U.S. Cancer Statistics Data Brief

October 2019 | No. 13

Liver Cancer Incidence in the American Indian and Alaska Native Population, United States—2012–2016 (Purchased/Referred Care Delivery Areas)

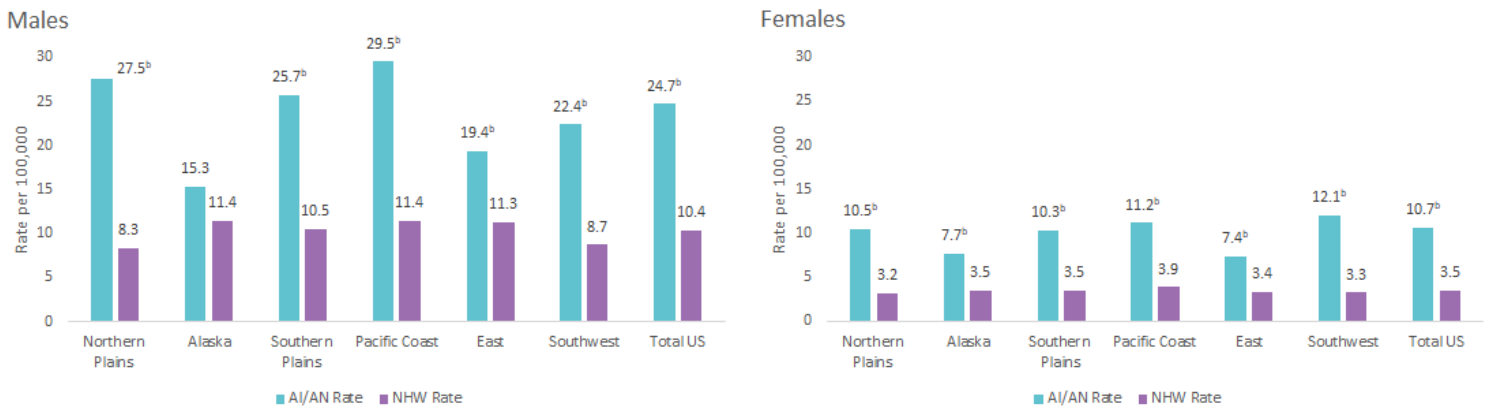
Common risk factors for liver cancer include –

- Having hepatitis B or hepatitis C, cirrhosis, or hemochromatosis.
- Other risk factors are excessive alcohol consumption, lack of physical activity, non-alcoholic fatty liver disease, and excess weight gain.

The American Indian and Alaska Native (AI/AN) population has higher rates of liver cancer incidence than non-Hispanic white people in all regions. Efforts to reduce liver cancer rates include vaccinating against hepatitis B, testing for and treating hepatitis C, reducing excessive alcohol use, and promoting healthy eating and physical activity.
Purchased/Referred Care Delivery Areas (PRCDA) are counties that contain federally recognized tribal lands or are adjacent to tribal lands. Race classification for the AI/AN population is more accurate in these counties.

Rates by Sex and Region

Figure 1. Age-Adjusted Liver Cancer Incidence Rates[a] by Sex and Region: PRCDA, 2012–2016



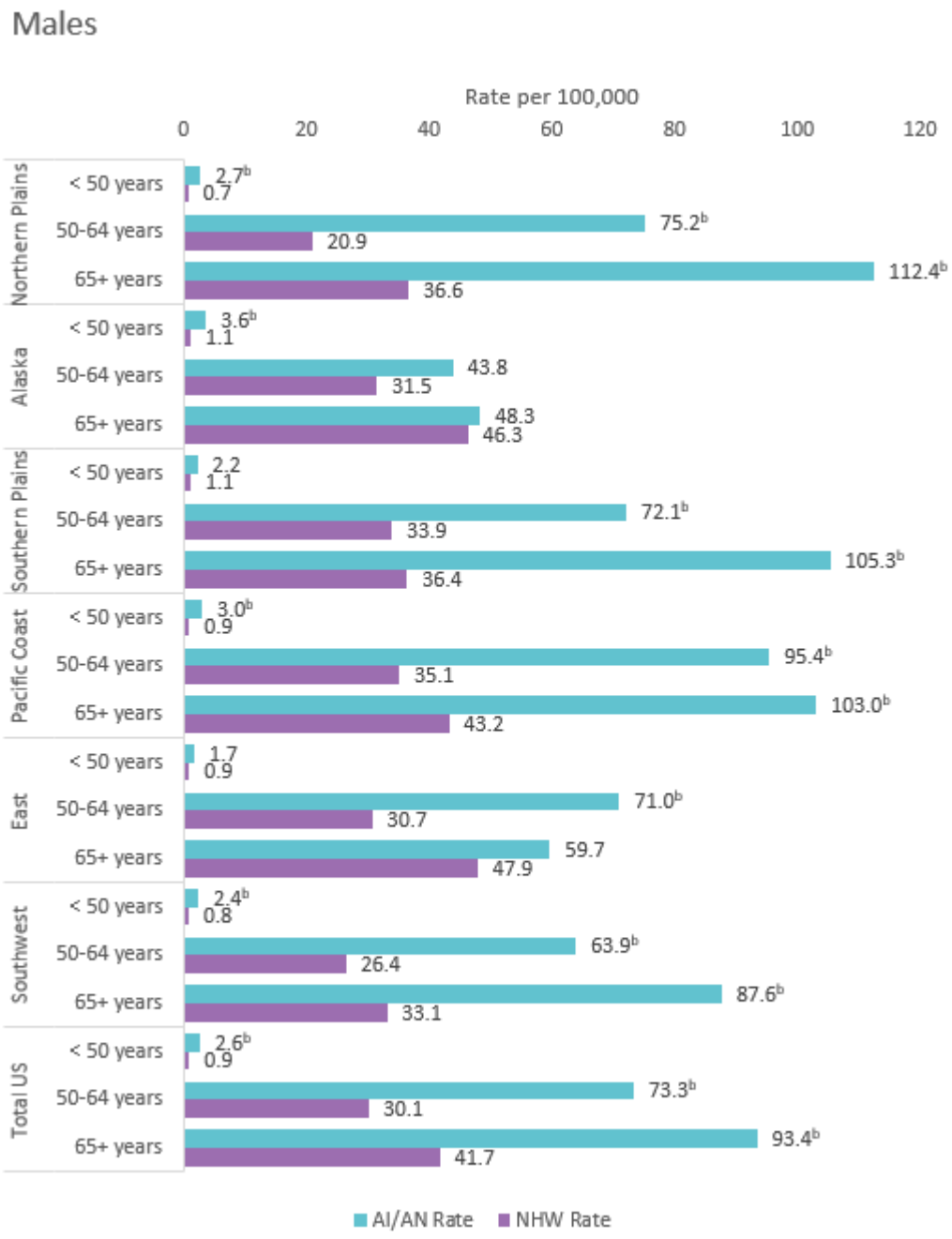
[a] Rates are per 100,000 males or females, respectively, and age-adjusted to the 2000 US standard population.
[b] The age-adjusted rates in the AI/AN population are significantly different than those in the non-Hispanic white (NHW) population living in PRCDA counties.

Summary

- Rates of liver cancer were much higher for AI/AN males compared with AI/AN females overall (24.7 vs. 10.7) and by region.
- There was distinct regional variation in the AI/AN population, with rates ranging from 15.3 to 29.5 for AI/AN males and 7.4 to 12.1 for AI/AN females. Regional variations were not as strongly observed in the white population.
- Liver cancer incidence rates were between 50% to over 3 times higher for AI/AN males and females compared with the white population.

Rates by Age Group, Sex, and Region

Figure 2a. Age-Adjusted Liver Cancer Incidence Rates[a] by Age Group, Sex, and Region, PRCDA, 2012–2016

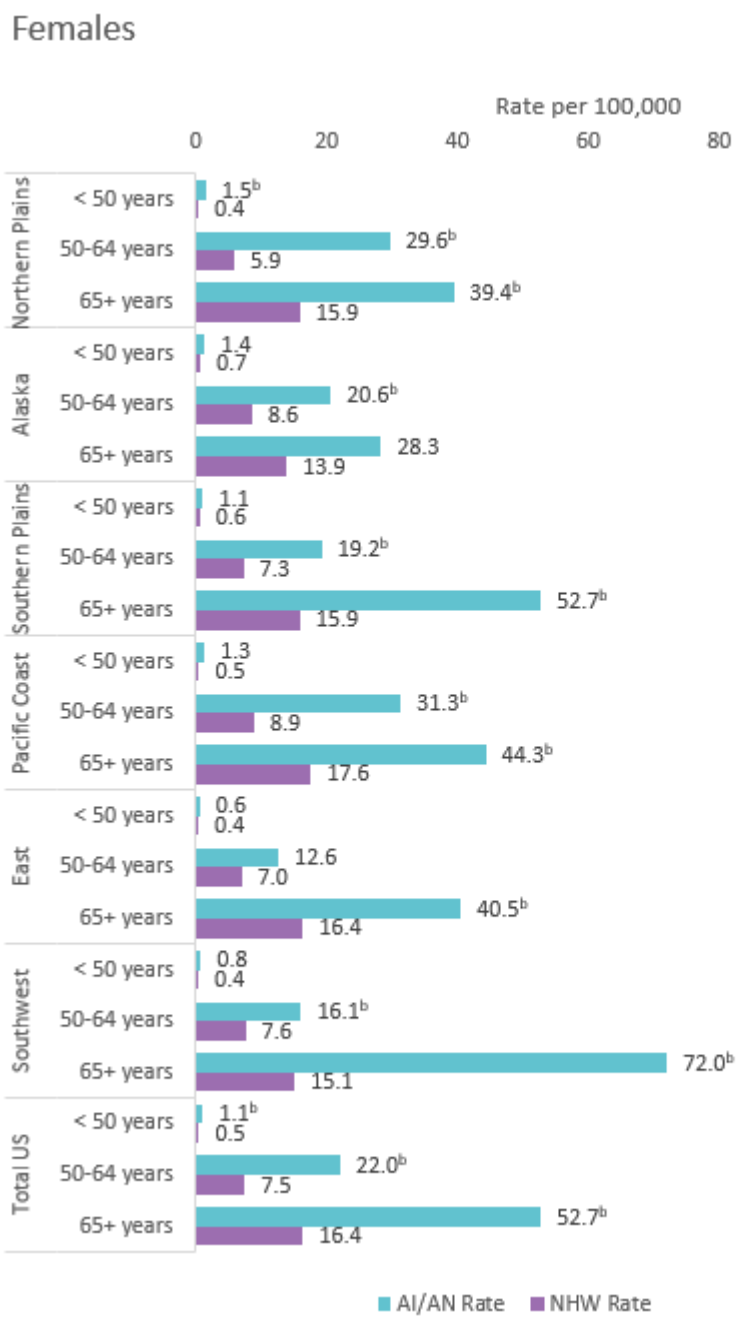


[a] Rates are per 100,000 males and age-adjusted to the 2000 US standard population.

[b] The age-adjusted rates in the AI/AN population are significantly different than those in the non-Hispanic white (NHW) population living in PRCDA counties.

Rates by Age Group, Sex, and Region

Figure 2b. Age-Adjusted Liver Cancer Incidence Rates[a] by Age Group, Sex, and Region, PRCDA, 2012–2016



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

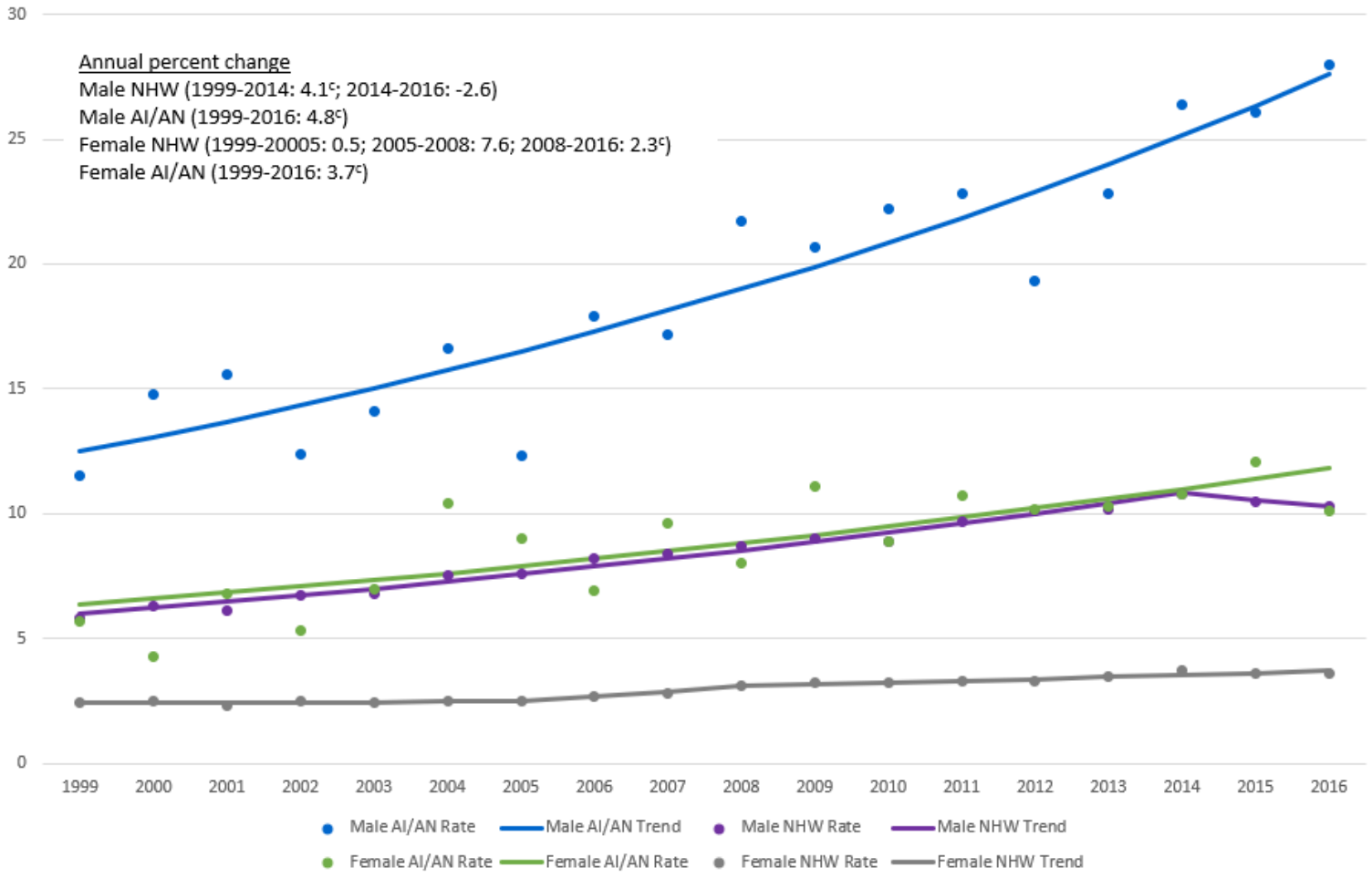
[b] The age-adjusted rates in the AI/AN population are significantly different than those in the non-Hispanic white (NHW) population living in PRCDA counties.

Summary

- There were significant differences between the liver cancer incidence rates in the AI/AN population and in the white population, particularly in the oldest age groups, except in Alaska and the East (males only).
- Rates in the oldest age group were between 2 to 3 times higher for AI/AN males and between 2.5 to 4 times higher for AI/AN females compared with the white population.

Rates by Age Group, Sex, and Region

Figure 3. Annual Age-Adjusted Liver Cancer Incidence Rates[a] and Trend Lines,[b] AI/AN Population vs. White Population, by Sex, PRCDA, 1999–2016



[a] Rates are per 100,000 males or females, respectively, and age-adjusted to the 2000 US standard population.
[b] Trend lines were calculated using Joinpoint regression analysis: Average Annual Percent Change (AAPC).
[c] The average annual percent change is significantly different from zero (P<0.5).

Summary

- Rates of liver cancer increased significantly for both AI/AN populations and white populations among males and females.
- Overall, the rates of liver cancer are significantly higher for AI/AN males compared with AI/AN females and the white population, and the disparities have grown larger over time.

Data Sources

Data are from the U.S. Cancer Statistics American Indian and Alaska Native Incidence Analytic Database (USCS AIAD).

This database includes data from cancer registries participating in CDC's National Program of Cancer Registries or the 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.[1] These linkages address racial misclassification of the AI/AN population in the central cancer registries. These data met quality criteria for 2012 to 2016.

Reference

[1] 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;1120–1130. https://doi.org/10.1002/cncr.23724

More Information

Cancer Health Disparities Among American Indians and Alaska Natives
https://go.usa.gov/xVFWg

U.S. Cancer Statistics Data Visualizations Tool
www.cdc.gov/cancer/dataviz

Liver Cancer
https://www.cdc.gov/cancer/liver/index.htm

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.
https://www.cdc.gov/cancer/ncccp/

Suggested Citation

Centers for Disease Control and Prevention. Liver Cancer Incidence in the American Indian and Alaska Native Population, 2012–2016 (Purchased/Referred Care Delivery Areas). U.S. Cancer Statistics data brief, no 13. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services; 2019.