6. Cancer

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Cancer is the second leading cause of death for AI/AN in the Northwest and nationwide. Cancer occurs when cells in the body begin to grow abnormally and spread throughout the body. The severity, progression, and the ability to screen for and treat cancer often depend on the place in the body where the abnormal growth first occurs. Some cancer sites (such as lung, breast, and prostate cancers) are relatively common, while others are rare. Just as there are many risk factors for cancer, there are also many strategies to reduce the risk for developing cancer, and to improve survival and quality of life for cancer patients.

Perhaps the most important strategy to reduce cancer mortality is early detection. The primary clinical tool to dectect cancer early is by routine cancer screening tests. Cancer screening tests can detect cancer in its early stages, which can improve treatment outcomes and survival for cancer patients. IHS tracks cervical, breast, and colorectal cancer screenings as part of its reporting for the Government Performance and Reporting Act (GPRA).

In Idaho, screening rates for breast, cervical and colorectal cancers have remained relatively unchanged for the past five years. In 2013, two thirds had received appropriate Pap screenings, but closer to one third had received recommended mammogram and colorectal screenings.

The most common cancer sites for AI/AN in Idaho are breast, prostate, lung, blood and colorectal cancers. Cancer incidence rates for AI/AN were lower than rates for NHW in the state and have remained relatively stable since 1992.

Despite lower cancer indicence, AI/AN mortality from cancer is similar to that for NHW in Idaho. This is related to the fact that only 40% of AI/AN cancer diagnoses are made during the early stages of illness, compared to 52% of NHW diagnoses. A diagnosis made at late stages of illness when the cancer may already have spread is less responsive to treatment.

This section presents data on cancer screening, incidence, stage at diagnosis and mortality for AI/AN in Idaho.

Cancer Screenings

Cervical Cancer

Pap screenings are used to detect early signs of cervical cancer. The U.S. goal is for 93% of women (ages 21-65) to receive a cervical cancer screening at least once every three years (Healthy People 2020).

Until 2012, IHS measured the percentage of female AI/AN patients ages 21-64 who received a Pap screen within the past three years. The 2012 IHS goal for this measure was 59.5%. In 2013, IHS changed the definition for this measure to the percentage of women ages 25-64 who received a Pap screening within the previous four years.

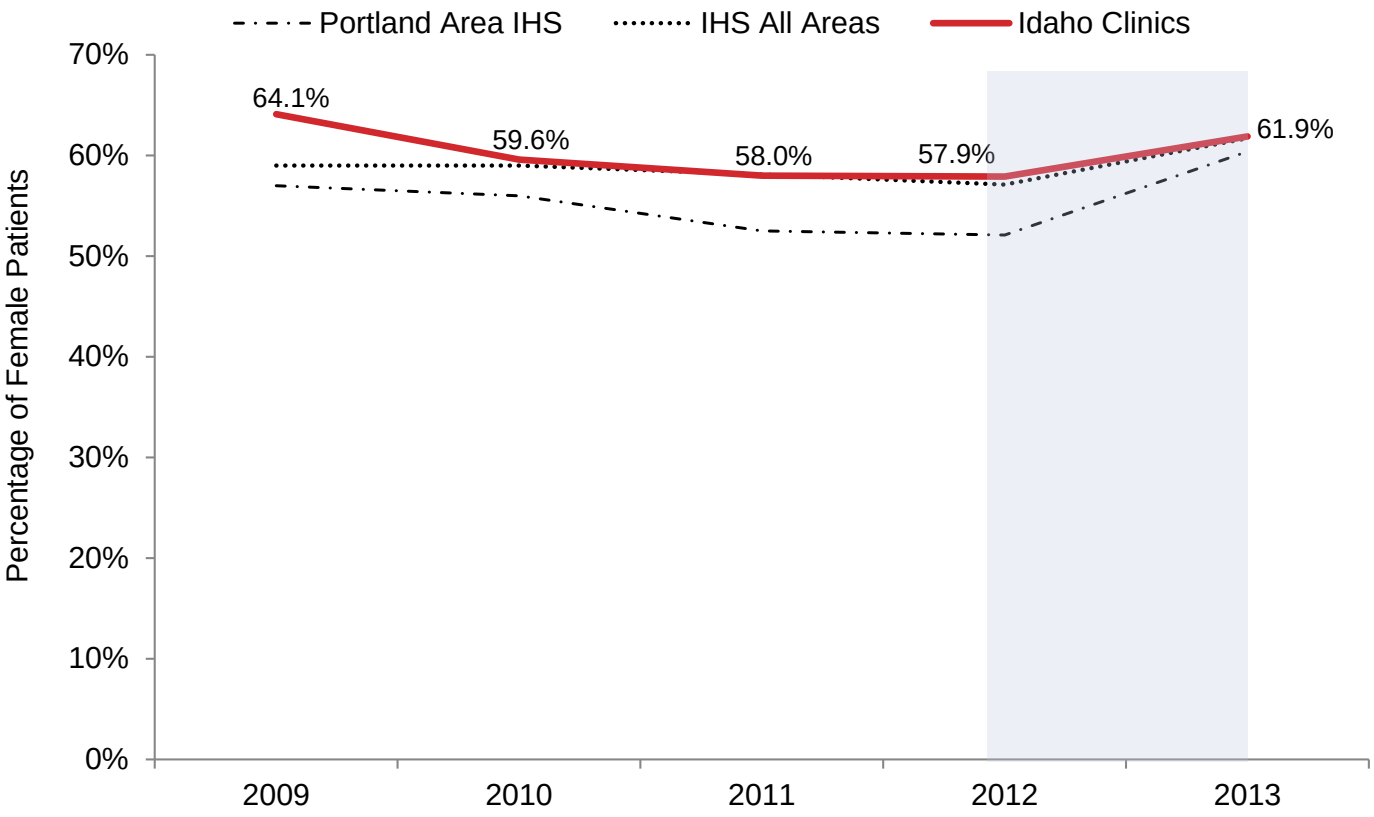
From 2009-2012, Pap screening rates decreased within the Idaho, the Portland Area, and national IHS patient population (Figure 6.1). In 2012, the screening rates for all three areas were below the 2012 goal of 59.5%. In 2013, Idaho clinics had a higher screening rate compared to the Portland Area and national IHS. The increase in rates across all areas between 2012 and 2013 is likely due to the change in this measure's definition.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Idaho clinics. The shaded area shows the year when the definition for pap screening rates changed.

Idaho clinics include non-urban federal and tribal Indian health facilities in Idaho. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 6.1: Pap screening rates for IHS female patients, 2009-2013.



Breast Cancer

Mammograms are an important tool for detecting breast cancer early. Women ages 50-64 should receive a mammogram at least once every two years, and some organizations recommend that biennial screenings should begin at age 40. The U.S. goal is for 81.1% of women (ages 50-74) to receive a mammogram at least once every two years (Healthy People 2020).

IHS tracks the percentage of AI/AN female patients ages 52-64 who have received at least one mammogram in the past two years. The 2013 goal for the measure was 49.7%.

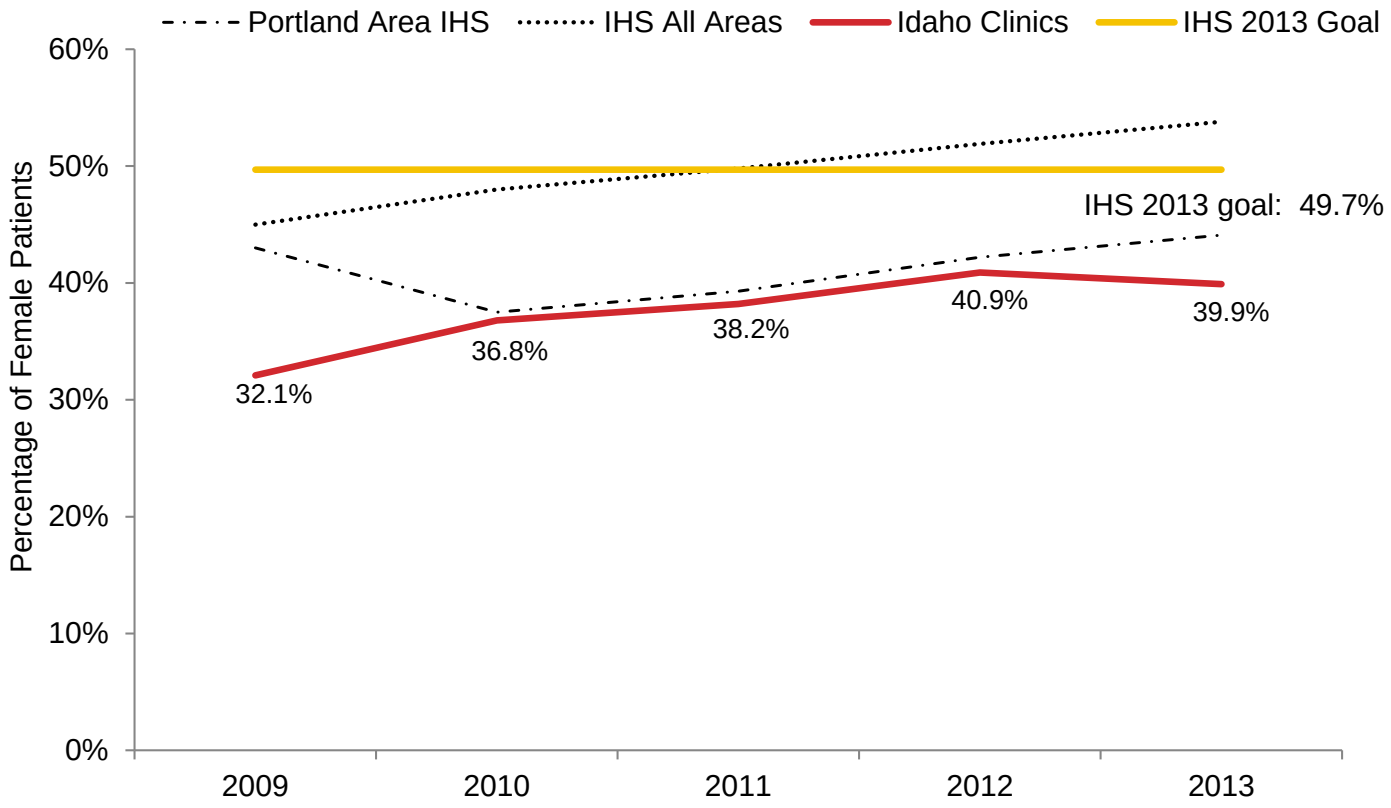
The national IHS mammogram screening rate has steadily increased since 2009, and exceeded the national goal in 2013 (Figure 6.2). Mammogram screening rates in Idaho clinics have also increased since 2009, but remained below Portland Area and national IHS rates. Neither Idaho clinics nor Portland Area IHS met the 2013 goal for this measure.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Idaho clinics.

Idaho clinics include non-urban federal and tribal Indian health facilities in Idaho. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 6.2: Mammogram screening rates for IHS female patients, 2009-2013.



Colorectal Cancer

Colorectal cancer screenings can identify colorectal cancer in its early stages and improve treatment outcomes. The U.S. goal is for 70.5% of adults (ages 50-75) to be screened for colorectal cancer by (Healthy People 2020).

Until 2012, IHS tracked the percentage of patients ages 51-80 who received any of the following screenings:

- a fecal occult blood test or fecal immunochemical test during the past year
- a flexible sigmoidoscopy in the past five years, or
- a colonoscopy in the past ten years

In 2013, IHS changed this measure's definition to the percentage of patients ages 50-75 who received a colorectal cancer screening.

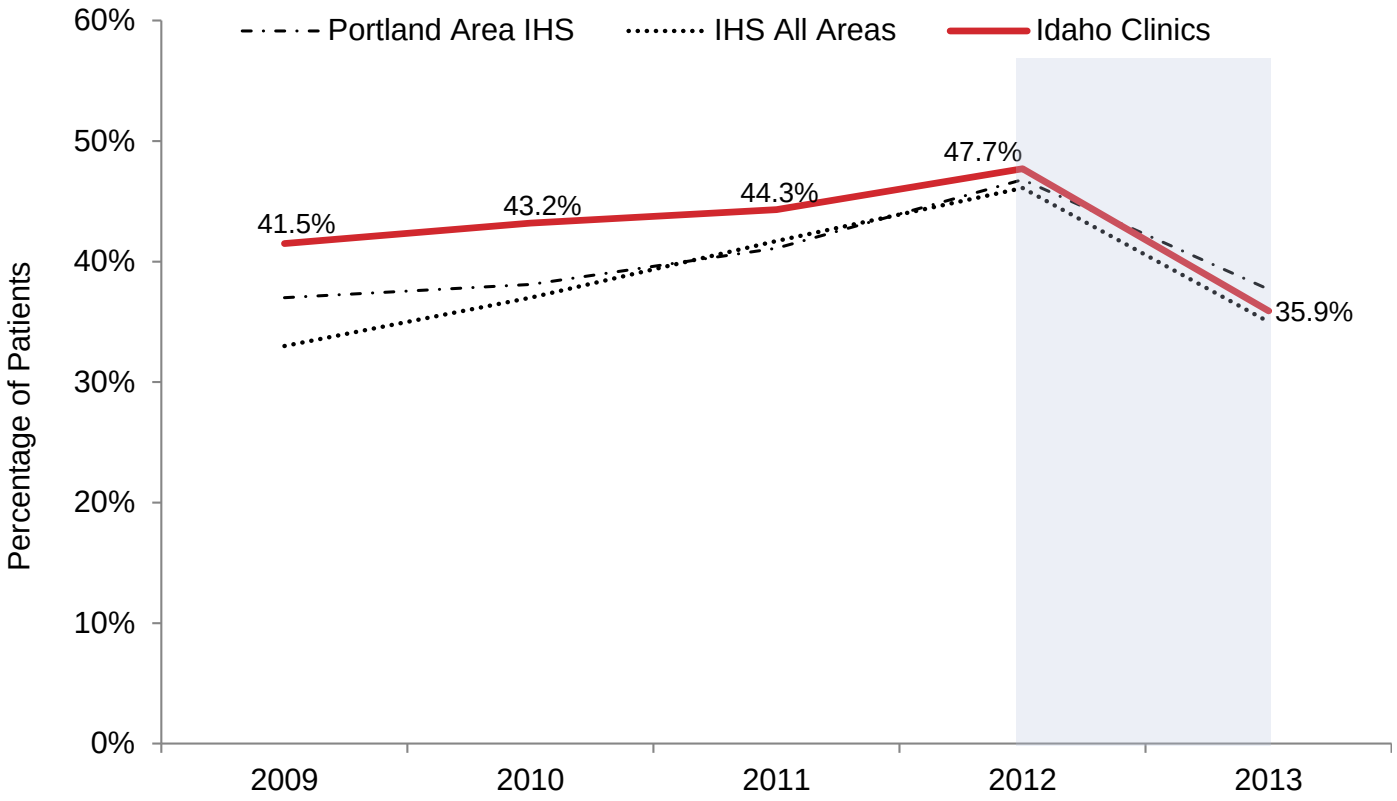
Colorectal cancer screening rates increased across all areas from 2009-2012 (Figure 6.3). The screening rates for Idaho clinics (47.7%), Portland Area IHS (46.8%) and national IHS (46.1%) exceeded the 2012 goal of 43.2%. The drop in screening rates between 2012 and 2013 is likely due to the change in this measure's definition.

Data Source: Portland Area Indian Health Service.

Data Notes: Data labels only shown for Idaho clinics. The shaded area shows the year when the definition for colorectal screening rates changed.

Idaho clinics include non-urban federal and tribal Indian health facilities in Idaho. Portland Area IHS clinics include non-urban federal and tribal Indian health facilities in Idaho, Oregon, and Washington.

Figure 6.3: Colorectal cancer screening rates for IHS patients, 2009-2013.



Leading Cancer Incidence Sites

Table 6.1 shows the leading cancer incidence sites for AI/AN males and females in Idaho. From 2006-2011, there were 157 newly diagnosed cancers for AI/AN males and 173 newly diagnosed cancers for AI/AN females. The most common cancer sites for AI/AN men were prostate cancer, lung cancer, and cancers of the blood. Breast cancer was the most common cancer site for AI/AN women, followed by lung cancer and colorectal cancer.

Data Source: Cancer Data Registry of Idaho (CDRI), 2006-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

Data Notes: Incidence counts and rates include invasive cancers and in situ urinary bladder cancer.

Table 6.1: Leading cancer incidence sites for AI/AN by sex, Idaho, 2006-2011.

Rank	Males	N (%)	Females	N (%)
1	Prostate	44 (28.0%)	Breast	51 (29.5%)
2	Lung & Bronchus	20 (12.7%)	Lung & Bronchus	26 (15.0%)
3	Blood Cancers†	19 (12.1%)	Colorectal	25 (14.5%)
4	Colorectal	14 (8.9%)	Uterine	9 (5.2%)
5	Liver & Intrahepatic Bile Duct	11 (7.0%)	Thyroid Blood Cancers†	8 (4.6%) 8 (4.6%)
Total	All Invasive Cancers	157 (100.0%)	All Invasive Cancers	173 (100.0%)

† Blood cancers include leukemia, Hodgkin lymphoma, non-Hodgkin lymphoma, and multiple myeloma

Cancer Incidence Rates

From 2006-2011, AI/AN in Idaho had a lower overall cancer incidence rate than NHW in the state (Table 6.2). The incidence rate for AI/AN males was 35% lower than the rate for NHW males, and the rate for AI/AN females was 24% lower than NHW females. For both races, males had higher cancer incidence rates than females, though the gap between sexes was smaller for AI/AN.

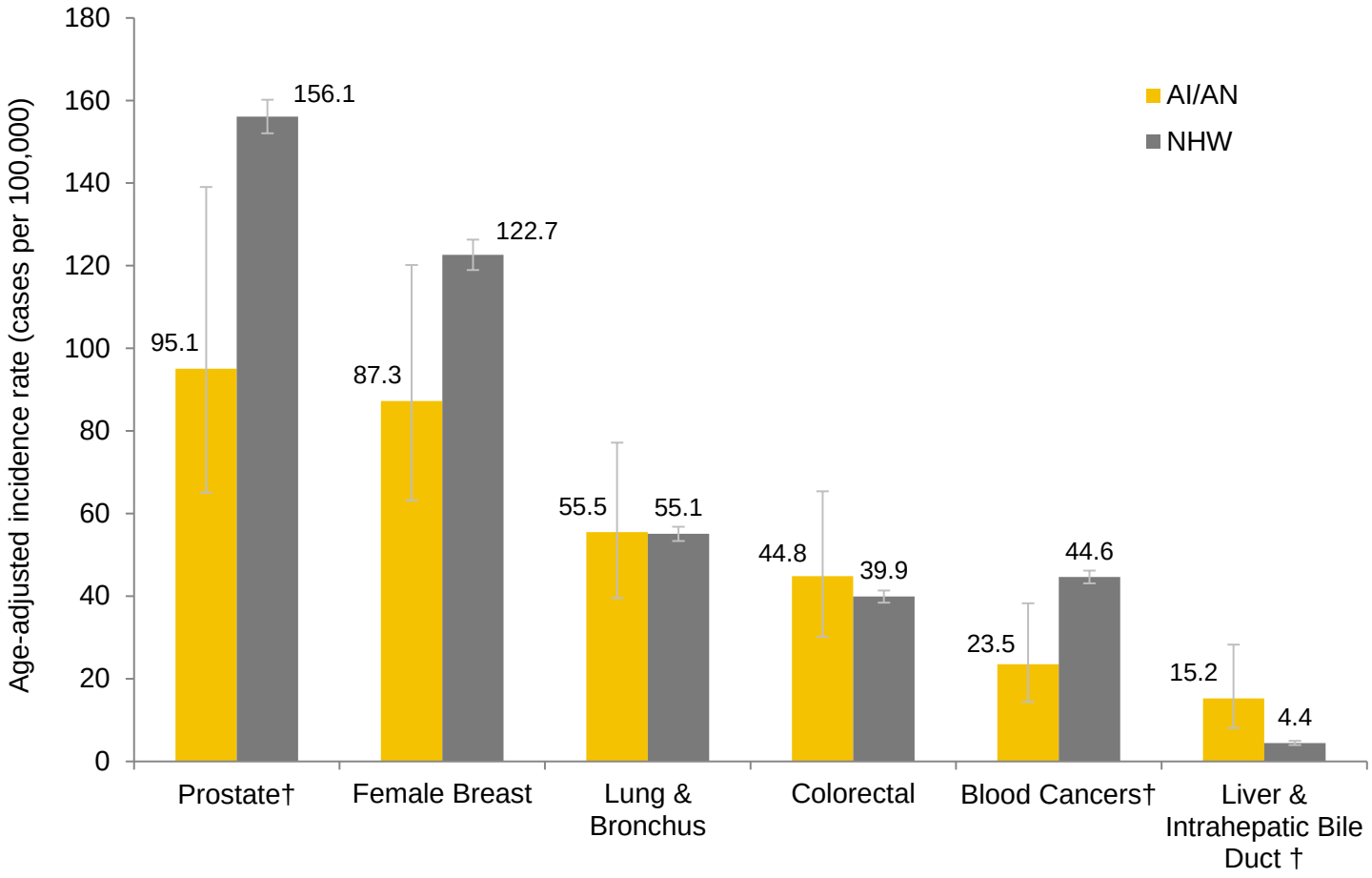
Figure 6.4 shows the age-adjusted incidence rates for most common cancer sites among AI/AN in Idaho, with comparisons to NHW. AI/AN had lower rates of prostate, breast, and blood cancers compared to NHW in the state. The rate of colorectal cancer was about 12% higher for AI/AN, though this difference was not statistically significant. The rate of liver and intrahepatic bile duct cancer for AI/AN was 3.4 times higher than the NHW rate.

Table 6.2: Cancer incidence rates by race and sex, Idaho, 2006-2011.

Sex	AI/AN Rate (95% CI)	NHW Rate (95% CI)	AI/AN vs. NHW Rate Ratio (95% CI)
Male	345.5 (285.3, 418.6)	532.1 (524.7, 539.4)	0.65 (0.55, 0.76)‡
Female	318.2 (268.3, 376.7)	420.6 (413.8, 427.4)	0.76 (0.65, 0.88)‡
Both Sexes	328.2 (289.6, 371.8)	470.1 (465.1, 475.1)	0.70 (0.63, 0.78)‡

CI = confidence interval
‡ Indicates a statistically significant difference (p<.05)

Figure 6.4: Age-adjusted incidence rates for leading cancer sites by race, Idaho, 2006-2011.



† *Indicates a statistically significant difference (p<.05)*

Data Source: Cancer Data Registry of Idaho (CDRI), 2006-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

Data Notes: Incidence counts and rates include invasive cancers and in situ urinary bladder cancer.

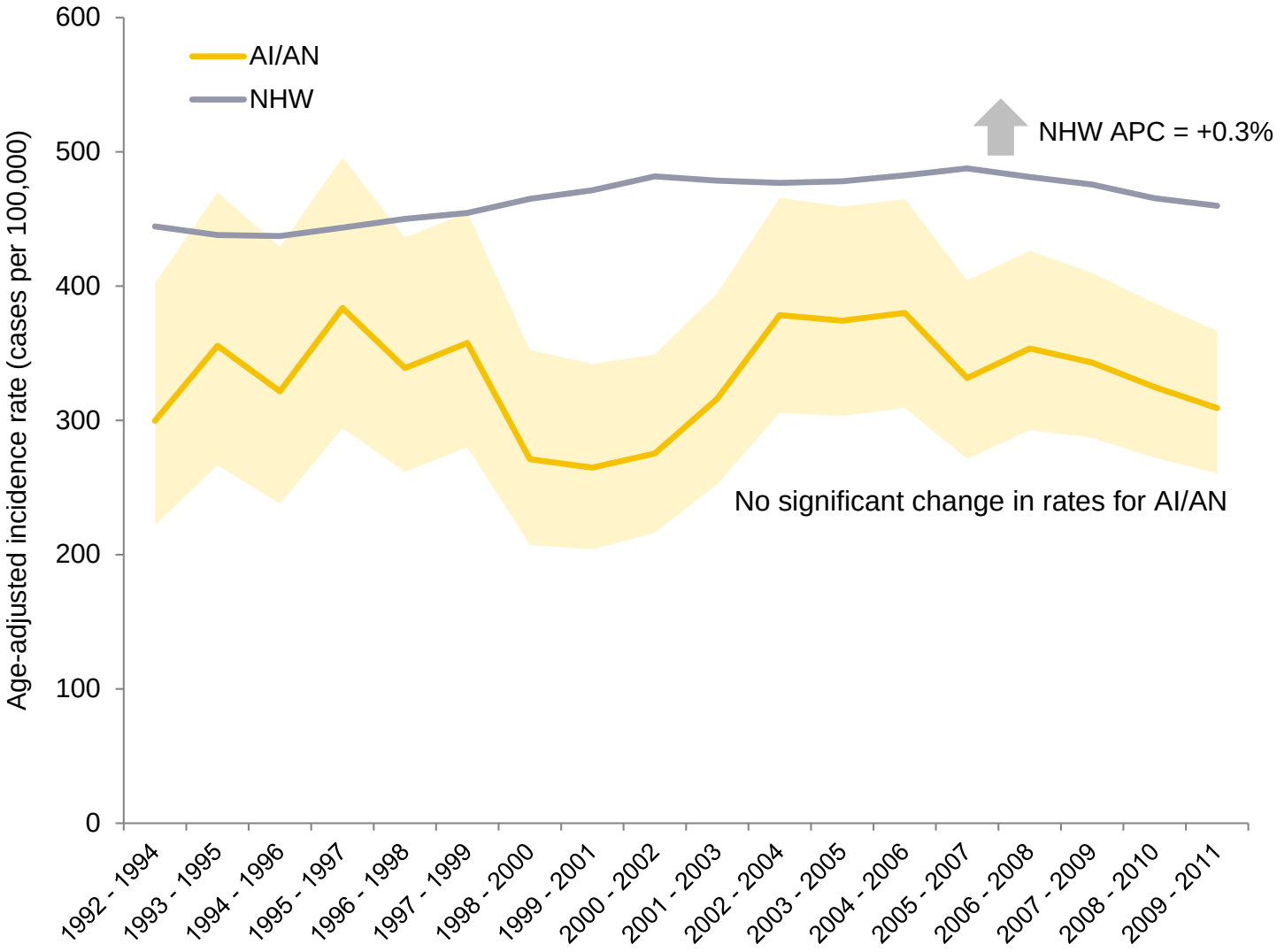
Cancer Incidence Trends

Figure 6.5 shows trends in age-adjusted cancer incidence rates for AI/AN and NHW in Idaho. From 1992-2011, there was no observable upward or downward trend for AI/AN. Since 1992, NHW cancer incidence rates have increased by 0.3% annually, though in recent years the rate has begun to decrease. NHW in Idaho have consistently had higher rates of cancer compared to AI/AN in the state; in recent years, the NHW rate has been roughly 40% higher than the AI/AN rate.

Data Source: Cancer Data Registry of Idaho (CDRI), 1992-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

Data Notes: Incidence counts and rates include invasive cancers and in situ urinary bladder cancer.

Figure 6.5: Age-adjusted cancer incidence rates, three-year rolling averages, by race, Idaho, 1992-2010.



APC = Annual percent change

Stage at Diagnosis

Stage at diagnosis describes the extent to which a cancer has spread in the body. In most cases, cancers that are diagnosed at an earlier stage are less severe and easier to treat. Cancer registries use five main categories to describe stage at diagnosis:

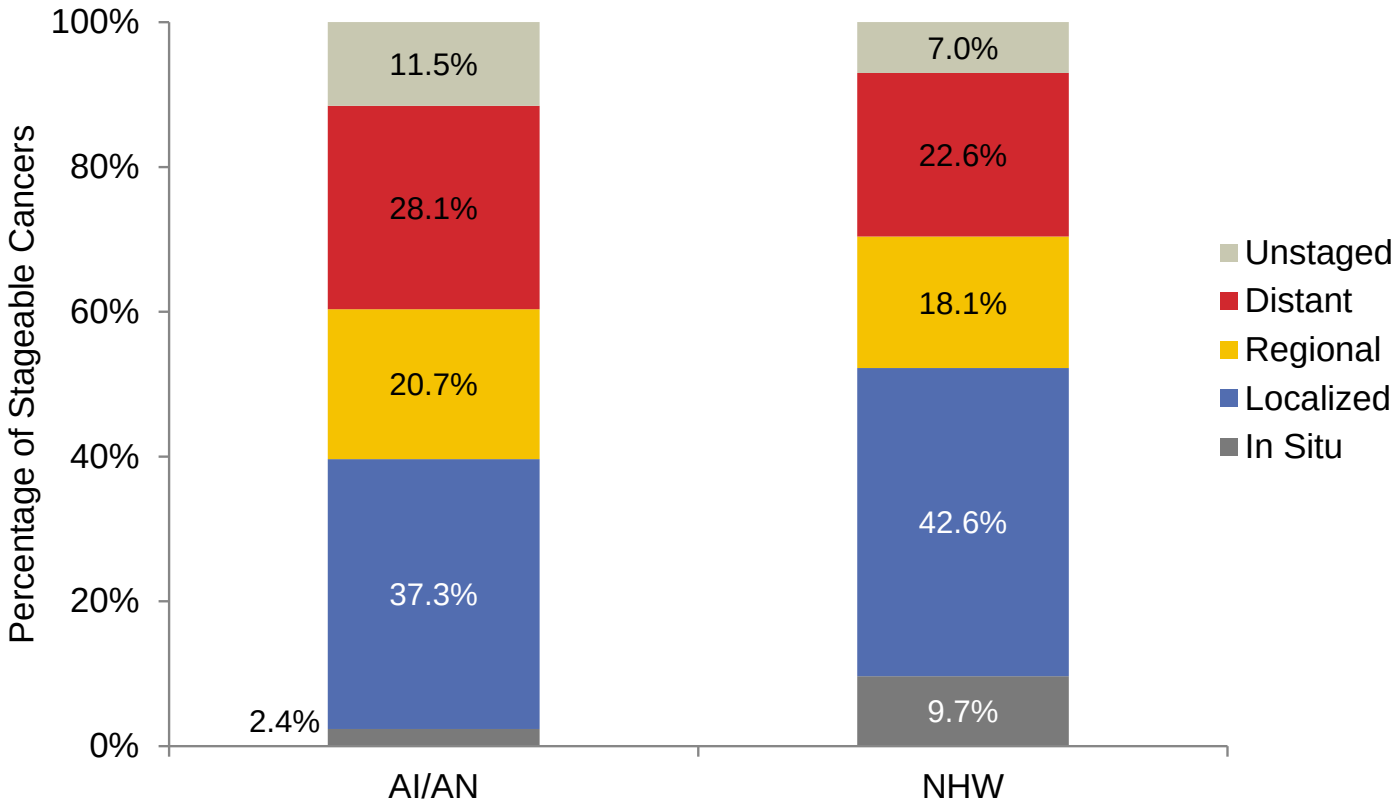
- In-situ: Cancer cells are only present in the layer of cells in which they developed
- Localized: Cancer cells are only present in the organ where the cancer began
- Regional: Cancer cells have spread beyond the primary organ to nearby tissues, organs, or lymph nodes
- Distant: Cancer cells have spread to distant tissues, organs, or lymph nodes
- Unstaged: Not enough information to determine the stage

Compared to NHW in the state, a smaller proportion of AI/AN in Idaho are diagnosed during the earlier stages of their cancers (Figure 6.6). From 2006-2011, only 2.4% of cancers among AI/AN were diagnosed during the earliest (in situ) stage of cancer, compared to 9.7% of cancers among NHW. About 28% of AI/AN cancers and 23% of NHW cancers were diagnosed when the cancer had spread to distant organs and tissues. A higher percentage (11.5%) of AI/AN cancers were not staged, compared to 7% of NHW cancers.

Data Source: Data Source: Cancer Data Registry of Idaho (CDRI), 2006-2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

Data Notes: Excludes cases with cancers that cannot be staged and cases missing stage data.

Figure 6.6: Stage at diagnosis for incident cancer cases by race, Idaho, 2006-2011.



Leading Cancer Mortality Sites

Table 6.3 shows the leading cancer mortality sites for AI/AN males and females in Idaho. From 2006-2012, lung cancer was the most common cause of cancer deaths for AI/AN in the state, accounting for 15% of cancer deaths among males and 30% of cancer deaths among females. Liver and prostate cancers each accounted for 12.5% of cancer deaths among AI/AN males. Colorectal cancer was the second leading cause of cancer deaths for AI/AN females, followed by breast cancer and blood cancers.

Data Source: Idaho state death certificates, 2006-2012, corrected for misclassified AI/AN race by the IDEA-NW Project.

Data Notes: Mortality rates exclude deaths from benign cancers.

Table 6.3: Leading cancer mortality sites for AI/AN by sex, Idaho, 2006-2012.

Rank	Males	N (%)	Females	N (%)
1	Lung & Bronchus	13 (14.8%)	Lung & Bronchus	25 (30.1%)
2	Liver & Intrahepatic Bile Duct Prostate	11 (12.5%) 11 (12.5%)	Colorectal	14 (16.9%)
3	Blood Cancers	10 (11.4%)	Female Breast Blood Cancers	8 (9.6%) 8 (9.6%)
4	Colorectal	9 (10.2%)	Liver & Intrahepatic Bile Duct	5 (6.0%)
Total	All Invasive Cancers	88 (100.0%)	All Invasive Cancers	83 (100.0%)

† Blood cancers include leukemia, Hodgkin lymphoma, non-Hodgkin lymphoma, and multiple myeloma

Cancer Mortality Rates

From 2006-2012, AI/AN in Idaho had cancer mortality rates that were slightly higher than the rates for NHW in the state (Table 6.4), though the difference was not statistically significant. For AI/AN, the cancer mortality rate for males was 52% higher than the rate for females. The rate for NHW males was 38% higher than the rate for NHW females.

Compared to NHW, AI/AN had higher mortality rates for prostate, colorectal, and blood cancers, and a statistically significant higher rate for liver cancer (Figure 6.7).

Table 6.4: Cancer mortality rates by race and sex, Idaho, 2006-2012.

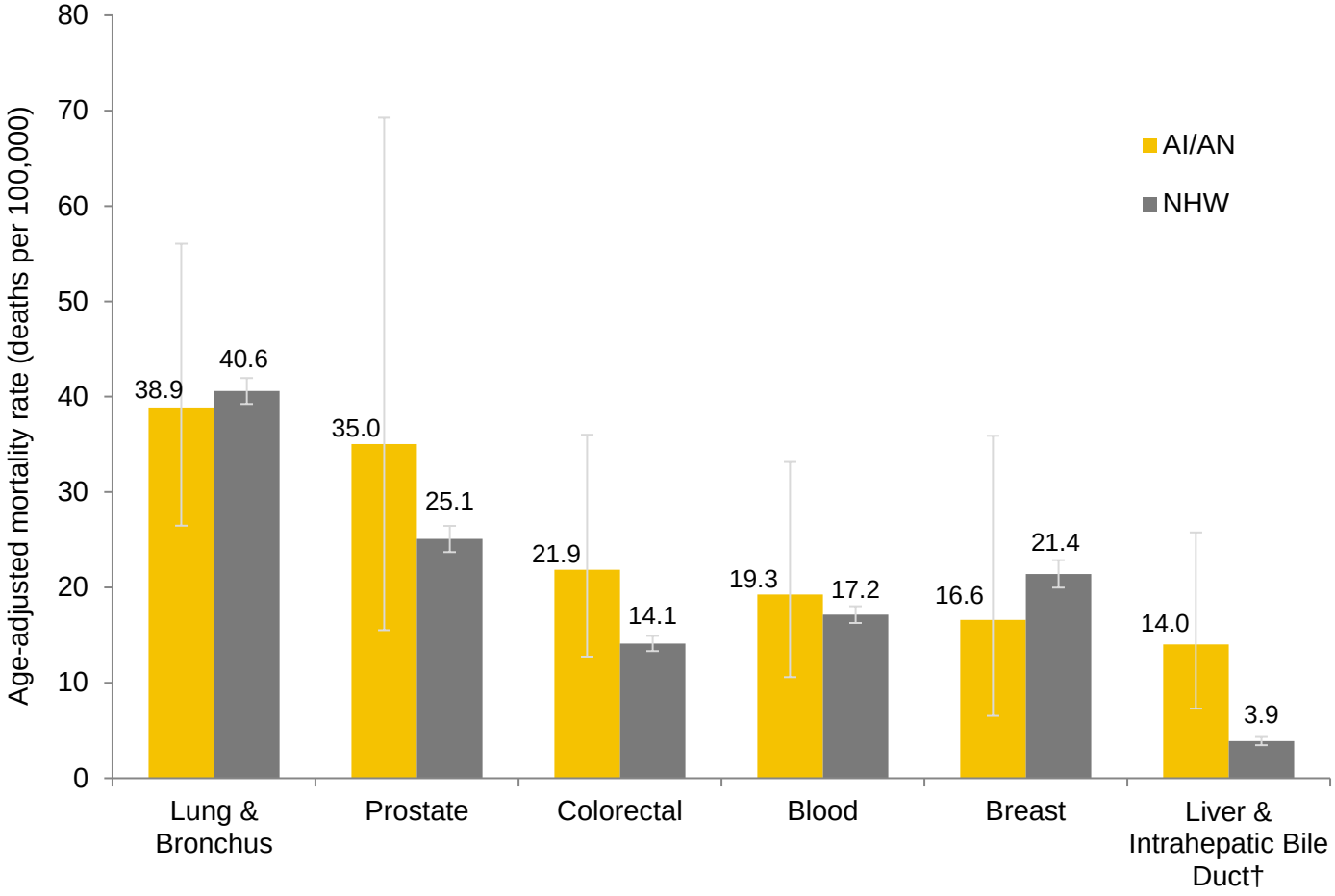
Sex	AI/AN Rate (95% CI)	NHW Rate (95% CI)	AI/AN vs. NHW Rate Ratio (95% CI)
Male	212.0 (163.3, 272.8)	191.9 (187.9, 195.9)	1.10 (0.90, 1.36)
Female	139.6 (108.6, 178.1)	139.0 (135.3, 142.7)	1.00 (0.81, 1.25)
Both Sexes	168.2 (140.9, 199.9)	161.9 (159.2, 164.6)	1.04 (0.89, 1.21)

CI = confidence interval

Data Source: Idaho state death certificates, 2006-2012, corrected for misclassified AI/AN race by the IDEA-NW Project.

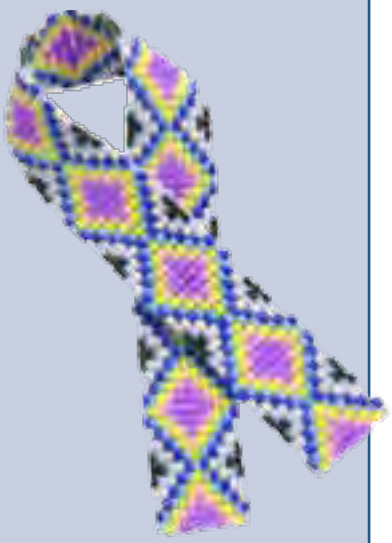
Data Notes: Mortality rates exclude deaths from benign cancers.

Figure 6.7: Age-adjusted mortality rates for leading cancer sites by race, Idaho, 2006-2010.



† *Indicates a statistically significant difference (p<.05)*

Program Spotlight: Northwest Tribal Comprehensive Cancer Project (NTCCP)



Northwest Tribal Comprehensive Cancer Project (NTCCP)
In collaboration with 43 Northwest tribes, the NTCCP works toward cancer-free tribal communities by taking an integrated and coordinated approach to cancer control.
The NTCCP was the first tribal recipient of a Comprehensive Cancer Grant from the CDC. NTCCP has been at the forefront in developing and implementing strategies to address cancer in tribal communities. These strategies include developing a tribal comprehensive cancer plan, forming a multi-state tribal cancer coalition, and designing a tribal behavioral risk factor survey.
NTCCP's goals are to:

- Facilitate a process for Northwest tribes to promote cancer risk reduction strategies
- Provide information on the most current early detection, screening and treatment practices through education and resource materials.
- Provide education regarding quality of life for cancer patients, their families and caretakers
- Coordinate and collaborate with local and national cancer organizations and individuals
- Improve Indian-specific cancer control data

NTCCP coordinates three tribal cancer coalition meetings per year; these meetings provide a forum for tribal programs, cancer centers, local and state health departments, non-profits, and private organizations to network and share resources. NTCCP also provides technical assistance to tribes to implement local cancer control plans, provides toolkits and educational materials to promote cancer screening, and assists tribes with data and funding resources. The Northwest Tribal Comprehensive Cancer Program is funded by a cooperative agreement from the Centers for Disease Control and Prevention.
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