

State of Wyoming



Department of Health

Annual Report on Cancer in Wyoming - 2015

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Director**

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Annual Report on Cancer in Wyoming—2015

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Table of Contents

Executive Summary	7
Introduction	9
Methodology and Definitions	10
Cancer Health Districts Map	13
Wyoming Incidence for 2015 Cases by Gender/Age	16
Wyoming Mortality for 2015 Deaths by Gender/Age	18
Wyoming Incidence for 2015 Cases by Race/Ethnicity	20
Wyoming Mortality for 2015 Deaths by Race/Ethnicity	21
Top Incidence Cancer Sites	24
Top Mortality Cancer Sites	25
Wyoming Relative Survival Rates	28
Summaries of All Cancer Sites Combined and the Top 15 Cancer Sites	
All Sites Combined	32
Bladder (Urinary)	34
Brain/CNS	36
Breast (Female)	38
Colorectal	40
Kidney/Renal Pelvis	42
Leukemia	44
Lung/Bronchus	46
Melanoma (of the skin)	48
Non-Hodgkin Lymphoma	50
Oral Cavity and Pharynx	52
Ovary	54
Pancreas	56
Prostate	58
Thyroid	60
Uterine	62
Appendix A: References	65
Definition of Age-Adjustment	66

Executive Summary

The incidence of and mortality rates from cancer in Wyoming residents continues to be lower than the U. S. average. The overall incidence rate for cancer in Wyoming was 383.8/100,000 in 2015, decreased from 2014 (389.5/100,000), and significantly lower than the national rate of 437.5/100,000. The overall mortality rate for all cancers in 2015 (138.8/100,000) was slightly lower than 2014 (139.8/100,000) and much lower than the national rate of 161.9/100,000.

The top five cancer sites for incidence in 2015 were: prostate, female breast, lung/bronchus, colorectal and melanoma. The most common cancers for incidence by age group were cancer of the testis (20-24); thyroid (25-34); breast (35-39 years); thyroid (40-44); breast (45-54); prostate (55-74); and lung (75-85+). There were five cases of melanoma in individuals under 30 years of age in 2015. For only the third time since 1980, more women than men were diagnosed with lung cancer in Wyoming.

The top five cancer sites for mortality were lung, colorectal, ill-defined, breast cancer and cancer of the pancreas. The most common cancers associated with mortality by age group were brain/CNS (40-44); colorectal (45-49); breast (50-54); and lung (55-85+). There were fewer than two deaths per cancer site for all age groups from 0 to 39 years. 2015 marked the second year in a row, and only the second year since 1990, that more women than men died from lung cancer in Wyoming.

The 5-year (60 months) relative survival rate for Wyoming cancer patients diagnoses between 2007– 2015 was 62.7%. This means that almost sixty-three percent of all cancer patients in Wyoming were alive five years after diagnosis during this time period. Prostate cancer (94.7%), cancer of the thyroid (92.3%), melanoma (90.7%), and female breast cancer (85.0%) continue to have the highest survival rates among Wyoming residents. The survival rates for cancer of the pancreas (6.2%) and lung cancer (12.0%) are the lowest among Wyoming residents. Children/adolescents (0-19 years) continue to have an excellent 5-year overall survival rate of 81.3% between 2007 and 2015.

INTRODUCTION

Cancer

Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. If the spread of abnormal cells is not controlled, death can result. Many cancers are preventable and many can be cured if detected and treated early.

Causes of Cancer

Cancer is caused by both environmental and internal factors. Environmental causes include exposures to chemicals, radiation, or viruses, as well as exposures associated with lifestyles (e.g., smoking, diet, and alcohol consumption). Internal causes include hormone levels, immune status, and inherited conditions. Causal factors may act together or in sequence to start or promote cancer. Ten or more years often pass between carcinogenic exposures and detectable cancer.

Prevention

Avoiding potential exposures such as tobacco use, severe sun exposure, and excessive dietary fat may prevent the onset or promotion of cancer. Also, increasing beneficial practices such as eating five servings of fruit or vegetables every day may help to prevent cancer. Early detection and treatment of cancer through established screening practices such as mammography, and colorectal screenings improve the survival rates and decrease mortality.

Wyoming Cancer Surveillance Program

Cancer is a reportable disease in Wyoming. State statute requires that physicians, hospitals, and laboratories report all cases of cancer they diagnose or treat in Wyoming to the Cancer Surveillance Program (WCSP), which serves as the state's central cancer registry. The purpose of the registry is to gather data to determine cancer incidence, mortality, treatment, and survival in Wyoming. Through special interstate agreements, information on Wyoming residents diagnosed or treated in other states is included in the program's database.

Insuring accurate data is one of the most important roles of the cancer registry. The WCSP established procedures for both automated and manual methods of checking the quality of data. The data is stored in the Rocky Mountain Cancer Data Systems software which has a built-in system to immediately check data when a new case is entered into the database. Each case submitted is reviewed for accuracy and completeness in compliance with data collection standards from the National Program of Cancer Registries and the American College of Surgeons.

The data are used by a variety of health professionals and others concerned about cancer. Within the Wyoming Department of Health (WDH), the data are used to monitor early detection, to determine year-to-year trends that develop, and to determine how Wyoming compares to the rest of the nation. The WDH uses the data to plan and evaluate the effectiveness of its cancer control programs such as the Breast and Cervical Cancer Early Detection Program, and the Wyoming Colorectal Cancer Screening Program. Outside of the WDH, the data are used by physicians, hospital administrators, legislators, non-profit organizations, and the general public. Anyone with a concern about cancer or who would like more information about cancer in a community should call the Wyoming Cancer Surveillance Program's Epidemiologist at 307-777-8654. Written correspondence should be addressed to 6101 Yellowstone Rd., Suite 510, Cheyenne, WY 82002. Information is also available at: <https://health.wyo.gov/publichealth/chronic-disease-and-maternal-child-health-epidemiology-unit/cancer-surveillance/>

METHODOLOGY and DEFINITIONS

Data Sources

Incidence

Definition -- Incidence is defined as the number of *new* cases diagnosed during a set time period in a defined population. Incidence is not a representation of risk. The defined time period for this report is 2015 except for the 12-year incidence trend, which used 3-year averages (e.g., 2001-2003 for 2002 or 2005-2007 for 2006). The defined population is the state of Wyoming, Wyoming counties, and Cancer Health Districts (CHD) (see page 13).

Wyoming Data -- The Wyoming Cancer Surveillance Program (WCSP) gathers data on Wyoming residents diagnosed and treated for invasive and in situ tumors. The data is sent to the program's registry by every hospital in the state. Data are also collected from pathology laboratories, clinics, and physician offices throughout the state. The registry has several data exchange agreements with other state registries to enable collection of data on Wyoming residents diagnosed and/or treated outside of Wyoming. Wyoming data for this report includes 2015 cancer cases among Wyoming residents received by WCSP as of June 1, 2016.

National Data -- The National Cancer Institute (NCI) updates cancer statistics annually in a publication called the Surveillance, Epidemiology, and End Results (SEER) Cancer Review, also available on-line. NCI monitors cancer statistics to assess progress and to identify population subgroups and geographic areas where cancer control efforts need to be concentrated. Cancer incidence rates are calculated using SEER software. WCSP used SEER*STAT for this report. **The national SEER rates presented in this report were calculated using 2014 data for whites.** See Appendix A for reference source.

Mortality

Definition -- Mortality is defined as the number of persons who have died during a set time period in a defined population. The time period for this report is the calendar year 2015 for Wyoming rates. The defined population is the state of Wyoming, Wyoming counties, and Cancer Health Districts (see page 13).

Wyoming Data -- Mortality data are derived from death certificates filed with Wyoming Vital Statistics Services. By state statute, the certification of the cause of death on the death certificate is completed by the attending physician or by the coroner with the assistance of a physician. Although a number of medical conditions may be listed on the certificate, statistics presented here are based solely on the underlying cause of death. This is defined as the disease or injury that initiated the sequence of events leading directly to death or as the circumstances of the accident or violence that produced the fatal injury. The primary underlying cause is selected and classified based upon the regulations of the World Health Organization.

National Data -- The National Center for Health Statistics (NCHS), a division of the U.S. Centers for Disease Control and Prevention (CDC), provides statistical information including the number of cancer deaths in the United States. United States cancer mortality data is available from SEER*STAT, an interactive CD-ROM. WCSP used SEER*STAT for this report. **The national SEER rates presented in this report were calculated using 2014 data for whites.** See Appendix A for reference source.

Population

Wyoming Data -- Population estimates for Wyoming state and counties were obtained from the Centers for Disease Control and Prevention (CDC) Wonder website for Bridged-Race Population Estimates for 2015. Population numbers were broken down by county, age-group, sex, race, and ethnicity. Because cancer rates are calculated by dividing the number of cancer cases by a census-generated denominator, rates can be heavily influenced by changes or uncertainties in census counts.

Rates

Age-Adjusted Incidence Rates

Incidence rates include 2015 invasive cases among Wyoming residents, except for bladder cancer which also includes in situ cases. Incidence rates presented are calculated for total cases and separately for males and females. The incidence rates are age-adjusted to the 2000 U.S. standard population using nineteen age groups, and are per 100,000 population. Age-adjustment allows rates to be compared over different time frames and allows rates from one geographic area to be compared with rates from another geographic area that may have differences in age distributions. Any observed differences in age-adjusted incidence rates are not due to differing age structures.

In conformity with the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program guidelines, the incidence rates excluded the following:

- in situ cases (except bladder cancer)
- basal and squamous cell skin cancer
- cases with unknown age
- cases with unknown gender

Age-Adjusted Mortality Rates

Mortality rates presented are calculated for total cases and separately for males and females. The mortality rates are age-adjusted to the 2000 U.S. standard population using 5-year age groups and are per 100,000 population. Age-adjustment allows rates to be compared over different time frames and allows rates from one geographic area to be compared with rates from another geographic area that may have differences in age distributions. Any observed differences in age-adjusted incidence rates are not due to differing age structures.

Age-Specific Incidence Rates

An age-specific rate is the rate of cancer found within a certain age group. Age-specific incidence rates were calculated using 5-year age groups and total population (both genders combined). They are reported per 100,000 population.

Statistical Significance

Z-Statistic

A Z-statistic is used to compare two different rates. This is defined as “the difference between two population proportions.” Statistical significance was found if the calculated Z-statistic was found to be greater than 1.65. This provides the equivalence of a 95% confidence interval (see below) and is indicated in the report as “statistically significant” or “significant.” The formula used can be found in most statistics books or by calling the WDH Chronic Disease Epidemiologist at (307) 777-8654.

Confidence Intervals

A confidence interval indicates the confidence level in the accuracy of a cancer rate. For example, if you calculate a cancer rate for a particular year as 130 cases per 100,000 people, with a confidence interval of 120 to 140 cases per 100,000, this means that you are 95% sure that the rate of cancer for that particular year lies somewhere between 120 to 140 cases per 100,000 people. The rate of 130 cases may in fact be correct, but you have more confidence that the “true” rate lies between 120 to 140 cases.

Confidence intervals are also used as a way to test statistical significance. If the confidence intervals of two different rates overlap one another, then there is no difference between the two rates. However, if the confidence intervals do not overlap one another, there is statistical significance. This is indicated in the report by the terms “statistically significant” or “significant.”

Staging

<u>In Situ</u>	cancer has not invaded the organ.
<u>Local Stage</u>	cancer has invaded the organ of origin.
<u>Regional Stage</u>	cancer has invaded beyond the organ of origin by direct extension to adjacent organs/tissues and/or regional lymph nodes.
<u>Distant Stage</u>	direct extension beyond adjacent organs or tissues or metastases to distant site(s) or distant lymph nodes.
<u>Unstaged</u>	extent of disease or primary site cannot be determined.

Note: Starting in 2004, the WCSP and other cancer registries belonging to the National Data Standard setters adopted and began using the Collaborative Staging Method for staging cancer cases. This method utilizes a new type of algorithm that provides more information concerning the size and extent of the cancer, as well as the number of nodes involved.

Cancer Health District

Cancer Health Districts (CHDs) were chosen based on geographic location, similarities in geography and by population size. Also taken into consideration were areas of the state that are routinely grouped for data requests and/or cancer cluster studies. This created seven CHDs that were similar in population size thereby eliminating some of the discrepancies in rate calculations that are caused from population size differences. CHDs are used when county data is too sparse to calculate accurate rates.

CHD 1 Laramie County

CHD 2 Albany County, Carbon County, Goshen County, Niobrara County, Platte County

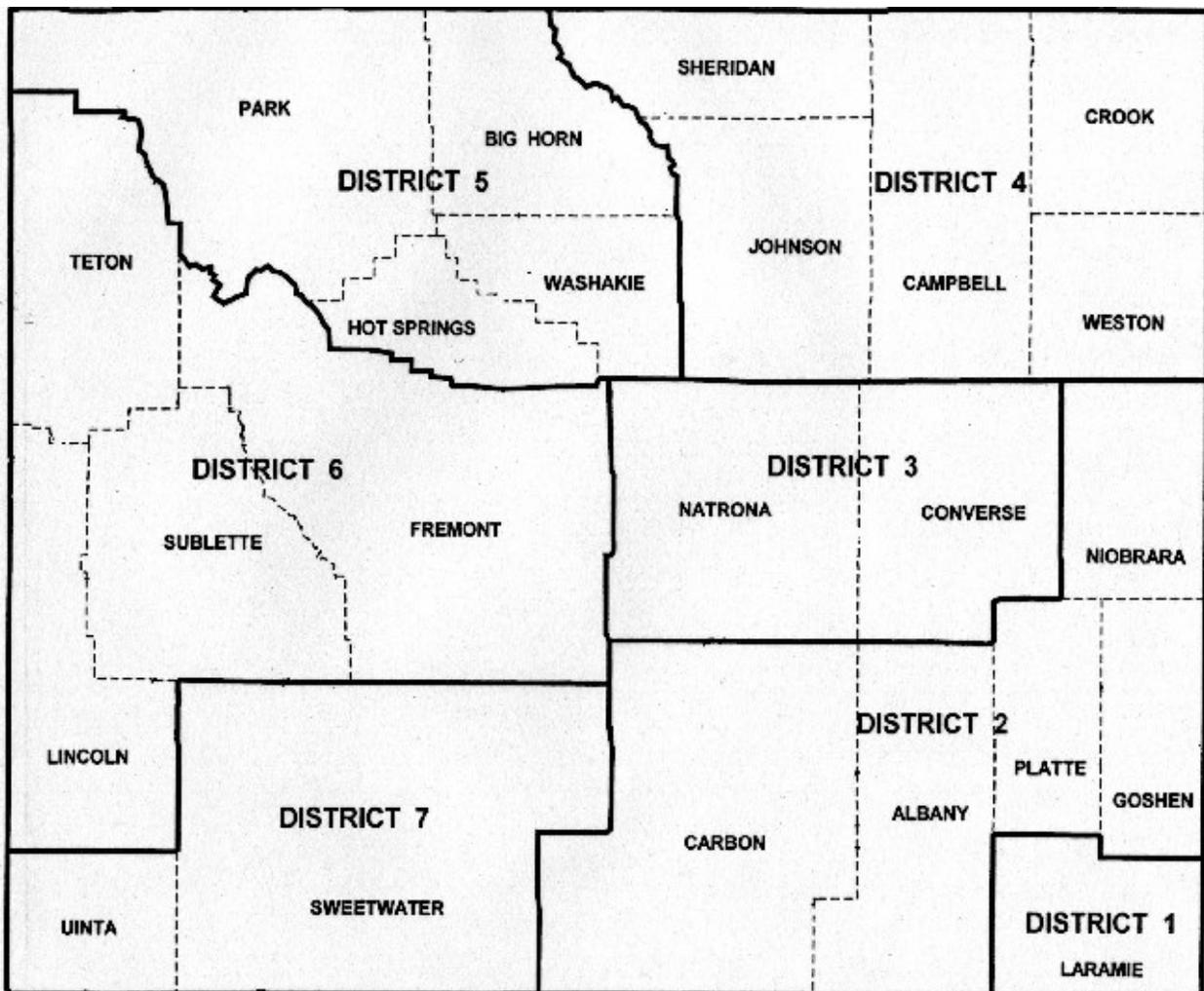
CHD 3 Converse County, Natrona County

CHD 4 Campbell County, Crook County, Johnson County, Sheridan County, Weston County

CHD 5 Big Horn County, Hot Springs County, Park County, Washakie County

CHD 6 Fremont County, Lincoln County, Sublette County, Teton County

CHD 7 Sweetwater County, Uinta County



State of Wyoming - 2015

Cancer Incidence and Mortality by Gender and Age (All Sites)
Cancer Incidence and Mortality by Race and Ethnicity (Top 15 Sites)

Wyoming Cancer Incidence¹ for 2015: Cases by Gender and Age (All Sites)

	Male	Female	Total	00-04	05-09	10-14	15-19	20-24	25-29	30-34
Anus	3	4	0	0	0	0	0	0	0	0
Bladder w/ in situ	104	36	0	0	0	0	0	0	0	0
Bones and Joints	2	4	0	0	0	1	1	0	1	0
Brain	22	23	0	0	1	0	1	0	2	1
Breast	6	340	0	0	0	0	0	0	5	6
Cervix	0	13	0	0	0	0	0	0	0	2
Colorectal	108	88	0	0	0	0	0	2	0	2
Esophagus	26	6	0	0	0	0	0	0	0	0
Eye	3	1	1	0	0	0	0	0	0	0
Gallbladder	3	6	0	0	0	0	0	0	0	0
Hodgkin	4	2	0	0	0	0	0	0	1	0
III-Defined	55	44	0	0	0	0	0	0	0	0
Kidney	57	31	0	0	0	0	0	1	1	2
Larynx	11	3	0	0	0	0	0	0	0	0
Leukemia	52	31	0	2	1	0	1	0	1	0
Liver	38	13	0	0	0	0	0	0	0	0
Lung	131	145	0	0	0	0	0	0	0	0
Melanoma	77	71	0	0	0	0	0	3	2	6
Myeloma	21	20	0	0	0	0	0	0	0	0
Nasal	1	2	0	0	0	0	0	1	0	0
Non-Hodgkin Lymphoma	61	51	0	0	0	0	1	3	2	1
Oral Cavity	46	12	0	0	0	0	0	0	1	0
Other Biliary	9	9	0	0	0	0	0	0	0	0
Other Digestive	3	8	1	2	0	0	0	0	0	0
Other Endocrine	2	4	0	0	0	0	0	1	0	0
Other Female	0	10	0	0	0	0	0	0	0	0
Other Male	5	0	0	0	0	0	0	0	0	0
Other Skin	10	2	0	0	0	0	0	0	0	0
Other Respiratory	2	0	0	1	0	0	0	0	0	0
Other Urinary	2	1	0	0	0	0	0	0	0	0
Ovary	0	38	0	0	0	0	0	1	0	0
Pancreas	42	36	0	0	0	0	0	0	0	1
Prostate	352	0	0	0	0	0	0	0	0	0
Small Intestine	6	7	0	0	0	0	0	0	0	0
Soft Tissue including Heart	10	7	0	0	0	0	0	3	2	0
Stomach	15	7	0	0	0	0	0	0	0	0
Testis	18	0	0	0	0	0	0	5	1	4
Thyroid	24	77	0	0	0	0	0	2	6	14
Uterine	0	82	0	0	0	0	0	0	0	1
Mesothelioma	6	6	0	0	0	0	0	1	0	0
All Sites	1,337	1,240	2	5	2	1	4	23	25	40

¹ See page 10 for a definition of incidence.

	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Anus	0	0	1	1	0	0	4	1	0	0	0
Bladder w/ in situ	1	2	2	4	12	20	26	18	20	20	15
Bones and Joints	0	0	0	0	0	0	1	1	1	0	0
Brain	1	6	2	4	6	5	4	2	2	1	7
Breast	14	13	29	39	31	50	60	37	24	22	16
Cervix	2	2	0	0	2	4	1	0	0	0	0
Colorectal	4	5	8	15	18	21	31	26	29	12	23
Esophagus	0	1	2	0	5	4	5	7	4	2	2
Eye	0	0	0	0	1	1	0	0	1	0	0
Gallbladder	0	0	0	0	0	2	2	1	1	2	1
Hodgkin	0	1	0	1	0	1	0	1	0	1	0
Ill-Defined	1	0	0	0	11	20	11	22	11	9	14
Kidney	4	1	6	4	14	15	12	10	10	4	4
Larynx	0	0	0	3	2	3	2	2	1	1	0
Leukemia	1	1	2	7	8	11	13	12	12	6	5
Liver	0	0	0	0	10	10	17	6	3	3	2
Lung	2	3	9	12	21	41	41	49	45	29	24
Melanoma	7	2	10	21	11	24	22	12	9	7	12
Myeloma	0	1	0	1	4	7	6	8	2	6	6
Nasal	0	1	0	0	0	0	0	1	0	0	0
Non-Hodgkin Lymphoma	0	5	3	11	6	17	9	13	11	18	12
Oral Cavity	1	1	0	10	9	10	11	5	6	2	2
Other Biliary	0	0	1	2	1	7	3	1	1	1	1
Other Digestive	1	0	1	0	0	0	0	3	2	1	0
Other Endocrine	0	0	0	0	3	1	1	0	0	0	0
Other Female	0	0	0	0	2	2	0	1	2	1	2
Other Male	0	0	0	1	2	0	0	0	2	0	0
Other Skin	0	0	0	0	2	1	2	1	3	2	1
Other Respiratory	0	0	0	0	0	0	0	1	0	0	0
Other Urinary	0	0	0	0	0	0	1	0	2	0	0
Ovary	0	2	7	3	4	5	8	3	3	1	1
Pancreas	0	0	2	4	4	8	18	13	12	5	11
Prostate	0	0	4	20	37	83	82	69	32	12	13
Small Intestine	0	1	0	1	3	2	1	3	1	1	0
Soft Tissue including Heart	0	0	1	1	1	1	1	4	2	1	0
Stomach	0	1	2	0	2	1	3	4	4	3	2
Testis	3	1	2	1	0	0	0	0	0	0	1
Thyroid	14	15	11	9	8	6	10	1	3	1	1
Uterine	0	5	4	9	16	23	11	4	6	1	2
Mesothelioma	0	0	0	0	0	1	2	1	1	3	3
All Sites	56	70	109	184	256	407	421	343	268	178	183

Wyoming Cancer Mortality¹ for 2015: Deaths by Gender and Age (All Sites)

	Male	Female	Total	00-04	05-09	10-14	15-19	20-24	25-29	30-34
Anus	0	0	0	0	0	0	0	0	0	0
Bladder w/ in situ	14	6	0	0	0	0	0	0	0	0
Bones and Joints	1	2	0	0	0	0	0	0	0	0
Brain	20	17	0	1	0	0	0	0	1	0
Breast	1	70	0	0	0	0	0	0	0	0
Cervix	0	4	0	0	0	0	0	0	0	0
Colorectal	45	45	0	0	0	0	0	0	0	1
Esophagus	30	4	0	0	0	0	0	0	0	0
Eye	0	1	0	0	0	0	0	0	0	0
Gallbladder	1	2	0	0	0	0	0	0	0	0
Hodgkin	0	0	0	0	0	0	0	0	0	0
Ill-Defined	41	31	0	0	0	0	0	0	0	1
Kidney	13	8	0	0	0	0	0	0	0	0
Larynx	3	0	0	0	0	0	0	0	0	0
Leukemia	22	16	0	0	0	1	0	0	0	1
Liver	24	3	0	0	0	0	0	0	0	0
Lung	106	107	0	0	0	0	0	0	0	0
Melanoma	11	7	0	0	0	0	0	0	0	0
Myeloma	13	5	0	0	0	0	0	0	0	0
Nasal	1	0	0	0	0	0	0	0	0	0
Non-Hodgkin Lymphoma	22	18	0	0	0	0	0	0	1	0
Oral Cavity	11	2	0	0	0	0	0	0	0	0
Other Biliary	5	4	0	0	0	0	0	0	0	0
Other Digestive	3	2	0	0	0	0	0	0	0	0
Other Endocrine	1	1	0	0	0	0	0	1	0	0
Other Female	0	3	0	0	0	0	0	0	0	0
Other Male	0	0	0	0	0	0	0	0	0	0
Other Skin	3	3	0	0	0	0	0	0	0	0
Other Respiratory	0	1	0	0	0	0	0	0	0	0
Other Urinary	0	0	0	0	0	0	0	0	0	0
Ovary	0	23	0	0	0	0	0	0	0	0
Pancreas	38	29	0	0	0	0	0	0	0	0
Prostate	39	0	0	0	0	0	0	0	0	0
Small Intestine	1	0	0	0	0	0	0	0	0	0
Soft Tissue including Heart	4	7	0	0	1	0	0	0	1	0
Stomach	1	3	0	0	0	0	0	0	0	0
Testis	0	0	0	0	0	0	0	0	0	0
Thyroid	1	1	0	0	0	0	0	0	0	0
Uterine	0	16	0	0	0	0	0	0	0	0
Mesothelioma	5	2	0	0	0	0	0	0	0	0
All Sites	480	444	0	1	1	1	0	1	3	3

¹See page 10 for definition of mortality.

	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Anus	0	0	0	0	0	0	0	0	0	0	0
Bladder w/ in situ	0	0	0	0	2	1	3	5	3	3	3
Bones and Joints	0	0	0	0	0	0	0	2	0	0	1
Brain	1	2	2	2	6	6	5	3	1	3	4
Breast	0	2	2	5	5	9	10	9	9	7	13
Cervix	1	0	0	2	0	0	0	0	1	0	0
Colorectal	1	1	4	3	9	10	11	7	16	10	17
Esophagus	0	1	0	0	2	6	6	7	2	8	2
Eye	0	0	0	0	0	0	0	0	0	0	1
Gallbladder	0	0	0	0	0	0	0	0	0	2	1
Hodgkin	0	0	0	0	0	0	0	0	0	0	0
III-Defined	0	0	1	2	7	8	9	9	7	12	16
Kidney	0	1	0	2	0	5	1	1	2	6	3
Larynx	0	0	0	1	0	0	0	1	1	0	0
Leukemia	1	1	2	1	2	5	4	6	7	1	6
Liver	0	0	0	1	3	10	10	3	0	0	0
Lung	1	0	2	5	14	23	29	43	37	23	36
Melanoma	0	1	0	1	2	3	2	1	2	2	4
Myeloma	0	0	0	1	1	1	2	3	0	4	6
Nasal	0	0	1	0	0	0	0	0	0	0	0
Non-Hodgkin Lymphoma	0	0	0	0	1	5	3	8	6	4	12
Oral Cavity	0	0	1	1	1	4	2	0	1	3	0
Other Biliary	0	0	0	0	1	1	3	1	1	0	2
Other Digestive	0	0	1	1	0	0	0	0	0	1	2
Other Endocrine	0	0	0	0	0	0	0	0	0	1	0
Other Female	0	0	0	0	0	0	0	0	1	0	2
Other Male	0	0	0	0	0	0	0	0	0	0	0
Other Skin	0	0	0	0	0	0	3	1	1	1	0
Other Respiratory	0	0	0	1	0	0	0	0	0	0	0
Other Urinary	0	0	0	0	0	0	0	0	0	0	0
Ovary	0	0	1	2	2	1	7	4	3	0	3
Pancreas	0	0	2	4	6	4	15	10	8	8	10
Prostate	0	0	0	0	1	3	3	6	5	11	10
Small Intestine	0	0	0	0	0	0	0	0	0	0	1
Soft Tissue including Heart	0	0	0	2	0	2	3	1	0	0	1
Stomach	0	0	1	0	1	0	0	0	0	0	2
Testis	0	0	0	0	0	0	0	0	0	0	0
Thyroid	0	0	0	1	0	0	1	0	0	0	0
Uterine	0	0	0	0	2	5	0	3	3	2	1
Mesothelioma	0	0	0	0	1	0	1	0	1	2	2
All Sites	5	9	20	38	69	112	133	134	118	114	162

**Wyoming Cancer Incidence for 2015: Cases by Race and Ethnicity
(Top 15 Sites Only)**

	Total	White	African American	Native American	Asian	Other	Ethnicity: Hispanic/Latino
All Sites	2,576	2,500	17	30	16	13	85
Bladder	140	135	0	2	2	1	1
Brain	45	45	0	0	0	0	1
Breast (Female)	346	333	0	5	5	3	11
Colorectal	196	191	0	4	1	0	6
Kidney	88	87	0	1	0	0	9
Leukemia	83	79	1	1	1	1	4
Lung	276	263	4	7	1	1	7
Melanoma	148	147	0	0	0	1	1
Non-Hodgkin Lymphoma	112	108	0	2	1	1	3
Oral Cavity	58	58	0	0	0	0	1
Ovary	38	38	0	0	0	0	2
Pancreas	78	75	2	0	1	0	4
Prostate	352	344	2	2	1	3	13
Thyroid	101	101	0	0	0	0	2
Uterine	82	79	1	2	0	0	2

**Wyoming Cancer Mortality for 2015: Cases by Race and Ethnicity
(Top 15 Sites Only)**

	Total	White	African American	Native American	Asian	Other	Ethnicity: Hispanic/Latino
All Sites	958	928	9	15	6	0	36
Bladder	20	20	0	0	0	0	0
Brain/CNS	37	36	0	0	1	0	1
Breast (Female)	71	69	0	1	1	0	1
Colorectal	90	88	0	2	0	0	3
Kidney	21	21	0	0	0	0	0
Leukemia	38	35	0	2	1	0	1
Lung	213	206	2	5	0	0	11
Melanoma	18	18	0	0	0	0	0
Non-Hodgkin Lymphoma	40	40	0	0	0	0	0
Oral Cavity	13	13	0	0	0	0	0
Ovary	23	22	0	1	0	0	2
Pancreas	67	65	1	0	1	0	5
Prostate	39	38	0	1	0	0	1
Thyroid	2	2	0	0	0	0	0
Uterine	16	15	1	0	0	0	3

State of Wyoming - 2015

Top Cancer Sites by Gender and Age - Incidence and Mortality

Top Cancer Incidence - Site by Gender - 2015

Total		Male		Female	
Prostate	352	Prostate	352	Breast	340
Breast	346	Lung	131	Lung	145
Lung	276	Colorectal	108	Colorectal	88
Colorectal	196	Bladder	104	Uterine	82
Melanoma	148	Melanoma	77	Thyroid	77

Top Incidence Sites by Age (Case count included only if more than 3 cases per cancer)

		<u>0-4</u>		<u>5-9</u>		<u>10-14</u>		<u>15-19</u>	
		Each site has less than 3 cases		Each site has less than 3 cases		Each site has less than 3 cases		Each site has less than 3 cases	
<u>20-24</u>		<u>25-29</u>		<u>30-34</u>		<u>35-39</u>		<u>40-44</u>	
Testis	5	Thyroid	6	Thyroid	14	Breast	14	Thyroid	15
Melanoma	3	Breast	5	Breast	6	Thyroid	14	Breast	13
NHL	3			Melanoma	6	Melanoma	7	Brain	6
Soft Tissue/ including heart	3							NHL	5
<u>45-49</u>		<u>50-54</u>		<u>55-59</u>		<u>60-64</u>		<u>65-69</u>	
Breast	29	Breast	39	Prostate	37	Prostate	83	Prostate	82
Thyroid	11	Melanoma	21	Breast	31	Breast	50	Breast	60
Lung	9	Prostate	20	Lung	21	Lung	41	Lung	41
Colorectal	8	Colorectal	15	Colorectal	18	Melanoma	24	Colorectal	31
Ovary	7	Lung	12	Uterine	16	Uterine	23	Bladder	26
<u>70-74</u>		<u>75-79</u>		<u>80-84</u>		<u>85+</u>			
Prostate	69	Lung	45	Lung	29	Lung	24		
Lung	49	Prostate	32	Breast	22	Colorectal	23		
Breast	37	Colorectal	29	Bladder	20	Breast	16		
Colorectal	26	Breast	24	NHL	18	Bladder	15		
Ill-Defined	22	Bladder	20	Prostate	12	Ill-Defined	14		

**Relative Survival Rates State of Wyoming
2007-2015
All Sites and Top 15 Cancers**

Relative Survival by Cancer Type: 2007-2015 (All Ages Combined)

	12 Months	24 Months	36 Months	48 Months	60 Months
All Sites	81.20%	73.90%	69.50%	65.90%	62.70%
Bladder w/in situ	88.20%	80.00%	76.50%	71.50%	68.00%
Brain/CNS	56.30%	39.40%	34.80%	28.40%	23.40%
Breast (Female)	97.30%	94.70%	90.70%	87.70%	85.00%
Colorectal	81.60%	70.80%	64.60%	58.90%	55.30%
Kidney	86.70%	80.20%	74.10%	69.90%	63.90%
Leukemia	74.40%	68.10%	60.80%	55.80%	51.90%
Lung	40.50%	24.40%	18.40%	15.00%	12.00%
Melanoma	98.30%	95.70%	94.20%	91.80%	90.70%
Non-Hodgkin	82.10%	76.00%	74.40%	69.30%	64.50%
Oral Cavity	86.60%	76.60%	68.20%	63.20%	58.10%
Ovary	78.20%	64.50%	50.60%	41.90%	36.20%
Pancreas	29.30%	15.60%	10.00%	6.20%	6.20%
Prostate	99.30%	98.40%	97.40%	96.30%	94.70%
Thyroid	97.90%	97.60%	95.90%	95.90%	92.30%
Uterine	93.50%	88.00%	83.00%	80.10%	74.60%

Relative Survival by Cancer Type: 2007-2015 (Ages 0-19 years old)

	12 Months	24 Months	36 Months	48 Months	60 Months
All Sites	92.20%	88.60%	86.80%	83.20%	81.30%
Brain	82.20%	74.00%	74.00%	59.20%	59.20%
Leukemia	92.90%	89.20%	85.30%	85.30%	80.40%
Bone & Joints	100.00%	77.80%	77.80%	58.40%	58.40%
Hodgkin Lymphoma	92.30%	92.30%	92.30%	92.30%	92.30%
Melanoma	77.10%	77.10%	77.10%	77.10%	77.10%
Soft Tissue, including Heart	100.00%	100.00%	100.00%	100.00%	100.00%

Note: Recurrent percentages across months are partly due to low numbers of cases in this age-group

Relative Survival: is a net survival measure representing cancer survival in the absence of other causes of death. It is defined as the ratio of the proportion of observed survivors in a cohort of cancer patients to the proportion of expected survivors in a comparable set of cancer-free individuals for a specific time period.

5-Year Survival: A 5-year (60 months) survival rate is important when discussing cancer because a person who is diagnosed with cancer (e.g., breast cancer) is considered “cured” if they can survive five years after treatment and they are found to have no other cancer. This does not mean that they may not develop another cancer after five years or even have a recurrence, but for the initial diagnosis they are considered “cured.”

Stage: Many factors play a part in the survival of a cancer patient including the stage at which the cancer is detected. Having a cancer diagnoses at an early stage (e.g., local or Stage I) generally results in a better survival prognosis than a cancer detected in its later stages (e.g., distant or Stage IV).

**Summary of
All Cancer Sites Combined
and
Top 15 Sites**

2015 Wyoming Incidence and Mortality Rates

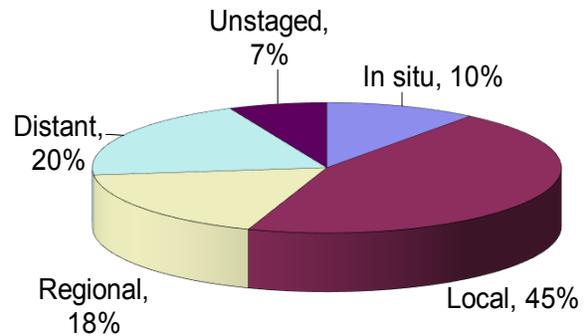
All Cancer Sites

Incidence and Mortality Summary

	Male	Female	Total
Invasive Cases	1,337	1,240	2,577
In situ Cases	153	140	293
WY Incidence	399.4*	375.0	383.8*
US Incidence	468.3	419.3	437.5
Cancer Deaths	480	444	924
WY Mortality	154.6*	126.1	138.8
US Mortality	193.6	138.6	161.9

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



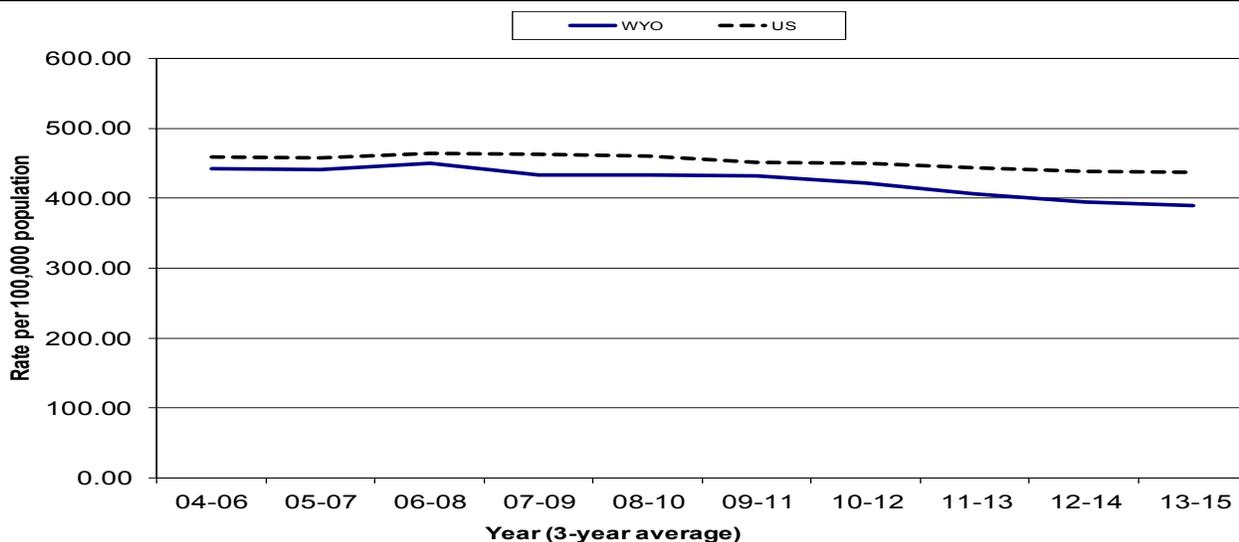
The incidence rates for Wyoming’s total population and males were significantly lower than the United States rates for 2015. The incidence rate for females, while lower than the national rate, was not statistically significant. The mortality rates for total population, males and females were all lower than the United States mortality, but only the rate for males was statistically significant.

The 12-year incidence trend for Wyoming continues a modest decline that started in 2009-2011, while the U.S. trend appears steady.

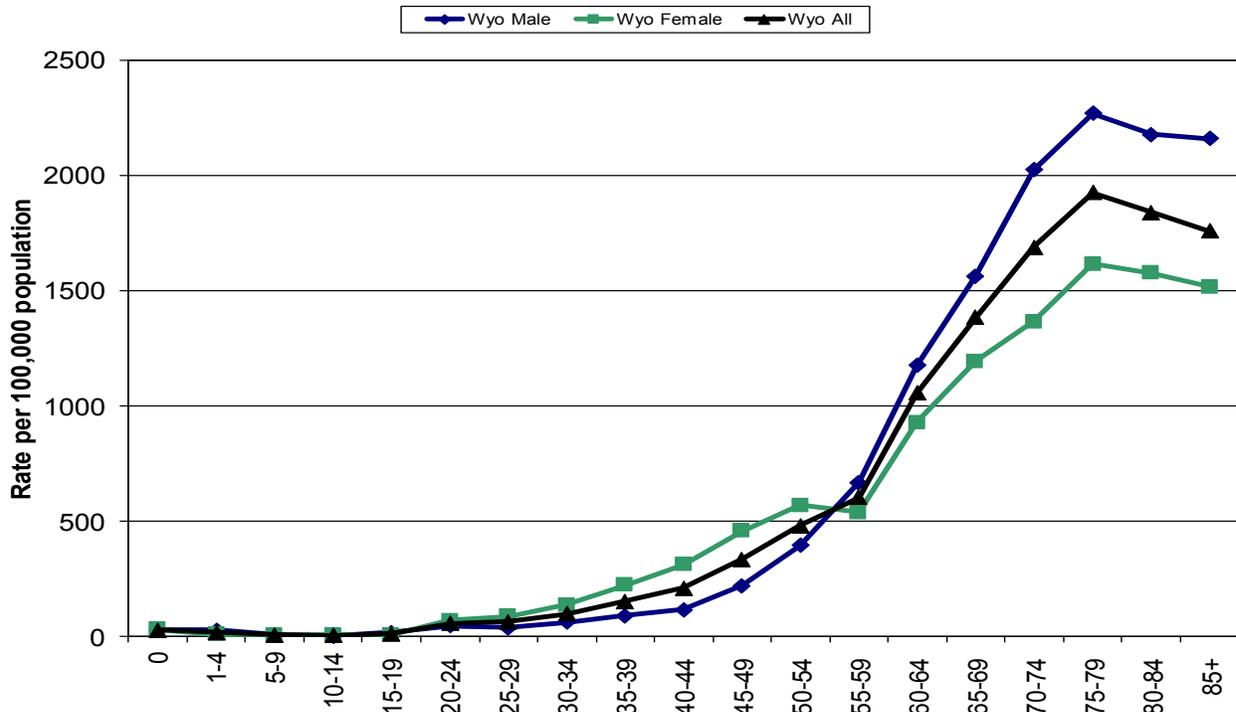
There were no significant changes in the percentages of cancer diagnosed at each stage from 2014 to 2015. Over half (55%) of cancers in Wyoming were staged as either In situ or Local which is considered “early” and are more treatable and curable than cancers diagnosed as Regional or Distant (late).

There were no significant differences between CHD rates for incidence or mortality.

12-Year Incidence Trend

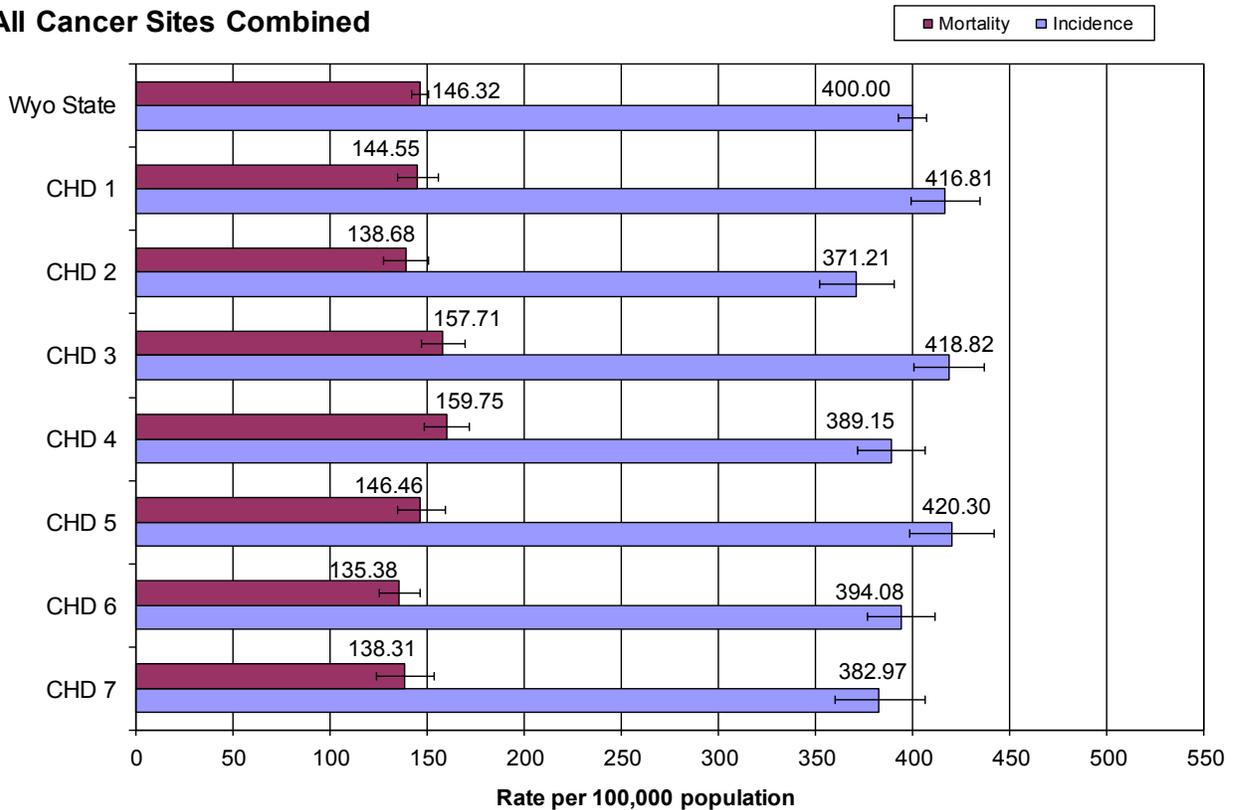


Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015

All Cancer Sites Combined



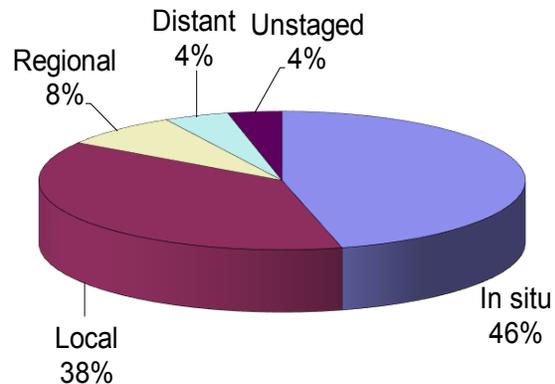
Bladder (Urinary)

Incidence and Mortality Summary

	Male	Female	Total
Invasive Cases	56	20	76
In situ Cases	48	16	64
WY Incidence	33.5	9.90	20.7
US Incidence	36.4	8.7	20.9
Cancer Deaths	14	6	20
WY Mortality	4.6	1.6	3.0
US Mortality	7.9	2.1	4.6

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



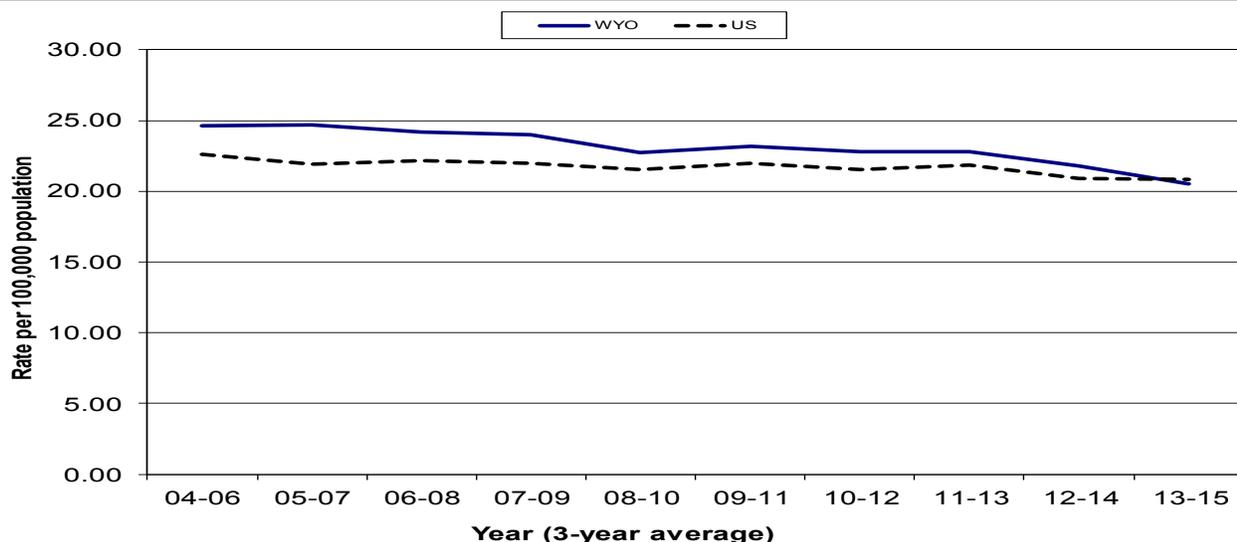
The incidence rates in Wyoming for males and total population were lower than the national rate, while the female rate was higher than the national rates in 2015. All of the Wyoming populations were lower than the nation in mortality.

The incidence trend shows that for the first time Wyoming incidence rates have dropped below the national rates. It remains to be seen if this trend continues.

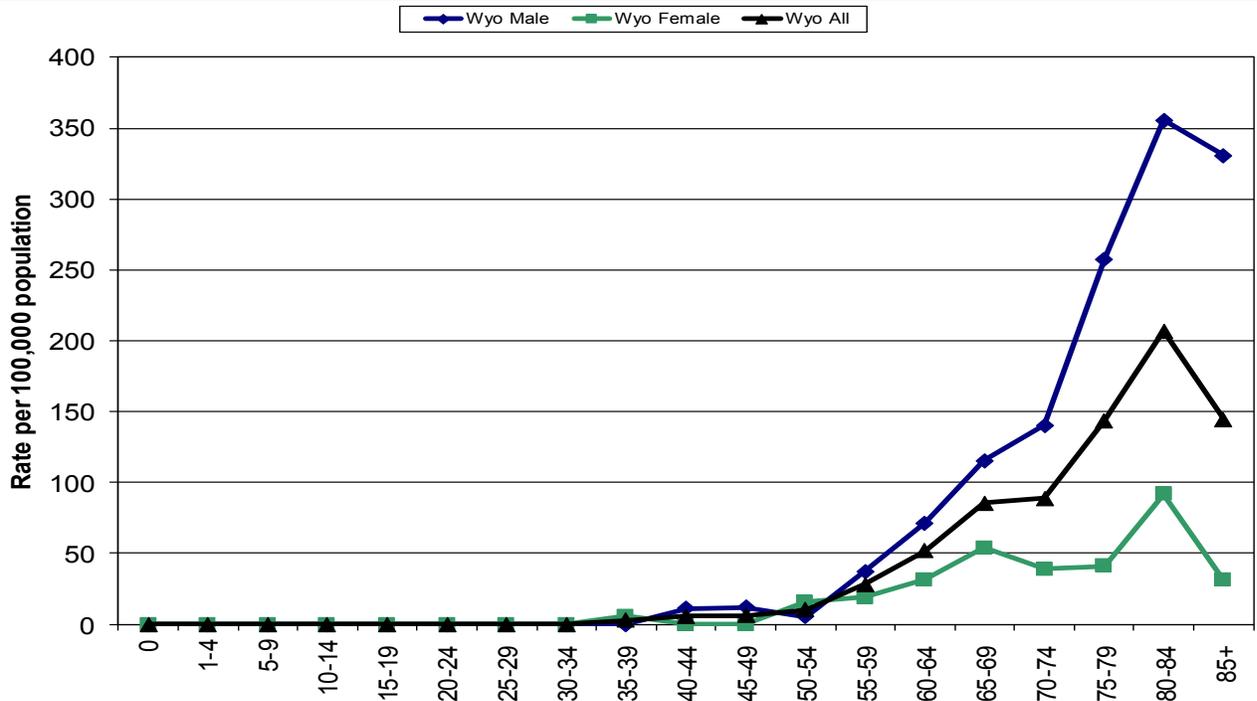
The percent of bladder cancers diagnosed at each stage in 2015 were basically unchanged from 2014.

No statistically significant differences were found between the CHD rates and the state rate for incidence or mortality.

12-Year Incidence Trend

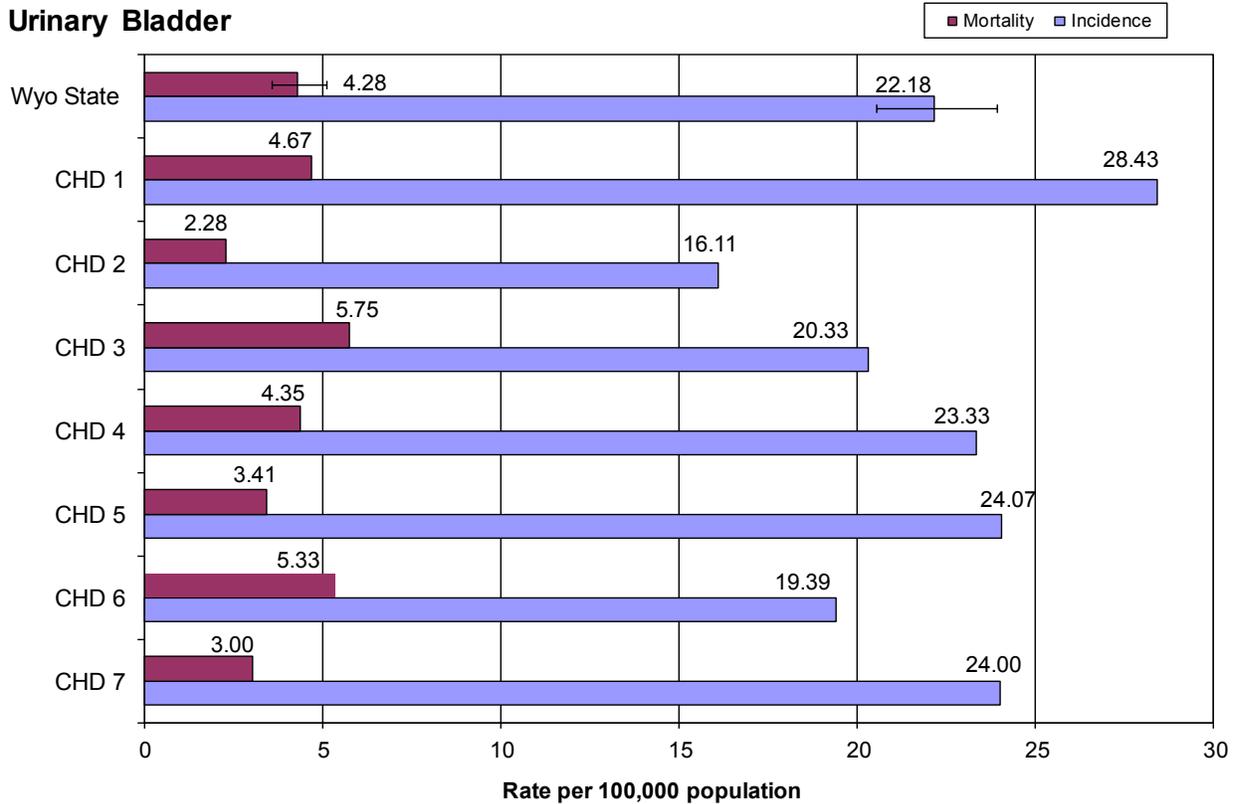


Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015

Urinary Bladder



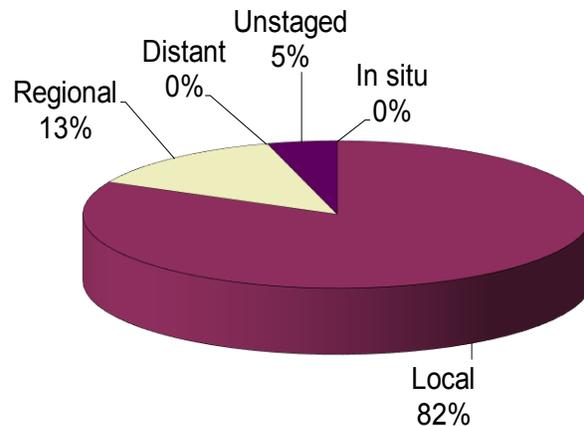
Brain/Central Nervous System (CNS)

Incidence and Mortality Summary

	Male	Female	Total
Invasive Cases	22	23	45
WY Incidence	7.3	7.0	7.2
US Incidence	8.3	5.6	6.9
Cancer Deaths	20	17	37
WY Mortality	6.5	4.6	5.5
US Mortality	5.9	3.9	4.8

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



The incidence rate of Brain/CNS cancer in Wyoming females and total population were both higher than the national rate, while males were lower. However, in term of mortality each Wyoming population was higher than that national rate.

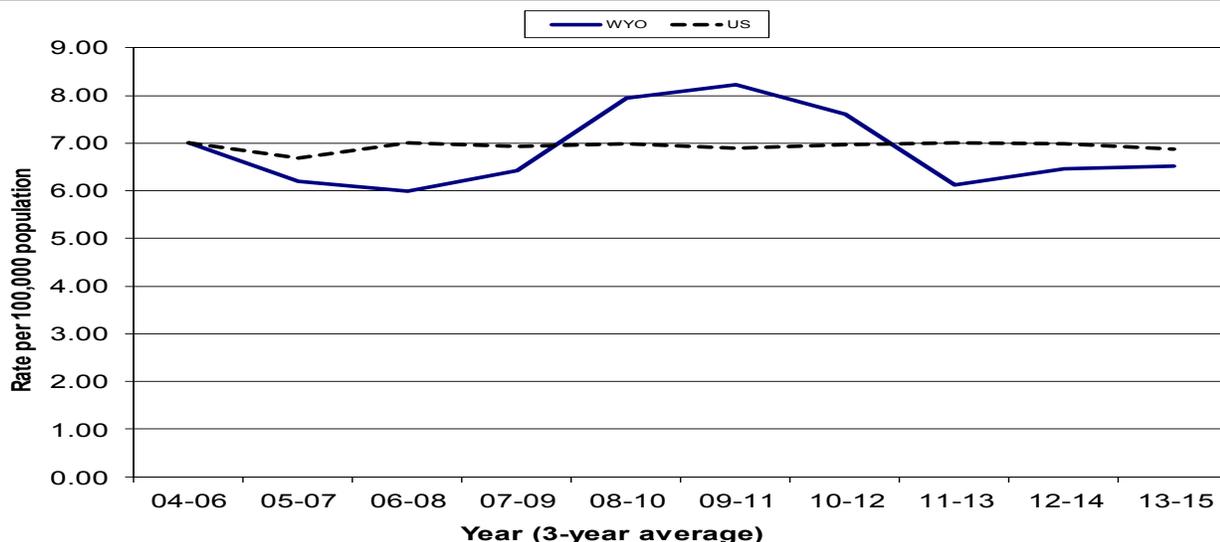
The 12-year trend shows a slight increase from 2011-2013 to 2012-2014 reaching a bit of a plateau in 2013-2015. The national rate is unchanged.

There were fewer cases diagnosed in Wyoming residents under age 30 in 2015, than 2014.

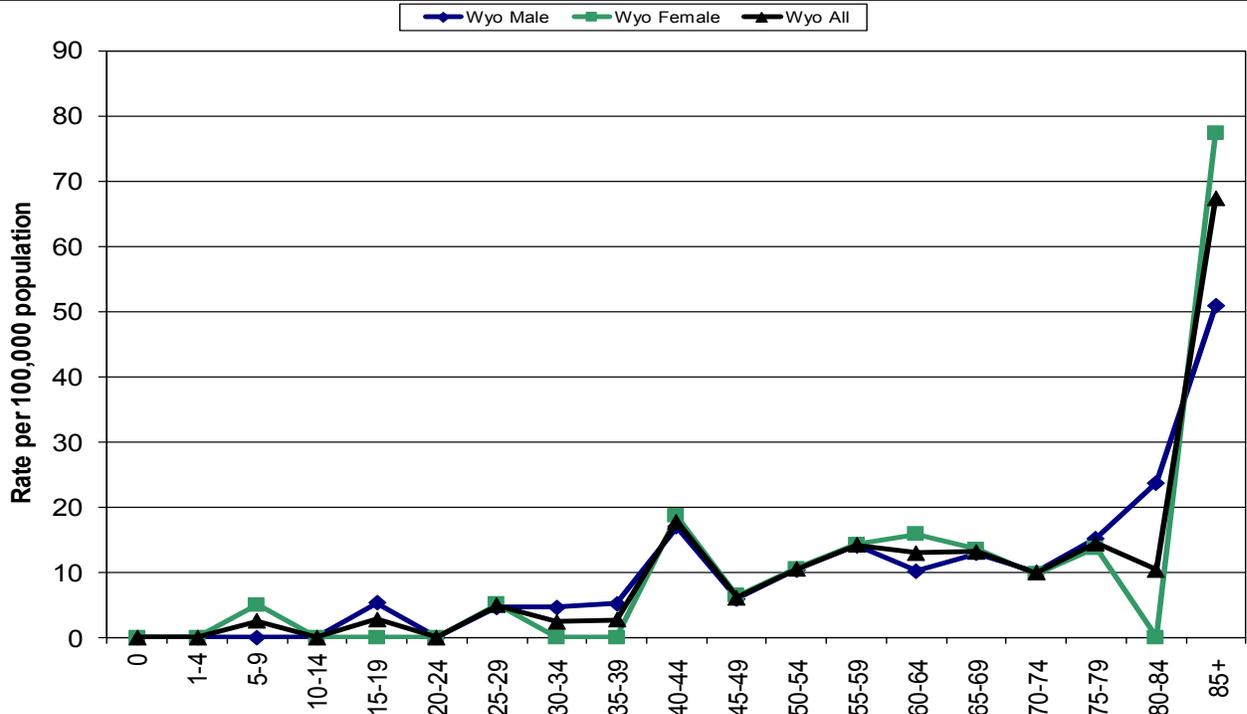
The percentage of cases diagnosed as Regional increase from 5% in 2014 to 13% in 2015, while cases diagnosed as Distant declined from 5% in 2014 to zero in 2015. No changes were significant.

No statistically significant differences were found between the CHD rates and the state rates.

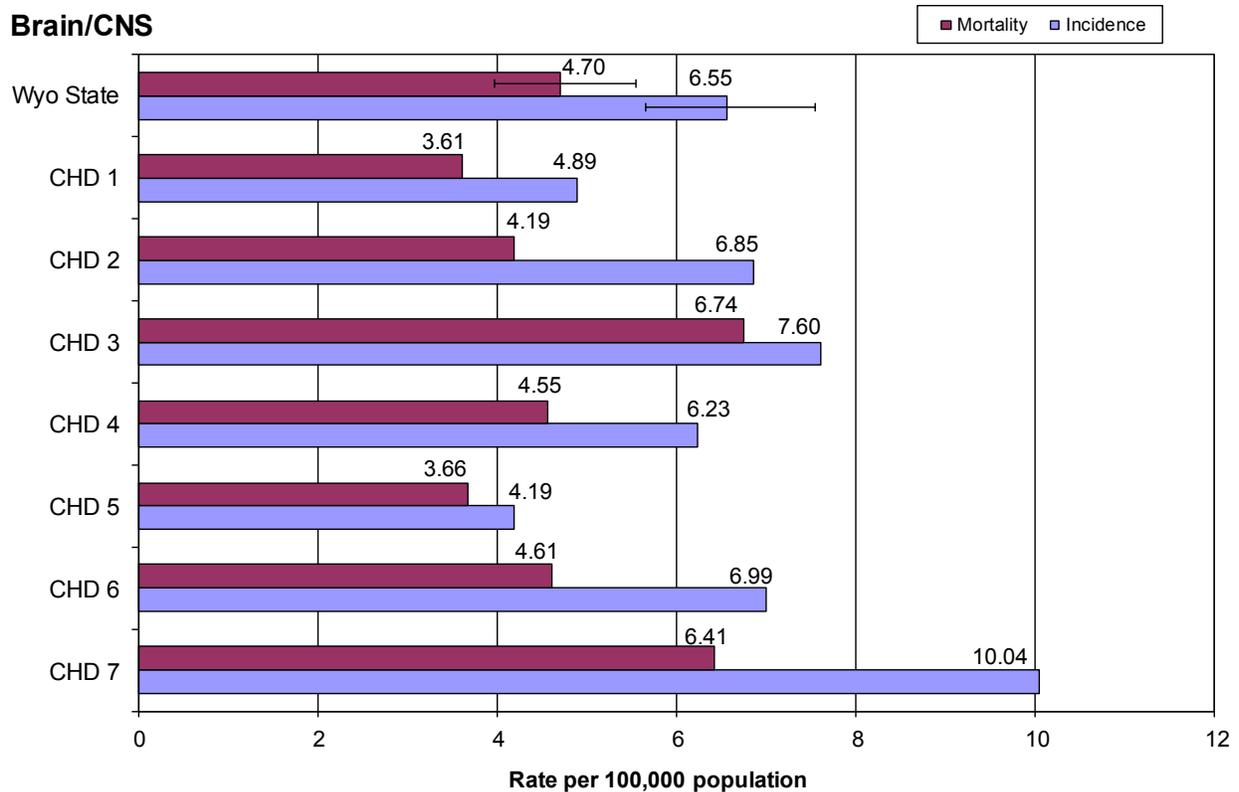
12-Year Incidence Trend



Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015



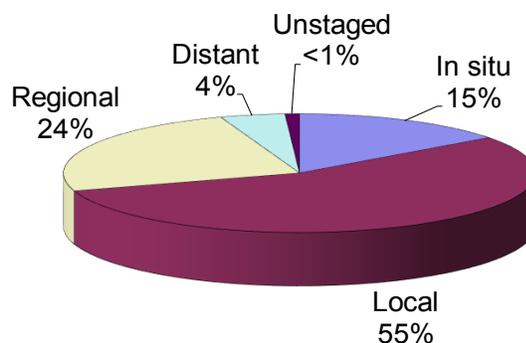
Breast (Female Only)

Incidence and Mortality Summary

	Female
Invasive Cases	340
In situ Cases	58
WY Incidence	104.0
US Incidence	127.3
Cancer Deaths	70
WY Mortality	20.2
US Mortality	20.0

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



The incidence rate of female breast cancer in Wyoming remained lower than the national rate in 2015, while the mortality rate was basically equal to the national rate.

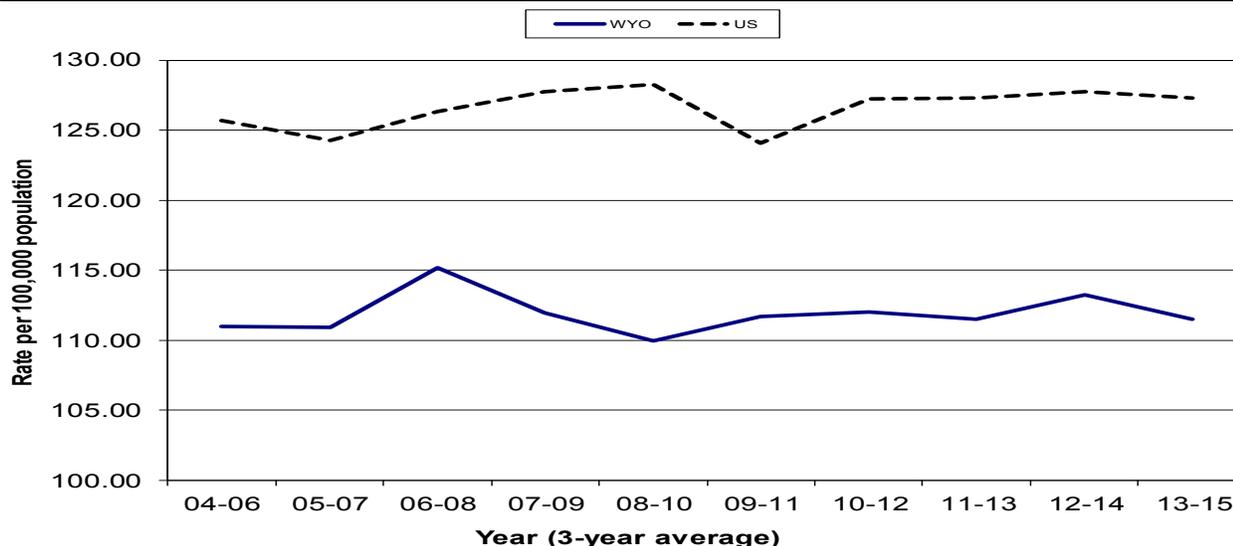
The 12-year incidence trend shows a decrease from 2012-2014 to 2013-2015 after a small increase starting in 2011-2013. The national trend remained basically flat.

The percentage of cases diagnosed at each stage in 2015 were almost identical to the percentages in 2014.

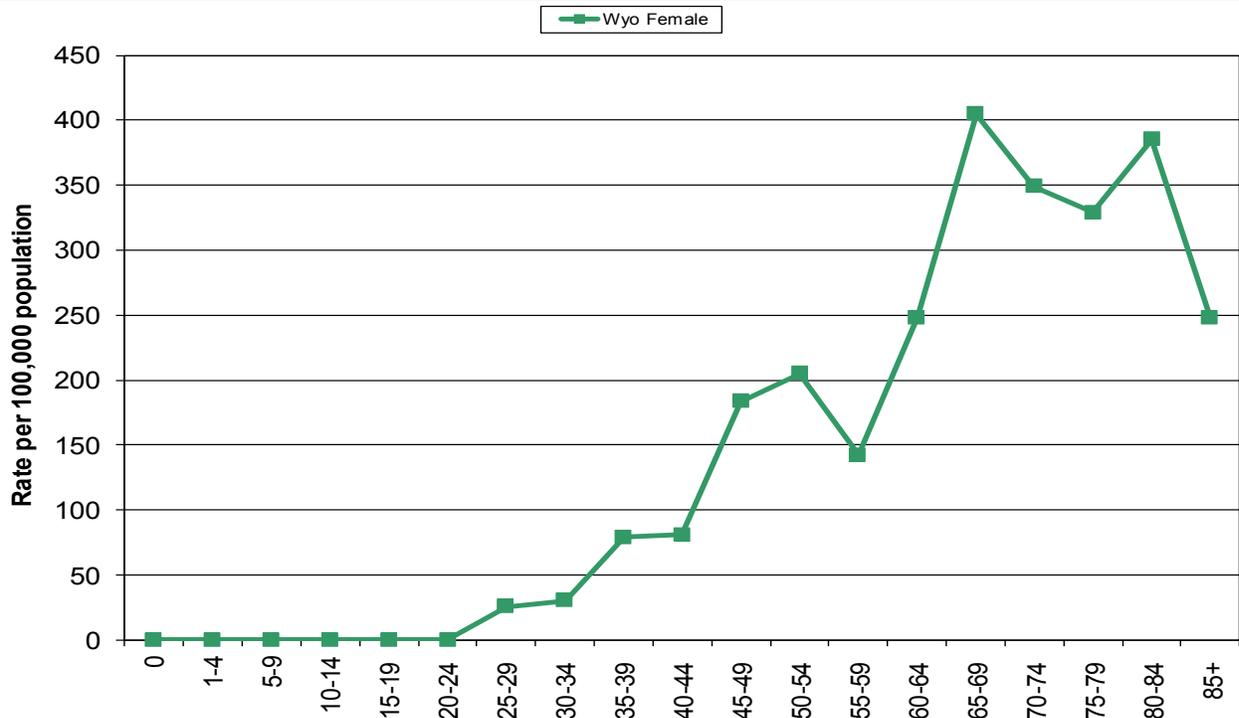
No statistically significant differences were found for incidence or mortality between CHDs.

There were eight cases (6 malignant and 2 In situ) of breast cancer diagnosed in Wyoming males in 2015.

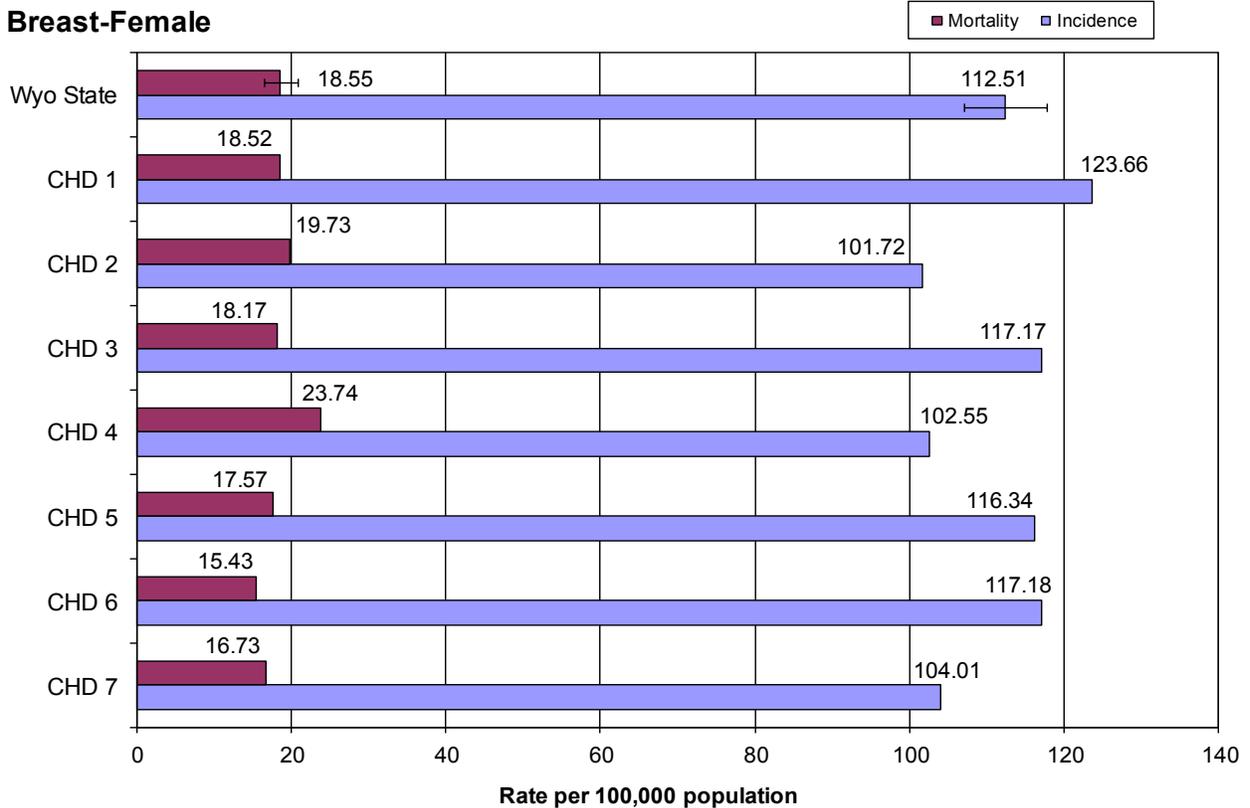
12-Year Incidence Trend



Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015



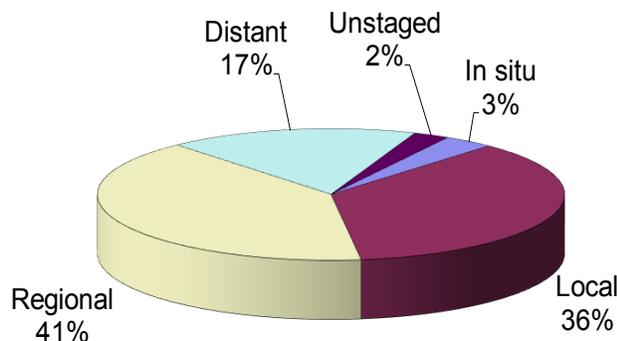
Colorectal

Incidence and Mortality Summary

	Male	Female	Total
Invasive Cases	108	88	196
In situ Cases	4	3	7
WY Incidence	33.9	26.4	30.0
US Incidence	44.2	33.5	38.4
Cancer Deaths	45	45	90
WY Mortality	14.6	13.0	13.9
US Mortality	16.4	11.7	13.8

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



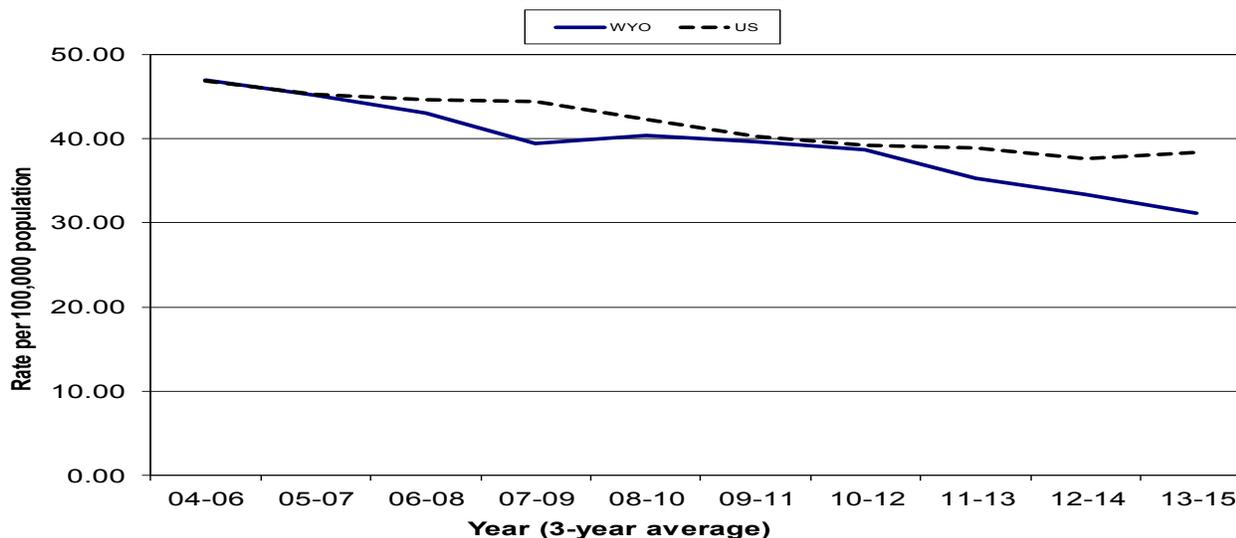
The Wyoming incidence rates for colorectal cancer in males, females and total population were all lower than the national rates in 2015. The mortality rates in males and females were also lower as the total rate was essentially equal to the national rate.

The 12-year incidence graph shows that the incidence rate in Wyoming continues to decrease, as the national trend has leveled off over time.

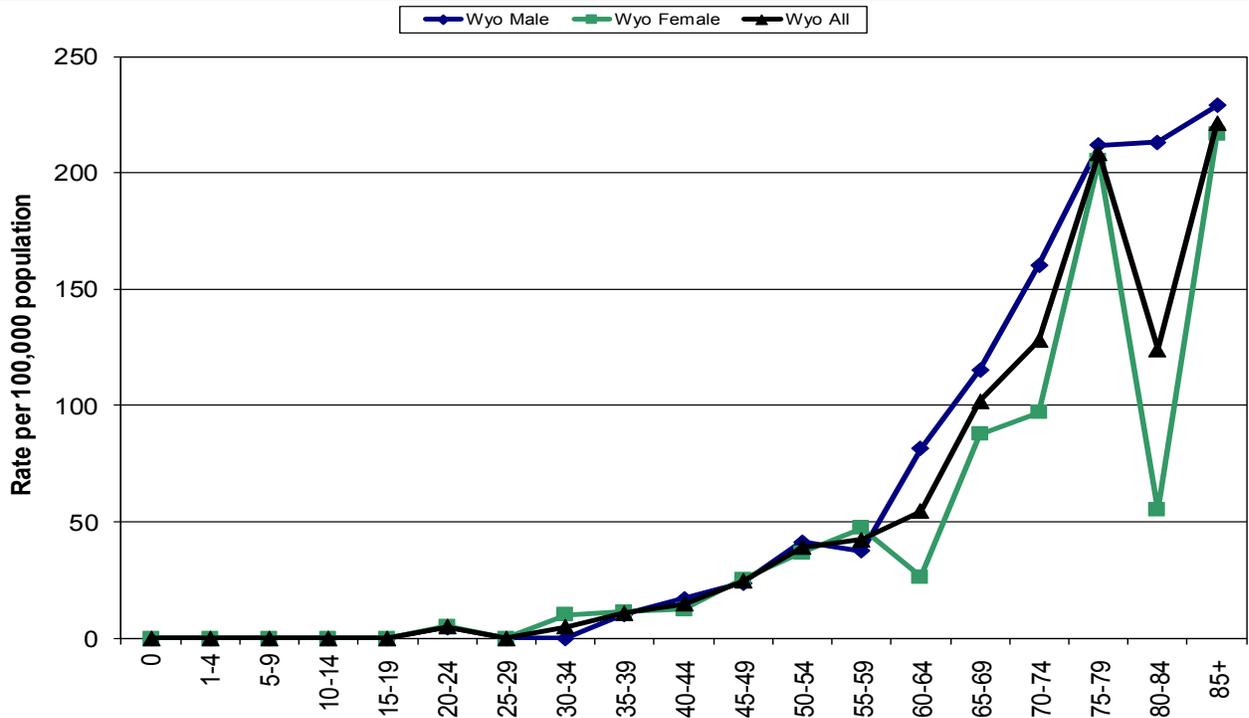
The percentage of colorectal cancers diagnosed at the Local stage in decreased in 2015 as compared to 2014 (44%), but the Regional stage increased from 2014 (33%).

No statistically significant differences were found between the CHD rates and the state rate for incidence or mortality.

12-Year Incidence Trend

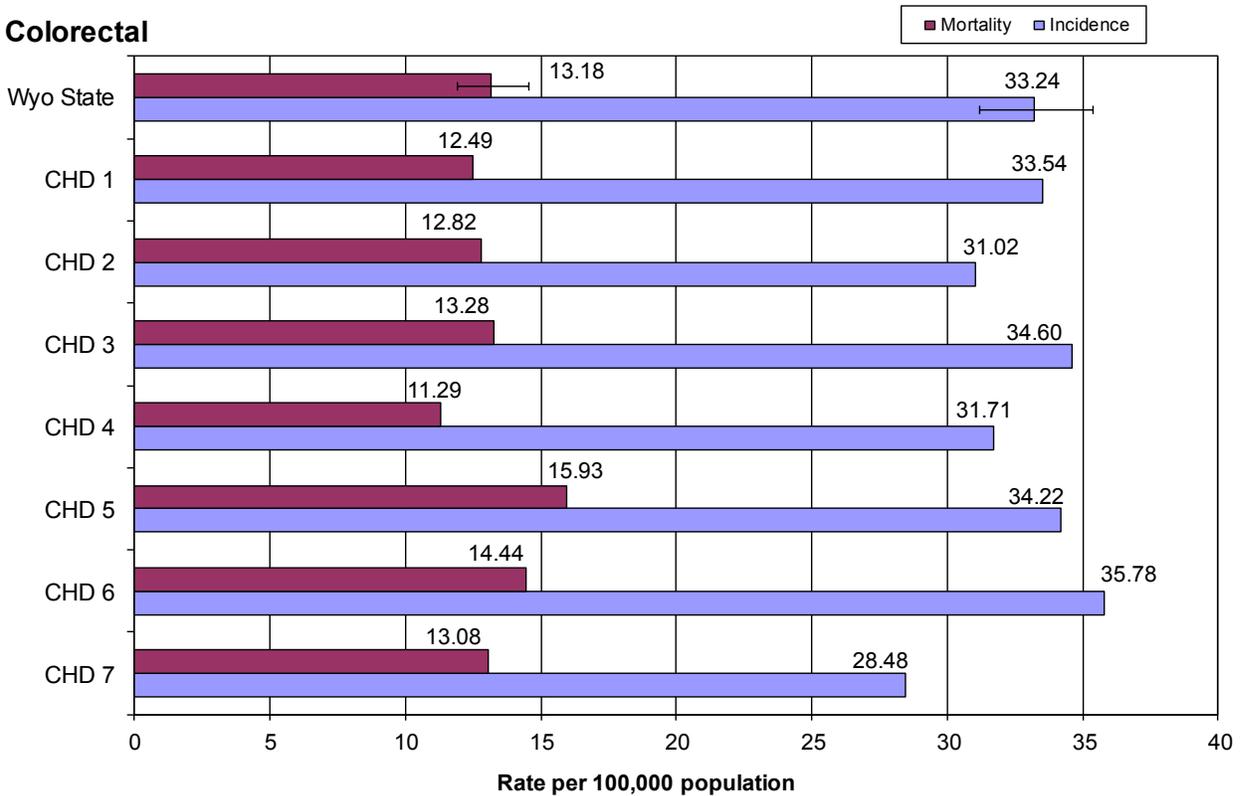


Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015

Colorectal



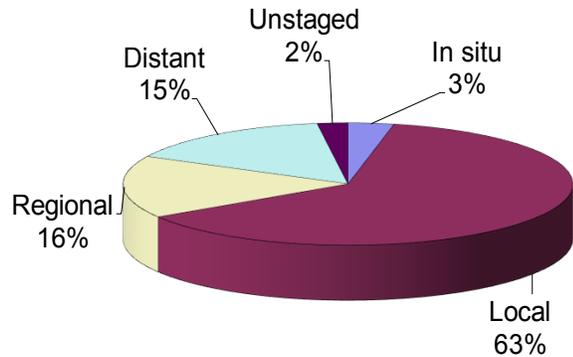
Kidney/Renal Pelvis

Incidence and Mortality Summary

	Male	Female	Total
Invasive Cases	57	31	88
WY Incidence	16.6	9.2	13.1
US Incidence	22.0	10.9	16.1
Cancer Deaths	13	8	21
WY Mortality	4.4	2.5	3.3
US Mortality	5.7	2.3	3.9

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



The incidence rates for kidney/renal pelvis cancer in Wyoming were all lower than the national rates in 2015. The mortality rate for Wyoming females was slightly higher than the national, while the two other rates were both lower.

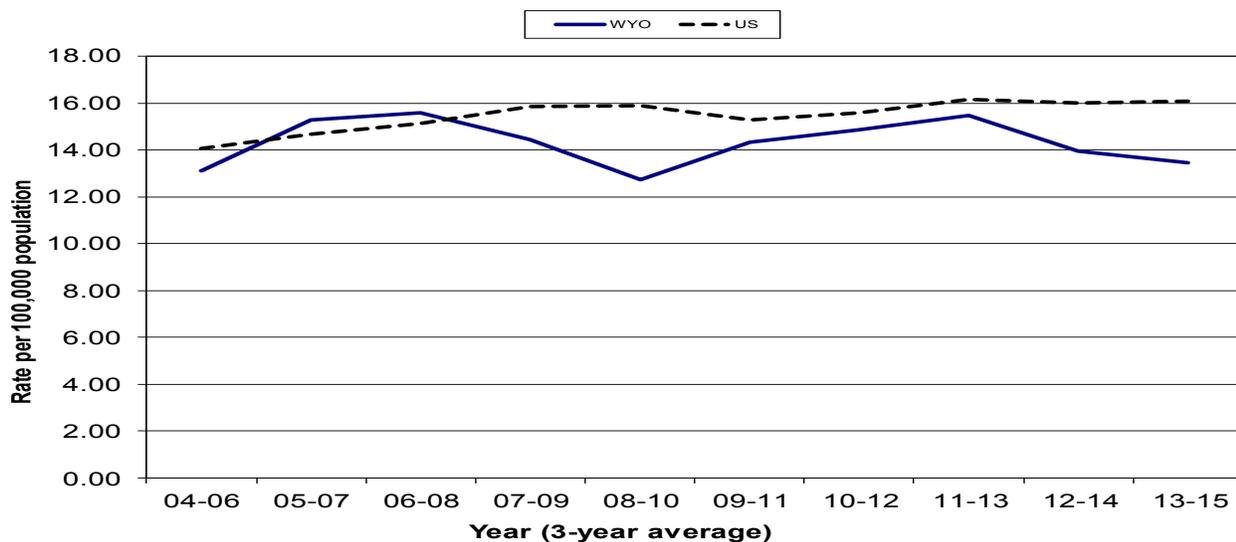
The 12-year trend shows a continuing decrease for Wyoming while the national rate remains steady.

The percent of cases diagnosed as Local in 2015 increased from 2014 (48%), while Regional cases decreased from 2014 (27%).

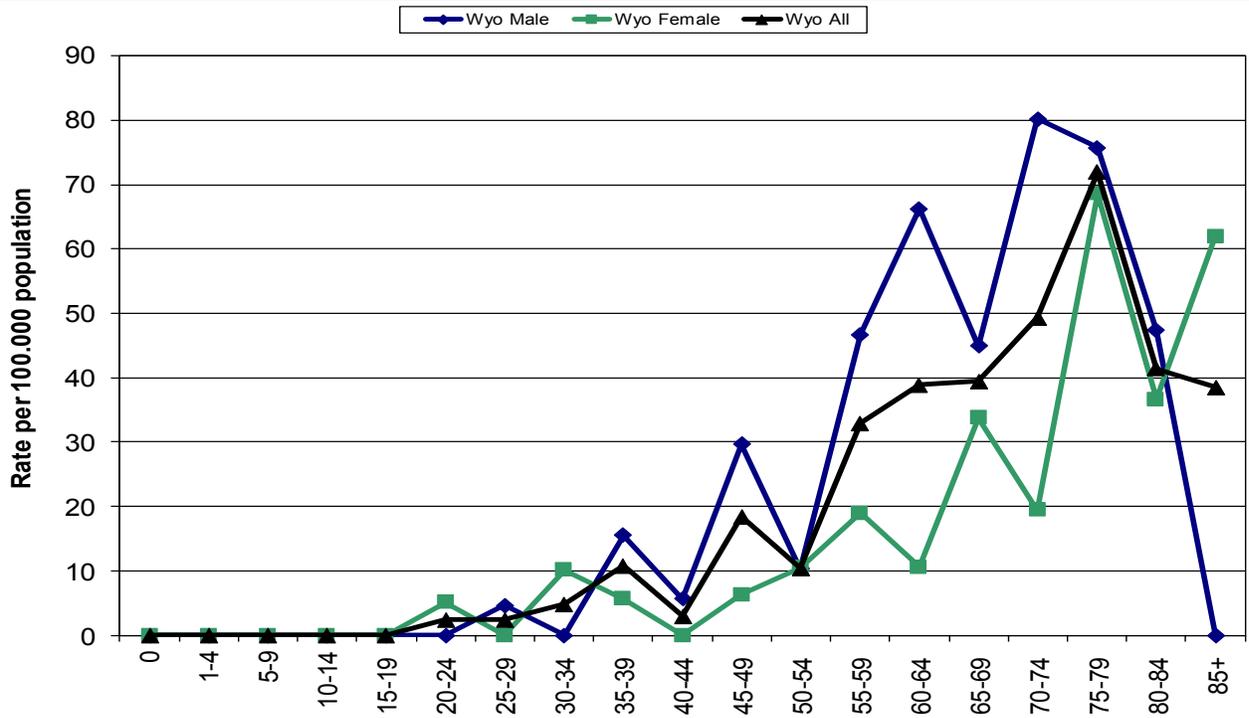
Unlike 2014, there were no cases diagnosed in Wyomingites under 20 years of age.

No statistically significant differences were found between the CHD rates and the state rates.

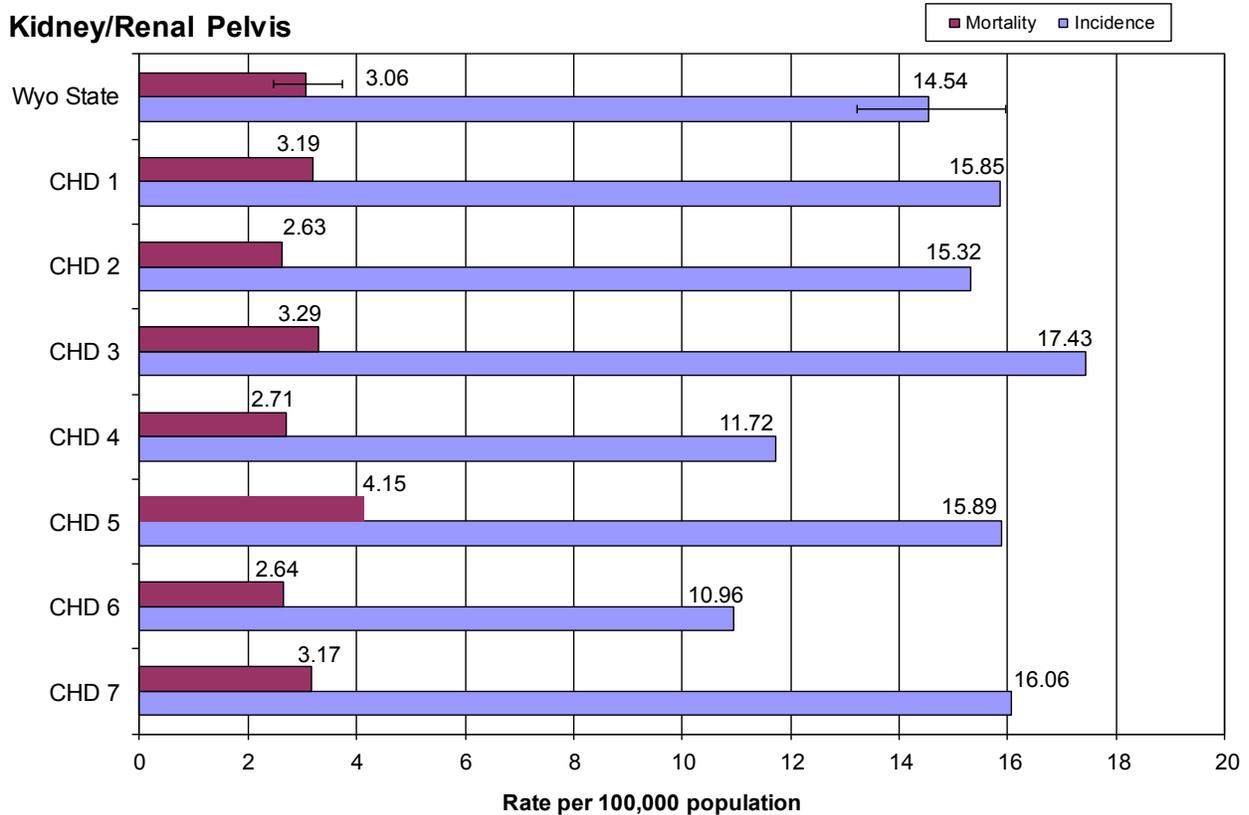
12-Year Incidence Trend



Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015



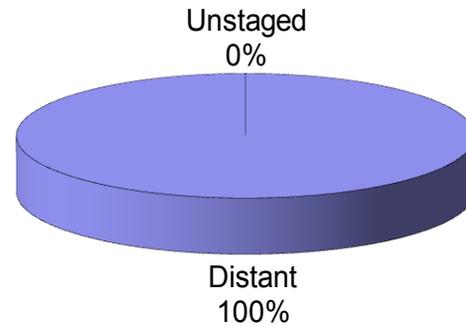
Leukemia

Incidence and Mortality Summary

	Male	Female	Total
Invasive Cases	52	31	83
WY Incidence	15.9	9.2	12.5
US Incidence	18.0	11.0	14.2
Cancer Deaths	22	16	38
WY Mortality	7.3	4.6	6.0
US Mortality	9.2	5.2	6.9

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



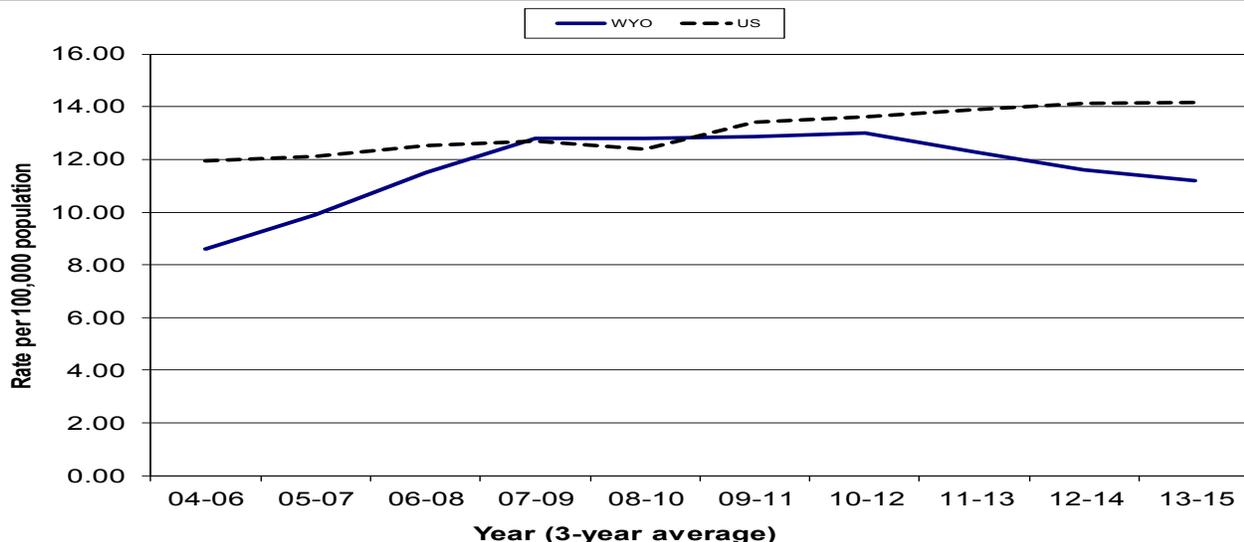
The incidence and mortality rates for leukemia in Wyoming for males, females, and total population were all lower than the national rates.

There were twenty-one more cases of leukemia diagnosed in 2015 than were diagnosed in 2014, eleven were in males and ten in females.

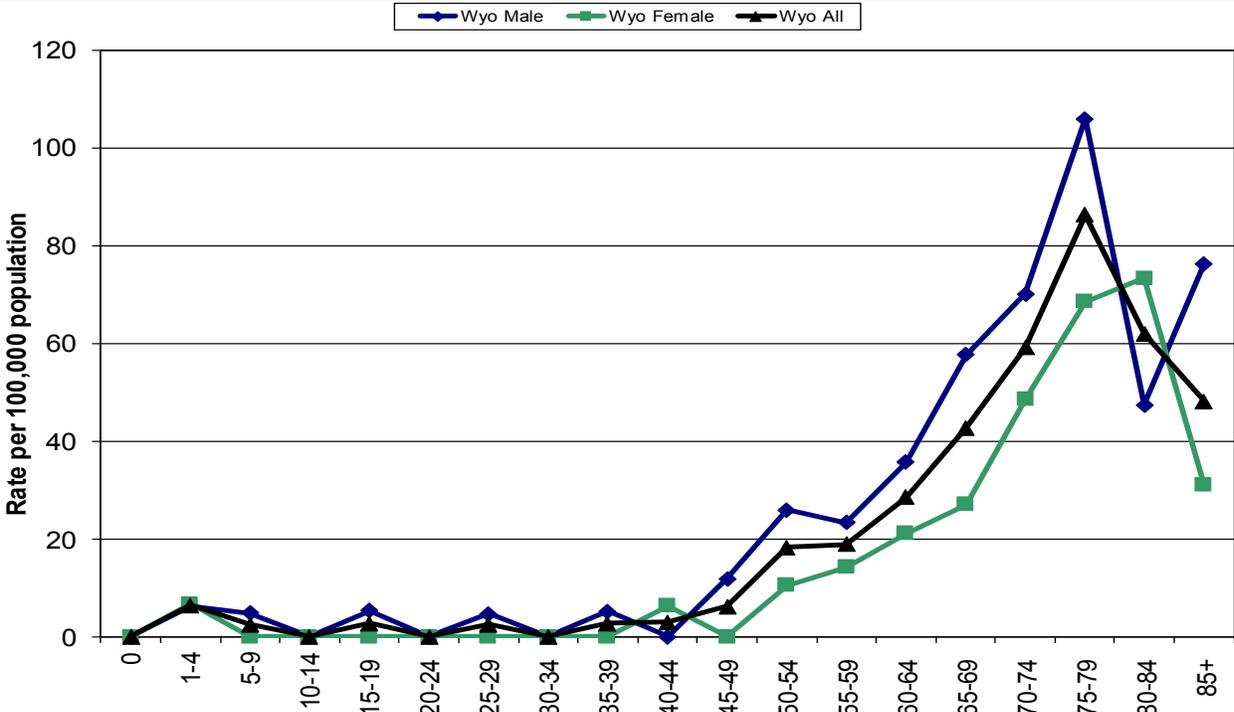
The incidence trend for Wyoming continues the decrease that began in 2010-2012, while the national rate continues to increase slightly over time.

No statistically significant differences were found between the CHD rates and the state rate for incidence or mortality.

12-Year Incidence Trend

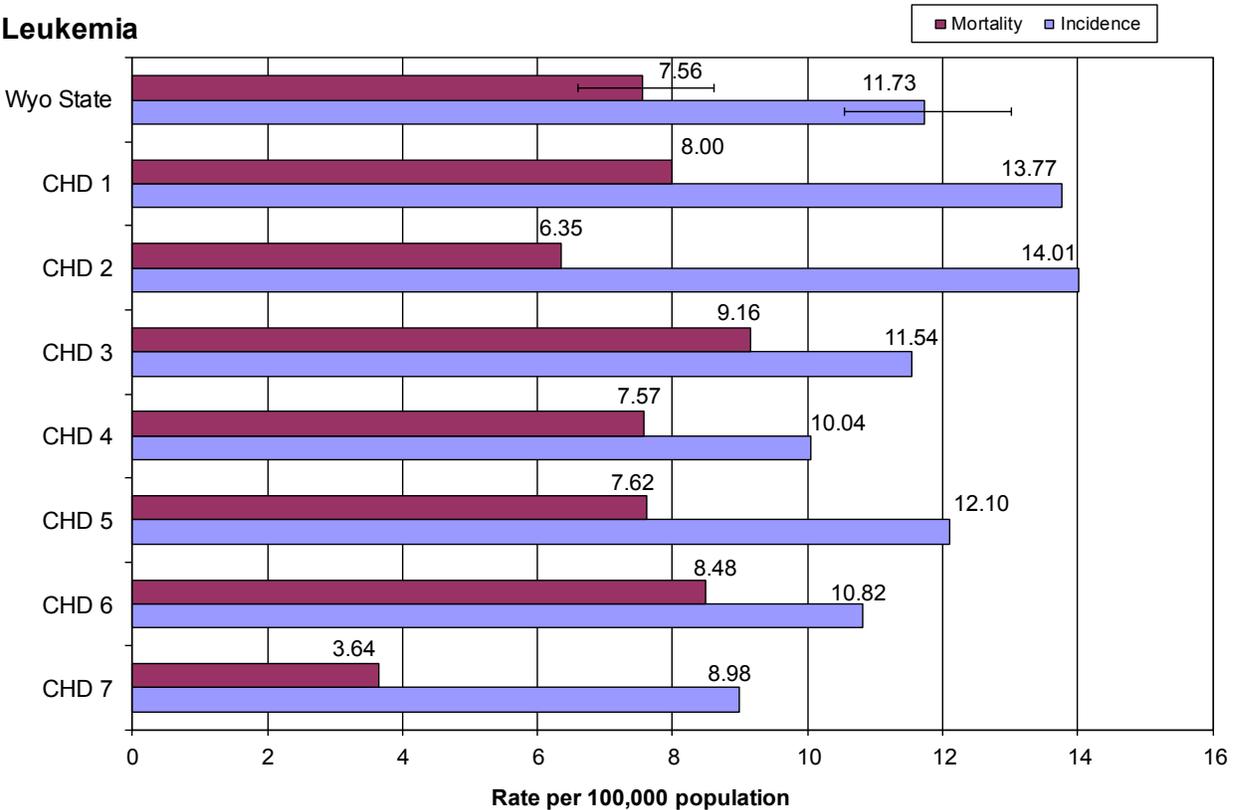


Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015

Leukemia



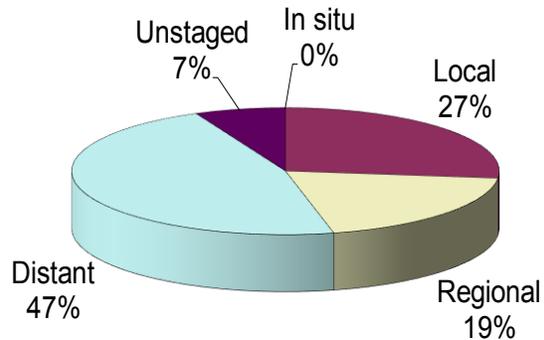
Lung and Bronchus

Incidence and Mortality Summary

	Male	Female	Total
Invasive Cases	131	145	276
WY Incidence	40.5*	42.4	41.6
US Incidence	61.7	49.0	54.5
Cancer Deaths	106	107	213
WY Mortality	35.0*	30.6	32.2
US Mortality	52.1	36.0	43.0

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



Lung cancer incidence and mortality rates in Wyoming males, females, and total population continue to all be lower than the national rates in 2015, with only the differences in rates for males being statistically significant.

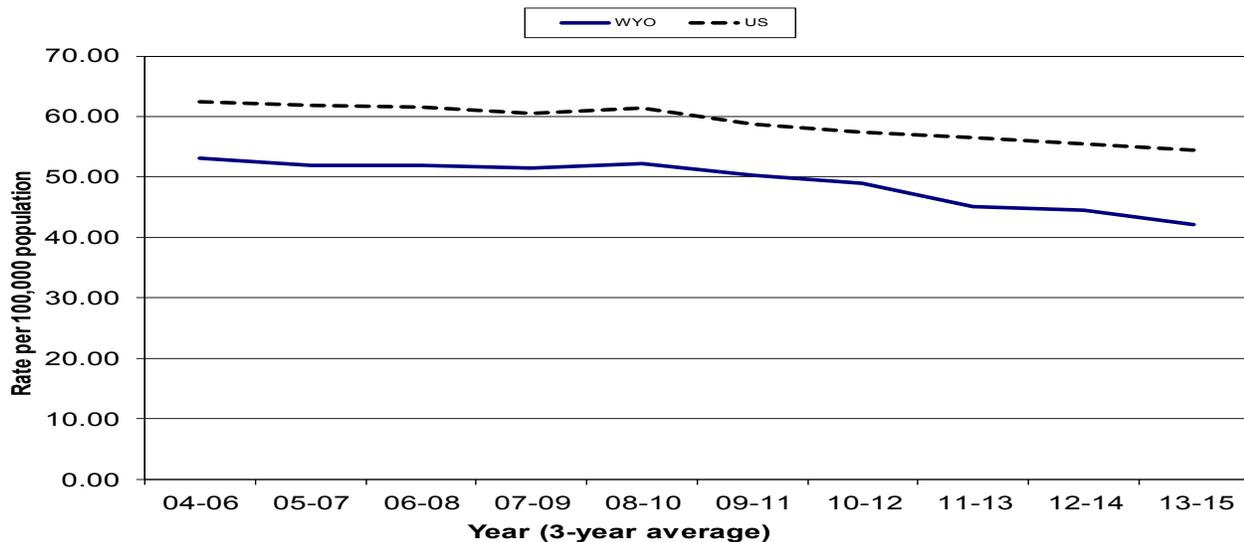
For only the third time since 1980, more Wyoming females were diagnosed with lung cancer than males.

The 12-year incidence trend showed the rates for lung cancer show a continued decrease in Wyoming and the U.S. from 2008-2010.

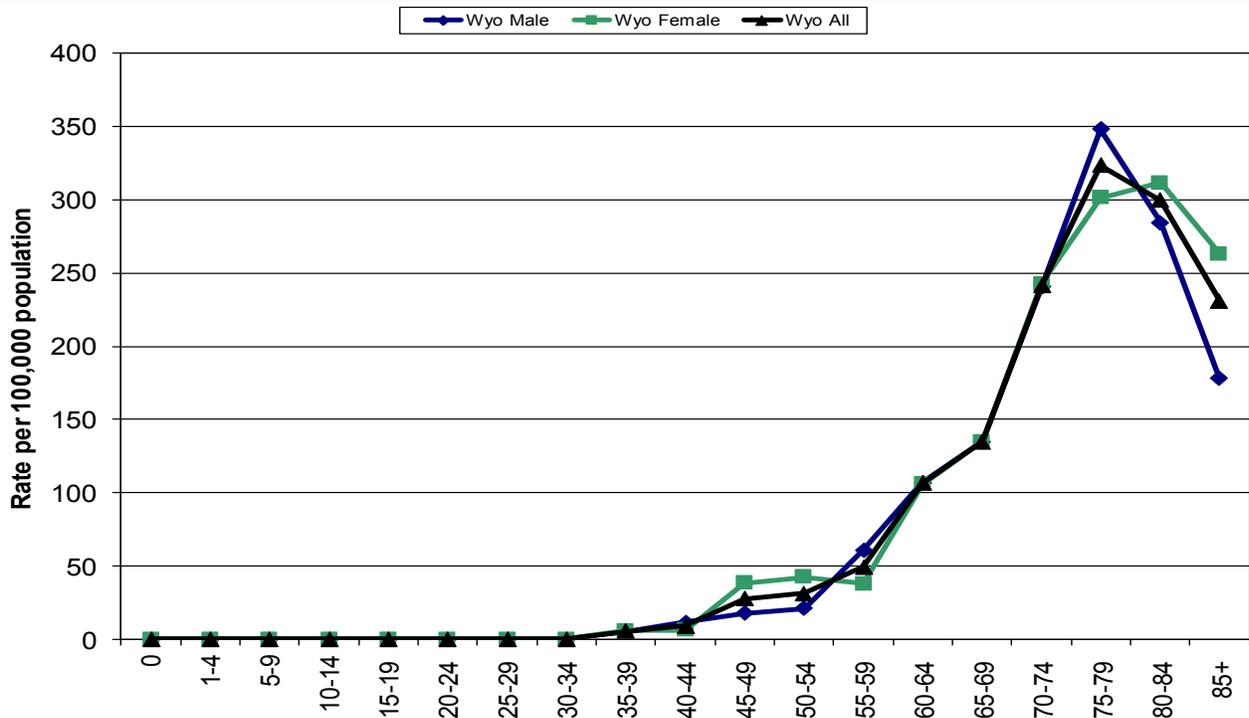
The percent of cases diagnosed at each stage in 2015 was similar to 2014.

No statistically significant differences were found between the CHD rates and the state rates.

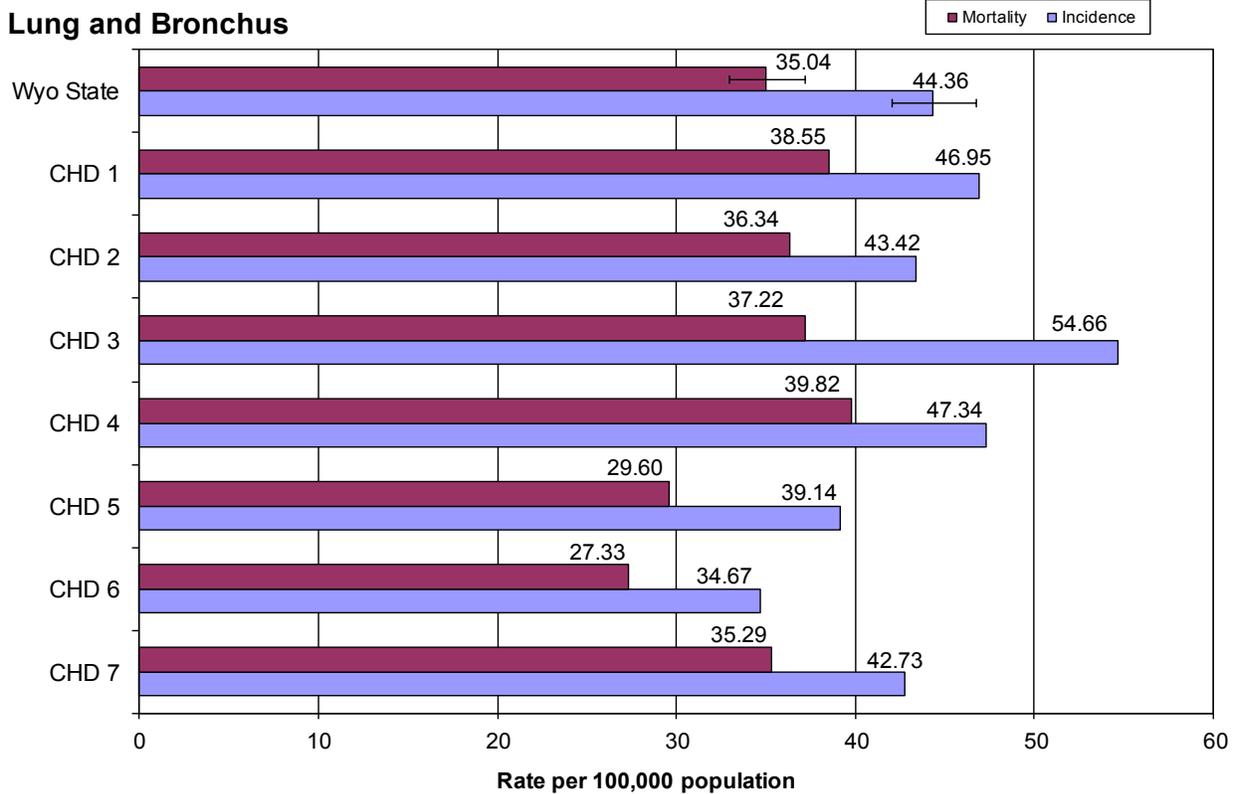
12-Year Incidence Trend



Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015



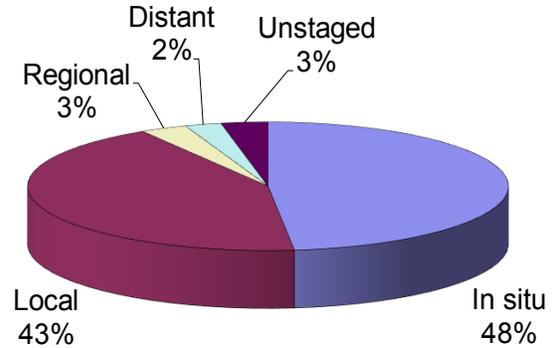
Melanoma (of the skin)

Incidence and Mortality Summary

	Male	Female	Total
Invasive Cases	77	71	148
In situ Cases	85	53	138
WY Incidence	24.0	21.6	22.3
US Incidence	36.1	22.4	28.2
Cancer Deaths	11	7	18
WY Mortality	3.5	2.0	2.7
US Mortality	4.4	1.9	3.0

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



The incidence rates for melanoma of the skin for Wyoming were all lower than the national rates in 2015. The mortality rates for males and total population were lower than the national rates, while the female rate was basically the same as the national rate.

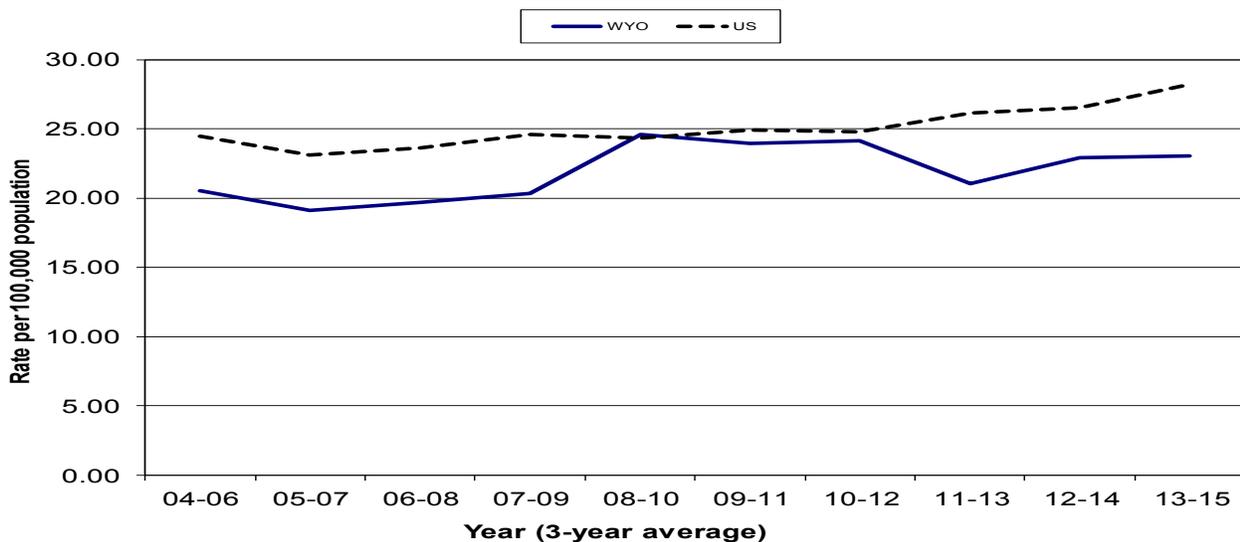
There were five cases of melanoma in individuals under 30 years of age in 2015.

The incidence trend of melanoma in Wyoming leveled off between 2012-2014 to 2013-2015, while the national trend continues to climb.

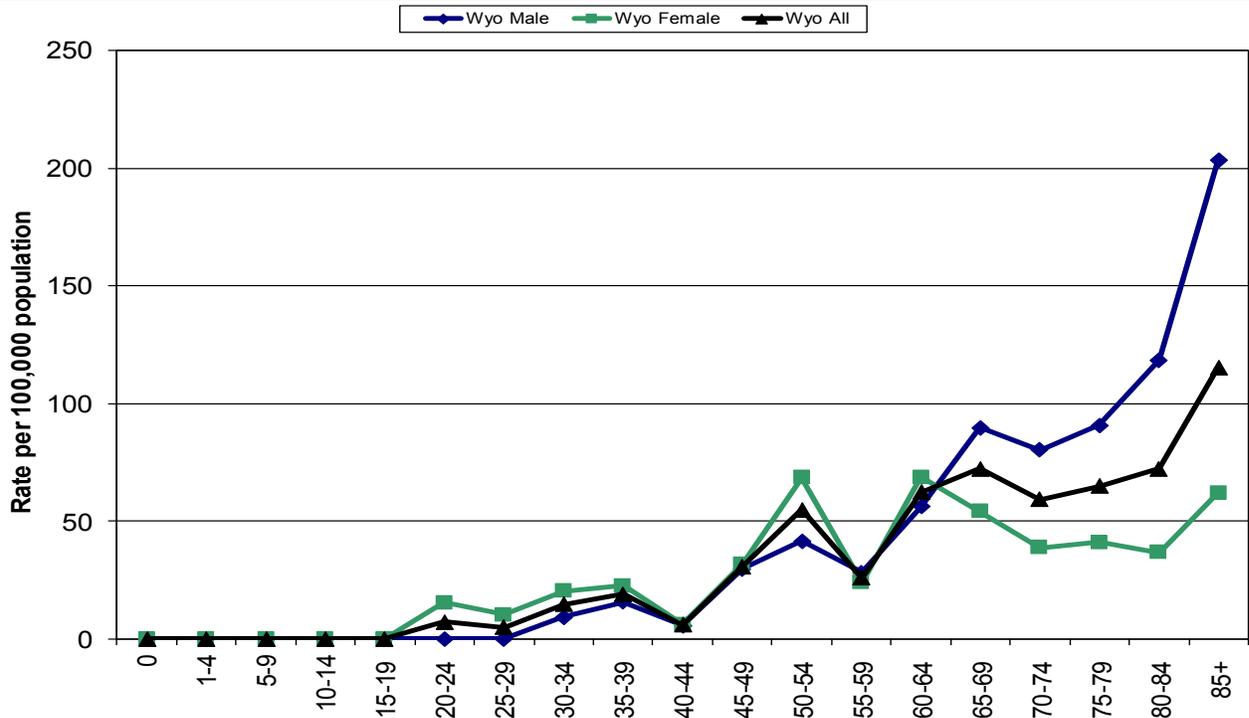
The percentage of cases diagnosed at each stage in 2015 was essentially the same as 2014.

No statistically significant differences were found between the CHD and state rates.

12-Year Incidence Trend

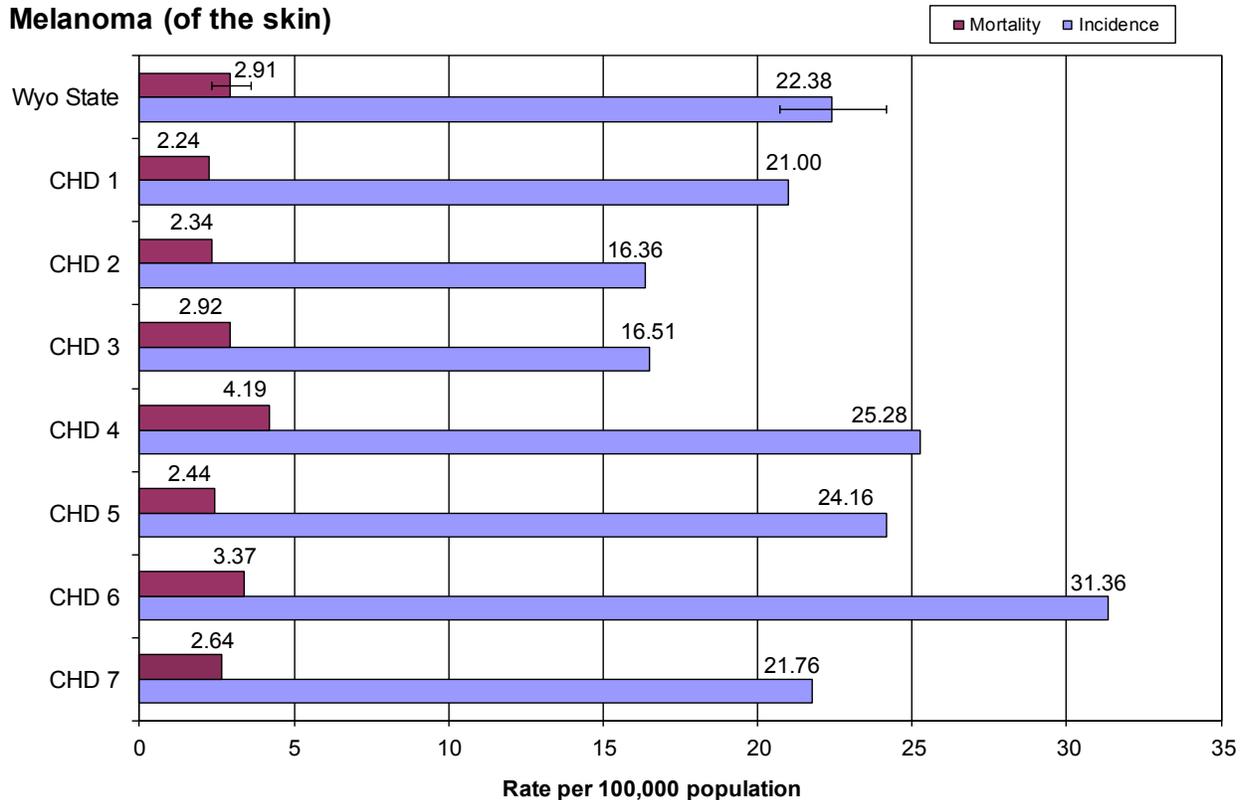


Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015

Melanoma (of the skin)



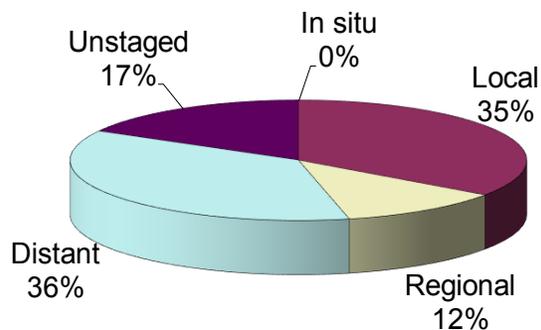
Non-Hodgkin Lymphoma

Incidence and Mortality Summary

	Male	Female	Total
Invasive Cases	61	51	112
WY Incidence	19.3	15.9	17.5
US Incidence	24.7	16.6	20.2
Cancer Deaths	22	18	40
WY Mortality	7.1	4.9	6.1
US Mortality	7.6	4.6	5.9

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



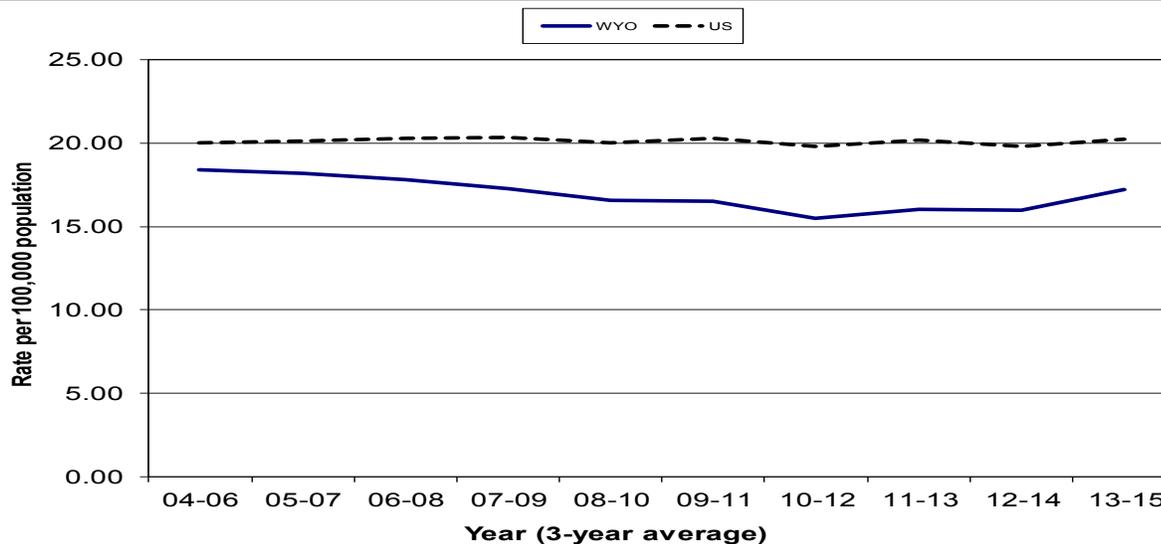
The incidence rates for Non-Hodgkin lymphoma in males, females, and total population in Wyoming were all lower than the national rates. The mortality rate for females and total population were both higher than the national rate, while the rate for males was lower.

The incidence trend for Wyoming increased between 2012-2014 and 2013-2015, while the national rate remained basically level.

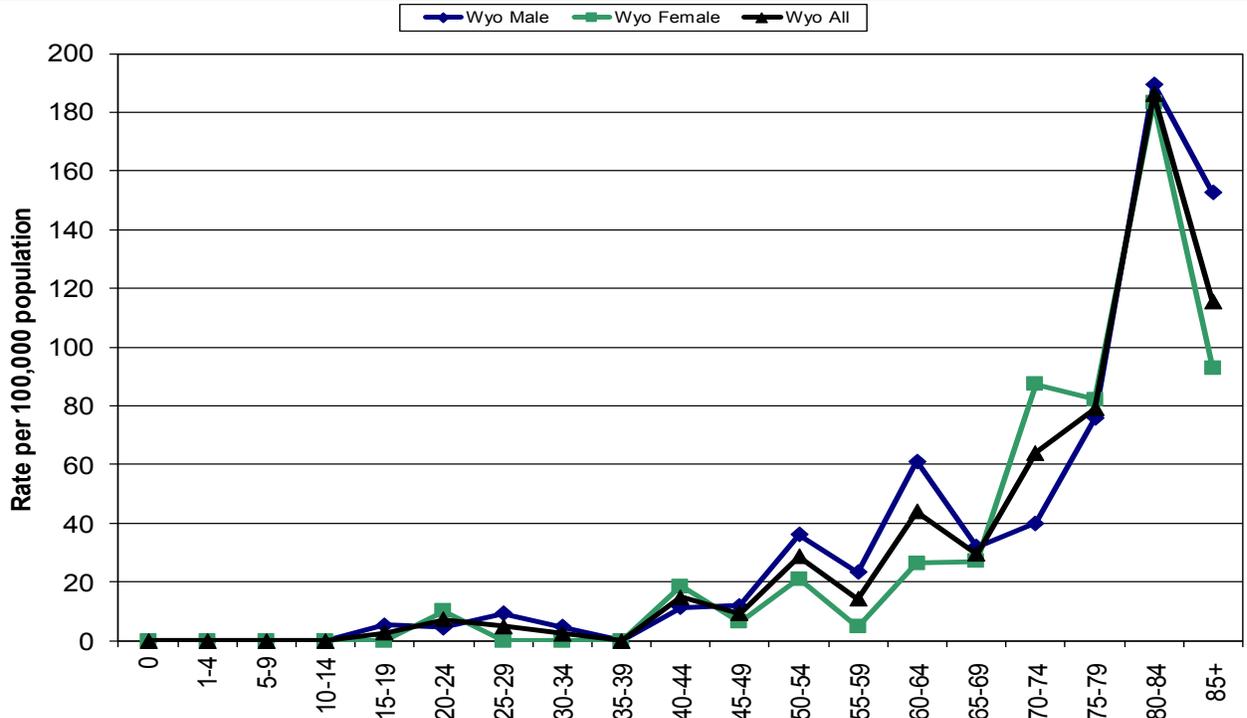
The percentage of cases diagnosed at each stage in 2015 are similar to the percentages in 2014.

No statistically significant differences were found between the CHD rates and the state rate for incidence or mortality.

12-Year Incidence Trend

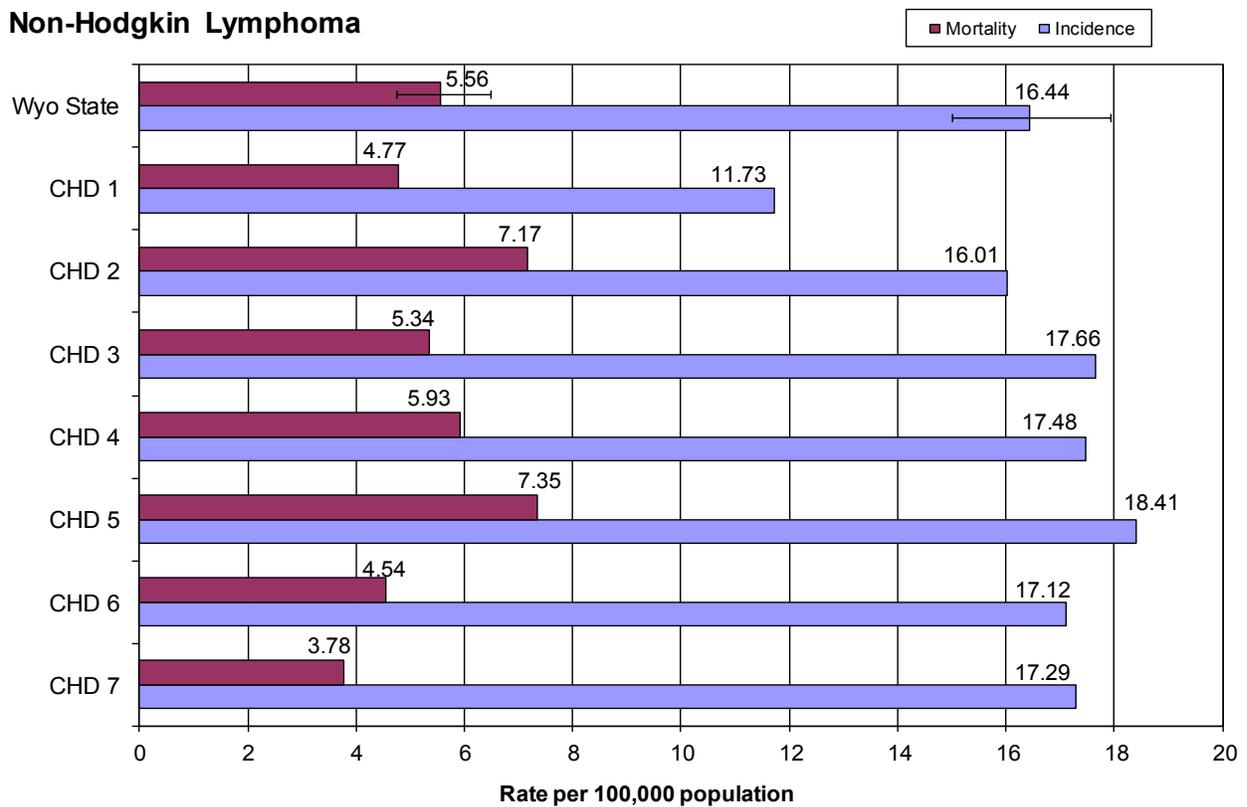


Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015

Non-Hodgkin Lymphoma



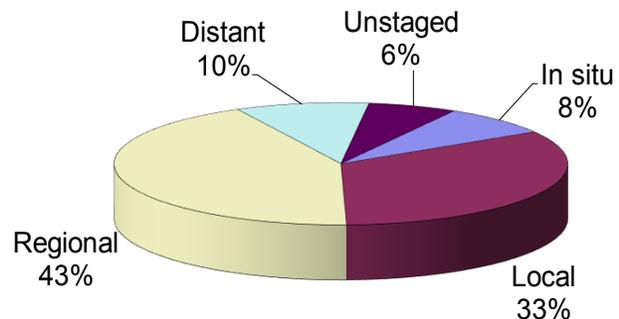
Oral Cavity and Pharynx

Incidence and Mortality Summary

	Male	Female	Total
Invasive Cases	46	12	58
WY Incidence	13.0	3.4	8.1
US Incidence	17.9	6.4	11.8
Cancer Deaths	11	NC	13
WY Mortality	3.1	NC	1.9
US Mortality	3.9	1.3	2.5

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



Incidence and mortality rates for cancer of the oral cavity and pharynx in Wyoming were all lower than the national rates. The female mortality rate was not calculated due to low numbers.

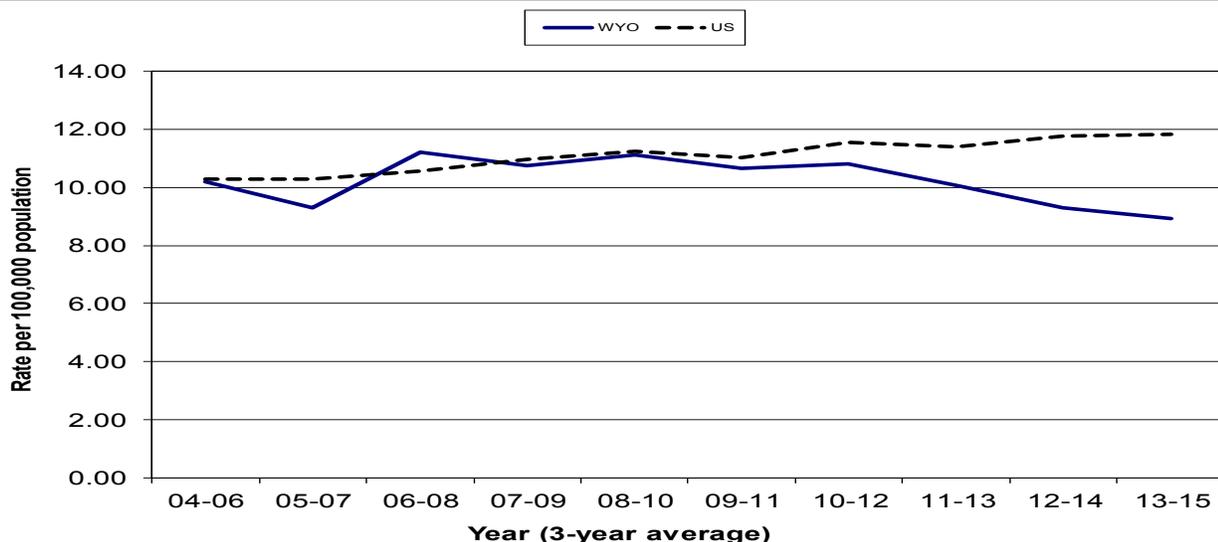
The incidence trend for Wyoming shows a continuation of the decrease that started in 2010-12. On the other hand, the national has leveled off after a slight increase from 2011-2013 to 2012-2014.

Unlike 2014, there were no cases diagnosed in people under 25 years of age in 2015.

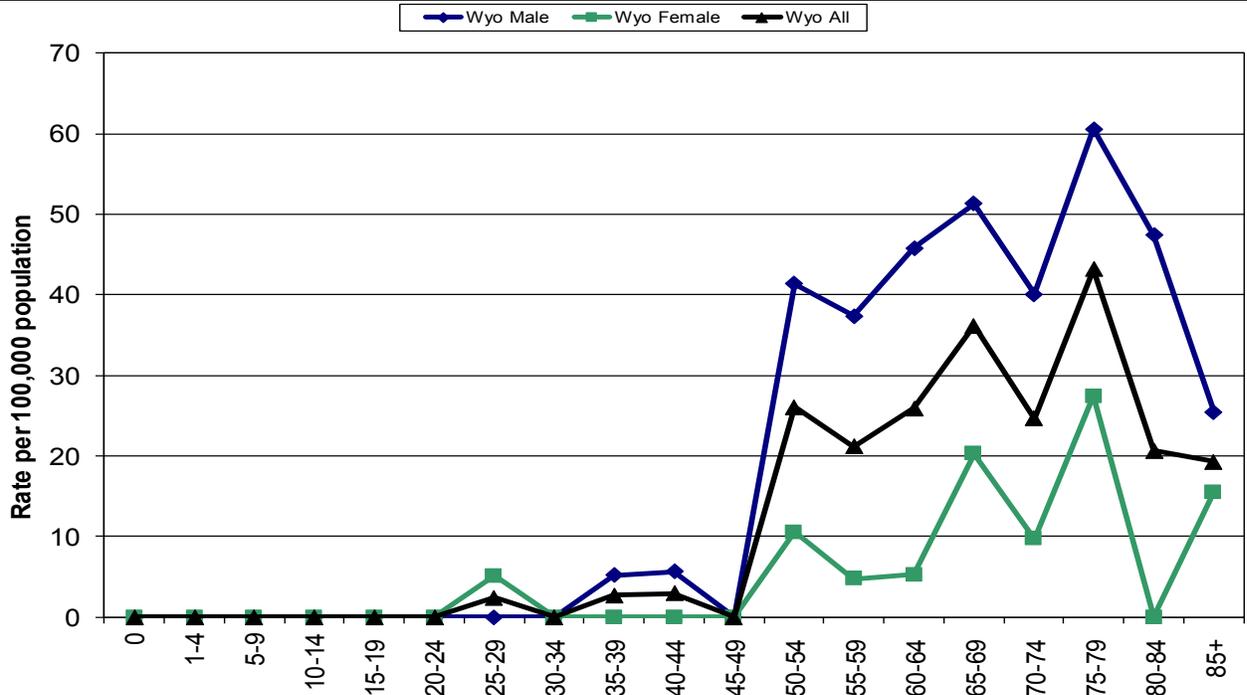
The percent of cancers diagnosed at the Local stage decreased significantly from 2014 (56%) while the percent of cases diagnosed as Regional saw a significant increase from 2014 (28%).

No statistically significant differences were found between the CHD rates and the state rate.

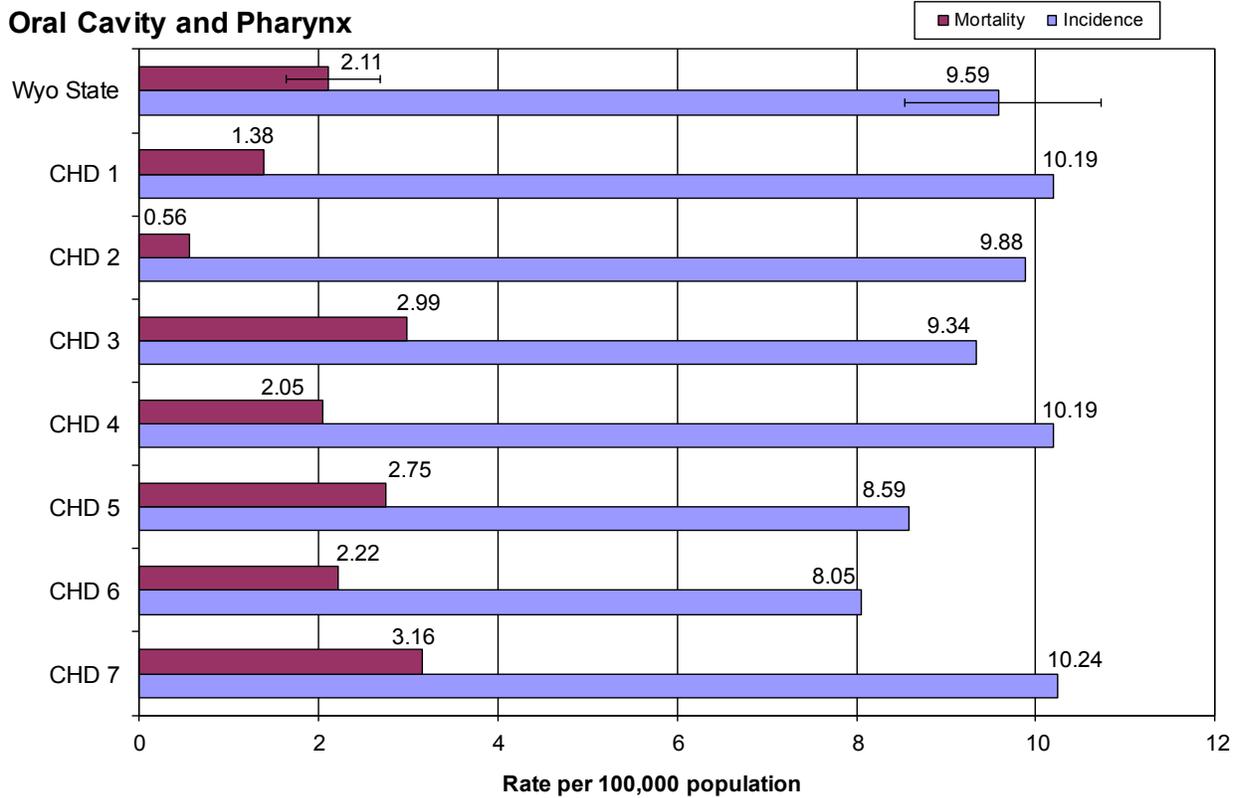
12-Year Incidence Trend



Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015



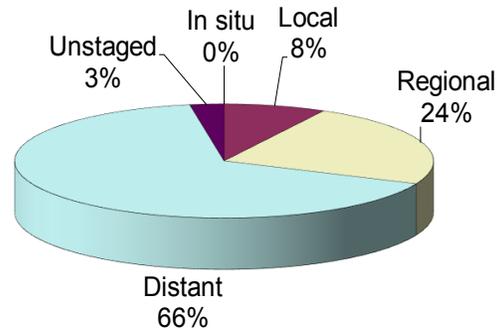
Ovary

Incidence and Mortality Summary

	Female
Invasive Cases	38
WY Incidence	11.9
US Incidence	11.7
Cancer Deaths	23
WY Mortality	6.5
US Mortality	7.3

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



The incidence rate in Wyoming females for ovarian cancer was slightly higher than the national rate in 2015, while the mortality rate was lower.

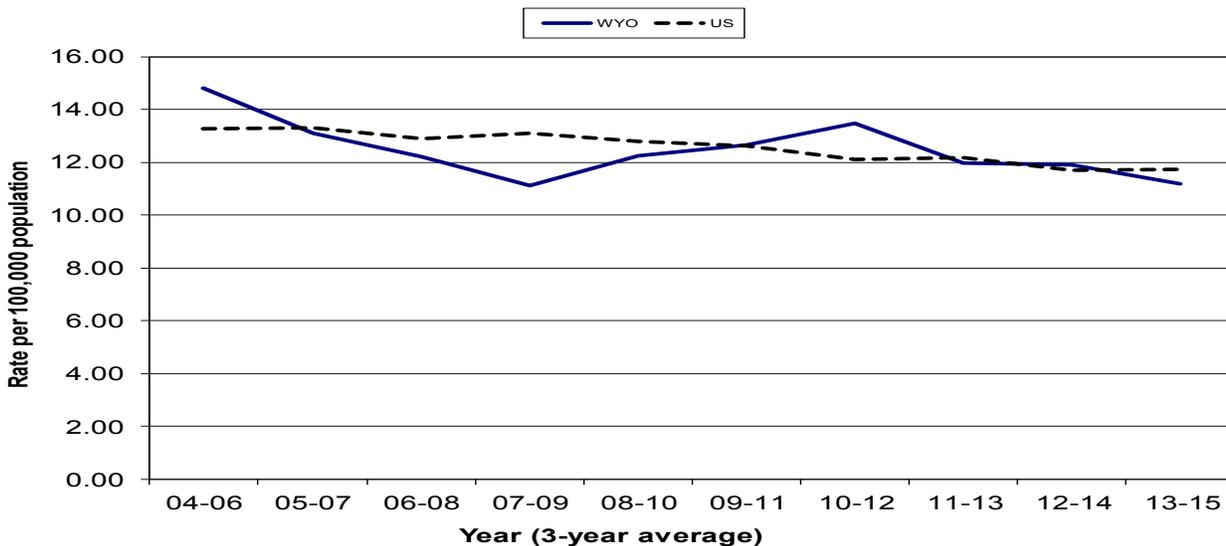
The 12-year incidence trend shows Wyoming dropping below the national rate in 2013-2015.

There was only one case diagnosed in a Wyoming woman under 40 years of age. This is the same as 2014.

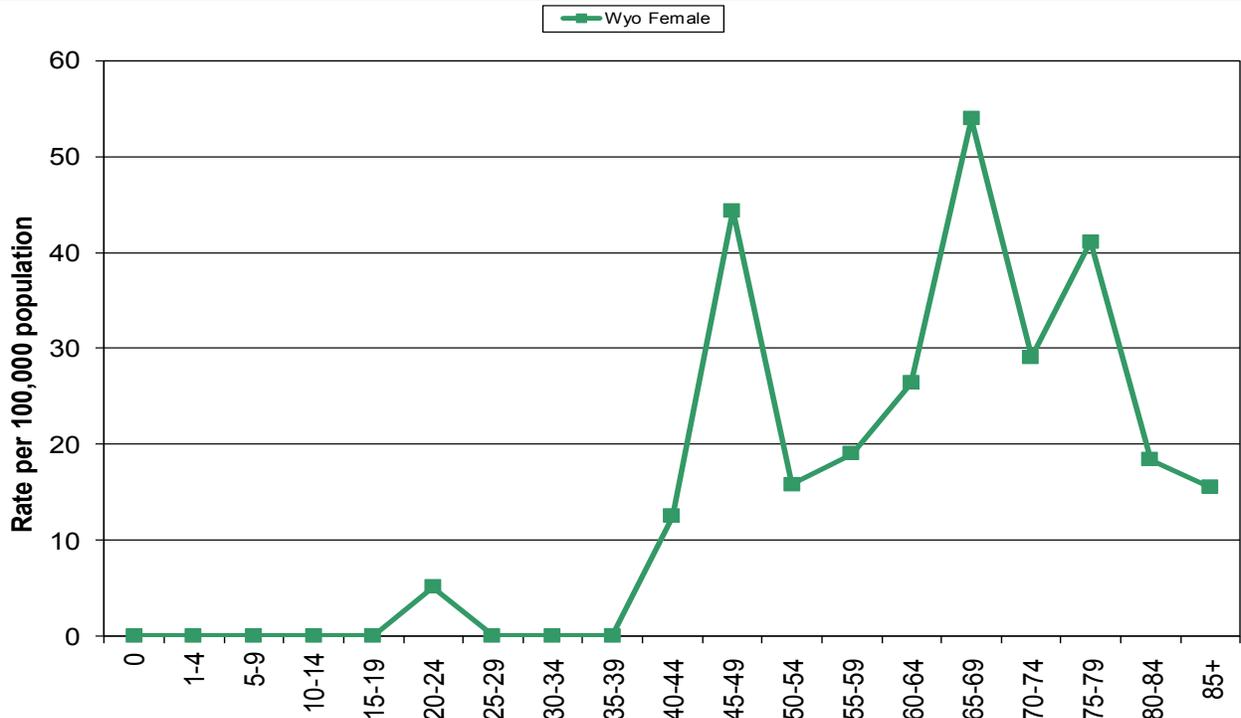
There were non-significant increases in the percentage of cancers diagnosed at the Distant stage (2014 = 50%) and Regional stages (2014 = 18%).

No statistically significant differences were found between the CHD rates and the state rate.

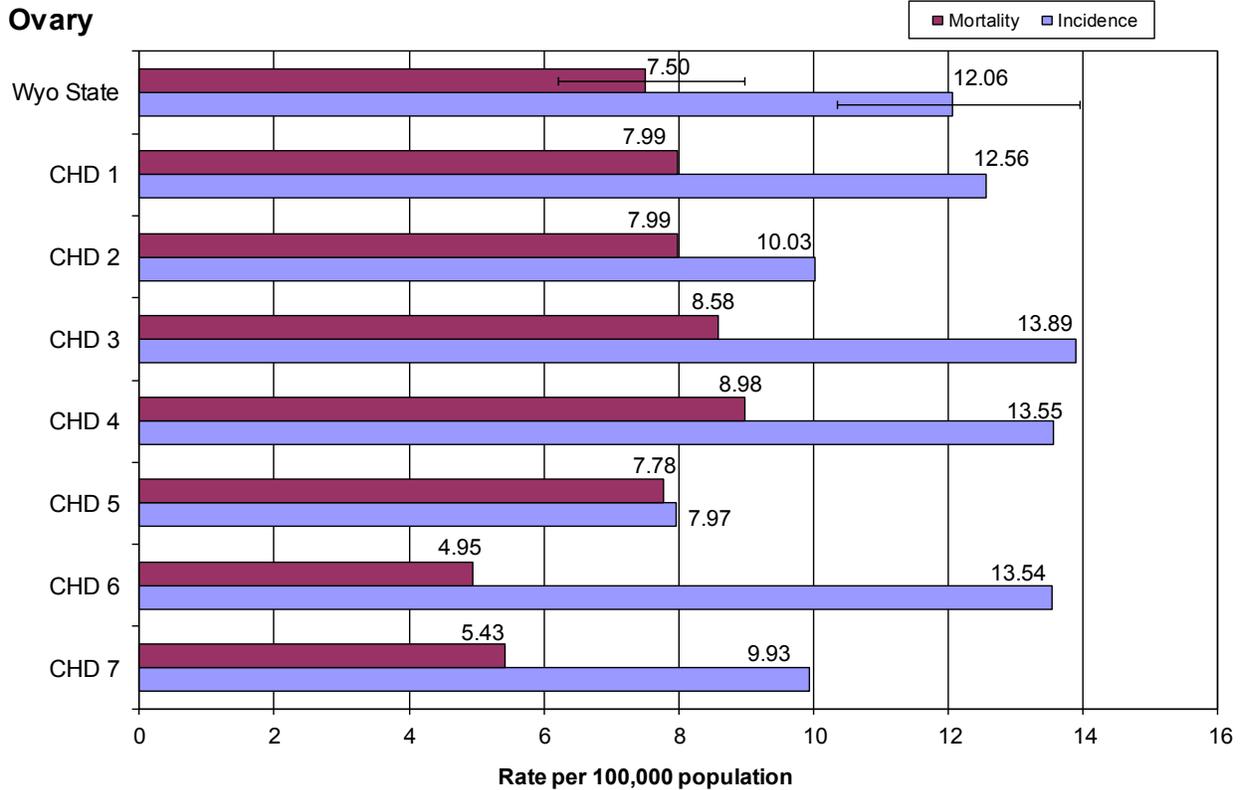
12-Year Incidence Trend



Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015



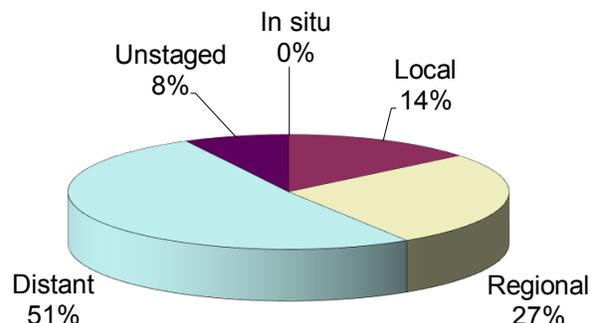
Pancreas

Incidence and Mortality Summary

	Male	Female	Total
Invasive Cases	42	36	78
WY Incidence	13.1	9.9	11.5
US Incidence	14.3	11.0	12.5
Cancer Deaths	38	29	67
WY Mortality	11.3	8.5	10.0
US Mortality	12.7	9.4	10.9

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



The incidence and mortality rates of cancer of the pancreas in Wyoming males, females and total population were all lower than the national rates.

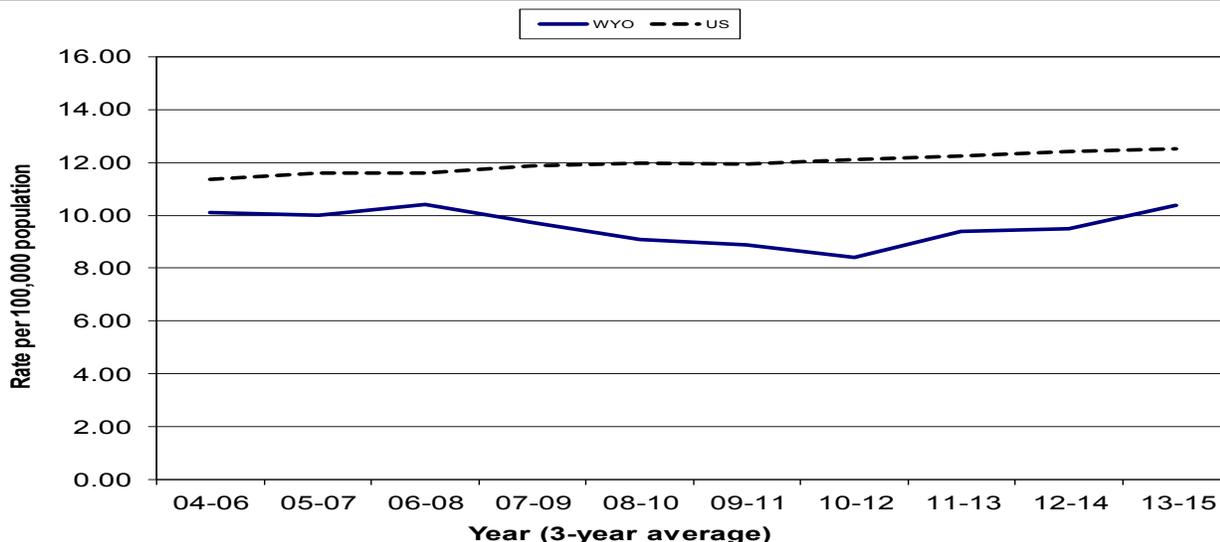
The incidence trend for Wyoming and the nation continue to increase, with Wyoming increasing at a faster rate than the nation as a whole.

There were eleven more cases in 2015 than in 2014, with eight of these case occurring in men.

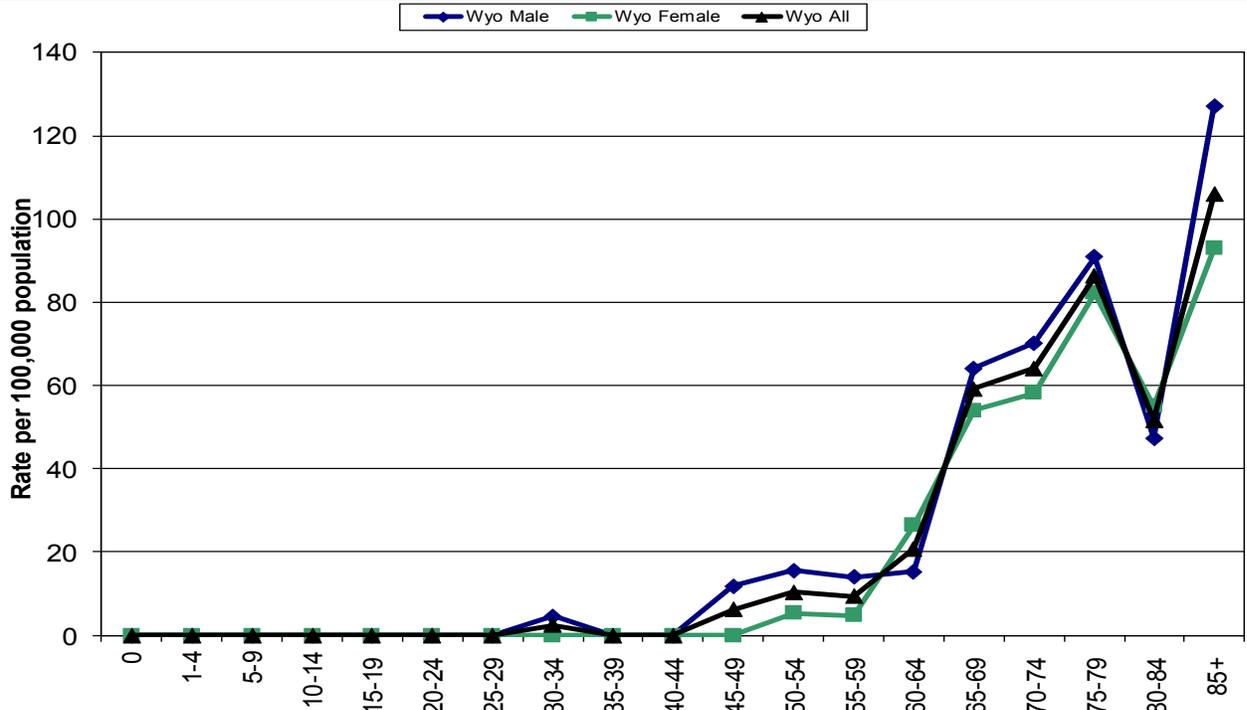
The percentage of cancer diagnosed at each stage was very similar to the percentages in 2014.

No statistically significant differences were found between the CHD rates and the state rate for incidence or mortality.

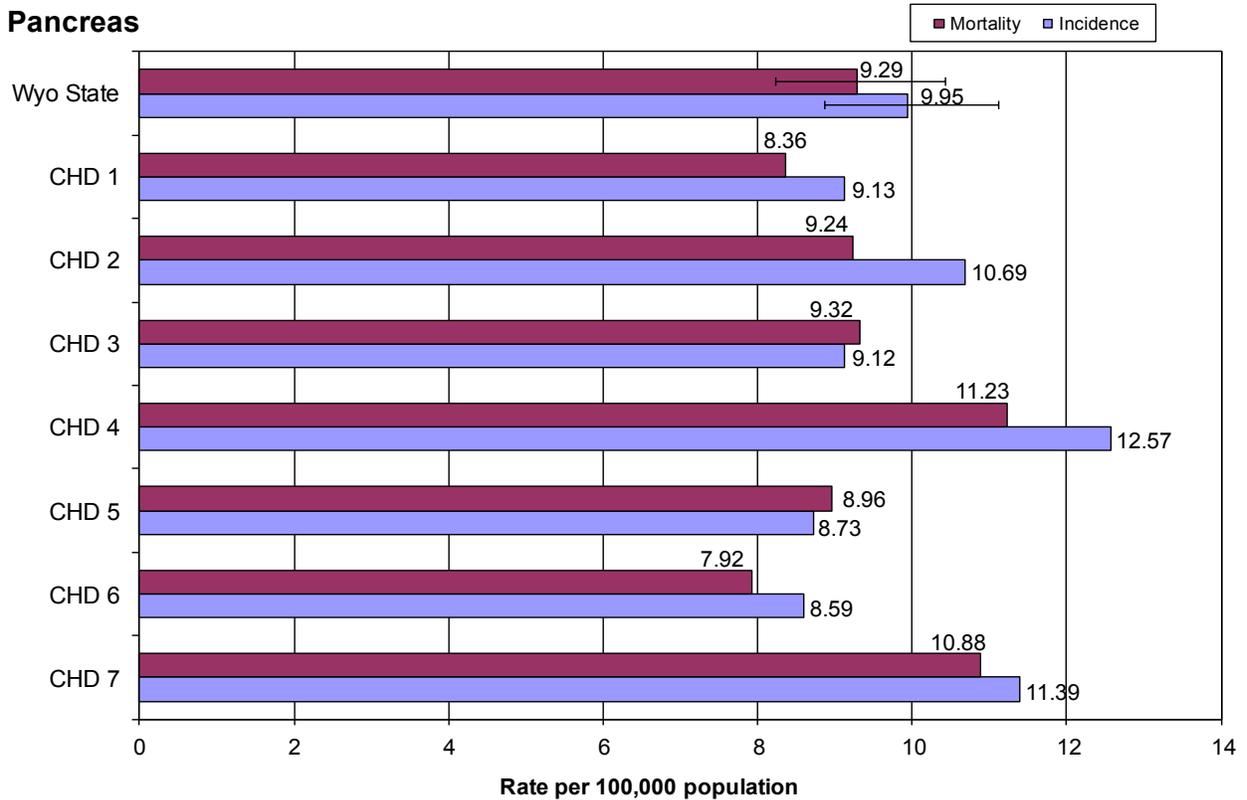
12-Year Incidence Trend



Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015



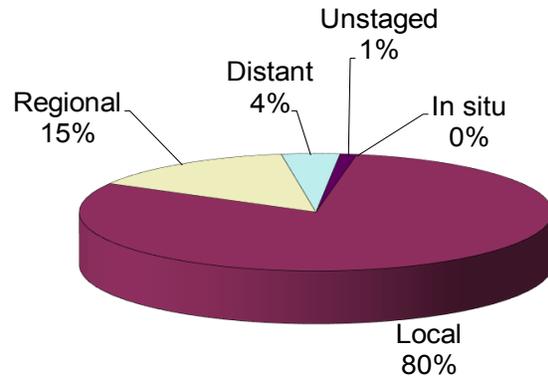
Prostate

Incidence and Mortality Summary

	Male
Invasive Cases	352
WY Incidence	96.3
US Incidence	90.8
Cancer Deaths	39
WY Mortality	14.0
US Mortality	17.9

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



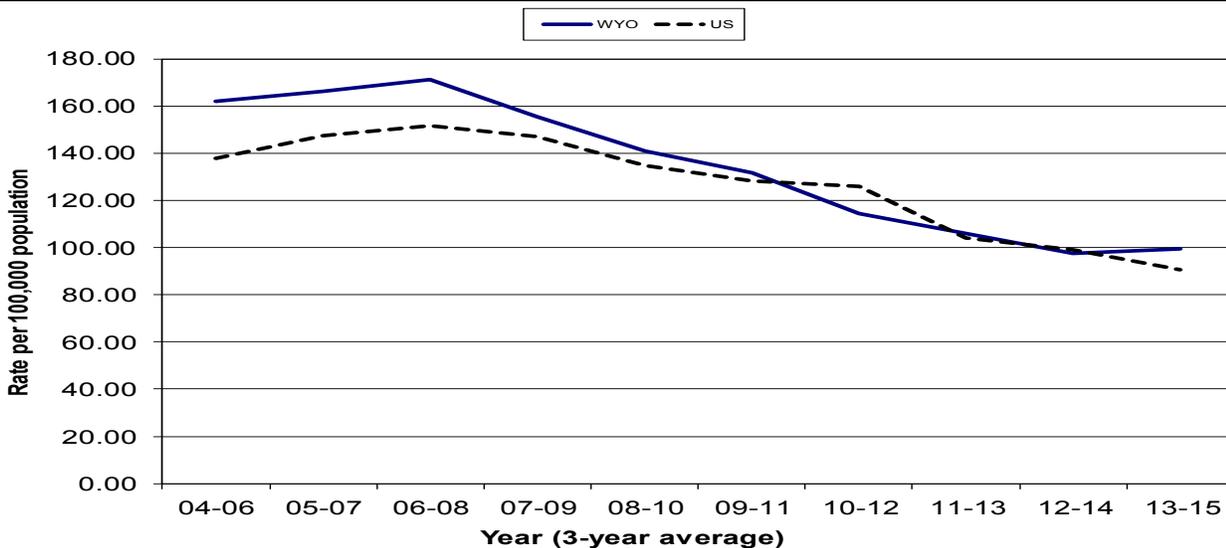
The incidence rate for prostate cancer in Wyoming males was higher than the national rate in 2015; however, the mortality rate was lower than the national rate.

The incidence trend show Wyoming leveling off between 2012-2014 to 2013-2015, while the national trend continues to decline.

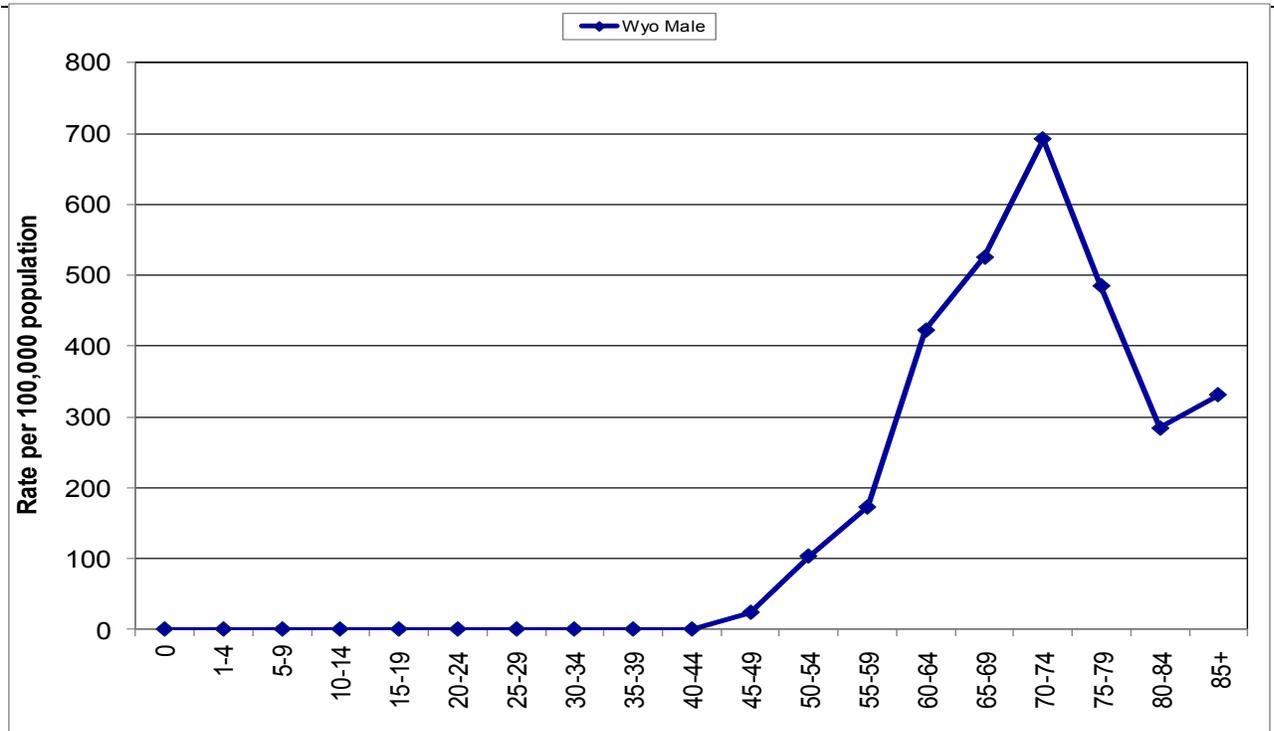
The number of cases and the percent of cases diagnosed at each stage in 2015 were basically the same as those from 2014.

The incidence rate in CHD 5 was significantly higher than the state rate of 102.87 in 2015. No other significant differences were found.

12-Year Incidence Trend

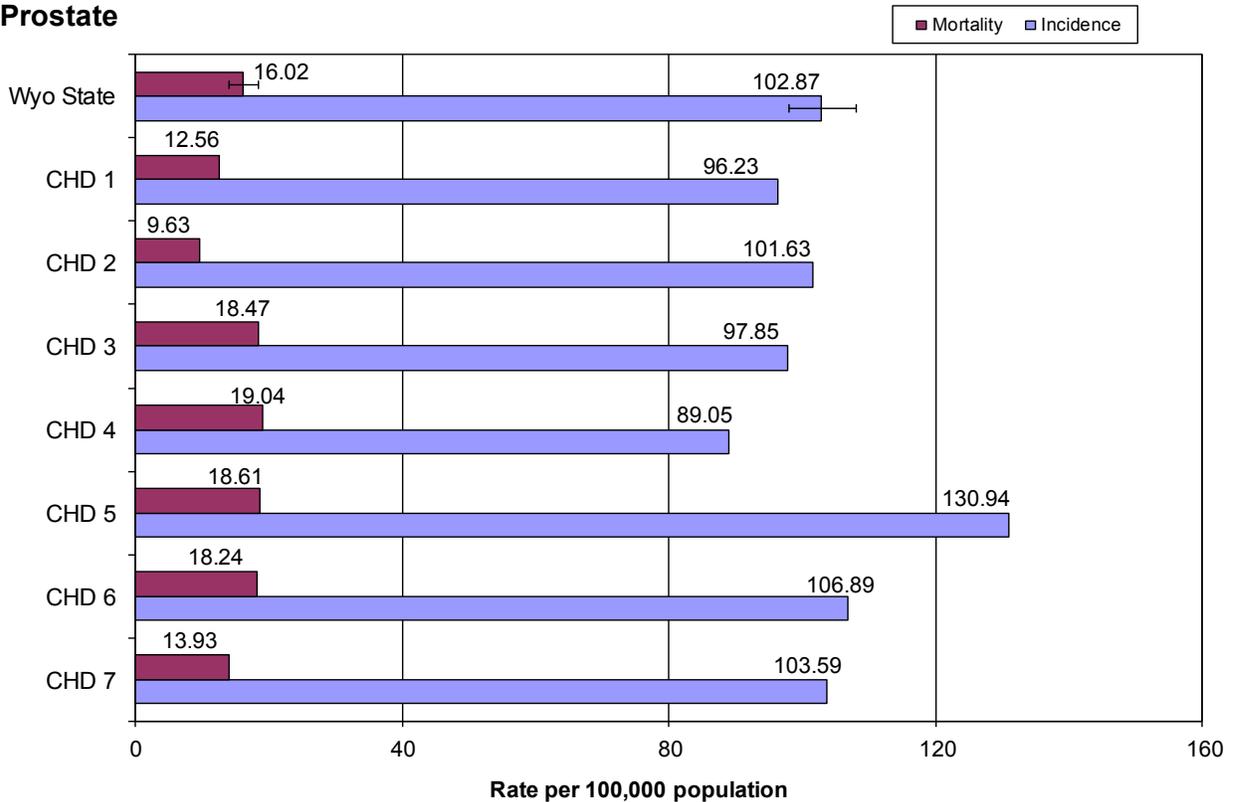


Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015

Prostate



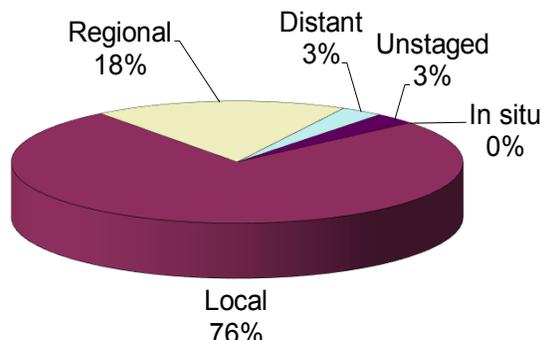
Thyroid

Incidence and Mortality Summary

	Male	Female	Total
Invasive Cases	24	77	101
WY Incidence	7.5	29.5	18.0
US Incidence	7.7	23.1	15.4
Cancer Deaths	NC	NC	NC
WY Mortality	NC	NC	NC
US Mortality	0.52	0.48	0.50

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



The incidence rate for thyroid cancer in Wyoming females and total population were both higher than the national rate in 2015. The incidence rate for males was only slightly lower than the national rate. None of the Wyoming mortality rates were calculated due to low numbers.

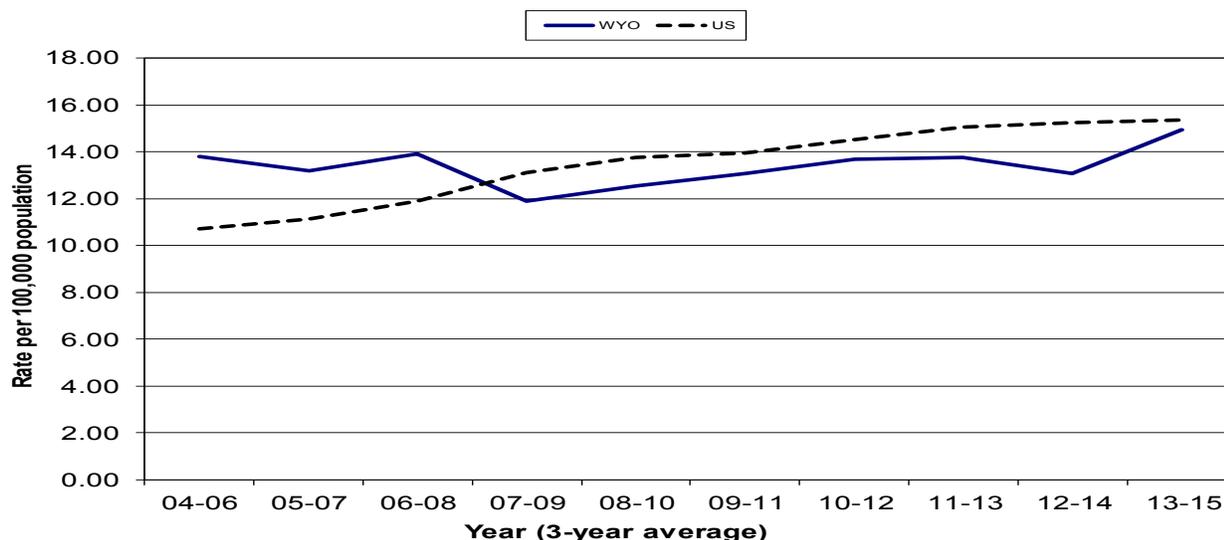
The trend of thyroid cancer incidence in Wyoming sharply increased between 2012-2014 and 2013-2015. This was partly due to the fact that there were 31 more cases of Thyroid cancer diagnosed in Wyoming in 2015 than 2014, with thirty of the cases occurring in women.

The percentages for each stage were essentially the same as those seen in 2014.

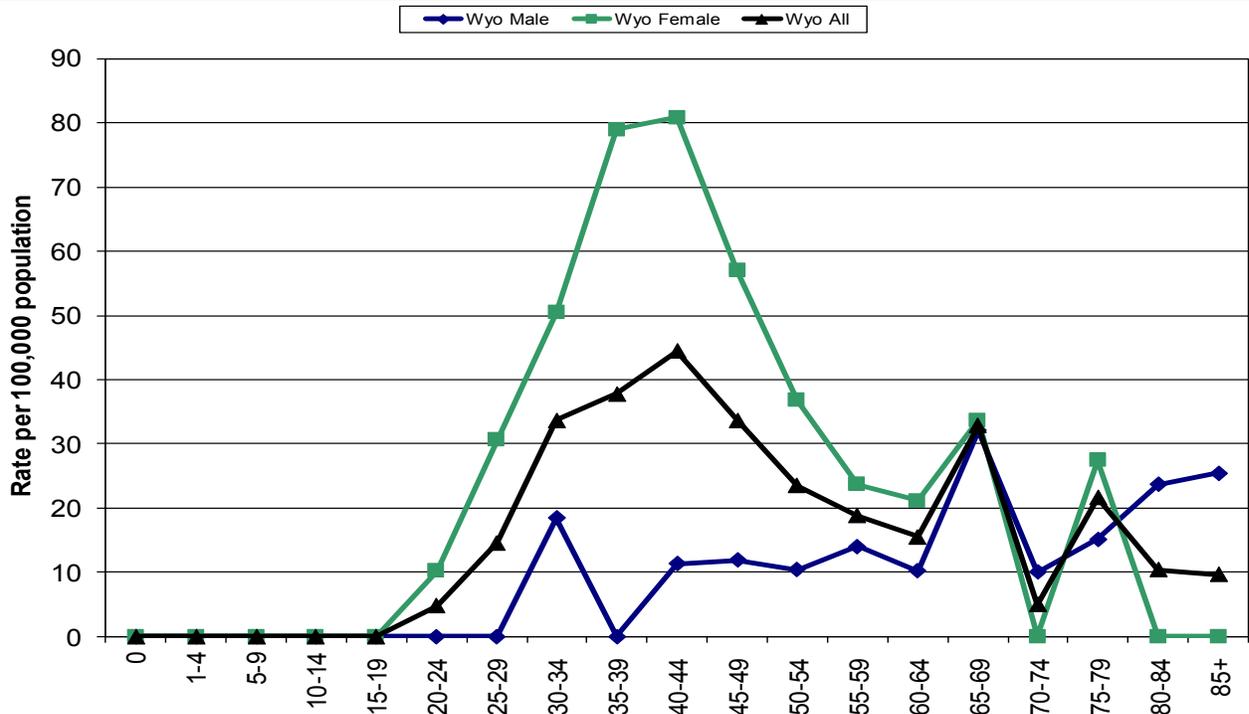
No statistically significant differences were found between the CHD rates and state rate for incidence.

No region reported more than 5 deaths due to thyroid cancer from 2011-2015.

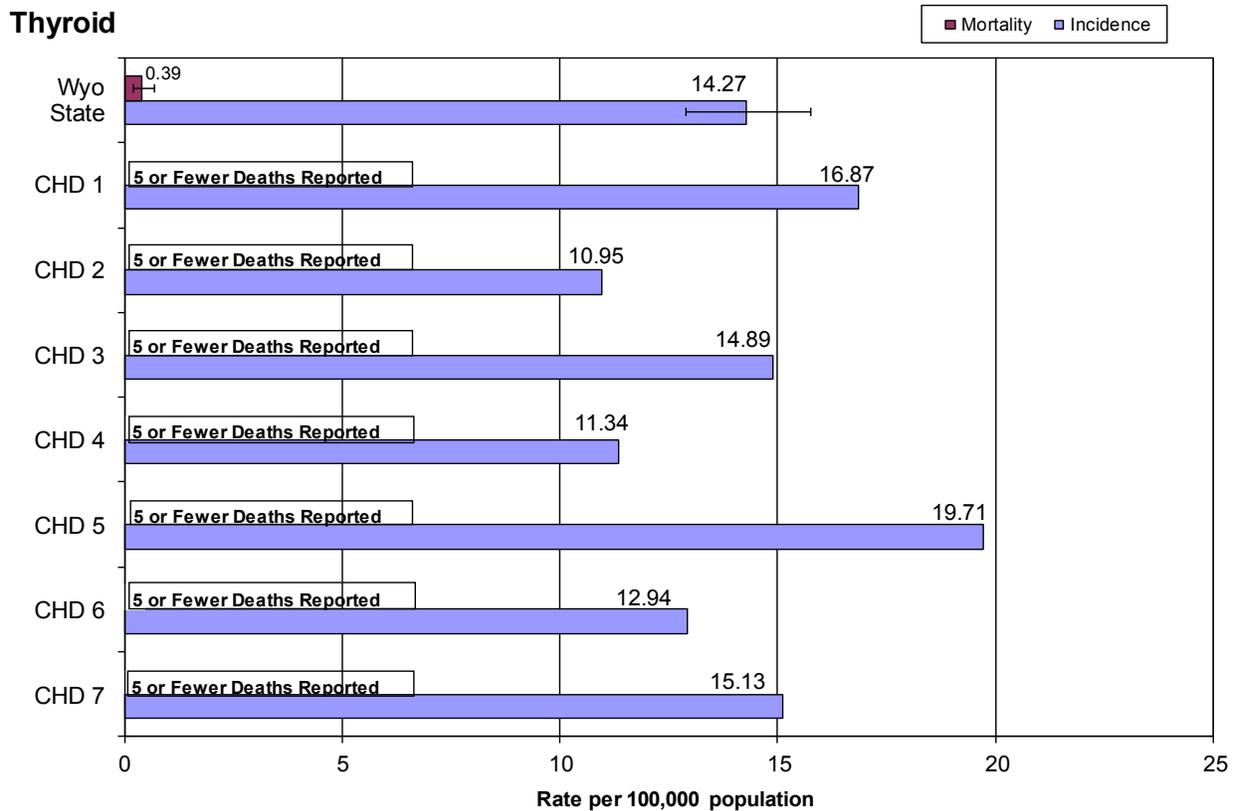
12-Year Incidence Trend



Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015



Uterine

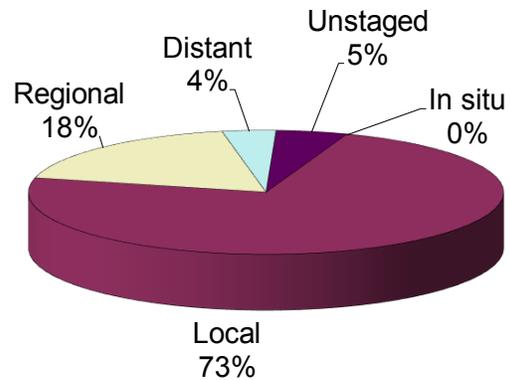
(Corpus Uteri + Uterus)

Incidence and Mortality Summary

	Female
Invasive Cases	82
WY Incidence	23.0
US Incidence	27.1
Cancer Deaths	16
WY Mortality	4.4
US Mortality	4.4

* indicates the state rate is significantly different than the national rate
 NC = rate not calculated for under 5 cases/deaths

Stage at Diagnosis



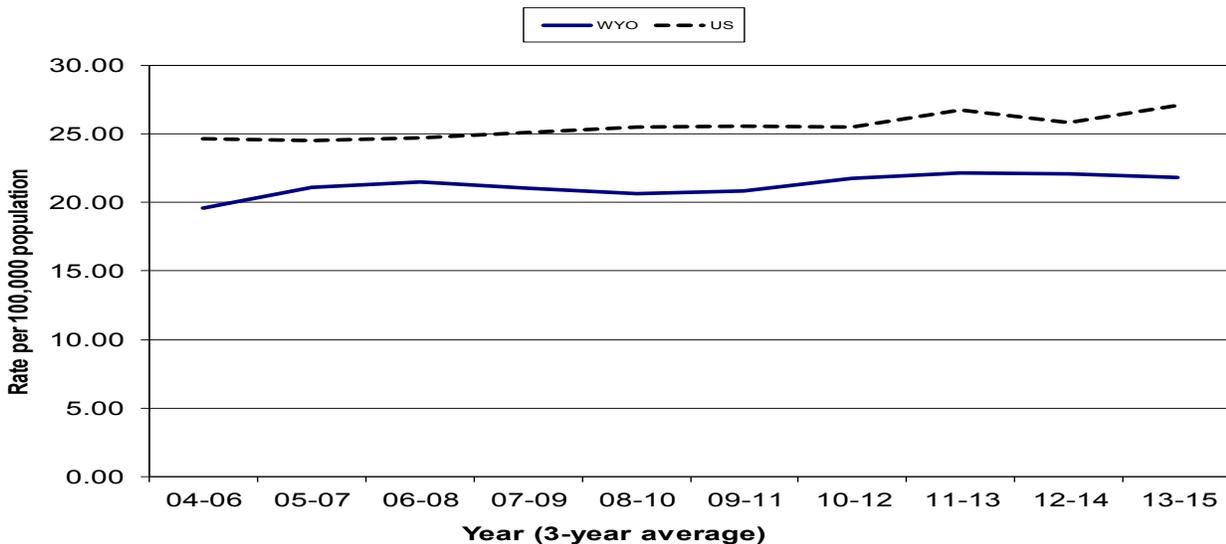
The incidence rate in Wyoming females for uterine cancer was lower than the U.S. rate, while the mortality rate was the same as the national rate.

The Wyoming incidence trend has remained relatively flat since 2010-2012, but the national trend increased between 2012-2014 to 2013-2015.

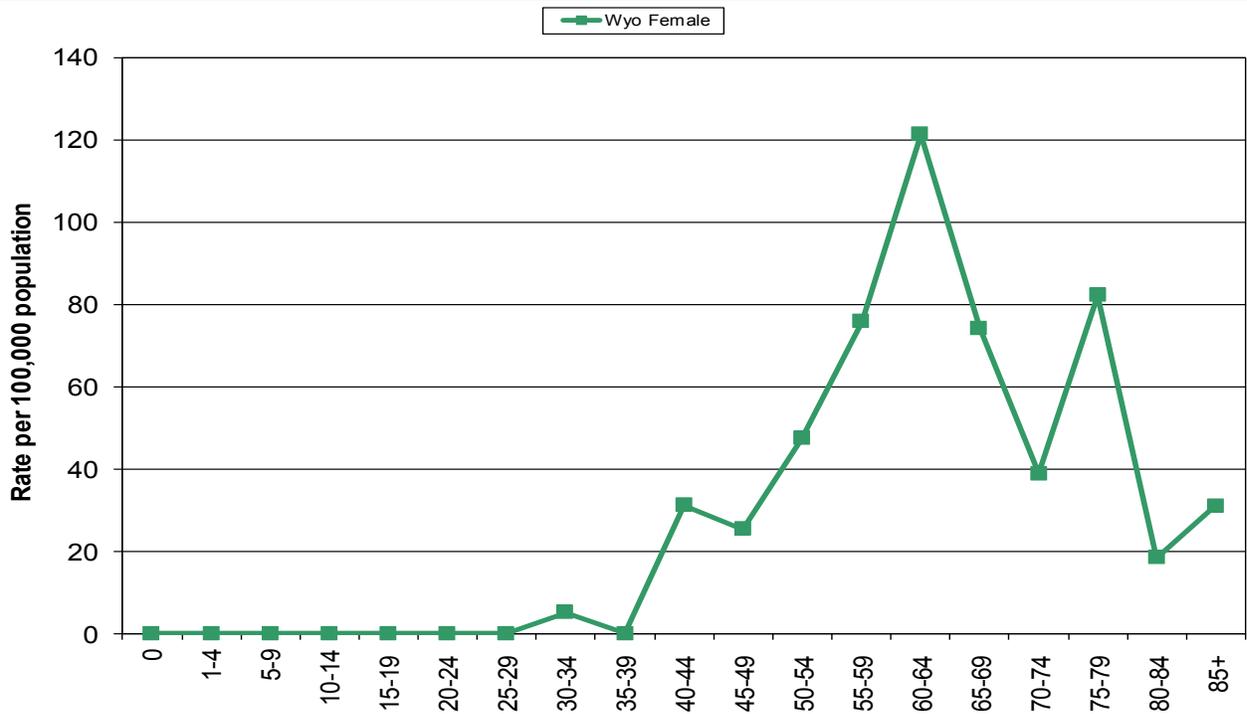
The percentage of cases diagnosed at each stage remained virtually unchanged from 2014.

No statistically significant differences were found between the CHD rates and the state rate for incidence or mortality.

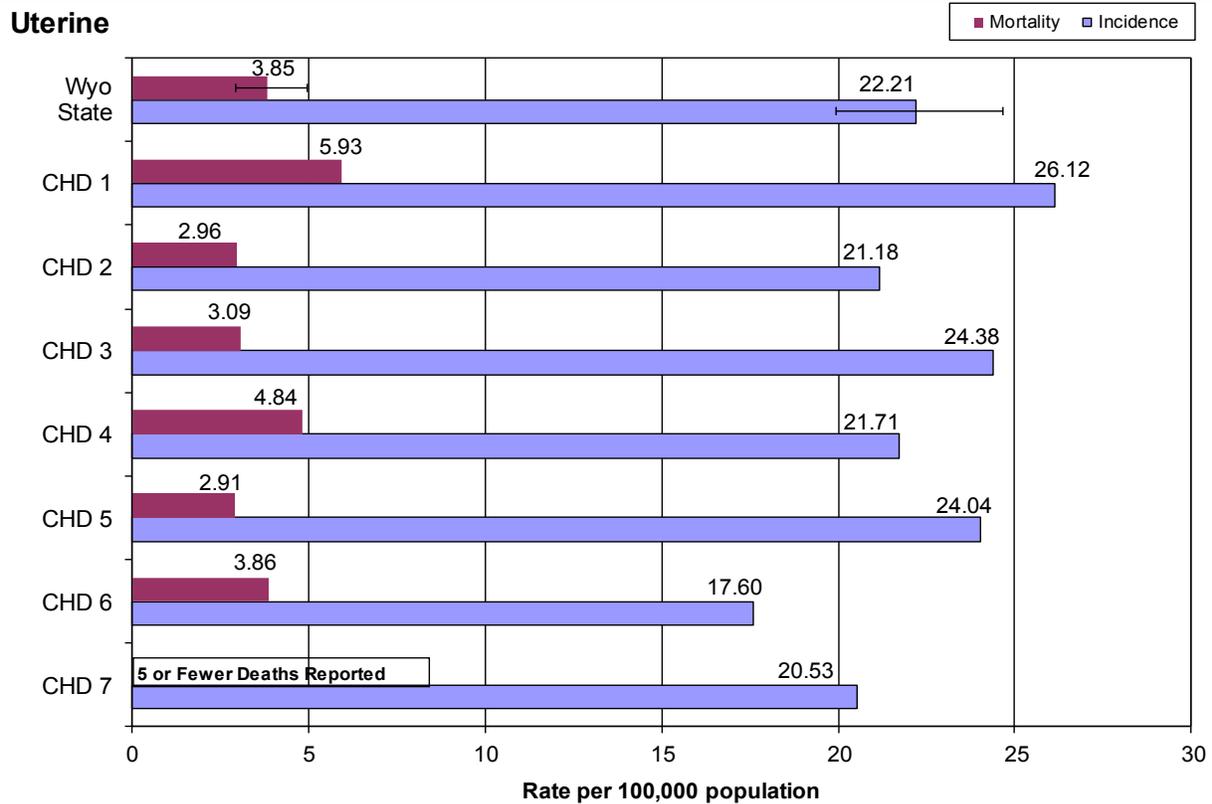
12-Year Incidence Trend



Age-Specific Incidence Rates - 2015



Cancer Health District Incidence and Mortality 5-Year Average, 2011-2015



Appendix A

References

Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) version 8.3.4. SEER*Stat Database: Incidence - SEER 18 Regs Research Data + Hurricane Katrina Impacted Louisiana Cases, Nov 2016 Sub (2000-2014) <Katrina/Rita Population Adjustment> Linked To County Attributes - Total U.S., 1969-2015 Counties, National Cancer Institute, DCCPS, Surveillance Research Program, Cancer Statistics Branch, released April 2017, based on the November 2016 submission.

Wyoming Department of Administration and Information, Economic Analysis Division. Wyoming State and County Population. (<http://eadiv.state.wy.us/eahome.htm>)

Wyoming Vital Statistics Service, Wyoming Department of Health - (http://www.health.wyo.gov/rfhd/vital_records/index.html) (*Note: These data were supplied by the Vital Statistics Services, Wyoming Department of Health, Cheyenne, Wyoming. The Wyoming Vital Statistics Services was not involved in any analyses, interpretations, or conclusions.*)

Age-Adjustment

Prior to data year 1999, the Wyoming Cancer Surveillance Program (WCSP) performed age-adjustment of cancer mortality rates using the 1940 standard population and a 10-year age group, or the 1970 standard population using 5-year age groups. Starting with the data year 1999, WCSP began using the Year 2000 standard population with 5-year age groups to calculate cancer mortality and cancer incidence rates.

The decision to use 5-year age groups was made to keep WCSP data calculations comparable to the national cancer reports published through SEER and the National Cancer Institute. The 5-year age group also enables cancer prevention programs to use Wyoming reports (e.g., Vital Records) as printed versus requesting specially calculated rates.

Age-adjusted rates should be used for comparative purposes only and should not be interpreted as the absolute risk of the disease or death. As can be seen in Chart A (below) and Chart B, (following page), the change in standard population affects the magnitude of the age-adjusted rates but not the trends of the rates. In general, the age-adjusted rate is only appropriate to track trends over time or to make comparisons among groups using the same population standard.

Chart A:

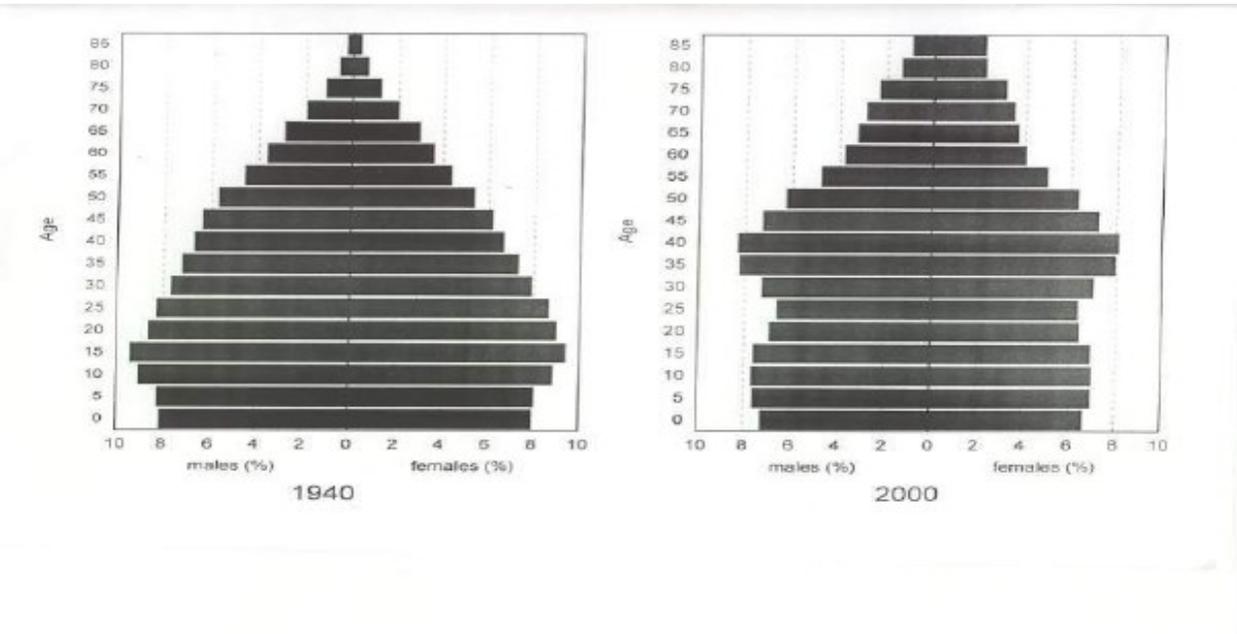


Chart B:

U.S. Age-Adjusted Cancer Mortality, All Sites Combined by Standard Year Populations 1940, 1970, 2000

