American Indian Cancer Statistics

The Partnership for Native American Cancer Prevention, U54CA143924

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Contents	Page

A guide for information on the statistical impact of cancer within American Indian/Alaska Native populations to:

- Understand cancer statistics by race, region, and sex.
- Understand importance of prevention.
- Access additional cancer resources.

The Partnership for Native American Cancer Prevention (NACP) Outreach Cancer Series

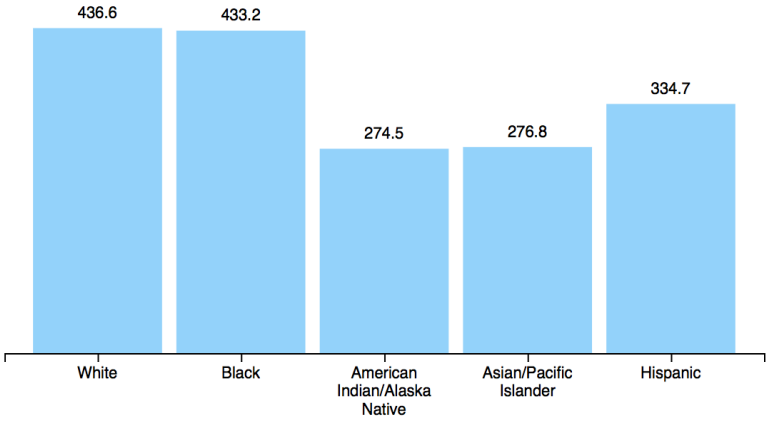
This document is part of a series produced by the University of Arizona (UA) Outreach Core team members. The other guides in the series focus on:

- Tips for Caring for In-Treatment American Indian Cancer Patients, Volume VI
- American Indian End of Life Considerations, Volume VII

Cancer in American Indian/Alaska Native Populations

Cancer rates in American Indian/Alaska Native (AI/AN) populations tend to be lower compared to other populations in the United States (U.S.) (Figure 1)[1]; however, cancer is the second leading cause of death among AI/AN populations (Figure 2).[2]

Figure 1. Rate of New Cancers (Incidence) by Race/Ethnicities, Both Sexes, 1999-2016 All Types of Cancer; Rate per 100,000 people



What is Cancer?

Cancer involves many diseases that have abnormal cells that mainly divide uncontrollably and may invade other parts of the body. Tumors are solid masses of abnormal cells that grow randomly within tissues of the body.[3] A benign tumor is a growth that is not cancerous and does not infect other parts of the body.[4] However, benign tumors can be deadly if it puts pressure on other systems due to the size or shape of the tumor. Malignant tumors are cancerous growths that progress very quickly and spread throughout the body, possibly infecting other organs.[4] It is important to note that not all cancers will have a tumor. Cancers of the blood, for example, leukemia, has an abnormally large amount of white blood cells compared to normal blood cells making it harder for the blood to provide enough oxygen to organs.[3]

Why is Knowing about Cancer Important?

Prevention is key to minimizing risk of cancer. Knowing the signs and symptoms of cancer along with getting regular screenings by a doctor significantly increases successful treatment when it is caught early. Balancing a ***healthy diet, adequate exercise and not engaging in risky behavior is important to reduce risk of cancer***.[5] Risky behaviors include drinking alcohol, smoking tobacco and substance abuse.[5] Knowing about the types of cancers that affect AI/AN allow us to implement programs and services to best address these cancers.

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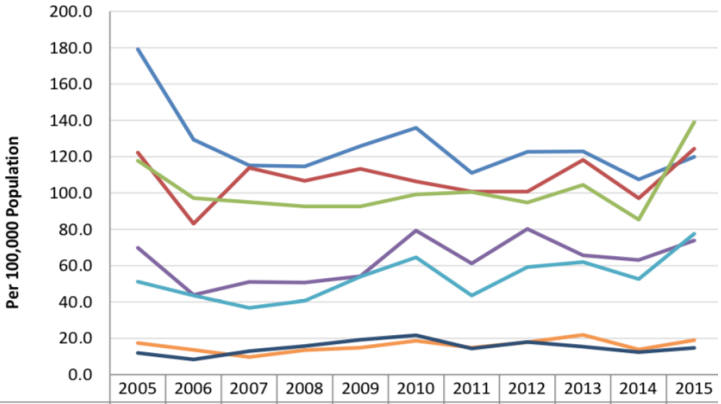
Figure 2. Age-Adjusted Mortality Rate for Selected Causes of Death among American Indians/Alaska Natives, 2005-2015



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Heart Disease	179.1	129.4	115.2	114.6	125.8	135.9	111.1	122.7	122.9	107.5	119.9
Cancer	122.2	83.1	113.9	106.7	113.3	106.4	100.8	100.8	118.2	97.1	124.4
Accidents (Unintentional Injury)	117.8	97.2	95.0	92.6	92.6	99.2	100.6	94.8	104.5	85.4	139.0
Diabetes	69.9	43.9	51.1	50.8	54.2	79.3	61.3	80.2	65.7	63.2	73.9
Chronic Liver Disease	51.2	43.6	36.8	40.7	54.0	64.6	43.6	59.2	62.0	52.7	77.6
Suicide	17.5	13.7	9.8	13.5	14.9	18.7	14.9	17.9	21.9	13.9	19.0
Chronic Lower Respiratory Disease	12.0	8.4	13.0	15.8	19.2	21.7	14.4	18.0	15.5	12.4	14.8

Overall Cancer Statistics, Arizona, 2019

In Arizona, there were about 37,490 new cases (incidence) and 12,470 deaths due to cancer in 2019.[6] The top five types of cancers include breast, lung & bronchus, colorectum, prostate, and melanoma (Figure 3).[6] In addition, less common cancers, such as kidney, stomach, liver, and gallbladder, were more frequently diagnosed among Arizona American Indians.[7] The top cancer types that people are dying from are lung & bronchus, colorectum cancer, pancreas, prostate, and breast (Figure 4).[6]

Figure 3. Arizona's Leading New Cancers, 2019

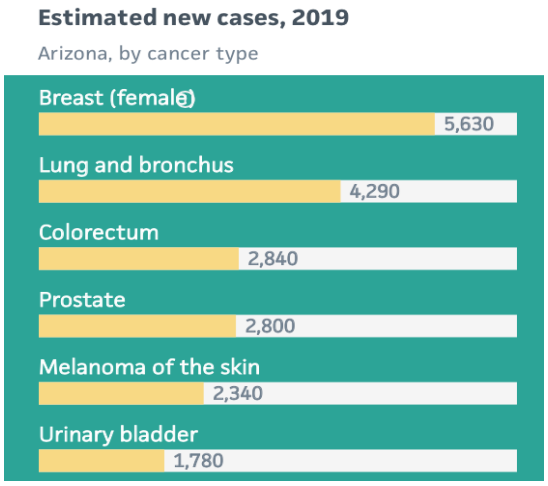
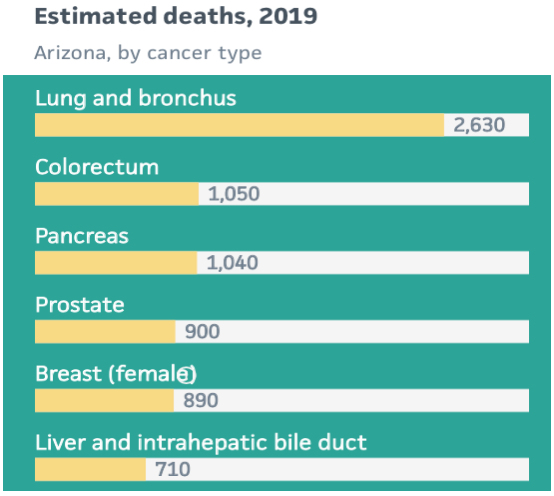


Figure 4. Arizona's Leading Causes of Cancer Deaths, 2019



Available Cancer Screenings

Early detection is imperative to either prevent or control cancer. Available tests to detect cancer early[8] are:

- *Colonoscopy, sigmoidoscopy, and high-sensitivity fecal occult blood tests* (FOBTs) for colorectal cancer. Recommended for ages 50 through 75 years.
- *Low-dose helical computed tomography* for lung cancer. Recommended among heavy smokers ages 55 to 74 years.
- *Mammography* for breast cancer. Recommended among women ages 40 to 74 years, especially those age 50 or older.
- *Pap test and human papillomavirus (HPV) testing* for cervical cancer. Recommended for women.

Variation in Cancer Rates

Incidence rates for cancer vary by race, region, and sex. For all cancer sites, the American Indian/Alaska Native rate is lower than other races, except when compared to Asian/Pacific Islanders (Table 1).[9] When comparing cancer incidence and mortality rates across regions (Table 2), the Southwest region has the lowest rates for both men and women.[10] Within this region, the cancer incidence and mortality rates are higher for men compared to women (Table 2).[10]

Table 1. Incidence and Mortality Rates By Race and Ethnicity, US, 2010-2015

Incidence, 2010-2014	All races	Non-Hispanic white	Non-Hispanic black	Asian/ Pacific Islander	American Indian/ Alaska Native†	Hispanic/ Latino
All sites						
Male	501.9	510.7	560.9	302.8	425.3	386.3
Female	417.9	436.0	407.4	287.6	388.7	329.6
Breast (female)	123.6	128.7	125.5	90.8	100.7	91.9
Colon & rectum						
Male	45.9	45.2	56.4	37.0	50.1	41.9
Female	34.8	34.5	41.7	27.0	41.3	29.3
Kidney & renal pelvis						
Male	21.8	22.1	24.8	10.9	30.0	20.7
Female	11.3	11.3	12.9	4.9	17.4	12.0
Liver & intrahepatic bile duct						
Male	12.1	10.0	17.2	20.0	20.1	19.8
Female	4.2	3.4	5.1	7.6	8.8	7.6
Lung & bronchus						
Male	73.0	75.9	87.9	45.2	71.9	40.6
Female	52.8	57.6	50.1	27.9	55.9	25.2
Prostate	114.9	107.0	186.8	58.4	78.3	97.0
Stomach						
Male	9.2	7.9	14.3	14.1	11.6	12.9
Female	4.7	3.5	7.8	8.1	6.5	7.8
Uterine cervix	7.6	7.0	9.5	6.0	9.1	9.7
Mortality, 2011-2015						
All sites						
Male	196.7	200.7	246.1	120.4	181.4	140.0
Female	139.5	143.7	163.2	87.7	127.6	96.7
Breast (female)	20.9	20.8	29.5	11.3	14.3	14.2
Colon & rectum						
Male	17.3	16.9	25.1	12.0	20.2	14.6
Female	12.2	12.1	16.5	8.6	13.6	9.0
Kidney & renal pelvis						
Male	5.6	5.8	5.7	2.6	8.4	5.0
Female	2.4	2.5	2.4	1.1	4.1	2.3
Liver & intrahepatic bile duct						
Male	9.4	8.2	13.5	14.0	14.8	13.0
Female	3.8	3.4	4.7	6.0	7.0	5.9
Lung & bronchus						
Male	53.8	56.3	66.9	31.0	45.0	26.4
Female	35.4	39.0	34.4	17.7	30.6	13.3
Prostate	19.5	18.2	40.8	8.7	19.7	16.1
Stomach						
Male	4.3	3.4	8.5	6.8	7.3	6.7
Female	2.3	1.7	4.0	4.2	3.5	4.0
Uterine cervix	2.3	2.1	3.8	1.8	2.6	2.6

Hispanic origin is not mutually exclusive from Asian/Pacific Islander or American Indian/Alaska Native. *Rates are per 100,000 population and age adjusted to the 2000 US standard population. Data based on Indian Health Service Contract Health Service Delivery Areas.

Table 2. Incidence and Mortality Rates of the Top 15 Cancers for American Indian/Alaska Native Persons compared to White Persons, 1990-2009

Incidence	Northern Plains	Alaska	Southern Plains	Southwest	Pacific Coast	East
Male	633.1 (530.6)	556.0 (551.3)	655.4 (547.6)	316.6 (491.0)	468.2 (549.1)	356.1 (580.4)
Female	483.6 (408.5)	530.5 (428.5)	520.8 (409.7)	257.5 (393.2)	408.0 (436.6)	288.7 (443.1)
Mortality						
Male	338.1 (223.4)	298.7 (207.2)	319.8 (244.2)	163.8 (207.1)	233.8 (223.7)	192.5 (231.7)
Female	246.9 (154.4)	232.6 (155.5)	221.1 (162.1)	125.9 (149.9)	194.4 (164.4)	141.6 (160.5)

*By Indian Health Service Region and Sex; (White)

Resources

The **American Cancer Society** provides information on types of cancers, on-going cancer research, prevention, and patient support. https://www.cancer.org/about-us.html

The **National Cancer Institute** conducts and provides information on cutting edge cancer research. https://www.cancer.gov/about-nci/overview

Center for Disease Control and Prevention: Cancer Division provides information on prevention of cancer, support for survivors, data/statistics on cancer, health disparities, and research. https://www.cdc.gov/cancer/

The **American Indian Cancer Foundation** provides information for solutions that fix cancer inequities, cancer prevention and care, systems that improve cancer screening, and health care provider education. https://www.americanindiancancer.org/our-approach

The **Indian Health Service** provides information on cancer care through the lens of cultural and spiritual aspects, improvement of cancer surveillance, and training of providers to improve screening of cancers. https://www.ihs.gov/epi/cancer/

The **Native American Cancer Research Corporation** provides information on cancer prevention, cancer risk reduction, cancer screening, cancer education, training, and research. http://natamcancer.org/index.html

The **Cancer Control in American Indian and Alaska Native Populations** is an article with Dr. Shobha Srinivasan about the minority cancer disparities and efforts the National Institute of Health is taking to address such disparities. https://www.cancer.gov/news-events/cancer-currents-blog/2018/american-indian-alaska-native-cancer-control

The **Keep It Sacred** network provides more information on the prevalence of different cancers among American Indian populations. http://keepitsacred.itcmi.org/cancer/cancer-prevalence/

The **HHS Office of Minority** health provides more information on cancer incidence and death rates within American Indian populations. https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=31

The **Intercultural Cancer Council** provides Cancer Facts document that relays information about cancer screening, disparities, provider communication, and outcomes. http://nebula.wsimg.com/89d7685493014f6906d8b85e29babc01?AccessKeyId=4ECD43F4A65F6DBF7F21&disposition=0&alloworigin=1

The **Urban Indian Health Institute** is examining cancer disparities data for urban AI/AN to raise awareness, advance training, and reveal solutions. https://www.uihi.org/uihi-partners-with-american-indian-cancer-foundation-to-address-cancer-disparities-in-urban-indian-clinics/

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