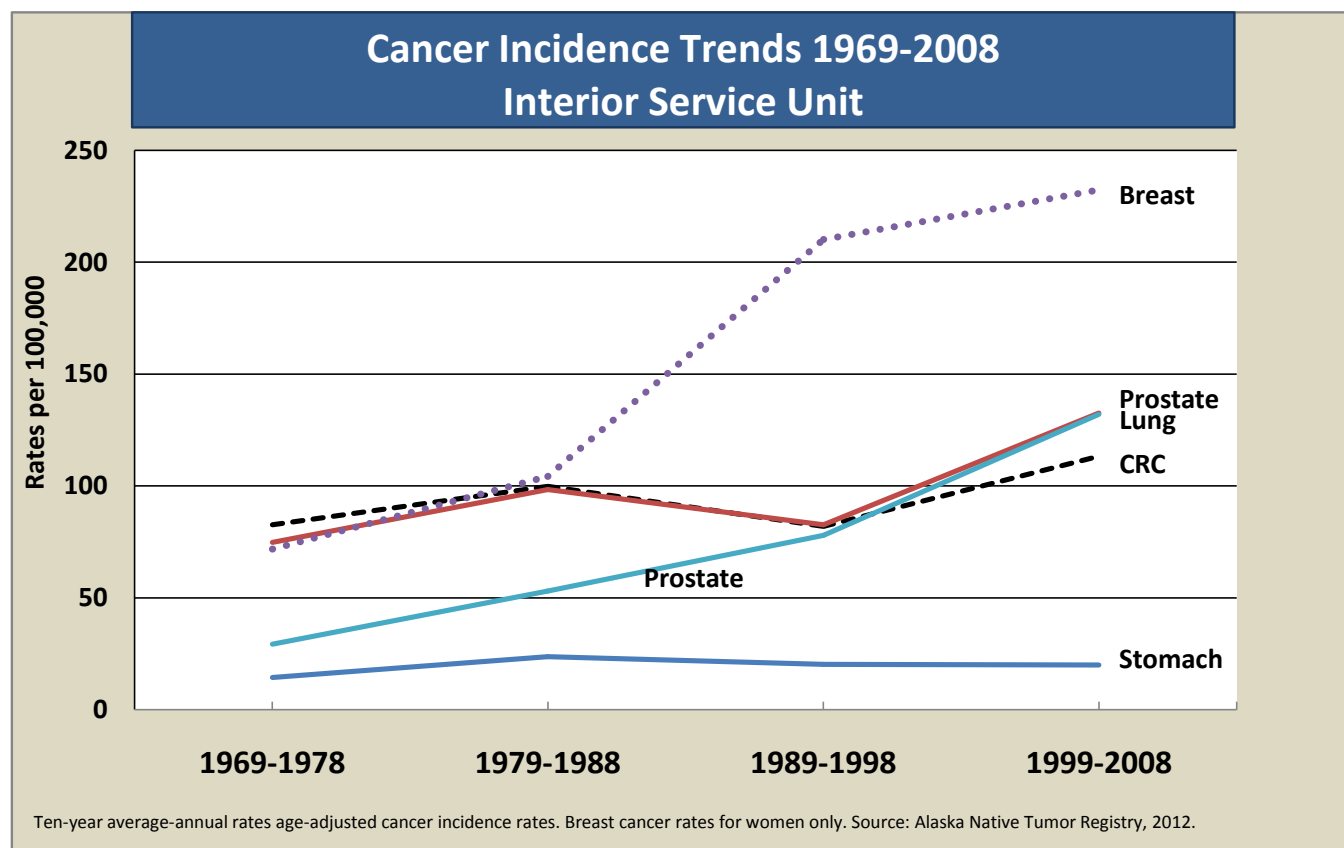
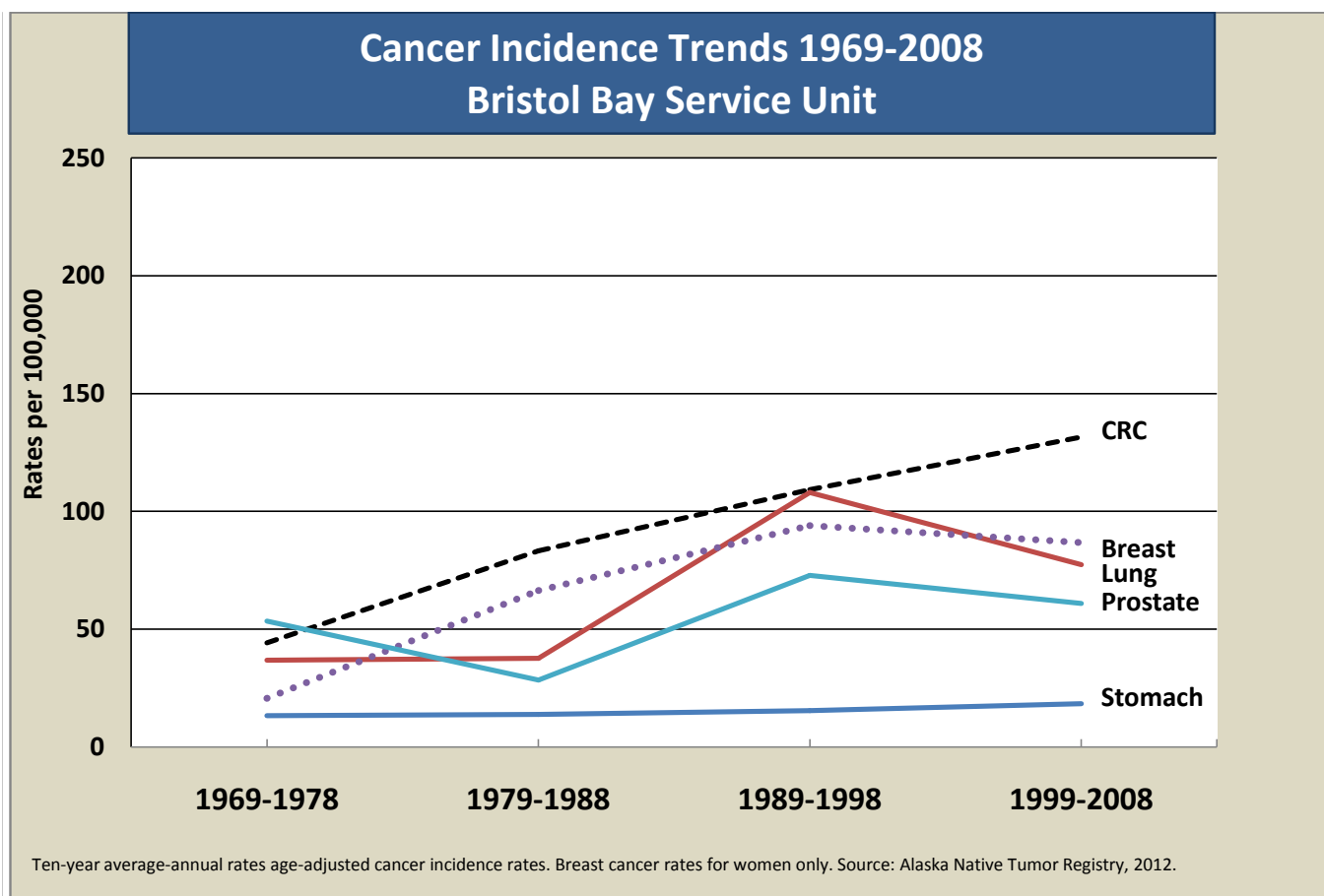
| Service Unit             | Rate         | Odds ratio                      | X <sup>2</sup> p value |
|--------------------------|--------------|---------------------------------|------------------------|
| <b>All Alaska Native</b> | <b>495.5</b> |                                 |                        |
| Anchorage                | 492.2        | <b>0.94 &lt; 1.0 &lt; 1.05</b>  | 0.94                   |
| Barrow                   | 510.3        | <b>0.85 &lt; 0.99 &lt; 1.16</b> | 0.9                    |
| Bristol Bay              | 524.5        | <b>0.84 &lt; 0.97 &lt; 1.12</b> | 0.64                   |
| Interior                 | 544.0        | <b>0.99 &lt; 1.08 &lt; 1.18</b> | 0.09                   |
| Kotzebue                 | 453.1        | <b>0.75 &lt; 0.86 &lt; 0.99</b> | 0.02 *                 |
| Mt. Edgecumbe            | 585.5        | <b>0.96 &lt; 1.04 &lt; 1.13</b> | 0.31                   |
| Norton Sound             | 548.1        | <b>0.95 &lt; 1.07 &lt; 1.20</b> | 0.27                   |
| Yukon-Kuskokwim          | 414.8        | <b>0.71 &lt; 0.77 &lt; 0.84</b> | <0.01 *                |

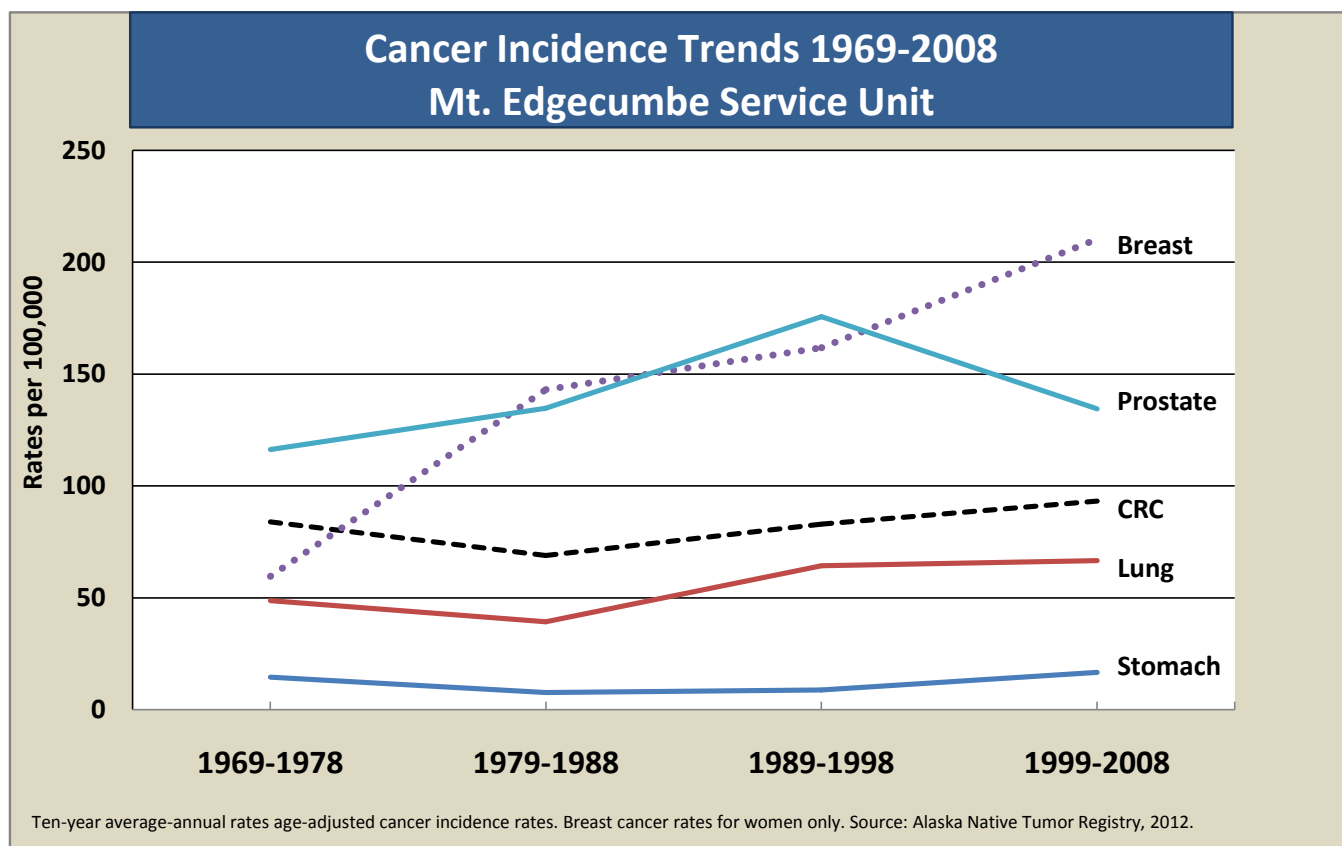
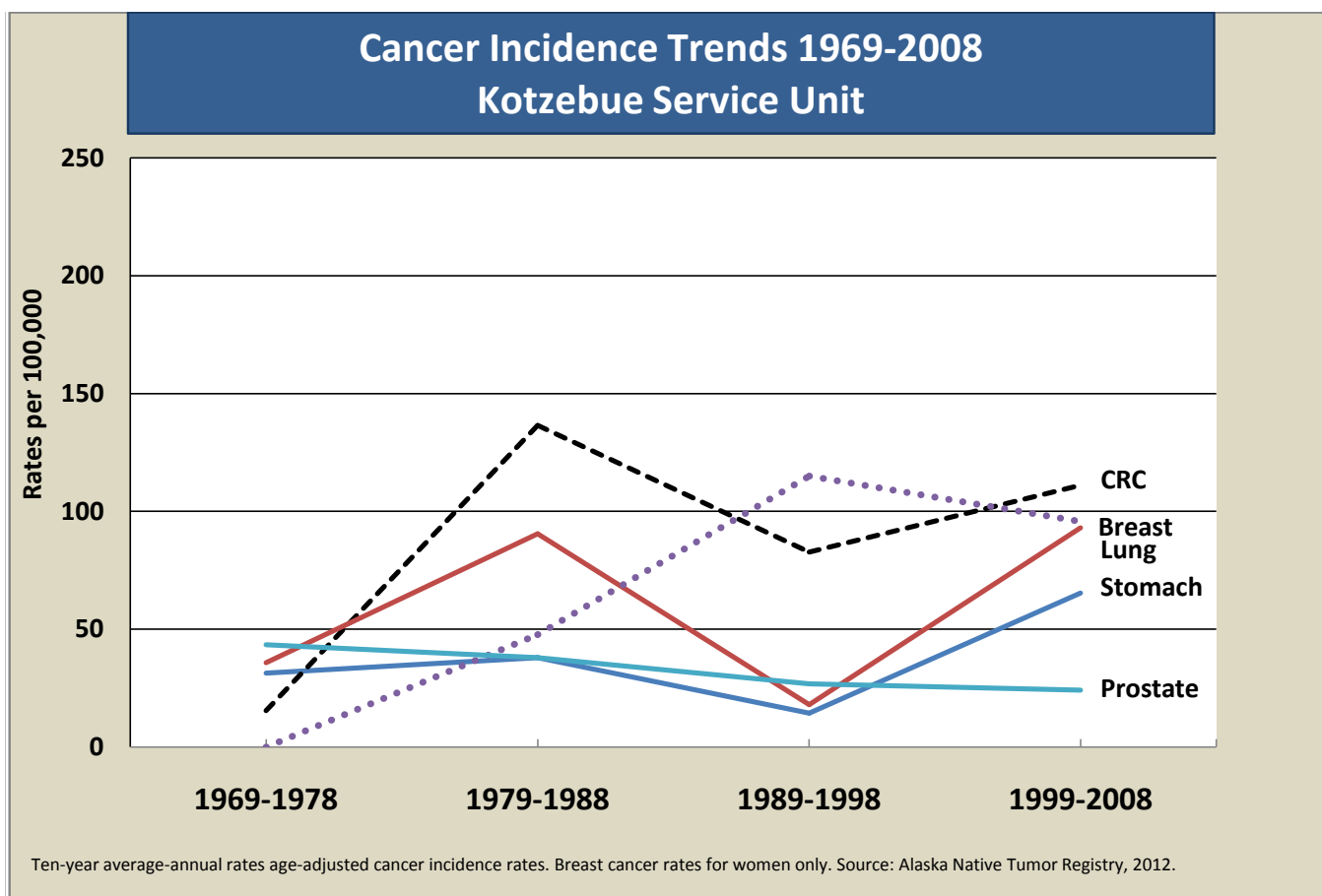
\*Rates are statistically lower than the all Alaska Native combined rate.

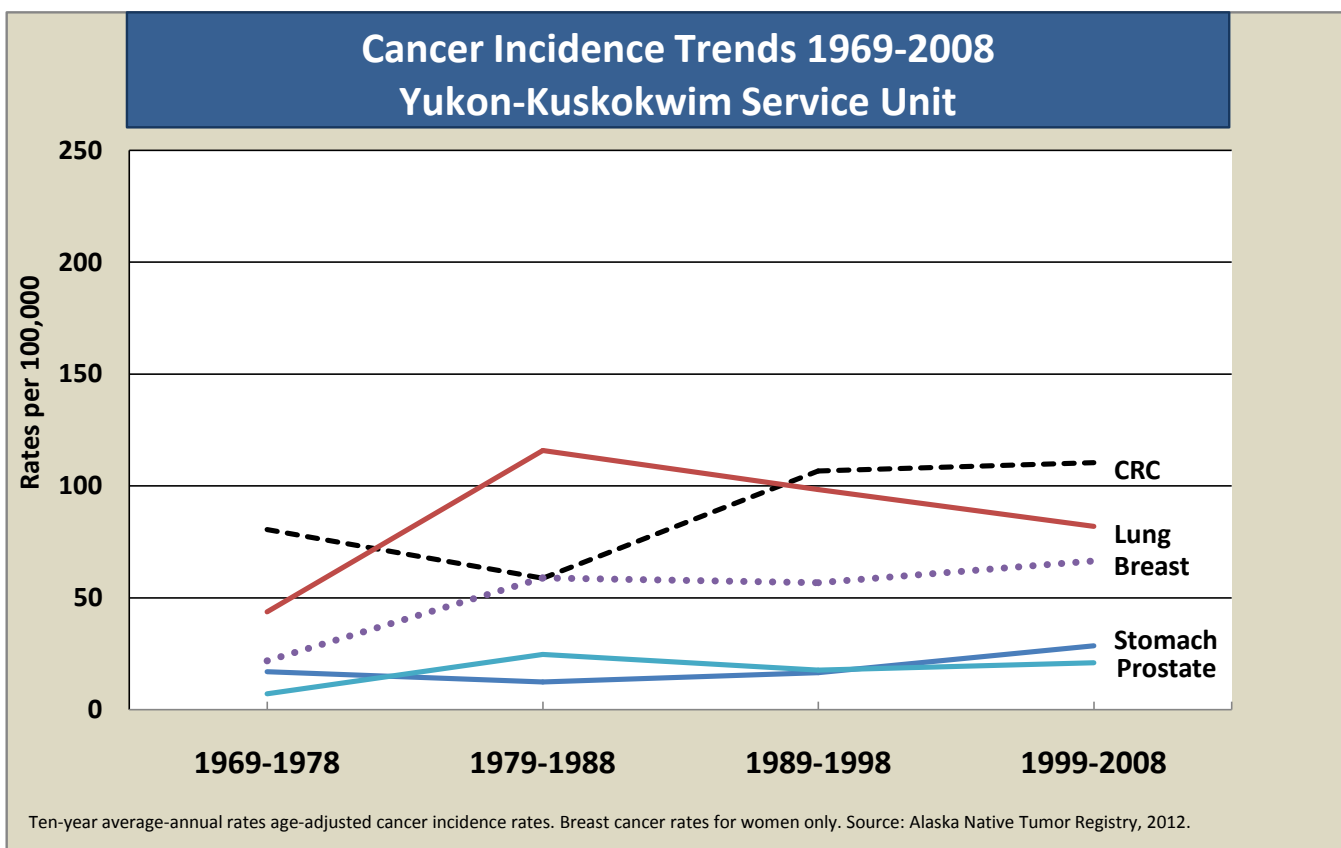
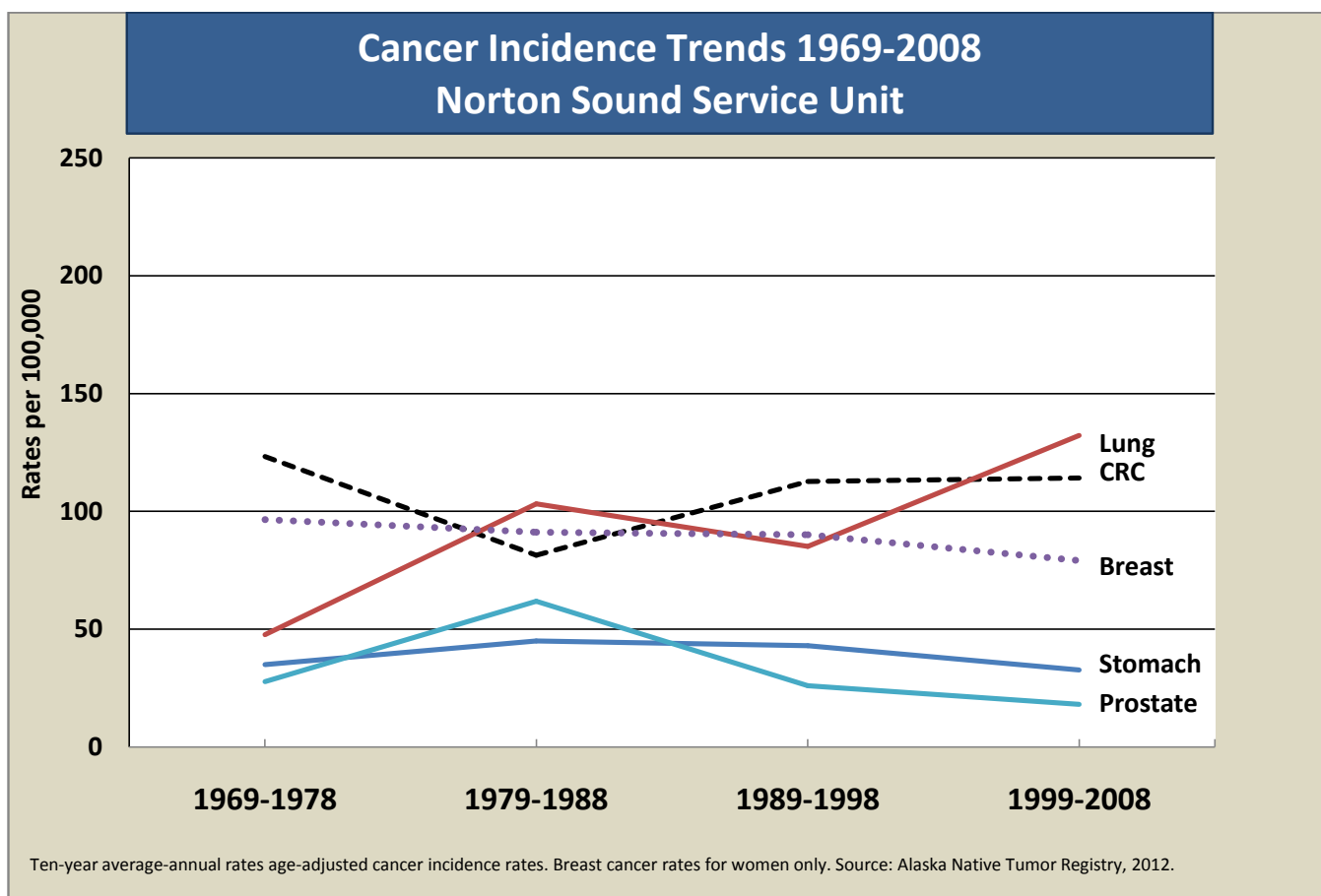
**Ten-Year Average Annual Age-Adjusted Cancer Incidence Rates per 100,000  
by Service Unit, 1969-2008  
Five Leading Cancers, Men and Women Combined**

| Service Unit    | Years     | Lung  |       | Colon & Rectum |       | Breast |       | Prostate |       | Stomach |      |
|-----------------|-----------|-------|-------|----------------|-------|--------|-------|----------|-------|---------|------|
|                 |           | Count | Rate  | Count          | Rate  | Count  | Rate  | Count    | Rate  | Count   | Rate |
| Anchorage       | 1969-1978 | 29    | 43.5  | 50             | 90.5  | 23     | 58.4  | 7        | 30.0  | 5       | 5.4  |
|                 | 1979-1988 | 82    | 88.8  | 82             | 92.8  | 46     | 71.6  | 13       | 36.6  | 20      | 20.2 |
|                 | 1989-1998 | 155   | 136.6 | 133            | 117.6 | 169    | 183.0 | 49       | 101.0 | 40      | 30.6 |
|                 | 1999-2008 | 242   | 194.9 | 226            | 159.2 | 323    | 271.4 | 87       | 128.3 | 41      | 32.8 |
| Barrow          | 1969-1978 | 6     | 72.0  | 8              | 95.9  | 0      | 0.0   | 0        | 0.0   | 4       | 54.7 |
|                 | 1979-1988 | 17    | 124.0 | 8              | 83.4  | 3      | 38.3  | 1        | 26.0  | 4       | 38.3 |
|                 | 1989-1998 | 25    | 162.1 | 22             | 134.2 | 14     | 90.5  | 3        | 48.8  | 6       | 23.6 |
|                 | 1999-2008 | 32    | 174.0 | 28             | 148.0 | 16     | 111.8 | 12       | 121.1 | 9       | 55.1 |
| Bristol Bay     | 1969-1978 | 5     | 36.9  | 5              | 44.2  | 3      | 20.7  | 2        | 53.5  | 1       | 13.4 |
|                 | 1979-1988 | 6     | 37.7  | 15             | 83.3  | 5      | 66.5  | 3        | 28.5  | 3       | 13.9 |
|                 | 1989-1998 | 24    | 108.0 | 27             | 109.3 | 16     | 94.1  | 9        | 72.9  | 5       | 15.5 |
|                 | 1999-2008 | 22    | 77.4  | 36             | 131.6 | 17     | 86.8  | 10       | 61.0  | 6       | 18.4 |
| Interior        | 1969-1978 | 18    | 74.7  | 18             | 82.7  | 12     | 71.8  | 2        | 29.2  | 5       | 14.4 |
|                 | 1979-1988 | 34    | 98.4  | 30             | 99.9  | 24     | 104.3 | 6        | 53.0  | 8       | 23.7 |
|                 | 1989-1998 | 42    | 82.7  | 44             | 81.9  | 71     | 210.1 | 19       | 77.9  | 12      | 20.3 |
|                 | 1999-2008 | 79    | 132.7 | 91             | 113.2 | 105    | 232.4 | 39       | 132.0 | 14      | 20.0 |
| Kotzebue        | 1969-1978 | 5     | 35.9  | 2              | 15.5  | 0      | 0.0   | 2        | 43.4  | 6       | 31.4 |
|                 | 1979-1988 | 15    | 90.5  | 23             | 136.5 | 6      | 47.8  | 4        | 38.0  | 9       | 38.0 |
|                 | 1989-1998 | 18    | 18.1  | 25             | 82.7  | 18     | 115.0 | 3        | 26.9  | 6       | 14.4 |
|                 | 1999-2008 | 30    | 93.1  | 41             | 111.1 | 28     | 95.7  | 4        | 24.1  | 23      | 65.3 |
| Mt Edgecumbe    | 1969-1978 | 17    | 48.8  | 23             | 83.9  | 14     | 59.6  | 16       | 116.3 | 4       | 14.5 |
|                 | 1979-1988 | 17    | 39.3  | 27             | 68.9  | 47     | 143.0 | 26       | 134.8 | 3       | 7.7  |
|                 | 1989-1998 | 49    | 64.4  | 64             | 82.9  | 80     | 161.8 | 60       | 175.7 | 8       | 8.8  |
|                 | 1999-2008 | 53    | 66.6  | 93             | 93.2  | 138    | 210.3 | 59       | 134.5 | 15      | 16.7 |
| Norton Sound    | 1969-1978 | 9     | 47.7  | 19             | 123.3 | 12     | 96.5  | 1        | 27.8  | 7       | 35.0 |
|                 | 1979-1988 | 26    | 103.3 | 19             | 81.5  | 14     | 91.2  | 5        | 61.9  | 10      | 45.1 |
|                 | 1989-1998 | 30    | 85.2  | 49             | 112.7 | 24     | 90.1  | 4        | 26.1  | 17      | 43.0 |
|                 | 1999-2008 | 52    | 132.2 | 54             | 114.2 | 28     | 79.1  | 4        | 18.1  | 15      | 32.7 |
| Yukon-Kuskokwim | 1969-1978 | 22    | 43.7  | 32             | 80.5  | 8      | 21.8  | 1        | 7.1   | 7       | 17.0 |
|                 | 1979-1988 | 71    | 115.9 | 63             | 58.8  | 24     | 58.9  | 8        | 24.6  | 15      | 12.4 |
|                 | 1989-1998 | 83    | 98.4  | 93             | 106.8 | 36     | 56.8  | 7        | 17.7  | 15      | 16.5 |
|                 | 1999-2008 | 75    | 82.0  | 118            | 110.4 | 49     | 66.5  | 10       | 20.9  | 31      | 28.6 |











## Alaska Native Tumor Registry

# Five-Year Cancer Mortality Rates, 2004-2008

**Age-Adjusted Cancer Mortality Rates  
Among Alaska Native People and US Whites, 2004-2008**

|                              | Alaska Native<br>Men and Women |         |          |          | US White<br>Men and Women |          |          |            |
|------------------------------|--------------------------------|---------|----------|----------|---------------------------|----------|----------|------------|
|                              | Number                         | Rate    | Lower CI | Upper CI | Rate                      | Lower CI | Upper CI | Rate Ratio |
| All Malignant Cancers        | 787                            | 237.8 * | 220.6    | 255.8    | 180.0                     | 179.8    | 180.2    | 1.3        |
| Oral Cavity and Pharynx      | 16                             | 4.7 *   | 2.6      | 7.6      | 2.4                       | 2.4      | 2.5      | 2.0        |
| Nasopharynx                  | ^                              |         |          |          | 0.2                       | 0.2      | 0.2      |            |
| Digestive System             | 254                            | 78.3 *  | 68.5     | 88.9     | 42.0                      | 41.9     | 42.1     | 1.9        |
| Esophagus                    | 23                             | 7.1     | 4.4      | 10.8     | 4.4                       | 4.4      | 4.4      | 1.6        |
| Stomach                      | 42                             | 11.3 *  | 8.0      | 15.5     | 3.2                       | 3.2      | 3.3      | 3.5        |
| Colon and Rectum             | 93                             | 30.2 *  | 24.1     | 37.3     | 16.6                      | 16.6     | 16.7     | 1.8        |
| Colon                        | 78                             | 25.9 *  | 20.2     | 32.5     | 13.8                      | 13.7     | 13.9     | 1.9        |
| Rectum/Rectosigmoid Junction | 15                             | 4.4     | 2.4      | 7.2      | 2.8                       | 2.8      | 2.8      | 1.6        |
| Liver                        | 25                             | 7.5 *   | 4.7      | 11.1     | 3.7                       | 3.7      | 3.7      | 2.0        |
| Gallbladder                  | ^                              |         |          |          | 0.6                       | 0.6      | 0.6      |            |
| Pancreas                     | 48                             | 14.6    | 10.6     | 19.5     | 10.6                      | 10.6     | 10.7     | 1.4        |
| Respiratory System           | 242                            | 74.3 *  | 64.9     | 84.6     | 53.5                      | 53.4     | 53.6     | 1.4        |
| Larynx                       | ^                              |         |          |          | 1.1                       | 1.1      | 1.1      |            |
| Lung and Bronchus            | 239                            | 73.6 *  | 64.2     | 83.8     | 52.1                      | 52.0     | 52.2     | 1.4        |
| Bones and Joints             | 0                              |         |          |          | 0.5                       | 0.4      | 0.5      |            |
| Melanoma of the Skin         | ^                              |         |          |          | 3.1                       | 3.0      | 3.1      |            |
| Breast                       | 55                             | 14.8    | 10.9     | 19.5     | 12.8                      | 12.7     | 12.8     | 1.2        |
| Urinary System               | 25                             | 7.5     | 4.8      | 11.1     | 8.9                       | 8.9      | 9.0      | 0.8        |
| Urinary Bladder              | ^                              |         |          |          | 4.6                       | 4.5      | 4.6      |            |
| Kidney and Renal Pelvis      | 19                             | 5.4     | 3.2      | 8.5      | 4.1                       | 4.1      | 4.2      | 1.3        |
| Eye and Orbit                | ^                              |         |          |          | 0.1                       | 0.1      | 0.1      |            |
| Brain/Nervous System         | ^                              |         |          |          | 4.6                       | 4.6      | 4.6      |            |
| Endocrine System             | ^                              |         |          |          | 0.8                       | 0.8      | 0.8      |            |
| Thyroid                      | ^                              |         |          |          | 0.5                       | 0.5      | 0.5      |            |
| Lymphoma                     | ^                              |         |          |          | 7.4                       | 7.4      | 7.5      |            |
| Hodgkin Lymphoma             | ^                              |         |          |          | 0.4                       | 0.4      | 0.4      |            |
| Non-Hodgkin Lymphoma         | ^                              |         |          |          | 7.0                       | 6.9      | 7.0      |            |
| Myeloma                      | ^                              |         |          |          | 3.2                       | 3.2      | 3.3      |            |
| Leukemia                     | 25                             | 6.1     | 3.8      | 9.2      | 7.4                       | 7.3      | 7.4      | 0.8        |
| Miscellaneous                | 82                             | 25.2 *  | 19.7     | 31.5     | 13.6                      | 13.6     | 13.7     | 1.9        |

Rates are per 100,000 and age-adjusted to the 2000 US Std Population.

\* Rate is significantly higher than comparison rate; confidence intervals (Tiwari mod) are 95% for rates.

^ Fewer than 10 deaths; mortality rate not calculated.

**Age-Adjusted Cancer Mortality Rates  
Among Alaska Native People and US Whites, 2004-2008**

|                              | Alaska Native<br>Men |         |          |          | US White<br>Men |          |          |            |
|------------------------------|----------------------|---------|----------|----------|-----------------|----------|----------|------------|
|                              | Number               | Rate    | Lower CI | Upper CI | Rate            | Lower CI | Upper CI | Rate Ratio |
| All Malignant Cancers        | 402                  | 278.3 * | 249.0    | 309.8    | 220.0           | 219.7    | 220.4    | 1.3        |
| Oral Cavity and Pharynx      | ^                    |         |          |          | 3.7             | 3.6      | 3.7      |            |
| Nasopharynx                  | ^                    |         |          |          | 0.2             | 0.2      | 0.2      |            |
| Digestive System             | 144                  | 99.5 *  | 82.2     | 118.9    | 54.1            | 53.9     | 54.3     | 1.8        |
| Esophagus                    | 16                   | 11.2    | 5.7      | 19.2     | 7.9             | 7.8      | 8.0      | 1.4        |
| Stomach                      | 26                   | 16.3 *  | 9.8      | 24.9     | 4.5             | 4.4      | 4.6      | 3.6        |
| Colon and Rectum             | 49                   | 34.7 *  | 24.9     | 46.6     | 20.1            | 19.9     | 20.2     | 1.7        |
| Colon                        | 38                   | 27.9 *  | 19.0     | 39.0     | 16.4            | 16.3     | 16.5     | 1.7        |
| Rectum/Rectosigmoid Junction | 11                   | 6.8     | 3.2      | 12.2     | 3.6             | 3.6      | 3.7      | 1.9        |
| Liver                        | 17                   | 11.5 *  | 6.5      | 18.6     | 5.8             | 5.7      | 5.8      | 2.0        |
| Gallbladder                  | ^                    |         |          |          | 0.4             | 0.4      | 0.5      |            |
| Pancreas                     | 24                   | 16.6    | 10.1     | 25.3     | 12.4            | 12.3     | 12.5     | 1.3        |
| Respiratory System           | 131                  | 88.6 *  | 73.0     | 106.2    | 69.4            | 69.2     | 69.6     | 1.3        |
| Larynx                       | ^                    |         |          |          | 2.0             | 2.0      | 2.0      |            |
| Lung and Bronchus            | 128                  | 86.9 *  | 71.4     | 104.4    | 66.9            | 66.7     | 67.1     | 1.3        |
| Bones and Joints             | 0                    |         |          |          | 0.5             | 0.5      | 0.6      |            |
| Melanoma of the Skin         | ^                    |         |          |          | 4.6             | 4.5      | 4.6      |            |
| Breast                       | 0                    |         |          |          | 0.3             | 0.3      | 0.3      |            |
| Male Genital System          | 20                   | 20.0    | 11.9     | 30.7     | 22.9            | 22.8     | 23.0     | 0.9        |
| Prostate                     | 19                   | 18.9    | 11.1     | 29.4     | 22.4            | 22.3     | 22.6     | 0.8        |
| Urinary System               | 20                   | 13.7    | 8.1      | 21.3     | 14.3            | 14.2     | 14.4     | 1.0        |
| Urinary Bladder              | ^                    |         |          |          | 8.0             | 8.0      | 8.1      |            |
| Kidney and Renal Pelvis      | 15                   | 9.4     | 5.1      | 15.7     | 6.0             | 5.9      | 6.0      | 1.6        |
| Eye and Orbit                | ^                    |         |          |          | 0.1             | 0.1      | 0.1      |            |
| Brain/Nervous System         | ^                    |         |          |          | 5.6             | 5.5      | 5.7      |            |
| Endocrine System             | ^                    |         |          |          | 0.8             | 0.8      | 0.8      |            |
| Thyroid                      | ^                    |         |          |          | 0.5             | 0.5      | 0.5      |            |
| Lymphoma                     | ^                    |         |          |          | 9.4             | 9.3      | 9.5      |            |
| Hodgkin Lymphoma             | 0                    |         |          |          | 0.5             | 0.5      | 0.5      |            |
| Non-Hodgkin Lymphoma         | ^                    |         |          |          | 8.9             | 8.8      | 9.0      |            |
| Myeloma                      | ^                    |         |          |          | 4.2             | 4.1      | 4.2      |            |
| Leukemia                     | 15                   | 8.0     | 3.9      | 14.3     | 9.9             | 9.9      | 10.0     | 0.8        |
| Miscellaneous                | 44                   | 32.2 *  | 22.1     | 44.7     | 17.2            | 17.1     | 17.3     | 1.9        |

Rates are per 100,000 and age-adjusted to the 2000 US Std Population.

\* Rate is significantly higher than comparison rate; confidence intervals (Tiwari mod) are 95% for rates.

^ Fewer than 10 deaths; mortality rate not calculated.

**Age-Adjusted Cancer Mortality Rates  
Among Alaska Native People and US Whites, 2004-2008**

|                              | Alaska Native<br>Women |         |          |          | US White<br>Women |          |          |            |
|------------------------------|------------------------|---------|----------|----------|-------------------|----------|----------|------------|
|                              | Number                 | Rate    | Lower CI | Upper CI | Rate              | Lower CI | Upper CI | Rate Ratio |
| All Malignant Cancers        | 385                    | 210.8 * | 189.7    | 233.5    | 152.8             | 152.5    | 153.1    | 1.4        |
| Oral Cavity and Pharynx      | ^                      |         |          |          | 1.4               | 1.4      | 1.4      |            |
| Nasopharynx                  | ^                      |         |          |          | 0.1               | 0.1      | 0.1      |            |
| Digestive System             | 110                    | 62.6 *  | 51.1     | 75.6     | 32.4              | 32.3     | 32.6     | 1.9        |
| Esophagus                    | ^                      |         |          |          | 1.6               | 1.5      | 1.6      |            |
| Stomach                      | 16                     | 8.1 *   | 4.5      | 13.1     | 2.3               | 2.3      | 2.3      | 3.5        |
| Colon and Rectum             | 44                     | 26.2 *  | 18.8     | 35.2     | 14.0              | 13.9     | 14.1     | 1.9        |
| Colon                        | 40                     | 24.0 *  | 16.9     | 32.7     | 11.8              | 11.8     | 11.9     | 2.0        |
| Rectum/Rectosigmoid Junction | ^                      |         |          |          | 2.2               | 2.1      | 2.2      |            |
| Liver                        | ^                      |         |          |          | 2.0               | 1.9      | 2.0      |            |
| Gallbladder                  | ^                      |         |          |          | 0.7               | 0.7      | 0.8      |            |
| Pancreas                     | 24                     | 13.3    | 8.4      | 19.7     | 9.2               | 9.1      | 9.3      | 1.4        |
| Respiratory System           | 111                    | 63.1 *  | 51.6     | 76.1     | 41.8              | 41.7     | 42.0     | 1.5        |
| Larynx                       | 0                      |         |          |          | 0.4               | 0.4      | 0.5      |            |
| Lung and Bronchus            | 111                    | 63.1 *  | 51.6     | 76.1     | 41.2              | 41.1     | 41.3     | 1.5        |
| Bones and Joints             | 0                      |         |          |          | 0.4               | 0.4      | 0.4      |            |
| Melanoma of the Skin         | ^                      |         |          |          | 2.0               | 1.9      | 2.0      |            |
| Breast                       | 55                     | 27.1    | 20.2     | 35.5     | 22.8              | 22.7     | 23.0     | 1.2        |
| Female Genital System        | 29                     | 15.6    | 10.3     | 22.5     | 15.7              | 15.6     | 15.8     | 1.0        |
| Cervix Uteri                 | 10                     | 5.0 *   | 2.3      | 9.3      | 2.2               | 2.2      | 2.2      | 2.3        |
| Corpus and Uterus, NOS       | ^                      |         |          |          | 3.9               | 3.8      | 3.9      |            |
| Ovary                        | 12                     | 6.8     | 3.4      | 11.7     | 8.8               | 8.7      | 8.8      | 0.8        |
| Urinary System               | ^                      |         |          |          | 5.1               | 5.0      | 5.1      |            |
| Urinary Bladder              | ^                      |         |          |          | 2.2               | 2.2      | 2.3      |            |
| Kidney and Renal Pelvis      | ^                      |         |          |          | 2.7               | 2.7      | 2.7      |            |
| Eye and Orbit                | 0                      |         |          |          | 0.1               | 0.1      | 0.1      |            |
| Brain/Nervous System         | ^                      |         |          |          | 3.8               | 3.7      | 3.8      |            |
| Endocrine System             | ^                      |         |          |          | 0.7               | 0.7      | 0.8      |            |
| Thyroid                      | ^                      |         |          |          | 0.5               | 0.5      | 0.5      |            |
| Lymphoma                     | ^                      |         |          |          | 5.9               | 5.9      | 6.0      |            |
| Hodgkin Lymphoma             | ^                      |         |          |          | 0.3               | 0.3      | 0.4      |            |
| Non-Hodgkin Lymphoma         | ^                      |         |          |          | 5.6               | 5.5      | 5.6      |            |
| Myeloma                      | ^                      |         |          |          | 2.6               | 2.5      | 2.6      |            |
| Leukemia                     | 10                     | 4.8     | 2.2      | 8.9      | 5.5               | 5.5      | 5.6      | 0.9        |
| Miscellaneous                | 38                     | 21.5 *  | 15.0     | 29.6     | 11.0              | 10.9     | 11.1     | 2.0        |

Rates are per 100,000 and age-adjusted to the 2000 US Std Population.

\* Rate is significantly higher than comparison rate; confidence intervals (Tiwari mod) are 95% for rates.

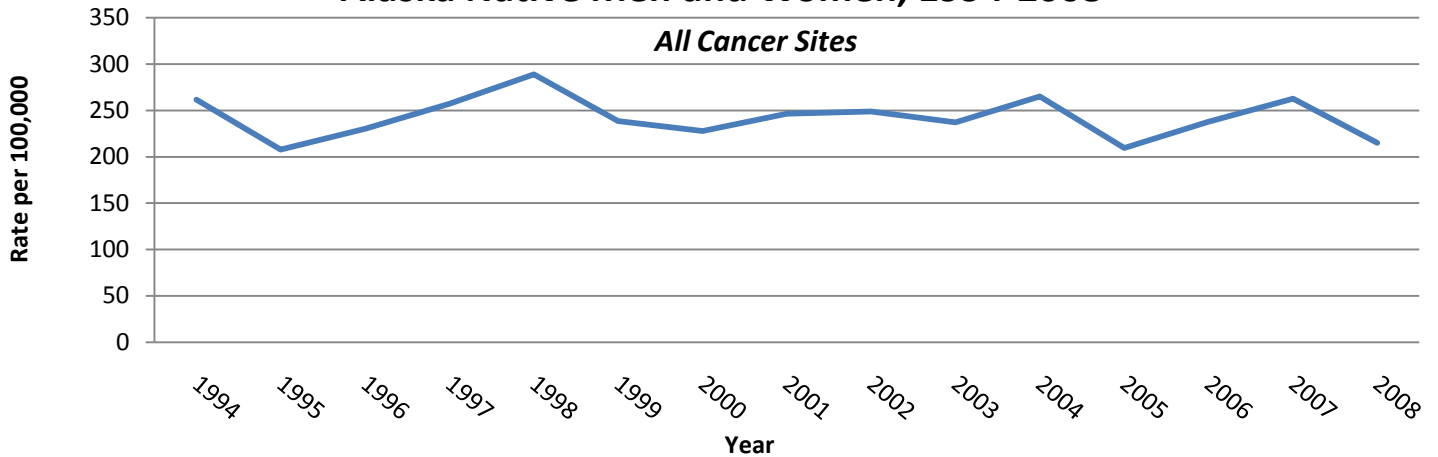
^ Fewer than 10 deaths; mortality rate not calculated.



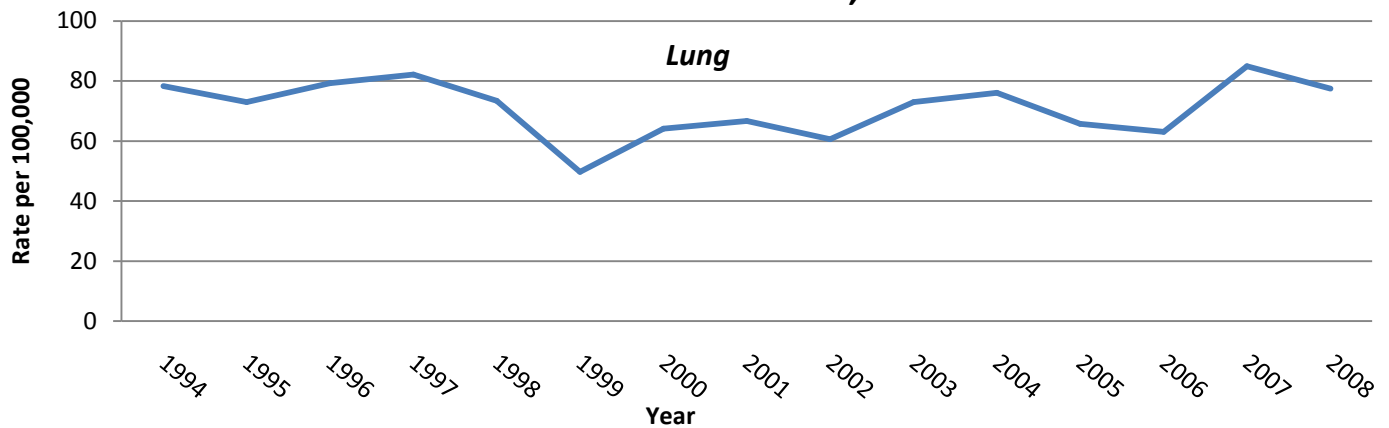
## Alaska Native Tumor Registry

# 15-Year Cancer Mortality Rates, 1994-2008

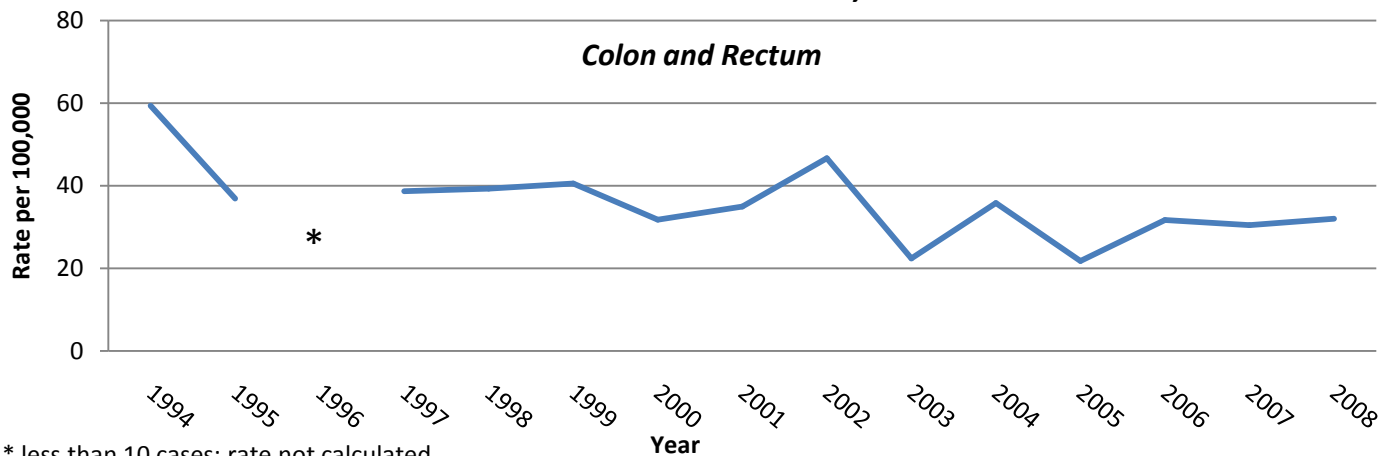
### Age-Adjusted Cancer Mortality Rates Alaska Native Men and Women, 1994-2008



### Age-Adjusted Lung Cancer Mortality Rates Alaska Native Men and Women, 1994-2008

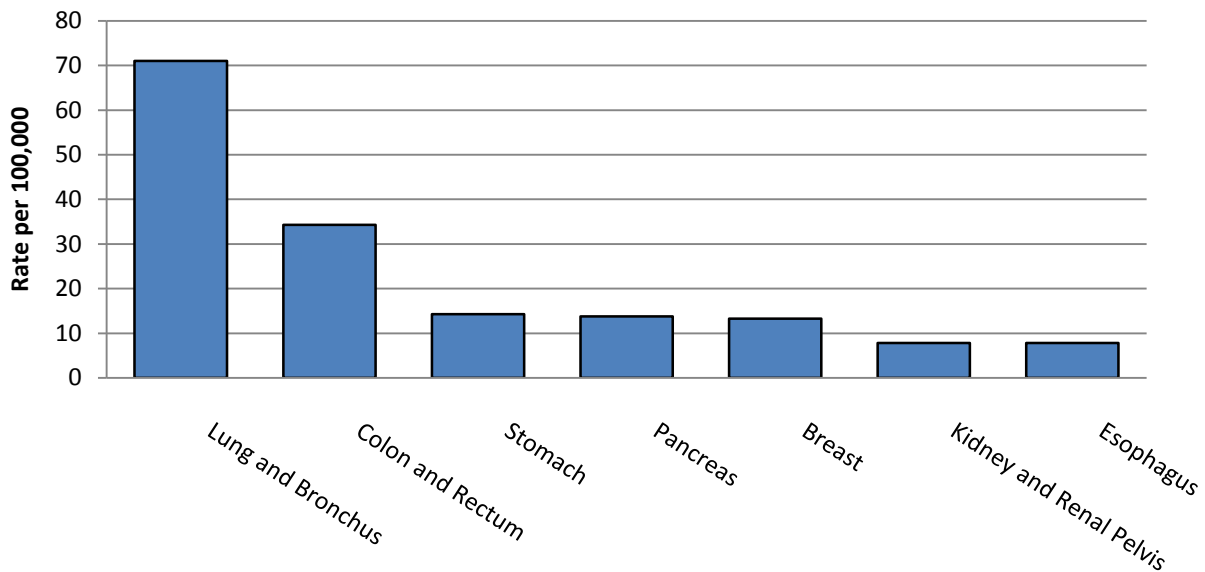


### Age-Adjusted Colon/Rectum Cancer Mortality Rates Alaska Native Men and Women, 1994-2008



\* less than 10 cases; rate not calculated

### Leading Cancer Deaths Alaska Native Men and Women Combined, 1994-2008

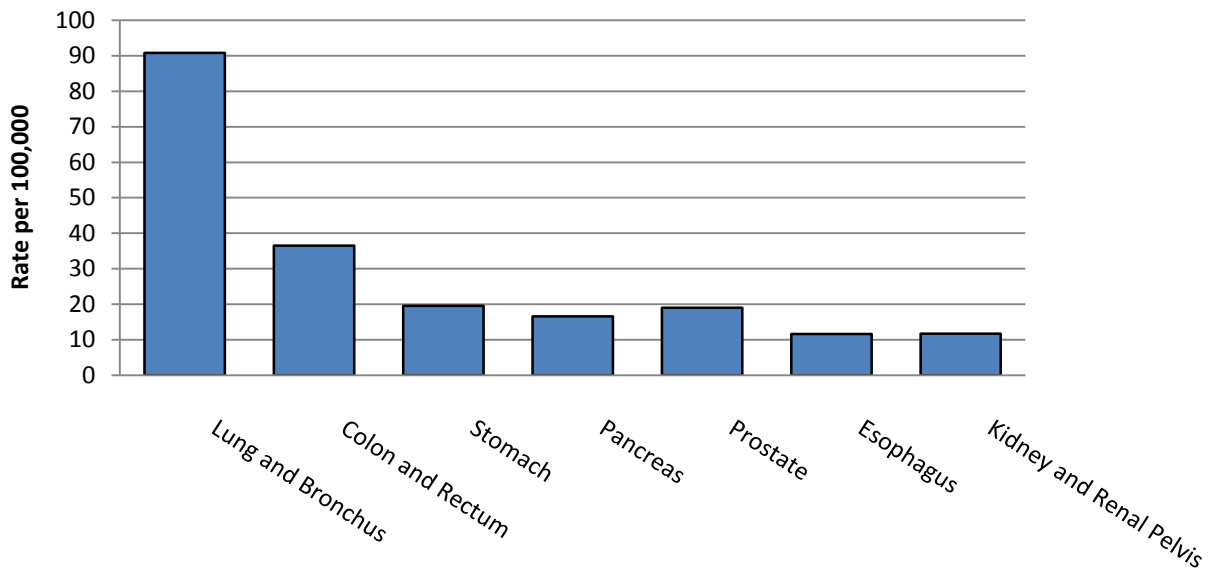


### Ten Leading Cancer Deaths, 1994-2008 Alaska Native People and US Whites

| Alaska Native Men and Women |       |        | US White Men and Women   |      |
|-----------------------------|-------|--------|--------------------------|------|
|                             | Count | Rate   |                          | Rate |
| Lung and Bronchus           | 586   | 71.0 * | Lung and Bronchus        | 54.8 |
| Colon and Rectum            | 266   | 34.3 * | Colon and Rectum         | 19.1 |
| Stomach                     | 139   | 14.3 * | Breast                   | 14.4 |
| Pancreas                    | 120   | 13.8 * | Pancreas                 | 10.4 |
| Breast                      | 127   | 13.3   | Prostate                 | 27.0 |
| Kidney and Renal Pelvis     | 63    | 7.8 *  | Non-Hodgkin Lymphoma     | 8.0  |
| Esophagus                   | 63    | 7.8 *  | Leukemia                 | 7.7  |
| Oral Cavity and Pharynx     | 60    | 7.1 *  | Ovary                    | 9.1  |
| Liver                       | 58    | 6.9 *  | Brain and Nervous System | 4.8  |
| Leukemia                    | 49    | 4.5    | Urinary Bladder          | 4.5  |

\*Age-adjusted cancer mortality rate is statistically different from the US rate for the same cancer site;  $p < 0.05$

### Leading Cancer Deaths Alaska Native Men, 1994-2008



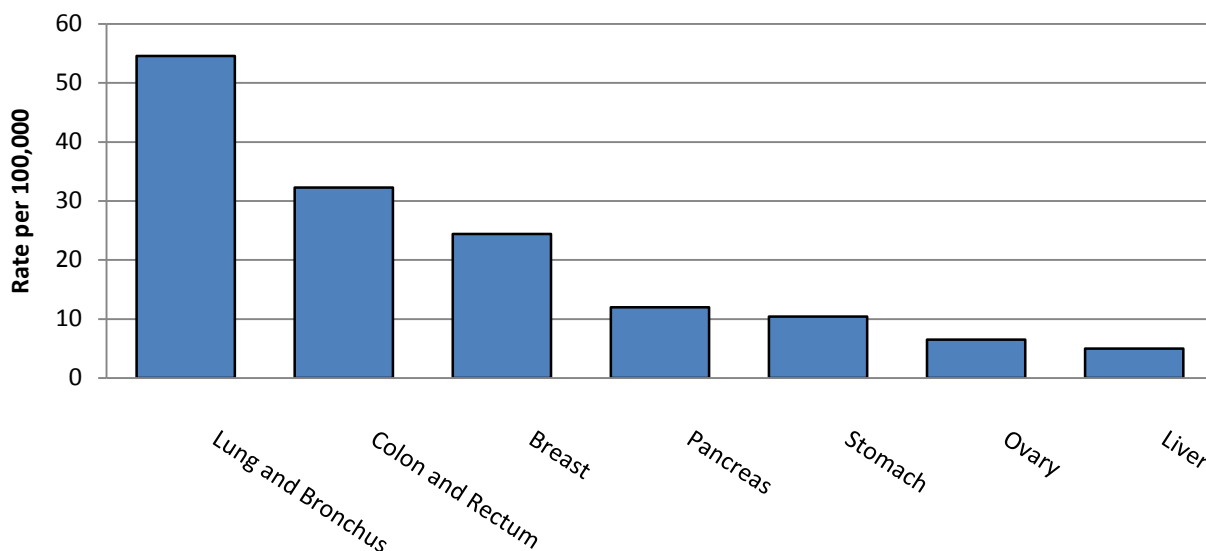
### Ten Leading Cancer Deaths, 1994-2008 Alaska Native People and US Whites

| Alaska Native Men       |       |        |
|-------------------------|-------|--------|
|                         | Count | Rate   |
| Lung and Bronchus       | 345   | 90.8 * |
| Colon and Rectum        | 129   | 36.5 * |
| Stomach                 | 84    | 19.5 * |
| Pancreas                | 62    | 16.6 * |
| Prostate                | 46    | 19.0   |
| Esophagus               | 43    | 11.6 * |
| Kidney and Renal Pelvis | 42    | 11.7 * |
| Oral Cavity and Pharynx | 37    | 9.5 *  |
| Liver                   | 34    | 9.3 *  |
| Leukemia                | 29    | 5.8    |

| US White Men             |  | Rate |
|--------------------------|--|------|
| Lung and Bronchus        |  | 73.5 |
| Prostate                 |  | 27.0 |
| Colon and Rectum         |  | 23.2 |
| Pancreas                 |  | 12.1 |
| Leukemia                 |  | 10.3 |
| Non-Hodgkin Lymphoma     |  | 10.1 |
| Esophagus                |  | 7.6  |
| Urinary Bladder          |  | 8.0  |
| Kidney and Renal Pelvis  |  | 6.1  |
| Brain and Nervous System |  | 5.9  |

\*Age-adjusted cancer mortality rate is statistically different from the US rate for the same cancer site;  $p < 0.05$

### Leading Cancer Deaths Alaska Native Women, 1994-2008



### Ten Leading Cancer Deaths, 1994-2008 Alaska Native People and US Whites

| Alaska Native Women     |       |        | US White Women           |      |
|-------------------------|-------|--------|--------------------------|------|
|                         | Count | Rate   |                          | Rate |
| Lung and Bronchus       | 241   | 54.6 * | Lung and Bronchus        | 41.1 |
| Colon and Rectum        | 137   | 32.3 * | Breast                   | 25.6 |
| Breast                  | 127   | 24.4   | Colon and Rectum         | 16.1 |
| Pancreas                | 58    | 12.0   | Pancreas                 | 9.0  |
| Stomach                 | 55    | 10.4 * | Ovary                    | 9.1  |
| Ovary                   | 33    | 6.5    | Non-Hodgkin Lymphoma     | 6.5  |
| Liver                   | 24    | 5.0 *  | Leukemia                 | 5.8  |
| Oral Cavity and Pharynx | 23    | 5.1 *  | Corpus and Uterus        | 3.9  |
| Kidney and Renal Pelvis | 21    | 4.7 *  | Brain and Nervous System | 3.9  |
| Esophagus               | 20    | 4.8 *  | Myeloma                  | 2.8  |

\*Age-adjusted cancer mortality rate is statistically different from the US rate for the same cancer site;  $p < 0.05$

**Age-Adjusted Cancer Mortality Rates  
Among Alaska Native People and US Whites, 1994-2008**

|                                  | Alaska Native<br>Men and Women |         |          |          | US White<br>Men and Women |          |          |            |
|----------------------------------|--------------------------------|---------|----------|----------|---------------------------|----------|----------|------------|
|                                  | Number                         | Rate    | Lower CI | Upper CI | Rate                      | Lower CI | Upper CI | Rate Ratio |
| All Malignant Cancers            | 2,040                          | 241.7 * | 230.7    | 253.1    | 191.6                     | 191.4    | 191.7    | 1.3        |
| Oral Cavity and Pharynx          | 60                             | 7.1 *   | 5.3      | 9.2      | 2.6                       | 2.6      | 2.6      | 2.7        |
| Nasopharynx                      | 33                             | 4.0 *   | 2.7      | 5.6      | 0.2                       | 0.2      | 0.2      | 20.0       |
| Digestive System                 | 697                            | 83.7 *  | 77.2     | 90.5     | 44.4                      | 44.3     | 44.4     | 1.9        |
| Esophagus                        | 63                             | 7.8 *   | 5.9      | 10.1     | 4.2                       | 4.2      | 4.3      | 1.9        |
| Stomach                          | 139                            | 14.3 *  | 11.9     | 17.0     | 3.8                       | 3.8      | 3.9      | 3.8        |
| Colon and Rectum                 | 266                            | 34.3 *  | 30.0     | 38.9     | 19.1                      | 19.1     | 19.1     | 1.8        |
| Colon excluding Rectum           | 217                            | 28.6 *  | 24.7     | 32.9     | 16.2                      | 16.1     | 16.2     | 1.8        |
| Rectum and Rectosigmoid Junction | 49                             | 5.7 *   | 4.1      | 7.6      | 2.9                       | 2.9      | 3.0      | 2.0        |
| Liver                            | 58                             | 6.9 *   | 5.1      | 9.0      | 3.4                       | 3.4      | 3.5      | 2.0        |
| Gallbladder                      | 11                             | 1.6 *   | 0.8      | 2.9      | 0.7                       | 0.7      | 0.7      | 2.3        |
| Pancreas                         | 120                            | 13.8 *  | 11.4     | 16.7     | 10.4                      | 10.4     | 10.4     | 1.3        |
| Respiratory System               | 595                            | 71.8 *  | 65.9     | 78.1     | 56.4                      | 56.3     | 56.5     | 1.3        |
| Larynx                           | ^                              | ^       | ^        | ^        | 1.2                       | 1.2      | 1.2      |            |
| Lung and Bronchus                | 586                            | 71.0 *  | 65.1     | 77.2     | 54.8                      | 54.7     | 54.9     | 1.3        |
| Bones and Joints                 | ^                              | ^       | ^        | ^        | 0.5                       | 0.4      | 0.5      |            |
| Melanoma of the Skin             | ^                              | ^       | ^        | ^        | 3.0                       | 3.0      | 3.1      |            |
| Breast                           | 127                            | 13.3    | 10.9     | 16.0     | 14.4                      | 14.4     | 14.5     | 0.9        |
| Urinary System                   | 83                             | 10.8    | 8.5      | 13.4     | 9.0                       | 8.9      | 9.0      | 1.2        |
| Urinary Bladder                  | 18                             | 2.7     | 1.6      | 4.2      | 4.5 *                     | 4.5      | 4.5      | 0.6        |
| Kidney and Renal Pelvis          | 63                             | 7.8 *   | 5.9      | 10.1     | 4.2                       | 4.2      | 4.3      | 1.9        |
| Eye and Orbit                    | ^                              | ^       | ^        | ^        | 0.1                       | 0.1      | 0.1      |            |
| Brain and Other Nervous System   | 16                             | 1.3     | 0.7      | 2.2      | 4.8 *                     | 4.8      | 4.8      | 0.3        |
| Endocrine System                 | ^                              | ^       | ^        | ^        | 0.8                       | 0.8      | 0.8      |            |
| Thyroid                          | ^                              | ^       | ^        | ^        | 0.5                       | 0.5      | 0.5      |            |
| Lymphoma                         | 38                             | 4.2     | 2.9      | 5.9      | 8.5 *                     | 8.5      | 8.6      | 0.5        |
| Hodgkin Lymphoma                 | ^                              | ^       | ^        | ^        | 0.5                       | 0.5      | 0.5      |            |
| Non-Hodgkin Lymphoma             | 36                             | 4.0     | 2.7      | 5.7      | 8.0 *                     | 8.0      | 8.1      | 0.5        |
| Myeloma                          | 22                             | 2.3     | 1.4      | 3.4      | 3.4                       | 3.4      | 3.5      | 0.7        |
| Leukemia                         | 49                             | 4.5     | 3.2      | 6.1      | 7.7 *                     | 7.6      | 7.7      | 0.6        |
| Miscellaneous                    | 212                            | 25.4 *  | 21.9     | 29.3     | 14.3                      | 14.2     | 14.3     | 1.8        |

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

\* Rate is significantly higher than comparison rate; confidence intervals are 95% for rates.

^ Fewer than 10 deaths; mortality rate not calculated.

**Age-Adjusted Cancer Mortality Rates  
Among Alaska Native People and US Whites, 1994-2008**

|                                  | Alaska Native<br>Men |         |          |          | US White<br>Men |          |          |            |
|----------------------------------|----------------------|---------|----------|----------|-----------------|----------|----------|------------|
|                                  | Number               | Rate    | Lower CI | Upper CI | Rate            | Lower CI | Upper CI | Rate Ratio |
| All Malignant Cancers            | 1,072                | 286.6 * | 267.9    | 306.2    | 237.6           | 237.3    | 237.8    | 1.2        |
| Oral Cavity and Pharynx          | 37                   | 9.5 *   | 6.4      | 13.3     | 3.9             | 3.9      | 3.9      | 2.4        |
| Nasopharynx                      | 21                   | 5.7 *   | 3.3      | 8.9      | 0.3             | 0.3      | 0.3      | 19.0       |
| Digestive System                 | 378                  | 101.4 * | 90.3     | 113.3    | 57.1            | 57.0     | 57.2     | 1.8        |
| Esophagus                        | 43                   | 11.6 *  | 8.1      | 16.0     | 7.6             | 7.5      | 7.6      | 1.5        |
| Stomach                          | 84                   | 19.5 *  | 15.1     | 24.6     | 5.4             | 5.4      | 5.5      | 3.6        |
| Colon and Rectum                 | 129                  | 36.5 *  | 29.9     | 44.0     | 23.2            | 23.1     | 23.3     | 1.6        |
| Colon excluding Rectum           | 100                  | 29.2 *  | 23.2     | 36.1     | 19.4            | 19.3     | 19.4     | 1.5        |
| Rectum and Rectosigmoid Junction | 29                   | 7.3 *   | 4.7      | 10.8     | 3.8             | 3.8      | 3.9      | 1.9        |
| Liver                            | 34                   | 9.3 *   | 6.2      | 13.3     | 5.3             | 5.3      | 5.3      | 1.8        |
| Gallbladder                      | ^                    | ^       | ^        | ^        | 0.5             | 0.5      | 0.5      |            |
| Pancreas                         | 62                   | 16.6 *  | 12.4     | 21.7     | 12.1            | 12.1     | 12.2     | 1.4        |
| Respiratory System               | 354                  | 92.6 *  | 82.5     | 103.4    | 76.3            | 76.2     | 76.5     | 1.2        |
| Larynx                           | ^                    | ^       | ^        | ^        | 2.2             | 2.2      | 2.3      |            |
| Lung and Bronchus                | 345                  | 90.8 *  | 80.8     | 101.6    | 73.5            | 73.4     | 73.7     | 1.2        |
| Bones and Joints                 | 0                    | 0.0     | 0.0      | 0.9      | 0.6             | 0.5      | 0.6      | 0.0        |
| Melanoma of the Skin             | ^                    | ^       | ^        | ^        | 4.4             | 4.4      | 4.5      |            |
| Breast                           | 0                    | 0.0     | 0.0      | 0.9      | 0.3             | 0.3      | 0.3      | 0.0        |
| Male Genital System              | 49                   | 19.8    | 14.3     | 26.4     | 27.5 *          | 27.4     | 27.6     | 0.7        |
| Prostate                         | 46                   | 19.0    | 13.6     | 25.5     | 27.0 *          | 26.9     | 27.1     | 0.7        |
| Testis                           | ^                    | ^       | ^        | ^        | 0.3             | 0.3      | 0.3      |            |
| Penis                            | ^                    | ^       | ^        | ^        | 0.2             | 0.2      | 0.2      |            |
| Other Male Genital Organs        | 0                    | 0.0     | 0.0      | 0.9      | 0.0             | 0.0      | 0.0      |            |
| Urinary System                   | 55                   | 15.9    | 11.7     | 20.9     | 14.4            | 14.4     | 14.5     | 1.1        |
| Urinary Bladder                  | 11                   | 3.7     | 1.8      | 6.5      | 8.0 *           | 8.0      | 8.1      | 0.5        |
| Kidney and Renal Pelvis          | 42                   | 11.7 *  | 8.2      | 16.1     | 6.1             | 6.1      | 6.2      | 1.9        |
| Eye and Orbit                    | ^                    | ^       | ^        | ^        | 0.1             | 0.1      | 0.1      |            |
| Brain and Other Nervous System   | 10                   | 1.8     | 0.8      | 3.5      | 5.9 *           | 5.8      | 5.9      | 0.3        |
| Endocrine System                 | ^                    | ^       | ^        | ^        | 0.8             | 0.8      | 0.8      |            |
| Thyroid                          | ^                    | ^       | ^        | ^        | 0.5             | 0.5      | 0.5      |            |
| Lymphoma                         | 22                   | 5.2     | 3.0      | 8.3      | 10.7 *          | 10.6     | 10.7     | 0.5        |
| Hodgkin Lymphoma                 | ^                    | ^       | ^        | ^        | 0.6             | 0.6      | 0.6      |            |
| Non-Hodgkin Lymphoma             | 21                   | 5.0     | 2.8      | 8.1      | 10.1 *          | 10.0     | 10.1     | 0.5        |
| Myeloma                          | ^                    | ^       | ^        | ^        | 4.4             | 4.3      | 4.4      |            |
| Leukemia                         | 29                   | 5.8     | 3.5      | 8.7      | 10.3 *          | 10.3     | 10.4     | 0.6        |
| Miscellaneous                    | 118                  | 30.8 *  | 24.9     | 37.6     | 17.9            | 17.8     | 17.9     | 1.7        |

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

\* Rate is significantly higher than comparison rate; confidence intervals are 95% for rates.

^ Fewer than 10 deaths; mortality rate not calculated.

**Age-Adjusted Cancer Mortality Rates  
Among Alaska Native People and US Whites, 1994-2008**

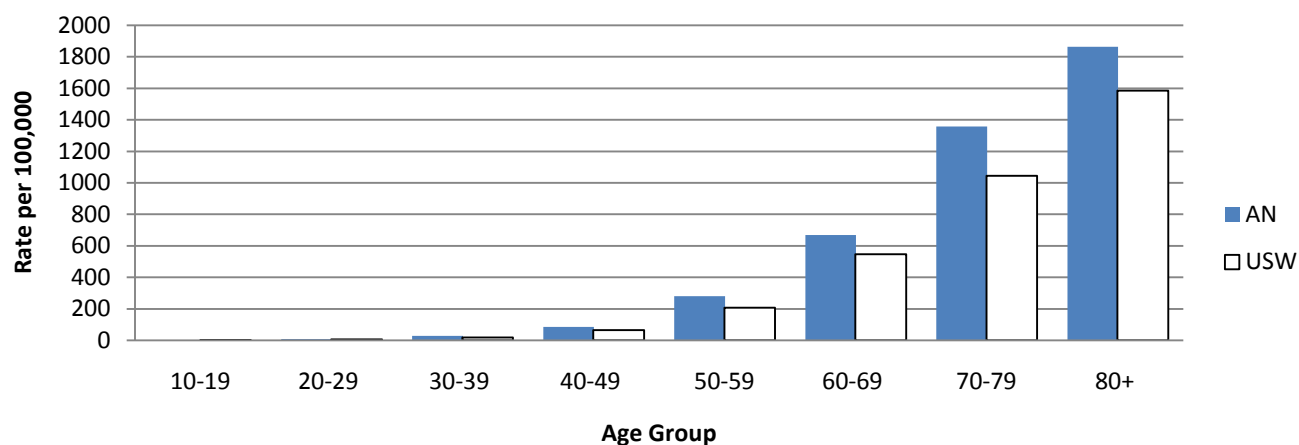
|                                  | Alaska Native<br>Women |         |          |          | US White<br>Women |          |          |            |
|----------------------------------|------------------------|---------|----------|----------|-------------------|----------|----------|------------|
|                                  | Number                 | Rate    | Lower CI | Upper CI | Rate              | Lower CI | Upper CI | Rate Ratio |
| All Malignant Cancers            | 968                    | 208.5 * | 195.1    | 222.6    | 161.4             | 161.2    | 161.6    | 1.3        |
| Oral Cavity and Pharynx          | 23                     | 5.1 *   | 3.2      | 7.7      | 1.5               | 1.5      | 1.6      | 3.4        |
| Nasopharynx                      | 12                     | 2.7 *   | 1.3      | 4.6      | 0.1               | 0.1      | 0.1      | 27.0       |
| Digestive System                 | 319                    | 70.3 *  | 62.5     | 78.7     | 34.7              | 34.6     | 34.8     | 2.0        |
| Esophagus                        | 20                     | 4.8 *   | 2.9      | 7.4      | 1.6               | 1.6      | 1.6      | 3.0        |
| Stomach                          | 55                     | 10.4 *  | 7.7      | 13.6     | 2.7               | 2.6      | 2.7      | 3.9        |
| Colon and Rectum                 | 137                    | 32.3 *  | 27.0     | 38.4     | 16.1              | 16.0     | 16.1     | 2.0        |
| Colon excluding Rectum           | 117                    | 28.0 *  | 23.0     | 33.7     | 13.8              | 13.8     | 13.9     | 2.0        |
| Rectum and Rectosigmoid Junction | 20                     | 4.3 *   | 2.6      | 6.7      | 2.3               | 2.2      | 2.3      | 1.9        |
| Liver                            | 24                     | 5.0 *   | 3.1      | 7.5      | 1.9               | 1.9      | 1.9      | 2.6        |
| Gallbladder                      | ^                      | ^       | ^        | ^        | 0.8               | 0.8      | 0.8      |            |
| Pancreas                         | 58                     | 12.0    | 9.0      | 15.6     | 9.0               | 9.0      | 9.1      | 1.3        |
| Respiratory System               | 241                    | 54.6 *  | 47.7     | 62.1     | 42.1              | 42.0     | 42.1     | 1.3        |
| Larynx                           | 0                      | 0.0     | 0.0      | 0.6      | 0.5               | 0.5      | 0.5      | 0.0        |
| Lung and Bronchus                | 241                    | 54.6 *  | 47.7     | 62.1     | 41.4              | 41.3     | 41.4     | 1.3        |
| Bones and Joints                 | ^                      | ^       | ^        | ^        | 0.4               | 0.4      | 0.4      |            |
| Melanoma of the Skin             | ^                      | ^       | ^        | ^        | 2.0               | 2.0      | 2.0      |            |
| Breast                           | 127                    | 24.4    | 20.2     | 29.2     | 25.6              | 25.5     | 25.6     | 1.0        |
| Female Genital System            | 63                     | 12.5    | 9.5      | 16.1     | 16.3 *            | 16.3     | 16.4     | 0.8        |
| Cervix Uteri                     | 17                     | 3.1     | 1.7      | 5.0      | 2.5               | 2.4      | 2.5      | 1.2        |
| Corpus and Uterus, NOS           | ^                      | ^       | ^        | ^        | 3.9               | 3.9      | 3.9      |            |
| Corpus Uteri                     | ^                      | ^       | ^        | ^        | 1.9               | 1.9      | 1.9      |            |
| Uterus, NOS                      | ^                      | ^       | ^        | ^        | 2.0               | 2.0      | 2.0      |            |
| Ovary                            | 33                     | 6.5     | 4.4      | 9.2      | 9.1               | 9.0      | 9.1      | 0.7        |
| Vagina                           | ^                      | ^       | ^        | ^        | 0.2               | 0.2      | 0.2      |            |
| Vulva                            | ^                      | ^       | ^        | ^        | 0.5               | 0.5      | 0.5      |            |
| Other Female Genital Organs      | ^                      | ^       | ^        | ^        | 0.2               | 0.2      | 0.2      |            |
| Urinary System                   | 28                     | 6.6     | 4.4      | 9.6      | 5.2               | 5.2      | 5.3      | 1.3        |
| Urinary Bladder                  | ^                      | ^       | ^        | ^        | 2.3               | 2.2      | 2.3      |            |
| Kidney and Renal Pelvis          | 21                     | 4.7 *   | 2.9      | 7.2      | 2.8               | 2.8      | 2.8      | 1.7        |
| Eye and Orbit                    | 0                      | 0.0     | 0.0      | 0.6      | 0.1               | 0.1      | 0.1      | 0.0        |
| Brain and Other Nervous System   | ^                      | ^       | ^        | ^        | 3.9               | 3.9      | 4.0      |            |
| Endocrine System                 | ^                      | ^       | ^        | ^        | 0.7               | 0.7      | 0.8      |            |
| Thyroid                          | ^                      | ^       | ^        | ^        | 0.5               | 0.5      | 0.5      |            |
| Lymphoma                         | 16                     | 3.4     | 1.8      | 5.5      | 6.9 *             | 6.9      | 7.0      | 0.5        |
| Hodgkin Lymphoma                 | ^                      | ^       | ^        | ^        | 0.4               | 0.4      | 0.4      |            |
| Non-Hodgkin Lymphoma             | 15                     | 3.2     | 1.7      | 5.4      | 6.5 *             | 6.5      | 6.6      | 0.5        |
| Myeloma                          | 16                     | 3.1     | 1.8      | 5.0      | 2.8               | 2.8      | 2.8      | 1.1        |
| Leukemia                         | 20                     | 3.5     | 2.1      | 5.5      | 5.8 *             | 5.8      | 5.9      | 0.6        |
| Miscellaneous                    | 94                     | 21.1 *  | 16.9     | 25.9     | 11.7              | 11.6     | 11.7     | 1.8        |

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

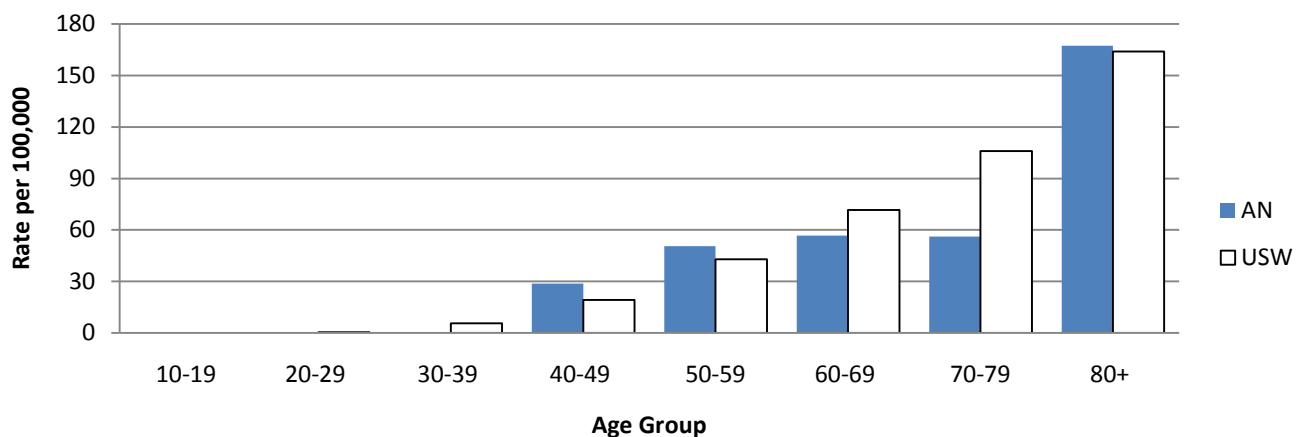
\* Rate is significantly higher than comparison rate; confidence intervals are 95% for rates.

^ Fewer than 10 deaths; mortality rate not calculated.

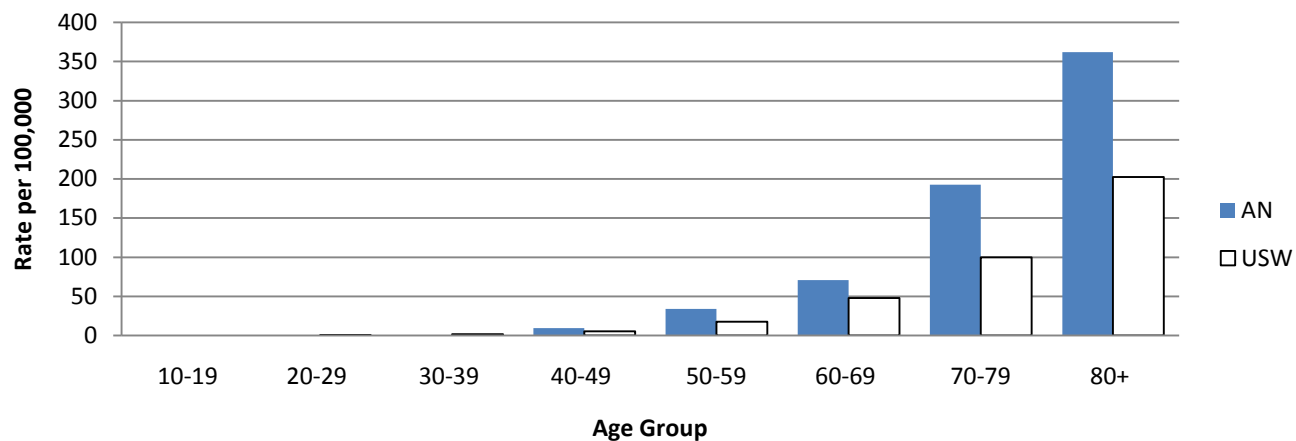
**All Cancer Sites Age-Specific Mortality Rates  
Alaska Native and US White Men and Women, 1994-2008**



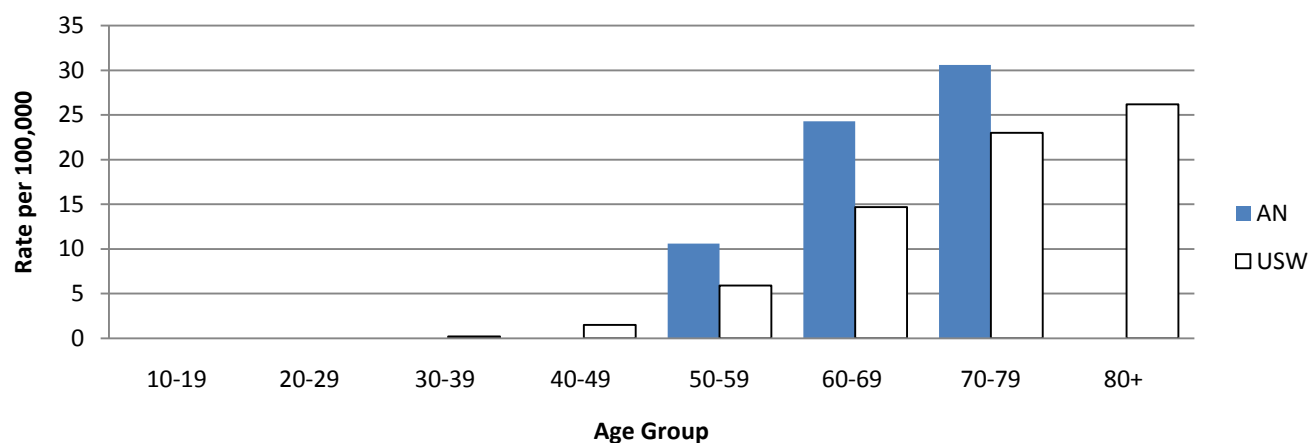
**Breast Cancer Age-Specific Mortality Rates  
Alaska Native and US White Women, 1994-2008**



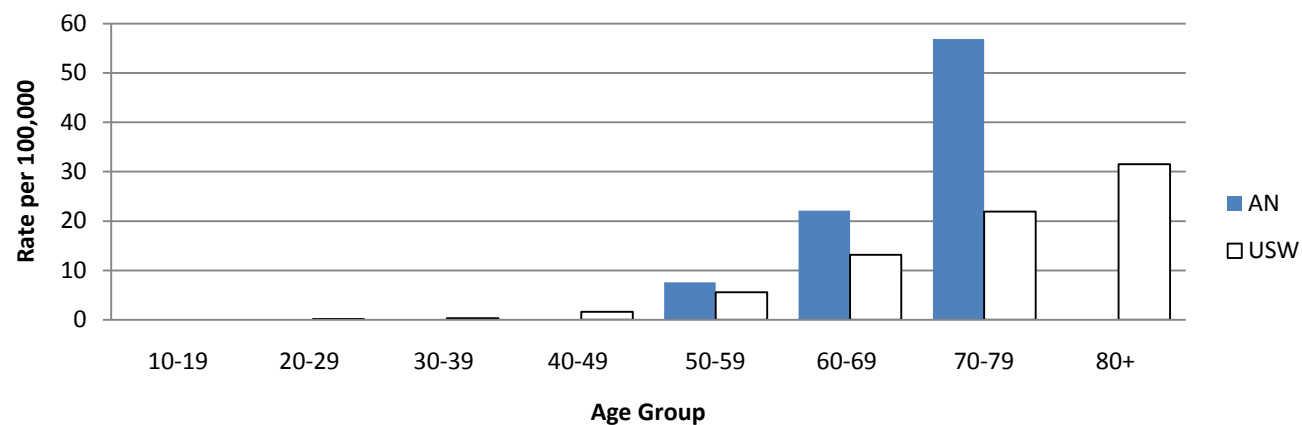
**Colorectal Cancer Age-Specific Mortality Rates  
Alaska Native and US White Men and Women, 1994-2008**



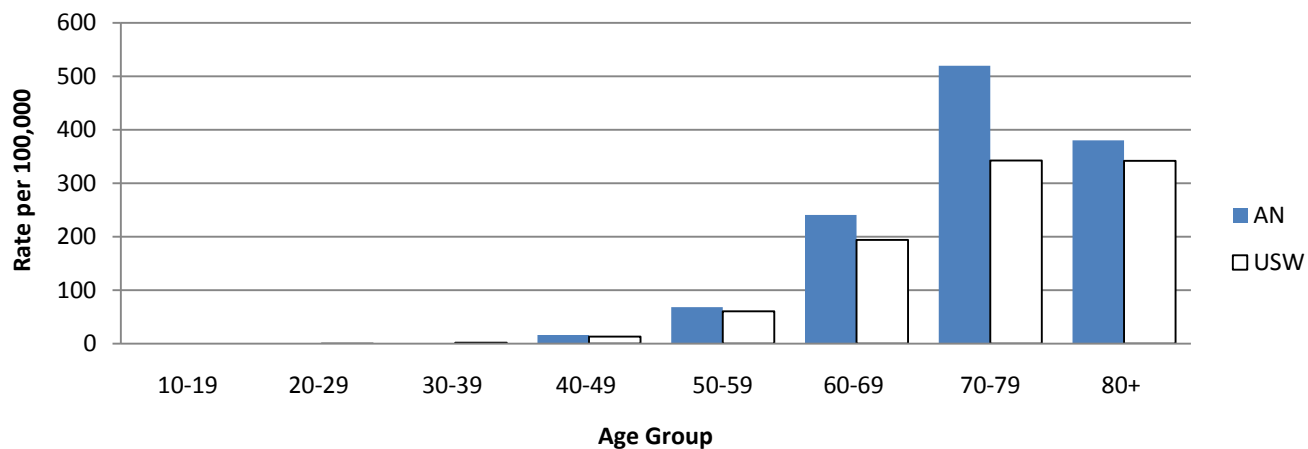
**Esophageal Cancer Age-Specific Mortality Rates  
Alaska Native and US White Men and Women, 1994-2008**



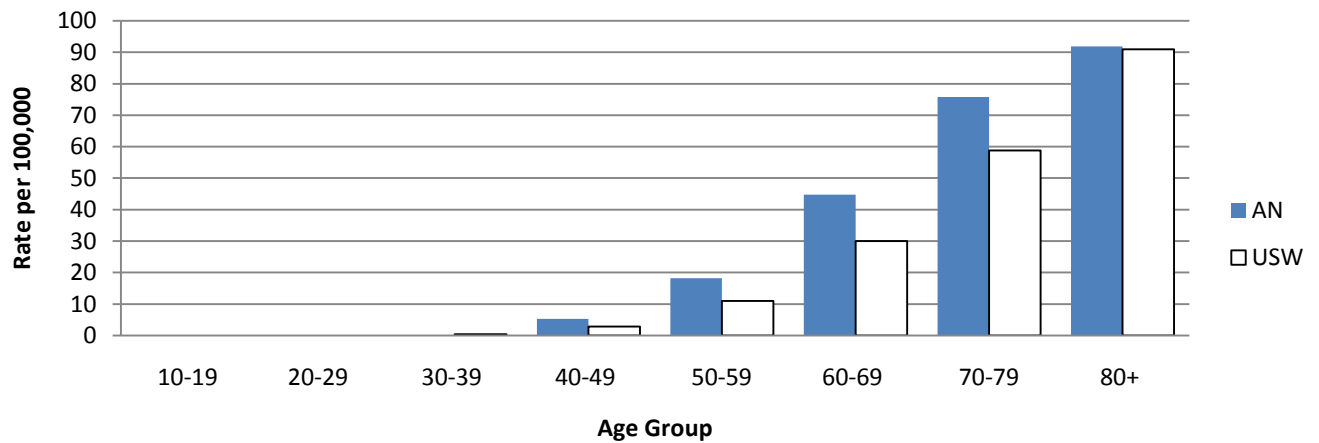
**Kidney Cancer Age-Specific Mortality Rates  
Alaska Native and US White Men and Women, 1994-2008**



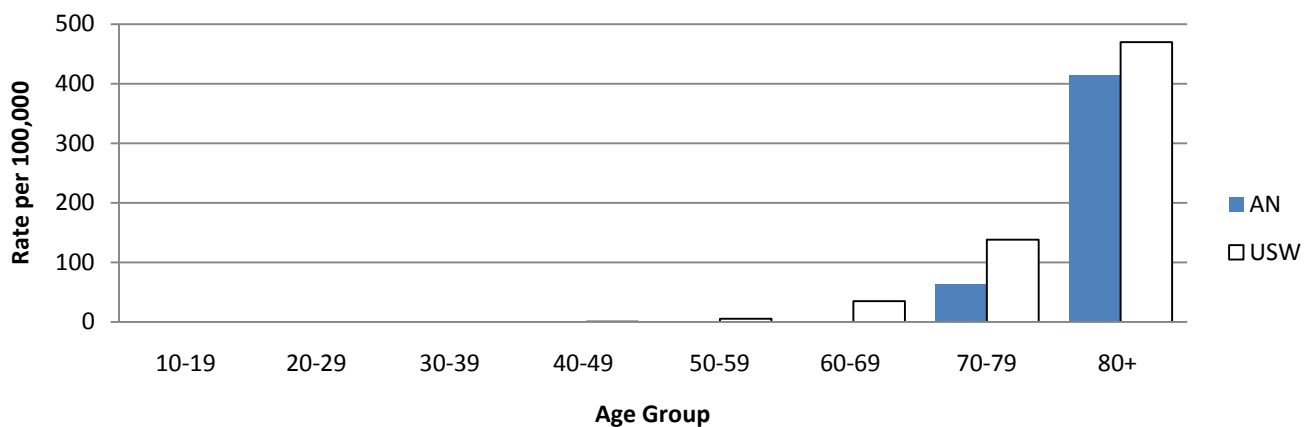
**Lung Cancer Age-Specific Mortality Rates  
Alaska Native and US White Men and Women, 1994-2008**



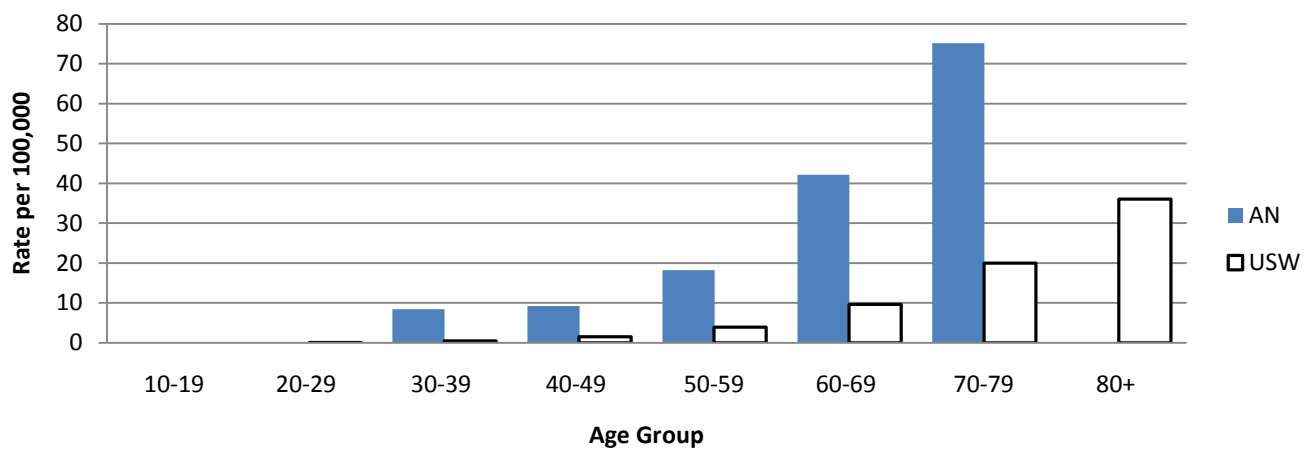
**Pancreatic Cancer Age-Specific Mortality Rates**  
**Alaska Native and US White Men and Women, 1994-2008**



**Prostate Cancer Age-Specific Mortality Rates**  
**Alaska Native and US White Men, 1994-2008**



**Stomach Cancer Age-Specific Mortality Rates**  
**Alaska Native and US White Men and Women, 1994-2008**

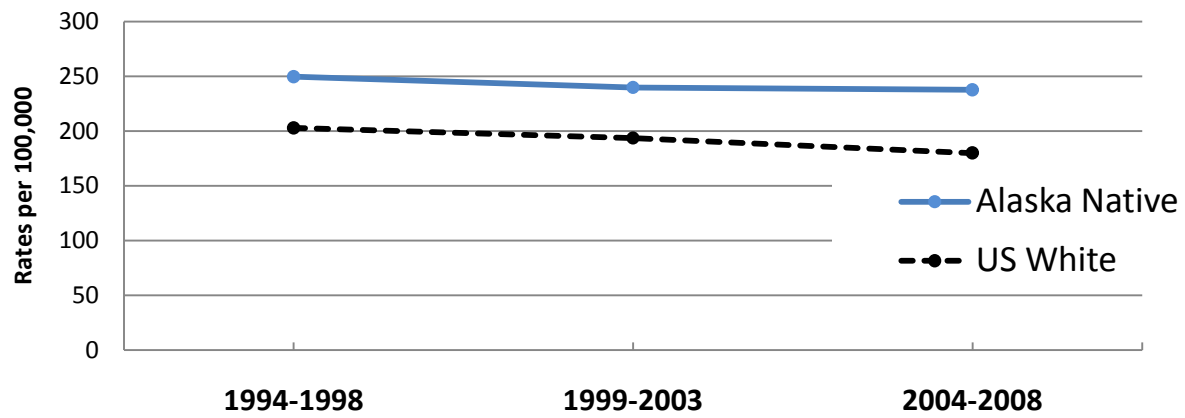


**Age-Adjusted Cancer Mortality Rates per 100,000**  
**Alaska Native and US White Men and Women Combined, 1994-2008**

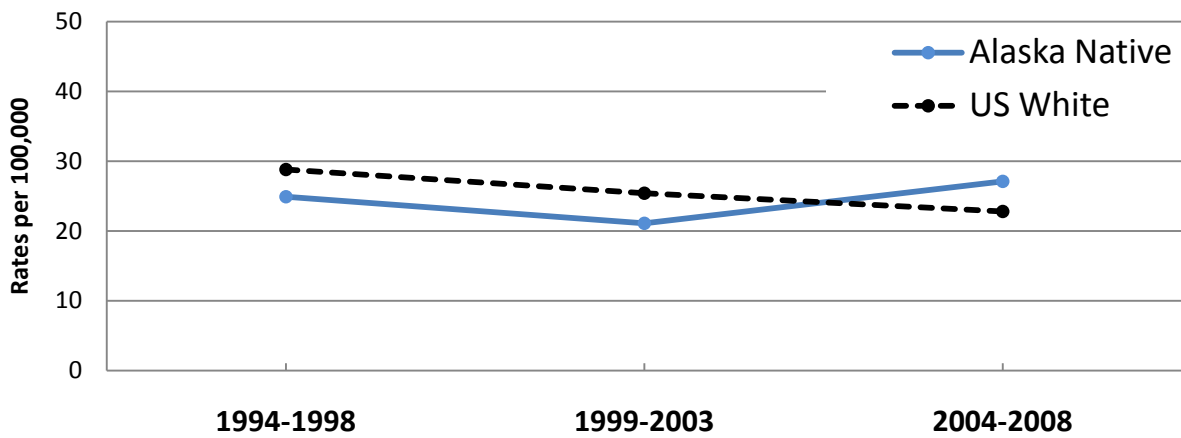
|                         |     | 1994-1998 |          |          |     | 1999-2003 |          |          |     | 2004-2008 |          |          |     |
|-------------------------|-----|-----------|----------|----------|-----|-----------|----------|----------|-----|-----------|----------|----------|-----|
|                         |     | Rate      | Lower CI | Upper CI | No. | Rate      | Lower CI | Upper CI | No. | Rate      | Lower CI | Upper CI | No. |
| All Malignant Cancers   | AN  | 249.9     | 228.8    | 272.4    | 593 | 240.0     | 220.9    | 260.2    | 660 | 237.8     | 220.6    | 255.8    | 787 |
|                         | USW | 202.9     | 202.6    | 203.1    |     | 193.6     | 193.4    | 193.8    |     | 180.0     | 179.8    | 180.2    |     |
|                         |     |           |          |          |     |           |          |          |     |           |          |          |     |
| Oral Cavity and Pharynx | AN  | 8.5       | 5.0      | 13.3     | 20  | 9.0       | 5.6      | 13.4     | 24  | 4.7       | 2.6      | 7.6      | 16  |
|                         | USW | 2.8       | 2.8      | 2.9      |     | 2.5       | 2.5      | 2.6      |     | 2.4       | 2.4      | 2.5      |     |
|                         |     |           |          |          |     |           |          |          |     |           |          |          |     |
| Esophagus               | AN  | 7.9       | 4.5      | 12.6     | 18  | 8.5       | 5.2      | 13.0     | 22  | 7.1       | 4.4      | 10.8     | 23  |
|                         | USW | 4.0       | 4.0      | 4.0      |     | 4.3       | 4.3      | 4.3      |     | 4.4       | 4.4      | 4.4      |     |
|                         |     |           |          |          |     |           |          |          |     |           |          |          |     |
| Stomach                 | AN  | 16.7      | 12.2     | 22.2     | 51  | 15.6      | 11.1     | 21.0     | 46  | 11.3      | 8.0      | 15.5     | 42  |
|                         | USW | 4.5       | 4.5      | 4.6      |     | 3.8       | 3.8      | 3.9      |     | 3.2       | 3.2      | 3.3      |     |
|                         |     |           |          |          |     |           |          |          |     |           |          |          |     |
| Colon and Rectum        | AN  | 39.5      | 30.9     | 49.4     | 83  | 35.0      | 27.8     | 43.4     | 90  | 30.2      | 24.1     | 37.3     | 93  |
|                         | USW | 21.5      | 21.4     | 21.6     |     | 19.6      | 19.5     | 19.6     |     | 16.6      | 16.6     | 16.7     |     |
|                         |     |           |          |          |     |           |          |          |     |           |          |          |     |
| Liver                   | AN  | 4.6       | 2.1      | 8.4      | 11  | 7.8       | 4.7      | 12.1     | 22  | 7.5       | 4.7      | 11.1     | 25  |
|                         | USW | 3.2       | 3.1      | 3.2      |     | 3.3       | 3.3      | 3.4      |     | 3.7       | 3.7      | 3.7      |     |
|                         |     |           |          |          |     |           |          |          |     |           |          |          |     |
| Pancreas                | AN  | 14.2      | 9.6      | 19.9     | 35  | 12.3      | 8.5      | 17.1     | 37  | 14.6      | 10.6     | 19.5     | 48  |
|                         | USW | 10.2      | 10.2     | 10.3     |     | 10.3      | 10.3     | 10.4     |     | 10.6      | 10.6     | 10.7     |     |
|                         |     |           |          |          |     |           |          |          |     |           |          |          |     |
| Lung and Bronchus       | AN  | 77.3      | 65.6     | 90.3     | 174 | 63.4      | 53.9     | 73.9     | 173 | 73.6      | 64.2     | 83.8     | 239 |
|                         | USW | 57.6      | 57.5     | 57.8     |     | 55.3      | 55.2     | 55.4     |     | 52.1      | 52.0     | 52.2     |     |
|                         |     |           |          |          |     |           |          |          |     |           |          |          |     |
| Breast                  | AN  | 13.6      | 9.0      | 19.5     | 34  | 11.3      | 7.8      | 15.8     | 38  | 14.8      | 10.9     | 19.5     | 55  |
|                         | USW | 16.4      | 16.3     | 16.5     |     | 14.4      | 14.3     | 14.4     |     | 12.8      | 12.7     | 12.8     |     |
|                         |     |           |          |          |     |           |          |          |     |           |          |          |     |
| Kidney and Renal Pelvis | AN  | 10.1      | 6.0      | 15.5     | 21  | 8.9       | 5.5      | 13.5     | 23  | 5.4       | 3.2      | 8.5      | 19  |
|                         | USW | 4.3       | 4.3      | 4.4      |     | 4.3       | 4.2      | 4.3      |     | 4.1       | 4.1      | 4.2      |     |
|                         |     |           |          |          |     |           |          |          |     |           |          |          |     |
| Non-Hodgkin Lymphoma    | AN  | 4.9       | 2.4      | 8.7      | 12  | 5.1       | 2.7      | 8.5      | 16  | ^         | ^        | ^        | ^   |
|                         | USW | 9.1       | 9.0      | 9.1      |     | 8.2       | 8.1      | 8.2      |     | 7.0       | 6.9      | 7.0      |     |
|                         |     |           |          |          |     |           |          |          |     |           |          |          |     |
| Leukemia                | AN  | 4.0       | 1.9      | 7.3      | 13  | 3.0       | 1.4      | 5.6      | 11  | 6.1       | 3.8      | 9.2      | 25  |
|                         | USW | 7.9       | 7.9      | 8.0      |     | 7.8       | 7.7      | 7.8      |     | 7.4       | 7.3      | 7.4      |     |

^ Mortality rate not calculated for less than 10 deaths; Age-adjusted to US 2000 Standard population.

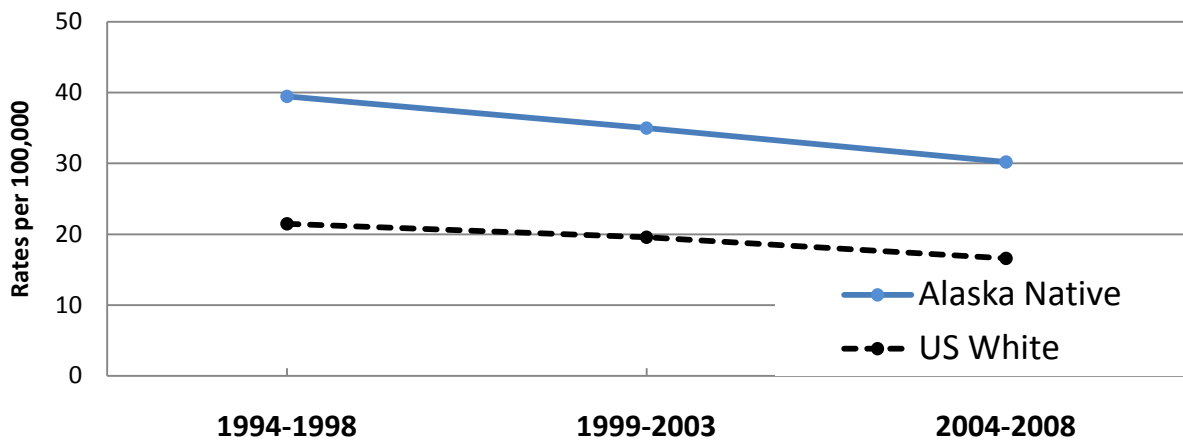
**All Sites Cancer Mortality Rates  
Alaska Native and USW Populations, 1994-2008**



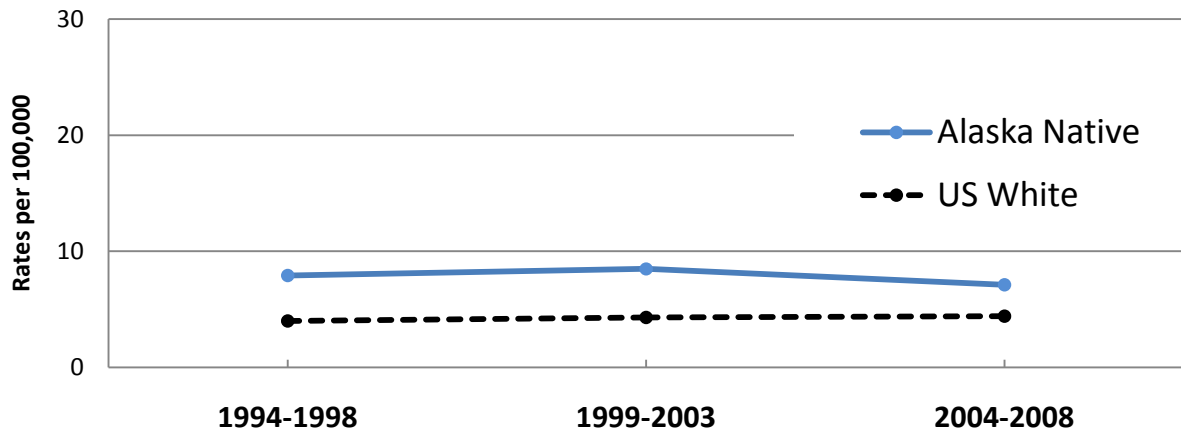
**Breast Cancer Mortality Rates in Alaska Native and US White  
Women, 1994-2008**



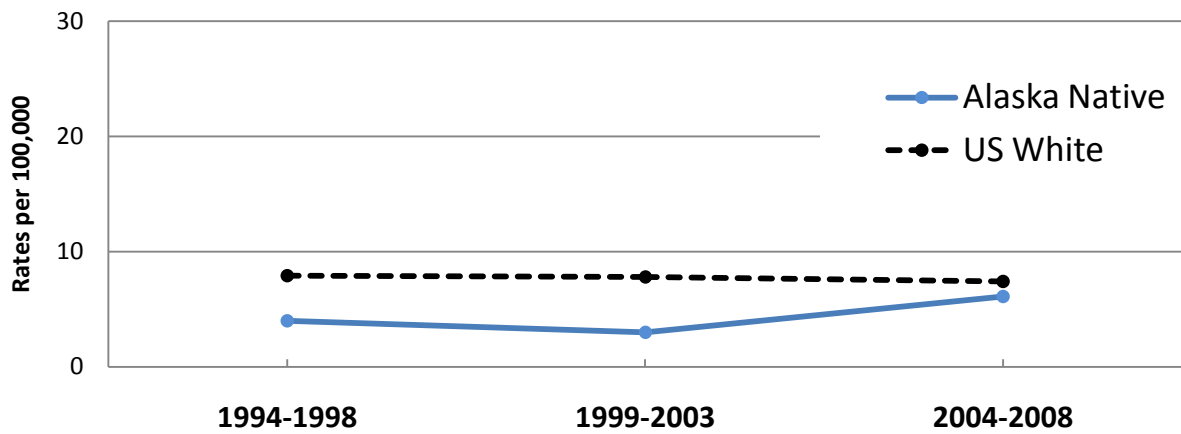
**Colorectal Cancer Mortality Rates Alaska Native and US White  
Population, 1994-2008**



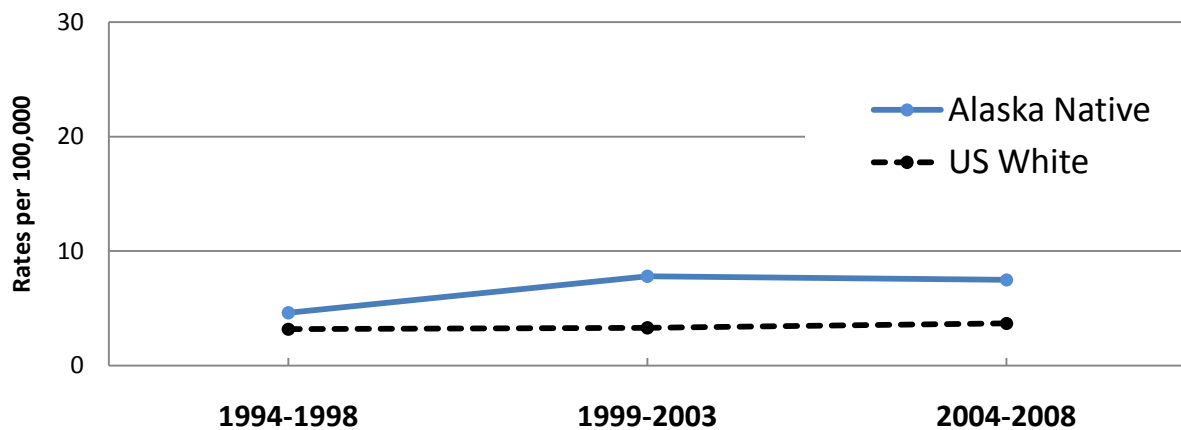
**Esophagus Cancer Mortality Rates  
Alaska Native and US White Populations, 1994-2008**



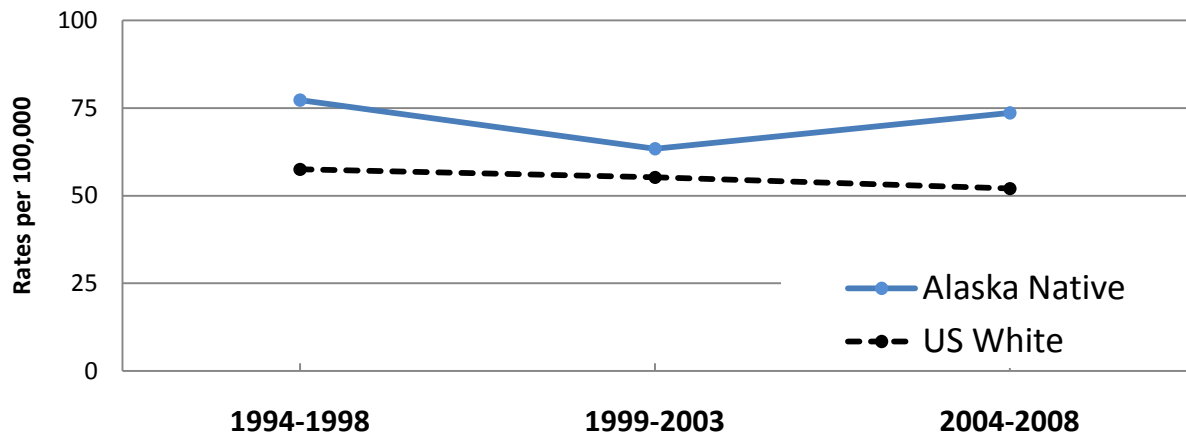
**Leukemia Mortality Rates in Alaska Native and US White  
Populations, 1994-2008**



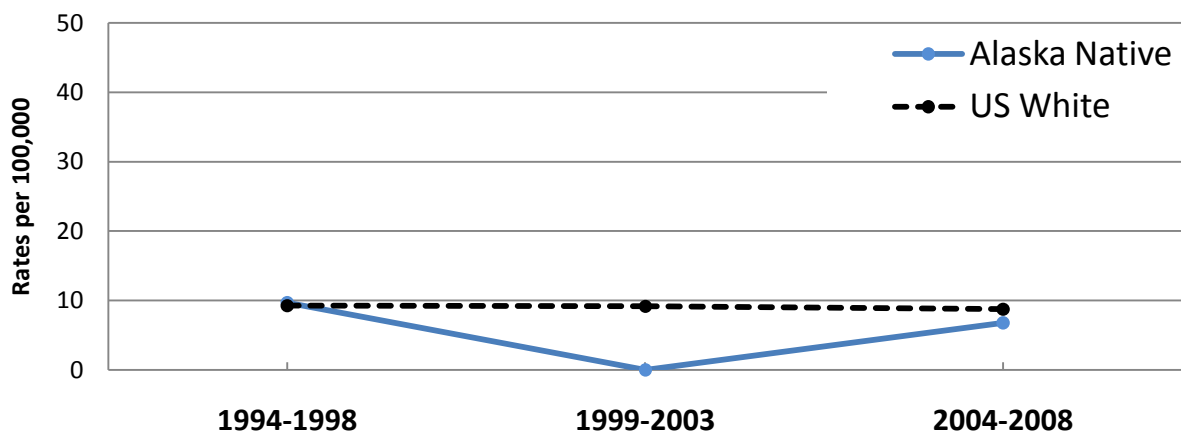
**Liver Cancer Mortality Rates in Alaska Native and US White  
Populations, 1994-2008**



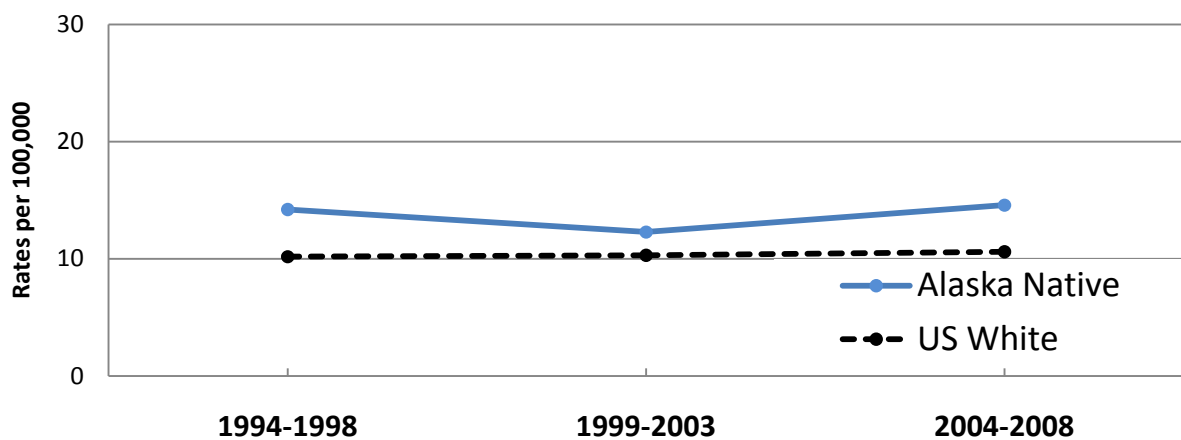
**Lung Cancer Mortality Rates in Alaska Native and US White Populations, 1994-2008**



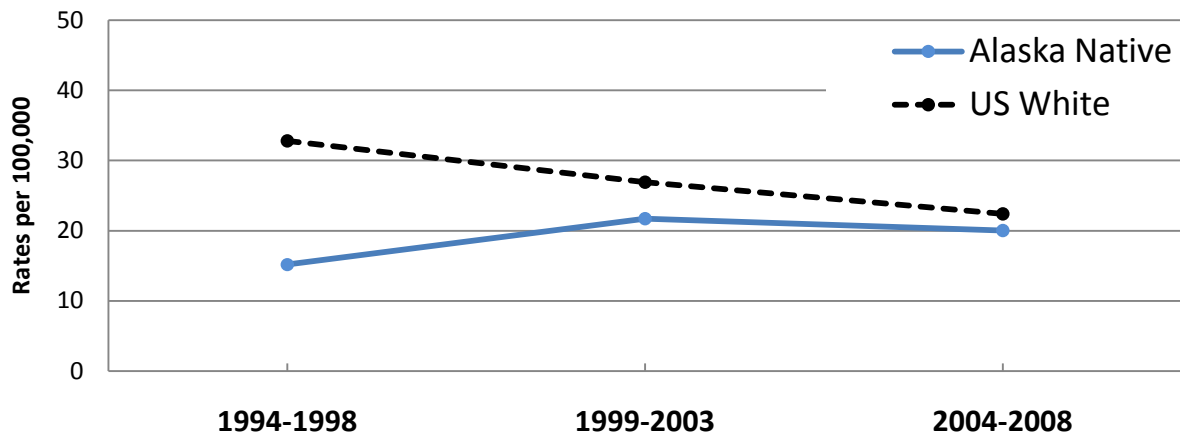
**Ovary Cancer Mortality Rates in Alaska Native and US White Women, 1994-2008**



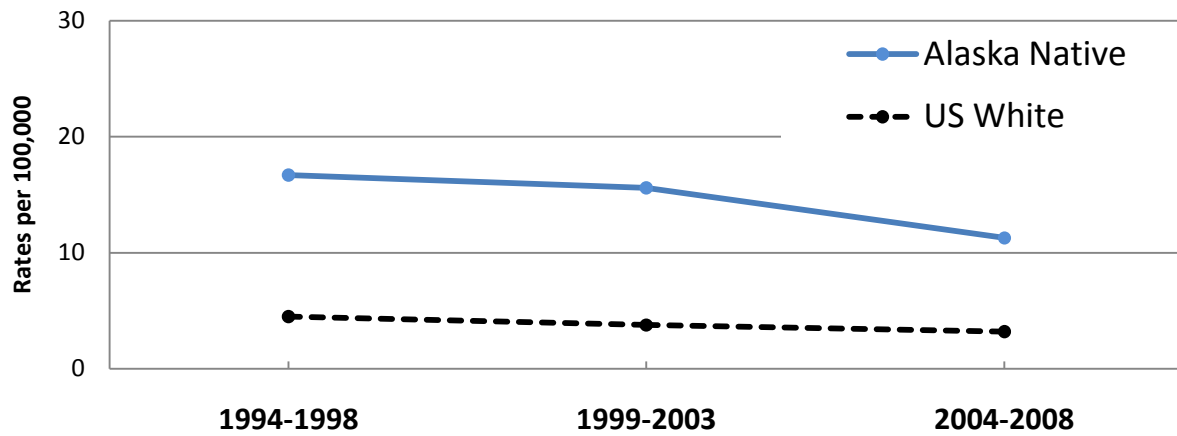
**Pancreas Cancer Mortality Rates in Alaska Native and US White Populations, 1994-2008**



**Prostate Cancer Mortality Rates in Alaska Native and US White Men, 1994-2008**



**Stomach Cancer Mortality Rates Alaska Native and US White Populations, 1994-2008**





# Alaska Native Tumor Registry



## Appendices

## SEER Site Recode ICD-O-3 (1/27/2003) Definition

| Site Group                           | ICD-O-3 Site                       | ICD-O-3 Histology (Type)                               | Recode |
|--------------------------------------|------------------------------------|--------------------------------------------------------|--------|
| <b>Oral Cavity and Pharynx</b>       |                                    |                                                        |        |
| Lip                                  | C000-C009                          | excluding 9590-9989, and sometimes<br>9050-9055, 9140+ | 20010  |
| Tongue                               | C019-C029                          |                                                        | 20020  |
| Salivary Gland                       | C079-C089                          |                                                        | 20030  |
| Floor of Mouth                       | C040-C049                          |                                                        | 20040  |
| Gum and Other Mouth                  | C030-C039, C050-C059,<br>C060-C069 |                                                        | 20050  |
| Nasopharynx                          | C110-C119                          |                                                        | 20060  |
| Tonsil                               | C090-C099                          |                                                        | 20070  |
| Oropharynx                           | C100-C109                          |                                                        | 20080  |
| Hypopharynx                          | C129, C130-C139                    |                                                        | 20090  |
| Other Oral Cavity and<br>Pharynx     | C140, C142-C148                    |                                                        | 20100  |
| <b>Digestive System</b>              |                                    |                                                        |        |
| Esophagus                            | C150-C159                          | excluding 9590-9989, and sometimes<br>9050-9055, 9140+ | 21010  |
| Stomach                              | C160-C169                          |                                                        | 21020  |
| Small Intestine                      | C170-C179                          |                                                        | 21030  |
| Colon and Rectum                     |                                    |                                                        |        |
| Colon excluding Rectum               |                                    |                                                        |        |
| Cecum                                | C180                               | excluding 9590-9989, and sometimes<br>9050-9055, 9140+ | 21041  |
| Appendix                             | C181                               |                                                        | 21042  |
| Ascending Colon                      | C182                               |                                                        | 21043  |
| Hepatic Flexure                      | C183                               |                                                        | 21044  |
| Transverse Colon                     | C184                               |                                                        | 21045  |
| Splenic Flexure                      | C185                               |                                                        | 21046  |
| Descending Colon                     | C186                               |                                                        | 21047  |
| Sigmoid Colon                        | C187                               |                                                        | 21048  |
| Large Intestine, NOS                 | C188-C189, C260                    |                                                        | 21049  |
| Rectum and<br>Rectosigmoid Junction  |                                    |                                                        |        |
| Rectosigmoid Junction                | C199                               | excluding 9590-9989, and sometimes<br>9050-9055, 9140+ | 21051  |
| Rectum                               | C209                               |                                                        | 21052  |
| Anus, Anal Canal and<br>Anorectum    | C210-C212, C218                    |                                                        | 21060  |
| Liver and Intrahepatic Bile<br>Duct  |                                    |                                                        |        |
| Liver                                | C220                               | excluding 9590-9989, and sometimes<br>9050-9055, 9140+ | 21071  |
| Intrahepatic Bile Duct               | C221                               |                                                        | 21072  |
| Gallbladder                          | C239                               |                                                        | 21080  |
| Other Biliary                        | C240-C249                          |                                                        | 21090  |
| Pancreas                             | C250-C259                          |                                                        | 21100  |
| Retroperitoneum                      | C480                               |                                                        | 21110  |
| Peritoneum, Omentum and<br>Mesentery | C481-C482                          |                                                        | 21120  |
| Other Digestive Organs               | C268-C269, C488                    |                                                        | 21130  |
| <b>Respiratory System</b>            |                                    |                                                        |        |

|                                                   |                                         |                                                                                                            |              |
|---------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------|--------------|
| Nose, Nasal Cavity and Middle Ear                 | C300-C301, C310-C319                    | excluding 9590-9989, and sometimes 9050-9055, 9140+                                                        | 22010        |
| Larynx                                            | C320-C329                               |                                                                                                            | 22020        |
| Lung and Bronchus                                 | C340-C349                               |                                                                                                            | 22030        |
| Pleura                                            | C384                                    |                                                                                                            | 22050        |
| Trachea, Mediastinum and Other Respiratory Organs | C339, C381-C383, C388, C390, C398, C399 |                                                                                                            | 22060        |
| <b>Bones and Joints</b>                           | <b>C400-C419</b>                        | <b>excluding 9590-9989, and sometimes 9050-9055, 9140+</b>                                                 | <b>23000</b> |
| <b>Soft Tissue including Heart</b>                | <b>C380, C470-C479, C490-C499</b>       | <b>excluding 9590-9989, and sometimes 9050-9055, 9140+</b>                                                 | <b>24000</b> |
| <b>Skin excluding Basal and Squamous</b>          |                                         |                                                                                                            |              |
| Melanoma of the Skin                              | C440-C449                               | 8720-8790                                                                                                  | 25010        |
| Other Non-Epithelial Skin                         | C440-C449                               | excluding 8000-8005, 8010-8045, 8050-8084, 8090-8110, 8720-8790, 9590-9989, and sometimes 9050-9055, 9140+ | 25020        |
| <b>Breast</b>                                     | <b>C500-C509</b>                        | <b>excluding 9590-9989, and sometimes 9050-9055, 9140+</b>                                                 | <b>26000</b> |
| <b>Female Genital System</b>                      |                                         |                                                                                                            |              |
| Cervix Uteri                                      | C530-C539                               | excluding 9590-9989, and sometimes 9050-9055, 9140+                                                        | 27010        |
| Corpus and Uterus, NOS                            |                                         |                                                                                                            |              |
| Corpus Uteri                                      | C540-C549                               | excluding 9590-9989, and sometimes 9050-9055, 9140+                                                        | 27020        |
| Uterus, NOS                                       | C559                                    |                                                                                                            | 27030        |
| Ovary                                             | C569                                    |                                                                                                            | 27040        |
| Vagina                                            | C529                                    |                                                                                                            | 27050        |
| Vulva                                             | C510-C519                               |                                                                                                            | 27060        |
| Other Female Genital Organs                       | C570-C589                               |                                                                                                            | 27070        |
| <b>Male Genital System</b>                        |                                         |                                                                                                            |              |
| Prostate                                          | C619                                    | excluding 9590-9989, and sometimes 9050-9055, 9140+                                                        | 28010        |
| Testis                                            | C620-C629                               |                                                                                                            | 28020        |
| Penis                                             | C600-C609                               |                                                                                                            | 28030        |
| Other Male Genital Organs                         | C630-C639                               |                                                                                                            | 28040        |
| <b>Urinary System</b>                             |                                         |                                                                                                            |              |
| Urinary Bladder                                   | C670-C679                               | excluding 9590-9989, and sometimes 9050-9055, 9140+                                                        | 29010        |
| Kidney and Renal Pelvis                           | C649, C659                              |                                                                                                            | 29020        |
| Ureter                                            | C669                                    |                                                                                                            | 29030        |
| Other Urinary Organs                              | C680-C689                               |                                                                                                            | 29040        |
| <b>Eye and Orbit</b>                              | <b>C690-C699</b>                        | <b>excluding 9590-9989, and sometimes 9050-9055, 9140+</b>                                                 | <b>30000</b> |
| <b>Brain and Other Nervous System</b>             |                                         |                                                                                                            |              |
| Brain                                             | C710-C719                               | excluding 9530-9539, 9590-9989, and sometimes 9050-9055, 9140+                                             | 31010        |
| Cranial Nerves Other Nervous System               | C710-C719                               | 9530-9539                                                                                                  | 31040        |
|                                                   | C700-C709, C720-C729                    | excluding 9590-9989, and sometimes 9050-9055, 9140+                                                        |              |
| <b>Endocrine System</b>                           |                                         |                                                                                                            |              |
| Thyroid                                           | C739                                    | excluding 9590-9989, and sometimes 9050-9055, 9140+                                                        | 32010        |
| Other Endocrine including Thymus                  | C379, C740-C749, C750-C759              |                                                                                                            | 32020        |

|                                  |                                                                                     |                                                                                                                                        |              |
|----------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Lymphoma</b>                  |                                                                                     |                                                                                                                                        |              |
| Hodgkin Lymphoma                 |                                                                                     |                                                                                                                                        |              |
| Hodgkin - Nodal                  | C024, C098-C099, C111, C142, C379, C422, C770-C779                                  | 9650-9667                                                                                                                              | 33011        |
| Hodgkin - Extranodal             | All other sites                                                                     |                                                                                                                                        | 33012        |
| Non-Hodgkin Lymphoma             |                                                                                     |                                                                                                                                        |              |
| NHL - Nodal                      | C024, C098,C099, C111,C142, C379,C422, C770-C779                                    | 9590-9596, 9670-9671, 9673, 9675, 9678-9680, 9684, 9687, 9689-9691, 9695, 9698-9702, 9705, 9708-9709, 9714-9719, 9727-9729, 9823, 9827 | 33041        |
| NHL - Extranodal                 | All sites except C024, C098-C099, C111, C142, C379, C422, C770-C779                 | 9590-9596, 9670-9671, 9673, 9675, 9678-9680, 9684, 9687, 9689-9691, 9695, 9698-9702, 9705, 9708-9709, 9714-9719, 9727-9729             | 33042        |
|                                  | All sites except C024, C098-C099, C111, C142, C379, C420-C422, C424, C770-C779      | 9823, 9827                                                                                                                             |              |
| <b>Myeloma</b>                   |                                                                                     | <b>9731-9732, 9734</b>                                                                                                                 | <b>34000</b> |
| <b>Leukemia</b>                  |                                                                                     |                                                                                                                                        |              |
| Lymphocytic Leukemia             |                                                                                     |                                                                                                                                        |              |
| Acute Lymphocytic Leukemia       |                                                                                     | 9826,9835-9837                                                                                                                         | 35011        |
| Chronic Lymphocytic Leukemia     | C420, C421, C424                                                                    | 9823                                                                                                                                   | 35012        |
| Other Lymphocytic Leukemia       |                                                                                     | 9820, 9832-9834, 9940                                                                                                                  | 35013        |
| Myeloid and Monocytic Leukemia   |                                                                                     |                                                                                                                                        |              |
| Acute Myeloid Leukemia           |                                                                                     | 9840, 9861, 9866, 9867, 9871-9874, 9895-9897, 9910, 9920                                                                               | 35021        |
| Acute Monocytic Leukemia         |                                                                                     | 9891                                                                                                                                   | 35031        |
| Chronic Myeloid Leukemia         |                                                                                     | 9863, 9875, 9876, 9945, 9946                                                                                                           | 35022        |
| Other Myeloid/Monocytic Leukemia |                                                                                     | 9860, 9930                                                                                                                             | 35023        |
| Other Leukemia                   |                                                                                     |                                                                                                                                        |              |
| Other Acute Leukemia             |                                                                                     | 9801, 9805, 9931                                                                                                                       | 35041        |
| Aleukemic, subleukemic and NOS   |                                                                                     | 9733, 9742, 9800, 9831, 9870, 9948, 9963, 9964                                                                                         | 35043        |
|                                  | C420, C421, C424                                                                    | 9827                                                                                                                                   |              |
| <b>Mesothelioma +</b>            |                                                                                     | <b>9050-9055</b>                                                                                                                       | <b>36010</b> |
| <b>Kaposi Sarcoma +</b>          |                                                                                     | <b>9140</b>                                                                                                                            | <b>36020</b> |
| <b>Miscellaneous</b>             |                                                                                     | 9740-9741, 9750-9758, 9760-9769, 9950, 9960-9962, 9970, 9975, 9980, 9982-9987, 9989                                                    | 37000        |
|                                  | C760-C768, C809                                                                     |                                                                                                                                        |              |
|                                  | C420-C424                                                                           | excluding 9590-9989, and sometimes 9050-9055, 9140+                                                                                    |              |
|                                  | C770-C779                                                                           |                                                                                                                                        |              |
| <b>Invalid</b>                   | Site or histology code not within valid range or site code not found in this table. |                                                                                                                                        | <b>99999</b> |

## **GLOSSARY OF CANCER TERMS**

**AGE-ADJUSTED RATES:** Rates have been mathematically weighted to allow comparisons of populations with different age distributions. Adjustment is usually made to a standard population: in this report to the Census 2000 U.S. standard population.

**AGE-SPECIFIC RATES:** Rates are calculated using the number of cases occurring in a specified age group, divided by the population for that age group.

**AVERAGE ANNUAL RATE:** Cases for a given number of years are added together and divided by the numbers of years to give an average annual number. This number of cases is then divided by the population to determine the rate.

**BENIGN:** A growth which is not life threatening.

**BIOPSY:** The removal of a sample of tissue to be examined under a microscope to look for cancer cells.

**CANCER:** A harmful growth of cells that if allowed to keep growing will interfere with body function and eventually cause death. A malignant neoplasm or malignant tumor.

**CARCINOGEN:** A cancer causing substance.

**CHEMOTHERAPY:** Treatment with cancer fighting drugs to kill cancerous cells.

**COLONOSCOPY:** A procedure that allows the medical provider to look inside the rectum and the colon through a lighted tube.

**CORPUS UTERI:** Body of the uterus, in contrast to the cervix.

**DEFICIT:** When compared to another population, the population under study has fewer cancer cases than the comparison population.

**DYSPLASIA:** Abnormal development of cells which may precede the development of cancer.

**ENDOSCOPY:** A diagnostic procedure using a flexible instrument with a lighted tube and optical system (endoscope) to examine the inside of parts of the body.

**EXCESS:** When compared to another population, the population under study has more cancer cases than the comparison population.

**GENETIC:** Inherited; having to do with cell information passed from parents to children through DNA.

**HORMONE THERAPY:** Treatment that prevents certain cancer cells from getting the hormones they need to grow.

**HYPERPLASIA:** Abnormal growth of cells resulting in the increase in size of a tissue or organ. Hyperplasia may become cancerous.

**IMMUNOTHERAPY:** Treatment to stimulate or restore the ability of the immune system to fight infection and disease including cancer.

**INCIDENCE:** New cases of a specific disease occurring in a specified time period, usually expressed as new cases per 100,000 populations per year.

**IN SITU:** The growth, tumor, cancer has not extended beyond the level of tissue in which it began.

**INTRAEPITHELIAL NEOPLASM:** See "in situ".

**INVASIVE:** The growth extends beyond where it started, into other tissues and organs in the body.

**LEUKEMIAS:** Cancers of the organs that make the blood, bone marrow and lymph.

**LOCALIZED:** Cancer only found in the organ where the cancer started.

**MALIGNANT:** A tumor that is cancerous and has the ability to spread to other parts of the body.

**METASTASIS:** The spread of cancer from one part of the body to another part of the body.

**MORBIDITY:** Illness or disease.

**MORTALITY:** Numbers of deaths occurring in a certain time period usually expressed as number of deaths per 100,000 populations. Mortality data are based on death certificates.

**MRI:** A procedure using a magnet linked to a computer to make pictures of areas inside the body.

**NEOPLASM:** Any growth, benign or malignant. A tumor.

**ONCOLOGIST:** A doctor who specializes in cancer treatment.

**PAP TEST:** Removal of a small amount of tissue from the cervix so that cells may be examined for changes which could lead to cancer.

**POLYP:** A small, noncancerous growth in the mucous membrane, most commonly found in the colon.

**PRIMARY CANCER:** The organ of the body in which the cancer is thought to have started.

**PSA:** Prostate Specific Antigen test to detect prostate disease.

**RADIATION THERAPY:** Treatment with high energy rays to kill or damage cancer cells.

**RATE:** The number of occurrences of a disease in a population in a given time period.

**RATE RATIO:** Comparison of one rate with another to show how many times larger or smaller one is compared to the other. Generally the rate in the population of interest is compared with that of a standard population (for which data are available and published).

**RISK:** An individual's chance of developing cancer.

**RISK FACTORS:** Factors which increase an individual's chance of getting cancer. These may genetic, environmental, cultural or behavioral.

**SCREENING:** Tests or examinations done to detect cancer very early, before the person is aware of the cancer and has symptoms.

**SEER (STATISTICS, EPIDEMIOLOGY AND END RESULTS):** A program sponsored by the National Cancer Institute designed to collect very detailed information on cancer occurrence, treatment and outcome in select states and regions in the U.S.

**SIGMOIDOSCOPY:** A procedure that allows a health care provider to look inside the rectum and lower part of the colon through a lighted tube.

**SITE:** In cancer information, site refers to body organ.

**SITE-SPECIFIC RATE:** Rate or risk of developing cancer in a specific site (body organ).

**STAGE OF DISEASE:** The disease (cancer) is categorized how far the disease has spread. Generally, the terms local, regional, distant are used. More detailed staging systems are also available specific to the cancer site.

**SURVIVAL RATE:** The proportion of patients alive following diagnosis of cancer. Often percent of patients alive after five years (five year survival rate) is given.

**TRENDS:** Changes over time.

**TUMOR:** A general term used for a growth, malignant or benign.

**TUMOR REGISTRAR:** The person who collects and reports tumor registry information. Those who have had special training and an examination become Certified Tumor Registrars (CTR).

**TUMOR REGISTRY:** A standard system of collecting information on patients with cancer, benign tumors are usually not entered into the registry.

**ULTRASOUND:** A method used to locate and measure solid tumors in the body by using high frequency sound waves.