Annual Report
of the

Cancer Data Registry of Idaho

Cancer in Idaho – 2010

December 2012

CDRI Cancer Data Registry of Idaho

Idaho Hospital Association

IDAHO DEPARTMENT OF HEALTH & WELFARE

CANCER IN IDAHO - 2010

December 2012

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Cancer Data Registry of Idaho

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PREFACE

"Cancer in Idaho - 2010," the thirty-fourth 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 2010. 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 1U58DP003882-01. 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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TABLE OF CONTENTS

TABLE OF CONTENTS

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).

Incomplete case reporting by US Veterans Affairs (VA) hospitals since late 2004 may have resulted in 40,000 to 70,000 cases being missed nationwide each year.[1] The impact of incomplete case reporting of VA cases on Idaho cancer statistics is unknown, but acknowledged.

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*.[2] 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 2.02.*[3,4,5] 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.[6-9] Beginning with cases diagnosed in 2010, new rules for coding hematopoietic and lymphoid neoplasms were applied.[10]

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)[11] are provided. Only registries whose data meet specified data quality criteria are included in NPCR statistics. For the latest NPCR data (2009 incidence), all areas of the U.S. are included except the five states funded exclusively by the SEER program (CT, HI, IA, NM, UT). The SEER and NPCR data combined represent approximately 100% of the U.S. population. Section II depicts incidence data by site and gender for invasive and in-situ cases. 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 1975-2010. New this year, Section VIII shows cancer incidence rates by race and ethnicity for the period 2006-2010.

Descriptive Summary by Gender and Race and Ethnicity

The data presented in this report cover cancer cases diagnosed among Idaho residents between January 1, 2010, and December 31, 2010. In this time frame, there were 7,729 cases of in-situ and invasive cancer diagnosed among Idaho residents (3,990 among males and 3,739 among females). By race and ethnicity, there were 7,172 cases among non-Hispanic whites, 232 among Hispanic whites, 24 cases among Blacks, 61 cases among Native Americans, and 59 cases among Asians/Pacific Islanders. One hundred eighty-one cases were coded as other or missing 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*.[12]

Trends

There was a 2.5% decrease in the age-adjusted cancer incidence rates as published in the 2009 and 2010 annual reports. The incidence rates of cancers of the cervix and stomach, which fluctuate annually due to relatively small case counts, rebounded from lower rates in 2009. See Section VII for more detailed long term trends in cancer incidence.

Population Description

The population of the state of Idaho on July 1, 2010, was estimated to be 1,571,102 (787,182 males and 783,920 females). Population estimates were obtained from the National Center for Health Statistics.[13] 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	105,877	106,994
District 2	Clearwater, Latah, Lewis, Idaho, Nez Perce	53,914	51,578
District 3	Adams, Canyon, Gem, Owyhee, Payette, Washington	145,011	145,097
District 4	Ada, Boise, Elmore, Valley	219,914	217,433
District 5	Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, Twin Falls	93,799	92,481
District 6	Bannock, Bear Lake, Bingham, Butte, Caribou, Franklin, Oneida, Power	85,092	84,485
District 7	Bonneville, Clark, Custer, Fremont, Jefferson, Lemhi, Madison, Teton	102,382	102,777

SUMMARY MEASURES OF CANCER BURDEN IN IDAHO - 2010

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 2009 to 2010
All Sites	7,140	2,532	66.0	72.0	54,336	18,183	12.3	-2.5%
Bladder	364	62	73.0	76.0	2,407	252	8.4	9.1%
Brain	89	79	60.0	60.5	546	1,192	18.3	-10.1%
Breast	999	189	63.0	68.0	11,109	1,774	13.9	-1.6%
Cervix	50	13	48.5	59.0	810	234	21.2	40.1%
Colorectal	551	212	68.0	73.0	4,435	1,491	12.3	-12.8%
Corpus Uteri	194	14	62.0	80.5	2,290	41	8.1	-6.7%
Esophagus	68	74	65.5	68.5	148	656	13.7	-0.3%
Hodgkin Lymphoma	40	5	40.0	65.0	728	46	15.2	1.3%
Kidney	207	69	64.0	70.0	1478	642	14.3	-16.3%
Larynx	37	17	65.0	68.0	344	118	9.8	-19.8%
Leukemia	262	116	67.0	77.0	1416	726	15.1	11.7%
Liver and Bile Duct	83	75	61.0	63.0	111	923	18.1	2.3%
Lung and Bronchus	808	609	71.0	73.0	1,492	3,203	8.8	0.4%
Melanoma of Skin	373	57	62.0	63.0	3,963	707	16.4	-8.4%
Myeloma	90	56	72.0	74.0	338	197	6.0	-14.0%
Non-Hodgkin Lymphoma	290	88	66.0	77.0	2,079	408	10.4	-3.7%
Oral Cavity and Pharynx	219	46	65.0	70.0	1,451	459	15.8	-3.0%
Ovary	98	50	65.0	72.5	748	394	14.6	6.3%
Pancreas	196	182	70.0	71.5	165	1,240	11.3	14.4%
Prostate	1,111	155	67.0	80.0	11,533	362	6.6	-7.2%
Stomach	90	34	68.5	73.0	260	187	9.4	33.2%
Testis	40	3	32.0	30	960	-	-	-16.5%
Thyroid	256	12	49.5	78.0	2,529	104	17.3	1.2%

Notes:

Incident cases include all invasive and bladder in situ cases newly diagnosed among Idaho residents in 2010.

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 2010 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).[13]

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 2010 (7,729), a total of 7,140 cases (6,938 invasive and 202 bladder in-situ) were used for calculating age-adjusted incidence rates. Of the 7,140 cases, 3,774 occurred among males and 3,366 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*.[14-16] 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

An estimated range of values within which the true population value lies with given probability is the confidence interval.

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 more detailed statistics by race and ethnicity, see Section VIII and *Cancer in Idaho by Race and Ethnicity: 1990-2001*.[12]

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.[6,7] 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/icdo3_d01272003/ 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.[17]

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 6.6.1 software.[18] DEVCAN was used to calculate the probability of developing or dying of cancer using Idaho-specific cancer incidence and mortality data for the years 2006-2010. 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 3.5.4 software was used to model trends in age-adjusted cancer incidence rates.[19] 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. Heteroscedastic errors in annual rates were incorporated into the models based on the standard errors for the rates by primary site category and year. 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. Model selection was performed using Monte Carlo methods.

SECTION I

2010 SUMMARY ON ALL SITES COMBINED
AND
23 MOST COMMON SITES

ALL SITES

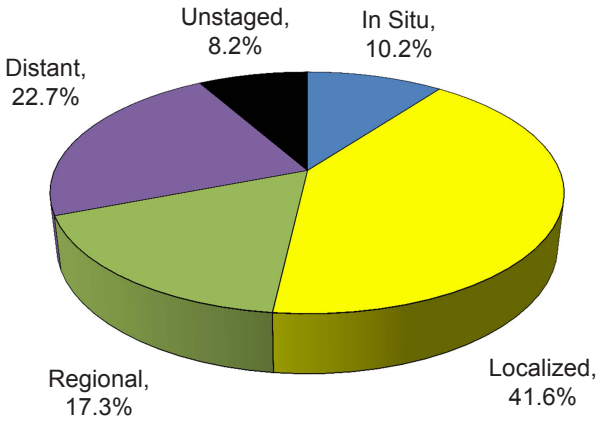
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	440.8	490.2	401.3
# of new invasive cases	6,938	3,616	3,322
# of new in-situ cases	791	374	417
# of deaths	2,532	1,408	1,124

Total Cases by County

Ada	1,855	Cassia	90	Lewis	36
Adams	33	Clark	6	Lincoln	22
Bannock	290	Clearwater	72	Madison	88
Bear Lake	26	Custer	38	Minidoka	91
Benewah	61	Elmore	123	Nez Perce	275
Bingham	191	Franklin	48	Oneida	20
Blaine	103	Fremont	60	Owyhee	52
Boise	63	Gem	131	Payette	125
Bonner	295	Gooding	96	Power	33
Bonneville	491	Idaho	98	Shoshone	94
Boundary	59	Jefferson	96	Teton	26
Butte	12	Jerome	98	Twin Falls	408
Camas	4	Kootenai	815	Valley	59
Canyon	789	Latah	163	Washington	84
Caribou	43	Lemhi	64		

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 African Americans than for Caucasians 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.

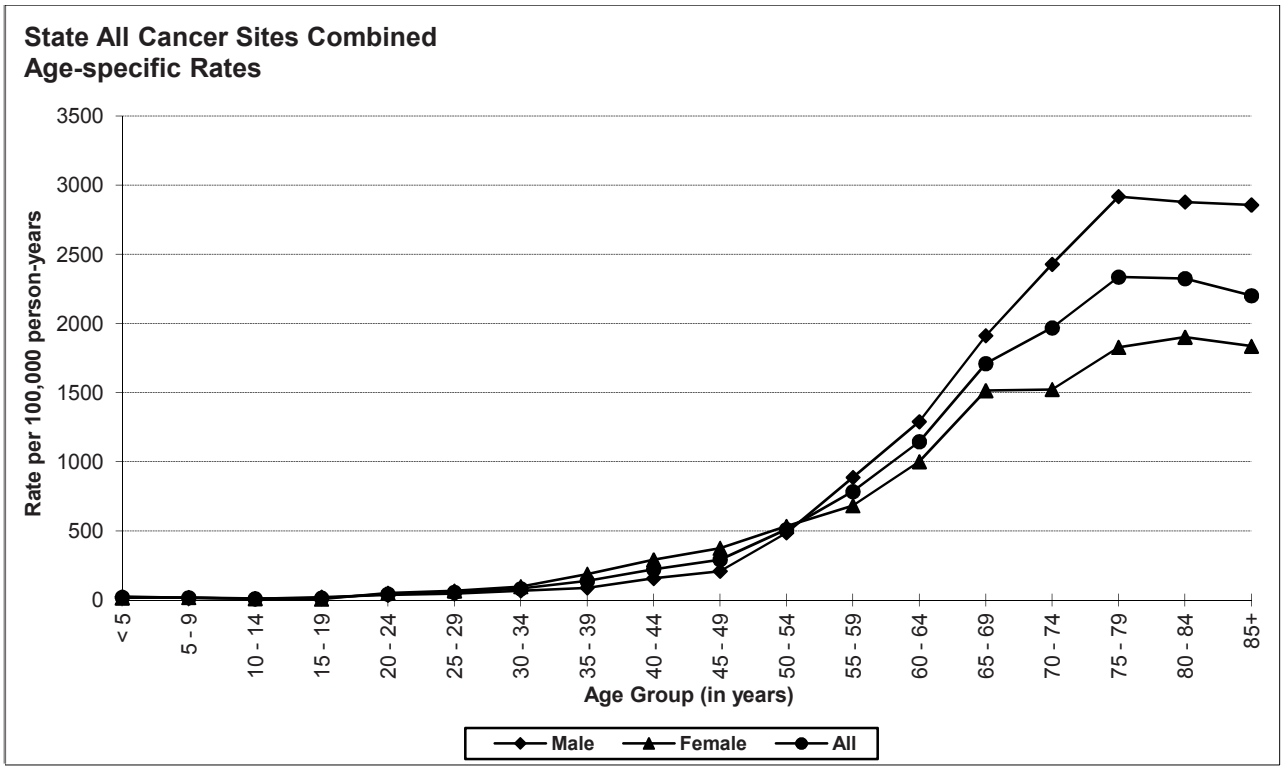
Diet Diets that are low in fresh fruits and vegetables have been associated with increased incidence of several cancers.

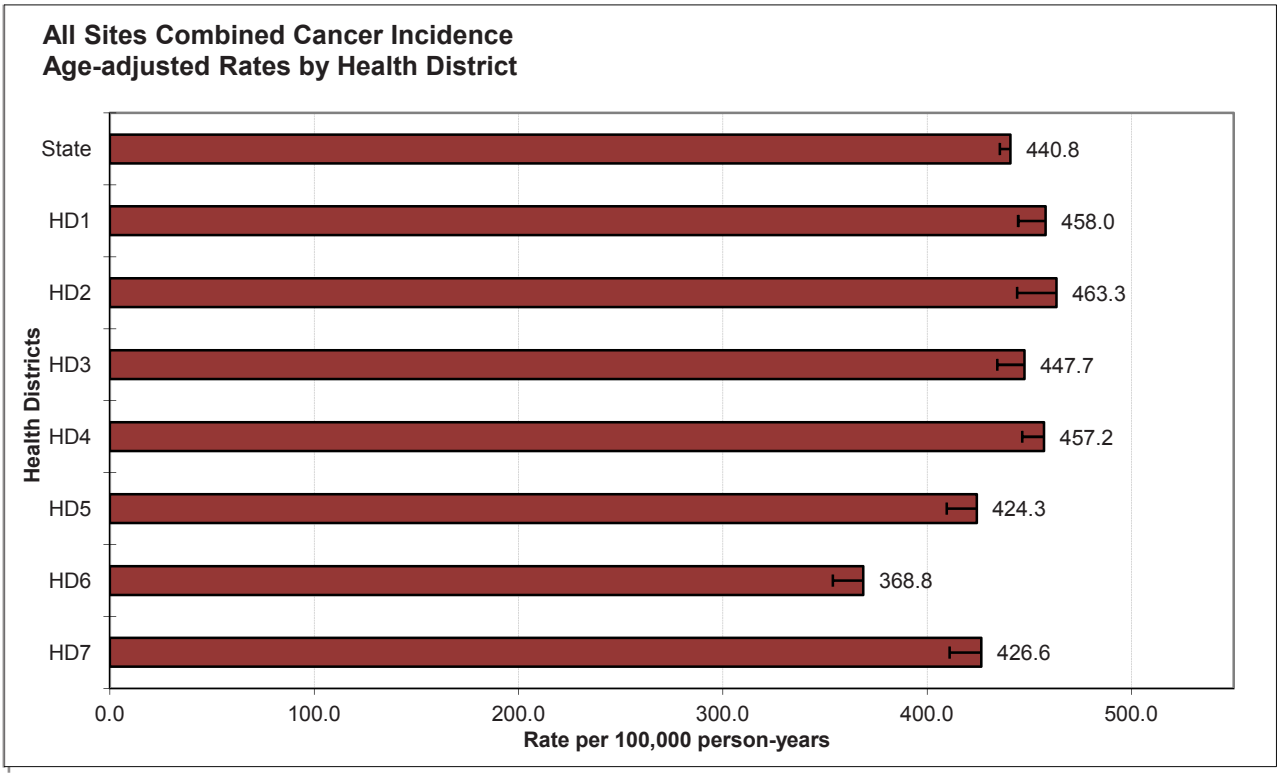
Other Tobacco use is the single most important risk factor for cancer incidence and mortality. Most cancers manifest a tendency to aggregate in families – close relatives of a cancer patient can be considered to have increased risk of that neoplasm, but not all forms of cancer. Excess risk is usually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

Special Notes

Mean age-adjusted incidence rate across health districts:	435.1
95% confidence interval on the mean age-adjusted incidence rate:	410.6- 459.6
Median age-adjusted incidence rate of health districts:	447.7
Range of age-adjusted incidence rate for health districts:	368.8- 463.3
SEER 18 rate (2009, all races):	456.4
NPCR rate (2009, all races):	457.6

The incidence rates for all cancers combined were similar for males and females in Idaho until approximately age 55-59, after which rates for males rose dramatically. The highest rates for both males and females were observed in age groups after age 70, peaking in the age group 75-79 for males and 80-84 for females. Health District 4 had statistically significantly more cases of cancer than expected based upon rates for the remainder of Idaho, and Health District 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
440.8
458.0
463.3
447.7
457.2
424.3
368.8
426.6
0.0
100.0
200.0
300.0
400.0
500.0
Rate per 100,000 person-years

BLADDER

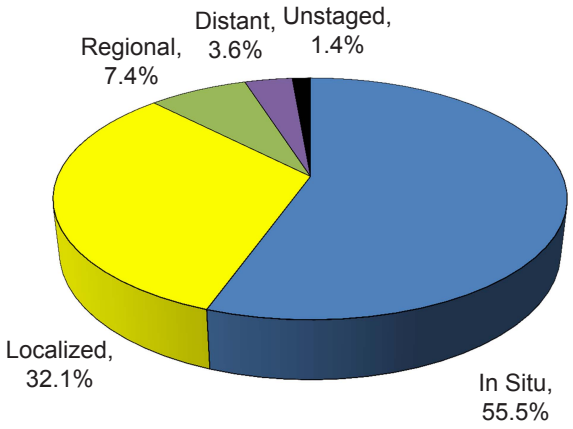
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	23.1	39.4	9.2
# of new invasive cases	162	128	34
# of new in-situ cases	202	158	44
# of deaths	62	48	14

Total Cases by County

Ada	72	Cassia	7	Lewis	-
Adams	2	Clark	1	Lincoln	-
Bannock	9	Clearwater	1	Madison	5
Bear Lake	2	Custer	1	Minidoka	7
Benewah	2	Elmore	6	Nez Perce	14
Bingham	7	Franklin	1	Oneida	1
Blaine	7	Fremont	2	Owyhee	5
Boise	5	Gem	3	Payette	8
Bonner	17	Gooding	3	Power	2
Bonneville	16	Idaho	8	Shoshone	4
Boundary	4	Jefferson	4	Teton	1
Butte	-	Jerome	6	Twin Falls	29
Camas	-	Kootenai	41	Valley	1
Canyon	40	Latah	8	Washington	7
Caribou	5	Lemhi	-		

Stage at Diagnosis - Bladder



Risk and Associated Factors

Age Rates usually increase steadily with age.

Gender Males have substantially higher rates than females.

Race Incidence rates are higher in Caucasians.

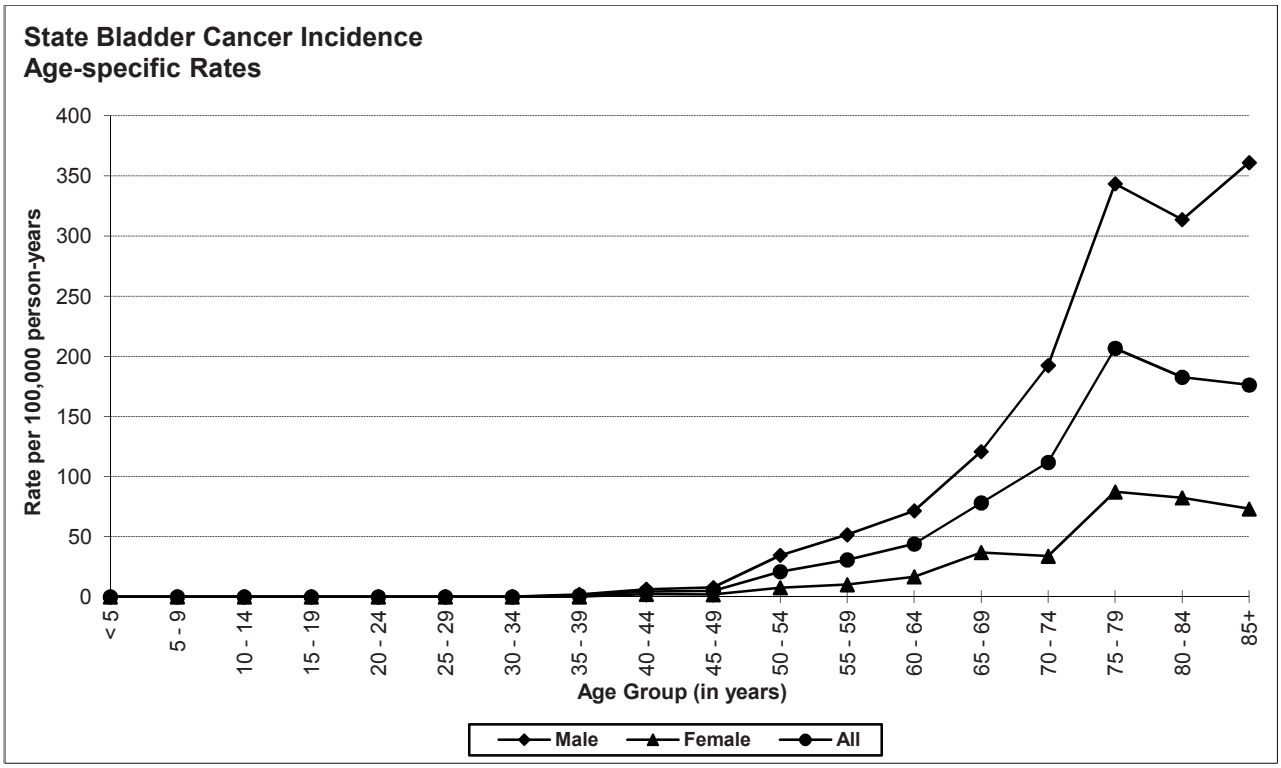
Occupation Truck drivers, likely via exposure to motor exhaust, are at increased risk. Occupational exposures, including manufacturers of certain dyes, painters, and aluminum, rubber, cable, and leather workers, have been shown to increase risk of bladder cancer. Exposure to permanent hair dyes may increase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

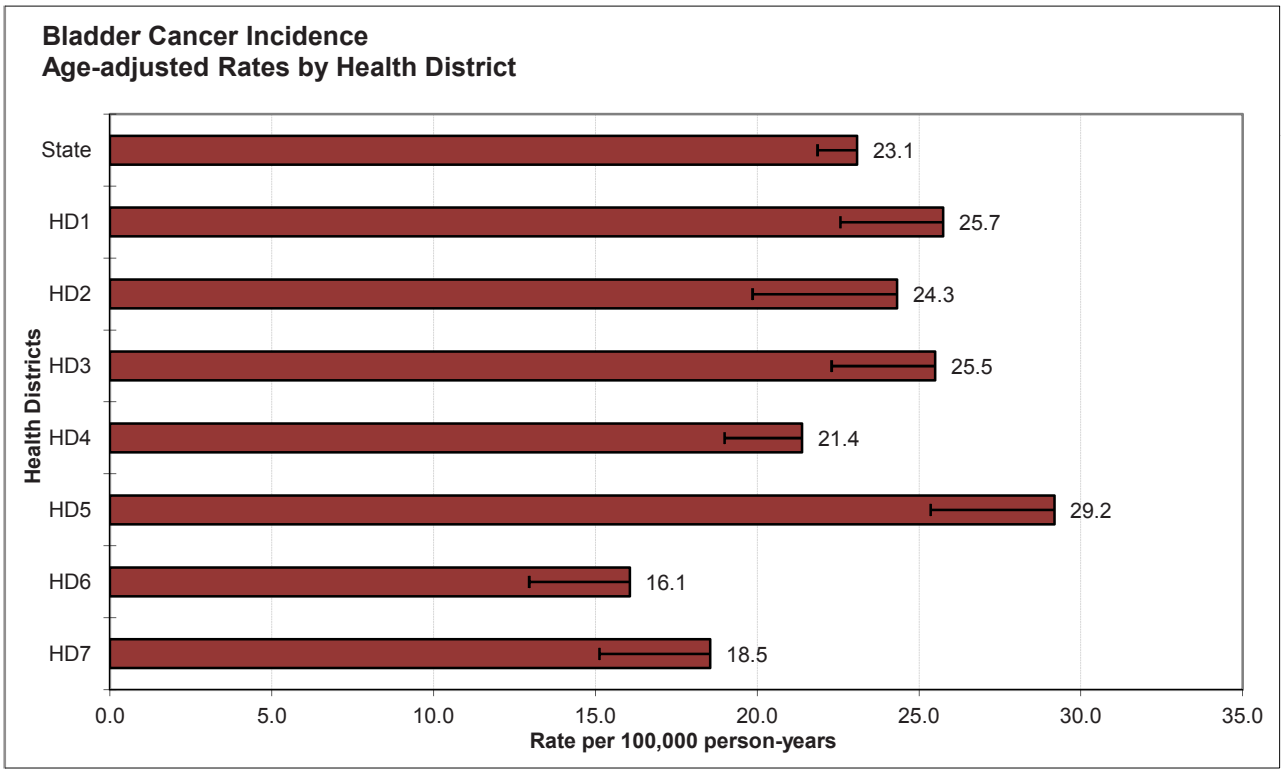
Other Tobacco consumption has been associated with a 2- to 5-fold higher incidence of bladder cancer and is attributable for a greater number of cases than other risk factors. Cyclophosphamide, a chemotherapeutic agent, and 4-amino-diphenyl are known human bladder carcinogens. *Schistosoma hematobium* 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:	23.0
95% confidence interval on the mean age-adjusted incidence rate:	19.6- 26.3
Median age-adjusted incidence rate of health districts:	24.3
Range of age-adjusted incidence rate for health districts:	16.1- 29.2
SEER 18 rate (2009, all races):	20.0
NPCR rate (2009, all races):	20.4

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 85+ for males and 75-79 for females. Health District 5 had statistically significantly more cases of 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
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


Bladder Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
23.1
25.7
24.3
25.5
21.4
29.2
16.1
18.5
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
Rate per 100,000 person-years

BRAIN

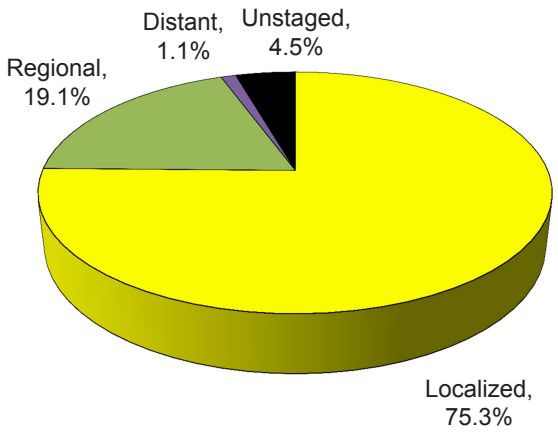
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.6	7.3	4.0
# of new invasive cases	89	57	32
# of new in-situ cases	0	0	0
# of deaths	78	55	23

Total Cases by County

Ada	22	Cassia	2	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	5	Clearwater	1	Madison	-
Bear Lake	2	Custer	-	Minidoka	1
Benewah	1	Elmore	-	Nez Perce	2
Bingham	5	Franklin	3	Oneida	-
Blaine	4	Fremont	-	Owyhee	-
Boise	1	Gem	1	Payette	2
Bonner	6	Gooding	1	Power	-
Bonneville	2	Idaho	1	Shoshone	-
Boundary	-	Jefferson	1	Teton	-
Butte	1	Jerome	1	Twin Falls	3
Camas	-	Kootenai	10	Valley	1
Canyon	8	Latah	-	Washington	1
Caribou	-	Lemhi	1		

Stage at Diagnosis - Brain



Risk and Associated Factors

Age This is the second most common cancer among children, following leukemia. Adult malignant brain tumors are most common after age 60.

Gender Males typically have higher rates than females.

Race & SES The incidence rate is higher in Caucasians 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 that may be useful in screening for recurrences are being developed.

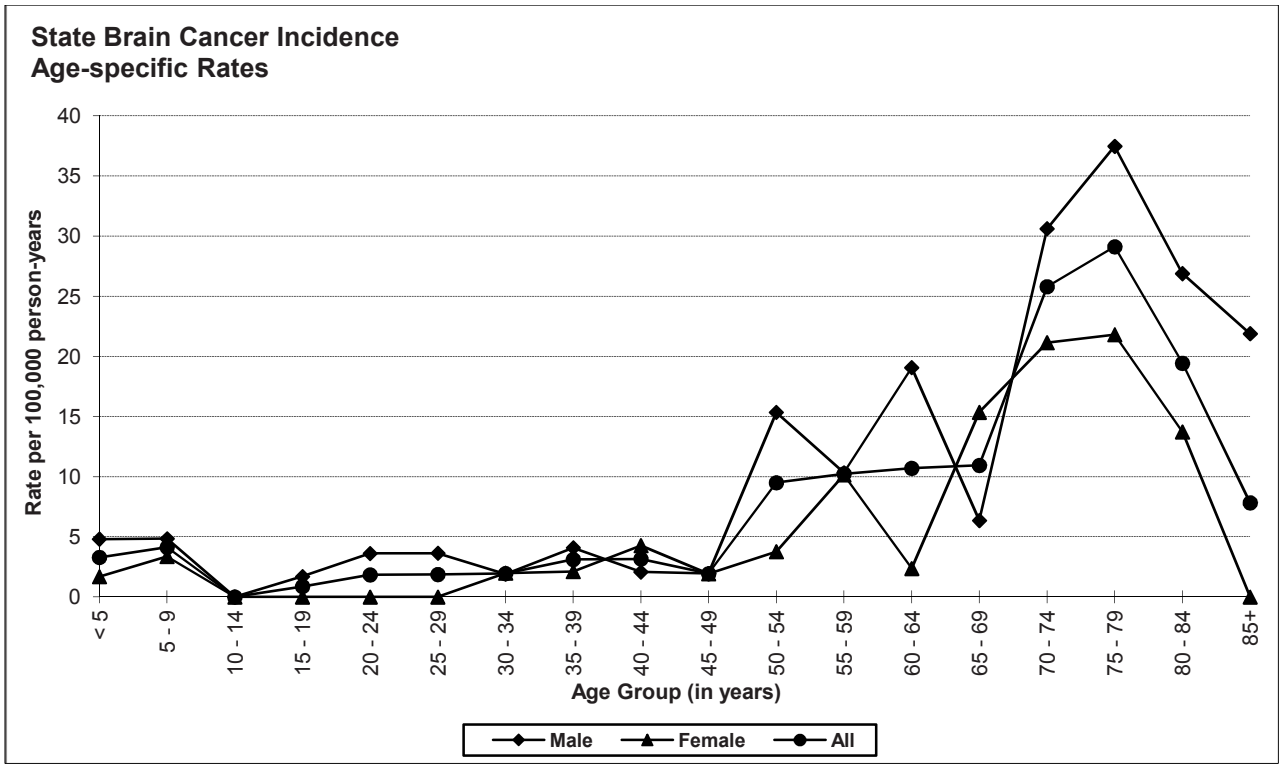
Occupation Vinyl chloride and ionizing radiation exposure are risk factors. Many occupational and environmental exposures have shown suggestive associations with elevated rates of brain cancer. Roofers, sheet metal workers, and rubber and plastic workers may be at elevated risk. Specific exposures underlying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

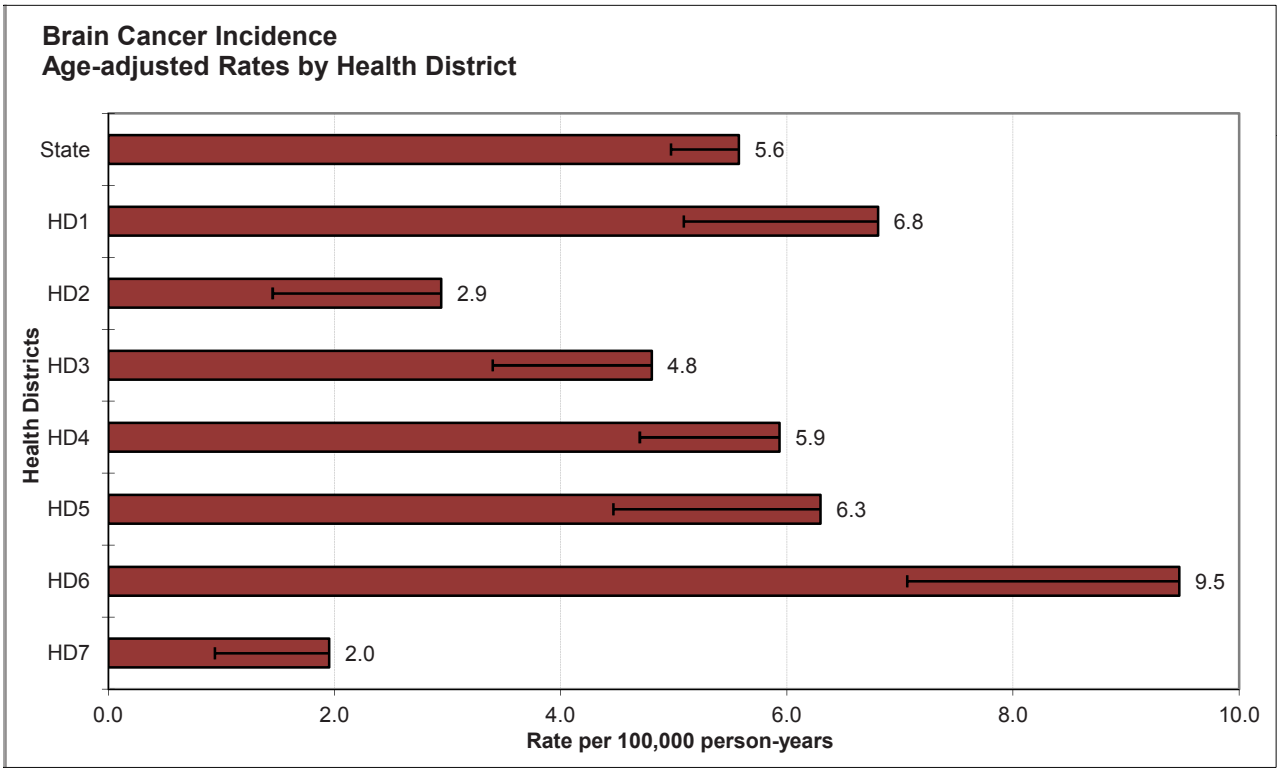
Other Human Immunodeficiency Virus (HIV) infected individuals and organ transplant recipients have an increased risk of developing brain lymphoma.

Special Notes

Mean age-adjusted incidence rate across health districts:	5.5
95% confidence interval on the mean age-adjusted incidence rate:	3.6- 7.3
Median age-adjusted incidence rate of health districts:	5.9
Range of age-adjusted incidence rate for health districts:	2.0- 9.5
SEER 18 rate (2009, all races):	6.0
NPCR rate (2009, all races):	6.5

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. Health District 6 had statistically significantly more cases of brain cancer than expected based upon rates for the remainder of Idaho, and Health District 7 had statistically significantly fewer cases than expected.


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
5.6
6.8
2.9
4.8
5.9
6.3
9.5
2.0
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	11.4	8.5	14.1
# of new cases	176	61	115

Total Cases by County

Ada	33	Cassia	3	Lewis	-
Adams	1	Clark	-	Lincoln	1
Bannock	8	Clearwater	-	Madison	4
Bear Lake	3	Custer	1	Minidoka	2
Benewah	3	Elmore	2	Nez Perce	13
Bingham	9	Franklin	4	Oneida	-
Blaine	-	Fremont	1	Owyhee	3
Boise	-	Gem	4	Payette	3
Bonner	6	Gooding	2	Power	1
Bonneville	13	Idaho	6	Shoshone	4
Boundary	3	Jefferson	1	Teton	-
Butte	1	Jerome	-	Twin Falls	7
Camas	-	Kootenai	17	Valley	-
Canyon	14	Latah	2	Washington	-
Caribou	1	Lemhi	-		

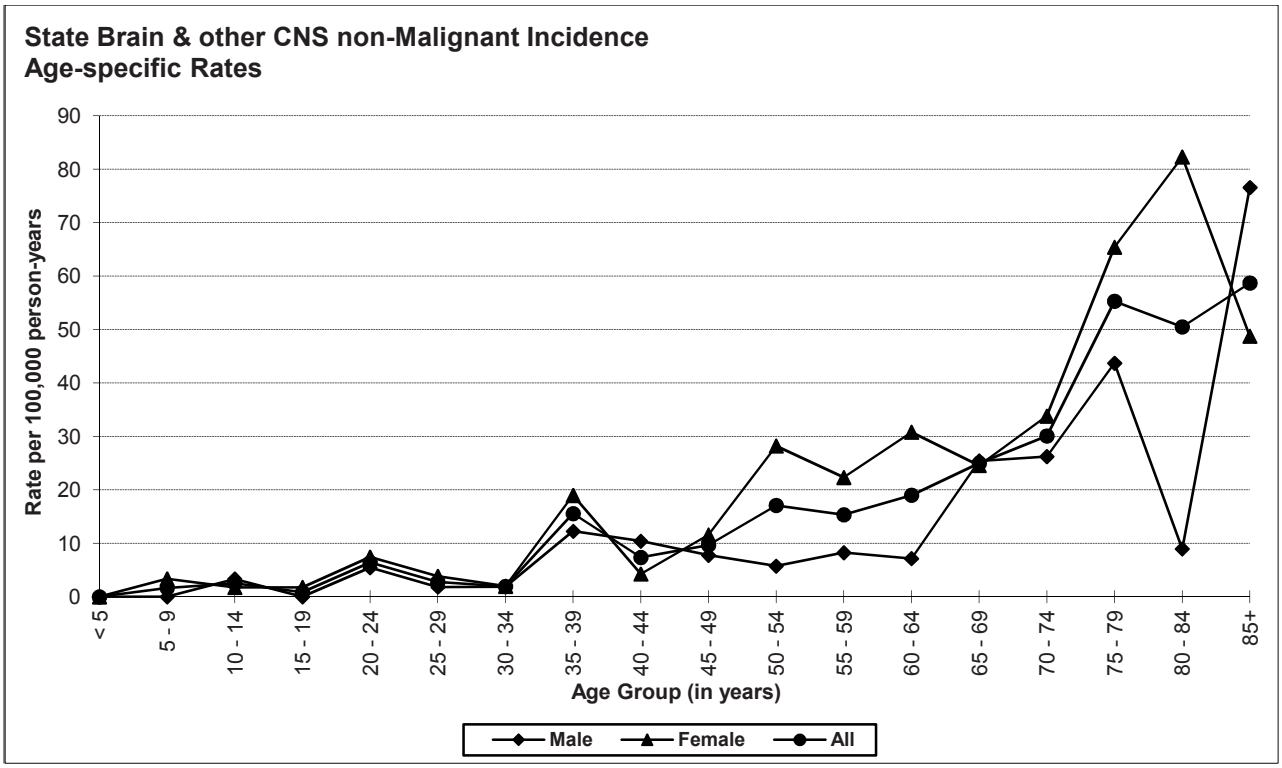
Background

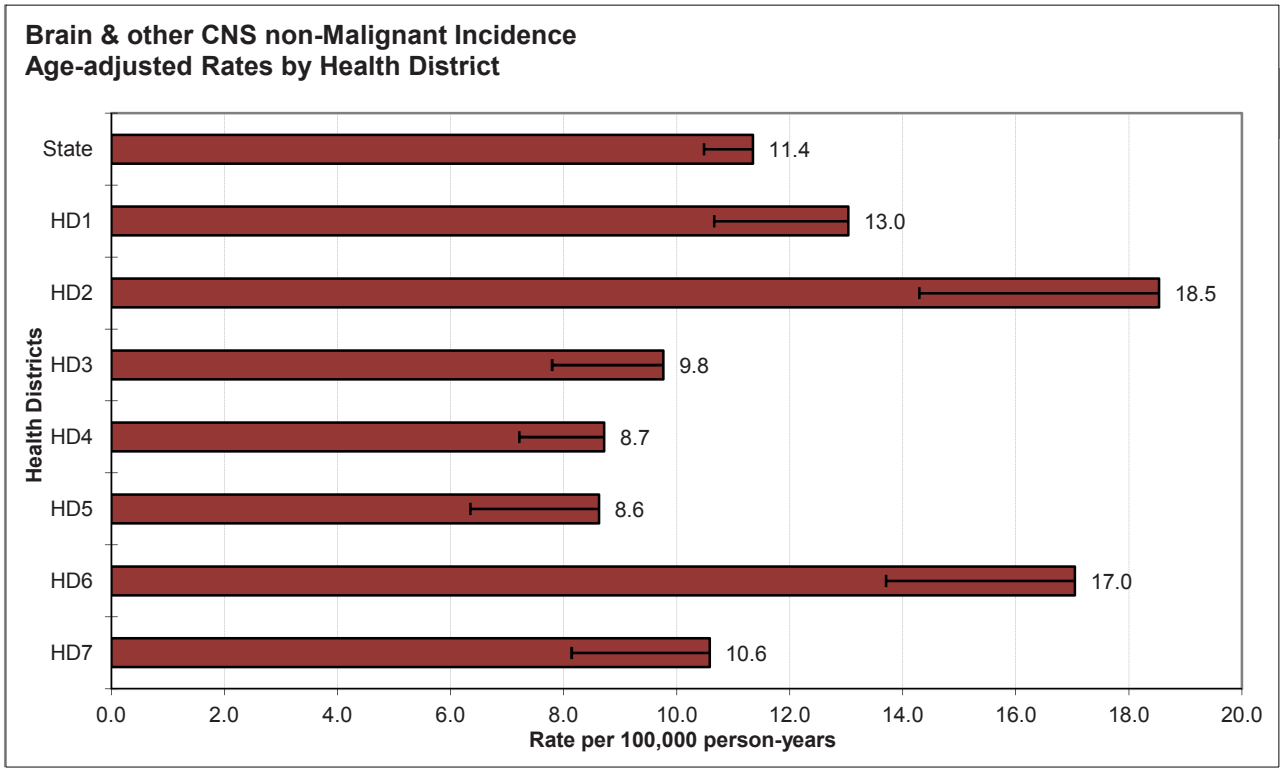
In 2007, as a result of Public Law 107-260, the publication *United States Cancer Statistics 2004 Incidence and Mortality* began to include tables for non-malignant brain tumors. Until this time, the only reference data were from the Central Brain Tumor Registry of the United States (CBTRUS), which has 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:	12.3	
95% confidence interval on the mean age-adjusted incidence rate:6.8-	9.3-	15.3
Median age-adjusted incidence rate of health districts:	10.6	
Range of age-adjusted incidence rate for health districts:	8.6-	18.5
SEER 18 rate (2009, all races):	10.4	

Health District 6 had statistically significantly more cases of non-malignant brain tumors than expected based upon rates for the remainder of Idaho, and Health District 4 had statistically significantly fewer cases than expected.


State Brain & other CNS non-Malignant 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


Brain & other CNS non-Malignant Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
11.4
13.0
18.5
9.8
8.7
8.6
17.0
10.6
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

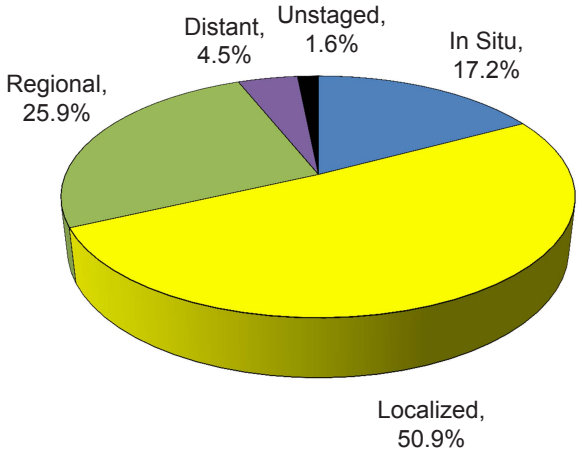
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	61.6	2.2	116.9
# of new invasive cases	999	17	982
# of new in-situ cases	207	1	206
# of deaths	189	3	186

Total Cases by County

Ada	336	Cassia	14	Lewis	8
Adams	9	Clark	1	Lincoln	2
Bannock	48	Clearwater	7	Madison	13
Bear Lake	-	Custer	9	Minidoka	13
Benewah	6	Elmore	13	Nez Perce	47
Bingham	22	Franklin	8	Oneida	2
Blaine	21	Fremont	10	Owyhee	7
Boise	8	Gem	19	Payette	16
Bonner	50	Gooding	14	Power	3
Bonneville	69	Idaho	16	Shoshone	12
Boundary	4	Jefferson	11	Teton	4
Butte	2	Jerome	14	Twin Falls	62
Camas	-	Kootenai	123	Valley	14
Canyon	117	Latah	24	Washington	13
Caribou	8	Lemhi	7		

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 Caucasians 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.

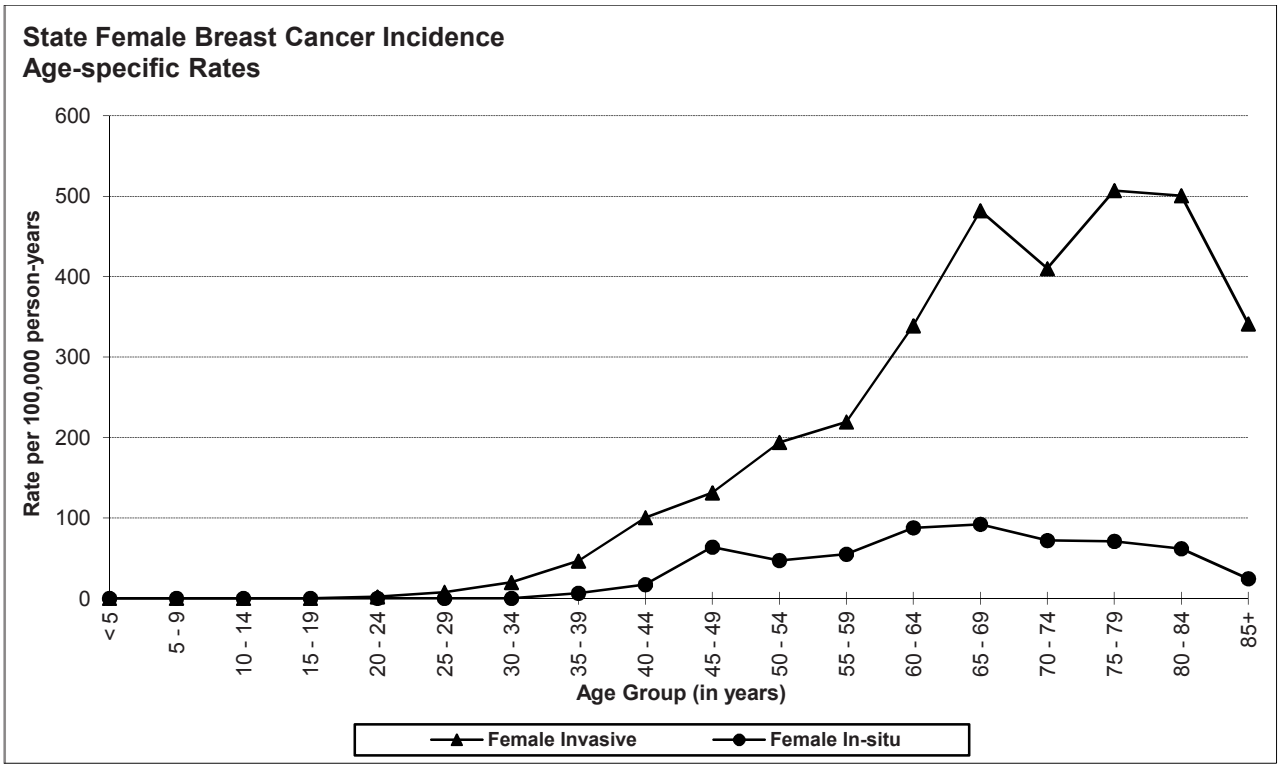
Hormonal There is evidence of hormonal influence in the risk of developing breast cancer. Longer intervals of menarche to the first full-term pregnancy and menarche to menopause, as well as menarche before age 13, have been associated with higher risks of breast cancer. Cumulative estrogen exposure,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

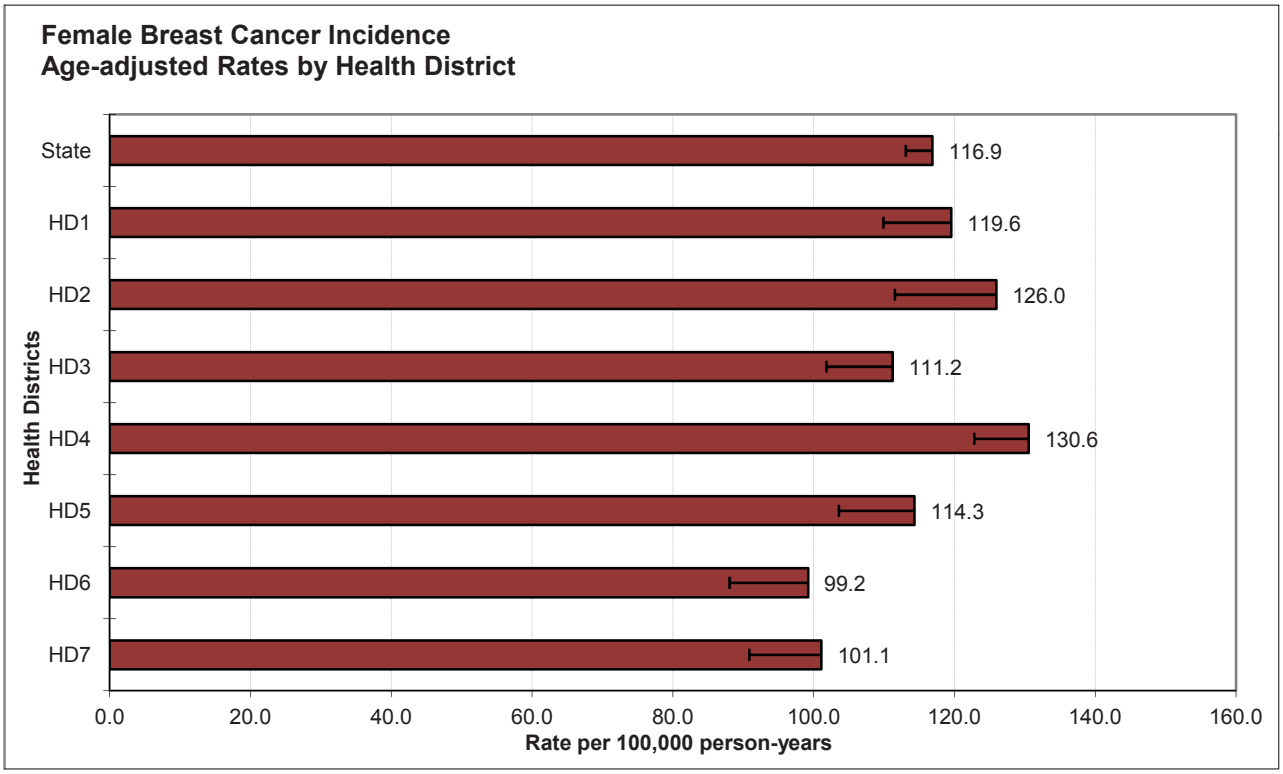
Other Alcohol consumption, high dietary fat intake, obesity (in postmenopausal women), sedentary life-style, and having a mother or sister with breast cancer have all been implicated as associated risk factors. Weight gain of 55 lbs or more after age 18 is associated with a 45% increased risk.

Special Notes

Mean age-adjusted incidence rate across health districts:	114.6	
95% confidence interval on the mean age-adjusted incidence rate:	105.8-	123.3
Median age-adjusted incidence rate of health districts:	114.3	
Range of age-adjusted incidence rate for health districts:	99.2-	130.6
SEER 18 rate (2009, all races):	125.7	
NPCR rate (2009, all races):	122.8	

The vast majority of breast cancer cases occur among females. In Idaho during the year 2010, there were 17 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 75-79 for invasive cases. No cases were observed in women less than 20 years of age. Health District 4 had statistically significantly more cases of breast cancer than expected based upon rates for the remainder of Idaho, and Health District 6 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
116.9
119.6
126.0
111.2
130.6
114.3
99.2
101.1
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

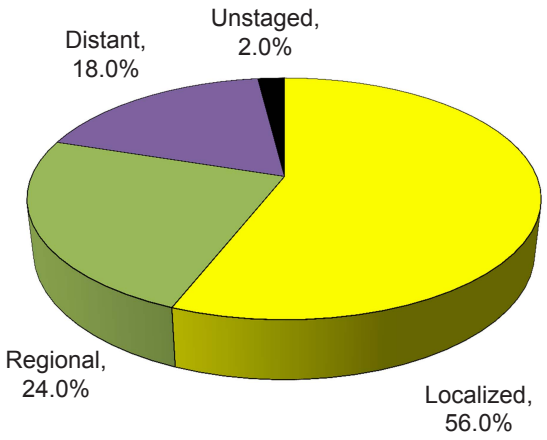
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	6.8
# of new invasive cases	-	-	50
# of new in-situ cases	-	-	n/a
# of deaths	-	-	13

Total Cases by County

Ada	9	Cassia	1	Lewis	1
Adams	-	Clark	0	Lincoln	1
Bannock	1	Clearwater	0	Madison	0
Bear Lake	-	Custer	1	Minidoka	2
Benewah	-	Elmore	0	Nez Perce	0
Bingham	2	Franklin	1	Oneida	1
Blaine	1	Fremont	0	Owyhee	1
Boise	-	Gem	0	Payette	2
Bonner	1	Gooding	0	Power	0
Bonneville	4	Idaho	1	Shoshone	0
Boundary	1	Jefferson	0	Teton	0
Butte	-	Jerome	1	Twin Falls	3
Camas	-	Kootenai	9	Valley	0
Canyon	4	Latah	1	Washington	0
Caribou	-	Lemhi	1		

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.

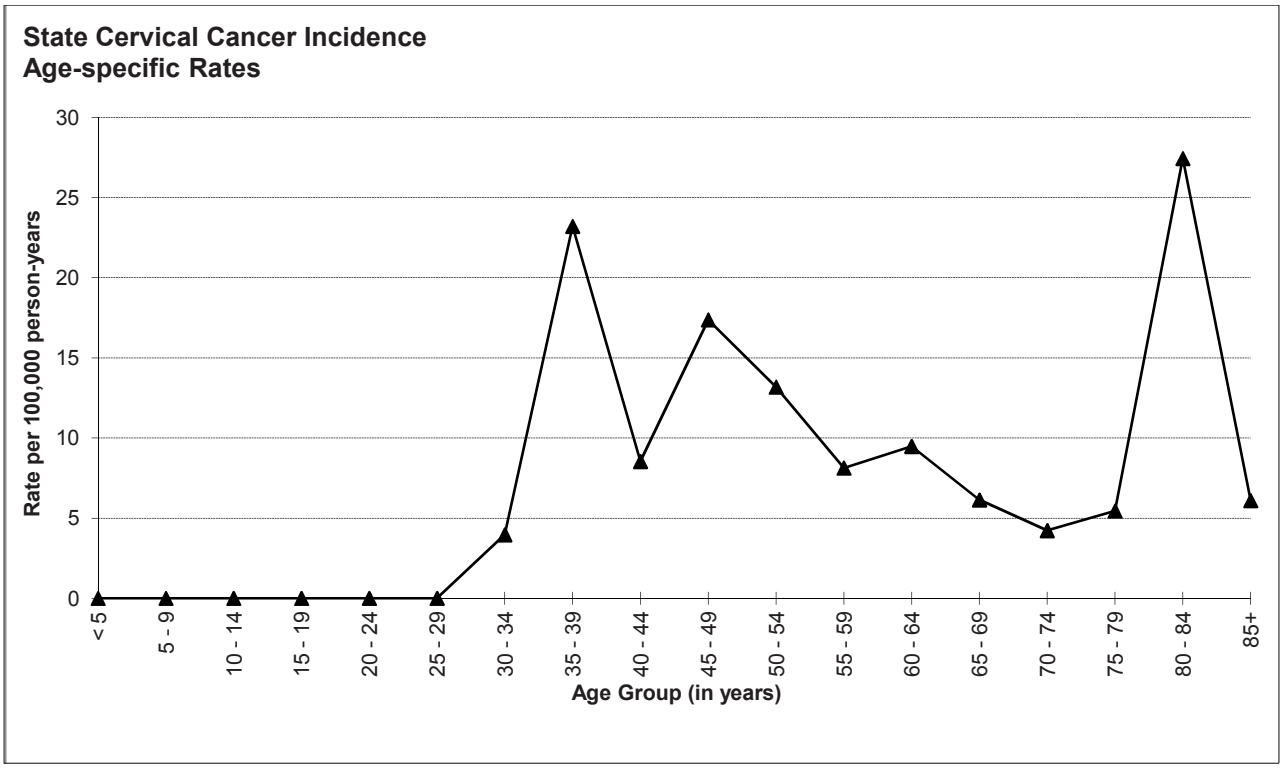
Race & SES African Americans, Hispanics, and women in lower income groups have been shown to experience higher rates.

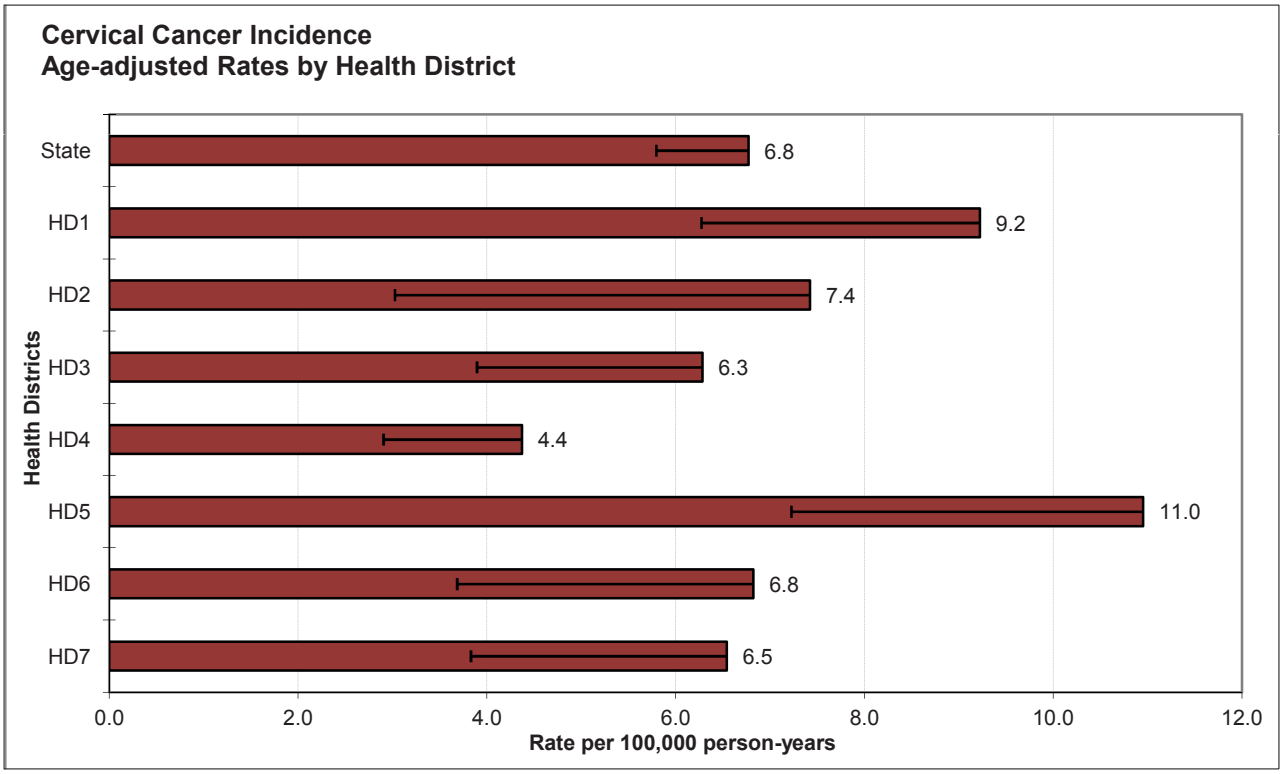
Other The large majority of cervical cancer cases worldwide can be attributed to human papilloma virus (HPV) infection. Of the at least 70 types of HPV known, types 16 and 18 are most closely associated with malignancy. Other risk factors that may be correlates, cofactors, or independent risk factors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

Special Notes

Mean age-adjusted incidence rate across health districts:	7.4
95% confidence interval on the mean age-adjusted incidence rate:	5.8- 9.0
Median age-adjusted incidence rate of health districts:	6.8
Range of age-adjusted incidence rate for health districts:	4.4- 11.0
SEER 18 rate (2009, all races):	7.9
NPCR rate (2009, all races):	7.9

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


State Cervical Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
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)


Cervical Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
6.8
9.2
7.4
6.3
4.4
11.0
6.8
6.5
0.0
2.0
4.0
6.0
8.0
10.0
12.0
Rate per 100,000 person-years

COLORECTAL

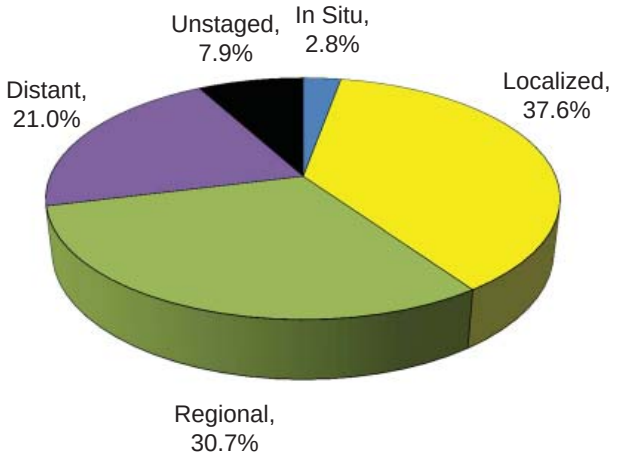
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	34.2	39.4	29.3
# of new invasive cases	551	300	251
# of new in-situ cases	16	7	9
# of deaths	212	122	90

Total Cases by County

Ada	115	Cassia	7	Lewis	2
Adams	2	Clark	0	Lincoln	3
Bannock	21	Clearwater	5	Madison	7
Bear Lake	3	Custer	0	Minidoka	3
Benewah	6	Elmore	8	Nez Perce	21
Bingham	20	Franklin	6	Oneida	1
Blaine	4	Fremont	6	Owyhee	7
Boise	8	Gem	9	Payette	5
Bonner	22	Gooding	5	Power	5
Bonneville	41	Idaho	5	Shoshone	10
Boundary	-	Jefferson	5	Teton	1
Butte	2	Jerome	8	Twin Falls	39
Camas	1	Kootenai	58	Valley	3
Canyon	59	Latah	18	Washington	5
Caribou	5	Lemhi	6		

Stage at Diagnosis - Colorectal



Risk and Associated Factors

Age Rates increase with age; the vast majority of cases occur after age 50.

Gender Incidence rates are slightly higher in males.

Genetics It is estimated that 65-85% of colorectal cancer cases are sporadic, 10-30% are familial, and the remainder are the result of specific rare genetic disorders such as Lynch Syndrome.

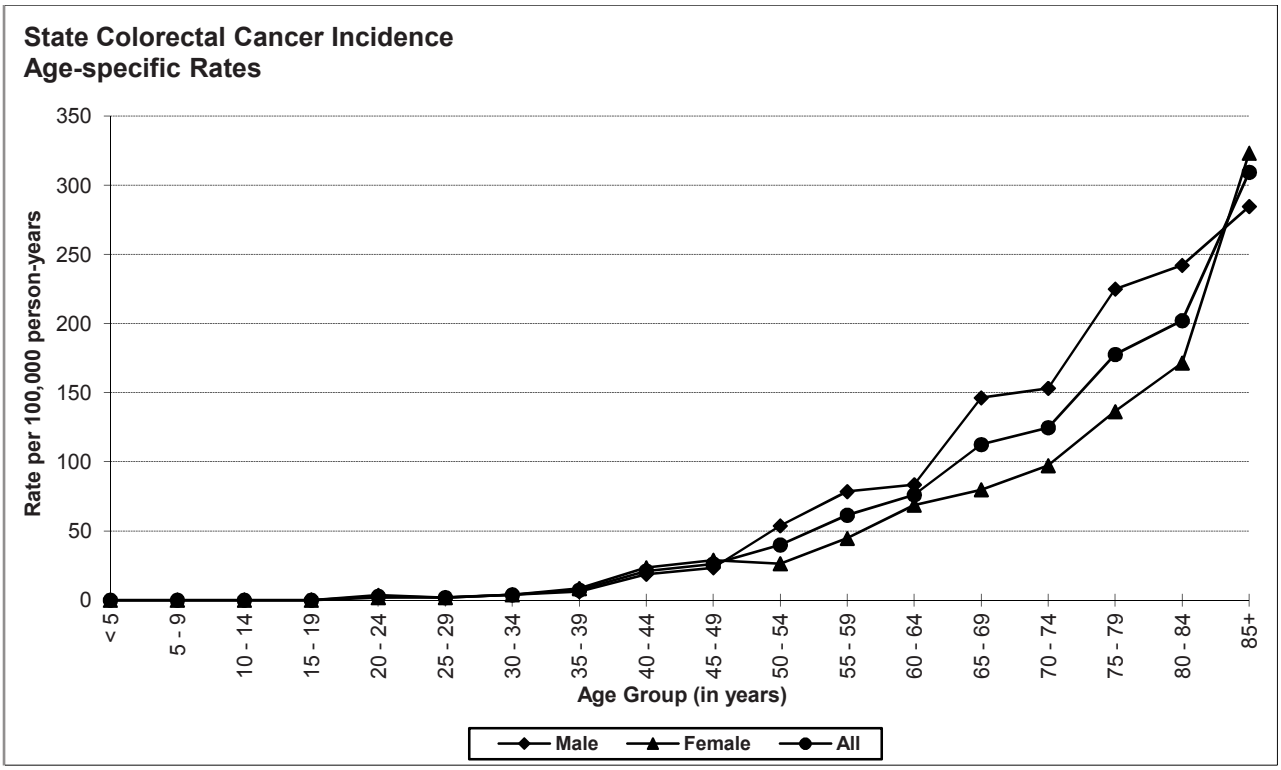
Diet There is strong evidence that high calorie diets and diets high in fat and low in fiber contribute to higher risks of colon cancer.

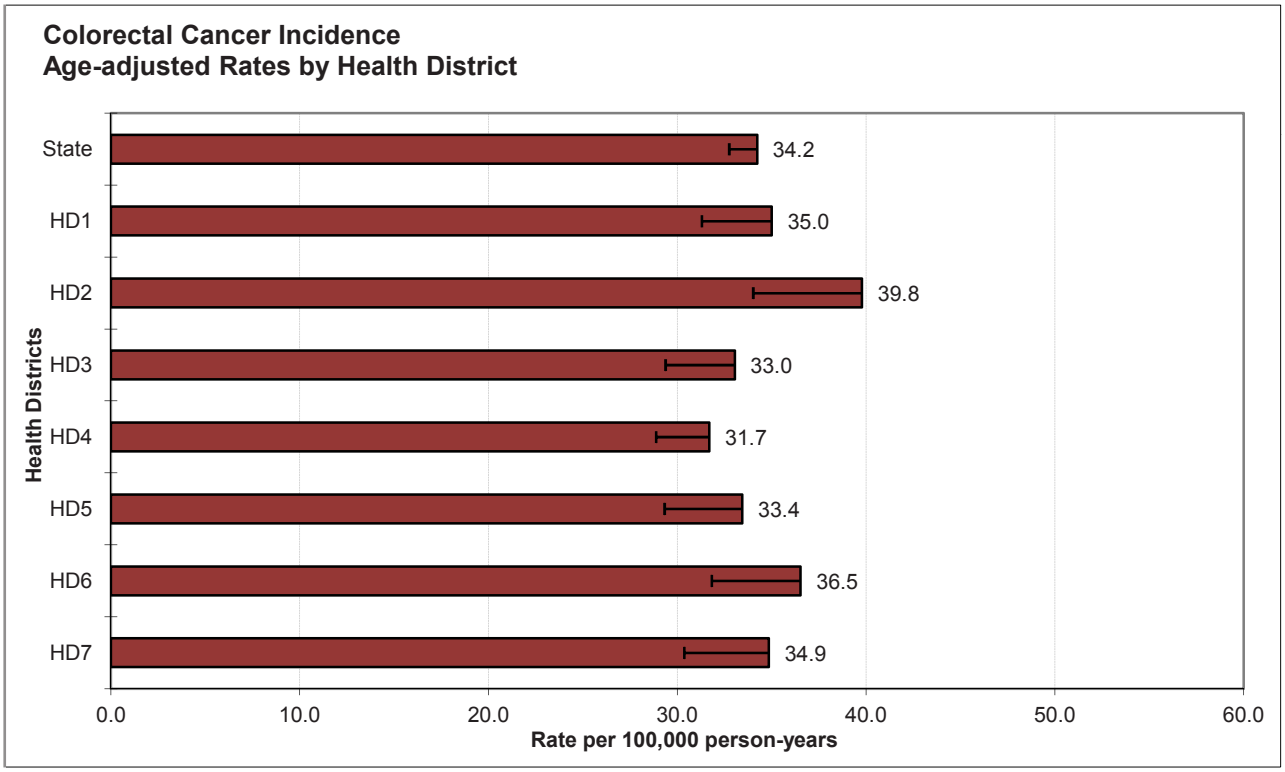
Other Individuals with a close family history of this cancer and those with a personal history of certain other cancers are at increased risk. Physical inactivity, obesity, and tobacco use are known risk factors for colorectal cancer. Cigarette smoking is significantly associated with colorectal cancer incidence and mortality. The use of NSAIDs, including aspirin, may help prevent colon cancer. Inflammatory bowel disease confers a 4- to 20-fold increase in colorectal cancer risk, with younger age at diagnosis. If everyone aged 50 years and older were screened regularly, as many as 60% of deaths from colorectal cancer could be avoided.

Special Notes

Mean age-adjusted incidence rate across health districts:	34.9
95% confidence interval on the mean age-adjusted incidence rate:	32.9- 36.9
Median age-adjusted incidence rate of health districts:	34.9
Range of age-adjusted incidence rate for health districts:	31.7- 39.8
SEER 18 rate (2009, all races):	43.5
NPCR rate (2009, all races):	42.3

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. No health district had statistically significantly more, or fewer, cases 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
34.2
35.0
39.8
33.0
31.7
33.4
36.5
34.9
0.0
10.0
20.0
30.0
40.0
50.0
60.0
Rate per 100,000 person-years

CORPUS UTERI

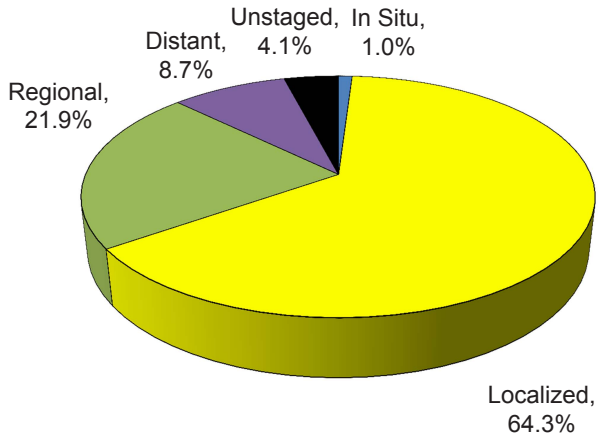
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	22.3
# of new invasive cases	-	-	194
# of new in-situ cases	-	-	2
# of deaths	-	-	14

Total Cases by County

Ada	42	Cassia	1	Lewis	1
Adams	1	Clark	-	Lincoln	1
Bannock	8	Clearwater	1	Madison	1
Bear Lake	1	Custer	-	Minidoka	-
Benewah	1	Elmore	3	Nez Perce	5
Bingham	6	Franklin	-	Oneida	1
Blaine	3	Fremont	1	Owyhee	2
Boise	1	Gem	2	Payette	6
Bonner	6	Gooding	10	Power	1
Bonneville	12	Idaho	2	Shoshone	1
Boundary	1	Jefferson	1	Teton	-
Butte	-	Jerome	3	Twin Falls	10
Camas	-	Kootenai	26	Valley	2
Canyon	25	Latah	2	Washington	3
Caribou	-	Lemhi	3		

Stage at Diagnosis - Corpus Uteri



Risk and Associated Factors

Age Occurs predominantly after menopause, with median age 58 and peaking at the 65 to 75 age group.

Race & SES Caucasian women have higher rates than African American or Asian women in the U.S.

Genetics Familial tendency has been observed, but likely accounts for a small fraction of cases.

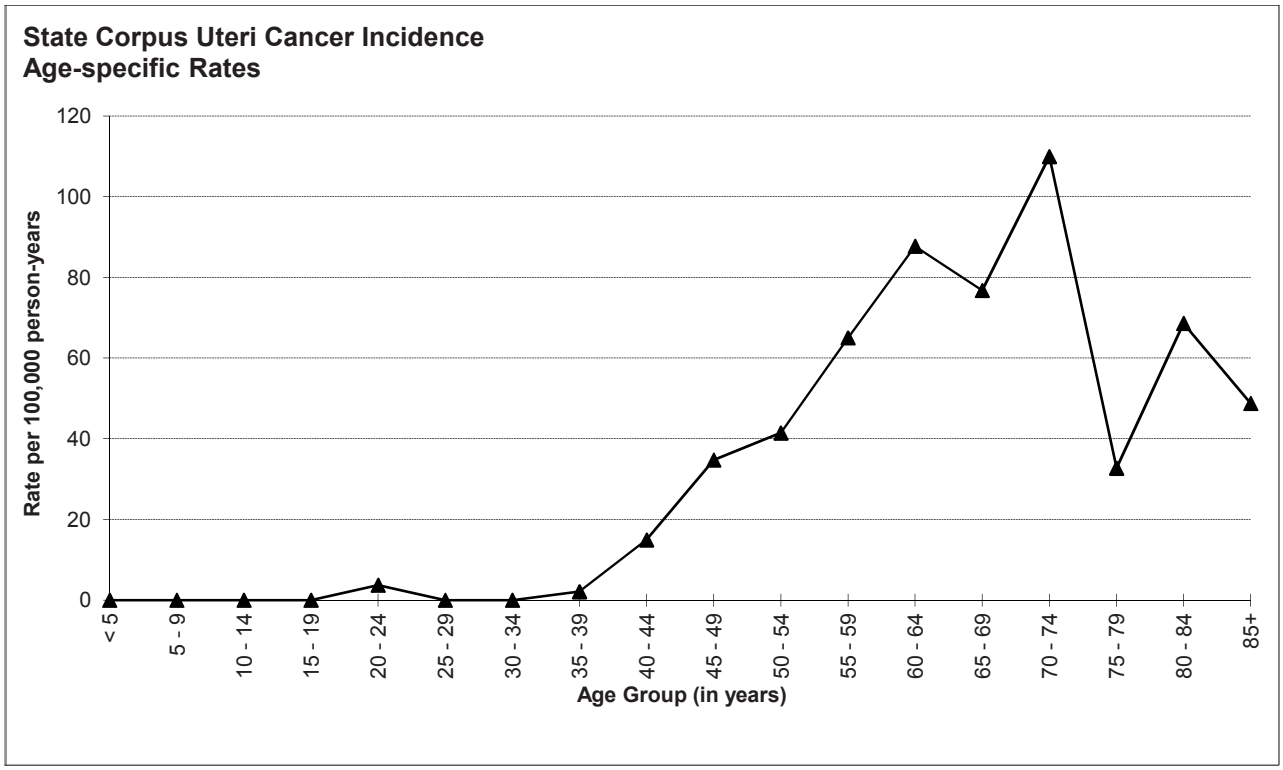
Diet Dietary fat may play a role in increased risk. Obesity and hypertension are common associated conditions of endometrial cancer.

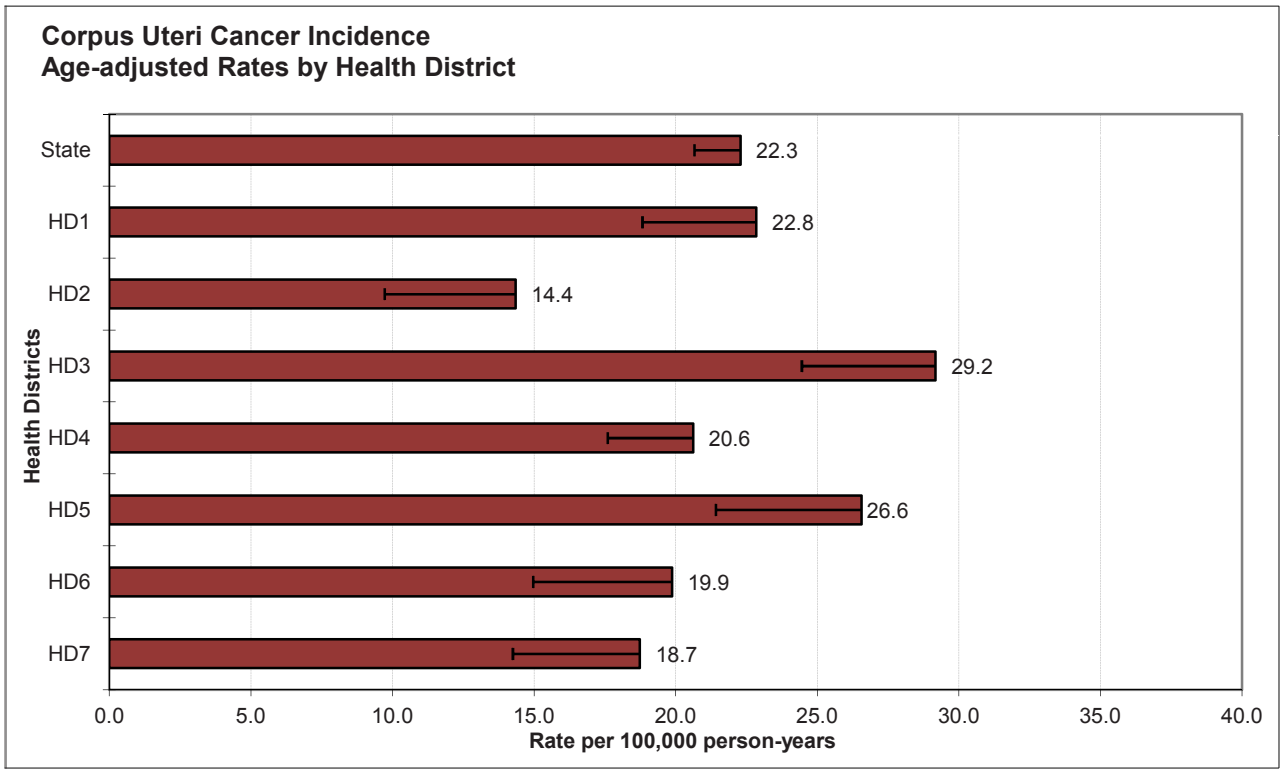
Hormonal Factors that elevate levels of estrogen or decrease progesterone levels enhance the risk. Women who have never carried a pregnancy to term are at a relatively high risk. Risk decreases as the number of pregnancies increases. An increased incidence of endometrial cancer has been found in association with prolonged, unopposed estrogen exposure as well as 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:	21.7
95% confidence interval on the mean age-adjusted incidence rate:	18.1- 25.4
Median age-adjusted incidence rate of health districts:	20.6
Range of age-adjusted incidence rate for health districts:	14.4- 29.2
SEER 18 rate (2009, all races):	25.1
NPCR rate (2009, all races):	24.0

Few cases of endometrial cancer were diagnosed in persons less than 35 years of age. After age 55, there was a sharp increase in age-specific rates, peaking in the age group 70-74. 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
22.3
22.8
14.4
29.2
20.6
26.6
19.9
18.7
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

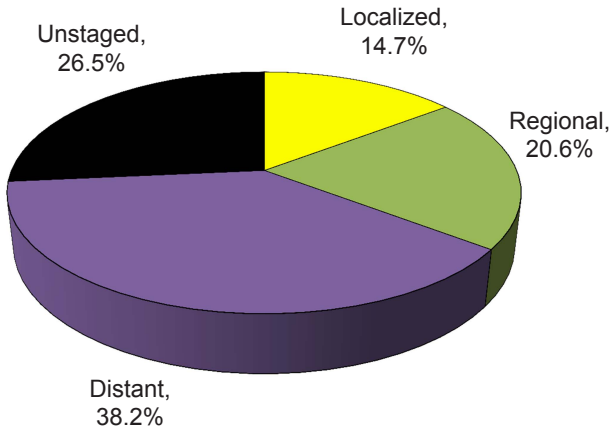
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.1	7.3	1.1
# of new invasive cases	68	58	10
# of new in-situ cases	0	0	0
# of deaths	74	57	17

Total Cases by County

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

Stage at Diagnosis - Esophagus



Risk and Associated Factors

Age Incidence of esophageal cancer is highest after age 55.

Gender It is predominantly a disease of the male, with male-to-female ratios of about 3:1 or more.

Race & SES United States data show that African Americans are affected more than Caucasians. Risk is higher among lower SES strata.

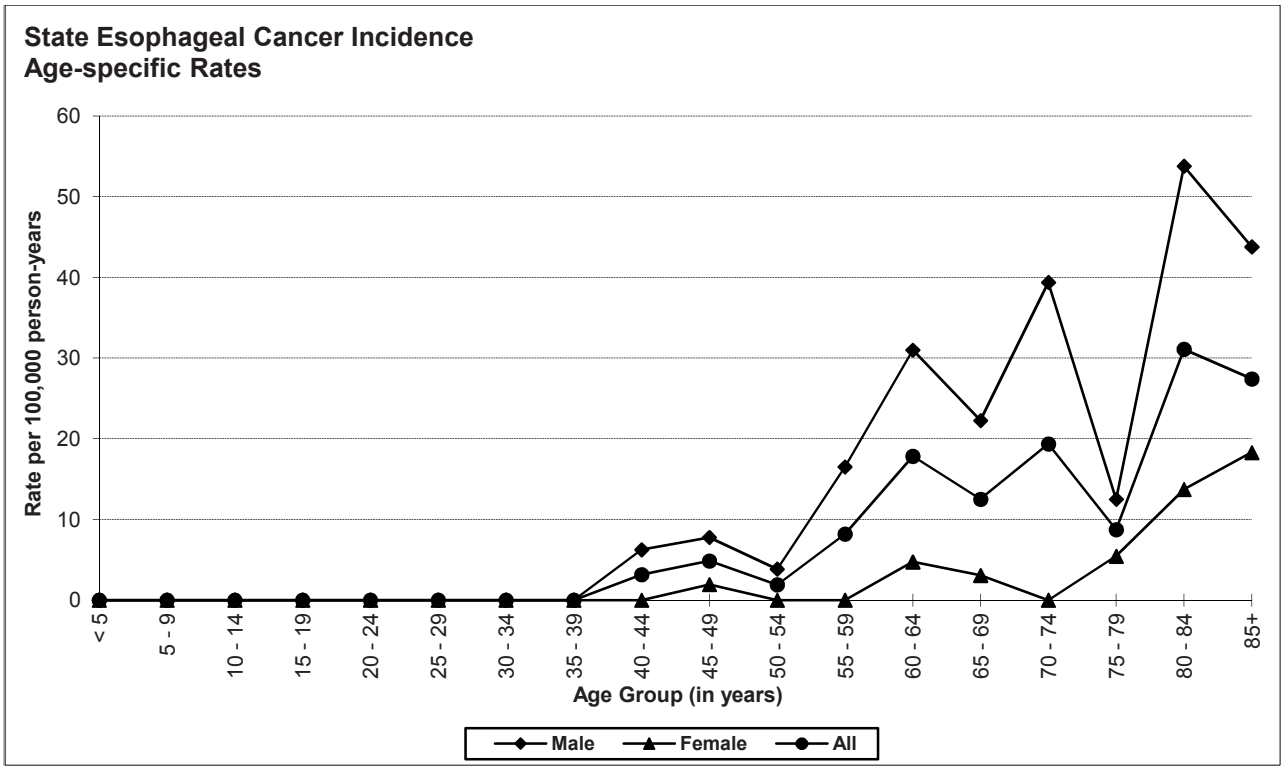
Occupation Chimney sweeps exposed to soot are at higher risk.

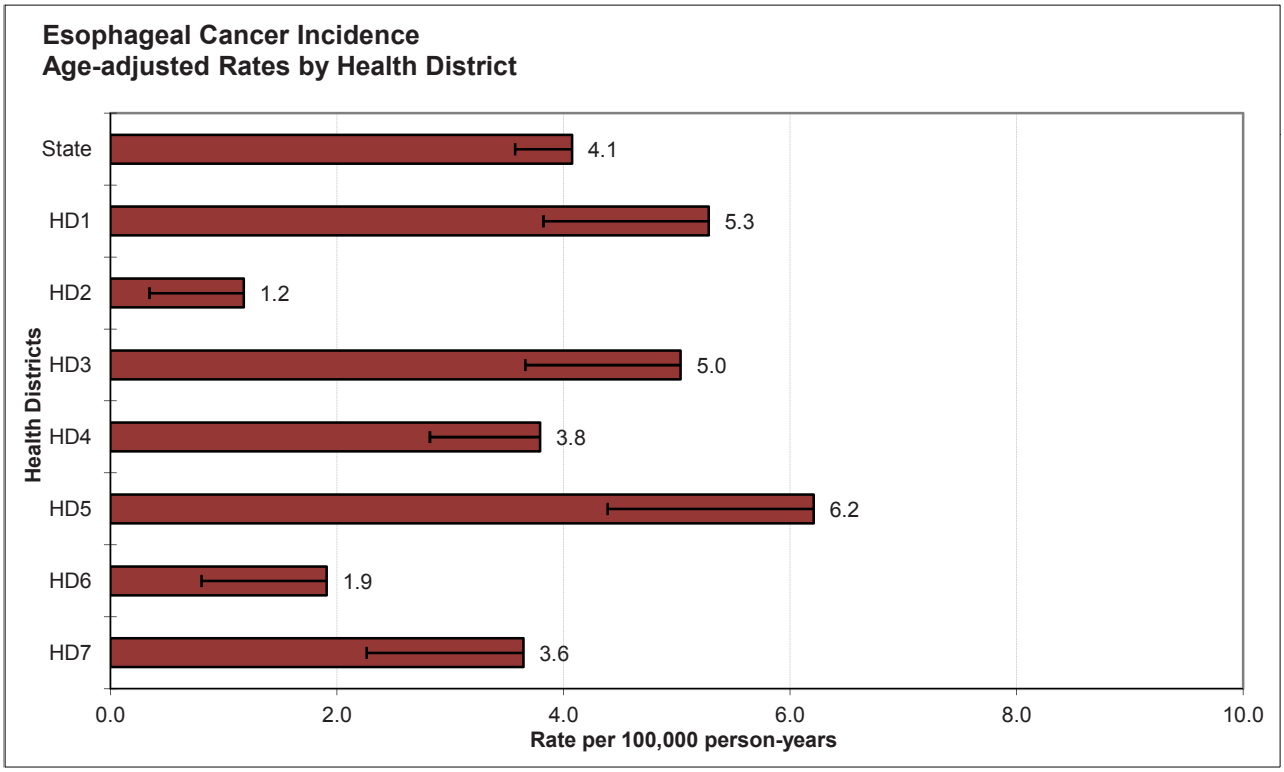
Other Tobacco use (cigarettes or spit tobacco) and heavy alcohol consumption are major risk factors for cancer of the esophagus. The risk is particularly increased when these two factors are both present. In Western Europe and North America, 90% or more of the risk of esophageal cancer can be attributed 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:	3.9
95% confidence interval on the mean age-adjusted incidence rate:	2.5- 5.2
Median age-adjusted incidence rate of health districts:	3.8
Range of age-adjusted incidence rate for health districts:	1.2- 6.2
SEER 17 rate (2008, all races):	4.5
NPCR rate (2008, all races):	4.8

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 85+ 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
5.3
1.2
5.0
3.8
6.2
1.9
3.6
0.0
2.0
4.0
6.0
8.0
10.0
Rate per 100,000 person-years

HODGKIN LYMPHOMA

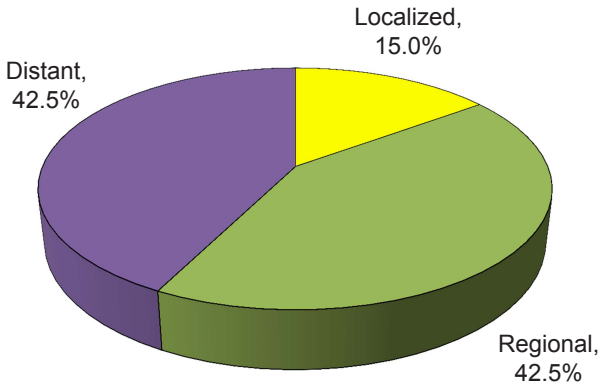
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	2.6	2.9	2.3
# of new invasive cases	40	21	19
# of new in-situ cases	0	0	0
# of deaths	5	4	1

Total Cases by County

Ada	10	Cassia	-	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	1	Clearwater	-	Madison	1
Bear Lake	-	Custer	-	Minidoka	1
Benewah	-	Elmore	1	Nez Perce	1
Bingham	-	Franklin	-	Oneida	-
Blaine	-	Fremont	-	Owyhee	-
Boise	1	Gem	1	Payette	1
Bonner	4	Gooding	-	Power	-
Bonneville	3	Idaho	-	Shoshone	-
Boundary	-	Jefferson	1	Teton	-
Butte	-	Jerome	-	Twin Falls	3
Camas	-	Kootenai	4	Valley	-
Canyon	6	Latah	-	Washington	-
Caribou	1	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 Caucasians than among African Americans. Hodgkin lymphoma is more common in higher income groups.

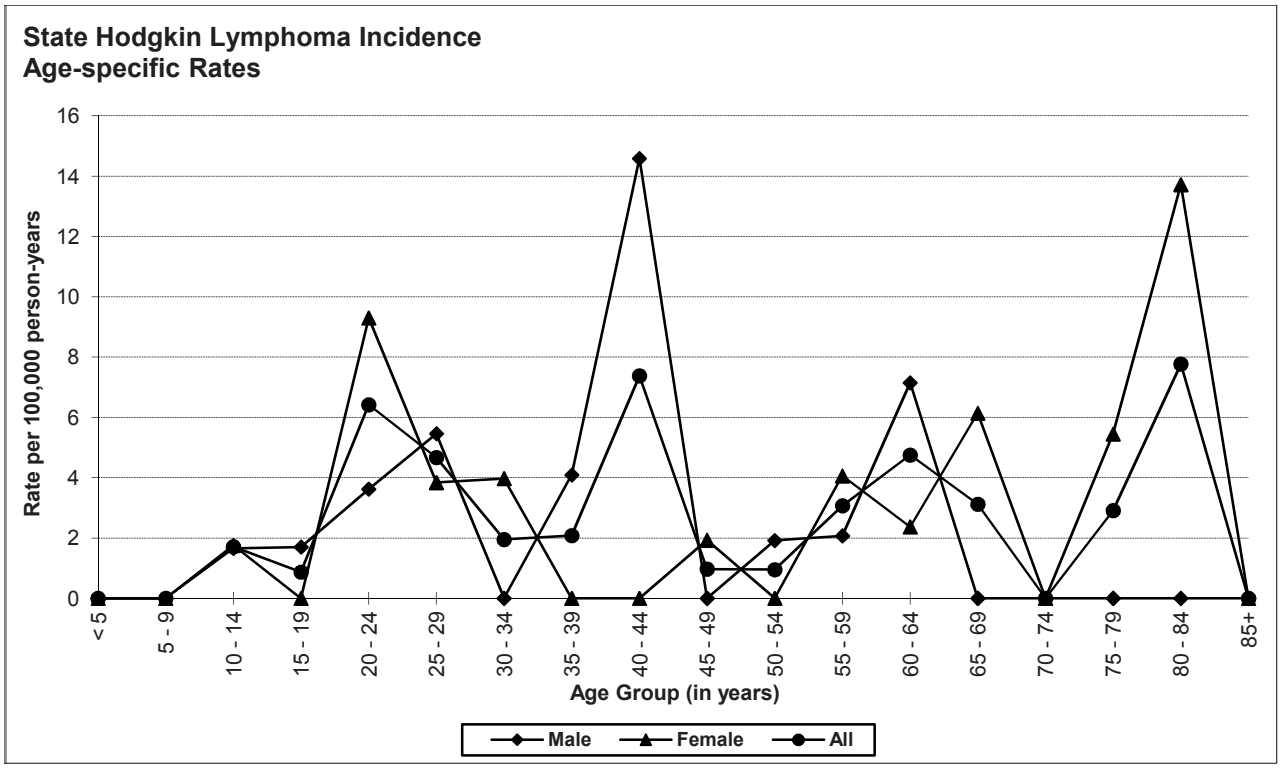
Genetics Genetic factors are thought to play an important role in the etiology of Hodgkin lymphoma, but these are yet to be adequately defined.

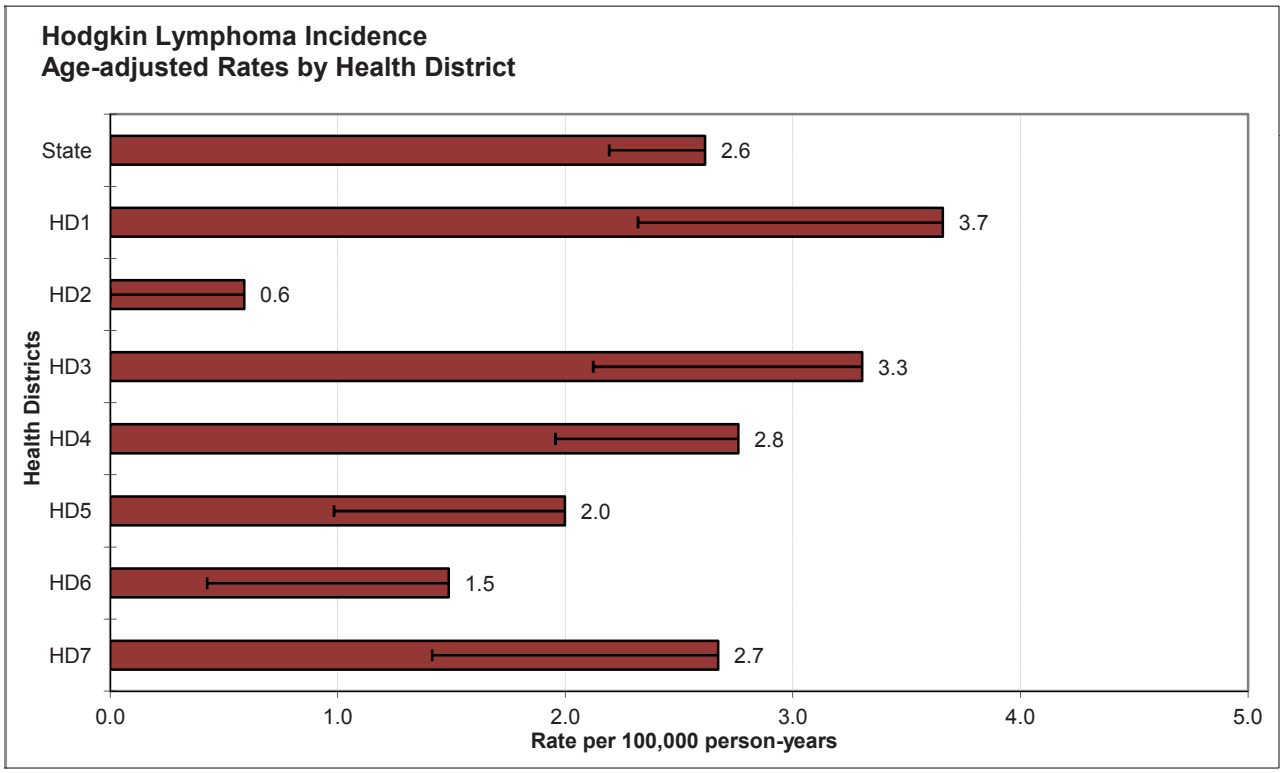
Other Small family size and ensuing delayed exposure to childhood infections is thought to be responsible for a portion of Hodgkin lymphoma cases. Certain viral infections, especially Epstein-Barr virus, and AIDS increase the risk of Hodgkin lymphoma. With current treatment, Hodgkin disease, which was 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:	2.7
Range of age-adjusted incidence rate for health districts:	0.6- 3.7
SEER 18 rate (2009, all races):	2.7
NPCR rate (2009, 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
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)
Male
Female
All


Hodgkin Lymphoma Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
2.6
3.7
0.6
3.3
2.8
2.0
1.5
2.7
0.0
1.0
2.0
3.0
4.0
5.0
Rate per 100,000 person-years

KIDNEY AND RENAL PELVIS

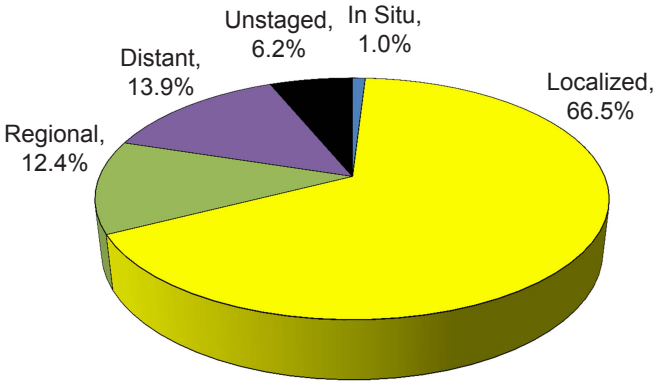
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	12.9	16.7	9.6
# of new invasive cases	207	129	78
# of new in-situ cases	2	2	0
# of deaths	69	46	23

Total Cases by County

Ada	50	Cassia	3	Lewis	2
Adams	-	Clark	-	Lincoln	-
Bannock	7	Clearwater	1	Madison	-
Bear Lake	-	Custer	2	Minidoka	1
Benewah	3	Elmore	6	Nez Perce	11
Bingham	10	Franklin	1	Oneida	-
Blaine	2	Fremont	1	Owyhee	3
Boise	3	Gem	5	Payette	6
Bonner	4	Gooding	2	Power	1
Bonneville	9	Idaho	2	Shoshone	3
Boundary	2	Jefferson	3	Teton	-
Butte	-	Jerome	4	Twin Falls	5
Camas	-	Kootenai	19	Valley	-
Canyon	31	Latah	5	Washington	1
Caribou	1	Lemhi	-		

Stage at Diagnosis - Kidney and Renal Pelvis



Risk and Associated Factors

Age Both adults and children are at risk for kidney cancer. Renal cell carcinoma accounts for about 80% of all adult kidney cancers. Wilm's tumor (nephroblastoma) affects predominantly children under age 5 and accounts for the majority of childhood kidney cancers.

Gender Renal cell carcinoma affects males twice as often as females.

Genetics Wilm's tumor often occurs with congenital defects.

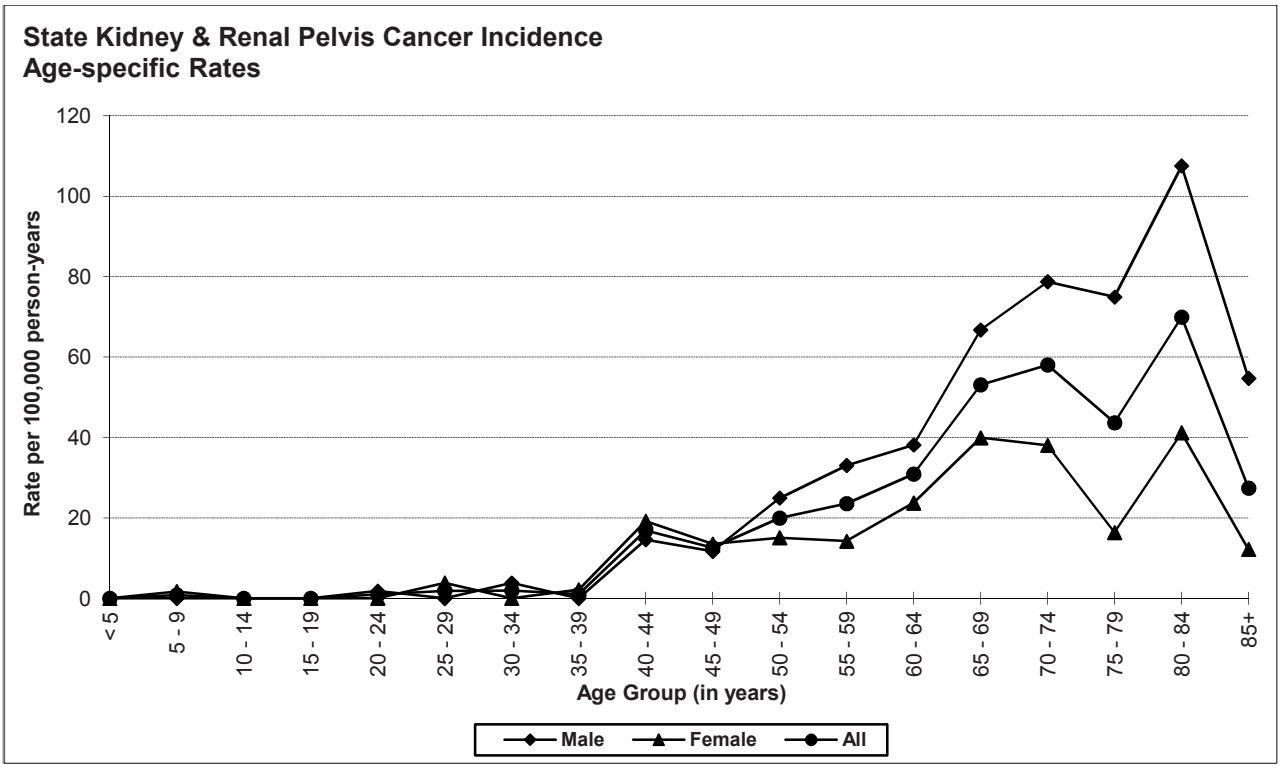
Occupation Certain occupations, such as laundry and leather workers, have been associated with increased risk due to chemical exposure.

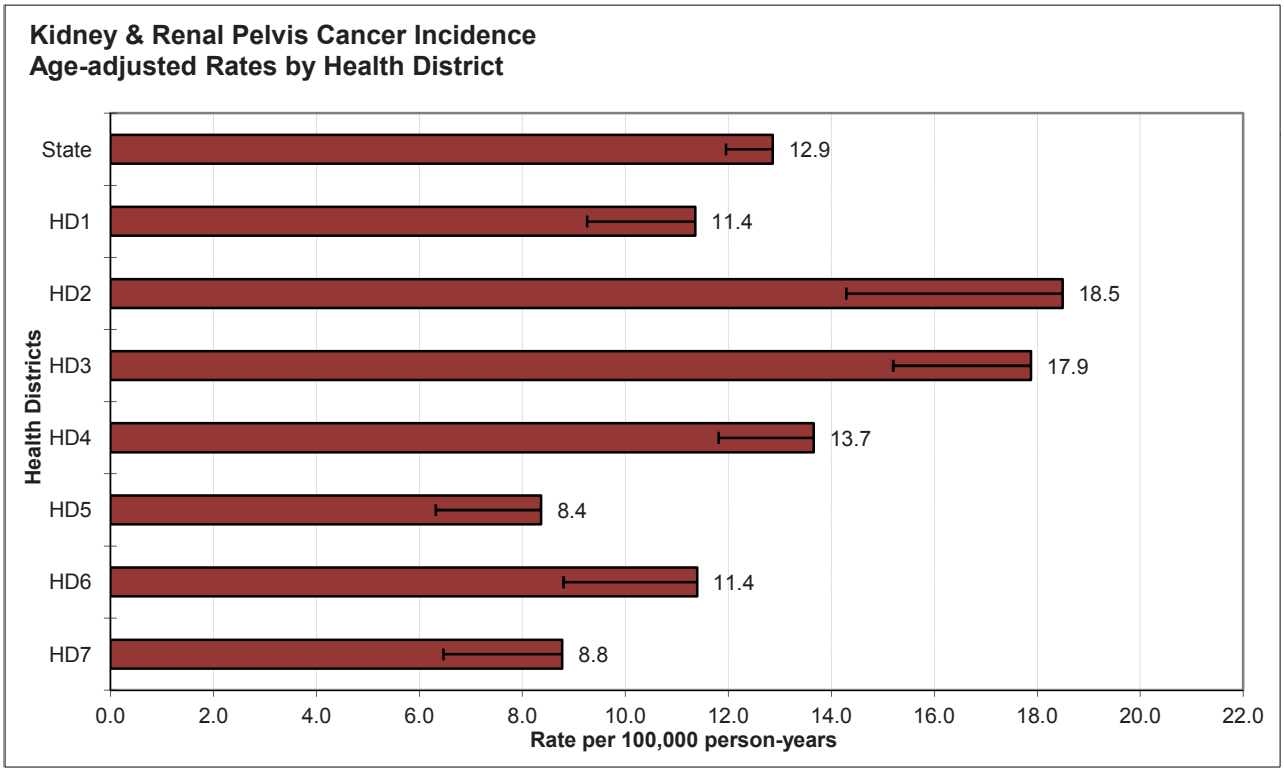
Other Cigarette smoking is strongly associated with renal pelvis and ureter cancers. Smokers are at twice the risk of developing kidney cancer as non-smokers. Analgesic mixtures containing phenacetin increase the risk of kidney cancer. Obesity is a risk factor for kidney cancer. High dietary protein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

Special Notes

Mean age-adjusted incidence rate across health districts:	12.8
95% confidence interval on the mean age-adjusted incidence rate:	9.8- 15.9
Median age-adjusted incidence rate of health districts:	11.4
Range of age-adjusted incidence rate for health districts:	8.4- 18.5
SEER 18 rate (2009, all races):	15.5
NPCR rate (2009, all races):	15.7

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 both males and females. Health District 3 had statistically significantly more cases than expected based upon rates for the remainder of Idaho.


State Kidney & Renal Pelvis Cancer Incidence
Age-specific Rates
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


Kidney & Renal Pelvis Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
12.9
11.4
18.5
17.9
13.7
8.4
11.4
8.8
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

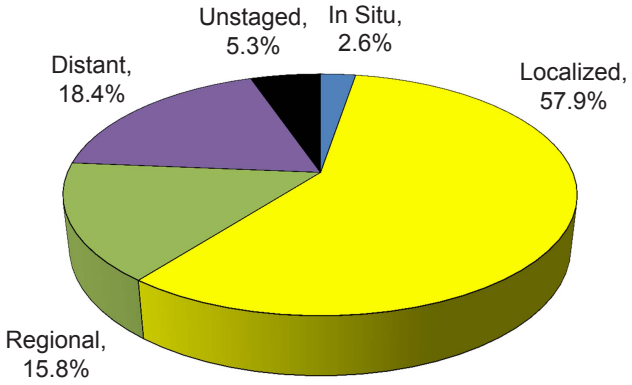
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	2.3	4.2	0.5
# of new invasive cases	37	33	4
# of new in-situ cases	1	1	0
# of deaths	17	14	3

Total Cases by County

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

Stage at Diagnosis - Larynx



Risk and Associated Factors

Age Rates increase with age, with the vast majority of cases occurring after age 55.

Gender Laryngeal cancers are much more common in males than females.

Race & SES Generally in the United States, African Americans have higher incidence rates than Caucasians. Lower income groups experience higher rates.

Occupation Laryngeal cancer has been associated with exposures to asbestos and wood dust.

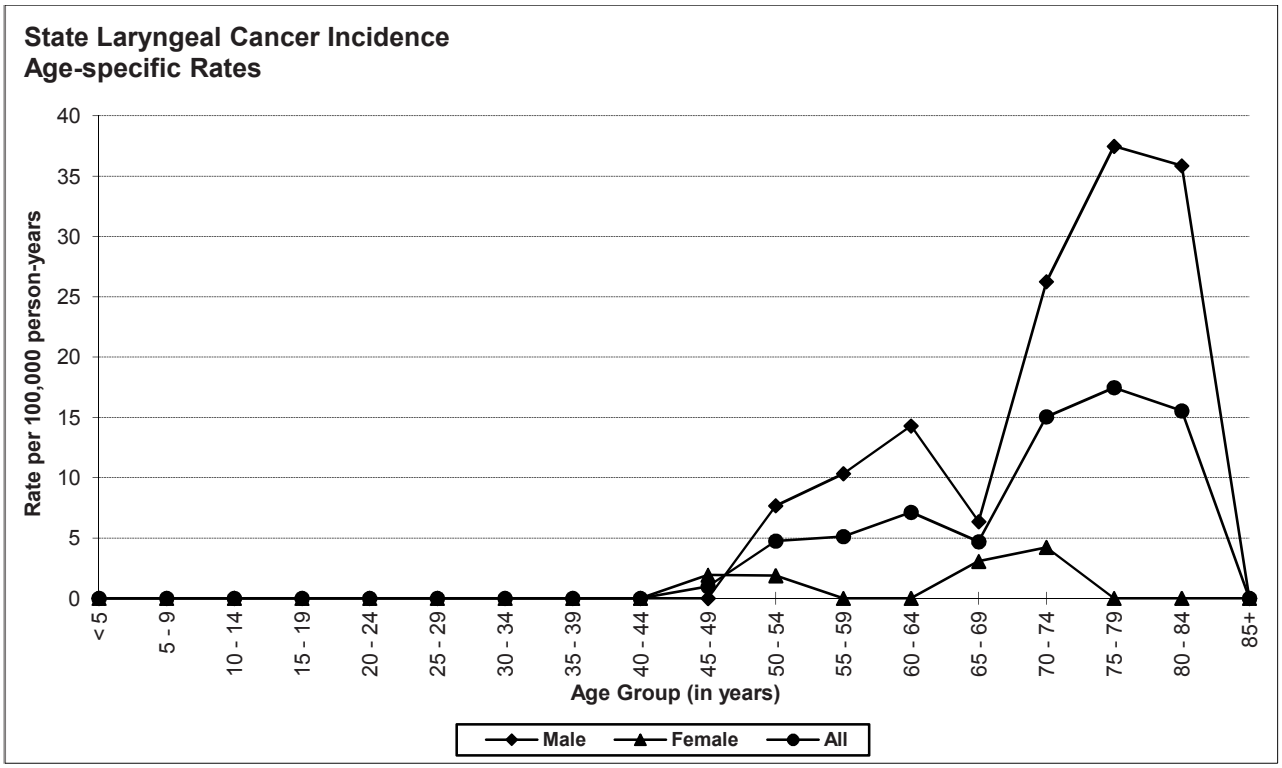
Diet Diets low in fresh fruits and vegetables may increase the risk.

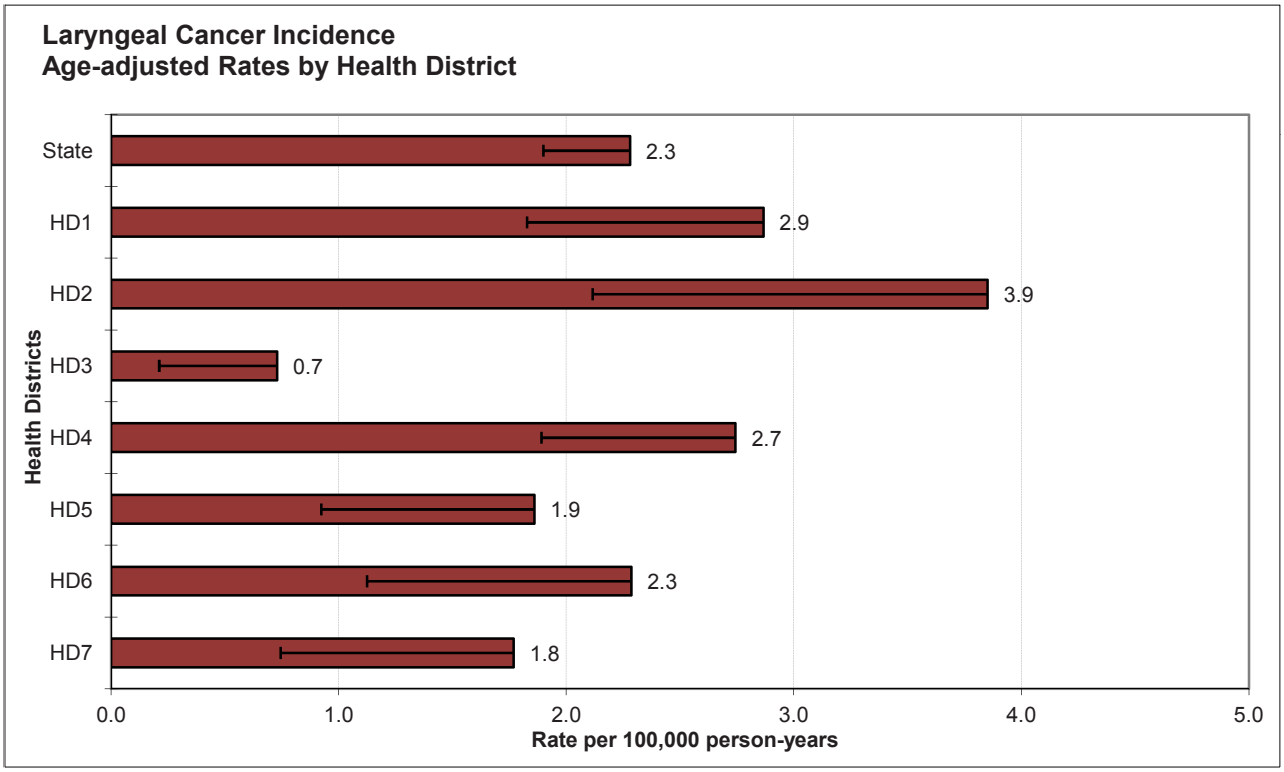
Other Cigarette smoking and alcohol use are both major risk factors. The combination of alcohol consumption and tobacco use (smoking or spit tobacco) acts greatly to increase the risk. A patient with a single laryngeal cancer who continues to smoke and drink alcohol has an enhanced risk of developing 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:	1.6- 3.0
Median age-adjusted incidence rate of health districts:	2.3
Range of age-adjusted incidence rate for health districts:	0.7- 3.9
SEER 18 rate (2009, all races):	3.2
NPCR rate (2009, all races):	3.7

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 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 Laryngeal 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


Laryngeal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
2.3
2.9
3.9
0.7
2.7
1.9
2.3
1.8
0.0
1.0
2.0
3.0
4.0
5.0
Rate per 100,000 person-years

LEUKEMIA

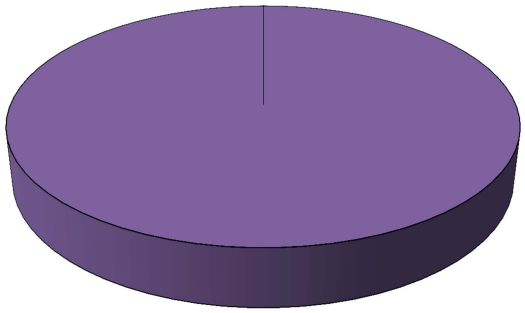
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	16.5	21.1	12.5
# of new invasive cases	262	157	105
# of new in-situ cases	0	0	0
# of deaths	116	80	36

Total Cases by County

Ada	57	Cassia	3	Lewis	3
Adams	1	Clark	-	Lincoln	-
Bannock	8	Clearwater	2	Madison	4
Bear Lake	-	Custer	6	Minidoka	2
Benewah	1	Elmore	8	Nez Perce	8
Bingham	5	Franklin	1	Oneida	1
Blaine	2	Fremont	1	Owyhee	3
Boise	2	Gem	7	Payette	6
Bonner	5	Gooding	2	Power	-
Bonneville	15	Idaho	3	Shoshone	3
Boundary	4	Jefferson	8	Teton	2
Butte	-	Jerome	1	Twin Falls	16
Camas	-	Kootenai	32	Valley	2
Canyon	26	Latah	6	Washington	2
Caribou	1	Lemhi	3		

Stage at Diagnosis - Leukemia



Distant, 100%

Risk and Associated Factors

Age This 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 African Americans. CLL is rare in Asians.

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.

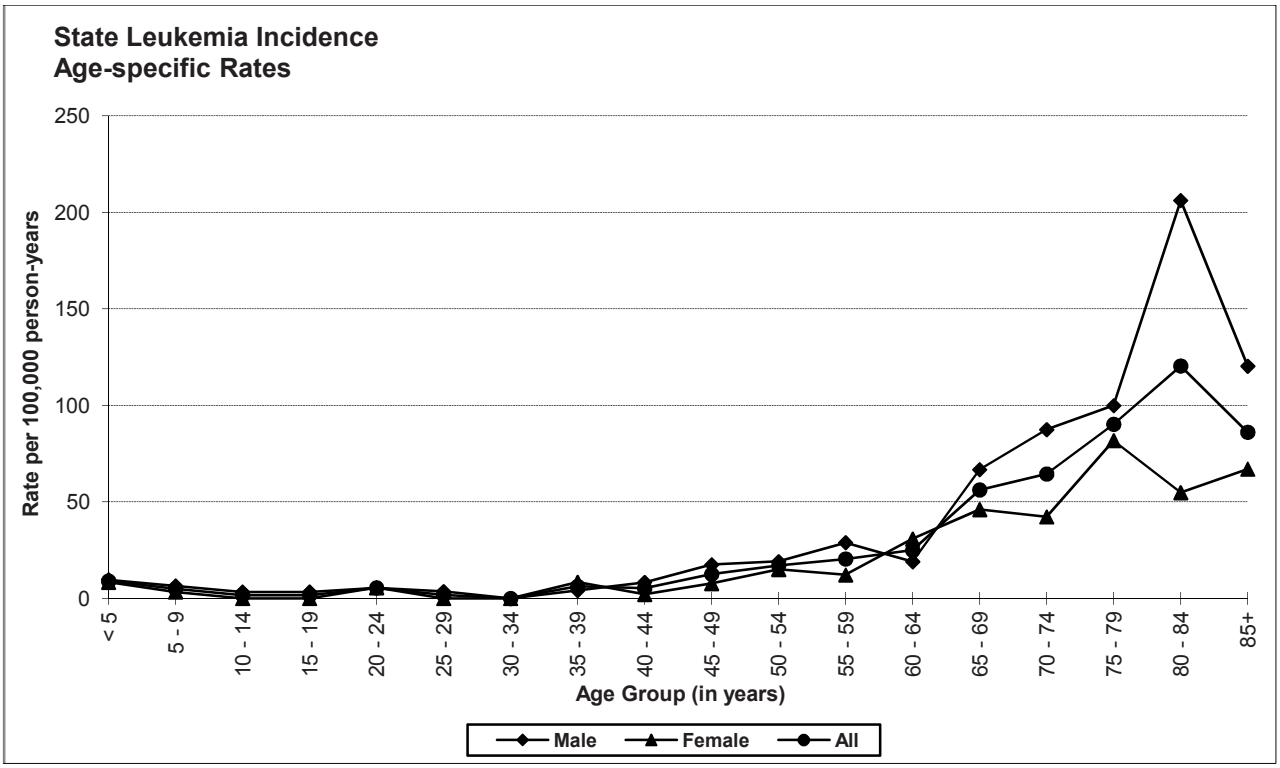
Occupation Benzene is a known cause of leukemia (predominantly acute myelogenous leukemia [AML]). Chimney sweeps exposed to soot are at higher risk.

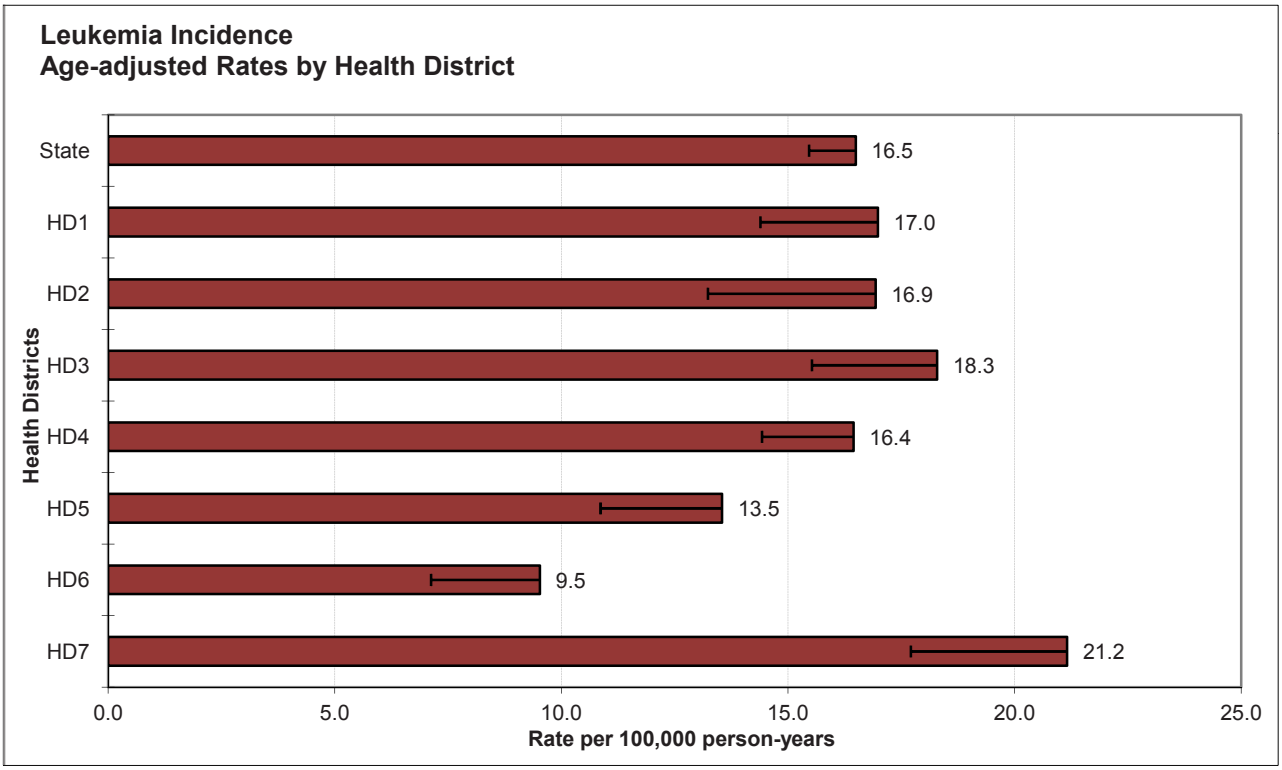
Other Ionizing radiation exposure increases the risk (except for CLL). Environmental exposure to low frequency, non-ionizing radiation and its association with leukemia incidence is being investigated. Treatment with some chemotherapeutic agents for other cancers increases the risk of leukemia. Exposure 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:	16.1
95% confidence interval on the mean age-adjusted incidence rate:	13.4- 18.9
Median age-adjusted incidence rate of health districts:	16.9
Range of age-adjusted incidence rate for health districts:	9.5- 21.2
SEER 18 rate (2009, all races):	12.0
NPCR rate (2009, all races):	11.9

The age-specific incidence distribution of leukemia for Idaho is quite similar to the typical pattern described by the SEER program of the National Cancer Institute. 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. Generally, the incidence of leukemia is higher in older age groups. Health District 6 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho.


State Leukemia Incidence
Age-specific Rates
Rate per 100,000 person-years
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


Leukemia Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
16.5
17.0
16.9
18.3
16.4
13.5
9.5
21.2
0.0
5.0
10.0
15.0
20.0
25.0
Rate per 100,000 person-years

LIVER AND BILE DUCT

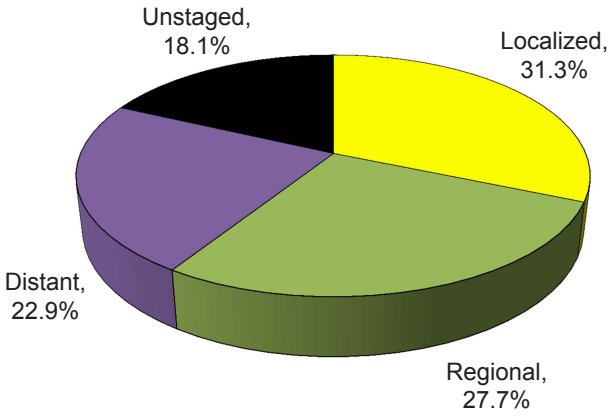
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.9	7.0	2.9
# of new invasive cases	83	58	25
# of new in-situ cases	0	0	0
# of deaths	75	52	23

Total Cases by County

Ada	20	Cassia	1	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	1	Clearwater	2	Madison	-
Bear Lake	-	Custer	-	Minidoka	1
Benewah	-	Elmore	3	Nez Perce	4
Bingham	2	Franklin	-	Oneida	1
Blaine	3	Fremont	-	Owyhee	-
Boise	-	Gem	2	Payette	1
Bonner	4	Gooding	-	Power	-
Bonneville	7	Idaho	-	Shoshone	1
Boundary	1	Jefferson	-	Teton	1
Butte	-	Jerome	1	Twin Falls	2
Camas	-	Kootenai	10	Valley	1
Canyon	8	Latah	3	Washington	1
Caribou	-	Lemhi	1		

Stage at Diagnosis - Liver and Bile Duct



Risk and Associated Factors

Age The incidence rate of liver cancer increases with age.

Gender Rates are usually higher among males than females.

Race Incidence is higher among Asians and African Americans 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.

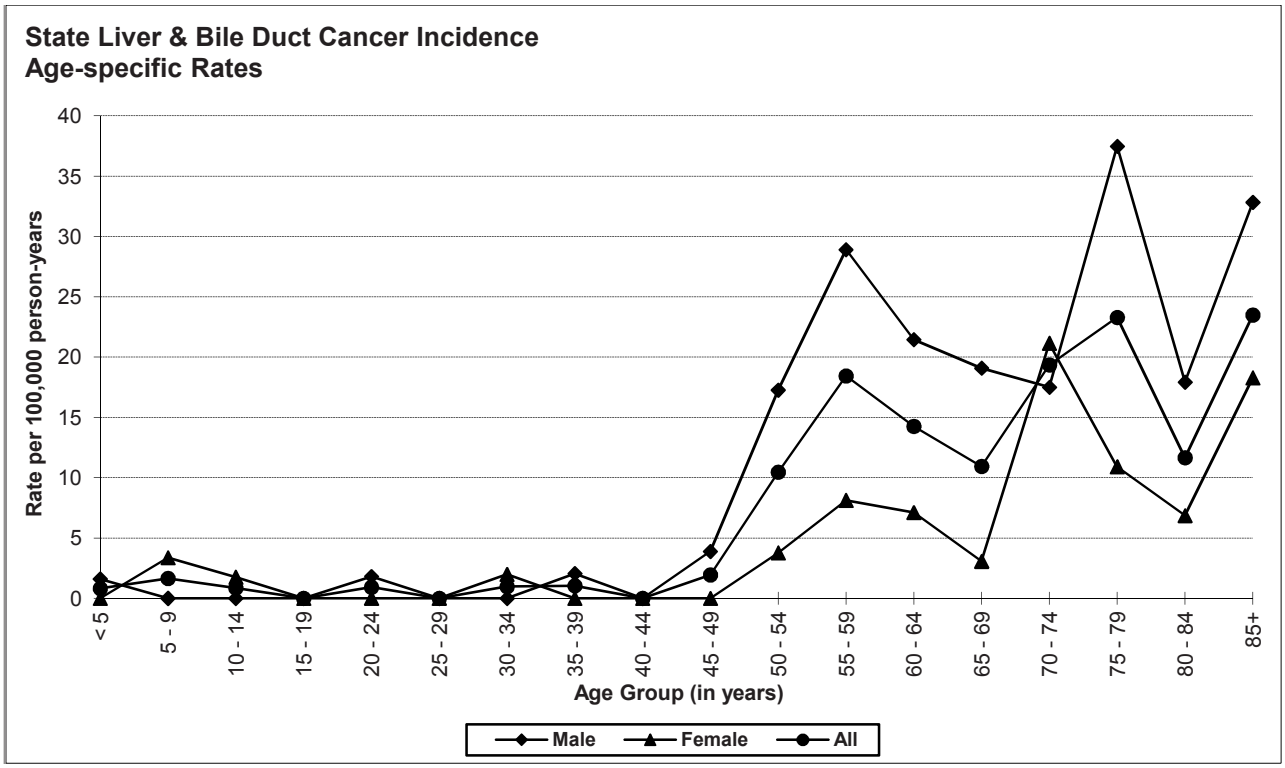
Occupation Thorium dioxide (an x-ray contrast medium) exposure increases liver cancer risk. Exposure to vinyl chloride used in plastic production is associated with an increased risk of angiosar coma of the liver. Chimney sweeps exposed to soot are at higher risk.

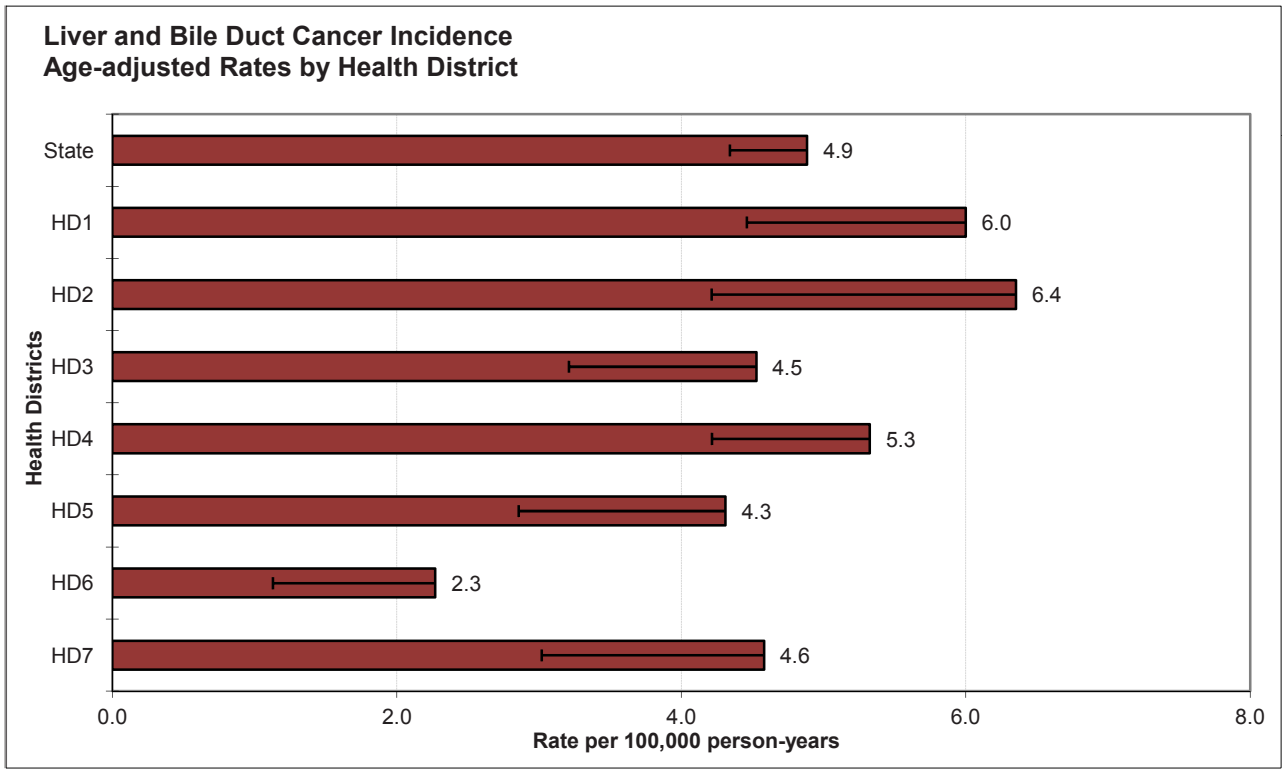
Other Hepatitis B and Hepatitis C infections are significant causes of hepatocellular carcinoma. Cirrhosis of the liver due to viral hepatitis, alcoholism, or toxic chemical exposure accounts for 50-80% of patients diagnosed with liver cancer. Long-term use of oral contraceptives increases risk of hepatocellular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

Special Notes

Mean age-adjusted incidence rate across health districts:	4.8
95% confidence interval on the mean age-adjusted incidence rate:	3.8- 5.8
Median age-adjusted incidence rate of health districts:	4.6
Range of age-adjusted incidence rate for health districts:	2.3- 6.4
SEER 18 rate (2009, all races):	7.9
NPCR rate (2009, all races):	6.4

There were few cases of liver cancer among persons less than 45 years of age. Age-specific incidence rates generally increased with age, peaking in the age group 75-79 for males and 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
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


Liver and Bile Duct Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
4.9
6.0
6.4
4.5
5.3
4.3
2.3
4.6
0.0
2.0
4.0
6.0
8.0
Rate per 100,000 person-years

LUNG AND BRONCHUS

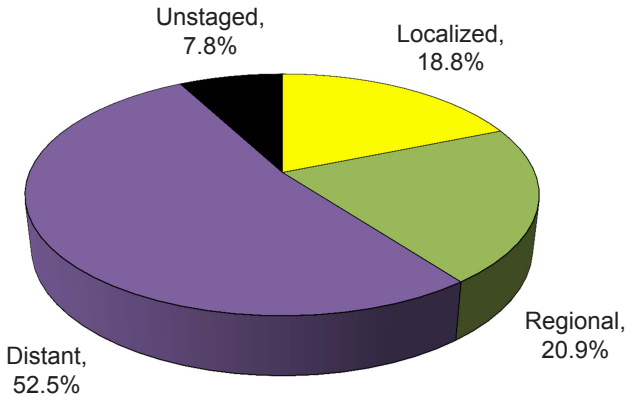
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	50.5	55.6	46.4
# of new invasive cases	808	412	396
# of new in-situ cases	0	0	0
# of deaths	609	350	259

Total Cases by County

Ada	175	Cassia	3	Lewis	4
Adams	4	Clark	1	Lincoln	1
Bannock	19	Clearwater	9	Madison	3
Bear Lake	-	Custer	6	Minidoka	11
Benewah	14	Elmore	12	Nez Perce	40
Bingham	14	Franklin	3	Oneida	2
Blaine	2	Fremont	5	Owyhee	3
Boise	10	Gem	24	Payette	19
Bonner	35	Gooding	14	Power	1
Bonneville	37	Idaho	12	Shoshone	19
Boundary	8	Jefferson	8	Teton	-
Butte	1	Jerome	15	Twin Falls	50
Camas	-	Kootenai	89	Valley	2
Canyon	93	Latah	11	Washington	17
Caribou	3	Lemhi	9		

Stage at Diagnosis - Lung and Bronchus



Risk and Associated Factors

Age Lung cancer incidence rates increase with age.

Gender The incidence is currently higher in males than in females, but the gap is narrowing due to increased smoking rates among women.

Race & SES Generally, incidence is higher among African Americans than other racial groups, and is also higher in lower income groups.

Diet Diets low in consumption of fresh fruits and vegetables contribute to increased risk.

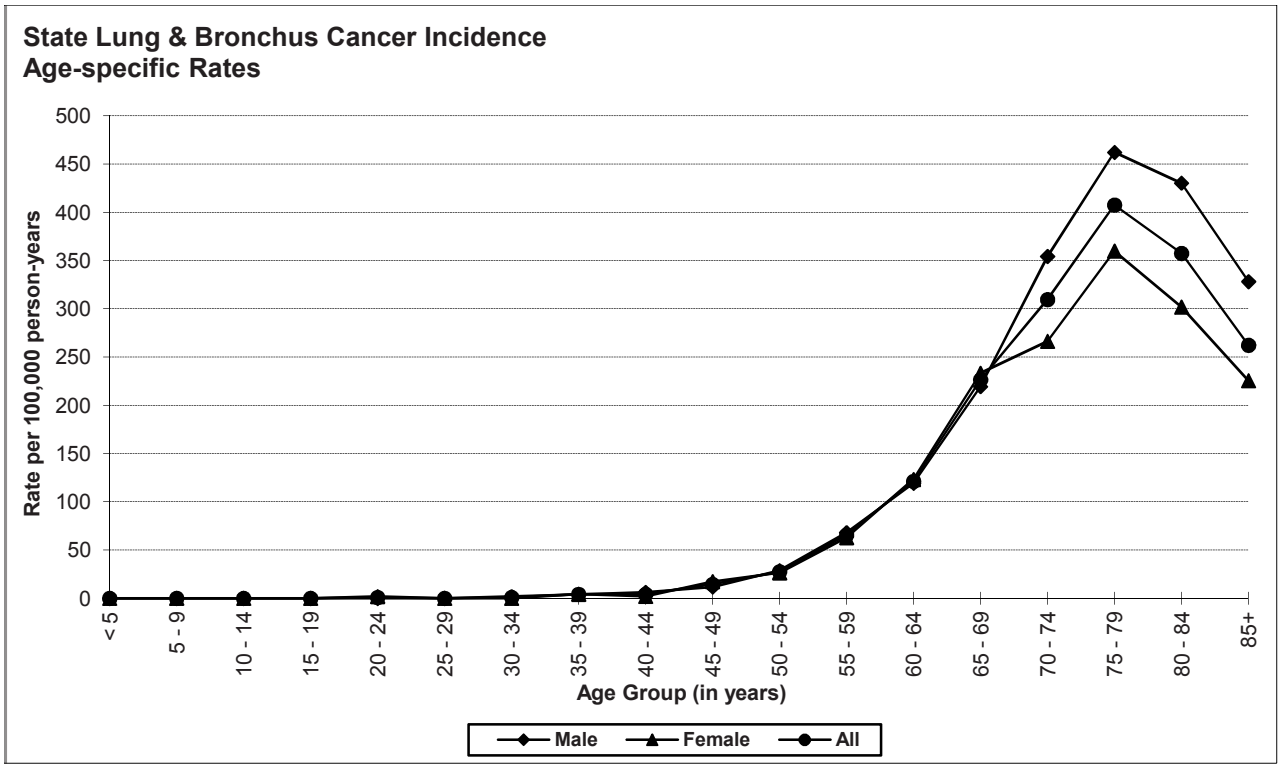
Occupation Occupational or environmental exposures to asbestos, cadmium, chromium, coal tars, crystalline silica dust, polycyclic aromatic hydrocarbons, radon, soot, chlorpyrifos insecticides, ionizing radiation, and other substances increase the risk.

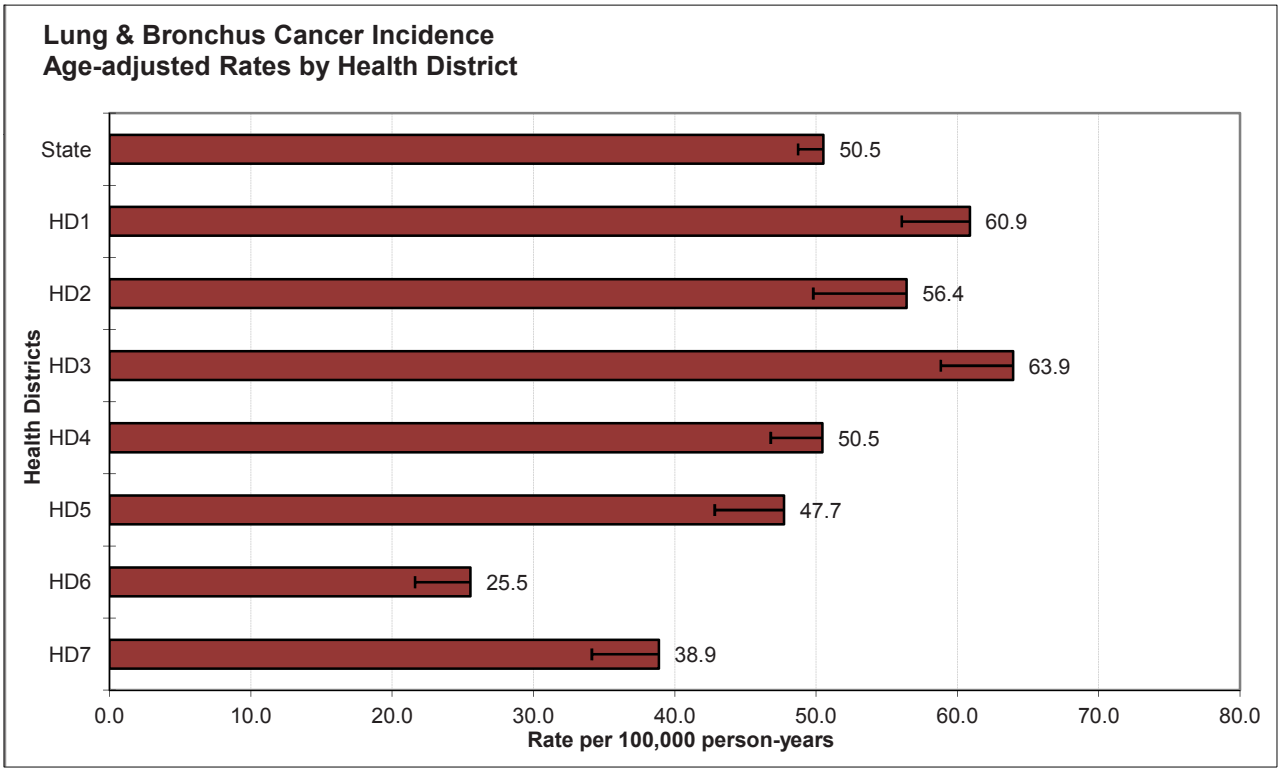
Other Cigarette smoking, including exposure to second-hand smoke, is the most important risk factor, accounting for over 85% of lung cancer deaths. Evidence exists that rates are about 1.3 times higher, adjusted for smoking, in urban areas than rural areas due to air pollution, mostly from motor vehicles.

Special Notes

Mean age-adjusted incidence rate across health districts:	49.1
95% confidence interval on the mean age-adjusted incidence rate:	39.2- 59.0
Median age-adjusted incidence rate of health districts:	50.5
Range of age-adjusted incidence rate for health districts:	25.5- 63.9
SEER 18 rate (2009, all races):	60.3
NPCR rate (2009, all races):	64.4

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 75-79 for both males and females. Health Districts 1 and 3 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health Districts 6 and 7 had statistically significantly fewer.


State Lung & Bronchus Cancer Incidence
Age-specific Rates
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
50.5
60.9
56.4
63.9
50.5
47.7
25.5
38.9
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

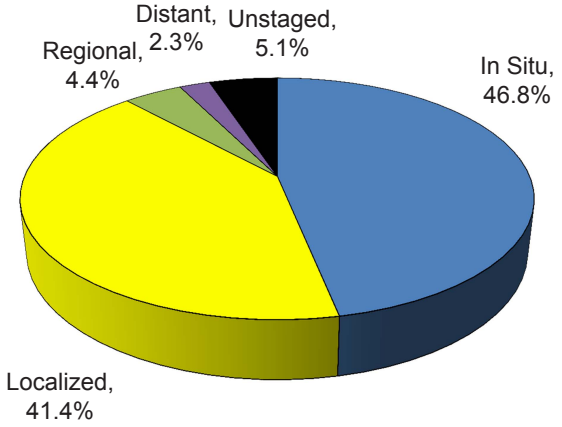
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	23.2	29.1	18.5
# of new invasive cases	373	220	153
# of new in-situ cases	328	190	138
# of deaths	57	36	21

Total Cases by County

Ada	173	Cassia	10	Lewis	1
Adams	3	Clark	1	Lincoln	2
Bannock	46	Clearwater	2	Madison	10
Bear Lake	3	Custer	1	Minidoka	2
Benewah	3	Elmore	13	Nez Perce	18
Bingham	15	Franklin	3	Oneida	1
Blaine	15	Fremont	9	Owyhee	4
Boise	2	Gem	8	Payette	5
Bonner	22	Gooding	7	Power	3
Bonneville	67	Idaho	7	Shoshone	5
Boundary	3	Jefferson	11	Teton	4
Butte	1	Jerome	6	Twin Falls	27
Camas	-	Kootenai	97	Valley	5
Canyon	55	Latah	12	Washington	5
Caribou	5	Lemhi	8		

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.

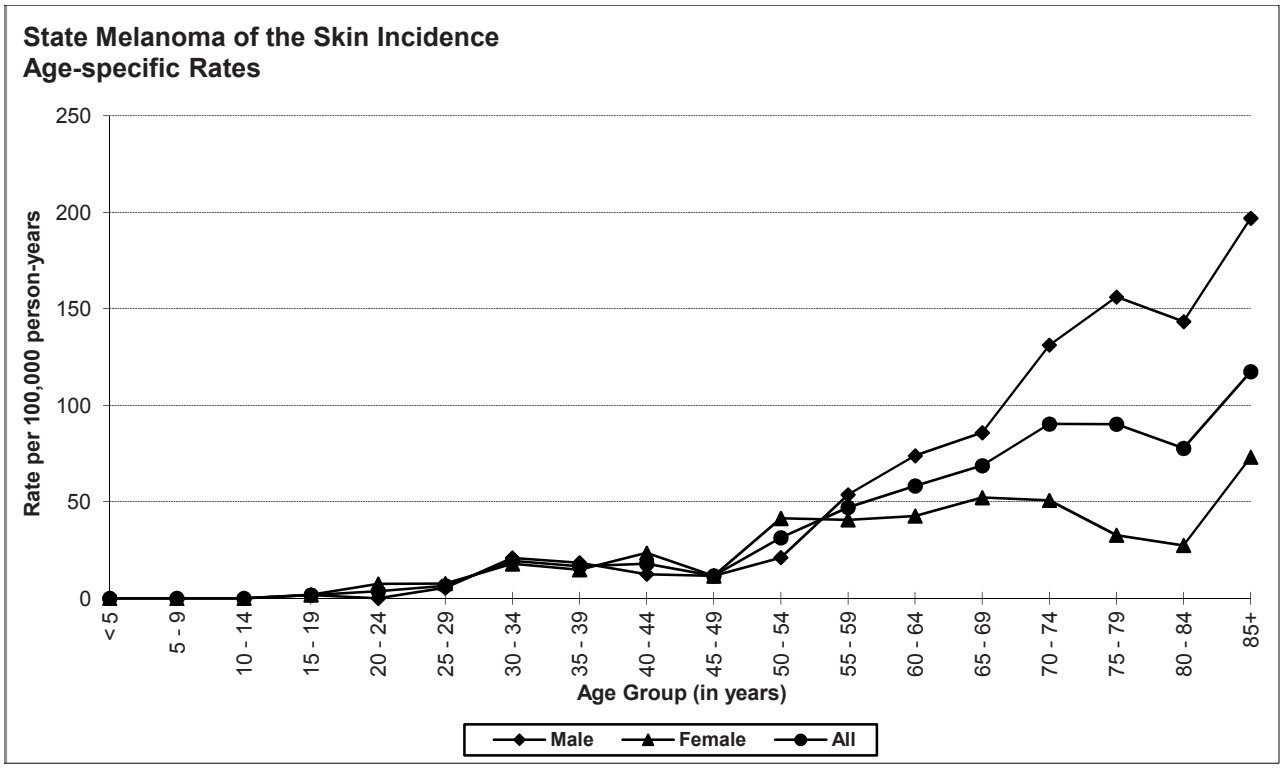
Race & SES The incidence rate is highest in Caucasians and lowest in African Americans. Incidence rates of melanoma of the skin are higher in higher income groups (indoor workers).

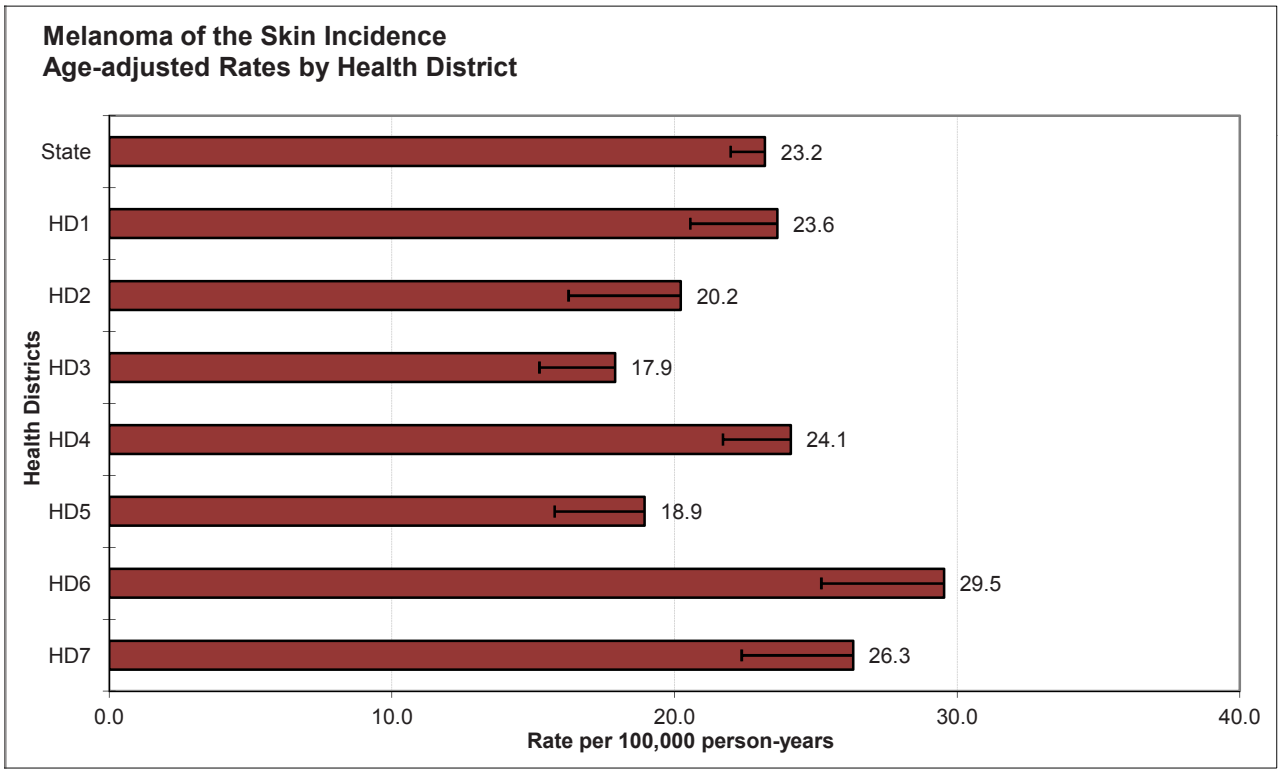
Other Ultra-violet light exposure, especially blistering sunburns during childhood, is a major risk factor. Melanoma incidence rates are increasing around the world. Blue eyes, fair or red hair and pale complexion are well-known risk factors for melanoma. Apart from race and age, the number of melanocytic nevi is the strongest known risk factor for melanoma. Intermittent exposure of untanned skin to intense sunlight is particularly effective in increasing incidence of melanoma.

Special Notes

Mean age-adjusted incidence rate across health districts:	23.0
95% confidence interval on the mean age-adjusted incidence rate:	19.8- 26.1
Median age-adjusted incidence rate of health districts:	23.6
Range of age-adjusted incidence rate for health districts:	17.9- 29.5
SEER 18 rate (2009, all races):	20.8
NPCR rate (2009, all races):	19.2

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


State Melanoma of the Skin Incidence
Age-specific Rates
Rate per 100,000 person-years
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
23.2
23.6
20.2
17.9
24.1
18.9
29.5
26.3
0.0
10.0
20.0
30.0
40.0
Rate per 100,000 person-years

MYELOMA

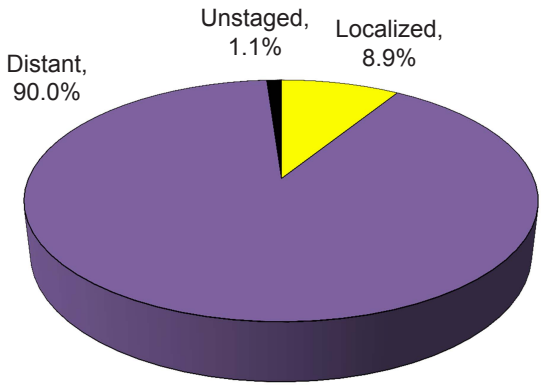
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.7	8.8	3.1
# of new invasive cases	90	64	26
# of new in-situ cases	0	0	0
# of deaths	56	33	23

Total Cases by County

Ada	21	Cassia	1	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	4	Clearwater	-	Madison	2
Bear Lake	-	Custer	-	Minidoka	2
Benewah	-	Elmore	1	Nez Perce	1
Bingham	1	Franklin	-	Oneida	-
Blaine	3	Fremont	1	Owyhee	-
Boise	-	Gem	2	Payette	3
Bonner	3	Gooding	-	Power	1
Bonneville	6	Idaho	1	Shoshone	2
Boundary	-	Jefferson	2	Teton	-
Butte	1	Jerome	1	Twin Falls	6
Camas	-	Kootenai	5	Valley	-
Canyon	11	Latah	6	Washington	1
Caribou	1	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 African Americans have higher incidence rates than Caucasians.

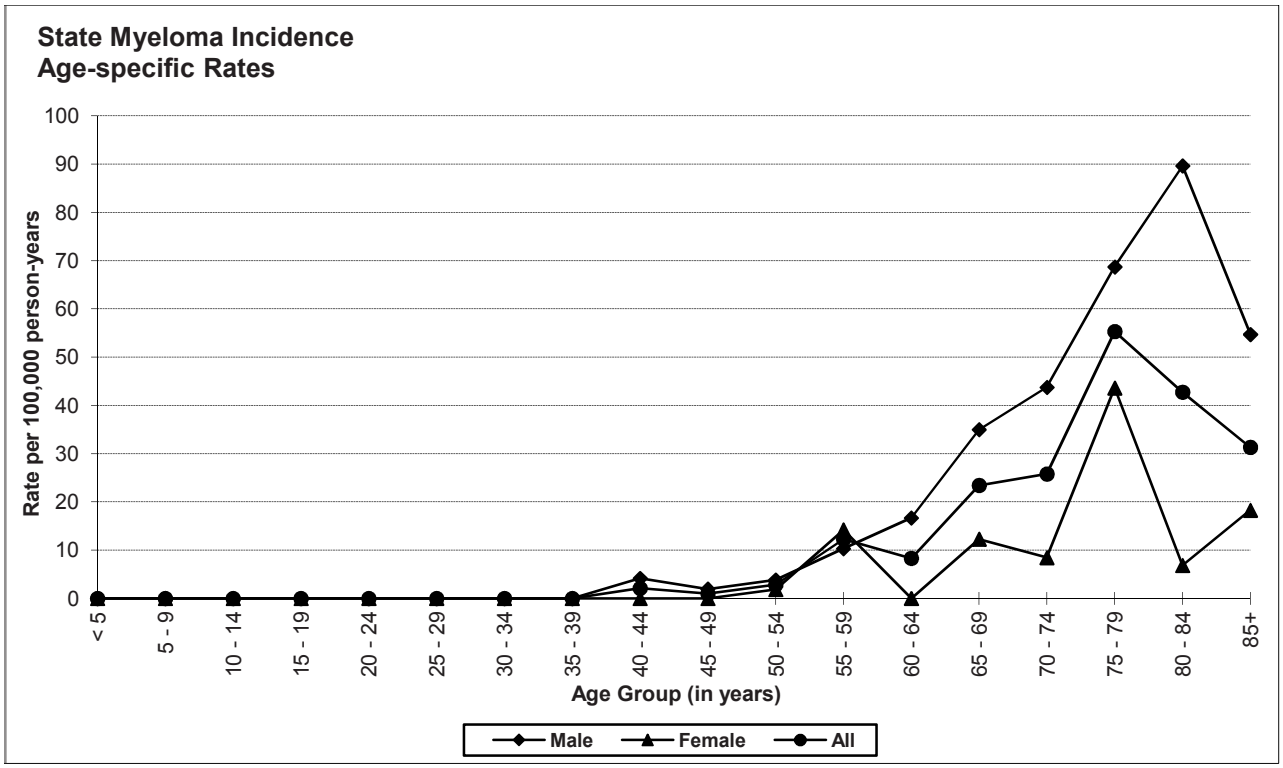
Genetics Genetic factors play an important role in its development but how so is not completely understood. Familial factors and chronic antigenic stimulation have also been implicated.

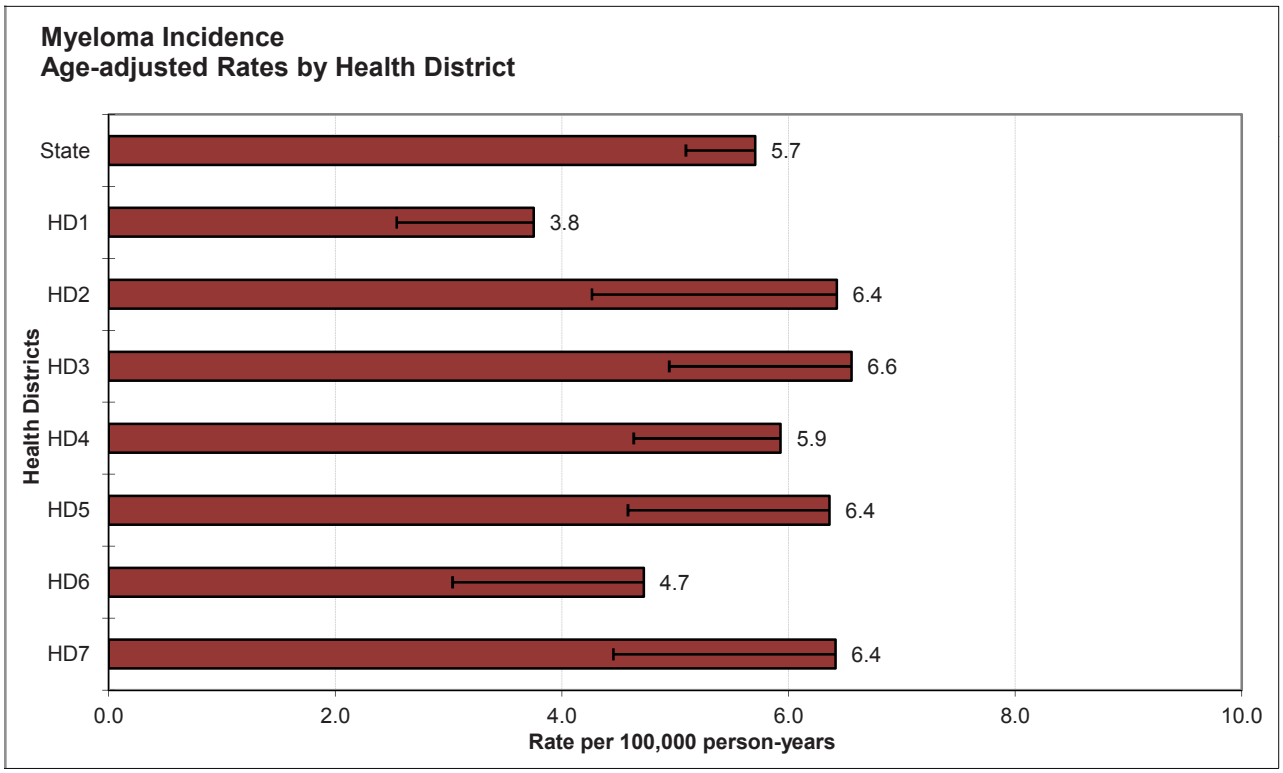
Other Multiple myeloma has been associated with lymphomas such as Burkitt's and non-Hodgkin lymphomas. Studies have suggested several possible viral etiologies, and multiple myeloma has been linked to ionizing radiation exposure. Several specific chemical and physical substances have been linked to myeloma 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:	4.9- 6.5
Median age-adjusted incidence rate of health districts:	6.4
Range of age-adjusted incidence rate for health districts:	3.8- 6.6
SEER 18 rate (2009, all races):	5.8
NPCR rate (2009, all races):	5.7

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


State Myeloma Incidence
Age-specific Rates
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
5.7
3.8
6.4
6.6
5.9
6.4
4.7
6.4
0.0
2.0
4.0
6.0
8.0
10.0
Rate per 100,000 person-years

NON-HODGKIN LYMPHOMA

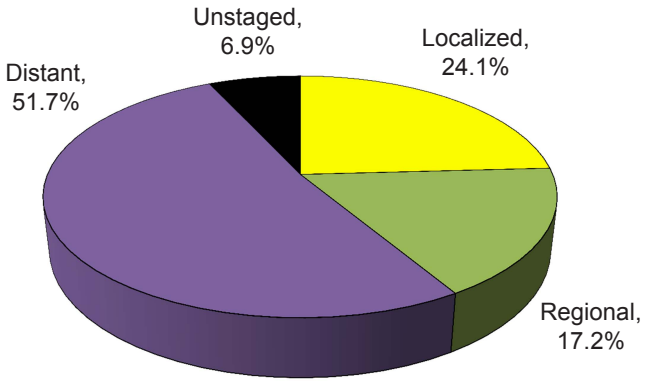
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	17.8	19.7	16.0
# of new invasive cases	290	154	136
# of new in-situ cases	0	0	0
# of deaths	88	44	44

Total Cases by County

Ada	73	Cassia	2	Lewis	1
Adams	-	Clark	-	Lincoln	3
Bannock	12	Clearwater	4	Madison	4
Bear Lake	-	Custer	-	Minidoka	4
Benewah	1	Elmore	2	Nez Perce	8
Bingham	15	Franklin	3	Oneida	-
Blaine	2	Fremont	2	Owyhee	1
Boise	1	Gem	6	Payette	2
Bonner	10	Gooding	2	Power	-
Bonneville	23	Idaho	5	Shoshone	2
Boundary	1	Jefferson	5	Teton	1
Butte	-	Jerome	-	Twin Falls	18
Camas	-	Kootenai	28	Valley	-
Canyon	36	Latah	4	Washington	3
Caribou	2	Lemhi	4		

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 Caucasians than African Americans. Rates are higher in upper income groups.

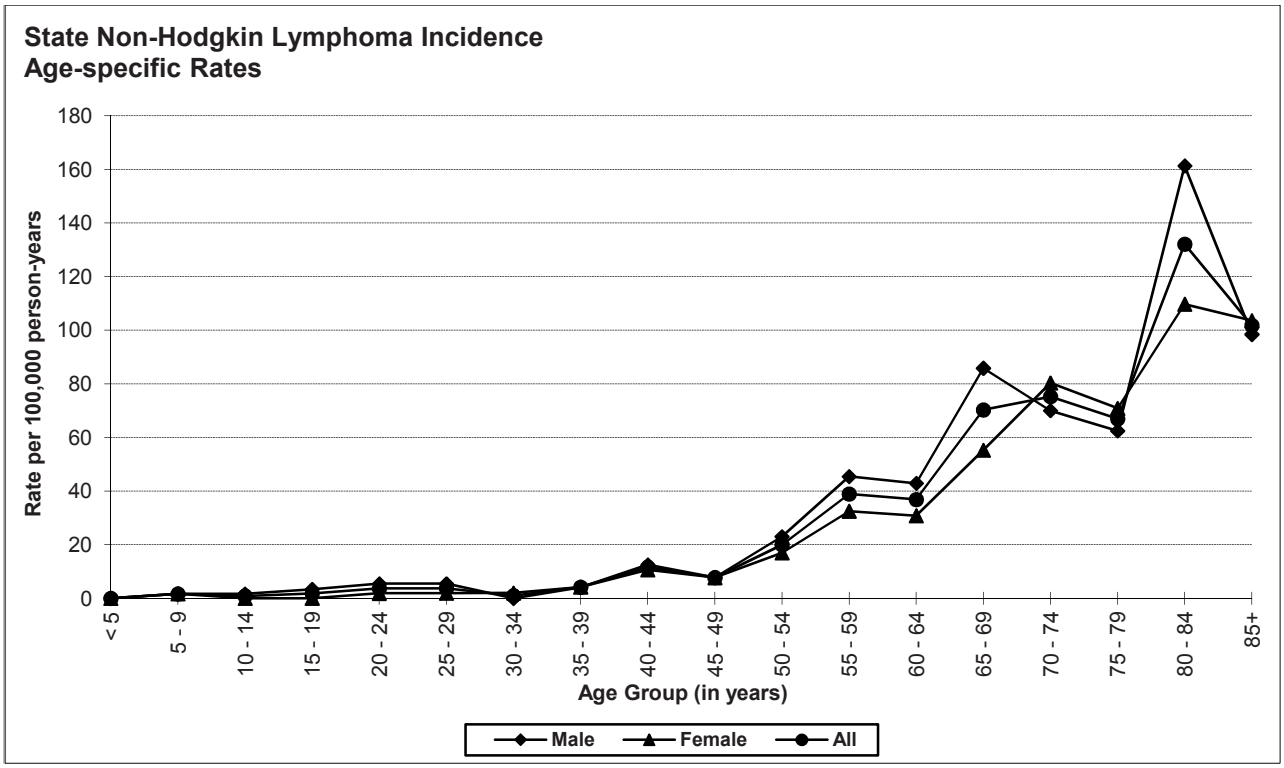
Occupation Ethylene oxide exposure at plants producing sterilized medical supplies and spices is a risk factor.

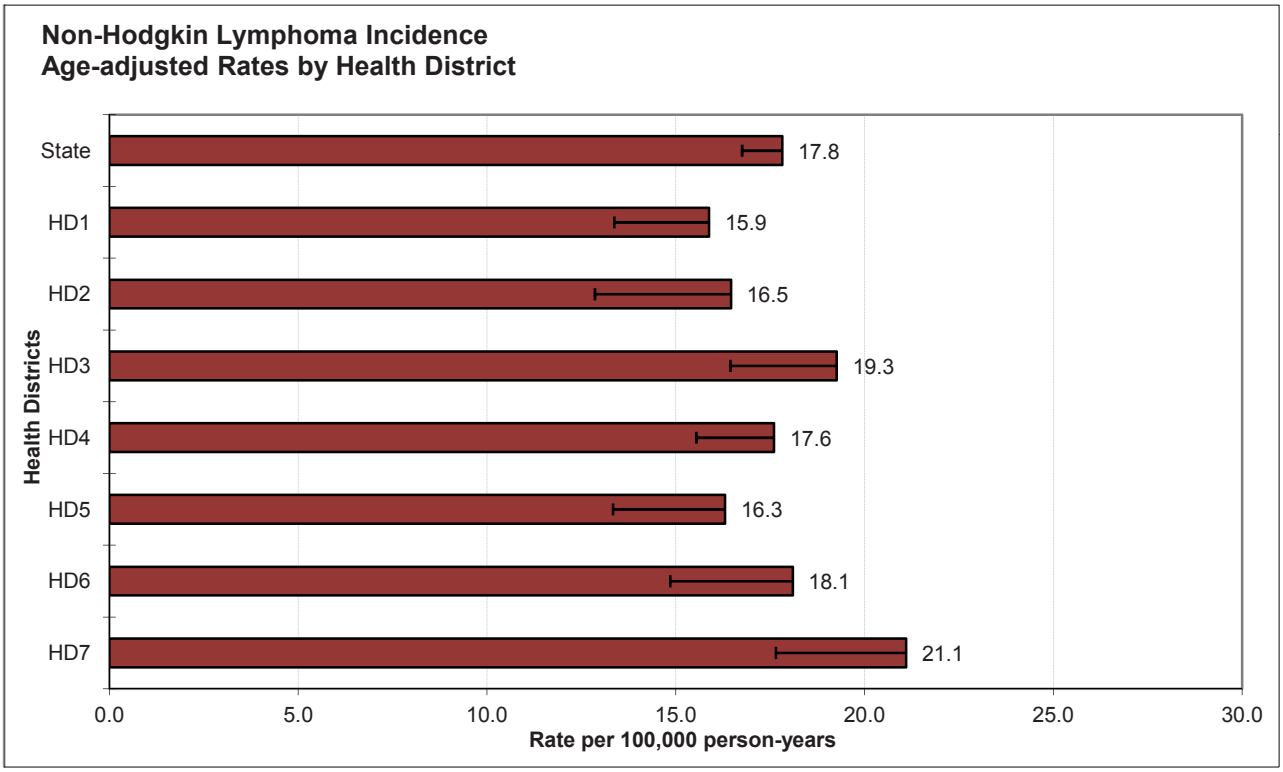
Other Non-Hodgkin lymphoma (NHL) develops with increased frequency in individuals infected with certain viruses, including HTLV-I, HIV, and EBV. Exposures to agricultural chemicals and PCBs have also been implicated. Treatment with some immunosuppressants increases the risk of NHL among organ transplant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

Special Notes

Mean age-adjusted incidence rate across health districts:	17.8
95% confidence interval on the mean age-adjusted incidence rate:	16.4- 19.2
Median age-adjusted incidence rate of health districts:	17.6
Range of age-adjusted incidence rate for health districts:	15.9- 21.1
SEER 18 rate (2009, all races):	19.3
NPCR rate (2009, all races):	18.9

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
180
160
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


Non-Hodgkin Lymphoma Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
17.8
15.9
16.5
19.3
17.6
16.3
18.1
21.1
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Rate per 100,000 person-years

ORAL CAVITY AND PHARYNX

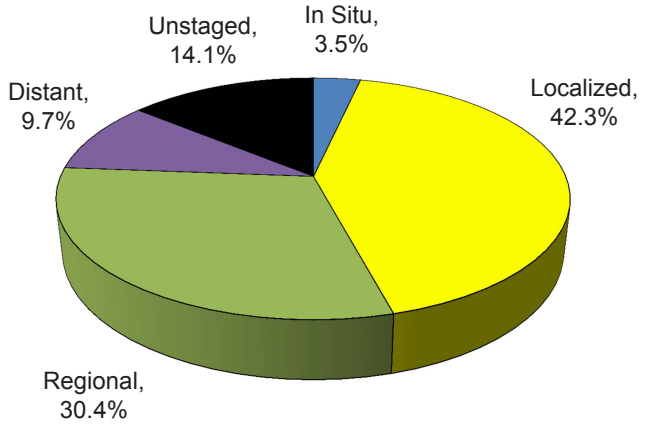
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	13.3	18.6	8.3
# of new invasive cases	219	149	70
# of new in-situ cases	8	4	4
# of deaths	46	31	15

Total Cases by County

Ada	44	Cassia	1	Lewis	-
Adams	1	Clark	1	Lincoln	1
Bannock	7	Clearwater	-	Madison	5
Bear Lake	1	Custer	4	Minidoka	4
Benewah	1	Elmore	2	Nez Perce	9
Bingham	3	Franklin	-	Oneida	-
Blaine	6	Fremont	2	Owyhee	2
Boise	4	Gem	4	Payette	3
Bonner	7	Gooding	4	Power	2
Bonneville	20	Idaho	1	Shoshone	3
Boundary	2	Jefferson	6	Teton	2
Butte	-	Jerome	3	Twin Falls	18
Camas	-	Kootenai	17	Valley	1
Canyon	24	Latah	6	Washington	1
Caribou	-	Lemhi	5		

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 African Americans than for Caucasians. Rates are also higher among lower income groups.

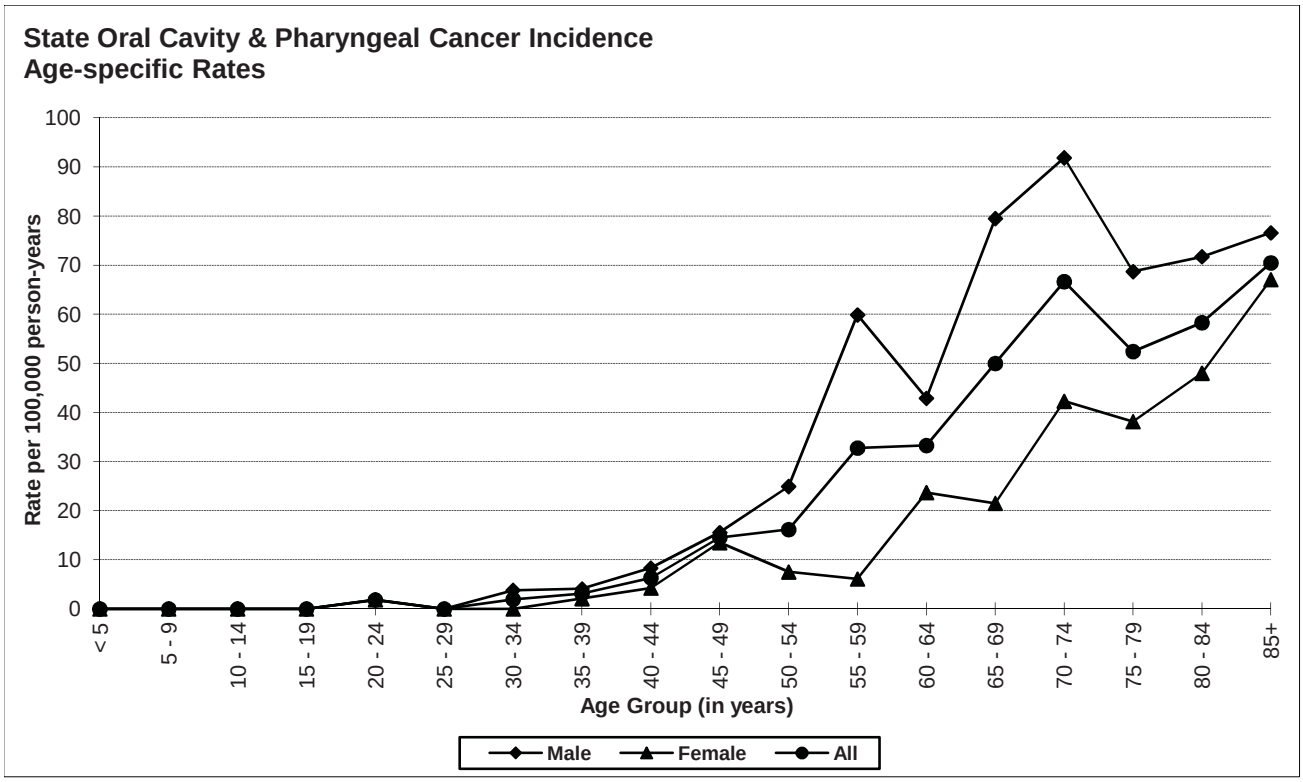
Diet Diets low in fresh fruit and vegetable consumption are associated with increased risk.

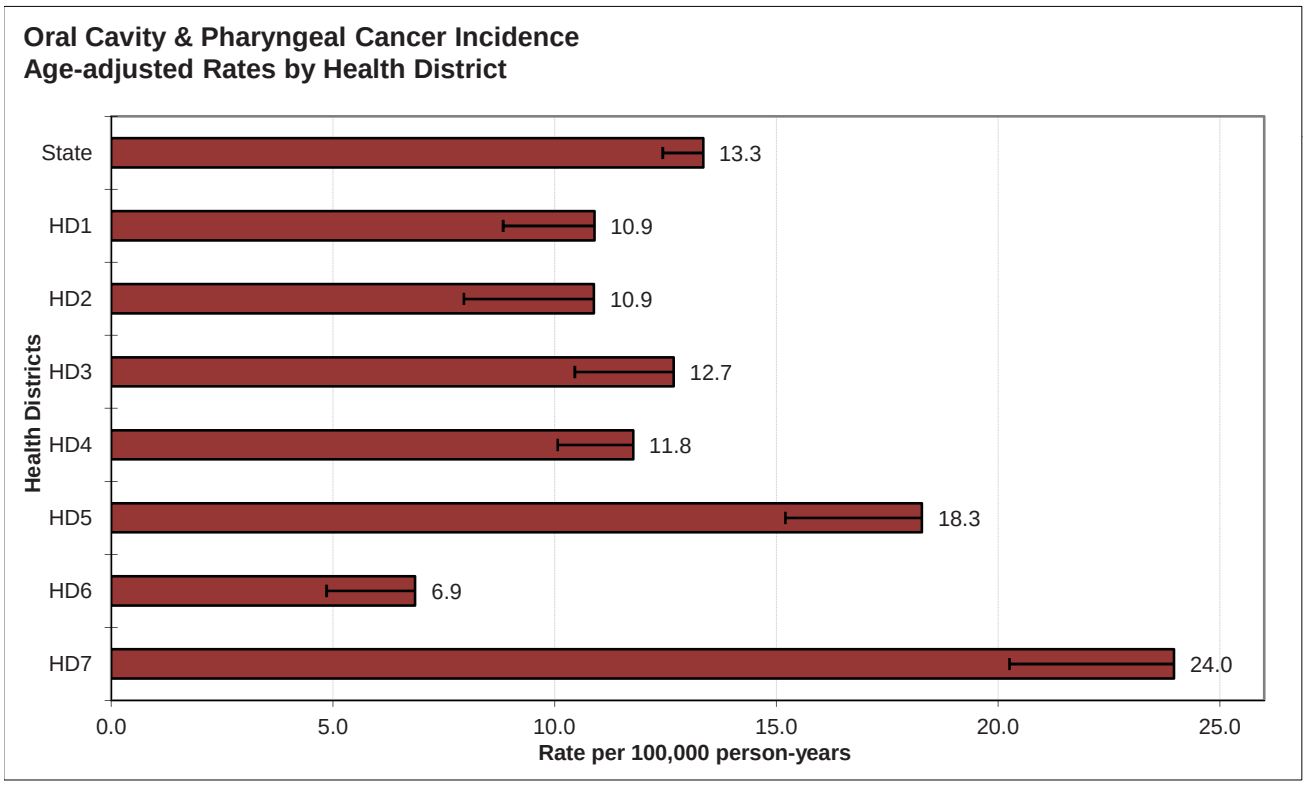
Other Smoking and spit tobacco use are major risk factors for cancers of the oral cavity and pharynx. Alcohol use, especially excessive, is a major risk factor. Combined exposure to tobacco and alcohol multiply the risks of each other. It is estimated that smoking and drinking account for 75% of all 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:	13.6
95% confidence interval on the mean age-adjusted incidence rate:	9.4- 17.8
Median age-adjusted incidence rate of health districts:	11.8
Range of age-adjusted incidence rate for health districts:	6.9- 24.0
SEER 18 rate (2009, all races):	11.0
NPCR rate (2009, 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 70-74 for males and 85+ for females. Health District 7 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 6 had statistically significantly fewer.


State Oral Cavity & Pharyngeal Cancer 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


Oral Cavity & Pharyngeal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
13.3
10.9
10.9
12.7
11.8
18.3
6.9
24.0
0.0
5.0
10.0
15.0
20.0
25.0
Rate per 100,000 person-years

OVARY

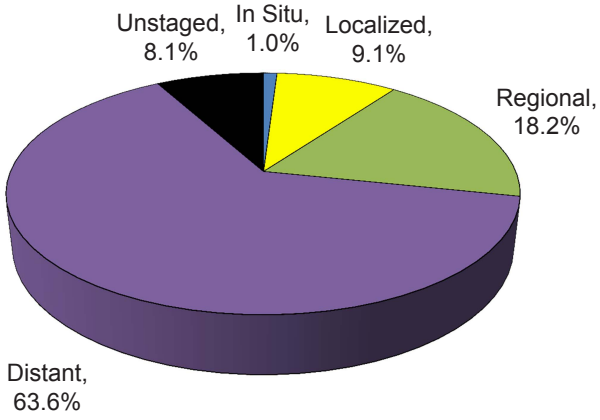
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	11.6
# of new invasive cases	-	-	98
# of new in-situ cases	-	-	1
# of deaths	-	-	50

Total Cases by County

Ada	26	Cassia	2	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	6	Clearwater	2	Madison	1
Bear Lake	-	Custer	1	Minidoka	1
Benewah	-	Elmore	-	Nez Perce	4
Bingham	4	Franklin	-	Oneida	-
Blaine	1	Fremont	1	Owyhee	-
Boise	-	Gem	-	Payette	-
Bonner	10	Gooding	1	Power	-
Bonneville	13	Idaho	-	Shoshone	1
Boundary	-	Jefferson	1	Teton	-
Butte	-	Jerome	3	Twin Falls	3
Camas	-	Kootenai	5	Valley	2
Canyon	7	Latah	2	Washington	-
Caribou	1	Lemhi	-		

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 Caucasian females than African Americans. 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. Highest risk is in post-menopausal women. Ovarian cancer is also associated with a personal history of breast, endometrial, and colon cancers.

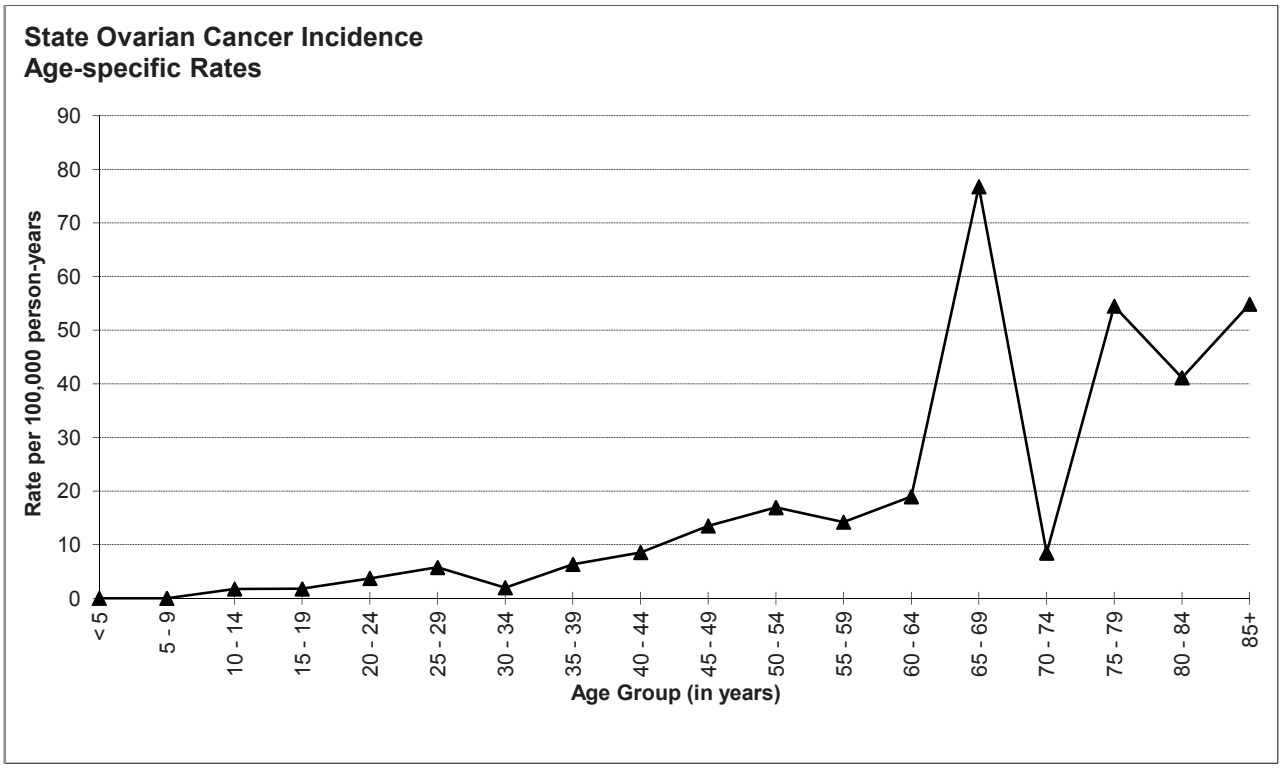
Diet Dietary animal fat may increase the risk.

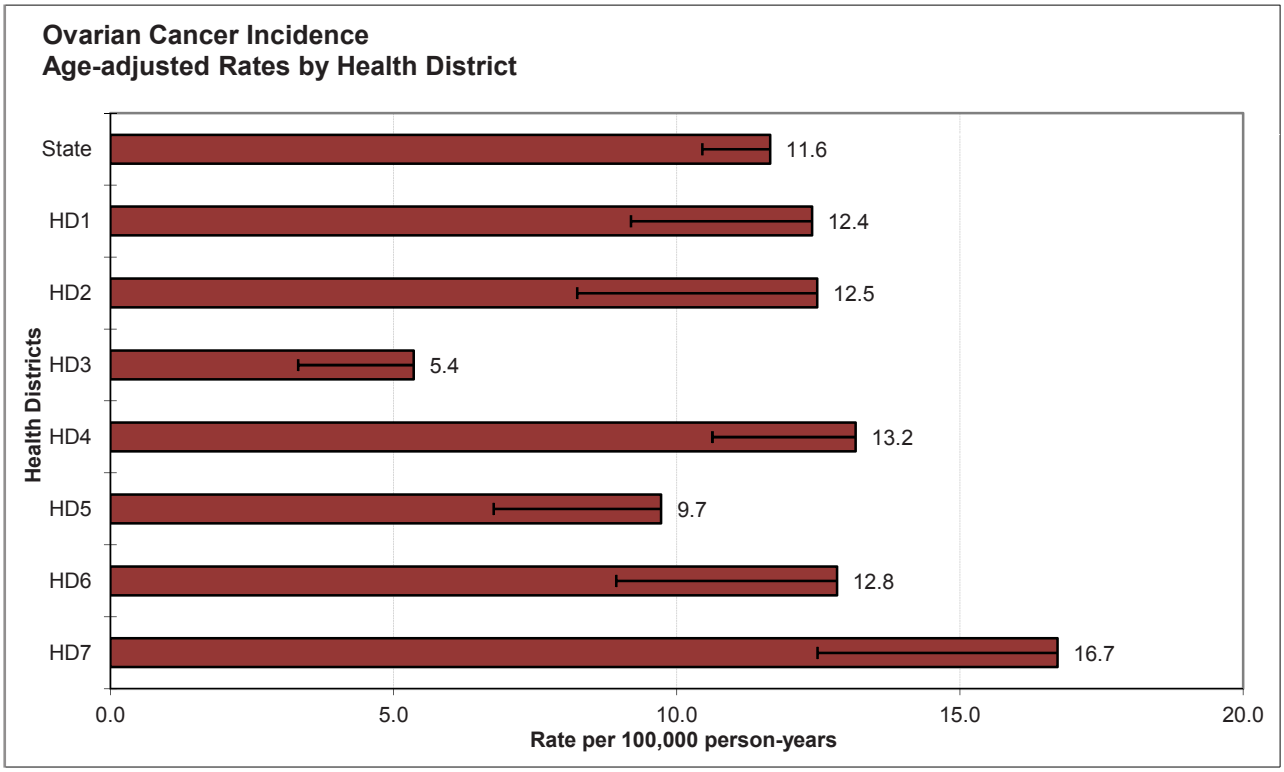
Other High dose (>100 rads) ionizing radiation roughly doubles the risk of ovarian cancer.

Special Notes

Mean age-adjusted incidence rate across health districts:	11.8
95% confidence interval on the mean age-adjusted incidence rate:	9.2- 14.4
Median age-adjusted incidence rate of health districts:	12.5
Range of age-adjusted incidence rate for health districts:	5.4- 16.7
SEER 18 rate (2009, all races):	12.1
NPCR rate (2009, all races):	11.8

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 65-69. Health District 3 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
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)


Ovarian Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
11.6
12.4
12.5
5.4
13.2
9.7
12.8
16.7
0.0
5.0
10.0
15.0
20.0
Rate per 100,000 person-years

PANCREAS

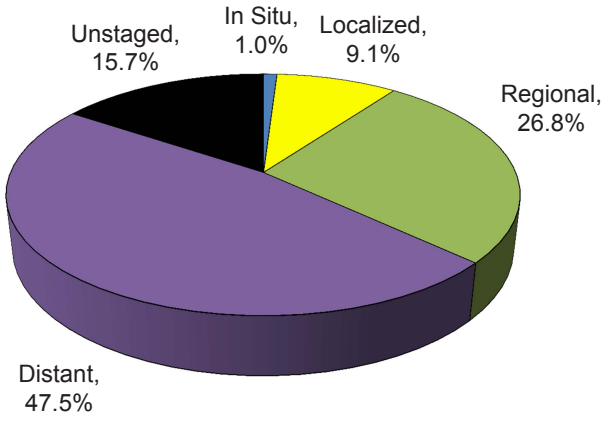
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	12.3	12.9	12.0
# of new invasive cases	196	97	99
# of new in-situ cases	2	1	1
# of deaths	182	108	74

Total Cases by County

Ada	44	Cassia	4	Lewis	1
Adams	1	Clark	-	Lincoln	-
Bannock	10	Clearwater	3	Madison	1
Bear Lake	2	Custer	-	Minidoka	5
Benewah	1	Elmore	3	Nez Perce	7
Bingham	1	Franklin	3	Oneida	2
Blaine	1	Fremont	1	Owyhee	-
Boise	1	Gem	4	Payette	2
Bonner	9	Gooding	4	Power	-
Bonneville	9	Idaho	3	Shoshone	1
Boundary	2	Jefferson	4	Teton	1
Butte	-	Jerome	2	Twin Falls	7
Camas	-	Kootenai	20	Valley	3
Canyon	27	Latah	3	Washington	1
Caribou	2	Lemhi	3		

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 African Americans.

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/m2) has been associated with decreased risk of pancreatic cancer.

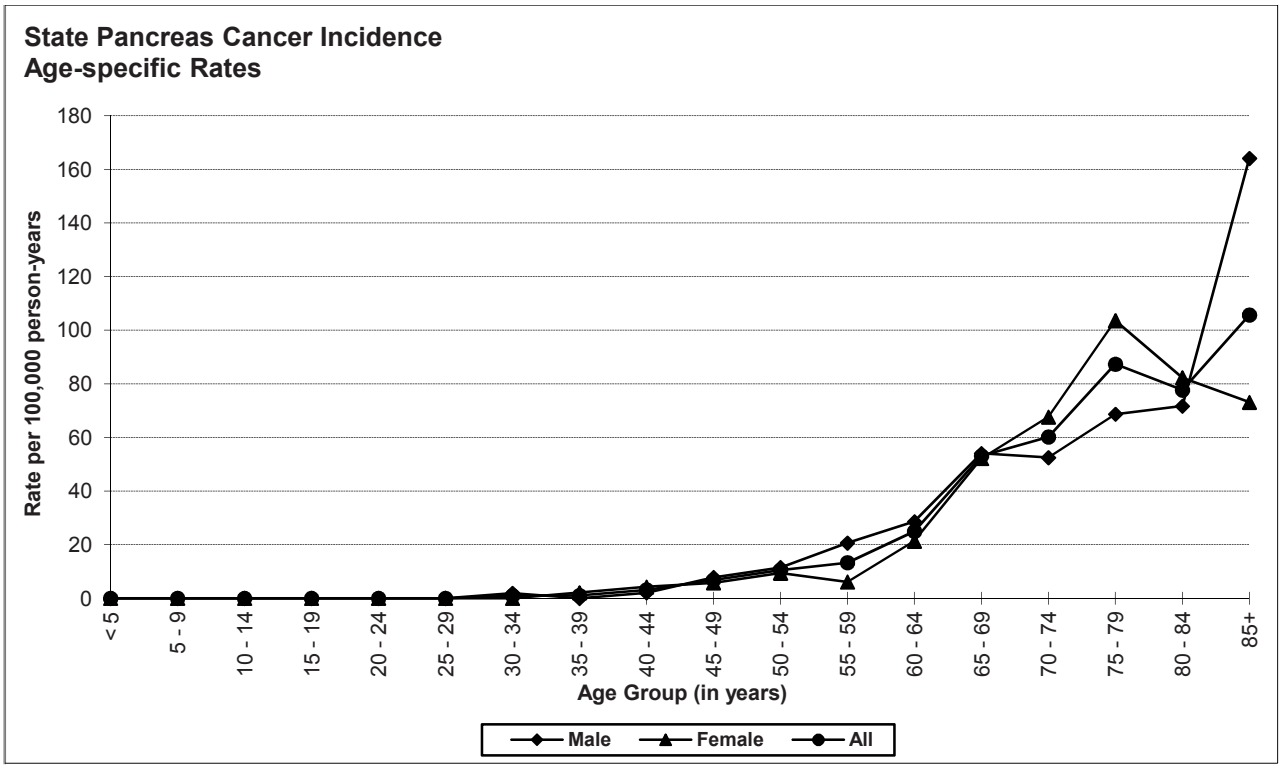
Occupation Persons in certain occupations, such as chemists, metal workers, and persons employed in the manufacture of benzidine and betanaphthylene, are believed to be at higher risk.

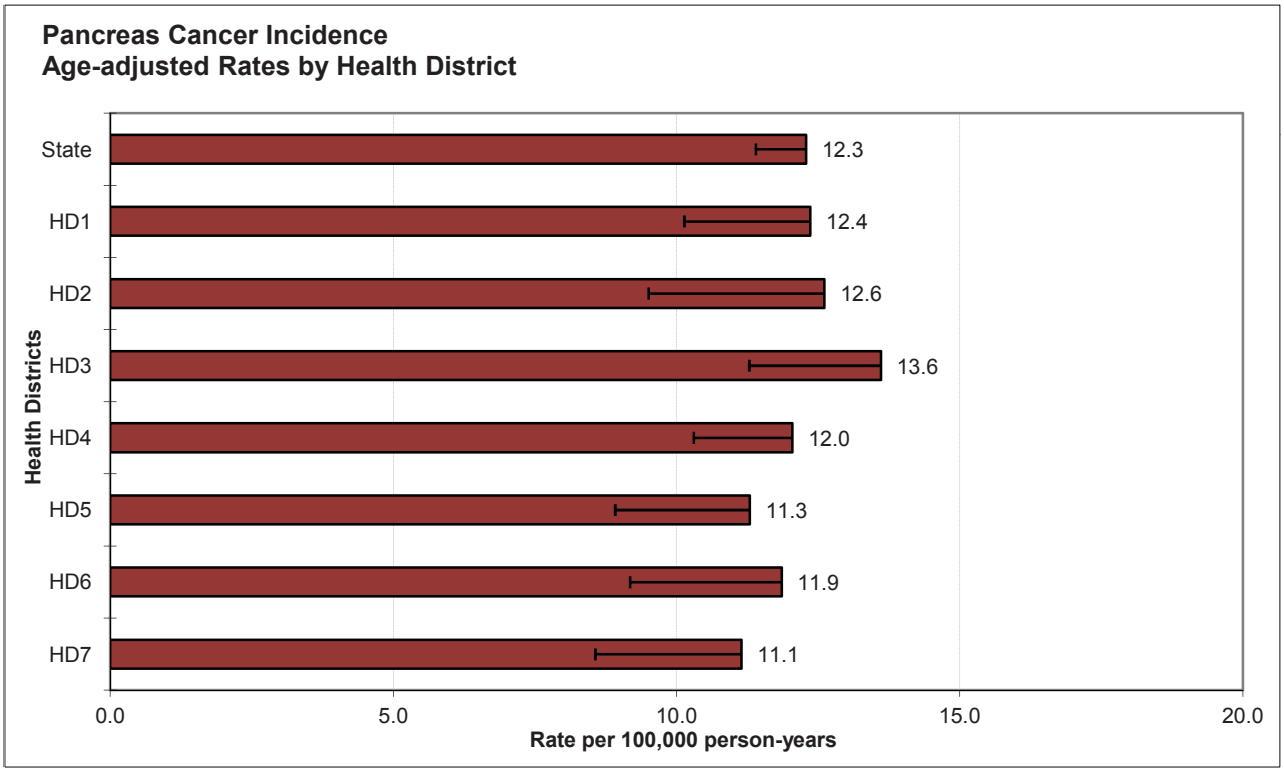
Other Pancreatic cancer is more common among smokers than non-smokers. Familial clustering has been observed in some studies. Pancreatic cancer usually progresses to an advanced stage before symptoms develop. It is rapidly fatal in over 90% of cases.

Special Notes

Mean age-adjusted incidence rate across health districts:	12.1
95% confidence interval on the mean age-adjusted incidence rate:	11.5- 12.8
Median age-adjusted incidence rate of health districts:	12.0
Range of age-adjusted incidence rate for health districts:	11.1- 13.6
SEER 18 rate (2009, all races):	12.1
NPCR rate (2009, all races):	11.7

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
180
160
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
12.3
12.4
12.6
13.6
12.0
11.3
11.9
11.1
0.0
5.0
10.0
15.0
20.0
Rate per 100,000 person-years

PROSTATE

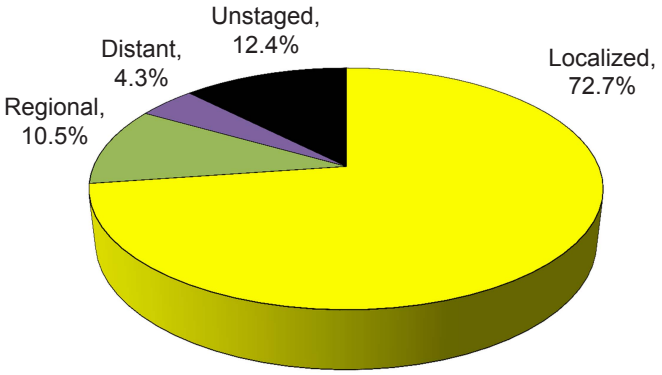
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	137.1	-
# of new invasive cases	-	1111	-
# of new in-situ cases	-	0	-
# of deaths	-	155	-

Total Cases by County

Ada	295	Cassia	13	Lewis	1
Adams	6	Clark	-	Lincoln	2
Bannock	37	Clearwater	13	Madison	15
Bear Lake	6	Custer	4	Minidoka	13
Benewah	10	Elmore	18	Nez Perce	38
Bingham	23	Franklin	8	Oneida	5
Blaine	14	Fremont	5	Owyhee	6
Boise	5	Gem	17	Payette	21
Bonner	44	Gooding	20	Power	7
Bonneville	59	Idaho	15	Shoshone	13
Boundary	18	Jefferson	11	Teton	6
Butte	2	Jerome	19	Twin Falls	57
Camas	-	Kootenai	109	Valley	10
Canyon	91	Latah	29	Washington	16
Caribou	6	Lemhi	4		

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 African American males have substantially higher incidence and mortality rates than Caucasian males.

Genetics A family history of prostate cancer is associated with increased risk.

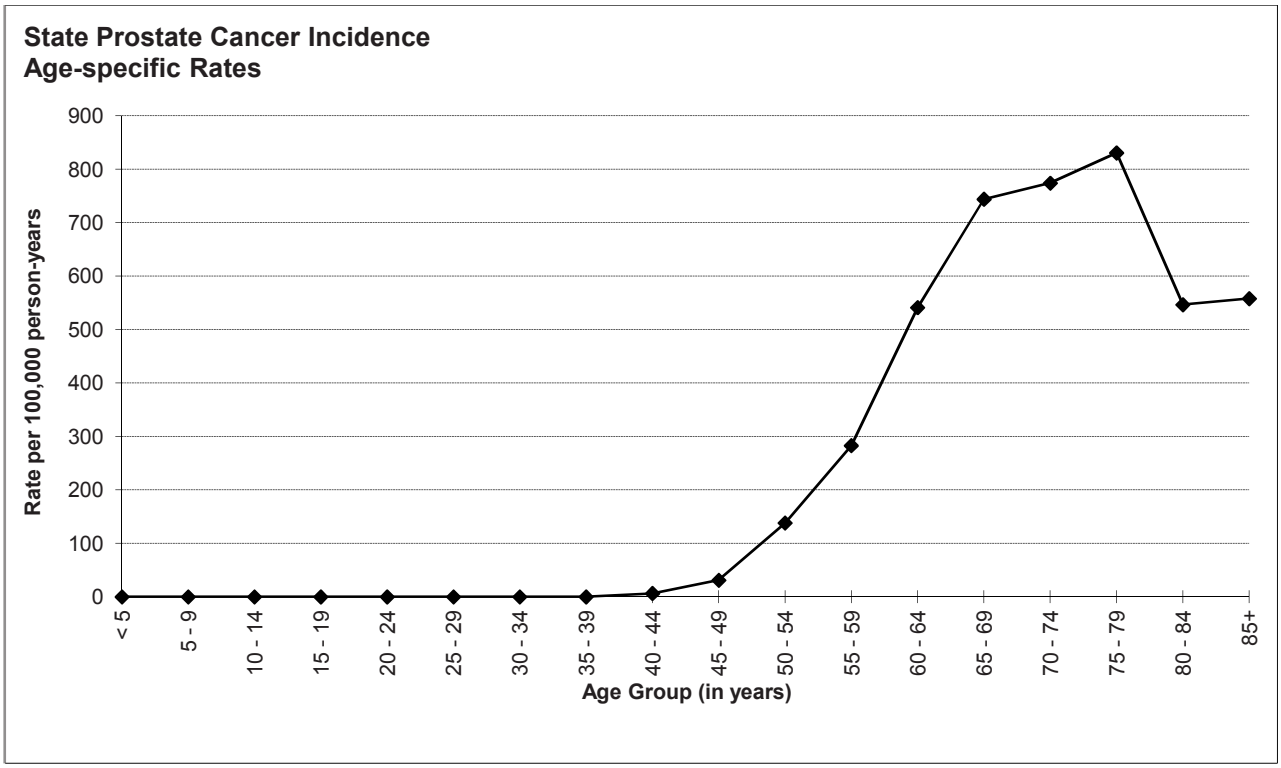
Diet Dietary fat has been implicated in several international, regional, and case-control studies.

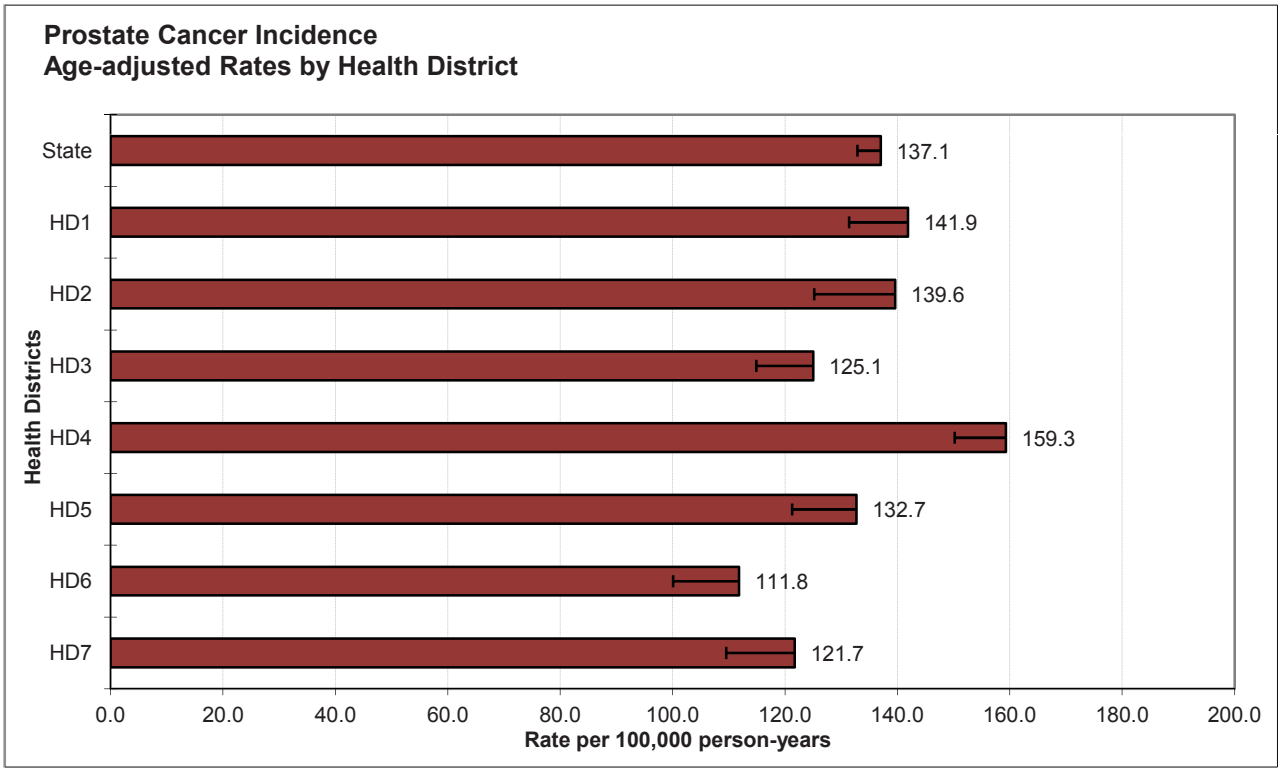
Other Environmental and familial factors may contribute to an increased incidence but no specific factor in these two groups of potential risk factors has been clearly identified. Three risk factors are well established: age, family history, and ethnic group/country of residence. Farming is the most 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:	133.2
95% confidence interval on the mean age-adjusted incidence rate:	121.6- 144.7
Median age-adjusted incidence rate of health districts:	132.7
Range of age-adjusted incidence rate for health districts:	111.8- 159.3
SEER 18 rate (2009, all races):	145.0
NPCR rate (2009, all races):	137.1

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 75-79 age group. Health District 4 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 6 had statistically significantly fewer cases than expected.


State Prostate Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
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
137.1
141.9
139.6
125.1
159.3
132.7
111.8
121.7
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

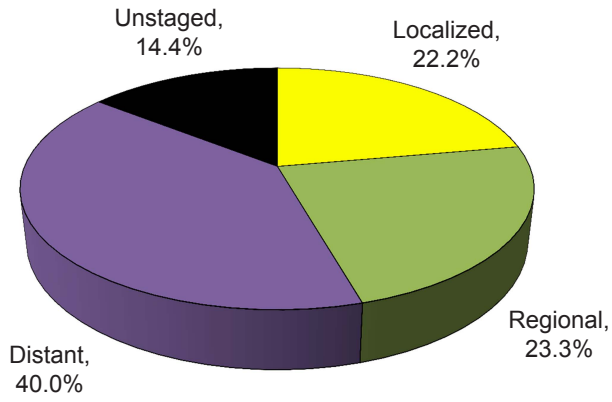
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.6	7.4	4.0
# of new invasive cases	90	55	35
# of new in-situ cases	0	0	0
# of deaths	34	17	17

Total Cases by County

Ada	18	Cassia	-	Lewis	3
Adams	2	Clark	-	Lincoln	-
Bannock	2	Clearwater	3	Madison	-
Bear Lake	1	Custer	-	Minidoka	1
Benewah	-	Elmore	2	Nez Perce	2
Bingham	4	Franklin	-	Oneida	-
Blaine	-	Fremont	1	Owyhee	1
Boise	1	Gem	2	Payette	-
Bonner	5	Gooding	1	Power	1
Bonneville	5	Idaho	1	Shoshone	1
Boundary	1	Jefferson	1	Teton	-
Butte	-	Jerome	-	Twin Falls	4
Camas	-	Kootenai	13	Valley	2
Canyon	9	Latah	2	Washington	-
Caribou	1	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 African Americans and Asians, 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.

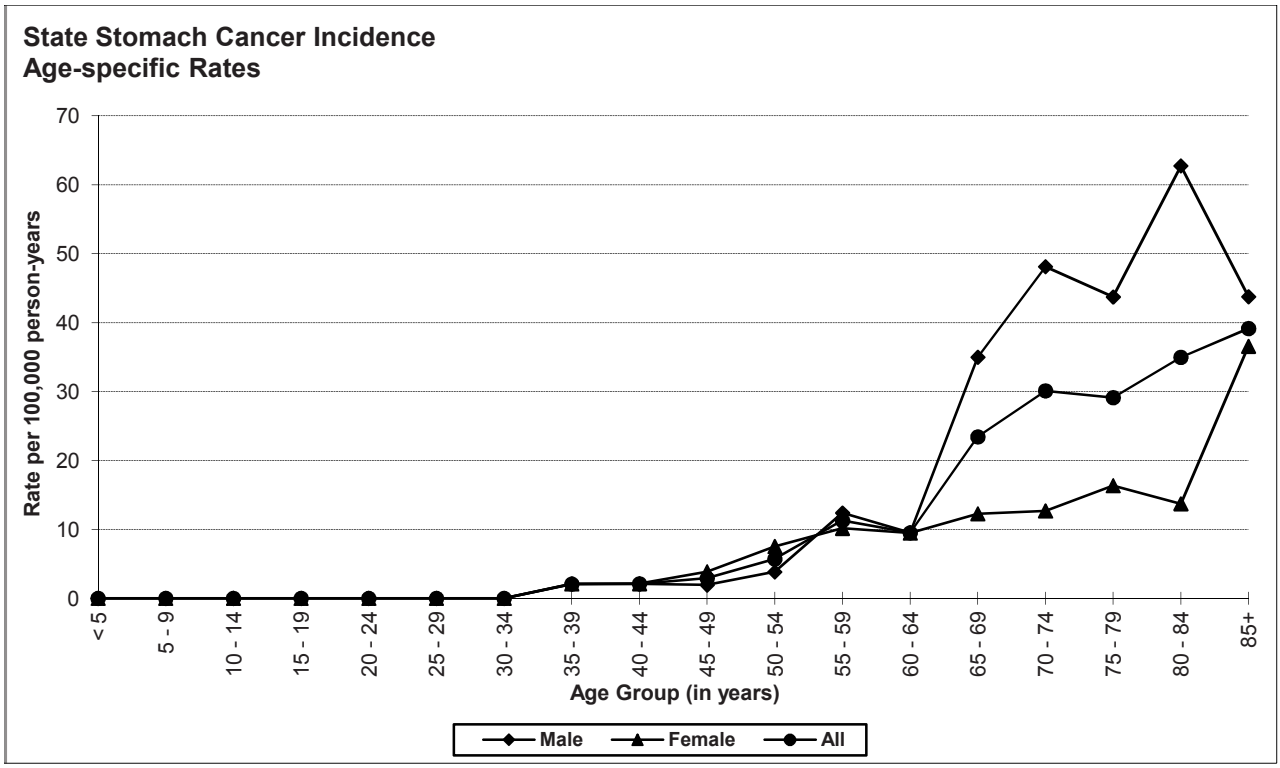
Occupation Elevated rates have been found in certain occupational groups, especially coal miners and asbestos workers, and occupations with mineral dust exposure.

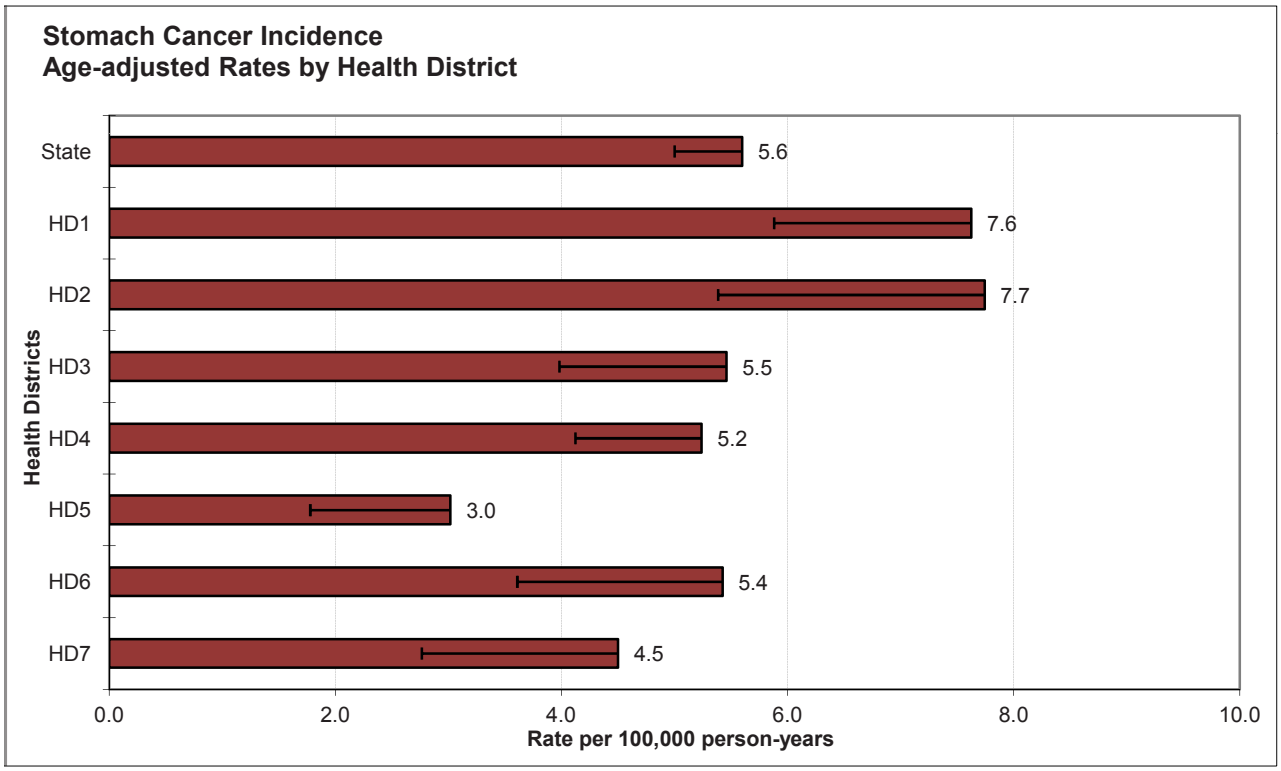
Other Stomach cancer has been linked to peptic ulcer disease and to certain bacteria.

Special Notes

Mean age-adjusted incidence rate across health districts:	5.6
95% confidence interval on the mean age-adjusted incidence rate:	4.3- 6.8
Median age-adjusted incidence rate of health districts:	5.4
Range of age-adjusted incidence rate for health districts:	3.0- 7.7
SEER 18 rate (2009, all races):	7.5
NPCR rate (2009, all races):	6.4

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


State Stomach Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
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


Stomach Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
5.6
7.6
7.7
5.5
5.2
3.0
5.4
4.5
0.0
2.0
4.0
6.0
8.0
10.0
Rate per 100,000 person-years

TESTIS

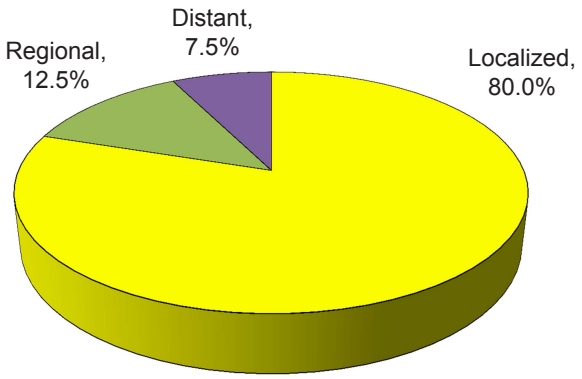
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	5.3	-
# of new invasive cases	-	40	-
# of new in-situ cases	-	0	-
# of deaths	-	3	-

Total Cases by County

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

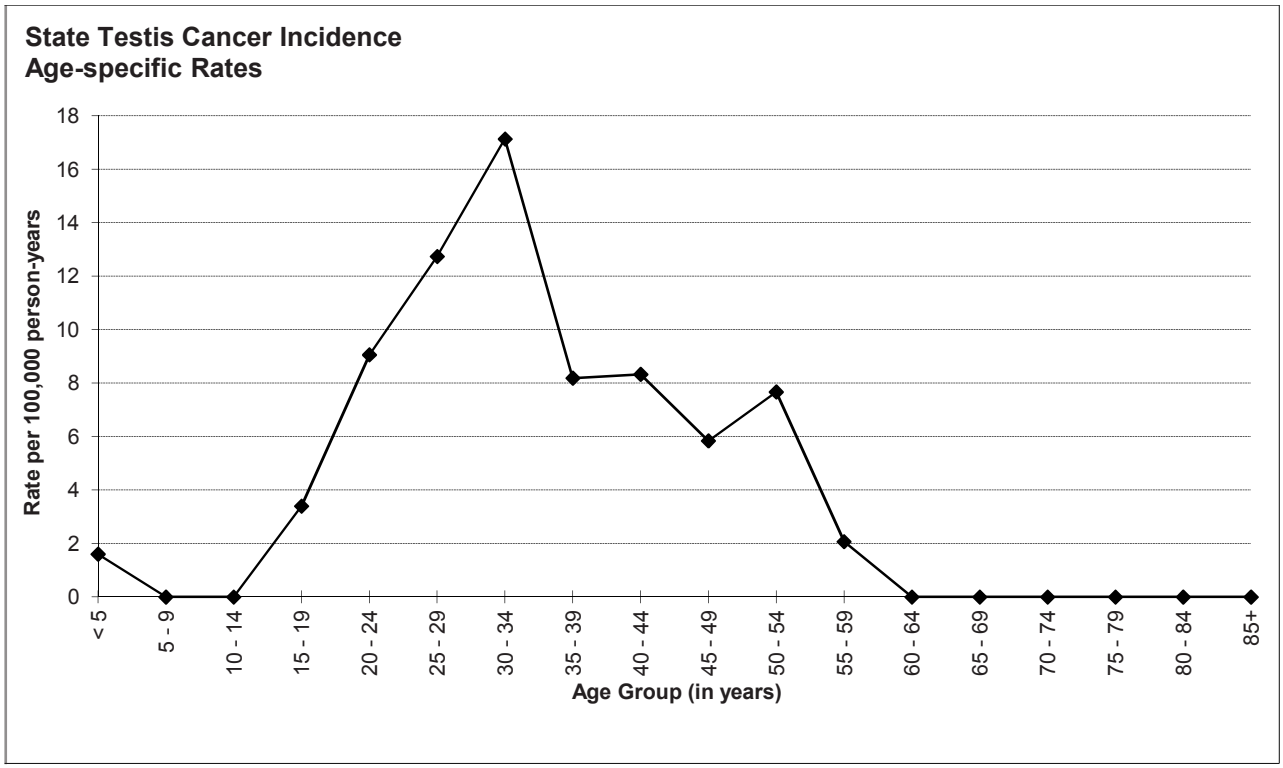
Race & SES Incidence rates are substantially higher in Caucasian males than in African American males. Incidence of testicular cancer is highest in highest socioeconomic classes.

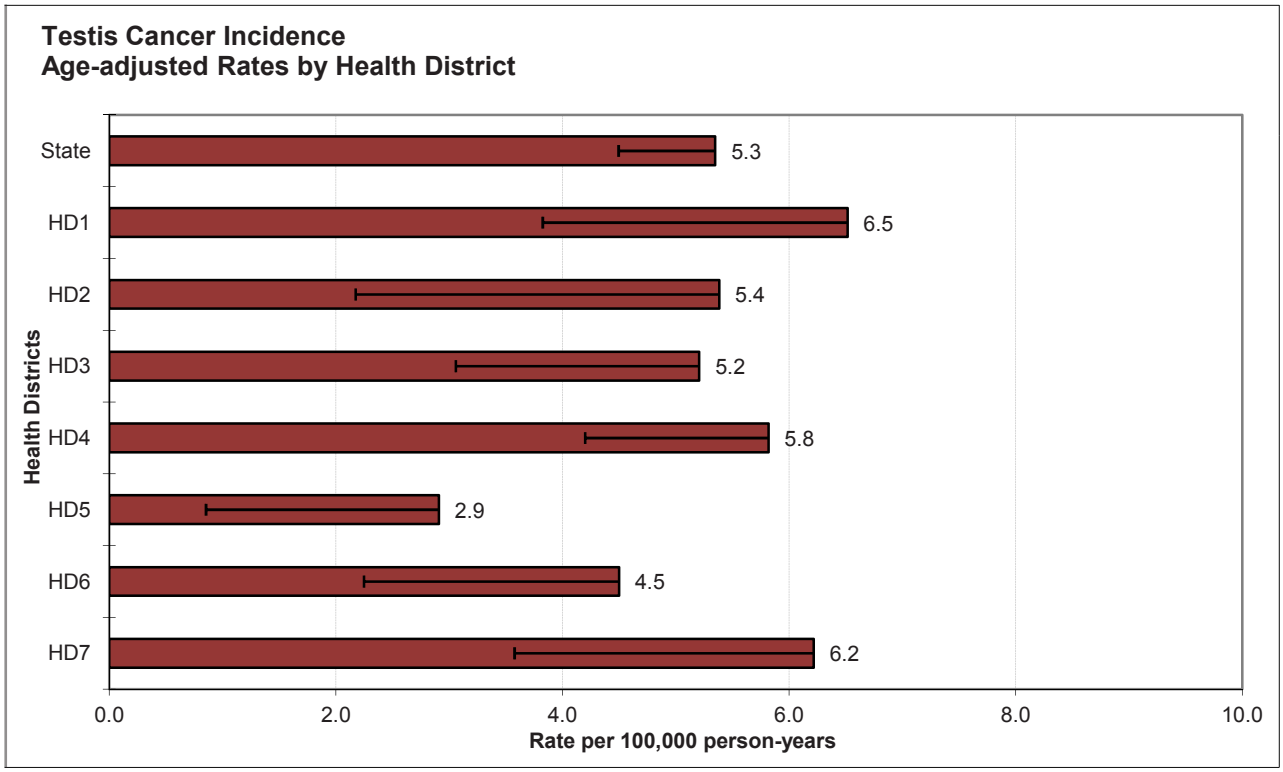
Other Undescended testis, a minor abnormality that can usually be detected and corrected with surgery in childhood, is responsible for a substantially high risk for testicular cancer when uncorrected. The extent to which surgical correction reduces cancer risk is unclear. Some evidence suggests that 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:	5.2
95% confidence interval on the mean age-adjusted incidence rate:	4.3- 6.1
Median age-adjusted incidence rate of health districts:	5.4
Range of age-adjusted incidence rate for health districts:	2.9- 6.5
SEER 18 rate (2009, all races):	5.5
NPCR rate (2009, all races):	5.2

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
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)


Testis Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
5.3
6.5
5.4
5.2
5.8
2.9
4.5
6.2
0.0
2.0
4.0
6.0
8.0
10.0
Rate per 100,000 person-years

THYROID

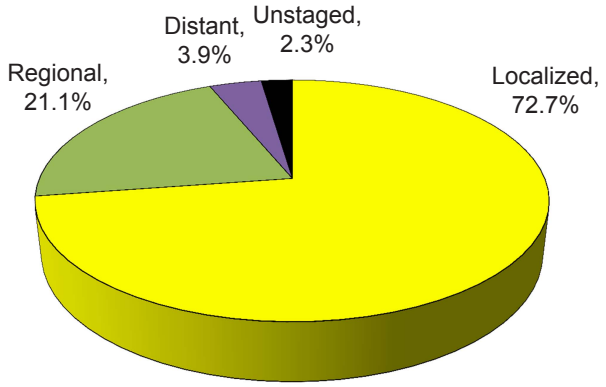
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	16.7	7.4	26.1
# of new invasive cases	256	57	199
# of new in-situ cases	0	0	0
# of deaths	12	7	5

Total Cases by County

Ada	76	Cassia	3	Lewis	1
Adams	1	Clark	-	Lincoln	2
Bannock	6	Clearwater	2	Madison	6
Bear Lake	1	Custer	1	Minidoka	4
Benewah	-	Elmore	3	Nez Perce	6
Bingham	14	Franklin	5	Oneida	1
Blaine	3	Fremont	2	Owyhee	1
Boise	2	Gem	1	Payette	1
Bonner	4	Gooding	3	Power	1
Bonneville	27	Idaho	-	Shoshone	-
Boundary	-	Jefferson	5	Teton	1
Butte	-	Jerome	-	Twin Falls	7
Camas	1	Kootenai	24	Valley	5
Canyon	34	Latah	2	Washington	-
Caribou	-	Lemhi	-		

Stage at Diagnosis - Thyroid



Risk and Associated Factors

Age Though relatively unusual, 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 in Caucasians and in upper income groups.

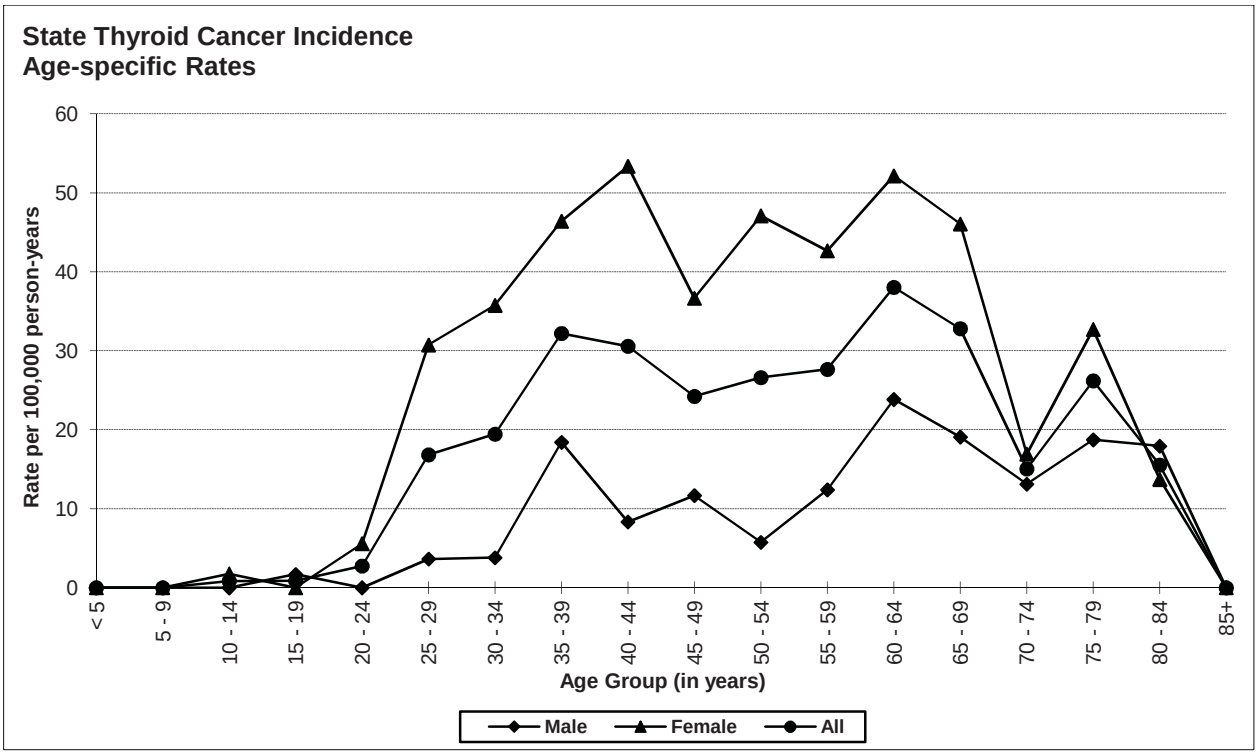
Hormonal Hormonal factors are believed to contribute to the increased risk in females. This is demonstrated by the sharp increase in incidence among women after menarche.

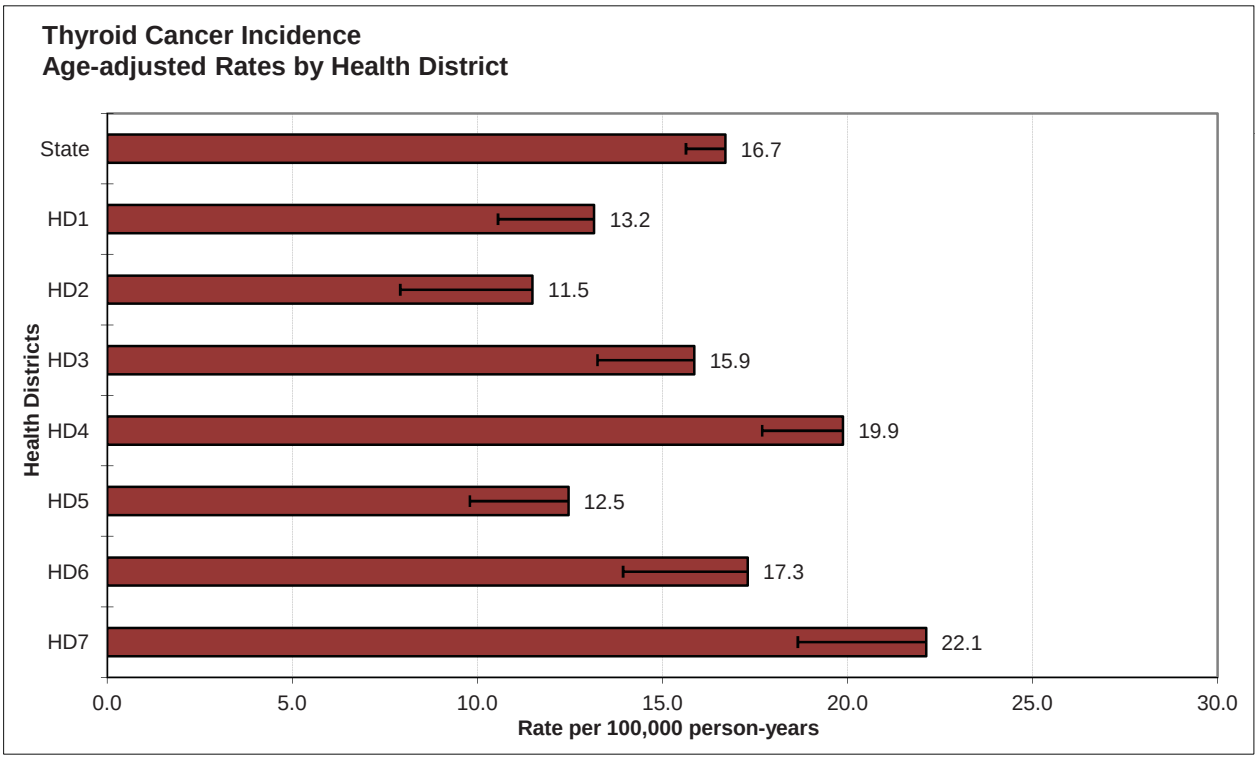
Other Occupational and environmental exposures to ionizing radiation have been associated with higher rates of thyroid cancer. Radiation exposure to the head and neck in childhood is a well-known risk factor. Family history of thyroid cancer substantially increases the risk. Death due to thyroid cancer 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.

Special Notes

Mean age-adjusted incidence rate across health districts:	16.0
95% confidence interval on the mean age-adjusted incidence rate:	13.1- 19.0
Median age-adjusted incidence rate of health districts:	15.9
Range of age-adjusted incidence rate for health districts:	11.5- 22.1
SEER 18 rate (2009, all races):	13.2
NPCR rate (2009, all races):	13.0

The age-specific incidence rates of thyroid cancer were typically higher for females than males. Health Districts 4 and 7 had statistically significantly more cases than expected based upon rates for the remainder of Idaho.


State Thyroid 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


Thyroid Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
16.7
13.2
11.5
15.9
19.9
12.5
17.3
22.1
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Rate per 100,000 person-years

SECTION II

STATE OF IDAHO – 2010
INCIDENCE DATA BY SITE AND GENDER

Idaho Resident Cancer Cases - 2010

Primary Site of Cancer	Invasive			In situ		
	Total	Male	Female	Total	Male	Female
All Sites	6,938	3,616	3,322	791	374	417
Oral Cavity and Pharynx	219	149	70	8	4	4
Lip	56	34	22	6	2	4
Tongue	56	38	18	1	1	-
Salivary Gland	21	13	8	-	-	-
Floor of Mouth	13	10	3	-	-	-
Gum and Other Mouth	27	18	9	-	-	-
Nasopharynx	5	3	2	-	-	-
Tonsil	29	23	6	-	-	-
Oropharynx	3	3	-	1	1	-
Hypopharynx	4	3	1	-	-	-
Other Oral Cavity and Pharynx	5	4	1	-	-	-
Digestive System	1,128	626	502	19	8	11
Esophagus	68	58	10	-	-	-
Stomach	90	55	35	-	-	-
Small Intestine	41	23	18	-	-	-
Colon and Rectum	551	300	251	16	7	9
Colon excluding Rectum	384	195	189	7	2	5
Cecum	93	44	49	2	-	2
Appendix	14	6	8	-	-	-
Ascending Colon	62	27	35	-	-	-
Hepatic Flexure	19	10	9	-	-	-
Transverse Colon	28	10	18	1	-	1
Splenic Flexure	13	9	4	1	1	-
Descending Colon	27	14	13	-	-	-
Sigmoid Colon	104	61	43	2	-	2
Large Intestine, NOS	24	14	10	1	1	-
Rectum and Rectosigmoid Junction	167	105	62	9	5	4
Rectosigmoid Junction	32	19	13	-	-	-
Rectum	135	86	49	9	5	4
Anus, Anal Canal and Anorectum	28	10	18	1	-	1
Liver and Intrahepatic Bile Duct	83	58	25	-	-	-
Liver	73	54	19	-	-	-
Intrahepatic Bile Duct	10	4	6	-	-	-
Gallbladder	19	2	17	-	-	-
Other Biliary	27	14	13	-	-	-
Pancreas	196	97	99	2	1	1
Retroperitoneum	5	4	1	-	-	-
Peritoneum, Omentum and Mesentery	16	3	13	-	-	-
Other Digestive Organs	4	2	2	-	-	-
Respiratory System	874	463	411	1	1	-
Nose, Nasal Cavity and Middle Ear	13	6	7	-	-	-
Larynx	37	33	4	1	1	-
Lung and Bronchus	808	412	396	-	-	-
Pleura	13	9	4	-	-	-
Trachea, Mediastinum and Other Respiratory Organs	3	3	-	-	-	-
Skin excluding Basal and Squamous	399	238	161	328	190	138
Melanoma of the Skin	373	220	153	328	190	138
Other Non-Epithelial Skin	26	18	8	-	-	-
Breast	999	17	982	207	1	206

Primary Site of Cancer	Invasive			In situ		
	Total	Male	Female	Total	Male	Female
Female Genital System	377	n/a	377	11	n/a	11
Cervix Uteri	50	n/a	50	-	n/a	-
Corpus and Uterus, NOS	205	n/a	205	2	n/a	2
Corpus Uteri	194	n/a	194	2	n/a	2
Uterus, NOS	11	n/a	11	-	n/a	-
Ovary	98	n/a	98	1	n/a	1
Vagina	3	n/a	3	1	n/a	1
Vulva	18	n/a	18	6	n/a	6
Other Female Genital Organs	3	n/a	3	1	n/a	1
Male Genital System	1,159	1,159	n/a	3	3	n/a
Prostate	1,111	1,111	n/a	-	-	n/a
Testis	40	40	n/a	-	-	n/a
Penis	8	8	n/a	3	3	n/a
Other Male Genital Organs	-	-	n/a	-	-	n/a
Urinary System	382	267	115	211	165	46
Urinary Bladder	162	128	34	202	158	44
Kidney and Renal Pelvis	207	129	78	2	2	-
Ureter	4	3	1	5	3	2
Other Urinary Organs	9	7	2	2	2	-
Brain and Other Nervous System	94	60	34	-	-	-
Brain	89	57	32	-	-	-
Cranial Nerves Other Nervous System	5	3	2	-	-	-
Endocrine System	268	64	204	-	-	-
Thyroid	256	57	199	-	-	-
Other Endocrine including Thymus	12	7	5	-	-	-
Lymphoma	330	175	155	-	-	-
Hodgkin Lymphoma	40	21	19	-	-	-
Non-Hodgkin Lymphoma	290	154	136	-	-	-
Myeloma	90	64	26	-	-	-
Leukemia	262	157	105	-	-	-
Lymphocytic Leukemia	145	93	52	-	-	-
Acute Lymphocytic Leukemia	29	19	10	-	-	-
Chronic Lymphocytic Leukemia	105	64	41	-	-	-
Other Lymphocytic Leukemia	11	10	1	-	-	-
Myeloid and Monocytic Leukemia	101	53	48	-	-	-
Acute Myeloid Leukemia	59	34	25	-	-	-
Acute Monocytic Leukemia	6	3	3	-	-	-
Chronic Myeloid Leukemia	34	15	19	-	-	-
Other Myeloid/Monocytic Leukemia	2	1	1	-	-	-
Other Leukemia	16	11	5	-	-	-
Other Acute Leukemia	5	2	3	-	-	-
Aleukemic, Subleukemic and NOS	11	9	2	-	-	-
Other or Unknown Sites	357	177	180	3	2	1
Bones and Joints	15	6	9	-	-	-
Soft Tissue including Heart	50	22	28	-	-	-
Eye and Orbit	17	10	7	3	2	1
Miscellaneous	275	139	136	-	-	-

SECTION III

STATE OF IDAHO – 2010
MORTALITY RATES BY SITE AND GENDER

Idaho Resident Cancer Mortality Rates - 2010

Cause of Death	Total			Male			Female		
	Rate	Deaths	Pop	Rate	Deaths	Pop	Rate	Deaths	Pop
All Causes of Death	724.0	11,411	1,571,102	845.1	5,883	787,182	619.9	5,528	783,920
All Malignant Cancers	158.8	2,532	1,571,102	194.4	1,408	787,182	129.9	1,124	783,920
Bladder	3.9	62	1,571,102	6.5	48	787,182	1.6	14	783,920
Brain and Other Nervous System	4.9	79	1,571,102	7.3	56	787,182	2.6	23	783,920
Breast	11.6	189	1,571,102	0.3	3	787,182	21.5	186	783,920
Cervix	0.8	13	1,571,102	-	-	787,182	1.6	13	783,920
Colorectal	13.3	212	1,571,102	16.8	122	787,182	10.3	90	783,920
Corpus Uteri	0.9	14	1,571,102	-	-	787,182	1.5	14	783,920
Esophagus	4.5	74	1,571,102	7.6	57	787,182	1.8	17	783,920
Hodgkin Lymphoma	0.3	5	1,571,102	0.6	4	787,182	0.1	1	783,920
Kidney	4.3	69	1,571,102	6.2	46	787,182	2.7	23	783,920
Larynx	1.0	17	1,571,102	1.7	14	787,182	0.4	3	783,920
Leukemia	7.4	116	1,571,102	11.7	80	787,182	3.9	36	783,920
Liver and Bile Duct	4.5	75	1,571,102	6.7	52	787,182	2.6	23	783,920
Lung and Bronchus	38.5	609	1,571,102	47.9	350	787,182	30.3	259	783,920
Melanoma of the Skin	3.6	57	1,571,102	4.8	36	787,182	2.5	21	783,920
Myeloma	3.5	56	1,571,102	4.6	33	787,182	2.6	23	783,920
Non-Hodgkin Lymphoma	5.7	88	1,571,102	6.2	44	787,182	5.2	44	783,920
Oral Cavity and Pharynx	2.9	46	1,571,102	4.1	31	787,182	1.8	15	783,920
Ovary	3.1	50	1,571,102	-	-	787,182	5.6	50	783,920
Pancreas	11.4	182	1,571,102	14.4	108	787,182	8.9	74	783,920
Prostate	10.1	155	1,571,102	23.5	155	787,182	-	-	783,920
Stomach	2.1	34	1,571,102	2.4	17	787,182	1.8	17	783,920
Testis	0.2	3	1,571,102	0.4	3	787,182	-	-	783,920
Thyroid	0.8	12	1,571,102	1.1	7	787,182	0.7	5	783,920

Data source: Bureau of Vital Records and Health Statistics (BVRHS), Idaho Department of Health and Welfare, 2011.[20]

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

2010 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** **2010**

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	19.7	16.5	9.4	13.9	43.1	55.2	81.7	137.1	222.5	291.7	509.5	783.5	1144.7	1709.1	1967.6	2335.1	2323.9	2200.4
Male	24.1	14.6	8.3	20.4	36.2	45.5	66.7	88.0	156.3	208.2	485.4	886.0	1289.7	1911.0	2428.0	2917.1	2877.4	2856.2
Female	15.2	18.6	10.6	7.1	50.2	65.3	97.4	187.8	290.3	374.5	533.1	682.7	1000.5	1514.0	1522.5	1826.9	1900.3	1835.0
Bladder																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.2	4.9	20.9	30.7	44.0	78.1	111.8	206.7	182.6	176.2
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	6.3	7.8	34.5	51.6	71.5	120.8	192.5	343.6	313.7	361.1
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.9	7.5	10.2	16.6	36.9	33.8	87.3	82.3	73.2
Brain																		
All	3.3	4.1	0.0	0.9	1.8	1.9	2.0	3.1	3.2	1.9	9.5	10.2	10.7	10.9	25.8	29.1	19.4	7.8
Male	4.8	4.9	0.0	1.7	3.6	3.6	1.9	4.1	2.1	2.0	15.4	10.3	19.1	6.4	30.6	37.5	26.9	21.9
Female	1.7	3.4	0.0	0.0	0.0	0.0	2.0	2.1	4.3	1.9	3.8	10.2	2.4	15.4	21.2	21.8	13.7	0.0
Brain & Other Central Nervous System (Non-Malignant)																		
All	0.0	1.7	2.6	0.9	6.4	2.8	2.0	15.6	7.4	9.7	17.1	15.4	19.0	25.0	30.1	55.3	50.5	58.7
Male	0.0	0.0	3.3	0.0	5.4	1.8	1.9	12.3	10.4	7.8	5.8	8.3	7.2	25.4	26.3	43.7	9.0	76.6
Female	0.0	3.4	1.8	1.8	7.4	3.8	2.0	19.0	4.3	11.6	28.3	22.4	30.8	24.6	33.8	65.4	82.3	48.8
Breast																		
Female Invasive	0.0	0.0	0.0	0.0	1.9	7.7	19.9	46.4	100.3	131.3	194.0	219.4	339.0	482.2	410.2	507.2	500.8	341.4
Female In-situ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	17.1	63.7	47.1	54.9	87.7	92.1	71.9	70.9	61.7	24.4
Cervix																		
Female	0.0	0.0	0.0	0.0	0.0	0.0	4.0	23.2	8.5	17.4	13.2	8.1	9.5	6.1	4.2	5.5	27.4	6.1
Colorectal																		
All	0.0	0.0	0.0	0.0	2.8	1.9	3.9	7.3	21.1	26.2	39.9	61.5	76.1	112.5	124.7	177.6	202.1	309.3
Male	0.0	0.0	0.0	0.0	3.6	1.8	3.8	6.1	18.8	23.4	53.7	78.5	83.4	146.3	153.1	224.9	242.0	284.5
Female	0.0	0.0	0.0	0.0	1.9	1.9	4.0	8.4	23.5	29.0	26.4	44.7	68.8	79.9	97.3	136.3	171.5	323.1
Corpus Uteri																		
Female	0.0	0.0	0.0	0.0	3.7	0.0	0.0	2.1	14.9	34.7	41.4	65.0	87.7	76.8	110.0	32.7	68.6	48.8
Esophagus																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	4.9	1.9	8.2	17.8	12.5	19.4	8.7	31.1	27.4
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	7.8	3.8	16.5	31.0	22.3	39.4	12.5	53.8	43.8
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	4.7	3.1	0.0	5.5	13.7	18.3

IDAHO **AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER** **2010**

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	0.0	1.7	0.9	6.4	4.7	2.0	2.1	7.4	1.0	1.0	3.1	4.8	3.1	0.0	2.9	7.8	0.0
Male	0.0	0.0	1.7	1.7	3.6	5.5	0.0	4.1	14.6	0.0	1.9	2.1	7.2	0.0	0.0	0.0	0.0	0.0
Female	0.0	0.0	1.8	0.0	9.3	3.8	4.0	0.0	0.0	1.9	0.0	4.1	2.4	6.1	0.0	5.5	13.7	0.0
Kidney & Renal Pelvis																		
All	0.0	0.8	0.0	0.0	0.9	1.9	2.0	1.0	16.9	12.6	20.0	23.6	30.9	53.1	58.1	43.7	70.0	27.4
Male	0.0	0.0	0.0	0.0	1.8	0.0	3.8	0.0	14.6	11.7	24.9	33.0	38.1	66.8	78.8	75.0	107.6	54.7
Female	0.0	1.7	0.0	0.0	0.0	3.8	0.0	2.1	19.2	13.5	15.1	14.2	23.7	39.9	38.1	16.4	41.2	12.2
Larynx																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.8	5.1	7.1	4.7	15.1	17.5	15.5	0.0
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	10.3	14.3	6.4	26.3	37.5	35.9	0.0
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	0.0	0.0	3.1	4.2	0.0	0.0	0.0
Leukemia																		
All	9.1	5.0	1.7	1.7	5.5	1.9	0.0	6.2	5.3	12.6	17.1	20.5	25.0	56.2	64.5	90.3	120.5	86.1
Male	9.6	6.5	3.3	3.4	5.4	3.6	0.0	4.1	8.3	17.5	19.2	28.9	19.1	66.8	87.5	99.9	206.2	120.4
Female	8.4	3.4	0.0	0.0	5.6	0.0	0.0	8.4	2.1	7.7	15.1	12.2	30.8	46.1	42.3	81.8	54.9	67.1
Liver & Bile Duct																		
All	0.8	1.7	0.9	0.0	0.9	0.0	1.0	1.0	0.0	1.9	10.5	18.4	14.3	10.9	19.4	23.3	11.7	23.5
Male	1.6	0.0	0.0	0.0	1.8	0.0	0.0	2.1	0.0	3.9	17.3	28.9	21.5	19.1	17.5	37.5	17.9	32.8
Female	0.0	3.4	1.8	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.8	8.1	7.1	3.1	21.2	10.9	6.9	18.3
Lung & Bronchus																		
All	0.0	0.0	0.0	0.0	0.9	0.0	1.0	4.2	4.2	14.5	27.6	65.6	121.2	226.5	309.7	407.6	357.5	262.3
Male	0.0	0.0	0.0	0.0	0.0	0.0	1.9	4.1	6.3	11.7	28.8	68.2	119.2	219.4	354.4	462.2	430.3	328.3
Female	0.0	0.0	0.0	0.0	1.9	0.0	0.0	4.2	2.1	17.4	26.4	63.0	123.3	233.4	266.4	359.9	301.9	225.6
Melanoma of the Skin																		
All	0.0	0.0	0.0	1.7	3.7	6.5	19.5	16.6	17.9	11.6	31.4	47.1	58.2	68.7	90.3	90.3	77.7	117.5
Male	0.0	0.0	0.0	1.7	0.0	5.5	21.0	18.4	12.5	11.7	21.1	53.7	73.9	85.9	131.3	156.2	143.4	197.0
Female	0.0	0.0	0.0	1.8	7.4	7.7	17.9	14.8	23.5	11.6	41.4	40.6	42.7	52.2	50.8	32.7	27.4	73.2
Myeloma																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.0	2.9	12.3	8.3	23.4	25.8	55.3	42.8	31.3
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	2.0	3.8	10.3	16.7	35.0	43.8	68.7	89.6	54.7
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	14.2	0.0	12.3	8.5	43.6	6.9	18.3

IDAHO **AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER** **2010**

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	1.7	0.9	1.7	3.7	3.7	1.0	4.2	11.6	7.8	20.0	38.9	36.9	70.3	75.3	67.0	132.1	101.8
Male	0.0	1.6	1.7	3.4	5.4	5.5	0.0	4.1	12.5	7.8	23.0	45.4	42.9	85.9	70.0	62.5	161.4	98.5
Female	0.0	1.7	0.0	0.0	1.9	1.9	2.0	4.2	10.7	7.7	17.0	32.5	30.8	55.3	80.4	70.9	109.8	103.6
Oral Cavity & Pharynx																		
All	0.0	0.0	0.0	0.0	1.8	0.0	2.0	3.1	6.3	14.5	16.2	32.8	33.3	50.0	66.7	52.4	58.3	70.5
Male	0.0	0.0	0.0	0.0	1.8	0.0	3.8	4.1	8.3	15.6	24.9	59.9	42.9	79.5	91.9	68.7	71.7	76.6
Female	0.0	0.0	0.0	0.0	1.9	0.0	0.0	2.1	4.3	13.5	7.5	6.1	23.7	21.5	42.3	38.2	48.0	67.1
Ovary																		
Female	0.0	0.0	1.8	1.8	3.7	5.8	2.0	6.3	8.5	13.5	17.0	14.2	19.0	76.8	8.5	54.5	41.2	54.9
Pancreas																		
All	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	3.2	6.8	10.5	13.3	25.0	53.1	60.2	87.4	77.7	105.7
Male	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	2.1	7.8	11.5	20.7	28.6	54.1	52.5	68.7	71.7	164.2
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.3	5.8	9.4	6.1	21.3	52.2	67.7	103.6	82.3	73.2
Prostate																		
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	31.1	138.1	282.9	541.1	744.1	774.4	830.8	546.8	558.1
Stomach																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	2.9	5.7	11.3	9.5	23.4	30.1	29.1	35.0	39.2
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	2.0	3.8	12.4	9.5	35.0	48.1	43.7	62.8	43.8
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	3.9	7.5	10.2	9.5	12.3	12.7	16.4	13.7	36.6
Testis																		
Male	1.6	0.0	0.0	3.4	9.1	12.7	17.1	8.2	8.3	5.8	7.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0
Thyroid																		
All	0.0	0.0	0.9	0.9	2.8	16.8	19.5	32.2	30.6	24.2	26.6	27.7	38.0	32.8	15.1	26.2	15.5	0.0
Male	0.0	0.0	0.0	1.7	0.0	3.6	3.8	18.4	8.3	11.7	5.8	12.4	23.8	19.1	13.1	18.7	17.9	0.0
Female	0.0	0.0	1.8	0.0	5.6	30.8	35.8	46.4	53.4	36.7	47.1	42.7	52.2	46.1	16.9	32.7	13.7	0.0

SECTION V

2010 OBSERVED VS. EXPECTED NUMBERS BY HEALTH DISTRICT

2010 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	1,220	1,165.0	610	575.7	1,138	1,122.9	1,926	1,818.0 +	853	877.2	620	758.9 *	770	796.3
Bladder	68	59.5	31	31.0	65	56.1	84	93.2	59	43.6 +	27	39.7 +	30	41.0
Brain	17	13.3	4	7.0	12	14.6	24	23.5	12	10.6	16	8.7 +	4	11.3 +
Brain & CNS non-Malignant	33	26.1	21	13.2	25	28.3	35	51.7 +	15	22.2	27	17.4 +	20	20.2
Breast	167	163.9	85	78.9	145	159.1	298	250.7 *	120	121.6	83	105.6 +	101	111.7
Breast (in-situ)	28	35.3	17	15.8	36	31.5	73	49.0 *	20	25.5	10	22.4 *	23	22.9
Cervix	11	6.8	3	3.5	7	8.1	9	16.9	9	5.5	5	5.1	6	5.7
Colorectal	94	89.5	50	44.9	83	87.6	132	145.9	68	67.8	62	56.9	62	60.6
Corpus Uteri	34	31.7	10	15.7	39	28.6	48	52.8	28	22.8	17	20.3	18	22.0
Esophagus	14	10.8	2	5.9	14	10.1	16	18.5	12	7.7	3	7.5	7	7.5
Hodgkin lymphoma	8	5.0	1	3.1	8	5.9	12	10.9	4	4.7	2	4.5	5	5.2
Kidney & renal pelvis	31	34.5	21	16.0	46	30.0 *	57	54.0	17	26.2	20	21.6	15	24.0
Larynx	8	5.9	5	2.8	2	6.5	11	8.9	4	4.6	4	3.9	3	4.2
Leukemia	45	40.8	22	20.9	45	41.0	69	66.3	26	33.2	16	29.1 +	39	28.9
Liver & bile duct	16	13.1	9	6.3	12	13.1	24	20.9	9	10.2	4	9.3	9	9.3
Lung & bronchus	165	130.5 *	76	67.9	160	122.0 *	199	202.2	96	101.2	43	89.7 *	69	90.8 +
Melanoma of skin	63	58.8	27	29.3	46	61.0	105	96.9	37	46.3	48	37.8	46	41.7
Myeloma	10	16.2	9	7.5	17	13.6	22	22.6	13	11.0	8	9.7	11	9.7
N-H Lymphoma	42	48.6	22	23.7	48	45.2	76	74.5	31	36.1	32	30.1	39	31.6
Oral cavity & pharynx	30	37.5	15	17.9	33	34.6	50	59.4	36	25.4	12	24.0 +	43	21.9 *
Ovary	16	15.7	9	7.7	7	17.1 +	28	24.9	11	12.0	11	10.0	16	10.6
Pancreas	32	32.7	17	16.4	35	30.4	50	48.7	23	24.6	20	20.5	19	21.8
Prostate	194	188.9	96	91.3	157	178.0	328	265.3 *	138	135.9	94	118.0 +	104	123.4
Stomach	20	13.9	11	7.1	14	14.3	23	22.8	6	11.8	9	9.4	7	10.2
Testis	6	4.9	3	2.6	6	6.3	13	11.5	2	4.9	4	4.3	6	5.3
Thyroid	28	40.2	11	18.5	38	40.7	86	68.3 +	23	31.0	28	26.1	42	28.3 +
Pediatric (age 0-19)	8	8.2	0	4.0 +	12	12.7	24	16.9	10	8.6	10	8.1	7	11.2

+ 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.

2010 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	676	624.5 +	336	315.7	571	591.5	979	939.5	474	463.7	329	403.7 *	408	423.6
Bladder	49	48.5	25	25.1	54	43.1	67	70.6	45	34.5	23	31.1	23	32.7
Brain	13	8.0	2	4.6	7	9.4	15	15.2	8	6.8	9	5.7	3	7.4
Brain & CNS non-Malignant	12	8.9	8	4.6	5	10.5	15	17.0	5	7.8	9	6.0	7	7.1
Breast	4	2.6	2	1.4	1	2.9	5	4.0	2	2.1	1	1.9	2	1.9
Breast (in-situ)	0	0.1	0	0.1	0	0.2	1	0.0 *	0	0.1	0	0.1	0	0.1
Cervix	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Colorectal	60	47.8	28	24.9	37	48.4	73	77.1	35	37.3	35	31.1	32	33.6
Corpus Uteri	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Esophagus	13	9.2	2	5.1	13	8.3	12	16.2	10	6.6	3	6.3	5	6.6
Hodgkin lymphoma	5	2.5	1	1.5	5	3.0	7	5.9	0	2.7	1	2.3	2	2.7
Kidney & renal pelvis	20	21.8	11	10.6	31	18.0 *	34	33.1	12	16.3	12	13.6	9	15.1
Larynx	8	5.2	5	2.6	2	5.6	9	8.0	3	4.2	3	3.6	3	3.8
Leukemia	29	24.4	14	12.8	21	25.5	39	39.6	18	19.7	8	17.8 +	28	16.9 +
Liver & bile duct	11	9.2	8	4.4	10	8.6	15	15.1	6	7.2	2	6.6	6	6.6
Lung & bronchus	96	65.6 *	35	36.1	73	63.1	89	104.0	53	51.2	24	45.7 *	42	45.9
Melanoma of skin	32	36.8	18	18.1	25	36.1	61	55.0	30	26.5	29	22.4	24	24.9
Myeloma	6	12.0	6	5.5	10	10.0	17	15.1	12	7.4	7	6.7	6	7.2
N-H Lymphoma	23	25.8	14	12.6	23	24.0	38	39.9	16	19.2	18	15.9	22	16.8
Oral cavity & pharynx	25	24.9	12	12.2	21	23.4	30	41.2	23	17.4	9	16.3	29	15.2 *
Ovary	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pancreas	15	16.5	9	8.3	12	15.8	23	24.5	14	11.8	13	9.9	11	10.7
Prostate	194	191.5	96	94.0	157	175.4	328	259.7 *	138	136.2	94	118.5 +	104	124.8
Stomach	12	8.9	9	4.3	8	8.8	14	13.2	2	7.5 +	6	5.7	4	6.3
Testis	6	4.8	3	2.7	6	6.2	13	11.6	2	5.0	4	4.2	6	5.3
Thyroid	2	10.1 *	3	4.3	9	8.8	21	13.9	9	6.5	8	5.6	5	6.7
Pediatric (age 0-19)	4	4.9	0	2.4	5	7.7	15	9.3	9	4.5	3	5.1	5	6.1

+ 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.

2010 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	544	544.7	274	262.7	567	530.2	947	869.6 *	379	413.5	291	355.8 *	362	373.5
Bladder	19	11.6	6	6.6	11	12.7	17	20.8	14	9.2	4	8.7	7	8.6
Brain	4	5.3	2	2.4	5	5.2	9	8.3	4	3.9	7	3.0	1	4.0
Brain & CNS non-Malignant	21	17.3	13	8.6	20	17.9	20	34.8 *	10	14.4	18	11.3	13	13.0
Breast	163	160.4	83	75.9	144	158.1	293	249.4 *	118	119.0	82	103.4 +	99	108.7
Breast (in-situ)	28	35.1	17	15.4	36	31.8	72	49.3 *	20	25.3	10	22.3 *	23	22.5
Cervix	11	6.9	3	3.5	7	8.2	9	16.8	9	5.5	5	5.1	6	5.6
Colorectal	34	41.8	22	20.1	46	39.0	59	68.3	33	30.5	27	25.9	30	27.1
Corpus Uteri	34	31.6	10	15.4	39	29.0	48	53.3	28	22.7	17	20.3	18	21.8
Esophagus	1	1.8	0	0.9	1	1.7	4	2.2	2	1.1	0	1.1	2	1.0
Hodgkin lymphoma	3	2.5	0	1.6	3	3.0	5	5.1	4	2.0	1	2.2	3	2.5
Kidney & renal pelvis	11	12.8	10	5.5	15	11.9	23	20.5	5	10.0	8	8.0	6	9.0
Larynx	0	0.8	0	0.3	0	0.8	2	0.7	1	0.4	1	0.3	0	0.5
Leukemia	16	16.7	8	8.3	24	15.4	30	26.3	8	13.6	8	11.4	11	12.0
Liver & bile duct	5	3.9	1	2.0	2	4.4	9	5.7	3	3.1	2	2.7	3	2.8
Lung & bronchus	69	65.2	41	32.0	87	58.9 *	110	97.4	43	50.0	19	44.0 *	27	45.0 *
Melanoma of skin	31	22.5	9	11.6	21	24.7	44	41.1	7	19.7 *	19	15.5	22	17.0
Myeloma	4	4.4	3	2.1	7	3.6	5	7.3	1	3.5	1	3.0	5	2.5
N-H Lymphoma	19	22.8	8	11.1	25	21.1	38	34.5	15	16.9	14	14.2	17	14.7
Oral cavity & pharynx	5	12.7 +	3	5.9	12	11.0	20	17.8	13	8.0	3	7.7	14	6.8 +
Ovary	16	15.6	9	7.5	7	17.3 *	28	25.2	11	11.9	11	10.0	16	10.5
Pancreas	17	16.1	8	8.2	23	14.6 +	27	24.2	9	12.8	7	10.7	8	11.1
Prostate	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Stomach	8	5.3	2	2.9	6	5.5	9	9.3	4	4.3	3	3.7	3	3.9
Testis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thyroid	26	30.5	8	13.9	29	32.2	65	54.1	14	24.3 +	20	20.6	37	21.4 *
Pediatric (age 0-19)	4	3.4	0	1.6	7	5.0	9	7.7	1	4.1	7	3.0	2	4.9

+ 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 DEVELOPING AND DYING FROM CANCER

Risks of Developing and Dying from Cancer

All Sites, Invasive in Females

If your current age is:	Then your risk of developing cancer by a particular 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 particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 595	1 in 138	1 in 46	1 in 18	1 in 9	1 in 5
40		1 in 178	1 in 49	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 28	1 in 10	1 in 6
70					1 in 15	1 in 6
80						1 in 8

All Sites, Invasive in Males

If your current age is:	Then your risk of developing cancer by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 130	1 in 35	1 in 11	1 in 4	1 in 2	1 in 2
40		1 in 48	1 in 12	1 in 4	1 in 2	1 in 2
50			1 in 15	1 in 5	1 in 2	1 in 2
60				1 in 6	1 in 3	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 particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 766	1 in 162	1 in 44	1 in 16	1 in 7	1 in 4
40		1 in 203	1 in 46	1 in 16	1 in 7	1 in 4
50			1 in 58	1 in 17	1 in 7	1 in 4
60				1 in 22	1 in 8	1 in 4
70					1 in 11	1 in 5
80						1 in 6

Risks of Developing and Dying from Cancer

Female Breast Cancer

If your current age is:	Then your risk of developing breast cancer by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 273	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 particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 2129	1 in 579	1 in 205	1 in 97	1 in 57	1 in 36
40		1 in 787	1 in 225	1 in 101	1 in 58	1 in 36
50			1 in 309	1 in 114	1 in 61	1 in 37
60				1 in 173	1 in 73	1 in 41
70					1 in 115	1 in 48
80						1 in 64

Prostate Cancer

If your current age is:	Then your risk of developing prostate cancer by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 17829	1 in 333	1 in 43	1 in 13	1 in 7	1 in 6
40		1 in 334	1 in 42	1 in 12	1 in 7	1 in 6
50			1 in 47	1 in 13	1 in 7	1 in 6
60				1 in 16	1 in 7	1 in 6
70					1 in 12	1 in 7
80						1 in 13

If your current age is:	Then your risk of dying from prostate cancer by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in *	1 in 28461	1 in 1765	1 in 331	1 in 82	1 in 29
40		1 in 28037	1 in 1738	1 in 326	1 in 81	1 in 29
50			1 in 1798	1 in 320	1 in 78	1 in 28
60				1 in 365	1 in 77	1 in 27
70					1 in 85	1 in 25
80						1 in 25

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

Risks of Developing and Dying from Cancer

Colon/Rectal Cancer in Females

If your current age is:	Then your risk of developing colon/rectal cancer by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 1576	1 in 383	1 in 141	1 in 65	1 in 35	1 in 22
40		1 in 501	1 in 153	1 in 68	1 in 36	1 in 22
50			1 in 215	1 in 76	1 in 38	1 in 22
60				1 in 114	1 in 44	1 in 24
70					1 in 64	1 in 27
80						1 in 36

If your current age is:	Then your risk of dying from colon/rectal cancer by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 22588	1 in 1720	1 in 533	1 in 227	1 in 107	1 in 56
40		1 in 1844	1 in 540	1 in 227	1 in 106	1 in 56
50			1 in 749	1 in 254	1 in 111	1 in 56
60				1 in 368	1 in 125	1 in 59
70					1 in 171	1 in 63
80						1 in 76

Colon/Rectal Cancer in Males

If your current age is:	Then your risk of developing colon/rectal cancer by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 1766	1 in 407	1 in 128	1 in 52	1 in 29	1 in 21
40		1 in 522	1 in 136	1 in 53	1 in 29	1 in 21
50			1 in 178	1 in 57	1 in 29	1 in 21
60				1 in 78	1 in 33	1 in 22
70					1 in 49	1 in 26
80						1 in 39

If your current age is:	Then your risk of dying from colon/rectal cancer by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 11430	1 in 1633	1 in 531	1 in 181	1 in 90	1 in 52
40		1 in 1877	1 in 548	1 in 181	1 in 90	1 in 52
50			1 in 752	1 in 194	1 in 91	1 in 52
60				1 in 246	1 in 97	1 in 52
70					1 in 140	1 in 57
80						1 in 67

Risks of Developing and Dying from Cancer

Melanoma in Females

If your current age is:	Then your risk of developing melanoma by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 641	1 in 248	1 in 142	1 in 97	1 in 73	1 in 59
40		1 in 401	1 in 180	1 in 113	1 in 82	1 in 65
50			1 in 319	1 in 155	1 in 100	1 in 75
60				1 in 287	1 in 141	1 in 94
70					1 in 249	1 in 127
80						1 in 198

If your current age is:	Then your risk of dying from melanoma by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 10056	1 in 4248	1 in 1642	1 in 1069	1 in 679	1 in 468
40		1 in 7284	1 in 1943	1 in 1184	1 in 722	1 in 486
50			1 in 2599	1 in 1387	1 in 786	1 in 510
60				1 in 2858	1 in 1082	1 in 610
70					1 in 1581	1 in 705
80						1 in 969

Melanoma in Males

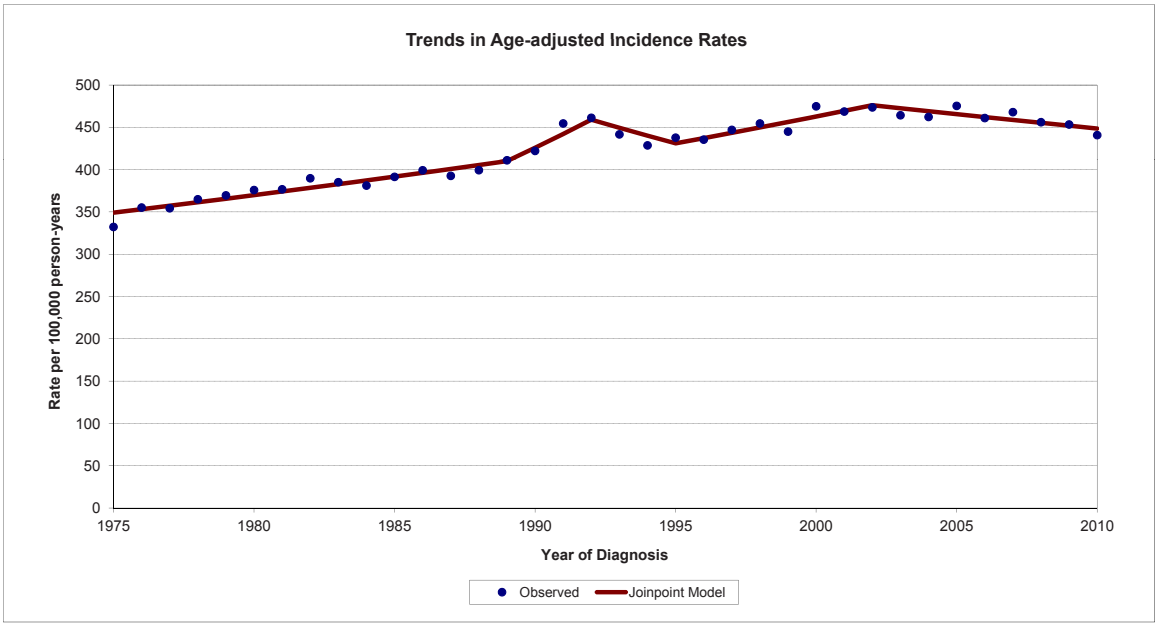
If your current age is:	Then your risk of developing melanoma by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 702	1 in 277	1 in 128	1 in 68	1 in 44	1 in 34
40		1 in 451	1 in 154	1 in 74	1 in 46	1 in 35
50			1 in 227	1 in 86	1 in 49	1 in 37
60				1 in 129	1 in 59	1 in 41
70					1 in 94	1 in 52
80						1 in 81

If your current age is:	Then your risk of dying from melanoma by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 5583	1 in 1973	1 in 958	1 in 441	1 in 266	1 in 192
40		1 in 3005	1 in 1140	1 in 472	1 in 276	1 in 196
50			1 in 1782	1 in 543	1 in 295	1 in 204
60				1 in 733	1 in 331	1 in 216
70					1 in 524	1 in 265
80						1 in 374

SECTION VII

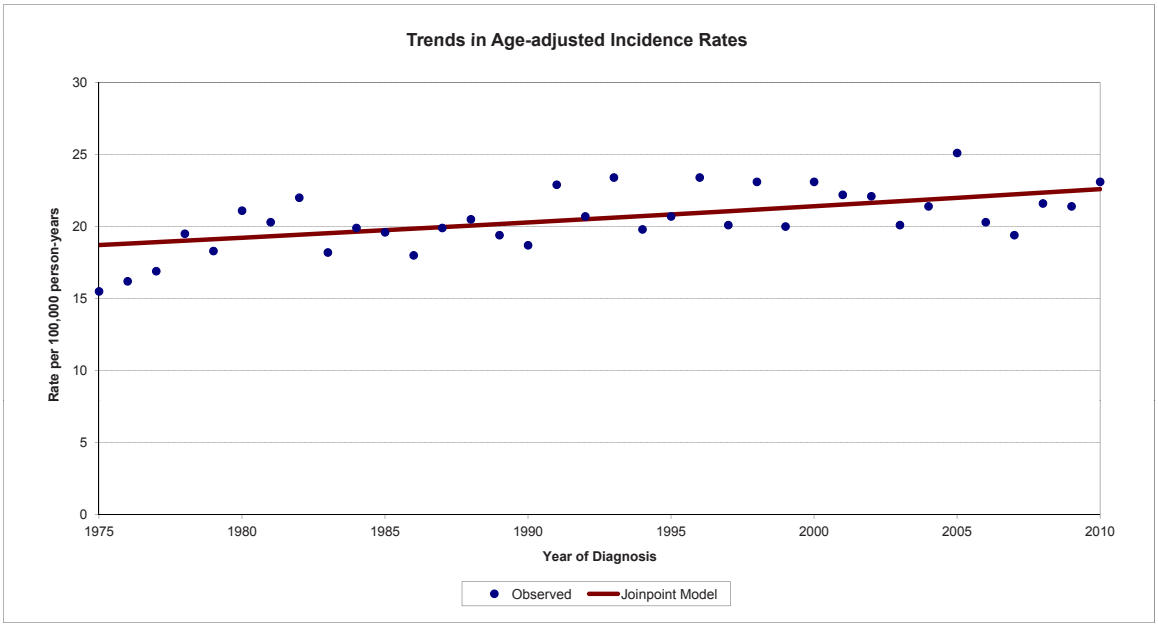
CANCER TRENDS IN IDAHO
1975-2010

All Sites



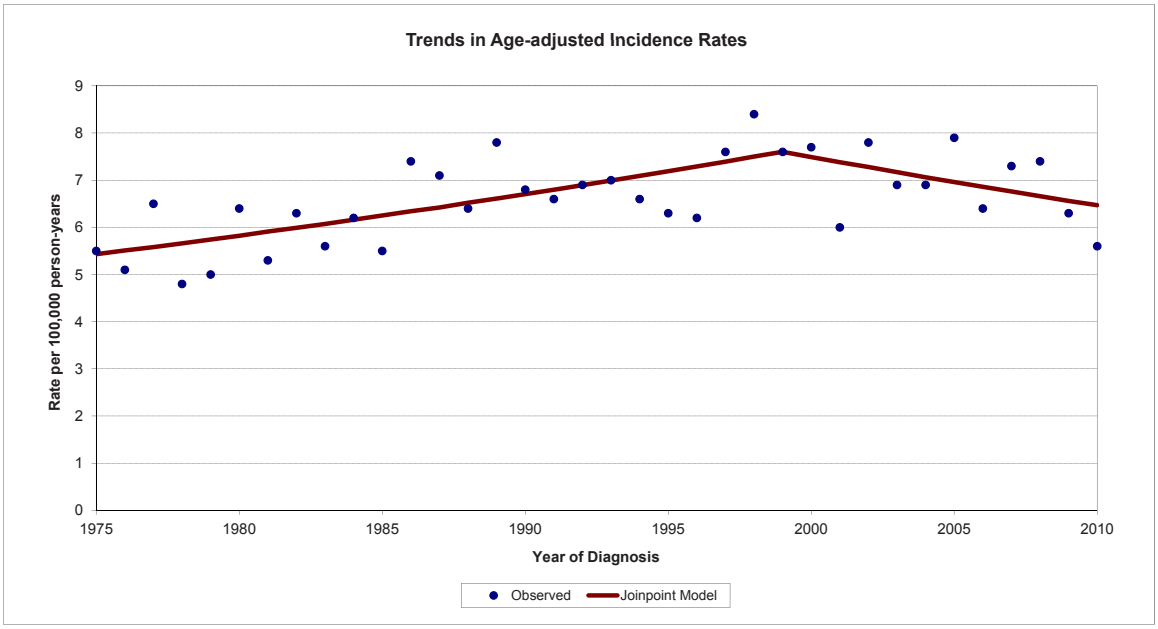
Cancer incidence increased at a rate of about 1.2% per year in Idaho from 1975 to 1989, and at a rate of about 1.4% per year from 1995 to 2002. Between 1989 and 1995, the trend was predominately influenced by prostate cancer incidence among males. Since 2002, overall cancer incidence has declined about 0.7% 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



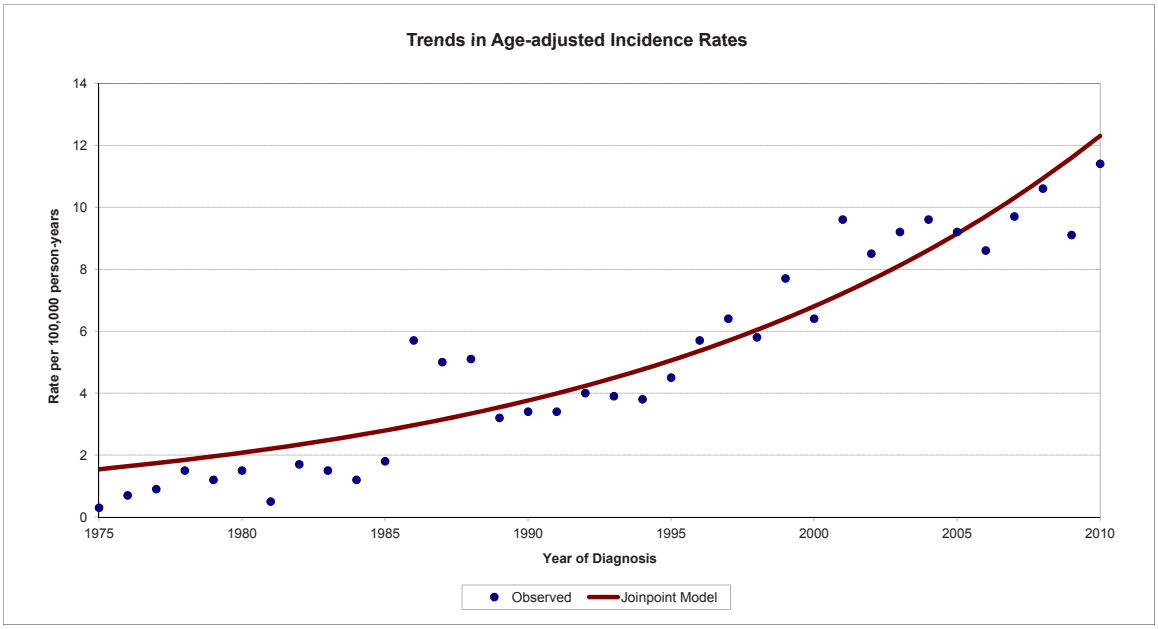
Bladder cancer incidence includes in-situ and invasive cases. Bladder cancer incidence increased at a rate of about 0.5% per year in Idaho from 1975 to 2010. Most of the increase in bladder cancer incidence is attributable to males, who have rates of bladder cancer incidence about 4-5 times those of females.

Brain



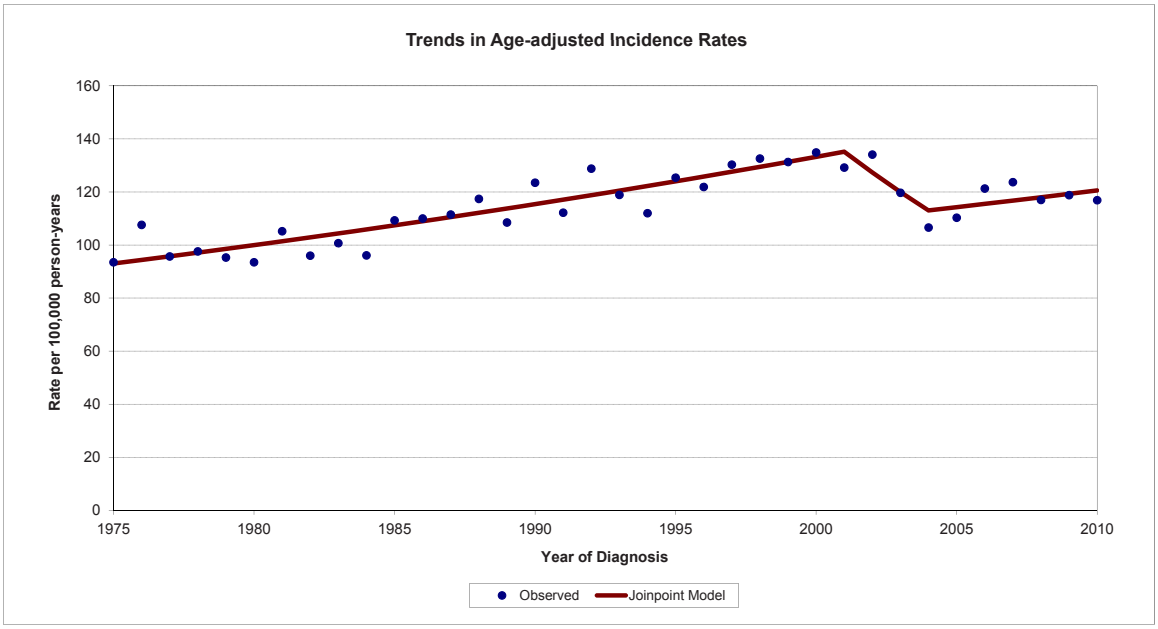
Malignant brain cancer incidence increased at a rate of about 1.4% per year in Idaho from 1975 to 1999, after which the rate has been stable. The trend for males follows the same pattern, whereas among females brain cancer incidence has been stable over the entire timespan.

Brain and Other CNS, Non-Malignant



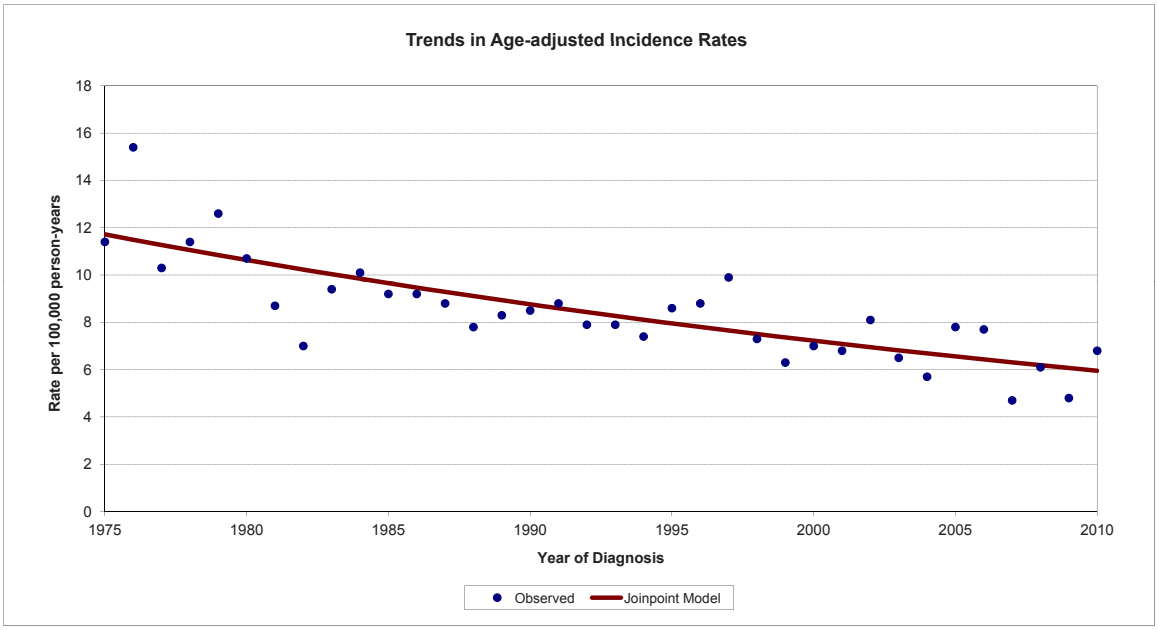
Non-malignant brain and other central nervous system tumors include those with benign and borderline behavior. Non-malignant brain and other CNS tumor incidence increased at a rate of about 6.1 % per year in Idaho from 1975 to 2010.

Breast Female



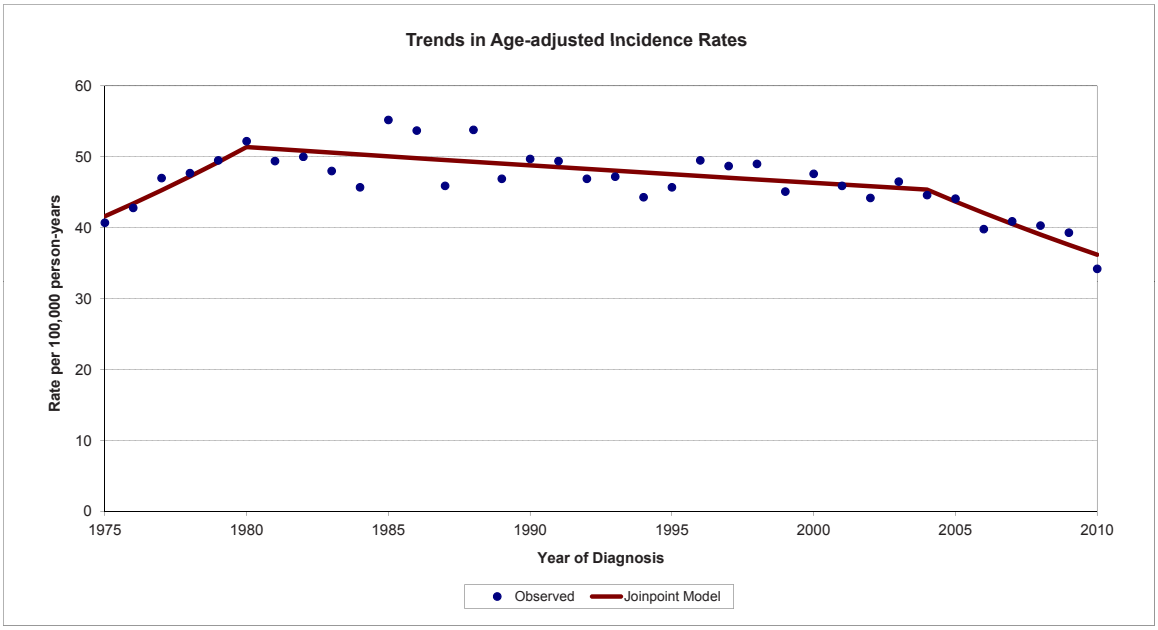
Invasive breast cancer incidence increased at a rate of about 1.5% per year among female Idahoans from 1975 to 2001, after which the rate decreased by about 5.8% per year until 2004, then increased by about 1.1% per year. The sharp decrease may have been due in part to a decrease in the use of hormone 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



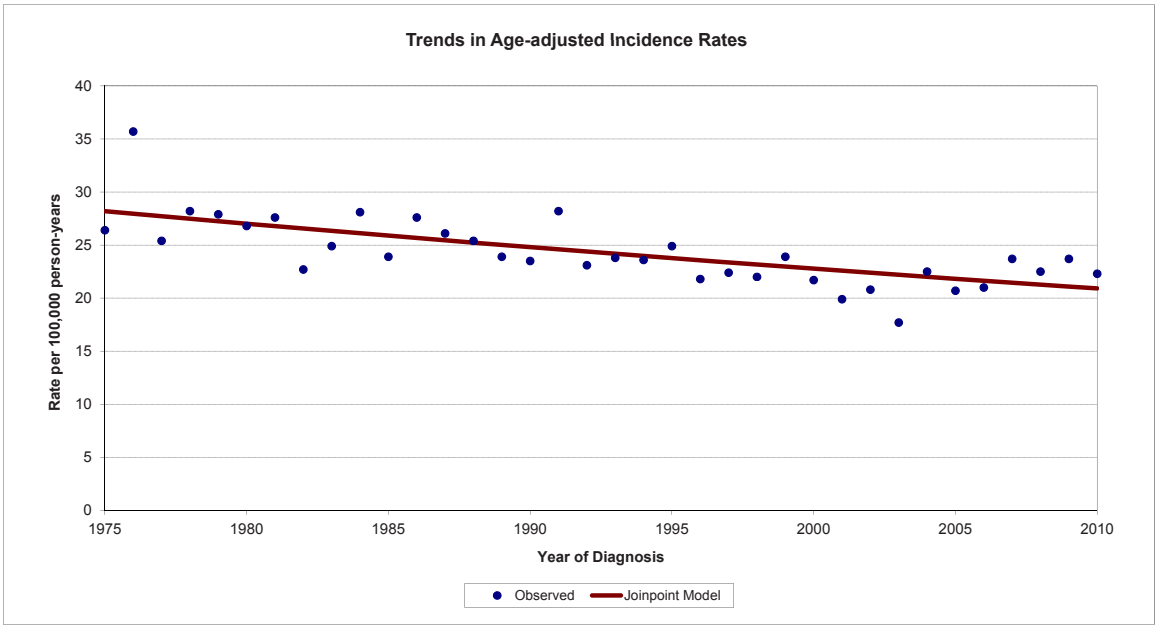
Invasive cervical cancer incidence has decreased about 1.9% per year in Idaho from 1975 to 2010.

Colorectal



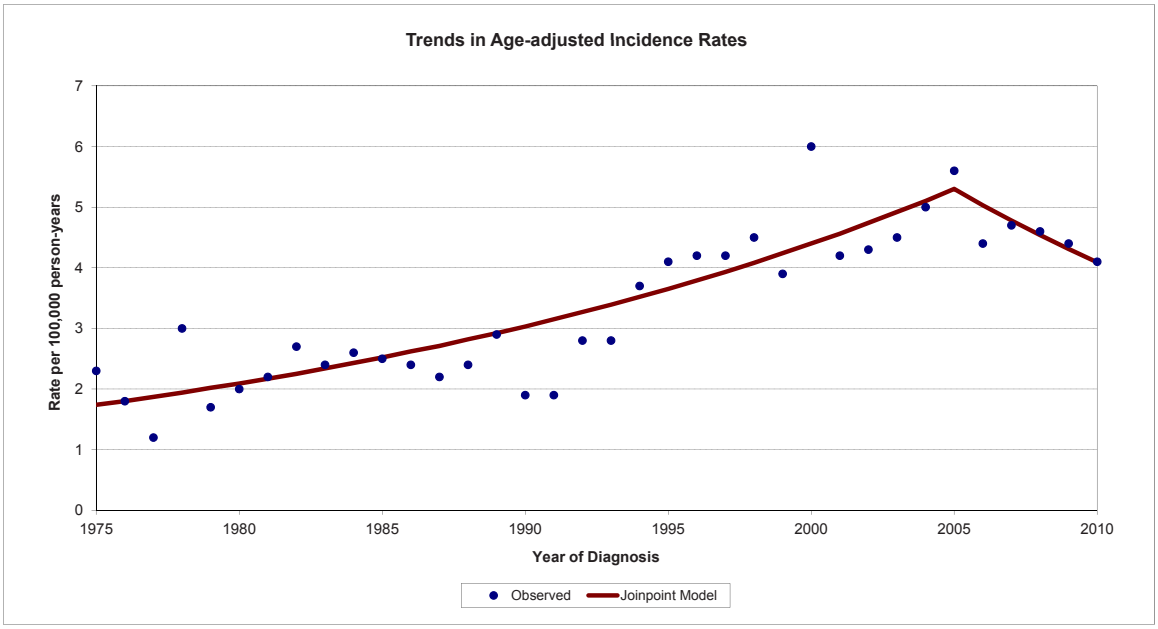
Colorectal cancer incidence increased at a rate of about 4.3% per year in Idaho from 1975 to 1980. From 1980 to 2004, the rate decreased about 0.5% per year, and then the rate decreased about 3.7% per year from 2004 to 2010. Colorectal cancer incidence trends over time were different for males and females. For males, rates increased from 1975 to 1988, then decreased. For females, rates decreased across the entire time series.

Corpus Uteri



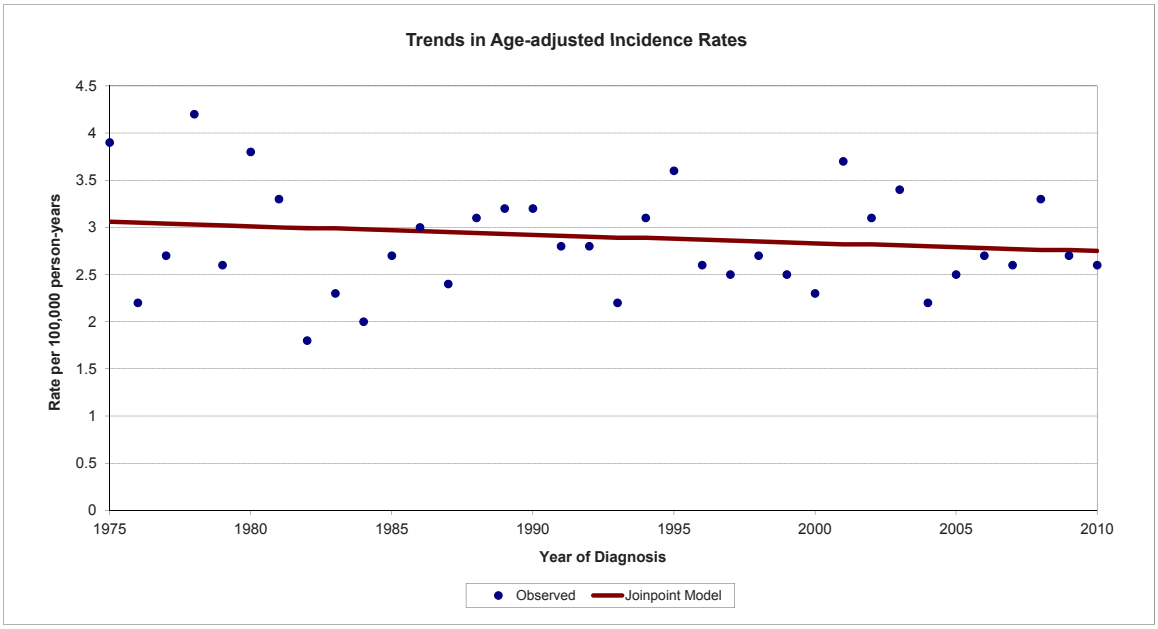
Corpus uteri cancer incidence decreased about 0.9% per year in Idaho from 1975 to 2010.

Esophagus



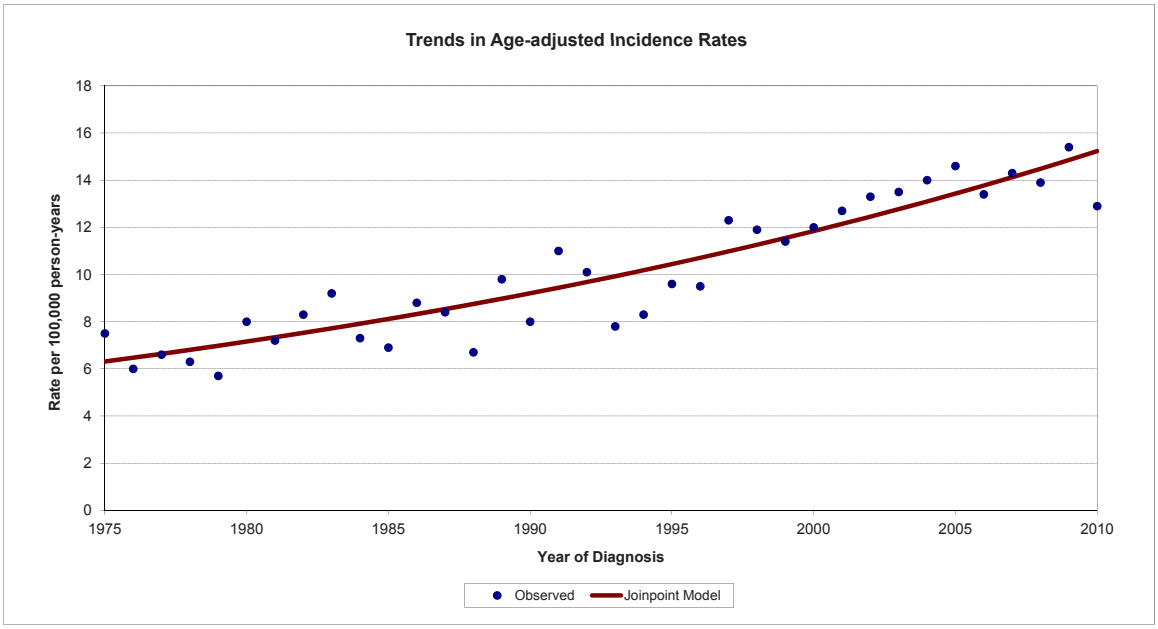
Esophageal cancer incidence increased at a rate of about 3.8% per year in Idaho from 1975 to 2005. From 2005 to 2010, the rate decreased about 5% per year. The trend for males follows the same pattern, whereas among females esophageal cancer incidence has increased about 1.4% per year. Rates of esophageal cancers among males were about 3-4 times higher than those among females.

Hodgkin Lymphoma



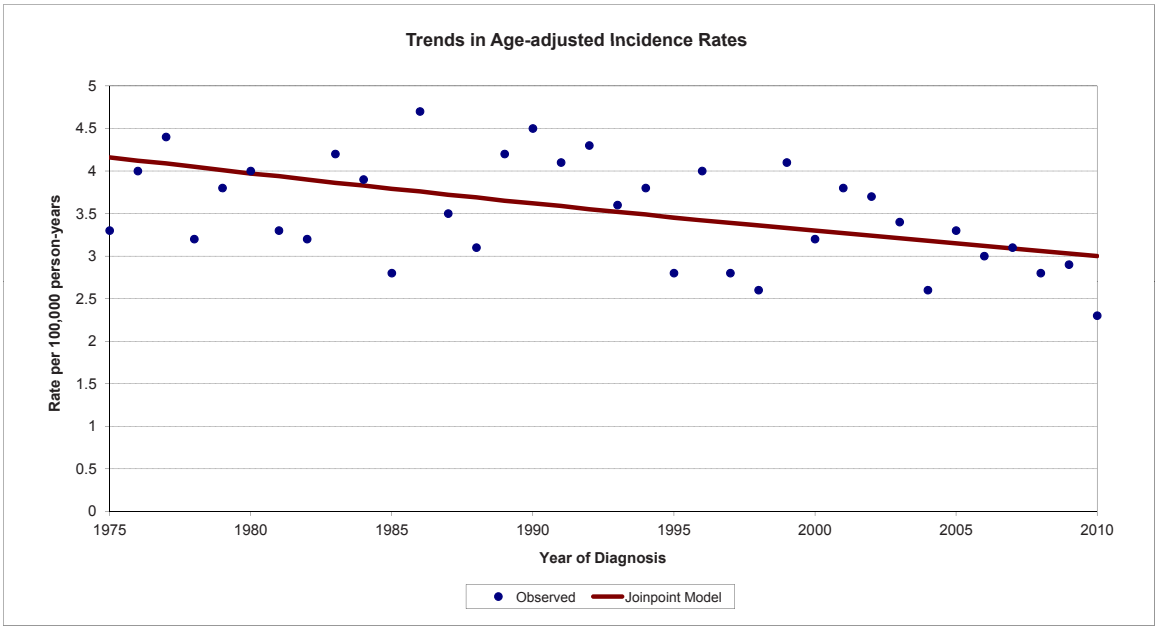
There was no statistically significant trend in Hodgkin lymphoma incidence in Idaho from 1975 to 2010; rates were stable but showed year-to-year variability due to the relatively small numbers of cases diagnosed annually.

Kidney and Renal Pelvis



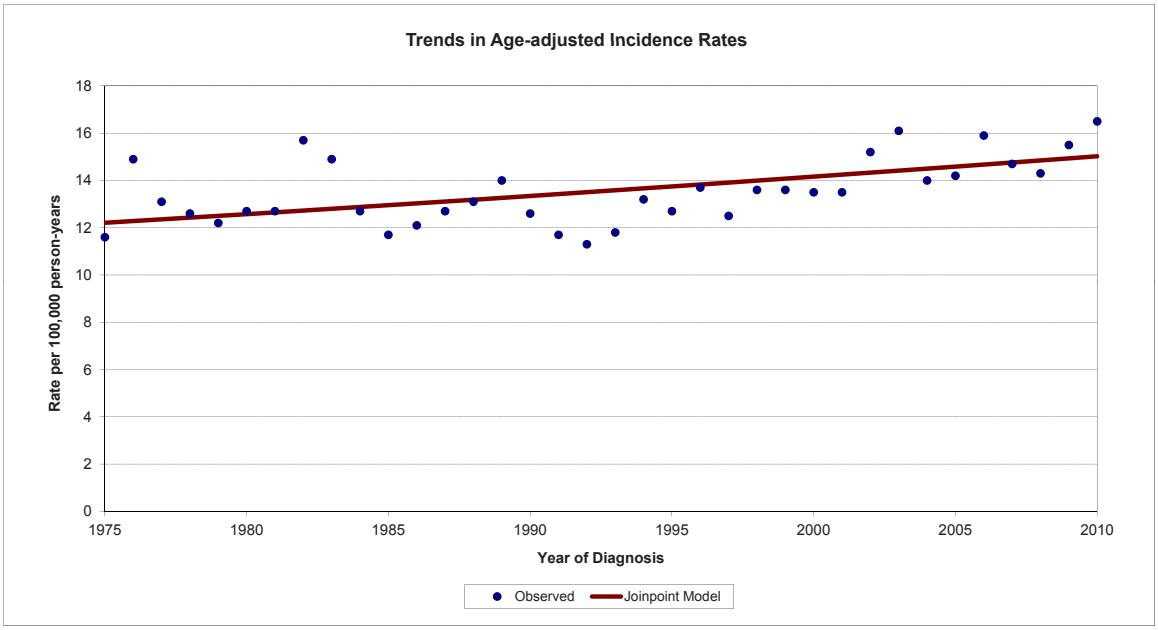
Kidney and renal pelvis cancer incidence increased at a rate of about 2.6% per year in Idaho from 1975 to 2010. The rate of increase was similar for males and females, although rates of kidney and renal pelvis cancers among males were about twice as high as among females.

Larynx



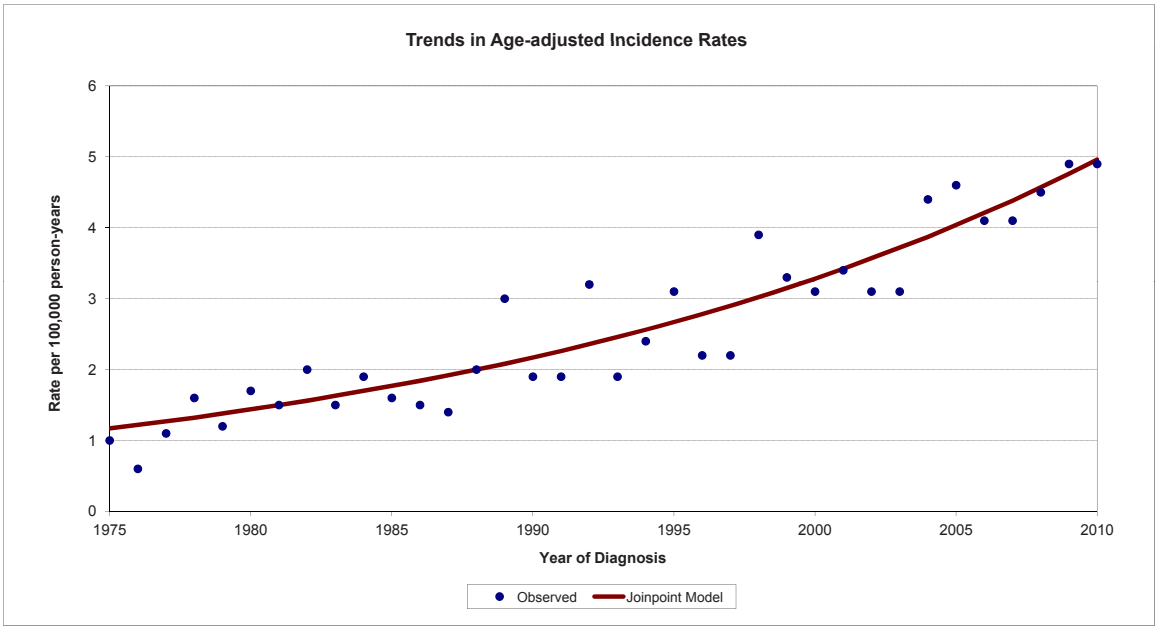
Laryngeal cancer incidence decreased about 0.9% per year in Idaho from 1975 to 2010; rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually. The rate of decrease was similar for males and females, although rates of laryngeal cancers among males were about 4 times as high as among females.

Leukemia



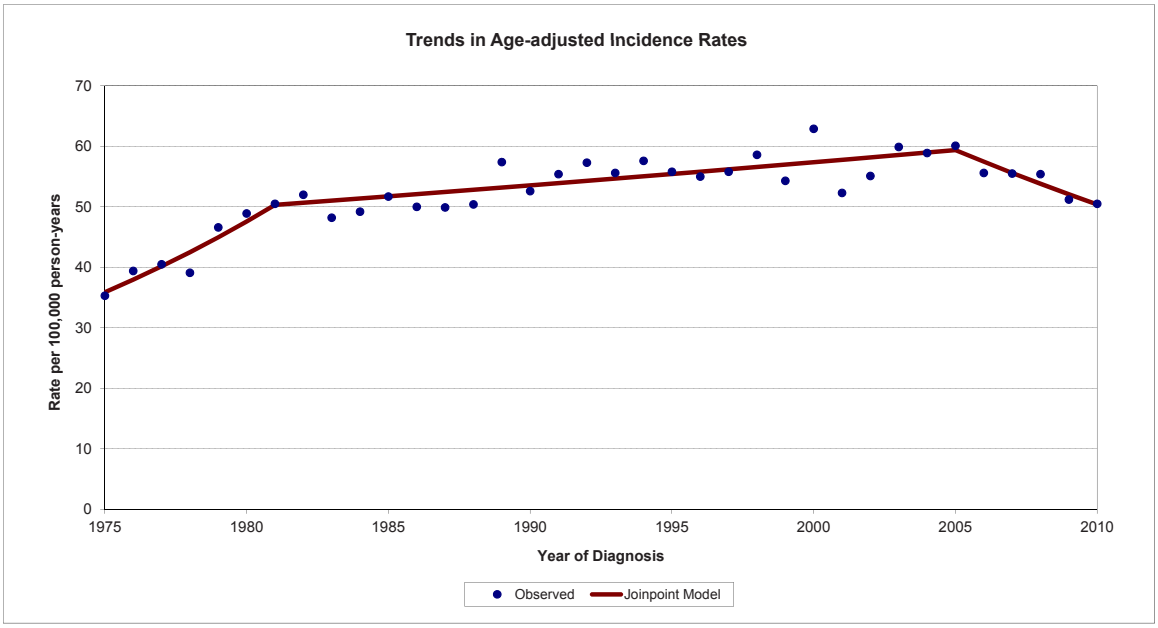
Leukemia incidence increased about 0.6% per year in Idaho from 1975 to 2010; rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually.

Liver and Bile Duct



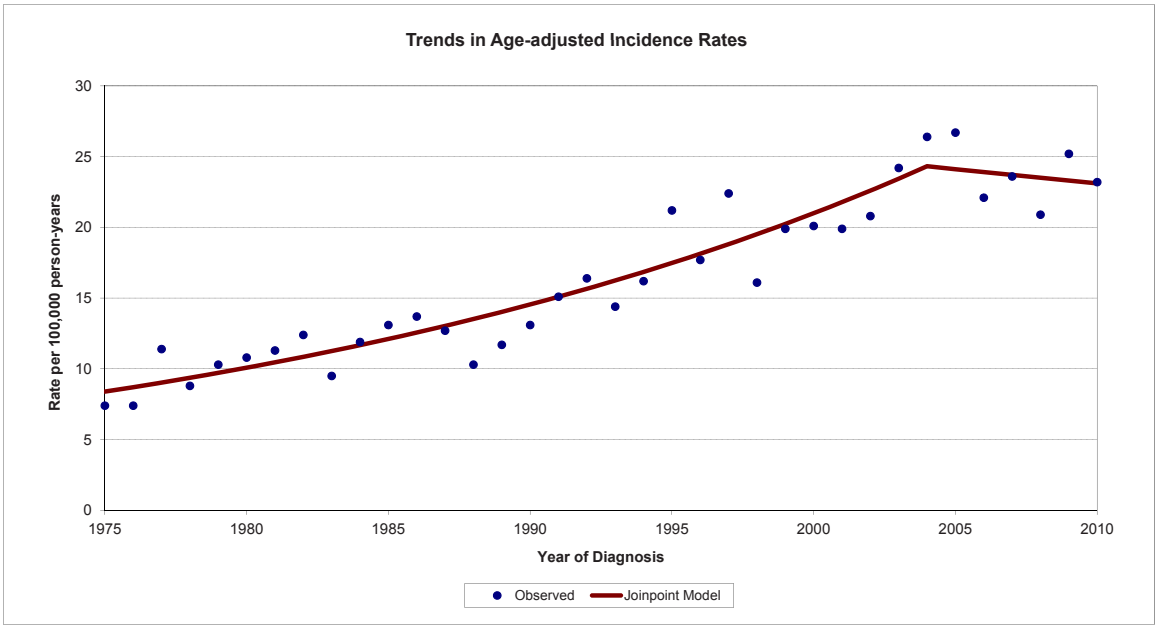
Liver cancer incidence increased at a rate of about 4.2% per year in Idaho from 1975 to 2010. The rate of increase was higher for males (5.0% per year) than for females (2.7% per year), and rates of liver cancers among males were about twice as high as among females.

Lung and Bronchus



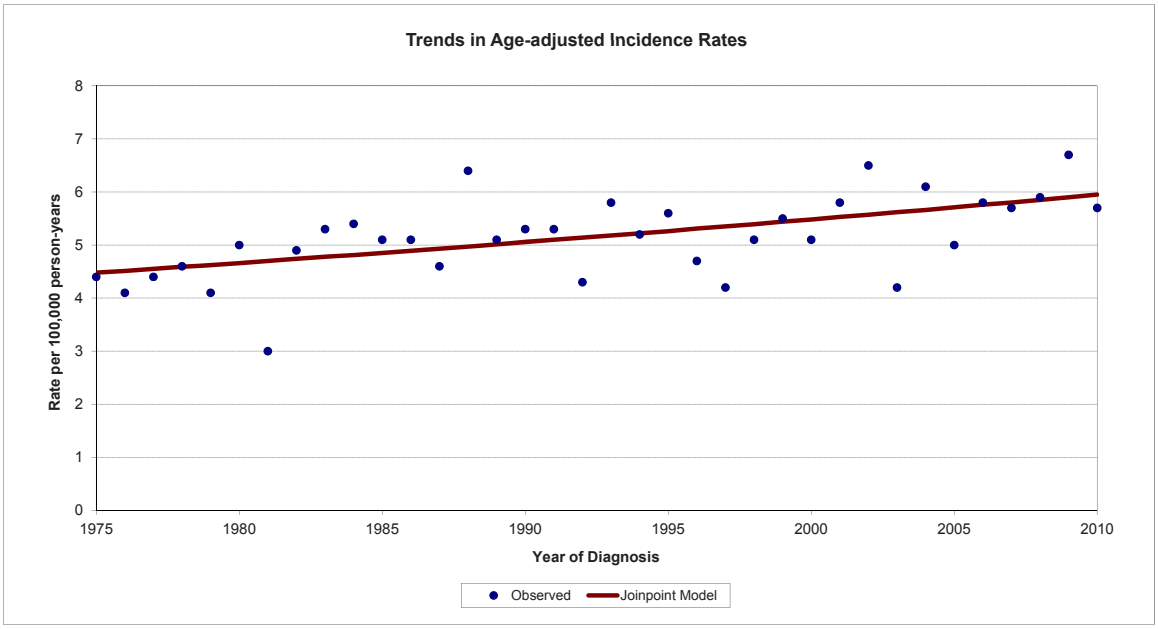
Lung cancer incidence increased at a rate of about 5.8% per year in Idaho from 1975 to 1981, after which the rate of increase lessened to about 0.7% per year until 2005. From 2005 to 2010, the rate has decreased about 3.2% per year. Lung cancer incidence trends over time were different for males and females. For males, lung cancer incidence increased at a rate of about 6.0% per year from 1975 to 1980, and then decreased by about 0.4% per year until 2005, after which it has decreased by about 4.4% per year. For females, lung cancer incidence increased at a rate of about 5.8% per year from 1975 to 1989, after which the rate of increase lessened to about 1.7% per year until 2006. From 2006 to 2010, lung cancer incidence among females decreased about 2.7% 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



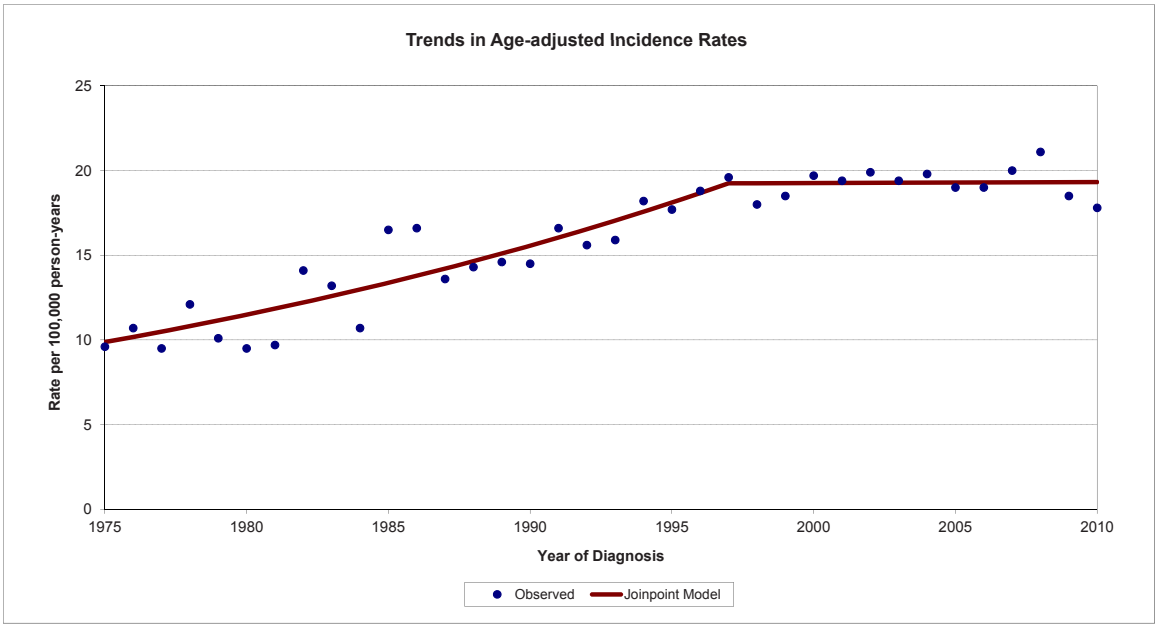
The incidence of melanoma of the skin increased at a rate of about 3.7% per year in Idaho from 1975 to 2004, after which it has decreased about 0.8% per year. The trend for males follows the same pattern, whereas among females melanoma incidence has increased about 2.5% per year over the entire timespan. The incidence of in-situ melanoma of the skin increased at a higher rate (8.3% per year from 1980 to 2010) than for the invasive cases depicted in the graph.

Myeloma



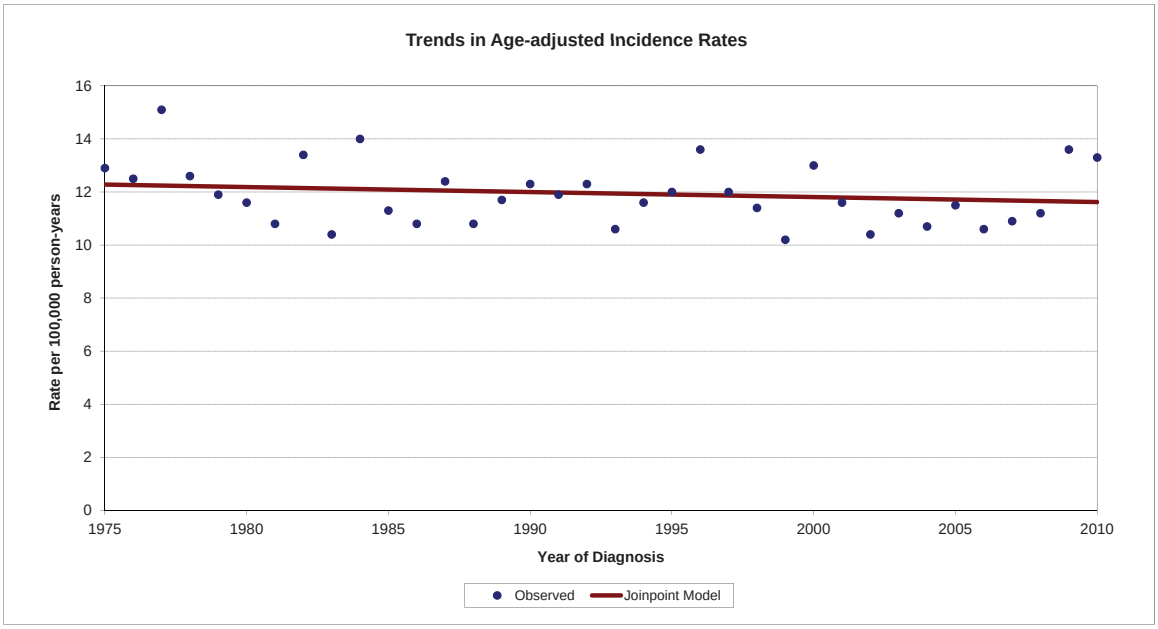
The incidence of myeloma increased at a rate of about 0.8% per year in Idaho from 1975 to 2010. The rate of increase was higher for males (1.3% per year) than for females (no significant trend), and rates of myeloma incidence among males were higher than among females.

Non-Hodgkin Lymphoma



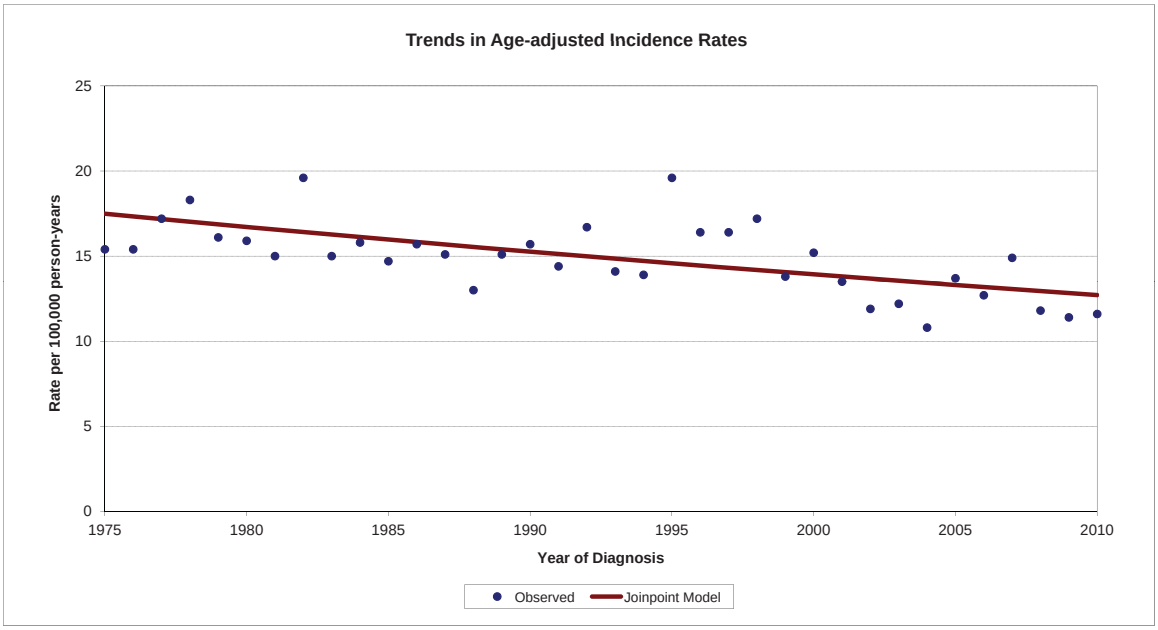
The incidence of non-Hodgkin lymphoma increased at a rate of about 3.1% per year in Idaho from 1975 to 1997, after which there has been no significant trend. Non-Hodgkin lymphoma incidence trends over time were similar for males and females, but rates of non-Hodgkin lymphoma incidence among males were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

Oral Cavity and Pharynx



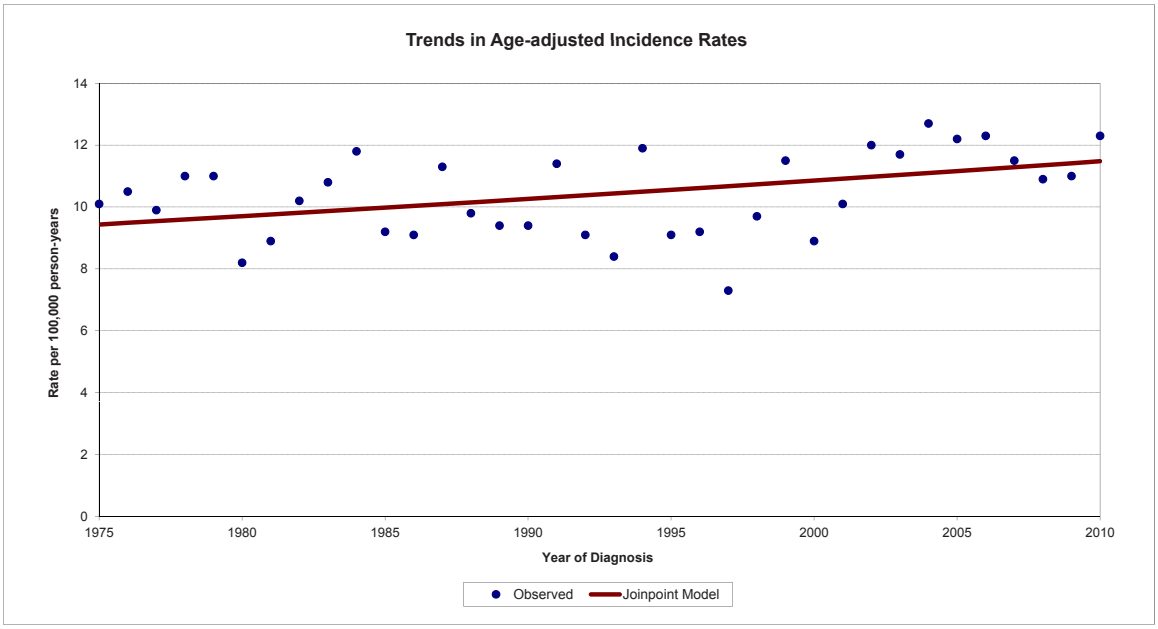
The incidence of cancers of the oral cavity and pharynx decreased at a rate of about 0.2% per year in Idaho from 1975 to 2010. Among males, the rate of decrease was about 0.6% per year. Among females, incidence of cancers of the oral cavity and pharynx increased at a rate of about 0.6% per year 1975 to 2010. Rates of cancers of the oral cavity and pharynx were about 3 times higher among males than among females. This latter result likely reflects differences in long-term prevalence trends for tobacco use and alcohol consumption between males and females.

Ovary



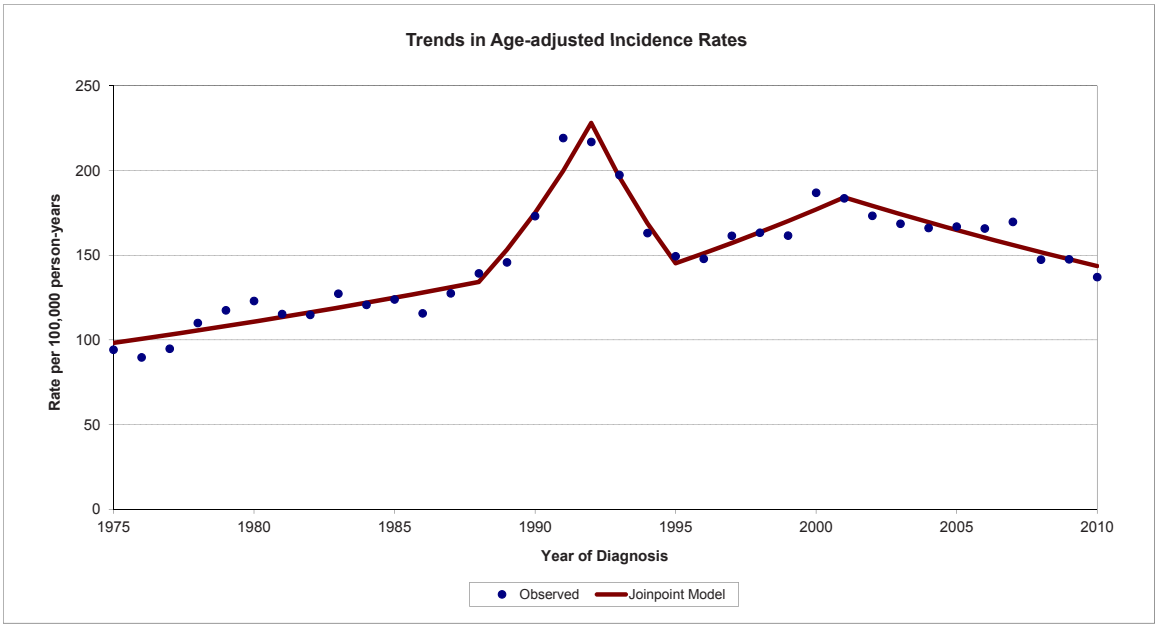
The incidence of ovarian cancer among females in Idaho decreased about 0.9% per year from 1975 to 2010. Part of the decrease may have been due to a decrease in the use of hormone replacement therapy.

Pancreas



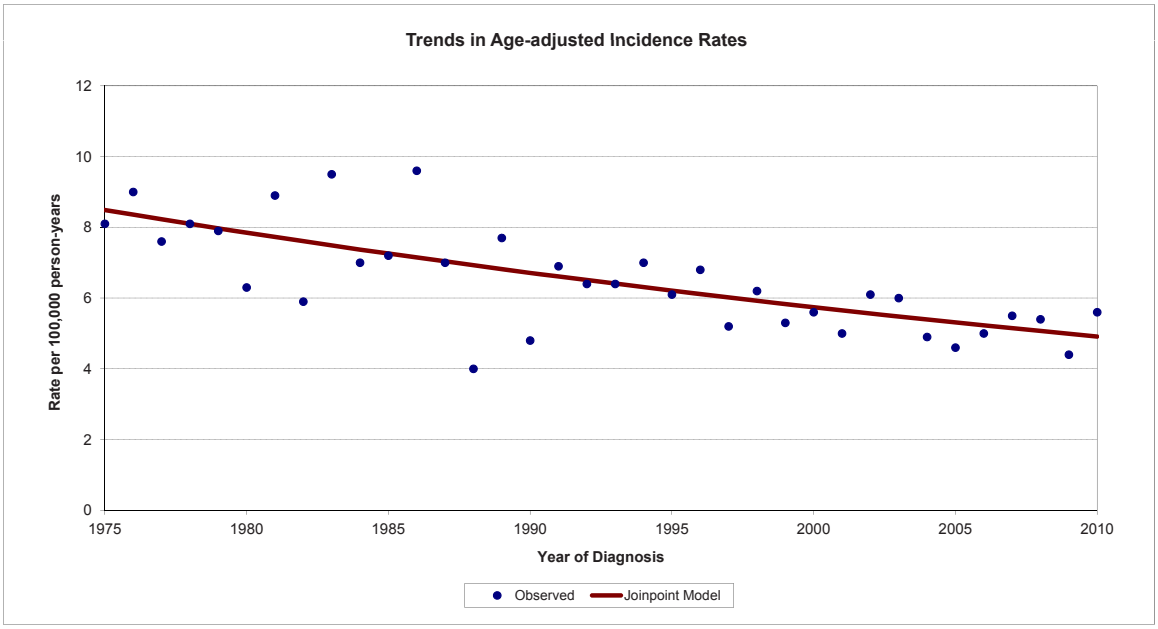
Pancreas cancer incidence increase at a rate of about 0.6% per year in Idaho from 1975 to 2010; rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually. The rate of increase was higher for females (1.2% per year) than for males (no significant trend), and rates of pancreas cancer incidence among males were higher than among females.

Prostate



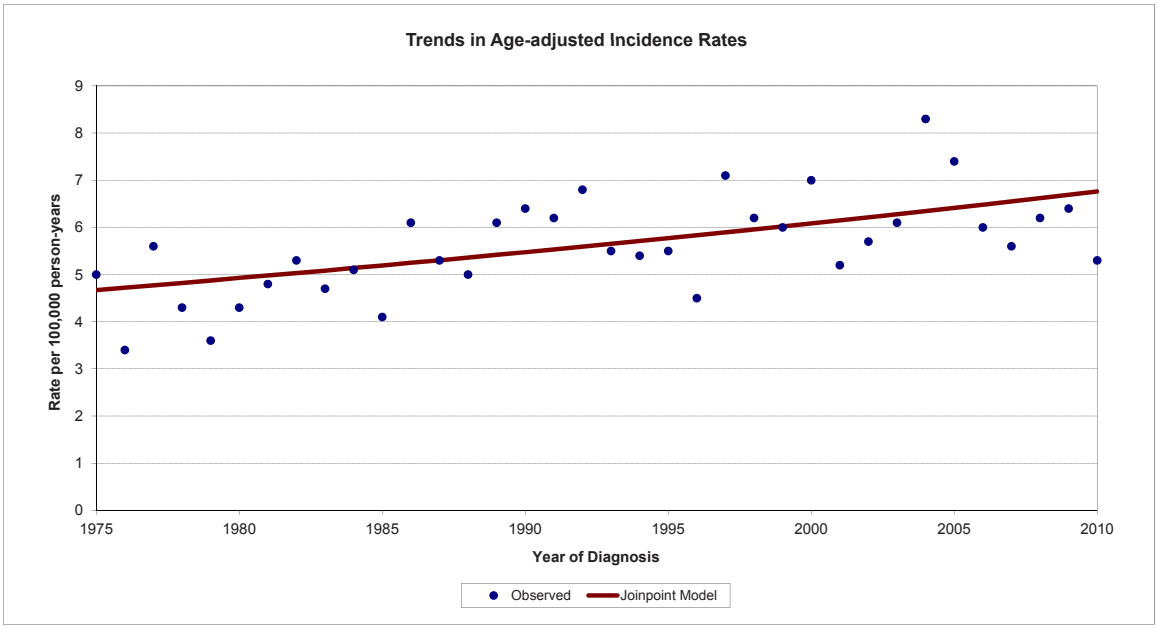
Trends in prostate cancer incidence are complicated, owing to the adoption of the Prostate-Specific Antigen (PSA) screening test in the late 1980s and early 1990s. From 1975 to 1988, prostate cancer incidence increased in Idaho at a rate of about 2.4% per year. From 1988 to 1992, prostate cancer incidence increased at a rate of about 14.2% per year. For the period 1992 to 1995, prostate cancer rates dropped by about 14.5% per year. From 1995 to 2001, the rates increased about 4.0% per year. Since 2001, the rate has decreased about 2.7% 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



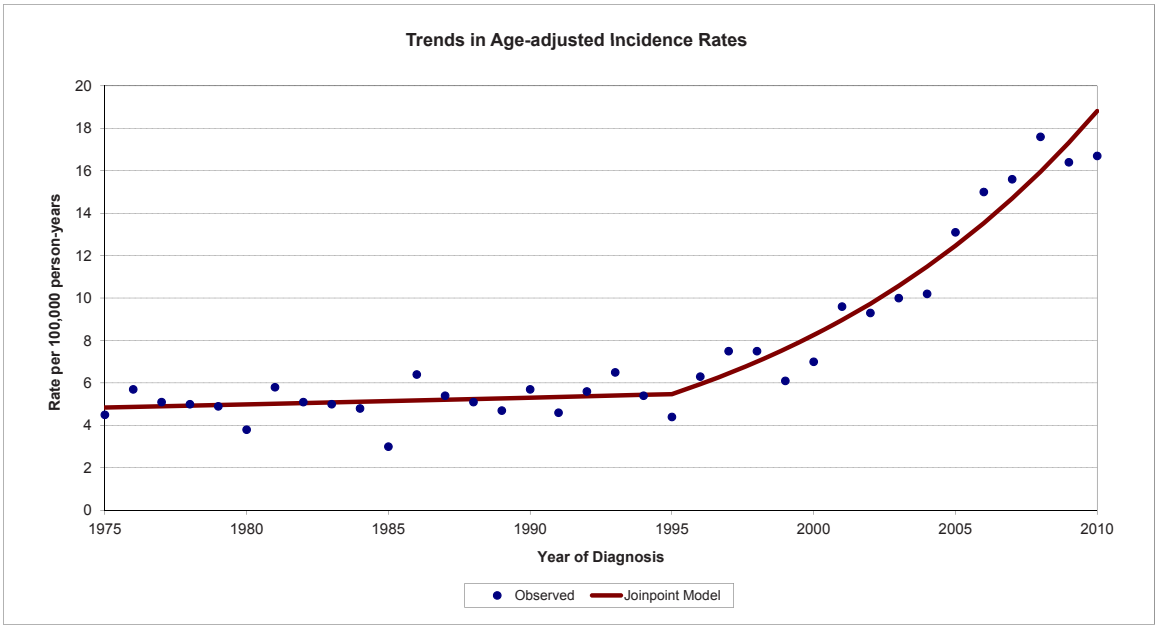
Stomach cancer incidence decreased at a rate of about 1.6% per year in Idaho from 1975 to 2010. Stomach cancer incidence trends over time were similar for males and females although stomach cancer incidence rates among males were about twice as high as among females.

Testis



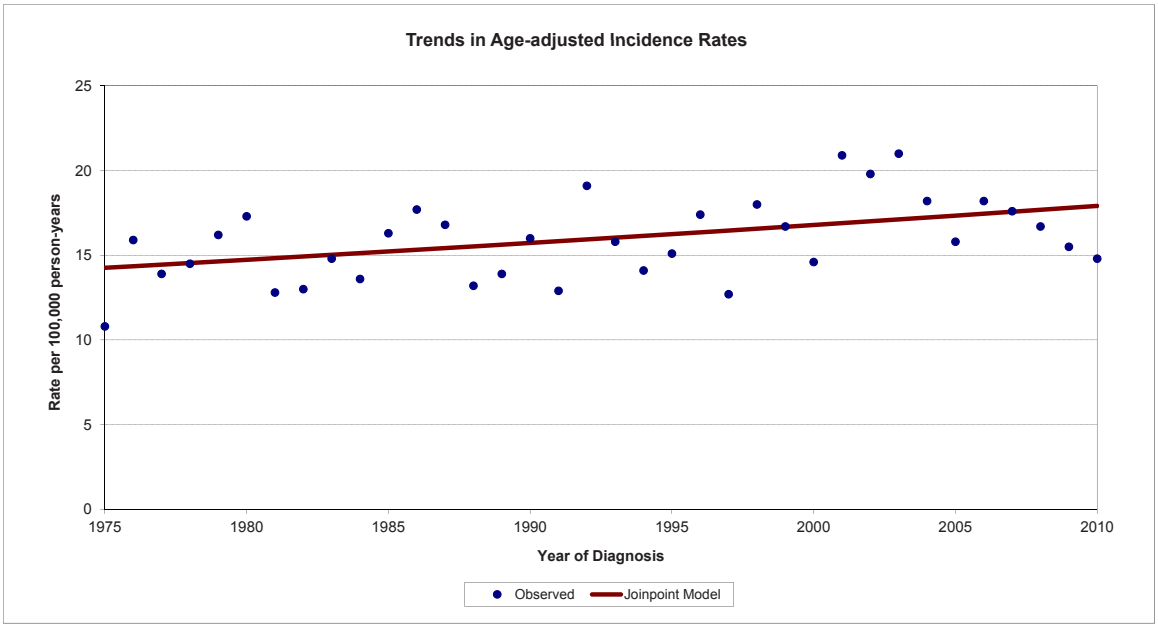
Testis cancer incidence increased at a rate of about 1.1% per year in Idaho from 1975 to 2010.

Thyroid



Thyroid cancer incidence was essentially stable in Idaho from 1975 to 1995, after which rates increased by about 8.6% per year. 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 2010. For females, thyroid cancer incidence was stable from 1975 to 1994, after which rates increased by about 8.7% per year. 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 0.7% per year in Idaho from 1975 to 2010. 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
2006-2010

Idaho Cancer Incidence Rates by Race and Ethnicity, 2006 - 2010

Primary Site	All Races (includes Hispanic)		White Non-Hispanic		Hispanic (any race)		Black		American Indian/Alaska		Asian or Pacific Islander	
	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases
All Sites	455.6	34,767	458.5	32,684	348.7	1,097	308.3	76	338.7	276	271.6	221
Bladder	21.2	1,588	21.4	1,519	16.2	32	^	^	^	^	^	^
Brain - malignant	6.6	498	6.9	469	4.7	19	^	^	^	^	^	^
Brain and other CNS - non-malignar	9.9	742	9.7	673	10.2	37	^	^	^	^	^	^
Breast	119.5	4,758	121.6	4,504	80.2	137	^	^	76.7	38	85.4	46
Breast - in situ	24.5	972	24.4	895	19.1	35	^	^	^	^	31.8	16
Cervix	6.0	219	5.7	190	6.4	20	^	^	^	^	^	^
Colorectal	38.8	2,945	38.8	2,767	28.1	80	^	^	48.6	34	30.7	24
Corpus Uteri	22.7	927	22.4	853	19.3	38	^	^	^	^	^	^
Esophagus	4.4	348	4.6	337	^	^	^	^	^	^	^	^
Hodgkin Lymphoma	2.8	210	3.0	193	1.5	11	^	^	^	^	^	^
Kidney and Renal Pelvis	14.0	1,070	14.0	996	13.6	47	^	^	13.7	13	^	^
Larynx	2.8	219	2.9	211	^	^	^	^	^	^	^	^
Leukemia	15.4	1,162	15.4	1,078	12.7	56	^	^	13.2	11	^	^
Liver and Bile Duct	4.5	359	4.0	299	12.8	40	^	^	13.3	10	^	^
Lung and Bronchus	53.5	4,036	54.3	3,888	33.4	75	54.5	11	51.6	37	33.4	22
Melanoma of the Skin	23.1	1,748	24.6	1,709	8.0	27	^	^	^	^	^	^
Myeloma	5.9	451	5.8	412	7.4	22	^	^	^	^	^	^
Non-Hodgkin Lymphoma	19.3	1,460	19.3	1,365	18.4	60	^	^	13.4	11	^	^
Oral Cavity and Pharynx	12.0	930	12.2	884	5.5	14	^	^	^	^	^	^
Ovary	12.5	504	12.8	481	6.5	13	^	^	^	^	^	^
Pancreas	11.6	880	11.6	835	15.4	35	^	^	^	^	^	^
Prostate	152.9	5,661	150.6	5,273	105.5	135	152.6	20	98.4	35	52.5	17
Stomach	5.2	387	4.9	341	8.8	22	^	^	^	^	17.4	12
Testis	5.9	216	6.3	195	3.2	17	^	^	^	^	^	^
Thyroid	16.3	1,207	16.9	1,112	12.2	65	^	^	8.5	10	^	^
Pediatric Age 0 to 19	16.5	388	17.4	326	13.5	51	^	^	^	^	^	^

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, 2012.[17]

APPENDIX B

2010 POPULATION BY HEALTH DISTRICT, GENDER, AND AGE GROUP

	HD 1	HD 2	HD 3	HD 4	HD 5	HD 7	STATE
Males							
< 5	6,691	2,980	11,651	16,244	7,923	9,858	62,376
5 to 9	7,150	2,892	11,513	16,870	7,710	8,717	61,844
10 to 14	7,560	3,098	11,256	16,236	7,232	8,140	60,108
15 to 19	7,556	4,389	11,777	15,133	7,136	8,067	58,872
20 to 24	5,660	5,835	11,635	14,830	5,832	9,467	55,193
25 to 29	5,953	3,749	9,870	16,905	6,283	8,132	54,949
30 to 34	6,050	2,952	9,507	16,024	6,272	6,950	52,499
35 to 39	6,151	2,782	8,890	15,848	5,551	5,678	48,861
40 to 44	6,617	2,876	8,695	15,389	5,406	5,320	47,994
45 to 49	7,390	3,332	8,791	15,737	6,108	6,038	51,386
50 to 54	7,899	3,722	8,884	14,966	6,325	6,063	52,121
55 to 59	7,917	3,753	8,370	13,353	5,695	5,499	48,420
60 to 64	7,361	3,374	7,318	11,315	4,845	4,551	41,949
65 to 69	5,680	2,655	5,800	7,640	3,861	3,380	31,449
70 to 74	4,214	2,079	4,220	5,155	2,848	2,500	22,858
75 to 79	2,805	1,489	2,957	3,494	2,096	1,802	16,009
80 to 84	1,884	1041	2,059	2,573	1,461	1223	11,156
85+	1,339	916	1,818	2,202	1,215	997	9,138
Total	105,877	53,914	145,011	219,914	93,799	102,382	787,182
	HD 1	**HD 2**	**HD 3**	**HD 4**	**HD 5**	**HD 7**	**STATE**
Females							
< 5	6,326	2,821	11,126	15,466	7,651	9,220	59,228
5 to 9	6,789	2,769	11,103	16,241	7,346	8,478	59,263
10 to 14	7,171	2,841	10,643	15,649	6,869	7,549	56,873
15 to 19	6,759	3,949	10,922	13,742	6,549	9,927	56,364
20 to 24	5,552	4,949	10,947	14,244	5,453	10,022	53,776
25 to 29	6,021	3,180	9,666	15,507	5,989	7,230	52,032
30 to 34	6,037	2,575	9,297	15,318	5,749	6,468	50,317
35 to 39	6,102	2,541	8,790	14,826	5,392	5,644	47,399
40 to 44	6,623	2,843	8,405	14,846	5,182	5,188	46,846
45 to 49	7,784	3,407	9,141	15,423	6,019	5,882	51,808
50 to 54	8,477	3,765	9,106	15,260	6,281	5,921	53,091
55 to 59	8,393	3,667	8,537	13,701	5,703	5,362	49,220
60 to 64	7,452	3,219	7,570	11,215	4,982	4,498	42,179
65 to 69	5,641	2,706	6,152	8,168	3,918	3,505	32,562
70 to 74	4,035	1,951	4,299	5,674	3,006	2,527	23,645
75 to 79	2,998	1,589	3,404	4,351	2,395	1,991	18,337
80 to 84	2,282	1,305	2,742	3,588	1,896	1,683	14,577
85+	2,552	1,501	3,247	4,214	2,101	1,682	16,403
Total	106,994	51,578	145,097	217,433	92,481	102,777	783,920
Total	212,871	105,492	290,108	437,347	186,280	205,159	1,571,102

Source: National Center for Health Statistics, 2012.