

# Colorectal Cancer in the American Indian and Alaska Native Population, United States — 2011–2015 (Purchased/Referred Care Delivery Areas\*)

\*Purchased/Referred Care Delivery Areas (PRCDA) are counties that contain federally recognized tribal lands or are adjacent to tribal lands. Race classification for the American Indian/Alaska Native (AI/AN) population is more accurate in these counties.

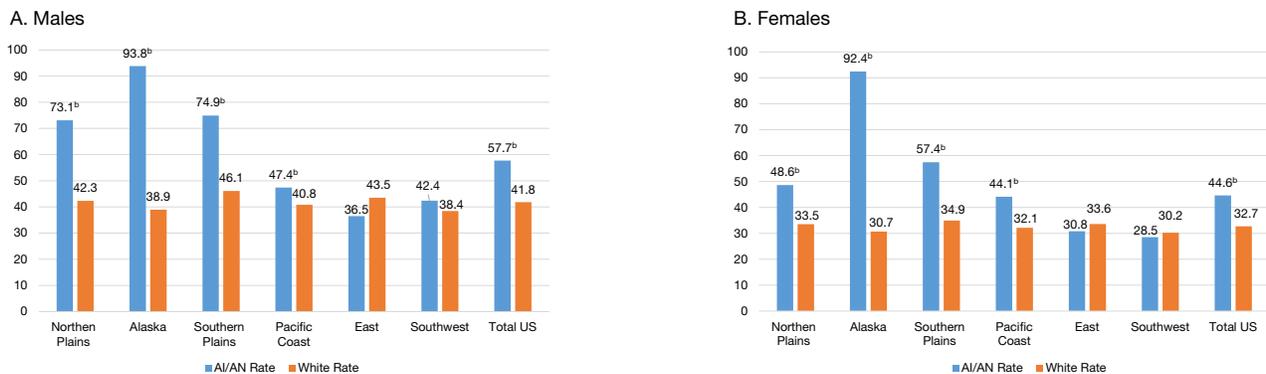
## Colorectal Cancer (CRC) is a cancer that occurs in the colon and rectum. Common risk factors include:

- Age over 50 years.
- Alcohol consumption, cigarette smoking, lack of physical activity, a low-fiber and high-fat diet, a diet high in red and processed meats, and overweight and obesity.
- Inflammatory bowel disease, diabetes, or a personal or family history of CRC.

The AI/AN population experiences excess CRC in many regions. Early detection of CRC through screening can help to reduce mortality.

## Rates by Sex and Region

Figure 1. Age-Adjusted Colorectal Cancer Incidence Rates<sup>a</sup> by Region: PRCDA, 2011–2015



<sup>a</sup>Rates are per 100,000 and age-adjusted to the 2000 US standard population.

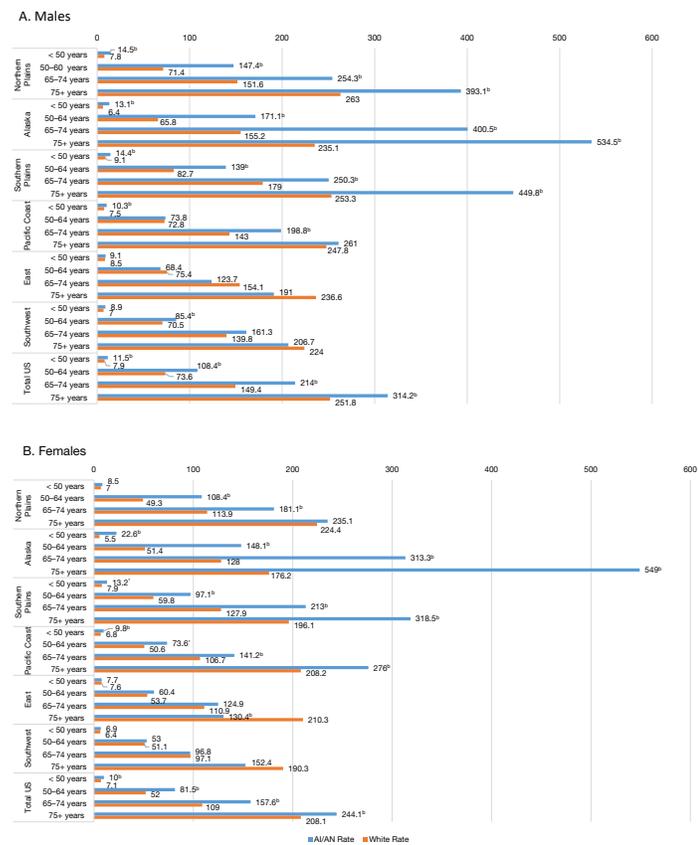
<sup>b</sup>Indicates age-adjusted rates in the AI/AN population are significantly different than the non-Hispanic white population living in PRCDA counties.

## Rates for CRC include the following:

- Overall, rates of CRC were higher in the AI/AN population compared with the non-Hispanic white population (57.7 vs. 41.8 in males; 44.6 vs. 32.7 in females).
- Rates of CRC in the AI/AN population varied by geographic region with the highest rates being in Alaska for both genders.
- Rates of CRC were significantly higher in the AI/AN population compared with the white population in the Northern Plains, Alaska, Southern Plains, and Pacific Coast regions for males and females.

## Rates by Age Group, Sex, and Region

**Figure 2. Age-Adjusted Colorectal Cancer Incidence Rates<sup>a</sup> by Region and Age Group, PRCDA, 2011–2015**



<sup>a</sup>Rates are per 100,000 and age-adjusted to the 2000 US standard population.

<sup>b</sup>Indicates age-adjusted rates in the AI/AN population are significantly different than the non-Hispanic white population living in PRCDA counties.

## AI/AN Trends for CRC include the following:

- Overall, the CRC rates have declined significantly for AI/AN males, but there have not been any significant decreases seen for AI/AN females.
- In AI/AN males, rates of CRC decreased significantly in the Northern Plains (1999–2015 APC: -3.3) and Pacific Coast (1999–2015 APC: -2.1), but increased significantly in the Southwest (1999–2015 APC: 2.2). (*Data not shown in graphs.*)
- In AI/AN females, rates of CRC decreased significantly in the Northern Plains (1999–2015 APC: -2.1) only, with a significant increase in the Southwest (1999–2015 APC: 4.0). (*Data not shown in graphs.*)

## Data Source

Data are from the United States Cancer Statistics American Indian/Alaska Native Incidence Database (USCS AIAD). This database includes data from cancer registries participating in CDC's National Program of Cancer Registries and National Cancer Institute's Surveillance, Epidemiology, and End Results program that have been linked with the Indian Health Service patient registration database. The USCS AIAD and PRCDA counties have been described previously<sup>1</sup>. These linkages address racial misclassification of the AI/AN population in the central cancer registries. These data met quality criteria<sup>2</sup> for 2011–2015.

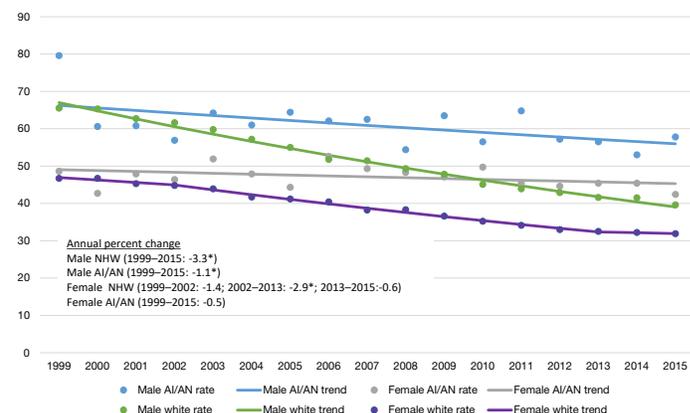
- Espey DK, Wiggins CL, Jim MA, Miller BA, Johnson CJ, Becker TM. Methods for improving cancer surveillance data in American Indian and Alaska Native populations. *Cancer* 2008;113(5 Suppl):1120–1130.
- See [registry-specific data quality information](#).

## Rates for CRC include the following:

- Overall, rates of CRC were higher in all age groups for AI/AN males and females compared with the white population.
- Rates of CRC in AI/AN males younger than 50 years were highest in the Northern Plains. Rates for AI/AN females younger than 50 years were highest in Alaska.
- Years of CRC in AI/AN males older than 50 years and for AI/AN females in all age groups were highest in Alaska.

## Trends by Sex

**Figure 3: Annual Age-Adjusted Colorectal Cancer Incidence Rates<sup>a</sup> and Trend Lines<sup>b</sup>, AI/AN vs. Non-Hispanic White, by Sex, PRCDA, 1999–2015**



<sup>a</sup>Rates are per 100,000 and age-adjusted to the 2000 US standard population.

<sup>b</sup>Trend lines were calculated using Joinpoint regression analysis.

<sup>c</sup>The annual percent change is significantly different from zero (P<0.05).

## More Information

[Cancer Health Disparities Among American Indians and Alaska Natives](#)  
[USCS Data Visualization Tool](#)  
[Colorectal Cancer | CDC](#)

[National Comprehensive Cancer Control Program \(NCCCP\)](#): The NCCCP funds all 50 states, the District of Columbia, 6 US Associated Pacific Island and Puerto Rico, and 8 tribes or tribal organizations to establish coalitions, assess the burden of cancer, determine priorities, and develop and implement comprehensive cancer control programs.

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