

Annual Report
of the
Cancer Data Registry of Idaho

Cancer in Idaho – 2012

December 2014



IDAHO DEPARTMENT OF
HEALTH & WELFARE

CANCER IN IDAHO - 2012

December 2014

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Cancer Data Registry of Idaho



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IDAHO DEPARTMENT OF
HEALTH & WELFARE

PREFACE

“Cancer in Idaho - 2012,” the thirty-sixth annual report of the Cancer Data Registry of Idaho (CDRI), contains information on the cancer burden among Idaho residents, with a focus on cancer cases diagnosed during 2012. The data can be used by public health officials, hospital administrators, physicians, the Comprehensive Cancer Alliance for Idaho, and others to effectively plan services, prioritize health resource allocations, develop and measure prevention and intervention strategies, and identify high risk populations within the state of Idaho.

ACKNOWLEDGMENTS

The Idaho Hospital Association (IHA) contracts with, and receives funding from, the Idaho Department of Health and Welfare, Division of Public Health, to provide a statewide cancer surveillance system.

The statewide cancer registry database is a product of collaboration among many report sources, including hospitals, physicians, surgery centers, pathology laboratories, and other states in which Idaho residents are diagnosed and/or treated for cancer. Their cooperation in reporting timely, accurate, and complete cancer data is acknowledged and sincerely appreciated.

CDRI would also like to thank the Division of Public Health, Idaho Department of Health and Welfare, and the Comprehensive Cancer Alliance for Idaho for their continued partnership and for using CDRI data as a tool in cancer control and prevention.

We acknowledge the Centers for Disease Control and Prevention for its support of CDRI under cooperative agreement 1U58DP003882-03. The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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BACKGROUND

Introduction to the Cancer Data Registry of Idaho (CDRI)

Purpose of the Registry

Population-based cancer registries are essential for assessing the extent of cancer burden in a specified geographic area. The Cancer Data Registry of Idaho (CDRI) is a population-based cancer registry that collects incidence and survival data on all cancer patients who reside in the state of Idaho or who are diagnosed and/or treated for cancer in the state of Idaho. The goals of the CDRI are to:

- ◆ determine the incidence of cancer in the state of Idaho with respect to geographic, demographic, and social characteristics;
- ◆ monitor trends and patterns of cancer incidence over time;
- ◆ identify high risk populations;
- ◆ provide a database and serve as a resource for conducting epidemiologic studies; and
- ◆ provide data to assist public health officials, hospital administrators, and physicians to effectively plan services, prioritize health resource allocations and develop and measure prevention and intervention strategies.

CDRI works closely with the Comprehensive Cancer Alliance for Idaho (CCAI), the Idaho Comprehensive Cancer Control Program, and other organizations to lessen the burden of cancer in Idaho.

History and Funding of the Registry

CDRI was established in 1969 and became population-based in 1971. The Idaho State Legislature has provided guidelines for the establishment, requirements, and funding of the statewide cancer registry. The operations of the registry are mandated by Idaho Code 57-1703 through 57-1707. Funding is appropriated in Idaho Code 57-1701 and 63-2520, which delineates a portion (less

than one percent) of the cigarette tax to be dedicated to fund the statewide cancer registry. Through the National Program of Cancer Registries (NPCR), additional funding has been awarded to CDRI from the Centers for Disease Control and Prevention (CDC) to enhance timely, complete and accurate data collection, computerization, and reporting of reliable data.

Collection of Data

Each Idaho hospital, outpatient surgery center, and pathology laboratory is responsible for the complete ascertainment of all data on cancer diagnoses and treatments provided in its facility within six months of diagnosis.

Sources for identifying eligible cases include:

- ◆ hospitals,
- ◆ outpatient surgery centers,
- ◆ private pathology laboratories,
- ◆ free-standing radiation centers,
- ◆ physicians (for patients not receiving cancer diagnoses and/or treatment in the above sources),
- ◆ death certificates, and
- ◆ other state cancer registries reporting an Idaho resident with cancer (as negotiated).

When a cancer case is reported from more than one source, the information is consolidated into one record.

Reported cases contain the following data:

- ◆ patient demographics (including geographic place of residence at time of cancer diagnosis);
- ◆ description of cancer (including date of diagnosis, primary site, metastatic sites, histology, extent of disease, etc.);
- ◆ first course treatment; and
- ◆ follow-up data for purposes of calculating survival rates.

Primary site, behavior, grade, and histology were coded according to the *International Classification of Diseases for Oncology, 3rd edition*.¹ Stage of disease variables were coded using SEER's *Summary Staging Manual 2000*, the *AJCC Manual for Staging of Cancer, 7th edition*, and the *Collaborative Staging Manual, Version 2.04*.^{2,3,4} SEER Summary Stage was derived from Collaborative Staging variables. All other variables were coded following the rules of the North American Association of Central Cancer Registries (NAACCR), the National Cancer Institute's SEER program, and the American College of Surgeons Commission on Cancer.⁵⁻⁸ Beginning with cases diagnosed in 2010, new rules for coding hematopoietic and lymphoid neoplasms were applied.⁹

Reportable Cases

All in-situ or malignant neoplasms are reportable to CDRI. The database includes all cases of carcinoma, sarcoma, melanoma, lymphoma, and leukemia, diagnosed by histology/cytology, radiology, laboratory testing, clinical observation, and autopsy.

Also reportable are benign tumors of the brain, meninges, pineal gland, and pituitary gland.

Basal and squamous cell carcinomas of the skin are excluded except when occurring on a mucous membrane or if the AJCC stage group is II, III, or IV.

Under Idaho Code, and as recommended by NAACCR, cervix in-situ cases are not currently reportable.

Confidentiality of Data

Idaho state law ensures the protection of confidential data and restricts the release of identifying data. Only aggregate data are published. The same law protects report sources from any liability for reporting confidential data to CDRI. Persons with access to confidential data are required to

sign a pledge of confidentiality and are subject to penalty if they, through negligence or willful misconduct, disclose confidential data.

Quality Assurance

To assure validity and reliability of data presented, CDRI has many mechanisms in place to check data for quality and completeness. CDRI uses GenEDITS Plus software which has standard edits using algorithms that check the content of data fields against an encoded set of acceptable possible contents and flags the acceptability of coded data. Edits include field edits, inter-field edits, and inter-record edits. Edits check for unlikely sex/site, site/histology and site/age combinations. Records are also routinely checked for duplicate entries. Duplicate case checking is performed both manually and electronically using several methodologies.

CDRI has met NPCR program standards and is recognized as a "gold standard registry" for quality, completeness and timeliness as designated by NAACCR. These designations enable Idaho data to be included in *United States Cancer Statistics* and all NAACCR volumes of "*Cancer Incidence in North America*."

Executive Summary

Data Presentation

This report is comprised of eight sections. Section I focuses on the 23 most common cancer sites and all sites combined and presents age-adjusted incidence rates, numbers of cases, numbers of deaths, counts by county, stage of disease at time of diagnosis, risk factors, special notes, age-adjusted incidence rate comparisons by health district, and age-specific rates by gender. Comparison rates from the National Cancer Institute's SEER program and United States Cancer Statistics (USCS), which are combined from SEER and the Centers for Disease Control and Prevention's National Program of Cancer Registries (NPCR),¹⁰ are provided. Only registries whose data meet specified data quality criteria are included in USCS statistics. For the latest USCS data (2011 incidence), all areas of the U.S. are included except Nevada. Section II depicts incidence data by site, subsite and gender for invasive and in-situ cases. For completeness, site groups include categories for mesothelioma and Kaposi sarcoma histologies. In the remainder of the report, these cancers are grouped by anatomic site. Section III depicts mortality data by site and gender. Section IV contains a table of age-specific cancer rates, per 100,000, by site and gender. Section V contains a table of observed versus expected numbers of cancer cases by health district. For more detailed statistics by county, see CDRI's *County Cancer Profiles* at www.idcancer.org. Section VI contains tables of age-specific risks of developing and dying from cancer for males and females. Section VII shows cancer incidence trends in Idaho for the period 1975-2012. Section VIII shows cancer incidence rates by race and ethnicity for the period 2008-2012.

Descriptive Summary by Gender and Race and Ethnicity

The data presented in this report cover cancer cases diagnosed among Idaho residents between January 1, 2012, and December 31, 2012. In this time frame, there were 8,081 cases of in-situ and invasive cancer diagnosed among Idaho residents (4,089 among males and 3,992 among females). By race and ethnicity, there were 7,451 cases among non-Hispanic whites, 264 among Hispanic whites, 22 cases among blacks, 81 cases among Native Americans, and 61 cases among Asians/Pacific Islanders. Two hundred and two cases were coded as other or unknown race. The number of cancer cases treated in outpatient settings and reported only by pathology laboratories has increased over the last several years. These cases are more likely to have missing race and ethnicity information. CDRI has conducted matches with the Indian Health Service and Northwest Portland Area Indian Health Board to improve the accuracy of race information collected on Native Americans, and uses the NAACCR Hispanic Identification Algorithm to identify Hispanics by birthplace/race/surname. For more detailed statistics by race and ethnicity, see Section VIII of this report and *Cancer in Idaho by Race and Ethnicity: 1990-2001*.¹¹

Trends

There was a 2.6% decrease in the age-adjusted cancer incidence rates as published in the 2011 and 2012 annual reports. The incidence rates of cancers of the brain and testis, which fluctuate annually due to relatively small case counts, rebounded from 2011. See Section VII for more detailed long term trends in cancer incidence.

Population Description

The population of the state of Idaho on July 1, 2012, was estimated to be 1,595,590 (798,322 males and 797,268 females). Population estimates were obtained from the National Center for Health Statistics.¹² Idaho is comprised of 44 counties grouped into seven health districts. The composition of the health districts and their population estimates by gender as used in this report are shown below:

<u>Health District</u>	<u>Counties</u>	<u>Male</u>	<u>Female</u>
District 1	Benewah, Bonner, Boundary, Kootenai, Shoshone	106,821	108,595
District 2	Clearwater, Latah, Lewis, Idaho, Nez Perce	54,213	52,226
District 3	Adams, Canyon, Gem, Owyhee, Payette, Washington	147,297	148,261
District 4	Ada, Boise, Elmore, Valley	226,519	224,975
District 5	Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, Twin Falls	93,938	93,081
District 6	Bannock, Bear Lake, Bingham, Butte, Caribou, Franklin, Oneida, Power	84,881	84,528
District 7	Bonneville, Clark, Custer, Fremont, Jefferson, Lemhi, Madison, Teton	103,895	103,343

SUMMARY MEASURES OF CANCER BURDEN IN IDAHO - 2012

Primary Site	Incident Cases	Deaths	Median Age at Diagnosis	Median Age at Death	Estimated Prevalence Count	Total Number of YPLL Before Age 75	Average Number of YPLL per Death, Persons Aged Less than 75 Years	% Change Incidence Rate 2011 to 2012
All Sites	7,452	2,570	66.0	72.0	54,951	17,383	11.4	-2.6%
Bladder	368	68	72.0	77.5	2,754	271	8.5	2.2%
Brain	108	83	59.0	64.0	500	1,158	16.3	20.2%
Breast	1,087	145	63.0	70.0	11,948	1,200	12.6	6.2%
Cervix	52	11	53.0	64.0	692	165	16.5	-6.4%
Colorectal	596	235	68.0	72.0	4,473	1,591	11.4	-9.1%
Corpus Uteri	227	22	61.0	65.0	2,331	230	14.4	2.3%
Esophagus	79	71	70.0	69.0	137	568	12.1	15.4%
Hodgkin Lymphoma	43	8	37.0	56.5	756	146	20.8	18.8%
Kidney	252	69	63.0	71.0	1,807	493	10.9	-5.6%
Larynx	39	9	64.0	66.0	335	68	8.5	-10.8%
Leukemia	242	100	65.0	73.0	1,733	821	14.2	3.4%
Liver and Bile Duct	106	93	62.0	67.0	127	792	11.3	2.3%
Lung and Bronchus	873	621	71.0	73.0	1,715	3,451	9.3	-0.1%
Melanoma of Skin	455	57	63.0	71.0	4,282	554	15.4	-2.3%
Myeloma	102	60	69.0	75.0	417	270	8.4	-0.7%
Non-Hodgkin Lymphoma	304	97	67.0	77.0	2,430	429	9.8	-5.1%
Oral Cavity and Pharynx	196	33	64.0	65.0	1,554	383	14.7	-9.5%
Ovary	116	90	64.0	69.0	750	724	12.9	19.0%
Pancreas	222	191	69.0	70.0	219	1,287	10.5	13.7%
Prostate	1,015	153	68.0	78.0	12,246	389	7.5	-16.8%
Stomach	70	38	71.0	72.5	250	218	9.1	-5.9%
Testis	43	-	31.0	-	1,003	-	-	-32.2%
Thyroid	266	11	49.0	77.0	3,162	24	6.0	8.7%

Notes:

Incident cases include all invasive and bladder in situ cases newly diagnosed among Idaho residents in 2012.

Cancer prevalence is the number of people alive today who have been diagnosed with cancer. This includes individuals who were newly diagnosed, are in active treatment, have completed active treatment, and those living with progressive symptoms of their disease. Limited-duration prevalence was estimated from long-term incidence and survival rates from 1970 to 2012 but underestimates complete prevalence due to an unknown number of live cases diagnosed prior to 1970.

Years of potential life lost (YPLL) is a statistic used to measure the number of years of life lost in a population when persons in that population die prematurely (standard of 75 years of age used for this table).

Mortality-related statistics are suppressed for testis primary site due to small number of deaths.

Technical Notes

Age-adjusted Incidence Rates

Age-adjusted incidence rates published within this report were adjusted using the direct method and standardized to the age distribution of the 2000 U.S. population (see Appendix A for the 2000 U.S. standard population). Incidence rates represent the average number of new cases diagnosed annually per 100,000 persons. Age adjustment allows rates from one geographic area or time period to be compared with rates from other geographic areas or time periods that may have differences in age distributions. Any observed differences in age-adjusted incidence rates between populations are not due to differing age structures.

Because the 2000 U.S. standard population was used to age-adjust rates, the age-adjusted rates published in this report are not comparable with age-adjusted rates published in CDRI annual reports for incident years prior to 1999.

The computation of rates requires reliable estimates of the population at risk by five-year age groups and gender during the time period being studied. Population figures used in this report were obtained from the National Center for Health Statistics (see Appendix B).¹²

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

- ◆ in-situ cases, except bladder;
- ◆ basal and squamous cell skin cancers;
- ◆ cases with unknown age; and
- ◆ cases with unknown gender.

Of the total number of invasive and in-situ cases for 2012 (8,081), a total of 7,452 cases (7,244 invasive and 208 bladder in-situ) were used for calculating age-adjusted incidence rates. Of the 7,452 cases, 3,831 occurred among males and 3,621 occurred among females.

Age-specific Incidence Rates

Age-specific rates are calculated by dividing the number of cases for a given age group by the total population of that age group and are expressed as an average annual rate per 100,000 population by age group. Age-specific rates exclude the same types of cases that are excluded from age-adjusted incidence rates.

Observed vs. Expected Numbers of Cases

The expected numbers of cases were calculated using the indirect method of age-adjustment. For each health district, the expected numbers of cases were calculated using rates for the remainder of Idaho. The observed and expected numbers exclude in-situ cases (except bladder), basal and squamous cell skin cancers, and cases with unknown age or sex. Cases with unknown county of residence were not included in the observed numbers of cases. Statistically significant differences between observed and expected cases (standardized incidence ratios) were marked (+) for $p \leq 0.05$ and (*) for $p \leq 0.01$. Statistical significance does not necessarily imply that concern is warranted, since differences can occur as a result of multiple factors.

Risk and Associated Factors

The “risk and associated factors” subsections in Section I were developed from extracts of *Cancer Epidemiology and Prevention*, the American Cancer Society’s *Clinical Oncology*, and the *U.S. Department of Health and Human Services 11th Report on Carcinogens*.¹³⁻¹⁵ Socioeconomic status is abbreviated as SES in Section I text.

Mean/Median/Mode

Measures of central tendency are helpful to describe a group of individual values in a simple and concise manner.

Mean, also known as the arithmetic average, is the sum of all observations divided by the number of observations.

Median is the middle value when the observations are ranked in order from the smallest to the largest.

Mode is the value which occurs most frequently in a group of observed values.

Confidence Intervals

A confidence interval gives an estimated range of values which is likely to include the true population value, and is used to indicate the reliability of an estimate.

Cancer Case Definition

A “cancer case” is defined as a primary cancer site (where the cancer started), not a metastatic cancer site (where the cancer spread to). Since an individual can have more than one primary cancer site during their lifetime, the number of incident cancer cases is greater than the number of persons who are diagnosed with cancer.

Limitations to Data Interpretation and Comparison

Rates based on population estimates: In non-census years, state and county population figures are estimates. Errors in the estimates will impact the rates.

Rate comparisons: Age-adjusted incidence rates and age-specific rates based on small numbers of cases (fewer than 10 cases) may be unstable. In comparing rates among geographic areas (counties, health districts, or states), factors such as the absolute numbers of cases and differences in demographics should be considered. Interpretations without consideration of these factors may be misleading or inaccurate.

Racial misclassification: Many source documents used to report cancer do not specify race of the patient, or misclassify race. For detailed statistics by race and ethnicity, see Section VIII and *Cancer in Idaho by Race and Ethnicity: 1990-2001*.¹¹

Standard Site Analyses Categories

To facilitate interpretation of data and comparisons across registries, CDRI uses standardized groupings of site analysis categories. These groupings are consistent with the National Cancer Institute’s SEER Program, the Center for Disease Control and Prevention’s National Program of Cancer Registries (NPCR), and are adopted by NAACCR.^{5,6} Most neoplasms are grouped by the organ where they occur. Neoplasms of the lymphatic, hematopoietic, and reticuloendothelial systems are grouped by their histologies (leukemias, lymphomas, etc.), and not by the anatomic site where they occurred. Melanoma of the skin is a combination of both anatomic site and histologic type. See <http://seer.cancer.gov/siterecode/> for groupings of codes.

NPCR

The Centers for Disease Control and Prevention's National Program of Cancer Registries (NPCR) supports central cancer registries in 45 states (including Idaho), the District of Columbia, Puerto Rico, and the U.S. Pacific Island Jurisdictions. These data represent 96% of the U.S. population.

SEER

Part of the National Cancer Institute, the Surveillance, Epidemiology, and End Results (SEER) program consists of several population-based cancer registries throughout the U.S. SEER cancer statistics are designed to be representative of the U.S. population, and are included for reference, combined with NPCR data, in Section I of this report. SEER rates included data from 18 registries and were calculated using SEER*Stat.¹⁶

Stage at Time of Diagnosis

Staging measures the extent of disease at the time of initial diagnosis. Summary staging attempts to group cases with similar prognoses into categories of:

- ◆ in-situ (non-invasive),
- ◆ localized (cancer confined to the primary site),
- ◆ regional (direct extension of tumor to adjacent organs, and/or lymph nodes),
- ◆ distant (metastasis to tissues or lymph nodes remote from the primary site), or
- ◆ unstaged.

Limited-Duration Prevalence

Limited-duration prevalence represents the number of people alive on a certain day that had a diagnosis of the disease within some past number of years. SEER*Stat's prevalence calculations use the counting method to estimate prevalence from incidence

and follow-up data. The counting method estimates prevalence by counting the number of persons who are known to be alive at a specific calendar time and adjusting for those lost to follow-up.

Risks of Developing and Dying from Cancer

Cancer incidence and mortality risks were estimated using DEVCAN Version 6.7.2 software.¹⁷ DEVCAN was used to calculate the probability of developing or dying of cancer using Idaho-specific cancer incidence and mortality data for the years 2008-2012. The estimates generated are similar to estimates derived using incidence data from the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute, mortality data from the National Center for Health Statistics, and population estimates from census data. DEVCAN was developed by Information Management Services, Inc. in consultation with the Applied Research Branch of the National Cancer Institute. DEVCAN uses a standard multiple decrement life table.

Trend Analyses

Joinpoint Version 4.1.1.1 software was used to model trends in age-adjusted cancer incidence rates.¹⁸ For each joinpoint time segment, the estimated annual percent change (EAPC) was calculated by fitting a least squares regression line to the natural logarithm of the rates using calendar year as a covariate. The software used a grid search to find the maximum likelihood estimates of the joinpoints for multiple models (0 to 4 joinpoints) per primary site category and sex. Trend analyses are limited to cases considered to be malignant in both ICD-O-2 and ICD-O-3, and exclude cases only defined as malignant in 2010 or later.

SECTION I

2012 SUMMARY ON ALL SITES COMBINED AND 23 MOST COMMON SITES

ALL SITES

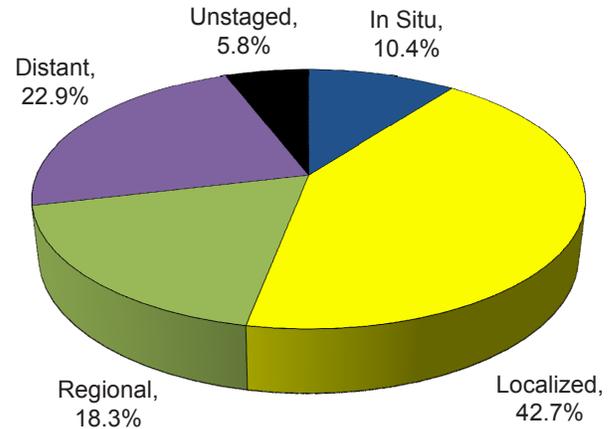
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	437.0	470.1	412.3
# of new invasive cases	7,244	3,664	3,580
# of new in-situ cases	837	425	412
# of deaths	2,570	1,391	1,179

Total Cases by County

Ada	2,055	Cassia	78	Lewis	37
Adams	36	Clark	6	Lincoln	24
Bannock	331	Clearwater	61	Madison	76
Bear Lake	41	Custer	41	Minidoka	104
Benewah	47	Elmore	120	Nez Perce	254
Bingham	173	Franklin	48	Oneida	16
Blaine	97	Fremont	50	Owyhee	62
Boise	45	Gem	127	Payette	137
Bonner	269	Gooding	75	Power	31
Bonneville	436	Idaho	109	Shoshone	95
Boundary	55	Jefferson	100	Teton	24
Butte	11	Jerome	105	Twin Falls	445
Camas	5	Kootenai	913	Valley	64
Canyon	950	Latah	150	Washington	76
Caribou	42	Lemhi	60		

Stage at Diagnosis - All Sites



Risk and Associated Factors

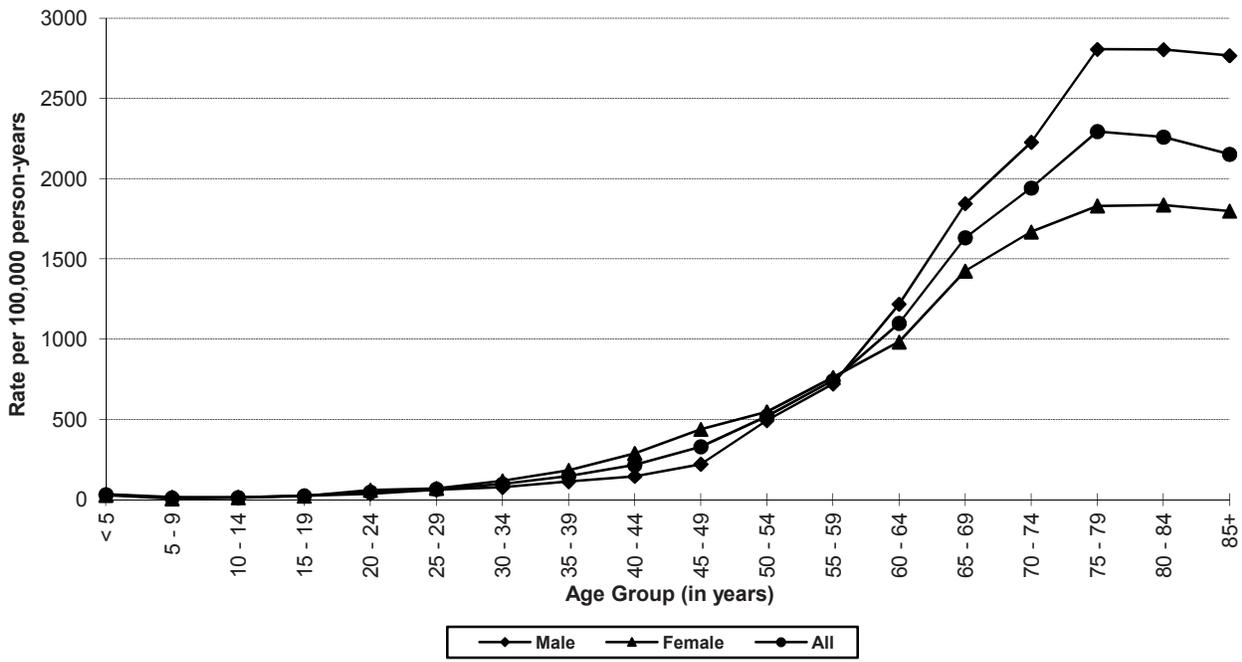
Age	Rates usually increase steadily with age. Most cases occur among adults in mid-life or older.
Gender	Males have higher incidence rates than females for most cancer types.
Race & SES	Rates are higher for blacks than for whites and other races. Rates are generally higher among lower income groups.
Occupation	Risk for cancer is greater with some kinds of workplace exposures, such as some chemicals, asbestos, and radiation.
Diet	Diets that are low in fresh fruits and vegetables have been associated with increased incidence of several cancers.
Other	Tobacco use is the single most important risk factor for cancer incidence and mortality. Most cancers manifest a tendency to aggregate in families – close relatives of a cancer patient can be considered to have increased risk of that neoplasm, but not all forms of cancer. Excess risk is usually 2-3 times baseline, but in some (rare) families may be hundreds-fold.

Special Notes

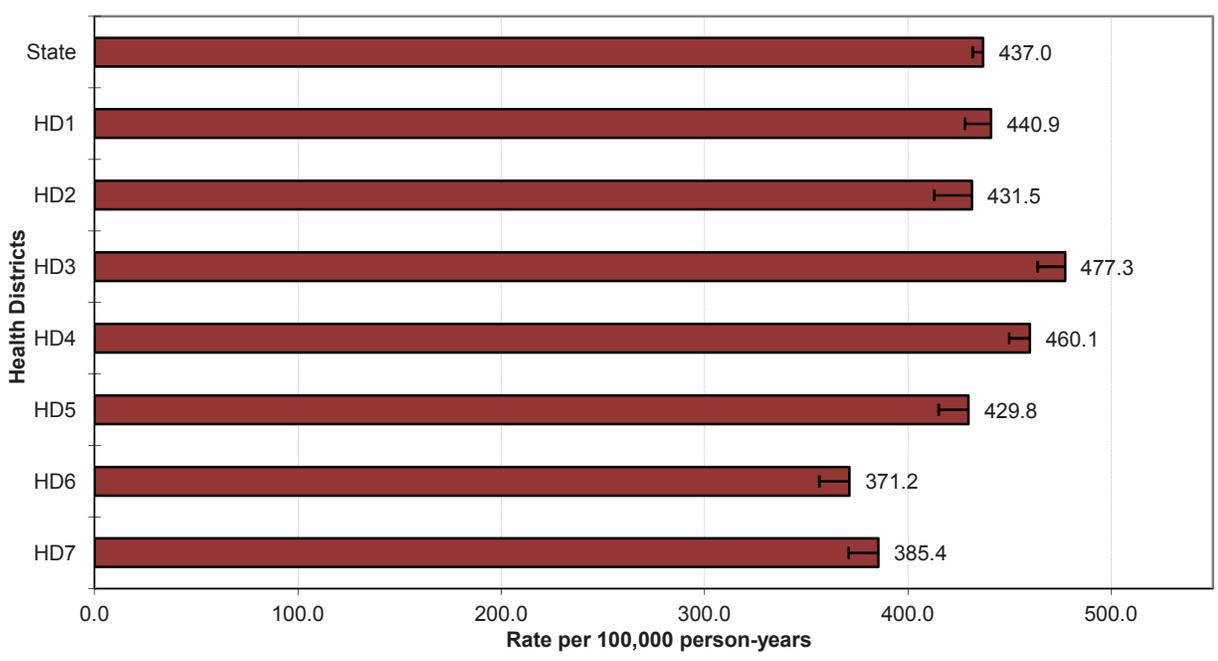
Mean age-adjusted incidence rate across health districts:	428.0
95% confidence interval on the mean age-adjusted incidence rate:	399.9- 456.2
Median age-adjusted incidence rate of health districts:	431.5
Range of age-adjusted incidence rate for health districts:	371.2- 477.3
USCS rate (2011, all races):	450.6

The incidence rates for all cancers combined were similar for males and females in Idaho until approximately age 55-59, after which rates for males rose dramatically. The highest rates for both males and females were observed in age groups after age 70, peaking in the age group 75-79 for males and 80-84 for females. Health Districts 3 and 4 had statistically significantly more cases of cancer than expected based upon rates for the remainder of Idaho, and Health Districts 6 and 7 had statistically significantly fewer cases than expected.

**State All Cancer Sites Combined
Age-specific Rates**



**All Sites Combined Cancer Incidence
Age-adjusted Rates by Health District**



BLADDER

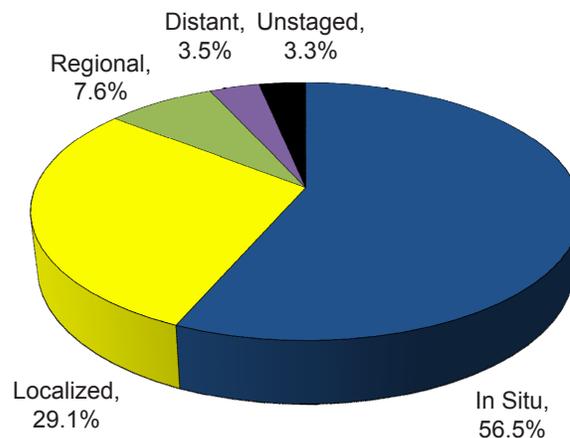
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	22.0	39.1	7.4
# of new invasive cases	160	135	25
# of new in-situ cases	208	167	41
# of deaths	68	54	14

Total Cases by County

Ada	80	Cassia	2	Lewis	2
Adams	1	Clark	1	Lincoln	-
Bannock	17	Clearwater	3	Madison	2
Bear Lake	4	Custer	2	Minidoka	4
Benewah	3	Elmore	7	Nez Perce	12
Bingham	3	Franklin	3	Oneida	2
Blaine	4	Fremont	1	Owyhee	4
Boise	-	Gem	7	Payette	6
Bonner	11	Gooding	1	Power	-
Bonneville	17	Idaho	7	Shoshone	7
Boundary	2	Jefferson	6	Teton	2
Butte	2	Jerome	8	Twin Falls	26
Camas	-	Kootenai	46	Valley	3
Canyon	47	Latah	10	Washington	3
Caribou	-	Lemhi	-		

Stage at Diagnosis - Bladder



Risk and Associated Factors

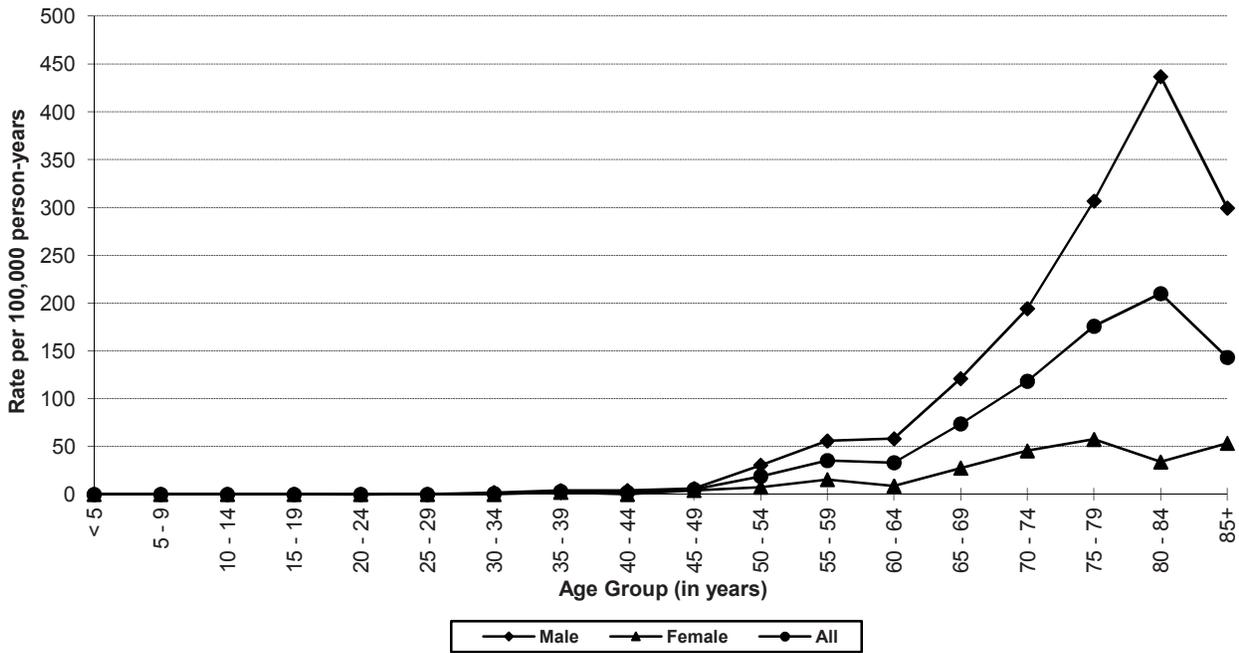
Age	Rates usually increase steadily with age.
Gender	Males have substantially higher rates than females.
Race	Incidence rates are higher in whites.
Occupation	Truck drivers, likely via exposure to motor exhaust, are at increased risk. Occupational exposures, including manufacturers of certain dyes, painters, and aluminum, rubber, cable, and leather workers, have been shown to increase risk of bladder cancer. Exposure to permanent hair dyes may increase risk.
Other	Tobacco consumption has been associated with a 2- to 5-fold higher incidence of bladder cancer and is attributable for a greater number of cases than other risk factors. Cyclophosphamide, a chemotherapeutic agent, and 4-amino-diphenyl are known human bladder carcinogens. <i>Schistosoma hematobium</i> may cause bladder tumors. Nitrate and arsenic in drinking water, and chlorinated surface water as a source for drinking water, have each been shown to increase the risk of bladder cancer.

Special Notes

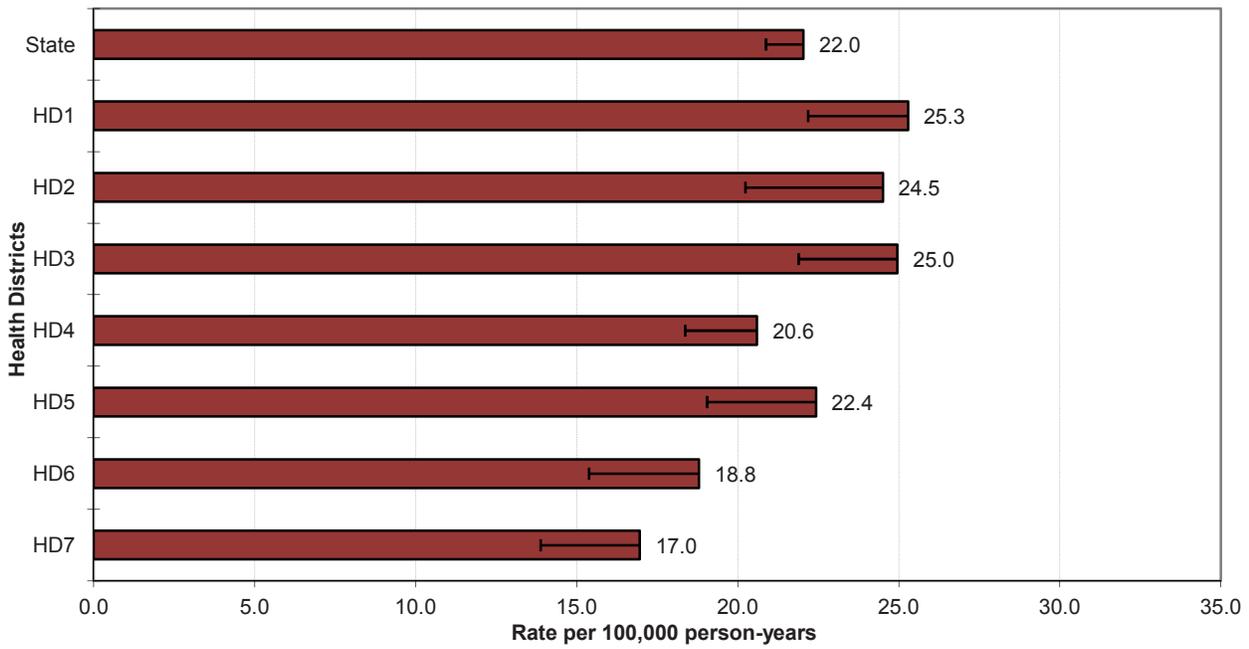
Mean age-adjusted incidence rate across health districts:	21.9
95% confidence interval on the mean age-adjusted incidence rate:	19.5- 24.3
Median age-adjusted incidence rate of health districts:	22.4
Range of age-adjusted incidence rate for health districts:	17.0- 25.3
USCS rate (2011, all races):	20.2

There were few cases of bladder cancer among persons aged less than 50 years. Bladder cancer incidence rates increased with age, peaking in the age group 80-84 for males and 75-79 for females. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.

**State Bladder Cancer Incidence
Age-specific Rates**



**Bladder Cancer Incidence
Age-adjusted Rates by Health District**



BRAIN

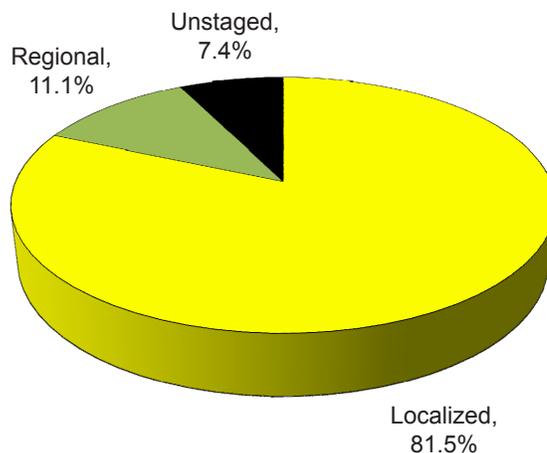
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	6.4	8.0	5.0
# of new invasive cases	108	65	43
# of new in-situ cases	0	0	0
# of deaths	83	58	25

Total Cases by County

Ada	25	Cassia	3	Lewis	1
Adams	-	Clark	-	Lincoln	1
Bannock	6	Clearwater	2	Madison	1
Bear Lake	2	Custer	-	Minidoka	3
Benewah	1	Elmore	2	Nez Perce	3
Bingham	2	Franklin	1	Oneida	-
Blaine	1	Fremont	1	Owyhee	2
Boise	1	Gem	2	Payette	-
Bonner	3	Gooding	1	Power	-
Bonneville	5	Idaho	1	Shoshone	-
Boundary	1	Jefferson	4	Teton	-
Butte	-	Jerome	5	Twin Falls	5
Camas	-	Kootenai	8	Valley	-
Canyon	12	Latah	2	Washington	-
Caribou	-	Lemhi	1		

Stage at Diagnosis - Brain



Risk and Associated Factors

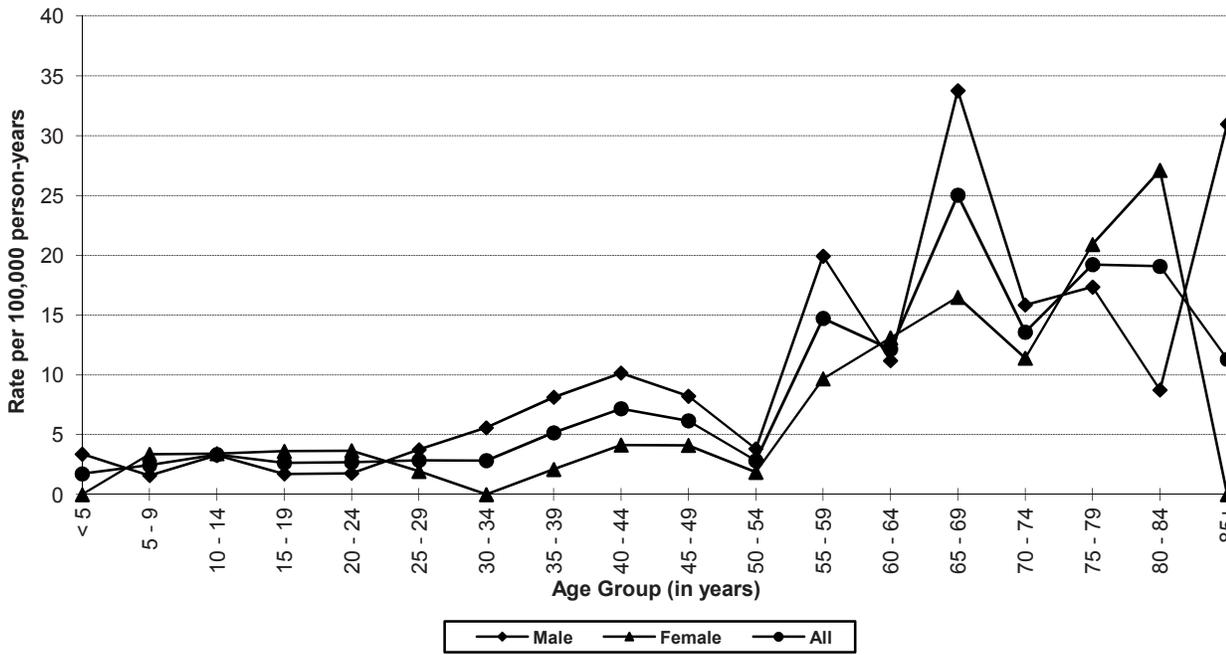
Age	This is the second most common cancer among children, following leukemia. Adult malignant brain tumors are most common after age 60.
Gender	Males typically have higher rates than females.
Race & SES	The incidence rate is higher in whites and higher social classes.
Genetics	Certain genetic factors may cause an increased risk of some malignant brain tumors, including gliomas, but the proportion of brain tumors attributable to inheritance is likely no more than 4%. Molecular tests are being developed that may be useful in screening for recurrences.
Occupation	Vinyl chloride and ionizing radiation exposure are risk factors. Many occupational and environmental exposures have shown suggestive associations with elevated rates of brain cancer. Roofers, sheet metal workers, and rubber and plastic workers may be at elevated risk. Specific exposures underlying these associations have been suggested but not established.
Other	Human Immunodeficiency Virus (HIV) infected individuals and organ transplant recipients have an increased risk of developing brain lymphoma.

Special Notes

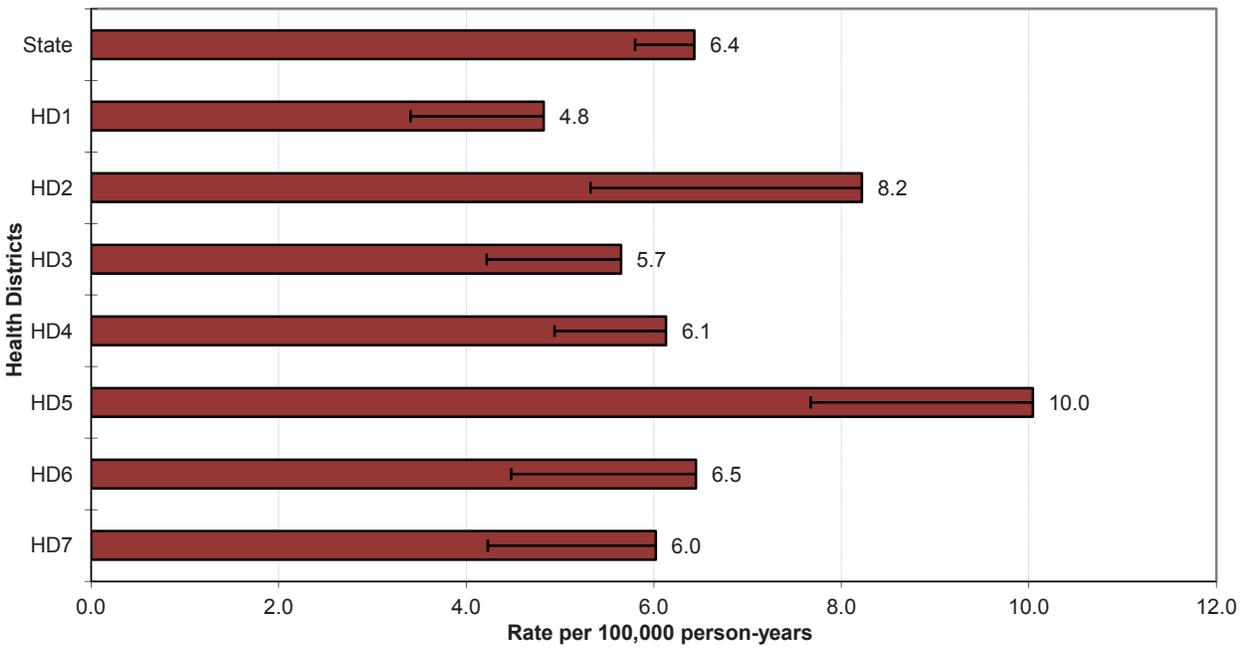
Mean age-adjusted incidence rate across health districts:	6.8
95% confidence interval on the mean age-adjusted incidence rate:	5.4- 8.1
Median age-adjusted incidence rate of health districts:	6.1
Range of age-adjusted incidence rate for health districts:	4.8- 10.0
USCS rate (2011, all races):	6.4

The age-related incidence of brain cancer is typically bimodal, usually with a peak in infancy and childhood, a gradual rise in young adulthood, and a broader, sustained peak during the fifth to eighth decade of life. This trend is difficult to discern in Idaho's population due to the relatively small number of cases observed annually, which increases the variability in age-specific rates. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.

**State Brain Cancer Incidence
Age-specific Rates**



**Brain Cancer Incidence
Age-adjusted Rates by Health District**



BRAIN & OTHER CNS NON-MALIGNANT

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	10.7	8.2	12.9
# of new cases	178	66	112

Total Cases by County

Ada	44	Cassia	4	Lewis	-
Adams	1	Clark	-	Lincoln	-
Bannock	12	Clearwater	1	Madison	1
Bear Lake	1	Custer	2	Minidoka	2
Benewah	1	Elmore	1	Nez Perce	4
Bingham	5	Franklin	-	Oneida	1
Blaine	2	Fremont	1	Owyhee	1
Boise	4	Gem	3	Payette	2
Bonner	8	Gooding	2	Power	-
Bonneville	6	Idaho	2	Shoshone	-
Boundary	3	Jefferson	3	Teton	3
Butte	-	Jerome	3	Twin Falls	2
Camas	1	Kootenai	13	Valley	-
Canyon	27	Latah	6	Washington	4
Caribou	2	Lemhi	-		

Background

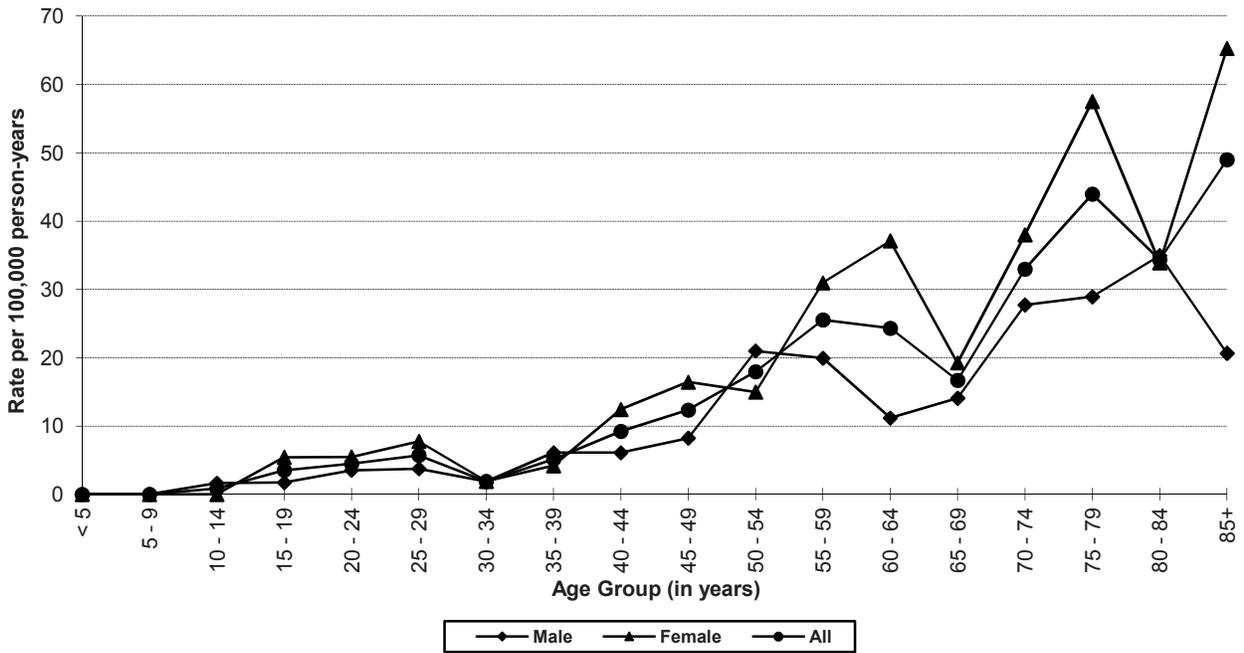
In 2007, as a result of Public Law 107-260, the publication *United States Cancer Statistics 2004 Incidence and Mortality* began to include tables for non-malignant brain tumors. Until this time, the only reference data were from the Central Brain Tumor Registry of the United States (CBTRUS), which has reported on data submitted from eighteen state central cancer registries, including Idaho. For more detailed information regarding non-malignant brain tumors, see <http://www.cbtrus.org>.

Special Notes

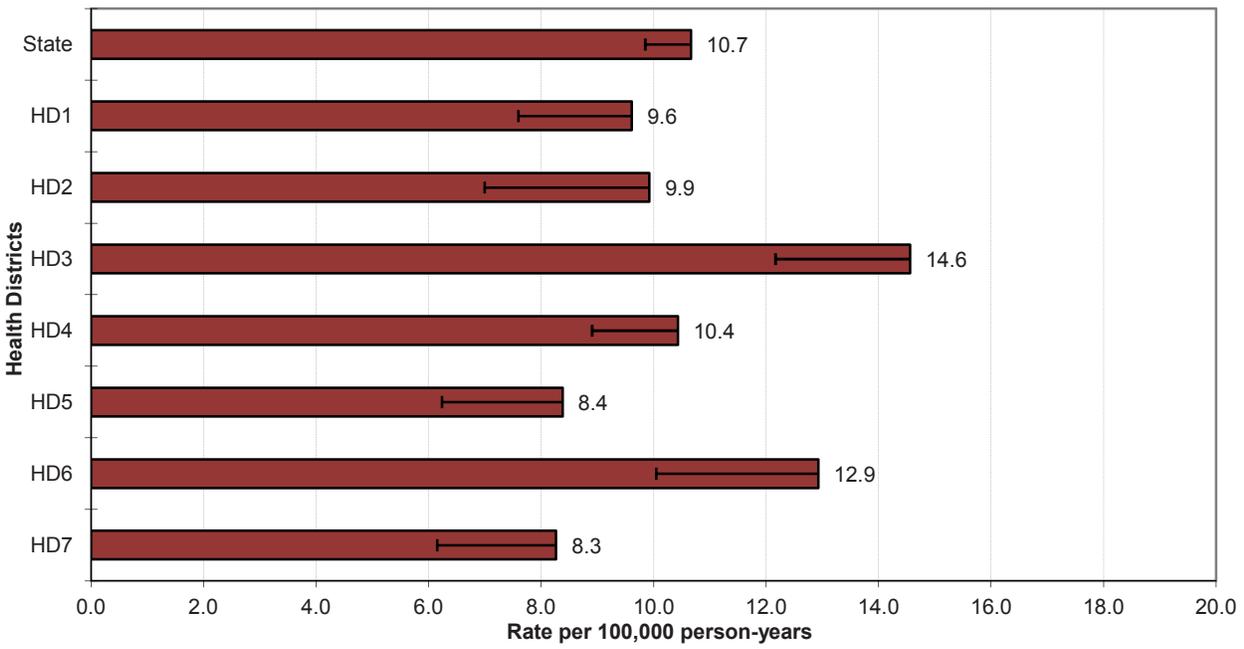
Mean age-adjusted incidence rate across health districts:	10.6
95% confidence interval on the mean age-adjusted incidence rate: 6.8-	8.9- 12.3
Median age-adjusted incidence rate of health districts:	9.9
Range of age-adjusted incidence rate for health districts:	8.3- 14.6
SEER 18 rate (2011, all races):	10.8

Health District 3 had statistically significantly more cases of non-malignant brain and other central nervous system tumors than expected based upon rates for the remainder of Idaho.

**State Brain & other CNS non-Malignant Incidence
Age-specific Rates**



**Brain & other CNS non-Malignant Incidence
Age-adjusted Rates by Health District**



BREAST

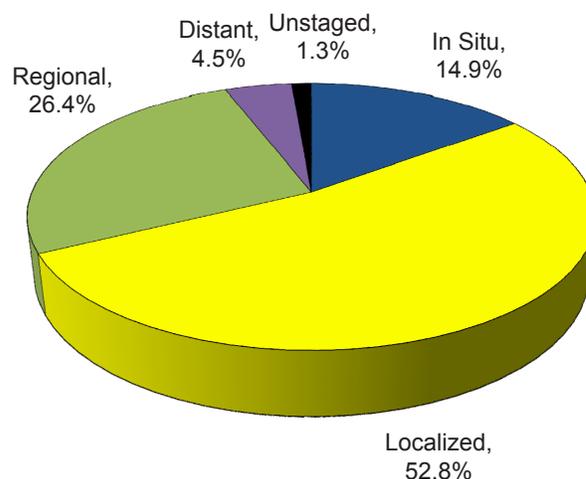
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	64.2	1.0	123.4
# of new invasive cases	1,087	8	1,079
# of new in-situ cases	191	0	191
# of deaths	145	1	144

Total Cases by County

Ada	358	Cassia	20	Lewis	3
Adams	2	Clark	1	Lincoln	4
Bannock	42	Clearwater	9	Madison	14
Bear Lake	5	Custer	7	Minidoka	15
Benewah	3	Elmore	15	Nez Perce	33
Bingham	29	Franklin	10	Oneida	2
Blaine	13	Fremont	6	Owyhee	9
Boise	4	Gem	15	Payette	28
Bonner	39	Gooding	13	Power	8
Bonneville	47	Idaho	14	Shoshone	11
Boundary	12	Jefferson	13	Teton	3
Butte	1	Jerome	17	Twin Falls	68
Camas	2	Kootenai	162	Valley	8
Canyon	160	Latah	29	Washington	12
Caribou	7	Lemhi	5		

Stage at Diagnosis - Breast



Risk and Associated Factors

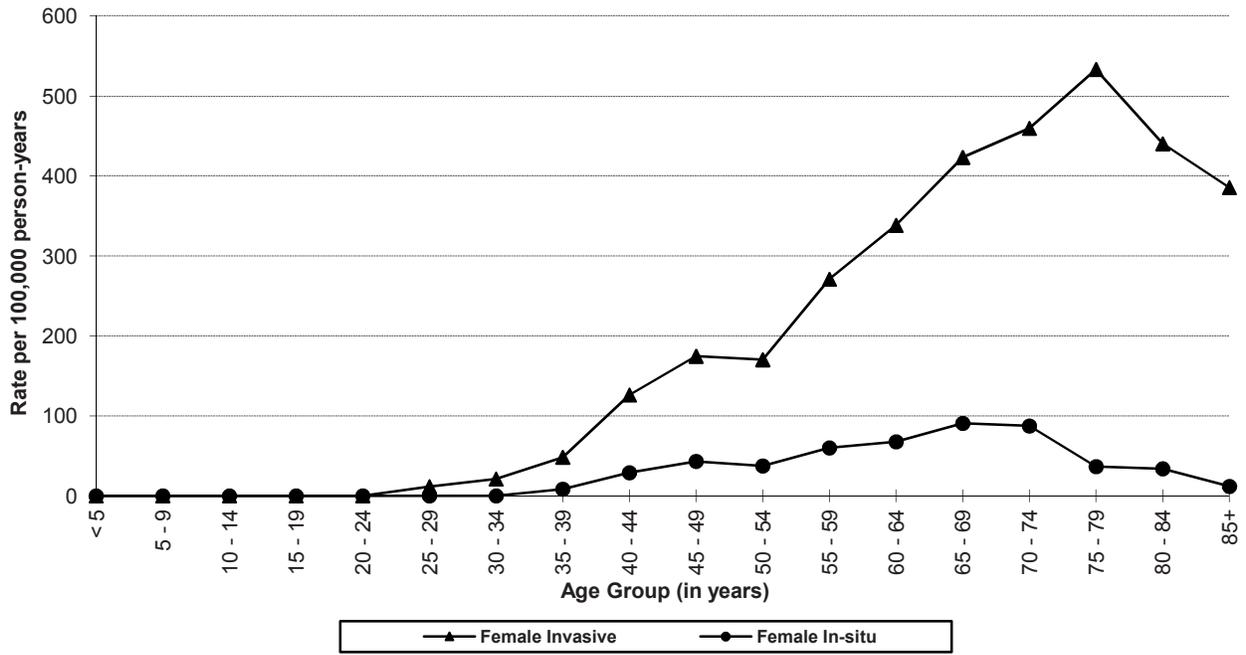
Age	Rates increase steadily with age. Age is the single most important risk factor for breast cancer. A 60-year-old white American woman's risk of developing breast cancer is fourteen times that of a 30-year-old American woman.
Race & SES	Whites have higher incidence rates, as do women in higher income groups.
Genetics	5% to 10% of all breast cancers have a major hereditary component. For the 2% to 4% of women who have BRCA 1 or 2 mutations, the risk of breast cancer by age 70 is about 45% to 65% in the absence of intervention.
Hormonal	There is evidence of hormonal influence in the risk of developing breast cancer. Longer intervals of menarche to the first full-term pregnancy and menarche to menopause, as well as menarche before age 13, have been associated with higher risks of breast cancer. Cumulative estrogen exposure, including use of hormone replacement therapy, increases breast cancer risk.
Other	Alcohol consumption, high dietary fat intake, obesity (in postmenopausal women), sedentary life-style, and having a mother or sister with breast cancer have all been implicated as associated risk factors. Weight gain of 55 lbs or more after age 18 is associated with a 45% increased risk.

Special Notes

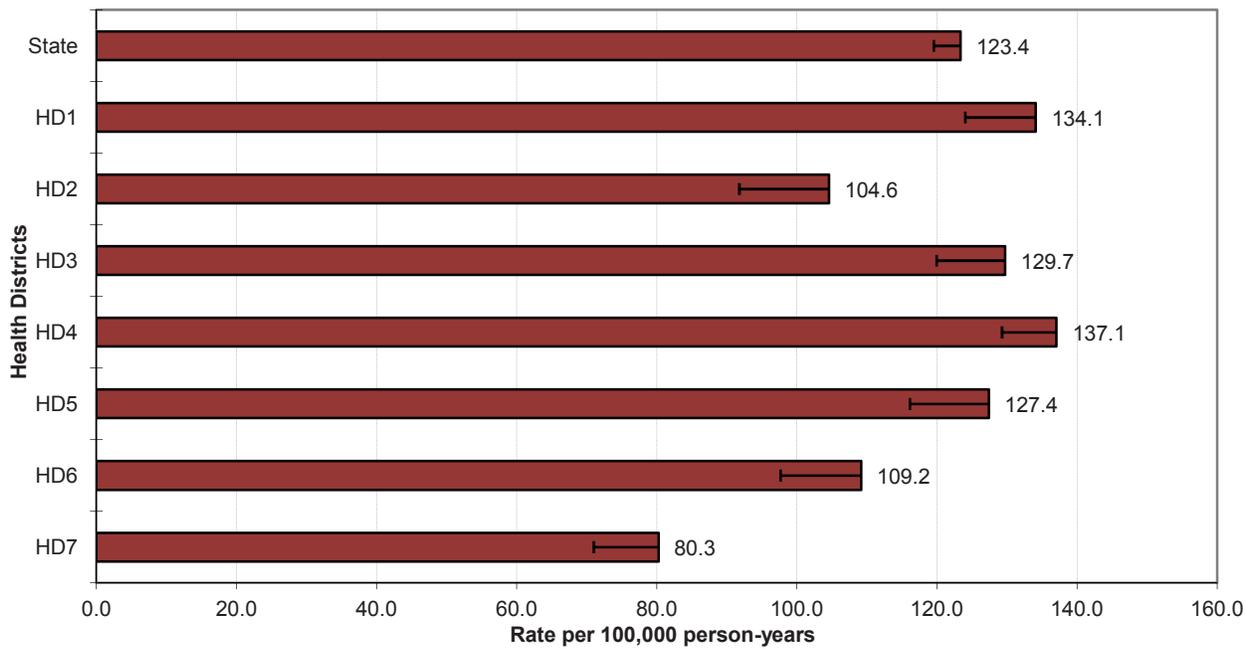
Mean age-adjusted incidence rate across health districts:	117.5
95% confidence interval on the mean age-adjusted incidence rate:	102.3- 132.7
Median age-adjusted incidence rate of health districts:	127.4
Range of age-adjusted incidence rate for health districts:	80.3- 137.1
USCS rate (2011, all races):	122.0

The vast majority of breast cancer cases occur among females. In Idaho during the year 2012, there were 8 cases of invasive breast cancer among males. The age-specific incidence rates of female breast cancer in Idaho increased with age, peaking in the age group 875-79 for invasive cases. No cases were observed in women less than 20 years of age. Health District 4 had statistically significantly more cases of breast cancer than expected based upon rates for the remainder of Idaho, and Health District 7 had statistically significantly fewer cases than expected.

**State Female Breast Cancer Incidence
Age-specific Rates**



**Female Breast Cancer Incidence
Age-adjusted Rates by Health District**



CERVIX

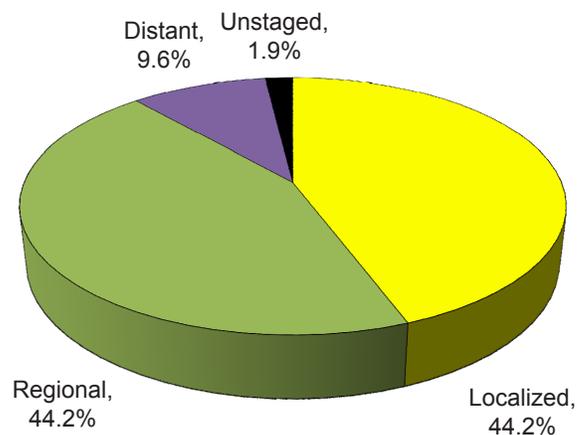
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	6.5
# of new invasive cases	-	-	52
# of new in-situ cases	-	-	n/a
# of deaths	-	-	11

Total Cases by County

Ada	16	Cassia	-	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	3	Clearwater	1	Madison	-
Bear Lake	-	Custer	2	Minidoka	1
Benewah	-	Elmore	-	Nez Perce	6
Bingham	-	Franklin	1	Oneida	-
Blaine	2	Fremont	-	Owyhee	-
Boise	1	Gem	2	Payette	-
Bonner	1	Gooding	-	Power	-
Bonneville	1	Idaho	-	Shoshone	-
Boundary	-	Jefferson	-	Teton	-
Butte	-	Jerome	2	Twin Falls	3
Camas	-	Kootenai	4	Valley	-
Canyon	5	Latah	1	Washington	-
Caribou	-	Lemhi	-		

Stage at Diagnosis - Cervix



Risk and Associated Factors

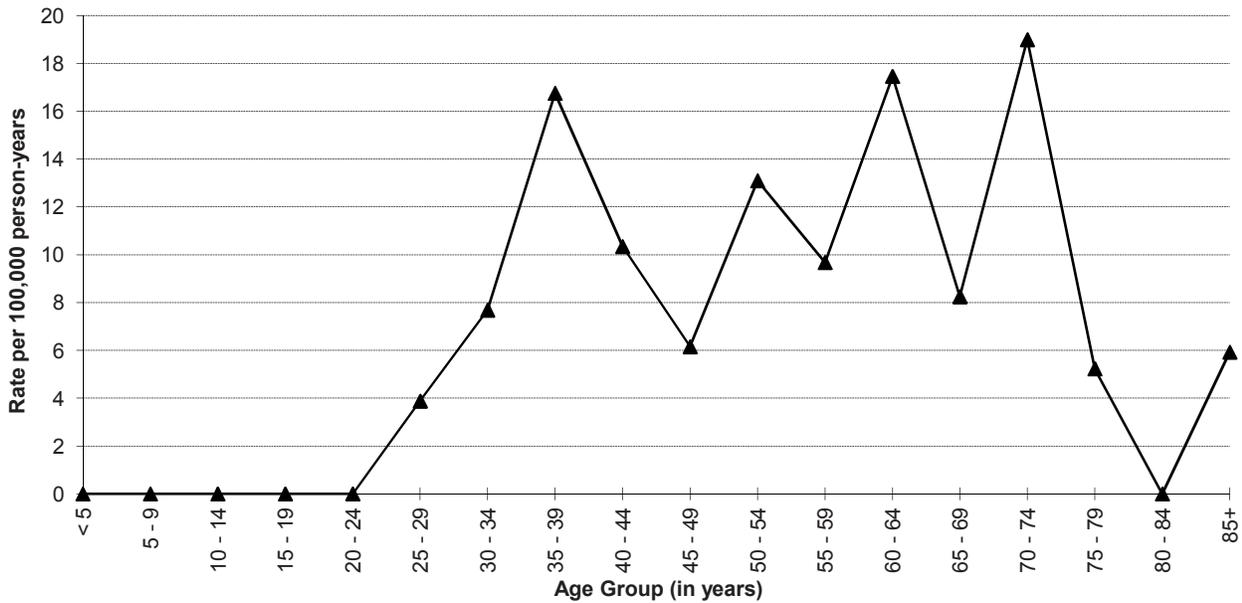
Age	Cervical cancer occurs in adult women of any age. However, the majority of invasive cases are diagnosed in older women.
Race & SES	Blacks, Hispanics, and women in lower income groups have been shown to experience higher rates.
Other	The large majority of cervical cancer cases worldwide can be attributed to human papilloma virus (HPV) infection. Of the at least 70 types of HPV known, types 16 and 18 are most closely associated with malignancy. Other risk factors that may be correlates, cofactors, or independent risk factors of HPV infection include: early age at first intercourse (less than 16 years old), a history of multiple sexual partners, a large number of pregnancies, oral contraceptive use, a history of other sexually transmitted diseases, and the presence of other genital tract neoplasia. Exposure to cigarette smoke is also a known risk factor, although by unknown mechanisms. Diethylstilbestrol use during pregnancy increased clear-cell adenocarcinoma in daughters exposed in utero.

Special Notes

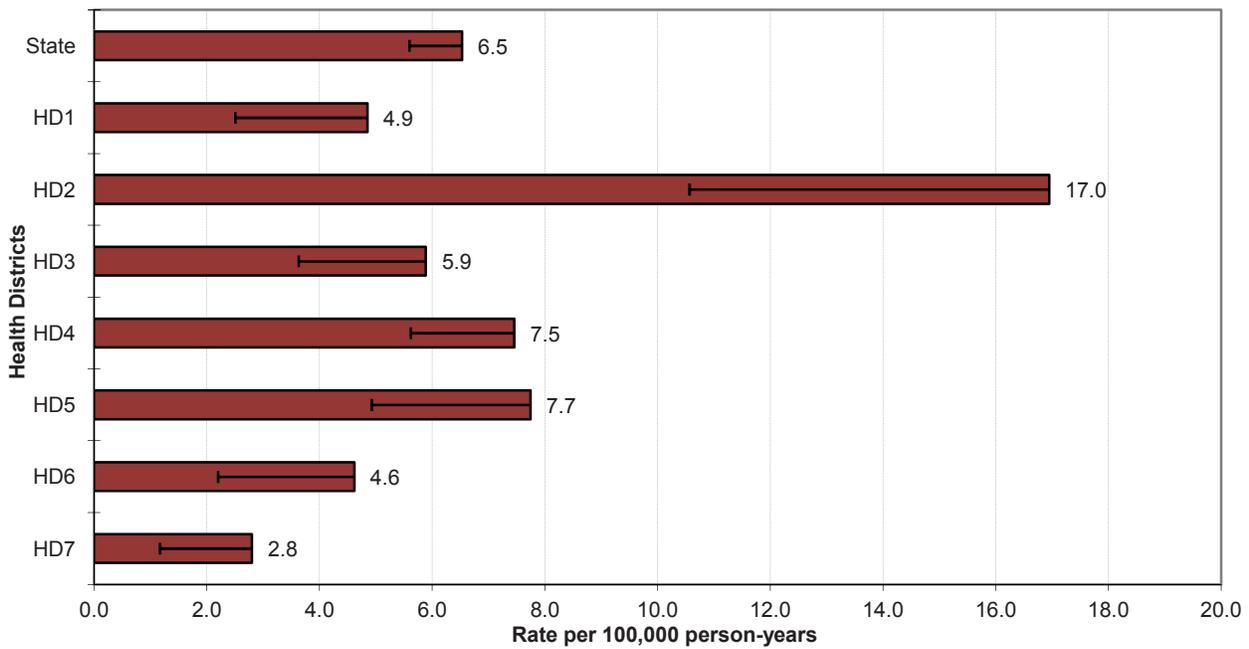
Mean age-adjusted incidence rate across health districts:	7.2
95% confidence interval on the mean age-adjusted incidence rate:	3.8- 10.6
Median age-adjusted incidence rate of health districts:	5.9
Range of age-adjusted incidence rate for health districts:	2.8- 17.0
USCS rate (2011, all races):	7.5

Increased screening with routine Pap tests, particularly among older and low-income women, has increased diagnostic rates for pre-invasive disease and helped to reduce the incidence of invasive cervical cancer. Today, the vast majority of cases in younger women is diagnosed before the invasive stage, with cure rates approaching 100%. These pre-invasive cases are not included in this report. Health District 2 had statistically significantly more cases of cervical cancer than expected based upon rates for the remainder of Idaho.

**State Cervical Cancer Incidence
Age-specific Rates**



**Cervical Cancer Incidence
Age-adjusted Rates by Health District**



COLORECTAL

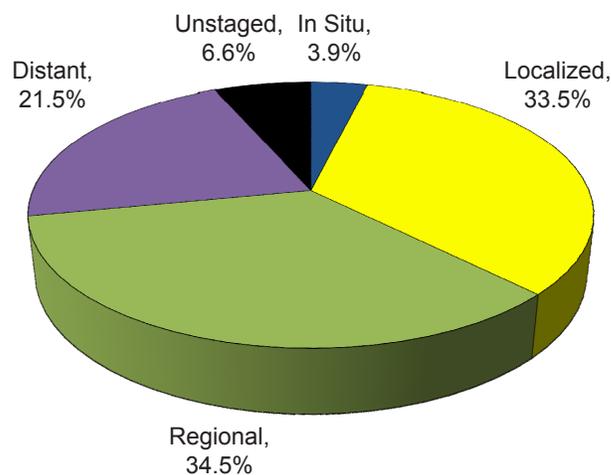
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	35.5	37.5	33.4
# of new invasive cases	596	300	296
# of new in-situ cases	24	14	10
# of deaths	235	130	105

Total Cases by County

Ada	144	Cassia	4	Lewis	2
Adams	5	Clark	2	Lincoln	-
Bannock	31	Clearwater	2	Madison	5
Bear Lake	5	Custer	4	Minidoka	5
Benewah	6	Elmore	13	Nez Perce	17
Bingham	24	Franklin	6	Oneida	3
Blaine	6	Fremont	6	Owyhee	3
Boise	1	Gem	5	Payette	9
Bonner	15	Gooding	6	Power	2
Bonneville	41	Idaho	8	Shoshone	7
Boundary	2	Jefferson	12	Teton	-
Butte	1	Jerome	5	Twin Falls	34
Camas	-	Kootenai	63	Valley	4
Canyon	87	Latah	5	Washington	5
Caribou	9	Lemhi	6		

Stage at Diagnosis - Colorectal



Risk and Associated Factors

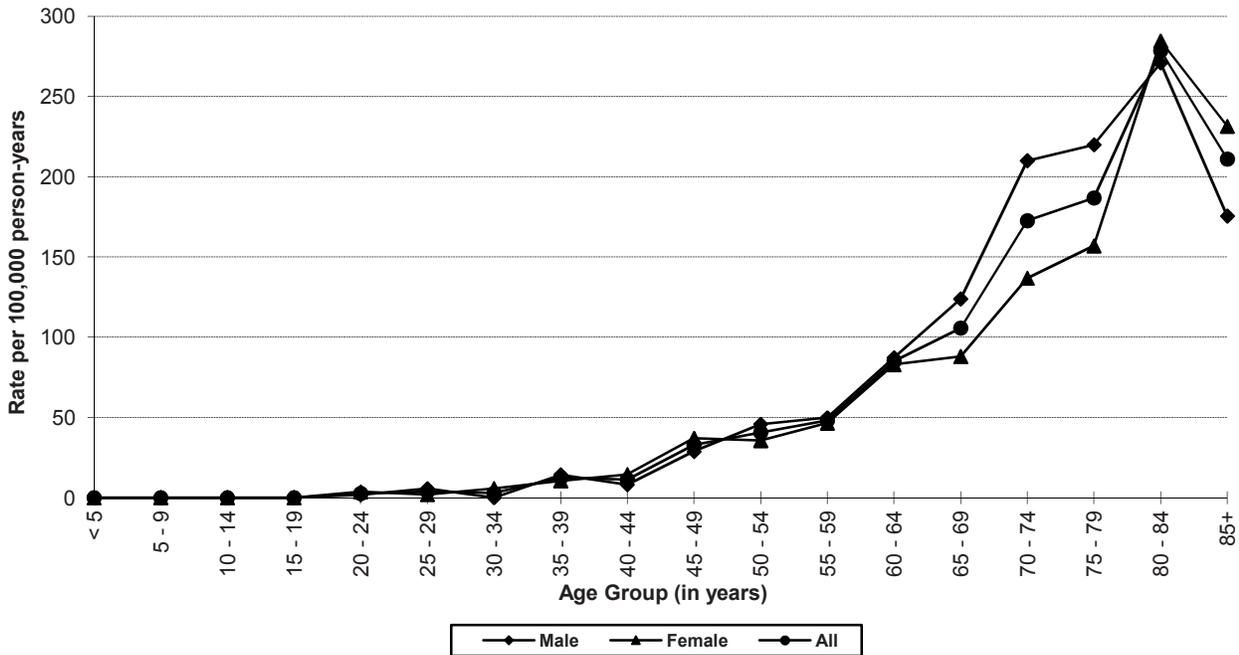
Age	Rates increase with age; the vast majority of cases occur after age 50.
Gender	Incidence rates are slightly higher in males.
Genetics	It is estimated that 65-85% of colorectal cancer cases are sporadic, 10-30% are familial, and the remainder are the result of specific rare genetic disorders such as Lynch Syndrome.
Diet	There is strong evidence that high calorie diets and diets high in fat and low in fiber contribute to higher risks of colon cancer.
Other	Individuals with a close family history of this cancer and those with a personal history of certain other cancers are at increased risk. Physical inactivity, obesity, and tobacco use are known risk factors for colorectal cancer. Cigarette smoking is significantly associated with colorectal cancer incidence and mortality. The use of NSAIDs, including aspirin, may help prevent colon cancer. Inflammatory bowel disease confers a 4- to 20-fold increase in colorectal cancer risk, with younger age at diagnosis. If everyone aged 50 years and older were screened regularly, as many as 60% of deaths from colorectal cancer could be avoided.

Special Notes

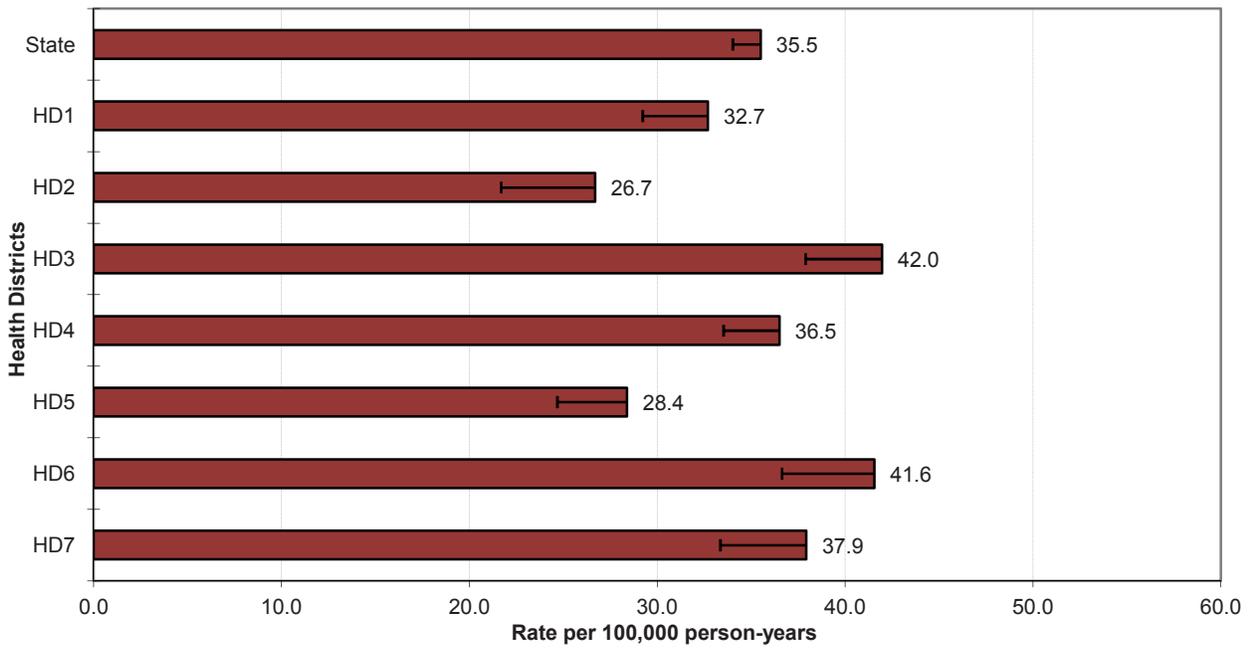
Mean age-adjusted incidence rate across health districts:	35.1
95% confidence interval on the mean age-adjusted incidence rate:	30.6- 39.6
Median age-adjusted incidence rate of health districts:	36.5
Range of age-adjusted incidence rate for health districts:	26.7- 42.0
USCS rate (2011, all races):	39.9

Few cases of colorectal cancer were diagnosed in persons less than 40 years of age. There was a steep increase in age-specific incidence rates starting at age 65. Health District 2 had statistically significantly fewer cases of colorectal cancer than expected based upon rates for the remainder of Idaho.

**State Colorectal Cancer Incidence
Age-specific Rates**



**Colorectal Cancer Incidence
Age-adjusted Rates by Health District**



CORPUS UTERI

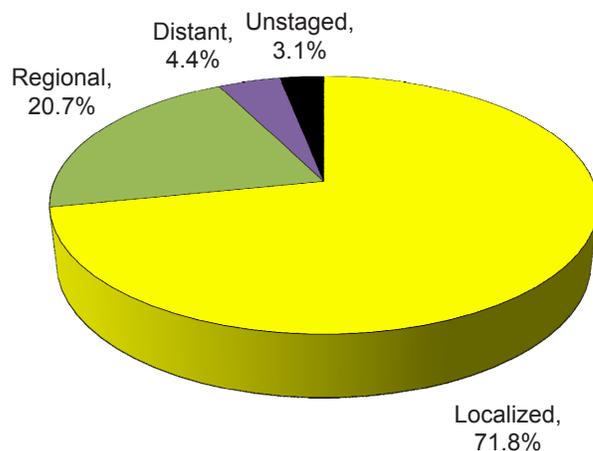
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	24.2
# of new invasive cases	-	-	227
# of new in-situ cases	-	-	0
# of deaths	-	-	22

Total Cases by County

Ada	50	Cassia	1	Lewis	4
Adams	-	Clark	-	Lincoln	-
Bannock	14	Clearwater	1	Madison	2
Bear Lake	1	Custer	-	Minidoka	5
Benewah	-	Elmore	4	Nez Perce	7
Bingham	5	Franklin	3	Oneida	-
Blaine	2	Fremont	-	Owyhee	2
Boise	2	Gem	6	Payette	4
Bonner	6	Gooding	-	Power	-
Bonneville	17	Idaho	7	Shoshone	-
Boundary	3	Jefferson	4	Teton	1
Butte	-	Jerome	3	Twin Falls	13
Camas	-	Kootenai	24	Valley	2
Canyon	25	Latah	5	Washington	3
Caribou	-	Lemhi	1		

Stage at Diagnosis - Corpus Uteri



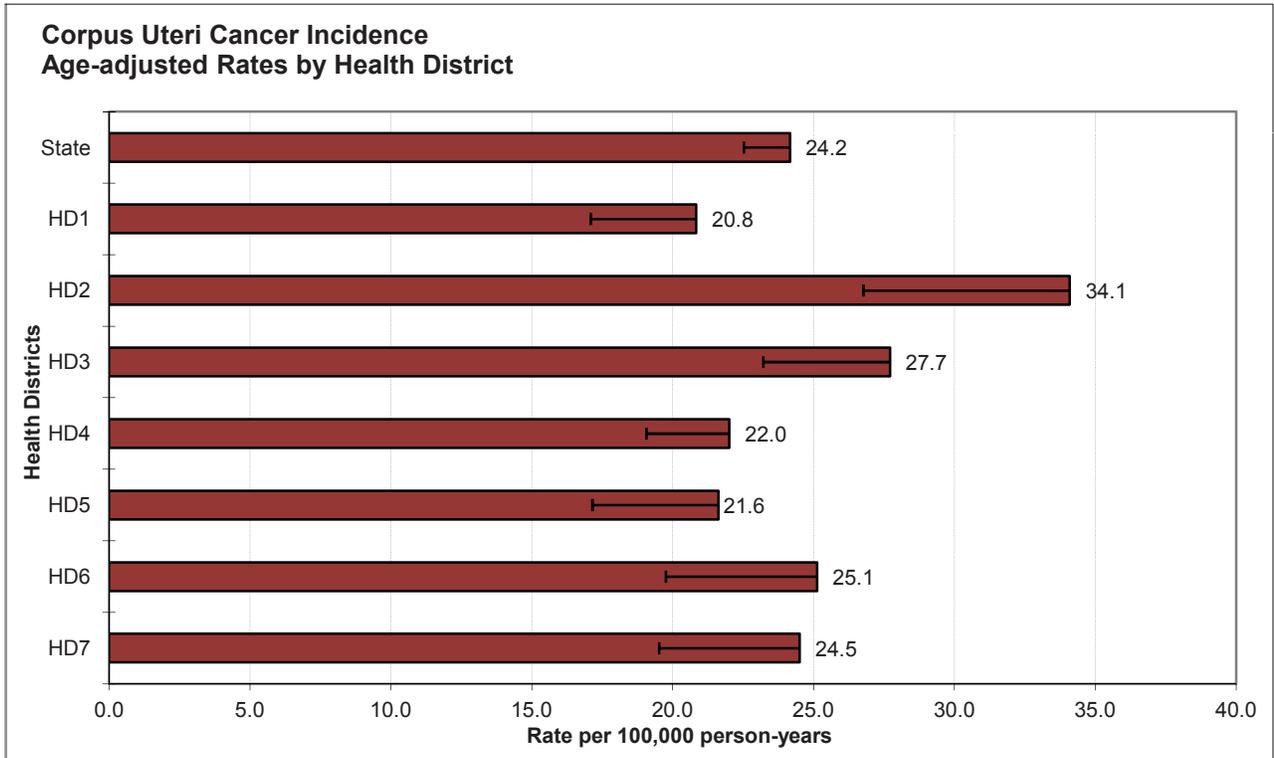
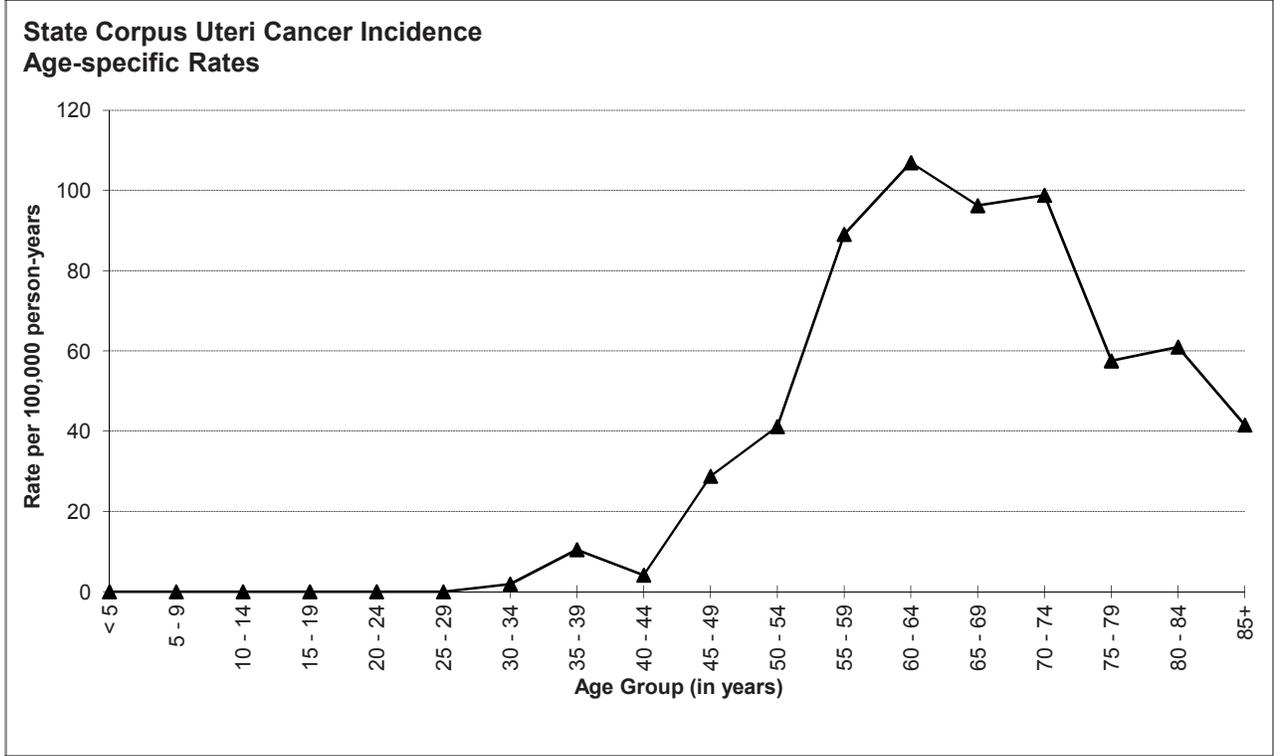
Risk and Associated Factors

Age	Occurs predominantly after menopause, with incidence rates peaking before age 80.
Race & SES	White women have higher rates than black or Asian/Pacific Islander women in the U.S.
Genetics	Familial tendency has been observed, but likely accounts for a small fraction of cases.
Diet	Dietary fat may play a role in increased risk. Obesity and hypertension are common associated conditions of endometrial cancer.
Hormonal	Factors that elevate levels of estrogen or decrease progesterone levels enhance the risk. Women who have never carried a pregnancy to term are at a relatively high risk. Risk decreases as the number of pregnancies increases. An increased incidence of endometrial cancer has been found in association with prolonged, unopposed estrogen exposure and with tamoxifen treatment of breast cancer. Use of combination oral contraceptives (estrogen and progestin) decreases risk of endometrial cancer by about 50%.

Special Notes

Mean age-adjusted incidence rate across health districts:	25.1
95% confidence interval on the mean age-adjusted incidence rate:	21.7- 28.5
Median age-adjusted incidence rate of health districts:	24.5
Range of age-adjusted incidence rate for health districts:	20.8- 34.1
USCS rate (2011, all races):	24.6

Few cases of endometrial cancer were diagnosed in persons less than 35 years of age. After age 54, there was a sharp increase in age-specific rates, peaking in the age group 60-64. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.



ESOPHAGUS

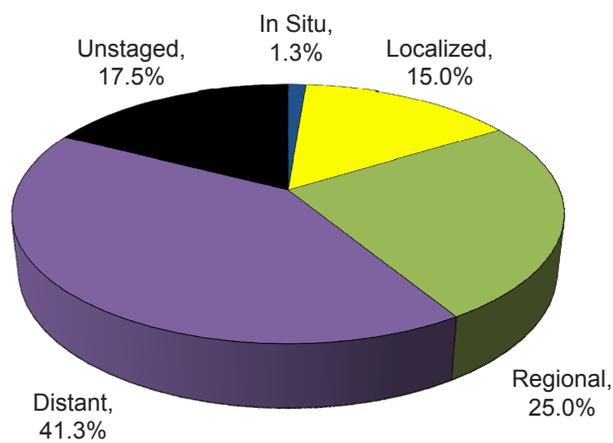
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.7	8.4	1.5
# of new invasive cases	79	66	13
# of new in-situ cases	1	1	0
# of deaths	71	55	16

Total Cases by County

Ada	20	Cassia	1	Lewis	-
Adams	2	Clark	-	Lincoln	-
Bannock	3	Clearwater	-	Madison	-
Bear Lake	-	Custer	1	Minidoka	1
Benewah	1	Elmore	-	Nez Perce	4
Bingham	1	Franklin	1	Oneida	-
Blaine	1	Fremont	-	Owyhee	-
Boise	-	Gem	1	Payette	-
Bonner	3	Gooding	-	Power	-
Bonneville	6	Idaho	1	Shoshone	-
Boundary	1	Jefferson	2	Teton	-
Butte	-	Jerome	3	Twin Falls	5
Camas	-	Kootenai	11	Valley	1
Canyon	7	Latah	2	Washington	-
Caribou	-	Lemhi	1		

Stage at Diagnosis - Esophagus



Risk and Associated Factors

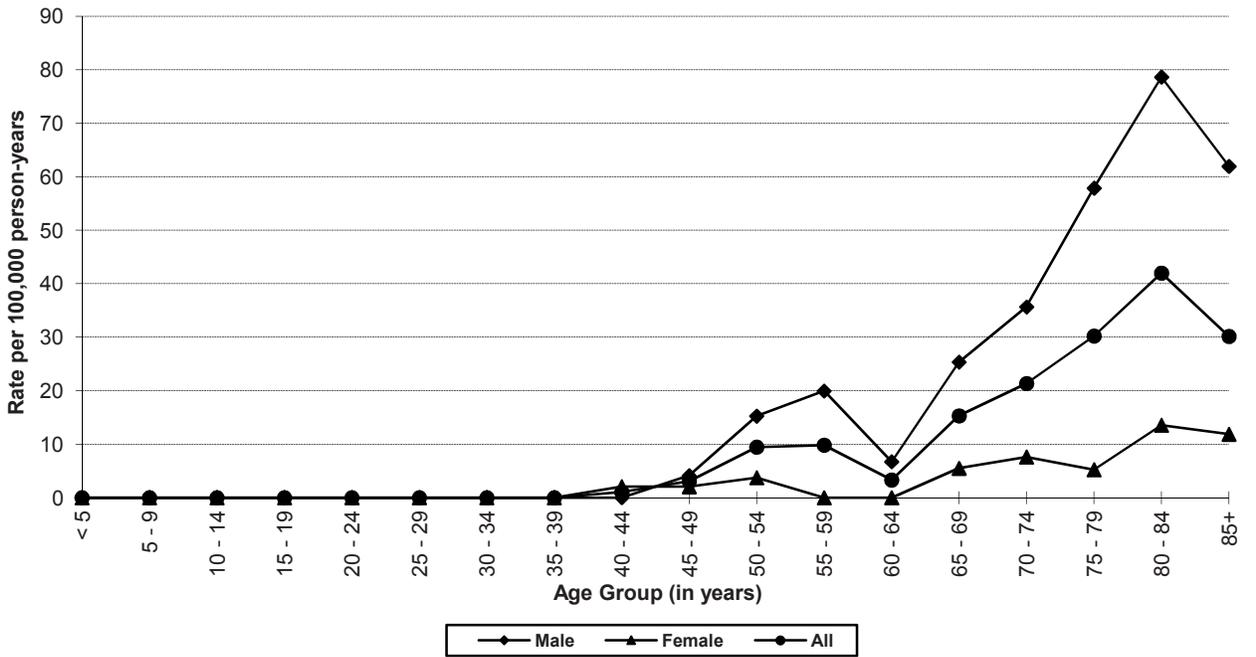
Age	Incidence of esophageal cancer is highest after age 55.
Gender	Males have higher incidence rates, with male-to-female ratios of cases about 3:1 or more.
Race & SES	United States data show that blacks are affected more than whites. Risk is higher among lower SES strata.
Occupation	Chimney sweeps exposed to soot are at higher risk.
Other	Tobacco use (cigarettes or spit tobacco) and heavy alcohol consumption are major risk factors for cancer of the esophagus. The risk is particularly increased when these two factors are both present. In Western Europe and North America, 90% or more of the risk of esophageal cancer can be attributed to alcohol and tobacco. Drinking "burning hot" beverages may increase the risk of esophageal cancer.

Special Notes

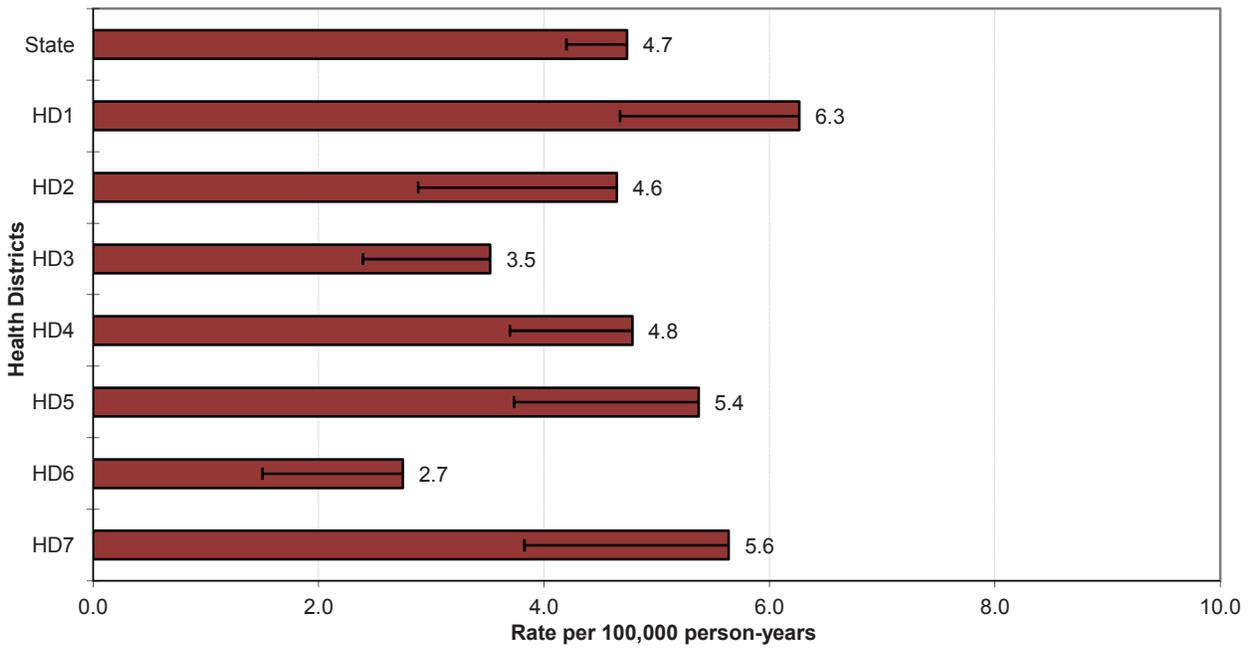
Mean age-adjusted incidence rate across health districts:	4.7
95% confidence interval on the mean age-adjusted incidence rate:	3.8- 5.6
Median age-adjusted incidence rate of health districts:	4.8
Range of age-adjusted incidence rate for health districts:	2.7- 6.3
USCS rate (2011, all races):	4.6

Few cases of esophageal cancer were diagnosed in person less than 50 years of age. The age-specific incidence rates peaked in the age group 80-84 for males and females. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.

**State Esophageal Cancer Incidence
Age-specific Rates**



**Esophageal Cancer Incidence
Age-adjusted Rates by Health District**



HODGKIN LYMPHOMA

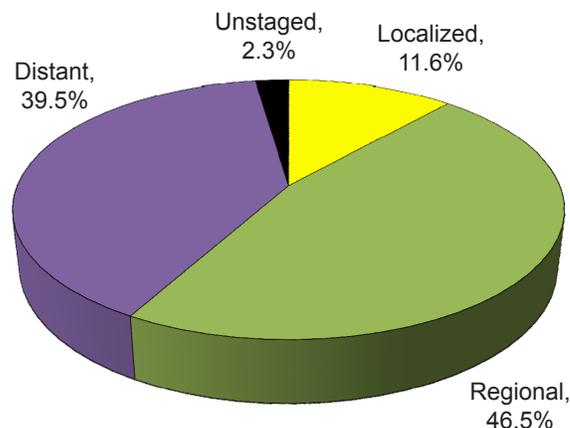
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	2.8	3.5	2.0
# of new invasive cases	43	28	15
# of new in-situ cases	0	0	0
# of deaths	8	6	2

Total Cases by County

Ada	11	Cassia	1	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	2	Clearwater	1	Madison	-
Bear Lake	-	Custer	1	Minidoka	1
Benewah	1	Elmore	-	Nez Perce	2
Bingham	-	Franklin	-	Oneida	-
Blaine	-	Fremont	-	Owyhee	-
Boise	-	Gem	-	Payette	1
Bonner	2	Gooding	1	Power	-
Bonneville	2	Idaho	-	Shoshone	1
Boundary	-	Jefferson	-	Teton	-
Butte	-	Jerome	-	Twin Falls	3
Camas	-	Kootenai	3	Valley	2
Canyon	6	Latah	2	Washington	-
Caribou	-	Lemhi	-		

Stage at Diagnosis - Hodgkin Lymphoma



Risk and Associated Factors

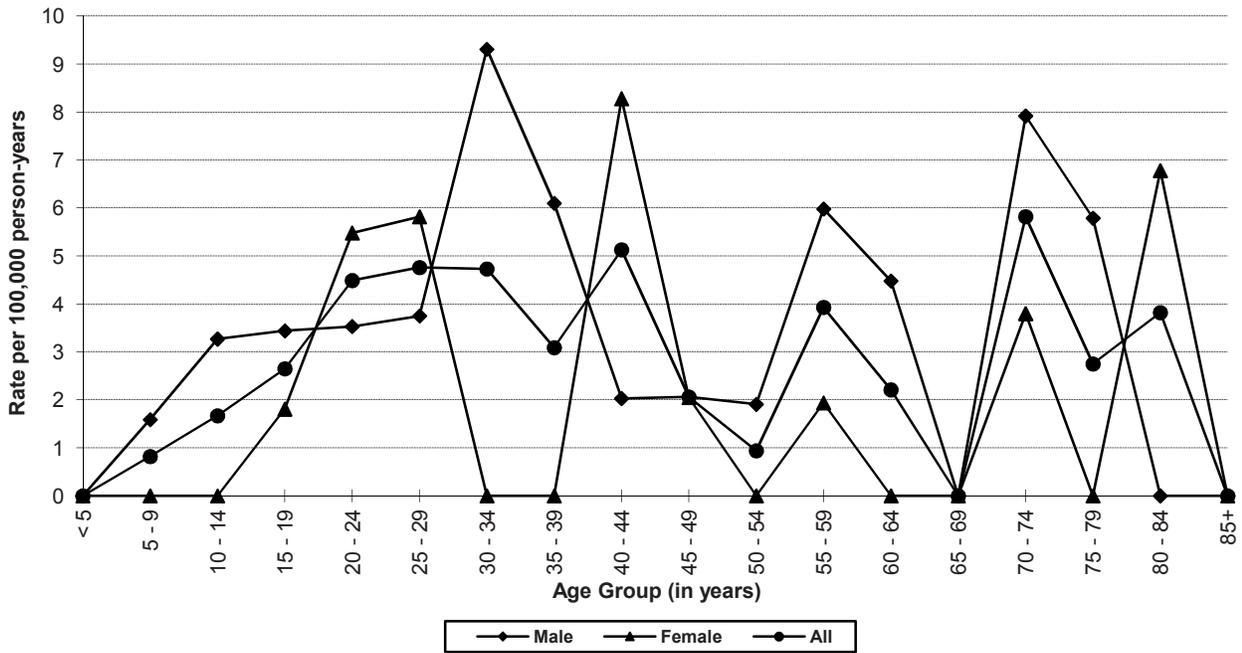
Age	High rates are seen in young adults and in later age groups especially among males.
Gender	Males typically have slightly higher rates than females.
Race & SES	Hodgkin lymphoma is more common among whites than among blacks. Hodgkin lymphoma is more common in higher income groups.
Genetics	Genetic factors are thought to play an important role in the etiology of Hodgkin lymphoma, but these are yet to be adequately defined.
Other	Small family size and ensuing delayed exposure to childhood infections is thought to be responsible for a portion of Hodgkin lymphoma cases. Certain viral infections, especially Epstein-Barr virus, and AIDS increase the risk of Hodgkin lymphoma. With current treatment, Hodgkin disease, which was once highly fatal, is among the most curable of all cancers.

Special Notes

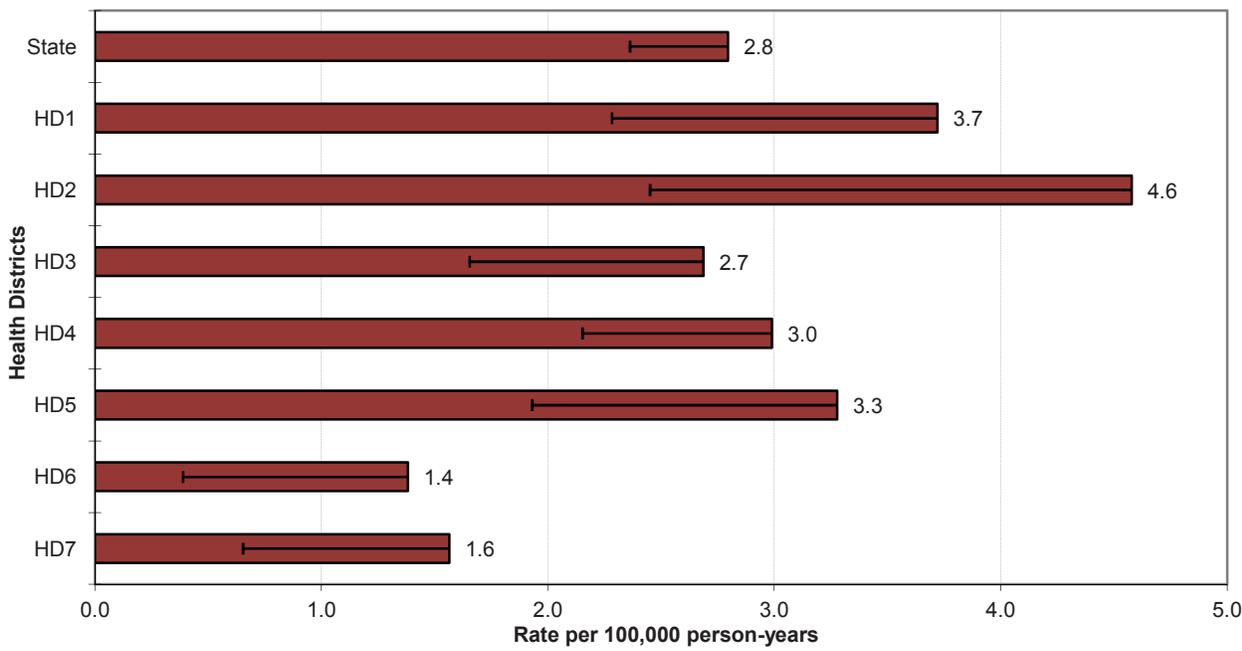
Mean age-adjusted incidence rate across health districts:	2.9
95% confidence interval on the mean age-adjusted incidence rate:	2.0- 3.7
Median age-adjusted incidence rate of health districts:	3.0
Range of age-adjusted incidence rate for health districts:	1.4- 4.6
USCS rate (2011, all races):	2.7

The age-related incidence of Hodgkin lymphoma is typically bimodal, usually with a peak in the late 20s to early 30s, and another peak in the ninth decade of life. This trend is difficult to discern in Idaho's population due to the relatively small number of cases observed annually, which increases the variability in age-specific rates. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.

State Hodgkin Lymphoma Incidence Age-specific Rates



Hodgkin Lymphoma Incidence Age-adjusted Rates by Health District



KIDNEY AND RENAL PELVIS

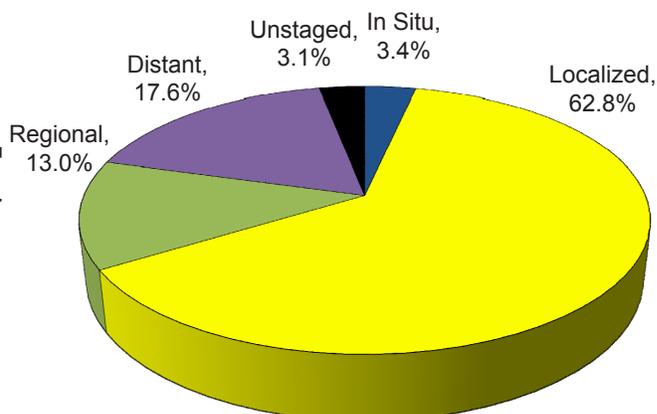
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	14.6	20.1	9.4
# of new invasive cases	252	168	84
# of new in-situ cases	9	7	2
# of deaths	69	45	24

Total Cases by County

Ada	63	Cassia	6	Lewis	1
Adams	1	Clark	1	Lincoln	1
Bannock	6	Clearwater	4	Madison	3
Bear Lake	3	Custer	1	Minidoka	3
Benewah	3	Elmore	6	Nez Perce	6
Bingham	8	Franklin	2	Oneida	-
Blaine	3	Fremont	-	Owyhee	-
Boise	2	Gem	4	Payette	5
Bonner	11	Gooding	2	Power	2
Bonneville	14	Idaho	-	Shoshone	1
Boundary	1	Jefferson	1	Teton	-
Butte	2	Jerome	2	Twin Falls	17
Camas	-	Kootenai	27	Valley	2
Canyon	41	Latah	4	Washington	1
Caribou	1	Lemhi	-		

Stage at Diagnosis - Kidney and Renal Pelvis



Risk and Associated Factors

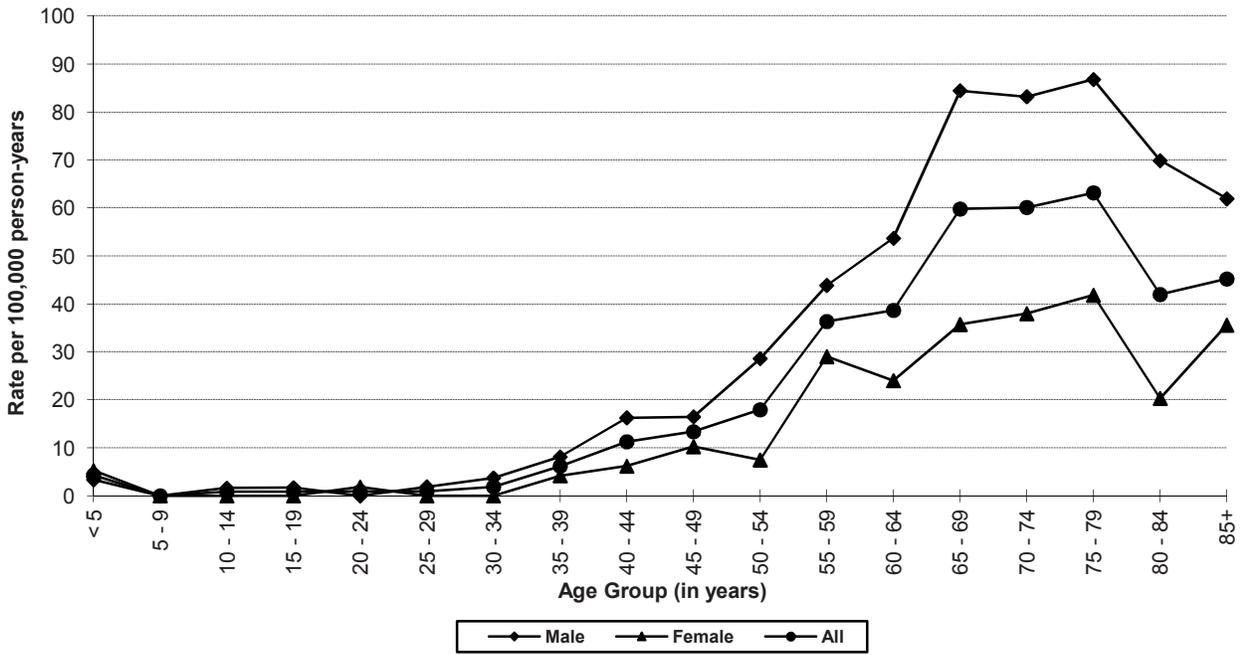
Age	Both adults and children are at risk for kidney cancer. Renal cell carcinoma accounts for about 80% of all adult kidney cancers. Wilm's tumor (nephroblastoma) affects predominantly children under age 5 and accounts for the majority of childhood kidney cancers.
Gender	Renal cell carcinoma affects males twice as often as females.
Genetics	Wilm's tumor often occurs with congenital defects.
Occupation	Certain occupations, such as laundry and leather workers, have been associated with increased risk due to chemical exposure.
Other	Cigarette smoking is strongly associated with renal pelvis and ureter cancers. Smokers are at twice the risk of developing kidney cancer as non-smokers. Analgesic mixtures containing phenacetin increase the risk of kidney cancer. Obesity is a risk factor for kidney cancer. High dietary protein consumption, independent of fat and calorie intake, may elevate kidney cancer risk.

Special Notes

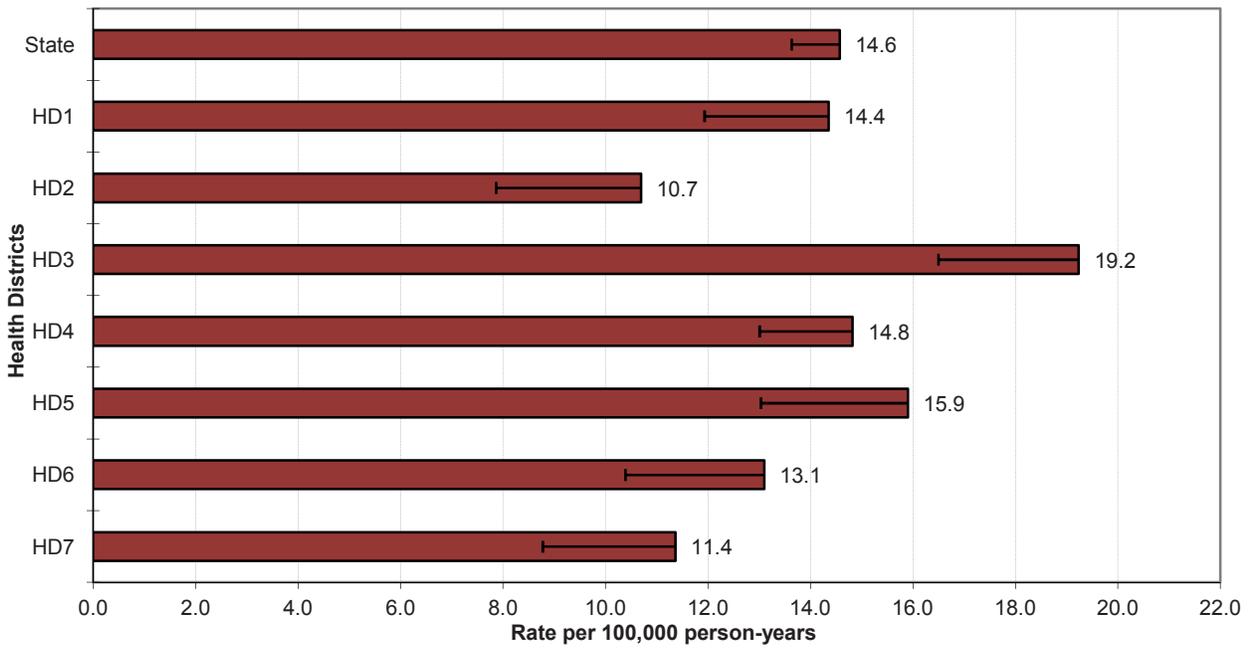
Mean age-adjusted incidence rate across health districts:	14.2
95% confidence interval on the mean age-adjusted incidence rate:	12.1- 16.4
Median age-adjusted incidence rate of health districts:	14.4
Range of age-adjusted incidence rate for health districts:	10.7- 19.2
USCS rate (2011, all races):	15.6

There were few cases of kidney or renal pelvis cancer among persons aged less than 40 years. The age-specific incidence rates peaked in the age group 75-79 for males and females. Health District 3 had statistically significantly more cases than expected based upon rates for the remainder of Idaho.

**State Kidney & Renal Pelvis Cancer Incidence
Age-specific Rates**



**Kidney & Renal Pelvis Cancer Incidence
Age-adjusted Rates by Health District**



LARYNX

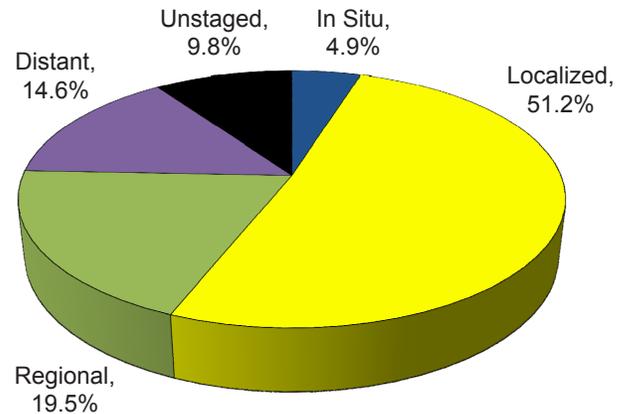
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	2.1	3.4	0.8
# of new invasive cases	39	30	9
# of new in-situ cases	2	2	0
# of deaths	9	7	2

Total Cases by County

Ada	8	Cassia	-	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	-	Clearwater	1	Madison	-
Bear Lake	-	Custer	-	Minidoka	-
Benewah	-	Elmore	1	Nez Perce	2
Bingham	2	Franklin	-	Oneida	-
Blaine	-	Fremont	1	Owyhee	-
Boise	1	Gem	-	Payette	2
Bonner	2	Gooding	1	Power	-
Bonneville	2	Idaho	1	Shoshone	-
Boundary	-	Jefferson	-	Teton	-
Butte	-	Jerome	2	Twin Falls	3
Camas	-	Kootenai	4	Valley	-
Canyon	5	Latah	2	Washington	-
Caribou	-	Lemhi	-		

Stage at Diagnosis - Larynx



Risk and Associated Factors

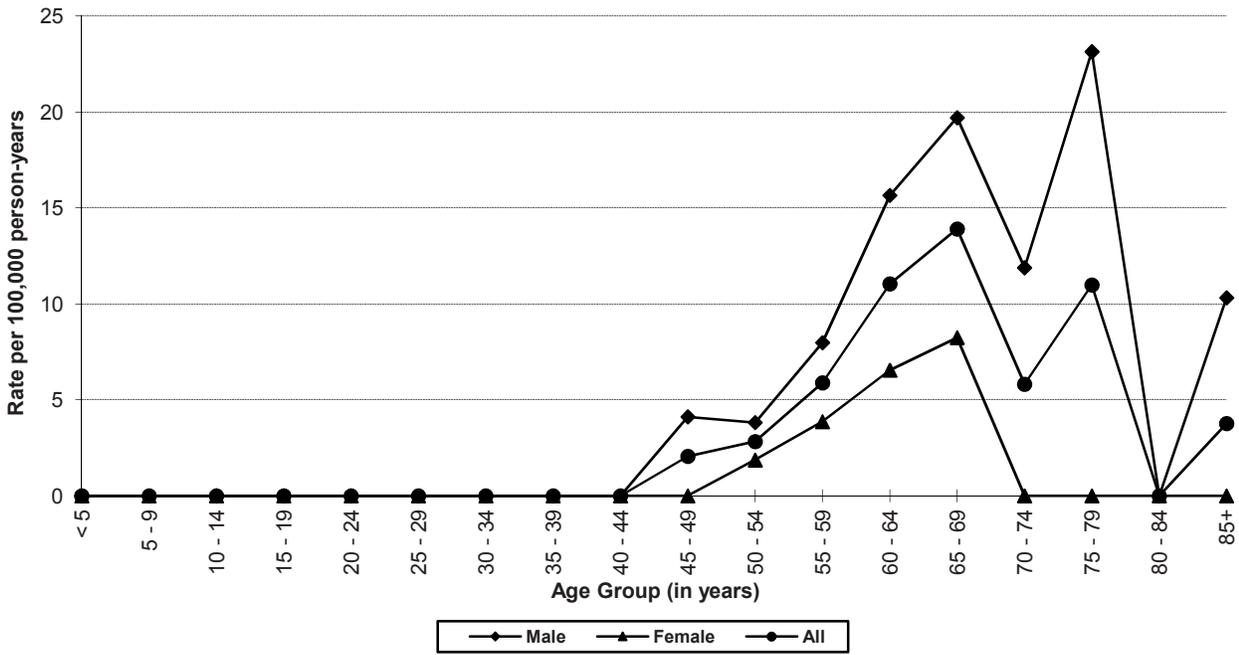
Age	Rates increase with age, with the vast majority of cases occurring after age 55.
Gender	Laryngeal cancers are much more common in males than females.
Race & SES	Generally in the United States, blacks have higher incidence rates than whites. Lower income groups experience higher rates.
Occupation	Laryngeal cancer has been associated with exposures to asbestos and wood dust.
Diet	Diets low in fresh fruits and vegetables may increase the risk.
Other	Cigarette smoking and alcohol use are both major risk factors. The combination of alcohol consumption and tobacco use (smoking or spit tobacco) acts greatly to increase the risk. A patient with a single laryngeal cancer who continues to smoke and drink alcohol has an enhanced risk of developing a second laryngeal tumor.

Special Notes

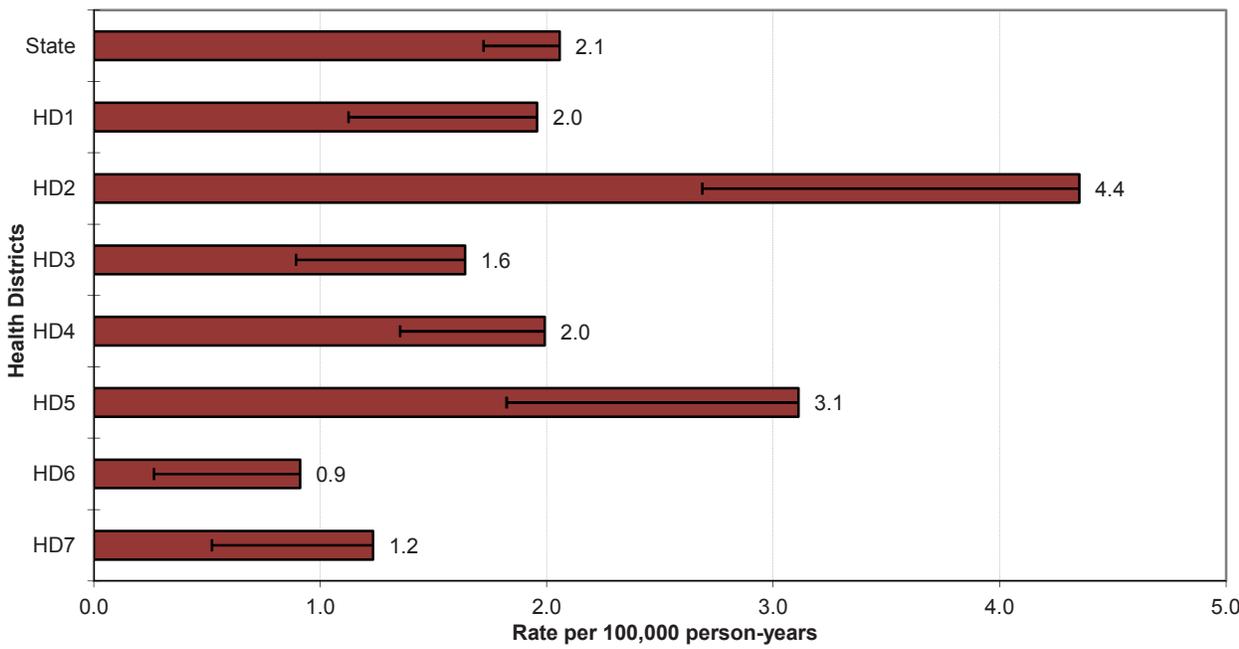
Mean age-adjusted incidence rate across health districts:	2.2
95% confidence interval on the mean age-adjusted incidence rate:	1.3- 3.1
Median age-adjusted incidence rate of health districts:	2.0
Range of age-adjusted incidence rate for health districts:	0.9- 4.4
USCS rate (2011, all races):	3.5

There were few cases of laryngeal cancer among persons aged less than 50 years. The age-specific incidence rates for males were more than twice those for females in most age groups. The age-specific incidence rates peaked in the age group 75-79 for males and 65-69 for females. Health District 2 had statistically significantly more cases than expected based upon rates for the remainder of Idaho.

**State Laryngeal Cancer Incidence
Age-specific Rates**



**Laryngeal Cancer Incidence
Age-adjusted Rates by Health District**



LEUKEMIA

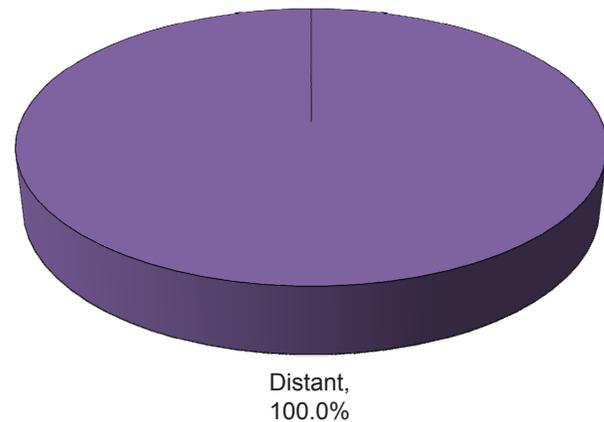
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	14.6	18.1	11.6
# of new invasive cases	242	143	99
# of new in-situ cases	0	0	0
# of deaths	100	55	45

Total Cases by County

Ada	61	Cassia	3	Lewis	2
Adams	2	Clark	-	Lincoln	-
Bannock	5	Clearwater	3	Madison	2
Bear Lake	2	Custer	1	Minidoka	3
Benewah	3	Elmore	5	Nez Perce	10
Bingham	3	Franklin	2	Oneida	1
Blaine	5	Fremont	1	Owyhee	1
Boise	1	Gem	4	Payette	8
Bonner	9	Gooding	1	Power	1
Bonneville	16	Idaho	4	Shoshone	4
Boundary	1	Jefferson	5	Teton	-
Butte	-	Jerome	2	Twin Falls	6
Camas	-	Kootenai	18	Valley	4
Canyon	31	Latah	10	Washington	1
Caribou	-	Lemhi	1		

Stage at Diagnosis - Leukemia



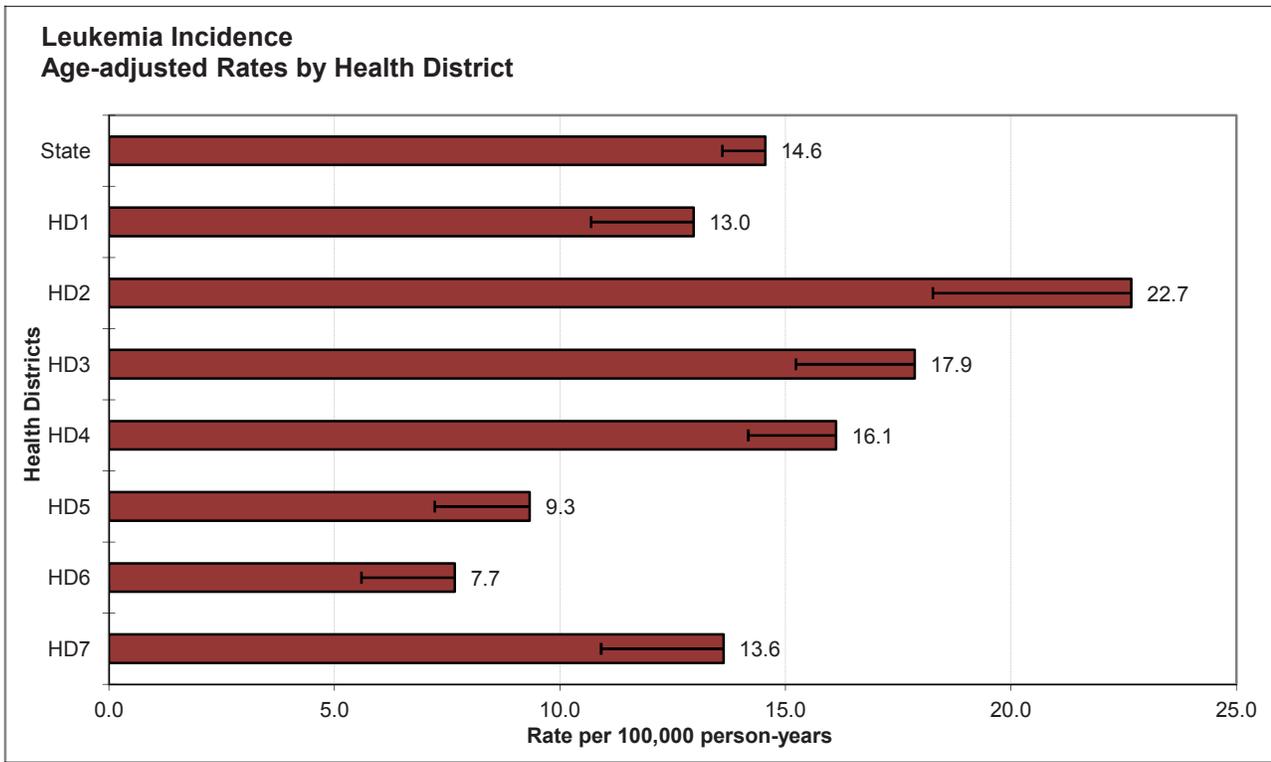
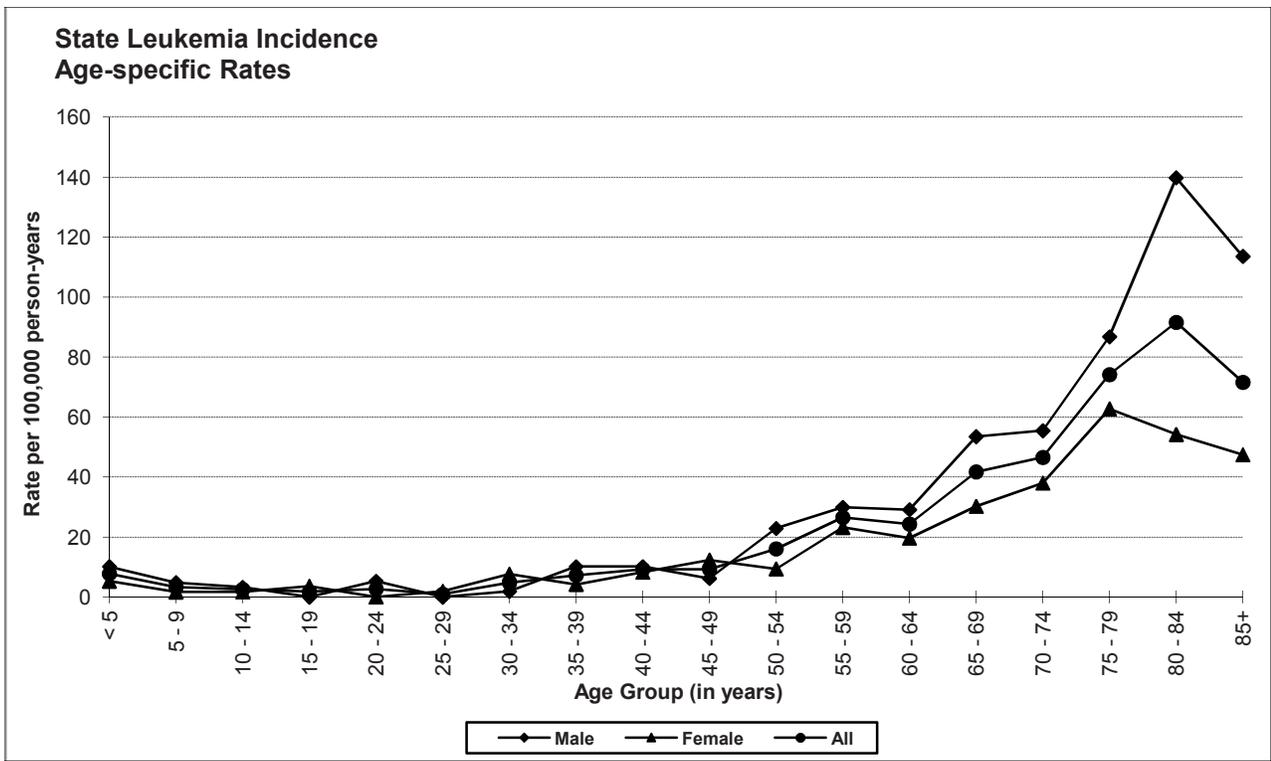
Risk and Associated Factors

Age	Leukemia is the most common form of cancer in children. Incidence usually increases with age in adults. The highest rates occur in individuals over age 60.
Gender	Males have higher incidence rates than females for chronic myelogenous leukemia (CML), acute lymphoblastic leukemia (ALL), and chronic lymphocytic leukemia (CLL).
Race	ALL is less common among blacks. CLL is rare in Asian/Pacific Islanders.
Genetics	Certain congenital defects, such as trisomy 21, Fanconi's anemia, Bloom syndrome, and ataxia-telangectasia, increase risk in children for various types of leukemia.
Occupation	Benzene is a known cause of leukemia (predominantly acute myelogenous leukemia [AML]). Chimney sweeps exposed to soot are at higher risk.
Other	Ionizing radiation exposure increases the risk (except for CLL). Environmental exposure to low frequency, non-ionizing radiation and its association with leukemia incidence is being investigated. Treatment with some chemotherapeutic agents for other cancers increases the risk of leukemia. Exposure to herbicides used during the Vietnam War, including Agent Orange, has been associated with increased incidence of CLL. The antibiotic chloramphenicol likely causes leukemia. Autoimmune diseases and several viruses, including HTLV-I and EBV, have been linked to certain types of leukemia.

Special Notes

Mean age-adjusted incidence rate across health districts:	14.3
95% confidence interval on the mean age-adjusted incidence rate:	10.5- 18.1
Median age-adjusted incidence rate of health districts:	13.6
Range of age-adjusted incidence rate for health districts:	7.7- 22.7
USCS rate (2011, all races):	13.0

The age-specific incidence distribution of leukemia for Idaho is quite similar to the typical pattern seen in SEER or NPCR data. The rates are higher for males than females for all types of leukemia with the exception of acute myelogenous leukemia (AML), which has no predilection for age or sex. Health District 2 had statistically significantly more cases of leukemia than expected based upon rates for the remainder of Idaho, and Health District 6 had statistically significantly fewer cases than expected.



LIVER AND BILE DUCT

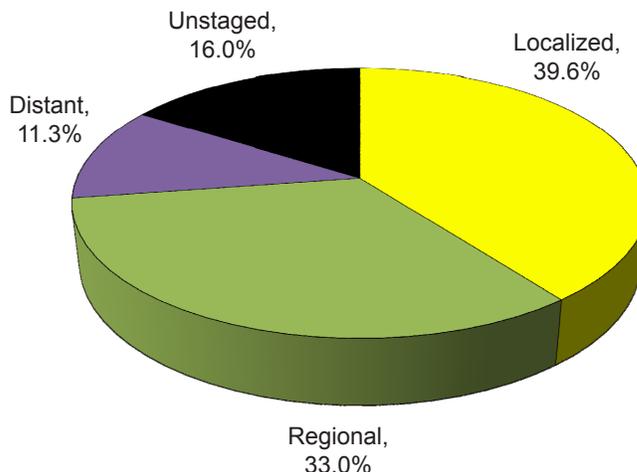
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.8	8.7	3.0
# of new invasive cases	106	78	28
# of new in-situ cases	0	0	0
# of deaths	93	67	26

Total Cases by County

Ada	27	Cassia	2	Lewis	2
Adams	-	Clark	-	Lincoln	1
Bannock	6	Clearwater	1	Madison	2
Bear Lake	-	Custer	-	Minidoka	2
Benewah	1	Elmore	3	Nez Perce	3
Bingham	3	Franklin	-	Oneida	1
Blaine	-	Fremont	-	Owyhee	3
Boise	-	Gem	-	Payette	-
Bonner	5	Gooding	-	Power	-
Bonneville	7	Idaho	1	Shoshone	2
Boundary	-	Jefferson	-	Teton	-
Butte	-	Jerome	-	Twin Falls	10
Camas	-	Kootenai	10	Valley	2
Canyon	9	Latah	1	Washington	1
Caribou	-	Lemhi	1		

Stage at Diagnosis - Liver and Bile Duct



Risk and Associated Factors

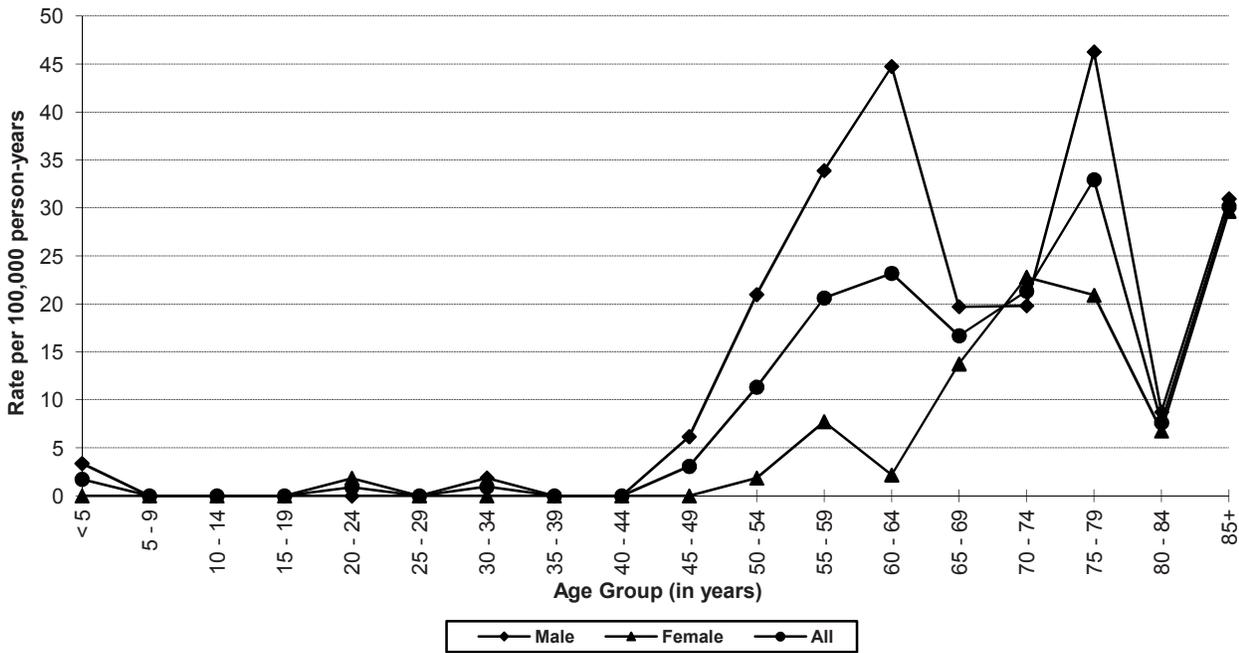
Age	The incidence rate of liver cancer increases with age.
Gender	Rates are usually higher among males than females.
Race	Incidence is higher among Asian/Pacific Islanders and blacks than the remainder of the population.
Diet	Aflatoxins, which are present in certain foods such as peanut butter, are classified as a known human carcinogen, causing liver cancer.
Occupation	Thorium dioxide (an x-ray contrast medium) exposure increases liver cancer risk. Exposure to vinyl chloride used in plastic production is associated with an increased risk of angiosarcoma of the liver. Chimney sweeps exposed to soot are at higher risk.
Other	Hepatitis B and Hepatitis C infections are significant causes of hepatocellular carcinoma. Cirrhosis of the liver due to viral hepatitis, alcoholism, or toxic chemical exposure accounts for 50-80% of patients diagnosed with liver cancer. Long-term use of oral contraceptives increases risk of hepatocellular carcinoma.

Special Notes

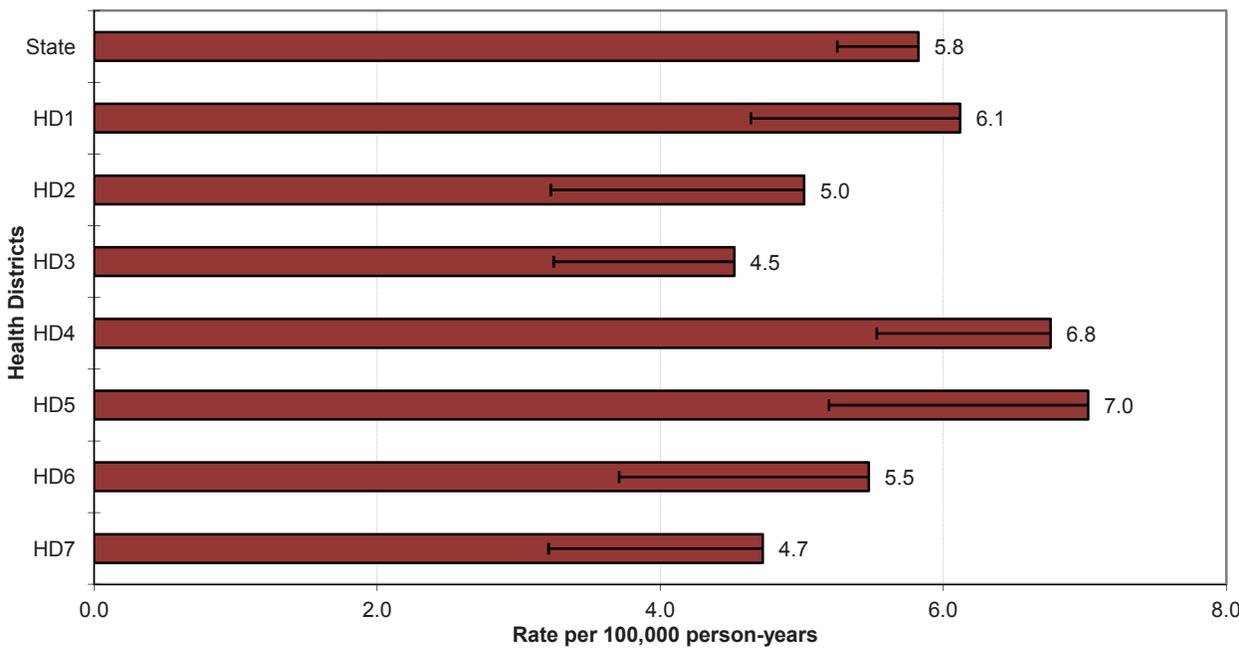
Mean age-adjusted incidence rate across health districts:	5.7
95% confidence interval on the mean age-adjusted incidence rate:	4.9- 6.4
Median age-adjusted incidence rate of health districts:	5.5
Range of age-adjusted incidence rate for health districts:	4.5- 7.0
USCS rate (2011, all races):	6.5

There were few cases of liver cancer among persons less than 45 years of age. Age-specific incidence rates generally increased with age, peaking in the age group 75-79 for males and 85+ for females. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.

**State Liver & Bile Duct Cancer Incidence
Age-specific Rates**



**Liver and Bile Duct Cancer Incidence
Age-adjusted Rates by Health District**



LUNG AND BRONCHUS

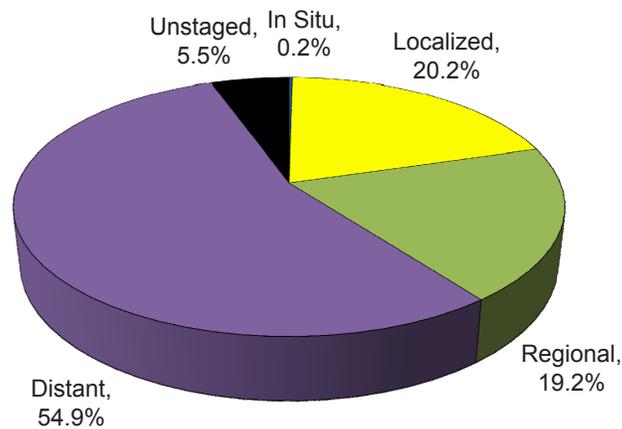
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	51.0	54.8	48.3
# of new invasive cases	873	433	440
# of new in-situ cases	2	1	1
# of deaths	621	325	296

Total Cases by County

Ada	217	Cassia	5	Lewis	3
Adams	5	Clark	-	Lincoln	3
Bannock	29	Clearwater	8	Madison	4
Bear Lake	2	Custer	2	Minidoka	13
Benewah	6	Elmore	16	Nez Perce	39
Bingham	11	Franklin	3	Oneida	-
Blaine	6	Fremont	8	Owyhee	9
Boise	11	Gem	19	Payette	17
Bonner	32	Gooding	13	Power	3
Bonneville	26	Idaho	14	Shoshone	20
Boundary	7	Jefferson	6	Teton	2
Butte	2	Jerome	10	Twin Falls	53
Camas	1	Kootenai	101	Valley	6
Canyon	107	Latah	19	Washington	8
Caribou	-	Lemhi	9		

Stage at Diagnosis - Lung and Bronchus



Risk and Associated Factors

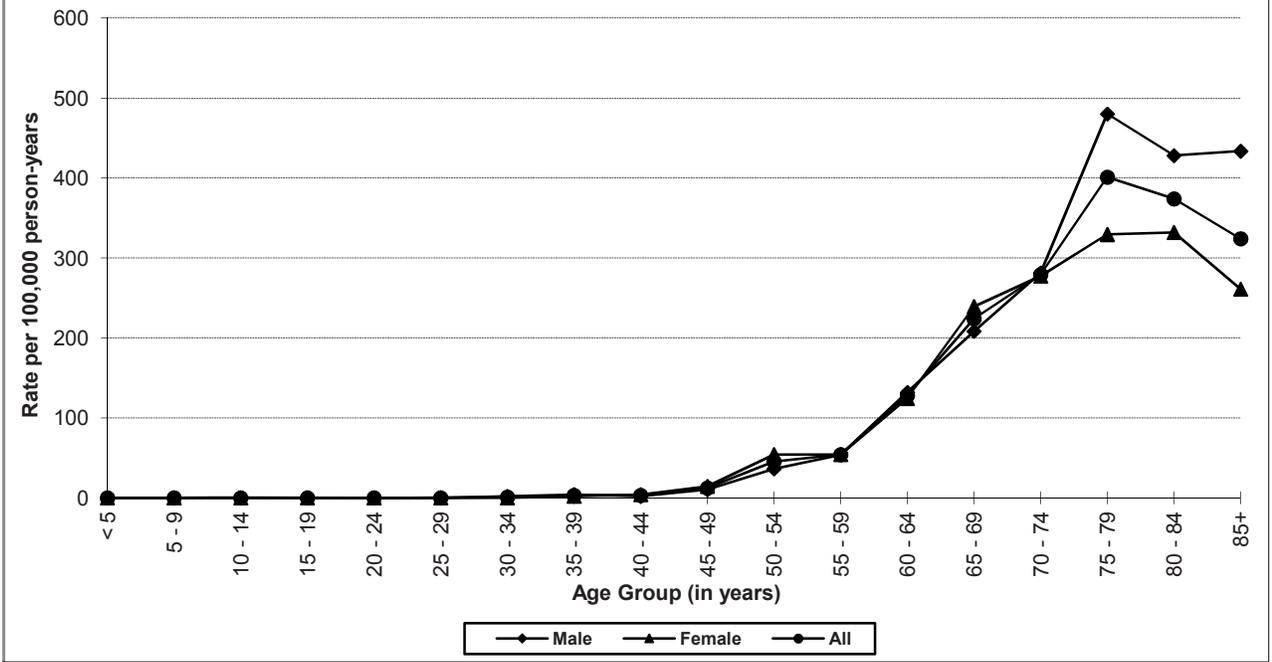
Age	Lung cancer incidence rates increase with age.
Gender	The incidence is currently higher in males than in females, but the gap is narrowing due to increased smoking rates among women in recent decades.
Race & SES	Incidence is generally higher among blacks than other racial groups, and is also higher in lower income groups.
Diet	Diets low in consumption of fresh fruits and vegetables contribute to increased risk.
Occupation	Occupational or environmental exposures to asbestos, cadmium, chromium, coal tars, crystalline silica dust, polycyclic aromatic hydrocarbons, radon, soot, chlorpyrifos insecticides, ionizing radiation, and other substances increase the risk.
Other	Cigarette smoking, including exposure to second-hand smoke, is the most important risk factor, accounting for over 85% of lung cancer deaths. Evidence exists that rates are about 1.3 times higher, adjusted for smoking, in urban areas than rural areas due to air pollution, mostly from motor vehicles.

Special Notes

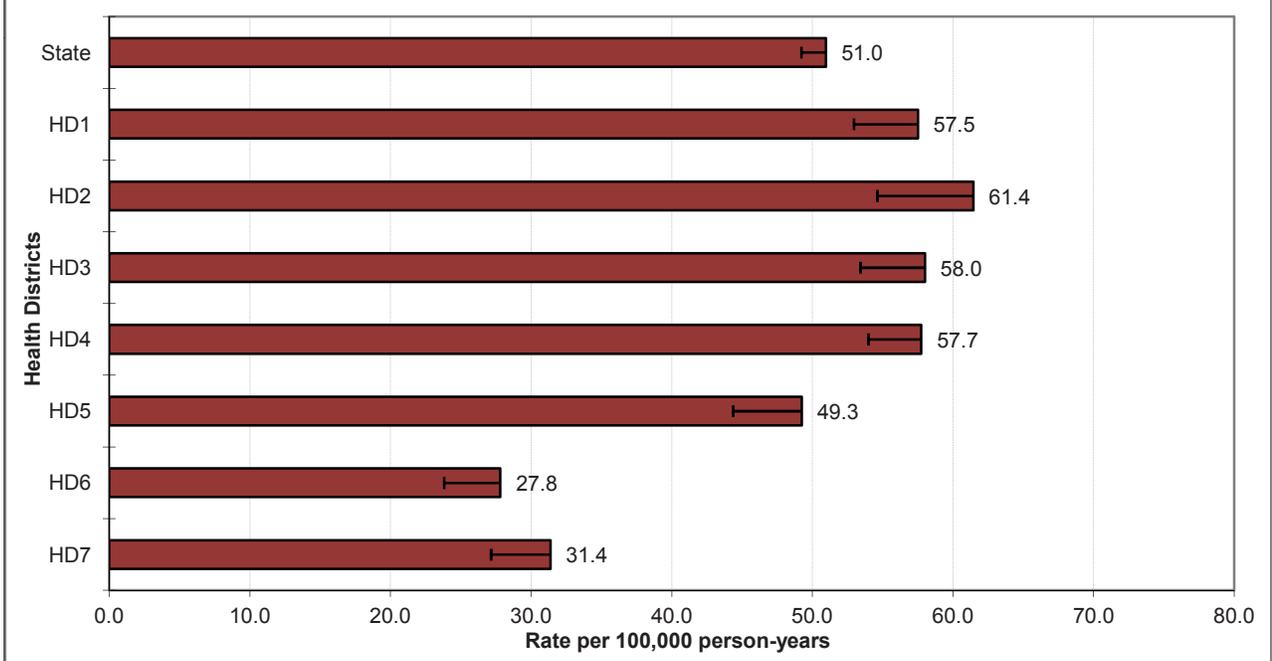
Mean age-adjusted incidence rate across health districts:	49.0
95% confidence interval on the mean age-adjusted incidence rate:	38.8- 59.3
Median age-adjusted incidence rate of health districts:	57.5
Range of age-adjusted incidence rate for health districts:	27.8- 61.4
USCS rate (2011, all races):	61.0

There were few cases of lung cancer among persons less than 50 years of age. The age-specific incidence rates for males were uniformly higher than the rates for females after age 74. The incidence rates increased with age, peaking in the age group 75-79 for males and 80-84 for females. Health Districts 3 and 4 had statistically significantly more cases of lung cancer than expected based upon rates for the remainder of Idaho, and Health Districts 6 and 7 had statistically significantly fewer.

**State Lung & Bronchus Cancer Incidence
Age-specific Rates**



**Lung & Bronchus Cancer Incidence
Age-adjusted Rates by Health District**



MELANOMA OF SKIN

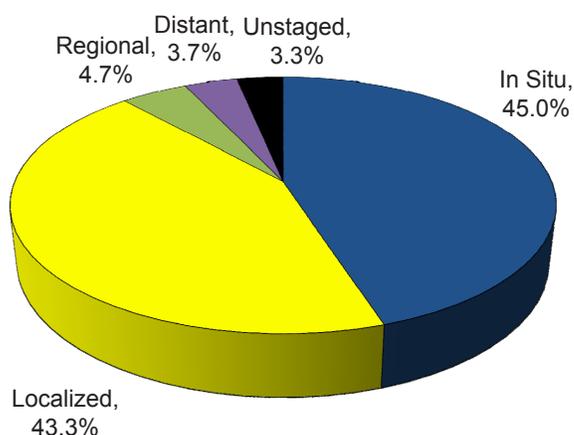
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	26.9	32.9	21.7
# of new invasive cases	455	272	183
# of new in-situ cases	372	221	151
# of deaths	57	35	22

Total Cases by County

Ada	236	Cassia	6	Lewis	2
Adams	6	Clark	-	Lincoln	-
Bannock	33	Clearwater	2	Madison	11
Bear Lake	3	Custer	4	Minidoka	8
Benewah	5	Elmore	6	Nez Perce	25
Bingham	12	Franklin	5	Oneida	-
Blaine	18	Fremont	6	Owyhee	8
Boise	5	Gem	9	Payette	8
Bonner	38	Gooding	3	Power	4
Bonneville	55	Idaho	4	Shoshone	4
Boundary	3	Jefferson	9	Teton	3
Butte	-	Jerome	6	Twin Falls	32
Camas	-	Kootenai	115	Valley	10
Canyon	89	Latah	12	Washington	7
Caribou	5	Lemhi	10		

Stage at Diagnosis - Melanoma of Skin



Risk and Associated Factors

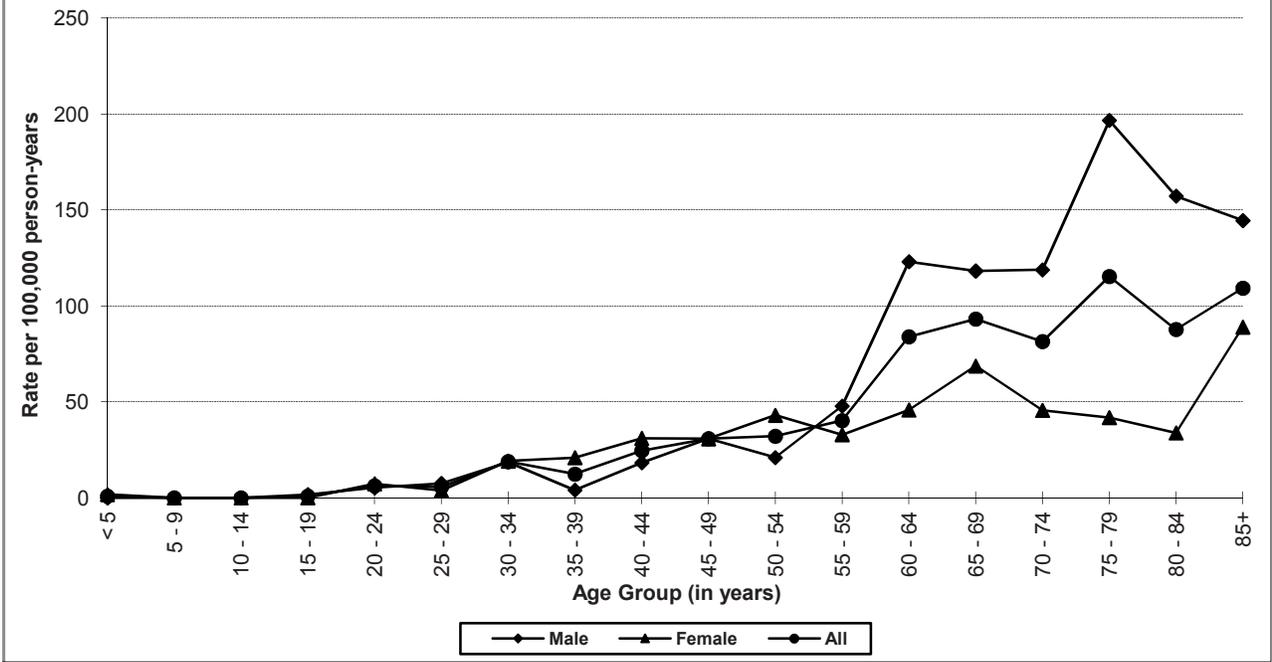
Age	Melanoma is extremely uncommon before puberty. Rates increase with age.
Gender	Incidence rates are higher among females than males in younger age groups, and higher in males than females in older age groups.
Race & SES	The incidence rate is highest in whites and lowest in blacks. Incidence rates of melanoma of the skin are higher in higher income groups (indoor workers).
Other	Ultra-violet light exposure, especially blistering sunburns during childhood and intermittent exposure of untanned skin to intense sunlight, is a major risk factor. Melanoma incidence rates are increasing around the world. Blue eyes, fair or red hair and pale complexion are well-known risk factors for melanoma. Apart from race and age, the number of melanocytic nevi is the strongest known risk factor for melanoma.

Special Notes

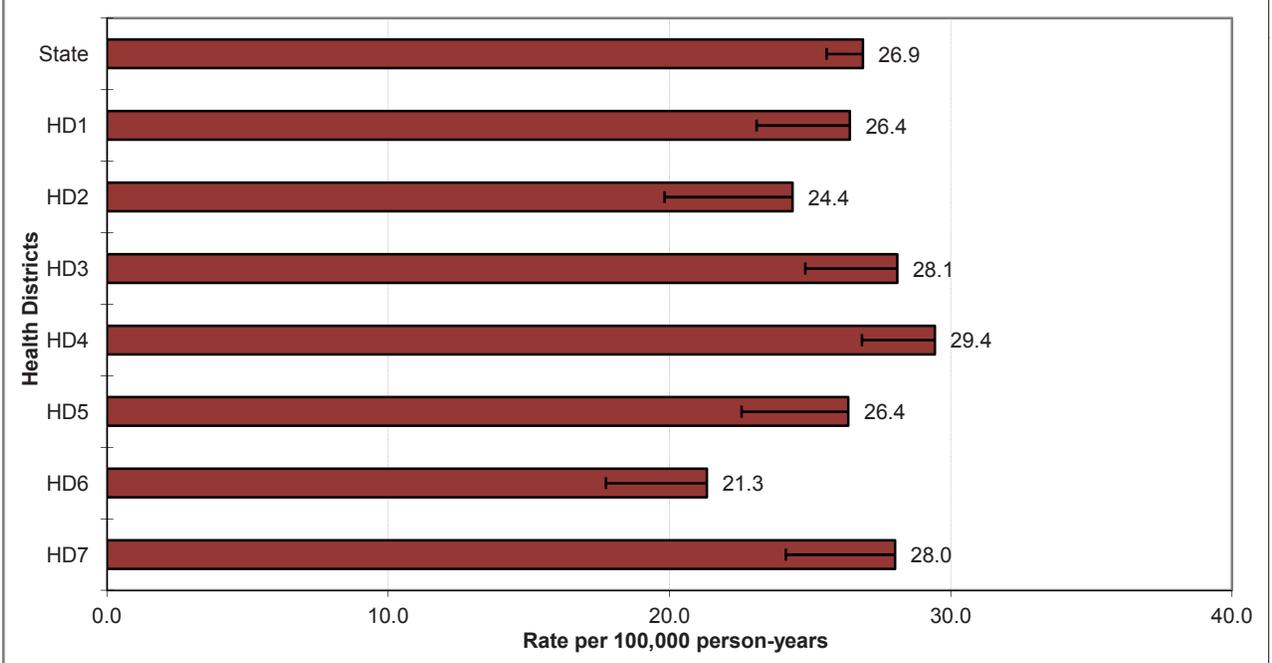
Mean age-adjusted incidence rate across health districts:	26.3
95% confidence interval on the mean age-adjusted incidence rate:	24.3- 28.3
Median age-adjusted incidence rate of health districts:	26.4
Range of age-adjusted incidence rate for health districts:	21.3- 29.4
USCS rate (2011, all races):	19.7

There were few cases of melanoma of the skin among persons less than 25 years of age. The age-specific incidence rates were higher among males after age 54. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.

**State Melanoma of the Skin Incidence
Age-specific Rates**



**Melanoma of the Skin Incidence
Age-adjusted Rates by Health District**



MYELOMA

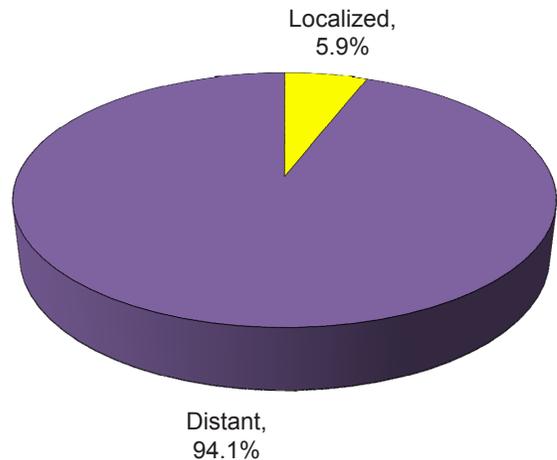
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.9	7.8	4.1
# of new invasive cases	102	65	37
# of new in-situ cases	0	0	0
# of deaths	60	38	22

Total Cases by County

Ada	26	Cassia	1	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	4	Clearwater	1	Madison	2
Bear Lake	-	Custer	-	Minidoka	4
Benewah	2	Elmore	3	Nez Perce	5
Bingham	1	Franklin	1	Oneida	-
Blaine	1	Fremont	-	Owyhee	2
Boise	-	Gem	3	Payette	3
Bonner	1	Gooding	1	Power	-
Bonneville	7	Idaho	2	Shoshone	6
Boundary	-	Jefferson	1	Teton	1
Butte	-	Jerome	-	Twin Falls	5
Camas	-	Kootenai	7	Valley	1
Canyon	8	Latah	2	Washington	1
Caribou	-	Lemhi	-		

Stage at Diagnosis - Myeloma



Risk and Associated Factors

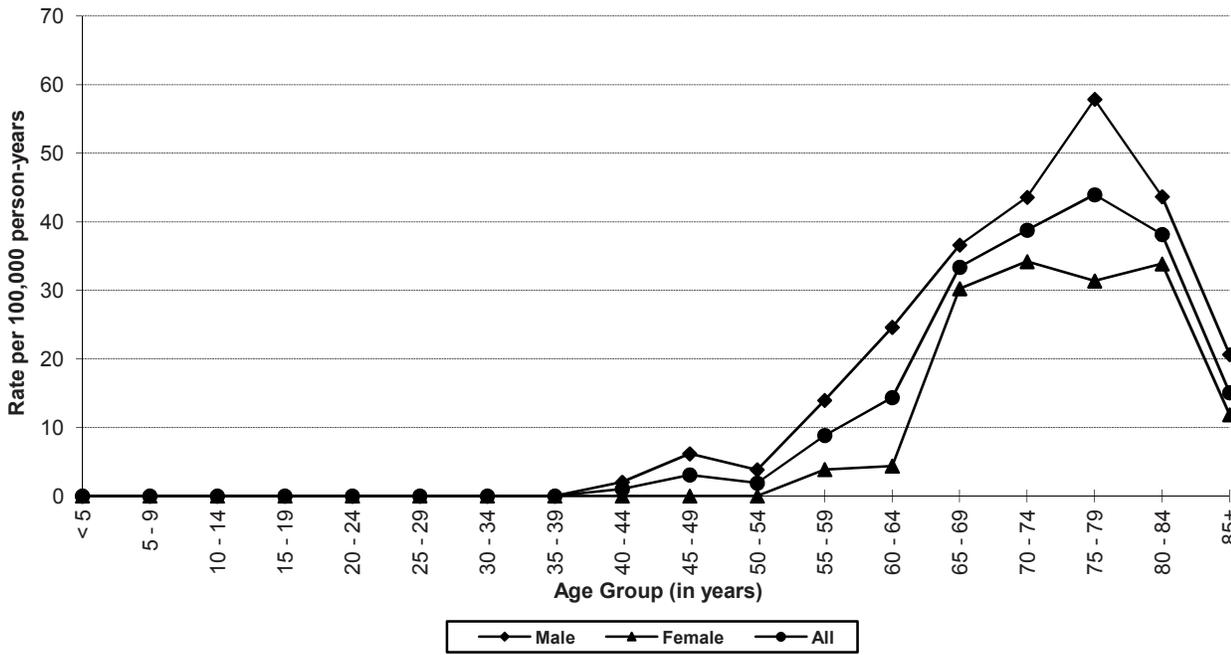
Age	Multiple myeloma is an age-dependent cancer; incidence rates increase with age and it rarely occurs before age 40.
Gender	Rates for males are somewhat higher than for females.
Race	Blacks have higher incidence rates than whites.
Genetics	Genetic factors play an important role in its development, but how so is not completely understood. Familial factors and chronic antigenic stimulation have also been implicated.
Other	Multiple myeloma has been associated with lymphomas such as Burkitt's and non-Hodgkin lymphomas. Studies have suggested several possible viral etiologies, and multiple myeloma has been linked to ionizing radiation exposure. Several specific chemical and physical substances have been linked to myeloma risk in one or more studies. Truck drivers, painters, and agricultural workers are at increased risk for multiple myeloma. Individuals with monoclonal gammopathy of unknown significance are predisposed to develop multiple myeloma.

Special Notes

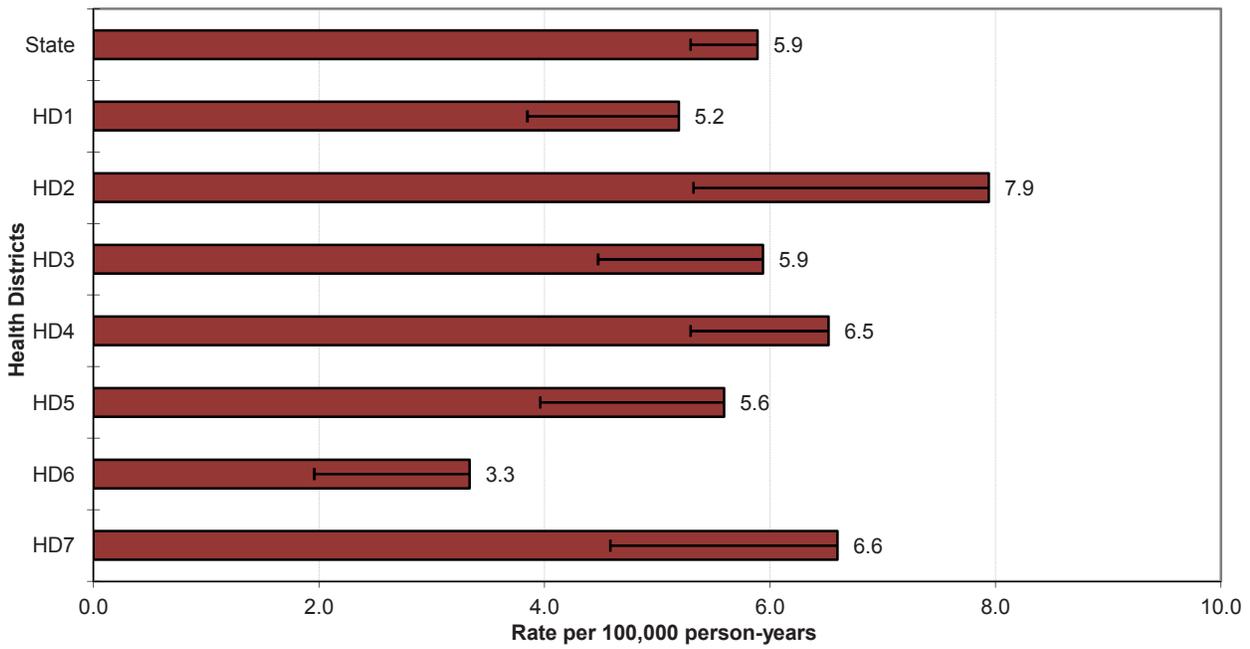
Mean age-adjusted incidence rate across health districts:	5.9
95% confidence interval on the mean age-adjusted incidence rate:	4.8- 6.9
Median age-adjusted incidence rate of health districts:	5.9
Range of age-adjusted incidence rate for health districts:	3.3- 7.9
USCS rate (2011, all races):	6.1

There were few cases of myeloma among persons less than 45 years of age. The age-specific incidence rates increased rapidly for both males and females after age group 60-64. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.

State Myeloma Incidence Age-specific Rates



Myeloma Incidence Age-adjusted Rates by Health District



NON-HODGKIN LYMPHOMA

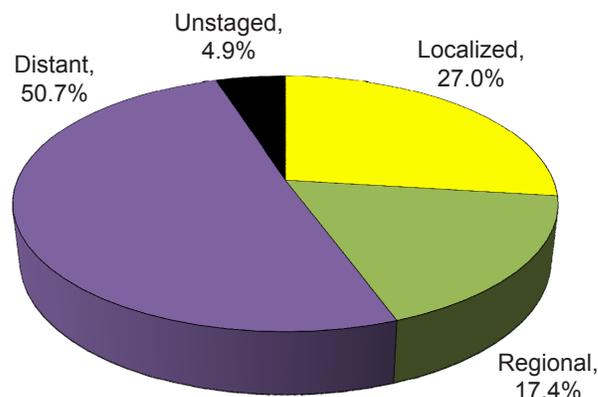
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	17.8	21.2	14.9
# of new invasive cases	304	172	132
# of new in-situ cases	0	0	0
# of deaths	97	56	41

Total Cases by County

Ada	87	Cassia	1	Lewis	1
Adams	1	Clark	-	Lincoln	2
Bannock	9	Clearwater	2	Madison	3
Bear Lake	1	Custer	1	Minidoka	6
Benewah	2	Elmore	3	Nez Perce	8
Bingham	9	Franklin	1	Oneida	-
Blaine	5	Fremont	-	Owyhee	4
Boise	1	Gem	5	Payette	7
Bonner	8	Gooding	3	Power	1
Bonneville	16	Idaho	5	Shoshone	3
Boundary	3	Jefferson	5	Teton	2
Butte	1	Jerome	5	Twin Falls	17
Camas	-	Kootenai	30	Valley	2
Canyon	25	Latah	6	Washington	8
Caribou	3	Lemhi	2		

Stage at Diagnosis - Non-Hodgkin Lymphoma



Risk and Associated Factors

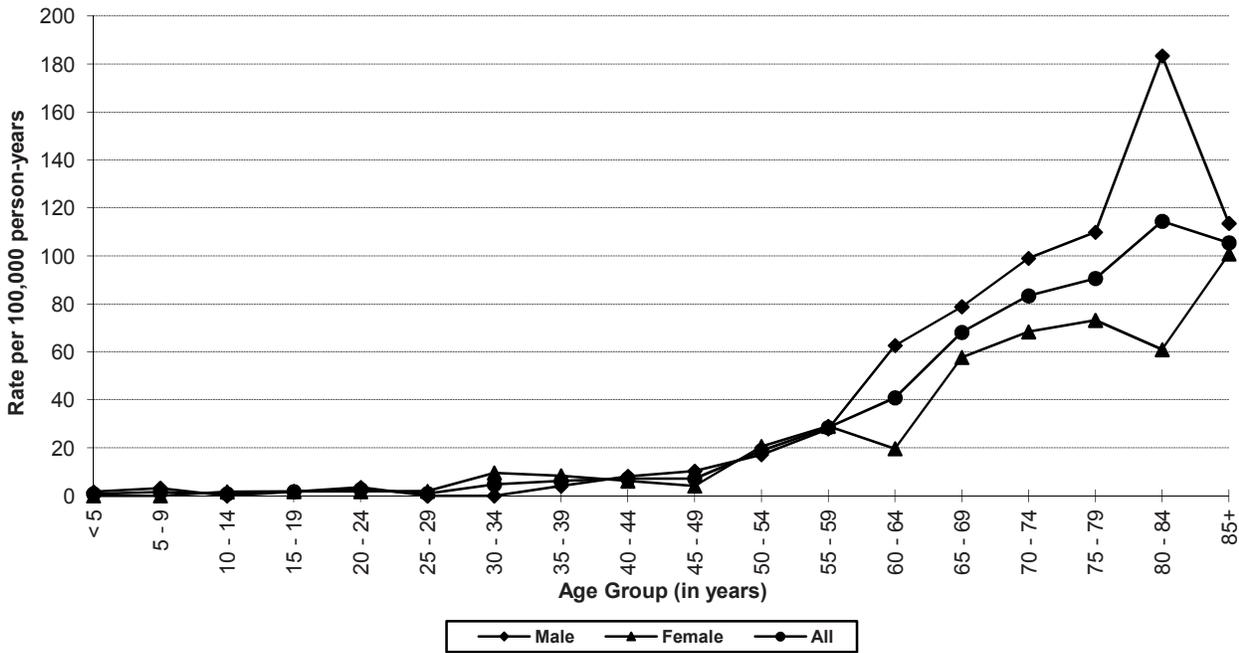
Age	Rates increase with age, reaching the highest levels in the eighth and ninth decades of life.
Gender	Males have higher rates than females.
Race & SES	Generally in the United States, incidence rates are generally higher for whites than blacks. Rates are higher in upper income groups.
Occupation	Ethylene oxide exposure at plants producing sterilized medical supplies and spices is a risk factor.
Other	Non-Hodgkin lymphoma (NHL) develops with increased frequency in individuals infected with certain viruses, including HTLV-I, HIV, and EBV. Exposures to agricultural chemicals and PCBs have also been implicated. Treatment with some immunosuppressants increases the risk of NHL among organ transplant patients, evidently by reactivating Epstein-Barr virus.

Special Notes

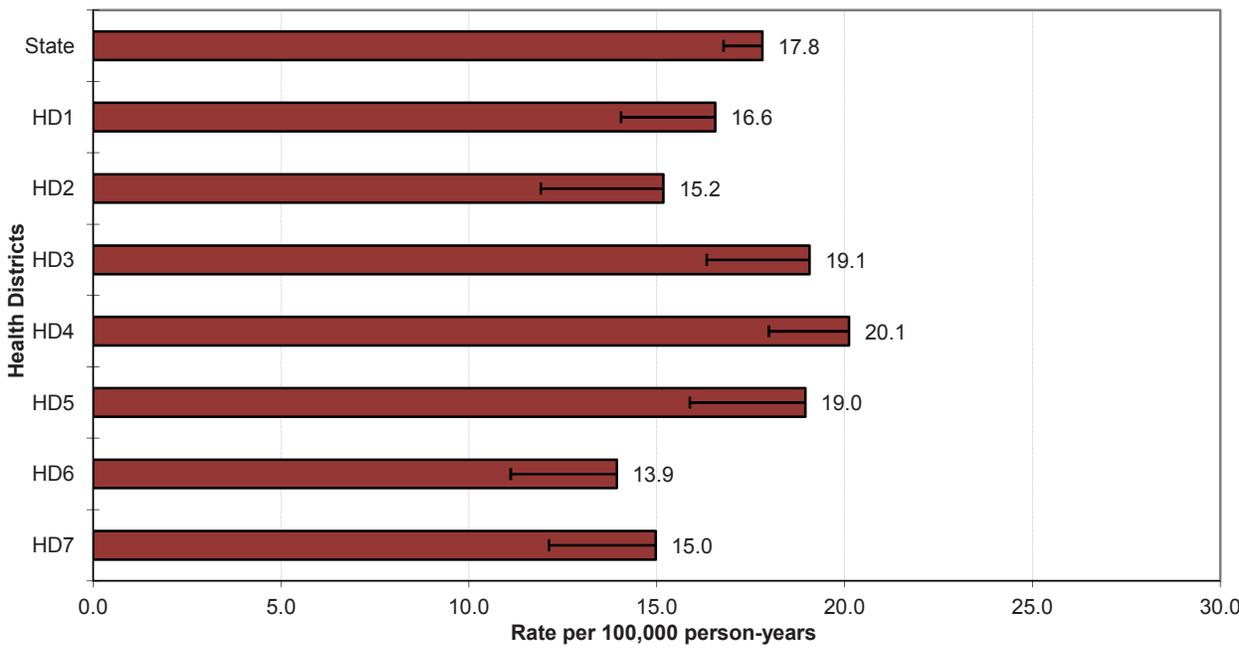
Mean age-adjusted incidence rate across health districts:	17.0
95% confidence interval on the mean age-adjusted incidence rate:	15.2- 18.8
Median age-adjusted incidence rate of health districts:	16.6
Range of age-adjusted incidence rate for health districts:	13.9- 20.1
USCS rate (2011, all races):	18.6

The age-specific incidence rates of non-Hodgkin lymphoma increased with age, peaking in the age group 80-84 for both males and 85+ for females. Health District 4 had statistically significantly more cases of non-Hodgkin lymphoma than expected based upon rates for the remainder of Idaho.

**State Non-Hodgkin Lymphoma Incidence
Age-specific Rates**



**Non-Hodgkin Lymphoma Incidence
Age-adjusted Rates by Health District**



ORAL CAVITY AND PHARYNX

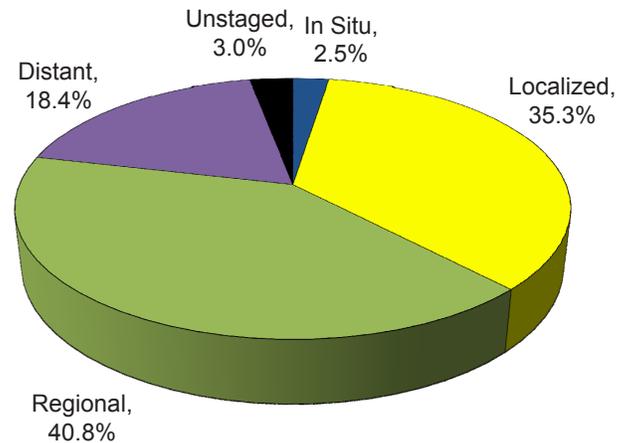
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	11.3	15.1	7.7
# of new invasive cases	196	127	69
# of new in-situ cases	5	4	1
# of deaths	33	28	5

Total Cases by County

Ada	52	Cassia	1	Lewis	1
Adams	1	Clark	-	Lincoln	-
Bannock	6	Clearwater	1	Madison	1
Bear Lake	-	Custer	-	Minidoka	3
Benewah	2	Elmore	4	Nez Perce	7
Bingham	5	Franklin	1	Oneida	-
Blaine	4	Fremont	1	Owyhee	1
Boise	1	Gem	3	Payette	-
Bonner	9	Gooding	1	Power	2
Bonneville	5	Idaho	2	Shoshone	5
Boundary	2	Jefferson	3	Teton	1
Butte	-	Jerome	5	Twin Falls	23
Camas	-	Kootenai	26	Valley	1
Canyon	18	Latah	1	Washington	-
Caribou	1	Lemhi	1		

Stage at Diagnosis - Oral Cavity and Pharynx



Risk and Associated Factors

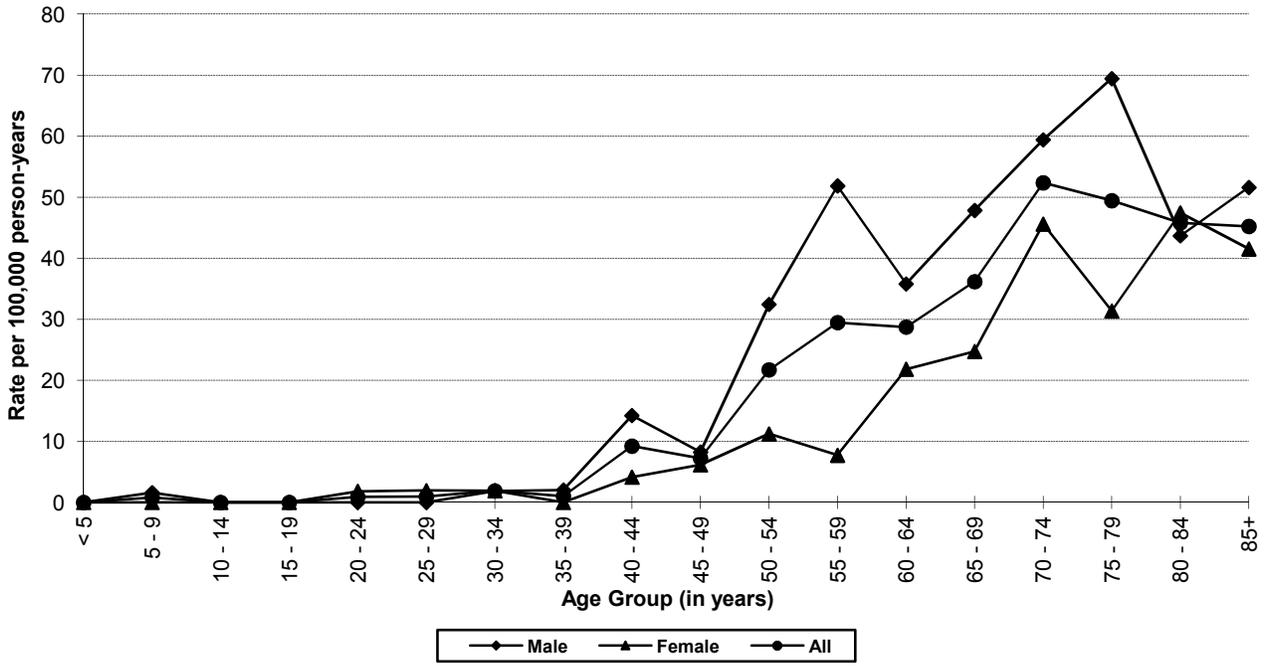
Age	Most cases occur in people over age 60.
Gender	Males have higher incidence rates than females, 2-6 times higher in most parts of the world.
Race & SES	Rates are higher for blacks than for whites. Rates are also higher among lower income groups.
Diet	Diets low in fresh fruit and vegetable consumption are associated with increased risk.
Other	Smoking and spit tobacco use are major risk factors for cancers of the oral cavity and pharynx. Alcohol use, especially excessive, is a major risk factor. Combined exposure to tobacco and alcohol multiply the risks of each other. It is estimated that smoking and drinking account for 75% of all oral cancers in the United States. Approximately 15% of oral cavity and pharyngeal cancers in the United States are attributable to infection with oncogenic human papillomavirus (HPV) types. Patients with late stage oropharyngeal cancer have better outcomes if their tumors were linked to HPV versus tobacco and alcohol.

Special Notes

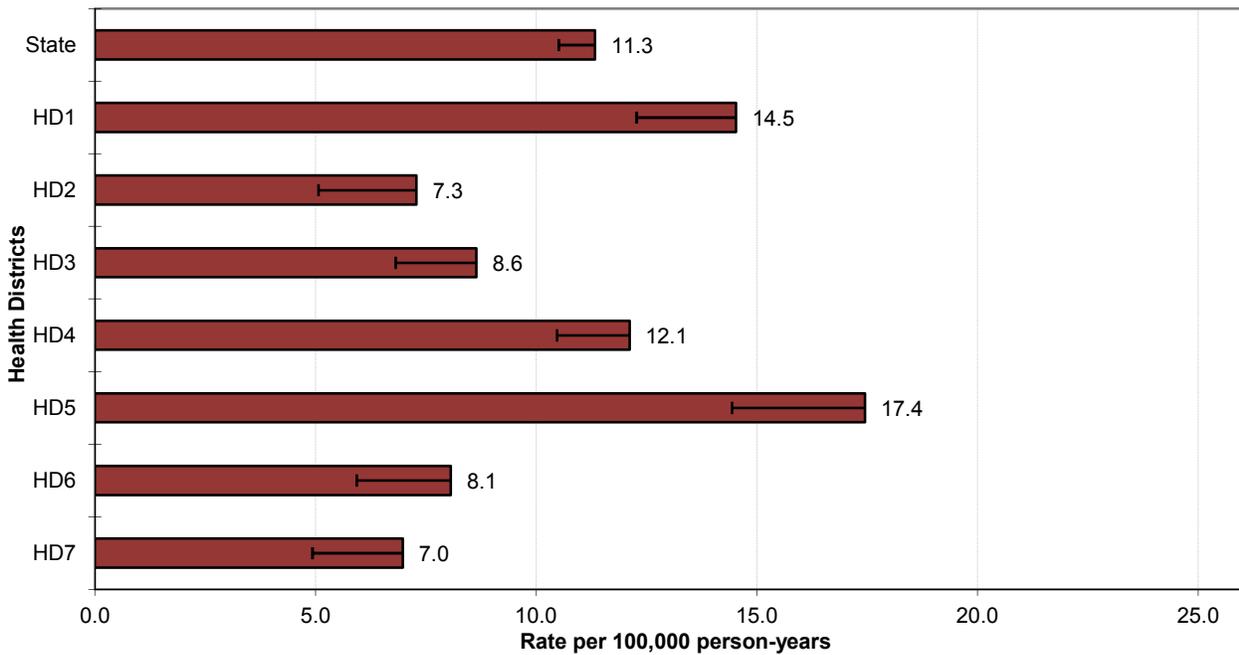
Mean age-adjusted incidence rate across health districts:	10.7
95% confidence interval on the mean age-adjusted incidence rate:	7.7- 13.7
Median age-adjusted incidence rate of health districts:	8.6
Range of age-adjusted incidence rate for health districts:	7.0- 17.4
USCS rate (2011, all races):	11.2

There were few cases of oral cavity and pharyngeal cancers among persons less than 45 years of age. The age-specific incidence rates generally increased with age after age 49, peaking in the age group 75-79 for males and 80-84 for females. Health Districts 1 and 5 had statistically significantly more cases of oral cavity and pharyngeal cancers than expected based upon rates for the remainder of Idaho, and Health District 7 had statistically significantly fewer cases than expected.

**State Oral Cavity & Pharyngeal Cancer Incidence
Age-specific Rates**



**Oral Cavity & Pharyngeal Cancer Incidence
Age-adjusted Rates by Health District**



OVARY

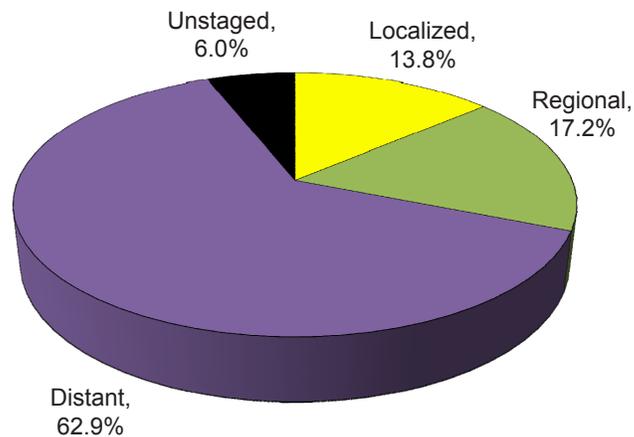
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	12.6
# of new invasive cases	-	-	116
# of new in-situ cases	-	-	0
# of deaths	-	-	90

Total Cases by County

Ada	25	Cassia	3	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	8	Clearwater	-	Madison	1
Bear Lake	-	Custer	-	Minidoka	2
Benewah	1	Elmore	-	Nez Perce	4
Bingham	5	Franklin	3	Oneida	-
Blaine	2	Fremont	-	Owyhee	1
Boise	-	Gem	1	Payette	1
Bonner	7	Gooding	1	Power	1
Bonneville	5	Idaho	1	Shoshone	2
Boundary	-	Jefferson	1	Teton	1
Butte	-	Jerome	-	Twin Falls	11
Camas	-	Kootenai	14	Valley	-
Canyon	9	Latah	2	Washington	2
Caribou	-	Lemhi	1		

Stage at Diagnosis - Ovary



Risk and Associated Factors

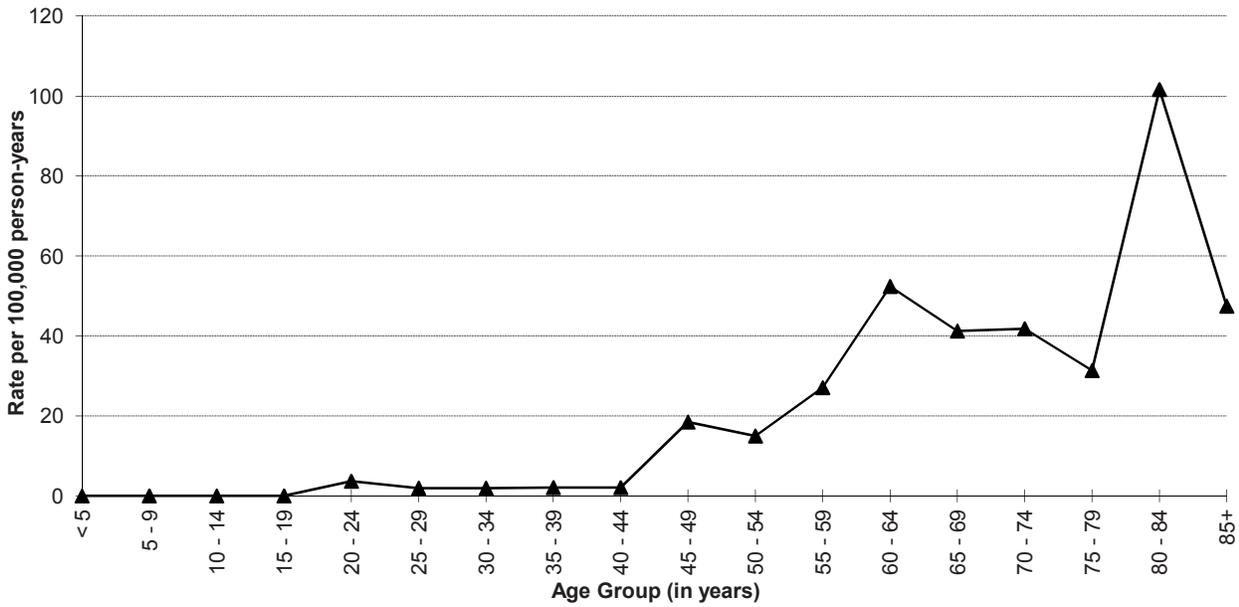
Age	The rate of ovarian cancer increases with age, and it is primarily a disease of older women.
Race & SES	Incidence rates are slightly higher among white females than blacks. Rates are higher among upper income groups.
Genetics	The most important risk factor for ovarian cancer is a family history of a first-degree relative (mother, daughter, or sister) with the disease. The risk is higher still in women with two or more first-degree relatives with ovarian cancer.
Hormonal	Risk of ovarian cancer is significantly reduced via suppression of ovulation through pregnancy or oral contraceptive use. The highest risk is in post-menopausal women. Ovarian cancer is also associated with a personal history of breast, endometrial, and colon cancers.
Diet	Dietary animal fat may increase the risk.
Other	High dose (>100 rads) ionizing radiation roughly doubles the risk of ovarian cancer.

Special Notes

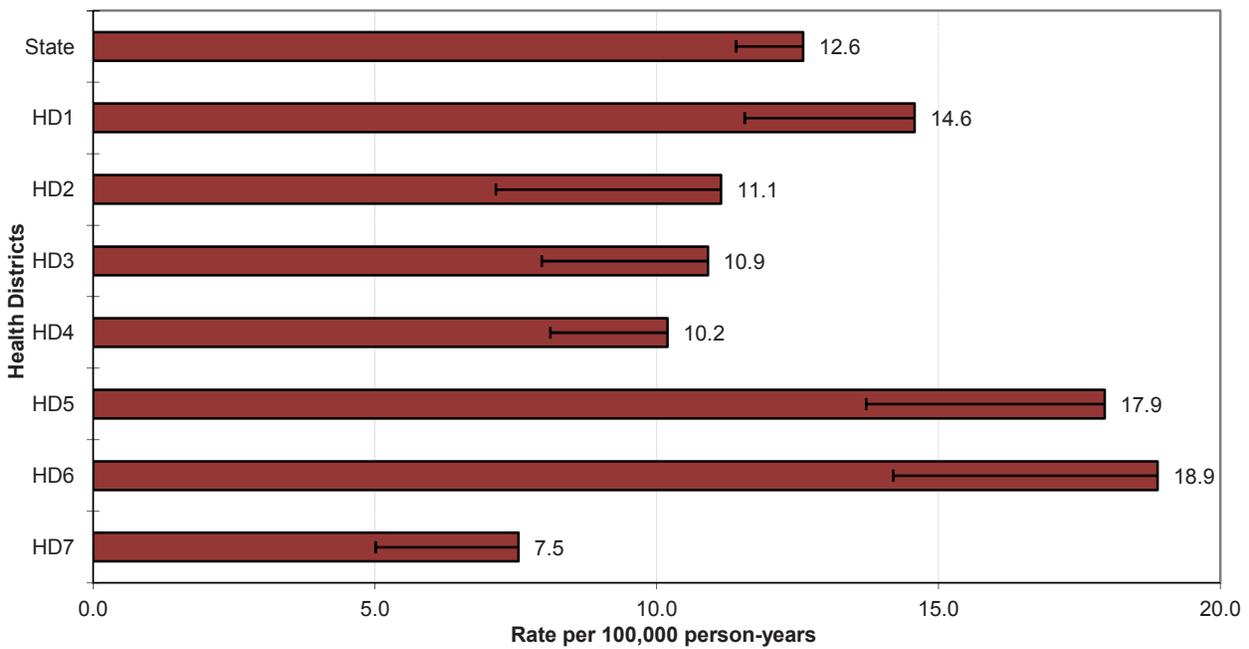
Mean age-adjusted incidence rate across health districts:	13.0
95% confidence interval on the mean age-adjusted incidence rate:	9.7- 16.2
Median age-adjusted incidence rate of health districts:	11.1
Range of age-adjusted incidence rate for health districts:	7.5- 18.9
USCS rate (2011, all races):	11.3

There were few cases of ovarian cancer among females aged less than 40 years. The age-specific incidence rates of ovarian cancer generally increased with age starting in the 50-54 age group. The highest age-specific rate was for women aged 80-84. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.

**State Ovarian Cancer Incidence
Age-specific Rates**



**Ovarian Cancer Incidence
Age-adjusted Rates by Health District**



PANCREAS

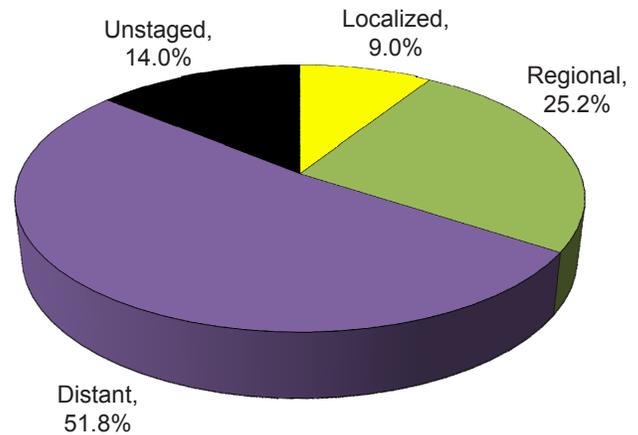
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	12.8	14.7	10.8
# of new invasive cases	222	123	99
# of new in-situ cases	0	0	0
# of deaths	191	108	83

Total Cases by County

Ada	44	Cassia	2	Lewis	2
Adams	2	Clark	-	Lincoln	2
Bannock	15	Clearwater	1	Madison	3
Bear Lake	-	Custer	4	Minidoka	2
Benewah	2	Elmore	2	Nez Perce	5
Bingham	4	Franklin	-	Oneida	1
Blaine	-	Fremont	4	Owyhee	-
Boise	1	Gem	5	Payette	4
Bonner	10	Gooding	3	Power	2
Bonneville	12	Idaho	6	Shoshone	1
Boundary	3	Jefferson	5	Teton	2
Butte	-	Jerome	2	Twin Falls	15
Camas	-	Kootenai	27	Valley	1
Canyon	17	Latah	4	Washington	2
Caribou	1	Lemhi	4		

Stage at Diagnosis - Pancreas



Risk and Associated Factors

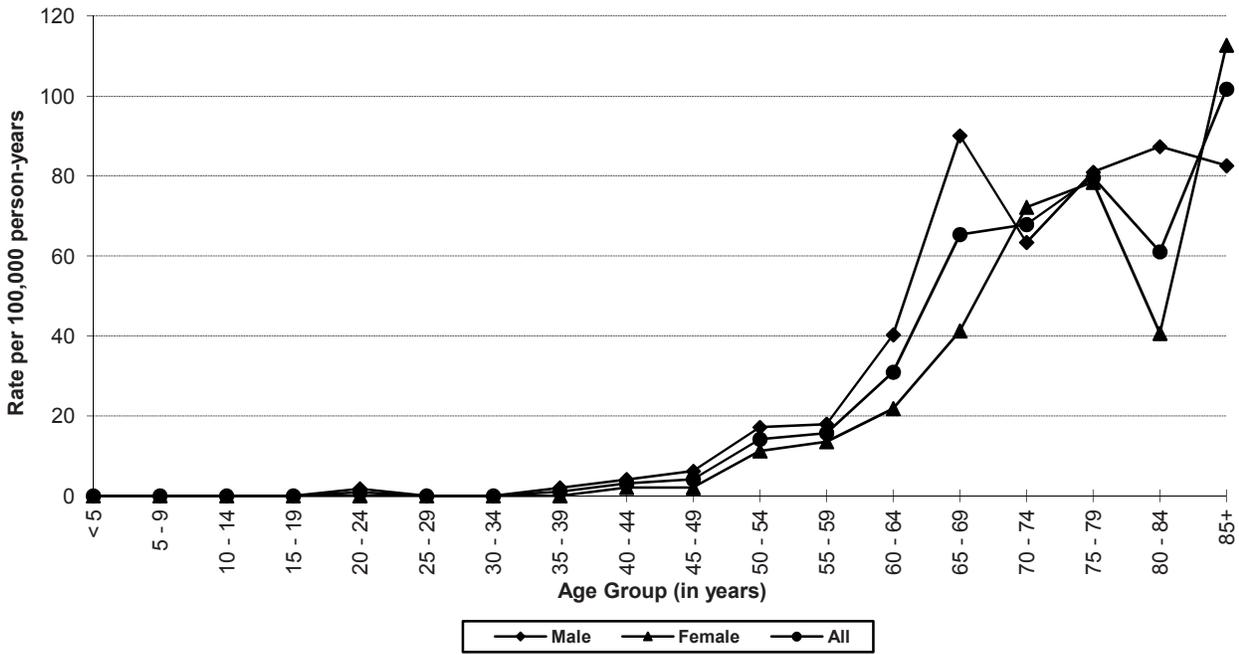
Age	Pancreatic cancer increases with age and is rare in persons younger than 40 years old.
Gender	Incidence rates of pancreatic cancer are about 50% higher in males than females.
Race	In the United States, the incidence is higher in blacks.
Diet	Investigators have generally found increased risks associated with animal protein and fat consumption, and decreased risks associated with vegetables and fruit intake. The normal range of body mass index (≥ 18 - < 25 kg/m ²) has been associated with decreased risk of pancreatic cancer.
Occupation	Persons in certain occupations, such as chemists, metal workers, and persons employed in the manufacture of benzidine and betanaphthylene, are believed to be at higher risk.
Other	Pancreatic cancer is more common among smokers than non-smokers. Familial clustering has been observed in some studies. Pancreatic cancer usually progresses to an advanced stage before symptoms develop. It is rapidly fatal in over 90% of cases.

Special Notes

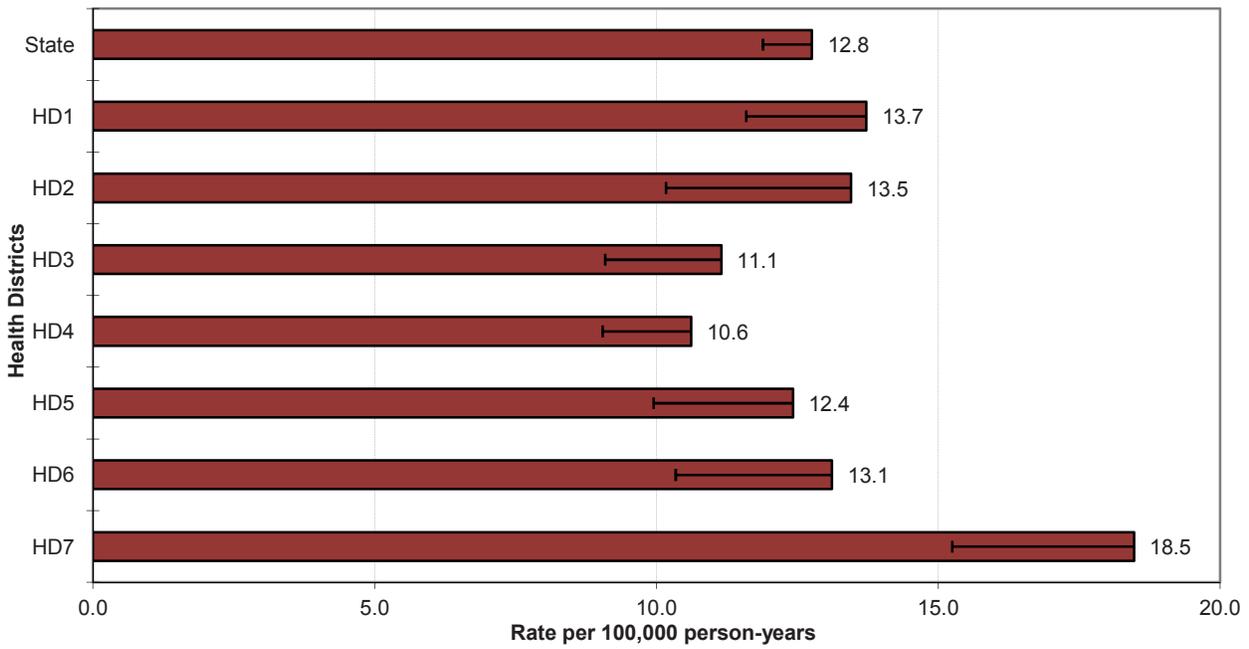
Mean age-adjusted incidence rate across health districts:	13.3
95% confidence interval on the mean age-adjusted incidence rate:	11.4- 15.2
Median age-adjusted incidence rate of health districts:	13.1
Range of age-adjusted incidence rate for health districts:	10.6- 18.5
USCS rate (2011, all races):	12.2

There were few cases of pancreatic cancer among persons aged less than 45 years. The age-specific incidence rates of pancreatic cancer generally increased after age 59. Health District 7 had statistically significantly more cases of pancreatic cancer than expected based upon rates for the remainder of Idaho.

**State Pancreas Cancer Incidence
Age-specific Rates**



**Pancreas Cancer Incidence
Age-adjusted Rates by Health District**



PROSTATE

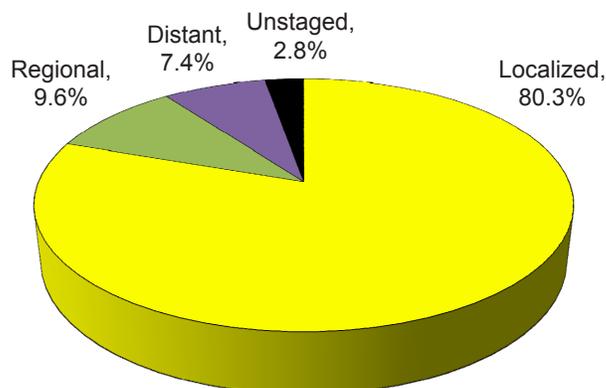
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	118.8	-
# of new invasive cases	-	1,015	-
# of new in-situ cases	-	0	-
# of deaths	-	153	-

Total Cases by County

Ada	257	Cassia	13	Lewis	5
Adams	5	Clark	-	Lincoln	7
Bannock	56	Clearwater	11	Madison	8
Bear Lake	5	Custer	5	Minidoka	12
Benewah	4	Elmore	12	Nez Perce	29
Bingham	21	Franklin	2	Oneida	3
Blaine	7	Fremont	5	Owyhee	9
Boise	10	Gem	23	Payette	18
Bonner	25	Gooding	12	Power	3
Bonneville	60	Idaho	19	Shoshone	11
Boundary	9	Jefferson	12	Teton	3
Butte	1	Jerome	14	Twin Falls	47
Camas	1	Kootenai	113	Valley	6
Canyon	108	Latah	16	Washington	13
Caribou	8	Lemhi	7		

Stage at Diagnosis - Prostate



Risk and Associated Factors

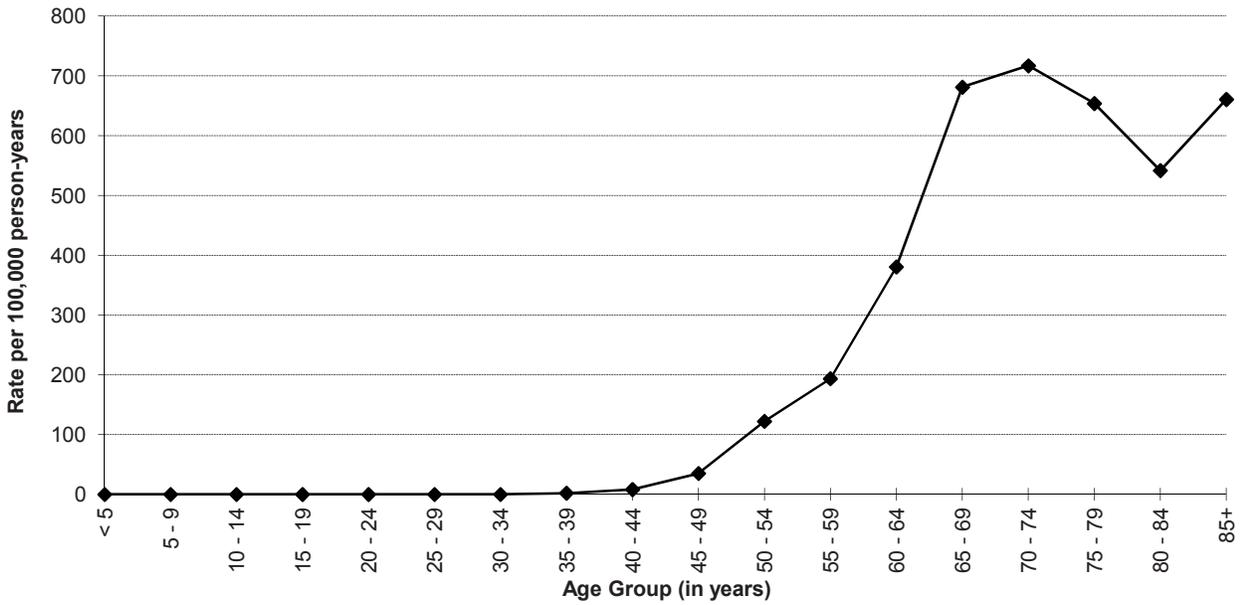
Age	Prostate cancer is rarely diagnosed before age 50, and it is primarily a disease of older men.
Race	Black males have substantially higher incidence and mortality rates than white males.
Genetics	A family history of prostate cancer is associated with increased risk.
Diet	Dietary fat has been implicated in several international, regional, and case-control studies.
Other	Environmental and familial factors may contribute to an increased incidence but no specific factor in these two groups of potential risk factors has been clearly identified. Three risk factors are well established: age, family history, and ethnic group/country of residence.
Occupation	Farming is the most consistent occupational risk factor for prostate cancer. Methyl bromide pesticide application has been identified as a risk factor by the Agricultural Health Study. It is likely that only a very small proportion of all prostate cancer cases can be attributed to a specific industrial chemical exposure.

Special Notes

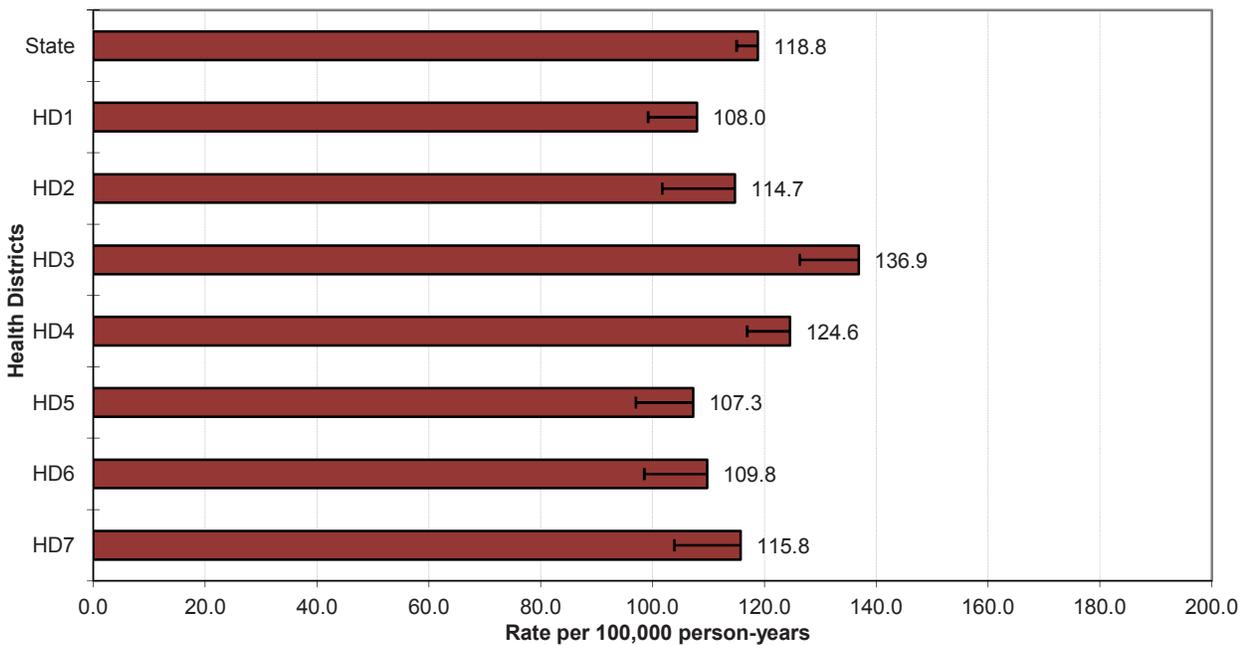
Mean age-adjusted incidence rate across health districts:	116.7
95% confidence interval on the mean age-adjusted incidence rate:	108.8- 124.6
Median age-adjusted incidence rate of health districts:	114.7
Range of age-adjusted incidence rate for health districts:	107.3- 136.9
USCS rate (2011, all races):	128.3

There were few cases of prostate cancer among men aged less than 50 years. The age-specific incidence rates of prostate cancer increased with age, peaking in the 70-74 age group. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.

**State Prostate Cancer Incidence
Age-specific Rates**



**Prostate Cancer Incidence
Age-adjusted Rates by Health District**



STOMACH

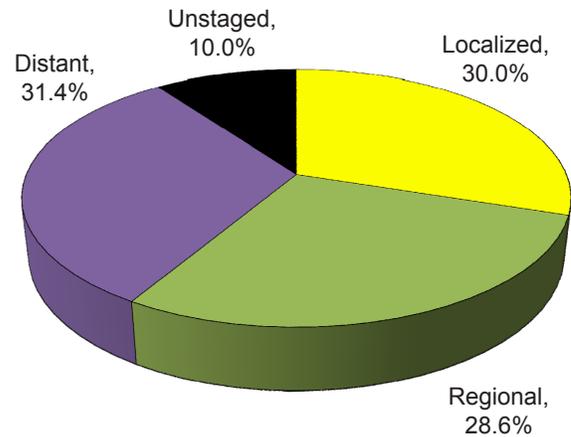
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.2	6.0	2.5
# of new invasive cases	70	48	22
# of new in-situ cases	0	0	0
# of deaths	38	26	12

Total Cases by County

Ada	15	Cassia	1	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	5	Clearwater	1	Madison	1
Bear Lake	-	Custer	-	Minidoka	1
Benewah	-	Elmore	1	Nez Perce	5
Bingham	-	Franklin	-	Oneida	-
Blaine	-	Fremont	1	Owyhee	1
Boise	-	Gem	2	Payette	1
Bonner	3	Gooding	2	Power	-
Bonneville	5	Idaho	-	Shoshone	2
Boundary	-	Jefferson	-	Teton	-
Butte	-	Jerome	1	Twin Falls	3
Camas	-	Kootenai	3	Valley	-
Canyon	8	Latah	1	Washington	2
Caribou	2	Lemhi	3		

Stage at Diagnosis - Stomach



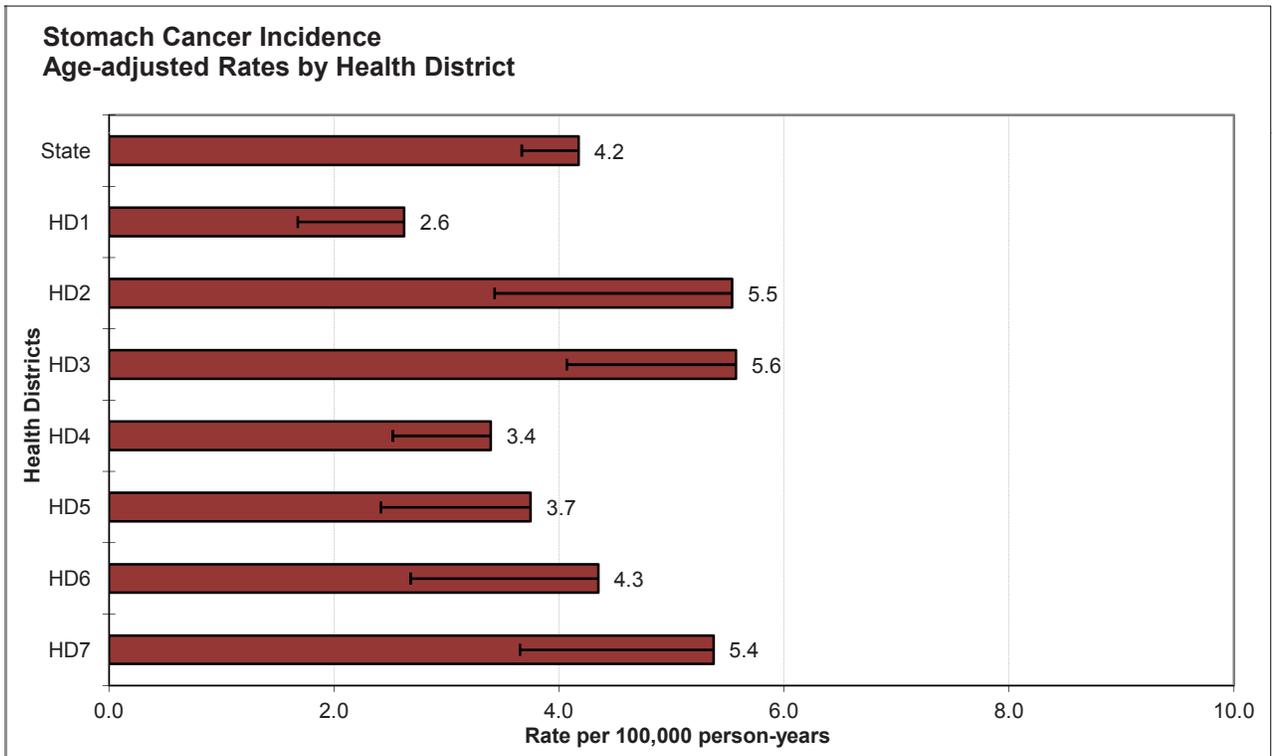
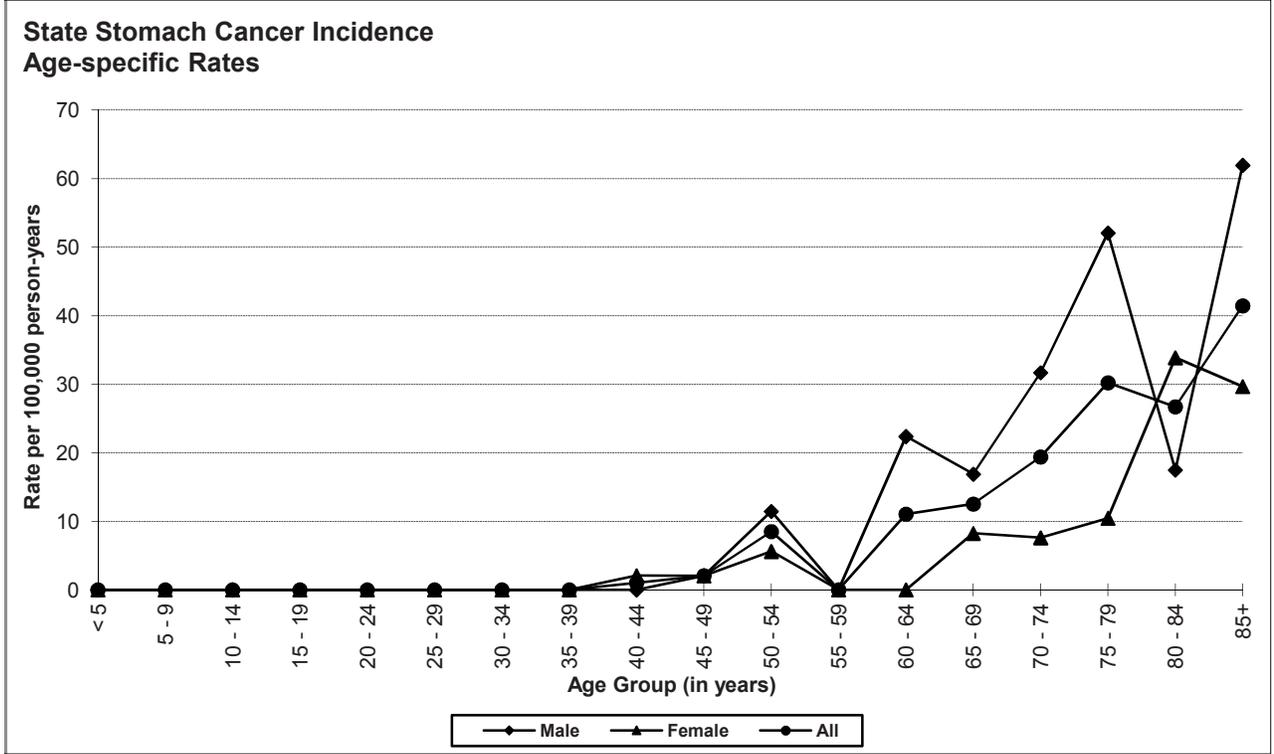
Risk and Associated Factors

Age	Stomach cancer incidence rates increase with age.
Gender	Incidence rates for males are usually more than twice as high as for females.
Race & SES	Incidence rates are higher among blacks and Asian/Pacific Islanders, and incidence is also higher in lower SES groups.
Diet	Increased risk has been attributed to diets high in smoked foods and foods high in nitrates. Salt and salted foods contribute to stomach cancer risk. Diets high in fresh fruits and vegetables seem to be protective.
Occupation	Elevated rates have been found in certain occupational groups, especially coal miners and asbestos workers, and occupations with mineral dust exposure.
Other	Stomach cancer has been linked to peptic ulcer disease and to certain bacteria.

Special Notes

Mean age-adjusted incidence rate across health districts:	4.4
95% confidence interval on the mean age-adjusted incidence rate:	3.5- 5.2
Median age-adjusted incidence rate of health districts:	4.3
Range of age-adjusted incidence rate for health districts:	2.6- 5.6
USCS rate (2011, all races):	6.6

There were few cases of stomach cancer among persons aged less than 50 years. The age-specific incidence rates of stomach cancer increased with age, peaking in the 85+ age group for males and 80-84 age group for females. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.



TESTIS

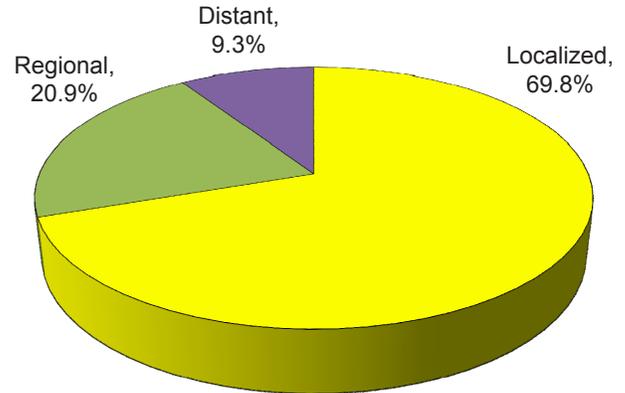
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	5.8	-
# of new invasive cases	-	43	-
# of new in-situ cases	-	0	-
# of deaths	-	0	-

Total Cases by County

Ada	14	Cassia	-	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	3	Clearwater	-	Madison	-
Bear Lake	1	Custer	-	Minidoka	-
Benewah	-	Elmore	1	Nez Perce	-
Bingham	1	Franklin	-	Oneida	-
Blaine	2	Fremont	-	Owyhee	-
Boise	-	Gem	-	Payette	-
Bonner	-	Gooding	-	Power	-
Bonneville	2	Idaho	-	Shoshone	-
Boundary	-	Jefferson	-	Teton	-
Butte	-	Jerome	-	Twin Falls	2
Camas	-	Kootenai	5	Valley	2
Canyon	7	Latah	-	Washington	-
Caribou	-	Lemhi	2		

Stage at Diagnosis - Testis



Risk and Associated Factors

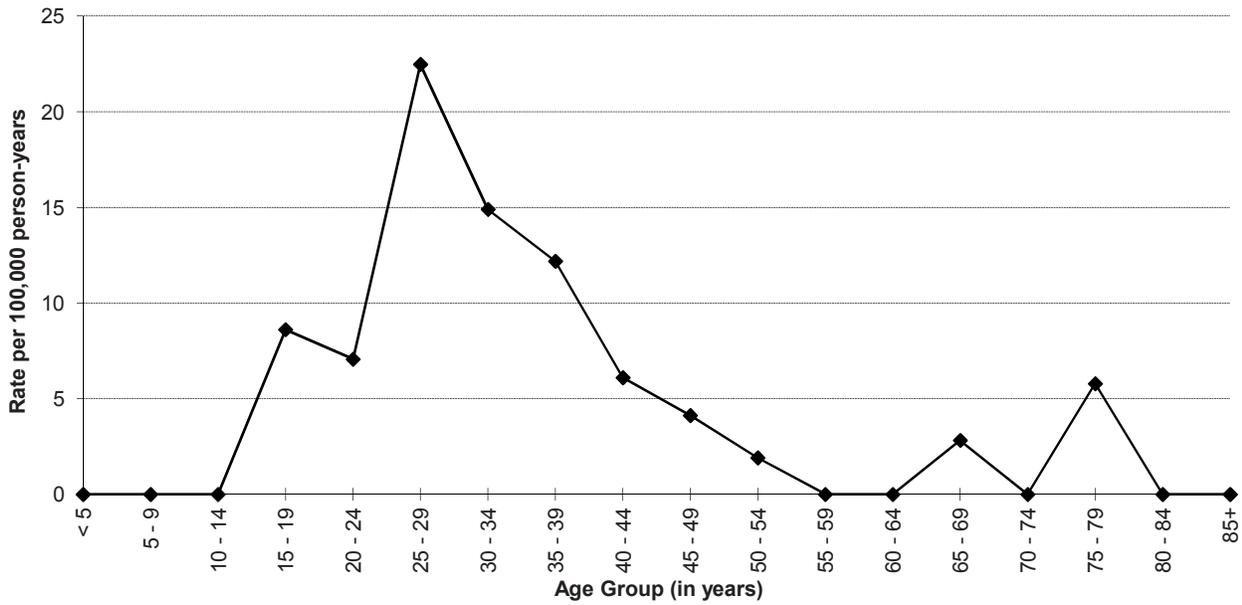
Age	Testicular cancer is the most common cancer in young males, especially males between the ages of 20 and 34.
Race & SES	Incidence rates are substantially higher in white males than in black males. Incidence of testicular cancer is highest in highest socioeconomic classes.
Other	Undescended testis, a minor abnormality that can usually be detected and corrected with surgery in childhood, is responsible for a substantially high risk for testicular cancer when uncorrected. The extent to which surgical correction reduces cancer risk is unclear. Some evidence suggests that males exposed in utero to diethylstilbestrol (DES) are at increased risk. With current treatment the cure rates for testicular cancer are greater than 80%.

Special Notes

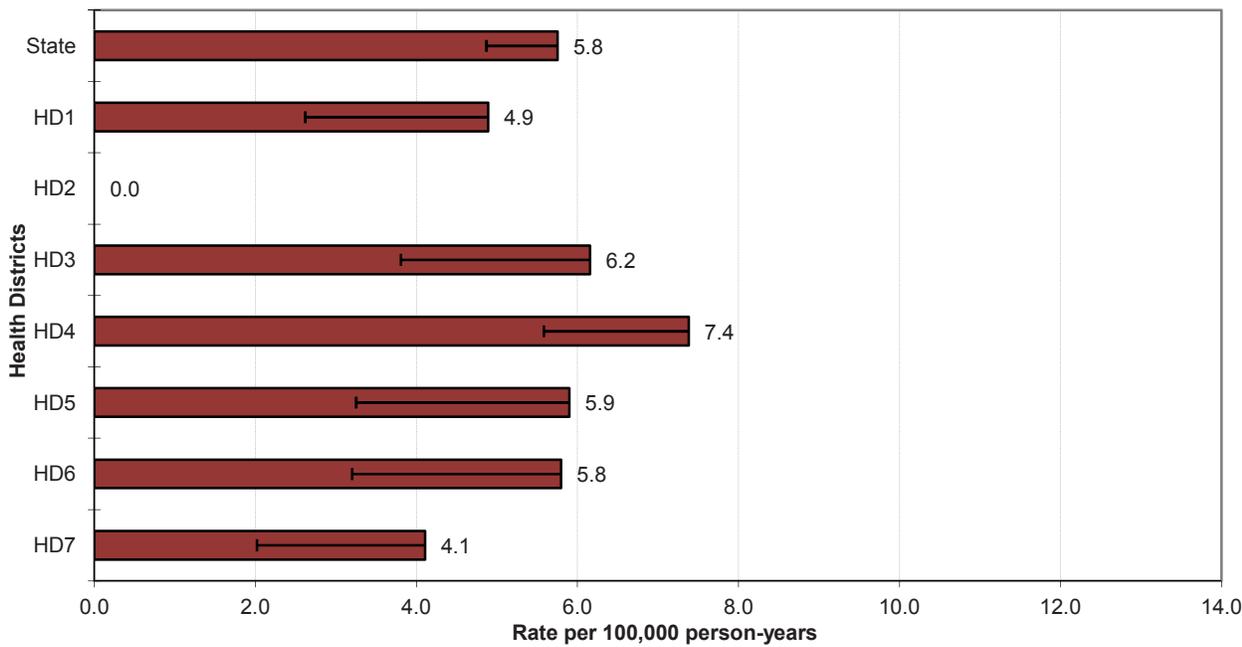
Mean age-adjusted incidence rate across health districts:	4.9
95% confidence interval on the mean age-adjusted incidence rate:	3.1- 6.7
Median age-adjusted incidence rate of health districts:	5.8
Range of age-adjusted incidence rate for health districts:	0.0- 7.4
USCS rate (2011, all races):	5.3

The highest age-specific incidence rate was in the 25-29 age group. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.

**State Testis Cancer Incidence
Age-specific Rates**



**Testis Cancer Incidence
Age-adjusted Rates by Health District**



THYROID

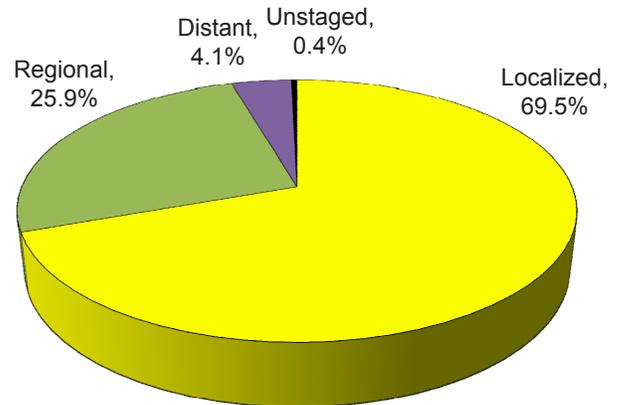
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	17.0	7.3	26.8
# of new invasive cases	266	57	209
# of new in-situ cases	0	0	0
# of deaths	11	5	6

Total Cases by County

Ada	72	Cassia	2	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	5	Clearwater	3	Madison	5
Bear Lake	4	Custer	2	Minidoka	3
Benewah	-	Elmore	4	Nez Perce	2
Bingham	11	Franklin	1	Oneida	1
Blaine	1	Fremont	4	Owyhee	1
Boise	1	Gem	1	Payette	5
Bonner	5	Gooding	2	Power	-
Bonneville	32	Idaho	-	Shoshone	3
Boundary	1	Jefferson	5	Teton	1
Butte	1	Jerome	4	Twin Falls	11
Camas	-	Kootenai	26	Valley	2
Canyon	38	Latah	2	Washington	1
Caribou	3	Lemhi	-		

Stage at Diagnosis - Thyroid



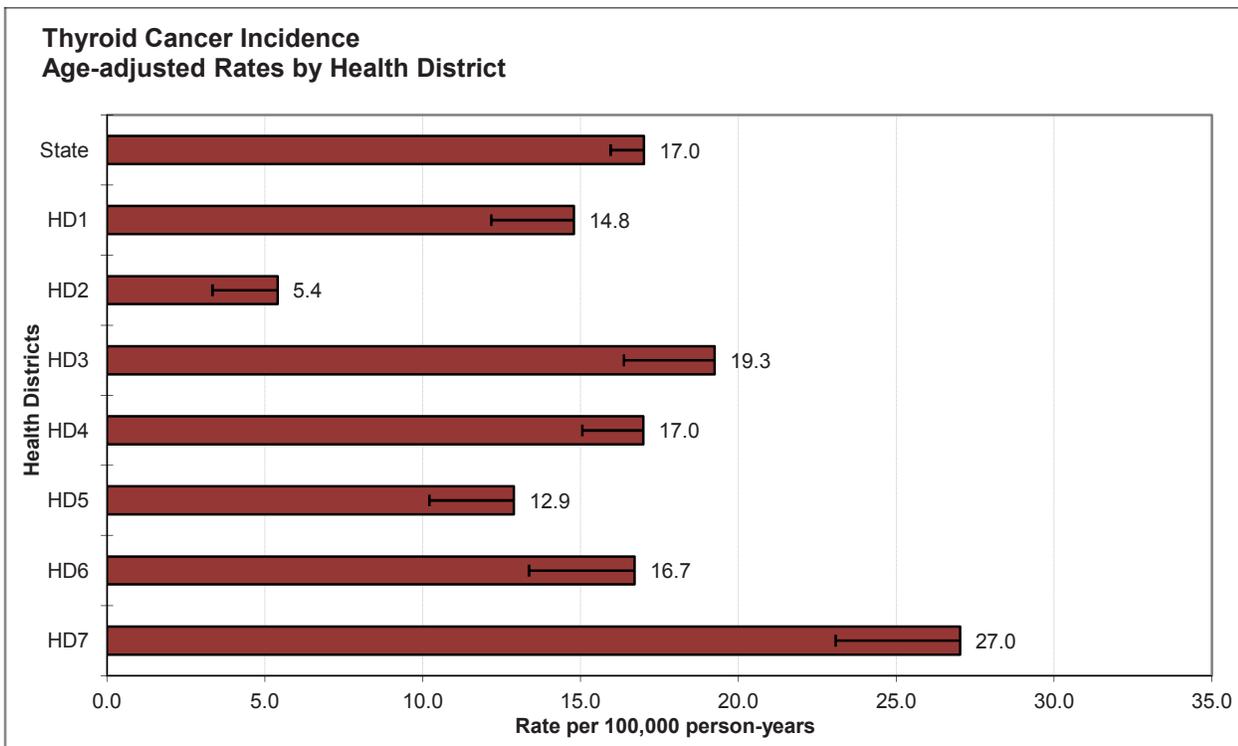
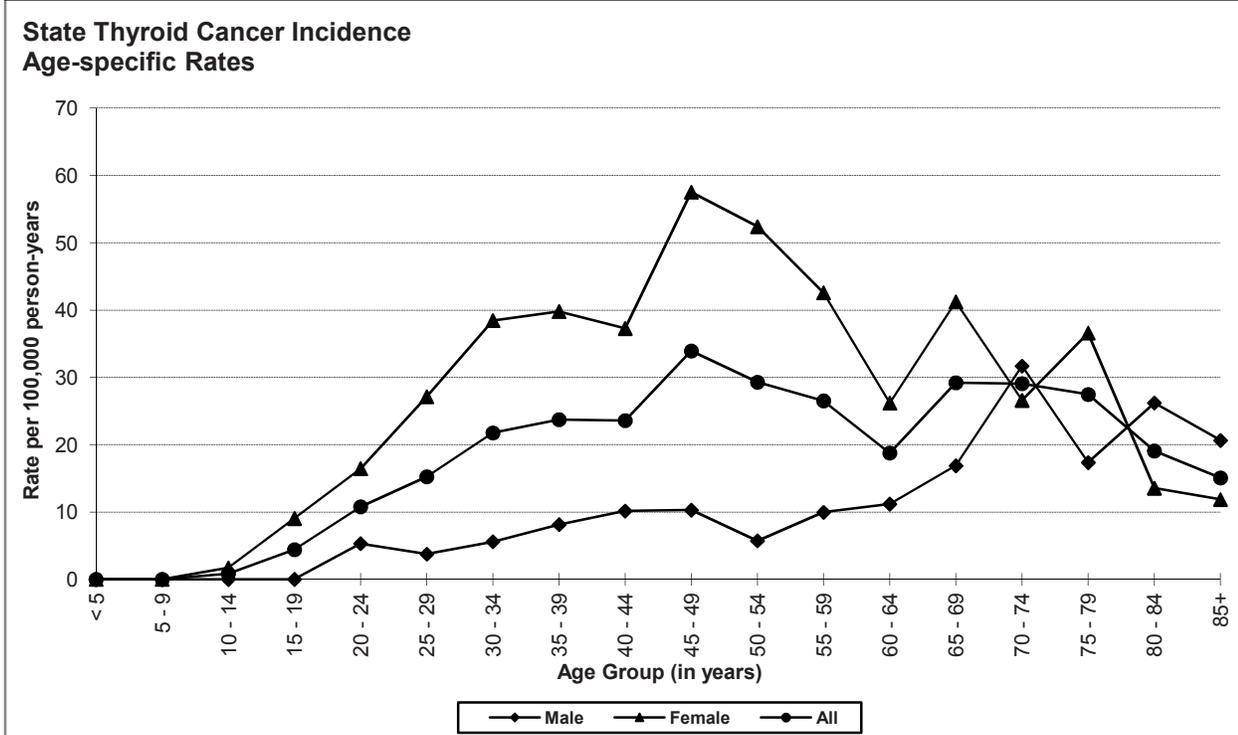
Risk and Associated Factors

Age	Thyroid cancer is one of the most common malignancies affecting adolescents and adults up to 50 years of age.
Gender	Two-thirds of the cases are among females.
Race & SES	The incidence is higher among whites and in upper income groups.
Hormonal	Hormonal factors are believed to contribute to the increased risk in females. This is demonstrated by the sharp increase in incidence among women after menarche.
Other	Occupational and environmental exposures to ionizing radiation have been associated with higher rates of thyroid cancer. Radiation exposure to the head and neck in childhood is a well-known risk factor. Family history of thyroid cancer substantially increases the risk. Prognosis worsens with each decade of age over 50, partially because anaplastic thyroid cancer, which has a higher fatality rate, occurs more often among older patients. In the U.S., thyroid cancer incidence rates have tripled in the past 30 years. Some clinicians believe that use of imaging technologies such as ultrasound, CT, and MRI scanning is fueling an epidemic in diagnosis of thyroid cancers that are unlikely to progress to cause symptoms or death, while others argue that the trend is in part real, and involves both small and large tumors.

Special Notes

Mean age-adjusted incidence rate across health districts:	16.2
95% confidence interval on the mean age-adjusted incidence rate:	11.3- 21.0
Median age-adjusted incidence rate of health districts:	16.7
Range of age-adjusted incidence rate for health districts:	5.4- 27.0
USCS rate (2011, all races):	13.8

The age-specific incidence rates of thyroid cancer were typically higher for females than males. Health District 7 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 2 had statistically significantly fewer cases than expected.



SECTION II

STATE OF IDAHO – 2012 INCIDENCE DATA BY SITE AND GENDER

Idaho Resident Cancer Cases - 2012

Primary Site of Cancer	Invasive			In situ		
	Total	Male	Female	Total	Male	Female
All Sites	7,244	3,664	3,580	837	425	412
Oral Cavity and Pharynx	196	127	69	5	4	1
Lip	19	14	5	1	1	-
Tongue	67	43	24	-	-	-
Salivary Gland	20	10	10	1	1	-
Floor of Mouth	11	8	3	-	-	-
Gum and Other Mouth	23	10	13	2	1	1
Nasopharynx	8	5	3	-	-	-
Tonsil	31	24	7	-	-	-
Oropharynx	9	7	2	-	-	-
Hypopharynx	5	4	1	1	1	-
Other Oral Cavity and Pharynx	3	2	1	-	-	-
Digestive System	1,208	673	535	26	16	10
Esophagus	79	66	13	1	1	-
Stomach	70	48	22	-	-	-
Small Intestine	37	22	15	-	-	-
Colon and Rectum	596	300	296	24	14	10
Colon excluding Rectum	437	206	231	18	11	7
Cecum	90	30	60	7	4	3
Appendix	11	6	5	-	-	-
Ascending Colon	72	30	42	3	2	1
Hepatic Flexure	28	16	12	1	1	-
Transverse Colon	44	23	21	1	1	-
Splenic Flexure	21	11	10	-	-	-
Descending Colon	24	17	7	1	-	1
Sigmoid Colon	117	57	60	5	3	2
Large Intestine, NOS	30	16	14	-	-	-
Rectum and Rectosigmoid Junction	159	94	65	6	3	3
Rectosigmoid Junction	37	22	15	1	1	-
Rectum	122	72	50	5	2	3
Anus, Anal Canal and Anorectum	31	7	24	-	-	-
Liver and Intrahepatic Bile Duct	106	78	28	-	-	-
Liver	95	74	21	-	-	-
Intrahepatic Bile Duct	11	4	7	-	-	-
Gallbladder	12	6	6	-	-	-
Other Biliary	23	13	10	1	1	-
Pancreas	222	123	99	-	-	-
Retroperitoneum	12	8	4	-	-	-
Peritoneum, Omentum and Mesentery	13	-	13	-	-	-
Other Digestive Organs	7	2	5	-	-	-
Respiratory System	924	472	452	4	3	1
Nose, Nasal Cavity and Middle Ear	8	5	3	-	-	-
Larynx	39	30	9	2	2	-
Lung and Bronchus	873	433	440	2	1	1
Pleura	-	-	-	-	-	-
Trachea, Mediastinum and Other Respiratory Organs	4	4	-	-	-	-
Skin excluding Basal and Squamous	479	288	191	373	221	152
Melanoma of the Skin	455	272	183	372	221	151
Other Non-Epithelial Skin	24	16	8	1	-	1
Breast	1,087	8	1,079	191	-	191

Idaho Resident Cancer Cases - 2012 (continued)

Primary Site of Cancer	Invasive			In situ		
	Total	Male	Female	Total	Male	Female
Female Genital System	441	-	441	11	-	11
Cervix Uteri	52	-	52	-	-	-
Corpus and Uterus, NOS	236	-	236	-	-	-
Corpus Uteri	227	-	227	-	-	-
Uterus, NOS	9	-	9	-	-	-
Ovary	116	-	116	-	-	-
Vagina	5	-	5	1	-	1
Vulva	24	-	24	10	-	10
Other Female Genital Organs	8	-	8	-	-	-
Male Genital System	1,060	1,060	-	2	2	-
Prostate	1,015	1,015	-	-	-	-
Testis	43	43	-	-	-	-
Penis	1	1	-	2	2	-
Other Male Genital Organs	1	1	-	-	-	-
Urinary System	432	315	117	221	177	44
Urinary Bladder	160	135	25	208	167	41
Kidney and Renal Pelvis	252	168	84	9	7	2
Ureter	14	6	8	2	1	1
Other Urinary Organs	6	6	-	2	2	-
Brain and Other Nervous System	121	73	48	-	-	-
Brain	108	65	43	-	-	-
Cranial Nerves Other Nervous System	13	8	5	-	-	-
Endocrine System	275	61	214	-	-	-
Thyroid	266	57	209	-	-	-
Other Endocrine including Thymus	9	4	5	-	-	-
Lymphoma	347	200	147	-	-	-
Hodgkin Lymphoma	43	28	15	-	-	-
Non-Hodgkin Lymphoma	304	172	132	-	-	-
Myeloma	102	65	37	-	-	-
Leukemia	242	143	99	-	-	-
Lymphocytic Leukemia	132	84	48	-	-	-
Acute Lymphocytic Leukemia	20	10	10	-	-	-
Chronic Lymphocytic Leukemia	101	68	33	-	-	-
Other Lymphocytic Leukemia	11	6	5	-	-	-
Myeloid and Monocytic Leukemia	96	51	45	-	-	-
Acute Myeloid Leukemia	61	31	30	-	-	-
Acute Monocytic Leukemia	3	2	1	-	-	-
Chronic Myeloid Leukemia	31	17	14	-	-	-
Other Myeloid/Monocytic Leukemia	1	1	-	-	-	-
Other Leukemia	14	8	6	-	-	-
Other Acute Leukemia	4	2	2	-	-	-
Aleukemic, Subleukemic and NOS	10	6	4	-	-	-
Other or Unknown Sites	330	179	151	4	2	2
Bones and Joints	11	5	6	-	-	-
Soft Tissue including Heart	49	27	22	-	-	-
Eye and Orbit	20	11	9	4	2	2
Mesothelioma	17	13	4	-	-	-
Kaposi Sarcoma	-	-	-	-	-	-
Miscellaneous	233	123	110	-	-	-

SECTION III

STATE OF IDAHO – 2012 MORTALITY RATES BY SITE AND GENDER

Idaho Resident Cancer Mortality Rates - 2012

Cause of Death	Total			Male			Female		
	Rate	Deaths	Pop	Rate	Deaths	Pop	Rate	Deaths	Pop
All Causes of Death	726.9	11,993	1,595,590	842.5	6,203	798,322	626.3	5,790	797,268
All Malignant Cancers	151.8	2,570	1,595,590	178.3	1,391	798,322	130.3	1,179	797,268
Bladder	4.1	68	1,595,590	7.2	54	798,322	1.6	14	797,268
Brain and Other Nervous System	4.8	83	1,595,590	6.9	58	798,322	2.8	25	797,268
Breast	8.5	145	1,595,590	0.2	1	798,322	15.8	144	797,268
Cervix	0.7	11	1,595,590	-	-	798,322	1.4	11	797,268
Colorectal	14.0	235	1,595,590	16.2	130	798,322	11.9	105	797,268
Corpus Uteri	1.2	22	1,595,590	-	-	798,322	2.3	22	797,268
Esophagus	4.0	71	1,595,590	6.9	55	798,322	1.7	16	797,268
Hodgkin Lymphoma	0.5	8	1,595,590	0.7	6	798,322	0.3	2	797,268
Kidney	4.0	69	1,595,590	5.5	45	798,322	2.6	24	797,268
Larynx	0.5	9	1,595,590	0.8	7	798,322	0.2	2	797,268
Leukemia	6.0	100	1,595,590	7.5	55	798,322	5.0	45	797,268
Liver and Bile Duct	5.2	93	1,595,590	8.0	67	798,322	2.7	26	797,268
Lung and Bronchus	36.5	621	1,595,590	40.9	325	798,322	32.7	296	797,268
Melanoma of the Skin	3.4	57	1,595,590	4.5	35	798,322	2.5	22	797,268
Myeloma	3.7	60	1,595,590	4.9	38	798,322	2.7	22	797,268
Non-Hodgkin Lymphoma	5.9	97	1,595,590	7.4	56	798,322	4.6	41	797,268
Oral Cavity and Pharynx	1.9	33	1,595,590	3.4	28	798,322	0.6	5	797,268
Ovary	5.1	90	1,595,590	-	-	798,322	9.6	90	797,268
Pancreas	11.0	191	1,595,590	13.0	108	798,322	9.1	83	797,268
Prostate	9.4	153	1,595,590	21.7	153	798,322	-	-	797,268
Stomach	2.2	38	1,595,590	3.3	26	798,322	1.2	12	797,268
Testis	0.0	0	1,595,590	0.0	0	798,322	-	-	797,268
Thyroid	0.7	11	1,595,590	0.6	5	798,322	0.8	6	797,268

Data source: Bureau of Vital Records and Health Statistics (BVRHS), Idaho Department of Health and Welfare, 2013.¹⁹

Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) standard.

Cause of death categories are based on SEER cause of death recodes (<http://seer.cancer.gov/codrecode/>), which differ from official BVRHS cancer mortality categories. Death counts may differ from official BVRHS statistics due to late filings.

SECTION IV

**2012 AGE SPECIFIC INCIDENCE RATES
PER 100,000 POPULATION
BY SITE AND GENDER**

Age (years)	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80 - 84	85 +	
All Cancers																		
All	30.2	9.8	12.5	22.9	46.7	64.8	96.5	146.5	215.4	329.0	519.6	740.7	1098.3	1631.7	1941.6	2293.8	2259.3	2151.8
Male	33.8	14.3	13.1	24.1	35.4	60.0	76.4	111.8	144.3	220.2	492.3	719.9	1217.3	1844.0	2226.6	2806.4	2804.5	2766.9
Female	26.5	5.0	12.0	21.7	58.5	69.8	117.3	182.3	287.9	437.7	546.5	760.8	982.2	1424.3	1668.2	1830.5	1836.4	1798.2
Bladder																		
All	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.1	2.1	5.1	18.9	35.4	33.2	73.7	118.3	175.8	209.9	143.2
Male	0.0	0.0	0.0	0.0	0.0	0.0	1.9	4.1	4.1	6.2	30.5	55.8	58.2	121.1	194.1	306.7	436.8	299.4
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	4.1	7.5	15.5	8.7	27.5	45.6	57.5	33.9	53.4
Brain																		
All	1.7	2.5	3.3	2.7	2.7	2.9	2.8	5.2	7.2	6.2	2.8	14.7	12.2	25.0	13.6	19.2	19.1	11.3
Male	3.4	1.6	3.3	1.7	1.8	3.8	5.6	8.1	10.2	8.2	3.8	19.9	11.2	33.8	15.9	17.4	8.7	31.0
Female	0.0	3.4	3.4	3.6	3.7	1.9	0.0	2.1	4.1	4.1	1.9	9.7	13.1	16.5	11.4	20.9	27.1	0.0
Brain & Other Central Nervous System (Non-Malignant)																		
All	0.0	0.0	0.8	3.5	4.5	5.7	1.9	5.2	9.2	12.3	18.0	25.5	24.3	16.7	33.0	44.0	34.4	49.0
Male	0.0	0.0	1.6	1.7	3.5	3.8	1.9	6.1	6.1	8.2	21.0	19.9	11.2	14.1	27.7	28.9	35.0	20.7
Female	0.0	0.0	0.0	5.4	5.5	7.8	1.9	4.2	12.4	16.4	15.0	31.0	37.1	19.3	38.0	57.5	33.9	65.3
Breast																		
Female Invasive	0.0	0.0	0.0	0.0	0.0	11.6	21.2	48.2	126.3	174.7	170.3	271.0	338.3	423.5	459.8	533.4	440.5	385.8
Female In-situ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	29.0	43.2	37.4	60.0	67.7	90.7	87.4	36.6	33.9	11.9
Cervix																		
Female	0.0	0.0	0.0	0.0	0.0	3.9	7.7	16.8	10.4	6.2	13.1	9.7	17.5	8.3	19.0	5.2	0.0	5.9
Colorectal																		
All	0.0	0.0	0.0	0.0	2.7	3.8	2.8	12.4	11.3	32.9	40.6	48.1	85.1	105.7	172.6	186.8	278.6	211.0
Male	0.0	0.0	0.0	0.0	1.8	5.6	0.0	14.2	8.1	28.8	45.8	49.9	87.3	123.9	210.0	219.9	270.8	175.5
Female	0.0	0.0	0.0	0.0	3.7	1.9	5.8	10.5	14.5	37.0	35.6	46.5	82.9	88.0	136.8	156.9	284.6	231.5
Corpus Uteri																		
Female	0.0	0.0	0.0	0.0	0.0	0.0	1.9	10.5	4.1	28.8	41.2	89.1	107.0	96.2	98.8	57.5	61.0	41.5
Esophagus																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.1	9.5	9.8	3.3	15.3	21.3	30.2	42.0	30.2
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	15.3	19.9	6.7	25.3	35.7	57.9	78.6	62.0
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	2.1	3.7	0.0	0.0	5.5	7.6	5.2	13.6	11.9

Age (years)	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	
Hodgkin Lymphoma																		
All	0.0	0.8	1.7	2.7	4.5	4.8	4.7	3.1	5.1	2.1	0.9	3.9	2.2	0.0	5.8	2.8	3.8	0.0
Male	0.0	1.6	3.3	3.4	3.5	3.8	9.3	6.1	2.0	2.1	1.9	6.0	4.5	0.0	7.9	5.8	0.0	0.0
Female	0.0	0.0	0.0	1.8	5.5	5.8	0.0	0.0	8.3	2.1	0.0	1.9	0.0	0.0	3.8	0.0	6.8	0.0
Kidney & Renal Pelvis																		
All	4.3	0.0	0.8	0.9	0.9	1.0	1.9	6.2	11.3	13.4	18.0	36.4	38.7	59.8	60.1	63.2	42.0	45.2
Male	3.4	0.0	1.6	1.7	0.0	1.9	3.7	8.1	16.3	16.5	28.6	43.9	53.7	84.5	83.2	86.8	69.9	62.0
Female	5.3	0.0	0.0	0.0	1.8	0.0	0.0	4.2	6.2	10.3	7.5	29.0	24.0	35.8	38.0	41.8	20.3	35.6
Larynx																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.8	5.9	11.1	13.9	5.8	11.0	0.0	3.8
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	3.8	8.0	15.7	19.7	11.9	23.2	0.0	10.3
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9	6.6	8.3	0.0	0.0	0.0	0.0
Leukemia																		
All	7.8	3.3	2.5	1.8	2.7	1.0	4.7	7.2	9.2	9.3	16.1	26.5	24.3	41.7	46.6	74.2	91.6	71.6
Male	10.1	4.8	3.3	0.0	5.3	0.0	1.9	10.2	10.2	6.2	22.9	29.9	29.1	53.5	55.5	86.8	139.8	113.6
Female	5.3	1.7	1.7	3.6	0.0	1.9	7.7	4.2	8.3	12.3	9.4	23.2	19.6	30.3	38.0	62.8	54.2	47.5
Liver & Bile Duct																		
All	1.7	0.0	0.0	0.0	0.9	0.0	1.0	0.0	0.0	3.1	11.3	20.6	23.2	16.7	21.3	33.0	7.6	30.2
Male	3.4	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	6.2	21.0	33.9	44.8	19.7	19.8	46.3	8.7	31.0
Female	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	1.9	7.7	2.2	13.8	22.8	20.9	6.8	29.7
Lung & Bronchus																		
All	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.1	3.1	12.3	45.4	54.0	128.2	224.0	279.3	401.1	374.0	324.1
Male	0.0	0.0	0.0	0.0	0.0	0.0	1.9	4.1	2.0	10.3	36.3	53.8	132.0	208.3	281.3	480.3	428.1	433.6
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.1	14.4	54.3	54.2	124.4	239.2	277.4	329.5	332.1	261.1
Melanoma of the Skin																		
All	0.9	0.0	0.0	0.9	6.3	5.7	18.9	12.4	24.6	30.9	32.1	40.3	84.0	93.2	81.5	115.4	87.8	109.3
Male	0.0	0.0	0.0	1.7	5.3	7.5	18.6	4.1	18.3	30.9	21.0	47.9	123.1	118.2	118.9	196.7	157.3	144.5
Female	1.8	0.0	0.0	0.0	7.3	3.9	19.2	21.0	31.1	30.8	43.0	32.9	45.8	68.7	45.6	41.8	33.9	89.0
Myeloma																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.1	1.9	8.8	14.4	33.4	38.8	44.0	38.2	15.1
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	6.2	3.8	14.0	24.6	36.6	43.6	57.9	43.7	20.7
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	4.4	30.3	34.2	31.4	33.9	11.9

Age (years)	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Non-Hodgkin Lymphoma																	
All	0.9	1.6	0.8	1.8	2.7	1.0	4.7	6.2	7.2	7.2	28.5	40.9	68.2	83.4	90.7	114.5	105.5
Male	1.7	3.2	0.0	1.7	3.5	0.0	0.0	4.1	10.3	17.2	27.9	62.7	78.8	99.1	109.9	183.5	113.6
Female	0.0	0.0	1.7	1.8	1.8	1.9	9.6	8.4	4.1	20.6	29.0	19.6	57.7	68.4	73.2	61.0	100.9
Oral Cavity & Pharynx																	
All	0.0	0.8	0.0	0.0	0.9	1.0	1.9	1.0	7.2	21.7	29.5	28.7	36.2	52.4	49.5	45.8	45.2
Male	0.0	1.6	0.0	0.0	0.0	0.0	1.9	2.0	8.2	32.4	51.9	35.8	47.9	59.4	69.4	43.7	51.6
Female	0.0	0.0	0.0	0.0	1.8	1.9	1.9	0.0	6.2	11.2	7.7	21.8	24.8	45.6	31.4	47.4	41.5
Ovary																	
Female	0.0	0.0	0.0	0.0	3.7	1.9	1.9	2.1	18.5	15.0	27.1	52.4	41.3	41.8	31.4	101.7	47.5
Pancreas																	
All	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.0	4.1	14.2	15.7	30.9	65.4	67.9	79.7	61.1	101.8
Male	0.0	0.0	0.0	0.0	1.8	0.0	0.0	4.1	6.2	17.2	18.0	40.3	90.1	63.4	81.0	87.4	82.6
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	11.2	13.6	21.8	41.3	72.2	78.5	40.7	112.8
Prostate																	
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	8.1	35.0	193.4	380.4	681.3	717.1	653.9	541.7	660.8
Stomach																	
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.1	8.5	11.1	12.5	19.4	30.2	26.7	41.5
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	11.5	0.0	22.4	16.9	31.7	52.1	17.5	62.0
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	5.6	0.0	0.0	8.3	7.6	10.5	33.9	29.7
Testis																	
Male	0.0	0.0	0.0	8.6	7.1	22.5	14.9	12.2	6.1	4.1	1.9	0.0	2.8	0.0	5.8	0.0	0.0
Thyroid																	
All	0.0	0.0	0.8	4.4	10.8	15.2	21.8	23.7	33.9	29.3	26.5	18.8	29.2	29.1	27.5	19.1	15.1
Male	0.0	0.0	0.0	0.0	5.3	3.8	5.6	8.1	10.2	5.7	10.0	11.2	16.9	31.7	17.4	26.2	20.7
Female	0.0	0.0	1.7	9.1	16.5	27.1	38.5	39.8	37.3	52.4	42.6	26.2	41.3	26.6	36.6	13.6	11.9

SECTION V

2012 OBSERVED VS. EXPECTED NUMBERS BY HEALTH DISTRICT

**2012 OBSERVED VERSUS EXPECTED NUMBERS
BY
HEALTH DISTRICT**

ALL SEXES

	HD 1		HD 2		HD 3		HD 4		HD 5		HD 6		HD 7	
	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP
All Sites	1,246	1,214.8	576	590.8	1,284	1,162.3 *	2,086	1,936.8 *	884	896.4	652	772.5 *	724	839.6 *
Bladder	69	60.1	34	30.2	68	56.8	90	95.6	45	45.2	31	38.7	31	41.3
Brain	13	17.2	9	7.8	16	17.5	28	30.5	19	11.9	11	11.1	12	12.8
Brain & CNS non-Malignant	25	28.4	13	13.7	38	26.0 +	49	48.9	16	21.8	21	17.9	16	21.0
Breast	196	173.6	71	84.8	187	169.1	325	282.6 +	135	128.6	95	111.6	78	125.2 *
Breast (in-situ)	31	31.1	17	14.1	39	28.5	60	50.1	17	23.1	9	20.2 *	18	21.5
Cervix	5	8.4	8	3.3 +	7	8.5	17	14.3	8	5.8	4	5.4	3	6.4
Colorectal	93	99.1	32	49.6 +	109	91.8	157	156.5	60	73.8	74	59.3	71	65.1
Corpus Uteri	33	38.6	24	17.0	40	34.5	58	63.0	24	27.2	23	23.0	25	25.0
Esophagus	16	12.5	7	6.4	10	13.0	20	21.0	11	9.5	5	8.4	10	8.5
Hodgkin lymphoma	7	5.7	5	2.8	7	6.8	13	12.1	6	4.8	2	4.8	3	6.0
Kidney & renal pelvis	39	41.6	15	19.7	51	37.9 +	71	67.1	32	29.7	24	25.9	20	29.1
Larynx	6	6.8	7	2.7 +	5	6.3	10	10.6	6	4.4	2	4.2	3	4.4
Leukemia	35	38.9	29	17.7 +	47	36.9	71	61.5	20	30.5	14	26.3 +	26	28.0
Liver & bile duct	18	17.5	8	8.3	13	17.2	32	27.0	15	12.3	10	10.9	10	12.1
Lung & bronchus	166	143.5	83	71.3	164	134.5 +	249	215.1 +	104	106.9	50	93.9 *	57	99.4 *
Melanoma of skin	70	73.7	31	35.3	76	71.1	135	120.1	51	54.3	38	47.2	54	50.6
Myeloma	16	17.7	10	8.2	17	16.2	30	24.9	12	12.4	6	10.9	11	11.0
N-H Lymphoma	46	50.4	22	24.6	50	48.1	93	74.9 +	39	36.2	25	31.8	29	34.2
Oral cavity & pharynx	43	29.9 +	11	15.6	23	32.3	57	50.9	35	21.8 +	15	20.5	12	23.0 +
Ovary	24	17.9	8	9.3	14	18.9	25	33.5	19	13.2	17	11.3	9	13.4
Pancreas	43	36.1	18	18.3	30	36.3	48	61.0	26	27.0	23	22.5	34	22.9 +
Prostate	162	174.7	80	82.3	176	158.5	285	254.6	113	123.3	99	103.4	100	111.3
Stomach	8	12.3	7	5.7	14	10.5	16	18.7	8	8.6	7	7.2	10	7.3
Testis	5	5.2	0	3.0	7	6.7	17	11.0	5	4.9	5	4.5	4	6.1
Thyroid	35	39.5	7	19.6 *	46	41.1	79	75.9	24	31.7	26	27.2	49	29.5 *
Pediatric (age 0-19)	11	10.1	5	4.9	18	14.9	29	21.2	11	10.8	7	10.6	7	14.3

+ Statistically significant difference at p=0.05 or less.

* Statistically significant difference at p=0.01 or less.

Note: Observed and expected numbers exclude in-situ cases, basal/squamous skin cases, and cases with unknown age and/or gender.

**2012 OBSERVED VERSUS EXPECTED NUMBERS
BY
HEALTH DISTRICT**

MALES

	HD 1		HD 2		HD 3		HD 4		HD 5		HD 6		HD 7	
	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP
All Sites	653	637.5	302	315.1	650	594.6 +	1,073	961.7 *	463	462.2	319	402.5 *	371	433.3 *
Bladder	60	49.6	27	25.6	59	45.8	65	78.9	38	37.0	27	31.9	26	34.0
Brain	8	10.3	6	4.7	11	10.2	18	18.4	11	7.2	4	7.0	7	7.7
Brain & CNS non-Malignant	8	10.6	4	5.1	14	9.6	18	18.3	8	7.8	5	7.0	9	7.5
Breast	2	1.2	0	0.7	3	0.9	2	2.1	1	1.0	0	0.9	0	1.0
Breast (in-situ)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Colorectal	50	50.5	15	25.5 +	46	47.6	84	74.9	30	37.1	36	30.1	39	32.6
Esophagus	12	10.9	7	5.4	9	10.7	16	17.3	10	7.8	5	7.0	7	7.3
Hodgkin lymphoma	4	3.8	4	1.8	5	4.3	8	8.1	4	3.2	1	3.2	2	3.8
Kidney & renal pelvis	29	27.6	12	13.2	31	25.7	49	44.2	19	20.1	15	17.4	13	19.6
Larynx	4	5.4	5	2.2	3	5.0	8	7.9	6	3.2	1	3.3	3	3.3
Leukemia	20	23.3	23	10.3 *	24	22.4	45	34.4	13	18.0	8	15.7	10	17.4
Liver & bile duct	15	12.5	6	6.1	10	12.4	27	18.9	9	9.3	6	8.3	5	9.3
Lung & bronchus	90	70.9 +	35	37.2	79	66.7	122	103.3	54	52.9	23	47.2 *	30	49.5 *
Melanoma of skin	42	45.5	18	22.3	48	41.5	83	68.4	27	33.2	24	28.3	30	30.6
Myeloma	11	11.3	6	5.3	10	10.3	19	15.8	7	8.0	2	7.2	10	6.8
N-H Lymphoma	27	29.2	14	14.2	24	27.7	54	40.9	26	20.0	13	18.3	14	19.7
Oral cavity & pharynx	28	19.4	4	10.5 +	14	20.9	39	32.3	26	13.6 *	8	13.6	8	15.0
Pancreas	24	20.2	10	10.2	16	20.0	29	32.9	13	15.1	13	12.5	18	12.9
Prostate	162	177.1	80	84.6	176	156.5	285	249.1 +	113	123.5	99	104.2	100	112.3
Stomach	6	8.6	5	4.0	12	6.7	12	12.0	4	6.1	4	5.0	5	5.3
Testis	5	5.1	0	3.2	7	6.5	17	11.2	5	4.9	5	4.5	4	6.1
Thyroid	13	8.0	2	4.6	8	9.0	17	15.3	5	6.9	6	5.8	6	6.7
Pediatric (age 0-19)	9	5.5	2	2.9	8	9.2	16	12.7	5	6.5	5	6.0	6	7.8

+ Statistically significant difference at p=0.05 or less.

* Statistically significant difference at p=0.01 or less.

Note: Observed and expected numbers exclude in-situ cases, basal/squamous skin cases, and cases with unknown age and/or gender.

**2012 OBSERVED VERSUS EXPECTED NUMBERS
BY
HEALTH DISTRICT**

FEMALES

	HD 1		HD 2		HD 3		HD 4		HD 5		HD 6		HD 7	
	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP
All Sites	593	581.6	274	277.9	634	567.5 *	1,013	967.8	421	433.8	333	370.8 +	353	406.5 *
Bladder	9	11.3	7	5.1	9	11.0	25	14.7 +	7	8.2	4	7.0	5	7.4
Brain	5	6.9	3	3.2	5	7.2	10	12.2	8	4.7	7	4.2	5	5.2
Brain & CNS non-Malignant	17	17.8	9	8.5	24	16.6	31	30.7	8	13.9	16	10.9	7	13.4
Breast	194	171.7	71	82.3	184	169.9	323	283.5 +	134	127.3	95	110.2	78	123.1 *
Breast (in-situ)	31	31.1	17	13.8	39	28.8	60	50.4	17	23.0	9	20.2 *	18	21.3
Cervix	5	8.5	8	3.2 +	7	8.6	17	14.2	8	5.7	4	5.4	3	6.3
Colorectal	43	49.0	17	24.2	63	44.1 *	73	81.3	30	36.6	38	29.2	32	32.6
Corpus Uteri	33	38.6	24	16.6	40	34.9	58	63.6	24	27.1	23	22.8	25	24.8
Esophagus	4	1.7	0	1.1	1	2.3	4	3.4	1	1.7	0	1.5	3	1.2
Hodgkin lymphoma	3	1.9	1	1.1	2	2.4	5	4.0	2	1.6	1	1.6	1	2.2
Kidney & renal pelvis	10	14.2	3	6.7	20	12.1 +	22	22.8	13	9.6	9	8.5	7	9.6
Larynx	2	1.4	2	0.6	2	1.3	2	2.6	0	1.2	1	0.9	0	1.1
Leukemia	15	15.6	6	7.5	23	14.5 +	26	26.9	7	12.5	6	10.6	16	10.7
Liver & bile duct	3	4.9	2	2.3	3	4.7	5	8.1	6	3.0	4	2.7	5	2.8
Lung & bronchus	76	72.7	48	34.4 +	85	67.9	127	111.1	50	54.1	27	46.7 *	27	50.0 *
Melanoma of skin	28	28.7	13	13.4	28	29.5	52	51.0	24	21.0	14	18.9	24	20.1
Myeloma	5	6.5	4	2.9	7	5.8	11	8.9	5	4.5	4	3.7	1	4.3
N-H Lymphoma	19	21.5	8	10.5	26	20.3	39	33.8	13	16.2	12	13.6	15	14.6
Oral cavity & pharynx	15	10.4	7	5.3	9	11.4	18	18.5	9	8.2	7	7.0	4	8.1
Ovary	24	17.9	8	9.1	14	19.1	25	33.9	19	13.2	17	11.1	9	13.3
Pancreas	19	15.9	8	8.1	14	16.2	19	28.3	13	11.9	10	10.1	16	10.0
Stomach	2	3.8	2	1.8	2	3.8	4	6.4	4	2.5	3	2.2	5	2.1
Thyroid	22	31.9	5	14.8 *	38	32.4	62	60.2	19	24.6	20	21.5	43	22.7 *
Pediatric (age 0-19)	2	4.6	3	2.0	10	5.7	13	8.6	6	4.3	2	4.5	1	6.5 +

+ Statistically significant difference at p=0.05 or less.

* Statistically significant difference at p=0.01 or less.

Note: Observed and expected numbers exclude in-situ cases, basal/squamous skin cases, and cases with unknown age and/or gender.

SECTION VI

RISKS OF BEING DIAGNOSED WITH AND DYING FROM CANCER

Risks of Being Diagnosed with and Dying from Cancer

All Sites, Invasive in Females

If your current age is:	Then your risk of <u>being diagnosed with cancer</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 67	1 in 21	1 in 9	1 in 5	1 in 3	1 in 2
40		1 in 30	1 in 11	1 in 5	1 in 3	1 in 2
50			1 in 16	1 in 6	1 in 3	1 in 2
60				1 in 8	1 in 4	1 in 2
70					1 in 6	1 in 3
80						1 in 4

If your current age is:	Then your risk of <u>dying from cancer</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 599	1 in 148	1 in 48	1 in 18	1 in 9	1 in 5
40		1 in 196	1 in 51	1 in 19	1 in 9	1 in 5
50			1 in 68	1 in 20	1 in 9	1 in 5
60				1 in 28	1 in 11	1 in 6
70					1 in 15	1 in 6
80						1 in 9

All Sites, Invasive in Males

If your current age is:	Then your risk of <u>being diagnosed with cancer</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 127	1 in 36	1 in 11	1 in 4	1 in 3	1 in 2
40		1 in 49	1 in 12	1 in 4	1 in 3	1 in 2
50			1 in 15	1 in 5	1 in 3	1 in 2
60				1 in 6	1 in 3	1 in 2
70					1 in 4	1 in 2
80						1 in 3

If your current age is:	Then your risk of <u>dying from cancer</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 786	1 in 162	1 in 44	1 in 16	1 in 8	1 in 4
40		1 in 202	1 in 46	1 in 16	1 in 7	1 in 4
50			1 in 58	1 in 17	1 in 8	1 in 4
60				1 in 23	1 in 8	1 in 4
70					1 in 11	1 in 5
80						1 in 6

Risks of Being Diagnosed with and Dying from Cancer

Female Breast Cancer

If your current age is:	Then your risk of <u>being diagnosed with breast cancer</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 278	1 in 62	1 in 27	1 in 14	1 in 10	1 in 8
40		1 in 78	1 in 29	1 in 15	1 in 10	1 in 8
50			1 in 46	1 in 18	1 in 11	1 in 8
60				1 in 28	1 in 14	1 in 10
70					1 in 24	1 in 13
80						1 in 23

If your current age is:	Then your risk of <u>dying from breast cancer</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 2471	1 in 595	1 in 206	1 in 98	1 in 58	1 in 38
40		1 in 776	1 in 223	1 in 102	1 in 59	1 in 38
50			1 in 307	1 in 115	1 in 62	1 in 39
60				1 in 176	1 in 75	1 in 43
70					1 in 120	1 in 52
80						1 in 71

Prostate Cancer

If your current age is:	Then your risk of <u>being diagnosed with prostate cancer</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 16412	1 in 349	1 in 45	1 in 13	1 in 8	1 in 6
40		1 in 351	1 in 44	1 in 13	1 in 7	1 in 6
50			1 in 49	1 in 13	1 in 7	1 in 6
60				1 in 16	1 in 8	1 in 6
70					1 in 13	1 in 8
80						1 in 15

If your current age is:	Then your risk of <u>dying from prostate cancer</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in *	1 in 23801	1 in 1685	1 in 326	1 in 84	1 in 31
40		1 in 23451	1 in 1660	1 in 321	1 in 83	1 in 30
50			1 in 1733	1 in 316	1 in 81	1 in 29
60				1 in 362	1 in 80	1 in 28
70					1 in 89	1 in 26
80						1 in 26

Note: * Risk is not precise - estimate not shown.

Risks of Being Diagnosed with and Dying from Cancer

Colon/Rectal Cancer in Females

If your current age is:	Then your risk of <u>being diagnosed with colorectal cancer</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 1560	1 in 369	1 in 140	1 in 68	1 in 38	1 in 23
40		1 in 479	1 in 153	1 in 71	1 in 39	1 in 23
50			1 in 220	1 in 81	1 in 41	1 in 24
60				1 in 123	1 in 48	1 in 26
70					1 in 72	1 in 30
80						1 in 39

If your current age is:	Then your risk of <u>dying from colorectal cancer</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 6129	1 in 1294	1 in 522	1 in 236	1 in 116	1 in 59
40		1 in 1626	1 in 565	1 in 244	1 in 117	1 in 59
50			1 in 849	1 in 281	1 in 124	1 in 60
60				1 in 404	1 in 139	1 in 62
70					1 in 192	1 in 66
80						1 in 78

Colon/Rectal Cancer in Males

If your current age is:	Then your risk of <u>being diagnosed with colorectal cancer</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 1926	1 in 392	1 in 125	1 in 53	1 in 30	1 in 22
40		1 in 484	1 in 131	1 in 54	1 in 30	1 in 22
50			1 in 175	1 in 58	1 in 30	1 in 22
60				1 in 82	1 in 34	1 in 23
70					1 in 51	1 in 28
80						1 in 43

If your current age is:	Then your risk of <u>dying from colorectal cancer</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 7515	1 in 1621	1 in 468	1 in 177	1 in 86	1 in 53
40		1 in 2036	1 in 492	1 in 179	1 in 86	1 in 53
50			1 in 629	1 in 190	1 in 87	1 in 52
60				1 in 256	1 in 94	1 in 54
70					1 in 130	1 in 59
80						1 in 75

Risks of Being Diagnosed with and Dying from Cancer

Melanoma in Females

If your current age is:	Then your risk of <u>being diagnosed with melanoma</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 589	1 in 231	1 in 131	1 in 87	1 in 66	1 in 53
40		1 in 377	1 in 167	1 in 100	1 in 73	1 in 58
50			1 in 294	1 in 134	1 in 89	1 in 67
60				1 in 236	1 in 123	1 in 83
70					1 in 231	1 in 116
80						1 in 178

If your current age is:	Then your risk of <u>dying from melanoma</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 7173	1 in 3272	1 in 1490	1 in 921	1 in 600	1 in 382
40		1 in 5962	1 in 1864	1 in 1047	1 in 649	1 in 400
50			1 in 2660	1 in 1246	1 in 714	1 in 420
60				1 in 2253	1 in 939	1 in 479
70					1 in 1463	1 in 553
80						1 in 685

Melanoma in Males

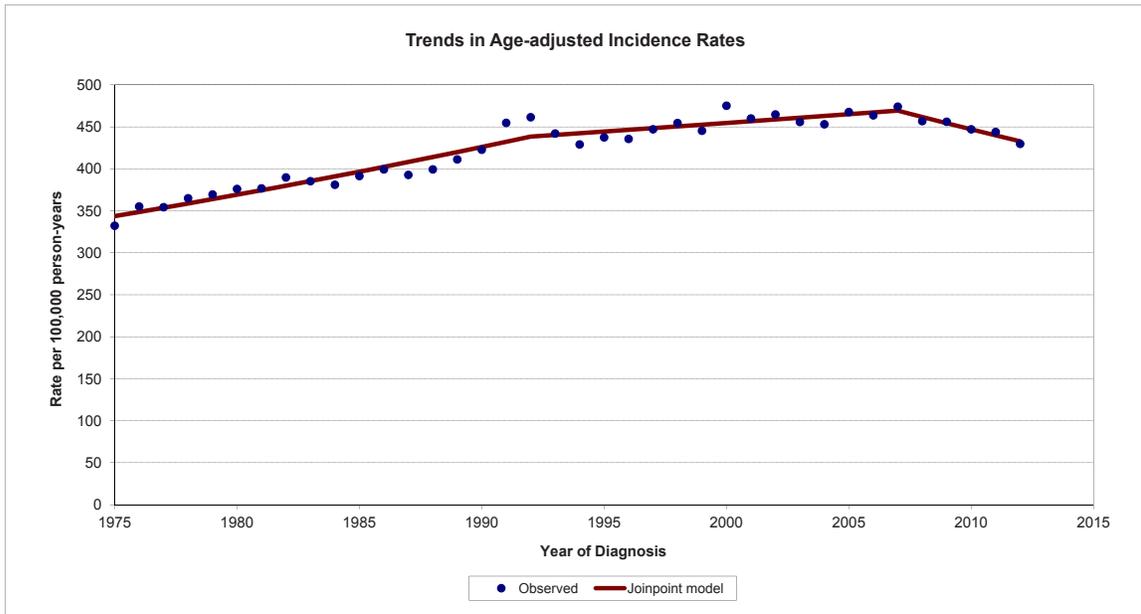
If your current age is:	Then your risk of <u>being diagnosed with melanoma</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 715	1 in 295	1 in 134	1 in 66	1 in 41	1 in 32
40		1 in 494	1 in 162	1 in 71	1 in 43	1 in 33
50			1 in 234	1 in 81	1 in 46	1 in 34
60				1 in 115	1 in 53	1 in 37
70					1 in 86	1 in 47
80						1 in 74

If your current age is:	Then your risk of <u>dying from melanoma</u> by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 8138	1 in 2444	1 in 1135	1 in 482	1 in 274	1 in 185
40		1 in 3442	1 in 1300	1 in 505	1 in 279	1 in 186
50			1 in 2025	1 in 573	1 in 295	1 in 191
60				1 in 750	1 in 323	1 in 198
70					1 in 494	1 in 233
80						1 in 310

SECTION VII

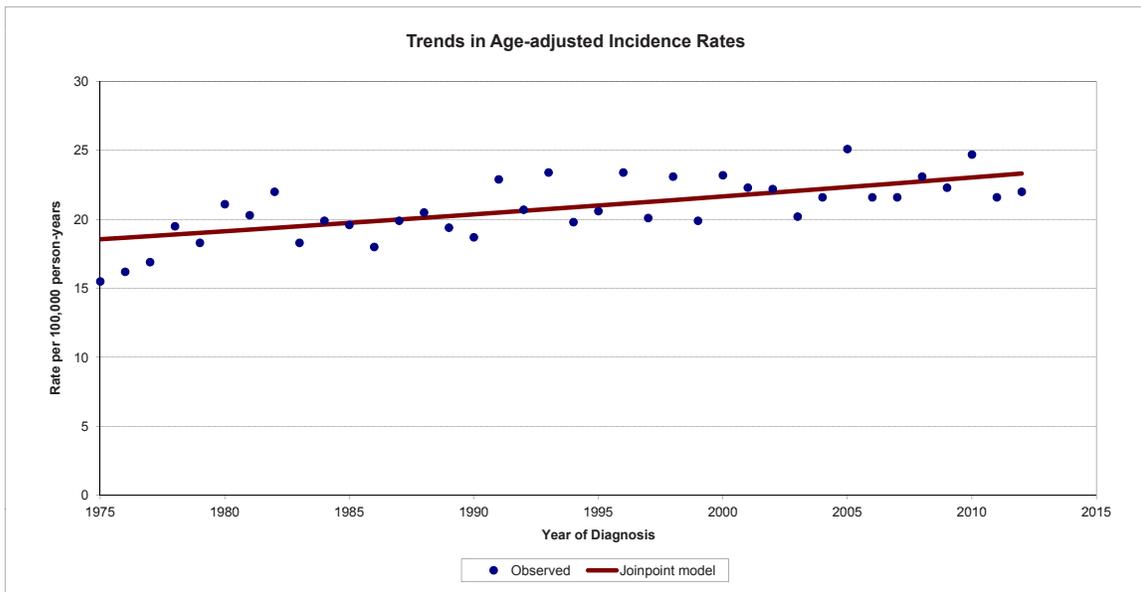
CANCER TRENDS IN IDAHO 1975-2012

All Sites



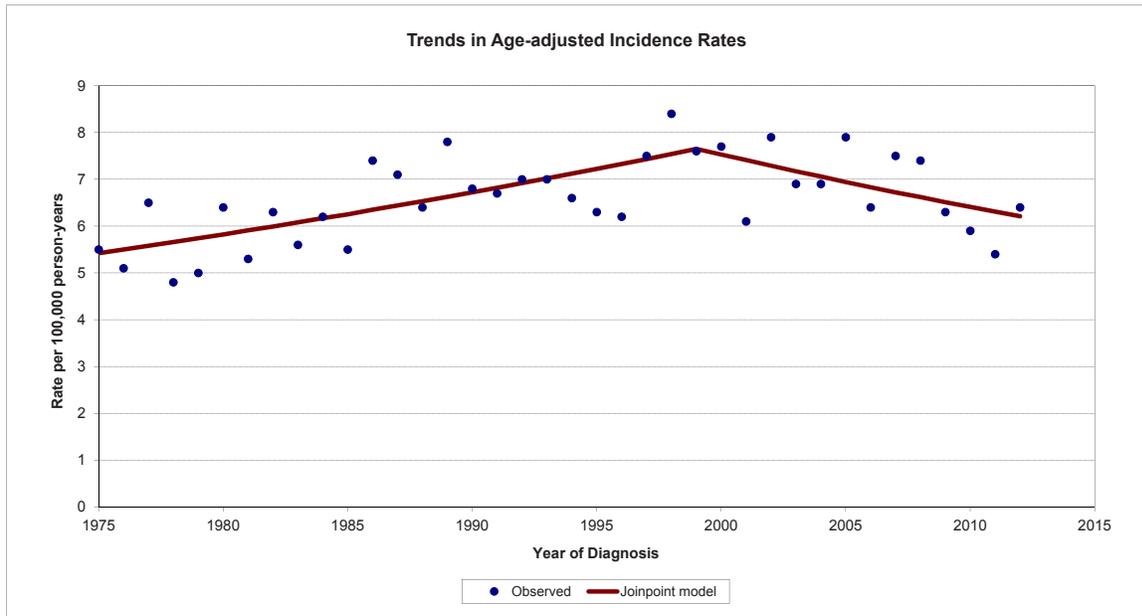
Cancer incidence increased at a rate of about 1.4% per year in Idaho from 1975 to 1992, and at a rate of about 0.5% per year from 1992 to 2007. Since 2007, overall cancer incidence has declined about 1.6% per year. Cancer incidence trends over time were different for males and females. For males, much of the overall trend is due to the trend in prostate cancer incidence. For females, much of the overall trend is due to the trend in breast cancer incidence.

Bladder



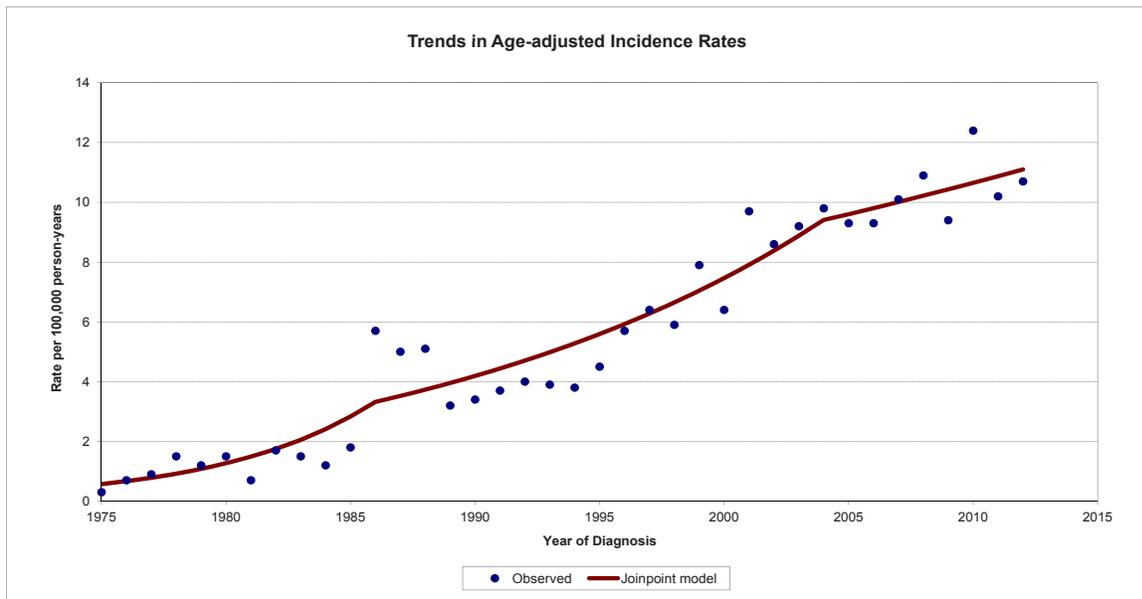
Bladder cancer incidence includes in-situ and invasive cases. Bladder cancer incidence increased at a rate of about 0.6% per year in Idaho from 1975 to 2012. Most of the increase in bladder cancer incidence is attributable to males, who have rates of bladder cancer incidence about 4-5 times those of females.

Brain



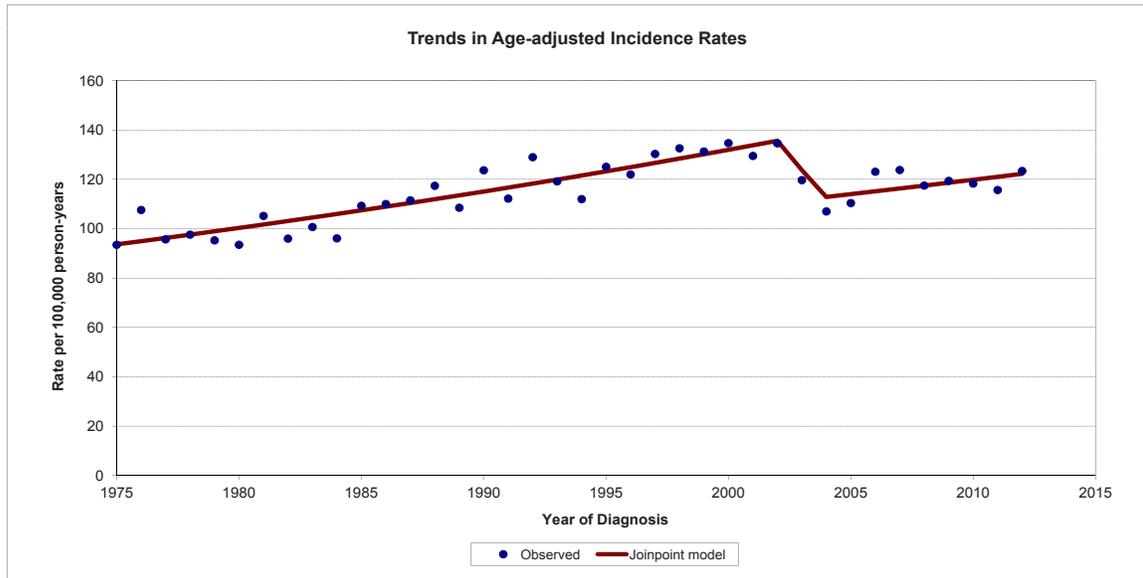
Malignant brain cancer incidence increased at a rate of about 1.5% per year in Idaho from 1975 to 1999, after which the rate has declined about 1.6% per year. Among males, malignant brain cancer incidence rates followed the same pattern. Among females, the rate has been stable 1975 to present.

Brain and Other CNS, Non-Malignant



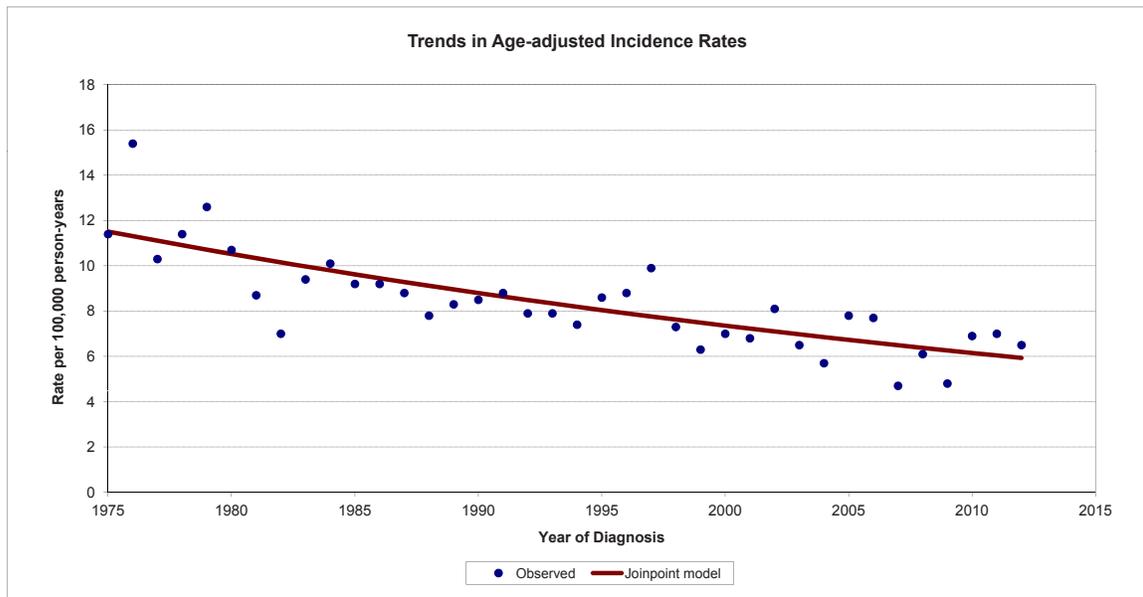
Non-malignant brain and other central nervous system tumors include those with benign and borderline behavior. Non-malignant brain and other CNS tumor incidence increased at a rate of about 17.4% per year in Idaho from 1975 to 1986, then increased by about 5.9% until 2004, after which the rate has been generally stable.

Breast Female



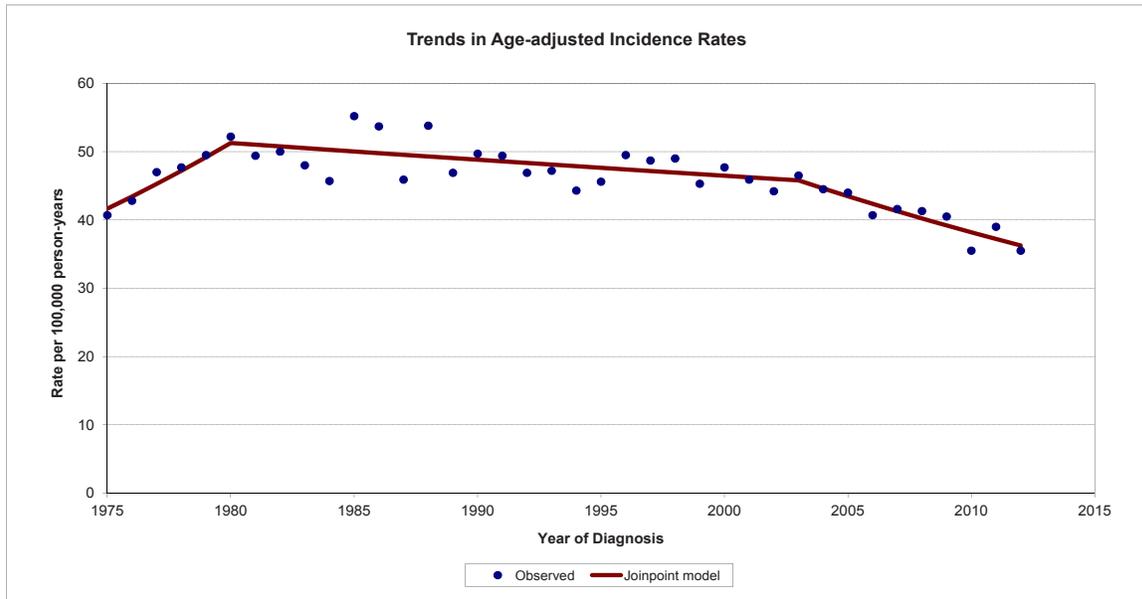
Invasive breast cancer incidence increased at a rate of about 1.4% per year among female Idahoans from 1975 to 2002. From 2002 to 2005, the rate decreased sharply by almost 9% per year. This decrease may be due in part to a decrease in the use of hormone replacement therapy. Since 2004, the invasive breast cancer incidence rate has increased about 1% per year. In-situ breast cancer rates increased at a rate of about 12.9% per year from 1975 to 1992, after which the rate of increase slowed to about 1.2% per year (data not shown).

Cervix



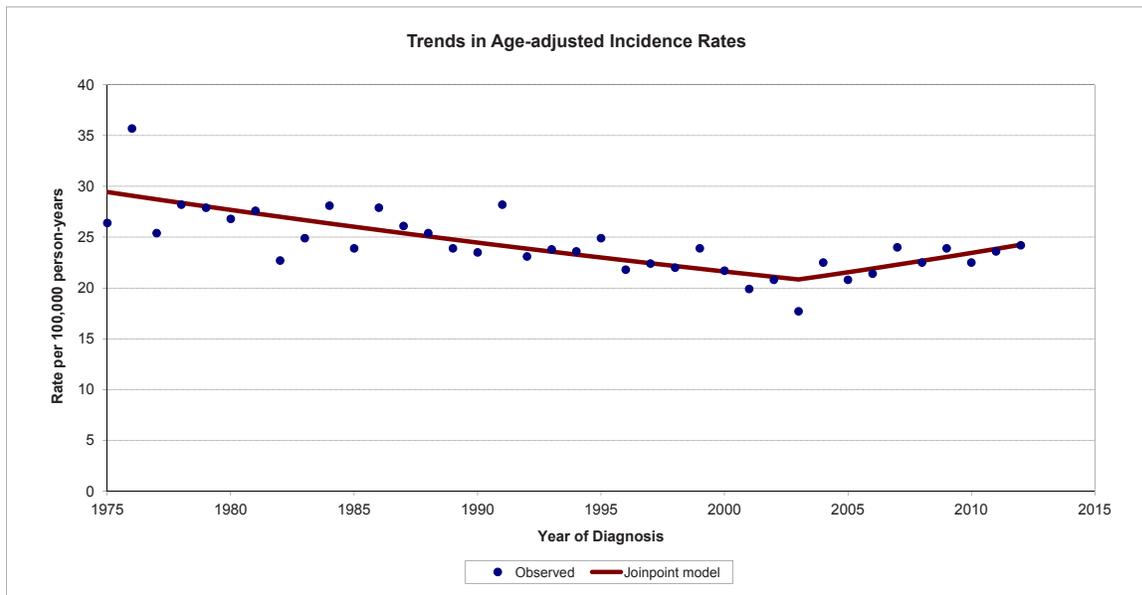
Invasive cervical cancer incidence has decreased about 1.8% per year in Idaho from 1975 to 2012.

Colorectal



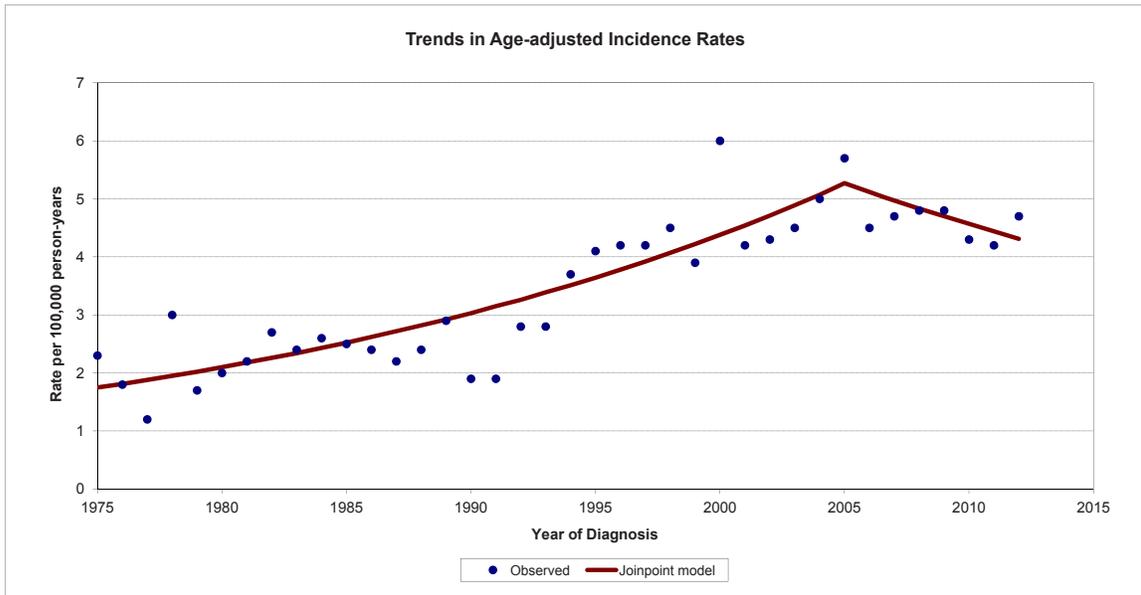
Colorectal cancer incidence increased at a rate of about 4.3% per year in Idaho from 1975 to 1980. From 1980 to 2003, the rate decreased about 0.5% per year, and then the rate decreased about 2.6% per year from 2004 to 2012. Colorectal cancer incidence trends over time were different for males and females. For males, rates increased from 1975 to 1988, then decreased. For females, rates decreased across the entire time series.

Corpus Uteri



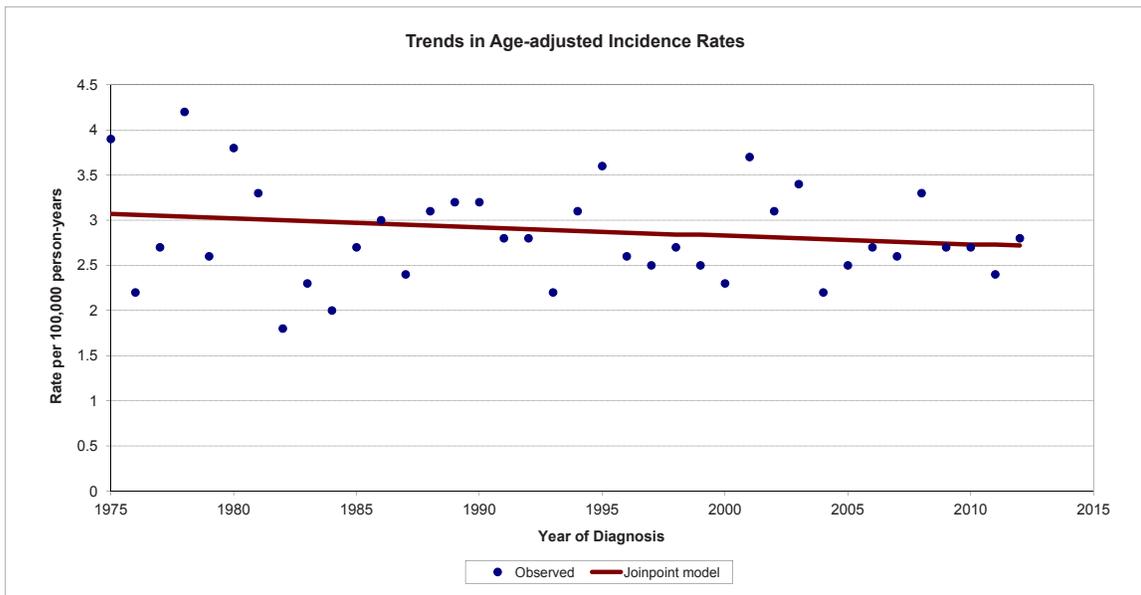
Corpus uteri cancer incidence rates decreased about 1.2% per year in Idaho from 1975 to 2003, and have increased by 1.7% per year since 2003.

Esophagus



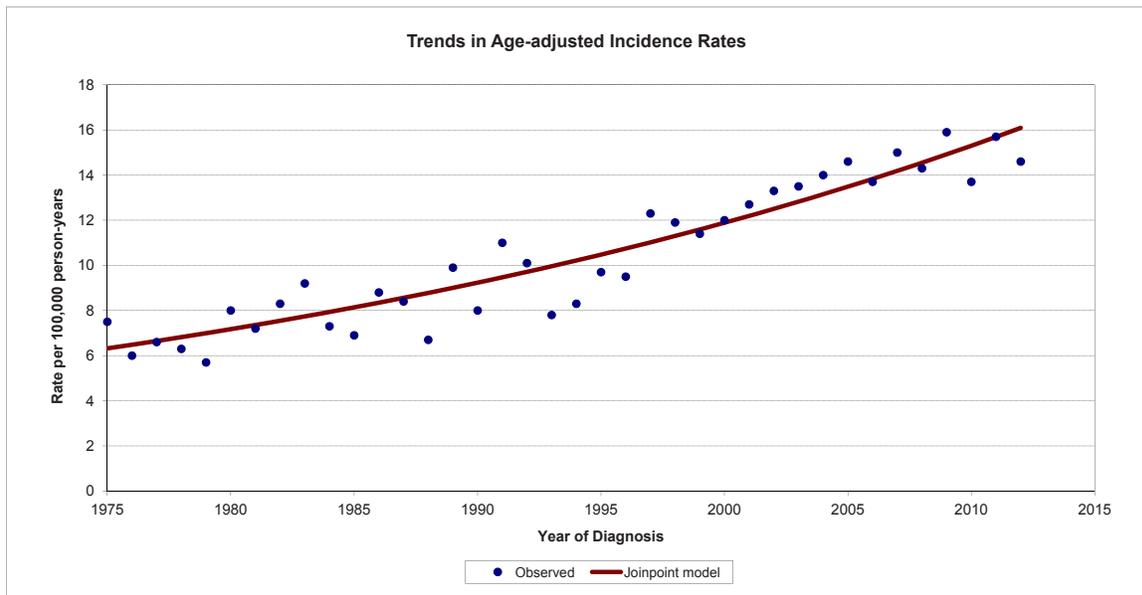
Esophageal cancer incidence increased at a rate of about 3.8% per year in Idaho from 1975 to 2005. From 2005 to 2012, the rate decreased about 2.8% per year. Rates of esophageal cancers among males were about 3-4 times higher than those among females.

Hodgkin Lymphoma



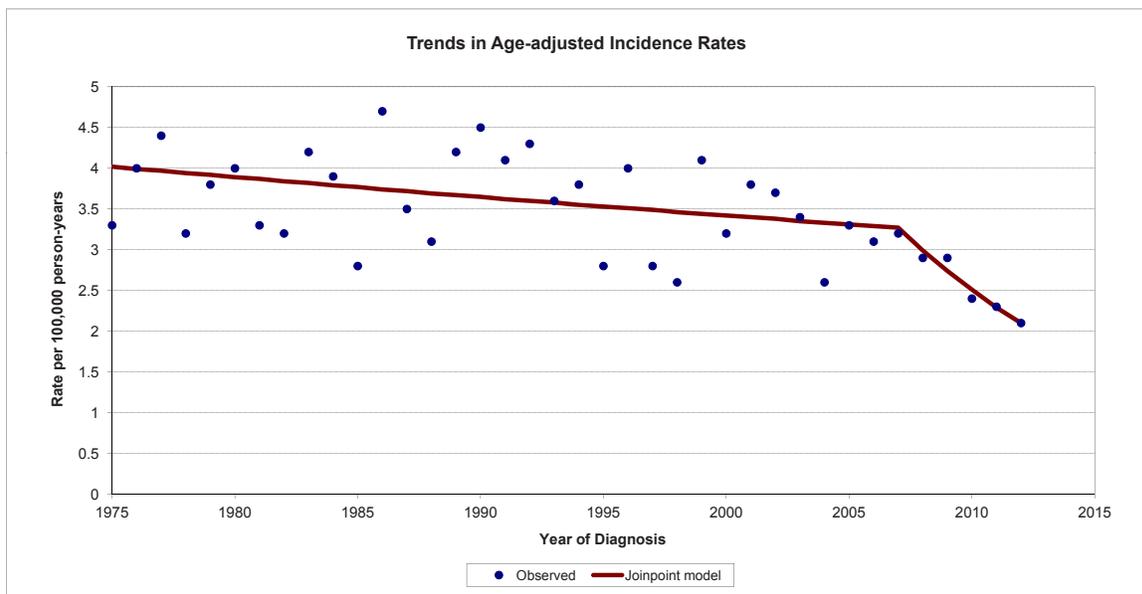
There was no statistically significant trend in Hodgkin lymphoma incidence in Idaho from 1975 to 2012; rates were stable but showed year-to-year variability due to the relatively small numbers of cases diagnosed annually.

Kidney and Renal Pelvis



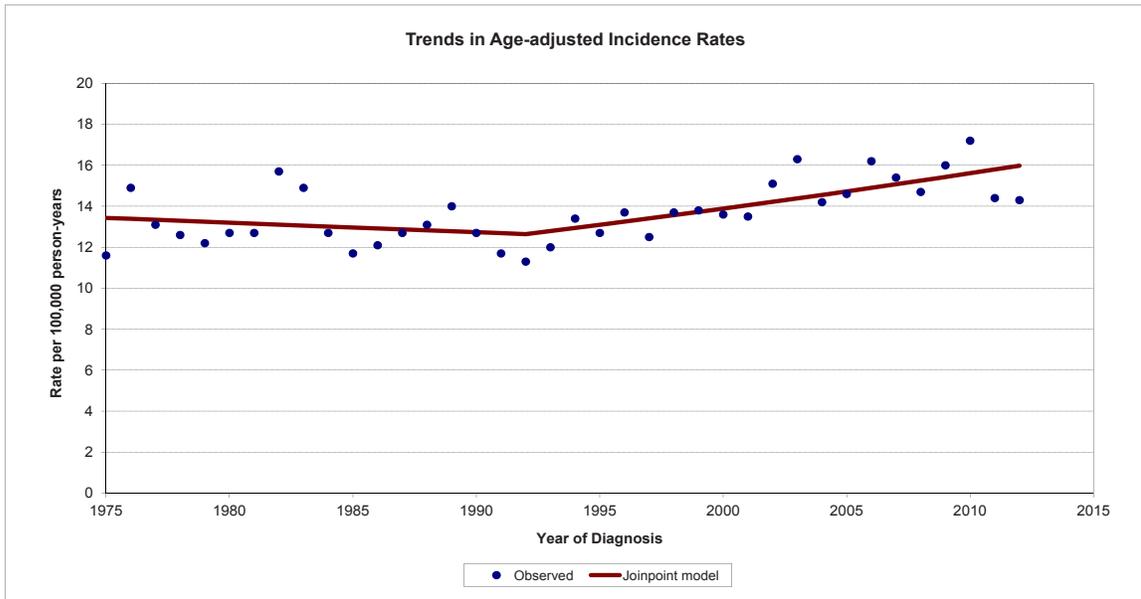
Kidney and renal pelvis cancer incidence increased at a rate of about 2.6% per year in Idaho from 1975 to 2012. The rate of increase was similar for males and females, although rates of kidney and renal pelvis cancers among males were about twice as high as among females.

Larynx



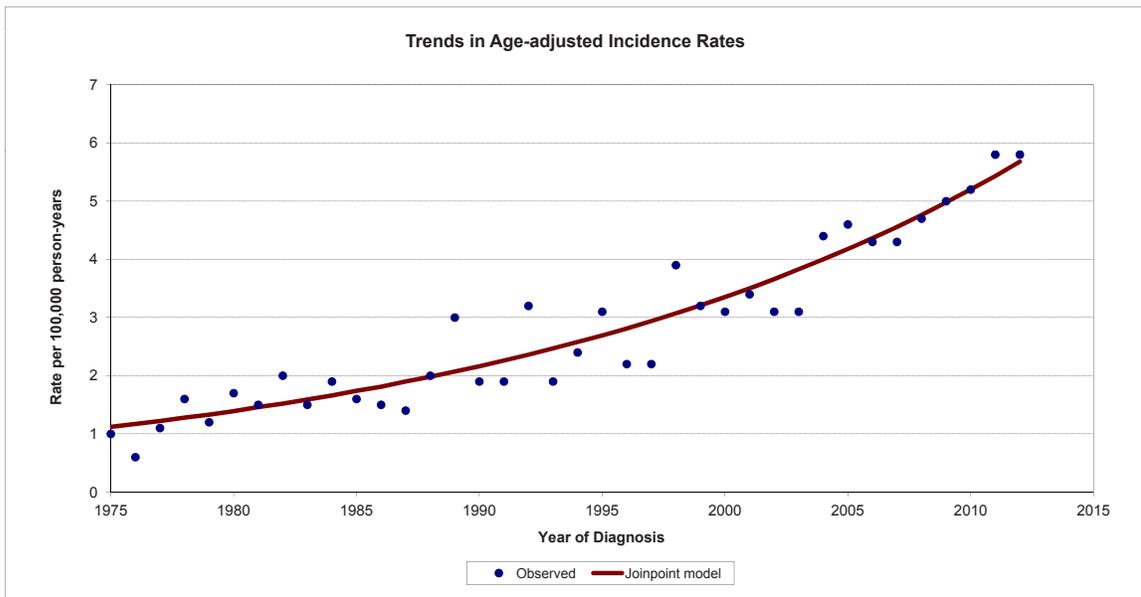
Laryngeal cancer incidence decreased about 0.6% per year in Idaho from 1975 to 2007, and decreased about 8.5% per year since 2007. Rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually. The temporal pattern was similar for males. Among females, incidence rates of laryngeal cancer decreased about 1% per year from 1975 to 2012. Incidence rates of laryngeal cancers among males were about 4 times as high as among females.

Leukemia



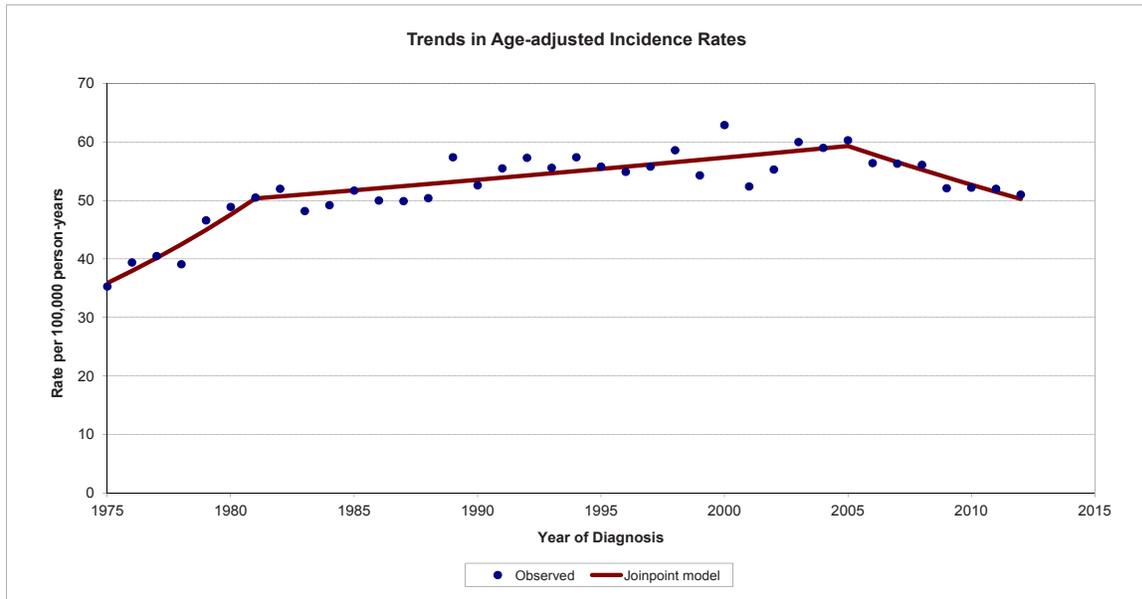
Leukemia incidence was generally stable from 1975 to 1992, and has increased about 1.2% per year since 1992. Rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually.

Liver and Bile Duct



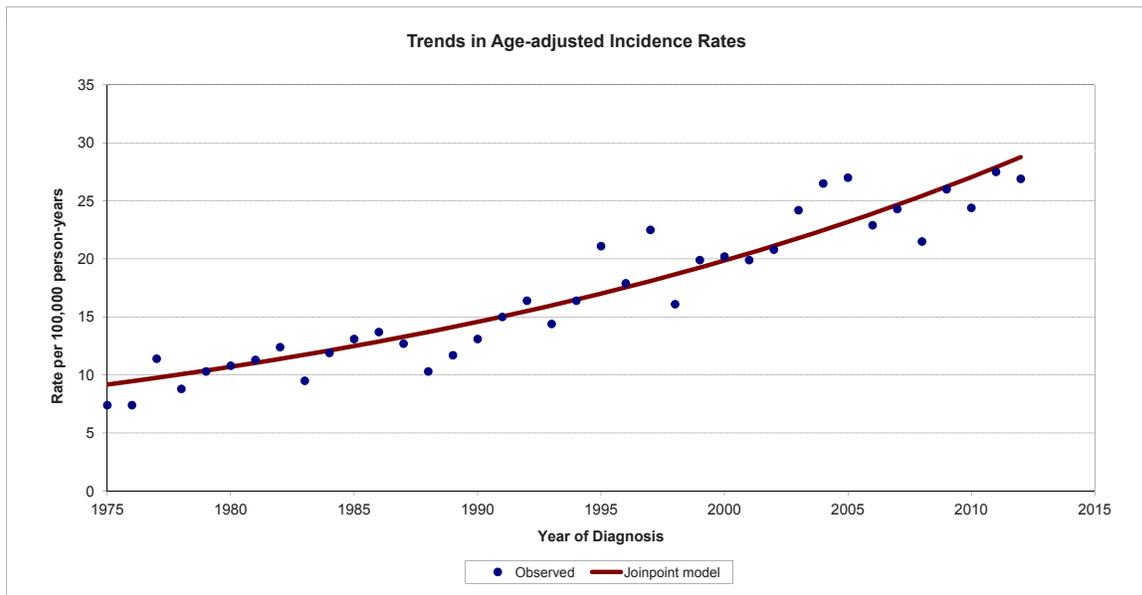
Liver cancer incidence increased at a rate of about 4.5% per year in Idaho from 1975 to 2012. The rate of increase was higher for males (5.3% per year) than for females (2.9% per year), and rates of liver cancers among males were about twice as high as among females.

Lung and Bronchus



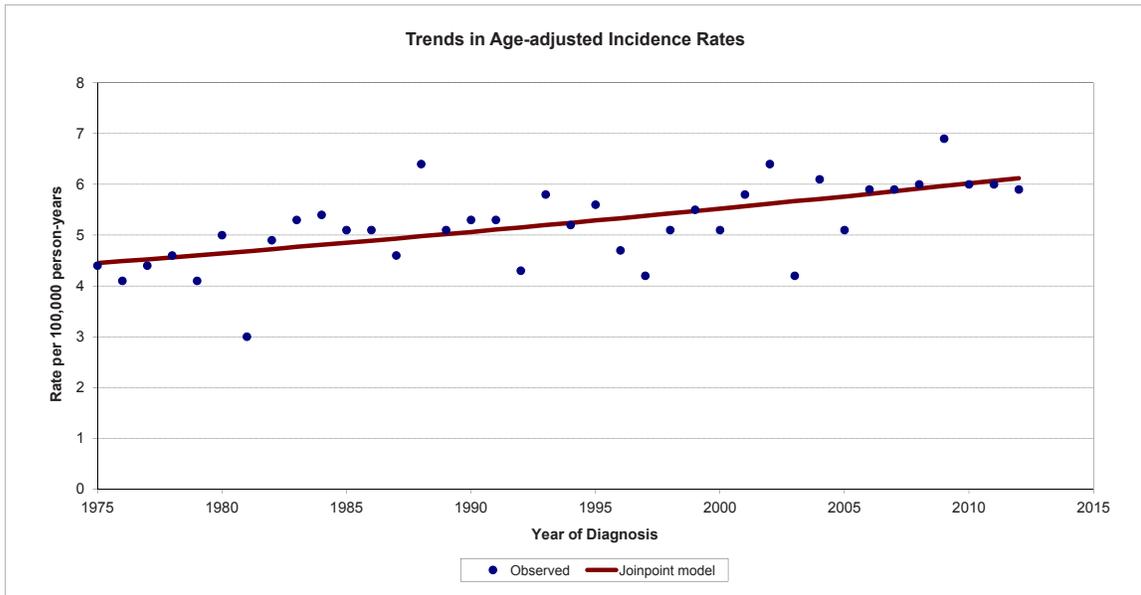
Lung cancer incidence increased at a rate of about 5.8% per year in Idaho from 1975 to 1981, after which the rate of increase lessened to about 0.7% per year until 2005. From 2005 to 2012, the rate has decreased about 2.3% per year. Lung cancer incidence trends over time were different for males and females. For males, lung cancer incidence increased at a rate of about 5.9% per year from 1975 to 1980, and then decreased by about 0.4% per year until 2005, after which it has decreased by about 3.7% per year. For females, lung cancer incidence increased at a rate of about 5.8% per year from 1975 to 1989, after which the rate of increase lessened to about 1.7% per year until 2005. From 2006 to 2012, there has been no statistically significant trend in lung cancer incidence among females. Historically, lung cancer incidence rates have been two or more times higher among males as among females, but the gap is continuing to narrow, reflecting long-term trends in smoking prevalence.

Melanoma



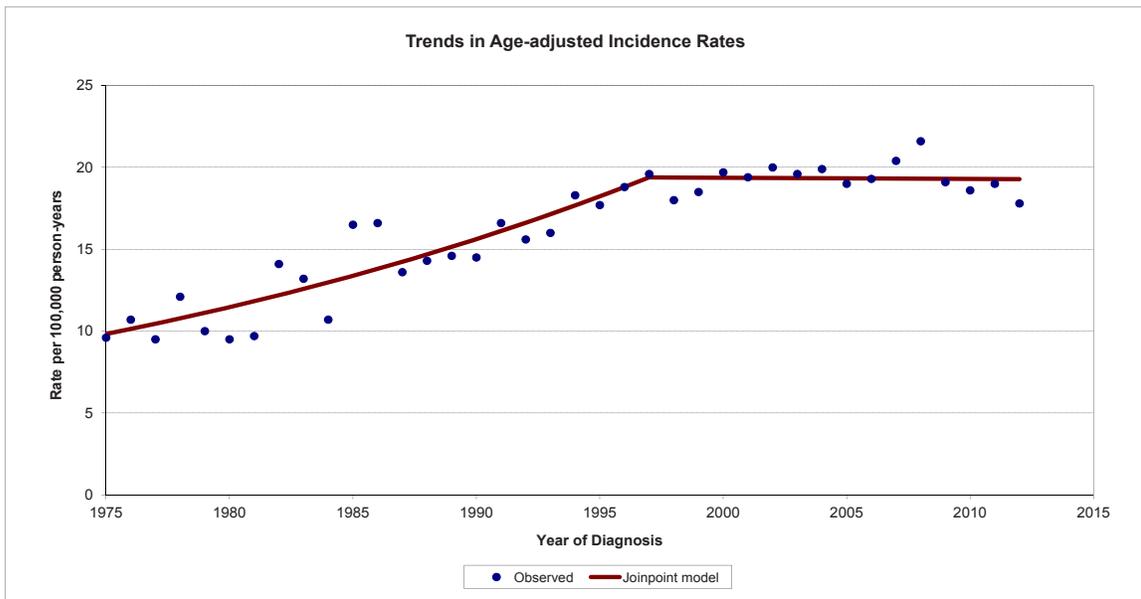
The incidence of melanoma of the skin increased at a rate of about 3.1% per year in Idaho from 1975 to 2012. The rate of increase has been higher for males (3.6% per year) than for females (2.5% per year). The incidence of in-situ melanoma of the skin increased at a higher rate (7.5% per year from 1980 to 2012) than for the invasive cases depicted in the graph.

Myeloma



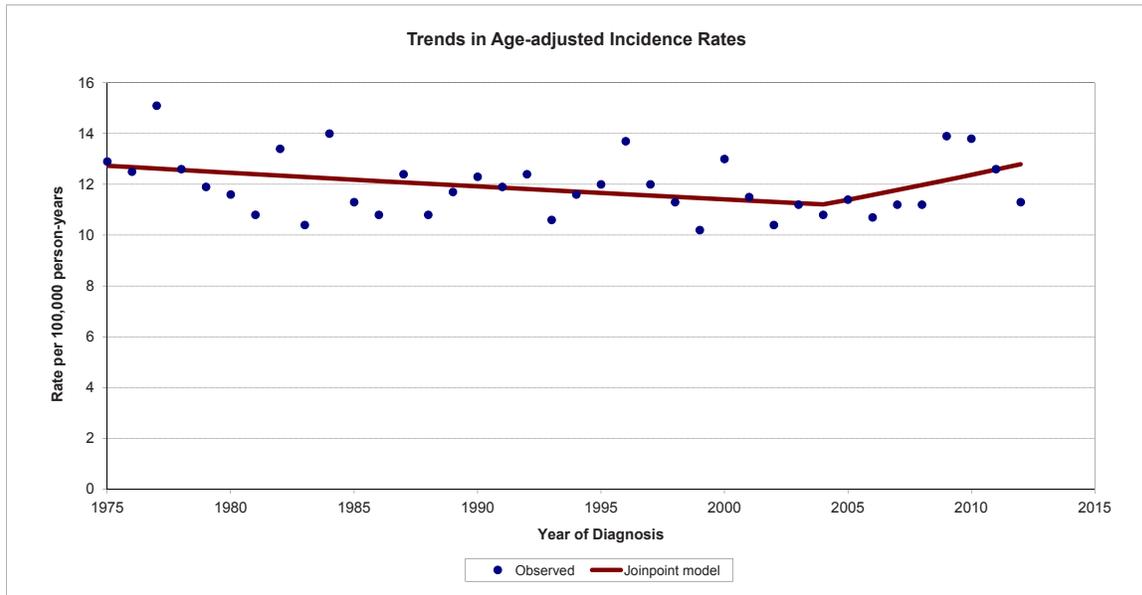
The incidence of myeloma increased at a rate of about 0.9% per year in Idaho from 1975 to 2012. The rate of increase was higher for males (1.4% per year) than for females (no significant trend), and rates of myeloma incidence among males were higher than among females.

Non-Hodgkin Lymphoma



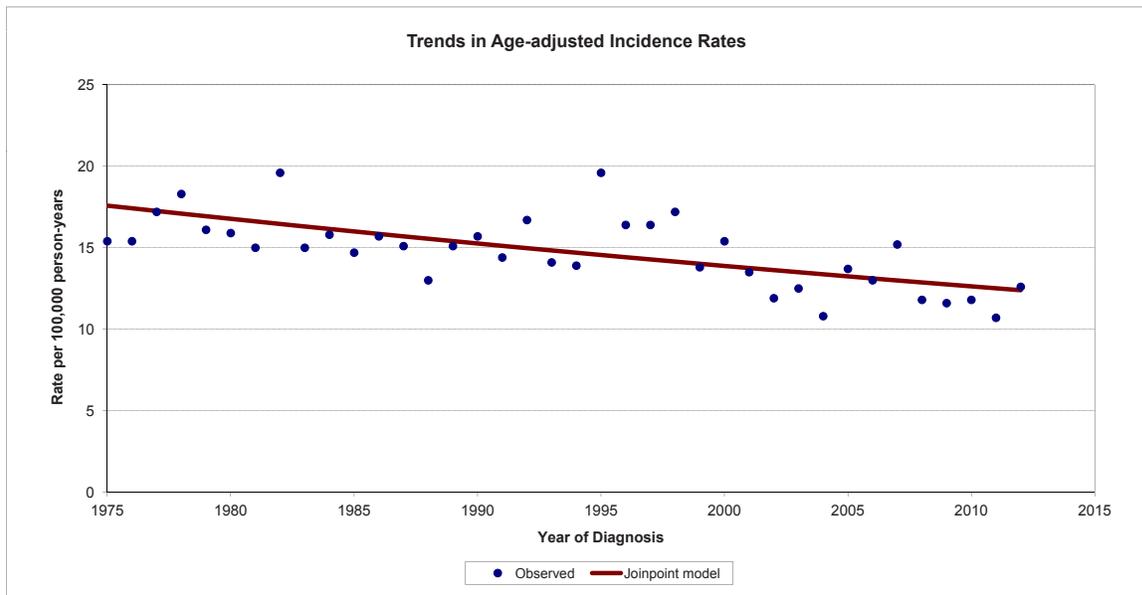
The incidence of non-Hodgkin lymphoma increased at a rate of about 3.1% per year in Idaho from 1975 to 1997, after which there has been no significant trend. Non-Hodgkin lymphoma incidence trends over time were similar for males and females, but rates of non-Hodgkin lymphoma incidence among males were higher than among females.

Oral Cavity and Pharynx



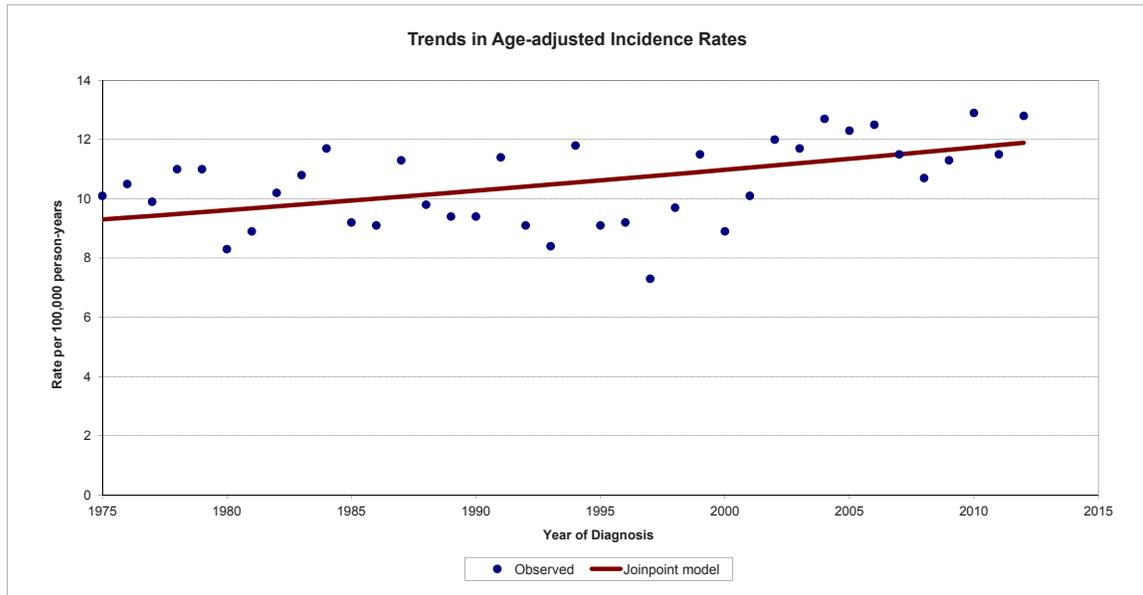
The incidence of cancers of the oral cavity and pharynx decreased at a rate of about 0.4% per year in Idaho from 1975 to 2004, and has since increased about 1.7% per year. Among males, the rate of decrease was about 0.5% per year for the entire time period. Among females, incidence of cancers of the oral cavity and pharynx increased at a rate of about 0.7% per year 1975 to 2012. Rates of cancers of the oral cavity and pharynx were about 3 times higher among males than among females. This latter result likely reflects differences in long-term prevalence trends for tobacco use and alcohol consumption between males and females.

Ovary



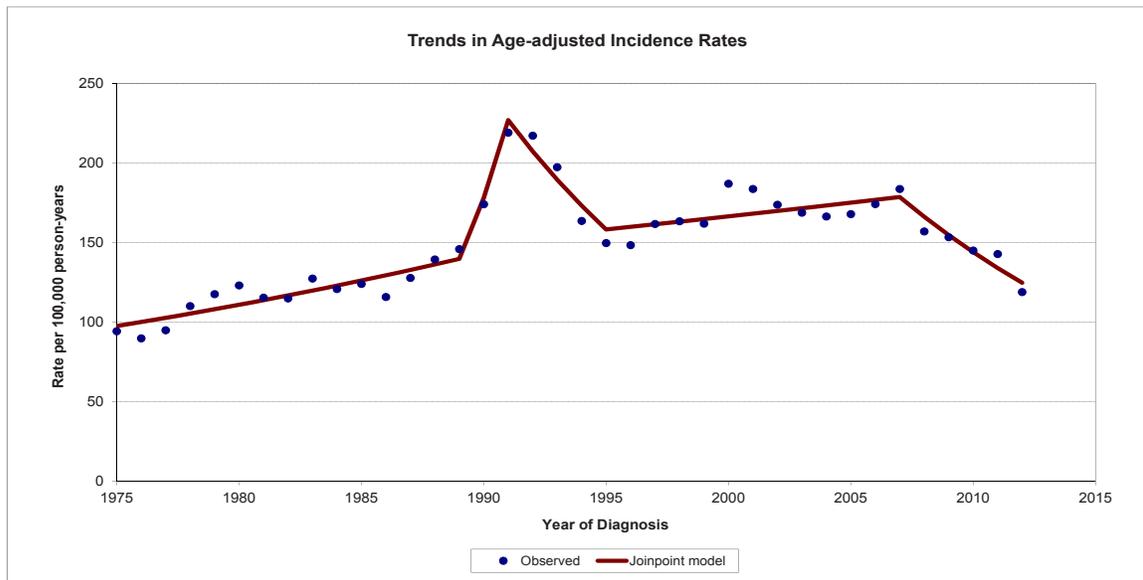
The incidence of ovarian cancer among females in Idaho decreased about 0.9% per year from 1975 to 2012. Part of the decrease in ovarian cancer incidence rates may have been due to a decrease in the use of hormone replacement therapy.

Pancreas



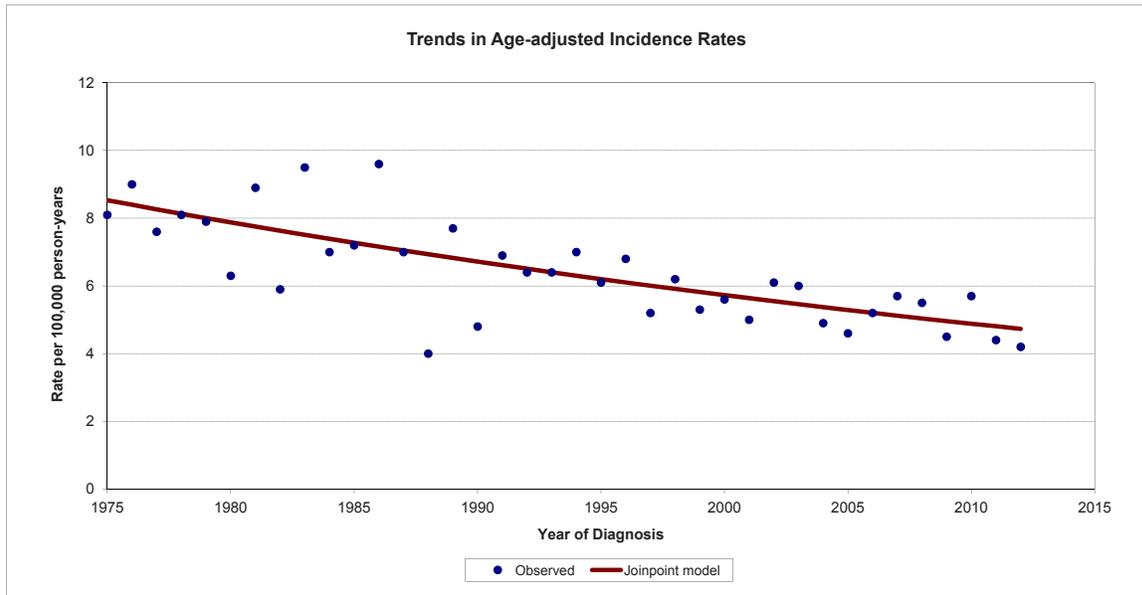
Pancreas cancer incidence increase at a rate of about 0.67 per year in Idaho from 1975 to 2012; rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually. The rate of increase was higher for females (1.2% per year) than for males (no significant trend), and rates of pancreas cancer incidence among males were higher than among females.

Prostate



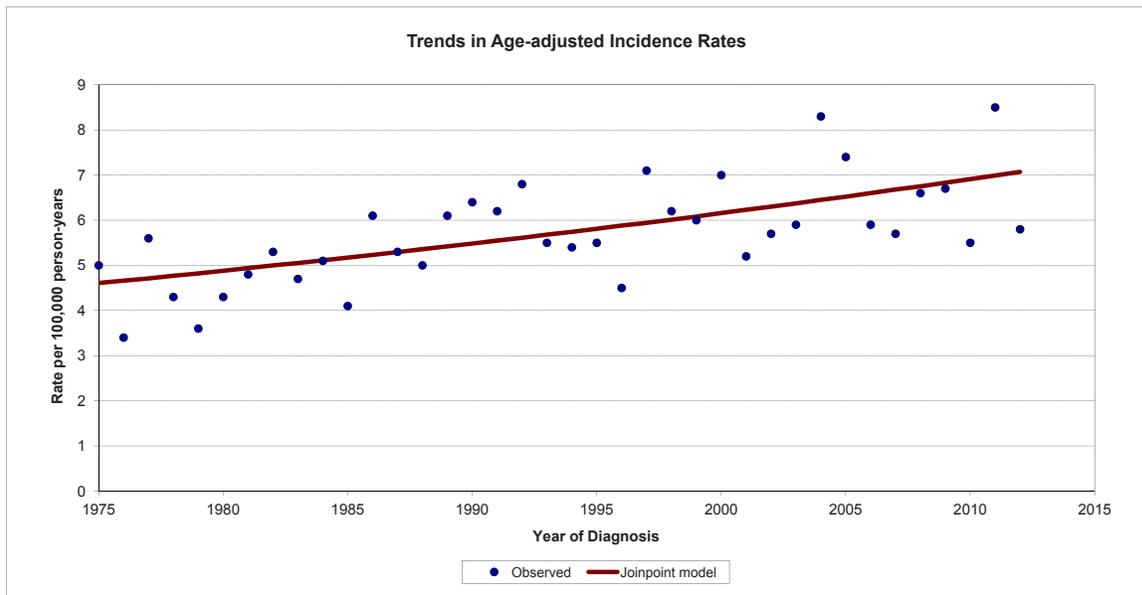
Trends in prostate cancer incidence are complicated, owing to the adoption of the Prostate-Specific Antigen (PSA) screening test in the late 1980s and early 1990s. From 1975 to 1989, prostate cancer incidence increased in Idaho at a rate of about 2.6% per year. From 1989 to 1991, prostate cancer incidence increased at a rate of about 27.5% per year. For the period 1991 to 1995, prostate cancer incidence rates decreased by about 8.6% per year. From 1995 to 2007, the rates increased about 1.0% per year, and since 2007, the rate has decreased about 6.9% per year. Overall, there was an increasing trend in prostate cancer incidence from 1975 to 2007 punctuated by a large increase and concomitant decrease associated with widespread adoption of the PSA test, which likely detected many indolent cases. The United States Preventive Service Task Force recommends against PSA-based screening for prostate cancer in all age groups.

Stomach



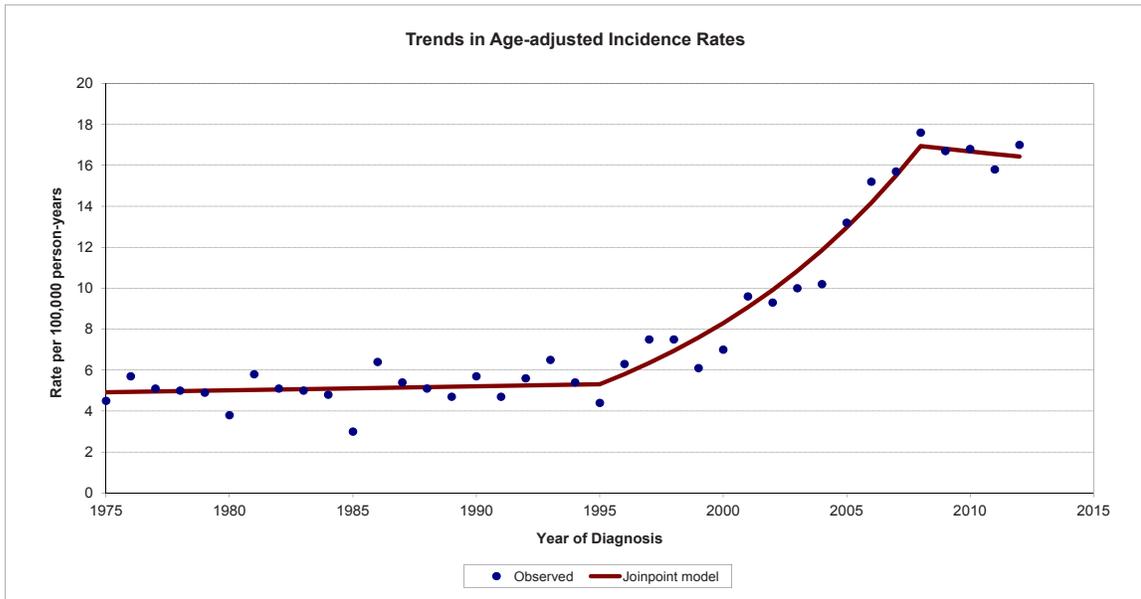
Stomach cancer incidence decreased at a rate of about 1.6% per year in Idaho from 1975 to 2012. Stomach cancer incidence trends over time were similar for males and females although stomach cancer incidence rates among males were about twice as high as among females.

Testis



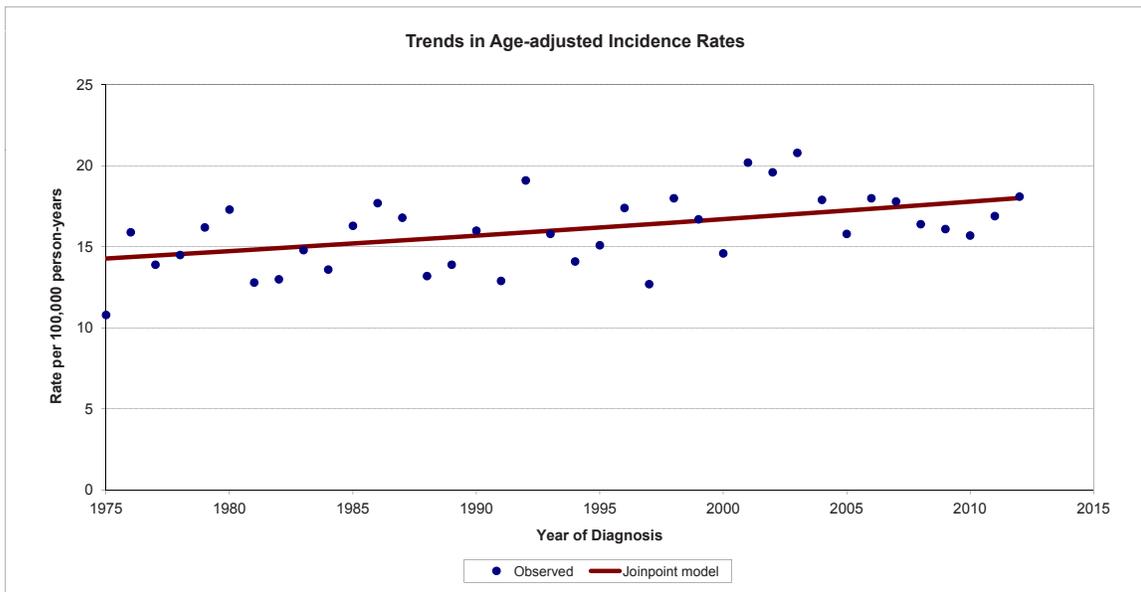
Testis cancer incidence increased at a rate of about 1.7% per year in Idaho from 1975 to 2012.

Thyroid



Thyroid cancer incidence was essentially stable in Idaho from 1975 to 1995. From 1995-2008, thyroid cancer incidence increased at a rate of about 9.3% per year, and thyroid cancer incidence has been stable since 2008. Thyroid cancer incidence trends over time were different for males and females. For males, thyroid cancer incidence increased at a rate of about 4.3% per year from 1975 to 2012. Among females, the trend was similar to both sexes combined. Historically, thyroid cancer incidence rates have been about 3 times higher among females as among males.

Pediatric (age 0 to 19) Cancer



Pediatric cancer incidence increased at a rate of about 0.6% per year in Idaho from 1975 to 2012. Pediatric cancer incidence trends over time were similar for males and females although pediatric cancer incidence rates among males were slightly higher than among females. For more detailed information on pediatric cancer in Idaho, see: <http://www.idcancer.org/specialreports.html>.

SECTION VIII

CANCER INCIDENCE BY RACE AND ETHNICITY 2008-2012

Idaho Cancer Incidence Rates by Race and Ethnicity, 2008 - 2012

Primary Site	All Races (includes Hispanic)		White Non-Hispanic		Hispanic (any race)		Black		American Indian/Alaska Native		Asian or Pacific Islander	
	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases
All Sites	455.2	36,858	456.0	34,289	359.1	1,287	384.2	111	364.6	346	290.8	264
Bladder	22.7	1,806	22.8	1,711	17.0	41	^	^	^	^	^	^
Brain - malignant	6.3	502	6.6	468	5.3	26	^	^	^	^	^	^
Brain and other CNS - non-malignant	10.7	840	10.7	769	9.3	42	^	^	^	^	^	^
Breast	118.9	4,988	120.9	4,694	79.8	153	103.4	13	87.6	47	85.5	51
Breast - in situ	24.9	1,043	25.1	967	20.4	41	^	^	^	^	27.5	16
Cervix	6.3	236	6.1	205	6.2	21	^	^	^	^	^	^
Colorectal	38.2	3,074	37.7	2,840	31.6	105	35.7	10	47.5	43	32.9	30
Corpus Uteri	23.3	1,022	23.1	937	19.4	43	^	^	19.6	13	18.8	11
Esophagus	4.6	376	4.7	360	^	^	^	^	^	^	^	^
Hodgkin Lymphoma	2.8	214	2.9	191	2.4	17	^	^	^	^	^	^
Kidney and Renal Pelvis	14.8	1,211	14.5	1,100	18.6	68	^	^	19.4	19	^	^
Larynx	2.5	208	2.5	198	^	^	^	^	^	^	^	^
Leukemia	15.4	1,229	15.4	1,133	9.9	59	^	^	11.5	14	10.9	10
Liver and Bile Duct	5.3	459	4.8	384	12.8	43	^	^	14.7	16	9.3	10
Lung and Bronchus	52.6	4,222	53.4	4,046	35.2	93	45.3	12	53.5	40	38.1	28
Melanoma of the Skin	25.3	2,025	27.0	1,975	10.2	35	^	^	10.2	10	^	^
Myeloma	6.2	492	5.9	444	8.4	27	^	^	^	^	^	^
Non-Hodgkin Lymphoma	19.2	1,542	19.3	1,441	19.0	63	^	^	14.9	12	10.9	11
Oral Cavity and Pharynx	12.6	1,030	12.7	969	9.9	28	^	^	^	^	^	^
Ovary	11.7	498	12.0	474	5.6	13	^	^	^	^	^	^
Pancreas	11.9	959	11.9	908	12.5	35	^	^	^	^	^	^
Prostate	142.7	5,736	138.2	5,220	105.4	155	121.5	23	101.1	45	54.4	19
Stomach	4.9	388	4.6	340	7.0	20	^	^	^	^	14.2	12
Testis	6.6	245	6.9	213	4.0	22	^	^	^	^	^	^
Thyroid	16.7	1,284	17.4	1,171	12.2	74	^	^	7.8	10	9.8	10
Pediatric Age 0 to 19	16.8	399	17.4	324	15.5	63	^	^	^	^	^	^

Notes:

Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) standard.
 Rates and case counts include all invasive and bladder in situ cases. Statistics for non-malignant brain and other CNS, and breast in-situ categories are not included in the all sites totals.
 Rates and case counts for cancers of the breast, cervix, corpus uteri, and ovary are for females only, and rates and case counts for cancers of the prostate and testis are for males only.
 Statistics for Black, American Indian/Alaska Native, and Asian or Pacific Islander include non-Hispanic and Hispanic ethnicity.
 ^ Statistic not displayed due to fewer than 10 cases.

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APPENDICES

APPENDIX A

2000 U.S. STANDARD POPULATION

Age Group	2000 US Standard Population (Census P25-1130)
0	3,794,901
1-4	15,191,619
5-9	19,919,840
10-14	20,056,779
15-19	19,819,518
20-24	18,257,225
25-29	17,722,067
30-34	19,511,370
35-39	22,179,956
40-44	22,479,229
45-49	19,805,793
50-54	17,224,359
55-59	13,307,234
60-64	10,654,272
65-69	9,409,940
70-74	8,725,574
75-79	7,414,559
80-84	4,900,234
85+	4,259,173
Total	274,633,642

Source: SEER Program, National Cancer Institute, 2014.¹⁶

APPENDIX B

2012 POPULATION BY HEALTH DISTRICT, GENDER, AND AGE GROUP

	HD 1	HD 2	HD 3	HD 4	HD 5	HD 6	HD 7	STATE
Males								
< 5	6,466	3,035	11,205	15,370	7,536	7,002	9,483	59,212
5 to 9	7,058	2,932	11,620	17,211	8,001	7,334	9,063	62,805
10 to 14	7,453	3,035	11,248	16,823	7,411	7,141	8,494	61,159
15 to 19	7,293	4,116	11,670	15,362	6,820	6,471	7,889	58,087
20 to 24	6,139	6,154	12,279	15,318	5,854	5,886	9,196	56,580
25 to 29	5,813	3,543	9,379	16,718	5,897	5,862	7,975	53,377
30 to 34	6,258	3,141	9,480	16,832	6,256	5,796	7,236	53,684
35 to 39	5,854	2,802	8,987	15,690	5,771	4,998	6,043	49,211
40 to 44	6,574	2,863	8,970	16,213	5,413	4,568	5,481	49,197
45 to 49	6,968	3,003	8,515	15,184	5,612	4,472	5,587	48,586
50 to 54	7,758	3,578	8,896	15,608	6,187	5,299	6,105	52,412
55 to 59	7,992	3,753	8,730	14,003	5,893	5,345	5,764	50,146
60 to 64	7,672	3,622	7,879	12,199	5,089	4,586	4,920	44,691
65 to 69	6,378	2,835	6,493	9,208	4,121	3,501	3,756	35,521
70 to 74	4,691	2,182	4,684	5,860	3,135	2,505	2,721	25,240
75 to 79	3,089	1,593	3,218	3,833	2,206	1,807	1,904	17,282
80 to 84	1,941	1,034	2,112	2,690	1,465	1,272	1,243	11,446
85+	1,424	992	1,932	2,397	1,271	1,036	1,035	9,686
Total	106,821	54,213	147,297	226,519	93,938	84,881	103,895	798,322
Females								
< 5	6,172	2,890	10,813	14,548	7,218	6,787	9,010	56,645
5 to 9	6,587	2,765	11,181	16,403	7,437	6,982	8,657	59,553
10 to 14	7,216	2,844	10,786	16,379	7,097	6,560	8,020	58,491
15 to 19	6,624	3,766	10,899	14,269	6,350	6,018	8,773	55,267
20 to 24	5,999	5,197	11,577	14,660	5,611	5,876	9,298	54,703
25 to 29	5,973	3,108	9,430	15,822	5,871	5,768	7,165	51,589
30 to 34	6,244	2,837	9,482	16,014	5,922	5,635	6,898	52,020
35 to 39	6,085	2,508	8,800	14,913	5,357	4,893	5,840	47,725
40 to 44	6,635	2,804	8,829	15,468	5,271	4,592	5,420	48,288
45 to 49	7,160	3,067	8,702	15,003	5,496	4,673	5,378	48,669
50 to 54	8,283	3,778	9,330	15,541	6,247	5,375	6,083	53,436
55 to 59	8,584	3,750	8,890	14,672	5,950	5,305	5,807	51,655
60 to 64	8,051	3,426	8,260	12,523	5,220	4,541	4,892	45,815
65 to 69	6,335	2,850	6,822	9,514	4,317	3,557	3,719	36,368
70 to 74	4,531	2,158	4,937	6,538	3,175	2,602	2,862	26,316
75 to 79	3,130	1,586	3,483	4,641	2,502	2,097	2,056	19,121
80 to 84	2,338	1,335	2,761	3,641	1,938	1,560	1,696	14,757
85+	2,648	1,557	3,279	4,426	2,102	1,707	1,769	16,850
Total	108,595	52,226	148,261	224,975	93,081	84,528	103,343	797,268
Total	215,416	106,439	295,558	451,494	187,019	169,409	207,238	1,595,590

Source: National Center for Health Statistics, 2014.