Annual Report
of the

Cancer Data Registry of Idaho

Cancer in Idaho – 2011

December 2013

CDRI Cancer Data Registry of Idaho

Idaho Hospital Association

IDAHO DEPARTMENT OF HEALTH & WELFARE

CANCER IN IDAHO - 2011

December 2013

A Publication of the
Cancer Data Registry of Idaho

CDRI Cancer Data Registry of Idaho

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PREFACE

"Cancer in Idaho - 2011," the thirty-fifth 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 2011. 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 1U58DP003882-02. 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 in 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 2.03.*[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 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 NPCR statistics. For the latest NPCR data (2010 incidence), all areas of the U.S. are included except the five states funded exclusively by the SEER program (CT, HI, IA, NM, UT) and the states of Arkansas and Minnesota. 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 1975-2011. Section VIII shows cancer incidence rates by race and ethnicity for the period 2007-2011.

Descriptive Summary by Gender and Race and Ethnicity

The data presented in this report cover cancer cases diagnosed among Idaho residents between January 1, 2011, and December 31, 2011. In this time frame, there were 8,112 cases of in-situ and invasive cancer diagnosed among Idaho residents (4,223 among males and 3,889 among females). By race and ethnicity, there were 7,574 cases among non-Hispanic whites, 261 among Hispanic whites, 21 cases among Blacks, 74 cases among Native Americans, and 41 cases among Asians/Pacific Islanders. One hundred forty-one 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 1.7% increase in the age-adjusted cancer incidence rates as published in the 2010 and 2011 annual reports. The incidence rates of cancers of the kidney & renal pelvis and tesits, which fluctuate annually due to relatively small case counts, rebounded from lower rates in 2010. Similarly, the rate of stomach cancer declined from 2010. See Section VII for more detailed long term trends in cancer incidence.

Population Description

The population of the state of Idaho on July 1, 2011, was estimated to be 1,583,744 (793,034 males and 790,710 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:

Health District	Counties	Male	Female
District 1	Benewah, Bonner, Boundary, Kootenai, Shoshone	106,580	107,999
District 2	Clearwater, Latah, Lewis, Idaho, Nez Perce	54,156	52,060
District 3	Adams, Canyon, Gem, Owyhee, Payette, Washington	146,133	146,793
District 4	Ada, Boise, Elmore, Valley	222,958	221,040
District 5	Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, Twin Falls	93,856	92,730
District 6	Bannock, Bear Lake, Bingham, Butte, Caribou, Franklin, Oneida, Power	85,016	84,762
District 7	Bonneville, Clark, Custer, Fremont, Jefferson, Lemhi, Madison, Teton	103,543	102,863

SUMMARY MEASURES OF CANCER BURDEN IN IDAHO - 2011

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 2010 to 2011
All Sites	7,449	2,559	67.0	72.0	57,100	17,553	11.7	1.7%
Bladder	350	70	71.5	81.5	2,522	217	8.7	-6.6%
Brain	88	75	61.0	64.0	567	1,106	19.1	-4.0%
Breast	1,006	194	63.0	67.0	11,476	1,949	15.2	-1.9%
Cervix	53	16	47.0	67.5	831	196	17.8	2.3%
Colorectal	639	222	69.0	73.0	4,591	1,660	12.7	14.1%
Corpus Uteri	211	21	61.0	72.0	2,397	139	10.7	5.9%
Esophagus	69	61	67.0	67.0	153	609	12.4	0.8%
Hodgkin Lymphoma	38	4	31.5	73.5	746	25	12.5	-10.0%
Kidney	258	70	65.0	74.0	1585	453	11.0	20.0%
Larynx	38	10	67.0	70.5	347	67	11.2	1.1%
Leukemia	234	117	65.5	77.0	1520	793	15.3	-14.7%
Liver and Bile Duct	100	85	65.0	71.0	122	667	11.5	16.5%
Lung and Bronchus	838	616	71.0	72.0	1,569	3,560	9.2	1.0%
Melanoma of Skin	443	57	62.0	70.0	4,208	524	16.4	18.6%
Myeloma	95	42	73.0	73.0	352	242	8.3	4.0%
Non-Hodgkin Lymphoma	307	114	70.0	77.0	2,197	523	9.5	5.4%
Oral Cavity and Pharynx	210	42	63.0	67.0	1,539	340	12.1	-6.2%
Ovary	91	64	62.0	71.5	771	404	10.3	-8.7%
Pancreas	186	162	72.0	74.0	196	915	10.6	-8.7%
Prostate	1,199	163	67.0	81.0	12,289	376	8.0	3.8%
Stomach	75	37	70.0	72.0	255	283	12.9	-20.8%
Testis	63	2	36.0	-	994	-	-	58.4%
Thyroid	245	8	49.0	75.5	2,764	75	18.8	-6.3%

Notes:

Incident cases include all invasive and bladder in situ cases newly diagnosed among Idaho residents in 2011.

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 2011 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 2011 (8,112), a total of 7,449 cases (7,263 invasive and 186 bladder in-situ) were used for calculating age-adjusted incidence rates. Of the 7,449 cases, 3,972 occurred among males and 3,477 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<= 0.05 and (*) for p<= 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 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 who 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 6.7.0 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 2007-2011. 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 4.0.4 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. Because of changes in cancer reportability over time, 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

2011 SUMMARY ON ALL SITES COMBINED
AND
23 MOST COMMON SITES

ALL SITES

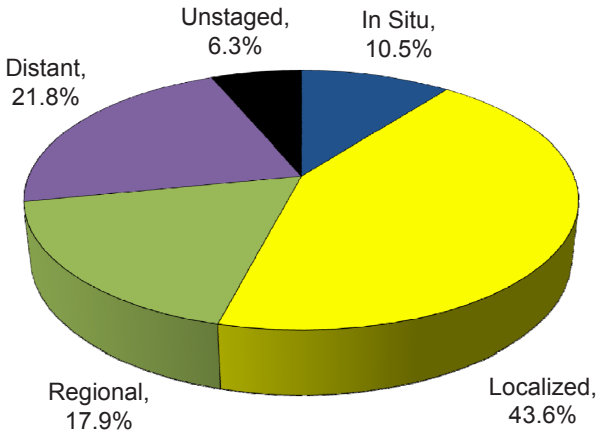
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	448.4	499.5	406.8
# of new invasive cases	7,263	3,831	3,432
# of new in-situ cases	849	392	457
# of deaths	2,559	1,399	1,160

Total Cases by County

Ada	2,014	Cassia	84	Lewis	31
Adams	34	Clark	3	Lincoln	25
Bannock	349	Clearwater	53	Madison	92
Bear Lake	30	Custer	38	Minidoka	107
Benewah	76	Elmore	138	Nez Perce	271
Bingham	217	Franklin	41	Oneida	21
Blaine	92	Fremont	65	Owyhee	65
Boise	44	Gem	127	Payette	151
Bonner	299	Gooding	85	Power	39
Bonneville	501	Idaho	106	Shoshone	109
Boundary	49	Jefferson	103	Teton	38
Butte	16	Jerome	82	Twin Falls	409
Camas	8	Kootenai	885	Valley	52
Canyon	849	Latah	146	Washington	84
Caribou	29	Lemhi	54		

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.

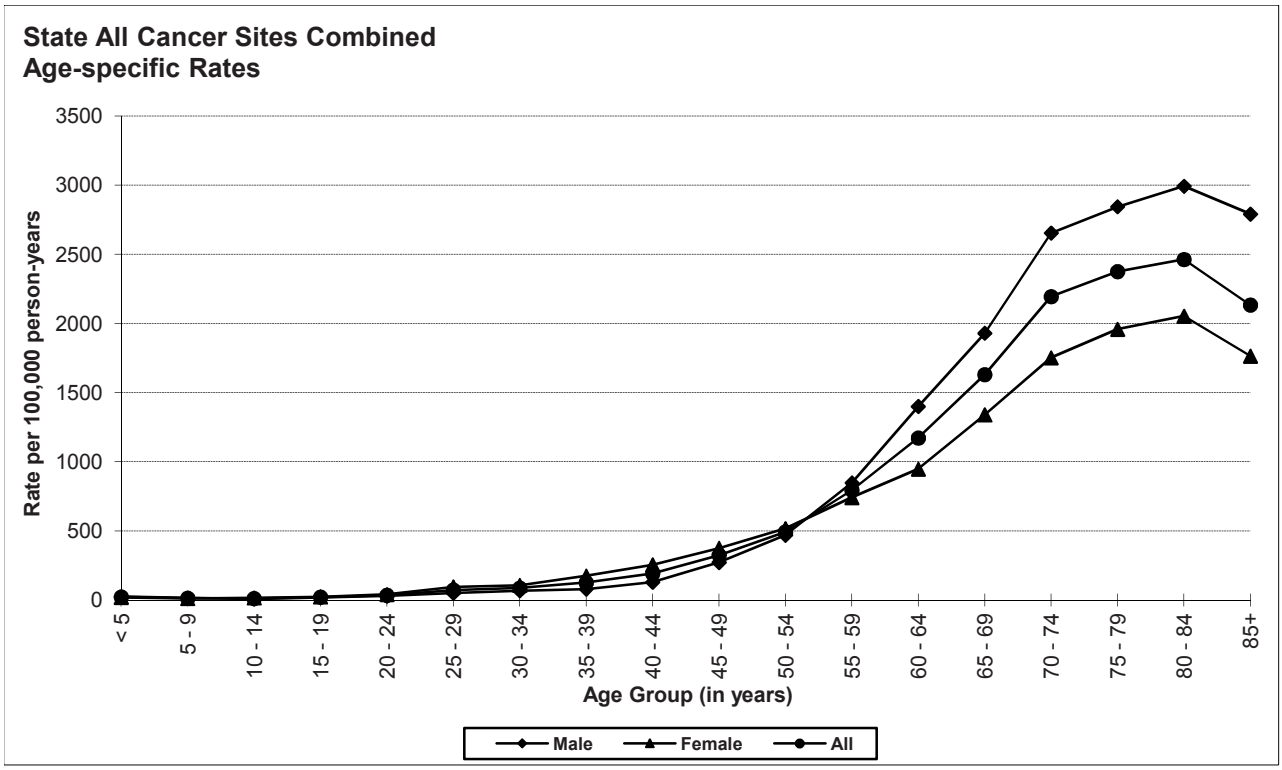
Diet Diets that are low in fresh fruits and vegetables have been associated with increased incidence of several cancers.

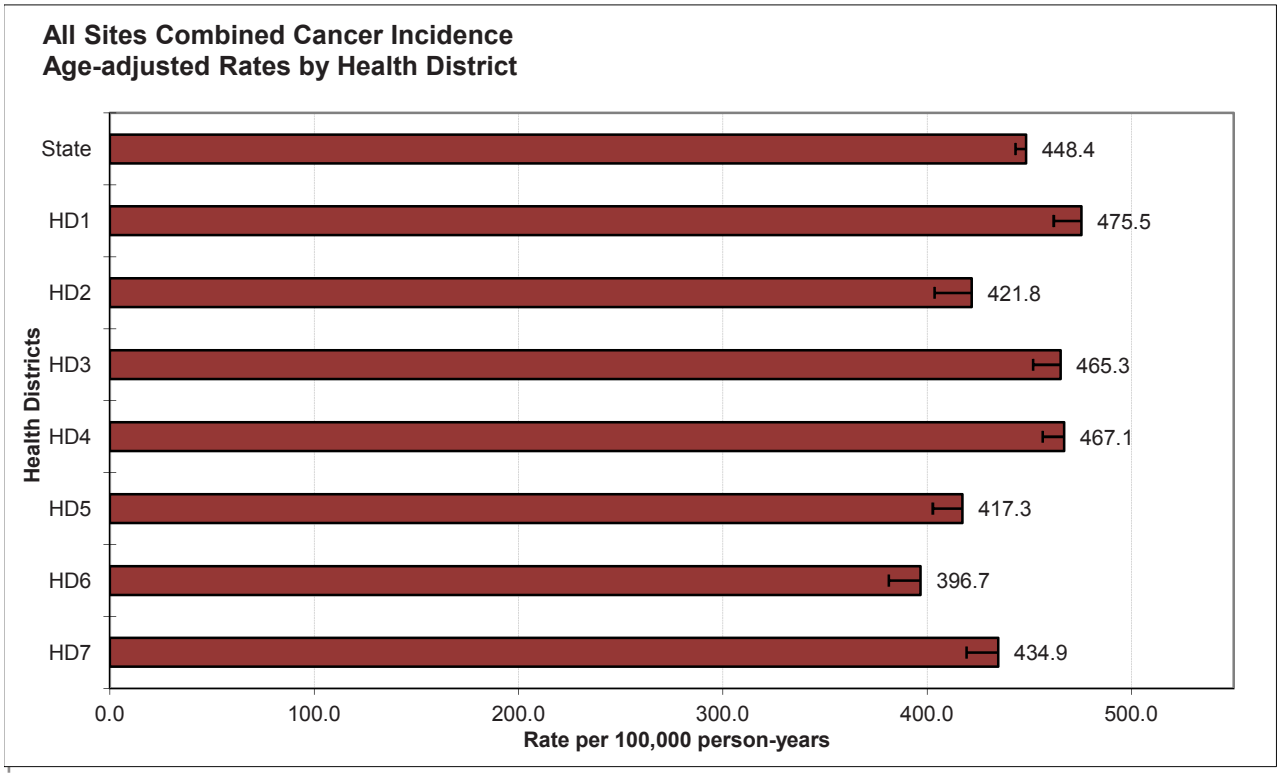
Other Tobacco use is the single most important risk factor for cancer incidence and mortality. Most cancers manifest a tendency to aggregate in families – close relatives of a cancer patient can be considered to have increased risk of that neoplasm, but not all forms of cancer. Excess risk is usually 2-3 times baseline, but in some (rare) families may be hundreds-fold.

Special Notes

Mean age-adjusted incidence rate across health districts:	439.8
95% confidence interval on the mean age-adjusted incidence rate:	417.6- 462.0
Median age-adjusted incidence rate of health districts:	434.9
Range of age-adjusted incidence rate for health districts:	396.7- 475.5
SEER 18 rate (2010, all races):	452.7
NPCR rate (2010, all races):	444.8

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 80-84 for both males and females. Health Districts 1 and 4 had statistically significantly more cases of cancer than expected based upon rates for the remainder of Idaho, and Health Districts 5 and 6 had statistically significantly fewer cases than expected.


State All Cancer Sites Combined
Age-specific Rates
Rate per 100,000 person-years
3500
3000
2500
2000
1500
1000
500
0
< 5
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+
Age Group (in years)
Male
Female
All


All Sites Combined Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
448.4
475.5
421.8
465.3
467.1
417.3
396.7
434.9
0.0
100.0
200.0
300.0
400.0
500.0
Rate per 100,000 person-years

BLADDER

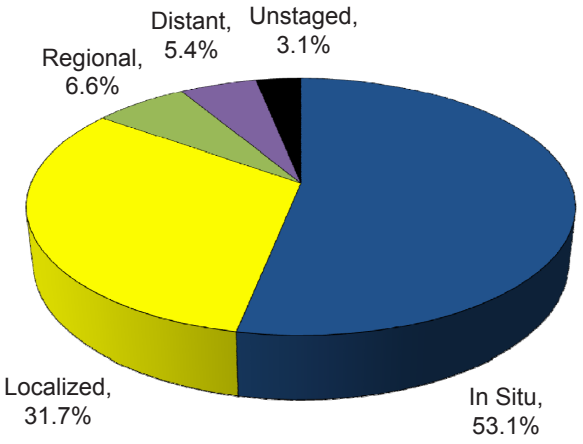
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	21.6	35.3	9.7
# of new invasive cases	164	125	39
# of new in-situ cases	186	141	45
# of deaths	70	52	18

Total Cases by County

Ada	94	Cassia	1	Lewis	3
Adams	2	Clark	-	Lincoln	2
Bannock	12	Clearwater	2	Madison	3
Bear Lake	2	Custer	-	Minidoka	8
Benewah	3	Elmore	4	Nez Perce	16
Bingham	8	Franklin	-	Oneida	1
Blaine	3	Fremont	1	Owyhee	2
Boise	-	Gem	6	Payette	4
Bonner	17	Gooding	6	Power	2
Bonneville	16	Idaho	7	Shoshone	6
Boundary	1	Jefferson	2	Teton	4
Butte	-	Jerome	9	Twin Falls	15
Camas	-	Kootenai	33	Valley	5
Canyon	38	Latah	9	Washington	1
Caribou	-	Lemhi	2		

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.

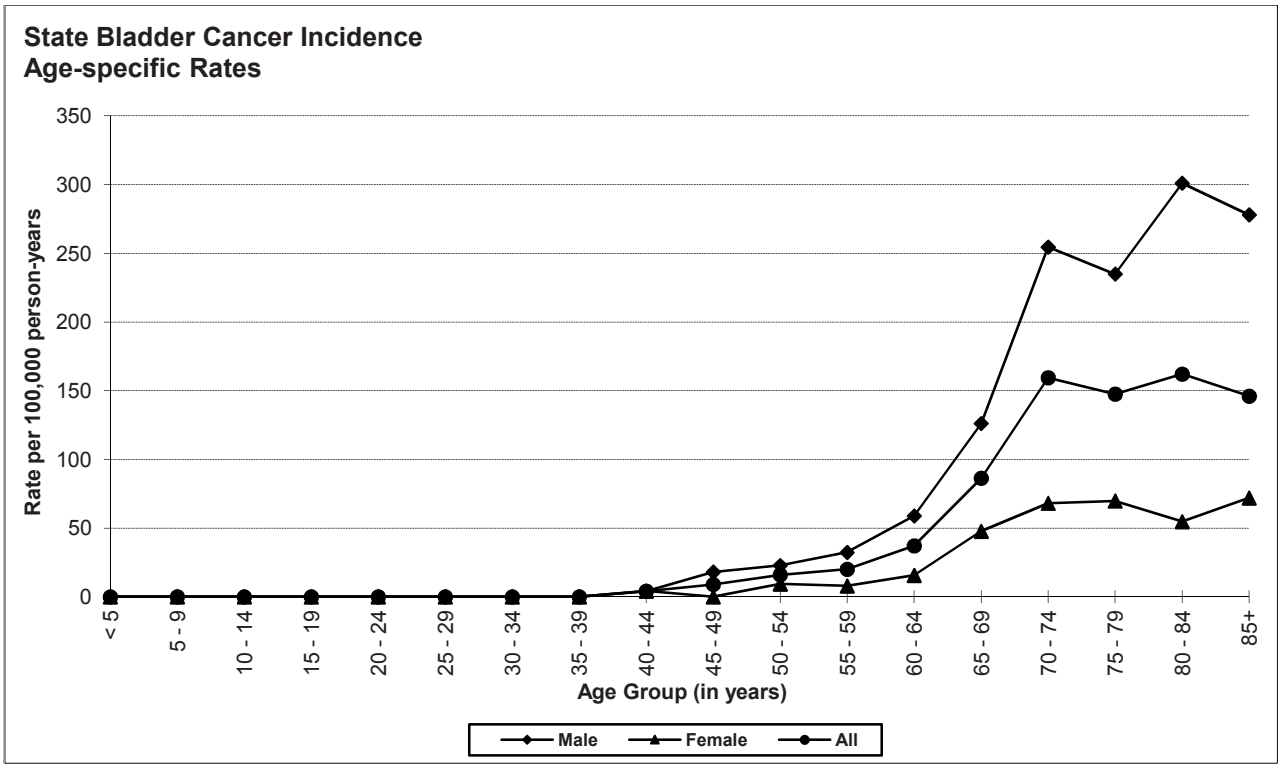
Occupation Truck drivers, likely via exposure to motor exhaust, are at increased risk. Occupational exposures, including manufacturers of certain dyes, painters, and aluminum, rubber, cable, and leather workers, have been shown to increase risk of bladder cancer. Exposure to permanent hair dyes may increase risk.

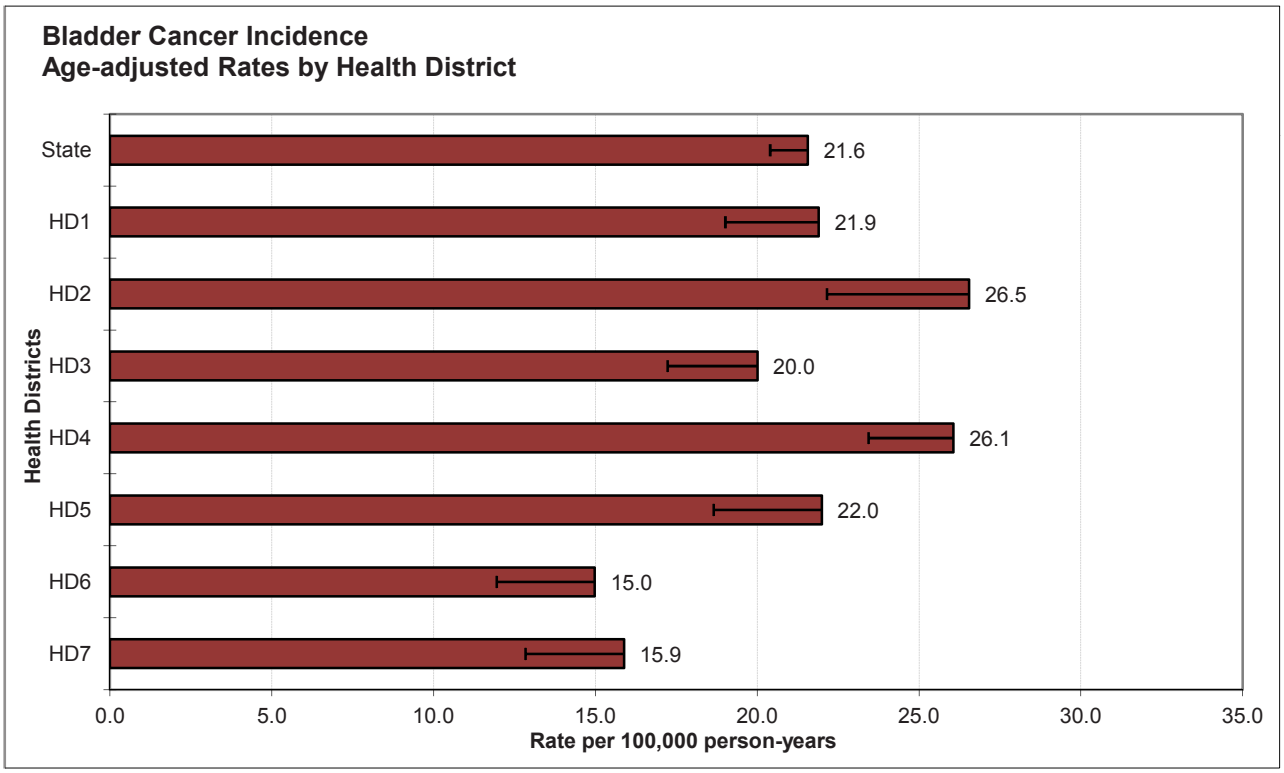
Other Tobacco consumption has been associated with a 2- to 5-fold higher incidence of bladder cancer and is attributable for a greater number of cases than other risk factors. Cyclophosphamide, a chemotherapeutic agent, and 4-amino-diphenyl are known human bladder carcinogens. *Schistosoma hematobium* 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:	21.7
95% confidence interval on the mean age-adjusted incidence rate:	17.7- 24.4
Median age-adjusted incidence rate of health districts:	21.9
Range of age-adjusted incidence rate for health districts:	15.0- 26.5
SEER 18 rate (2010, all races):	20.2
NPCR rate (2010, all races):	20.0

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 85+ for females. Health District 4 had statistically significantly more cases of bladder cancer than expected based upon rates for the remainder of Idaho, and Health District 6 had statistically significantly fewer cases than expected.


State Bladder Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
350
300
250
200
150
100
50
0
< 5
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+
Age Group (in years)
Male
Female
All


Bladder Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
21.6
21.9
26.5
20.0
26.1
22.0
15.0
15.9
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
Rate per 100,000 person-years

BRAIN

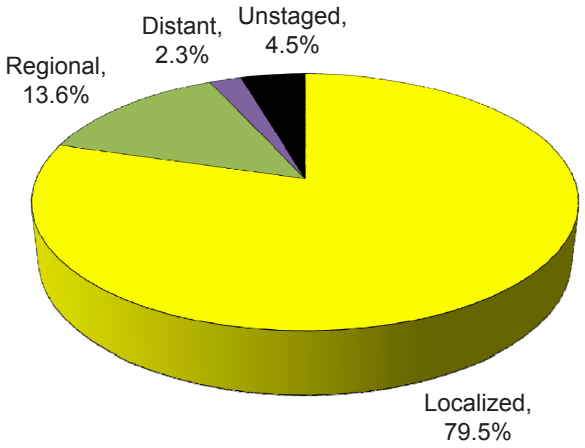
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.4	7.4	3.3
# of new invasive cases	88	59	29
# of new in-situ cases	0	0	0
# of deaths	75	48	27

Total Cases by County

Ada	21	Cassia	1	Lewis	-
Adams	1	Clark	-	Lincoln	-
Bannock	7	Clearwater	1	Madison	3
Bear Lake	-	Custer	-	Minidoka	2
Benewah	3	Elmore	1	Nez Perce	-
Bingham	1	Franklin	-	Oneida	-
Blaine	2	Fremont	1	Owyhee	-
Boise	1	Gem	1	Payette	2
Bonner	2	Gooding	1	Power	-
Bonneville	6	Idaho	2	Shoshone	-
Boundary	-	Jefferson	1	Teton	-
Butte	-	Jerome	-	Twin Falls	4
Camas	-	Kootenai	12	Valley	-
Canyon	12	Latah	-	Washington	-
Caribou	-	Lemhi	-		

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.

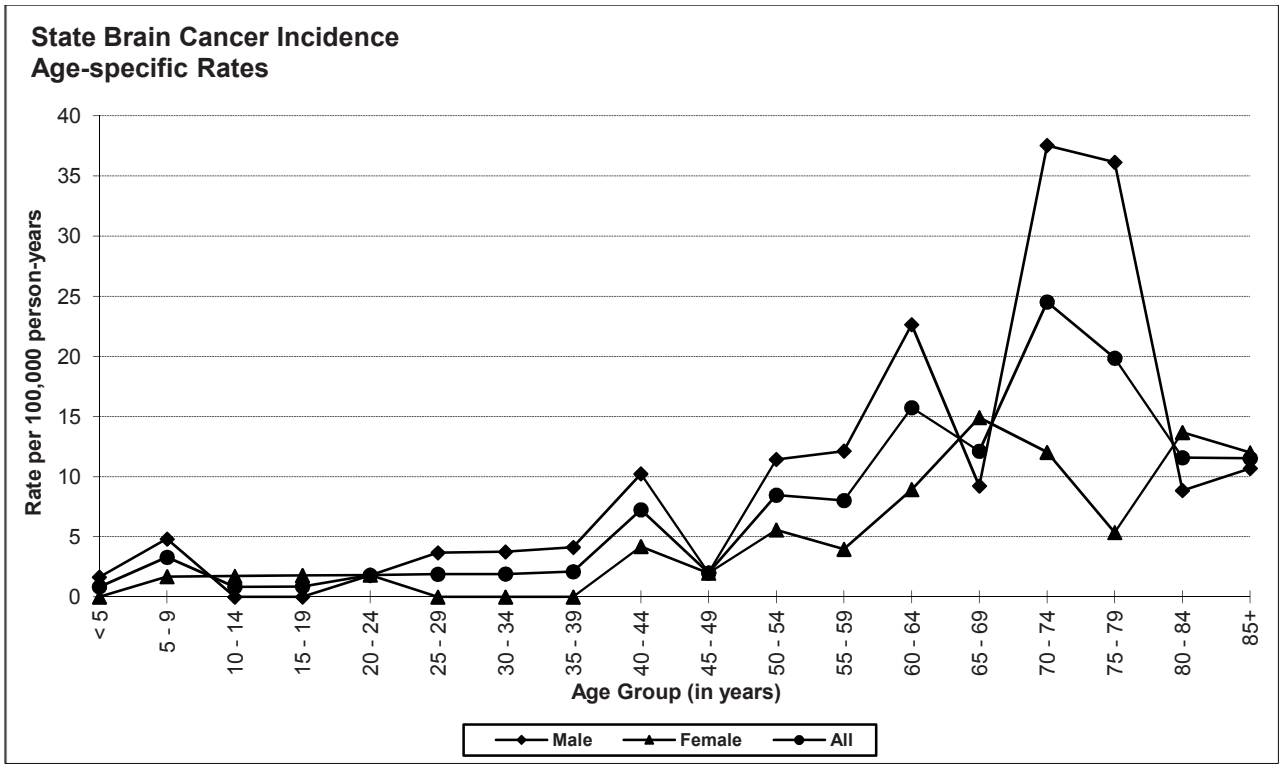
Occupation Vinyl chloride and ionizing radiation exposure are risk factors. Many occupational and environmental exposures have shown suggestive associations with elevated rates of brain cancer. Roofers, sheet metal workers, and rubber and plastic workers may be at elevated risk. Specific exposures underlying these associations have been suggested but not established.

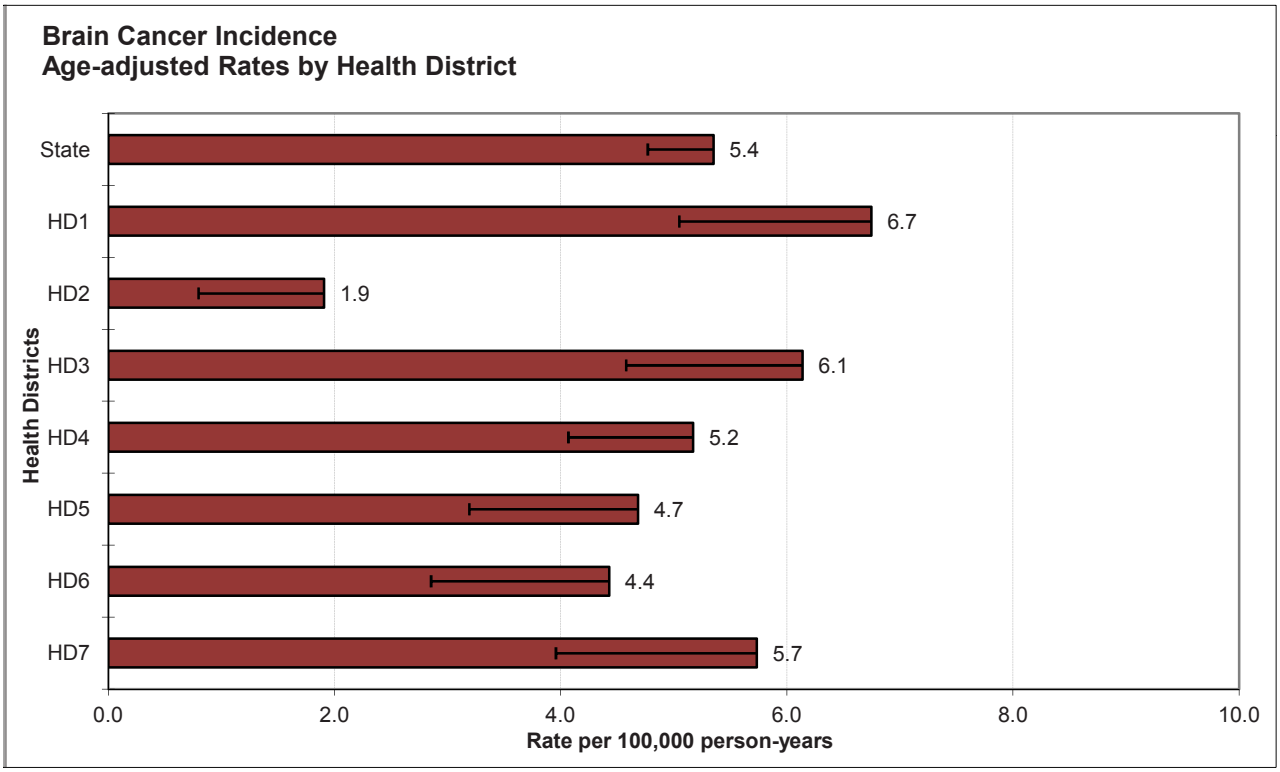
Other Human Immunodeficiency Virus (HIV) infected individuals and organ transplant recipients have an increased risk of developing brain lymphoma.

Special Notes

Mean age-adjusted incidence rate across health districts:	5.0
95% confidence interval on the mean age-adjusted incidence rate:	3.8- 6.1
Median age-adjusted incidence rate of health districts:	5.2
Range of age-adjusted incidence rate for health districts:	1.9- 6.7
SEER 18 rate (2010, all races):	5.9
NPCR rate (2010, 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
Rate per 100,000 person-years
40
35
30
25
20
15
10
5
0
< 5
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+
Age Group (in years)
Male
Female
All


Brain Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
5.4
6.7
1.9
6.1
5.2
4.7
4.4
5.7
0.0
2.0
4.0
6.0
8.0
10.0
Rate per 100,000 person-years

BRAIN & OTHER CNS NON-MALIGNANT

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	9.7	6.5	12.5
# of new cases	156	48	108

Total Cases by County

Ada	30	Cassia	1	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	8	Clearwater	-	Madison	1
Bear Lake	1	Custer	-	Minidoka	4
Benewah	1	Elmore	3	Nez Perce	8
Bingham	3	Franklin	1	Oneida	-
Blaine	2	Fremont	6	Owyhee	1
Boise	1	Gem	1	Payette	2
Bonner	2	Gooding	2	Power	1
Bonneville	8	Idaho	2	Shoshone	-
Boundary	1	Jefferson	5	Teton	-
Butte	-	Jerome	1	Twin Falls	13
Camas	-	Kootenai	22	Valley	-
Canyon	20	Latah	3	Washington	-
Caribou	1	Lemhi	-		

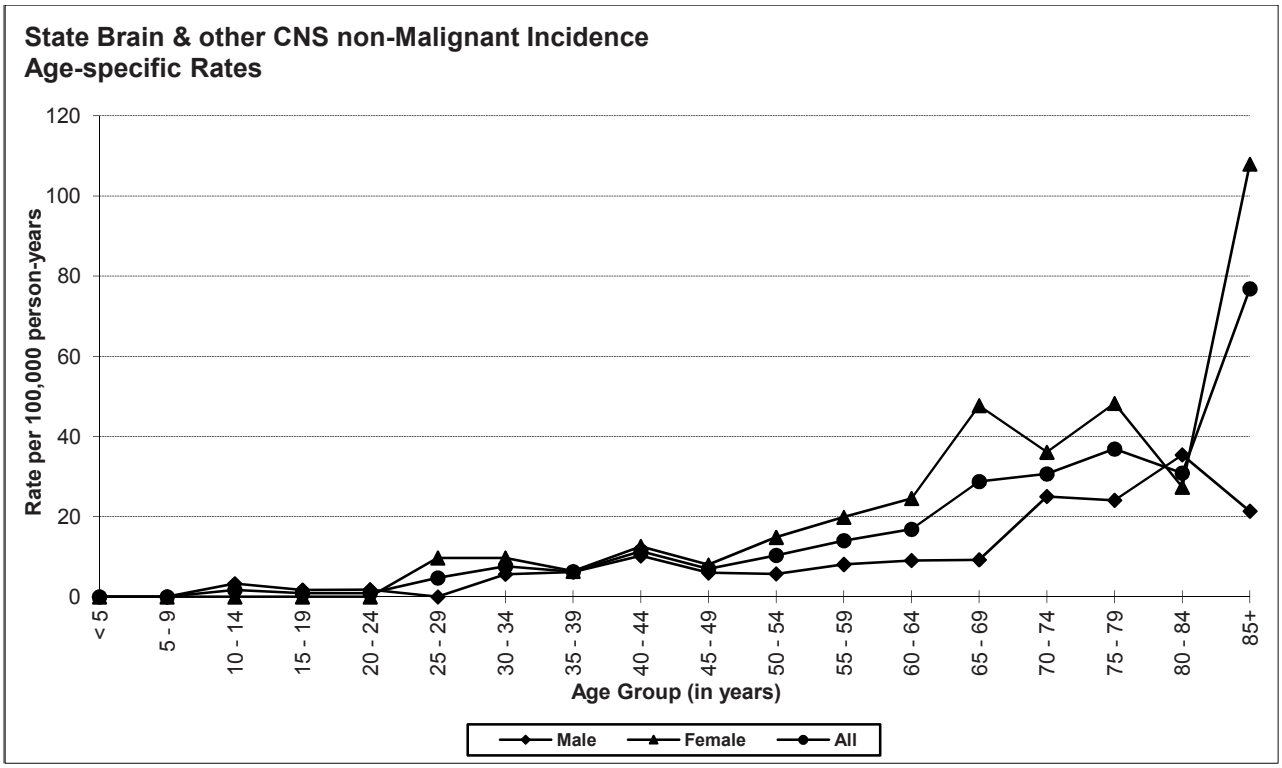
Background

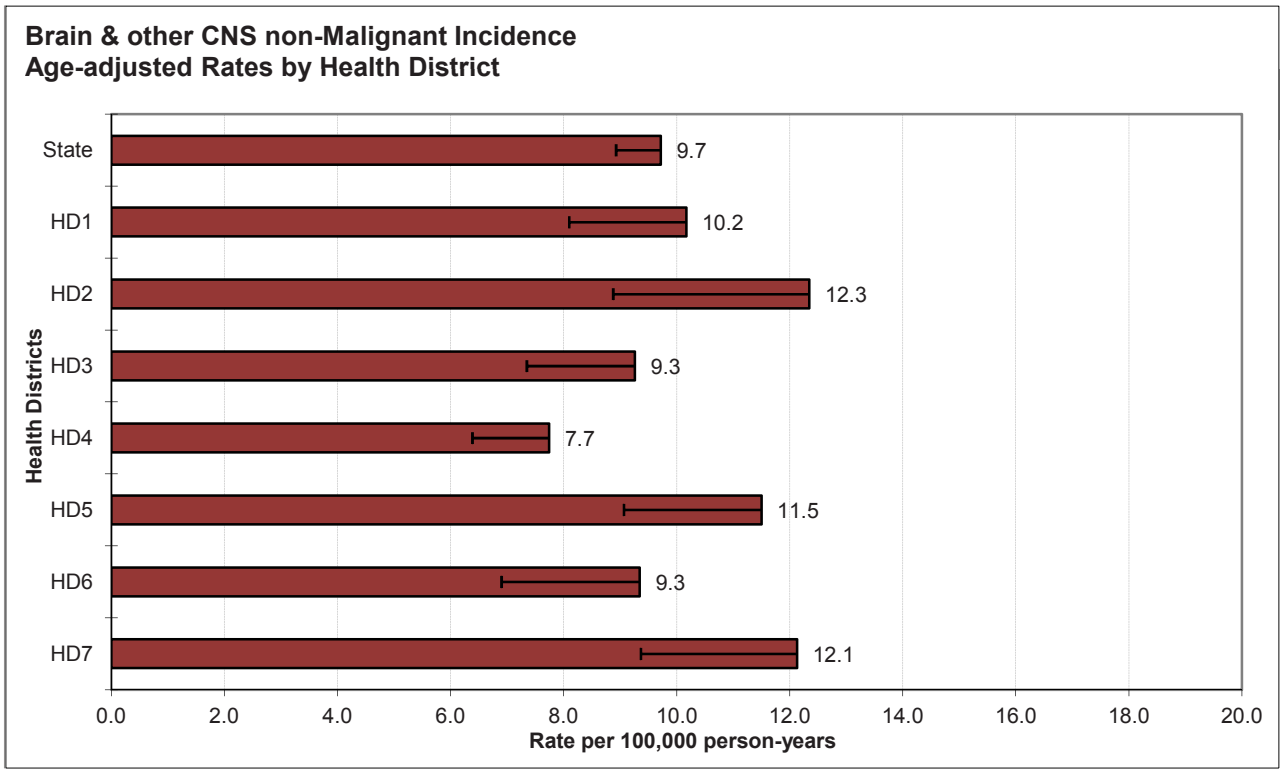
In 2007, as a result of Public Law 107-260, the publication United States Cancer Statistics 2004 Incidence and Mortality began to include tables for non-malignant brain tumors. Until this time, the only reference data were from the Central Brain Tumor Registry of the United States (CBTRUS), which has 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:	10.4	
95% confidence interval on the mean age-adjusted incidence rate:6.8-	9.1-	11.6
Median age-adjusted incidence rate of health districts:	10.2	
Range of age-adjusted incidence rate for health districts:	7.7-	12.3
SEER 18 rate (2010, all races):	10.3	

No health district had statistically significantly more, or fewer, cases of non-malignant brain tumors than expected based upon rates for the remainder of Idaho.


State Brain & other CNS non-Malignant Incidence
Age-specific Rates
Rate per 100,000 person-years
120
100
80
60
40
20
0
< 5
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+
Age Group (in years)
Male
Female
All


Brain & other CNS non-Malignant Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
9.7
10.2
12.3
9.3
7.7
11.5
9.3
12.1
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0
20.0
Rate per 100,000 person-years

BREAST

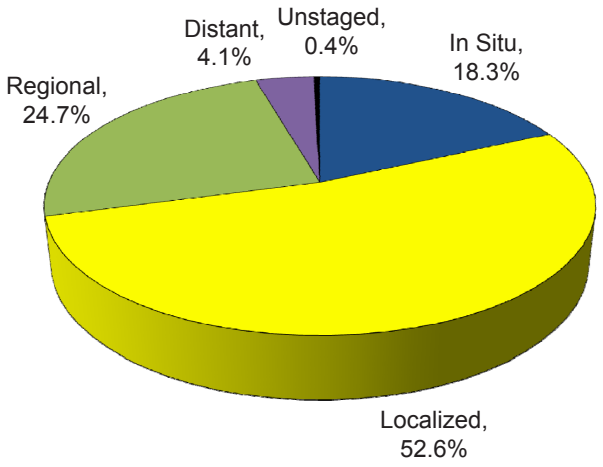
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	60.4	1.1	115.8
# of new invasive cases	1,006	9	997
# of new in-situ cases	225	1	224
# of deaths	194	2	192

Total Cases by County

Ada	270	Cassia	16	Lewis	3
Adams	3	Clark	1	Lincoln	3
Bannock	50	Clearwater	3	Madison	6
Bear Lake	1	Custer	4	Minidoka	15
Benewah	13	Elmore	14	Nez Perce	41
Bingham	21	Franklin	4	Oneida	2
Blaine	9	Fremont	8	Owyhee	9
Boise	5	Gem	15	Payette	14
Bonner	40	Gooding	14	Power	3
Bonneville	46	Idaho	18	Shoshone	15
Boundary	5	Jefferson	13	Teton	7
Butte	1	Jerome	11	Twin Falls	55
Camas	-	Kootenai	112	Valley	8
Canyon	89	Latah	17	Washington	11
Caribou	5	Lemhi	6		

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 Specific genes associated with breast cancers have been identified and are being studied. Identical twins of women with breast cancer have triple the risk of getting the disease themselves.

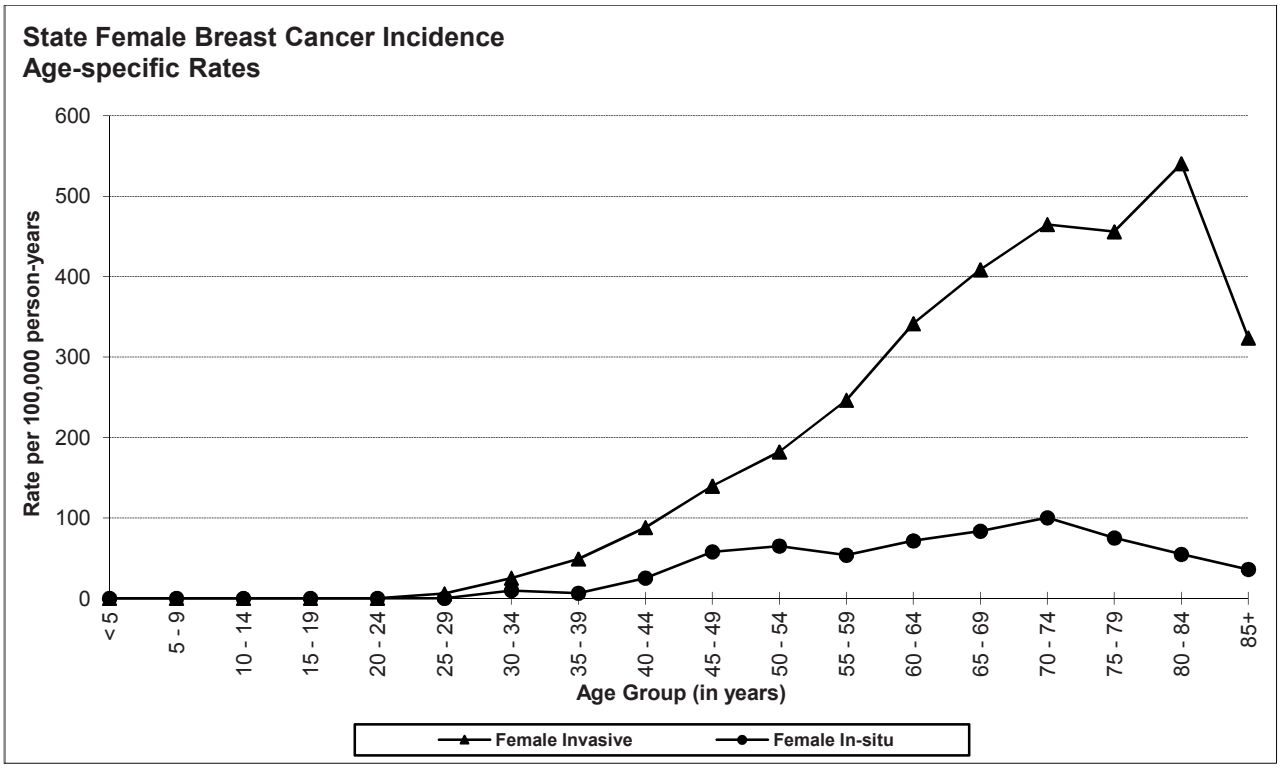
Hormonal There is evidence of hormonal influence in the risk of developing breast cancer. Longer intervals of menarche to the first full-term pregnancy and menarche to menopause, as well as menarche before age 13, have been associated with higher risks of breast cancer. Cumulative estrogen exposure, including use of hormone replacement therapy, increases breast cancer risk.

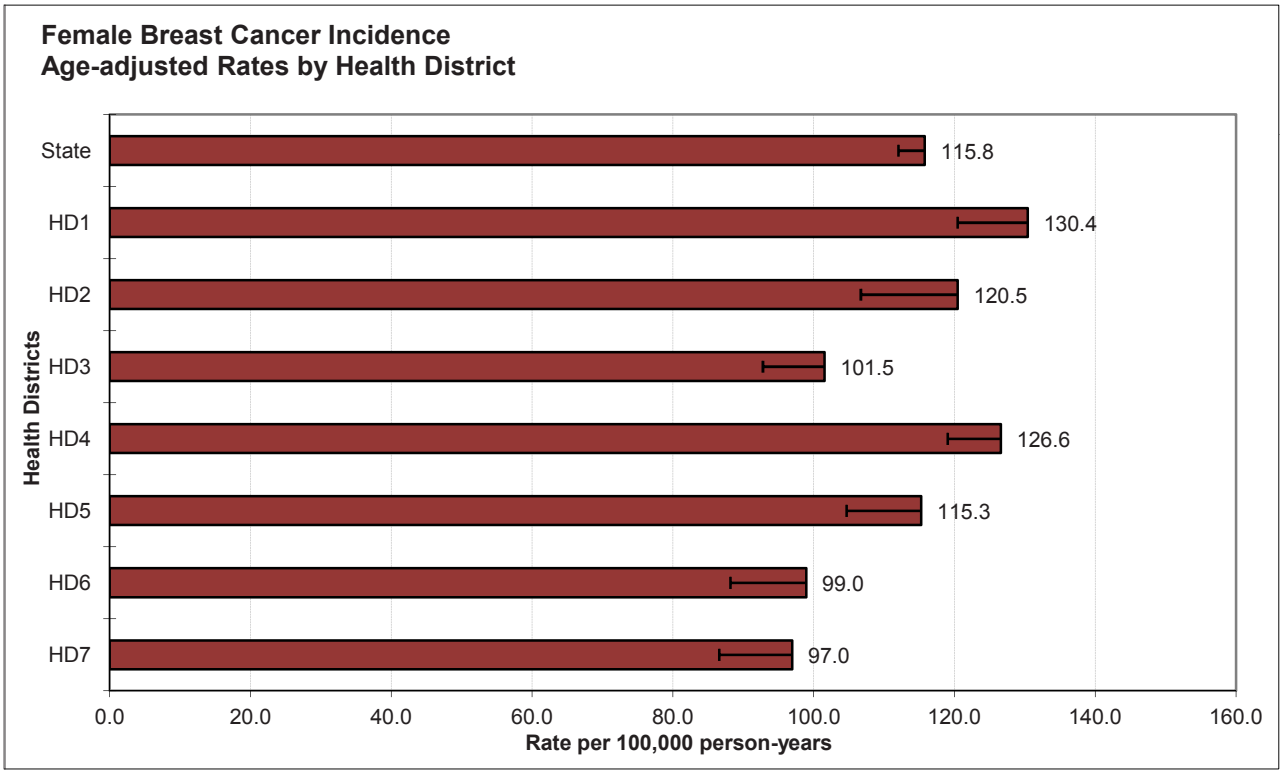
Other Alcohol consumption, high dietary fat intake, obesity (in postmenopausal women), sedentary life-style, and having a mother or sister with breast cancer have all been implicated as associated risk factors. Weight gain of 55 lbs or more after age 18 is associated with a 45% increased risk.

Special Notes

Mean age-adjusted incidence rate across health districts:	112.9	
95% confidence interval on the mean age-adjusted incidence rate:	102.7-	123.1
Median age-adjusted incidence rate of health districts:	115.3	
Range of age-adjusted incidence rate for health districts:	97.0-	130.4
SEER 18 rate (2010, all races):	120.9	
NPCR rate (2010, all races):	118.4	

The vast majority of breast cancer cases occur among females. In Idaho during the year 2011, there were 9 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 80-84 for invasive cases. No cases were observed in women less than 25 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
Rate per 100,000 person-years
600
500
400
300
200
100
0
< 5
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+
Age Group (in years)
Female Invasive
Female In-situ


Female Breast Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
115.8
130.4
120.5
101.5
126.6
115.3
99.0
97.0
0.0
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
Rate per 100,000 person-years

CERVIX

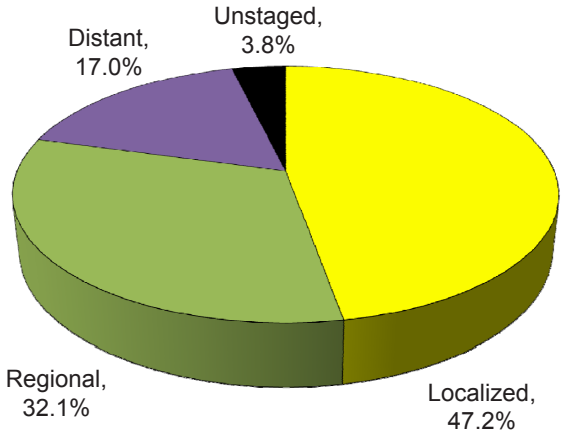
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	7.0
# of new invasive cases	-	-	53
# of new in-situ cases	-	-	n/a
# of deaths	-	-	16

Total Cases by County

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

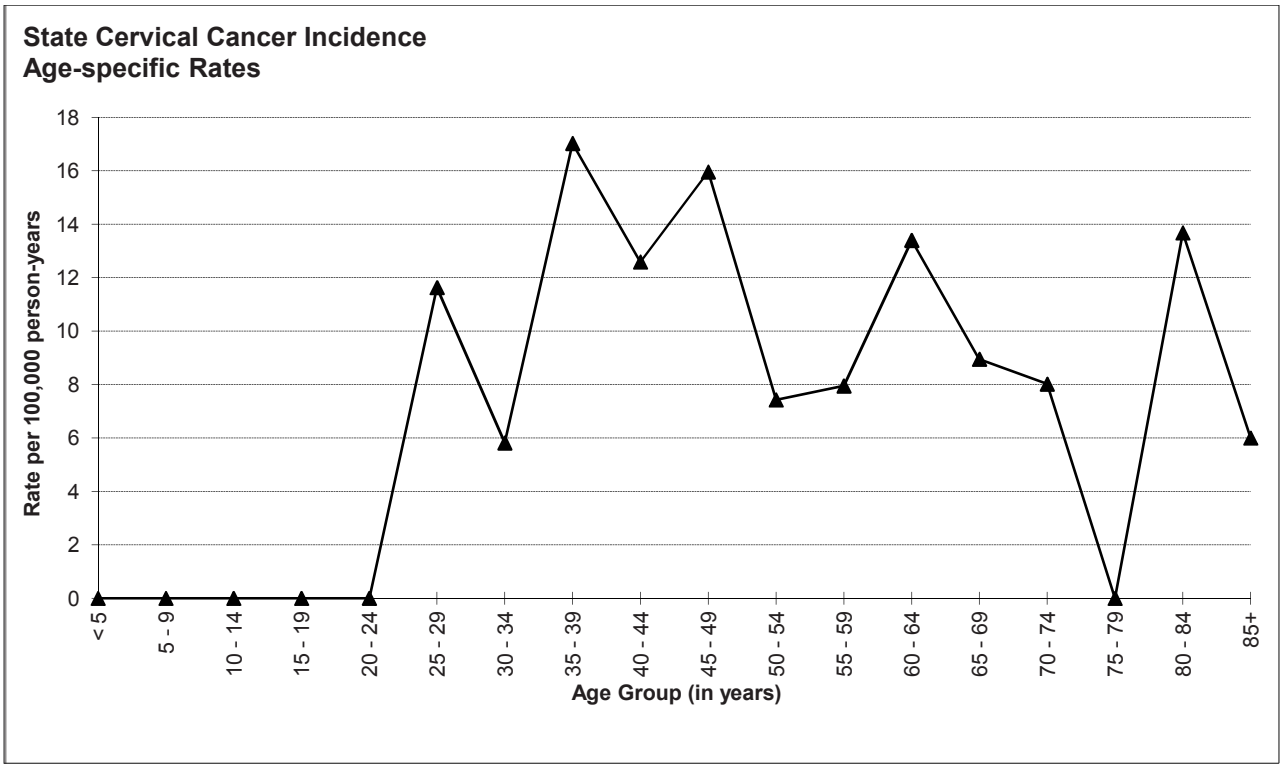
Race & SES Blacks, Hispanics, and women in lower income groups have been shown to experience higher rates.

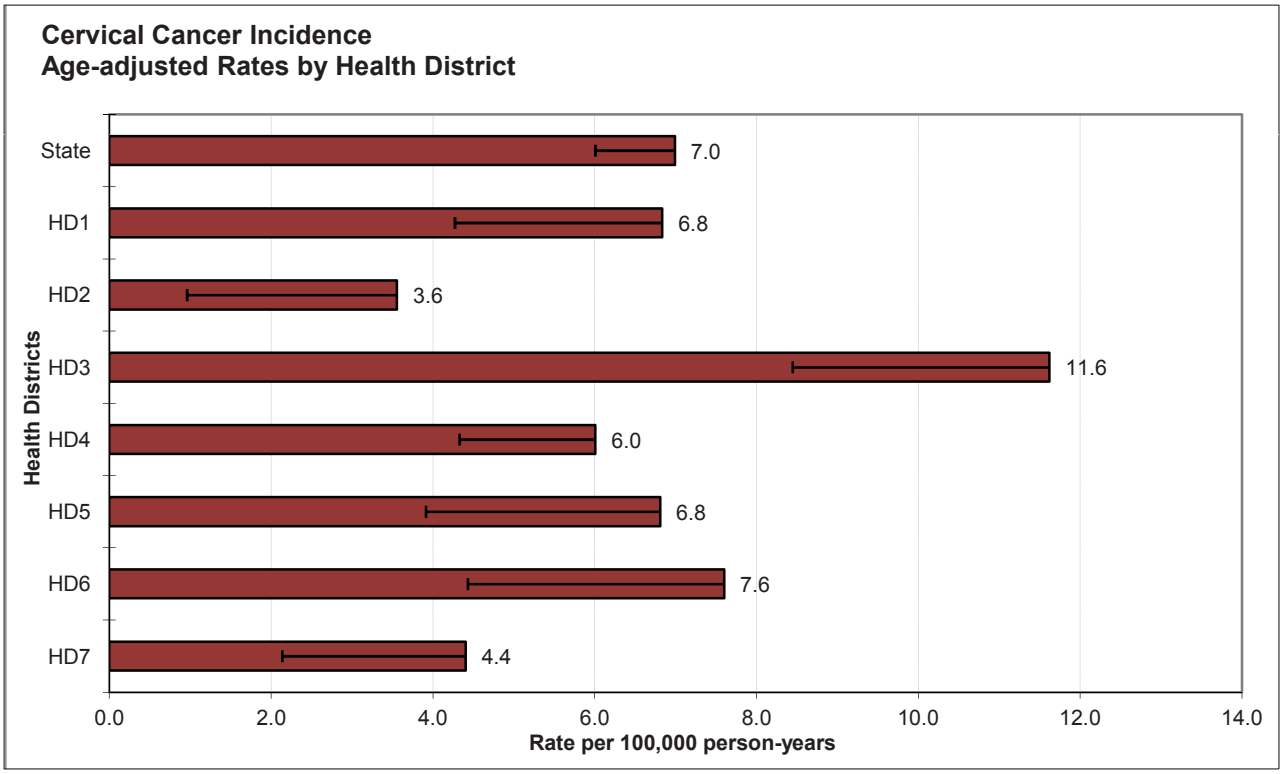
Other The large majority of cervical cancer cases worldwide can be attributed to human papilloma virus (HPV) infection. Of the at least 70 types of HPV known, types 16 and 18 are most closely associated with malignancy. Other risk factors that may be correlates, cofactors, or independent risk factors 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:	6.7
95% confidence interval on the mean age-adjusted incidence rate:	4.8- 8.6
Median age-adjusted incidence rate of health districts:	6.8
Range of age-adjusted incidence rate for health districts:	3.6- 11.6
SEER 18 rate (2010, all races):	7.5
NPCR rate (2010, all races):	7.5

Increased screening with routine Pap tests, particularly among older and low-income women, has increased diagnostic rates and helped to reduce the incidence of invasive disease. 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 3 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
Rate per 100,000 person-years
18
16
14
12
10
8
6
4
2
0
< 5
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+
Age Group (in years)


Cervical Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
7.0
6.8
3.6
11.6
6.0
6.8
7.6
4.4
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
Rate per 100,000 person-years

COLORECTAL

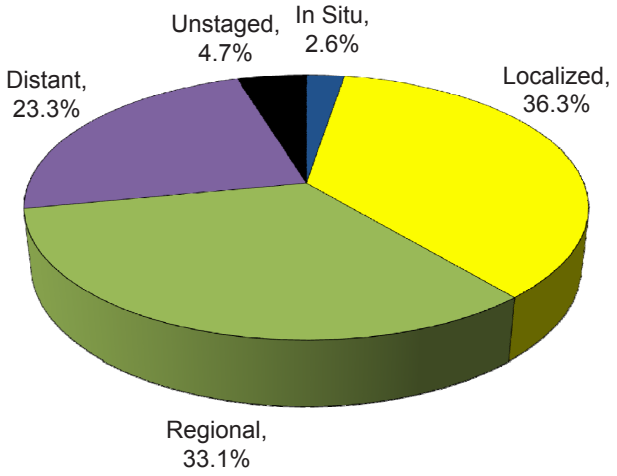
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	39.0	42.8	35.5
# of new invasive cases	639	334	305
# of new in-situ cases	17	8	9
# of deaths	222	122	100

Total Cases by County

Ada	121	Cassia	4	Lewis	2
Adams	-	Clark	-	Lincoln	1
Bannock	38	Clearwater	7	Madison	4
Bear Lake	2	Custer	4	Minidoka	10
Benewah	6	Elmore	15	Nez Perce	20
Bingham	24	Franklin	4	Oneida	1
Blaine	4	Fremont	6	Owyhee	4
Boise	2	Gem	14	Payette	14
Bonner	30	Gooding	8	Power	4
Bonneville	39	Idaho	7	Shoshone	9
Boundary	5	Jefferson	9	Teton	2
Butte	2	Jerome	15	Twin Falls	41
Camas	-	Kootenai	69	Valley	4
Canyon	64	Latah	16	Washington	10
Caribou	3	Lemhi	12		

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.

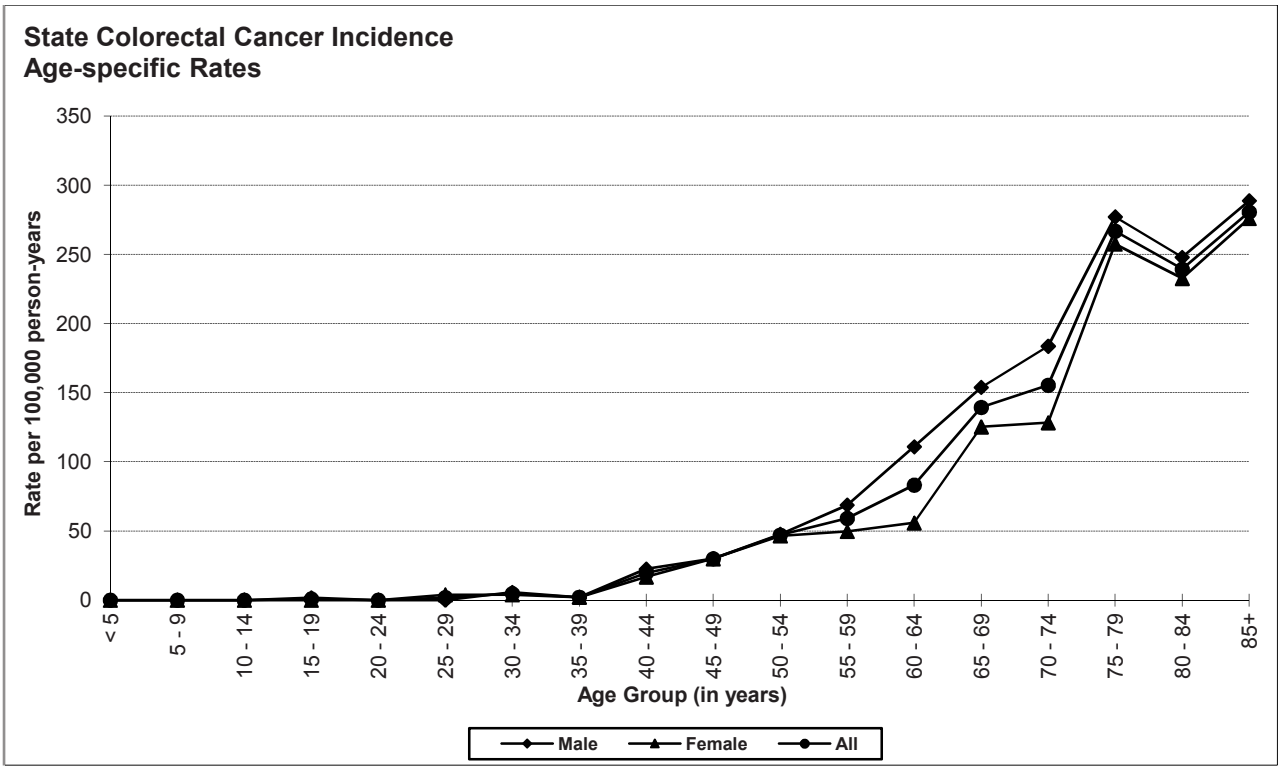
Diet There is strong evidence that high calorie diets and diets high in fat and low in fiber contribute to higher risks of colon cancer.

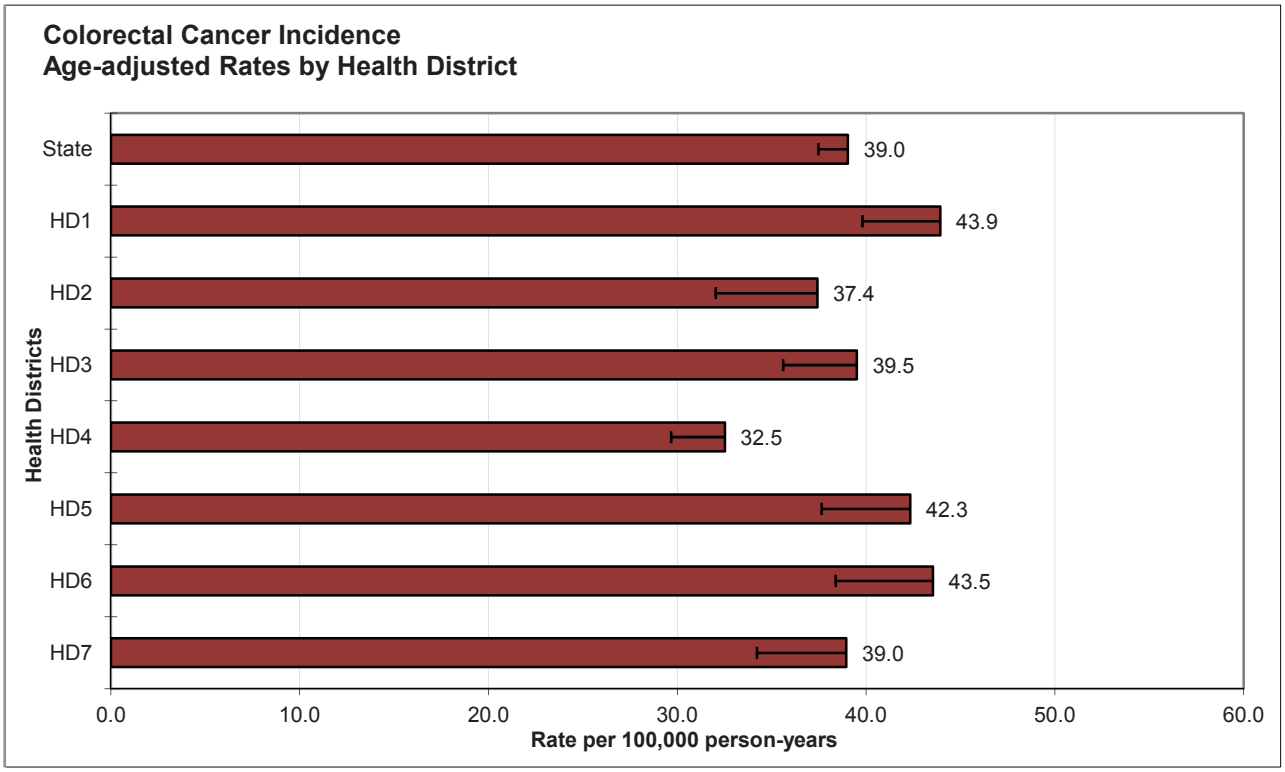
Other Individuals with a close family history of this cancer and those with a personal history of certain other cancers are at increased risk. Physical inactivity, obesity, and tobacco use are known risk factors for colorectal cancer. Cigarette smoking is significantly associated with colorectal cancer 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:	39.7
95% confidence interval on the mean age-adjusted incidence rate:	36.8- 42.7
Median age-adjusted incidence rate of health districts:	39.5
Range of age-adjusted incidence rate for health districts:	32.5- 43.9
SEER 18 rate (2010, all races):	41.4
NPCR rate (2010, all races):	40.4

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 4 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
Rate per 100,000 person-years
350
300
250
200
150
100
50
0
< 5
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+
Age Group (in years)
Male
Female
All


Colorectal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
39.0
43.9
37.4
39.5
32.5
42.3
43.5
39.0
0.0
10.0
20.0
30.0
40.0
50.0
60.0
Rate per 100,000 person-years

CORPUS UTERI

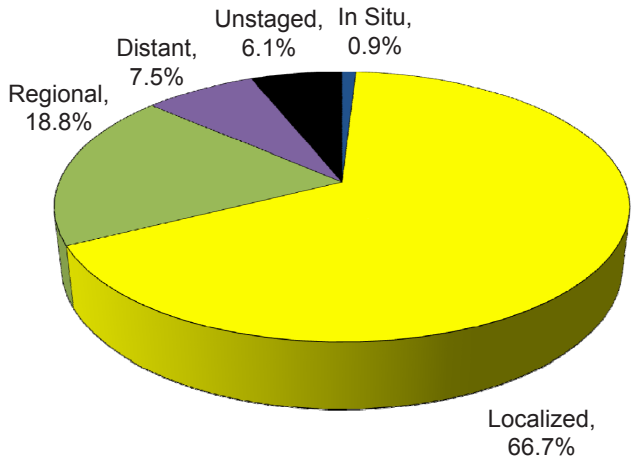
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	23.5
# of new invasive cases	-	-	211
# of new in-situ cases	-	-	2
# of deaths	-	-	21

Total Cases by County

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

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.

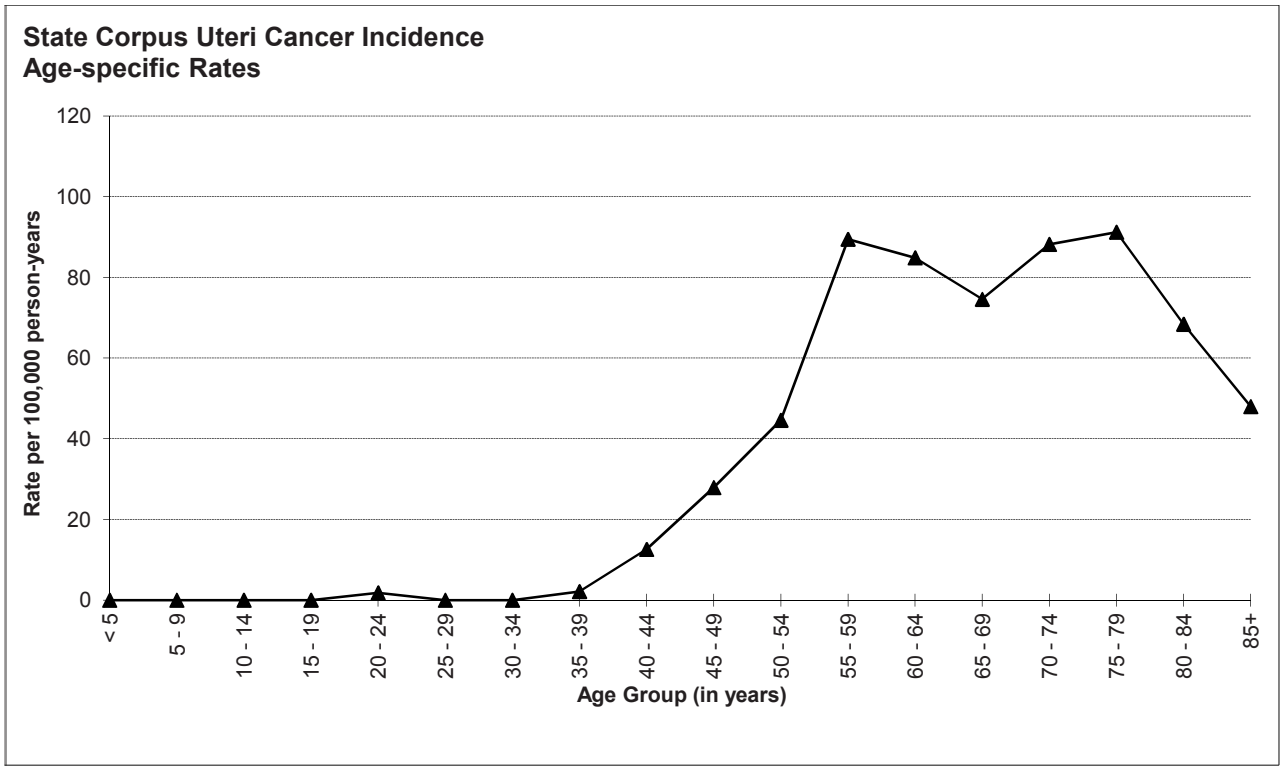
Diet Dietary fat may play a role in increased risk. Obesity and hypertension are common associated conditions of endometrial cancer.

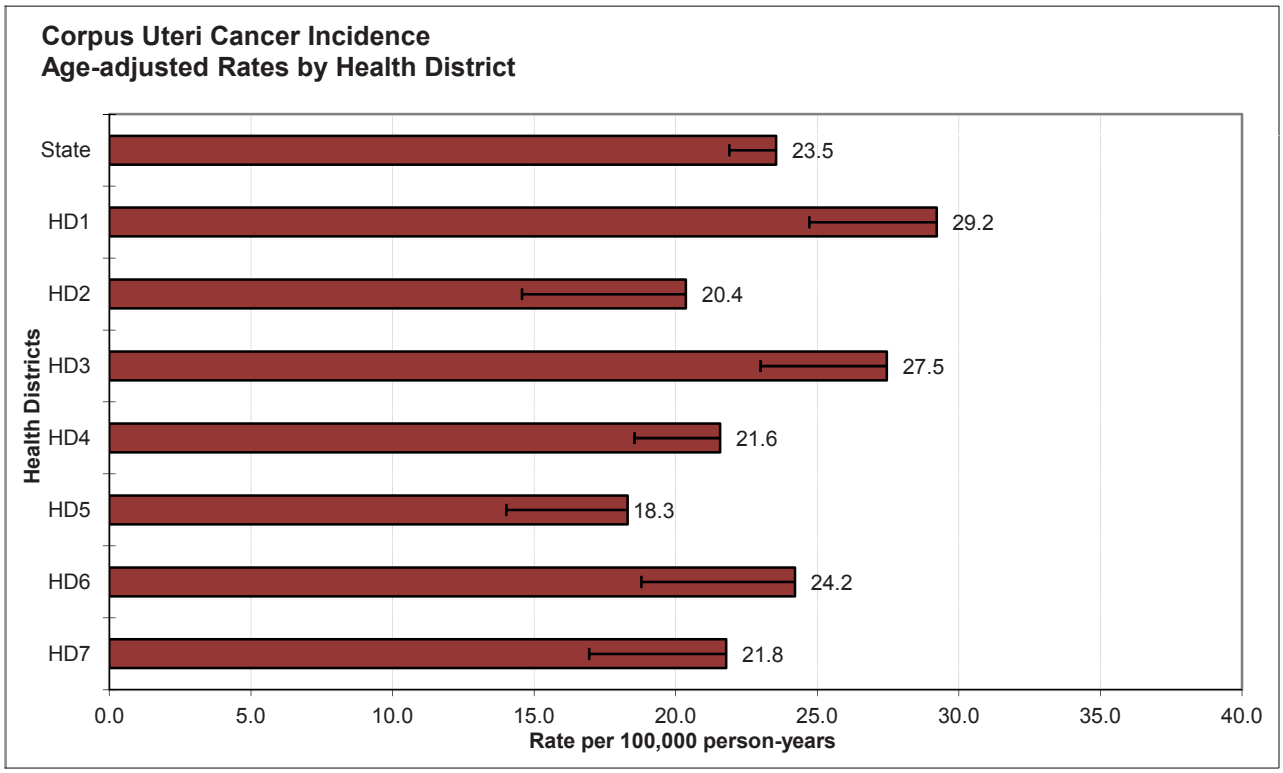
Hormonal Factors that elevate levels of estrogen or decrease progesterone levels enhance the risk. Women who have never carried a pregnancy to term are at a relatively high risk. Risk decreases as the number of pregnancies increases. An increased incidence of endometrial cancer has been found in association 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:	23.3
95% confidence interval on the mean age-adjusted incidence rate:	20.4- 26.2
Median age-adjusted incidence rate of health districts:	21.8
Range of age-adjusted incidence rate for health districts:	18.3- 29.2
SEER 18 rate (2010, all races):	24.9
NPCR rate (2010, all races):	23.9

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 75-79. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.


State Corpus Uteri Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
120
100
80
60
40
20
0
< 5
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+
Age Group (in years)


Corpus Uteri Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
23.5
29.2
20.4
27.5
21.6
18.3
24.2
21.8
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
Rate per 100,000 person-years

ESOPHAGUS

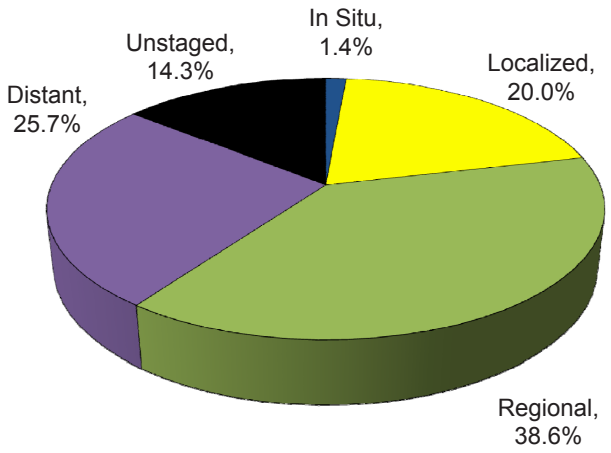
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.1	7.4	1.1
# of new invasive cases	69	60	9
# of new in-situ cases	1	1	0
# of deaths	61	55	6

Total Cases by County

Ada	18	Cassia	-	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	3	Clearwater	-	Madison	1
Bear Lake	-	Custer	1	Minidoka	1
Benewah	-	Elmore	1	Nez Perce	-
Bingham	5	Franklin	-	Oneida	-
Blaine	-	Fremont	1	Owyhee	1
Boise	-	Gem	-	Payette	2
Bonner	5	Gooding	1	Power	-
Bonneville	6	Idaho	2	Shoshone	1
Boundary	2	Jefferson	-	Teton	-
Butte	-	Jerome	2	Twin Falls	2
Camas	-	Kootenai	4	Valley	-
Canyon	11	Latah	-	Washington	-
Caribou	-	Lemhi	-		

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.

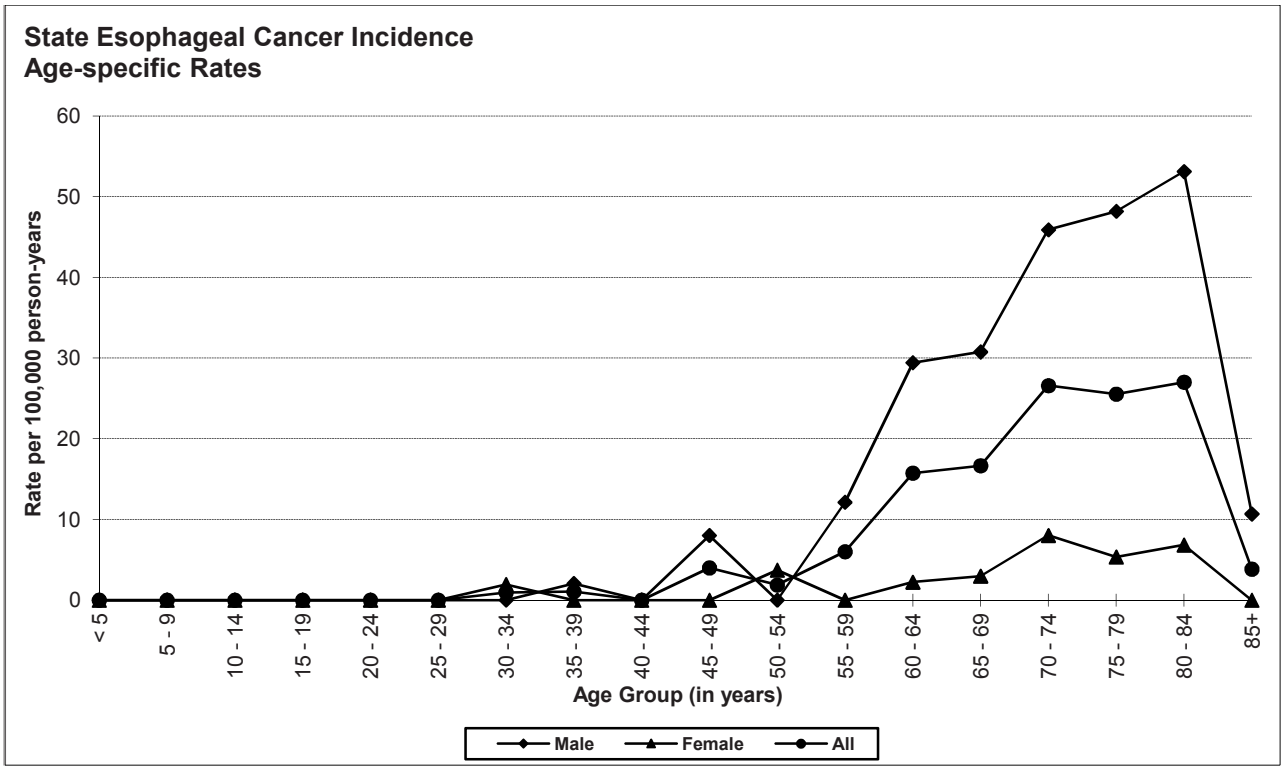
Occupation Chimney sweeps exposed to soot are at higher risk.

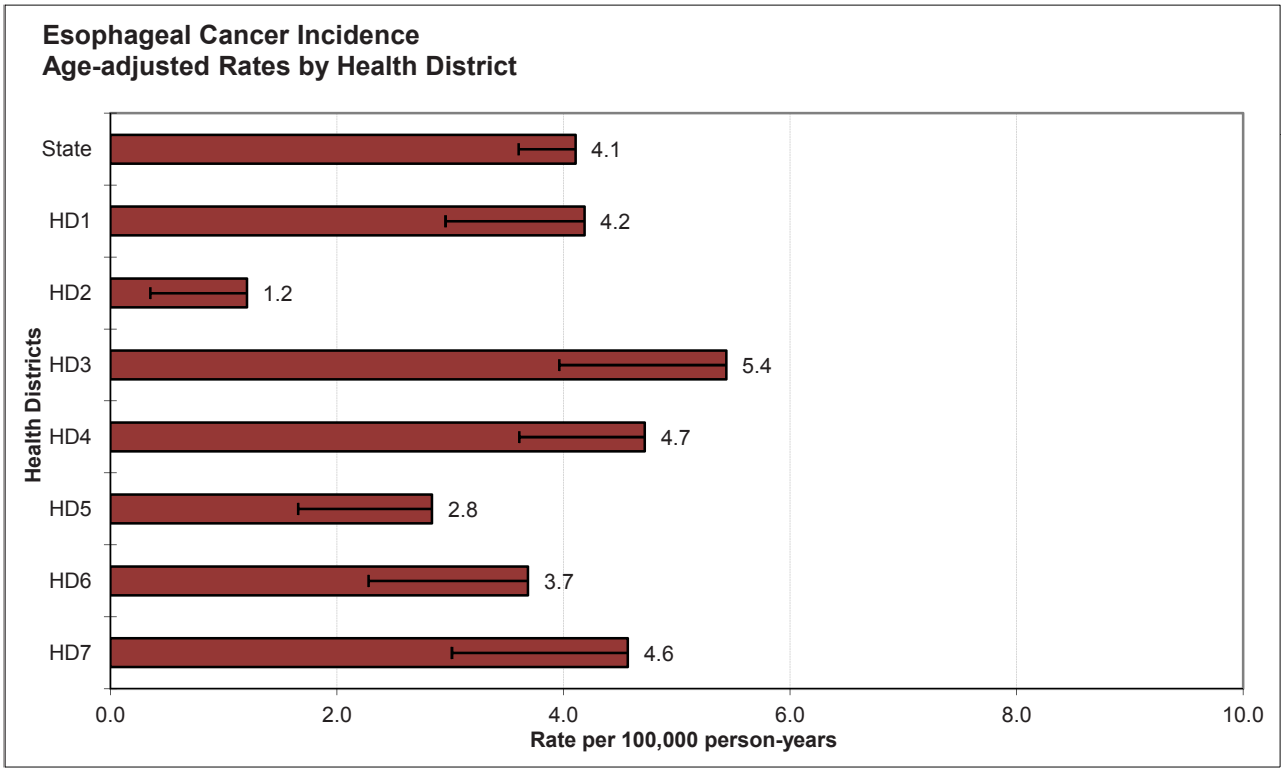
Other Tobacco use (cigarettes or spit tobacco) and heavy alcohol consumption are major risk factors for cancer of the esophagus. The risk is particularly increased when these two factors are both present. In Western Europe and North America, 90% or more of the risk of esophageal cancer can be attributed 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:	3.8
95% confidence interval on the mean age-adjusted incidence rate:	2.8- 4.9
Median age-adjusted incidence rate of health districts:	4.2
Range of age-adjusted incidence rate for health districts:	1.2- 5.4
SEER 17 rate (2010, all races):	4.3
NPCR rate (2010, all races):	4.6

Few cases of esophageal cancer were diagnosed in person less than 40 years of age. The age-specific incidence rates peaked in the age group 80-84 for males and 70-74 for 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
Rate per 100,000 person-years
60
50
40
30
20
10
0
< 5
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+
Age Group (in years)
Male
Female
All


Esophageal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
4.1
4.2
1.2
5.4
4.7
2.8
3.7
4.6
0.0
2.0
4.0
6.0
8.0
10.0
Rate per 100,000 person-years

HODGKIN LYMPHOMA

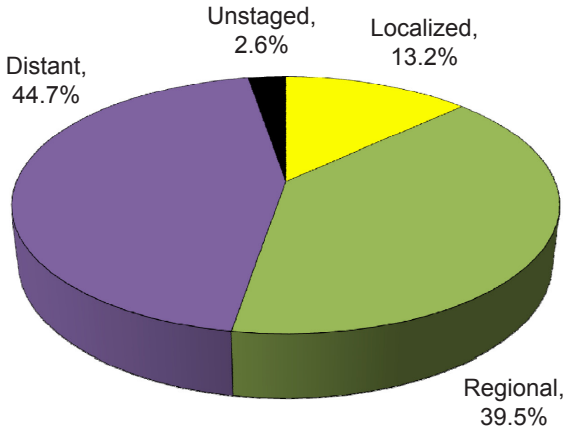
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	2.4	2.4	2.4
# of new invasive cases	38	20	18
# of new in-situ cases	0	0	0
# of deaths	4	1	3

Total Cases by County

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

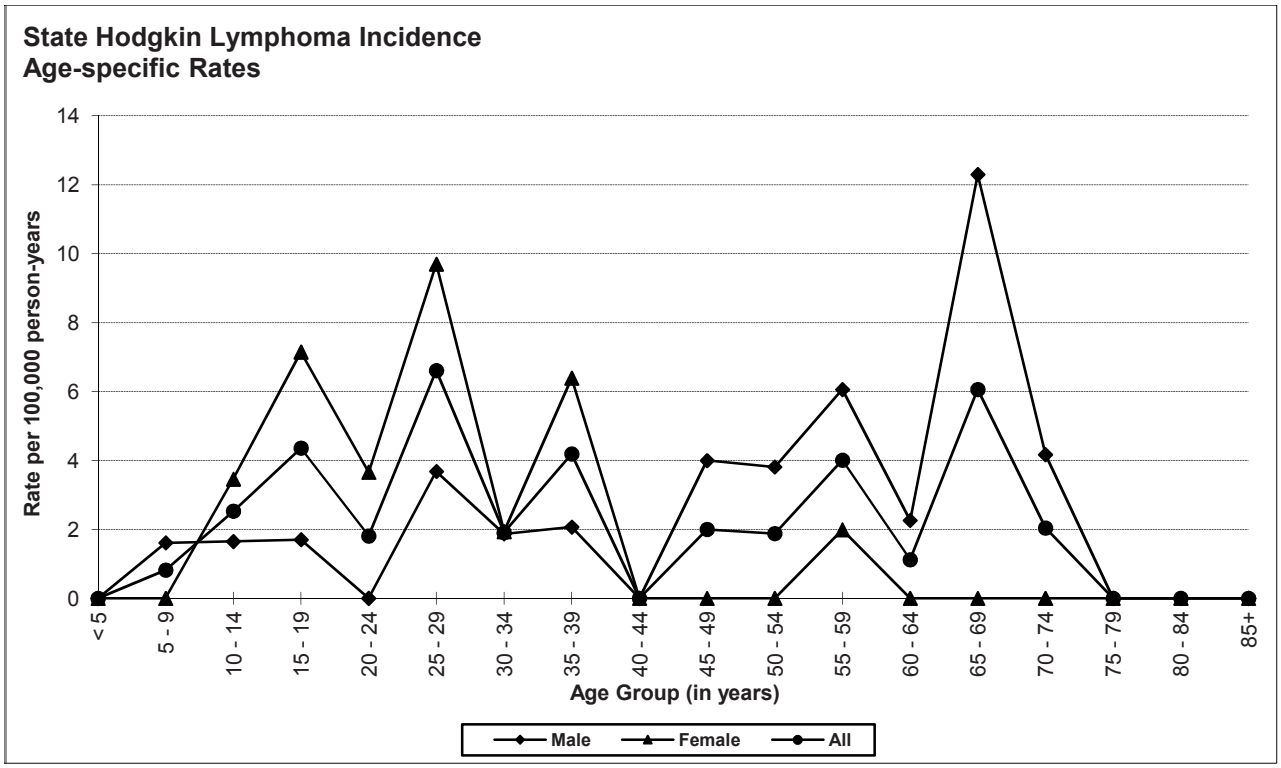
Genetics Genetic factors are thought to play an important role in the etiology of Hodgkin lymphoma, but these are yet to be adequately defined.

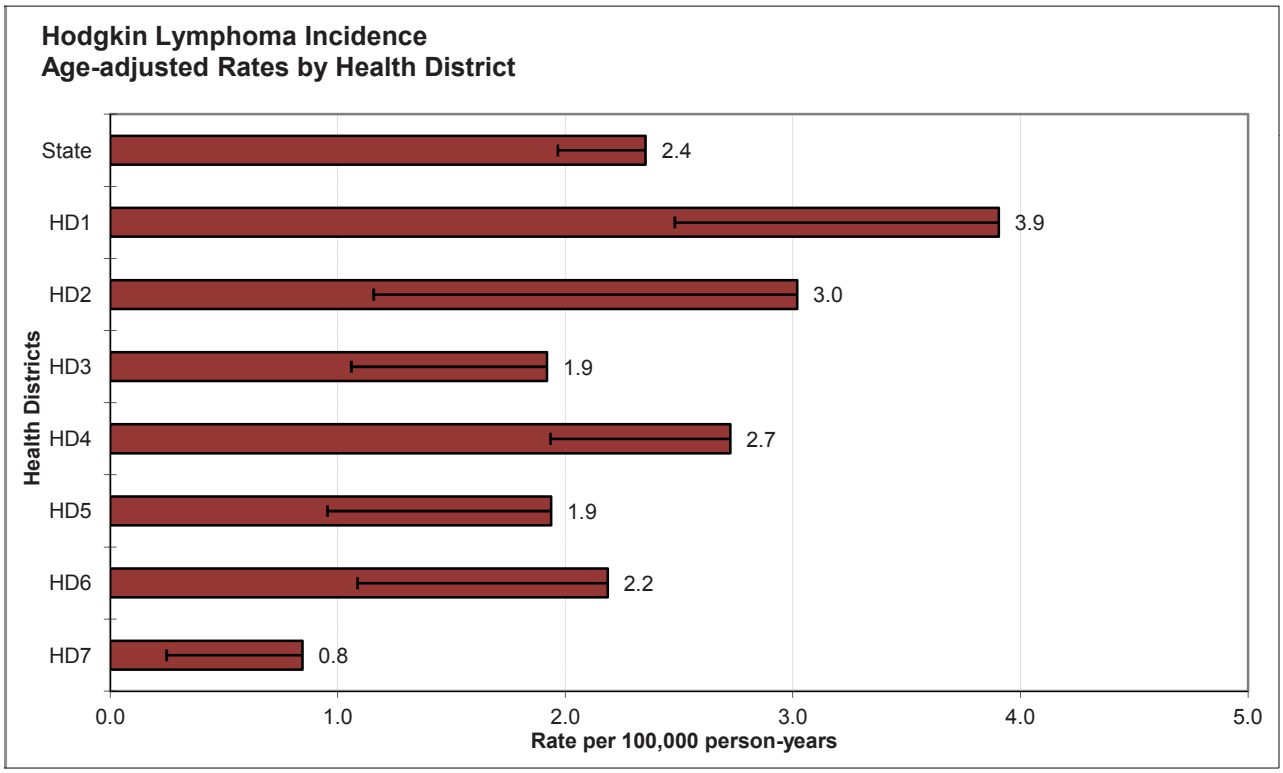
Other Small family size and ensuing delayed exposure to childhood infections is thought to be responsible for a portion of Hodgkin lymphoma cases. Certain viral infections, especially Epstein-Barr virus, and AIDS increase the risk of Hodgkin lymphoma. With current treatment, Hodgkin disease, which was once highly fatal, is among the most curable of all cancers.

Special Notes

Mean age-adjusted incidence rate across health districts:	2.4
95% confidence interval on the mean age-adjusted incidence rate:	1.6- 3.1
Median age-adjusted incidence rate of health districts:	2.2
Range of age-adjusted incidence rate for health districts:	0.8- 3.9
SEER 18 rate (2010, all races):	2.7
NPCR rate (2010, 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
Rate per 100,000 person-years
14
12
10
8
6
4
2
0
< 5
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+
Age Group (in years)
Male
Female
All


Hodgkin Lymphoma Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
2.4
3.9
3.0
1.9
2.7
1.9
2.2
0.8
0.0
1.0
2.0
3.0
4.0
5.0
Rate per 100,000 person-years

KIDNEY AND RENAL PELVIS

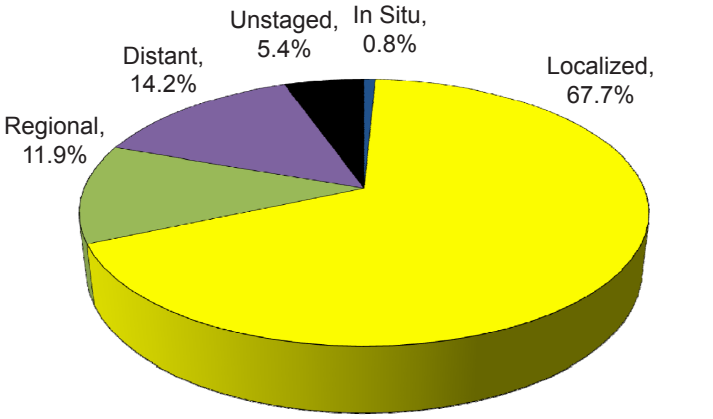
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	15.4	19.9	11.4
# of new invasive cases	258	159	99
# of new in-situ cases	2	2	0
# of deaths	70	48	22

Total Cases by County

Ada	66	Cassia	2	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	10	Clearwater	1	Madison	1
Bear Lake	-	Custer	1	Minidoka	4
Benewah	3	Elmore	6	Nez Perce	8
Bingham	2	Franklin	2	Oneida	-
Blaine	1	Fremont	3	Owyhee	4
Boise	5	Gem	4	Payette	4
Bonner	7	Gooding	3	Power	4
Bonneville	17	Idaho	4	Shoshone	3
Boundary	-	Jefferson	2	Teton	1
Butte	3	Jerome	1	Twin Falls	11
Camas	-	Kootenai	31	Valley	2
Canyon	33	Latah	4	Washington	3
Caribou	2	Lemhi	1		

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.

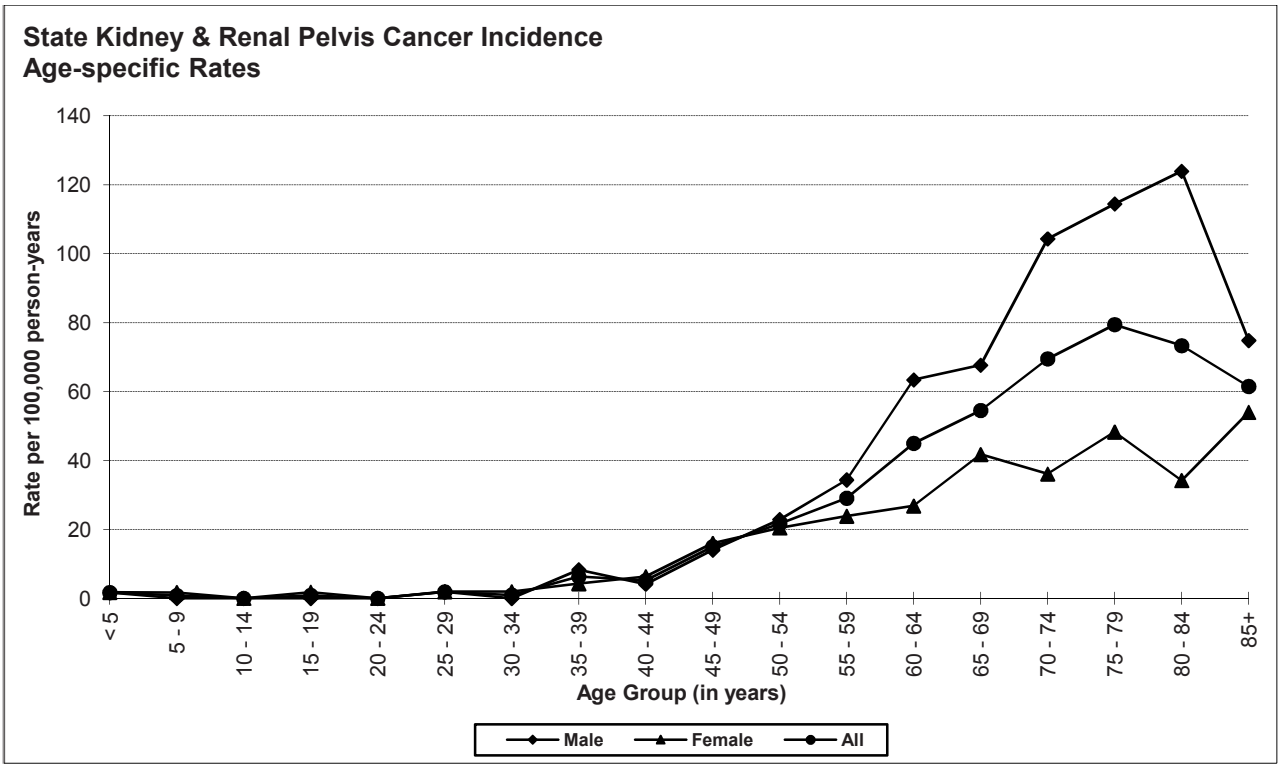
Occupation Certain occupations, such as laundry and leather workers, have been associated with increased risk due to chemical exposure.

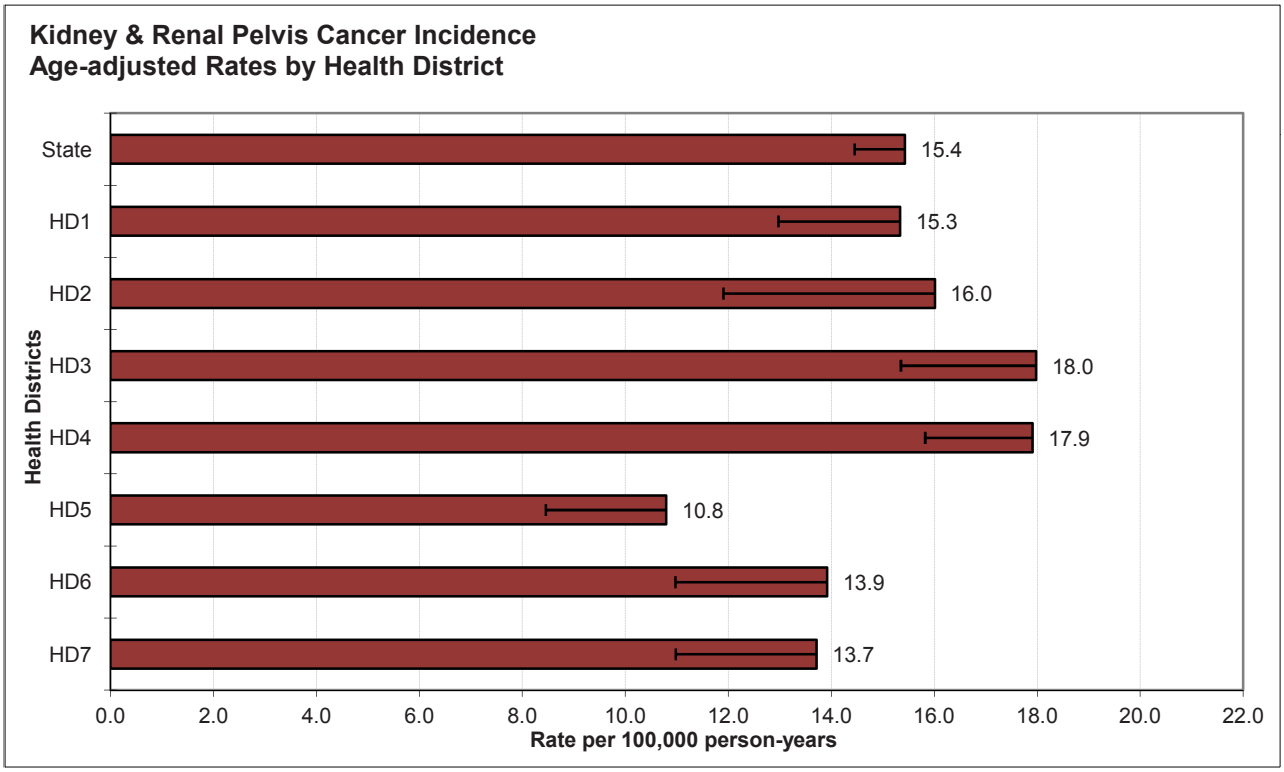
Other Cigarette smoking is strongly associated with renal pelvis and ureter cancers. Smokers are at twice the risk of developing kidney cancer as non-smokers. Analgesic mixtures containing phenacetin increase the risk of kidney cancer. Obesity is a risk factor for kidney cancer. High dietary protein consumption, independent of fat and calorie intake, may elevate kidney cancer risk.

Special Notes

Mean age-adjusted incidence rate across health districts:	15.1
95% confidence interval on the mean age-adjusted incidence rate:	13.2- 17.0
Median age-adjusted incidence rate of health districts:	15.3
Range of age-adjusted incidence rate for health districts:	10.8- 18.0
SEER 18 rate (2010, all races):	14.9
NPCR rate (2010, all races):	15.3

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 80-84 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 Kidney & Renal Pelvis Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
140
120
100
80
60
40
20
0
< 5
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+
Age Group (in years)
Male
Female
All


Kidney & Renal Pelvis Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
15.4
15.3
16.0
18.0
17.9
10.8
13.9
13.7
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0
20.0
22.0
Rate per 100,000 person-years

LARYNX

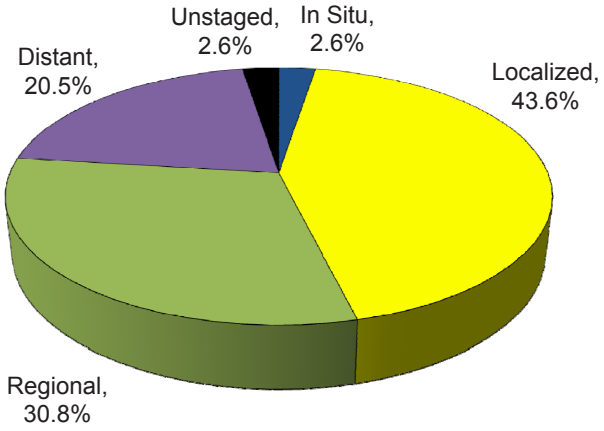
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	2.3	3.9	0.8
# of new invasive cases	38	31	7
# of new in-situ cases	1	1	0
# of deaths	10	9	1

Total Cases by County

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

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.

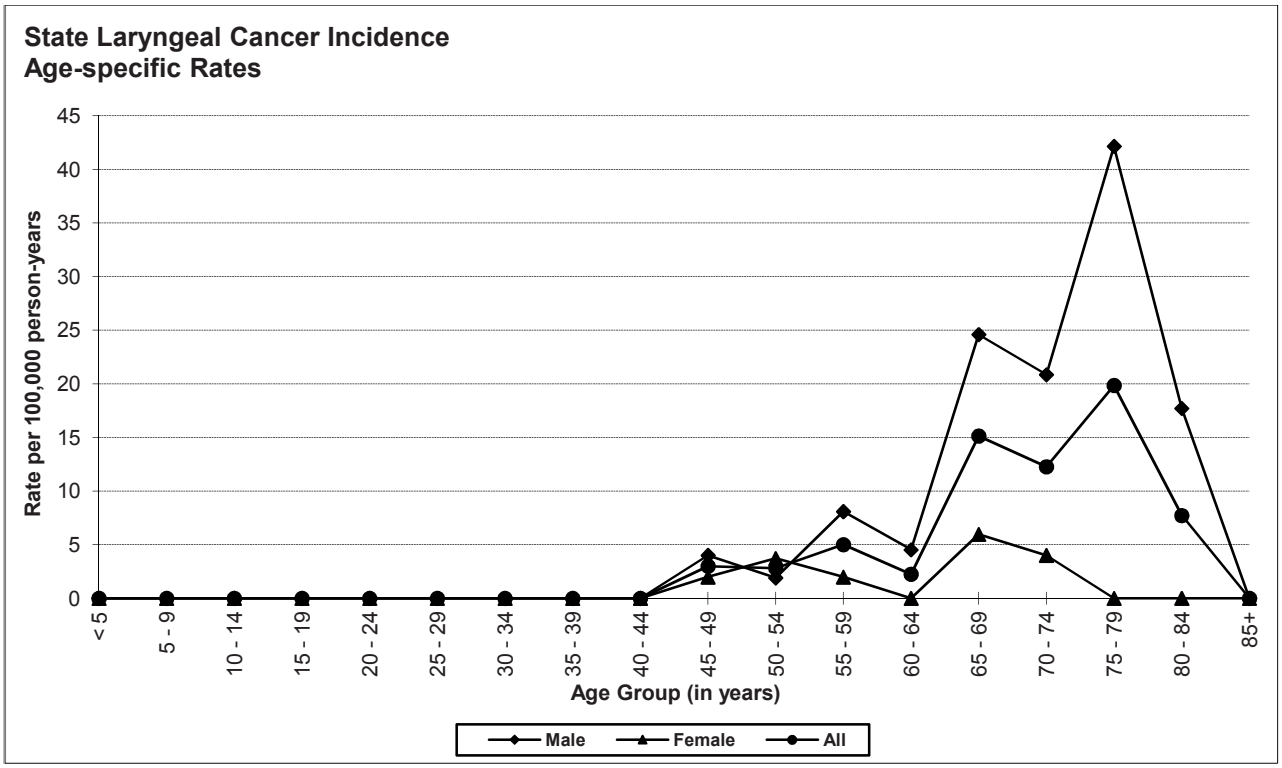
Diet Diets low in fresh fruits and vegetables may increase the risk.

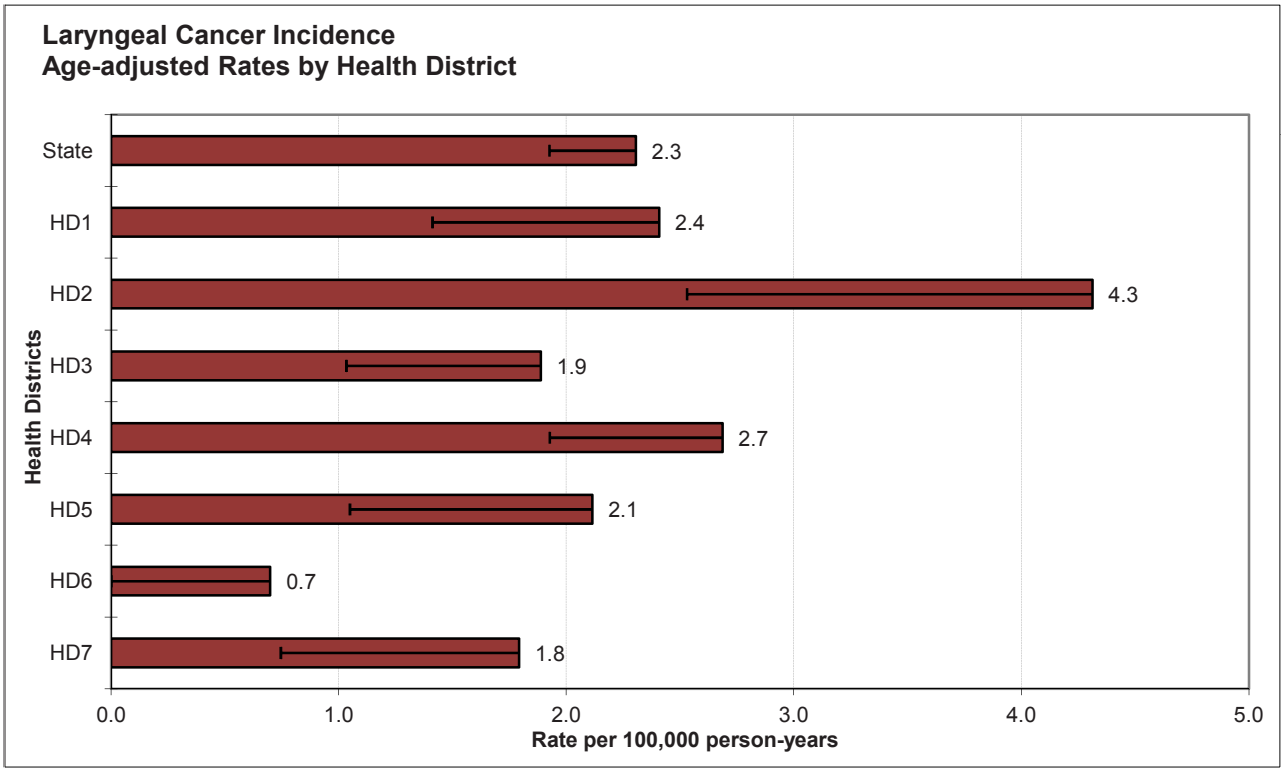
Other Cigarette smoking and alcohol use are both major risk factors. The combination of alcohol consumption and tobacco use (smoking or spit tobacco) acts greatly to increase the risk. A patient with a single laryngeal cancer who continues to smoke and drink alcohol has an enhanced risk of developing a second laryngeal tumor.

Special Notes

Mean age-adjusted incidence rate across health districts:	2.3
95% confidence interval on the mean age-adjusted incidence rate:	1.5- 3.1
Median age-adjusted incidence rate of health districts:	2.1
Range of age-adjusted incidence rate for health districts:	0.7- 4.3
SEER 18 rate (2010, all races):	3.3
NPCR rate (2010, all races):	3.6

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. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.


State Laryngeal Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
45
40
35
30
25
20
15
10
5
0
< 5
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+
Age Group (in years)
Male
Female
All


Laryngeal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
2.3
2.4
4.3
1.9
2.7
2.1
0.7
1.8
0.0
1.0
2.0
3.0
4.0
5.0
Rate per 100,000 person-years

LEUKEMIA

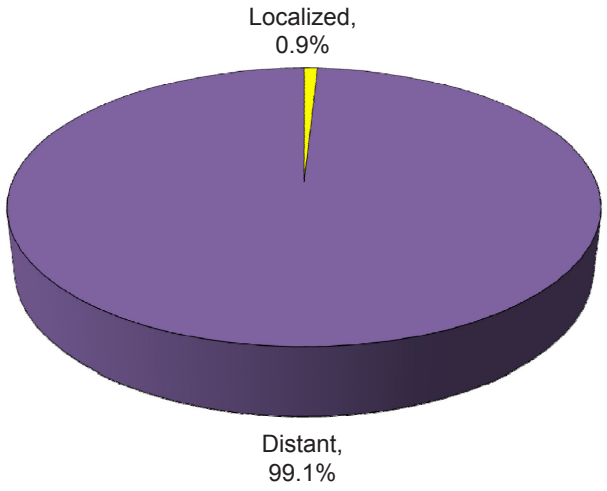
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	14.1	16.2	12.1
# of new invasive cases	234	127	107
# of new in-situ cases	0	0	0
# of deaths	117	66	51

Total Cases by County

Ada	72	Cassia	3	Lewis	1
Adams	1	Clark	-	Lincoln	2
Bannock	11	Clearwater	1	Madison	6
Bear Lake	1	Custer	2	Minidoka	3
Benewah	-	Elmore	5	Nez Perce	5
Bingham	8	Franklin	1	Oneida	-
Blaine	4	Fremont	-	Owyhee	-
Boise	2	Gem	1	Payette	3
Bonner	5	Gooding	2	Power	-
Bonneville	12	Idaho	1	Shoshone	3
Boundary	1	Jefferson	4	Teton	5
Butte	-	Jerome	2	Twin Falls	14
Camas	-	Kootenai	24	Valley	1
Canyon	22	Latah	1	Washington	3
Caribou	1	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.

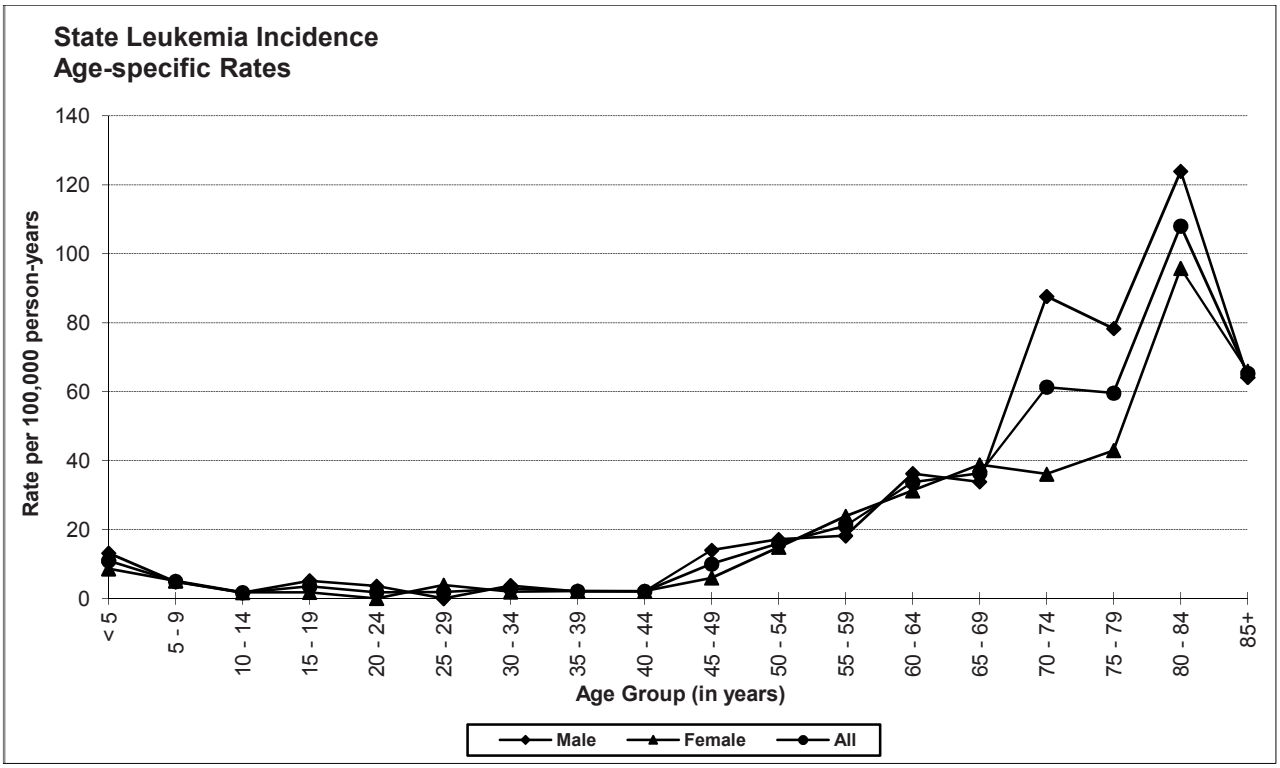
Occupation Benzene is a known cause of leukemia (predominantly acute myelogenous leukemia [AML]). Chimney sweeps exposed to soot are at higher risk.

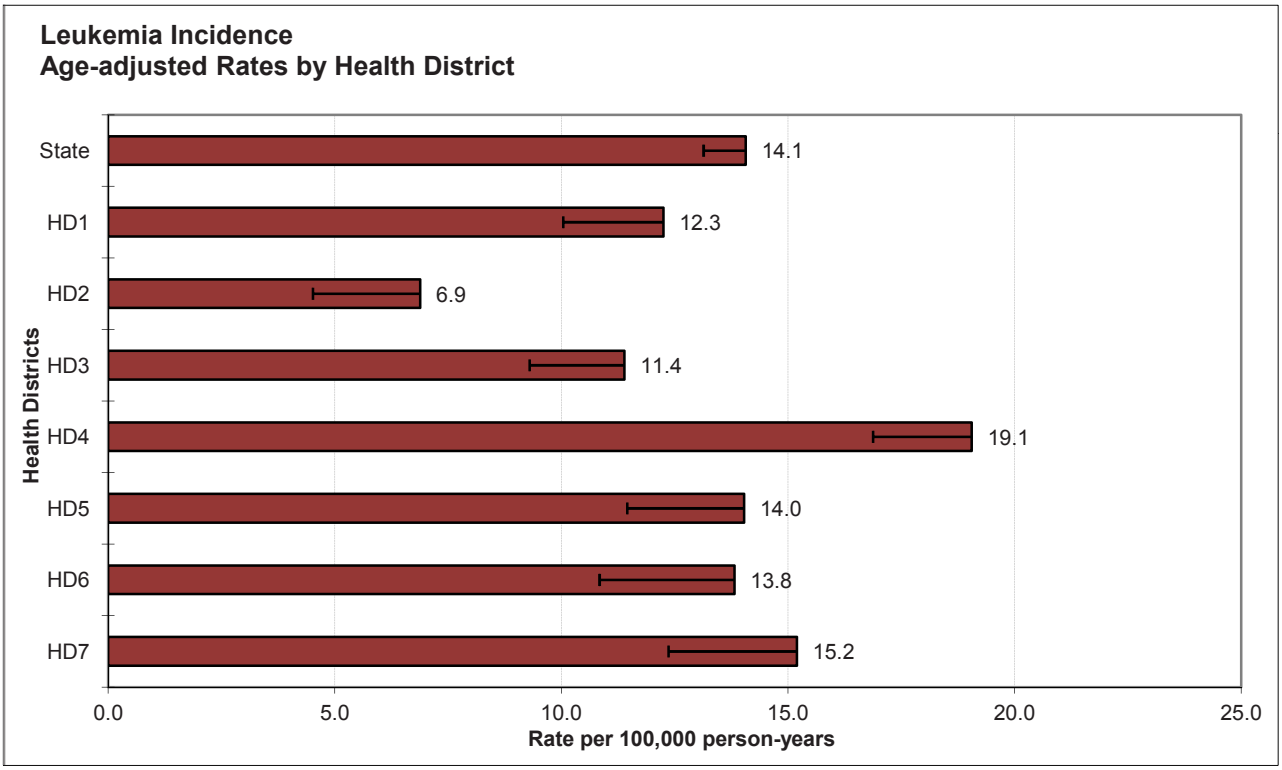
Other Ionizing radiation exposure increases the risk (except for CLL). Environmental exposure to low frequency, non-ionizing radiation and its association with leukemia incidence is being investigated. Treatment with some chemotherapeutic agents for other cancers increases the risk of leukemia. Exposure 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:	13.2
95% confidence interval on the mean age-adjusted incidence rate:	10.5- 16.0
Median age-adjusted incidence rate of health districts:	13.8
Range of age-adjusted incidence rate for health districts:	6.9- 19.1
SEER 18 rate (2010, all races):	12.9
NPCR rate (2010, all races):	12.3

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 4 had statistically significantly more cases of leukemia than expected based upon rates for the remainder of Idaho, and Health District 2 had statistically significantly fewer cases than expected.


State Leukemia Incidence
Age-specific Rates
Rate per 100,000 person-years
140
120
100
80
60
40
20
0
< 5
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+
Age Group (in years)
Male
Female
All


Leukemia Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
14.1
12.3
6.9
11.4
19.1
14.0
13.8
15.2
0.0
5.0
10.0
15.0
20.0
25.0
Rate per 100,000 person-years

LIVER AND BILE DUCT

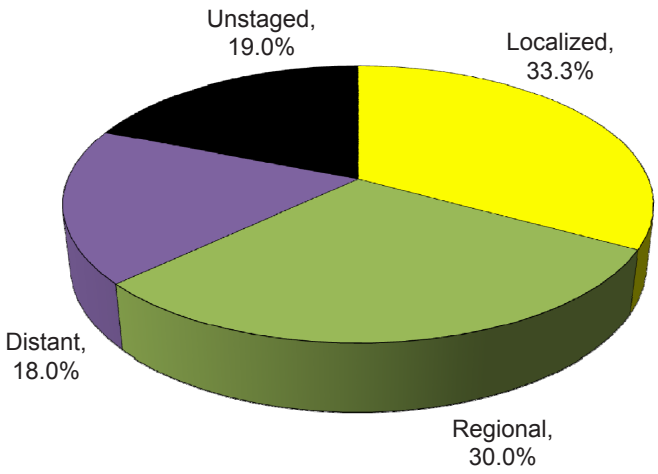
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.7	8.2	3.5
# of new invasive cases	100	69	31
# of new in-situ cases	0	0	0
# of deaths	85	56	29

Total Cases by County

Ada	28	Cassia	-	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	8	Clearwater	1	Madison	1
Bear Lake	-	Custer	1	Minidoka	2
Benewah	-	Elmore	1	Nez Perce	3
Bingham	2	Franklin	-	Oneida	-
Blaine	2	Fremont	-	Owyhee	-
Boise	-	Gem	3	Payette	-
Bonner	6	Gooding	1	Power	-
Bonneville	4	Idaho	1	Shoshone	1
Boundary	1	Jefferson	-	Teton	-
Butte	-	Jerome	1	Twin Falls	9
Camas	-	Kootenai	13	Valley	-
Canyon	9	Latah	-	Washington	-
Caribou	1	Lemhi	-		

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.

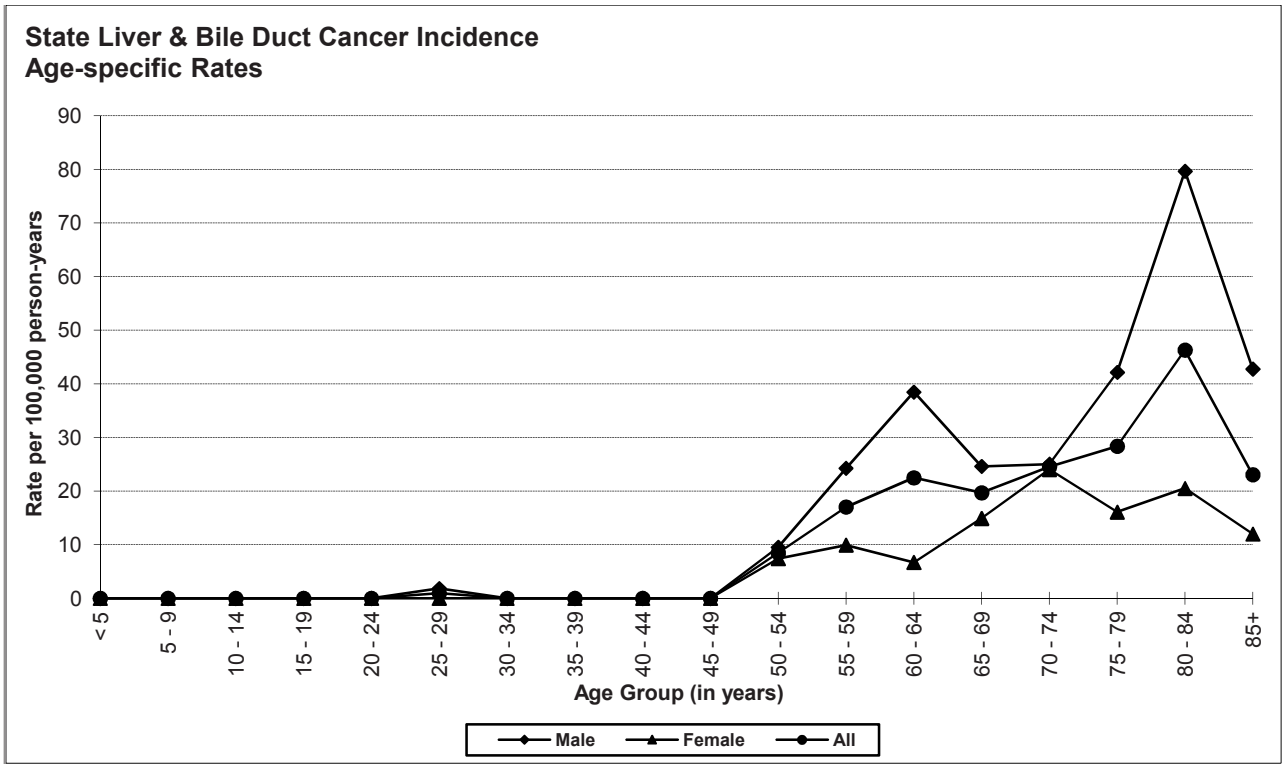
Occupation Thorium dioxide (an x-ray contrast medium) exposure increases liver cancer risk. Exposure to vinyl chloride used in plastic production is associated with an increased risk of angiosarcoma of the liver. Chimney sweeps exposed to soot are at higher risk.

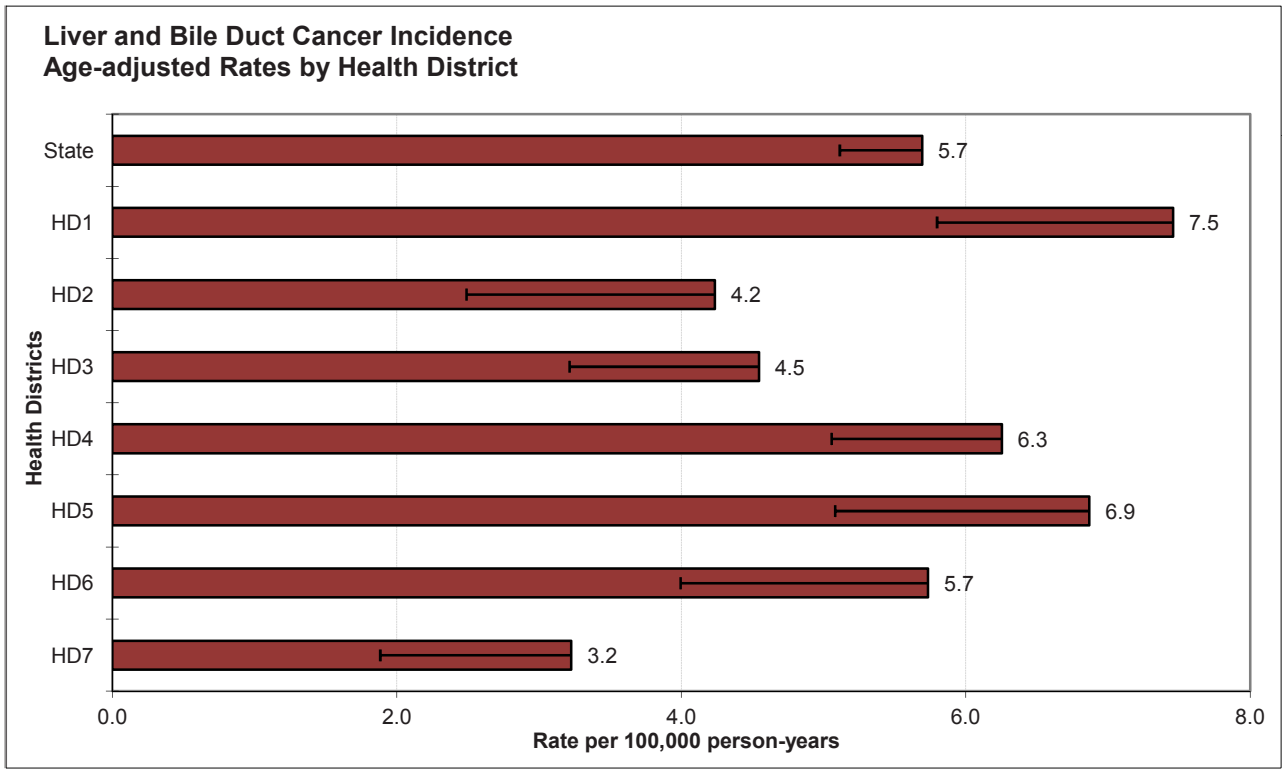
Other Hepatitis B and Hepatitis C infections are significant causes of hepatocellular carcinoma. Cirrhosis of the liver due to viral hepatitis, alcoholism, or toxic chemical exposure accounts for 50-80% of patients diagnosed with liver cancer. Long-term use of oral contraceptives increases risk of hepatocellular carcinoma.

Special Notes

Mean age-adjusted incidence rate across health districts:	5.5
95% confidence interval on the mean age-adjusted incidence rate:	4.3- 6.6
Median age-adjusted incidence rate of health districts:	5.7
Range of age-adjusted incidence rate for health districts:	3.2- 7.5
SEER 18 rate (2010, all races):	7.8
NPCR rate (2010, all races):	6.3

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 80-84 for males and 70-74 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
Rate per 100,000 person-years
90
80
70
60
50
40
30
20
10
0
< 5
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+
Age Group (in years)
Male
Female
All


Liver and Bile Duct Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
5.7
7.5
4.2
4.5
6.3
6.9
5.7
3.2
0.0
2.0
4.0
6.0
8.0
Rate per 100,000 person-years

LUNG AND BRONCHUS

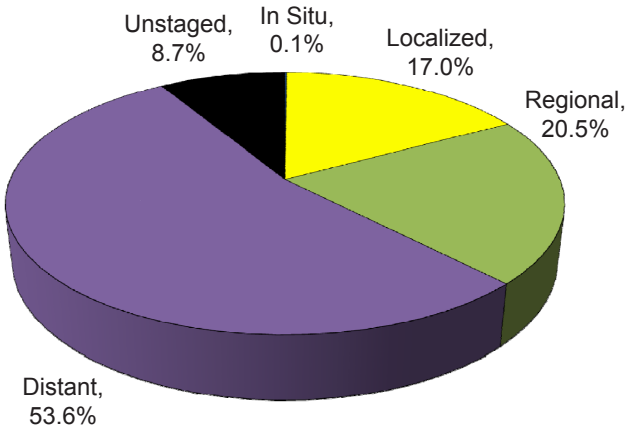
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	51.0	56.3	47.2
# of new invasive cases	838	430	408
# of new in-situ cases	1	0	1
# of deaths	616	336	280

Total Cases by County

Ada	170	Cassia	13	Lewis	4
Adams	9	Clark	-	Lincoln	1
Bannock	38	Clearwater	9	Madison	-
Bear Lake	6	Custer	5	Minidoka	12
Benewah	14	Elmore	25	Nez Perce	33
Bingham	20	Franklin	3	Oneida	1
Blaine	6	Fremont	7	Owyhee	5
Boise	6	Gem	11	Payette	19
Bonner	30	Gooding	11	Power	4
Bonneville	37	Idaho	17	Shoshone	22
Boundary	6	Jefferson	6	Teton	1
Butte	1	Jerome	8	Twin Falls	41
Camas	-	Kootenai	96	Valley	4
Canyon	99	Latah	20	Washington	11
Caribou	3	Lemhi	5		

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.

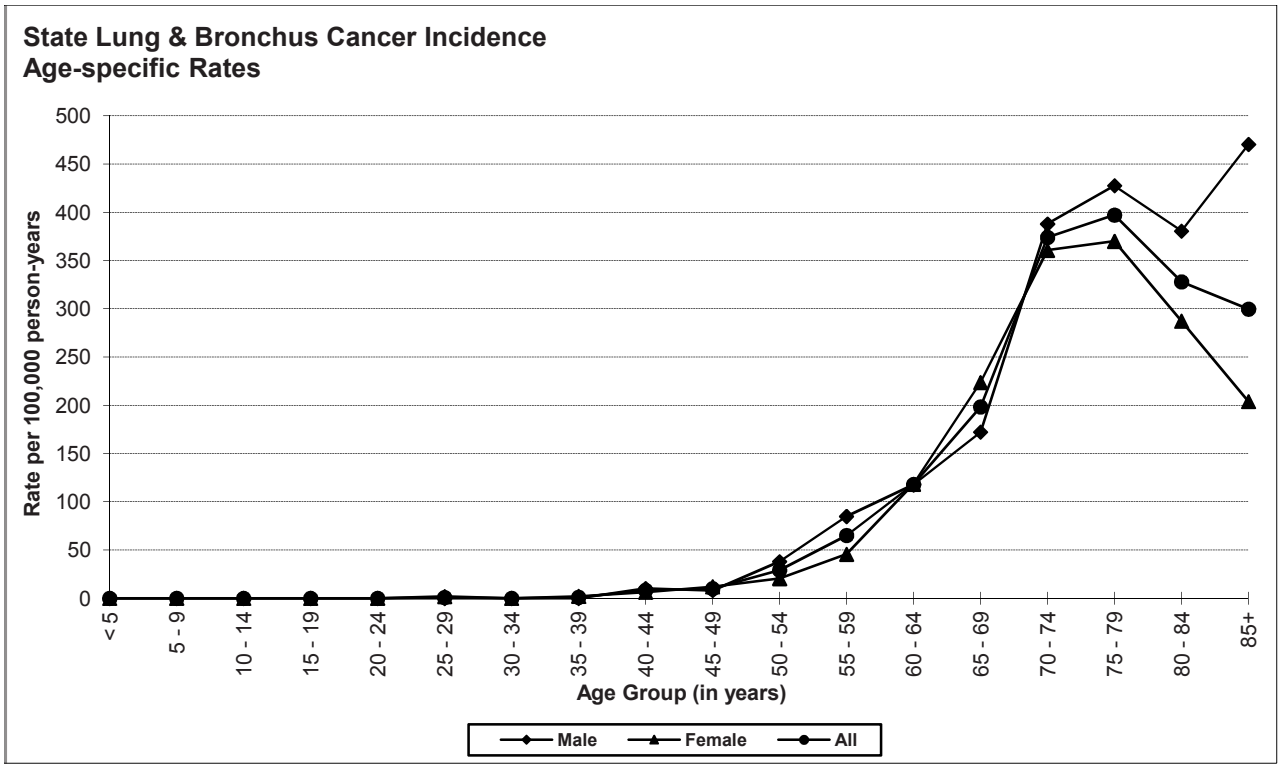
Occupation Occupational or environmental exposures to asbestos, cadmium, chromium, coal tars, crystalline silica dust, polycyclic aromatic hydrocarbons, radon, soot, chlorpyrifos insecticides, ionizing radiation, and other substances increase the risk.

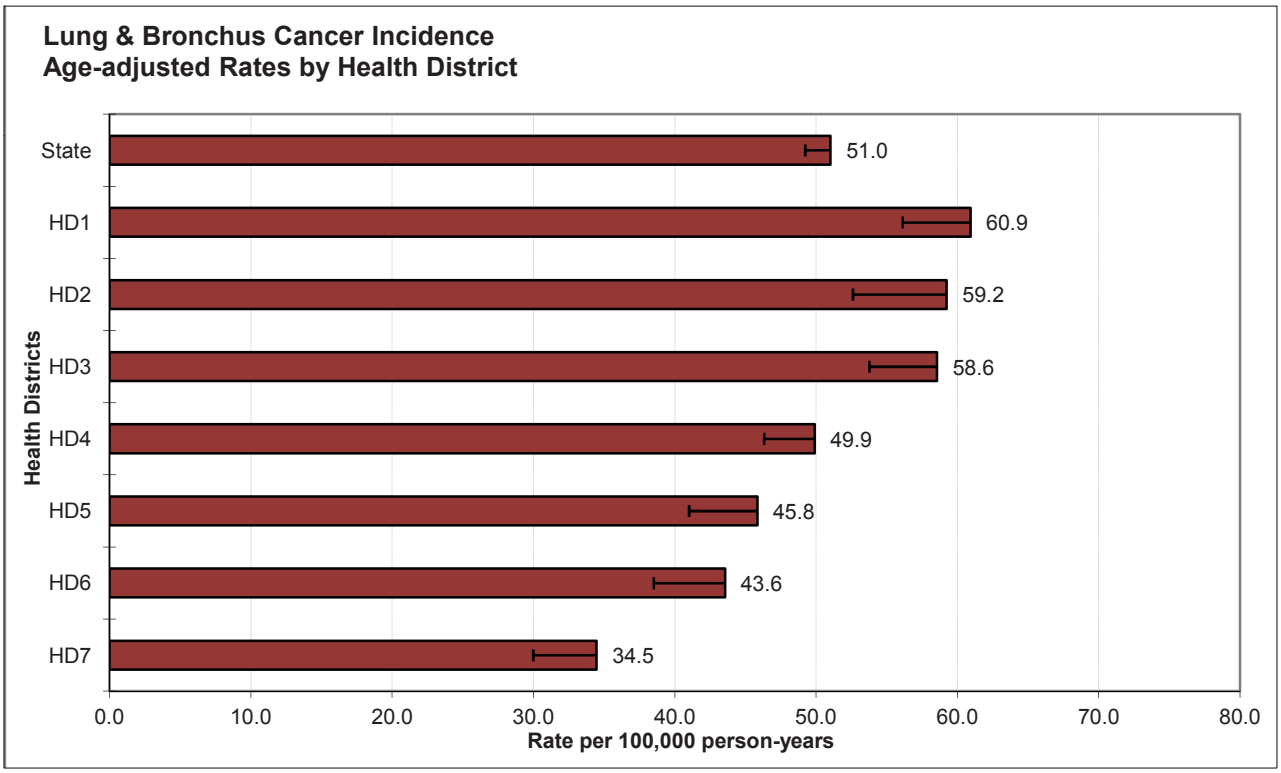
Other Cigarette smoking, including exposure to second-hand smoke, is the most important risk factor, accounting for over 85% of lung cancer deaths. Evidence exists that rates are about 1.3 times higher, adjusted for smoking, in urban areas than rural areas due to air pollution, mostly from motor vehicles.

Special Notes

Mean age-adjusted incidence rate across health districts:	50.4
95% confidence interval on the mean age-adjusted incidence rate:	43.1- 57.6
Median age-adjusted incidence rate of health districts:	49.9
Range of age-adjusted incidence rate for health districts:	35.4- 60.9
SEER 18 rate (2010, all races):	57.3
NPCR rate (2010, all races):	62.2

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 69. The incidence rates increased with age, peaking in the age group 85+ for males and 75-79 for females. Health Districts 1 and 3 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 7 had statistically significantly fewer.


State Lung & Bronchus Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
500
450
400
350
300
250
200
150
100
50
0
< 5
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+
Age Group (in years)
Male
Female
All


Lung & Bronchus Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
51.0
60.9
59.2
58.6
49.9
45.8
43.6
34.5
0.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
Rate per 100,000 person-years

MELANOMA OF SKIN

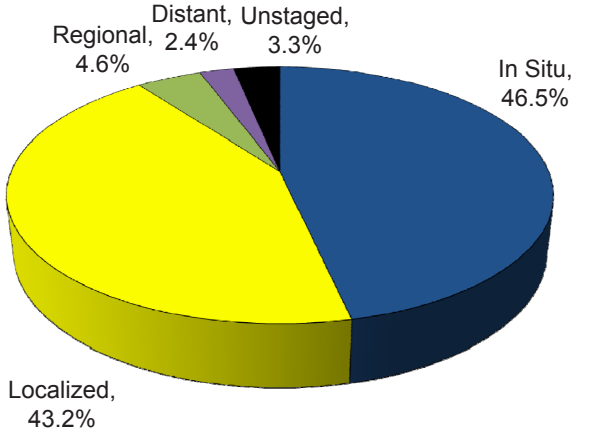
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	27.5	34.0	22.3
# of new invasive cases	443	265	178
# of new in-situ cases	385	226	159
# of deaths	57	41	16

Total Cases by County

Ada	241	Cassia	6	Lewis	5
Adams	2	Clark	-	Lincoln	1
Bannock	30	Clearwater	6	Madison	12
Bear Lake	4	Custer	4	Minidoka	5
Benewah	3	Elmore	6	Nez Perce	24
Bingham	16	Franklin	1	Oneida	3
Blaine	23	Fremont	5	Owyhee	5
Boise	5	Gem	7	Payette	14
Bonner	27	Gooding	6	Power	2
Bonneville	70	Idaho	3	Shoshone	8
Boundary	5	Jefferson	14	Teton	6
Butte	-	Jerome	6	Twin Falls	39
Camas	-	Kootenai	97	Valley	4
Canyon	85	Latah	18	Washington	3
Caribou	2	Lemhi	5		

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.

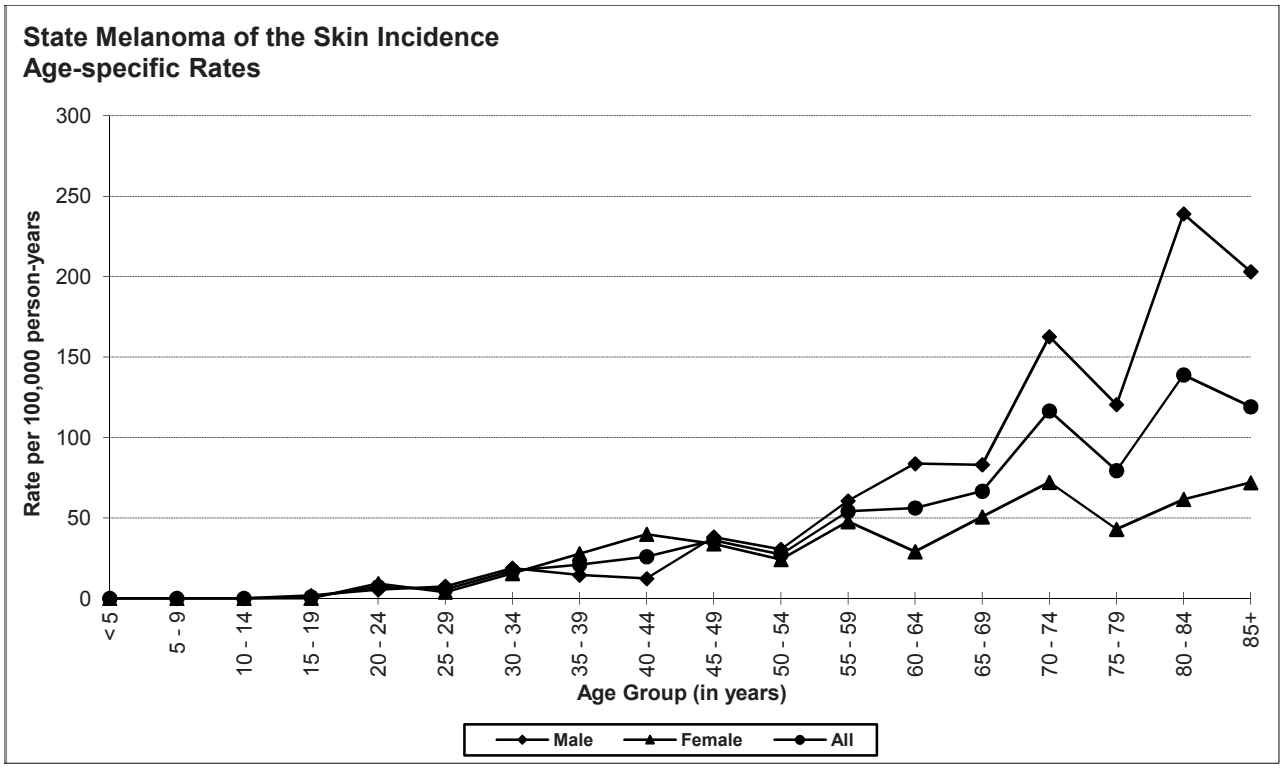
Race & SES The incidence rate is highest in whites and lowest in blacks. Incidence rates of melanoma of the skin are higher in higher income groups (indoor workers).

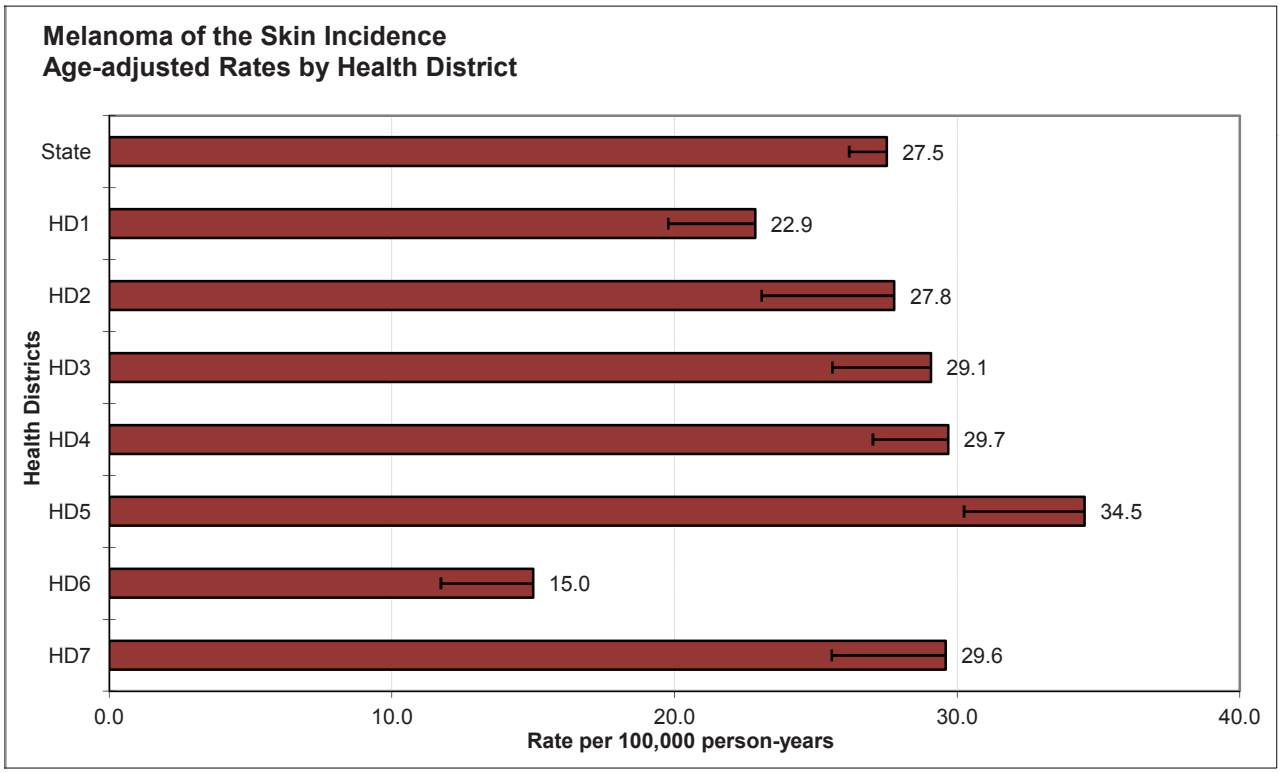
Other Ultra-violet light exposure, especially blistering sunburns during childhood, is a major risk factor. Melanoma incidence rates are increasing around the world. Blue eyes, fair or red hair and pale complexion are well-known risk factors for melanoma. Apart from race and age, the number of melanocytic nevi is the strongest known risk factor for melanoma. 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:	26.9
95% confidence interval on the mean age-adjusted incidence rate:	22.3- 31.6
Median age-adjusted incidence rate of health districts:	29.1
Range of age-adjusted incidence rate for health districts:	15.0- 34.5
SEER 18 rate (2010, all races):	21.3
NPCR rate (2010, all races):	18.8

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 44. Health District 5 had statistically significantly more cases of melanoma of the skin than expected based upon rates for the remainder of Idaho, and Health District 6 had statistically significantly fewer. The low case count for Health District 6 is likely due to incomplete reporting from non-hospital sources.


State Melanoma of the Skin Incidence
Age-specific Rates
Rate per 100,000 person-years
300
250
200
150
100
50
0
< 5
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+
Age Group (in years)
Male
Female
All


Melanoma of the Skin Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
27.5
22.9
27.8
29.1
29.7
34.5
15.0
29.6
0.0
10.0
20.0
30.0
40.0
Rate per 100,000 person-years

MYELOMA

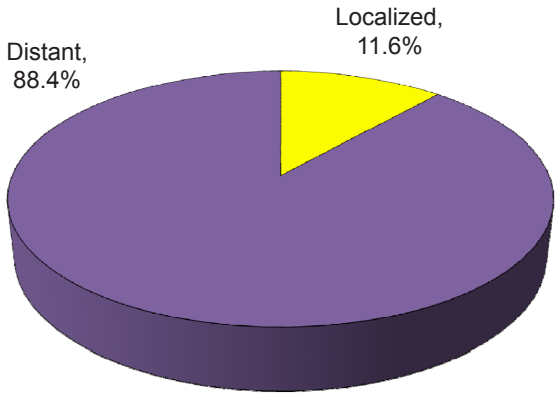
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.9	8.5	3.8
# of new invasive cases	95	63	32
# of new in-situ cases	0	0	0
# of deaths	42	27	15

Total Cases by County

Ada	28	Cassia	1	Lewis	1
Adams	-	Clark	1	Lincoln	-
Bannock	2	Clearwater	-	Madison	1
Bear Lake	2	Custer	1	Minidoka	1
Benewah	3	Elmore	1	Nez Perce	4
Bingham	4	Franklin	-	Oneida	-
Blaine	1	Fremont	-	Owyhee	1
Boise	-	Gem	2	Payette	3
Bonner	2	Gooding	-	Power	-
Bonneville	4	Idaho	-	Shoshone	-
Boundary	-	Jefferson	-	Teton	1
Butte	1	Jerome	1	Twin Falls	3
Camas	-	Kootenai	11	Valley	-
Canyon	9	Latah	4	Washington	2
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.

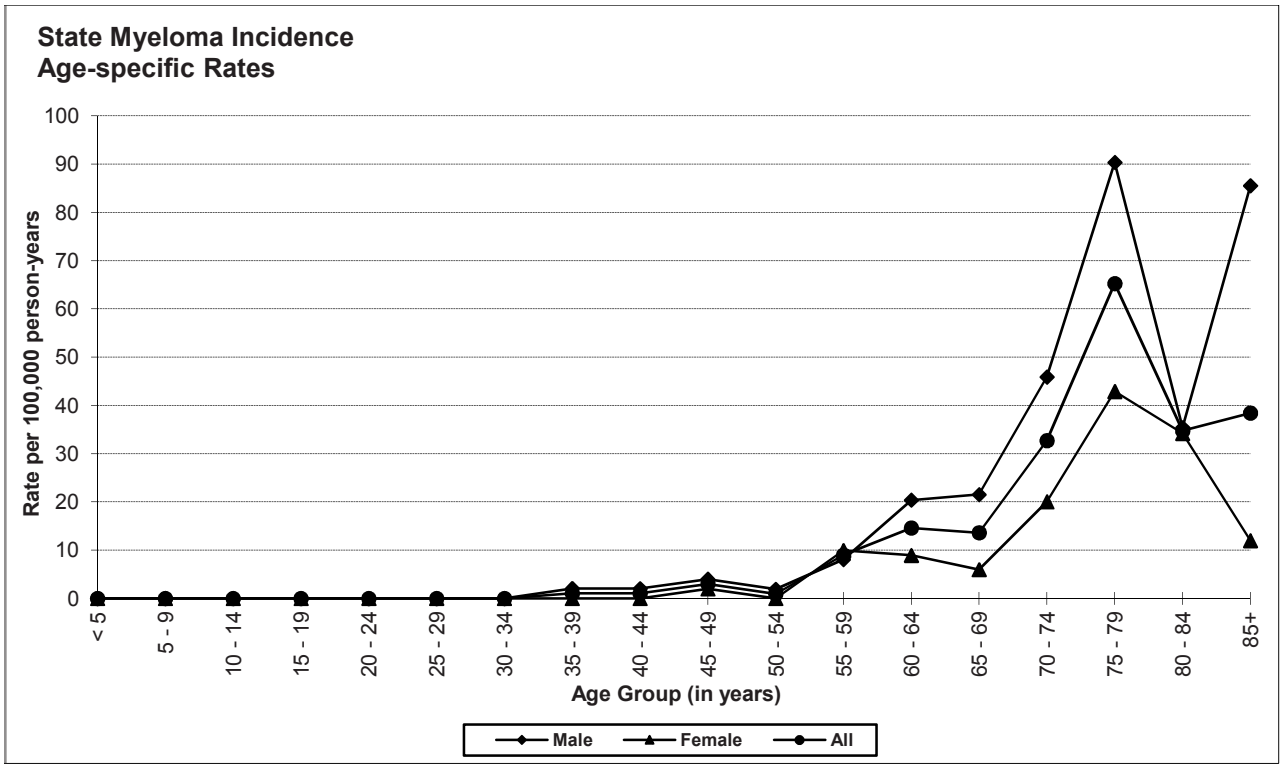
Genetics Genetic factors play an important role in its development, but how so is not completely understood. Familial factors and chronic antigenic stimulation have also been implicated.

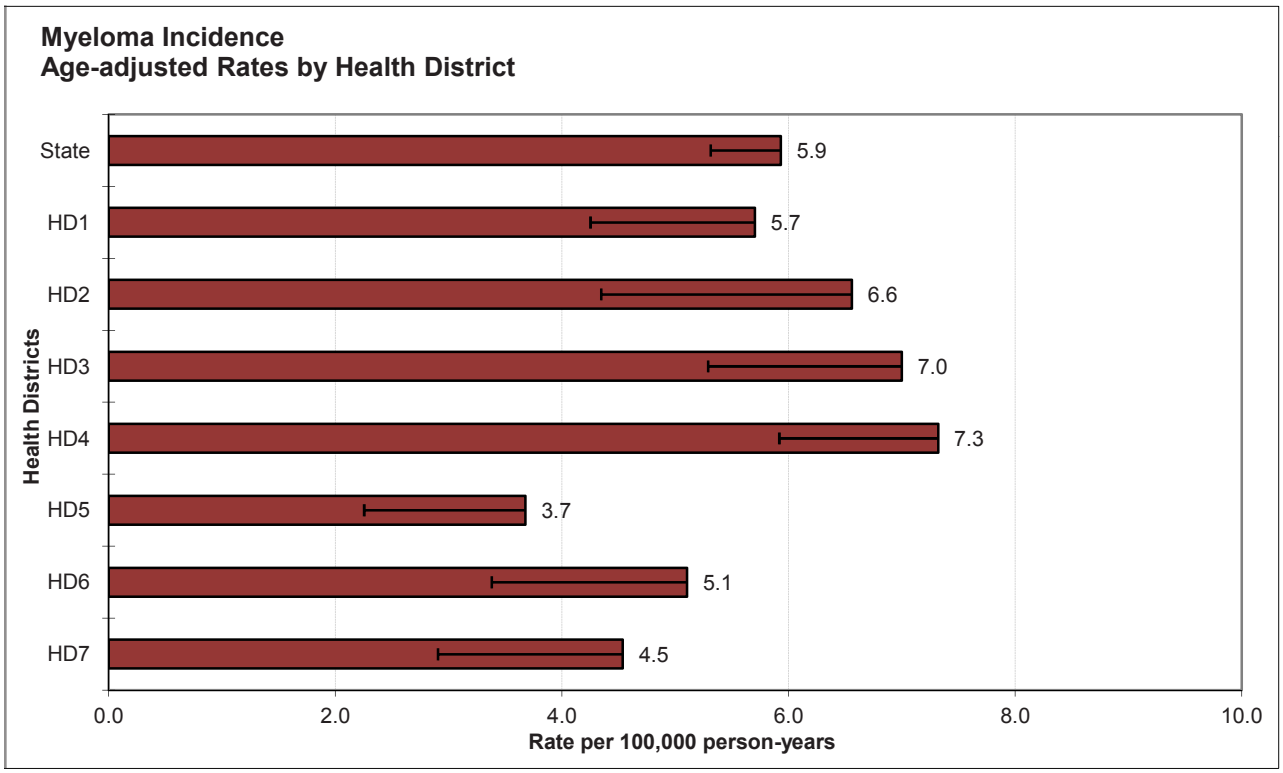
Other Multiple myeloma has been associated with lymphomas such as Burkitt's and non-Hodgkin lymphomas. Studies have suggested several possible viral etiologies, and multiple myeloma has been linked to ionizing radiation exposure. Several specific chemical and physical substances have been linked to myeloma 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:	5.7
95% confidence interval on the mean age-adjusted incidence rate:	4.7- 6.7
Median age-adjusted incidence rate of health districts:	5.7
Range of age-adjusted incidence rate for health districts:	3.7- 7.3
SEER 18 rate (2010, all races):	6.1
NPCR rate (2010, all races):	5.8

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 65-69. 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
Rate per 100,000 person-years
100
90
80
70
60
50
40
30
20
10
0
< 5
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+
Age Group (in years)
Male
Female
All


Myeloma Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
5.9
5.7
6.6
7.0
7.3
3.7
5.1
4.5
0.0
2.0
4.0
6.0
8.0
10.0
Rate per 100,000 person-years

NON-HODGKIN LYMPHOMA

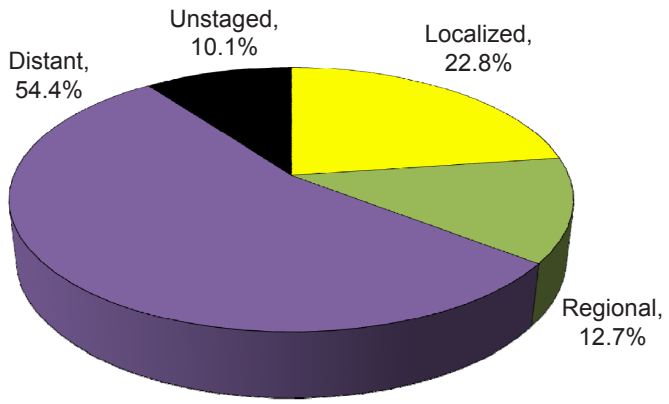
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	18.8	22.8	15.3
# of new invasive cases	307	177	130
# of new in-situ cases	0	0	0
# of deaths	114	68	46

Total Cases by County

Ada	79	Cassia	4	Lewis	2
Adams	-	Clark	-	Lincoln	-
Bannock	15	Clearwater	3	Madison	5
Bear Lake	-	Custer	1	Minidoka	5
Benewah	4	Elmore	1	Nez Perce	15
Bingham	7	Franklin	1	Oneida	1
Blaine	5	Fremont	2	Owyhee	1
Boise	1	Gem	5	Payette	5
Bonner	12	Gooding	3	Power	2
Bonneville	17	Idaho	8	Shoshone	2
Boundary	-	Jefferson	5	Teton	1
Butte	1	Jerome	-	Twin Falls	19
Camas	-	Kootenai	27	Valley	3
Canyon	34	Latah	3	Washington	3
Caribou	2	Lemhi	3		

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 higher for whites than blacks. Rates are higher in upper income groups.

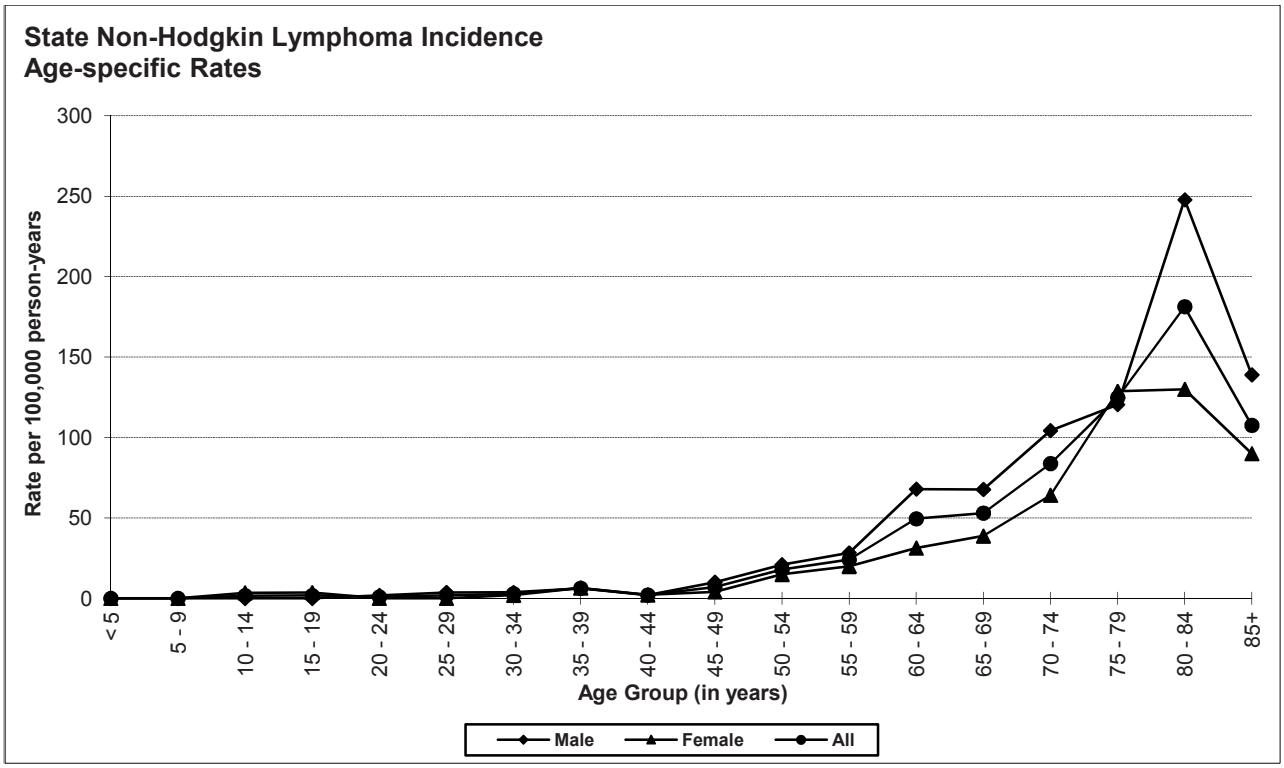
Occupation Ethylene oxide exposure at plants producing sterilized medical supplies and spices is a risk factor.

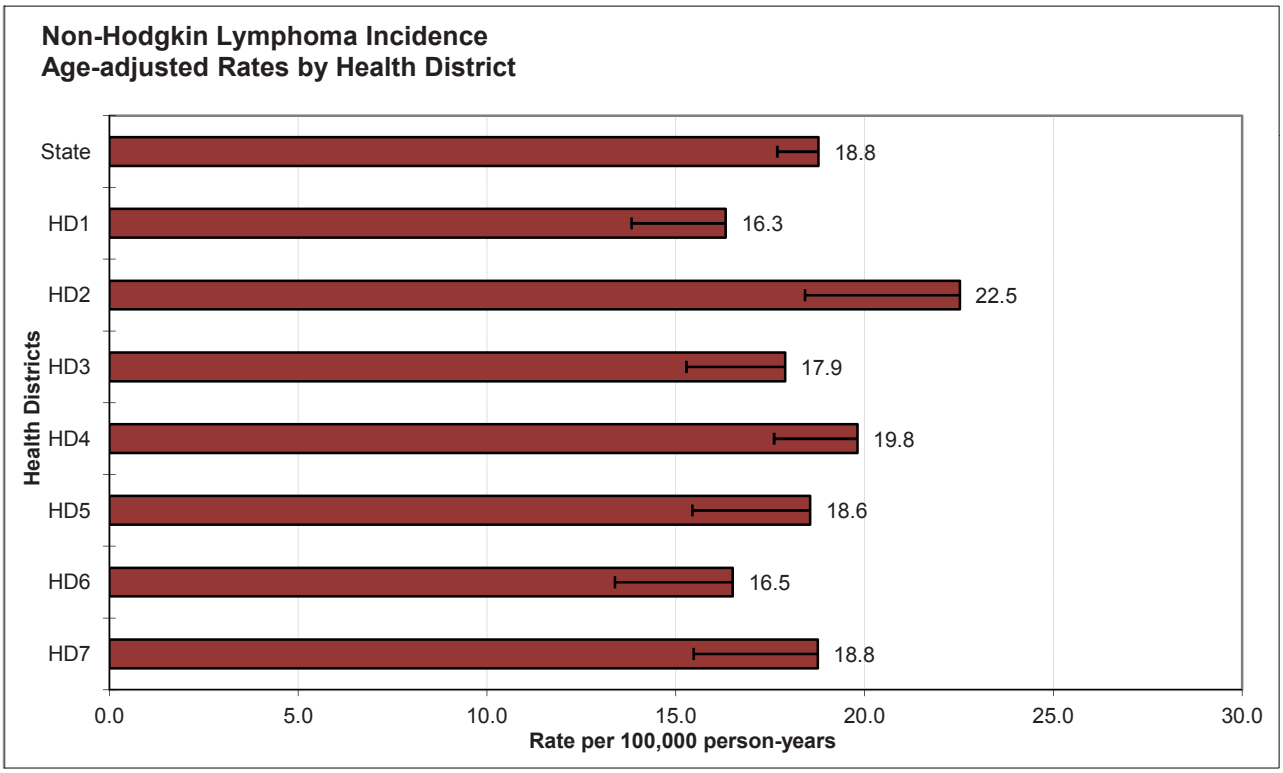
Other Non-Hodgkin lymphoma (NHL) develops with increased frequency in individuals infected with certain viruses, including HTLV-I, HIV, and EBV. Exposures to agricultural chemicals and PCBs have also been implicated. Treatment with some immunosuppressants increases the risk of NHL among organ transplant patients, evidently by reactivating Epstein-Barr virus.

Special Notes

Mean age-adjusted incidence rate across health districts:	18.6
95% confidence interval on the mean age-adjusted incidence rate:	17.1- 20.2
Median age-adjusted incidence rate of health districts:	18.6
Range of age-adjusted incidence rate for health districts:	16.3- 22.5
SEER 18 rate (2010, all races):	19.5
NPCR rate (2010, 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 females. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.


State Non-Hodgkin Lymphoma Incidence
Age-specific Rates
Rate per 100,000 person-years
300
250
200
150
100
50
0
< 5
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+
Age Group (in years)
Male
Female
All


Non-Hodgkin Lymphoma Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
18.8
16.3
22.5
17.9
19.8
18.6
16.5
18.8
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Rate per 100,000 person-years

ORAL CAVITY AND PHARYNX

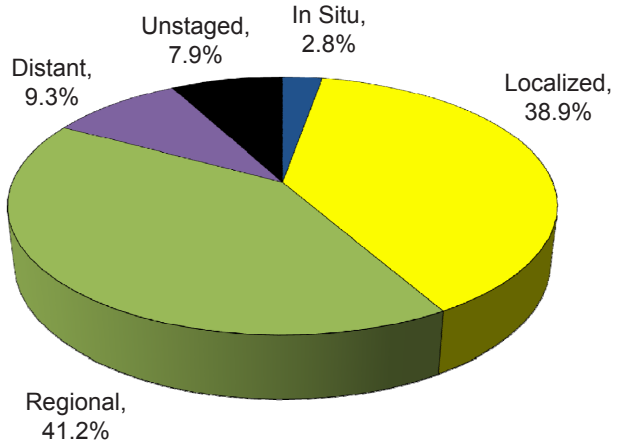
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	12.5	18.3	7.0
# of new invasive cases	210	150	60
# of new in-situ cases	6	2	4
# of deaths	42	31	11

Total Cases by County

Ada	64	Cassia	1	Lewis	1
Adams	-	Clark	-	Lincoln	4
Bannock	7	Clearwater	-	Madison	1
Bear Lake	-	Custer	2	Minidoka	6
Benewah	-	Elmore	2	Nez Perce	8
Bingham	4	Franklin	2	Oneida	1
Blaine	-	Fremont	-	Owyhee	1
Boise	-	Gem	2	Payette	-
Bonner	7	Gooding	3	Power	2
Bonneville	9	Idaho	6	Shoshone	3
Boundary	-	Jefferson	1	Teton	1
Butte	-	Jerome	5	Twin Falls	15
Camas	-	Kootenai	29	Valley	3
Canyon	19	Latah	2	Washington	4
Caribou	-	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 whiates. Rates are also higher among lower income groups.

Diet Diets low in fresh fruit and vegetable consumption are associated with increased risk.

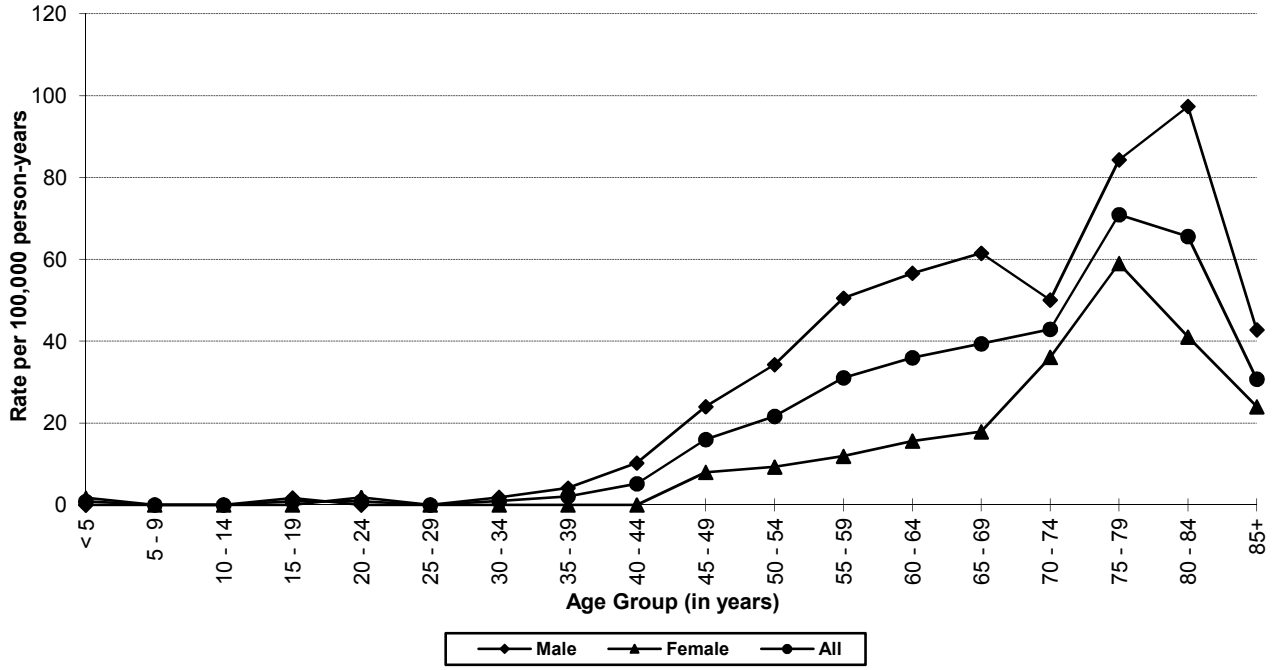
Other Smoking and spit tobacco use are major risk factors for cancers of the oral cavity and pharynx. Alcohol use, especially excessive, is a major risk factor. Combined exposure to tobacco and alcohol multiply the risks of each other. It is estimated that smoking and drinking account for 75% of all 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

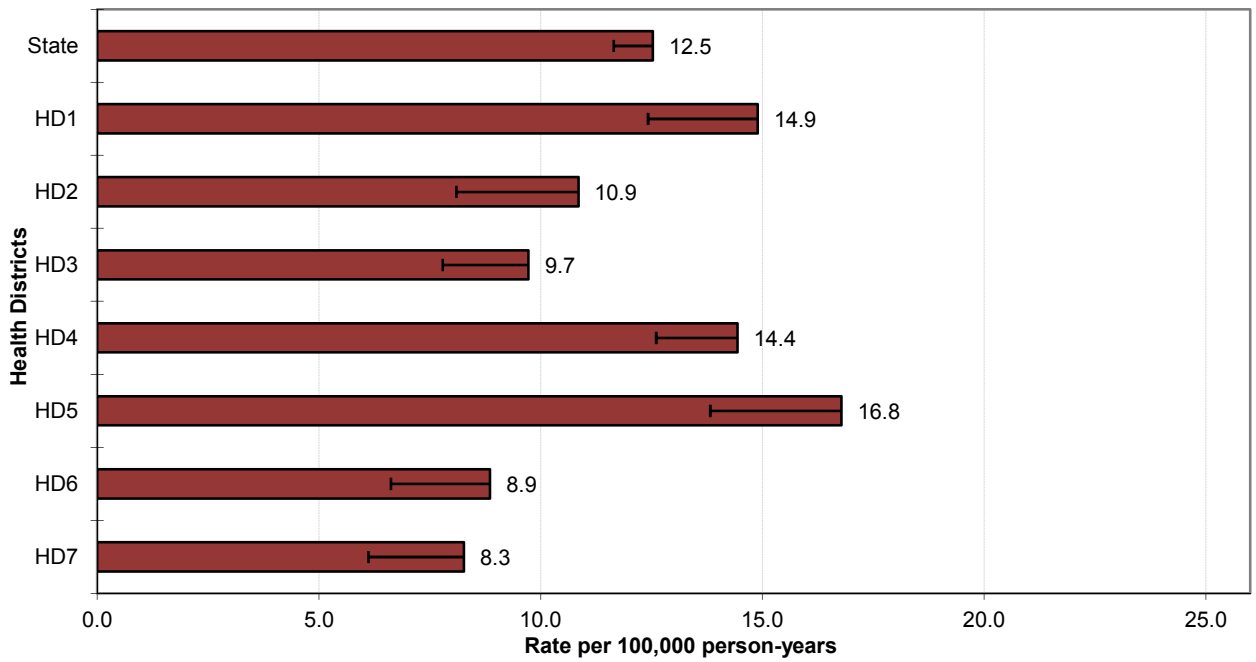
Mean age-adjusted incidence rate across health districts:	12.0
95% confidence interval on the mean age-adjusted incidence rate:	9.5- 14.5
Median age-adjusted incidence rate of health districts:	10.9
Range of age-adjusted incidence rate for health districts:	8.3- 16.8
SEER 18 rate (2010, all races):	10.7
NPCR rate (2010, all races):	10.9

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 80-84 for males and 75-79 for females. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.

State Oral Cavity & Pharyngeal Cancer Incidence
Age-specific Rates



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



OVARY

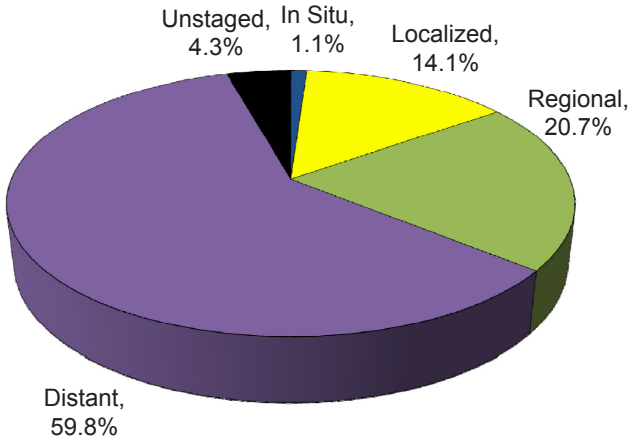
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	10.7
# of new invasive cases	-	-	91
# of new in-situ cases	-	-	1
# of deaths	-	-	64

Total Cases by County

Ada	25	Cassia	1	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	4	Clearwater	-	Madison	-
Bear Lake	-	Custer	1	Minidoka	-
Benewah	1	Elmore	2	Nez Perce	4
Bingham	3	Franklin	1	Oneida	3
Blaine	-	Fremont	-	Owyhee	1
Boise	-	Gem	1	Payette	-
Bonner	1	Gooding	-	Power	-
Bonneville	8	Idaho	1	Shoshone	1
Boundary	1	Jefferson	4	Teton	-
Butte	-	Jerome	-	Twin Falls	3
Camas	1	Kootenai	10	Valley	-
Canyon	9	Latah	3	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.

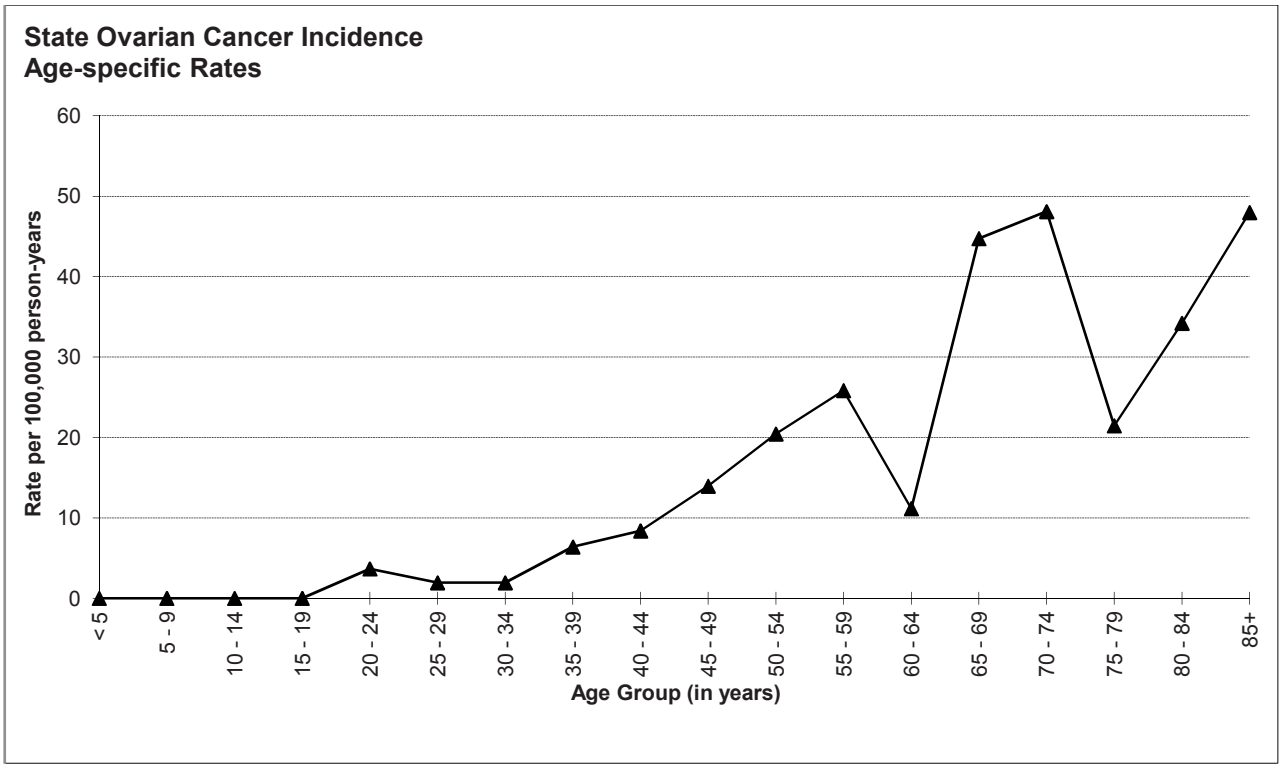
Diet Dietary animal fat may increase the risk.

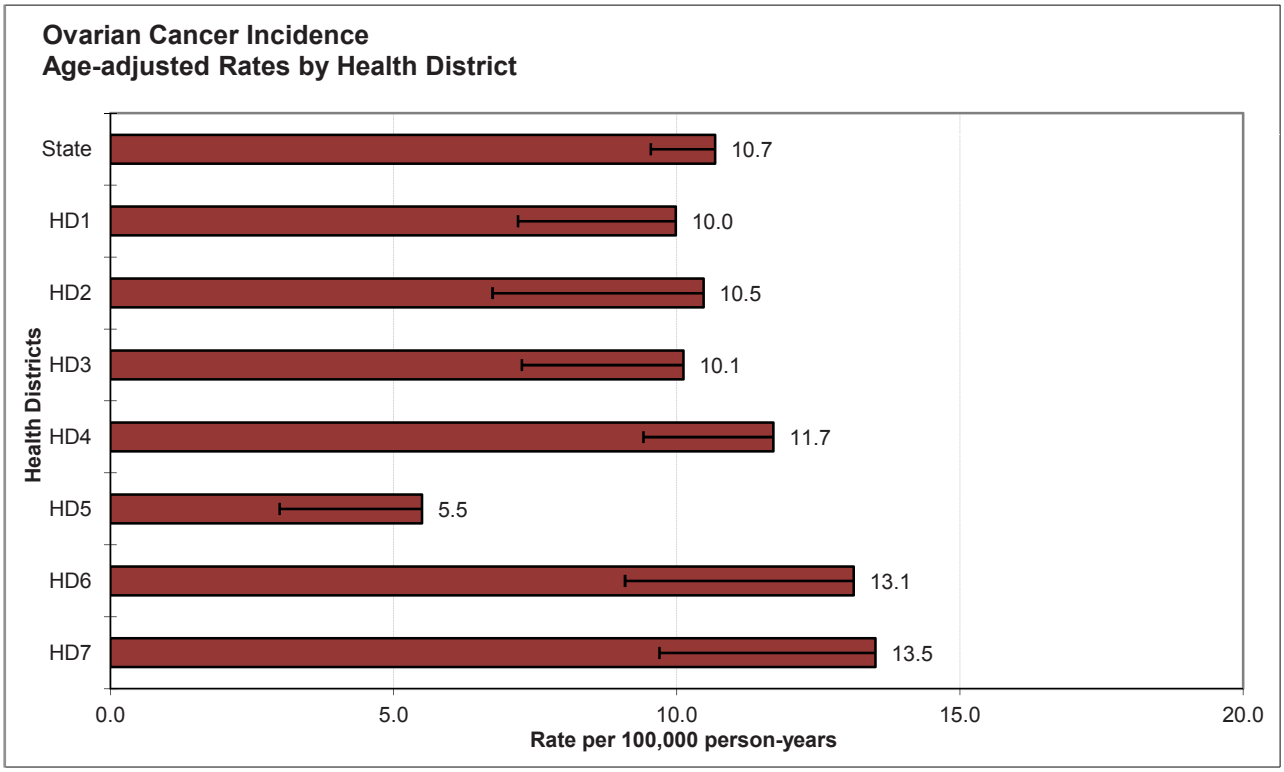
Other High dose (>100 rads) ionizing radiation roughly doubles the risk of ovarian cancer.

Special Notes

Mean age-adjusted incidence rate across health districts:	10.6	
95% confidence interval on the mean age-adjusted incidence rate:	8.7-	12.6
Median age-adjusted incidence rate of health districts:	10.5	
Range of age-adjusted incidence rate for health districts:	5.5-	13.5
SEER 18 rate (2010, all races):	11.9	
NPCR rate (2010, 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 45-49 age group. The highest age-specific rate was for women aged 70-74. Health District 5 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho.


State Ovarian Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
60
50
40
30
20
10
0
< 5
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+
Age Group (in years)


Ovarian Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
10.7
10.0
10.5
10.1
11.7
5.5
13.1
13.5
0.0
5.0
10.0
15.0
20.0
Rate per 100,000 person-years

PANCREAS

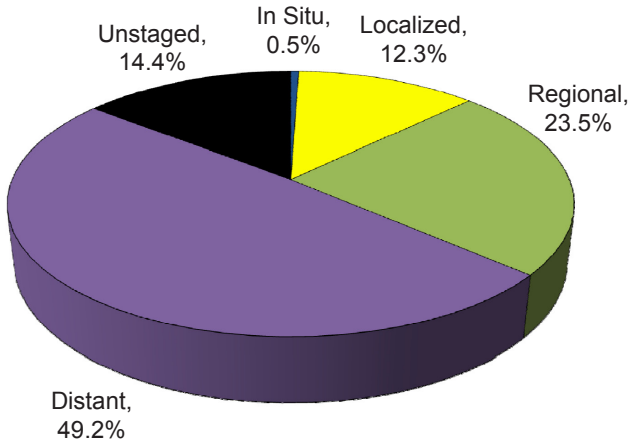
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	11.2	12.0	10.5
# of new invasive cases	186	93	93
# of new in-situ cases	1	0	1
# of deaths	162	85	77

Total Cases by County

Ada	36	Cassia	2	Lewis	1
Adams	2	Clark	-	Lincoln	-
Bannock	10	Clearwater	2	Madison	-
Bear Lake	1	Custer	1	Minidoka	-
Benewah	-	Elmore	5	Nez Perce	5
Bingham	9	Franklin	1	Oneida	3
Blaine	3	Fremont	3	Owyhee	5
Boise	-	Gem	4	Payette	5
Bonner	4	Gooding	1	Power	-
Bonneville	12	Idaho	1	Shoshone	2
Boundary	4	Jefferson	3	Teton	1
Butte	-	Jerome	2	Twin Falls	9
Camas	-	Kootenai	22	Valley	1
Canyon	19	Latah	1	Washington	3
Caribou	3	Lemhi	1		

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.

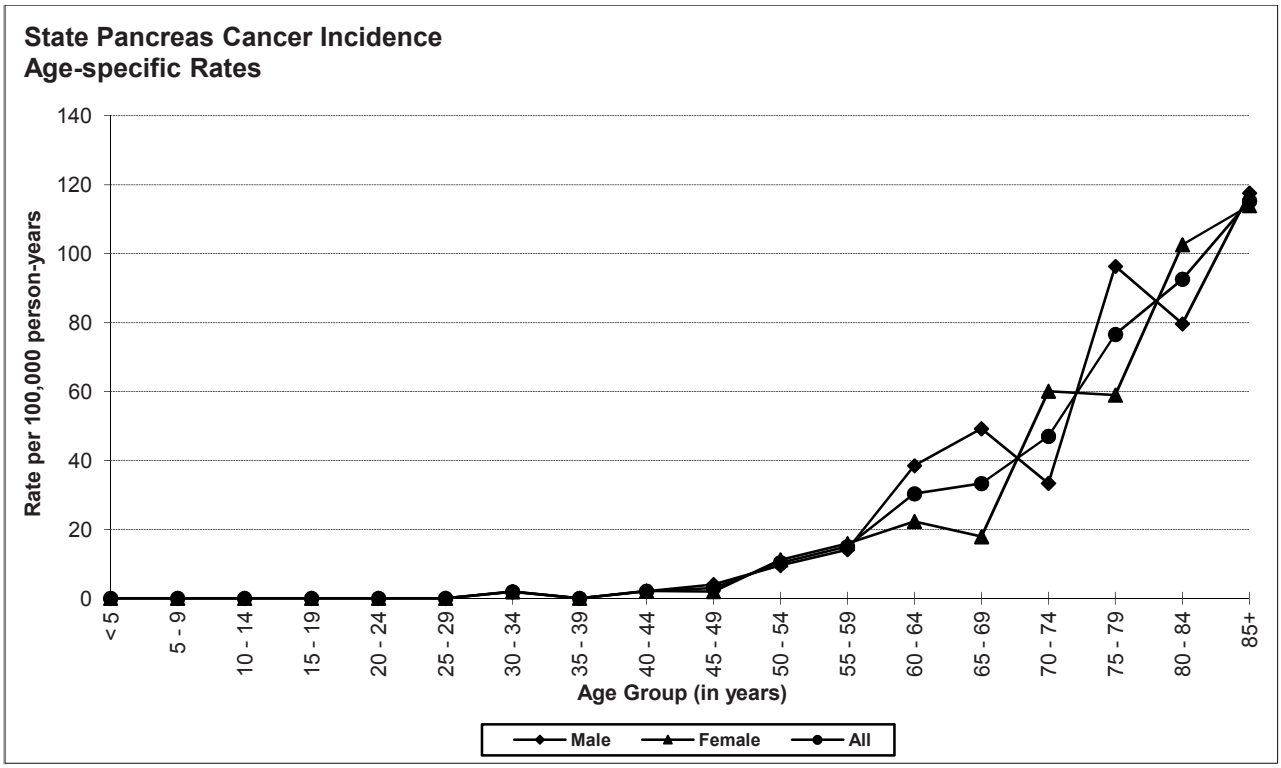
Occupation Persons in certain occupations, such as chemists, metal workers, and persons employed in the manufacture of benzidine and betanaphthylene, are believed to be at higher risk.

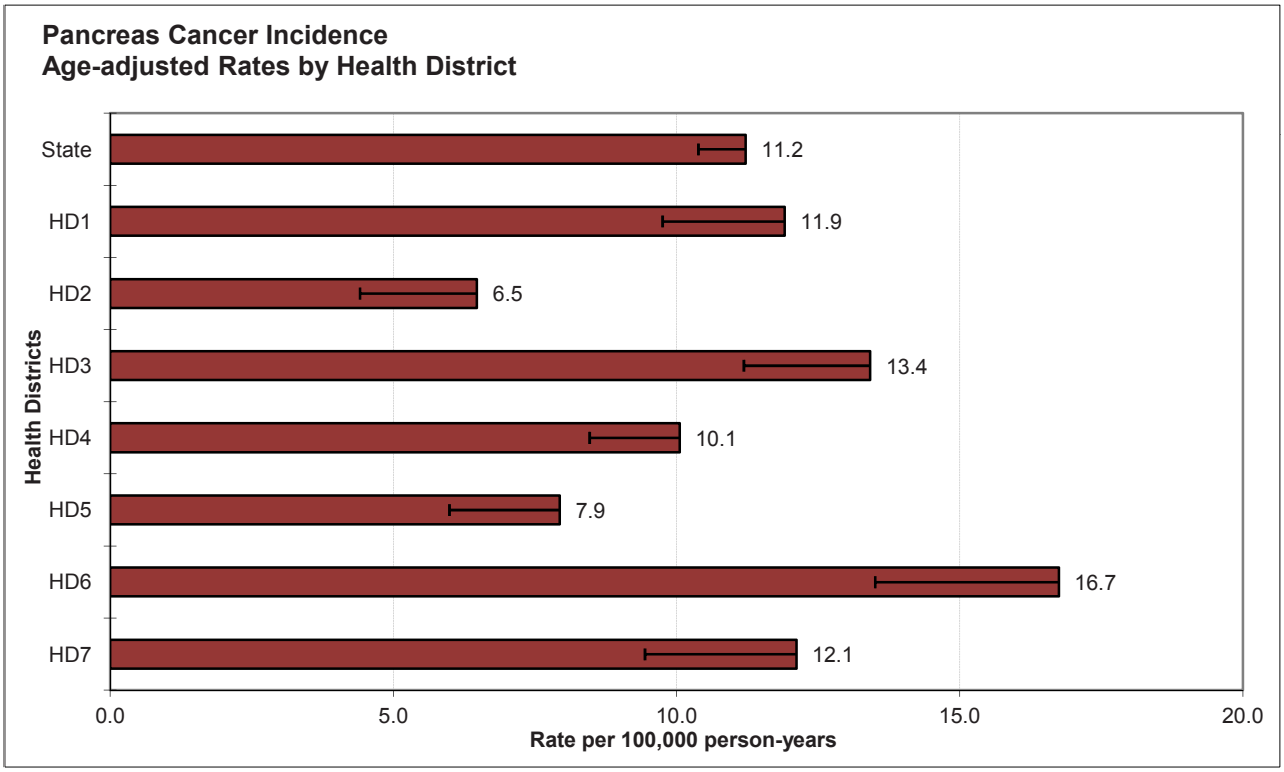
Other Pancreatic cancer is more common among smokers than non-smokers. Familial clustering has been observed in some studies. Pancreatic cancer usually progresses to an advanced stage before symptoms develop. It is rapidly fatal in over 90% of cases.

Special Notes

Mean age-adjusted incidence rate across health districts:	11.2	
95% confidence interval on the mean age-adjusted incidence rate:	8.7-	13.8
Median age-adjusted incidence rate of health districts:	11.9	
Range of age-adjusted incidence rate for health districts:	6.5-	16.7
SEER 18 rate (2010, all races):	12.1	
NPCR rate (2010, all races):	11.9	

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 54. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.


State Pancreas Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
140
120
100
80
60
40
20
0
< 5
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+
Age Group (in years)
Male
Female
All


Pancreas Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
11.2
11.9
6.5
13.4
10.1
7.9
16.7
12.1
0.0
5.0
10.0
15.0
20.0
Rate per 100,000 person-years

PROSTATE

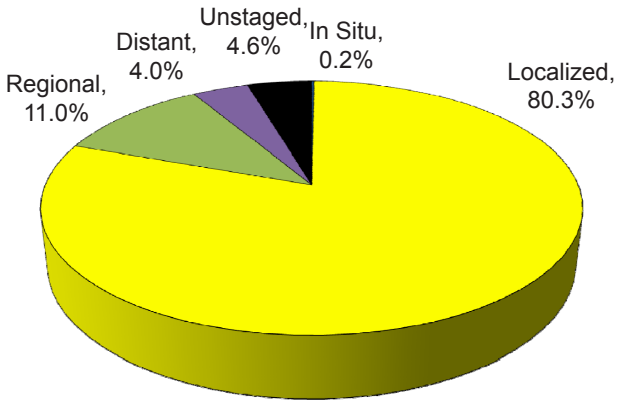
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	142.0	-
# of new invasive cases	-	1,199	-
# of new in-situ cases	-	2	-
# of deaths	-	163	-

Total Cases by County

Ada	288	Cassia	8	Lewis	2
Adams	8	Clark	-	Lincoln	5
Bannock	46	Clearwater	8	Madison	21
Bear Lake	5	Custer	5	Minidoka	17
Benewah	9	Elmore	18	Nez Perce	33
Bingham	38	Franklin	5	Oneida	3
Blaine	18	Fremont	17	Owyhee	9
Boise	9	Gem	16	Payette	33
Bonner	47	Gooding	9	Power	10
Bonneville	80	Idaho	11	Shoshone	19
Boundary	10	Jefferson	18	Teton	3
Butte	3	Jerome	10	Twin Falls	51
Camas	6	Kootenai	118	Valley	9
Canyon	131	Latah	20	Washington	12
Caribou	3	Lemhi	9		

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.

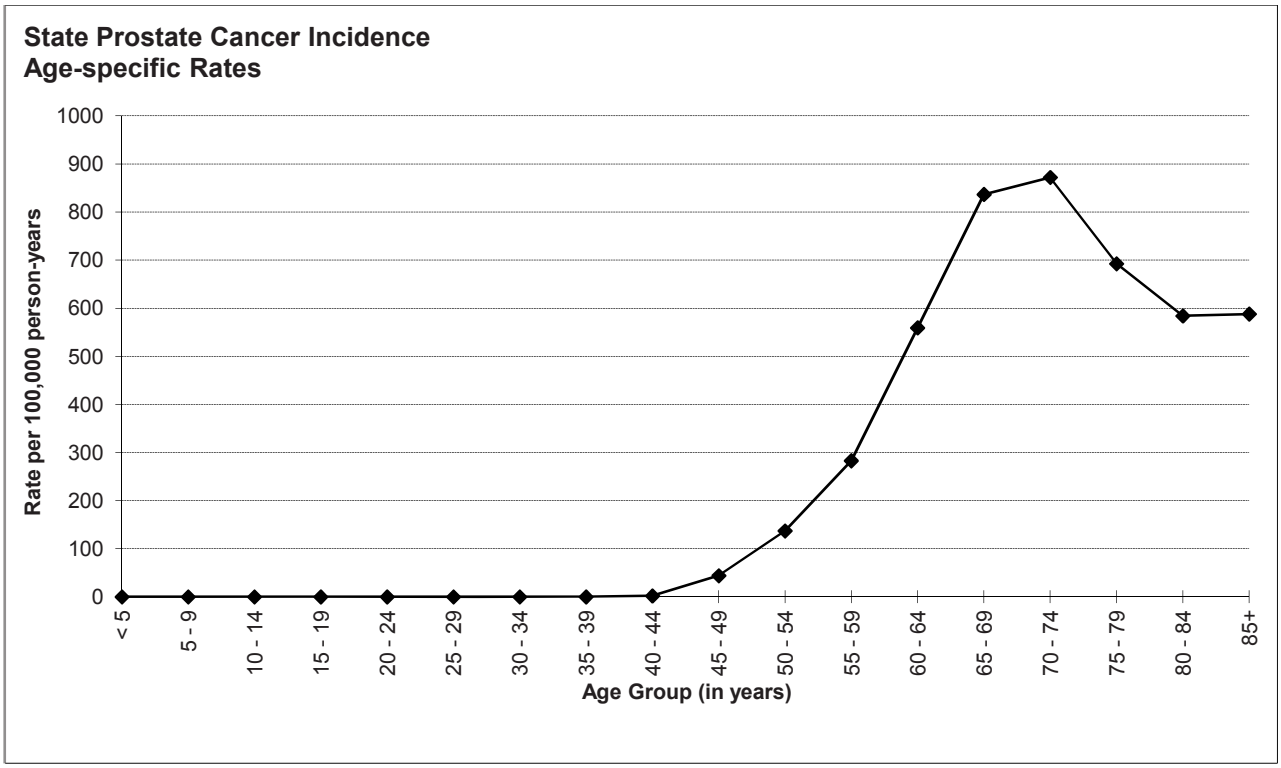
Other Environmental and familial factors may contribute to an increased incidence but no specific factor in these two groups of potential risk factors has been clearly identified. Three risk factors are well established: age, family history, and ethnic group/country of residence.

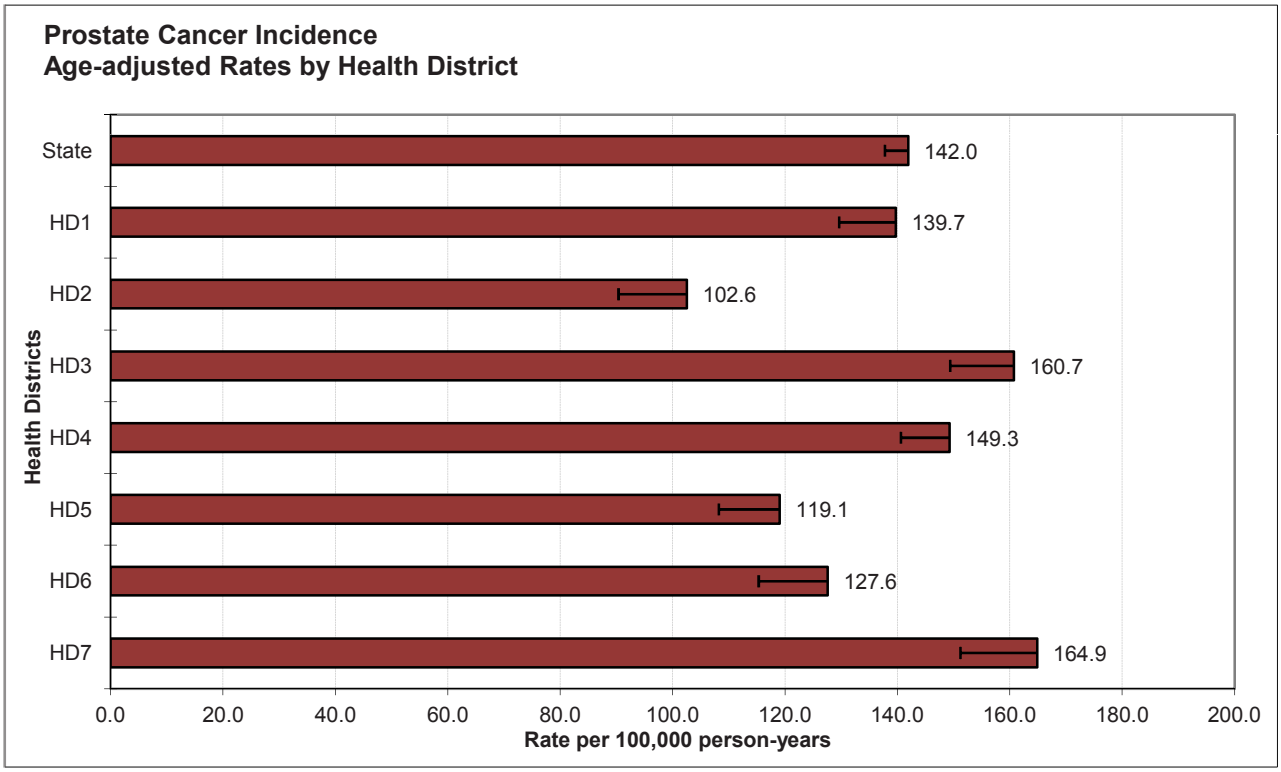
Occupation Farming is the most consistent occupational risk factor for prostate cancer. Methyl bromide pesticide application has been identified as a risk factor by the Agricultural Health Study. It is likely that only a very small proportion of all prostate cancer cases can be attributed to a specific industrial chemical exposure.

Special Notes

Mean age-adjusted incidence rate across health districts:	137.7
95% confidence interval on the mean age-adjusted incidence rate:	120.9- 154.5
Median age-adjusted incidence rate of health districts:	139.7
Range of age-adjusted incidence rate for health districts:	102.6- 164.9
SEER 18 rate (2010, all races):	136.6
NPCR rate (2010, all races):	125.8

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. Health District 7 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health Districts 2 and 5 had statistically significantly fewer cases than expected.


State Prostate Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
1000
900
800
700
600
500
400
300
200
100
0
< 5
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+
Age Group (in years)


Prostate Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
142.0
139.7
102.6
160.7
149.3
119.1
127.6
164.9
0.0
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
180.0
200.0
Rate per 100,000 person-years

STOMACH

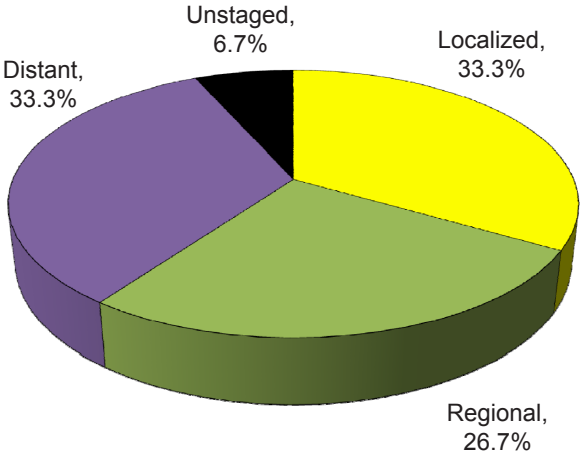
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.4	6.5	2.6
# of new invasive cases	75	51	24
# of new in-situ cases	0	0	0
# of deaths	37	24	13

Total Cases by County

Ada	19	Cassia	2	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	4	Clearwater	-	Madison	-
Bear Lake	-	Custer	1	Minidoka	-
Benewah	1	Elmore	3	Nez Perce	2
Bingham	4	Franklin	-	Oneida	-
Blaine	-	Fremont	1	Owyhee	-
Boise	-	Gem	1	Payette	-
Bonner	6	Gooding	-	Power	-
Bonneville	5	Idaho	2	Shoshone	1
Boundary	-	Jefferson	1	Teton	-
Butte	-	Jerome	-	Twin Falls	1
Camas	-	Kootenai	13	Valley	-
Canyon	7	Latah	1	Washington	-
Caribou	-	Lemhi	-		

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.

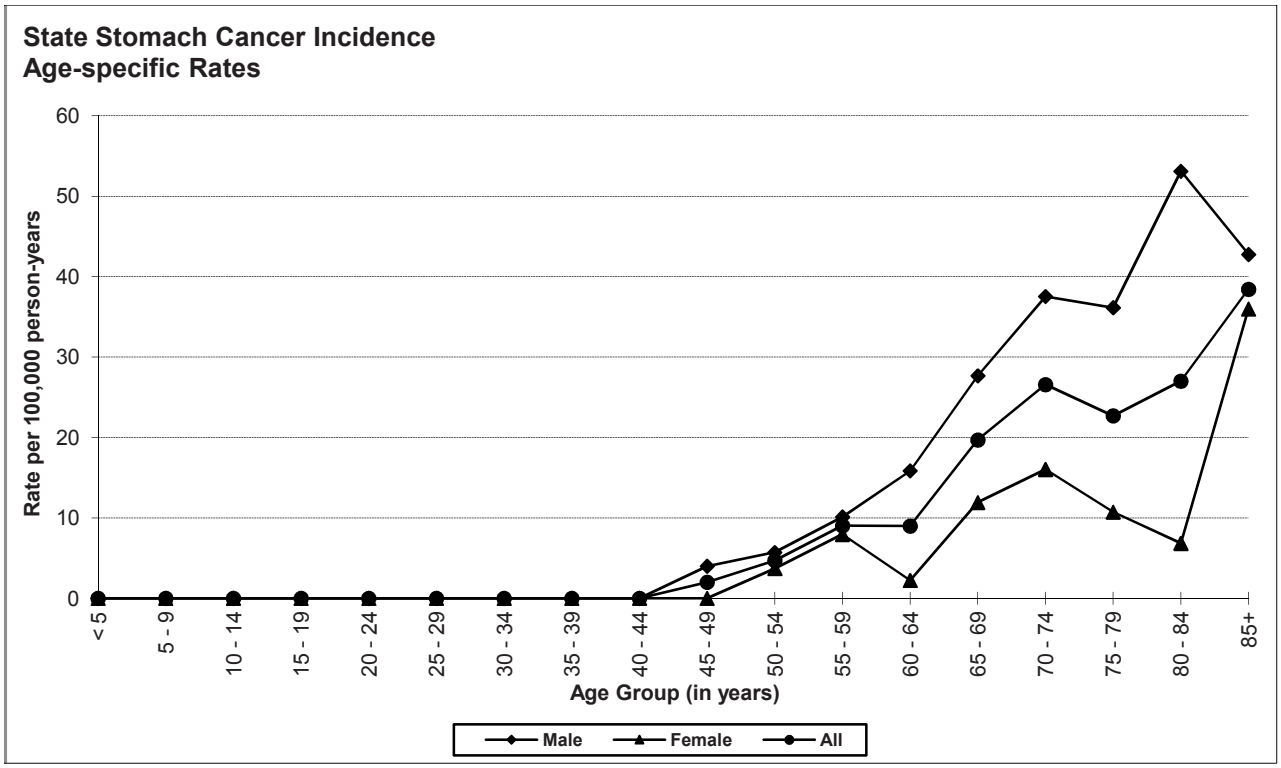
Occupation Elevated rates have been found in certain occupational groups, especially coal miners and asbestos workers, and occupations with mineral dust exposure.

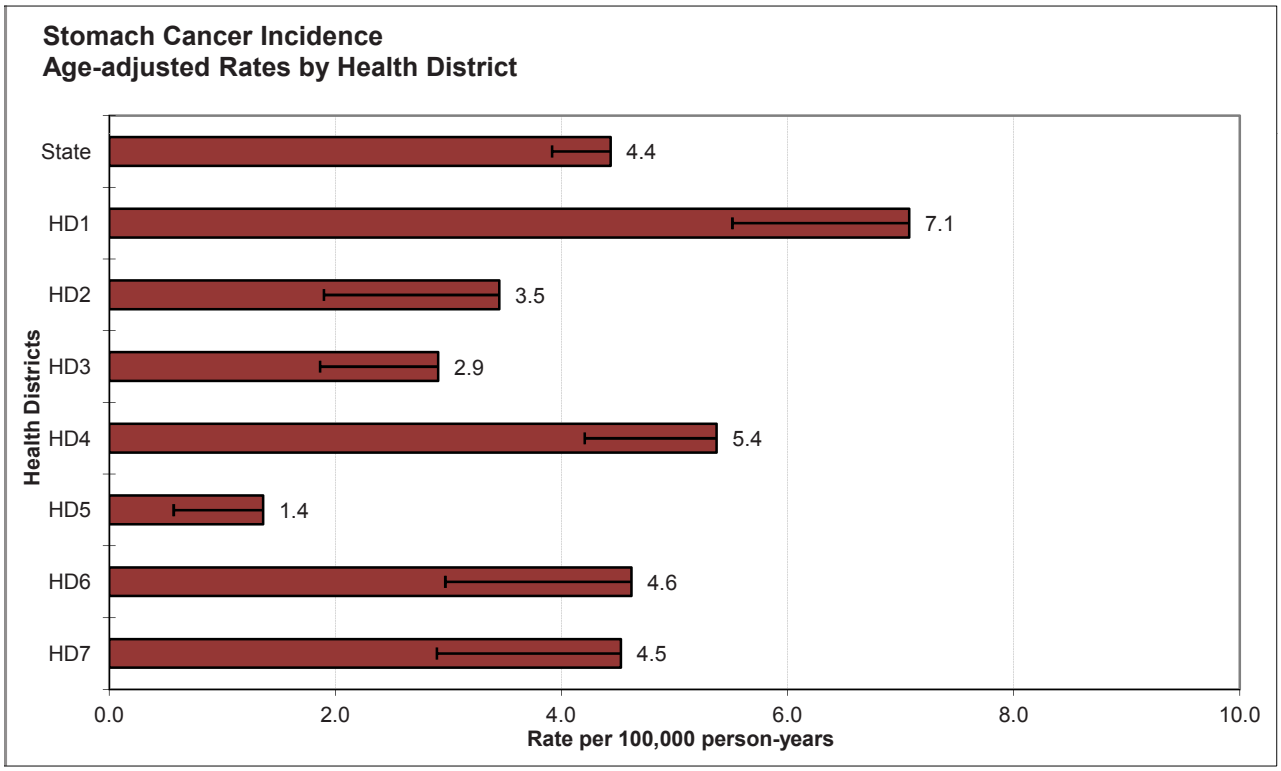
Other Stomach cancer has been linked to peptic ulcer disease and to certain bacteria.

Special Notes

Mean age-adjusted incidence rate across health districts:	4.2
95% confidence interval on the mean age-adjusted incidence rate:	2.8- 5.5
Median age-adjusted incidence rate of health districts:	4.5
Range of age-adjusted incidence rate for health districts:	1.4- 7.1
SEER 18 rate (2010, all races):	7.4
NPCR rate (2010, all races):	6.7

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 80-84 age group for males and 85+ age group for females. Health District 1 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 5 had statistically significantly fewer cases than expected.


State Stomach Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
60
50
40
30
20
10
0
< 5
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+
Age Group (in years)
Male
Female
All


Stomach Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
4.4
7.1
3.5
2.9
5.4
1.4
4.6
4.5
0.0
2.0
4.0
6.0
8.0
10.0
Rate per 100,000 person-years

TESTIS

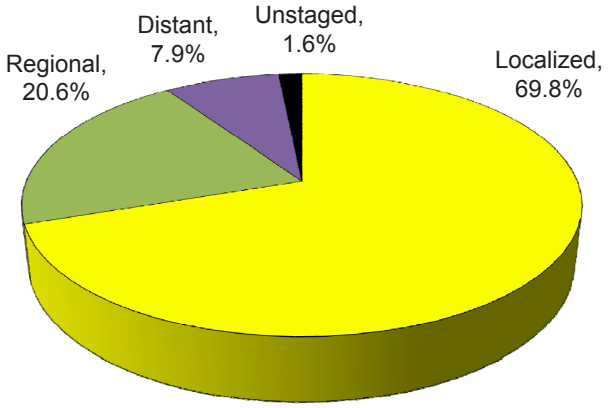
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	8.5	-
# of new invasive cases	-	63	-
# of new in-situ cases	-	0	-
# of deaths	-	2	-

Total Cases by County

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

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.

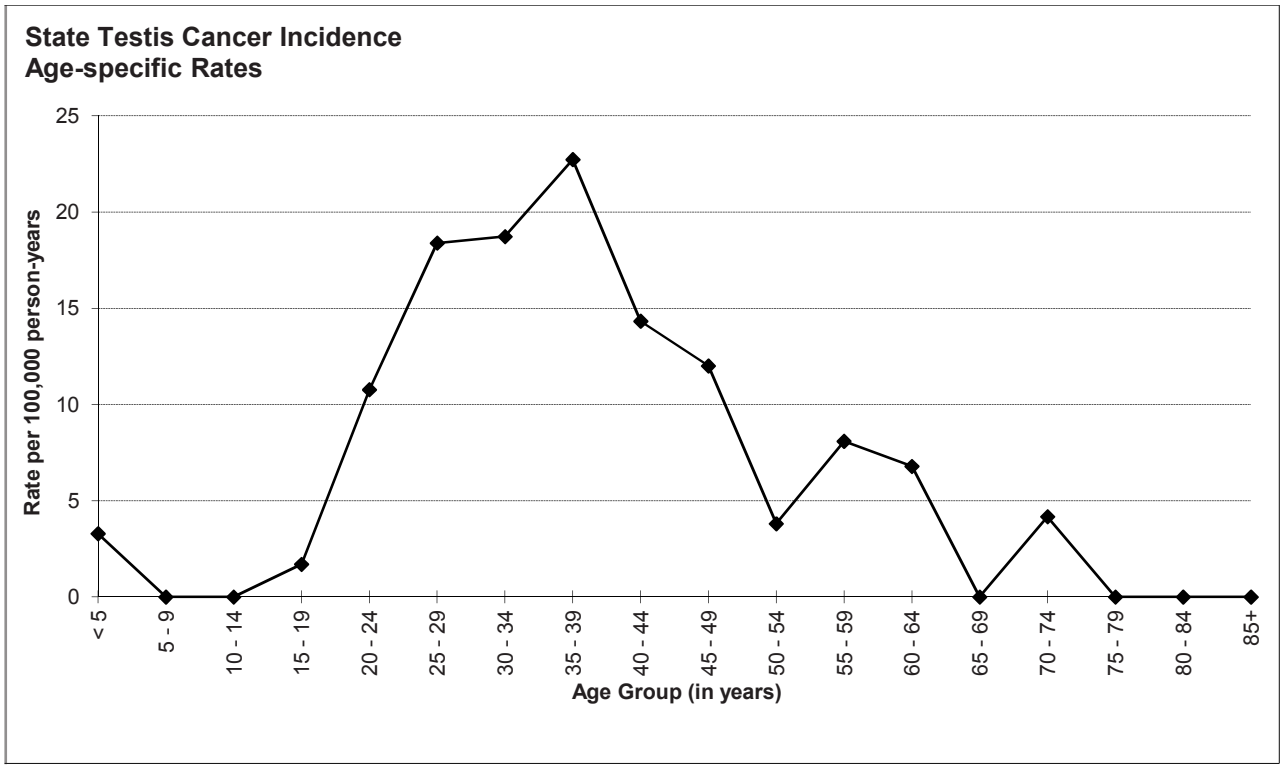
Race & SES Incidence rates are substantially higher in white males than in black males. Incidence of testicular cancer is highest in highest socioeconomic classes.

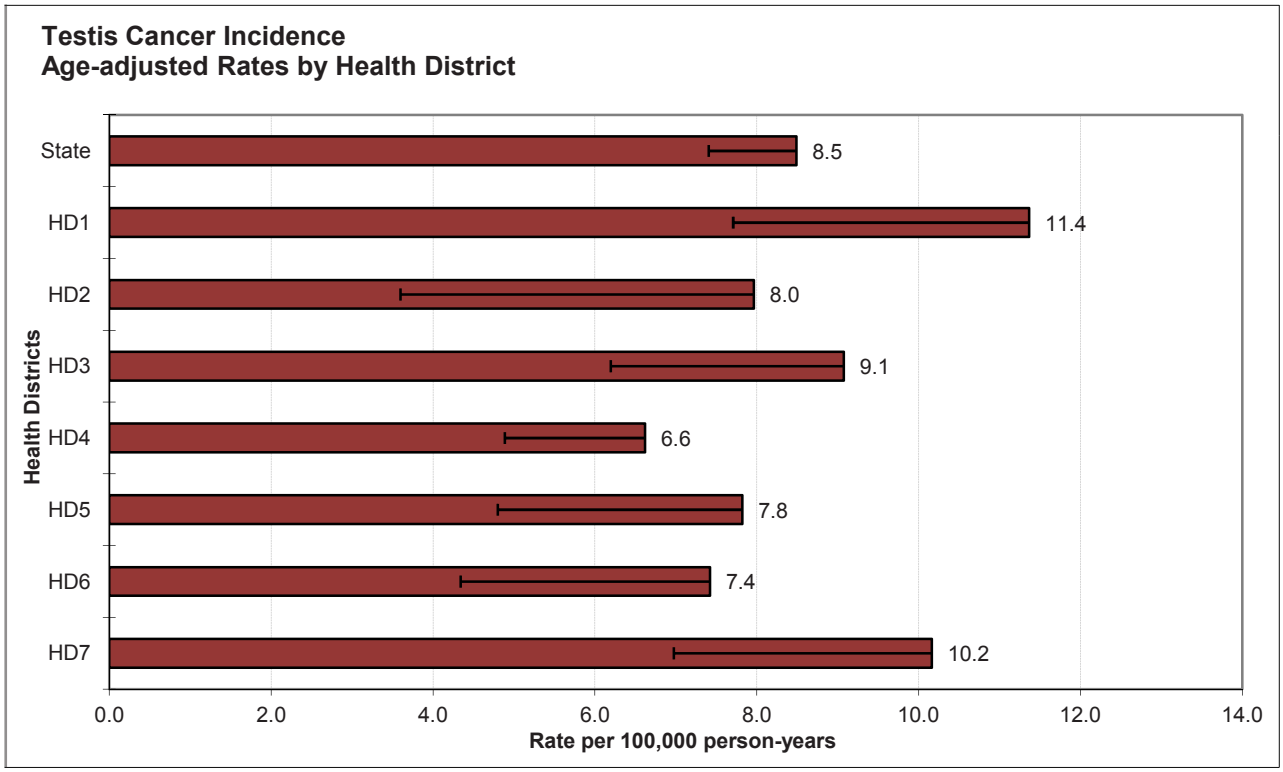
Other Undescended testis, a minor abnormality that can usually be detected and corrected with surgery in childhood, is responsible for a substantially high risk for testicular cancer when uncorrected. The extent to which surgical correction reduces cancer risk is unclear. Some evidence suggests that 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:	8.6
95% confidence interval on the mean age-adjusted incidence rate:	7.4- 9.9
Median age-adjusted incidence rate of health districts:	8.0
Range of age-adjusted incidence rate for health districts:	6.6- 11.4
SEER 18 rate (2010, all races):	5.6
NPCR rate (2010, all races):	5.3

The highest age-specific incidence rate was in the 30-34 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
Rate per 100,000 person-years
25
20
15
10
5
0
< 5
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+
Age Group (in years)


Testis Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
8.5
11.4
8.0
9.1
6.6
7.8
7.4
10.2
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
Rate per 100,000 person-years

THYROID

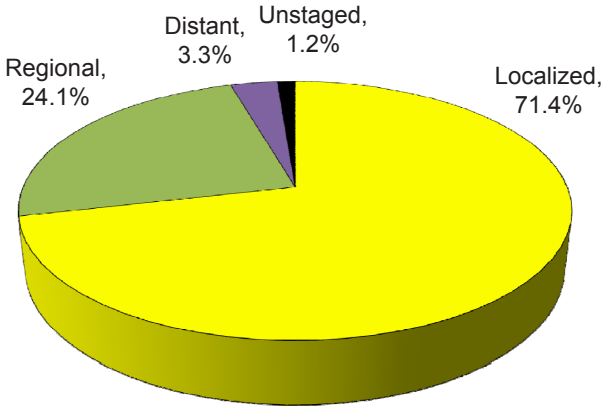
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	15.6	6.3	25.1
# of new invasive cases	245	49	196
# of new in-situ cases	0	0	0
# of deaths	8	4	4

Total Cases by County

Ada	57	Cassia	3	Lewis	-
Adams	3	Clark	-	Lincoln	-
Bannock	6	Clearwater	2	Madison	8
Bear Lake	-	Custer	-	Minidoka	1
Benewah	2	Elmore	5	Nez Perce	6
Bingham	12	Franklin	6	Oneida	-
Blaine	-	Fremont	4	Owyhee	3
Boise	2	Gem	4	Payette	2
Bonner	3	Gooding	1	Power	-
Bonneville	36	Idaho	1	Shoshone	1
Boundary	-	Jefferson	4	Teton	2
Butte	-	Jerome	1	Twin Falls	11
Camas	-	Kootenai	20	Valley	-
Canyon	29	Latah	5	Washington	2
Caribou	1	Lemhi	2		

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.

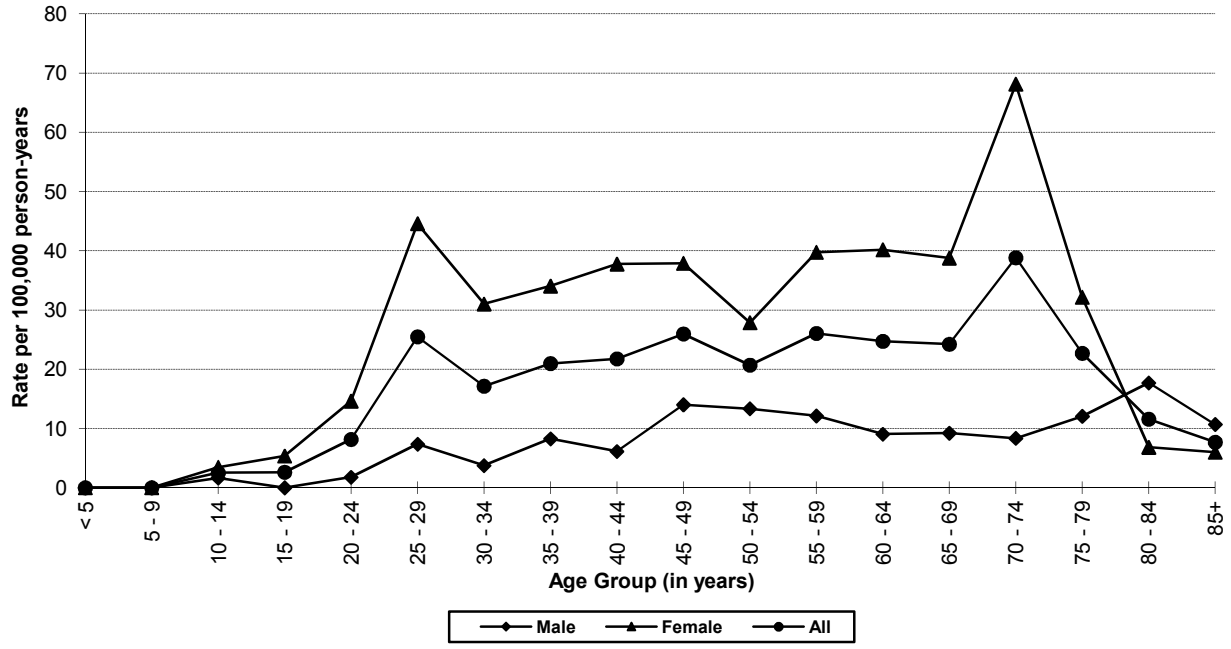
Other Occupational and environmental exposures to ionizing radiation have been associated with higher rates of thyroid cancer. Radiation exposure to the head and neck in childhood is a well-known risk factor. Family history of thyroid cancer substantially increases the risk. Death due to thyroid cancer under age 40 is rare. Prognosis worsens with each decade of age over 50, partially because anaplastic thyroid cancer, which has a high fatality rate, more often occurs 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.

Special Notes

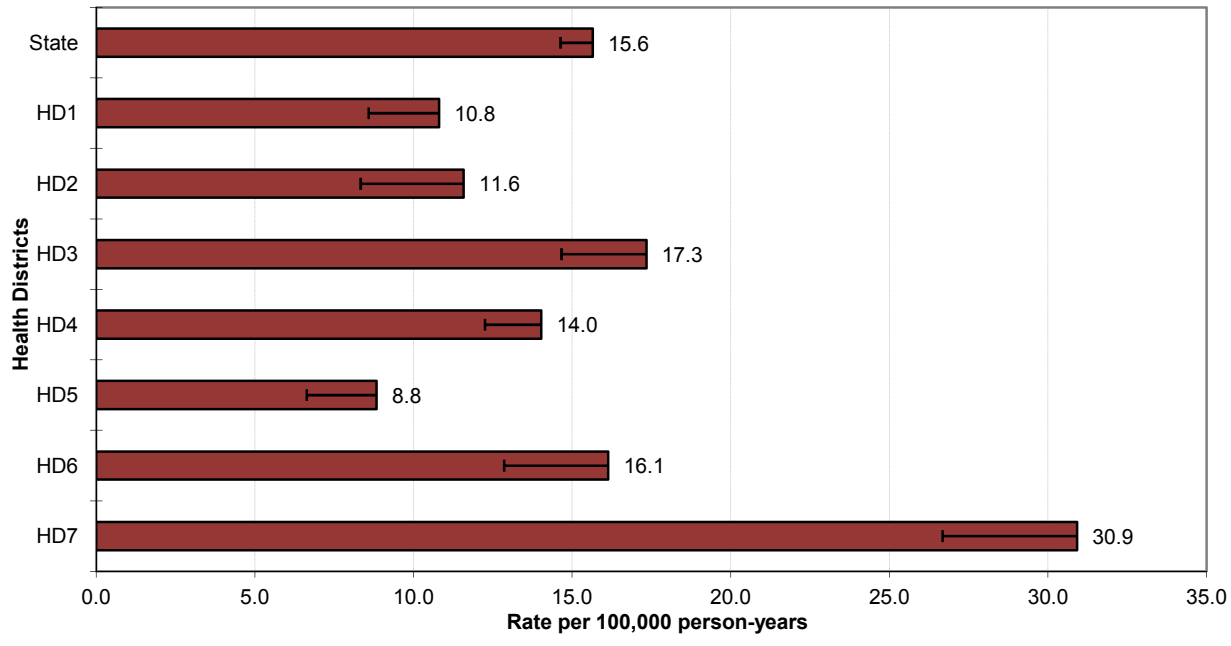
Mean age-adjusted incidence rate across health districts:	15.7
95% confidence interval on the mean age-adjusted incidence rate:	10.2- 21.1
Median age-adjusted incidence rate of health districts:	14.0
Range of age-adjusted incidence rate for health districts:	8.8- 30.9
SEER 18 rate (2010, all races):	13.2
NPCR rate (2010, all races):	13.3

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 5 had statistically significantly fewer cases than expected.

State Thyroid Cancer Incidence
Age-specific Rates



Thyroid Cancer Incidence
Age-adjusted Rates by Health District



SECTION II

STATE OF IDAHO – 2011
INCIDENCE DATA BY SITE AND GENDER

Idaho Resident Cancer Cases - 2011

Primary Site of Cancer	Invasive			In situ		
	Total	Male	Female	Total	Male	Female
All Sites	7,263	3,831	3,432	849	392	457
Oral Cavity and Pharynx	210	150	60	6	2	4
Lip	38	28	10	5	2	3
Tongue	55	44	11	-	-	-
Salivary Gland	13	6	7	-	-	-
Floor of Mouth	6	5	1	-	-	-
Gum and Other Mouth	30	12	18	-	-	-
Nasopharynx	7	4	3	-	-	-
Tonsil	41	36	5	1	-	1
Oropharynx	5	3	2	-	-	-
Hypopharynx	11	9	2	-	-	-
Other Oral Cavity and Pharynx	4	3	1	-	-	-
Digestive System	1,218	662	556	20	9	11
Esophagus	69	60	9	1	1	-
Stomach	75	51	24	-	-	-
Small Intestine	38	18	20	-	-	-
Colon and Rectum	639	334	305	17	8	9
Colon excluding Rectum	458	223	235	11	5	6
Cecum	122	56	66	2	-	2
Appendix	14	5	9	-	-	-
Ascending Colon	102	40	62	4	2	2
Hepatic Flexure	25	11	14	-	-	-
Transverse Colon	33	19	14	1	1	-
Splenic Flexure	12	8	4	-	-	-
Descending Colon	17	9	8	2	1	1
Sigmoid Colon	121	67	54	1	1	-
Large Intestine, NOS	12	8	4	1	-	1
Rectum and Rectosigmoid Junction	181	111	70	6	3	3
Rectosigmoid Junction	36	26	10	-	-	-
Rectum	145	85	60	6	3	3
Anus, Anal Canal and Anorectum	36	13	23	1	-	1
Liver and Intrahepatic Bile Duct	100	69	31	-	-	-
Liver	90	65	25	-	-	-
Intrahepatic Bile Duct	10	4	6	-	-	-
Gallbladder	20	3	17	-	-	-
Other Biliary	36	17	19	-	-	-
Pancreas	186	93	93	1	-	1
Retroperitoneum	10	2	8	-	-	-
Peritoneum, Omentum and Mesentery	6	-	6	-	-	-
Other Digestive Organs	3	2	1	-	-	-
Respiratory System	883	466	417	2	1	1
Nose, Nasal Cavity and Middle Ear	7	6	1	-	-	-
Larynx	38	31	7	1	1	-
Lung and Bronchus	836	428	408	1	-	1
Pleura	-	-	-	-	-	-
Trachea, Mediastinum and Other Respiratory Organs	2	1	1	-	-	-
Skin excluding Basal and Squamous	467	281	186	385	226	159
Melanoma of the Skin	443	265	178	385	226	159
Other Non-Epithelial Skin	24	16	8	-	-	-
Breast	1,006	9	997	225	1	224

Primary Site of Cancer	Invasive			In situ		
	Total	Male	Female	Total	Male	Female
Female Genital System	400	-	400	11	-	11
Cervix Uteri	53	-	53	-	-	-
Corpus and Uterus, NOS	213	-	213	2	-	2
Corpus Uteri	211	-	211	2	-	2
Uterus, NOS	2	-	2	-	-	-
Ovary	91	-	91	1	-	1
Vagina	6	-	6	1	-	1
Vulva	28	-	28	7	-	7
Other Female Genital Organs	9	-	9	-	-	-
Male Genital System	1,267	1,267	-	5	5	-
Prostate	1,199	1,199	-	2	2	-
Testis	63	63	-	-	-	-
Penis	2	2	-	2	2	-
Other Male Genital Organs	3	3	-	1	1	-
Urinary System	431	288	143	192	146	46
Urinary Bladder	164	125	39	186	141	45
Kidney and Renal Pelvis	258	159	99	2	2	-
Ureter	5	3	2	2	2	-
Other Urinary Organs	4	1	3	2	1	1
Brain and Other Nervous System	95	63	32	-	-	-
Brain	88	59	29	-	-	-
Cranial Nerves Other Nervous System	7	4	3	-	-	-
Endocrine System	249	51	198	-	-	-
Thyroid	245	49	196	-	-	-
Other Endocrine including Thymus	4	2	2	-	-	-
Lymphoma	345	197	148	-	-	-
Hodgkin Lymphoma	38	20	18	-	-	-
Non-Hodgkin Lymphoma	307	177	130	-	-	-
Myeloma	95	63	32	-	-	-
Leukemia	234	127	107	-	-	-
Lymphocytic Leukemia	122	70	52	-	-	-
Acute Lymphocytic Leukemia	29	16	13	-	-	-
Chronic Lymphocytic Leukemia	86	49	37	-	-	-
Other Lymphocytic Leukemia	7	5	2	-	-	-
Myeloid and Monocytic Leukemia	97	50	47	-	-	-
Acute Myeloid Leukemia	59	34	25	-	-	-
Acute Monocytic Leukemia	6	3	3	-	-	-
Chronic Myeloid Leukemia	28	12	16	-	-	-
Other Myeloid/Monocytic Leukemia	4	1	3	-	-	-
Other Leukemia	15	7	8	-	-	-
Other Acute Leukemia	5	1	4	-	-	-
Aleukemic, Subleukemic and NOS	10	6	4	-	-	-
Other or Unknown Sites	363	207	156	3	2	1
Bones and Joints	16	8	8	-	-	-
Soft Tissue including Heart	49	23	26	-	-	-
Eye and Orbit	11	6	5	3	2	1
Mesothelioma	29	25	4	-	-	-
Kaposi Sarcoma	2	2	-	-	-	-
Miscellaneous	256	143	113	-	-	-

SECTION III

STATE OF IDAHO – 2011
MORTALITY RATES BY SITE AND GENDER

Idaho Resident Cancer Mortality Rates - 2011

Cause of Death	Total			Male			Female		
	Rate	Deaths	Pop	Rate	Deaths	Pop	Rate	Deaths	Pop
All Causes of Death	743.7	11,990	1,583,744	858.3	6,112	793,034	643.1	5,878	790,710
All Malignant Cancers	156.8	2,559	1,583,744	189.3	1,399	793,034	131.5	1,160	790,710
Bladder	4.3	70	1,583,744	7.4	52	793,034	1.9	18	790,710
Brain and Other Nervous System	4.9	77	1,583,744	6.7	50	793,034	3.2	27	790,710
Breast	11.7	194	1,583,744	0.2	2	793,034	22.0	192	790,710
Cervix	1.0	16	1,583,744	-	-	793,034	1.9	16	790,710
Colorectal	13.8	222	1,583,744	16.6	122	793,034	11.4	100	790,710
Corpus Uteri	1.3	21	1,583,744	-	-	793,034	2.4	21	790,710
Esophagus	3.6	61	1,583,744	6.8	55	793,034	0.7	6	790,710
Hodgkin Lymphoma	0.2	4	1,583,744	0.1	1	793,034	0.3	3	790,710
Kidney	4.4	70	1,583,744	6.4	48	793,034	2.5	22	790,710
Larynx	0.6	10	1,583,744	1.2	9	793,034	0.1	1	790,710
Leukemia	7.4	117	1,583,744	9.5	66	793,034	5.7	51	790,710
Liver and Bile Duct	5.0	85	1,583,744	7.0	56	793,034	3.3	29	790,710
Lung and Bronchus	37.5	616	1,583,744	44.7	336	793,034	31.8	280	790,710
Melanoma of the Skin	3.6	57	1,583,744	5.5	41	793,034	1.9	16	790,710
Myeloma	2.6	42	1,583,744	3.5	27	793,034	1.8	15	790,710
Non-Hodgkin Lymphoma	7.1	114	1,583,744	9.5	68	793,034	5.2	46	790,710
Oral Cavity and Pharynx	2.4	42	1,583,744	3.7	31	793,034	1.2	11	790,710
Ovary	3.8	64	1,583,744	-	-	793,034	7.1	64	790,710
Pancreas	9.9	162	1,583,744	11.3	85	793,034	8.6	77	790,710
Prostate	10.4	163	1,583,744	24.4	163	793,034	-	-	790,710
Stomach	2.3	37	1,583,744	3.1	24	793,034	1.4	13	790,710
Testis	0.1	2	1,583,744	0.3	2	793,034	-	-	790,710
Thyroid	0.5	8	1,583,744	0.6	4	793,034	0.4	4	790,710

Data source: Bureau of Vital Records and Health Statistics (BVRHS), Idaho Department of Health and Welfare, 2012.[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

2011 AGE SPECIFIC INCIDENCE RATES
PER 100,000 POPULATION
BY SITE AND GENDER

IDAHO **AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER** **2011**

Age (years)	< 5	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	21.9	13.2	11.0	20.9	34.4	71.7	86.7	125.8	190.7	323.7	493.0	793.7	1171.4	1629.6	2193.6	2374.7	2462.1	2132.8
Male	24.7	14.5	6.6	18.8	28.7	49.7	67.4	78.5	128.9	272.2	468.8	847.0	1399.0	1928.7	2653.7	2842.9	2992.2	2790.6
Female	19.0	11.8	15.6	23.2	40.3	95.0	106.7	174.6	254.0	375.0	516.6	741.3	946.8	1339.5	1751.6	1957.8	2052.4	1763.8
Bladder																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	9.0	16.0	20.0	37.1	86.3	159.5	147.5	162.1	146.0
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	18.0	22.9	32.3	58.9	126.1	254.5	234.9	301.0	278.0
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	9.3	8.0	15.6	47.7	68.1	69.7	54.7	72.0
Brain																		
All	0.8	3.3	0.8	0.9	1.8	1.9	1.9	2.1	7.3	2.0	8.5	8.0	15.7	12.1	24.5	19.9	11.6	11.5
Male	1.6	4.8	0.0	0.0	1.8	3.7	3.8	4.1	10.2	2.0	11.4	12.1	22.6	9.2	37.6	36.1	8.9	10.7
Female	0.0	1.7	1.7	1.8	1.8	0.0	0.0	0.0	4.2	2.0	5.6	4.0	8.9	14.9	12.0	5.4	13.7	12.0
Brain & Other Central Nervous System (Non-Malignant)																		
All	0.0	0.0	1.7	0.9	0.9	4.7	7.6	6.3	11.4	7.0	10.4	14.0	16.9	28.8	30.7	36.9	30.9	76.9
Male	0.0	0.0	3.3	1.7	1.8	0.0	5.6	6.2	10.2	6.0	5.7	8.1	9.1	9.2	25.0	24.1	35.4	21.4
Female	0.0	0.0	0.0	0.0	0.0	9.7	9.7	6.4	12.6	8.0	14.9	19.9	24.6	47.7	36.1	48.3	27.4	108.0
Breast																		
Female Invasive	0.0	0.0	0.0	0.0	0.0	5.8	25.2	49.0	88.2	139.6	182.1	246.5	341.7	408.7	465.0	455.9	540.5	324.0
Female In-situ	0.0	0.0	0.0	0.0	0.0	0.0	9.7	6.4	25.2	57.8	65.0	53.7	71.5	83.5	100.2	75.1	54.7	36.0
Cervix																		
Female	0.0	0.0	0.0	0.0	0.0	11.6	5.8	17.0	12.6	16.0	7.4	8.0	13.4	9.0	8.0	0.0	13.7	6.0
Colorectal																		
All	0.0	0.0	0.0	0.9	0.0	1.9	4.8	2.1	19.7	30.0	47.0	59.1	83.2	139.3	155.4	266.7	239.3	280.5
Male	0.0	0.0	0.0	1.7	0.0	0.0	5.6	2.1	22.5	30.0	47.6	68.7	110.9	153.8	183.6	277.1	247.9	288.7
Female	0.0	0.0	0.0	0.0	0.0	3.9	3.9	2.1	16.8	29.9	46.5	49.7	55.8	125.3	128.3	257.5	232.6	276.0
Corpus Uteri																		
Female	0.0	0.0	0.0	0.0	1.8	0.0	0.0	2.1	12.6	27.9	44.6	89.4	84.9	74.6	88.2	91.2	68.4	48.0
Esophagus																		
All	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	4.0	1.9	6.0	15.7	16.7	26.6	25.5	27.0	3.8
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	8.0	0.0	12.1	29.4	30.8	45.9	48.2	53.1	10.7
Female	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	3.7	0.0	2.2	3.0	8.0	5.4	6.8	0.0

IDAHO **AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER** **2011**

Age (years)	< 5	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	2.5	4.4	1.8	6.6	1.9	4.2	0.0	2.0	1.9	4.0	1.1	6.1	2.0	0.0	0.0	0.0
Male	0.0	1.6	1.7	1.7	0.0	3.7	1.9	2.1	0.0	4.0	3.8	6.1	2.3	12.3	4.2	0.0	0.0	0.0
Female	0.0	0.0	3.5	7.2	3.7	9.7	1.9	6.4	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Kidney & Renal Pelvis																		
All	1.7	0.8	0.0	0.9	0.0	1.9	1.0	6.3	5.2	15.0	21.6	29.1	45.0	54.5	69.5	79.4	73.3	61.5
Male	1.6	0.0	0.0	0.0	0.0	1.8	0.0	8.3	4.1	14.0	22.9	34.4	63.4	67.7	104.3	114.4	123.9	74.8
Female	1.7	1.7	0.0	1.8	0.0	1.9	1.9	4.3	6.3	16.0	20.4	23.9	26.8	41.8	36.1	48.3	34.2	54.0
Larynx																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.8	5.0	2.3	15.1	12.3	19.9	7.7	0.0
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	1.9	8.1	4.5	24.6	20.9	42.2	17.7	0.0
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	3.7	2.0	0.0	6.0	4.0	0.0	0.0	0.0
Leukemia																		
All	10.9	4.9	1.7	3.5	1.8	1.9	2.9	2.1	2.1	10.0	16.0	21.1	33.7	36.4	61.3	59.6	108.1	65.3
Male	13.2	4.8	1.7	5.1	3.6	0.0	3.8	2.1	2.1	14.0	17.2	18.2	36.2	33.8	87.6	78.3	123.9	64.2
Female	8.6	5.1	1.7	1.8	0.0	3.9	1.9	2.1	2.1	6.0	14.9	23.9	31.3	38.8	36.1	42.9	95.8	66.0
Liver & Bile Duct																		
All	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	8.5	17.0	22.5	19.7	24.5	28.4	46.3	23.1
Male	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	9.5	24.3	38.5	24.6	25.0	42.2	79.7	42.8
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	9.9	6.7	14.9	24.1	16.1	20.5	12.0
Lung & Bronchus																		
All	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.1	8.3	10.0	29.2	65.1	118.0	198.4	374.1	397.2	328.0	299.8
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	8.0	38.1	84.9	117.7	172.3	388.0	427.6	380.7	470.4
Female	0.0	0.0	0.0	0.0	0.0	1.9	0.0	2.1	6.3	12.0	20.4	45.7	118.4	223.7	360.8	370.1	287.3	204.0
Melanoma of the Skin																		
All	0.0	0.0	0.0	0.9	7.3	5.7	17.2	21.0	25.9	36.0	27.3	54.1	56.2	66.6	116.5	79.4	138.9	119.1
Male	0.0	0.0	0.0	1.7	5.4	7.4	18.7	14.5	12.3	38.0	30.5	60.6	83.8	83.1	162.7	120.5	239.0	203.1
Female	0.0	0.0	0.0	0.0	9.2	3.9	15.5	27.7	39.9	33.9	24.2	47.7	29.0	50.7	72.2	42.9	61.6	72.0
Myeloma																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.0	3.0	0.9	9.0	14.6	13.6	32.7	65.3	34.7	38.4
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	4.0	1.9	8.1	20.4	21.5	45.9	90.4	35.4	85.5
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	9.9	8.9	6.0	20.0	42.9	34.2	12.0

IDAHO **AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER** **2011**

Age (years)	< 5	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	0.0	0.0	1.7	1.8	0.9	1.9	2.9	6.3	2.1	7.0	17.9	24.1	49.5	53.0	83.8	124.8	181.4	107.6
Male	0.0	0.0	0.0	0.0	1.8	3.7	3.8	6.2	2.1	10.0	21.0	28.3	67.9	67.7	104.3	120.5	247.9	139.0
Female	0.0	0.0	3.5	3.6	0.0	0.0	1.9	6.4	2.1	4.0	14.9	19.9	31.3	38.8	64.1	128.7	130.0	90.0
Oral Cavity & Pharynx																		
All	0.8	0.0	0.0	0.9	0.9	0.0	1.0	2.1	5.2	16.0	21.6	31.1	36.0	39.4	42.9	70.9	65.6	30.7
Male	0.0	0.0	0.0	1.7	0.0	0.0	1.9	4.1	10.2	24.0	34.3	50.5	56.6	61.5	50.1	84.3	97.4	42.8
Female	1.7	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	8.0	9.3	11.9	15.6	17.9	36.1	59.0	41.1	24.0
Ovary																		
Female	0.0	0.0	0.0	0.0	3.7	1.9	1.9	6.4	8.4	14.0	20.4	25.8	11.2	44.8	48.1	21.5	34.2	48.0
Pancreas																		
All	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	2.1	3.0	10.4	15.0	30.4	33.3	47.0	76.6	92.6	115.3
Male	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	2.1	4.0	9.5	14.2	38.5	49.2	33.4	96.4	79.7	117.6
Female	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	2.1	2.0	11.2	15.9	22.3	17.9	60.1	59.0	102.6	114.0
Prostate																		
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	44.0	137.2	283.0	559.2	836.7	872.0	692.7	584.3	588.1
Stomach																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.7	9.0	9.0	19.7	26.6	22.7	27.0	38.4
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	5.7	10.1	15.9	27.7	37.6	36.1	53.1	42.8
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	8.0	2.2	11.9	16.0	10.7	6.8	36.0
Testis																		
Male	3.3	0.0	0.0	1.7	10.8	18.4	18.7	22.7	14.3	12.0	3.8	8.1	6.8	0.0	4.2	0.0	0.0	0.0
Thyroid																		
All	0.0	0.0	2.5	2.6	8.2	25.5	17.2	21.0	21.8	26.0	20.7	26.1	24.7	24.2	38.8	22.7	11.6	7.7
Male	0.0	0.0	1.7	0.0	1.8	7.4	3.8	8.3	6.1	14.0	13.3	12.1	9.1	9.2	8.3	12.1	17.7	10.7
Female	0.0	0.0	3.5	5.4	14.6	44.6	31.0	34.1	37.8	37.9	27.9	39.8	40.2	38.8	68.1	32.2	6.8	6.0

SECTION V

2011 OBSERVED VS. EXPECTED NUMBERS BY HEALTH DISTRICT

2011 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	1,301	1,212.5 +	568	600.9	1,223	1,166.7	2,026	1,915.1 +	846	911.4 +	678	777.7 *	806	832.8
Bladder	60	59.0	37	28.7	53	56.3	103	83.4 +	44	43.1	25	37.4 +	28	39.6
Brain	17	13.2	3	6.9	16	13.5	23	23.9	10	10.6	8	9.2	11	10.1
Brain & CNS non-Malignant	26	24.4	14	11.9	24	24.9	34	45.5	23	18.2	15	16.2	20	17.5
Breast	185	161.0	82	78.7	141	161.1	297	257.1 +	123	120.8	87	104.7	91	114.2 +
Breast (in-situ)	34	37.1	16	17.1	35	35.3	78	55.4 *	22	27.5	22	22.9	18	26.0
Cervix	8	7.6	2	3.7	14	7.3 +	13	16.4	6	6.2	6	5.3	4	6.6
Colorectal	118	103.0	51	52.3	105	100.0	138	175.0 *	83	77.4	74	65.0	70	70.5
Corpus Uteri	45	32.9	13	16.8	39	31.6	53	57.9	19	26.1	21	21.7	21	23.7
Esophagus	12	11.5	2	5.9	14	10.3	19	17.4	6	8.7	7	7.1	9	7.4
Hodgkin lymphoma	8	4.8	3	2.6	5	6.3	12	10.3	4	4.5	4	4.1	2	5.4
Kidney & renal pelvis	44	42.1	17	20.9	48	39.4	78	64.5	22	32.5	23	26.9	26	29.1
Larynx	6	6.5	6	2.8	5	6.2	13	8.4	4	4.7	1	4.2	3	4.3
Leukemia	33	38.1	9	19.2 +	30	38.6	80	54.4 *	30	28.4	22	24.9	30	26.8
Liver & bile duct	21	15.9	6	8.4	12	16.2	29	24.8	15	11.8	11	10.3	6	11.7
Lung & bronchus	168	137.0 +	82	69.3	154	129.0 +	205	212.0	92	105.0	76	87.9	61	95.3 *
Melanoma of skin	60	72.5	37	34.0	71	69.5	130	115.0	67	51.0 +	22	48.2 *	56	49.5
Myeloma	16	15.9	9	7.9	17	14.8	29	22.3	7	12.4	9	10.0	8	10.7
N-H Lymphoma	45	51.9	31	24.7	48	48.5	84	76.0	36	37.8	29	32.2	34	34.2
Oral cavity & pharynx	39	33.9	16	16.6	26	34.1	65	52.0	33	24.2	16	22.2	15	24.5
Ovary	14	14.7	8	7.0	13	14.6	27	23.6	5	11.7 +	11	9.1	13	10.0
Pancreas	32	30.8	10	16.1	37	28.1	42	49.4	17	23.8	27	18.4	21	20.3
Prostate	203	205.0	73	99.9 *	209	185.0	323	302.0	124	148.0 +	113	124.0	153	128.0 +
Stomach	21	10.9 *	5	6.4	8	12.6	22	18.2	3	10.1 +	8	7.7	8	8.3
Testis	10	7.9	4	4.1	10	9.9	15	20.6	7	7.2	6	6.6	11	7.6
Thyroid	26	37.7	14	17.5	43	37.5	64	72.4	17	30.0 +	25	25.2	56	25.9 *
Pediatric (age 0-19)	12	8.9	2	4.6	16	13.5	23	20.1	7	10.1	10	9.0	9	12.2

+ 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.

2011 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	672	668.0	313	332.0	661	612.0	1,060	994.0 +	455	488.0	374	415.0 +	436	445.0
Bladder	45	45.9	30	22.4	43	41.8	76	62.2	31	33.2	18	28.7 +	23	30.1
Brain	11	8.8	1	4.8	10	9.0	14	16.5	8	6.9	5	6.2	10	6.5
Brain & CNS non-Malignant	3	8.3	3	3.8	9	7.4	12	13.8	8	5.5	5	5.0	8	5.3
Breast	1	1.5	1	0.7	2	1.2	4	1.8	0	1.2	0	1.0	1	1.0
Breast (in-situ)	0	0.2	1	0.0 *	0	0.2	0	0.3	0	0.2	0	0.1	0	0.1
Colorectal	50	57.3	30	27.6	60	50.7	69	91.1 +	42	40.5	46	33.2 +	37	37.2
Esophagus	11	10.2	2	5.3	13	8.7	14	15.6	6	7.5	5	6.3	9	6.3
Hodgkin lymphoma	4	2.9	2	1.4	3	3.1	6	5.4	2	2.4	2	2.1	1	2.6
Kidney & renal pelvis	31	25.8	8	13.6	30	23.9	49	37.9	12	20.3	14	16.7	15	18.1
Larynx	5	5.5	4	2.5	4	5.0	11	6.3	3	3.9	1	3.4	3	3.5
Leukemia	21	20.3	5	10.6	15	21.0	44	28.9 +	18	15.2	9	13.9	15	14.8
Liver & bile duct	15	10.9	3	6.0	9	10.9	21	16.6	10	8.2	9	7.0	2	8.4 +
Lung & bronchus	75	73.4	52	35.9 +	88	63.8 *	97	109.0	45	54.3	45	44.8	28	49.9 *
Melanoma of skin	37	44.4	20	21.7	38	41.7	78	66.3	52	29.3 *	10	29.5 *	30	30.1
Myeloma	13	10.2	7	5.4	9	10.1	18	14.9	5	8.2	7	6.5	4	7.3
N-H Lymphoma	22	31.4	18	14.6	23	28.4	48	43.2	21	21.7	20	18.3	25	19.1
Oral cavity & pharynx	30	23.9	13	11.8	20	23.7	44	38.2	23	17.3	10	16.0	10	17.7
Pancreas	15	15.8	5	8.2	17	14.1	20	24.3	10	11.7	17	8.8 +	9	10.5
Prostate	203	208.0	73	103.0 *	209	182.0	323	296.0	124	148.0 +	113	124.0	153	130.0
Stomach	13	7.9	3	4.5	6	8.4	18	11.0	2	6.9	4	5.4	5	5.7
Testis	10	7.8	4	4.3	10	9.7	15	20.8	7	7.3	6	6.6	11	7.7
Thyroid	7	7.3	3	3.6	5	8.0	16	13.1	2	6.3	5	5.0	11	5.1 +
Pediatric (age 0-19)	6	4.4	1	2.2	10	6.2	9	10.8	3	5.1	4	4.6	6	5.7

+ 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.

2011 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	629	549.0 *	255	271.0	562	553.0	966	913.0	391	424.0	304	363.0 *	370	388.0
Bladder	15	13.7	7	6.9	10	14.2	27	19.9	13	10.0	7	8.8	5	9.6
Brain	6	4.3	2	2.2	6	4.3	9	7.3	2	3.7	3	3.0	1	3.7
Brain & CNS non-Malignant	23	16.1	11	8.0	15	17.7	22	31.9	15	12.7	10	11.2	12	12.0
Breast	184	159.0	81	76.3	139	162.0	293	258.0 +	123	119.0	87	103.0	90	112.0 +
Breast (in-situ)	34	36.9	15	16.8	35	35.6	78	55.4 *	22	27.2	22	22.8	18	25.5
Cervix	8	7.7	2	3.7	14	7.4 +	13	16.3	6	6.2	6	5.3	4	6.5
Colorectal	68	46.2 *	21	24.8	45	49.3	69	83.6	41	36.9	28	31.8	33	33.4
Corpus Uteri	45	32.9	13	16.5	39	32.0	53	58.5	19	26.0	21	21.6	21	23.4
Esophagus	1	1.5	0	0.8	1	1.5	5	1.5 +	0	1.3	2	0.8	0	1.1
Hodgkin lymphoma	4	1.9	1	1.2	2	3.1	6	4.8	2	2.1	2	2.0	1	2.8
Kidney & renal pelvis	13	16.6	9	7.5	18	15.4	29	26.2	10	12.2	9	10.3	11	11.0
Larynx	1	1.2	2	0.4	1	1.1	2	1.9	1	0.8	0	0.8	0	0.9
Leukemia	12	18.0	4	8.6	15	17.5	36	25.5	12	13.2	13	10.9	15	12.0
Liver & bile duct	6	5.0	3	2.5	3	5.3	8	8.1	5	3.6	2	3.3	4	3.3
Lung & bronchus	93	63.4 *	30	33.6	66	65.7	108	103.0	47	50.6	31	43.4	33	45.6
Melanoma of skin	23	28.5	17	12.6	33	27.6	52	48.4	15	21.7	12	18.8	26	19.5
Myeloma	3	5.8	2	2.7	8	4.6	11	7.2	2	4.2	2	3.5	4	3.4
N-H Lymphoma	23	20.7	13	10.2	25	20.0	36	32.5	15	16.1	9	14.0	9	15.1
Oral cavity & pharynx	9	10.0	3	4.9	6	10.2	21	13.6	10	6.9	6	6.3	5	6.9
Ovary	14	14.6	8	6.9	13	14.7	27	23.8	5	11.7	11	9.1	13	9.9
Pancreas	17	14.9	5	7.9	20	13.8	22	25.0	7	12.1	10	9.6	12	10.0
Stomach	8	3.2 +	2	2.0	2	4.2	4	7.1	1	3.2	4	2.3	3	2.6
Thyroid	19	30.6 +	11	13.7	38	29.9	48	59.2	15	23.7	20	20.3	45	20.6 *
Pediatric (age 0-19)	6	4.5	1	2.3	6	7.3	14	9.3	4	5.0	6	4.4	3	6.6

+ 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 being diagnosed with cancer by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 66	1 in 20	1 in 9	1 in 5	1 in 3	1 in 2
40		1 in 29	1 in 10	1 in 5	1 in 3	1 in 2
50			1 in 15	1 in 5	1 in 3	1 in 2
60				1 in 8	1 in 4	1 in 2
70					1 in 5	1 in 3
80						1 in 4

If your current age is:	Then your risk of dying from cancer by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 555	1 in 143	1 in 47	1 in 18	1 in 9	1 in 5
40		1 in 190	1 in 50	1 in 18	1 in 9	1 in 5
50			1 in 67	1 in 20	1 in 9	1 in 5
60				1 in 27	1 in 10	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 being diagnosed with cancer by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 129	1 in 35	1 in 11	1 in 4	1 in 2	1 in 2
40		1 in 47	1 in 11	1 in 4	1 in 2	1 in 2
50			1 in 14	1 in 4	1 in 2	1 in 2
60				1 in 6	1 in 2	1 in 2
70					1 in 3	1 in 2
80						1 in 2

If your current age is:	Then your risk of dying from cancer by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 736	1 in 154	1 in 44	1 in 16	1 in 8	1 in 4
40		1 in 191	1 in 47	1 in 16	1 in 7	1 in 4
50			1 in 60	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 being diagnosed with breast cancer by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 277	1 in 60	1 in 26	1 in 14	1 in 9	1 in 8
40		1 in 76	1 in 28	1 in 14	1 in 10	1 in 8
50			1 in 43	1 in 17	1 in 11	1 in 8
60				1 in 27	1 in 13	1 in 10
70					1 in 23	1 in 13
80						1 in 22

If your current age is:	Then your risk of dying from breast cancer by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 2135	1 in 562	1 in 198	1 in 94	1 in 55	1 in 36
40		1 in 756	1 in 216	1 in 98	1 in 56	1 in 36
50			1 in 296	1 in 110	1 in 59	1 in 37
60				1 in 169	1 in 71	1 in 41
70					1 in 112	1 in 49
80						1 in 67

Prostate Cancer

If your current age is:	Then your risk of being diagnosed with prostate cancer by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 18642	1 in 325	1 in 41	1 in 12	1 in 7	1 in 6
40		1 in 326	1 in 41	1 in 12	1 in 7	1 in 6
50			1 in 45	1 in 12	1 in 7	1 in 5
60				1 in 15	1 in 7	1 in 6
70					1 in 12	1 in 7
80						1 in 14

If your current age is:	Then your risk of dying from prostate cancer 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 18620	1 in 1752	1 in 334	1 in 84	1 in 29
40		1 in 18348	1 in 1726	1 in 329	1 in 83	1 in 29
50			1 in 1848	1 in 325	1 in 81	1 in 28
60				1 in 369	1 in 79	1 in 27
70					1 in 87	1 in 25
80						1 in 25

Risks of Being Diagnosed with and Dying from Cancer

Colon/Rectal Cancer in Females

If your current age is:	Then your risk of being diagnosed with colorectal cancer by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 1636	1 in 375	1 in 140	1 in 66	1 in 36	1 in 22
40		1 in 482	1 in 152	1 in 68	1 in 36	1 in 22
50			1 in 218	1 in 77	1 in 38	1 in 23
60				1 in 114	1 in 45	1 in 24
70					1 in 66	1 in 28
80						1 in 37

If your current age is:	Then your risk of dying from colorectal cancer by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 9392	1 in 1468	1 in 527	1 in 228	1 in 110	1 in 56
40		1 in 1724	1 in 554	1 in 231	1 in 110	1 in 56
50			1 in 800	1 in 262	1 in 116	1 in 57
60				1 in 374	1 in 130	1 in 59
70					1 in 181	1 in 64
80						1 in 75

Colon/Rectal Cancer in Males

If your current age is:	Then your risk of being diagnosed with colorectal cancer by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 1817	1 in 395	1 in 122	1 in 50	1 in 27	1 in 20
40		1 in 497	1 in 129	1 in 50	1 in 27	1 in 20
50			1 in 169	1 in 54	1 in 28	1 in 20
60				1 in 75	1 in 31	1 in 21
70					1 in 46	1 in 25
80						1 in 39

If your current age is:	Then your risk of dying from colorectal cancer by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 6478	1 in 1357	1 in 472	1 in 184	1 in 89	1 in 53
40		1 in 1692	1 in 502	1 in 187	1 in 89	1 in 52
50			1 in 692	1 in 204	1 in 91	1 in 52
60				1 in 271	1 in 99	1 in 53
70					1 in 135	1 in 58
80						1 in 70

Risks of Being Diagnosed with and Dying from Cancer

Melanoma in Females

If your current age is:	Then your risk of being diagnosed with melanoma by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 574	1 in 224	1 in 130	1 in 89	1 in 66	1 in 53
40		1 in 362	1 in 165	1 in 104	1 in 74	1 in 58
50			1 in 298	1 in 143	1 in 91	1 in 68
60				1 in 264	1 in 126	1 in 84
70					1 in 217	1 in 112
80						1 in 176

If your current age is:	Then your risk of dying from melanoma by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 8366	1 in 3609	1 in 1531	1 in 958	1 in 631	1 in 420
40		1 in 6286	1 in 1856	1 in 1072	1 in 676	1 in 438
50			1 in 2584	1 in 1267	1 in 743	1 in 462
60				1 in 2390	1 in 1002	1 in 540
70					1 in 1566	1 in 633
80						1 in 814

Melanoma in Males

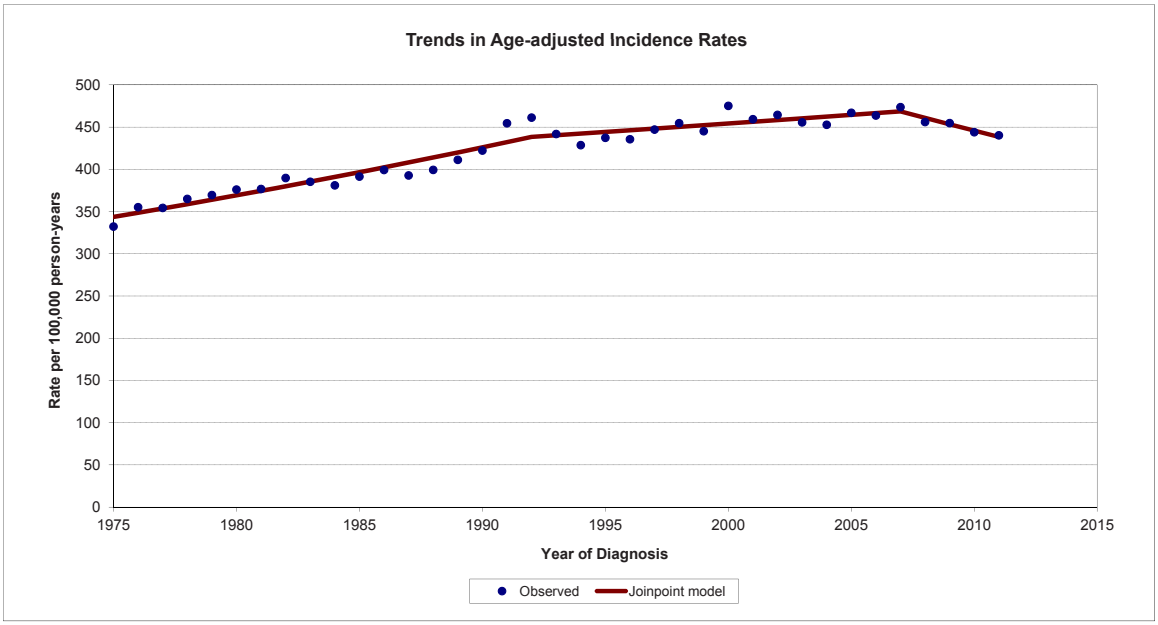
If your current age is:	Then your risk of being diagnosed with melanoma by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 648	1 in 279	1 in 125	1 in 66	1 in 42	1 in 32
40		1 in 482	1 in 152	1 in 72	1 in 44	1 in 33
50			1 in 215	1 in 82	1 in 47	1 in 34
60				1 in 123	1 in 56	1 in 38
70					1 in 88	1 in 47
80						1 in 70

If your current age is:	Then your risk of dying from melanoma by a given age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 6266	1 in 2243	1 in 1089	1 in 474	1 in 271	1 in 182
40		1 in 3441	1 in 1298	1 in 506	1 in 279	1 in 184
50			1 in 2022	1 in 575	1 in 294	1 in 189
60				1 in 754	1 in 323	1 in 195
70					1 in 491	1 in 229
80						1 in 301

SECTION VII

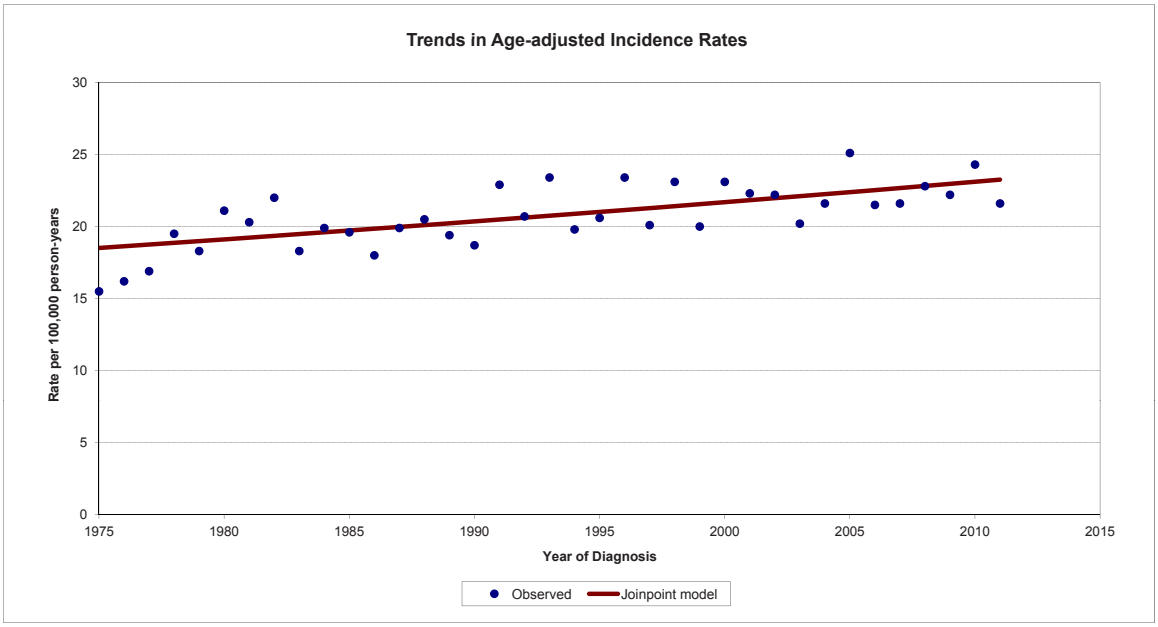
CANCER TRENDS IN IDAHO
1975-2011

All Sites



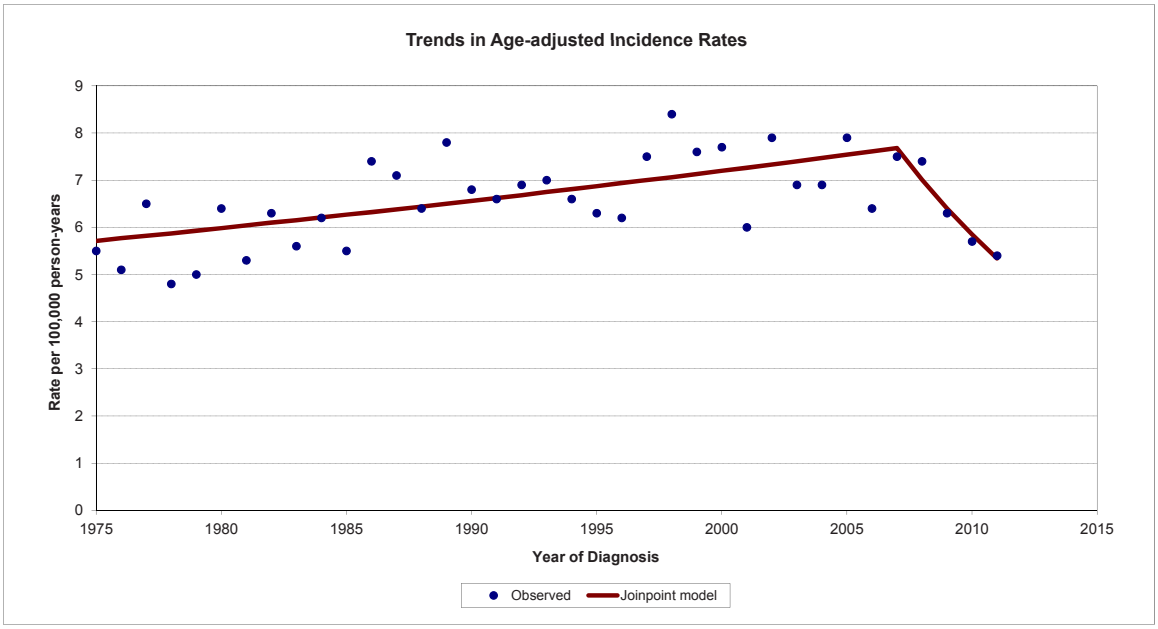
Cancer incidence increased at a rate of about 1.4% per year in Idaho from 1975 to 1992, and at a rate of about 0.5% per year from 1992 to 2007. Since 2007, overall cancer incidence has declined about 1.7% per year. Cancer incidence trends over time were different for males and females. For males, much 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



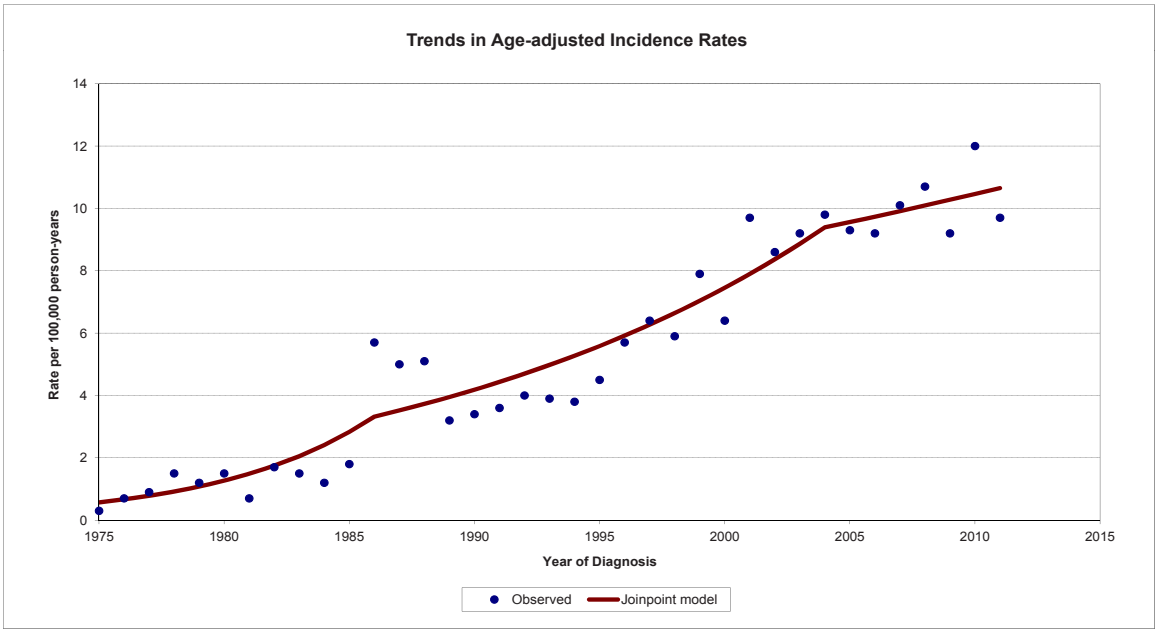
Bladder cancer incidence includes in-situ and invasive cases. Bladder cancer incidence increased at a rate of about 0.6% per year in Idaho from 1975 to 2011. Most of the increase in bladder cancer incidence is attributable to males, who have rates of bladder cancer incidence about 4-5 times those of females.

Brain



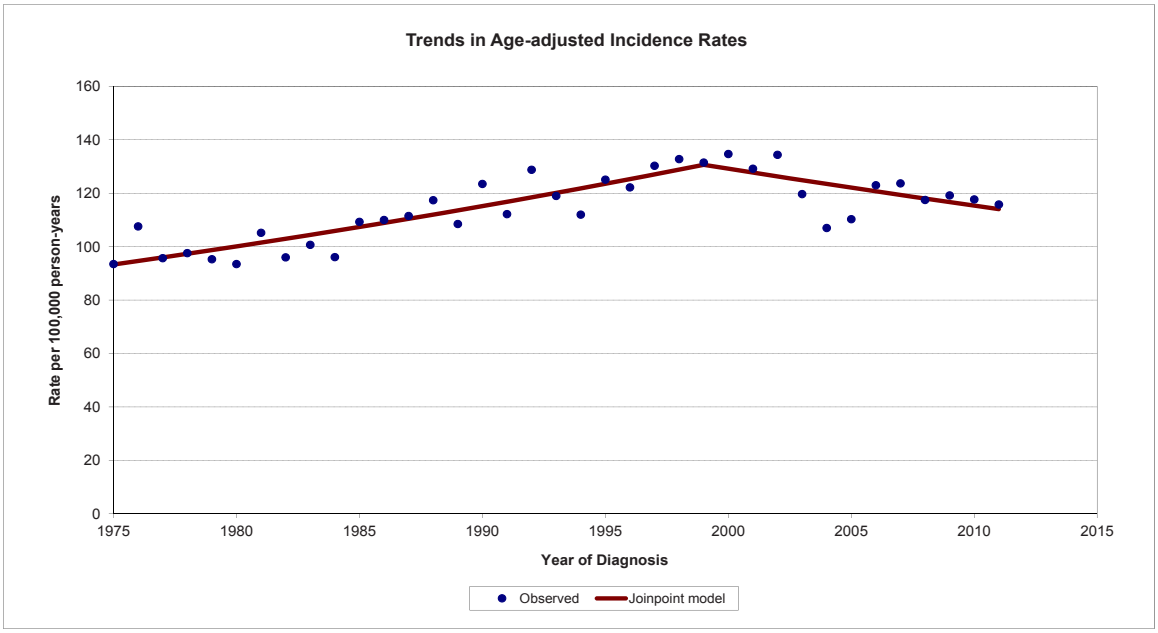
Malignant brain cancer incidence increased at a rate of about 0.9% per year in Idaho from 1975 to 2007, after which the rate has declined about 8.7% per year. Among males, malignant brain cancer increased at a rate of about 1.7% per year until 1999, and has been stable since. Among females, the rate was stable from 1975-2007, after which it has declined.

Brain and Other CNS, Non-Malignant



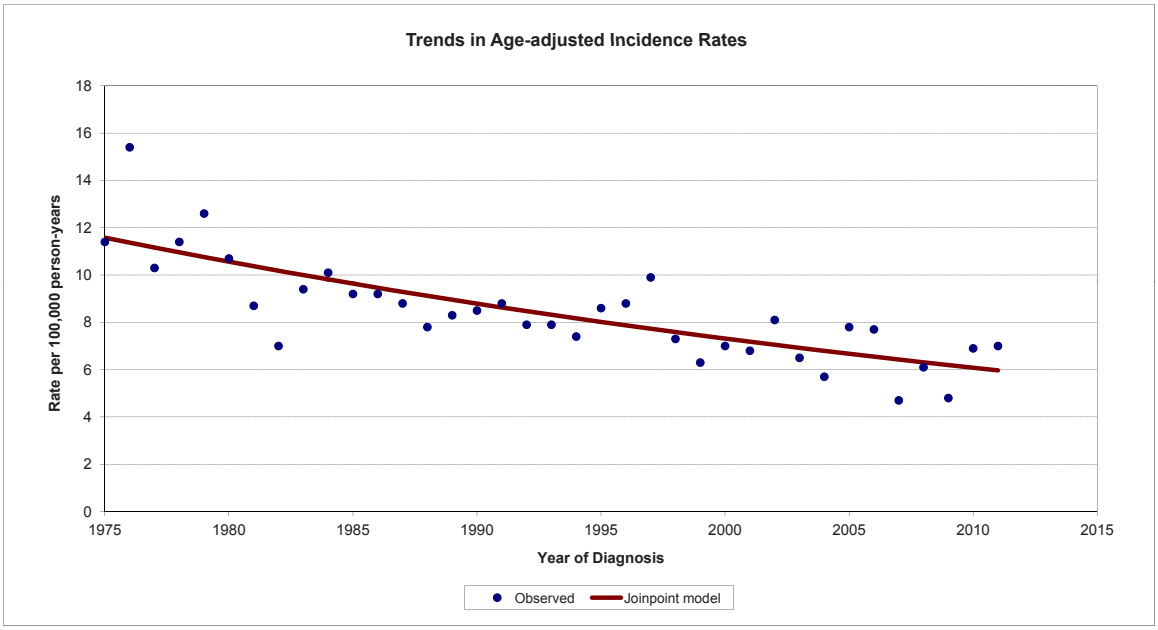
Non-malignant brain and other central nervous system tumors include those with benign and borderline behavior. Non-malignant brain and other CNS tumor incidence increased at a rate of about 17.4% per year in Idaho from 1975 to 1986, then increased by about 5.9% until 2004, after which the rate has been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

Breast Female



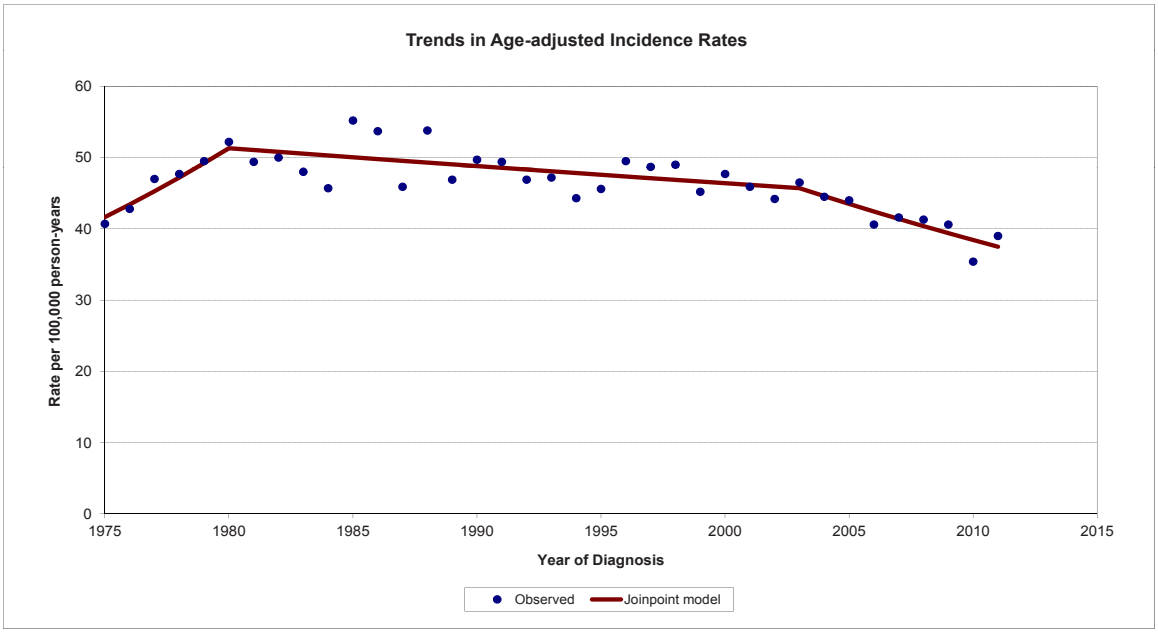
Invasive breast cancer incidence increased at a rate of about 1.4% per year among female Idahoans from 1975 to 1999, after which the rate decreased by about 1.1% per year. The decrease may be due in part to a decrease in the use of hormone replacement therapy. In-situ breast cancer rates increased at a rate of about 14.8% per year from 1975 to 1990, after which the rate of increase slowed to about 1.9% per year (data not shown).

Cervix



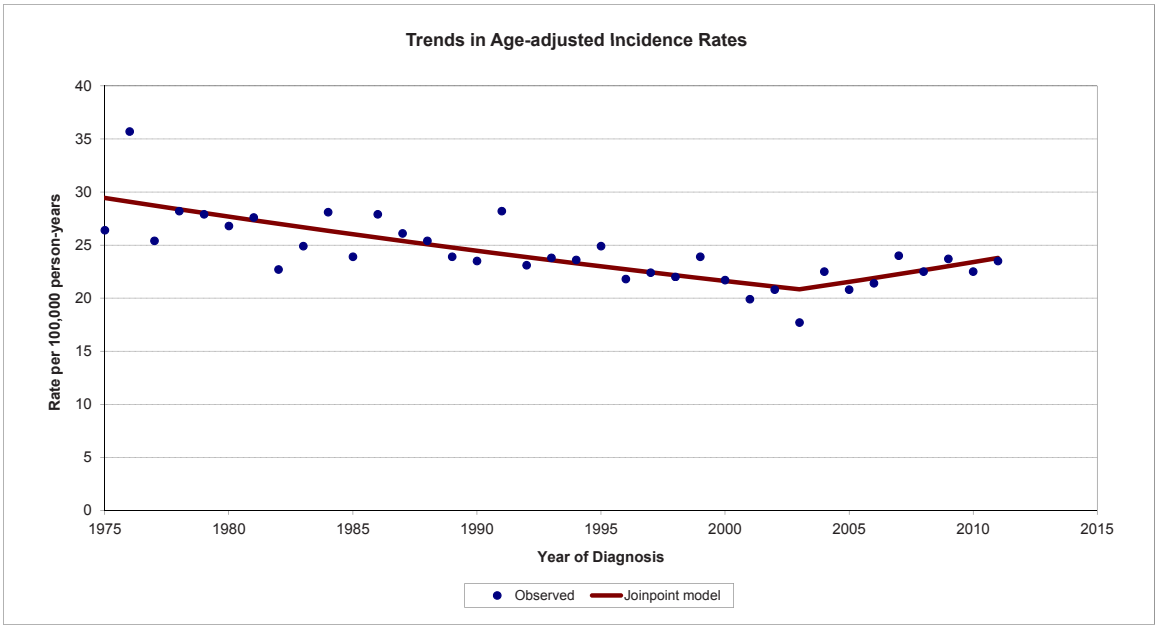
Invasive cervical cancer incidence has decreased about 1.8% per year in Idaho from 1975 to 2011.

Colorectal



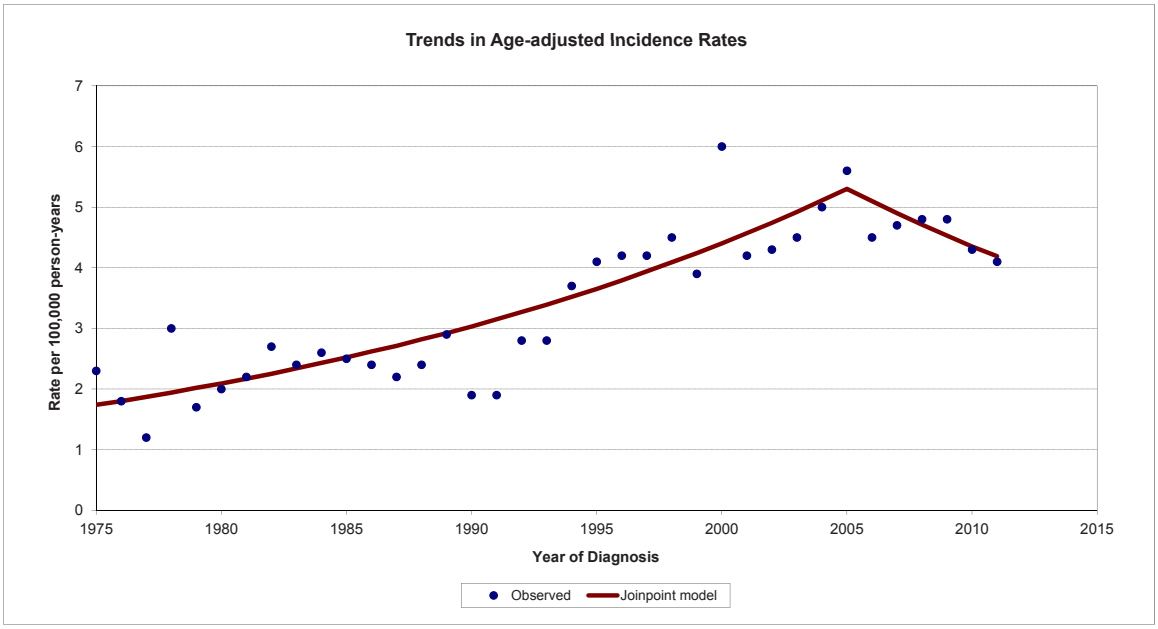
Colorectal cancer incidence increased at a rate of about 4.3% per year in Idaho from 1975 to 1980. From 1980 to 2003, the rate decreased about 0.5% per year, and then the rate decreased about 2.5% per year from 2004 to 2011. Colorectal cancer incidence trends over time were different for males and females. For males, rates increased from 1975 to 1988, then decreased. For females, rates decreased across the entire time series.

Corpus Uteri



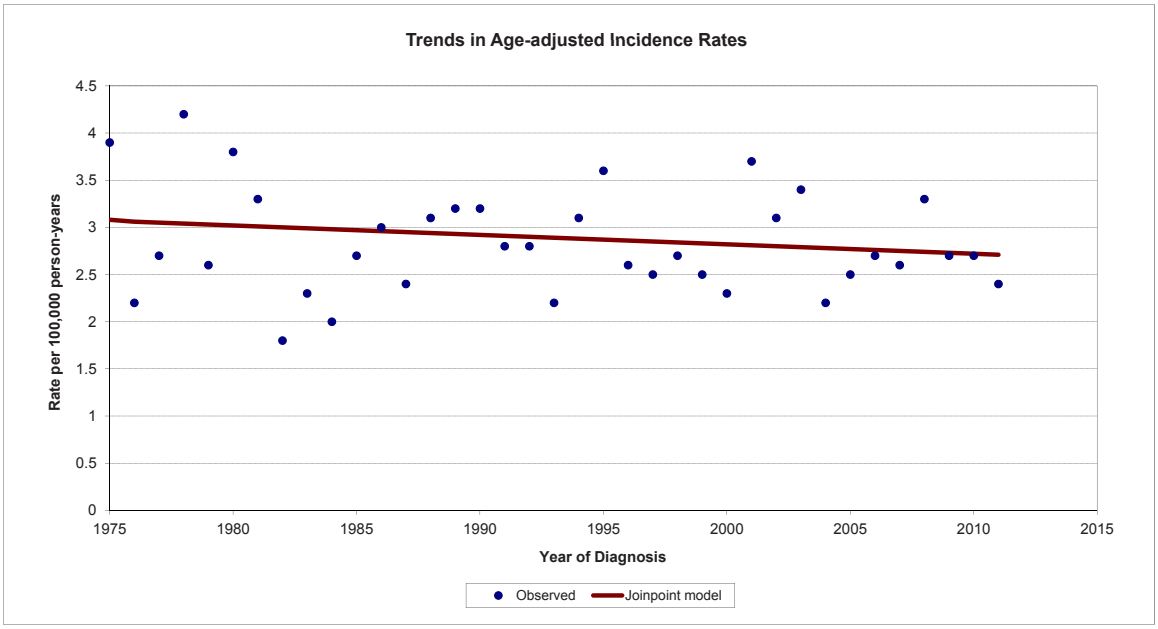
Corpus uteri cancer incidence decreased about 1.2% per year in Idaho from 1975 to 2003, and has been relatively stable since 2003.

Esophagus



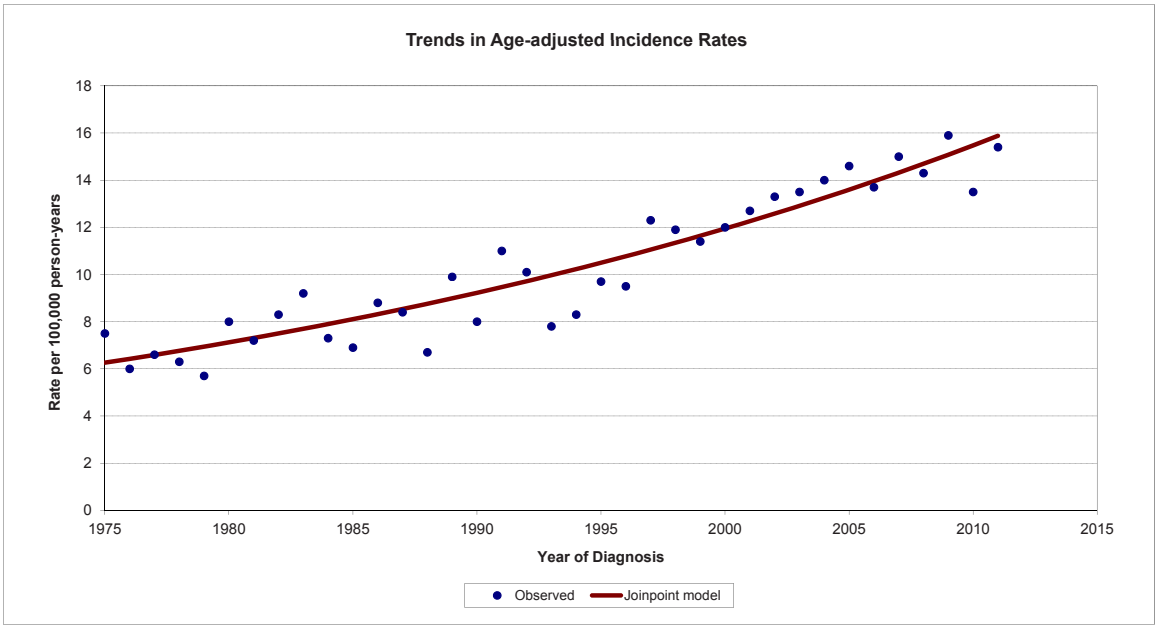
Esophageal cancer incidence increased at a rate of about 3.8% per year in Idaho from 1975 to 2005. From 2005 to 2011, the rate decreased about 3.9% per year. Rates of esophageal cancers among males were about 3-4 times higher than those among females.

Hodgkin Lymphoma



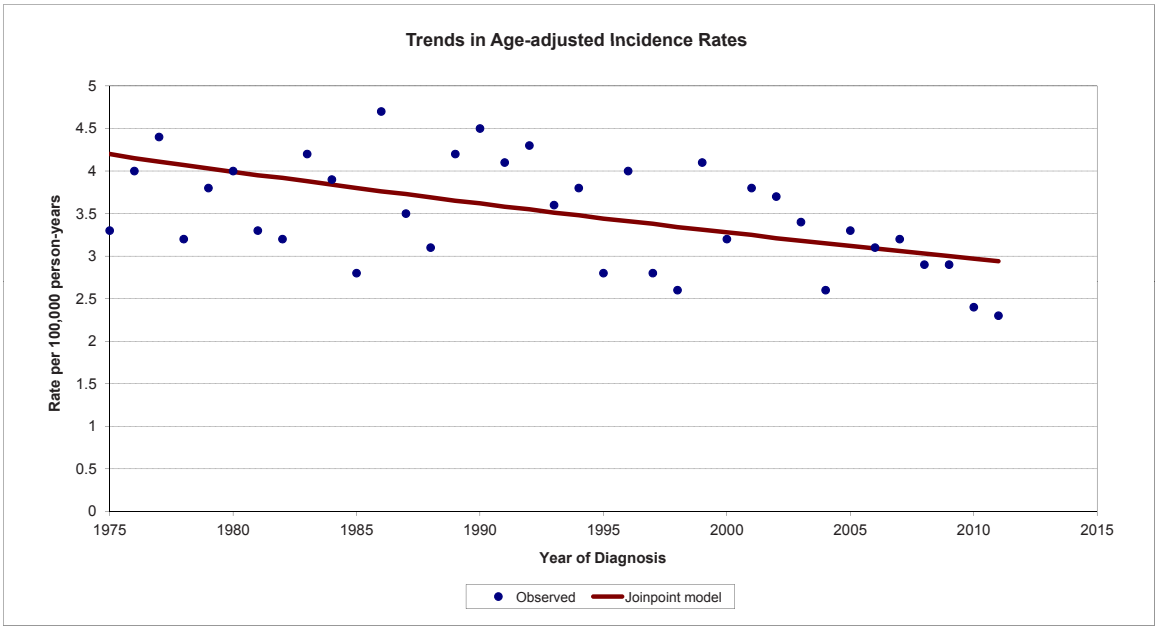
There was no statistically significant trend in Hodgkin lymphoma incidence in Idaho from 1975 to 2011; rates were stable but showed year-to-year variability due to the relatively small numbers of cases diagnosed annually.

Kidney and Renal Pelvis



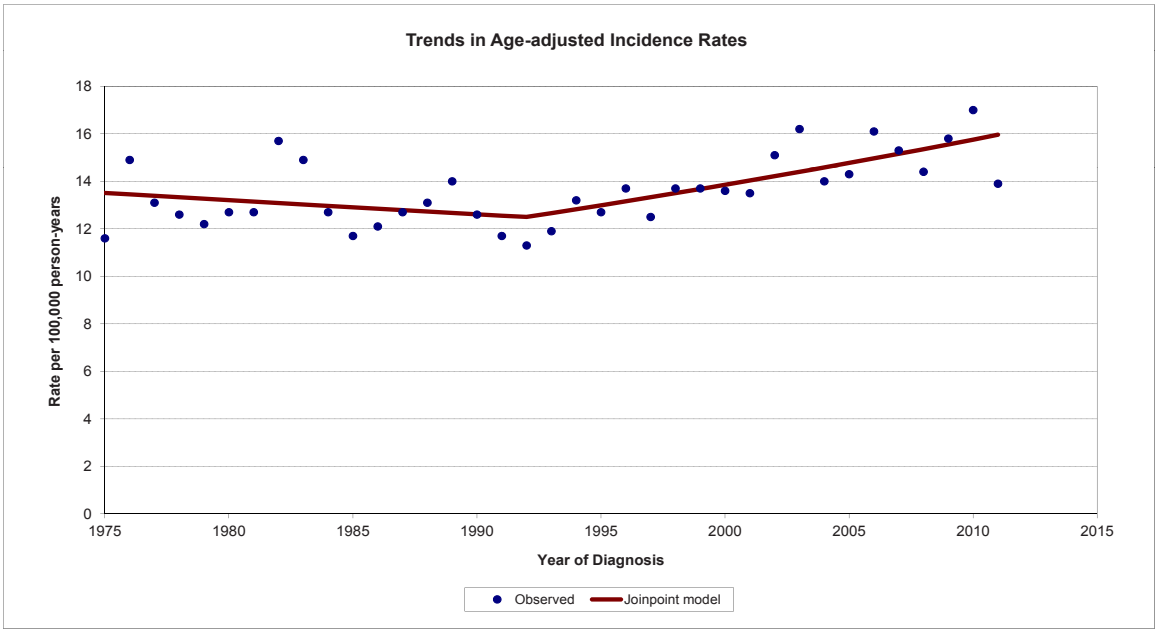
Kidney and renal pelvis cancer incidence increased at a rate of about 2.6% per year in Idaho from 1975 to 2011. The rate of increase was similar for males and females, although rates of kidney and renal pelvis cancers among males were about twice as high as among females.

Larynx



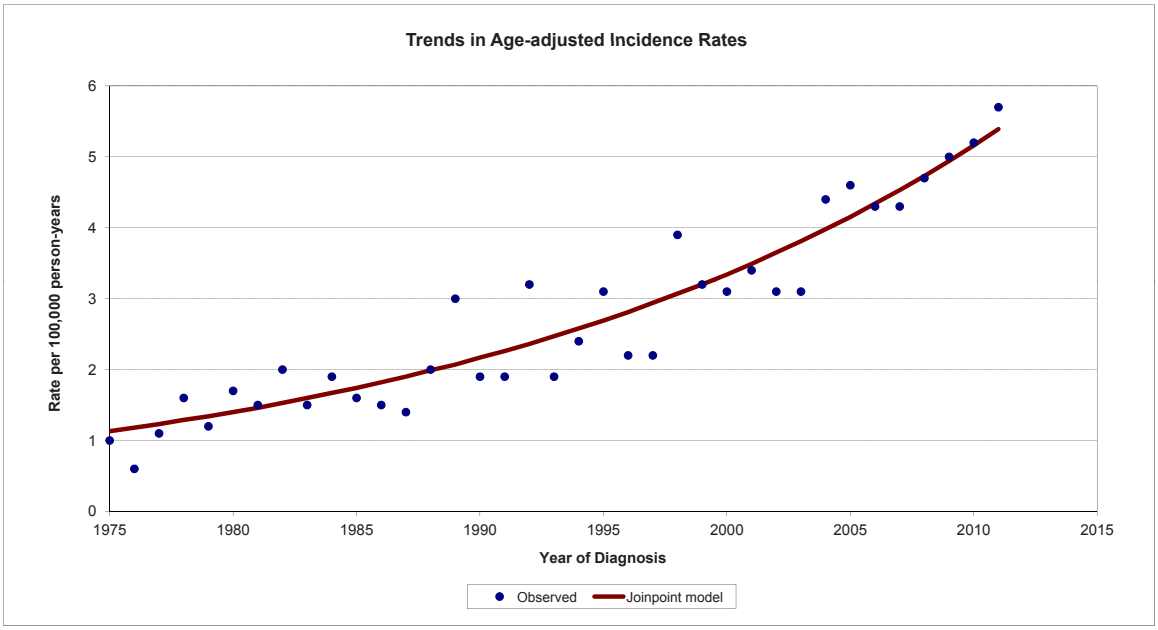
Laryngeal cancer incidence decreased about 1.0% per year in Idaho from 1975 to 2011; rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually. The rate of decrease was similar for males and females, although rates of laryngeal cancers among males were about 4 times as high as among females.

Leukemia



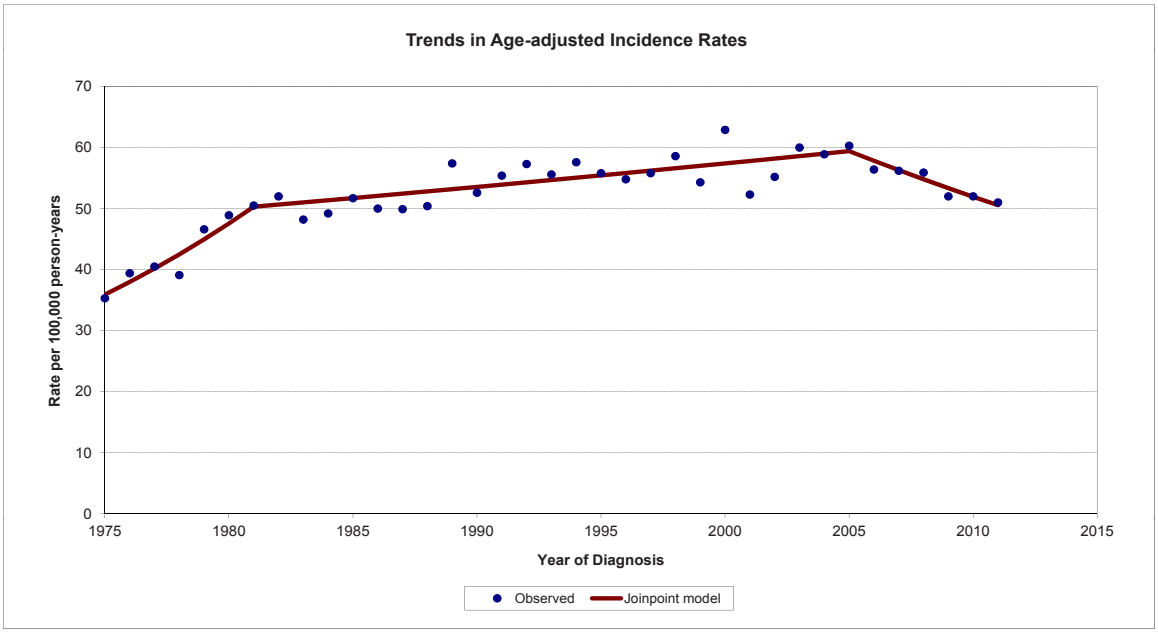
Leukemia incidence was generally stable from 1975 to 1992, and has increased about 1.3% per year since 1992. Rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually.

Liver and Bile Duct



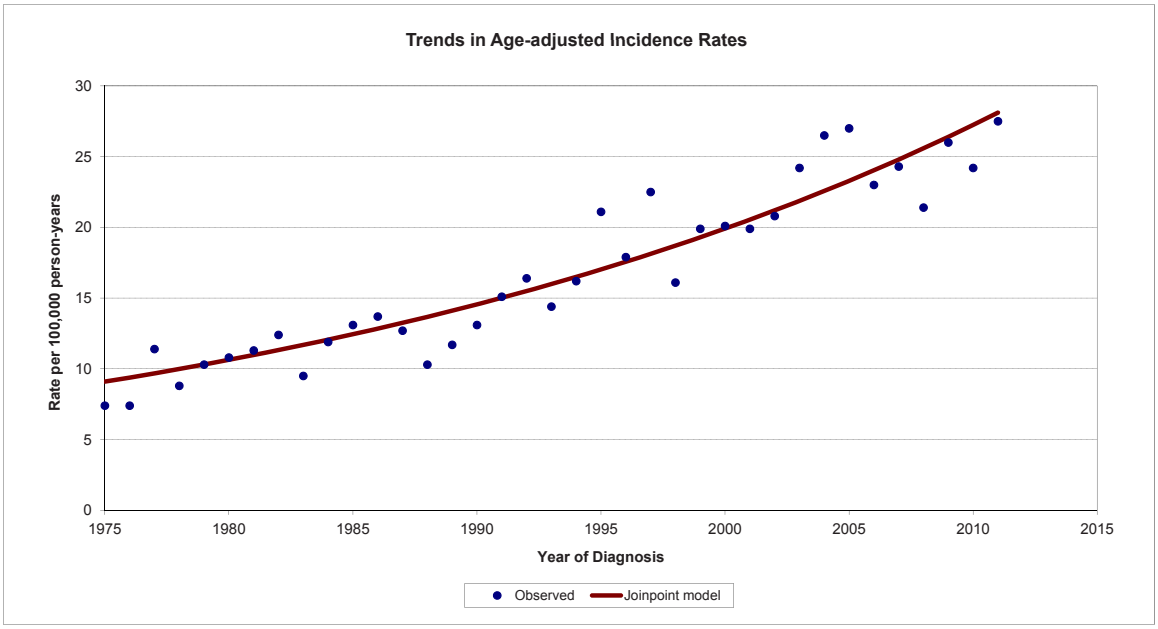
Liver cancer incidence increased at a rate of about 4.4% per year in Idaho from 1975 to 2011. The rate of increase was higher for males (5.3% per year) than for females (2.9% per year), and rates of liver cancers among males were about twice as high as among females.

Lung and Bronchus



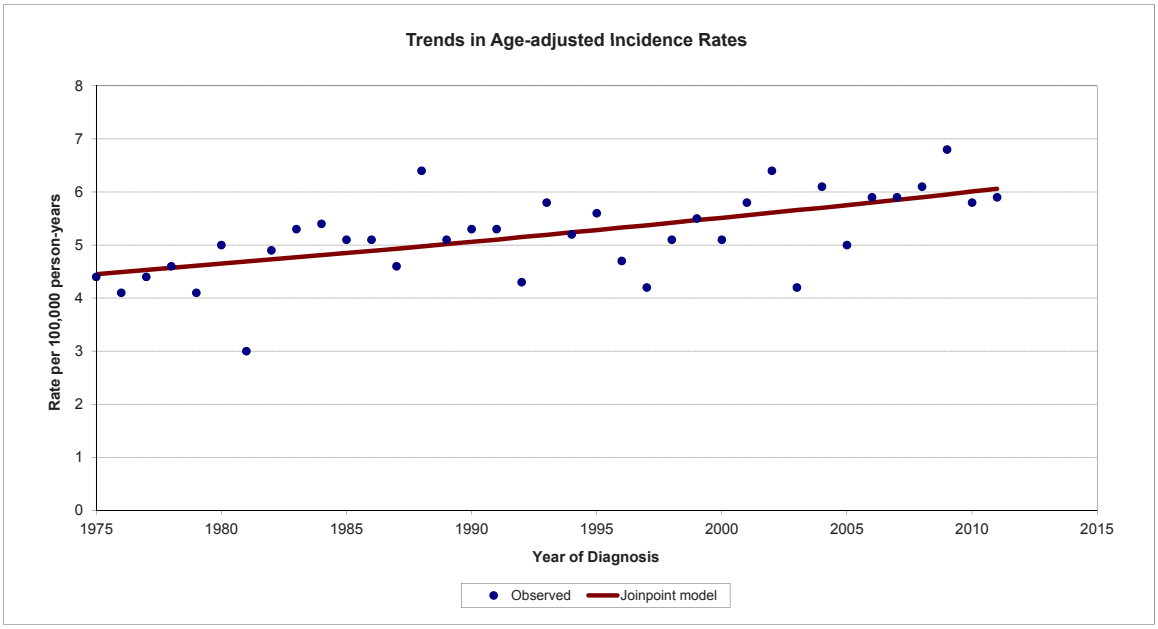
Lung cancer incidence increased at a rate of about 5.8% per year in Idaho from 1975 to 1981, after which the rate of increase lessened to about 0.7% per year until 2005. From 2005 to 2011, the rate has decreased about 2.7% per year. Lung cancer incidence trends over time were different for males and 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 3.8% per year. For females, lung cancer incidence increased at a rate of about 6.2% per year from 1975 to 1988, after which the rate of increase lessened to about 1.8% per year until 2005. From 2006 to 2011, lung cancer incidence among females decreased about 1.2% per year. 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



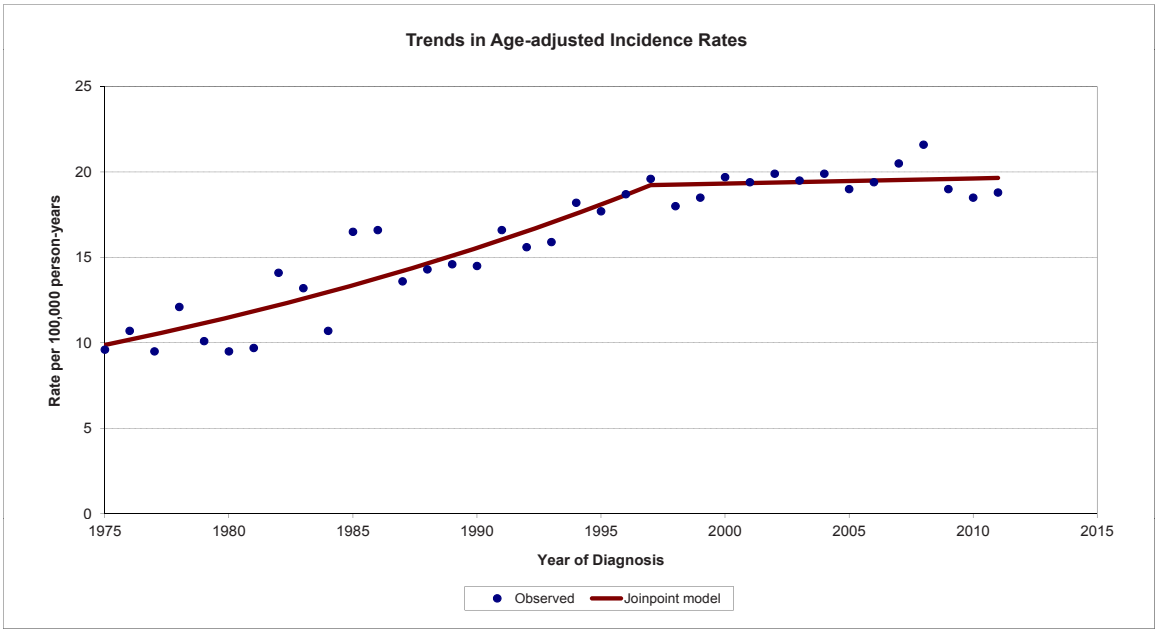
The incidence of melanoma of the skin increased at a rate of about 3.2% per year in Idaho from 1975 to 2011. The rate of increase has been higher for males (3.7% per year) than for females (2.6% per year). The incidence of in-situ melanoma of the skin increased at a higher rate (7.9% per year from 1980 to 2011) than for the invasive cases depicted in the graph.

Myeloma



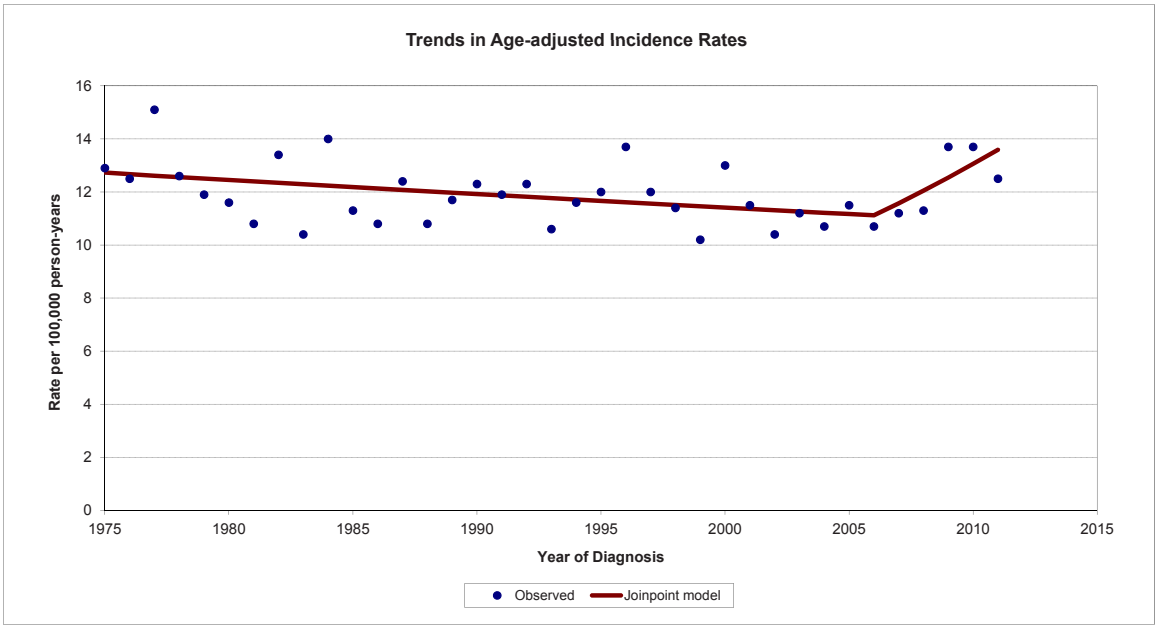
The incidence of myeloma increased at a rate of about 0.9% per year in Idaho from 1975 to 2011. The rate of increase was higher for males (1.4% per year) than for females (no significant trend), and rates of myeloma incidence among males were higher than among females.

Non-Hodgkin Lymphoma



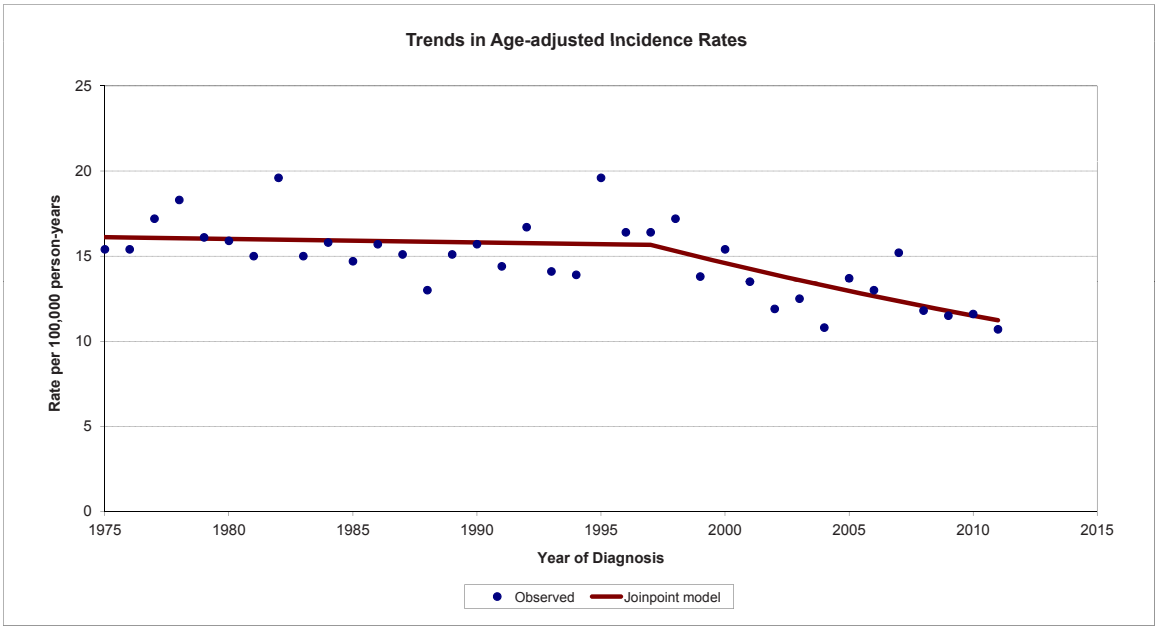
The incidence of non-Hodgkin lymphoma increased at a rate of about 3.1% per year in Idaho from 1975 to 1997, after which there has been no significant trend. Non-Hodgkin lymphoma incidence trends over time were similar for males and females, but rates of non-Hodgkin lymphoma incidence among males were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

Oral Cavity and Pharynx



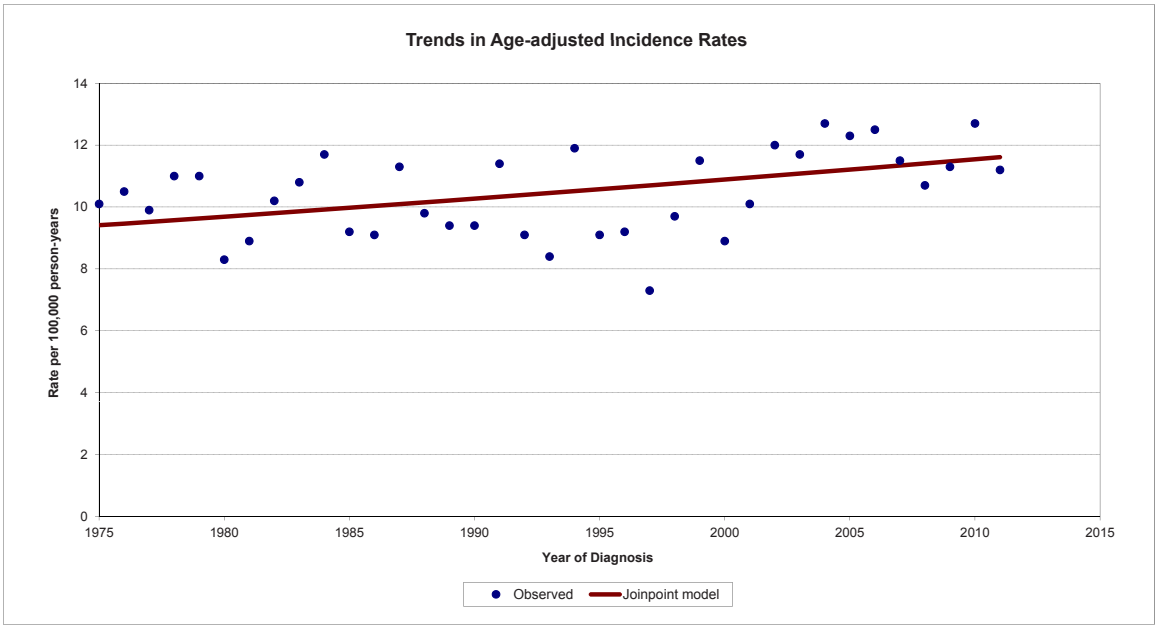
The incidence of cancers of the oral cavity and pharynx decreased at a rate of about 0.4% per year in Idaho from 1975 to 2006, and has since increased about 4.1% per year. Among males, the rate of decrease was about 0.5% per year for the entire time period. Among females, incidence of cancers of the oral cavity and pharynx increased at a rate of about 0.6% per year 1975 to 2011. 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



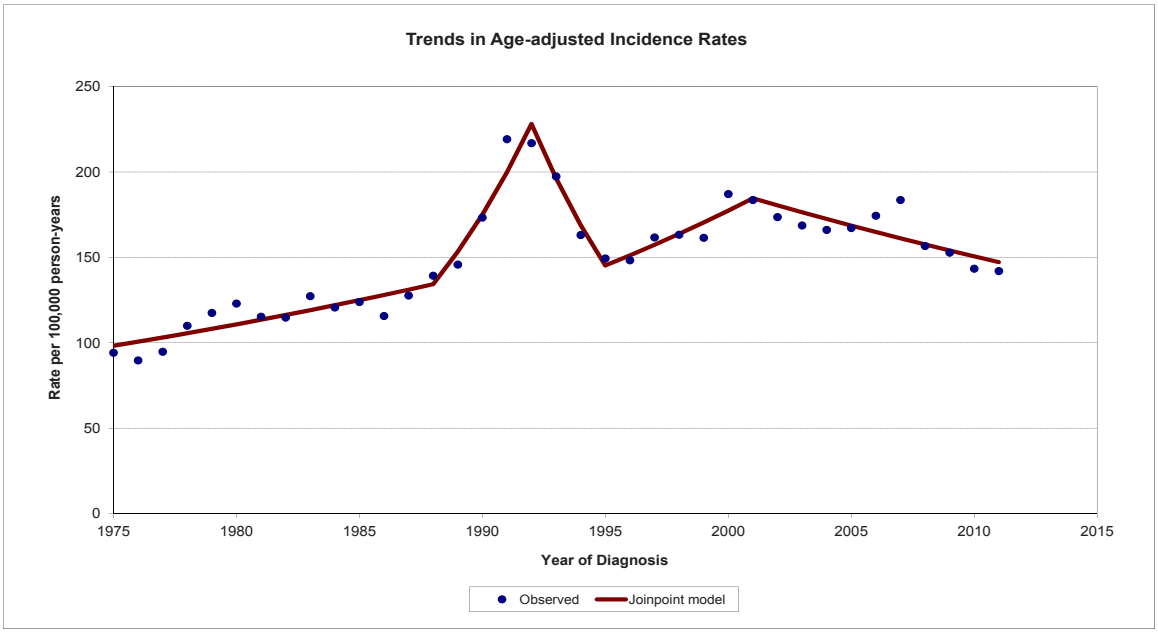
The incidence of ovarian cancer among females in Idaho was stable from 1975 to 1997, and then decreased about 2.4% per year from 1997 to 2011. Part of the decrease may have been due to a decrease in the use of hormone replacement therapy.

Pancreas



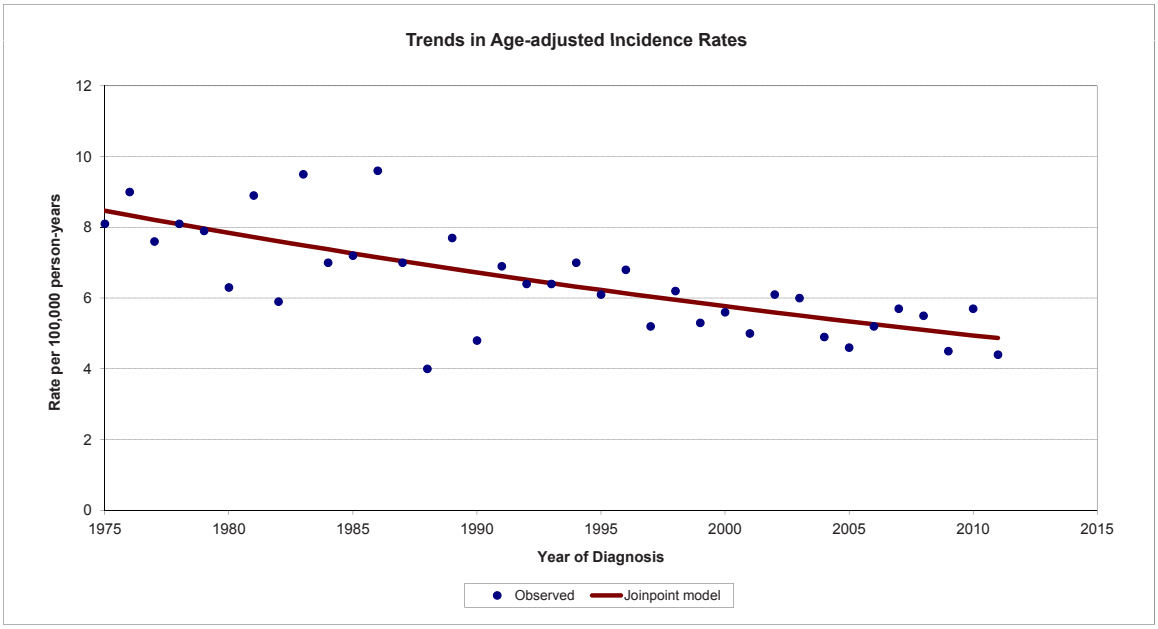
Pancreas cancer incidence increase at a rate of about 0.6% per year in Idaho from 1975 to 2011; rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually. The rate of increase was higher for females (1.2% per year) than for males (no significant trend), and rates of pancreas cancer incidence among males were higher than among females.

Prostate



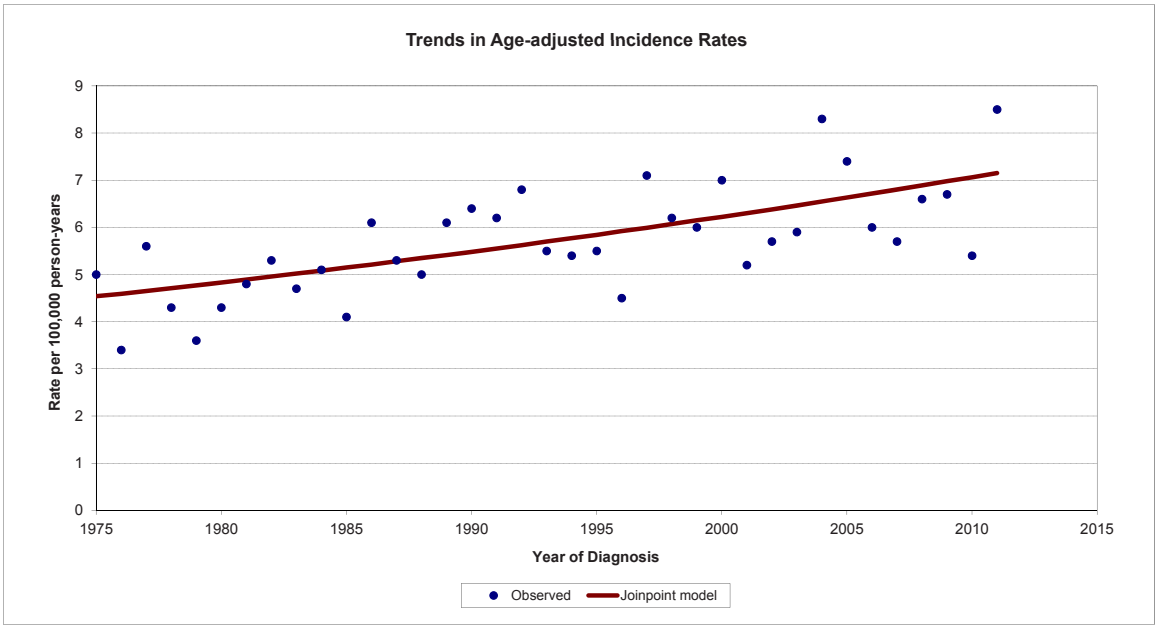
Trends in prostate cancer incidence are complicated, owing to the adoption of the Prostate-Specific Antigen (PSA) screening test in the late 1980s and early 1990s. From 1975 to 1988, prostate cancer incidence increased in Idaho at a rate of about 2.4% per year. From 1988 to 1992, prostate cancer incidence increased at a rate of about 14.2% per year. For the period 1992 to 1995, prostate cancer rates dropped by about 14.0% per year. From 1995 to 2001, the rates increased about 4.0% per year. Since 2001, the rate has decreased about 2.2% per year. Overall, there is an increasing trend in prostate cancer incidence punctuated by a large increase and concomitant decrease associated with widespread adoption of the PSA test, which likely detected many indolent cases.

Stomach



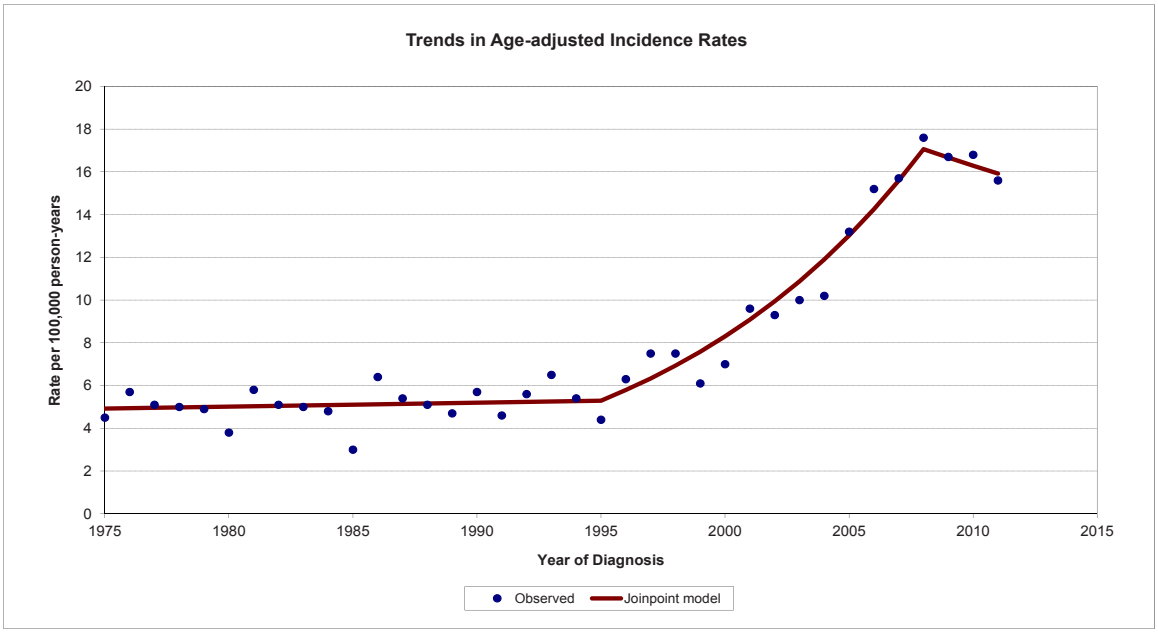
Stomach cancer incidence decreased at a rate of about 1.5% per year in Idaho from 1975 to 2011. Stomach cancer incidence trends over time were similar for males and females although stomach cancer incidence rates among males were about twice as high as among females.

Testis



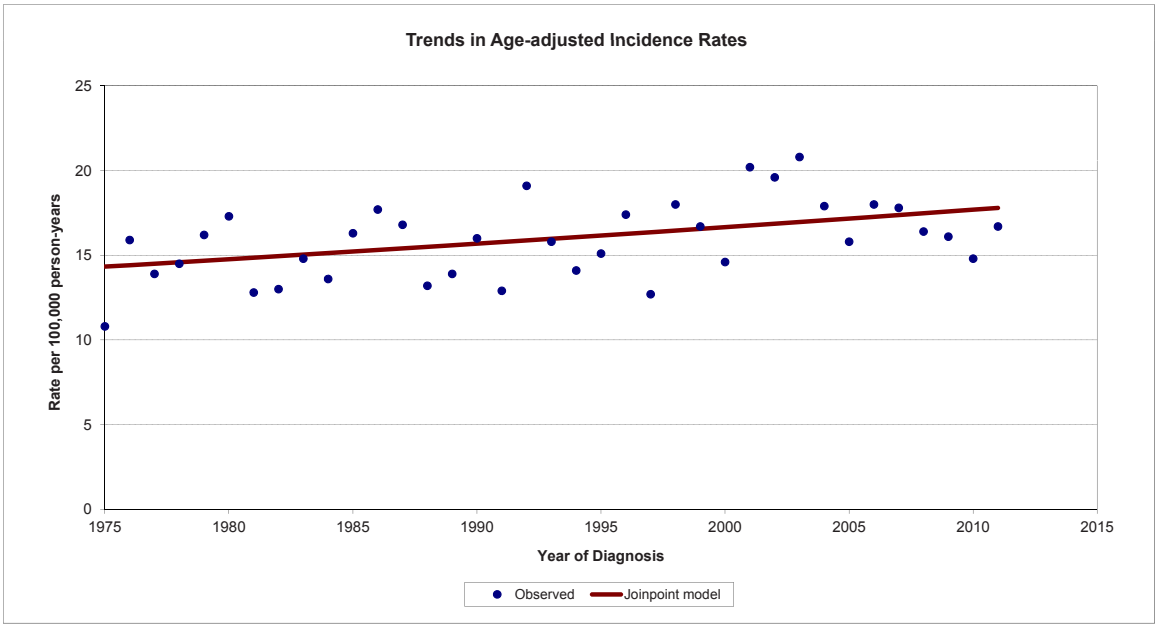
Testis cancer incidence increased at a rate of about 1.3% per year in Idaho from 1975 to 2011.

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 9.4% per year, and thyroid cancer incidence has decreased by about 2.3% per year 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 2011. 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 2011. 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
2007-2011

Idaho Cancer Incidence Rates by Race and Ethnicity, 2007 - 2011

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	462.5	36,387	463.6	33,985	369.7	1,218	381.7	98	361.1	319	283.8	242
Bladder	22.5	1,737	22.6	1,649	16.8	37	^	^	^	^	^	^
Brain - malignant	6.5	501	6.7	471	5.2	24	^	^	^	^	^	^
Brain and other CNS - non-malignan	10.3	792	10.2	722	11.4	41	^	^	^	^	^	^
Breast	118.8	4,861	120.5	4,576	88.3	153	95.2	10	90.2	46	84.3	48
Breast - in situ	25.2	1,029	25.3	951	19.8	38	^	^	^	^	27.3	15
Cervix	5.9	219	5.8	193	5.6	18	^	^	^	^	^	^
Colorectal	39.5	3,083	39.2	2,872	32.7	97	^	^	46.8	38	31.7	26
Corpus Uteri	23.2	982	22.9	899	20.7	42	^	^	15.8	10	^	^
Esophagus	4.5	366	4.6	351	^	^	^	^	^	^	^	^
Hodgkin Lymphoma	2.7	208	2.8	187	1.8	13	^	^	^	^	^	^
Kidney and Renal Pelvis	14.8	1,172	14.7	1,081	16.0	58	^	^	12.8	13	^	^
Larynx	2.7	217	2.8	208	^	^	^	^	^	^	^	^
Leukemia	15.3	1,194	15.2	1,095	12.1	62	^	^	11.7	13	^	^
Liver and Bile Duct	5.0	412	4.5	345	12.8	40	^	^	14.4	14	^	^
Lung and Bronchus	53.4	4,148	54.0	3,980	36.0	87	50.8	11	58.8	41	35.7	24
Melanoma of the Skin	24.8	1,922	26.4	1,873	10.3	34	^	^	^	^	^	^
Myeloma	6.1	472	5.9	429	7.9	24	^	^	^	^	^	^
Non-Hodgkin Lymphoma	19.6	1,531	19.7	1,433	18.6	58	^	^	11.8	10	10.6	10
Oral Cavity and Pharynx	12.5	998	12.7	940	8.9	22	^	^	^	^	^	^
Ovary	12.1	501	12.5	478	5.5	13	^	^	^	^	^	^
Pancreas	11.5	900	11.5	850	15.1	36	^	^	^	^	^	^
Prostate	155.0	5,995	151.1	5,513	110.9	154	175.0	26	106.0	43	61.6	21
Stomach	5.2	399	4.9	353	7.4	20	^	^	^	^	16.8	13
Testis	6.6	243	7.0	216	3.8	20	^	^	^	^	^	^
Thyroid	16.5	1,248	17.1	1,144	12.4	70	^	^	8.4	10	^	^
Pediatric Age 0 to 19	16.5	389	17.2	323	14.2	57	^	^	^	^	^	^

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, 2013.[16]

APPENDIX B

2011 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	6,676	2,998	11,390	15,779	7,772	7,268	9,691	60,839
5 to 9	7,011	2,962	11,681	16,923	7,766	7,369	8,953	62,193
10 to 14	7,477	3,109	11,344	16,529	7,383	7,132	8,337	60,772
15 to 19	7,468	4,230	11,681	15,381	7,021	6,548	7,953	58,665
20 to 24	5,944	5,979	11,977	15,017	5,757	6,067	9,133	55,729
25 to 29	5,995	3,643	9,557	16,772	6,123	5,850	8,299	54,374
30 to 34	6,154	3,084	9,569	16,456	6,306	5,862	7,158	53,396
35 to 39	5,947	2,774	8,840	15,534	5,514	4,811	5,878	48,390
40 to 44	6,691	2,857	8,804	15,956	5,481	4,522	5,362	48,861
45 to 49	7,097	3,197	8,678	15,471	5,809	4,697	5,901	49,964
50 to 54	7,938	3,631	8,897	15,264	6,273	5,410	6,121	52,480
55 to 59	7,959	3,772	8,518	13,706	5,862	5,310	5,706	49,470
60 to 64	7,668	3,602	7,758	12,029	5,122	4,475	4,805	44,173
65 to 69	5,905	2,644	5,933	8,062	3,852	3,235	3,534	32,509
70 to 74	4,463	2,153	4,458	5,474	2,970	2,417	2,611	23,967
75 to 79	2,927	1,542	3,126	3,650	2,166	1,770	1,836	16,603
80 to 84	1,924	1026	2,063	2,652	1,437	1,252	1239	11,296
85+	1336	953	1,859	2,303	1242	1021	1026	9,353
Total	106,580	54,156	146,133	222,958	93,856	85,016	103,543	793,034
	HD 1	**HD 2**	**HD 3**	**HD 4**	**HD 5**	**HD 6**	**HD 7**	**STATE**
Females								
< 5	6,258	2,842	11,014	14,954	7,457	6,942	9,244	58,043
5 to 9	6,665	2,849	11,102	16,265	7,274	6,961	8,551	59,152
10 to 14	7,244	2,863	10,749	15,935	6,956	6,560	7,858	57,749
15 to 19	6,791	3,861	11,049	14,083	6,592	6,258	8,789	55,929
20 to 24	5,769	5,092	11,334	14,679	5,515	6,072	9,664	54,632
25 to 29	6,003	3,125	9,477	15,454	5,924	5,766	7,322	51,570
30 to 34	6,202	2,775	9,521	15,748	5,785	5,710	6,712	51,566
35 to 39	6,023	2,507	8,694	14,606	5,384	4,769	5,649	46,976
40 to 44	6,646	2,832	8,587	15,320	5,198	4,585	5,272	47,648
45 to 49	7,466	3,229	8,854	15,199	5,736	4,855	5,650	50,137
50 to 54	8,516	3,855	9,289	15,534	6,355	5,470	6,069	53,812
55 to 59	8,452	3,664	8,740	14,100	5,820	5,202	5,628	50,315
60 to 64	7,951	3,393	7,946	12,160	5,182	4,452	4,738	44,783
65 to 69	5,737	2,693	6,366	8,573	4,019	3,258	3,580	33,521
70 to 74	4,303	2,075	4,599	6,055	3,109	2,577	2,683	24,948
75 to 79	3,116	1,546	3,418	4,493	2,398	2,091	1,961	18,643
80 to 84	2,250	1,345	2,776	3,590	1,917	1,541	1,727	14,617
85+	2,607	1,514	3,278	4,292	2,109	1,693	1766	16,669
Total	107,999	52,060	146,793	221,040	92,730	84,762	102,863	790,710
Total	214,579	106,216	292,926	443,998	186,586	169,778	206,406	1,583,744

Source: National Center for Health Statistics, 2013.