Annual Report of the Cancer Data Registry of Idaho

Cancer in Idaho – 2008

December 2010

CDRI Cancer Data Registry of Idaho

Idaho Hospital Association

IDAHO DEPARTMENT OF HEALTH & WELFARE

CANCER IN IDAHO - 2008

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PREFACE

"Cancer in Idaho - 2008," the thirty-second annual report of the Cancer Data Registry of Idaho (CDRI), contains data on cancer cases diagnosed during 2008 among Idaho residents. These 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 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 5U58DP000767-04. The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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BACKGROUND

Introduction to the Cancer Data Registry of Idaho (CDRI)

Purpose of the Registry

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

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

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, 6th edition*, and the *Collaborative Staging Manual, Version 1.04.*[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.[6-8] Beginning with cases diagnosed in 2007, new rules for coding multiple primaries and histologies were applied.[9] These rules standardize the process of determining the number of primary cases and provide guidance for identifying histologic lineages.

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. In addition to computerized edits, cases are manually reviewed for errors.

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 seven sections. Section I focuses on the 23 most common cancer sites and all sites combined and presents age-adjusted incidence rates, numbers of cases, numbers of deaths, counts by county, stage of disease at time of diagnosis, risk factors, special notes, age-adjusted incidence rate comparisons by health district, and age-specific rates by gender. Comparison rates from the National Cancer Institute's SEER program and *United States Cancer Statistics* (USCS)[10] are provided. Only registries whose data meet specified data quality criteria are included in USCS statistics. For the latest USCS report (2006 incidence), all states but Arizona and Wisconsin are included, representing approximately 96% 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 1975-2008.

Descriptive Summary by Gender and Race and Ethnicity

The data presented in this report cover cancer cases diagnosed among Idaho residents between January 1, 2008, and December 31, 2008. In this time frame, there were 7,396 cases of in-situ and invasive cancer diagnosed among Idaho residents (3,805 among males and 3,591 among females). By race and ethnicity, there were 6,838 cases among non-Hispanic whites, 249 among Hispanic whites, 14 cases among Blacks, 63 cases among Native Americans, and 46 cases among Asians/Pacific Islanders. One hundred eighty-six 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. 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 *Cancer in Idaho by Race and Ethnicity: 1990-2001*.[11]

Trends

There was a 1.9% decrease in the age-adjusted cancer incidence rates as published in the 2007 and 2008 annual reports. There was a notable increase in thyroid cancer incidence among residents of Idaho Public Health District 7, and a notable increase in cervical cancer incidence among residents of Idaho Public Health District 3. See Section VII for more detailed long term trends in cancer incidence.

Population Description

The population of the state of Idaho on July 1, 2008, was estimated to be 1,527,506 (767,412 males and 760,094 females). Population estimates were obtained from the National Center for Health Statistics.[12] Idaho is comprised of 44 counties grouped into seven health districts. The composition of the health districts and their population estimates by gender as used in this report are shown below:

Health District	Counties	Male	Female
District 1	Benewah, Bonner, Boundary, Kootenai, Shoshone	105,456	106,203
District 2	Clearwater, Latah, Lewis, Idaho, Nez Perce	52,635	51,223
District 3	Adams, Canyon, Gem, Owyhee, Payette, Washington	124,434	123,953
District 4	Ada, Boise, Elmore, Valley	215,198	209,784
District 5	Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, Twin Falls	89,508	87,869
District 6	Bannock, Bear Lake, Bingham, Butte, Caribou, Franklin, Oneida, Power	82,115	83,021
District 7	Bonneville, Clark, Custer, Fremont, Jefferson, Lemhi, Madison, Teton	98,066	98,041

SUMMARY MEASURES OF CANCER BURDEN IN IDAHO - 2008

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 2007 to 2008
All Sites	6,901	2,503	66.0	72.0	46,250	19,082	12.9	-1.9%
Bladder	326	69	73.0	79.0	2,036	179	7.8	7.6%
Brain	112	73	57.5	61.5	441	1,110	19.8	4.3%
Breast	943	180	62.0	68.0	9,878	1,795	15.1	-4.1%
Cervix	44	21	45.0	56.0	640	402	20.1	28.7%
Colorectal	612	218	69.0	71.5	3,859	1,806	14.2	-0.9%
Corpus Uteri	185	27	62.0	72.0	1,947	191	9.1	-5.2%
Esophagus	71	72	68.0	69.0	127	657	12.9	-1.6%
Hodgkin Lymphoma	49	9	28.0	58.0	648	163	20.4	21.8%
Kidney	211	61	63.0	71.0	1182	446	10.6	-3.5%
Larynx	45	7	63.0	67.0	319	78	13.0	-10.0%
Leukemia	209	109	70.0	73.0	1141	1,000	17.5	-2.4%
Liver and Bile Duct	72	56	58.0	67.0	70	615	15.8	11.5%
Lung and Bronchus	824	633	71.0	72.0	1,295	3,926	10.2	0.1%
Melanoma of Skin	314	50	60.0	67.5	3,232	588	15.5	-10.5%
Myeloma	88	52	71.0	77.5	278	252	10.9	6.4%
Non-Hodgkin Lymphoma	311	95	67.0	77.0	1,809	498	11.9	5.2%
Oral Cavity and Pharynx	175	41	64.0	69.0	1,168	378	12.6	2.8%
Ovary	92	69	68.0	71.0	683	524	11.6	-22.0%
Pancreas	161	155	71.0	72.0	137	1,064	11.4	-4.7%
Prostate	1,077	161	68.0	82.0	9,931	300	6.4	-11.6%
Stomach	79	51	70.0	72.0	198	331	11.4	-0.3%
Testis	46	1	30.0	-	832	-	-	11.5%
Thyroid	259	10	50.0	70.0	2,053	61	8.6	11.9%

Notes:

Incident cases include all invasive and bladder in situ cases newly diagnosed among Idaho residents in 2008.

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 2008 but underestimates complete prevalence due to an unknown number of live cases diagnosed prior to 1970.

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

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

Technical Notes

Age-adjusted Incidence Rates

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

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

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

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

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

Of the total number of invasive and in-situ cases for 2008 (7,396), a total of 6,901 cases (6,714 invasive and 187 bladder in-situ) were used for calculating age-adjusted incidence rates. Of the 6,901 cases, 3,633 occurred among males and 3,268 occurred among females.

Age-specific Incidence Rates

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

Observed vs. Expected Numbers of Cases

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

Risk and Associated Factors

The "risk and associated factors" subsections in Section I were developed from extracts of *Cancer Epidemiology and Prevention*, the American Cancer Society's *Clinical Oncology*, and the *U.S. Department of Health and Human Services 11th Report on Carcinogens*.[13-15] Socio-economic 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 *Cancer in Idaho by Race and Ethnicity: 1990-2001*.[11]

Standard Site Analyses Categories

To facilitate interpretation of data and comparisons across registries, CDRI uses standardized groupings of site analysis categories. These groupings are consistent with the National Cancer Institute's SEER Program, the Center for Disease Control and Prevention's National Program of Cancer Registries (NPCR), and are adopted by NAACCR.[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.

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 17 registries and were calculated using SEER*Stat.[16]

USCS

United States Cancer Statistics (USCS) includes data from SEER and NPCR registries whose data meet specified data quality criteria.[10] For the latest USCS report (2006 incidence data), all states besides Arizona and Wisconsin are included, representing approximately 96% of the U.S. population.

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 6.5.0 software.[17] DEVCAN was used to calculate the probability of developing or dying of cancer using Idaho-specific cancer incidence and mortality data for the years 2004-2008. 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 3.4.3 software was used to model trends in age-adjusted cancer incidence rates.[18] For each joinpoint time segment, the estimated annual percent change (EAPC) was calculated by fitting a least squares regression line to the natural logarithm of the rates using calendar year as a covariate. 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

2008 SUMMARY ON ALL SITES COMBINED
AND
23 MOST COMMON SITES

ALL SITES

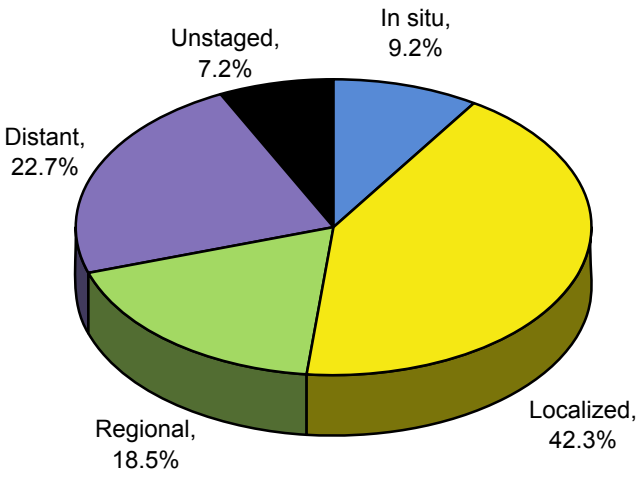
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	454.4	508.6	412.2
# of new invasive cases	6,714	3,488	3,226
# of new in-situ cases	682	317	365
# of deaths	2,503	1,308	1,195

Total Cases by County

Ada	1,711	Cassia	91	Lewis	37
Adams	21	Clark	5	Lincoln	24
Bannock	302	Clearwater	93	Madison	63
Bear Lake	30	Custer	24	Minidoka	83
Benewah	76	Elmore	114	Nez Perce	254
Bingham	192	Franklin	42	Oneida	20
Blaine	127	Fremont	53	Owyhee	60
Boise	47	Gem	102	Payette	113
Bonner	283	Gooding	76	Power	25
Bonneville	397	Idaho	107	Shoshone	91
Boundary	70	Jefferson	80	Teton	26
Butte	11	Jerome	106	Twin Falls	406
Camas	3	Kootenai	814	Valley	44
Canyon	799	Latah	123	Washington	63
Caribou	27	Lemhi	51		

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.

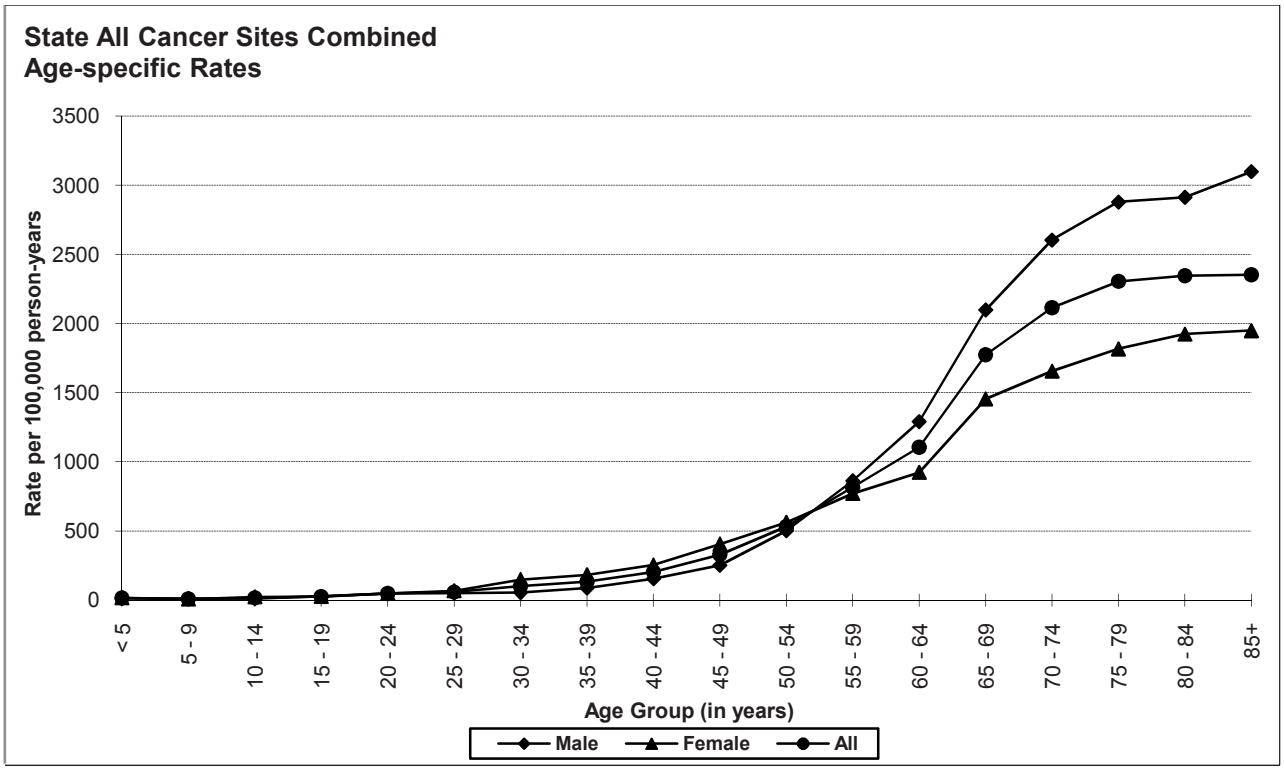
Diet Diets that are low in fresh fruits and vegetables have been associated with increased incidence of several cancers.

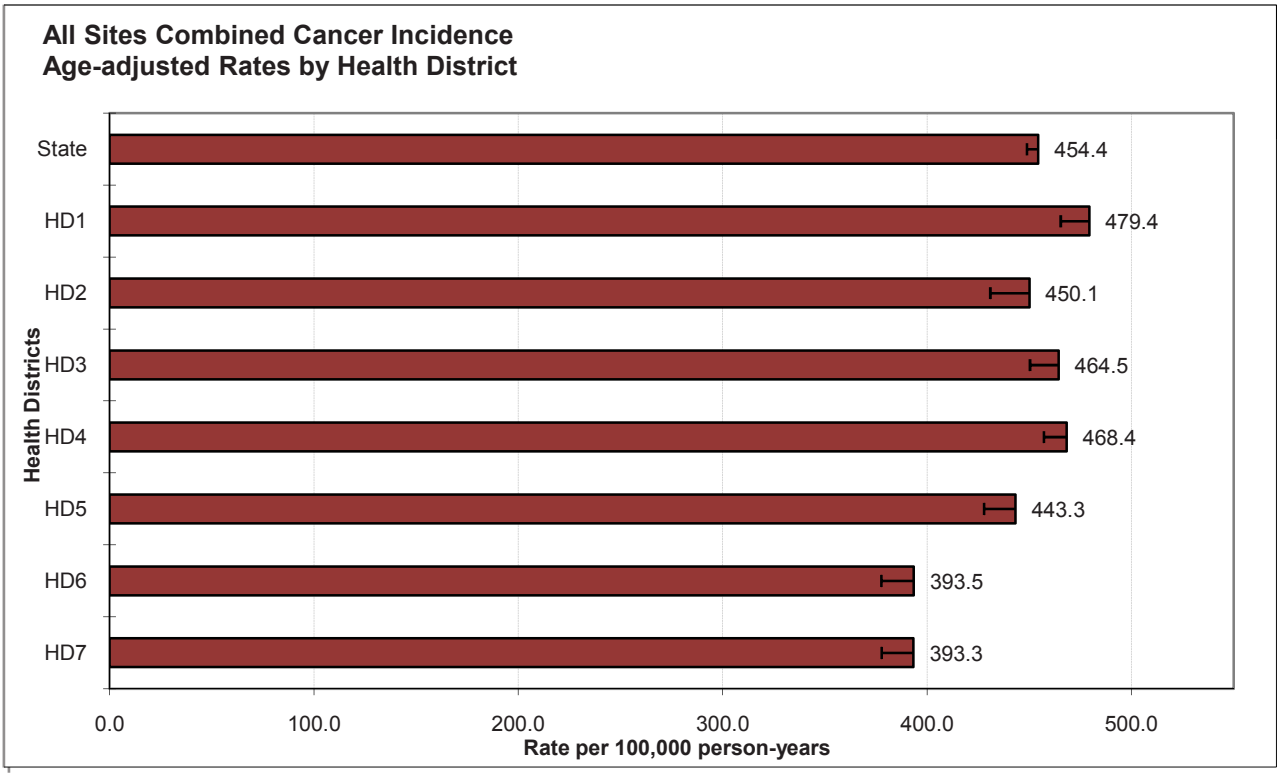
Other Tobacco use is the single most important risk factor for cancer incidence and mortality. Most cancers manifest a tendency to aggregate in families – close relatives of a cancer patient can be considered to have increased risk of that neoplasm, but not all forms of cancer. Excess risk is usually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

Special Notes

Mean age-adjusted incidence rate across health districts:	441.8
95% confidence interval on the mean age-adjusted incidence rate:	415.8- 467.8
Median age-adjusted incidence rate of health districts:	450.1
Range of age-adjusted incidence rate for health districts:	393.3- 479.4
SEER 17 rate (2007, all races):	458.0
USCS rate (2006, all races):	461.8

The incidence rates for all cancers combined were similar for males and females in Idaho until approximately age 55-59, after which rates for males rose dramatically. The highest rates for both males and females were observed in age groups after age 70, peaking in the age group 85+ for both males and females. Health District 1 had statistically significantly more cases of cancer than expected based upon rates for the remainder of Idaho, and Health Districts 6 and 7 had statistically significantly fewer cases than expected.


State All Cancer Sites Combined
Age-specific Rates
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
454.4
479.4
450.1
464.5
468.4
443.3
393.5
393.3
0.0
100.0
200.0
300.0
400.0
500.0
Rate per 100,000 person-years

BLADDER

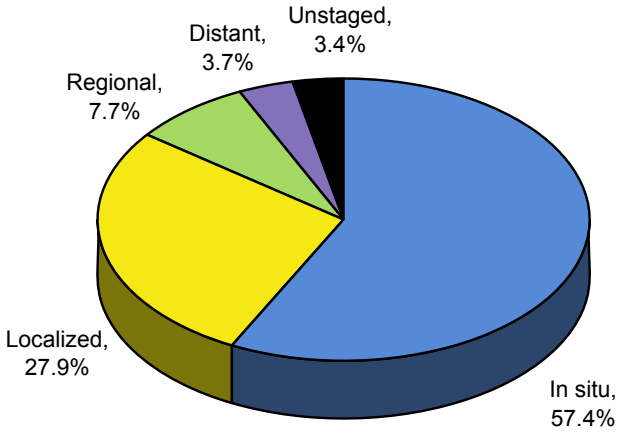
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	21.6	37.8	8.3
# of new invasive cases	139	113	26
# of new in-situ cases	187	145	42
# of deaths	69	51	18

Total Cases by County

Ada	75	Cassia	4	Lewis	-
Adams	1	Clark	1	Lincoln	2
Bannock	19	Clearwater	5	Madison	1
Bear Lake	2	Custer	-	Minidoka	7
Benewah	3	Elmore	6	Nez Perce	9
Bingham	8	Franklin	-	Oneida	-
Blaine	4	Fremont	3	Owyhee	3
Boise	3	Gem	3	Payette	5
Bonner	13	Gooding	1	Power	1
Bonneville	20	Idaho	4	Shoshone	6
Boundary	3	Jefferson	2	Teton	1
Butte	2	Jerome	4	Twin Falls	16
Camas	-	Kootenai	38	Valley	2
Canyon	33	Latah	6	Washington	2
Caribou	-	Lemhi	2		

Stage at Diagnosis - Bladder



Risk and Associated Factors

Age Rates usually increase steadily with age.

Gender Males have substantially higher rates than females.

Race Incidence rates are higher in Caucasians.

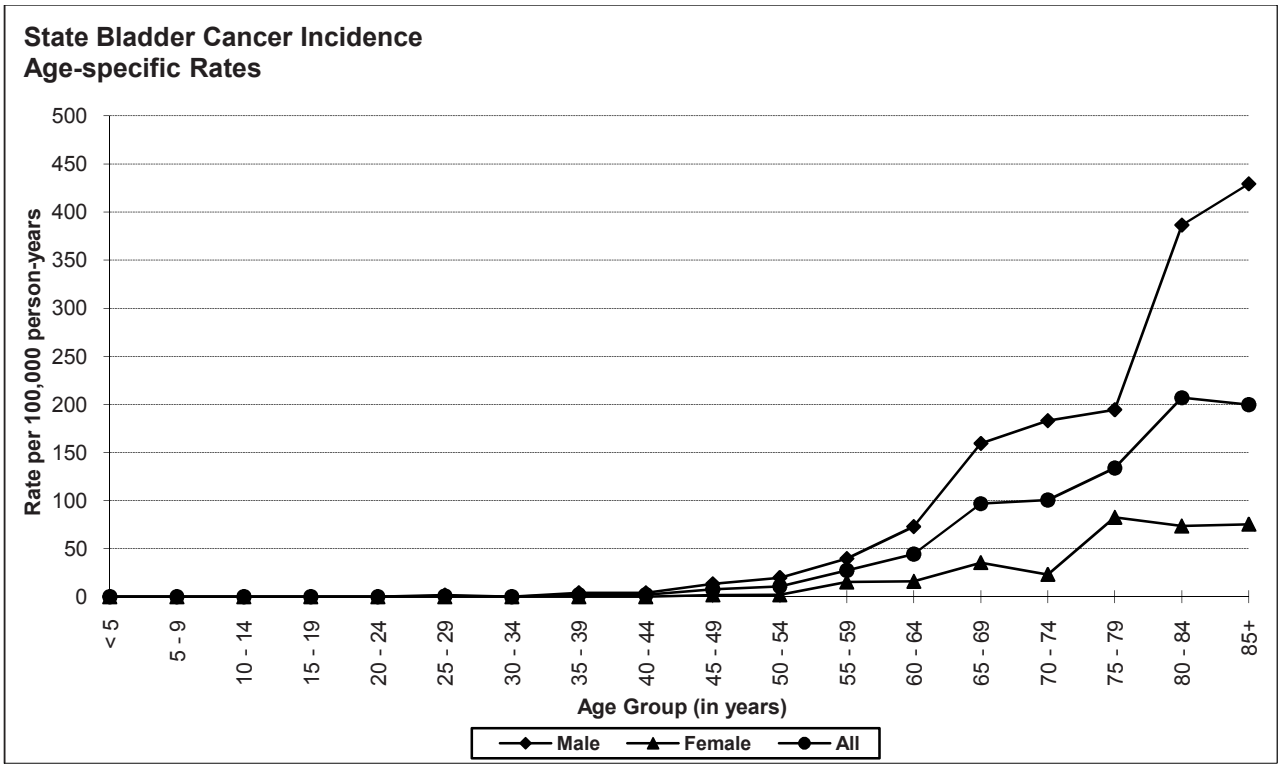
Occupation Truck drivers, likely via exposure to motor exhaust, are at increased risk. Occupational exposures, including manufacturers of certain dyes, painters, and aluminum, rubber, cable, and leather workers, have been shown to increase risk of bladder cancer. Exposure to permanent hair dyes may increase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

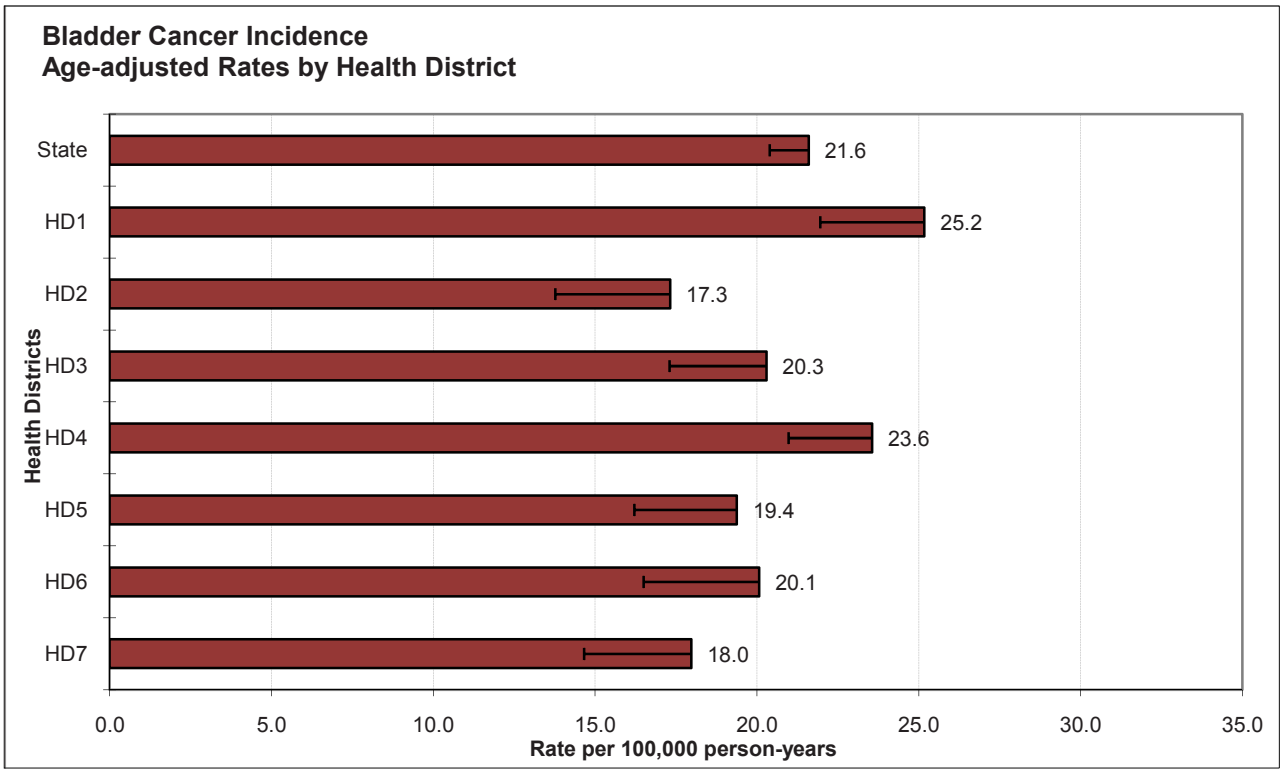
Other Tobacco consumption has been associated with a 2- to 5-fold higher incidence of bladder cancer and is attributable for a greater number of cases than other risk factors. Cyclophosphamide, a chemotherapeutic agent, and 4-amino-diphenyl are known human bladder carcinogens. Schistosoma hematobium 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:	20.5
95% confidence interval on the mean age-adjusted incidence rate:	18.4- 22.7
Median age-adjusted incidence rate of health districts:	20.1
Range of age-adjusted incidence rate for health districts:	17.3- 25.2
SEER 17 rate (2007, all races):	20.5
USCS rate (2006, all races):	20.5

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


State Bladder 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


Bladder Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
21.6
25.2
17.3
20.3
23.6
19.4
20.1
18.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
Rate per 100,000 person-years

BRAIN

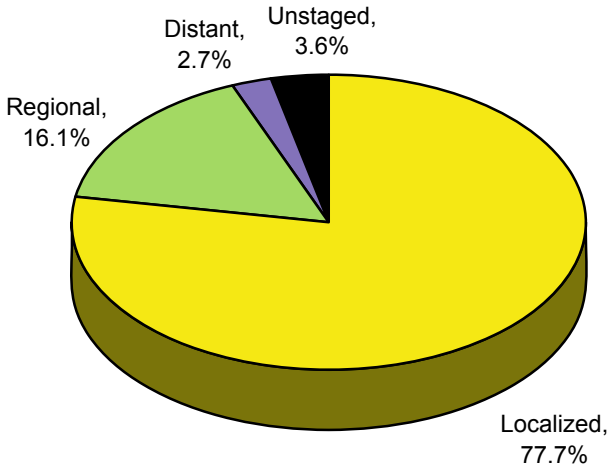
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	7.3	8.7	5.9
# of new invasive cases	112	66	46
# of new in-situ cases	0	0	0
# of deaths	70	39	31

Total Cases by County

Ada	31	Cassia	-	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	2	Clearwater	-	Madison	2
Bear Lake	1	Custer	1	Minidoka	2
Benewah	1	Elmore	2	Nez Perce	6
Bingham	3	Franklin	3	Oneida	-
Blaine	3	Fremont	1	Owyhee	2
Boise	-	Gem	-	Payette	2
Bonner	7	Gooding	-	Power	-
Bonneville	7	Idaho	1	Shoshone	1
Boundary	1	Jefferson	1	Teton	-
Butte	-	Jerome	1	Twin Falls	4
Camas	-	Kootenai	11	Valley	-
Canyon	13	Latah	1	Washington	2
Caribou	-	Lemhi	-		

Stage at Diagnosis - Brain



Risk and Associated Factors

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

Gender Males typically have higher rates than females.

Race & SES The incidence rate is higher in 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.

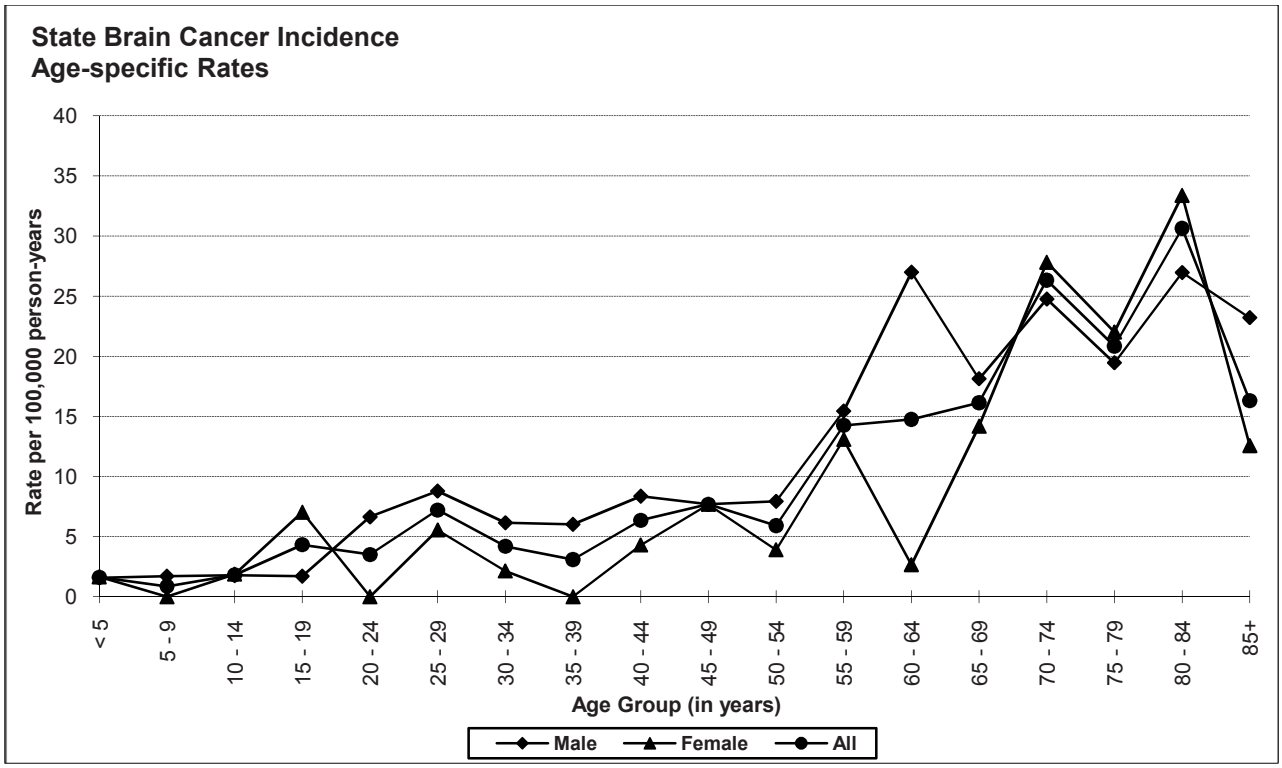
Occupation Vinyl chloride and ionizing radiation exposure are risk factors. Many occupational and environmental exposures have shown suggestive associations with elevated rates of brain cancer. Roofers, sheet metal workers, and rubber and plastic workers may be at elevated risk. Specific exposures underlying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

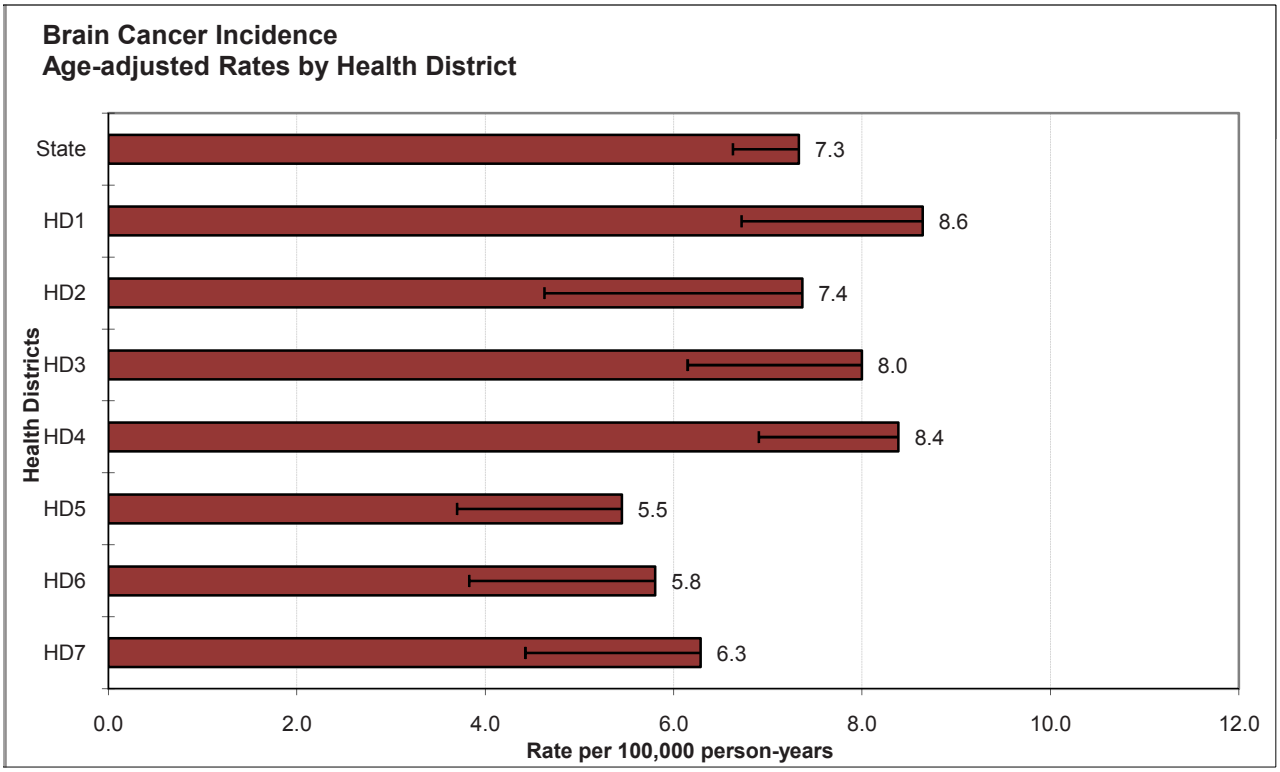
Other Human Immunodeficiency Virus (HIV) infected individuals and organ transplant recipients have an increased risk of developing brain lymphoma.

Special Notes

Mean age-adjusted incidence rate across health districts:	7.1
95% confidence interval on the mean age-adjusted incidence rate:	6.2- 8.1
Median age-adjusted incidence rate of health districts:	7.4
Range of age-adjusted incidence rate for health districts:	5.5- 8.6
SEER 17 rate (2007, all races):	6.0

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


State Brain Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
40
35
30
25
20
15
10
5
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All


Brain Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
7.3
8.6
7.4
8.0
8.4
5.5
5.8
6.3
0.0
2.0
4.0
6.0
8.0
10.0
12.0
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	10.2	7.4	12.8
# of new cases	152	52	100

Total Cases by County

Ada	50	Cassia	1	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	5	Clearwater	2	Madison	-
Bear Lake	-	Custer	2	Minidoka	1
Benewah	2	Elmore	2	Nez Perce	3
Bingham	5	Franklin	1	Oneida	1
Blaine	2	Fremont	-	Owyhee	-
Boise	-	Gem	5	Payette	3
Bonner	5	Gooding	1	Power	-
Bonneville	11	Idaho	2	Shoshone	3
Boundary	1	Jefferson	2	Teton	-
Butte	-	Jerome	2	Twin Falls	5
Camas	-	Kootenai	18	Valley	1
Canyon	14	Latah	-	Washington	1
Caribou	-	Lemhi	-		

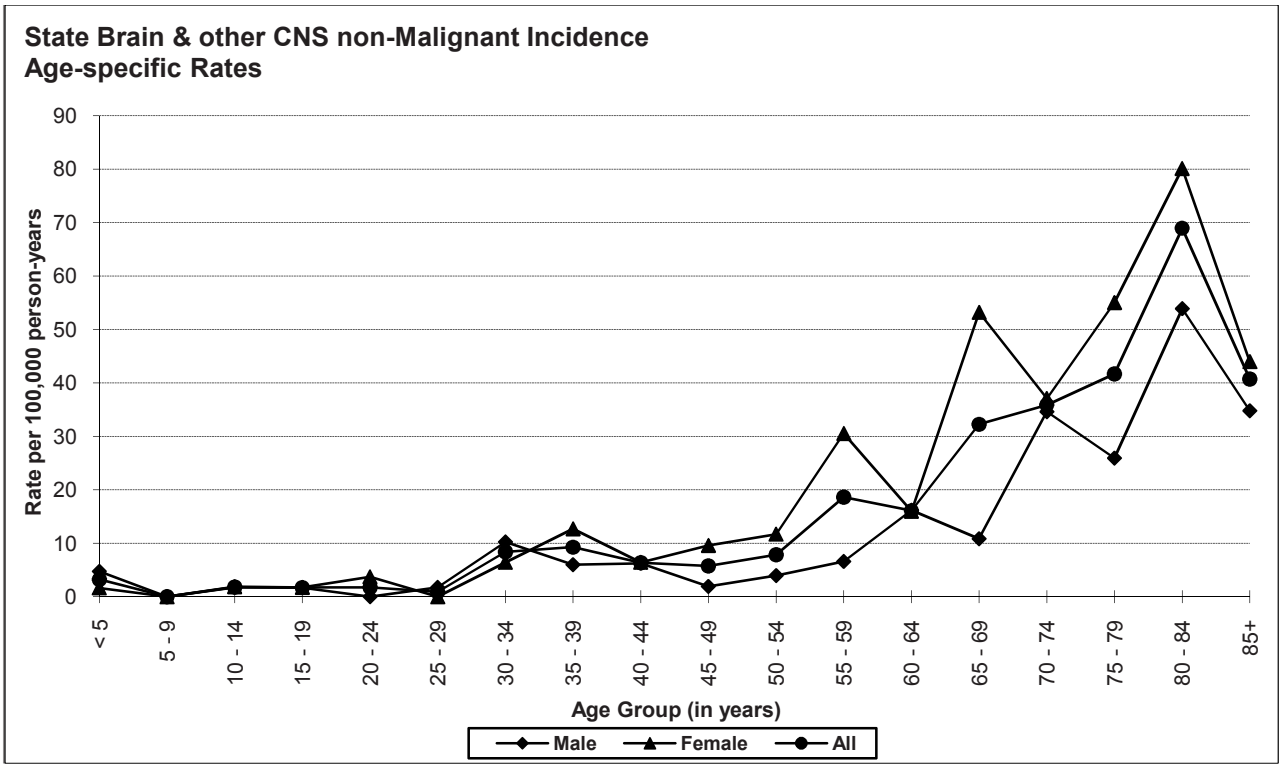
Background

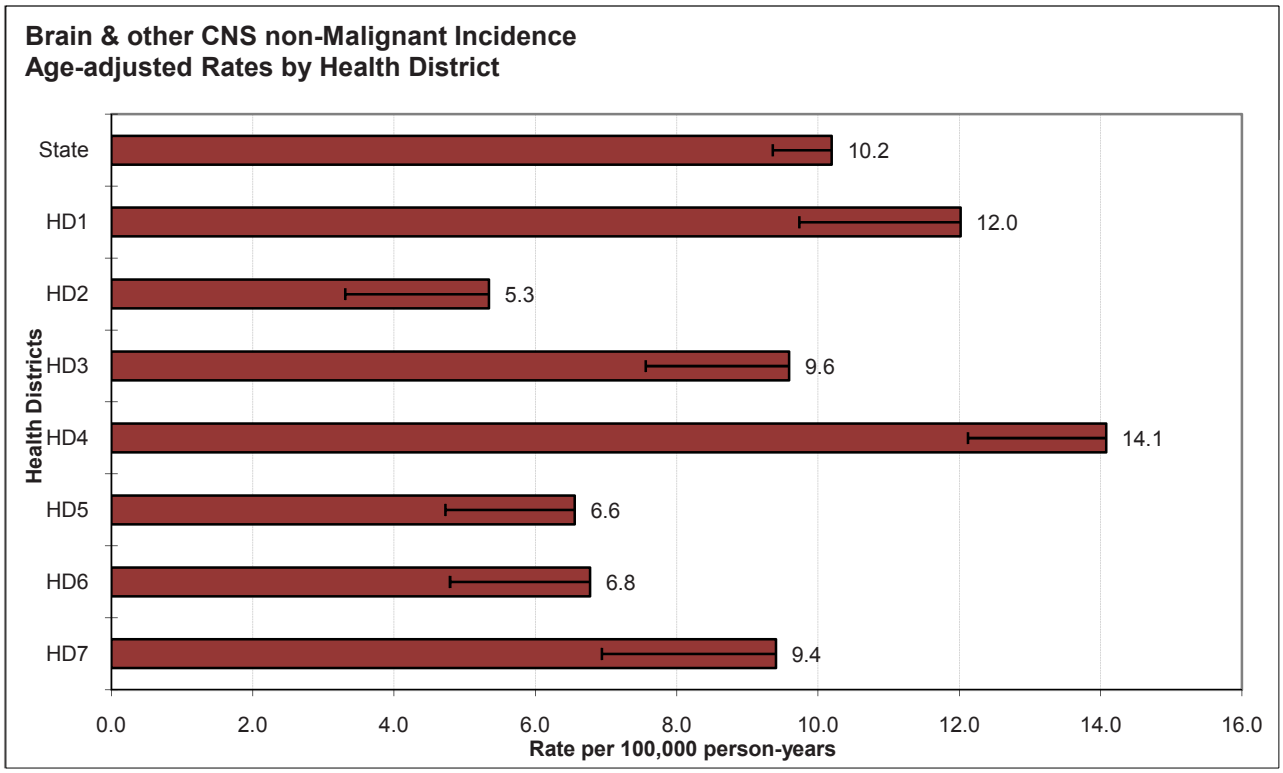
In 2007, as a result of Public Law 107-260, the publication United States Cancer Statistics 2004 Incidence and Mortality began to include tables for non-malignant brain tumors. Until this time, the only reference data were from the Central Brain Tumor Registry of the United States (CBTRUS), which has reported on data submitted from eighteen state central cancer registries, including Idaho.

Special Notes

Mean age-adjusted incidence rate across health districts:	9.1
95% confidence interval on the mean age-adjusted incidence rate:	6.8- 11.4
Median age-adjusted incidence rate of health districts:	9.4
Range of age-adjusted incidence rate for health districts:	5.3- 14.1
SEER 17 rate (2007, all races):	9.2

Health District 4 had statistically significantly more cases than expected based upon rates for the remainder of Idaho.


State Brain & other CNS non-Malignant Incidence
Age-specific Rates
Rate per 100,000 person-years
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
10.2
12.0
5.3
9.6
14.1
6.6
6.8
9.4
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
Rate per 100,000 person-years

BREAST

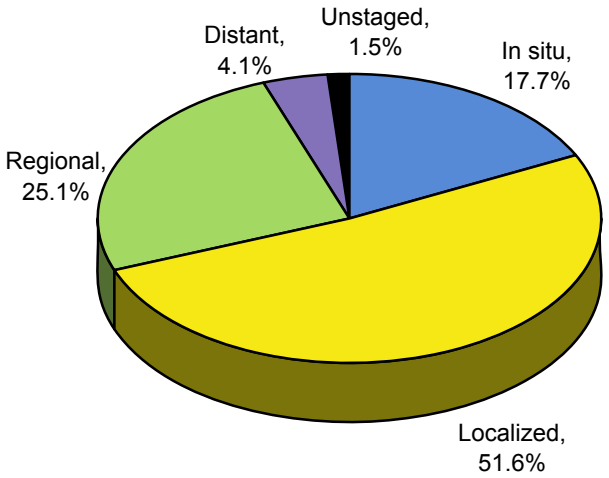
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	62.0	1.3	118.6
# of new invasive cases	943	8	935
# of new in-situ cases	203	0	203
# of deaths	180	3	177

Total Cases by County

Ada	239	Cassia	15	Lewis	-
Adams	3	Clark	1	Lincoln	1
Bannock	47	Clearwater	10	Madison	8
Bear Lake	1	Custer	1	Minidoka	11
Benewah	11	Elmore	9	Nez Perce	37
Bingham	24	Franklin	6	Oneida	6
Blaine	15	Fremont	4	Owyhee	6
Boise	4	Gem	13	Payette	15
Bonner	36	Gooding	8	Power	4
Bonneville	45	Idaho	5	Shoshone	11
Boundary	5	Jefferson	13	Teton	3
Butte	3	Jerome	9	Twin Falls	44
Camas	-	Kootenai	116	Valley	4
Canyon	104	Latah	21	Washington	9
Caribou	6	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.

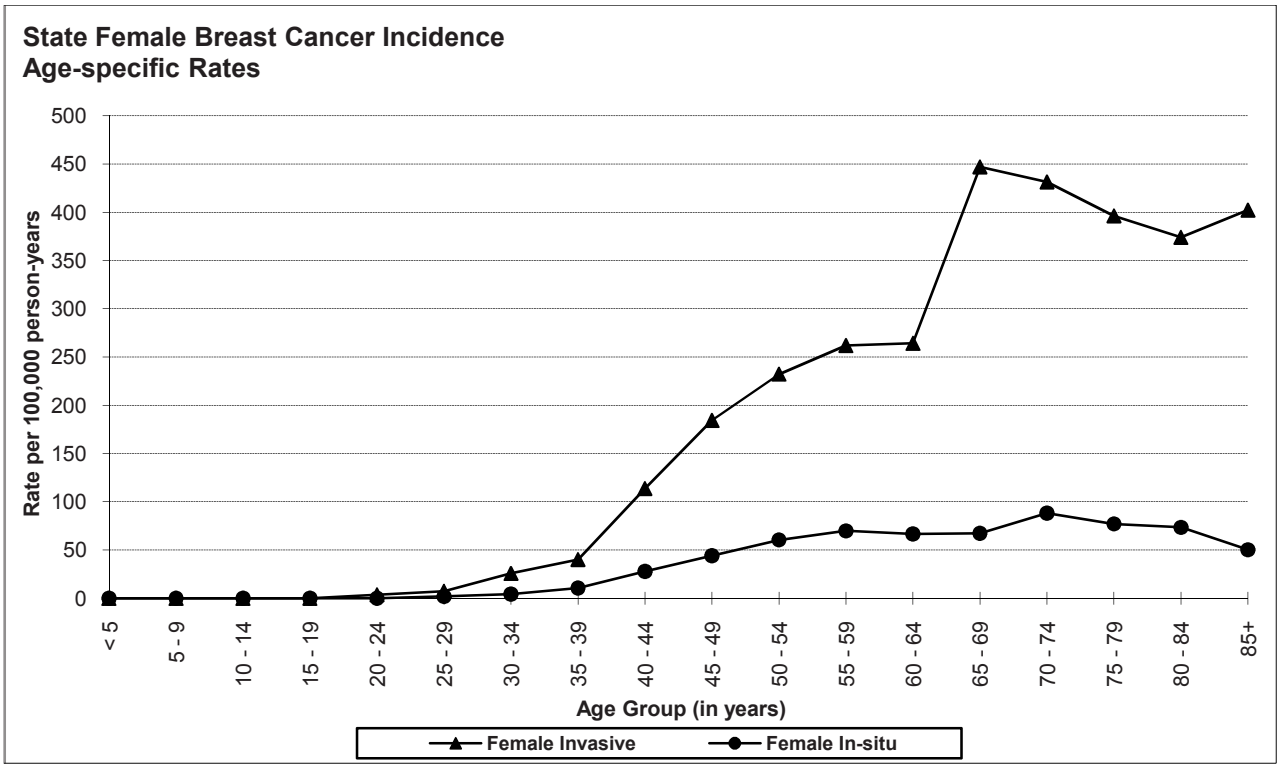
Hormonal There is evidence of hormonal influence in the risk of developing breast cancer. Longer intervals of menarche to the first full-term pregnancy and menarche to menopause, as well as menarche before age 13, have been associated with higher risks of breast cancer. Cumulative estrogen exposure,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

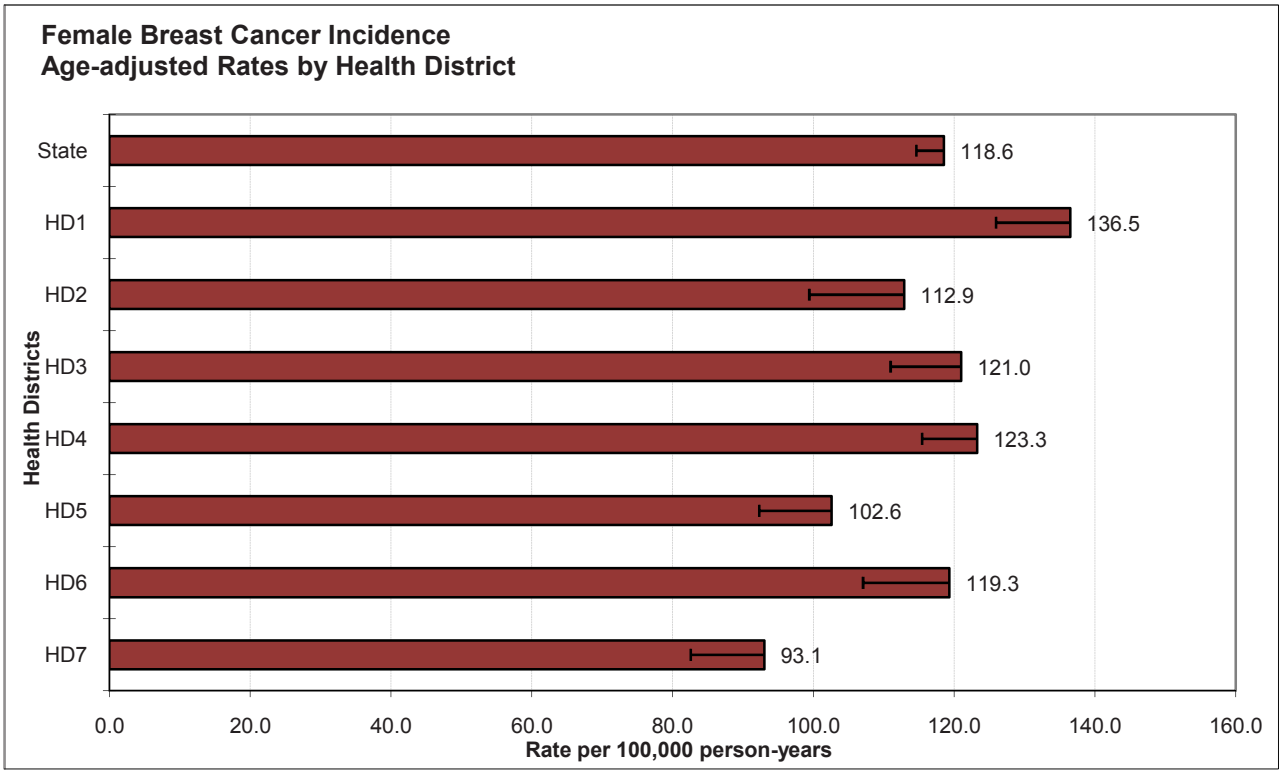
Other Alcohol consumption, high dietary fat intake, obesity (in postmenopausal women), sedentary life-style, and having a mother or sister with breast cancer have all been implicated as associated risk factors. Weight gain of 55 lbs or more after age 18 is associated with a 45% increased risk.

Special Notes

Mean age-adjusted incidence rate across health districts:	115.5	
95% confidence interval on the mean age-adjusted incidence rate:	105.0-	126.1
Median age-adjusted incidence rate of health districts:	119.3	
Range of age-adjusted incidence rate for health districts:	93.1-	136.5
SEER 17 rate (2007, all races):	123.4	
USCS rate (2006, all races):	119.3	

The vast majority of breast cancer cases occur among females. In Idaho during the year 2008, there were 8 cases of invasive breast cancer among males. The age-specific incidence rates of female breast cancer in Idaho in 2007 increased with age, peaking in the age group 65-69 for invasive cases. No cases were observed in women less than 20 years of age. Health District 1 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 7 had statistically significantly fewer cases than expected.


State Female Breast Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
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)
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
118.6
136.5
112.9
121.0
123.3
102.6
119.3
93.1
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

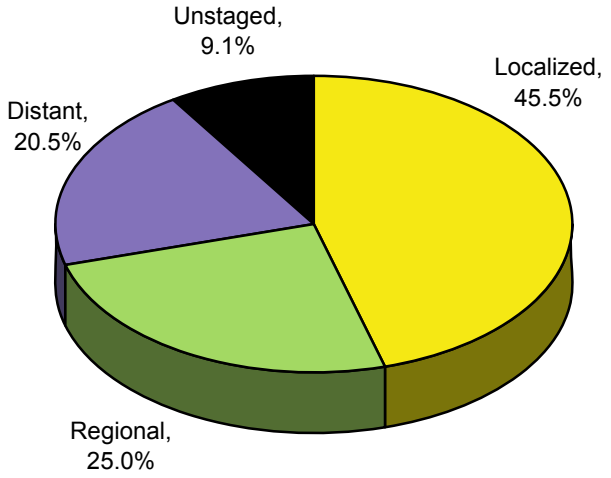
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	6.1
# of new invasive cases	-	-	44
# of new in-situ cases	-	-	n/a
# of deaths	-	-	21

Total Cases by County

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

Stage at Diagnosis - Cervix



Risk and Associated Factors

Age Cervical cancer occurs in adult women of any age. However, the majority of invasive cases are diagnosed in older women.

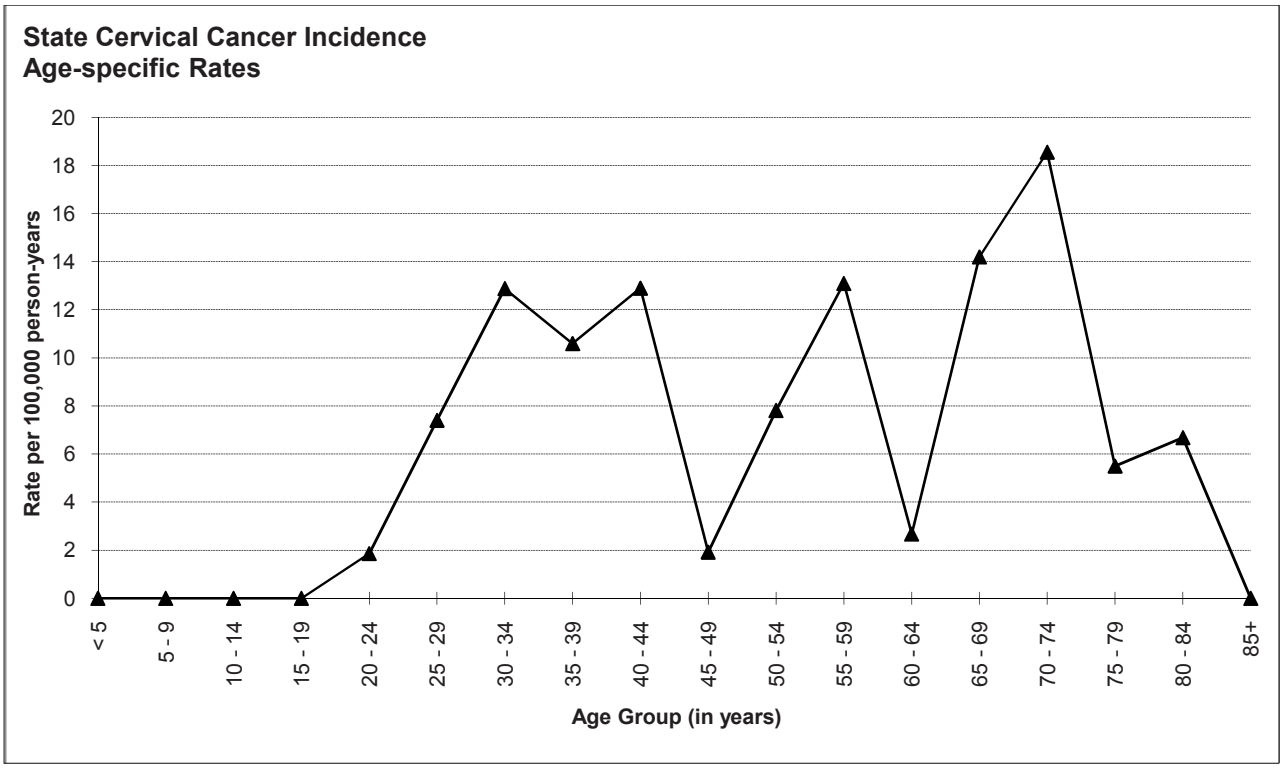
Race & SES African Americans, Hispanics, and women in lower income groups have been shown to experience higher rates.

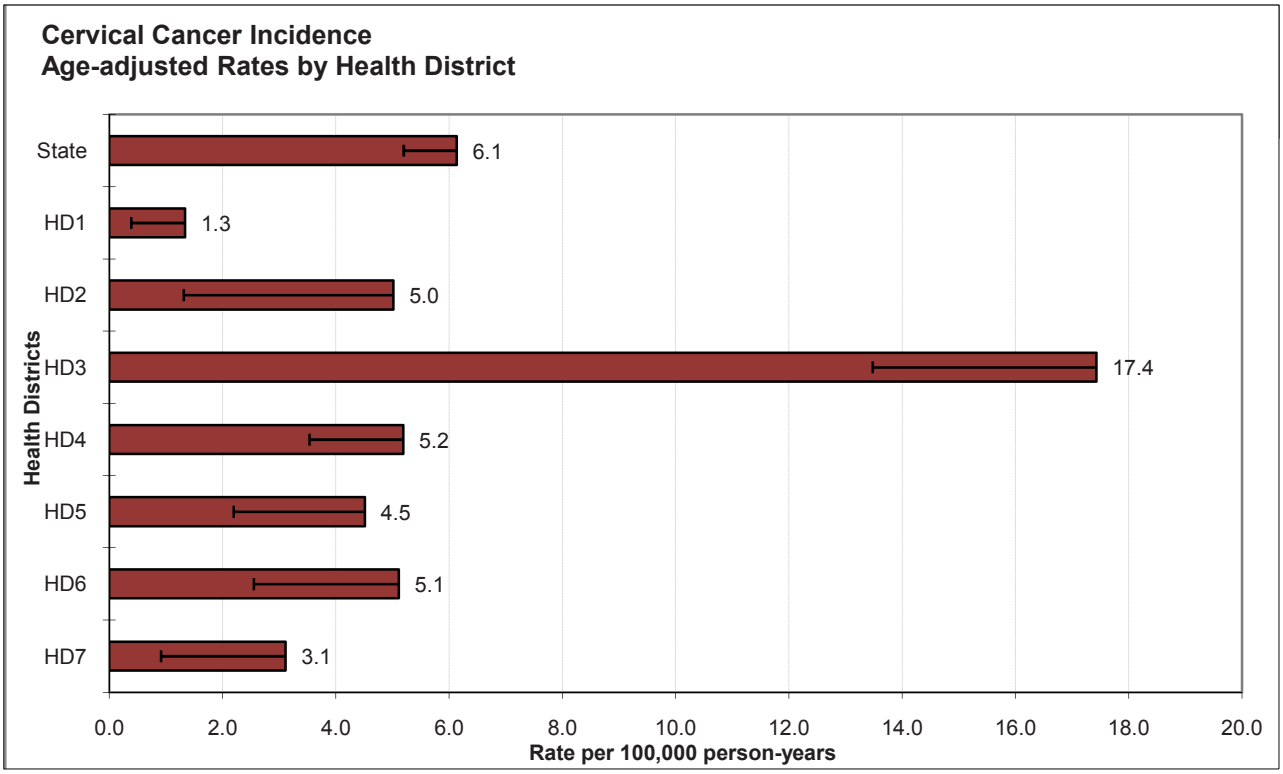
Other The large majority of cervical cancer cases worldwide can be attributed to human papilloma virus (HPV) infection. Of the at least 70 types of HPV known, types 16 and 18 are most closely associated with malignancy. Other risk factors that may be correlates, cofactors, or independent risk factors 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:	6.0
95% confidence interval on the mean age-adjusted incidence rate:	2.1- 9.8
Median age-adjusted incidence rate of health districts:	5.0
Range of age-adjusted incidence rate for health districts:	1.3- 17.4
SEER 17 rate (2007, all races):	7.8
USCS rate (2006, all races):	8.0

Increased screening with routine Pap tests, particularly among older and low-income women, has increased diagnostic rates and helped to reduce the incidence of invasive disease. Today, the vast majority of cases in younger women is diagnosed before the invasive stage, with cure rates approaching 100%. These pre-invasive cases are not included in this report. Health District 3 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 1 had statistically significantly fewer cases than expected.


State Cervical Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
0
2
4
6
8
10
12
14
16
18
20
< 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
6.1
1.3
5.0
17.4
5.2
4.5
5.1
3.1
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0
20.0
Rate per 100,000 person-years

COLORECTAL

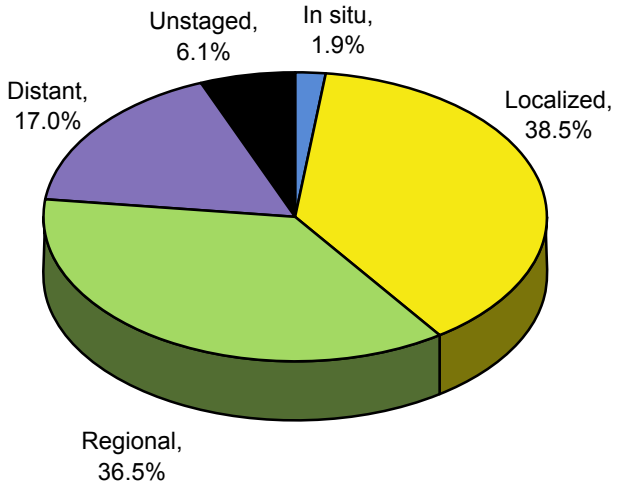
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	40.2	43.3	37.1
# of new invasive cases	612	307	305
# of new in-situ cases	12	8	4
# of deaths	218	97	121

Total Cases by County

Ada	146	Cassia	9	Lewis	3
Adams	4	Clark	-	Lincoln	3
Bannock	24	Clearwater	10	Madison	6
Bear Lake	5	Custer	2	Minidoka	8
Benewah	10	Elmore	6	Nez Perce	24
Bingham	15	Franklin	4	Oneida	1
Blaine	9	Fremont	4	Owyhee	2
Boise	3	Gem	14	Payette	9
Bonner	29	Gooding	4	Power	2
Bonneville	35	Idaho	18	Shoshone	10
Boundary	6	Jefferson	5	Teton	3
Butte	1	Jerome	10	Twin Falls	35
Camas	1	Kootenai	68	Valley	3
Canyon	59	Latah	7	Washington	2
Caribou	2	Lemhi	3		

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.

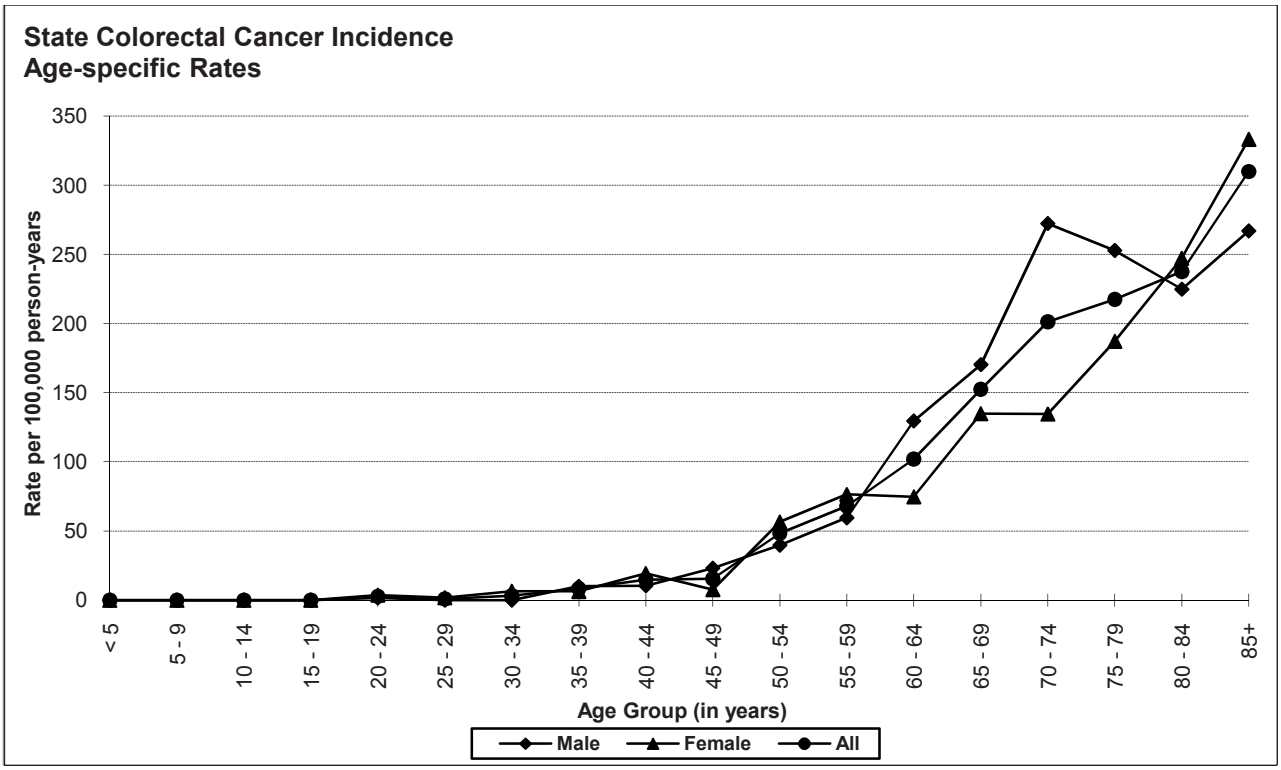
Diet There is strong evidence that high calorie diets and diets high in fat and low in fiber contribute to higher risks of colon cancer.

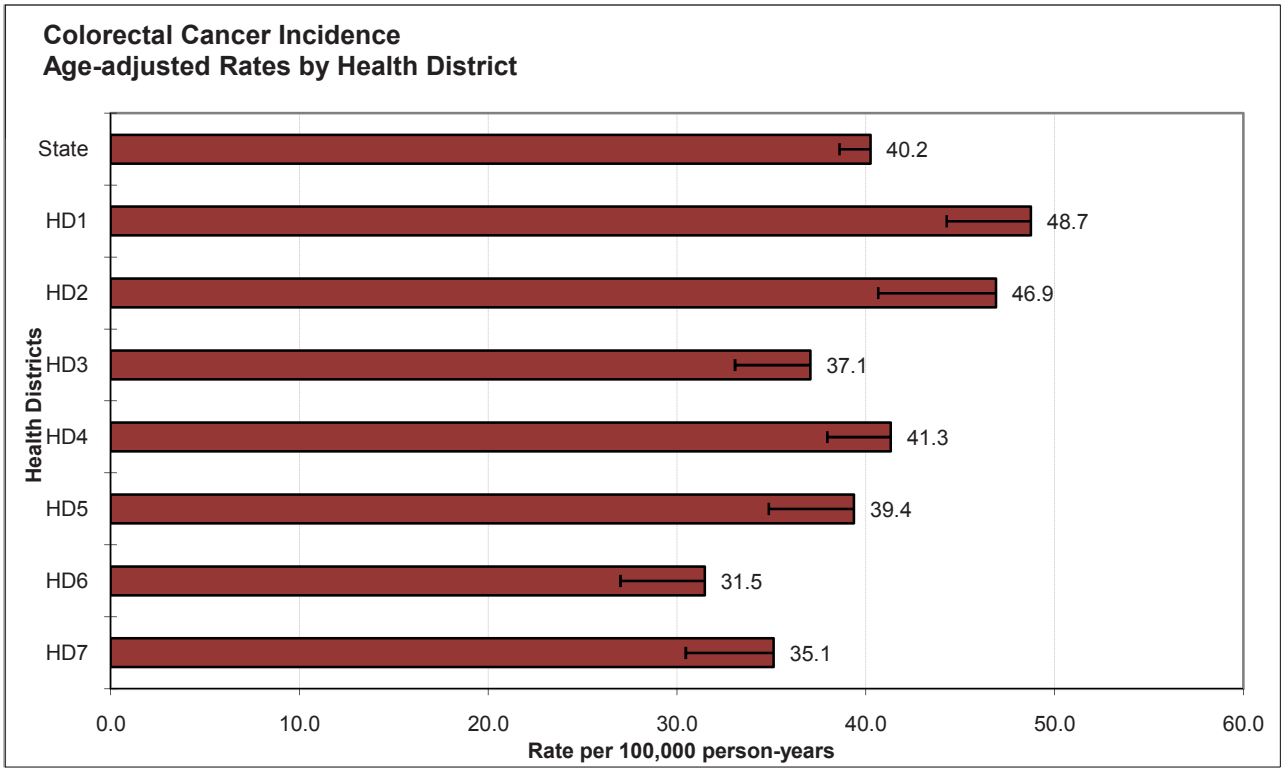
Other Individuals with a close family history of this cancer and those with a personal history of certain other cancers are at increased risk. Physical inactivity, obesity, and tobacco use are known risk factors for colorectal cancer. Cigarette smoking is significantly associated with colorectal cancer 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.

Special Notes

Mean age-adjusted incidence rate across health districts:	40.0
95% confidence interval on the mean age-adjusted incidence rate:	35.4- 44.6
Median age-adjusted incidence rate of health districts:	39.4
Range of age-adjusted incidence rate for health districts:	31.5- 48.7
SEER 17 rate (2007, all races):	45.5
USCS rate (2006, all races):	46.8

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 55. Health District 1 had significantly more 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
40.2
48.7
46.9
37.1
41.3
39.4
31.5
35.1
0.0
10.0
20.0
30.0
40.0
50.0
60.0
Rate per 100,000 person-years

CORPUS UTERI

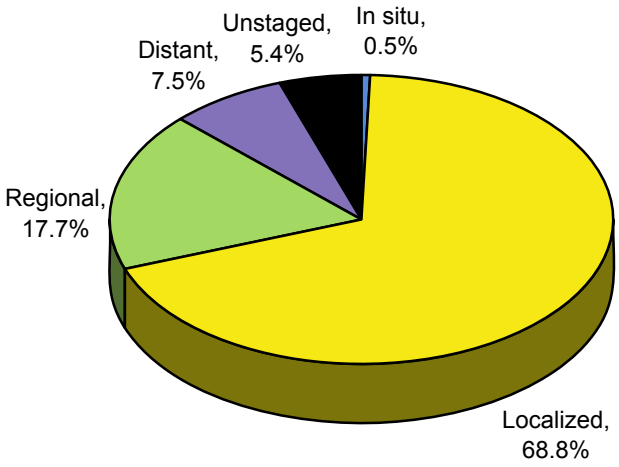
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	22.6
# of new invasive cases	-	-	185
# of new in-situ cases	-	-	1
# of deaths	-	-	27

Total Cases by County

Ada	29	Cassia	2	Lewis	2
Adams	-	Clark	-	Lincoln	4
Bannock	6	Clearwater	2	Madison	3
Bear Lake	1	Custer	-	Minidoka	-
Benewah	2	Elmore	3	Nez Perce	7
Bingham	5	Franklin	4	Oneida	-
Blaine	4	Fremont	-	Owyhee	1
Boise	3	Gem	2	Payette	2
Bonner	8	Gooding	3	Power	3
Bonneville	12	Idaho	1	Shoshone	2
Boundary	6	Jefferson	3	Teton	-
Butte	-	Jerome	5	Twin Falls	12
Camas	-	Kootenai	16	Valley	-
Canyon	22	Latah	5	Washington	2
Caribou	-	Lemhi	2		

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.

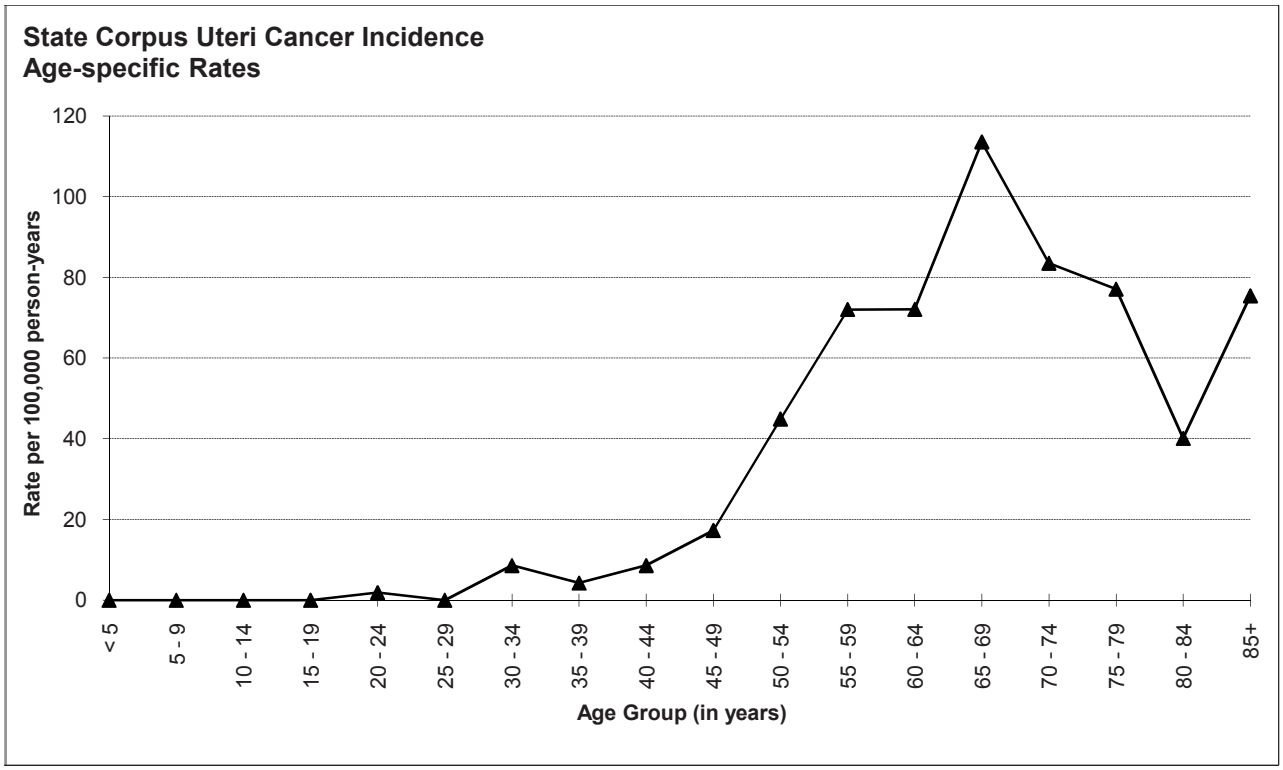
Diet Dietary fat may play a role in increased risk. Obesity and hypertension are common associated conditions of endometrial cancer.

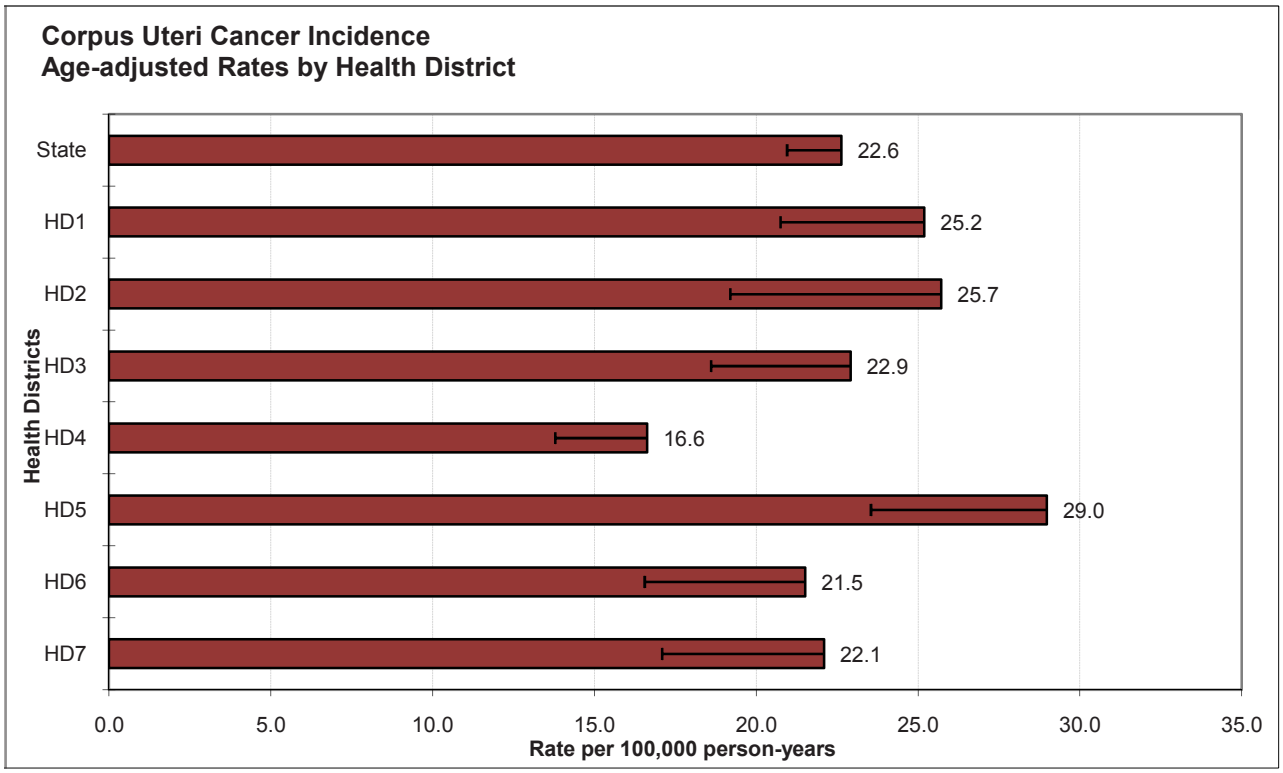
Hormonal Factors that elevate levels of estrogen or decrease progesterone levels enhance the risk. Women who have never carried a pregnancy to term are at a relatively high risk. Risk decreases as the number of pregnancies increases. An increased incidence of endometrial cancer has been found in association 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:	23.3
95% confidence interval on the mean age-adjusted incidence rate:	20.4- 26.2
Median age-adjusted incidence rate of health districts:	22.9
Range of age-adjusted incidence rate for health districts:	16.6- 29.0
SEER 17 rate (2007, all races):	24.0
USCS rate (2006, all races):	23.7

Few cases of endometrial cancer were diagnosed in persons less than 35 years of age. After age 54, there was a sharp increase in age-specific rates, peaking in the age group 65-69. Health District 4 had significantly 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
22.6
25.2
25.7
22.9
16.6
29.0
21.5
22.1
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
Rate per 100,000 person-years

ESOPHAGUS

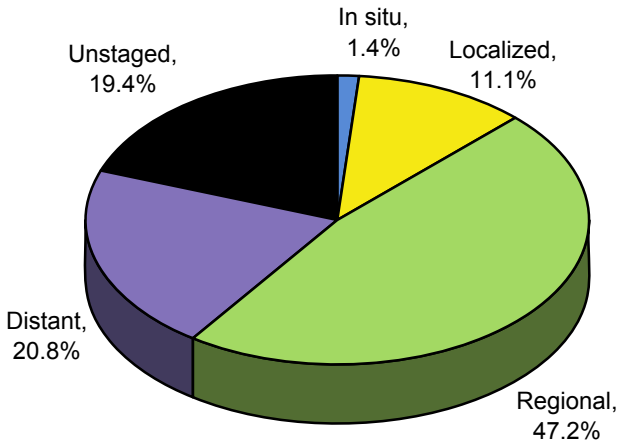
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.7	8.6	1.1
# of new invasive cases	71	62	9
# of new in-situ cases	1	1	0
# of deaths	72	58	14

Total Cases by County

Ada	13	Cassia	-	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	4	Clearwater	1	Madison	-
Bear Lake	1	Custer	-	Minidoka	2
Benewah	1	Elmore	3	Nez Perce	4
Bingham	3	Franklin	-	Oneida	-
Blaine	2	Fremont	-	Owyhee	-
Boise	1	Gem	2	Payette	-
Bonner	3	Gooding	-	Power	-
Bonneville	4	Idaho	2	Shoshone	1
Boundary	-	Jefferson	-	Teton	-
Butte	-	Jerome	-	Twin Falls	4
Camas	-	Kootenai	11	Valley	-
Canyon	6	Latah	-	Washington	-
Caribou	1	Lemhi	2		

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.

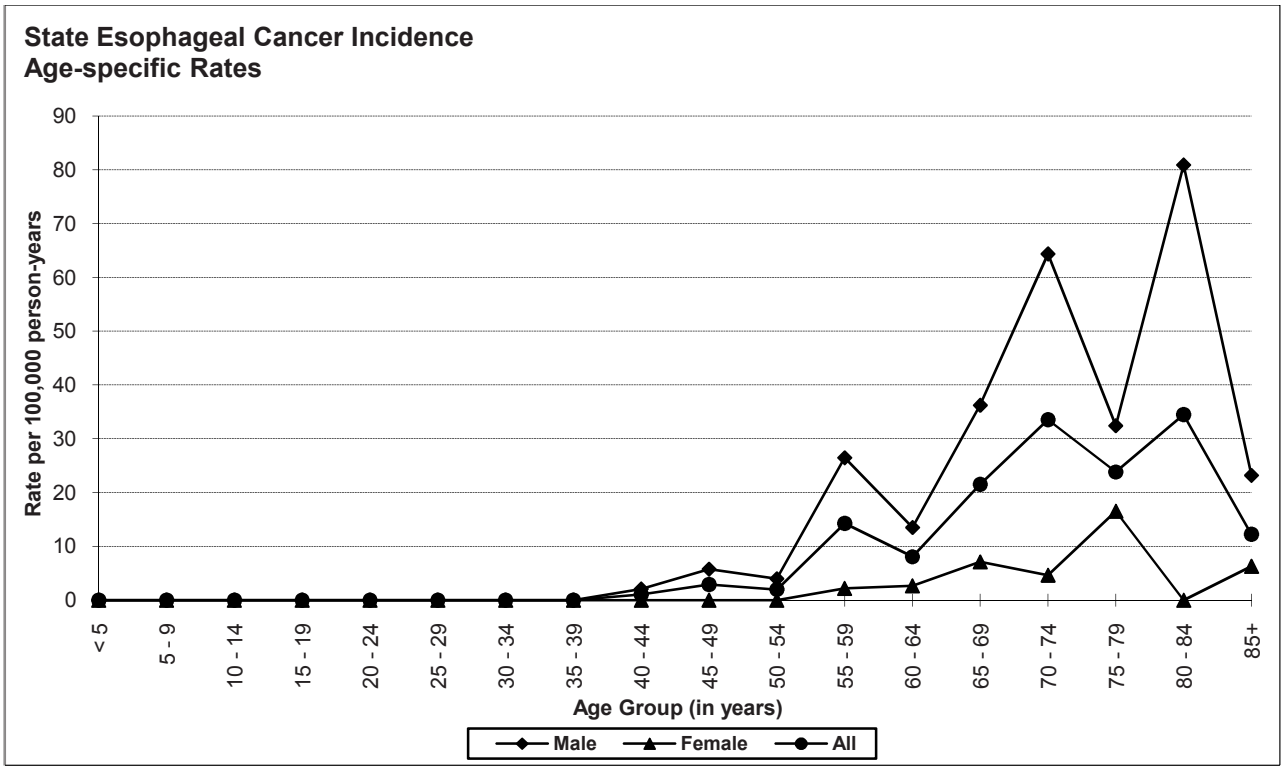
Occupation Chimney sweeps exposed to soot are at higher risk.

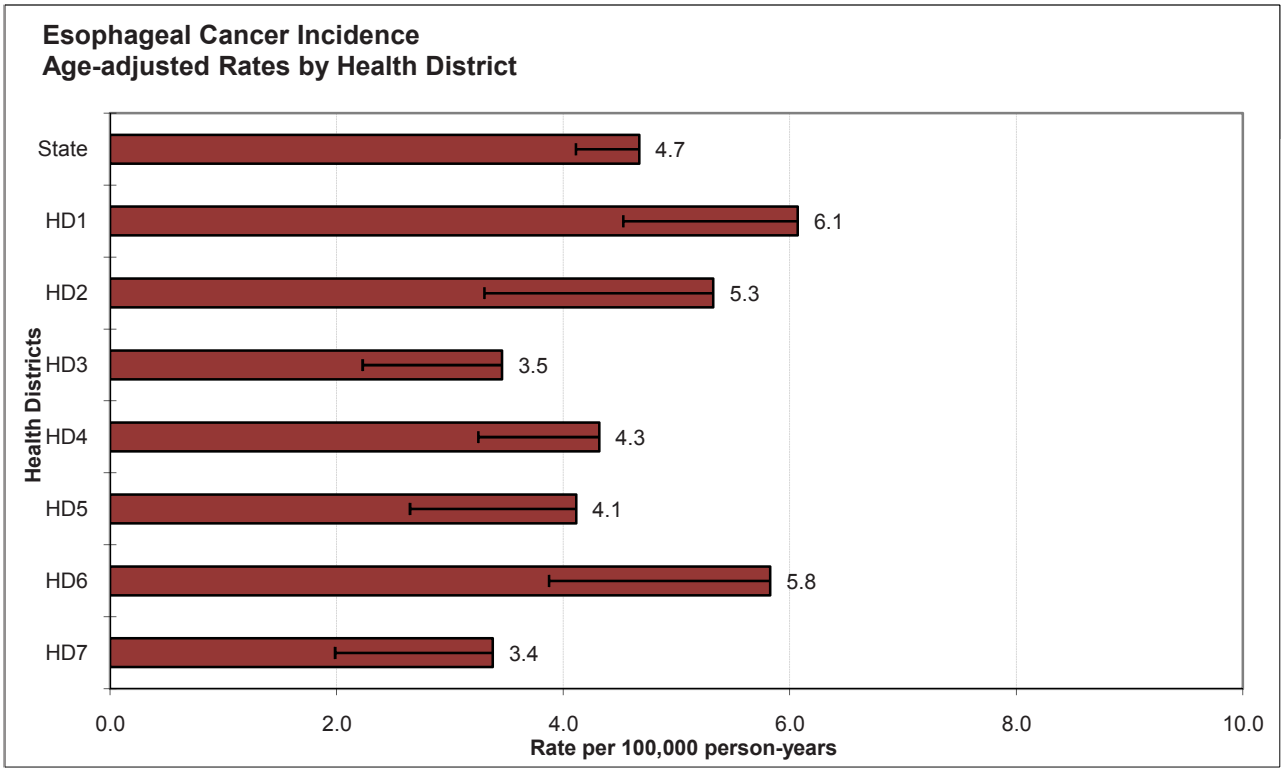
Other Tobacco use (cigarettes or spit tobacco) and heavy alcohol consumption are major risk factors for cancer of the esophagus. The risk is particularly increased when these two factors are both present. In Western Europe and North America, 90% or more of the risk of esophageal cancer can be attributed 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:	4.6
95% confidence interval on the mean age-adjusted incidence rate:	3.8- 5.5
Median age-adjusted incidence rate of health districts:	4.3
Range of age-adjusted incidence rate for health districts:	3.4- 6.1
SEER 17 rate (2007, all races):	4.4
USCS rate (2006, all races):	4.9

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 75-79 for females. No health districts 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
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


Esophageal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
4.7
6.1
5.3
3.5
4.3
4.1
5.8
3.4
0.0
2.0
4.0
6.0
8.0
10.0
Rate per 100,000 person-years

HODGKIN LYMPHOMA

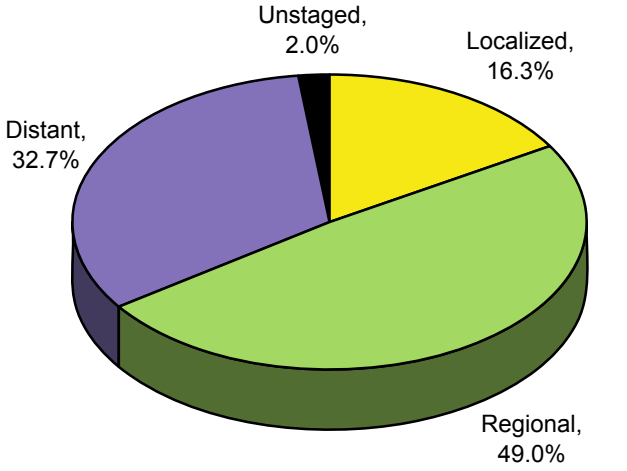
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	3.2	3.5	3.0
# of new invasive cases	49	27	22
# of new in-situ cases	0	0	0
# of deaths	9	4	5

Total Cases by County

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

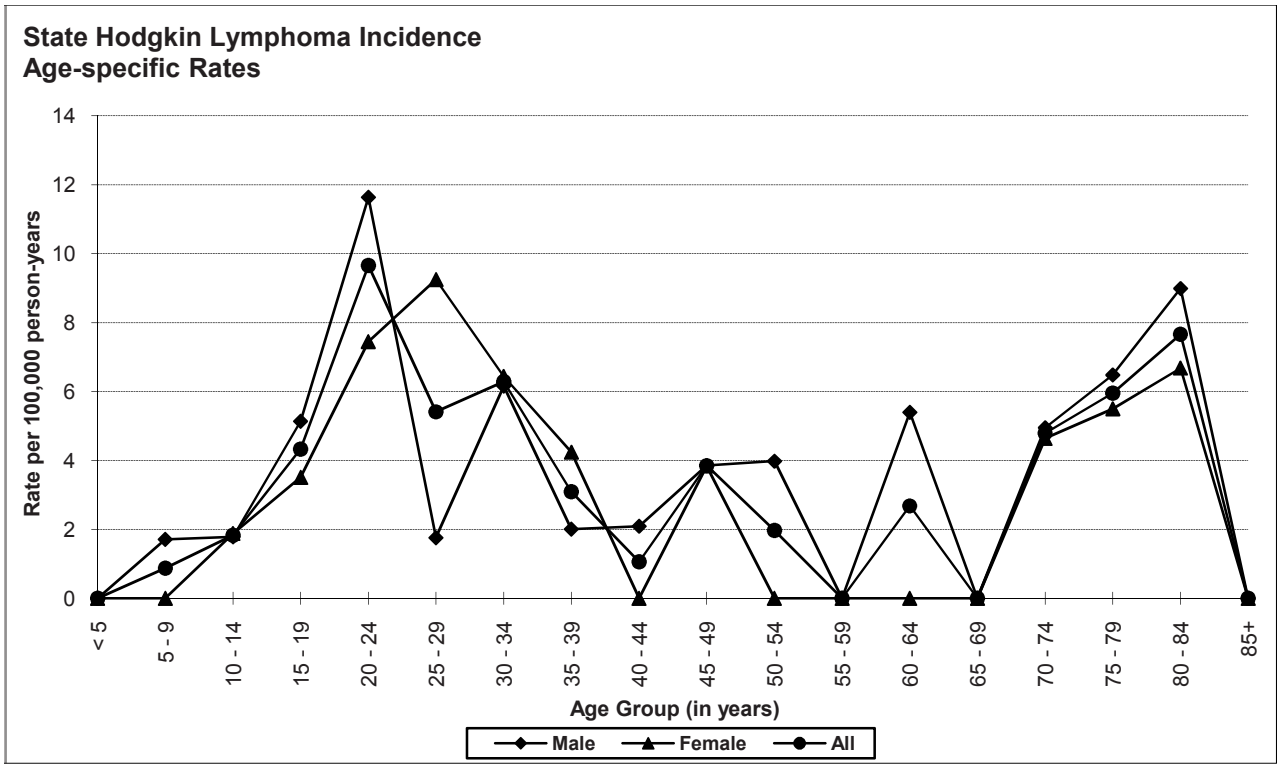
Genetics Genetic factors are thought to play an important role in the etiology of Hodgkin lymphoma, but these are yet to be adequately defined.

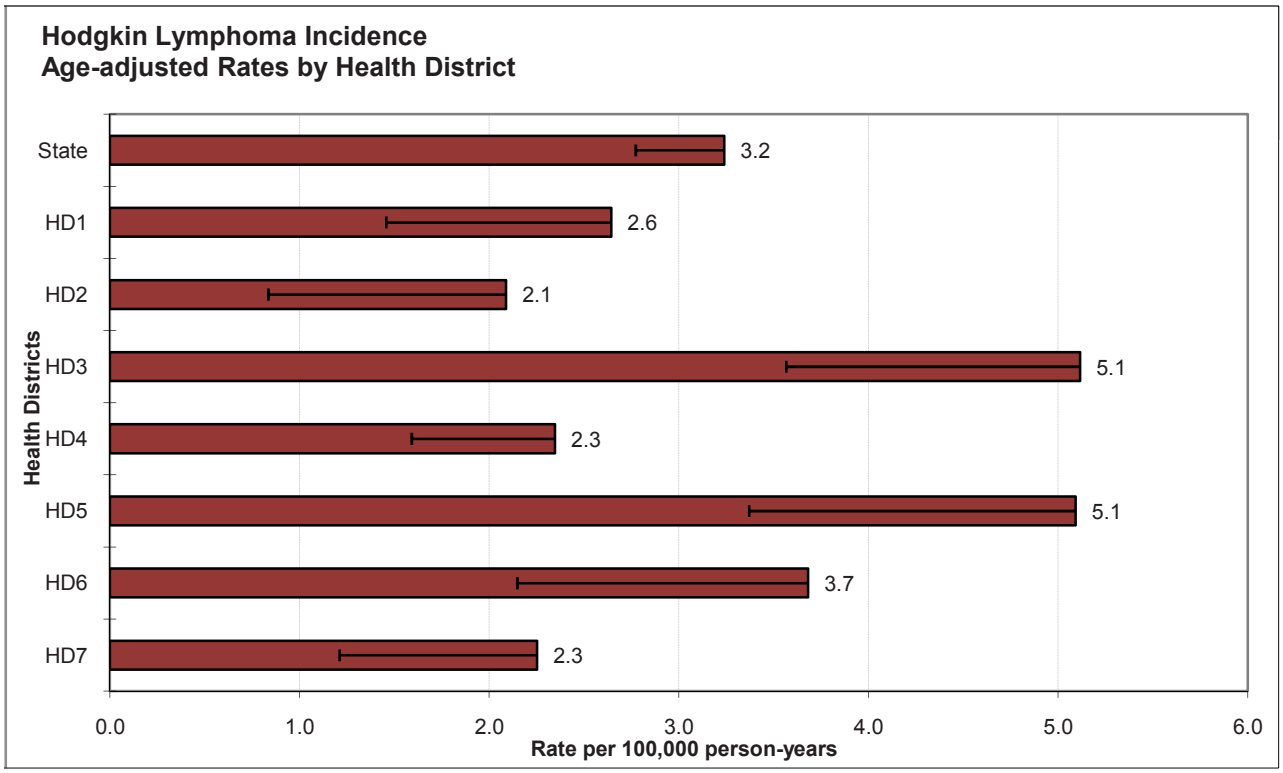
Other Small family size and ensuing delayed exposure to childhood infections is thought to be responsible for a portion of Hodgkin lymphoma cases. Certain viral infections, especially Epstein-Barr virus, and AIDS increase the risk of Hodgkin lymphoma. With current treatment, Hodgkin disease, which was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

Special Notes

Mean age-adjusted incidence rate across health districts:	3.3
95% confidence interval on the mean age-adjusted incidence rate:	2.3- 4.3
Median age-adjusted incidence rate of health districts:	2.6
Range of age-adjusted incidence rate for health districts:	2.1- 5.1
SEER 17 rate (2007, all races):	2.9
USCS rate (2006, all races):	2.8

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


State Hodgkin Lymphoma Incidence
Age-specific Rates
Rate per 100,000 person-years
14
12
10
8
6
4
2
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All


Hodgkin Lymphoma Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
3.2
2.6
2.1
5.1
2.3
5.1
3.7
2.3
0.0
1.0
2.0
3.0
4.0
5.0
6.0
Rate per 100,000 person-years

KIDNEY AND RENAL PELVIS

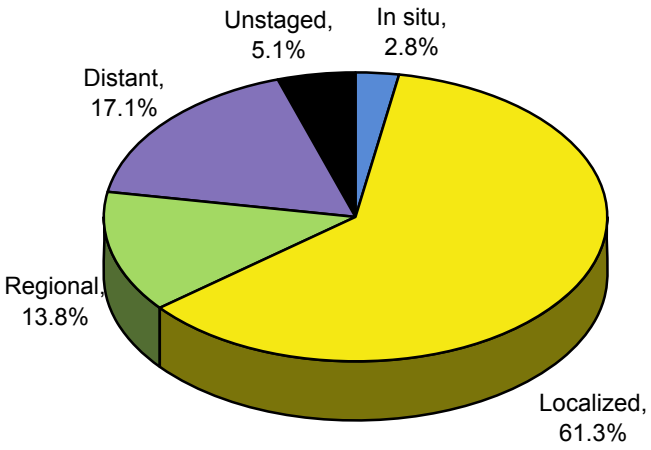
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	13.8	17.1	10.7
# of new invasive cases	211	123	88
# of new in-situ cases	6	3	3
# of deaths	61	38	23

Total Cases by County

Ada	36	Cassia	2	Lewis	3
Adams	-	Clark	-	Lincoln	-
Bannock	15	Clearwater	3	Madison	1
Bear Lake	-	Custer	2	Minidoka	3
Benewah	2	Elmore	1	Nez Perce	3
Bingham	3	Franklin	3	Oneida	3
Blaine	1	Fremont	3	Owyhee	5
Boise	-	Gem	3	Payette	1
Bonner	13	Gooding	3	Power	1
Bonneville	10	Idaho	2	Shoshone	3
Boundary	2	Jefferson	4	Teton	-
Butte	-	Jerome	2	Twin Falls	18
Camas	-	Kootenai	20	Valley	1
Canyon	35	Latah	4	Washington	3
Caribou	1	Lemhi	2		

Stage at Diagnosis - Kidney and Renal Pelvis



Risk and Associated Factors

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

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

Genetics Wilm's tumor often occurs with congenital defects.

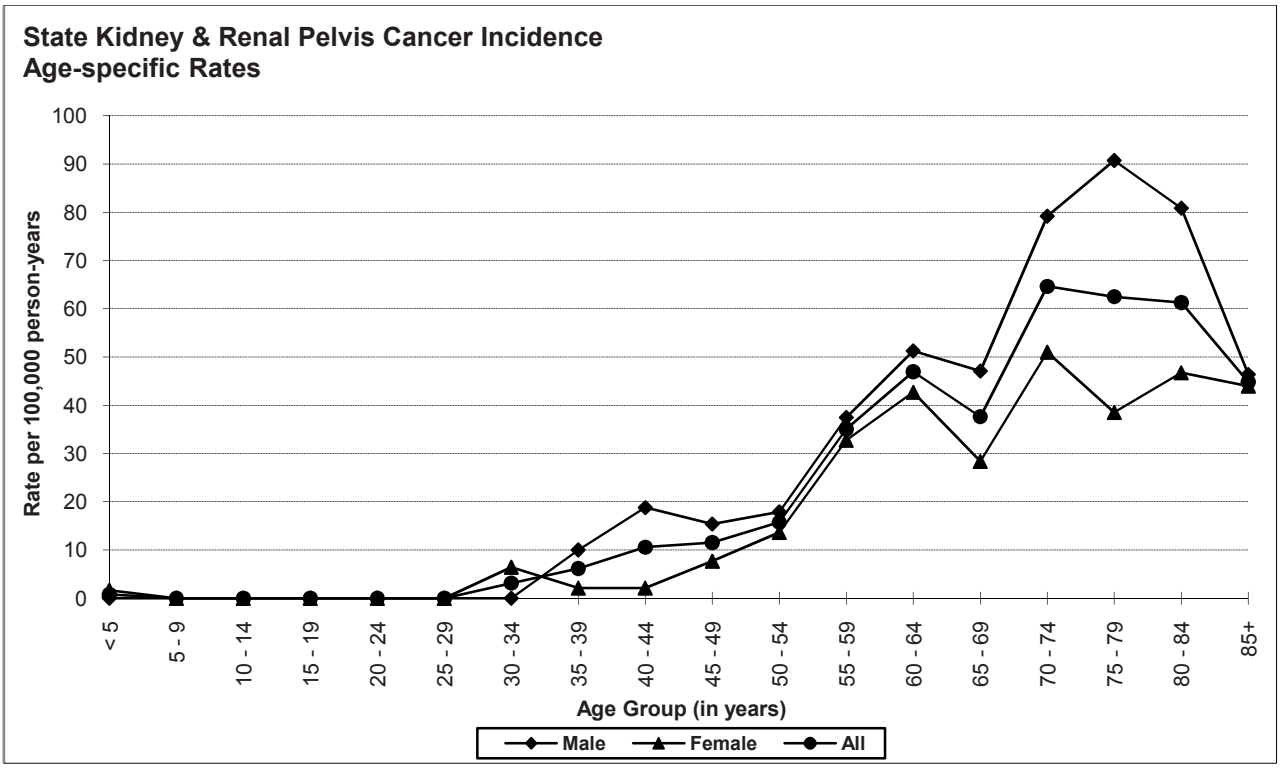
Occupation Certain occupations, such as laundry and leather workers, have been associated with increased risk due to chemical exposure.

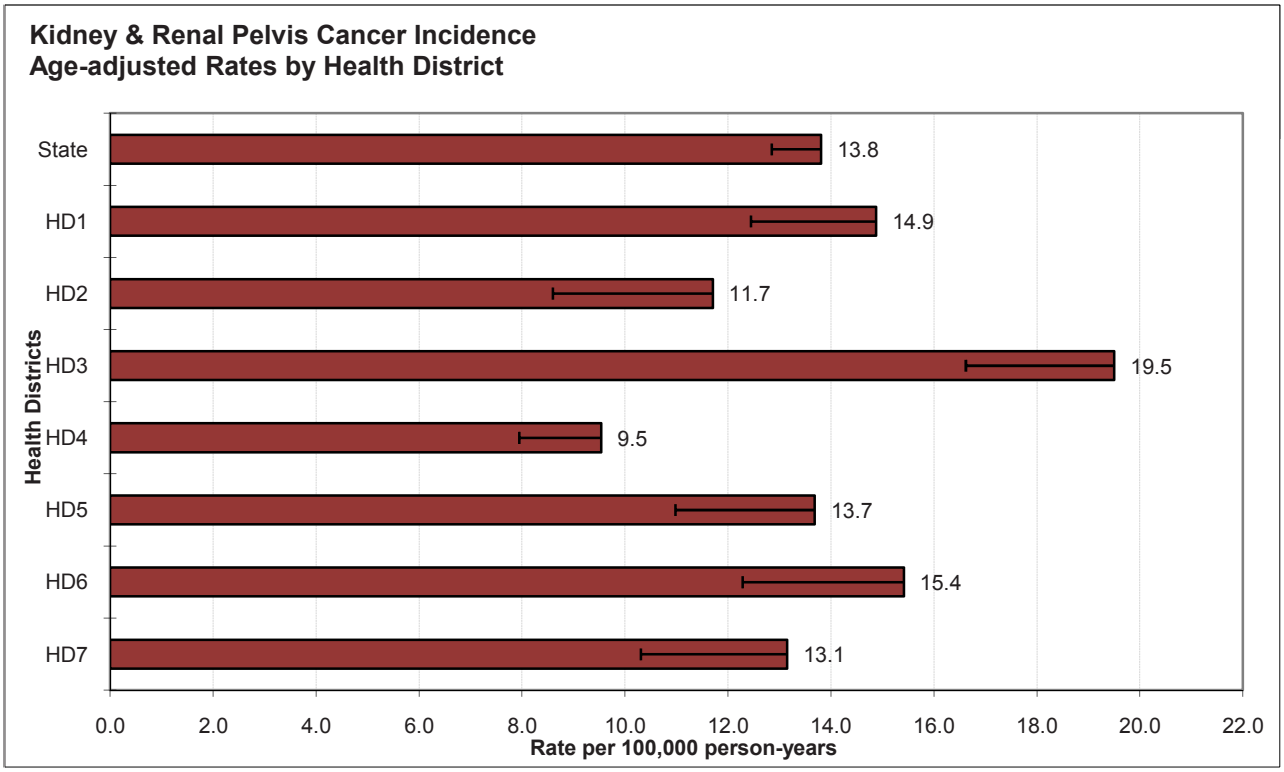
Other Cigarette smoking is strongly associated with renal pelvis and ureter cancers. Smokers are at twice the risk of developing kidney cancer as non-smokers. Analgesic mixtures containing phenacetin increase the risk of kidney cancer. Obesity is a risk factor for kidney cancer. High dietary protein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

Special Notes

Mean age-adjusted incidence rate across health districts:	14.0
95% confidence interval on the mean age-adjusted incidence rate:	11.7- 16.3
Median age-adjusted incidence rate of health districts:	13.7
Range of age-adjusted incidence rate for health districts:	9.5- 19.5
SEER 17 rate (2007, all races):	14.7
USCS rate (2006, all races):	15.0

There were few cases of kidney or renal pelvis cancer among persons aged less than 40 years. The age-specific incidence rates peaked in the age group 75-79 for males and 70-74 for females. Health District 3 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 4 had statistically significantly fewer cases than expected.


State Kidney & Renal Pelvis 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


Kidney & Renal Pelvis Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
13.8
14.9
11.7
19.5
9.5
13.7
15.4
13.1
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

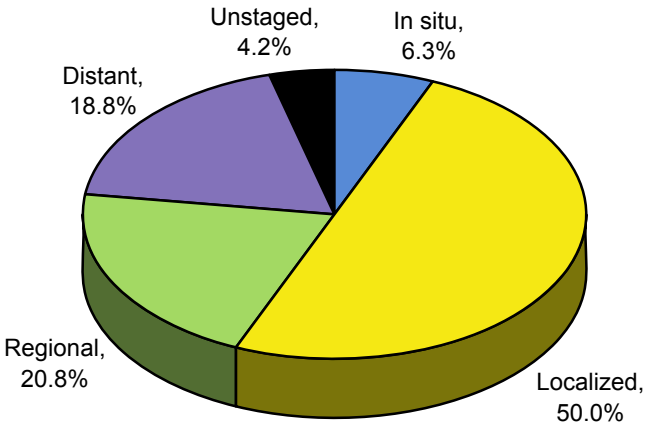
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	2.8	4.4	1.2
# of new invasive cases	45	36	9
# of new in-situ cases	3	2	1
# of deaths	7	7	0

Total Cases by County

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

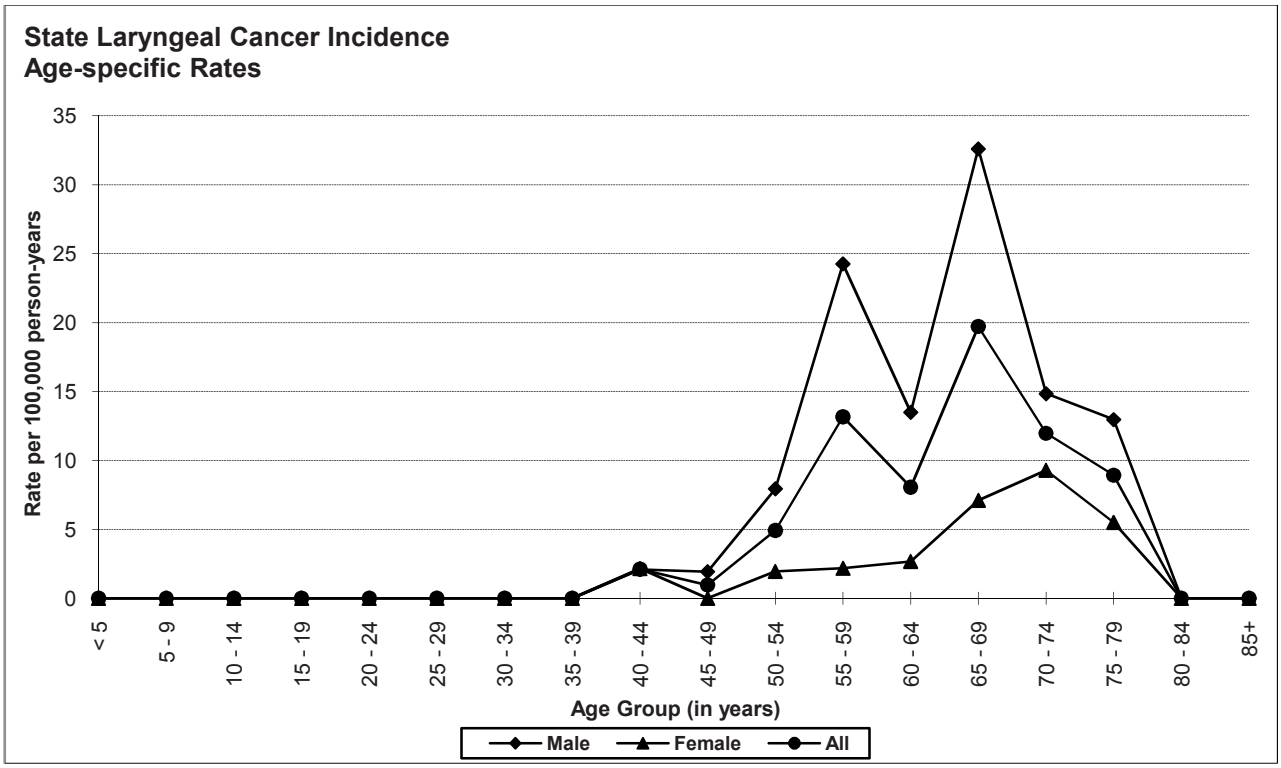
Diet Diets low in fresh fruits and vegetables may increase the risk.

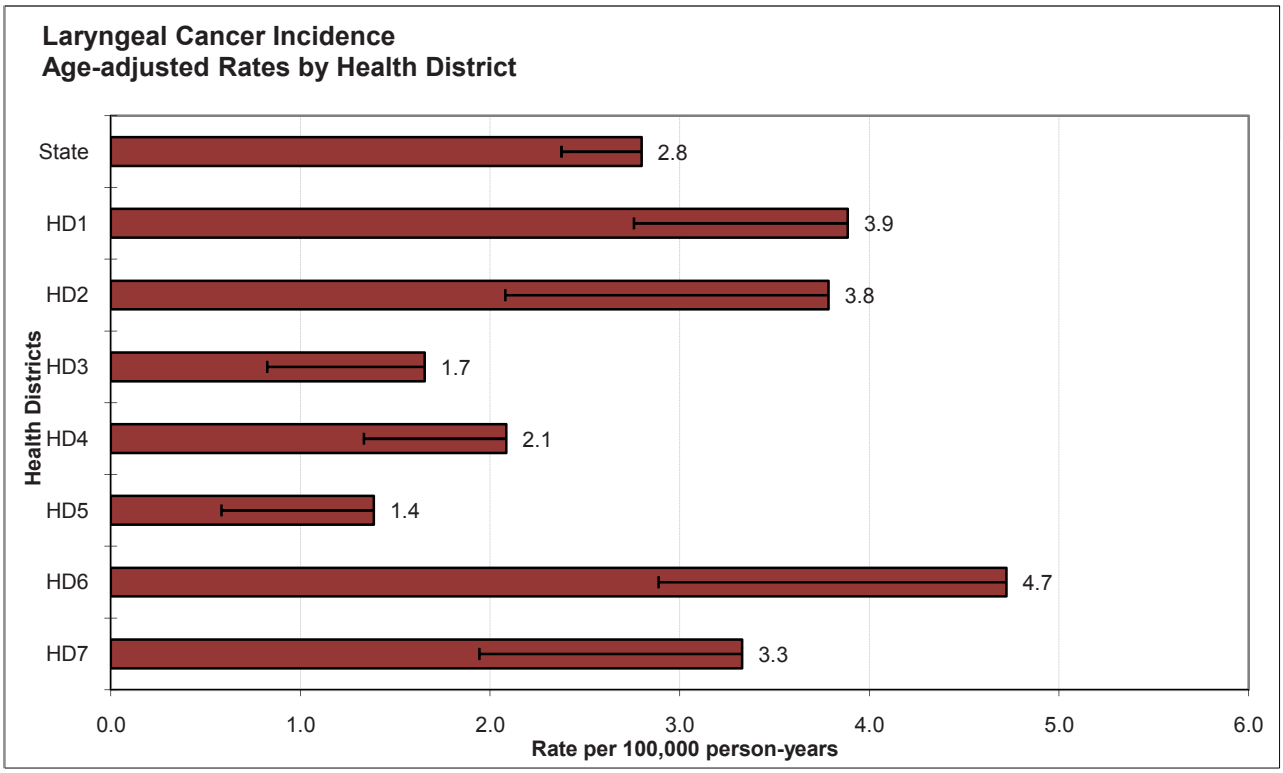
Other Cigarette smoking and alcohol use are both major risk factors. The combination of alcohol consumption and tobacco use (smoking or spit tobacco) acts greatly to increase the risk. A patient with a single laryngeal cancer who continues to smoke and drink alcohol has an enhanced risk of developing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

Special Notes

Mean age-adjusted incidence rate across health districts:	3.0
95% confidence interval on the mean age-adjusted incidence rate:	2.0- 3.9
Median age-adjusted incidence rate of health districts:	3.3
Range of age-adjusted incidence rate for health districts:	1.4- 4.7
SEER 17 rate (2007, all races):	3.3
USCS rate (2006, all races):	3.9

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 65-69 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
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
2.8
3.9
3.8
1.7
2.1
1.4
4.7
3.3
0.0
1.0
2.0
3.0
4.0
5.0
6.0
Rate per 100,000 person-years

LEUKEMIA

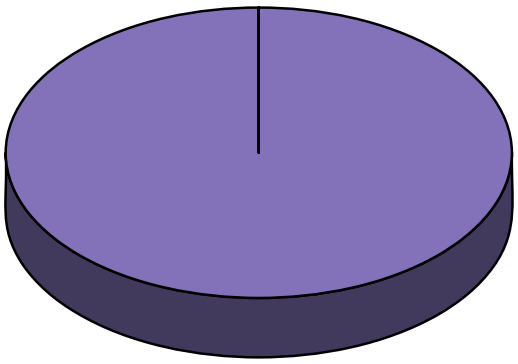
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	13.8	15.8	12.1
# of new invasive cases	209	112	97
# of new in-situ cases	0	0	0
# of deaths	109	63	46

Total Cases by County

Ada	52	Cassia	2	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	10	Clearwater	3	Madison	5
Bear Lake	1	Custer	-	Minidoka	5
Benewah	1	Elmore	4	Nez Perce	5
Bingham	7	Franklin	1	Oneida	1
Blaine	3	Fremont	1	Owyhee	3
Boise	-	Gem	3	Payette	2
Bonner	5	Gooding	4	Power	2
Bonneville	7	Idaho	3	Shoshone	5
Boundary	3	Jefferson	1	Teton	1
Butte	-	Jerome	5	Twin Falls	10
Camas	-	Kootenai	22	Valley	1
Canyon	25	Latah	2	Washington	-
Caribou	2	Lemhi	1		

Stage at Diagnosis - Leukemia



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.

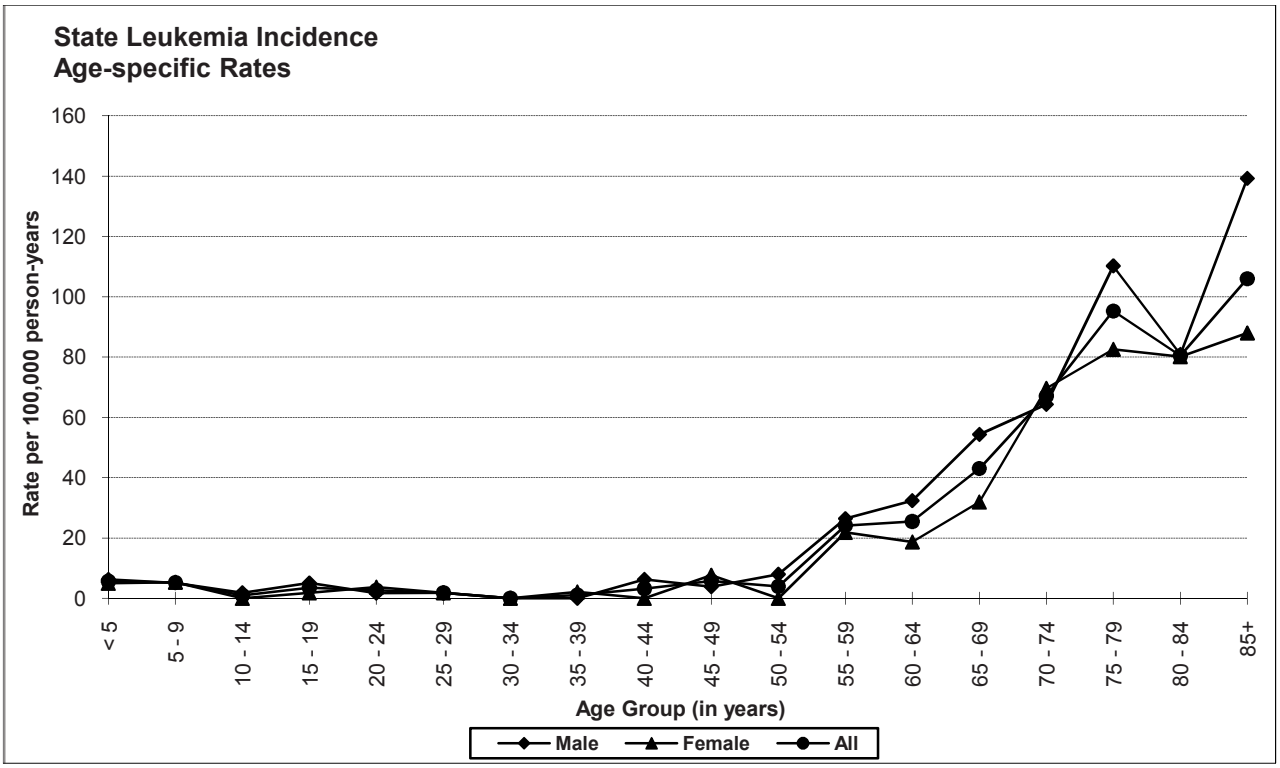
Occupation Benzene is a known cause of leukemia (predominantly acute myelogenous leukemia [AML]). Chimney sweeps exposed to soot are at higher risk.

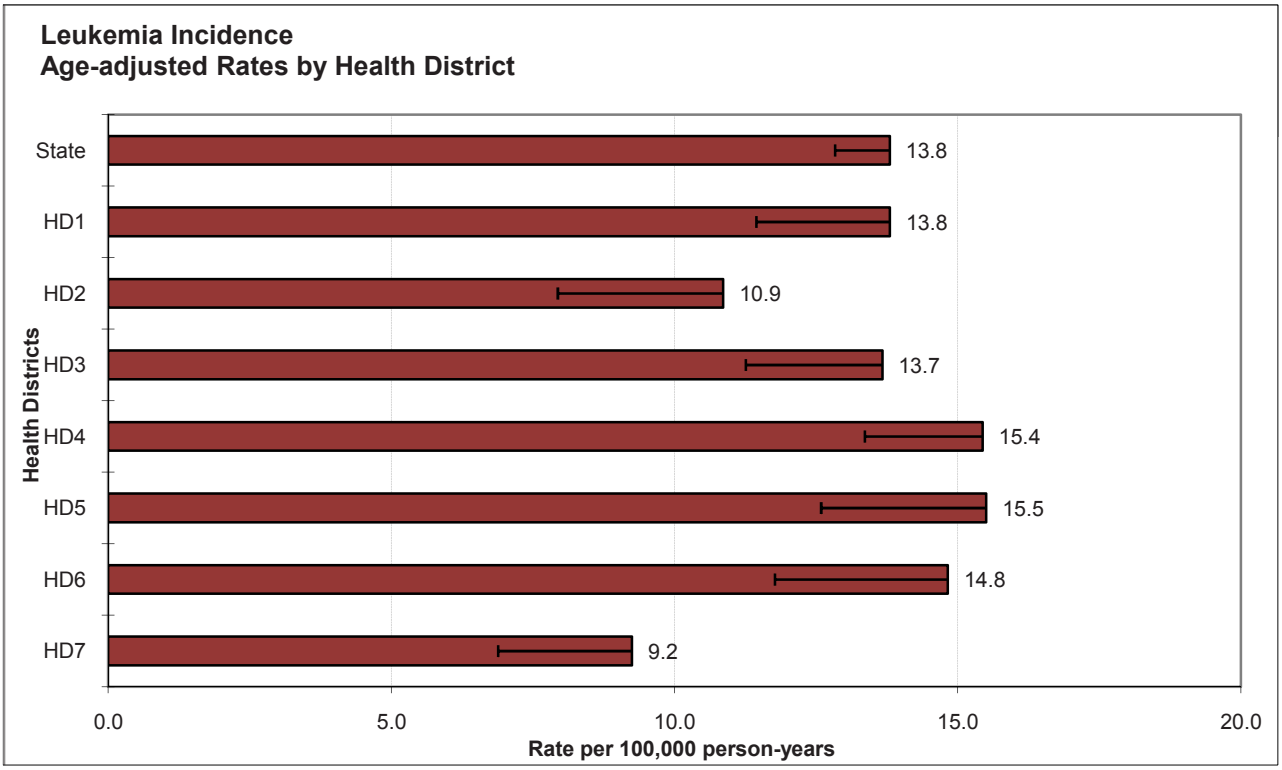
Other Ionizing radiation exposure increases the risk (except for CLL). Environmental exposure to low frequency, non-ionizing radiation and its association with leukemia incidence is being investigated. Treatment with some chemotherapeutic agents for other cancers increases the risk of leukemia. Exposure 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:	13.3
95% confidence interval on the mean age-adjusted incidence rate:	11.6- 15.1
Median age-adjusted incidence rate of health districts:	13.8
Range of age-adjusted incidence rate for health districts:	9.2- 15.5
SEER 17 rate (2007, all races):	11.8
USCS rate (2006, all races):	11.7

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


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


Leukemia Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
13.8
13.8
10.9
13.7
15.4
15.5
14.8
9.2
0.0
5.0
10.0
15.0
20.0
Rate per 100,000 person-years

LIVER AND BILE DUCT

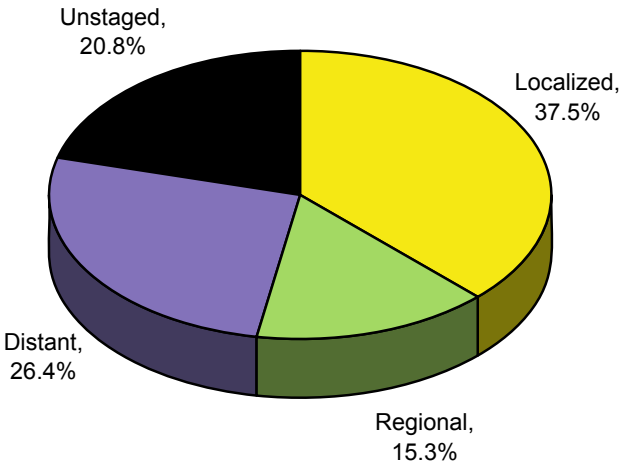
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.4	7.1	1.9
# of new invasive cases	72	55	17
# of new in-situ cases	0	0	0
# of deaths	56	42	14

Total Cases by County

Ada	16	Cassia	-	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	2	Clearwater	-	Madison	-
Bear Lake	-	Custer	-	Minidoka	2
Benewah	-	Elmore	2	Nez Perce	2
Bingham	1	Franklin	-	Oneida	-
Blaine	-	Fremont	2	Owyhee	-
Boise	1	Gem	-	Payette	2
Bonner	1	Gooding	-	Power	-
Bonneville	4	Idaho	2	Shoshone	2
Boundary	2	Jefferson	1	Teton	-
Butte	-	Jerome	1	Twin Falls	6
Camas	-	Kootenai	11	Valley	-
Canyon	6	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.

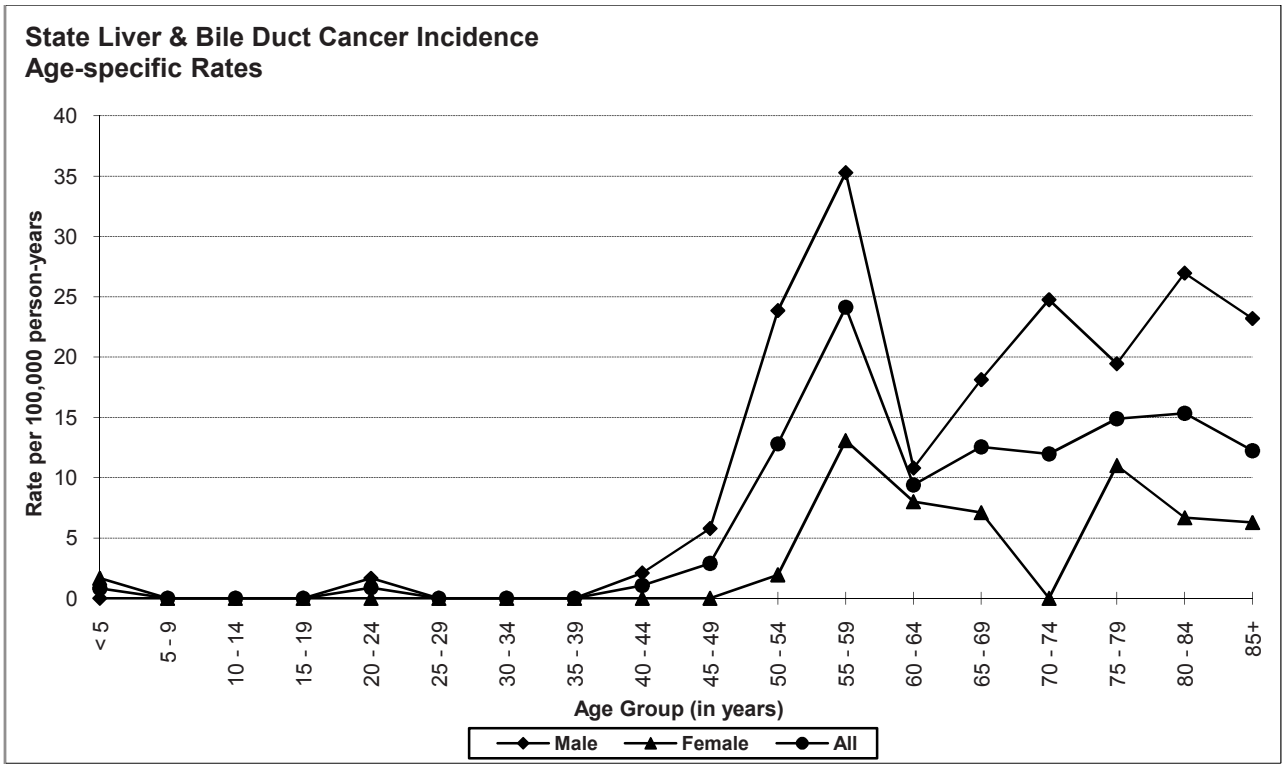
Occupation Thorium dioxide (an x-ray contrast medium) exposure increases liver cancer risk. Exposure to vinyl chloride used in plastic production is associated with an increased risk of angiosarcoma of the liver. Chimney sweeps exposed to soot are at higher risk.

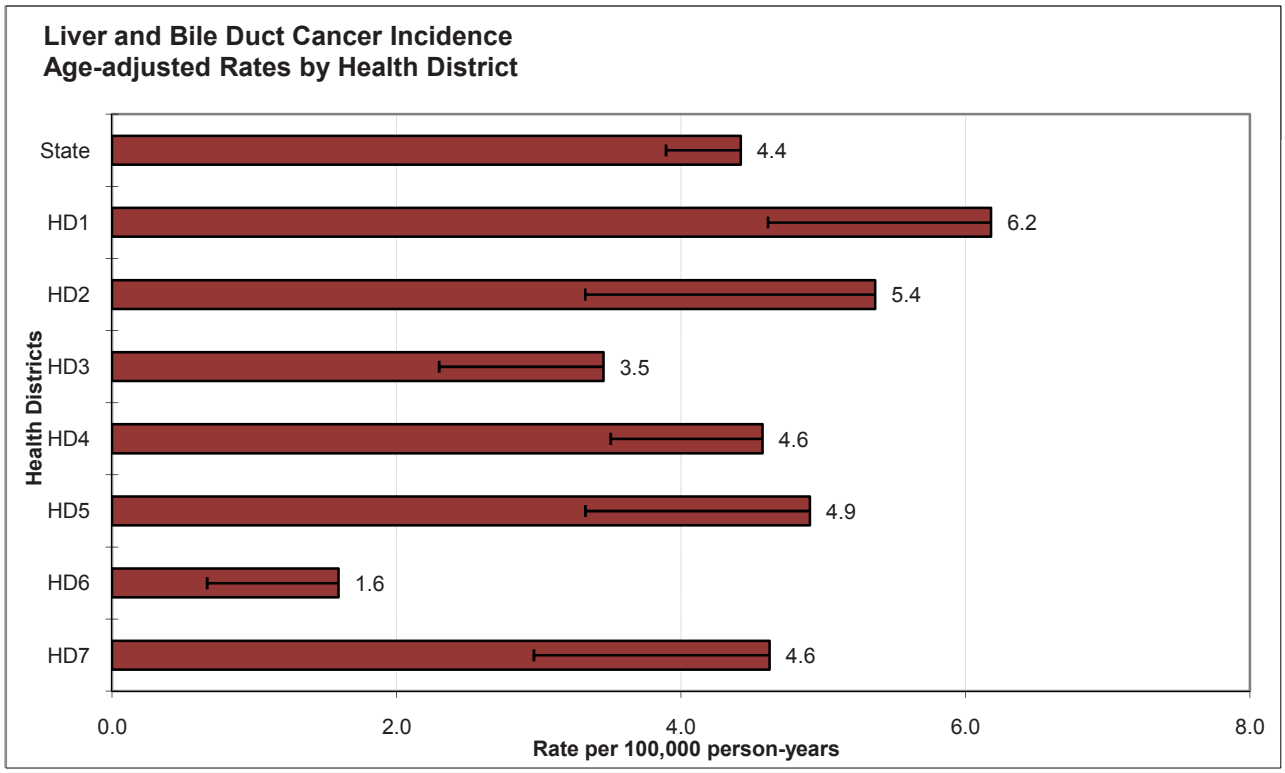
Other Hepatitis B and Hepatitis C infections are significant causes of hepatocellular carcinoma. Cirrhosis of the liver due to viral hepatitis, alcoholism, or toxic chemical exposure accounts for 50-80% of patients diagnosed with liver cancer. Long-term use of oral contraceptives increases risk of hepatocellular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

Special Notes

Mean age-adjusted incidence rate across health districts:	4.4
95% confidence interval on the mean age-adjusted incidence rate:	3.3- 5.5
Median age-adjusted incidence rate of health districts:	4.6
Range of age-adjusted incidence rate for health districts:	1.6- 6.2
SEER 17 rate (2007, all races):	7.2
USCS rate (2006, all races):	6.0

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 55-59 for males and 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
4.4
6.2
5.4
3.5
4.6
4.9
1.6
4.6
0.0
2.0
4.0
6.0
8.0
Rate per 100,000 person-years

LUNG AND BRONCHUS

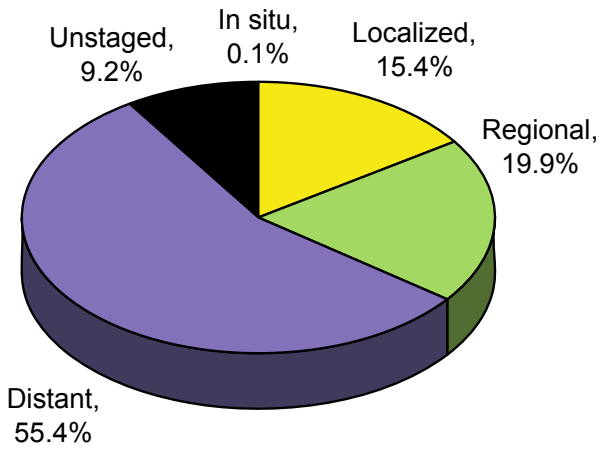
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	54.6	63.7	47.6
# of new invasive cases	824	441	383
# of new in-situ cases	1	1	0
# of deaths	633	336	297

Total Cases by County

Ada	177	Cassia	3	Lewis	5
Adams	1	Clark	-	Lincoln	2
Bannock	31	Clearwater	19	Madison	4
Bear Lake	3	Custer	4	Minidoka	7
Benewah	10	Elmore	15	Nez Perce	29
Bingham	19	Franklin	1	Oneida	1
Blaine	4	Fremont	2	Owyhee	9
Boise	9	Gem	19	Payette	16
Bonner	34	Gooding	8	Power	2
Bonneville	36	Idaho	15	Shoshone	19
Boundary	6	Jefferson	9	Teton	3
Butte	2	Jerome	9	Twin Falls	49
Camas	2	Kootenai	116	Valley	3
Canyon	92	Latah	8	Washington	8
Caribou	2	Lemhi	11		

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.

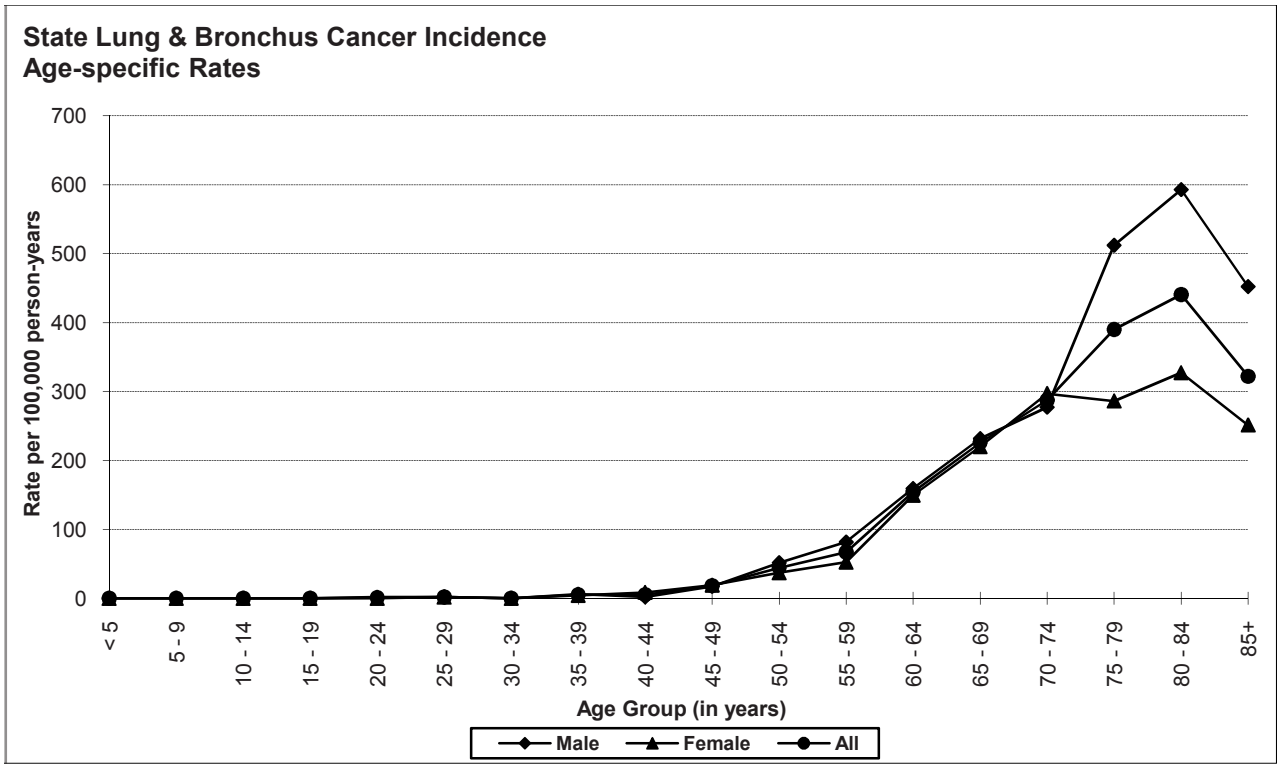
Occupation Occupational or environmental exposures to asbestos, cadmium, chromium, coal tars, crystalline silica dust, polycyclic aromatic hydrocarbons, radon, soot, chlorpyrifos insecticides, ionizing radiation, and other substances increase the risk.

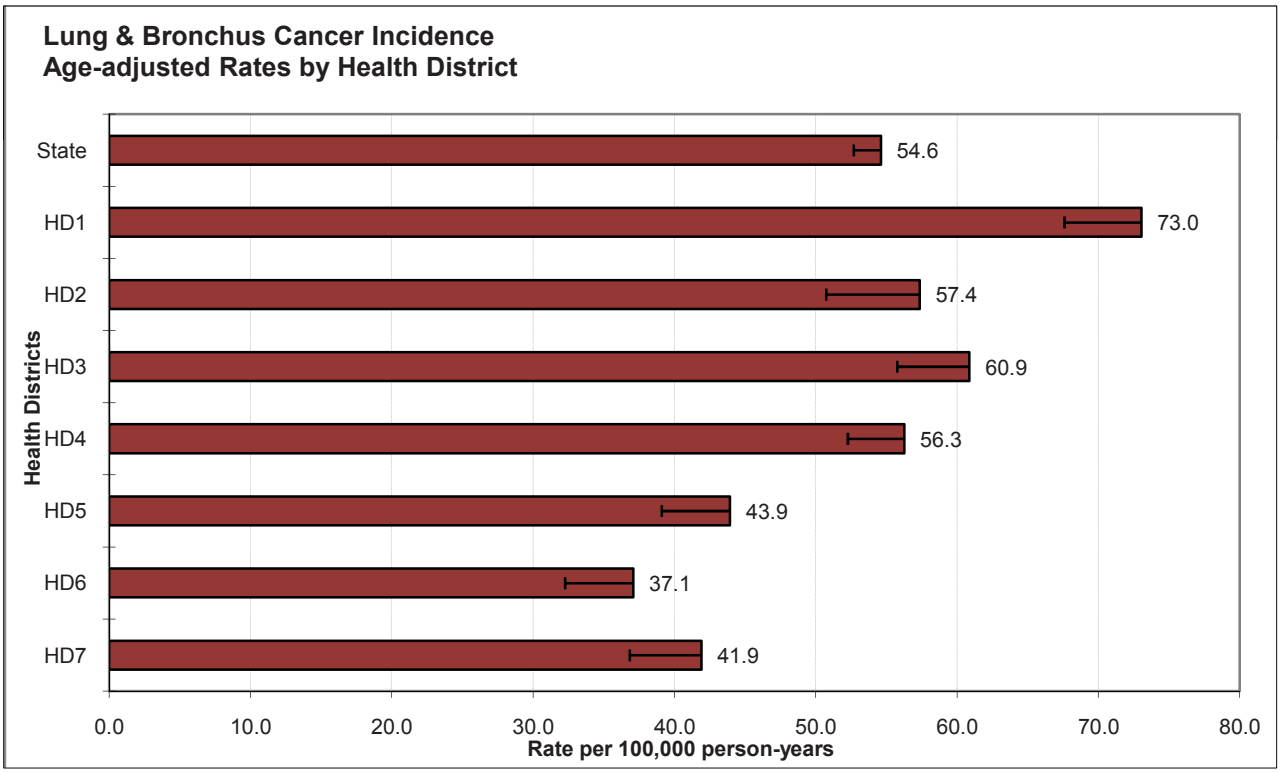
Other Cigarette smoking, including exposure to second-hand smoke, is the most important risk factor, accounting for over 85% of lung cancer deaths. Evidence exists that rates are about 1.3 times higher, adjusted for smoking, in urban areas than rural areas due to air pollution, mostly from motor vehicles.

Special Notes

Mean age-adjusted incidence rate across health districts:	52.9
95% confidence interval on the mean age-adjusted incidence rate:	43.6- 62.3
Median age-adjusted incidence rate of health districts:	56.3
Range of age-adjusted incidence rate for health districts:	37.1- 73.0
SEER 17 rate (2007, all races):	59.9
USCS rate (2006, all races):	66.8

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 75. The incidence rates increased with age, peaking in the age group 80-84 for males and females. Health District 1 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health Districts 5, 6, and 7 had statistically significantly fewer cases than expected.


State Lung & Bronchus Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
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)
Male
Female
All


Lung & Bronchus Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
54.6
73.0
57.4
60.9
56.3
43.9
37.1
41.9
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

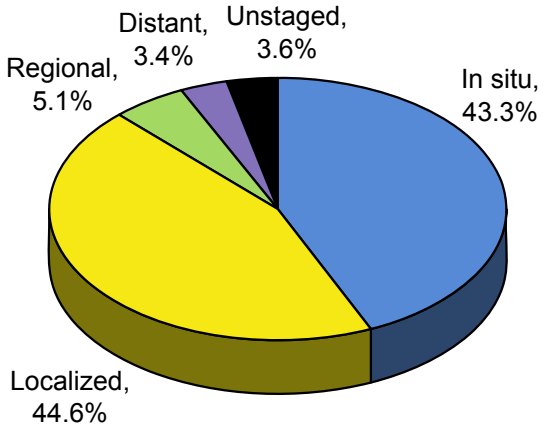
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	20.8	27.8	14.6
# of new invasive cases	314	201	113
# of new in-situ cases	240	143	97
# of deaths	50	33	17

Total Cases by County

Ada	111	Cassia	14	Lewis	2
Adams	2	Clark	-	Lincoln	-
Bannock	13	Clearwater	4	Madison	5
Bear Lake	2	Custer	2	Minidoka	4
Benewah	6	Elmore	6	Nez Perce	14
Bingham	11	Franklin	1	Oneida	-
Blaine	31	Fremont	8	Owyhee	4
Boise	2	Gem	2	Payette	4
Bonner	21	Gooding	3	Power	-
Bonneville	21	Idaho	6	Shoshone	3
Boundary	4	Jefferson	3	Teton	5
Butte	-	Jerome	14	Twin Falls	37
Camas	-	Kootenai	78	Valley	5
Canyon	45	Latah	11	Washington	-
Caribou	2	Lemhi	4		

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 males than females.

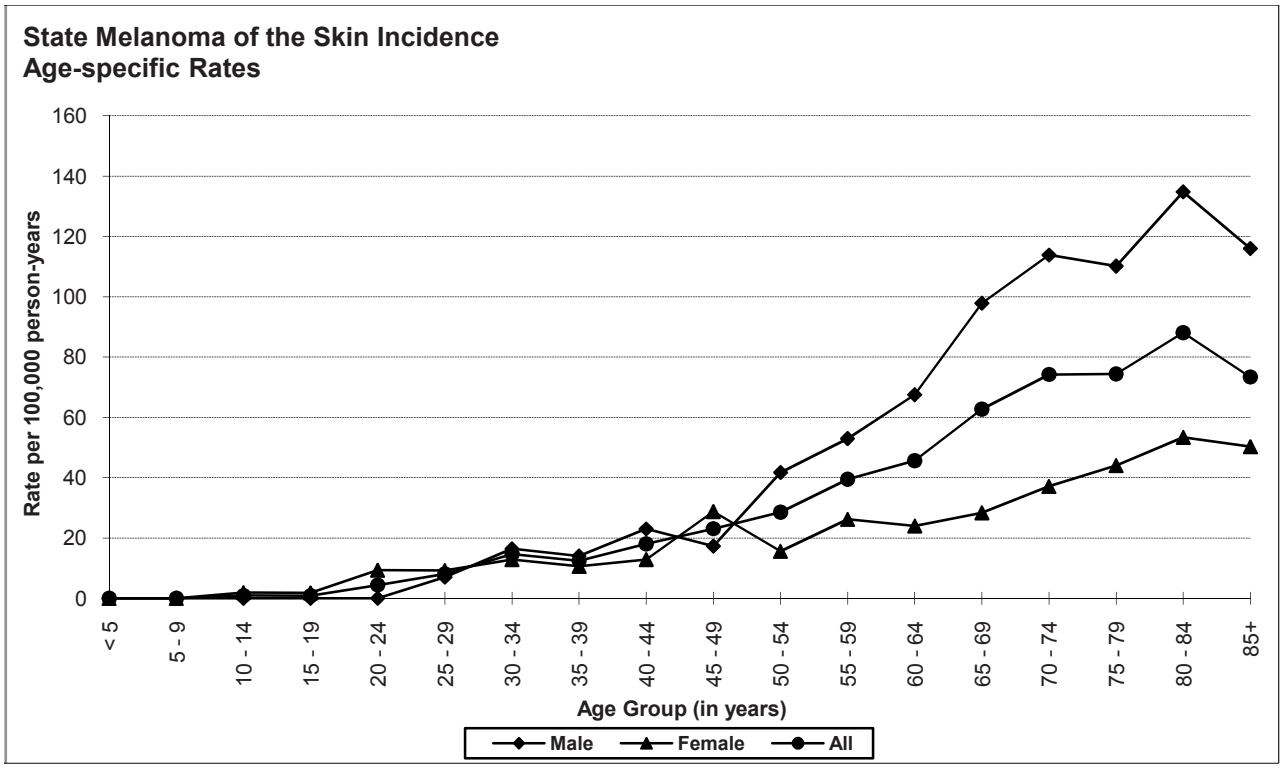
Race & SES The incidence rate is highest in Caucasians and lowest in African Americans. Incidence rates of melanoma of the skin are higher in higher income groups (indoor workers).

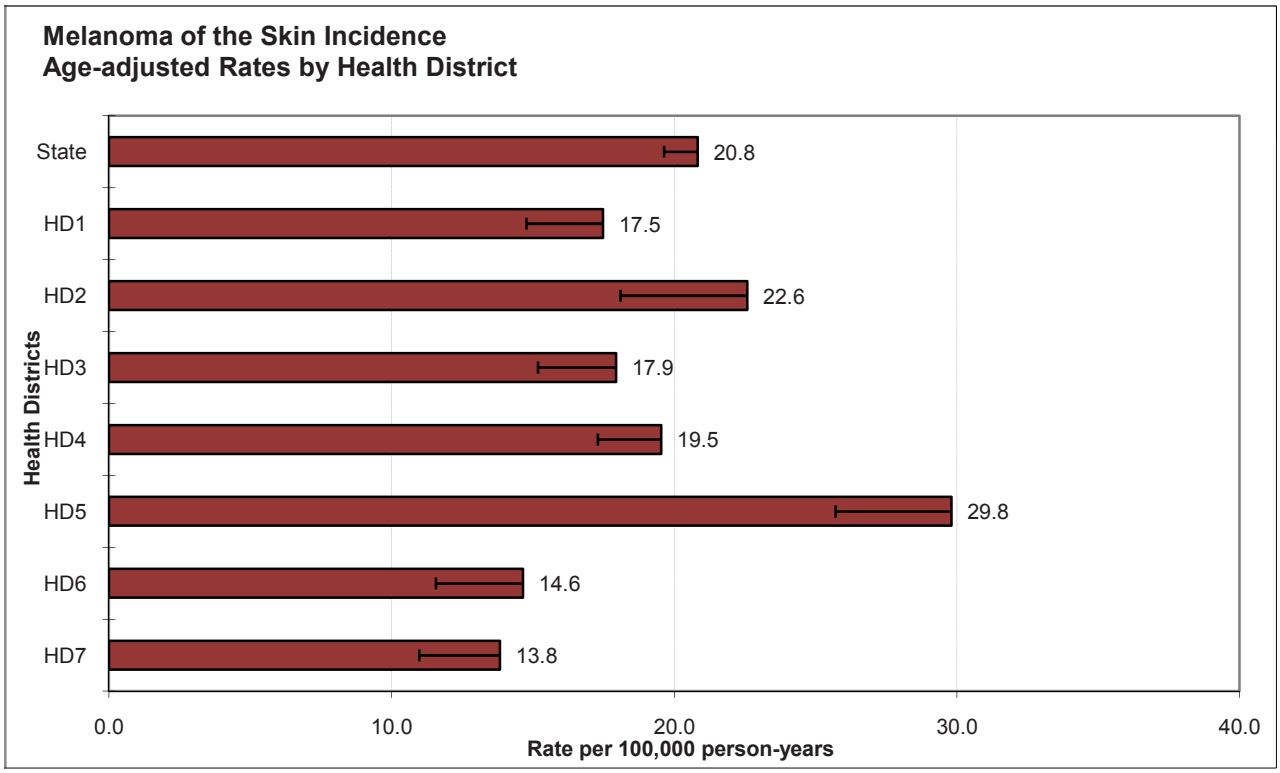
Other Ultra-violet light exposure, especially blistering sunburns during childhood, is a major risk factor. Melanoma incidence rates are increasing around the world. Blue eyes, fair or red hair and pale complexion are well-known risk factors for melanoma. Apart from race and age, the number of melanocytic 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:	19.4
95% confidence interval on the mean age-adjusted incidence rate:	15.4- 23.4
Median age-adjusted incidence rate of health districts:	17.9
Range of age-adjusted incidence rate for health districts:	13.8- 29.8
SEER 17 rate (2007, all races):	20.4
USCS rate (2006, all races):	18.2

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


State Melanoma of the Skin Incidence
Age-specific Rates
Rate per 100,000 person-years
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


Melanoma of the Skin Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
20.8
17.5
22.6
17.9
19.5
29.8
14.6
13.8
0.0
10.0
20.0
30.0
40.0
Rate per 100,000 person-years

MYELOMA

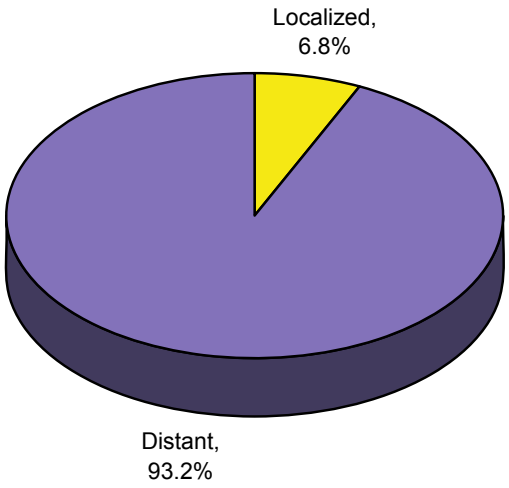
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.8	7.2	4.6
# of new invasive cases	88	50	38
# of new in-situ cases	0	0	0
# of deaths	52	30	22

Total Cases by County

Ada	21	Cassia	1	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	3	Clearwater	-	Madison	-
Bear Lake	1	Custer	-	Minidoka	1
Benewah	1	Elmore	1	Nez Perce	1
Bingham	3	Franklin	-	Oneida	1
Blaine	-	Fremont	-	Owyhee	-
Boise	-	Gem	1	Payette	1
Bonner	3	Gooding	1	Power	-
Bonneville	4	Idaho	1	Shoshone	-
Boundary	1	Jefferson	2	Teton	-
Butte	-	Jerome	1	Twin Falls	10
Camas	-	Kootenai	7	Valley	-
Canyon	16	Latah	2	Washington	1
Caribou	-	Lemhi	-		

Stage at Diagnosis - Myeloma



Risk and Associated Factors

Age Multiple myeloma is an age-dependent cancer; incidence rates increase with age and it rarely occurs before age 40.

Gender Rates for males are somewhat higher than for females.

Race African Americans have higher incidence rates than Caucasians.

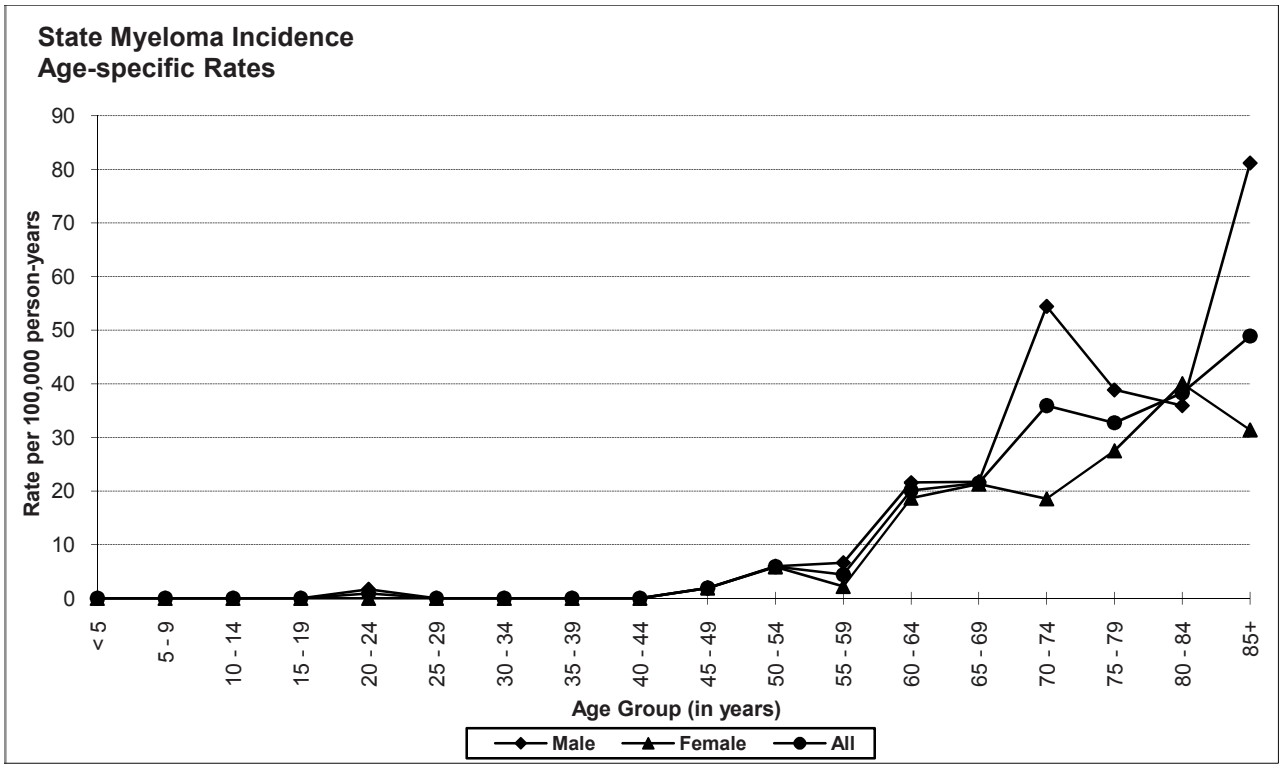
Genetics Genetic factors play an important role in its development but how so is not completely understood. Familial factors and chronic antigenic stimulation have also been implicated.

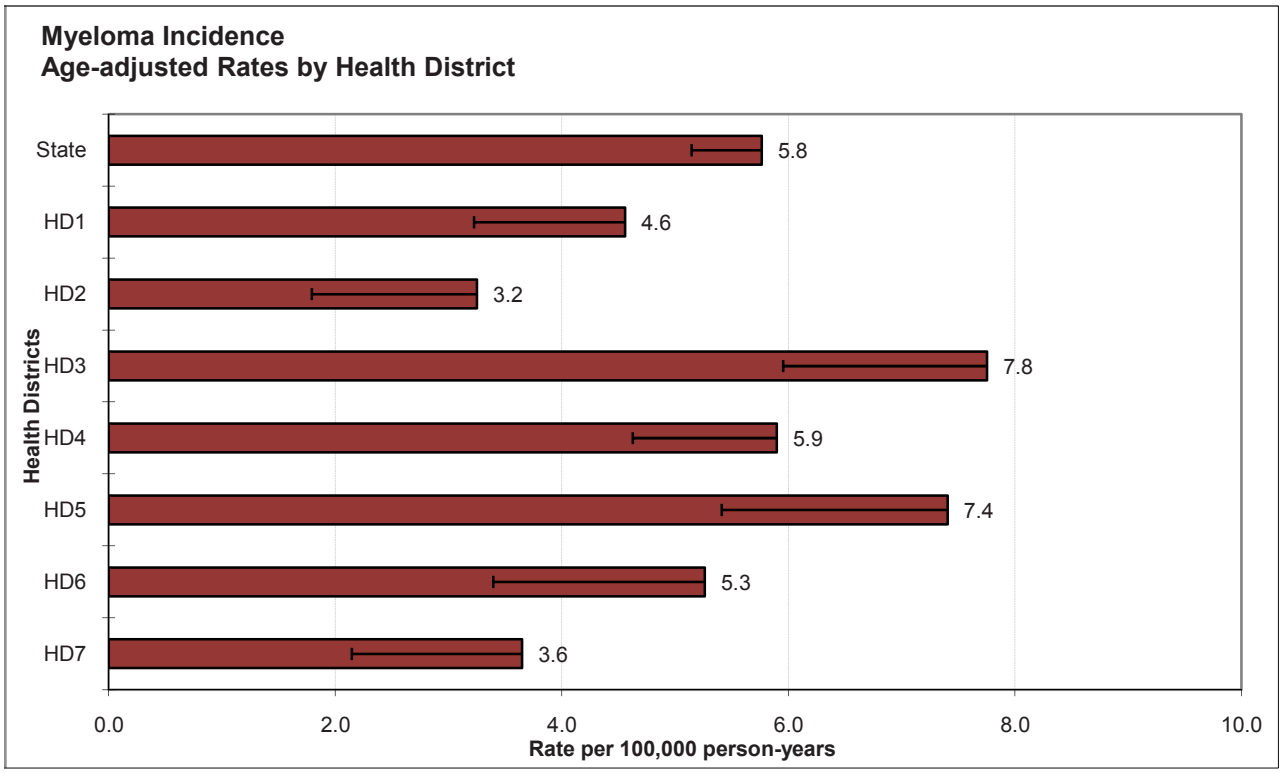
Other Multiple myeloma has been associated with lymphomas such as Burkitt's and non-Hodgkin lymphomas. Studies have suggested several possible viral etiologies, and multiple myeloma has been linked to ionizing radiation exposure. Several specific chemical and physical substances have been linked to myeloma 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:	5.4
95% confidence interval on the mean age-adjusted incidence rate:	4.1- 6.7
Median age-adjusted incidence rate of health districts:	5.3
Range of age-adjusted incidence rate for health districts:	3.2- 7.8
SEER 17 rate (2007, all races):	5.4
USCS rate (2006, all races):	5.4

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
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
5.8
4.6
3.2
7.8
5.9
7.4
5.3
3.6
0.0
2.0
4.0
6.0
8.0
10.0
Rate per 100,000 person-years

NON-HODGKIN LYMPHOMA

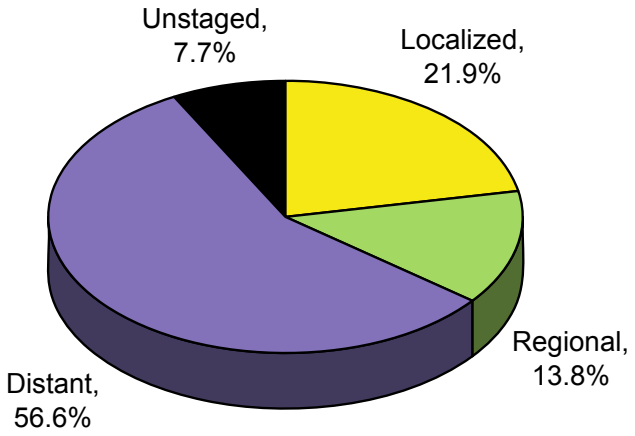
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	20.7	23.9	18.1
# of new invasive cases	311	170	141
# of new in-situ cases	0	0	0
# of deaths	95	59	36

Total Cases by County

Ada	68	Cassia	5	Lewis	1
Adams	-	Clark	-	Lincoln	3
Bannock	13	Clearwater	3	Madison	4
Bear Lake	-	Custer	3	Minidoka	2
Benewah	4	Elmore	1	Nez Perce	8
Bingham	10	Franklin	2	Oneida	1
Blaine	5	Fremont	2	Owyhee	2
Boise	1	Gem	1	Payette	7
Bonner	14	Gooding	7	Power	1
Bonneville	27	Idaho	5	Shoshone	2
Boundary	3	Jefferson	6	Teton	2
Butte	-	Jerome	5	Twin Falls	11
Camas	-	Kootenai	38	Valley	-
Canyon	29	Latah	7	Washington	2
Caribou	1	Lemhi	3		

Stage at Diagnosis - Non-Hodgkin Lymphoma



Risk and Associated Factors

Age Rates increase with age reaching the highest levels in the eighth and ninth decades of life.

Gender Males have higher rates than females.

Race & SES Generally in the United States, incidence rates are higher for Caucasians than African Americans. Rates are higher in upper income groups.

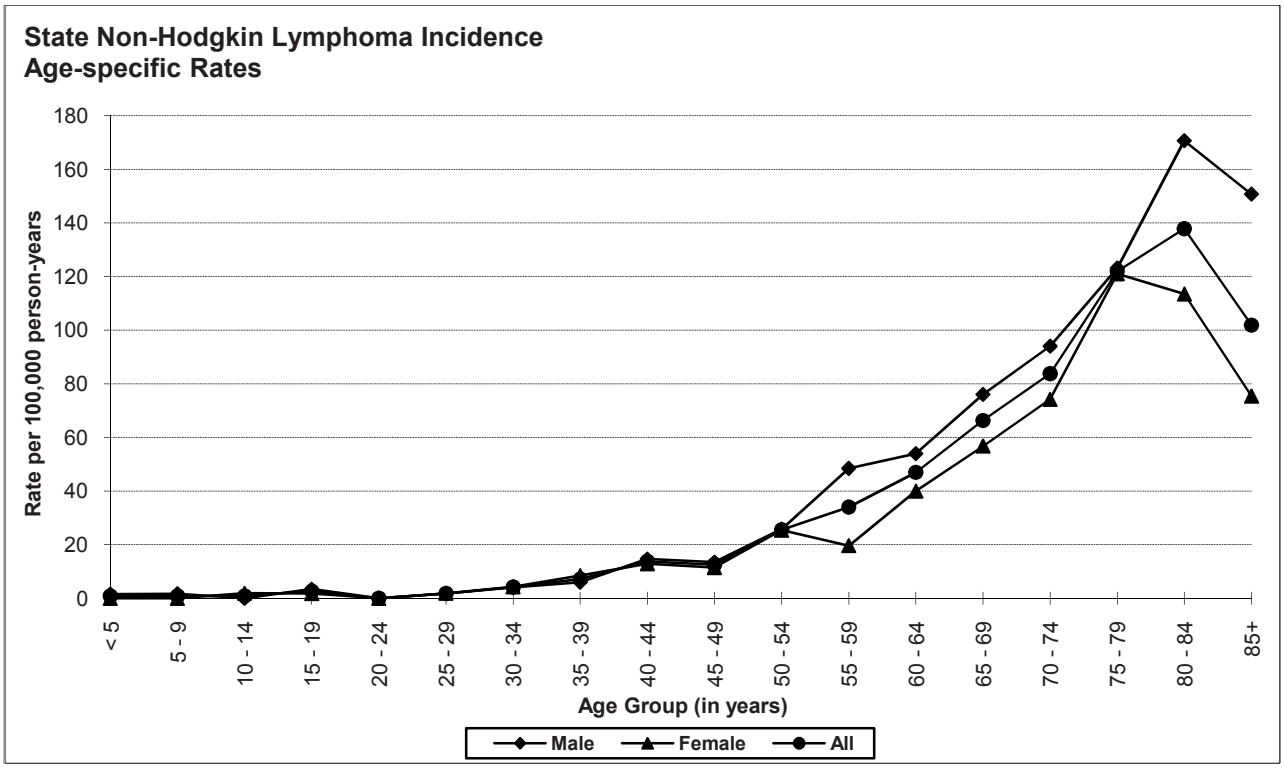
Occupation Ethylene oxide exposure at plants producing sterilized medical supplies and spices is a risk factor.

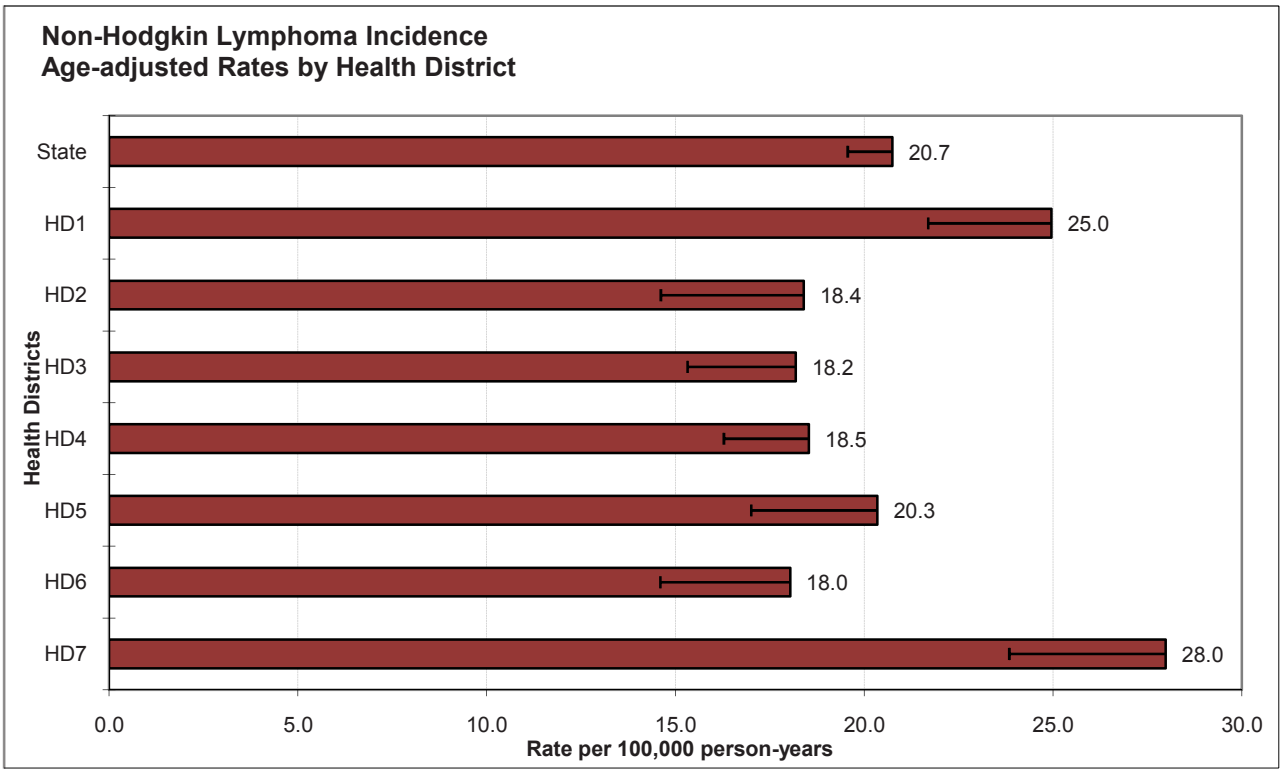
Other Non-Hodgkin lymphoma (NHL) develops with increased frequency in individuals infected with certain viruses, including HTLV-I, HIV, and EBV. Exposures to agricultural chemicals and PCBs have also been implicated. Treatment with some immunosuppressants increases the risk of NHL among organ transplant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

Special Notes

Mean age-adjusted incidence rate across health districts:	20.9
95% confidence interval on the mean age-adjusted incidence rate:	18.0- 23.9
Median age-adjusted incidence rate of health districts:	18.5
Range of age-adjusted incidence rate for health districts:	18.0- 28.0
SEER 17 rate (2007, all races):	19.3
USCS rate (2006, all races):	18.7

The age-specific incidence rates of non-Hodgkin lymphoma increased with age, peaking in the age group 80-84 for males and 75-79 for females. Health District 7 had statistically significantly 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
20.7
25.0
18.4
18.2
18.5
20.3
18.0
28.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Rate per 100,000 person-years

ORAL CAVITY AND PHARYNX

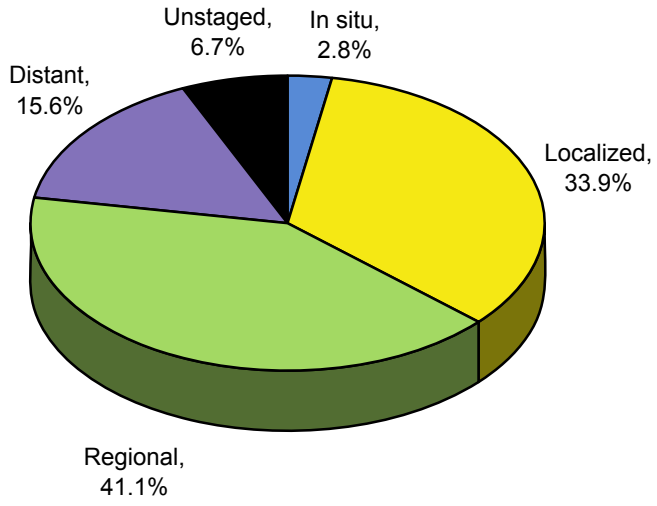
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	11.2	15.7	7.0
# of new invasive cases	175	119	56
# of new in-situ cases	5	3	2
# of deaths	41	27	14

Total Cases by County

Ada	48	Cassia	1	Lewis	2
Adams	1	Clark	1	Lincoln	-
Bannock	3	Clearwater	4	Madison	-
Bear Lake	-	Custer	-	Minidoka	2
Benewah	-	Elmore	4	Nez Perce	6
Bingham	7	Franklin	1	Oneida	-
Blaine	7	Fremont	-	Owyhee	-
Boise	3	Gem	4	Payette	1
Bonner	4	Gooding	3	Power	1
Bonneville	10	Idaho	2	Shoshone	1
Boundary	2	Jefferson	3	Teton	1
Butte	2	Jerome	2	Twin Falls	14
Camas	-	Kootenai	17	Valley	2
Canyon	14	Latah	1	Washington	-
Caribou	3	Lemhi	1		

Stage at Diagnosis - Oral Cavity and Pharynx



Risk and Associated Factors

Age Most cases occur in people over age 60.

Gender Males have higher incidence rates than females, 2-6 times higher in most parts of the world.

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

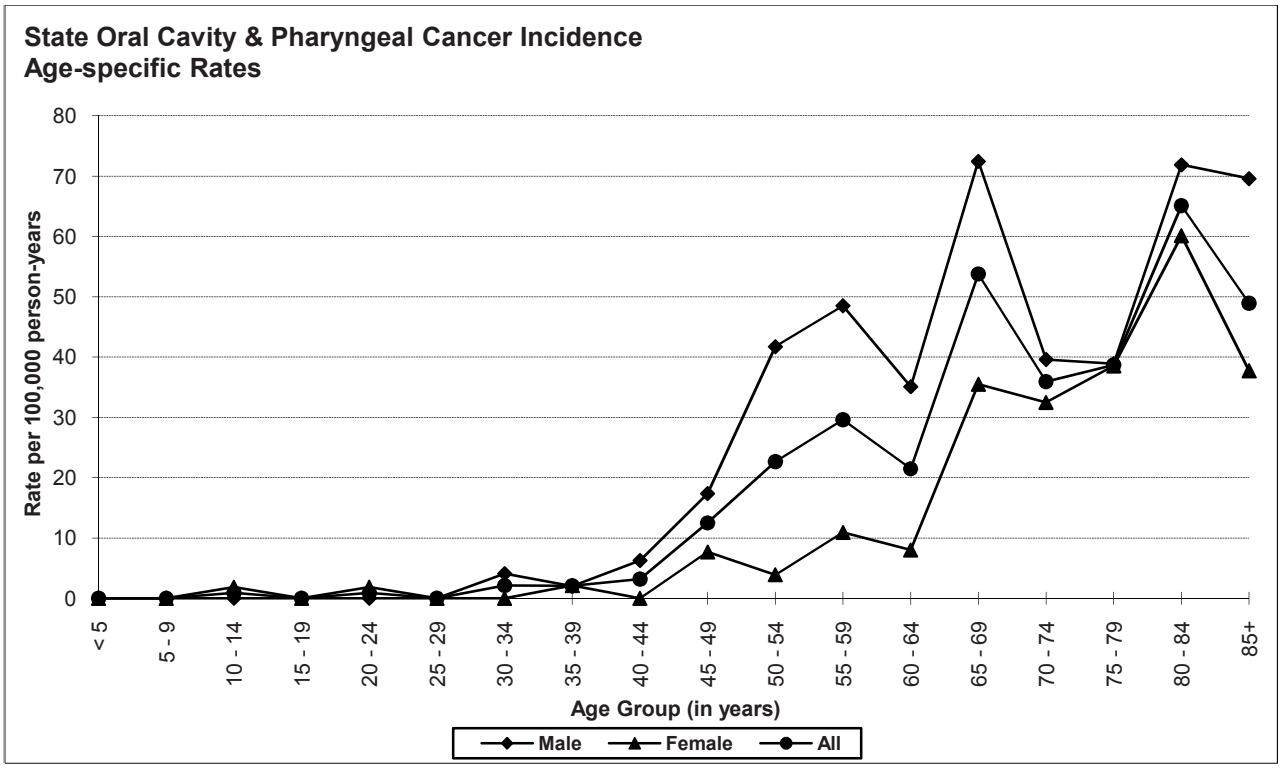
Diet Diets low in fresh fruit and vegetable consumption are associated with increased risk.

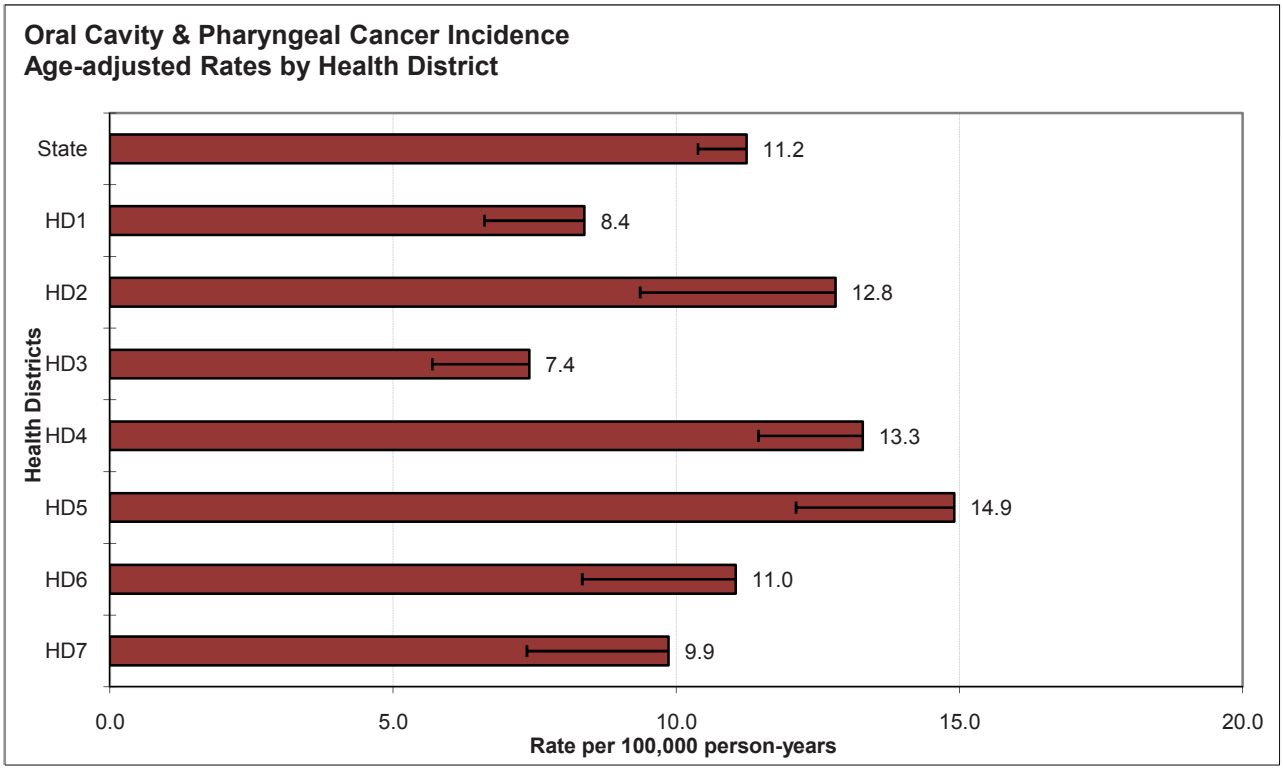
Other Smoking and spit tobacco use are major risk factors for cancers of the oral cavity and pharynx. Alcohol use, especially excessive, is a major risk factor. Combined exposure to tobacco and alcohol multiply the risks of each other. It is estimated that smoking and drinking account for 75% of all 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:	11.1
95% confidence interval on the mean age-adjusted incidence rate:	9.1- 13.1
Median age-adjusted incidence rate of health districts:	11.0
Range of age-adjusted incidence rate for health districts:	7.4- 14.9
SEER 17 rate (2007, all races):	10.3
USCS rate (2006, all races):	10.4

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 65-69 for males and 80-84 for females. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.


State Oral Cavity & Pharyngeal Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
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
11.2
8.4
12.8
7.4
13.3
14.9
11.0
9.9
0.0
5.0
10.0
15.0
20.0
Rate per 100,000 person-years

OVARY

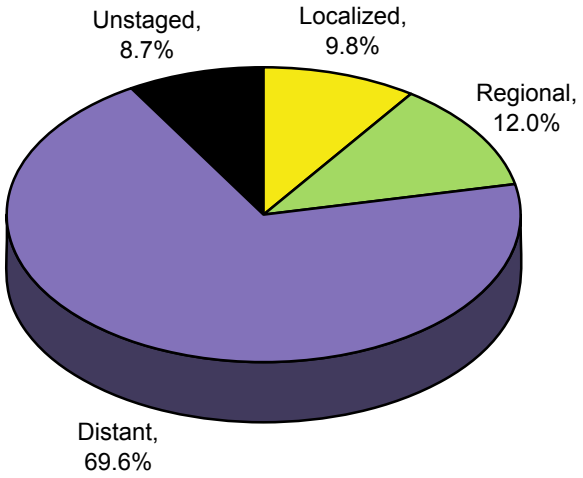
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	11.7
# of new invasive cases	-	-	92
# of new in-situ cases	-	-	-
# of deaths	-	-	69

Total Cases by County

Ada	21	Cassia	-	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	6	Clearwater	1	Madison	1
Bear Lake	2	Custer	-	Minidoka	-
Benewah	2	Elmore	1	Nez Perce	1
Bingham	3	Franklin	-	Oneida	-
Blaine	2	Fremont	-	Owyhee	2
Boise	-	Gem	-	Payette	2
Bonner	4	Gooding	1	Power	-
Bonneville	5	Idaho	1	Shoshone	2
Boundary	2	Jefferson	1	Teton	-
Butte	-	Jerome	-	Twin Falls	2
Camas	-	Kootenai	12	Valley	1
Canyon	9	Latah	3	Washington	2
Caribou	-	Lemhi	2		

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.

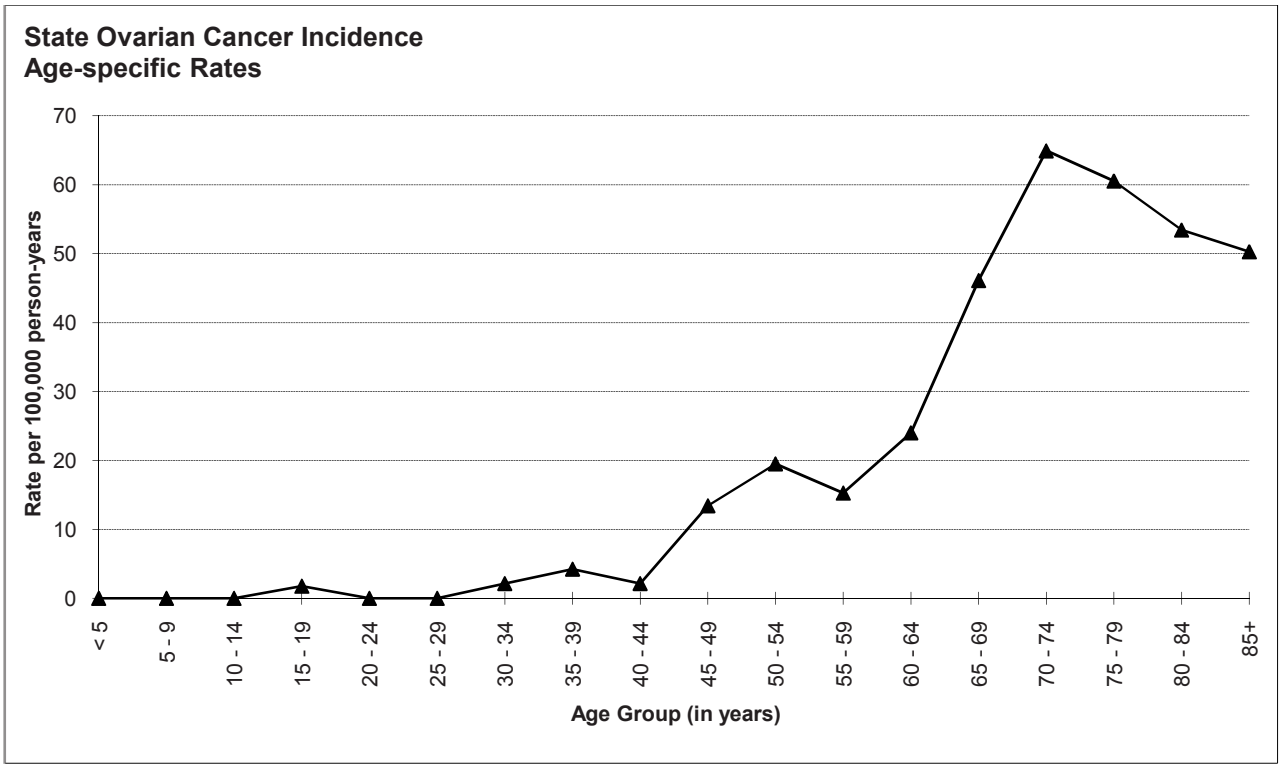
Diet Dietary animal fat may increase the risk.

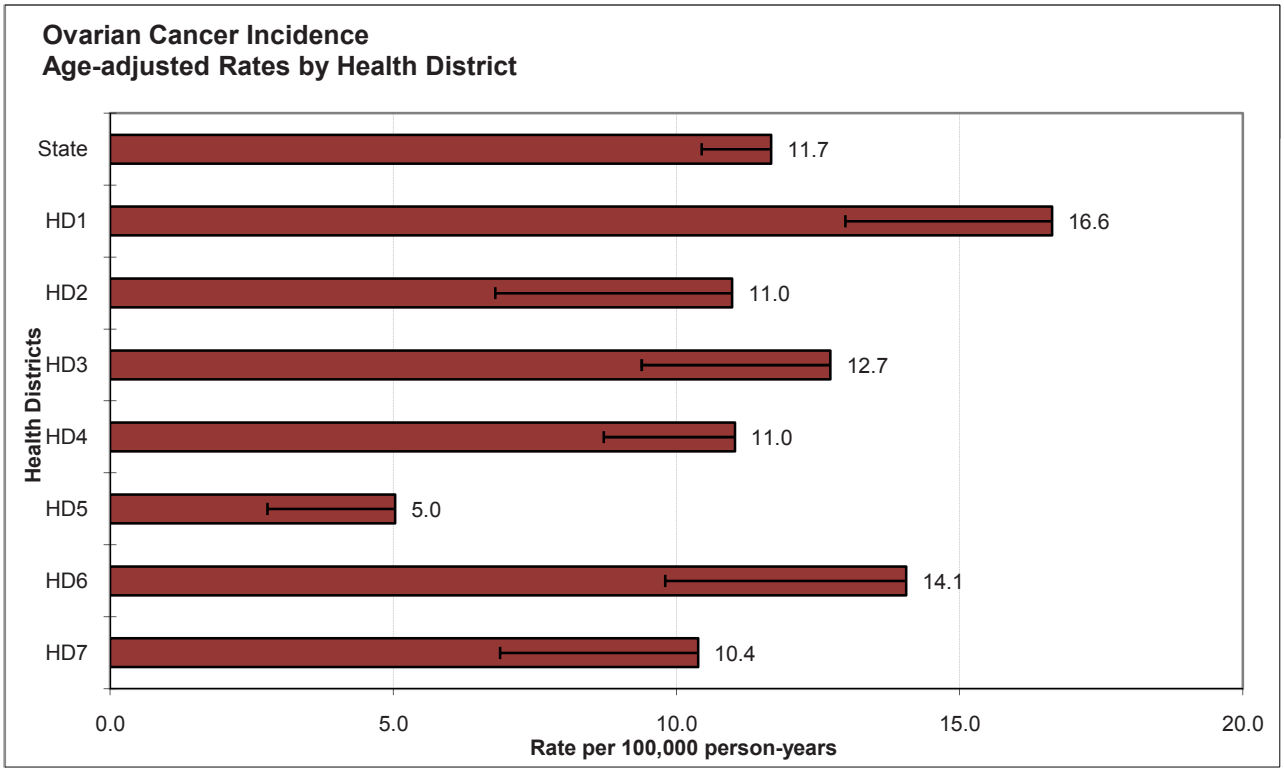
Other High dose (>100 rads) ionizing radiation roughly doubles the risk of ovarian cancer.

Special Notes

Mean age-adjusted incidence rate across health districts:	11.5
95% confidence interval on the mean age-adjusted incidence rate:	8.9- 14.2
Median age-adjusted incidence rate of health districts:	11.0
Range of age-adjusted incidence rate for health districts:	5.0- 16.6
SEER 17 rate (2007, all races):	12.3
USCS rate (2006, all races):	12.3

There were few cases of ovarian cancer among females aged less than 40 years. The age-specific incidence rates of ovarian cancer generally increased with age starting in the 45-49 age group. The highest age-specific rate was for women aged 70-74. Health District 5 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho.


State Ovarian Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
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
11.7
16.6
11.0
12.7
11.0
5.0
14.1
10.4
0.0
5.0
10.0
15.0
20.0
Rate per 100,000 person-years

PANCREAS

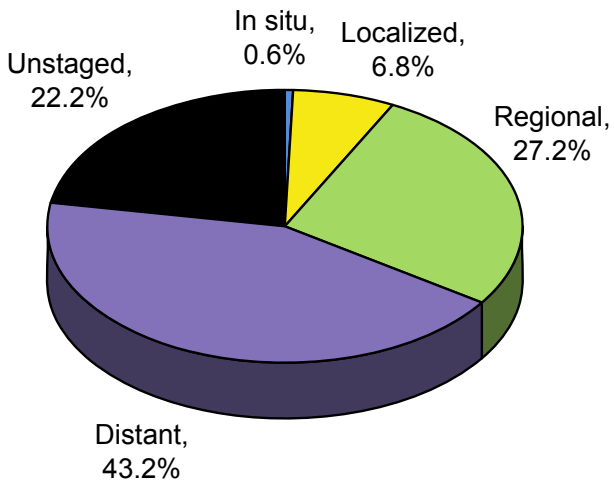
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	10.6	10.9	10.4
# of new invasive cases	161	76	85
# of new in-situ cases	1	0	1
# of deaths	155	82	73

Total Cases by County

Ada	34	Cassia	-	Lewis	-
Adams	1	Clark	-	Lincoln	-
Bannock	7	Clearwater	1	Madison	-
Bear Lake	-	Custer	1	Minidoka	5
Benewah	2	Elmore	4	Nez Perce	4
Bingham	4	Franklin	1	Oneida	1
Blaine	1	Fremont	1	Owyhee	-
Boise	-	Gem	2	Payette	2
Bonner	3	Gooding	5	Power	3
Bonneville	9	Idaho	3	Shoshone	2
Boundary	1	Jefferson	2	Teton	-
Butte	1	Jerome	2	Twin Falls	9
Camas	-	Kootenai	25	Valley	-
Canyon	19	Latah	3	Washington	2
Caribou	1	Lemhi	-		

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.

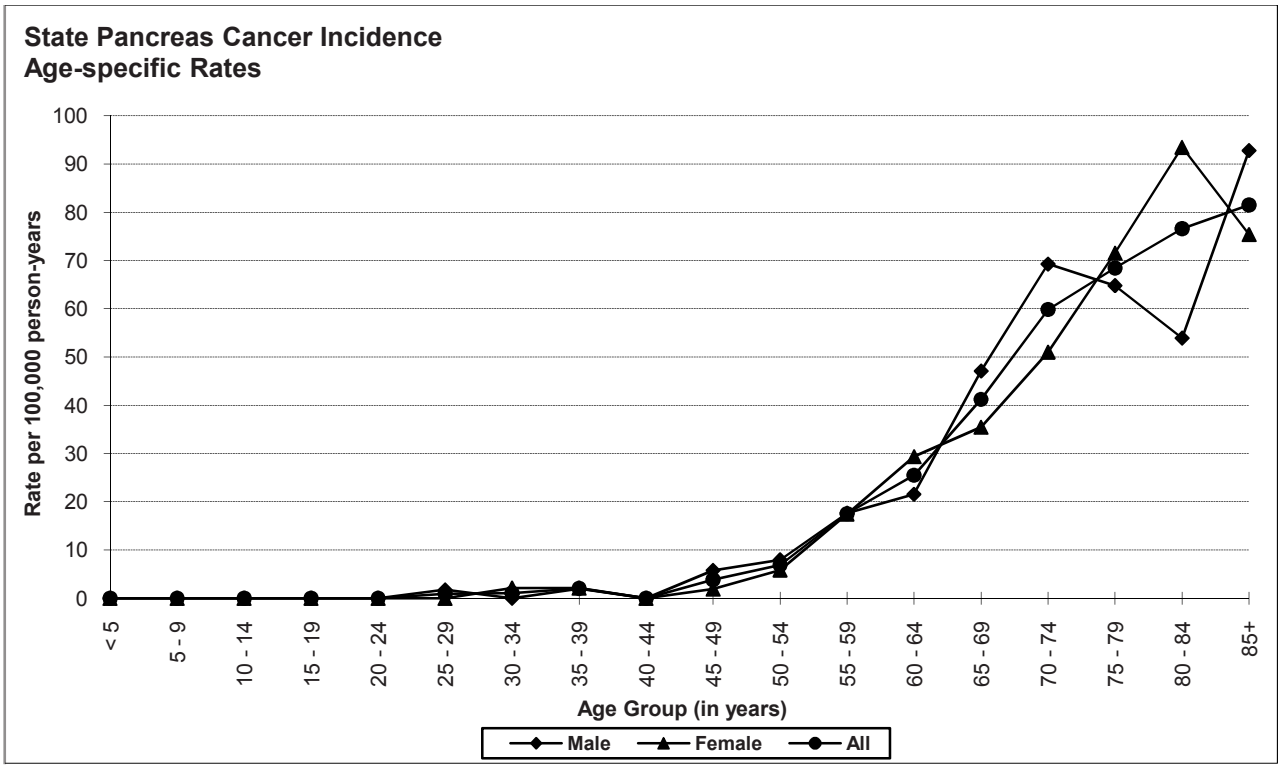
Occupation Persons in certain occupations, such as chemists, metal workers, and persons employed in the manufacture of benzidine and betanaphthylene, are believed to be at higher risk.

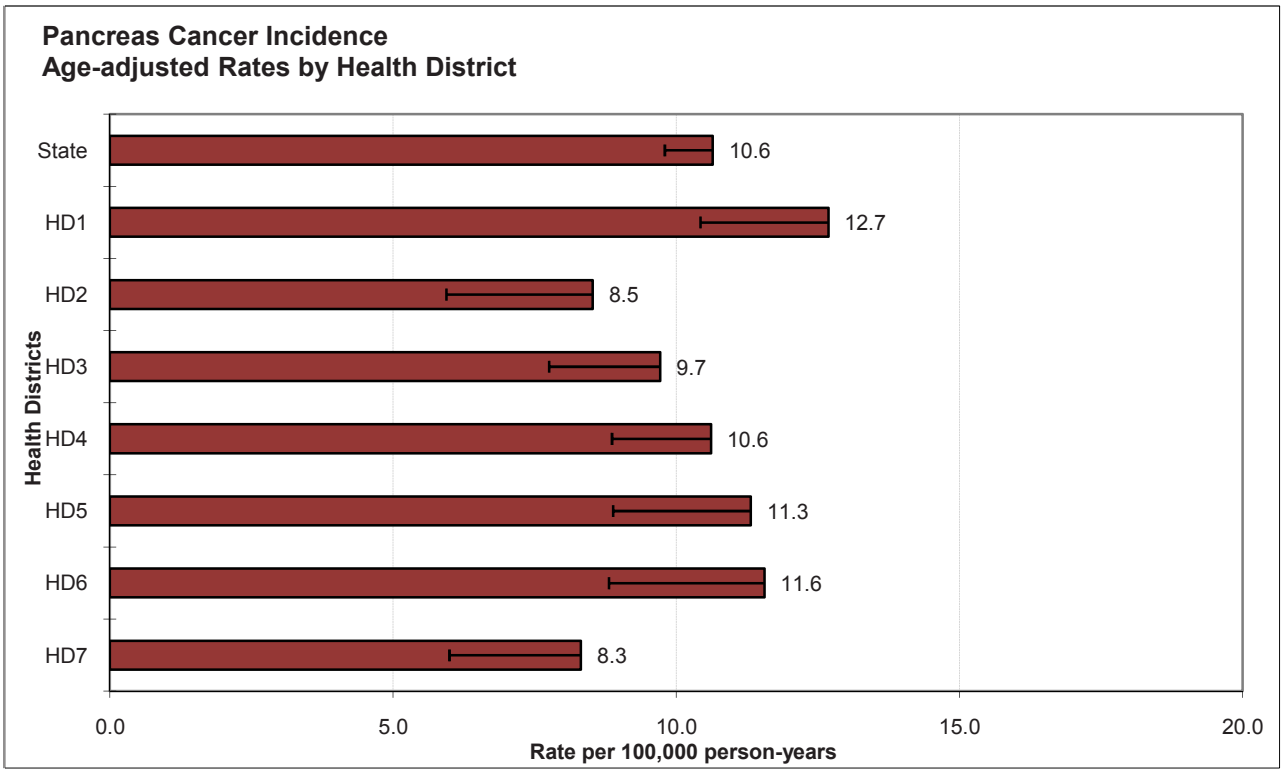
Other Pancreatic cancer is more common among smokers than non-smokers. Familial clustering has been observed in some studies. Pancreatic cancer usually progresses to an advanced stage before symptoms develop. It is rapidly fatal in over 90% of cases.

Special Notes

Mean age-adjusted incidence rate across health districts:	10.4
95% confidence interval on the mean age-adjusted incidence rate:	9.2- 11.6
Median age-adjusted incidence rate of health districts:	10.6
Range of age-adjusted incidence rate for health districts:	8.3- 12.7
SEER 17 rate (2007, all races):	11.7
USCS rate (2006, all races):	11.5

There were few cases of pancreatic cancer among persons aged less than 55 years. The age-specific incidence rates of pancreatic cancer generally increased after age 59. No health districts had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.


State Pancreas 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


Pancreas Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
10.6
12.7
8.5
9.7
10.6
11.3
11.6
8.3
0.0
5.0
10.0
15.0
20.0
Rate per 100,000 person-years

PROSTATE

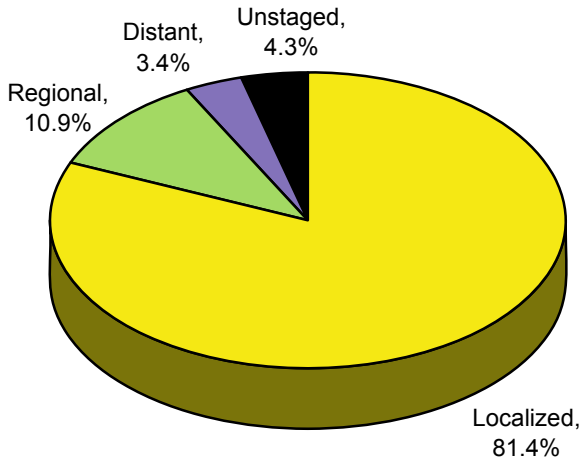
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	147.9	-
# of new invasive cases	-	1077	-
# of new in-situ cases	-	0	-
# of deaths	-	161	-

Total Cases by County

Ada	260	Cassia	17	Lewis	8
Adams	2	Clark	2	Lincoln	5
Bannock	45	Clearwater	9	Madison	12
Bear Lake	4	Custer	7	Minidoka	9
Benewah	9	Elmore	15	Nez Perce	50
Bingham	36	Franklin	7	Oneida	1
Blaine	24	Fremont	7	Owyhee	12
Boise	8	Gem	12	Payette	21
Bonner	37	Gooding	14	Power	2
Bonneville	50	Idaho	17	Shoshone	8
Boundary	14	Jefferson	14	Teton	3
Butte	-	Jerome	14	Twin Falls	57
Camas	-	Kootenai	77	Valley	11
Canyon	103	Latah	14	Washington	12
Caribou	5	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.

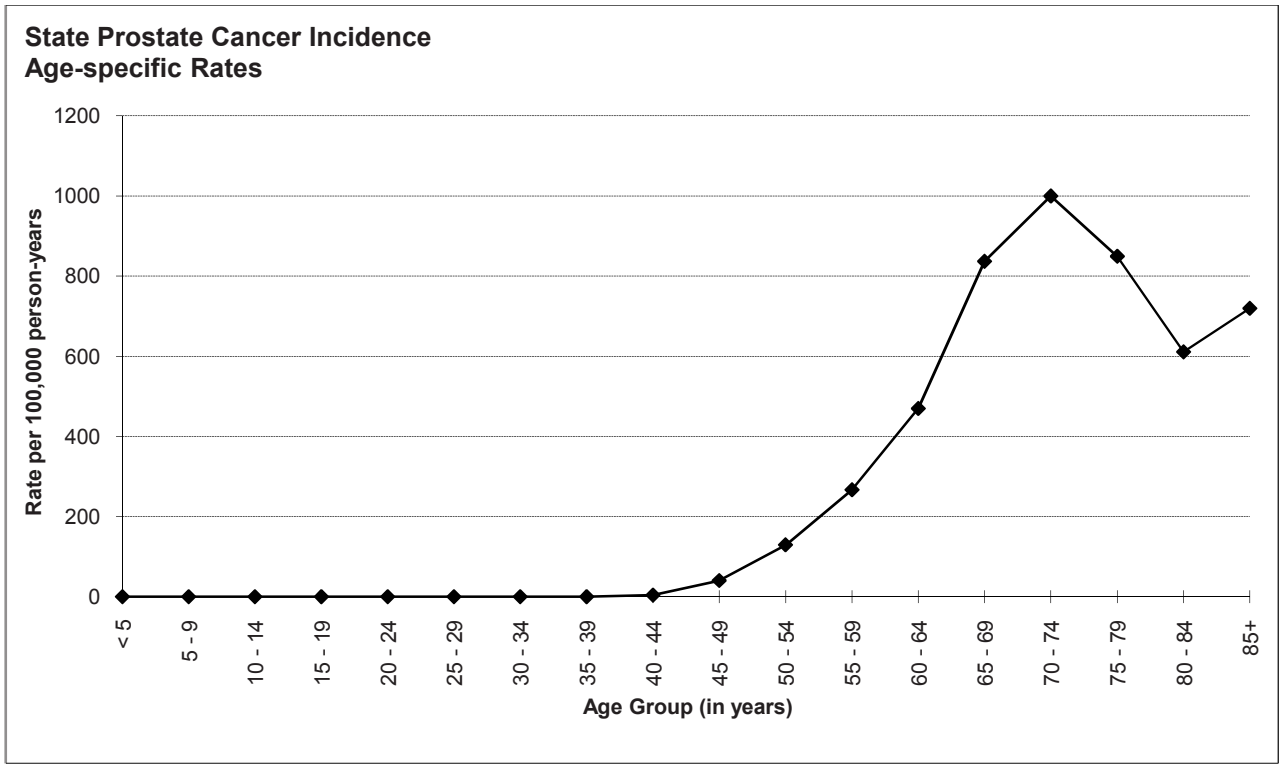
Diet Dietary fat has been implicated in several international, regional, and case-control studies.

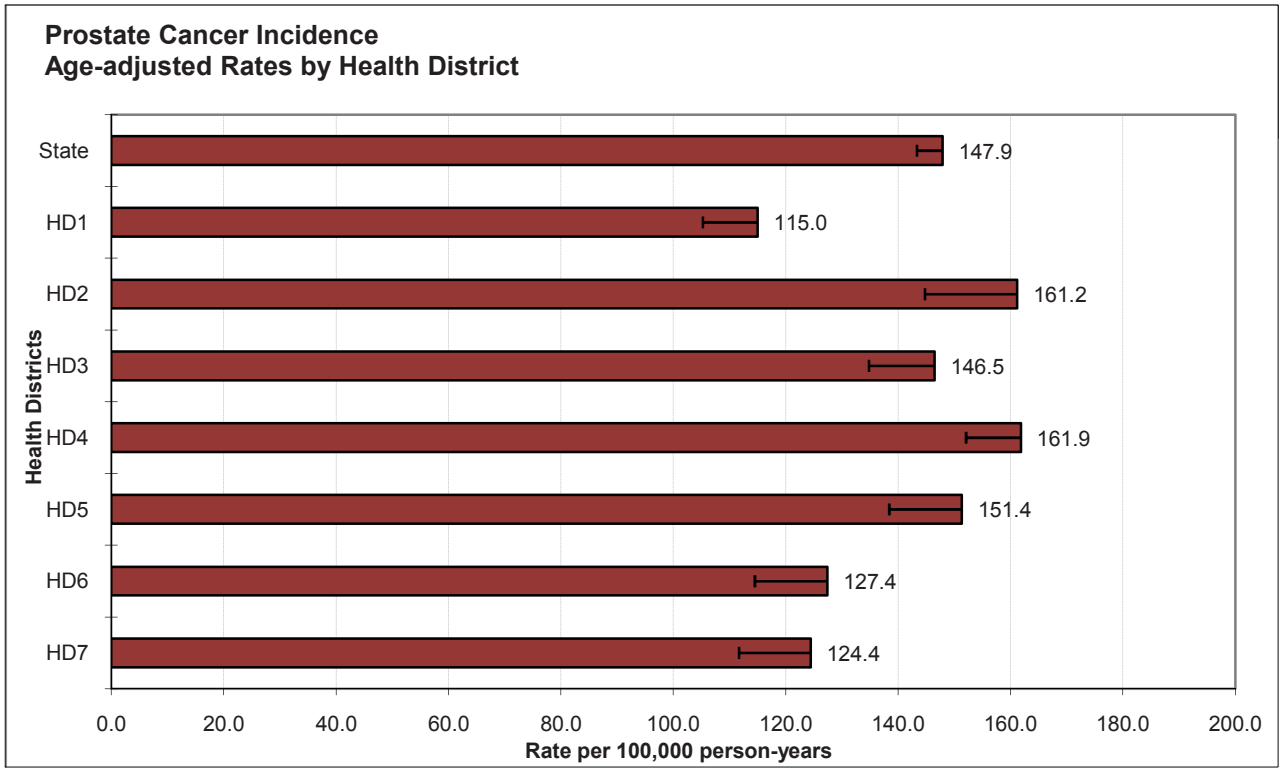
Other Environmental and familial factors may contribute to an increased incidence but no specific factor in these two groups of potential risk factors has been clearly identified. Three risk factors are well established: age, family history, and ethnic group/country of residence. Farming is the most 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:	141.1
95% confidence interval on the mean age-adjusted incidence rate:	127.2- 155.0
Median age-adjusted incidence rate of health districts:	146.5
Range of age-adjusted incidence rate for health districts:	115.0- 161.9
SEER 17 rate (2007, all races):	159.8
USCS rate (2006, all races):	152.6

There were few cases of prostate cancer among persons aged less than 50 years. The age-specific incidence rates of prostate cancer increased with age, peaking in the 70-74 age group. Health District 4 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 1 had statistically significantly fewer cases than expected.


State Prostate Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
1200
1000
800
600
400
200
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
147.9
115.0
161.2
146.5
161.9
151.4
127.4
124.4
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

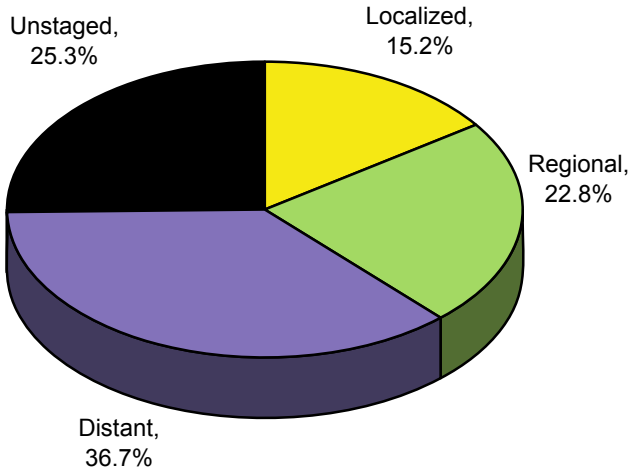
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.4	6.2	4.6
# of new invasive cases	79	42	37
# of new in-situ cases	0	0	0
# of deaths	51	28	23

Total Cases by County

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

Stage at Diagnosis - Stomach



Risk and Associated Factors

Age Stomach cancer incidence rates increase with age.

Gender Incidence rates for males are usually more than twice as high as for females.

Race & SES Incidence rates are higher among 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.

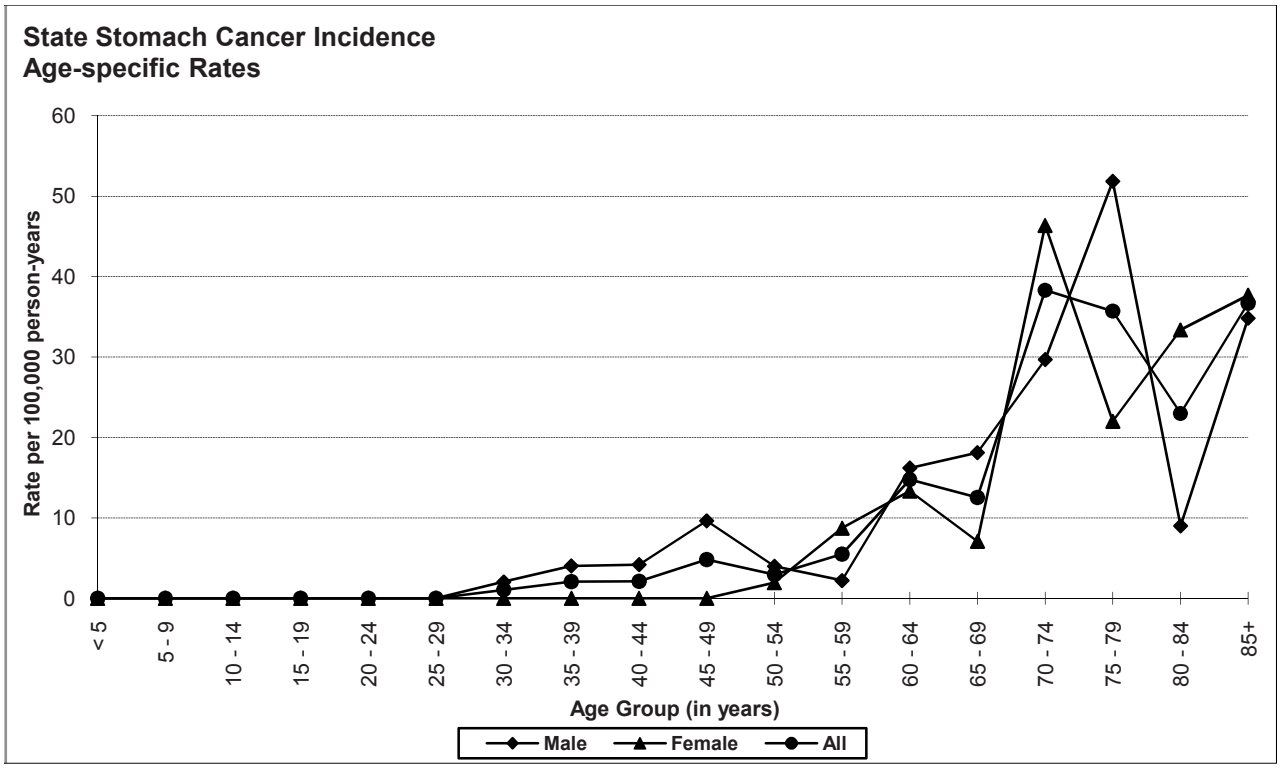
Occupation Elevated rates have been found in certain occupational groups, especially coal miners and asbestos workers, and occupations with mineral dust exposure.

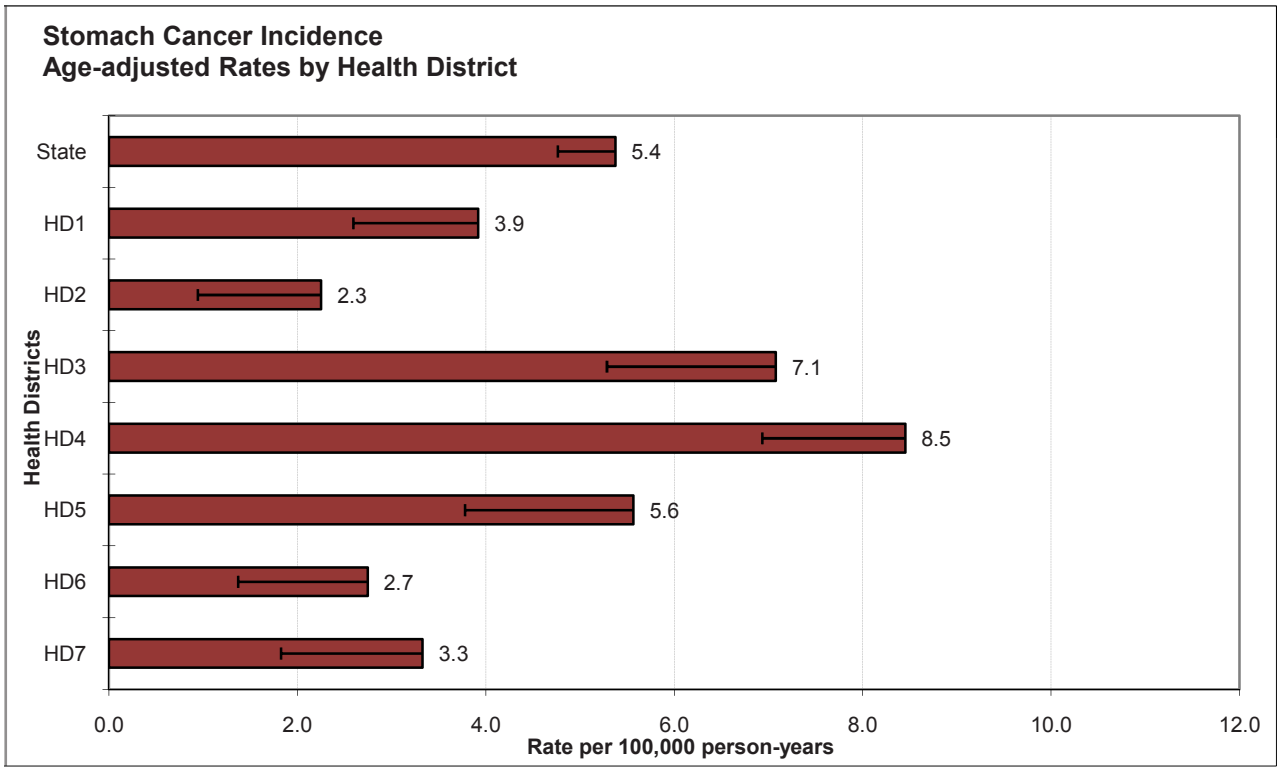
Other Stomach cancer has been linked to peptic ulcer disease and to certain bacteria.

Special Notes

Mean age-adjusted incidence rate across health districts:	4.8
95% confidence interval on the mean age-adjusted incidence rate:	3.0- 6.5
Median age-adjusted incidence rate of health districts:	3.9
Range of age-adjusted incidence rate for health districts:	2.3- 8.5
SEER 17 rate (2007, all races):	7.6
USCS rate (2006, all races):	6.6

There were few cases of stomach cancer among persons aged less than 50 years. The age-specific incidence rates of stomach cancer increased with age, peaking in the 75-79 age group for males and 70-74 age group for females. Health District 4 had statistically significantly 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
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
5.4
3.9
2.3
7.1
8.5
5.6
2.7
3.3
0.0
2.0
4.0
6.0
8.0
10.0
12.0
Rate per 100,000 person-years

TESTIS

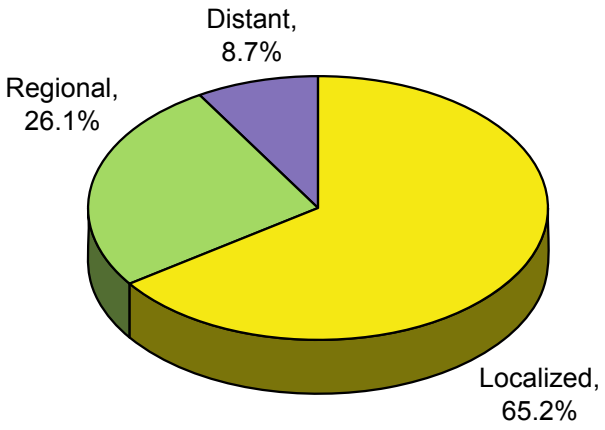
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	6.1	-
# of new invasive cases	-	46	-
# of new in-situ cases	-	0	-
# of deaths	-	1	-

Total Cases by County

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

Stage at Diagnosis - Testis



Risk and Associated Factors

Age Testicular cancer is the most common cancer in young males, especially males between the ages of 20 and 34.

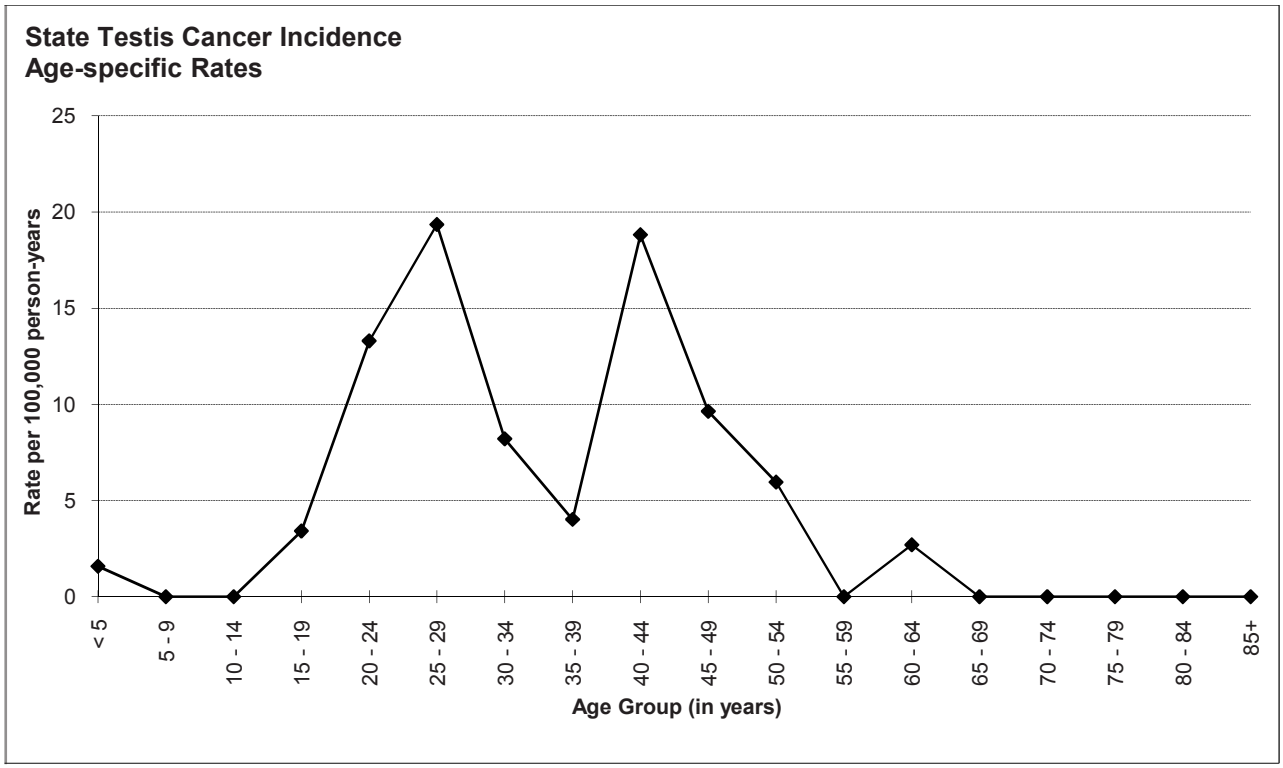
Race & SES Incidence rates are substantially higher in Caucasian males than in African American males. Incidence of testicular cancer is highest in highest socioeconomic classes.

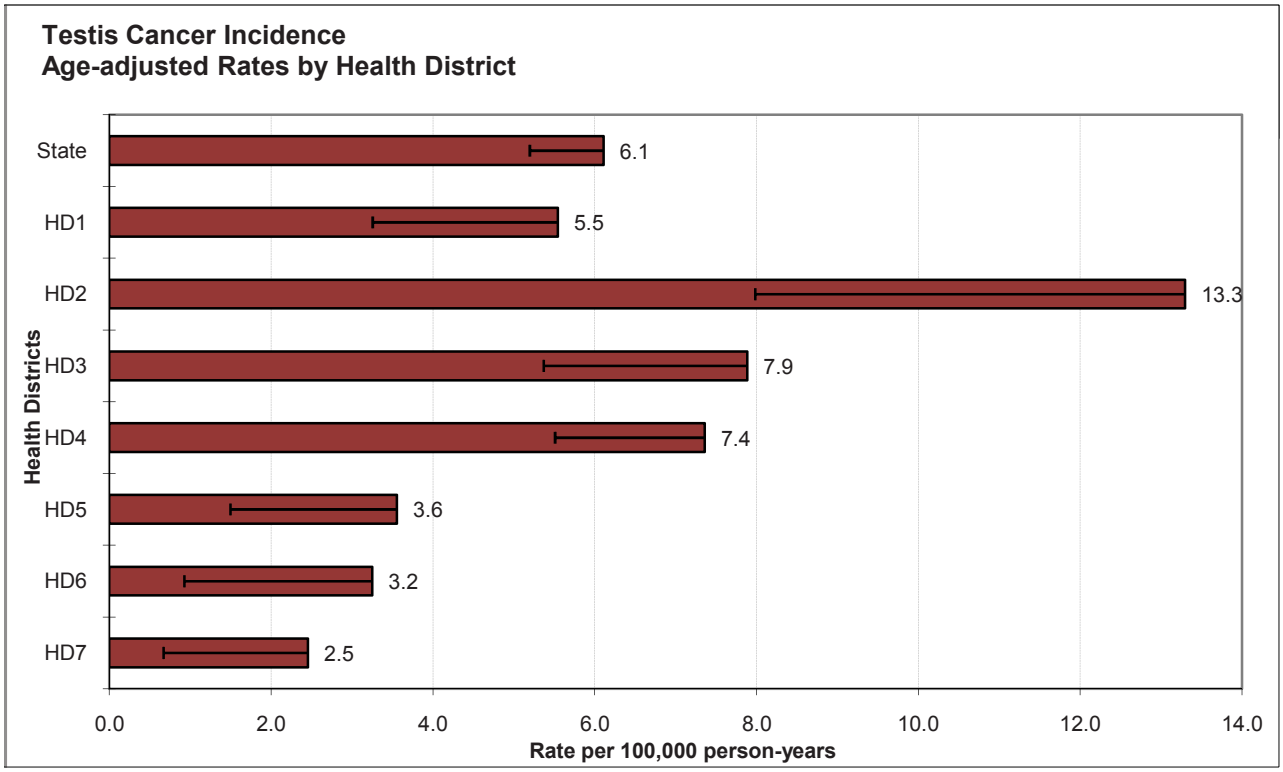
Other Undescended testis, a minor abnormality that can usually be detected and corrected with surgery in childhood, is responsible for a substantially high risk for testicular cancer when uncorrected. The extent to which surgical correction reduces cancer risk is unclear. Some evidence suggests that 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:	6.2
95% confidence interval on the mean age-adjusted incidence rate:	3.4- 9.0
Median age-adjusted incidence rate of health districts:	5.5
Range of age-adjusted incidence rate for health districts:	2.5- 13.3
SEER 17 rate (2007, all races):	5.4
USCS rate (2006, all races):	5.1

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


State Testis Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
25
20
15
10
5
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)


Testis Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
6.1
5.5
13.3
7.9
7.4
3.6
3.2
2.5
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
Rate per 100,000 person-years

THYROID

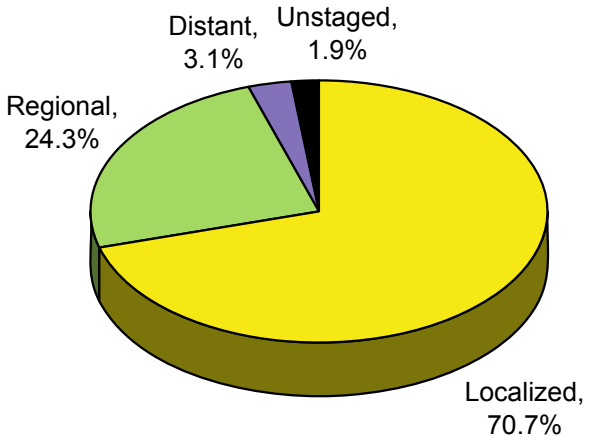
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	17.6	7.7	27.5
# of new invasive cases	259	58	201
# of new in-situ cases	0	0	0
# of deaths	10	1	9

Total Cases by County

Ada	70	Cassia	2	Lewis	1
Adams	2	Clark	-	Lincoln	-
Bannock	6	Clearwater	1	Madison	4
Bear Lake	2	Custer	-	Minidoka	1
Benewah	2	Elmore	4	Nez Perce	3
Bingham	10	Franklin	5	Oneida	1
Blaine	2	Fremont	3	Owyhee	3
Boise	-	Gem	3	Payette	3
Bonner	2	Gooding	2	Power	-
Bonneville	42	Idaho	2	Shoshone	-
Boundary	1	Jefferson	5	Teton	1
Butte	-	Jerome	4	Twin Falls	9
Camas	-	Kootenai	17	Valley	4
Canyon	33	Latah	6	Washington	1
Caribou	-	Lemhi	1		

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.

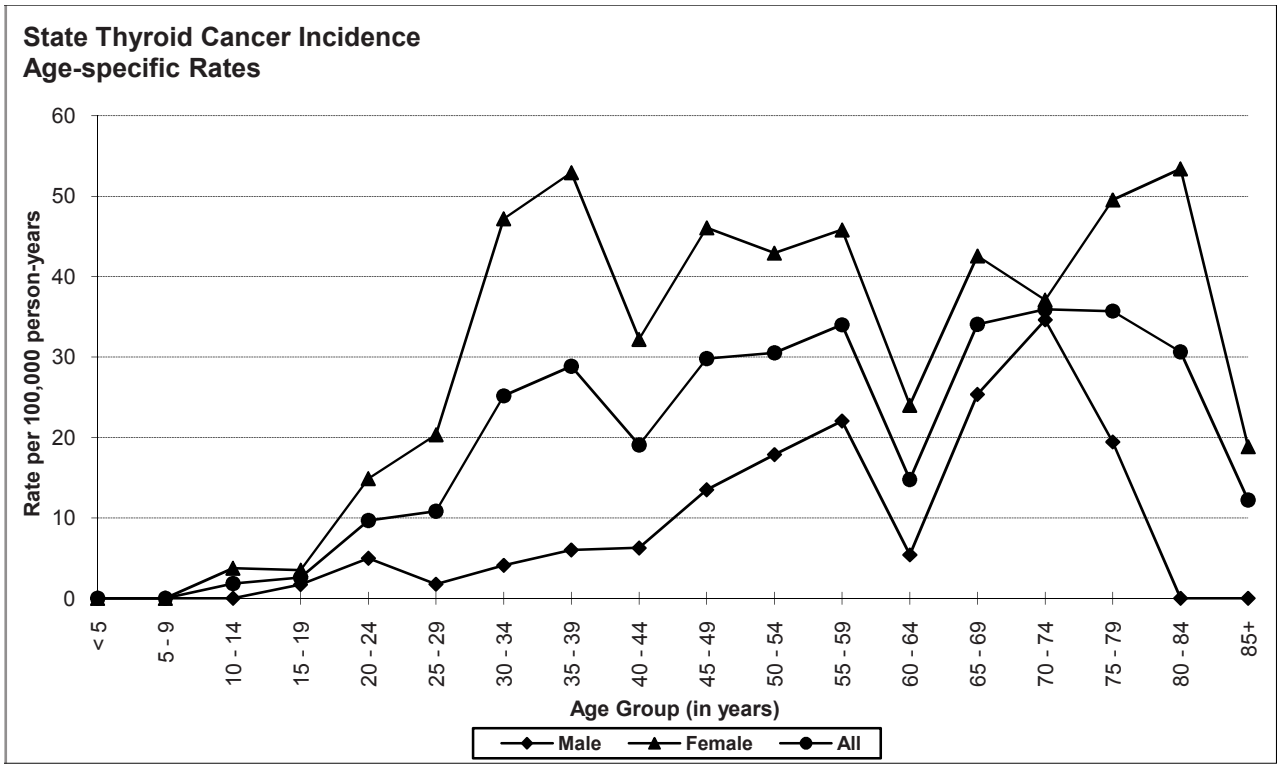
Hormonal Hormonal factors are believed to contribute to the increased risk in females. This is demonstrated by the sharp increase in incidence among women after menarche.

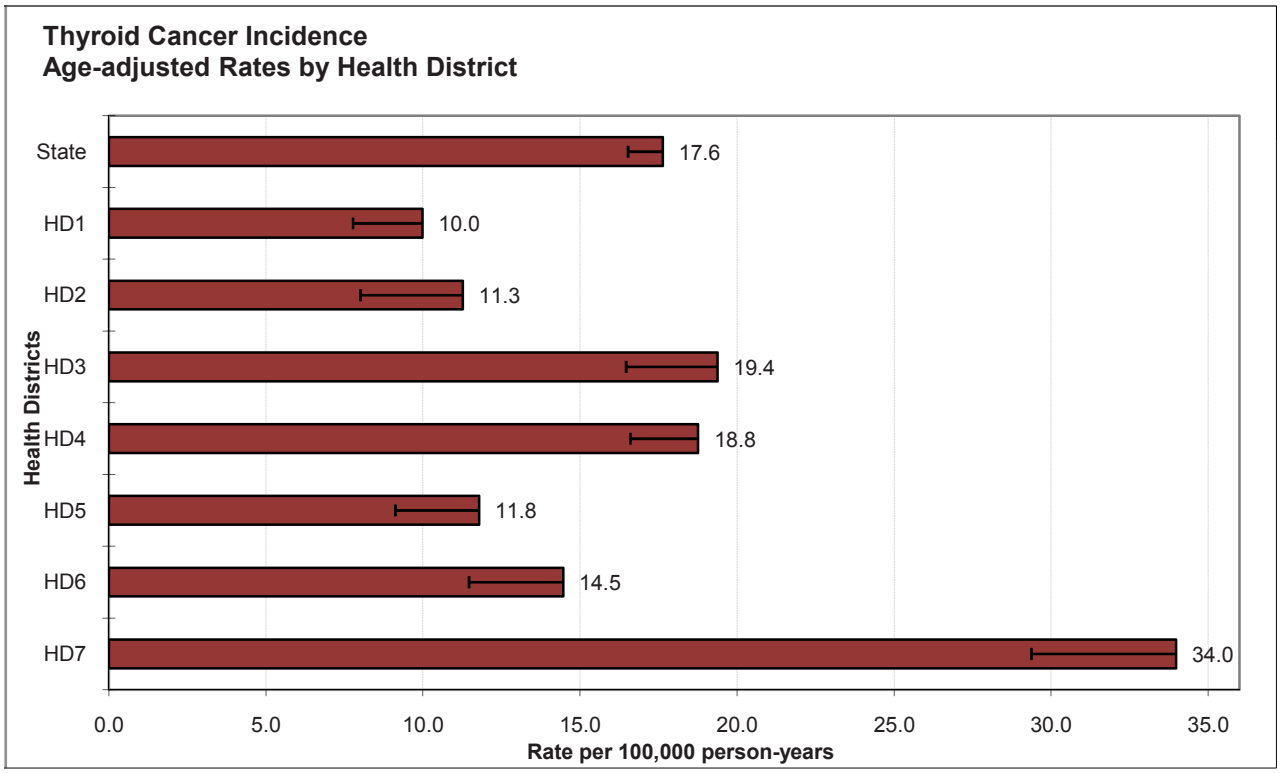
Other Occupational and environmental exposures to ionizing radiation have been associated with higher rates of thyroid cancer. Radiation exposure to the head and neck in childhood is a well-known risk factor. Family history of thyroid cancer substantially increases the risk. Death due to thyroid cancer 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:	17.1
95% confidence interval on the mean age-adjusted incidence rate:	10.9- 23.2
Median age-adjusted incidence rate of health districts:	14.5
Range of age-adjusted incidence rate for health districts:	10.0- 34.0
SEER 17 rate (2007, all races):	11.4
USCS rate (2006, all races):	10.8

The age-specific incidence rates of thyroid cancer were typically higher for females than males. Health District 7 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health Districts 1 and 5 had statistically significantly fewer cases than expected.


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
17.6
10.0
11.3
19.4
18.8
11.8
14.5
34.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
Rate per 100,000 person-years

SECTION II

STATE OF IDAHO – 2008
INCIDENCE DATA BY SITE AND GENDER

Primary Site of Cancer	Invasive			In situ		
	Total	Male	Female	Total	Male	Female
All Sites	6,714	3,488	3,226	682	317	365
Oral Cavity and Pharynx	175	119	56	5	3	2
Lip	32	19	13	1	1	-
Tongue	56	41	15	1	-	1
Salivary Gland	19	7	12	-	-	-
Floor of Mouth	10	6	4	-	-	-
Gum and Other Mouth	17	11	6	1	1	-
Nasopharynx	2	2	-	-	-	-
Tonsil	25	22	3	1	1	-
Oropharynx	5	5	-	-	-	-
Hypopharynx	5	4	1	-	-	-
Other Oral Cavity and Pharynx	4	2	2	1	-	1
Digestive System	1,115	590	525	18	11	7
Esophagus	71	62	9	1	1	-
Stomach	79	42	37	-	-	-
Small Intestine	27	8	19	-	-	-
Colon and Rectum	612	307	305	12	8	4
Colon excluding Rectum	451	209	242	7	5	2
Cecum	94	39	55	2	2	-
Appendix	16	13	3	-	-	-
Ascending Colon	76	39	37	-	-	-
Hepatic Flexure	26	10	16	-	-	-
Transverse Colon	40	15	25	2	1	1
Splenic Flexure	15	6	9	-	-	-
Descending Colon	26	12	14	1	1	-
Sigmoid Colon	128	63	65	2	1	1
Large Intestine, NOS	30	12	18	-	-	-
Rectum and Rectosigmoid Junction	161	98	63	5	3	2
Rectosigmoid Junction	31	17	14	2	1	1
Rectum	130	81	49	3	2	1
Anus, Anal Canal and Anorectum	36	7	29	3	2	1
Liver and Intrahepatic Bile Duct	72	55	17	-	-	-
Liver	65	50	15	-	-	-
Intrahepatic Bile Duct	7	5	2	-	-	-
Gallbladder	17	8	9	1	-	1
Other Biliary	23	15	8	-	-	-
Pancreas	161	76	85	1	-	1
Retroperitoneum	8	7	1	-	-	-
Peritoneum, Omentum and Mesentery	7	2	5	-	-	-
Other Digestive Organs	2	1	1	-	-	-
Respiratory System	909	502	407	4	3	1
Nose, Nasal Cavity and Middle Ear	13	8	5	-	-	-
Larynx	45	36	9	3	2	1
Lung and Bronchus	824	441	383	1	1	-
Pleura	20	14	6	-	-	-
Trachea, Mediastinum and Other Respiratory Organs	7	3	4	-	-	-
Skin excluding Basal and Squamous	329	207	122	240	143	97
Melanoma of the Skin	314	201	113	240	143	97
Other Non-Epithelial Skin	15	6	9	-	-	-
Breast	943	8	935	203	-	203

Primary Site of Cancer	Invasive			In situ		
	Total	Male	Female	Total	Male	Female
Female Genital System	355	n/a	355	7	n/a	7
Cervix Uteri	44	n/a	44	-	n/a	-
Corpus and Uterus, NOS	192	n/a	192	1	n/a	1
Corpus Uteri	185	n/a	185	1	n/a	1
Uterus, NOS	7	n/a	7	-	n/a	-
Ovary	92	n/a	92	-	n/a	-
Vagina	8	n/a	8	-	n/a	-
Vulva	18	n/a	18	6	n/a	6
Other Female Genital Organs	1	n/a	1	-	n/a	-
Male Genital System	1,126	1,126	n/a	1	1	n/a
Prostate	1,077	1,077	n/a	-	-	n/a
Testis	46	46	n/a	-	-	n/a
Penis	2	2	n/a	1	1	n/a
Other Male Genital Organs	1	1	n/a	-	-	n/a
Urinary System	379	258	121	203	155	48
Urinary Bladder	139	113	26	187	145	42
Kidney and Renal Pelvis	211	123	88	6	3	3
Ureter	9	5	4	4	2	2
Other Urinary Organs	20	17	3	6	5	1
Brain and Other Nervous System	117	67	50	-	-	-
Brain	112	66	46	-	-	-
Cranial Nerves Other Nervous System	5	1	4	-	-	-
Endocrine System	264	62	202	-	-	-
Thyroid	259	58	201	-	-	-
Other Endocrine including Thymus	5	4	1	-	-	-
Lymphoma	360	197	163	-	-	-
Hodgkin Lymphoma	49	27	22	-	-	-
Non-Hodgkin Lymphoma	311	170	141	-	-	-
Myeloma	88	50	38	-	-	-
Leukemia	209	112	97	-	-	-
Lymphocytic Leukemia	116	61	55	-	-	-
Acute Lymphocytic Leukemia	18	10	8	-	-	-
Chronic Lymphocytic Leukemia	95	50	45	-	-	-
Other Lymphocytic Leukemia	3	1	2	-	-	-
Myeloid and Monocytic Leukemia	80	44	36	-	-	-
Acute Myeloid Leukemia	44	21	23	-	-	-
Acute Monocytic Leukemia	3	2	1	-	-	-
Chronic Myeloid Leukemia	31	20	11	-	-	-
Other Myeloid/Monocytic Leukemia	2	1	1	-	-	-
Other Leukemia	13	7	6	-	-	-
Other Acute Leukemia	6	1	5	-	-	-
Aleukemic, Subleukemic and NOS	7	6	1	-	-	-
Other or Unknown Sites	345	190	155	1	1	-
Bones and Joints	20	11	9	-	-	-
Soft Tissue including Heart	48	27	21	-	-	-
Eye and Orbit	14	5	9	1	1	-
Miscellaneous	263	147	116	-	-	-

SECTION III

STATE OF IDAHO – 2008
MORTALITY RATES BY SITE AND GENDER

Idaho Resident Cancer Mortality Rates - 2008

Cause of Death	Total			Male			Female		
	Rate	Deaths	Pop	Rate	Deaths	Pop	Rate	Deaths	Pop
All Causes of Death	725.6	10,931	1,527,506	834.8	5,522	767,412	634.4	5,409	760,094
All Malignant Cancers	166.4	2,503	1,527,506	192.4	1,308	767,412	148.1	1,195	760,094
Bladder	4.8	69	1,527,506	8.2	51	767,412	2.4	18	760,094
Brain and Other Nervous System	4.8	73	1,527,506	5.3	39	767,412	4.3	34	760,094
Breast	11.9	180	1,527,506	0.5	3	767,412	21.9	177	760,094
Cervix	1.4	21	1,527,506	0.0	0	767,412	2.7	21	760,094
Colorectal	14.3	218	1,527,506	13.7	97	767,412	14.6	121	760,094
Corpus Uteri	1.8	27	1,527,506	0.0	0	767,412	3.5	27	760,094
Esophagus	4.8	72	1,527,506	8.1	58	767,412	1.8	14	760,094
Hodgkin Lymphoma	0.6	9	1,527,506	0.6	4	767,412	0.7	5	760,094
Kidney	4.0	61	1,527,506	5.3	38	767,412	2.9	23	760,094
Larynx	0.4	7	1,527,506	0.9	7	767,412	0.0	0	760,094
Leukemia	7.3	109	1,527,506	9.2	63	767,412	5.8	46	760,094
Liver and Bile Duct	3.6	56	1,527,506	5.8	42	767,412	1.7	14	760,094
Lung and Bronchus	42.2	633	1,527,506	48.5	336	767,412	37.2	297	760,094
Melanoma of the Skin	3.3	50	1,527,506	4.7	33	767,412	2.2	17	760,094
Myeloma	3.5	52	1,527,506	4.6	30	767,412	2.6	22	760,094
Non-Hodgkin Lymphoma	6.4	95	1,527,506	9.2	59	767,412	4.5	36	760,094
Oral Cavity and Pharynx	2.7	41	1,527,506	3.7	27	767,412	1.8	14	760,094
Ovary	4.6	69	1,527,506	0.0	0	767,412	8.6	69	760,094
Pancreas	10.3	155	1,527,506	11.6	82	767,412	8.9	73	760,094
Prostate	10.9	161	1,527,506	26.4	161	767,412	0.0	0	760,094
Stomach	3.5	51	1,527,506	4.3	28	767,412	2.8	23	760,094
Testis	0.1	1	1,527,506	0.1	1	767,412	0.0	0	760,094
Thyroid	0.6	10	1,527,506	0.1	1	767,412	1.1	9	760,094

Data source: Bureau of Vital Records and Health Statistics (BVRHS), Idaho Department of Health and Welfare, 2009.[19]

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

Cause of death categories are based on SEER cause of death recodes (http://seer.cancer.gov/codrecode/), which differ from official BVRHS cancer mortality categories.

SECTION IV

2008 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** **2008**

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	15.4	9.6	16.4	26.0	48.3	58.6	100.7	134.0	203.4	328.9	531.8	816.2	1105.7	1772.9	2114.3	2304.1	2344.8	2352.1
Male	14.2	12.0	10.7	27.4	48.2	51.0	55.4	88.3	154.7	252.5	500.9	862.4	1290.2	2097.9	2603.3	2878.3	2911.8	3097.8
Female	16.6	7.1	22.5	24.6	48.4	66.6	148.1	182.2	253.5	405.1	562.2	770.4	923.4	1454.6	1656.0	1816.5	1923.5	1948.2
Bladder																		
All	0.0	0.0	0.0	0.0	0.0	0.9	0.0	2.1	2.1	7.7	10.8	27.4	44.3	96.8	100.6	134.0	206.9	199.8
Male	0.0	0.0	0.0	0.0	0.0	1.8	0.0	4.0	4.2	13.5	19.9	39.7	72.9	159.4	183.1	194.5	386.5	429.3
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.0	15.3	16.0	35.5	23.2	82.6	73.5	75.4
Brain																		
All	1.6	0.9	1.8	4.3	3.5	7.2	4.2	3.1	6.4	7.7	5.9	14.3	14.8	16.1	26.3	20.8	30.7	16.3
Male	1.6	1.7	1.8	1.7	6.7	8.8	6.2	6.0	8.4	7.7	8.0	15.4	27.0	18.1	24.8	19.5	27.0	23.2
Female	1.7	0.0	1.9	7.0	0.0	5.6	2.2	0.0	4.3	7.7	3.9	13.1	2.7	14.2	27.8	22.0	33.4	12.6
Brain & Other Central Nervous System (Non-Malignant)																		
All	3.2	0.0	1.8	1.7	1.8	0.9	8.4	9.3	6.4	5.8	7.9	18.7	16.1	32.3	35.9	41.7	69.0	40.8
Male	4.7	0.0	1.8	1.7	0.0	1.8	10.3	6.0	6.3	1.9	4.0	6.6	16.2	10.9	34.6	25.9	53.9	34.8
Female	1.7	0.0	1.9	1.8	3.7	0.0	6.4	12.7	6.4	9.6	11.7	30.6	16.0	53.2	37.1	55.0	80.1	44.0
Breast																		
Female Invasive	0.0	0.0	0.0	0.0	3.7	7.4	25.8	40.2	113.9	184.3	232.3	261.9	264.2	447.0	431.4	396.3	374.0	402.2
Female In-situ	0.0	0.0	0.0	0.0	0.0	1.9	4.3	10.6	27.9	44.2	60.5	69.8	66.7	67.4	88.1	77.1	73.5	50.3
Cervix																		
Female	0.0	0.0	0.0	0.0	1.9	7.4	12.9	10.6	12.9	1.9	7.8	13.1	2.7	14.2	18.6	5.5	6.7	0.0
Colorectal																		
All	0.0	0.0	0.0	0.0	2.6	0.9	3.2	8.3	14.8	15.4	48.3	68.0	102.0	152.4	201.1	217.3	237.6	309.8
Male	0.0	0.0	0.0	0.0	1.7	0.0	0.0	10.0	10.5	23.1	39.8	59.6	129.6	170.3	272.2	252.8	224.7	266.9
Female	0.0	0.0	0.0	0.0	3.7	1.9	6.4	6.4	19.3	7.7	56.6	76.4	74.7	134.8	134.5	187.2	247.1	333.1
Corpus Uteri																		
Female	0.0	0.0	0.0	0.0	1.9	0.0	8.6	4.2	8.6	17.3	44.9	72.0	72.1	113.5	83.5	77.1	40.1	75.4
Esophagus																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.9	2.0	14.3	8.1	21.5	33.5	23.8	34.5	12.2
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	5.8	4.0	26.5	13.5	36.2	64.3	32.4	80.9	23.2
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.7	7.1	4.6	16.5	0.0	6.3

IDAHO **AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER** **2008**

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	0.9	1.8	4.3	9.7	5.4	6.3	3.1	1.1	3.9	2.0	0.0	2.7	0.0	4.8	6.0	7.7	0.0
Male	0.0	1.7	1.8	5.1	11.6	1.8	6.2	2.0	2.1	3.9	4.0	0.0	5.4	0.0	5.0	6.5	9.0	0.0
Female	0.0	0.0	1.9	3.5	7.5	9.3	6.4	4.2	0.0	3.8	0.0	0.0	0.0	0.0	4.6	5.5	6.7	0.0
Kidney & Renal Pelvis																		
All	0.8	0.0	0.0	0.0	0.0	0.0	3.2	6.2	10.6	11.5	15.8	35.1	47.0	37.6	64.7	62.5	61.3	44.8
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	18.8	15.4	17.9	37.5	51.3	47.1	79.2	90.8	80.9	46.4
Female	1.7	0.0	0.0	0.0	0.0	0.0	6.4	2.1	2.2	7.7	13.7	32.7	42.7	28.4	51.0	38.5	46.8	44.0
Larynx																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.0	4.9	13.2	8.1	19.7	12.0	8.9	0.0	0.0
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.9	8.0	24.3	13.5	32.6	14.9	13.0	0.0	0.0
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	2.0	2.2	2.7	7.1	9.3	5.5	0.0	0.0
Leukemia																		
All	5.7	5.2	0.9	3.5	2.6	1.8	0.0	1.0	3.2	5.8	3.9	24.1	25.5	43.0	67.0	95.3	80.5	106.0
Male	6.3	5.1	1.8	5.1	1.7	1.8	0.0	0.0	6.3	3.9	8.0	26.5	32.4	54.4	64.3	110.2	80.9	139.2
Female	5.0	5.4	0.0	1.8	3.7	1.9	0.0	2.1	0.0	7.7	0.0	21.8	18.7	31.9	69.6	82.6	80.1	88.0
Liver & Bile Duct																		
All	0.8	0.0	0.0	0.0	0.9	0.0	0.0	0.0	1.1	2.9	12.8	24.1	9.4	12.6	12.0	14.9	15.3	12.2
Male	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	2.1	5.8	23.9	35.3	10.8	18.1	24.8	19.5	27.0	23.2
Female	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	13.1	8.0	7.1	0.0	11.0	6.7	6.3
Lung & Bronchus																		
All	0.0	0.0	0.0	0.0	0.9	1.8	0.0	5.2	5.3	18.3	44.3	66.9	154.3	225.9	287.3	390.0	440.6	322.0
Male	0.0	0.0	0.0	0.0	1.7	1.8	0.0	6.0	2.1	17.4	51.7	81.6	159.2	231.9	277.2	512.1	593.2	452.5
Female	0.0	0.0	0.0	0.0	0.0	1.9	0.0	4.2	8.6	19.2	37.1	52.4	149.5	220.0	296.9	286.2	327.3	251.4
Melanoma of the Skin																		
All	0.0	0.0	0.9	0.9	4.4	8.1	14.7	12.4	18.0	23.1	28.6	39.5	45.6	62.7	74.2	74.4	88.1	73.4
Male	0.0	0.0	0.0	0.0	0.0	7.0	16.4	14.1	23.0	17.4	41.7	52.9	67.5	97.8	113.8	110.2	134.8	116.0
Female	0.0	0.0	1.9	1.8	9.3	9.3	12.9	10.6	12.9	28.8	15.6	26.2	24.0	28.4	37.1	44.0	53.4	50.3
Myeloma																		
All	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	1.9	5.9	4.4	20.1	21.5	35.9	32.7	38.3	48.9
Male	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.9	6.0	6.6	21.6	21.7	54.4	38.9	36.0	81.2
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	5.9	2.2	18.7	21.3	18.6	27.5	40.1	31.4

IDAHO **AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER** **2008**

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	0.8	0.9	0.9	2.6	0.0	1.8	4.2	7.2	13.8	12.5	25.6	34.0	47.0	66.3	83.8	122.1	137.9	101.9
Male	1.6	1.7	0.0	3.4	0.0	1.8	4.1	6.0	14.6	13.5	25.8	48.5	54.0	76.1	94.0	123.2	170.8	150.8
Female	0.0	0.0	1.9	1.8	0.0	1.9	4.3	8.5	12.9	11.5	25.4	19.6	40.0	56.8	74.2	121.1	113.5	75.4
Oral Cavity & Pharynx																		
All	0.0	0.0	0.9	0.0	0.9	0.0	2.1	2.1	3.2	12.5	22.7	29.6	21.5	53.8	35.9	38.7	65.1	48.9
Male	0.0	0.0	0.0	0.0	0.0	0.0	4.1	2.0	6.3	17.4	41.7	48.5	35.1	72.5	39.6	38.9	71.9	69.6
Female	0.0	0.0	1.9	0.0	1.9	0.0	0.0	2.1	0.0	7.7	3.9	10.9	8.0	35.5	32.5	38.5	60.1	37.7
Ovary																		
Female	0.0	0.0	0.0	1.8	0.0	0.0	2.2	4.2	2.2	13.4	19.5	15.3	24.0	46.1	64.9	60.6	53.4	50.3
Pancreas																		
All	0.0	0.0	0.0	0.0	0.0	0.9	1.1	2.1	0.0	3.9	6.9	17.6	25.5	41.2	59.9	68.5	76.6	81.5
Male	0.0	0.0	0.0	0.0	0.0	1.8	0.0	2.0	0.0	5.8	8.0	17.7	21.6	47.1	69.3	64.8	53.9	92.8
Female	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.1	0.0	1.9	5.9	17.5	29.4	35.5	51.0	71.6	93.5	75.4
Prostate																		
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	40.5	129.2	266.9	469.6	837.0	999.8	849.2	611.1	719.3
Stomach																		
All	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.1	2.1	4.8	3.0	5.5	14.8	12.6	38.3	35.7	23.0	36.7
Male	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.0	4.2	9.6	4.0	2.2	16.2	18.1	29.7	51.9	9.0	34.8
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	8.7	13.3	7.1	46.4	22.0	33.4	37.7
Testis																		
Male	1.6	0.0	0.0	3.4	13.3	19.4	8.2	4.0	18.8	9.6	6.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0
Thyroid																		
All	0.0	0.0	1.8	2.6	9.7	10.8	25.2	28.9	19.1	29.8	30.5	34.0	14.8	34.1	35.9	35.7	30.7	12.2
Male	0.0	0.0	0.0	1.7	5.0	1.8	4.1	6.0	6.3	13.5	17.9	22.1	5.4	25.4	34.6	19.5	0.0	0.0
Female	0.0	0.0	3.8	3.5	14.9	20.4	47.2	53.0	32.2	46.1	42.9	45.8	24.0	42.6	37.1	49.5	53.4	18.9

SECTION V

2008 OBSERVED VS. EXPECTED NUMBERS BY HEALTH DISTRICT

2008 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	1,215	1,138.2 +	574	571.3	1,102	1,080.8	1,798	1,734.4	843	862.8	626	738.7 *	658	771.1 *
Bladder	63	53.4	24	29.2	47	52.6	86	76.9	38	42.6	32	34.8	30	35.6
Brain	21	16.6	8	8.7	19	17.5	33	29.2	10	13.9	9	12.2	12	13.2
Brain & CNS non-Malignant	29	23.4	7	12.6	23	24.3	53	34.4 *	13	19.5	12	16.4	15	17.4
Breast	179	152.1 +	73	75.5	150	146.5	256	242.1	103	117.8	97	98.7	82	106.4 +
Breast (in-situ)	41	32.2	26	15.1 +	34	30.7	63	50.1	15	26.0 +	8	22.8 *	15	23.4
Cervix	2	7.5 +	2	3.1	20	4.5 *	10	14.3	4	5.2	4	4.5	2	5.4
Colorectal	122	99.2 +	60	51.5	88	98.0	156	150.9	77	77.5	51	66.2	58	67.4
Corpus Uteri	34	30.9	17	14.6	29	28.8	35	52.1 +	29	21.9	19	19.5	20	20.4
Esophagus	16	11.4	7	5.9	8	11.7	17	17.6	8	9.0	9	7.3	6	7.9
Hodgkin lymphoma	5	6.8	3	3.7	11	7.0	10	15.4	9	5.0	6	5.3	5	6.7
Kidney & renal pelvis	39	34.6	15	17.2	47	30.2 *	37	60.2 *	26	26.0	25	21.8	22	23.2
Larynx	12	6.9	5	3.4	4	7.4	8	12.8	3	5.8	7	4.5	6	4.9
Leukemia	36	33.5	14	17.9	33	33.5	57	50.1	29	26.0	24	22.2	16	24.4
Liver & bile duct	16	11.4	7	5.6	9	11.4	19	18.6	10	8.6	3	8.3	8	8.1
Lung & bronchus	185	131.1 *	76	71.1	145	126.7	204	201.7	84	108.0 +	60	90.5 *	69	91.4 +
Melanoma of skin	44	52.2	27	24.5	43	50.3	78	84.6	55	35.9 *	23	33.8	24	36.5 +
Myeloma	12	15.5	5	8.0	19	12.9	22	21.3	14	10.8	8	9.5	6	9.9
N-H Lymphoma	61	50.0	24	25.9	41	50.3	70	82.2	38	39.2	28	33.3	47	32.6 +
Oral cavity & pharynx	23	30.7	15	14.3	19	28.7	54	41.4	29	20.6	17	18.6	16	19.6
Ovary	22	14.1	7	7.7	15	14.4	23	23.4	5	12.5 +	11	9.5	9	10.2
Pancreas	33	26.0	11	14.3	25	25.5	38	40.1	22	20.3	18	16.9	13	17.8
Prostate	145	196.0 *	98	90.3	162	170.4	294	254.3 +	140	134.6	100	115.1	99	119.1
Stomach	9	14.2	3	7.1	16	11.9	32	15.7 *	10	10.0	4	8.8	5	9.0
Testis	6	6.0	7	2.9	10	6.7	16	13.1	3	5.3	2	5.1	2	6.6
Thyroid	22	42.7 *	13	19.1	45	39.9	78	71.0	20	31.4 +	24	27.0	56	26.7 *
Pediatric (age 0-19)	10	9.4	0	4.9 +	10	14.4	28	17.1 +	9	9.3	12	8.8	8	12.7

+ Statistically significant difference at p=0.05 or less.
* Statistically significant difference at p=0.01 or less.

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

2008 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	608	624.7	324	308.0	551	564.6	955	885.2 +	469	450.8	314	391.6 *	345	410.1 *
Bladder	51	43.0	19	23.5	36	41.1	74	57.6 +	27	34.0	21	27.9	25	28.5
Brain	13	9.5	7	5.0	10	10.4	17	18.5	5	8.2	4	7.2	10	7.4
Brain & CNS non-Malignant	10	7.6	2	4.2	9	8.1	17	12.2	3	6.9	3	5.7	8	5.7
Breast	2	1.2	0	0.8	1	1.3	2	2.3	1	1.1	0	0.9	1	0.8
Breast (in-situ)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cervix	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Colorectal	56	52.6	33	25.7	49	47.3	77	75.3	36	38.8	26	33.1	30	34.2
Corpus Uteri	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Esophagus	14	10.1	7	5.2	7	10.0	14	15.5	6	7.8	8	6.4	6	6.9
Hodgkin lymphoma	3	3.8	2	2.2	4	4.2	5	8.6	7	2.5 +	2	3.1	4	3.5
Kidney & renal pelvis	20	20.9	11	10.0	28	17.2 +	23	34.8 +	16	14.9	13	12.9	12	13.8
Larynx	10	5.5	4	2.8	2	6.1	7	10.0	2	4.6	6	3.6	5	3.9
Leukemia	18	18.7	7	9.7	20	17.2	34	25.7	15	14.0	11	12.0	7	13.6
Liver & bile duct	14	8.3	3	4.6	7	8.5	14	14.4	10	6.2	1	6.5 +	6	6.2
Lung & bronchus	94	72.7 +	37	39.3	64	68.8	108	106.6	54	56.2	41	47.7	42	49.1
Melanoma of skin	30	34.2	18	15.9	23	32.6	48	54.0	38	22.8 *	15	21.5	16	23.1
Myeloma	7	9.0	5	4.4	11	7.2	9	12.9	7	6.2	5	5.3	4	5.7
N-H Lymphoma	34	27.6	13	14.4	23	26.9	35	45.2	20	21.3	15	18.3	28	17.8 +
Oral cavity & pharynx	17	20.8	12	9.4	9	19.8 +	41	27.1 +	22	13.5 +	7	13.2	10	13.6
Ovary	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pancreas	12	13.5	6	6.7	12	11.8	19	18.3	11	9.4	9	7.9	7	8.5
Prostate	145	199.9 *	98	91.9	162	167.3	294	250.5 *	140	133.9	100	115.3	99	120.7 +
Stomach	6	7.3	2	3.6	8	6.3	19	8.1 *	3	5.5	2	4.6	2	4.9
Testis	6	5.9	7	2.9	10	6.7	16	13.2	3	5.4	2	5.0	2	6.5
Thyroid	4	10.4 +	4	4.5	12	8.4	15	16.0	5	7.1	7	6.0	11	6.2
Pediatric (age 0-19)	6	4.5	0	2.5	7	6.6	13	8.6	6	4.4	5	4.4	1	6.4 +

+ 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.

2008 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	607	519.5 *	250	265.0	551	513.3	843	841.8	374	411.2	312	347.5	313	362.7 *
Bladder	12	11.2	5	6.1	11	10.9	12	18.2	11	8.6	11	6.8	5	7.4
Brain	8	7.0	1	3.8	9	7.0	16	10.8	5	5.7	5	4.9	2	6.0
Brain & CNS non-Malignant	19	15.7	5	8.3	14	16.2	36	22.2 *	10	12.7	9	10.8	7	11.7
Breast	177	150.5 +	73	73.8	149	146.8	254	240.0	102	116.9	97	98.0	81	104.7 +
Breast (in-situ)	41	32.2	26	14.9 +	34	31.0	63	50.0	15	26.0 +	8	22.8 *	15	23.2
Cervix	2	7.5 +	2	3.1	20	4.6 *	10	14.1	4	5.2	4	4.5	2	5.4
Colorectal	66	46.9 *	27	25.8	39	50.5	79	75.6	41	38.6	25	33.1	28	33.2
Corpus Uteri	34	30.7	17	14.5	29	29.2	35	52.2 +	29	21.9	19	19.4	20	20.2
Esophagus	2	1.4	0	0.9	1	1.5	3	1.9	2	1.0	1	1.0	0	1.1
Hodgkin lymphoma	2	3.0	1	1.6	7	2.8 +	5	7.0	2	2.5	4	2.2	1	3.1
Kidney & renal pelvis	19	13.7	4	7.3	19	13.0	14	25.4 +	10	11.1	12	8.9	10	9.5
Larynx	2	1.4	1	0.7	2	1.3	1	2.8	1	1.1	1	0.9	1	1.0
Leukemia	18	14.8	7	8.3	13	16.3	23	24.4	14	12.1	13	10.2	9	10.9
Liver & bile duct	2	3.1	4	1.1	2	2.8	5	4.1	0	2.4	2	1.8	2	1.9
Lung & bronchus	91	58.9 *	39	32.1	81	57.5 *	96	94.3	30	51.8 *	19	42.9 *	27	42.5 +
Melanoma of skin	14	18.3	9	8.7	20	17.5	30	30.4	17	13.0	8	12.4	8	13.5
Myeloma	5	6.6	0	3.6	8	5.7	13	8.2	7	4.5	3	4.1	2	4.3
N-H Lymphoma	27	22.5	11	11.6	18	23.2	35	36.6	18	17.9	13	15.1	19	14.8
Oral cavity & pharynx	6	9.8	3	4.9	10	8.7	13	14.3	7	7.1	10	5.5	6	6.0
Ovary	22	13.9	7	7.6	15	14.6	23	23.5	5	12.5 +	11	9.5	9	10.1
Pancreas	21	12.6 +	5	7.6	13	13.7	19	21.8	11	10.9	9	9.0	6	9.4
Prostate	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Stomach	3	6.8	1	3.4	8	5.6	13	7.7	7	4.5	2	4.2	3	4.0
Testis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thyroid	18	32.7 *	9	14.5	33	31.8	63	54.3	15	24.2	17	21.2	45	20.7 *
Pediatric (age 0-19)	4	4.9	0	2.4	3	7.8	15	8.5	3	4.9	7	4.5	7	6.3

+ Statistically significant difference at p=0.05 or less.
* Statistically significant difference at p=0.01 or less.

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

SECTION VI

RISKS OF DEVELOPING AND DYING FROM CANCER

Risks of Developing and Dying from Cancer

For 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 67	1 in 21	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 6	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 646	1 in 133	1 in 45	1 in 17	1 in 8	1 in 5
40		1 in 167	1 in 48	1 in 17	1 in 8	1 in 5
50			1 in 66	1 in 19	1 in 9	1 in 5
60				1 in 26	1 in 10	1 in 5
70					1 in 14	1 in 6
80						1 in 8

For 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 125	1 in 34	1 in 11	1 in 4	1 in 2	1 in 2
40		1 in 45	1 in 11	1 in 4	1 in 2	1 in 2
50			1 in 14	1 in 4	1 in 2	1 in 2
60				1 in 6	1 in 2	1 in 2
70					1 in 3	1 in 2
80						1 in 2

If your current age is:	Then your risk of dying from cancer by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 727	1 in 164	1 in 44	1 in 15	1 in 7	1 in 4
40		1 in 209	1 in 46	1 in 15	1 in 7	1 in 4
50			1 in 57	1 in 16	1 in 7	1 in 4
60				1 in 21	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 276	1 in 61	1 in 26	1 in 14	1 in 10	1 in 8
40		1 in 77	1 in 28	1 in 15	1 in 10	1 in 8
50			1 in 44	1 in 18	1 in 11	1 in 8
60				1 in 28	1 in 14	1 in 10
70					1 in 24	1 in 13
80						1 in 23

If your current age is:	Then your risk of 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 2486	1 in 568	1 in 211	1 in 101	1 in 58	1 in 37
40		1 in 730	1 in 228	1 in 104	1 in 59	1 in 37
50			1 in 326	1 in 119	1 in 63	1 in 38
60				1 in 181	1 in 75	1 in 41
70					1 in 115	1 in 49
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 14536	1 in 317	1 in 41	1 in 12	1 in 7	1 in 5
40		1 in 319	1 in 41	1 in 12	1 in 7	1 in 5
50			1 in 45	1 in 12	1 in 7	1 in 5
60				1 in 15	1 in 7	1 in 5
70					1 in 11	1 in 7
80						1 in 12

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 19755	1 in 1476	1 in 296	1 in 80	1 in 28
40		1 in 19460	1 in 1454	1 in 291	1 in 78	1 in 28
50			1 in 1525	1 in 287	1 in 76	1 in 27
60				1 in 331	1 in 75	1 in 26
70					1 in 84	1 in 24
80						1 in 23

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 1845	1 in 422	1 in 138	1 in 58	1 in 31	1 in 20
40		1 in 542	1 in 148	1 in 59	1 in 32	1 in 20
50			1 in 199	1 in 65	1 in 33	1 in 21
60				1 in 93	1 in 38	1 in 22
70					1 in 57	1 in 26
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 22291	1 in 1875	1 in 576	1 in 214	1 in 99	1 in 50
40		1 in 2029	1 in 586	1 in 214	1 in 99	1 in 50
50			1 in 809	1 in 235	1 in 102	1 in 50
60				1 in 318	1 in 112	1 in 51
70					1 in 155	1 in 55
80						1 in 65

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 1733	1 in 427	1 in 129	1 in 51	1 in 27	1 in 19
40		1 in 558	1 in 138	1 in 52	1 in 27	1 in 19
50			1 in 177	1 in 55	1 in 28	1 in 19
60				1 in 75	1 in 30	1 in 20
70					1 in 44	1 in 24
80						1 in 35

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 8285	1 in 1610	1 in 536	1 in 186	1 in 91	1 in 54
40		1 in 1968	1 in 565	1 in 187	1 in 91	1 in 54
50			1 in 768	1 in 200	1 in 93	1 in 54
60				1 in 254	1 in 99	1 in 54
70					1 in 139	1 in 59
80						1 in 70

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 547	1 in 229	1 in 140	1 in 99	1 in 73	1 in 58
40		1 in 389	1 in 186	1 in 120	1 in 83	1 in 64
50			1 in 347	1 in 170	1 in 104	1 in 75
60				1 in 319	1 in 142	1 in 92
70					1 in 230	1 in 116
80						1 in 177

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 12109	1 in 4654	1 in 2224	1 in 1262	1 in 704	1 in 421
40		1 in 7493	1 in 2700	1 in 1396	1 in 741	1 in 432
50			1 in 4140	1 in 1683	1 in 807	1 in 450
60				1 in 2724	1 in 963	1 in 485
70					1 in 1345	1 in 533
80						1 in 667

Melanoma in Males

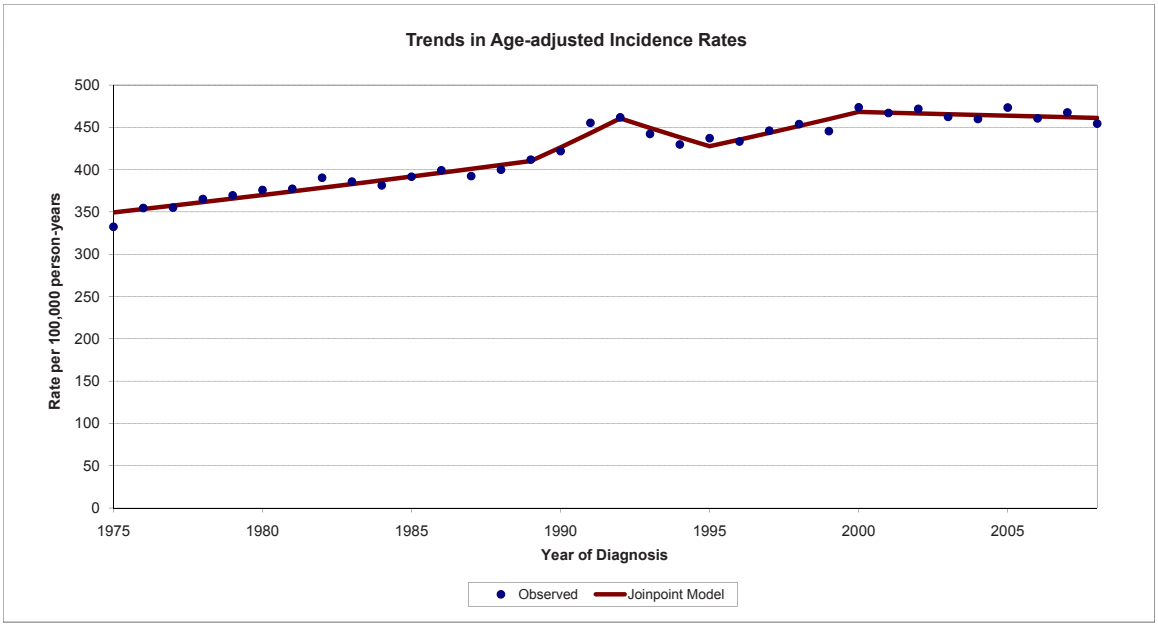
If your current age is:	Then your risk of developing melanoma by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 656	1 in 241	1 in 120	1 in 66	1 in 43	1 in 34
40		1 in 374	1 in 144	1 in 72	1 in 45	1 in 35
50			1 in 227	1 in 86	1 in 50	1 in 38
60				1 in 130	1 in 60	1 in 42
70					1 in 95	1 in 53
80						1 in 82

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 5009	1 in 2224	1 in 1053	1 in 477	1 in 275	1 in 194
40		1 in 3941	1 in 1314	1 in 519	1 in 287	1 in 199
50			1 in 1913	1 in 580	1 in 300	1 in 203
60				1 in 780	1 in 334	1 in 213
70					1 in 502	1 in 253
80						1 in 349

SECTION VII

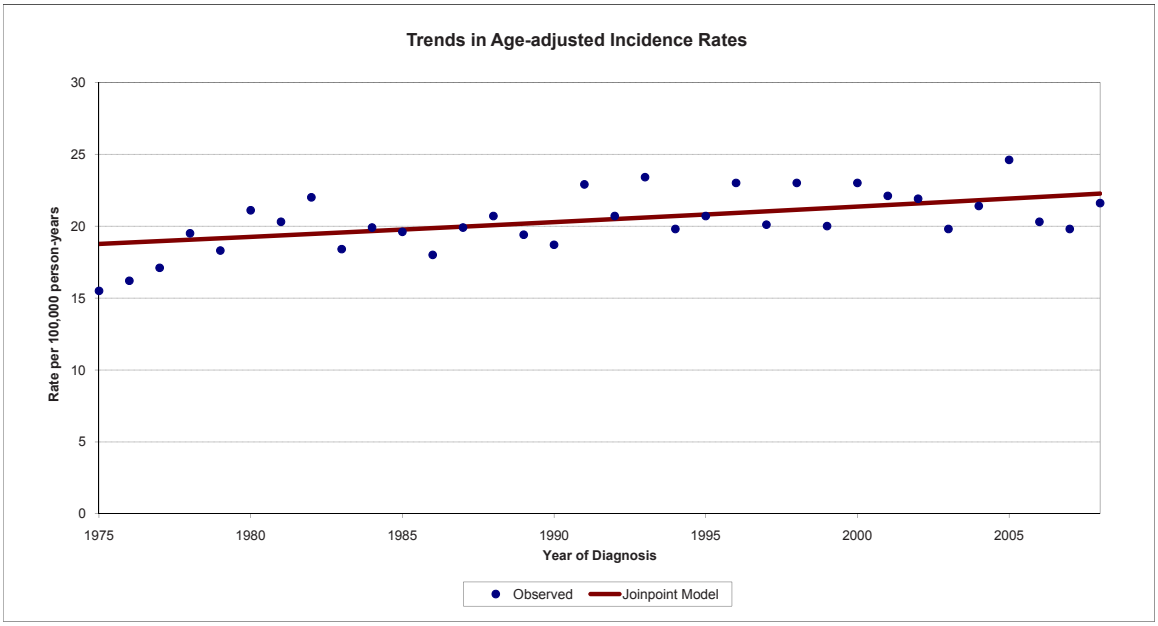
CANCER TRENDS IN IDAHO
1975-2008

All Sites



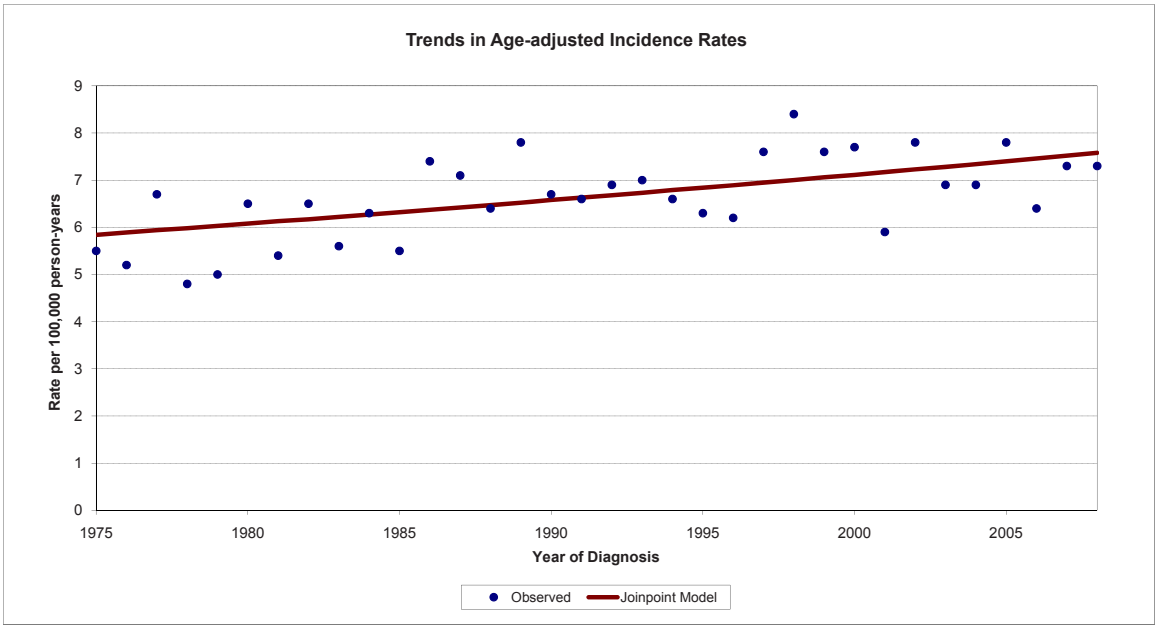
Cancer incidence increased at a rate of about 1.2% per year in Idaho from 1975 to 1989, and at a rate of about 1.8% per year from 1995 to 2000. Between 1989 and 1995, the trend was predominately influenced by prostate cancer incidence among males. Since 2000, the overall incidence trend has been stable. 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



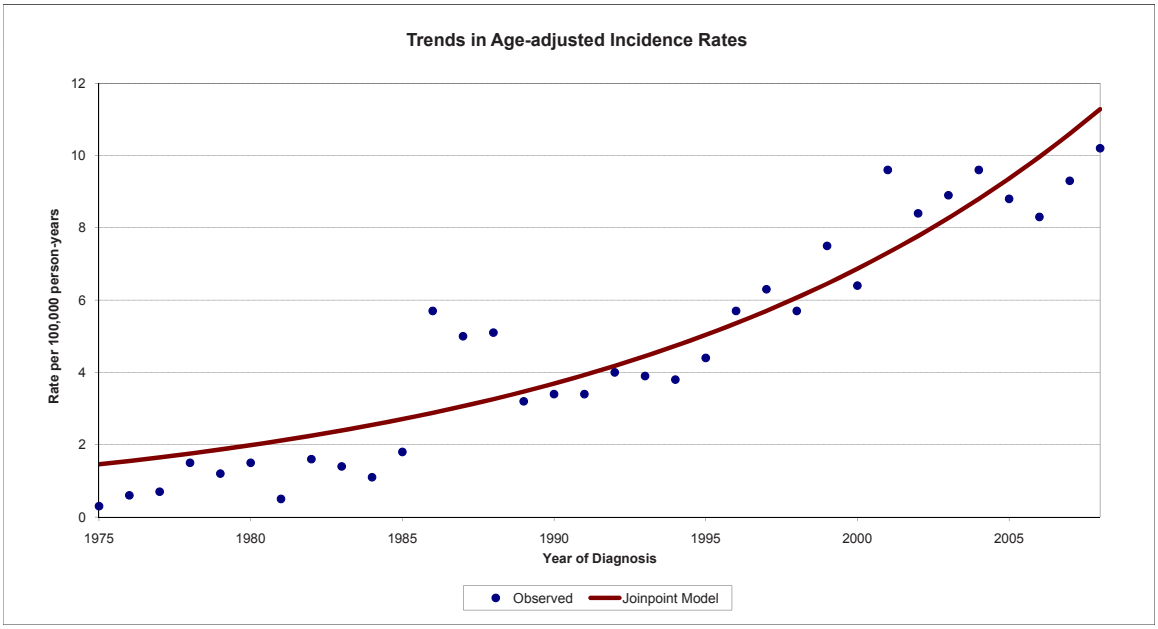
Bladder cancer incidence includes in-situ and invasive cases. Bladder cancer incidence increased at a rate of about 0.5% per year in Idaho from 1975 to 2008. Most of the increase in bladder cancer incidence is attributable to males, who have rates of bladder cancer incidence about 4-5 times those of females.

Brain



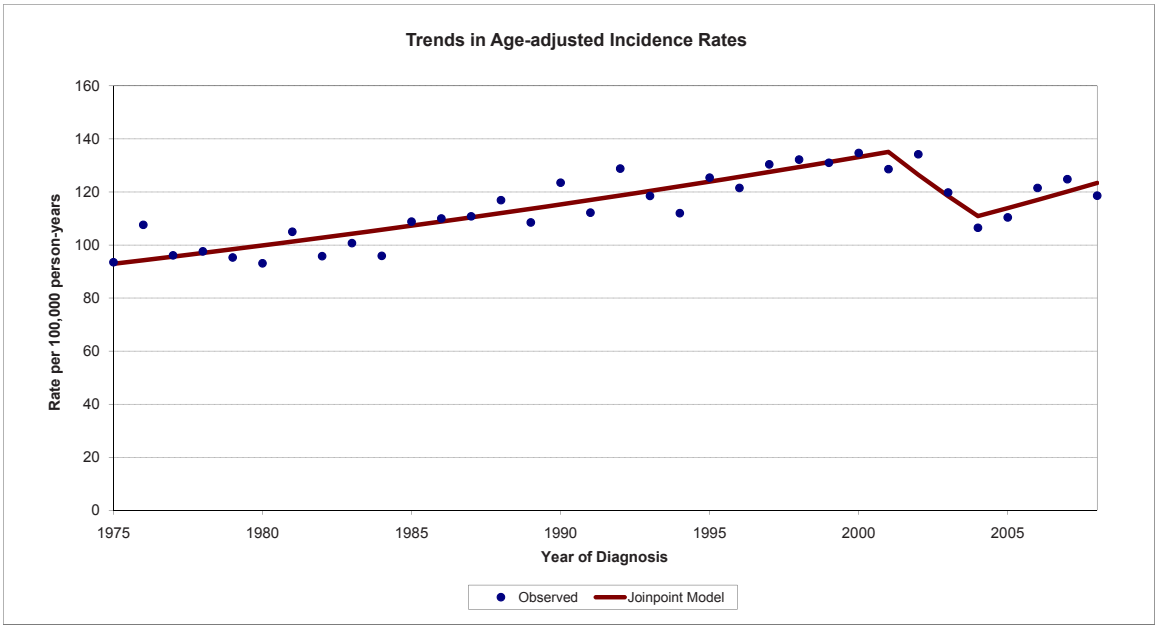
Malignant brain cancer incidence increased at a rate of about 0.8% per year in Idaho from 1975 to 2008. The trends for males and females are similar, though males have higher rates than females.

Brain and Other CNS, Non-Malignant



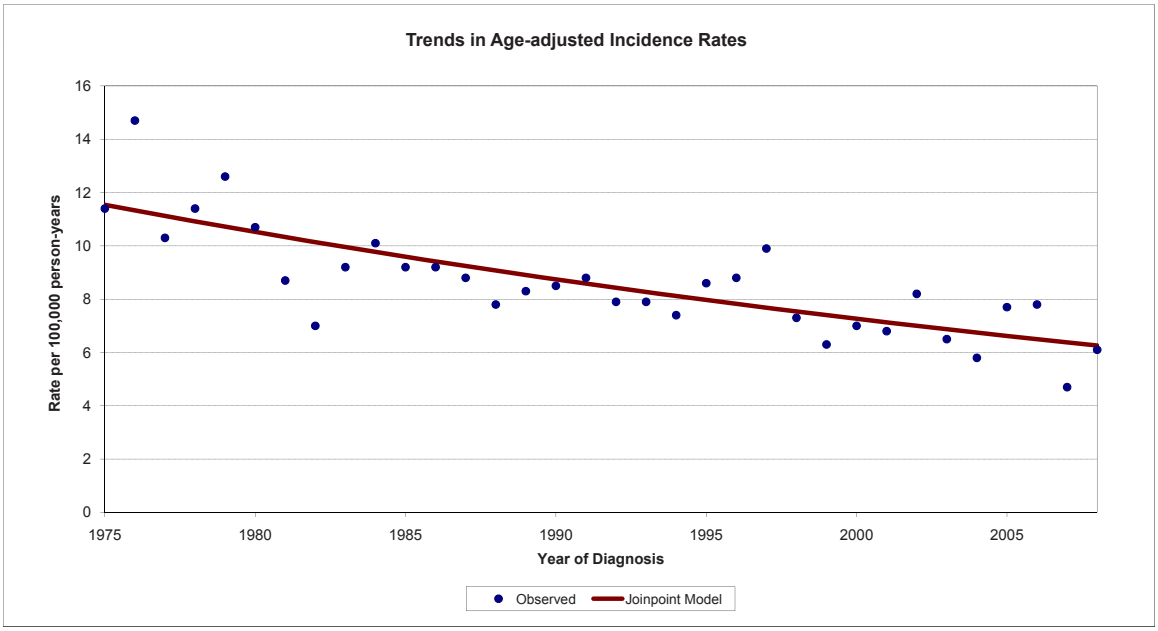
Non-malignant brain and other central nervous system tumors include those with benign and borderline behavior. Non-malignant brain and other CNS tumor incidence increased at a rate of about 6.4 % per year in Idaho from 1975 to 2008.

Breast Female



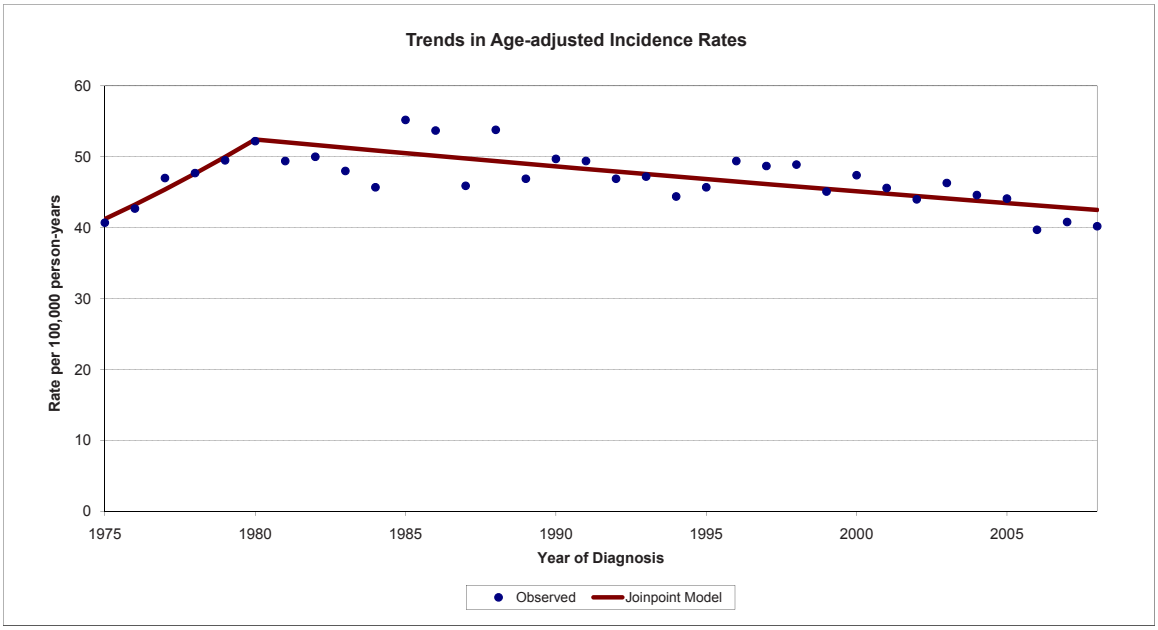
Invasive breast cancer incidence increased at a rate of about 1.5% per year among female Idahoans from 1975 to 2001, after which the rate decreased by about 6.4% per year until 2004, then increased by about 2.7% per year. The sharp decrease may have been due in part to a decrease in the use of hormone replacement therapy. In-situ breast cancer rates increased at a rate of about 14.6% per year from 1975 to 1990, after which the rate of increase slowed to about 2.2% per year (data not shown).

Cervix



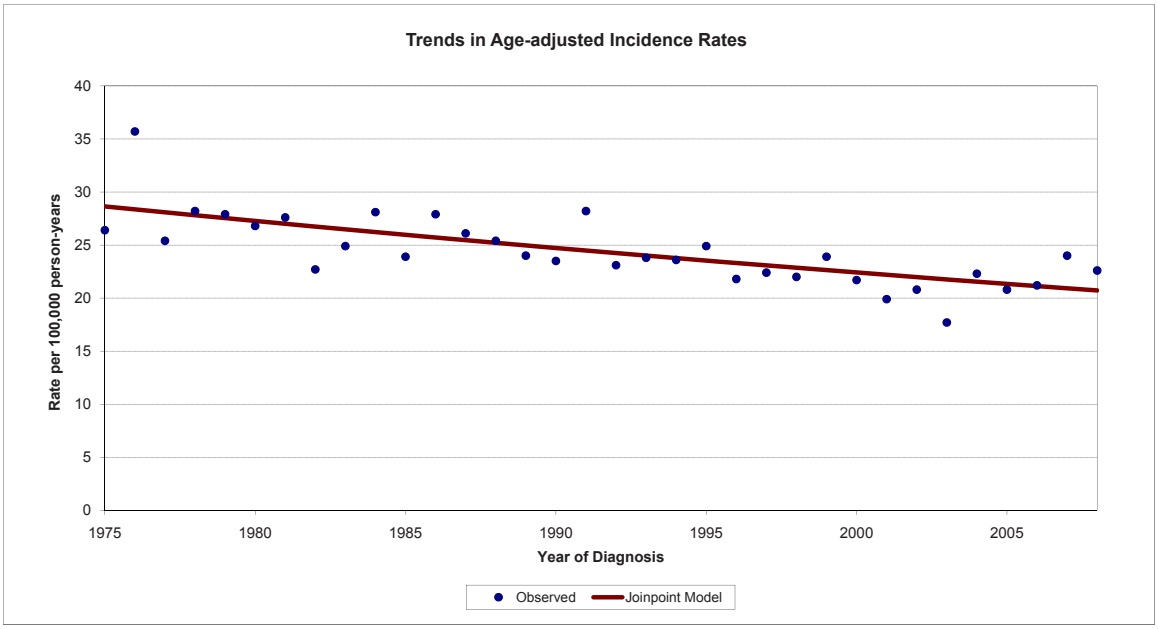
Invasive cervical cancer incidence has decreased about 1.8% per year in Idaho from 1975 to 2008.

Colorectal



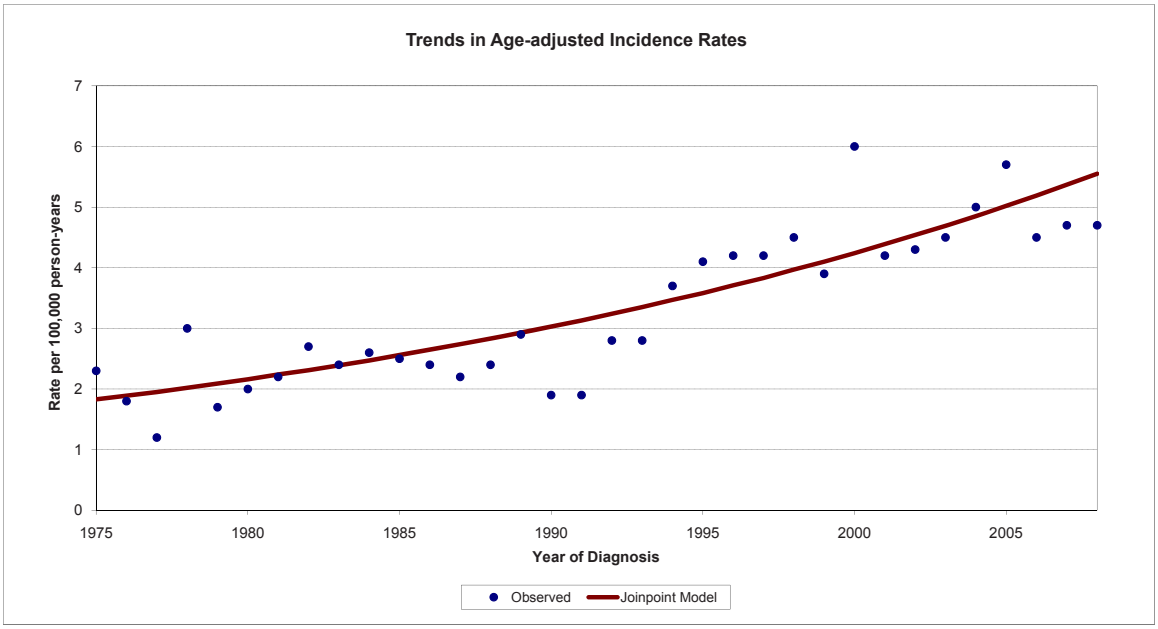
Colorectal cancer incidence increased at a rate of about 4.9% per year in Idaho from 1975 to 1980, after which the rate decreased about 0.7% per year. Colorectal cancer incidence trends over time were different for males and females. For males, rates increased from 1975 to 1988, then decreased. For females, rates decreased slowly across the entire time series.

Corpus Uteri



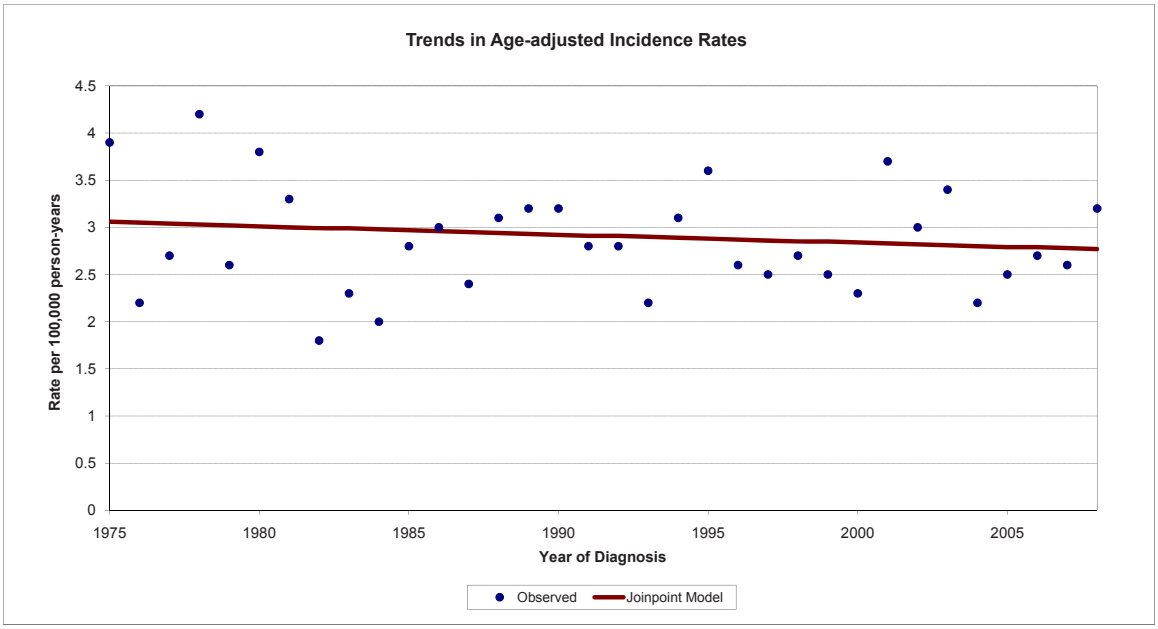
Corpus uteri cancer incidence decreased at a rate of about 1.0% per year among female Idahoans from 1975 to 2008.

Esophagus



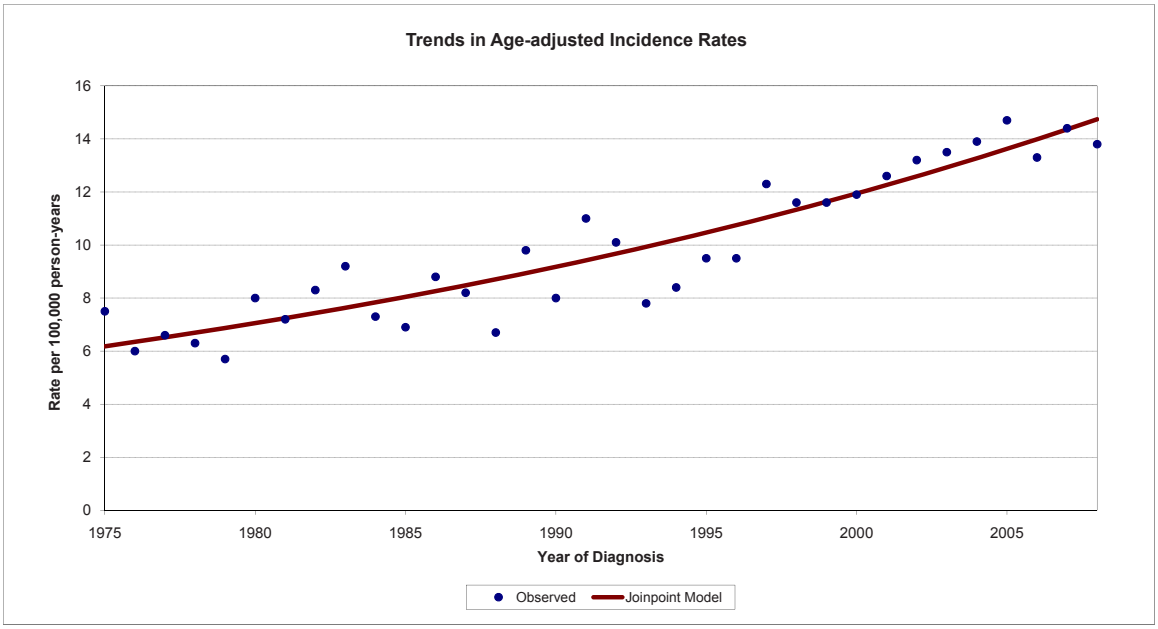
Esophageal cancer incidence increased at a rate of about 3.4% per year in Idaho from 1975 to 2008. The rate of increase was higher for males (3.6% per year) than for females (1.8% per year), and rates of esophageal cancers among males were about 3-4 times higher than those among females.

Hodgkin Lymphoma



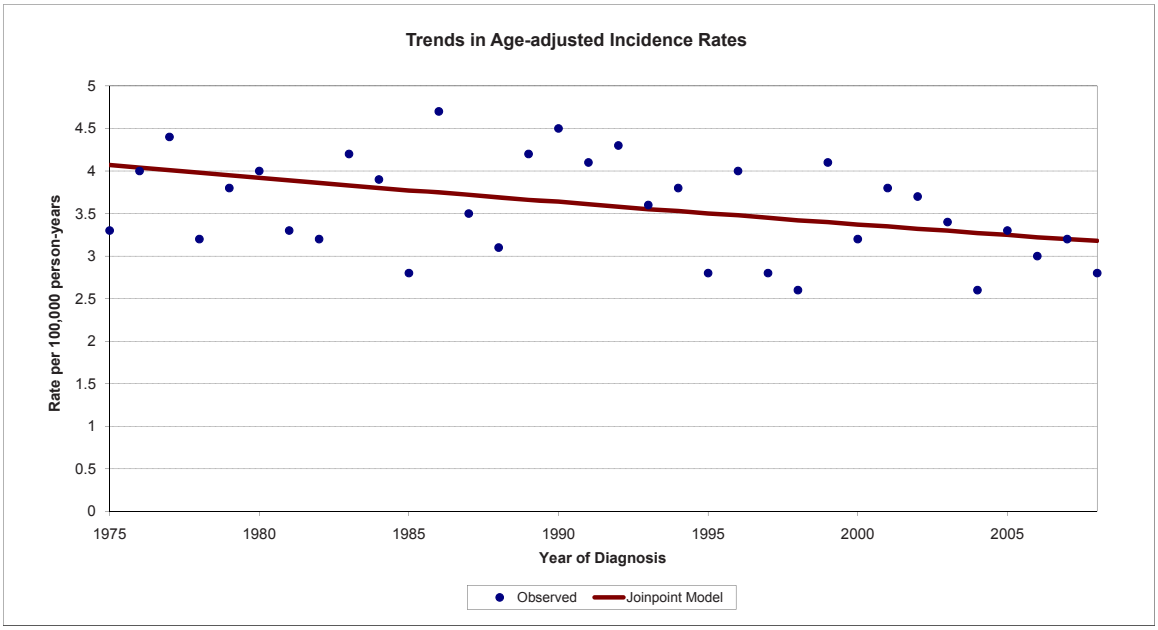
There was no statistically significant trend in Hodgkin lymphoma incidence in Idaho from 1975 to 2008; rates were stable but showed year-to-year variability due to the relatively small numbers of cases diagnosed annually.

Kidney and Renal Pelvis



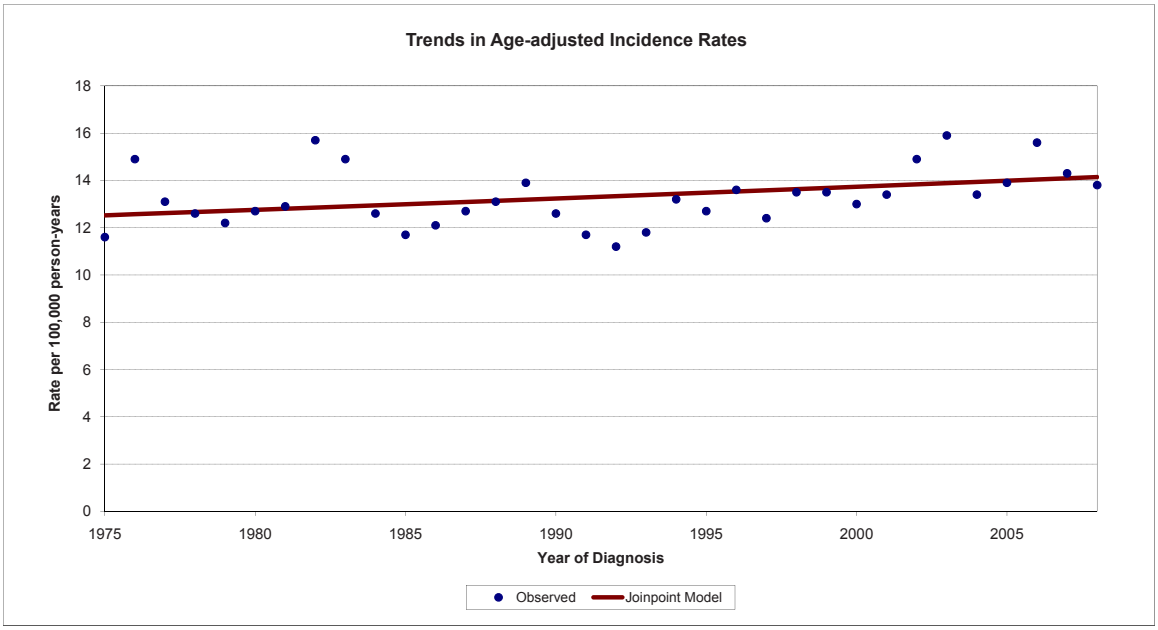
Kidney and renal pelvis cancer incidence increased at a rate of about 2.7% per year in Idaho from 1975 to 2008. The rate of increase was similar for males and females, although rates of kidney and renal pelvis cancers among males were about twice as high as among females.

Larynx



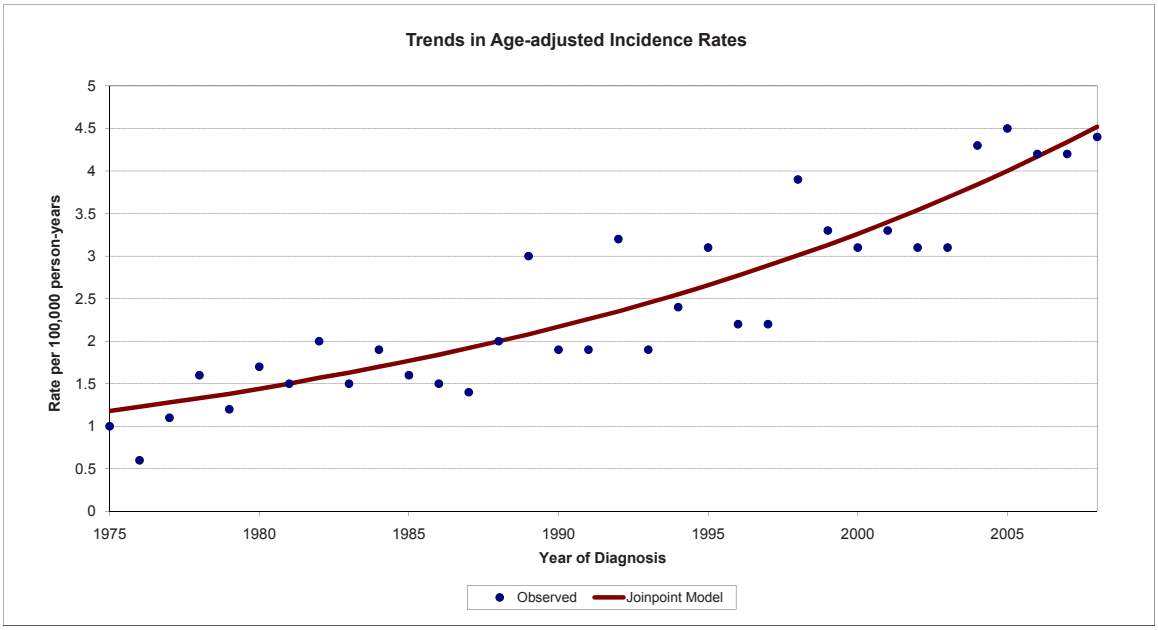
Laryngeal cancer incidence decreased about 0.7% per year in Idaho from 1975 to 2008; rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually. The rate of decrease was similar for males and females, although rates of laryngeal cancers among males were about 4 times as high as among females.

Leukemia



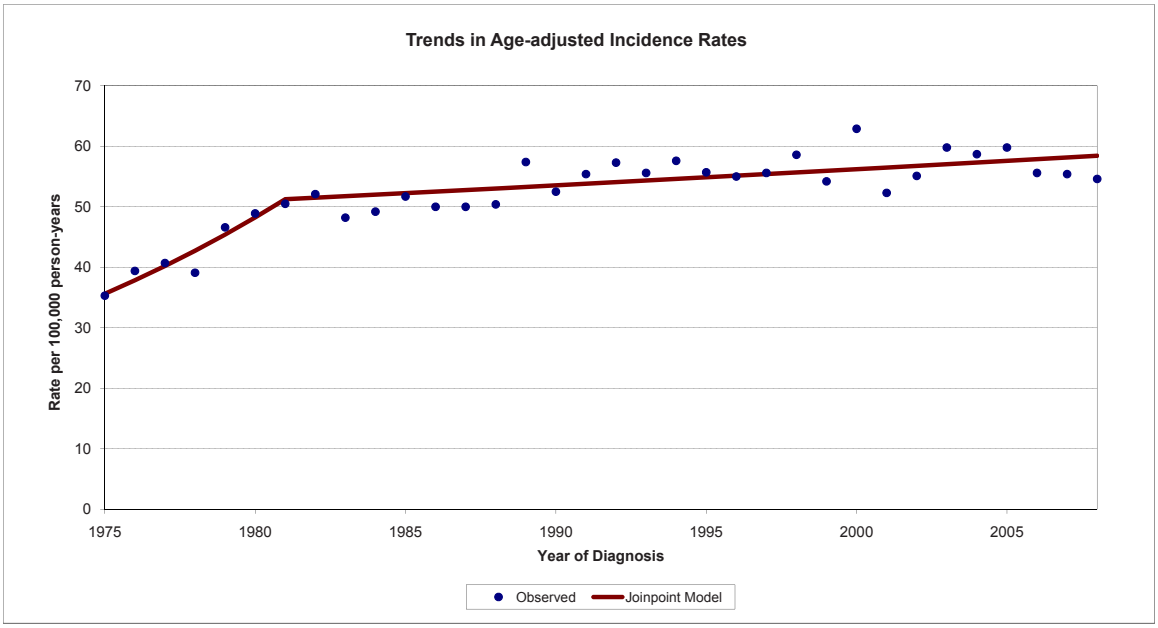
Leukemia incidence increased about 0.4% per year in Idaho from 1975 to 2008; rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually.

Liver and Bile Duct



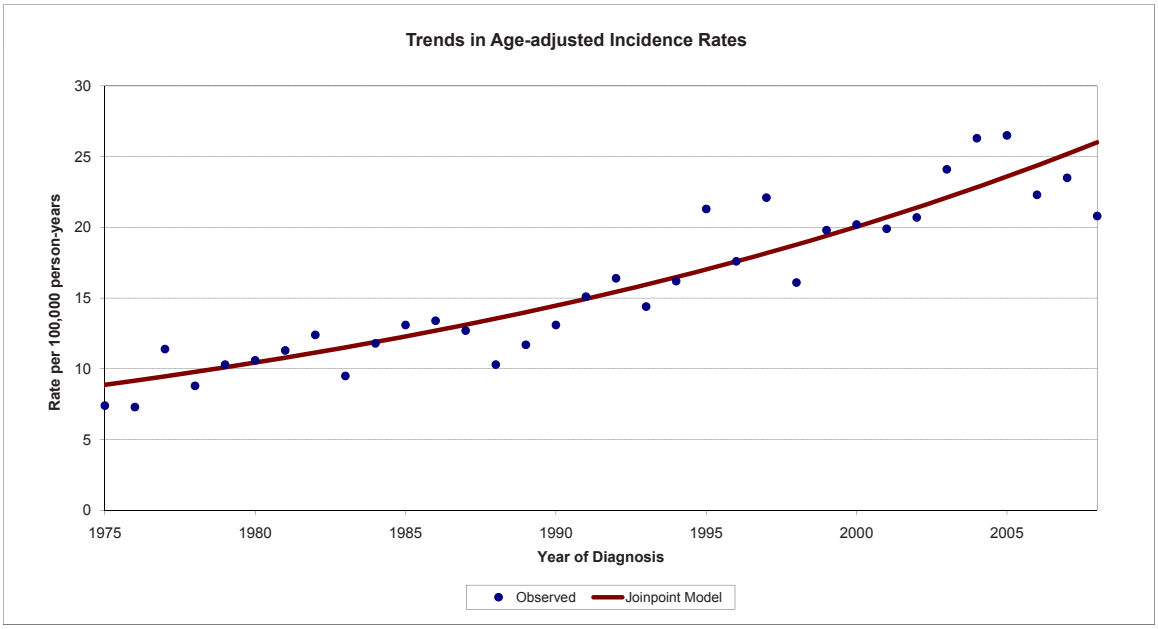
Liver cancer incidence increased at a rate of about 4.2% per year in Idaho from 1975 to 2008. The rate of increase was higher for males (4.9% per year) than for females (2.8% per year), and rates of liver cancers among males were about twice as high as among females.

Lung and Bronchus



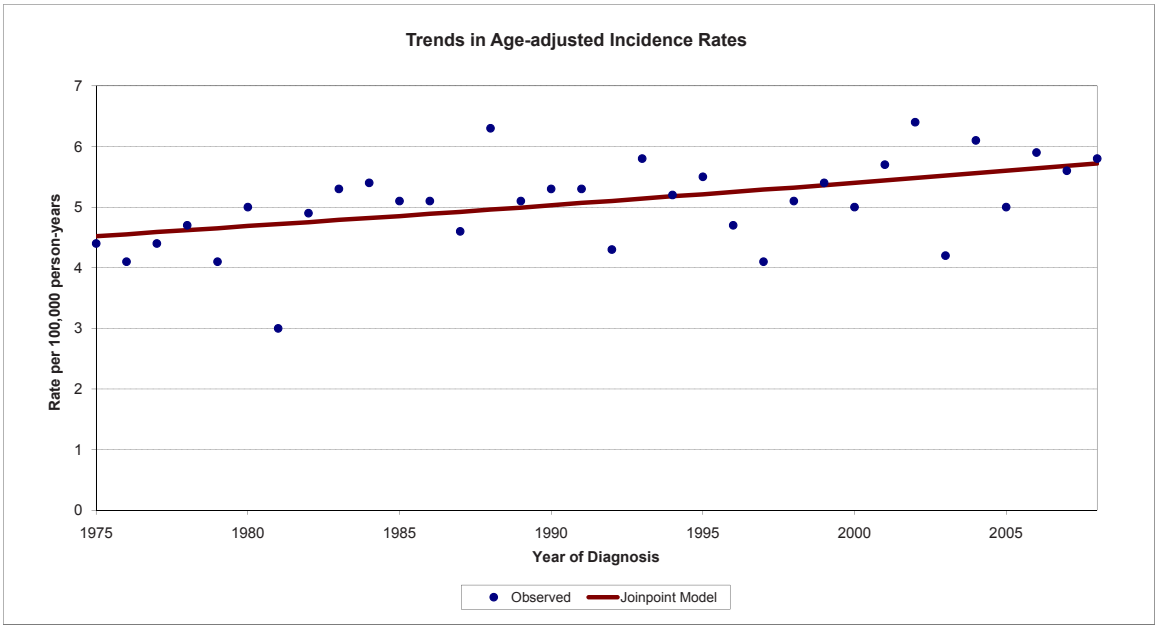
Lung cancer incidence increased at a rate of about 6.3% per year in Idaho from 1975 to 1981, after which the rate of increase lessened to about 0.5% per year. Lung cancer incidence trends over time were different for males and females. For males, lung cancer incidence increased at a rate of about 5.0% per year from 1975 to 1981, and then decreased by about 0.7% per year. For females, lung cancer incidence increased at a rate of about 6.0% per year from 1975 to 1989, after which the rate of increase lessened to about 1.5% 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



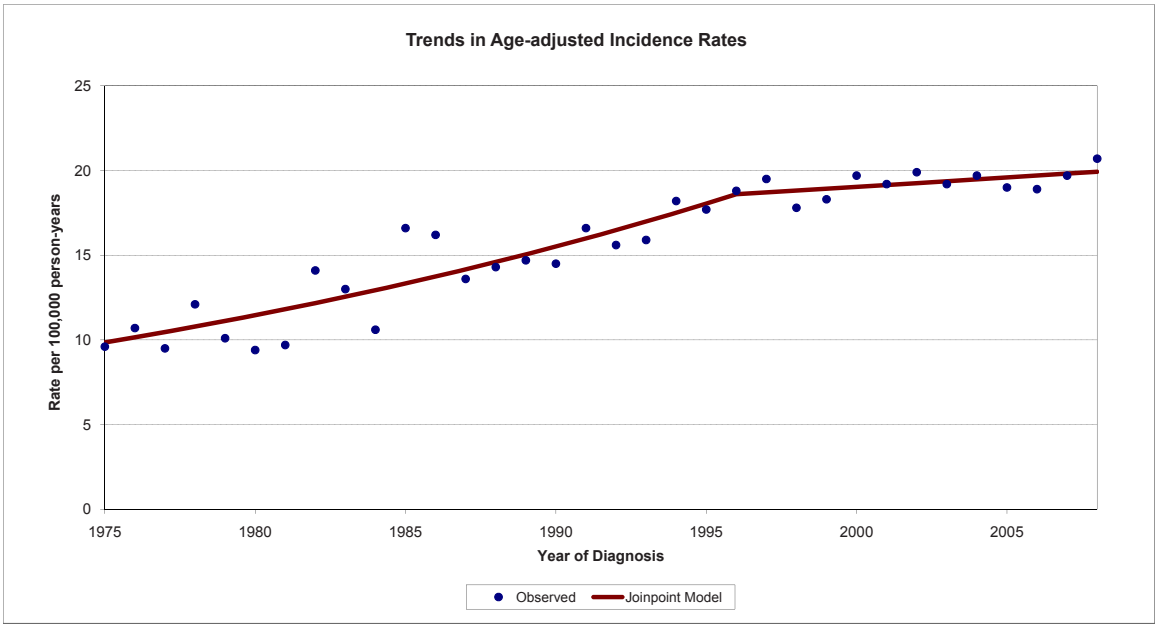
The incidence of melanoma of the skin increased at a rate of about 3.3% per year in Idaho from 1975 to 2008. The rate of increase was higher for males (3.9% per year) than for females (2.6% per year), and rates of melanoma incidence among males were higher than among females. The incidence of in-situ melanoma of the skin increased at a higher rate (8.5% per year from 1980 to 2008) than for the invasive cases depicted in the graph.

Myeloma



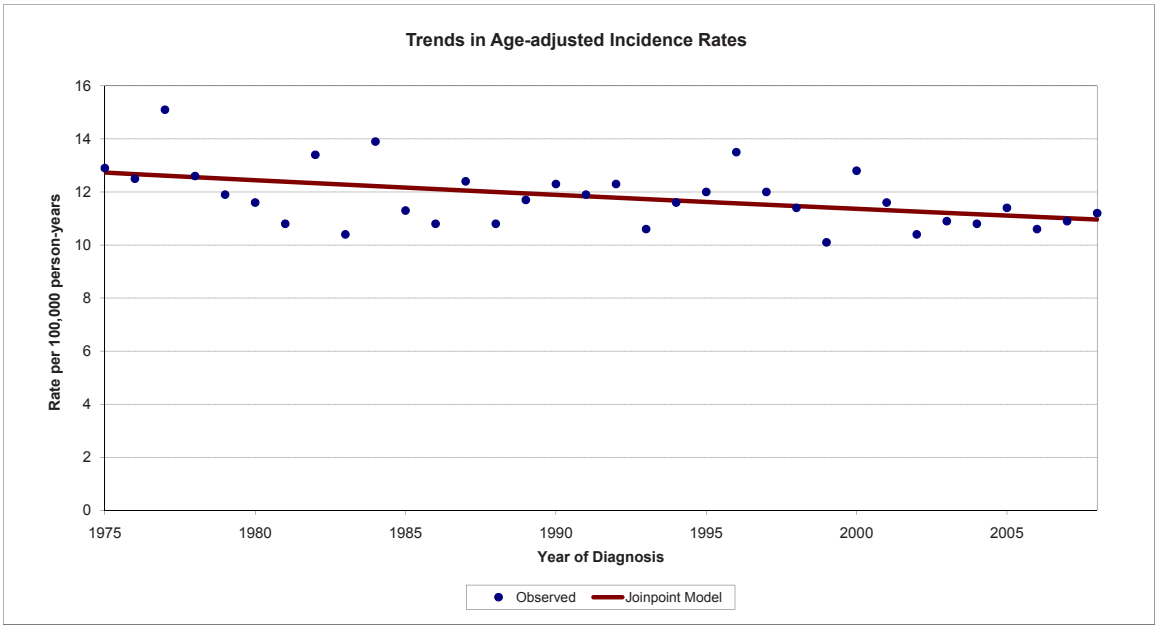
The incidence of myeloma increased at a rate of about 0.7% per year in Idaho from 1975 to 2008. The rate of increase was higher for males (1.2% per year) than for females (no significant trend), and rates of myeloma incidence among males were higher than among females.

Non-Hodgkin Lymphoma



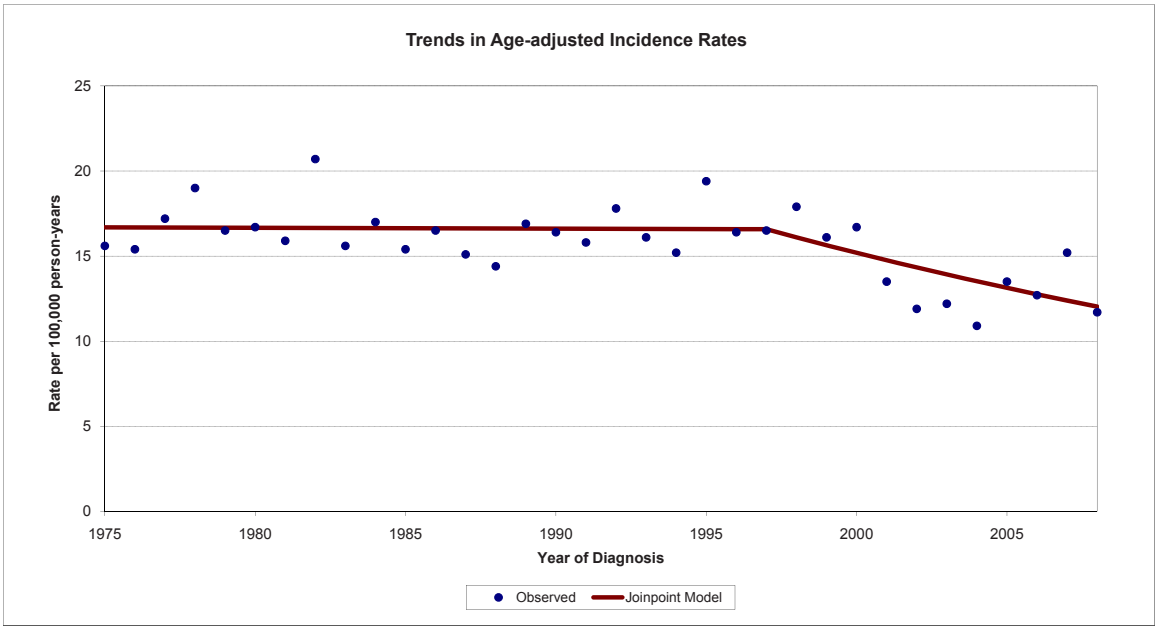
The incidence of non-Hodgkin lymphoma increased at a rate of about 3.1% per year in Idaho from 1975 to 1996, after which there has been no significant trend. Non-Hodgkin lymphoma incidence trends over time were different for males and females, and rates of non-Hodgkin lymphoma incidence among males were higher than among females. For males, non-Hodgkin lymphoma increased at a rate of about 1.9% per year from 1975 to 2008. For females, non-Hodgkin lymphoma increased at a rate of about 3.2% per year from 1975 to 1999, after which there has been no significant trend.

Oral Cavity and Pharynx



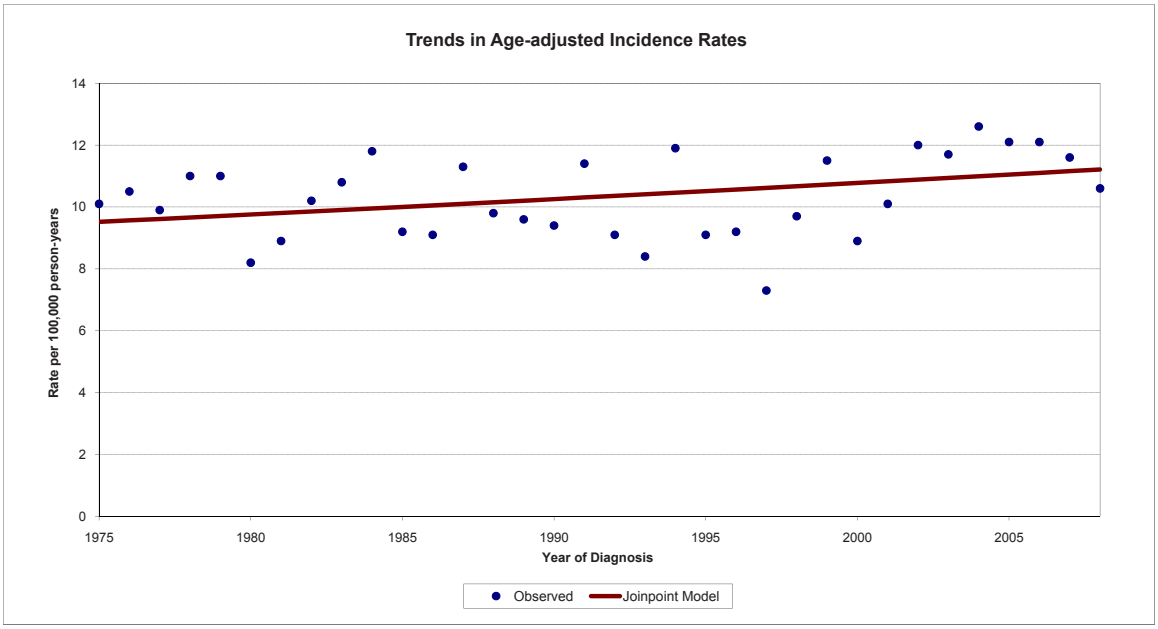
The incidence of cancers of the oral cavity and pharynx decreased at a rate of about 0.5% per year in Idaho from 1975 to 2008. The rate of decrease was higher for males (0.8% per year) than for females (no significant trend), and rates of cancers of the oral cavity and pharynx were about 3 times higher among males than among females. This latter result likely reflects differences in long-term prevalence trends for tobacco use and alcohol consumption between males and females.

Ovary



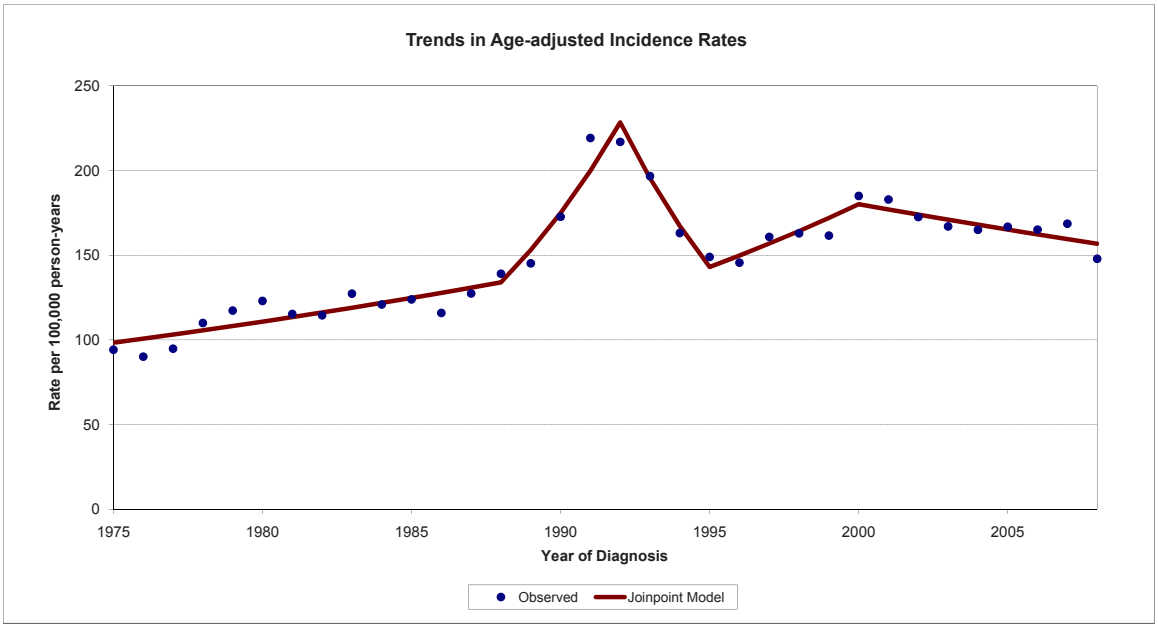
The incidence of ovarian cancer among females in Idaho was essentially stable from 1975 to 1997. From 1997 to 2008, the rate decreased by about 2.9% per year. Part of the decrease may have been due to a decrease in the use of hormone replacement therapy.

Pancreas



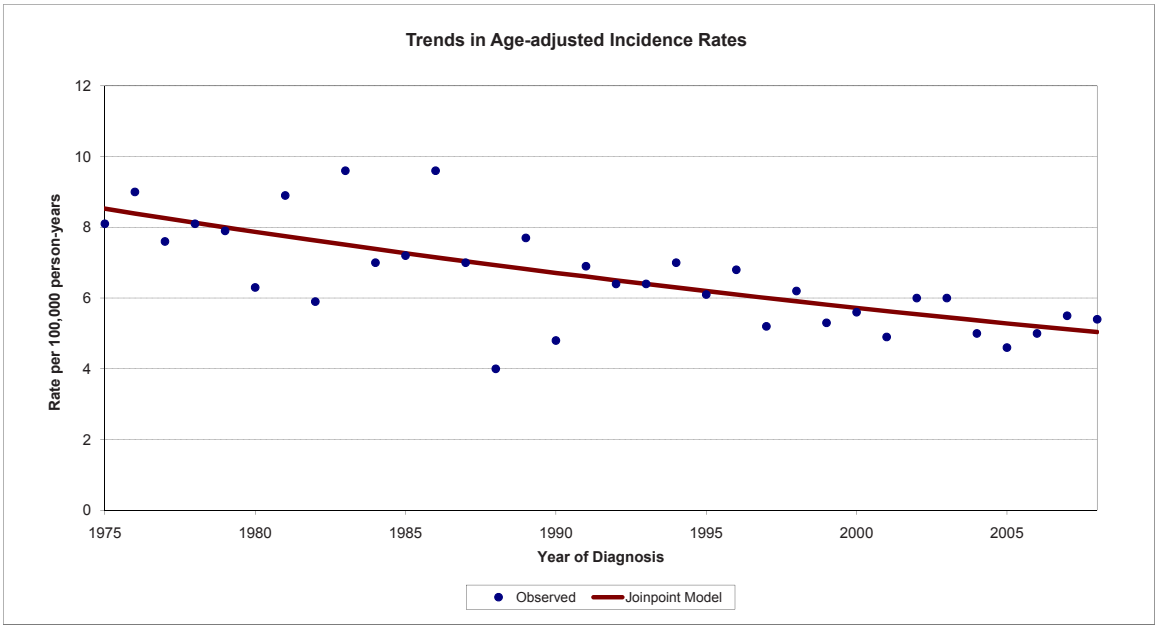
Pancreas cancer incidence increase at a rate of about 0.5% per year in Idaho from 1975 to 2008; rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually. The rate of increase was higher for females (1.1% per year) than for males (no significant trend), and rates of pancreas cancer incidence among males were higher than among females.

Prostate



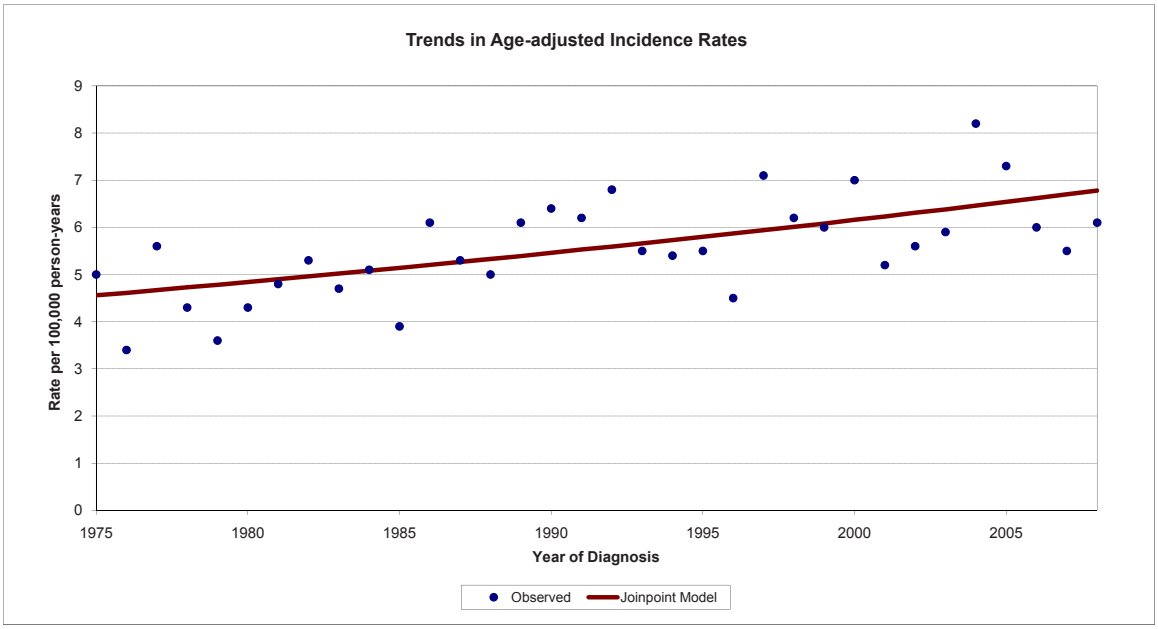
Trends in prostate cancer incidence are complicated, owing to the adoption of the Prostate-Specific Antigen (PSA) screening test in the late 1980s and early 1990s. From 1975 to 1988, prostate cancer incidence increased in Idaho at a rate of about 2.4% per year. From 1988 to 1992, prostate cancer incidence increased at a rate of about 14.3% per year. For the period 1992 to 1995, prostate cancer rates dropped by about 14.4% per year. From 1995 to 2000, the rates increased about 4.7% per year. Since 2000, the rate has decreased about 1.7% 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



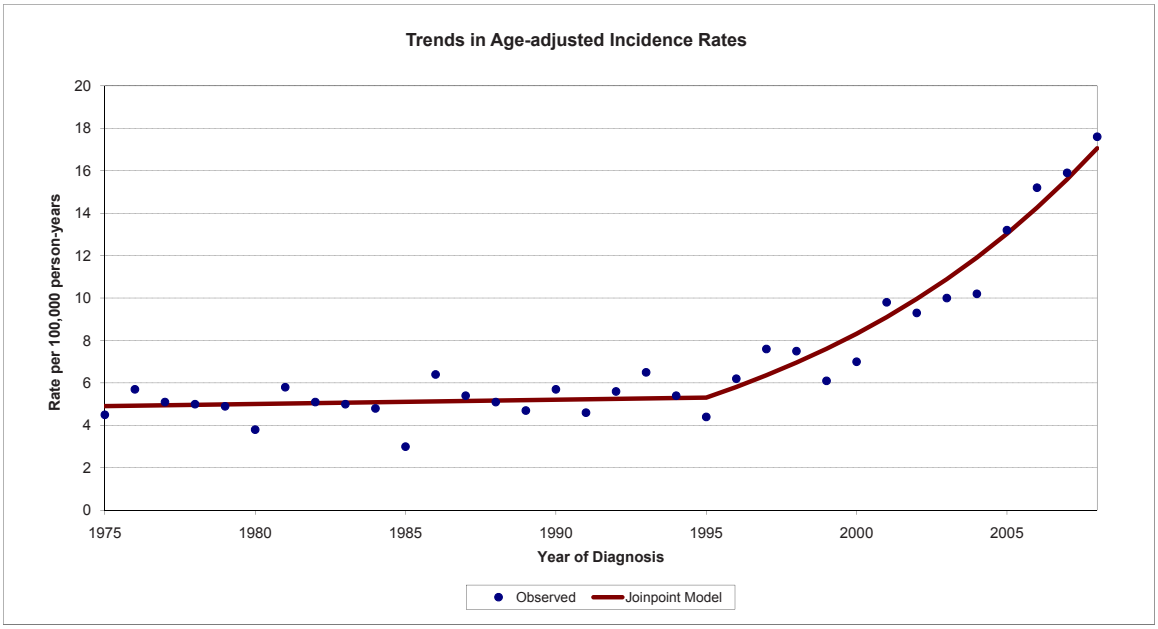
Stomach cancer incidence decreased at a rate of about 1.6% per year in Idaho from 1975 to 2008. Stomach cancer incidence trends over time were similar for males and females although stomach cancer incidence rates among males were about twice as high as among females.

Testis



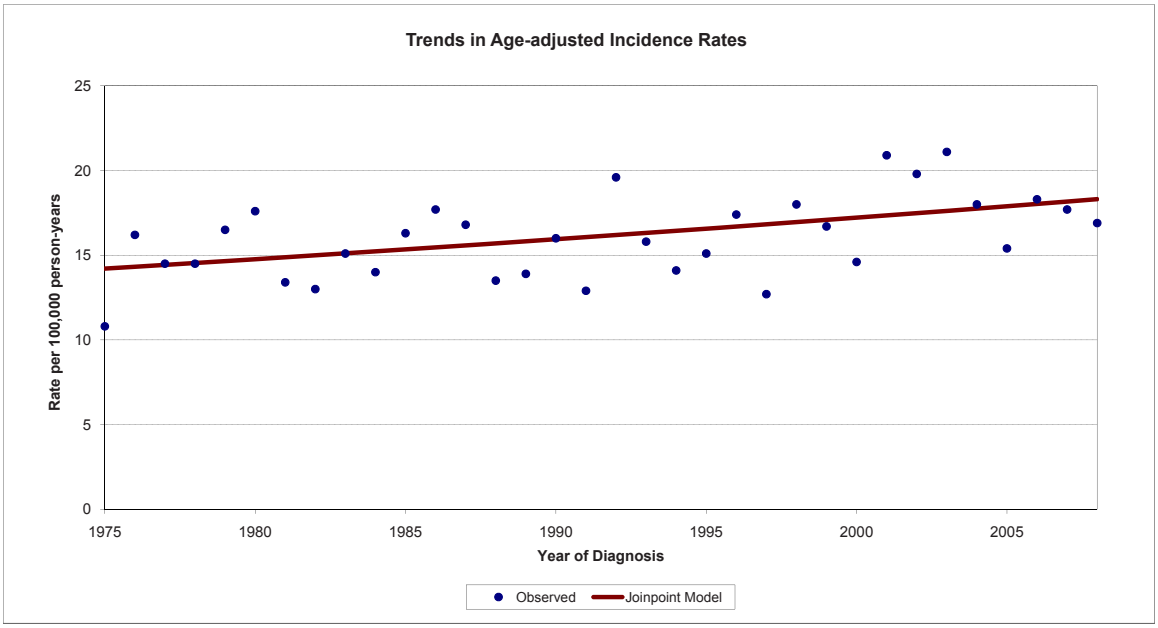
Testis cancer incidence increased at a rate of about 1.2% per year in Idaho from 1975 to 2008.

Thyroid



Thyroid cancer incidence was essentially stable in Idaho from 1975 to 1995, after which rates increased by about 9.4% 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 4.1% per year from 1975 to 2008. For females, thyroid cancer incidence was stable from 1975 to 1995, after which rates increased by about 10.0% 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 0.8% per year in Idaho from 1975 to 2008. 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.

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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, 2010. [16]

APPENDIX B

2008 POPULATION BY HEALTH DISTRICT, GENDER, AND AGE GROUP

	HD 1	HD 2	HD 3	HD 4	HD 5	HD 6	HD 7	STATE
Males								
< 5	6,652	2,965	11,667	16,685	7,965	7,464	9,990	63,388
5 to 9	6,925	2,788	10,784	15,626	7,074	6,888	8,364	58,449
10 to 14	7,372	2,956	10,194	15,057	6,671	6,472	7,512	56,234
15 to 19	7,650	4,510	9,578	14,261	7,007	6,800	8,605	58,411
20 to 24	6,031	6,421	7,919	15,845	5,929	7,607	10,380	60,132
25 to 29	7,044	3,397	9,279	18,652	6,207	5,376	6,899	56,854
30 to 34	5,843	2,533	8,583	16,417	5,417	4,237	5,707	48,737
35 to 39	6,301	2,993	8,325	16,918	5,245	4,629	5,395	49,806
40 to 44	6,712	2,893	7,668	15,372	5,426	4,391	5,379	47,841
45 to 49	7,721	3,488	7,952	15,441	6,135	5,209	5,940	51,886
50 to 54	7,951	3,676	7,279	14,110	6,077	5,513	5,704	50,310
55 to 59	7,868	3,447	6,503	12,162	5,228	4,972	5,158	45,338
60 to 64	6,629	2,945	5,566	9,704	4,416	3,806	3,984	37,050
65 to 69	5,133	2,313	4,428	6,468	3,409	2,794	3,054	27,599
70 to 74	3,730	1,800	3,208	4,596	2,519	2,126	2,226	20,205
75 to 79	2,700	1,461	2,343	3,525	1,977	1,732	1,688	15,426
80 to 84	1,842	1117	1,683	2,555	1,476	1,248	1206	11,127
85+	1352	932	1,475	1,804	1330	851	875	8,619
Total	105,456	52,635	124,434	215,198	89,508	82,115	98,066	767,412
	HD 1	**HD 2**	**HD 3**	**HD 4**	**HD 5**	**HD 6**	**HD 7**	**STATE**
Females								
< 5	6,294	2,883	11,215	15,736	7,511	7,321	9,402	60,362
5 to 9	6,885	2,645	10,223	15,120	6,740	6,516	7,942	56,071
10 to 14	6,902	2,707	9,655	14,166	6,410	6,252	7,141	53,233
15 to 19	6,901	4,119	8,937	13,218	6,270	6,834	10,658	56,937
20 to 24	5,546	5,535	7,183	13,953	5,169	7,577	8,718	53,681
25 to 29	6,523	3,209	8,884	18,421	5,422	4,859	6,734	54,052
30 to 34	5,939	2,179	8,414	15,295	5,027	4,270	5,467	46,591
35 to 39	6,506	2,660	7,996	14,928	5,035	4,655	5,434	47,214
40 to 44	6,866	2,854	7,327	14,243	5,316	4,684	5,259	46,549
45 to 49	8,030	3,569	7,897	15,135	6,022	5,479	5,956	52,088
50 to 54	8,577	3,707	7,374	14,228	6,086	5,411	5,846	51,229
55 to 59	8,024	3,377	6,840	12,282	5,352	4,875	5,070	45,820
60 to 64	6,769	2,909	5,889	9,556	4,493	3,823	4,032	37,471
65 to 69	5,105	2,375	4,595	6,689	3,509	2,844	3,069	28,186
70 to 74	3,676	1,812	3,589	5,157	2,774	2,313	2,237	21,558
75 to 79	2,918	1,645	2,818	4,320	2,449	2,021	1,996	18,167
80 to 84	2,403	1,412	2,370	3,606	2,039	1,554	1,589	14,973
85+	2,339	1,626	2,747	3,731	2,245	1,733	1491	15,912
Total	106,203	51,223	123,953	209,784	87,869	83,021	98,041	760,094
Total	211,659	103,858	248,387	424,982	177,377	165,136	196,107	1,527,506

Source: National Center for Health Statistics, 2010.