Annual Report of the Cancer Data Registry of Idaho

Cancer in Idaho – 2005

March 2007

CDRI Cancer Data Registry of Idaho

Idaho Hospital Association

IDAHO DEPARTMENT OF HEALTH & WELFARE

CANCER IN IDAHO - 2005

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Cancer Data Registry of Idaho

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PREFACE

"Cancer in Idaho - 2005," the twenty-ninth annual report of the Cancer Data Registry of Idaho (CDRI), contains data on cancer cases diagnosed during 2005 among Idaho residents. These data can be used by public health officials, hospital administrators, physicians, 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 Idaho Bureau of Health Policy and Vital Statistics of the Idaho Department of Health and Welfare, Division of Health, for their continued partnership in using CDRI data as a tool in cancer 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).

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

Reported cases contain the following data:

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

Primary site, behavior, grade, and histology were coded according to the *International Classification of Diseases for Oncology, 3rd edition.*[1] Stage of disease variables were coded using SEER's *Summary Staging Manual 2000*, the *AJCC Manual for Staging of Cancer, 6th edition*, and the *Collaborative Staging Manual, Version 1.0.*[2,3,16] SEER Summary Stage was coded using the SEER manual, not 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.[4-6]

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 EDITS 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, each case is 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. New for *Cancer in Idaho, 2005* are site-specific rate comparisons to *United States Cancer Statistics* (USCS).[18] Only registries whose data meet specified data quality criteria are included in USCS statistics. For the latest USCS report (2002 incidence), 44 states, 6 metropolitan areas, and the District of Columbia are included, representing 93% 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 1975-2005.

Descriptive Summary by Gender and Race and Ethnicity

The data presented in this report cover cancer cases diagnosed among Idaho residents between January 1, 2005, and December 31, 2005. In this time frame, there were 6,742 cases of in-situ and invasive cancer diagnosed among Idaho residents (3,595 among males and 3,147 among females). By race and ethnicity, there were 6,467 cases among non-Hispanic whites, 200 among Hispanic whites, 9 cases among Blacks, 28 cases among Native Americans, and 26 cases among Asians/Pacific Islanders. Twelve 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*.[15]

Trends

There was a 5.6% increase in the number of reported cases from 2004 to 2005 (an increase of 358 cases from 2004 to 2005 as of one year after close of calendar year), and an increase of 2.9% in the age-adjusted cancer incidence rate. Cancer sites with notable increases from 2004 to 2005 were cervix, larynx, ovary and thyroid. See Section VII for more detailed long term trends in cancer incidence.

Population Description

The population of the state of Idaho on July 1, 2005, was estimated to be 1,429,096 (716,877 males and 712,219 females). Population estimates were obtained from the National Center for Health Statistics.[7] 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	100,225	101,345
District 2	Clearwater, Latah, Lewis, Idaho, Nez Perce	50,927	49,538
District 3	Adams, Canyon, Gem, Owyhee, Payette, Washington	113,843	113,982
District 4	Ada, Boise, Elmore, Valley	197,626	191,602
District 5	Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, Twin Falls	85,779	84,838
District 6	Bannock, Bear Lake, Bingham, Butte, Caribou, Franklin, Oneida, Power	80,579	81,763
District 7	Bonneville, Clark, Custer, Fremont, Jefferson, Lemhi, Madison, Teton	87,898	89,151

SUMMARY MEASURES OF CANCER BURDEN IN IDAHO - 2005

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 2004 to 2005
All Sites	6,283	2,356	67.0	73.0	40,655	15,824	11.9	2.9%
Bladder	325	58	73.0	78.0	1,907	183	7.3	15.4%
Brain	107	79	53.0	62.0	397	1,309	17.7	10.3%
Breast	784	144	63.0	70.0	8,737	1,195	12.8	0.2%
Cervix	52	13	48.0	53.0	647	264	22.0	32.2%
Colorectal	591	207	71.0	77.0	3,730	1,177	12.1	-1.4%
Corpus Uteri	151	10	63.0	72.0	1,890	77	15.3	-4.0%
Esophagus	76	56	69.5	68.0	110	469	10.9	17.0%
Hodgkin Lymphoma	34	6	34.0	61.5	593	77	19.3	13.2%
Kidney	194	47	63.0	71.0	928	436	15.0	5.7%
Larynx	45	10	66.0	68.0	310	94	11.8	34.8%
Leukemia	175	107	69.0	75.0	901	825	15.3	3.3%
Liver and Bile Duct	61	63	64.0	69.0	53	537	12.5	3.9%
Lung and Bronchus	787	606	71.0	73.0	1,196	3,402	9.4	2.6%
Melanoma of Skin	349	47	61.0	70.0	2,723	448	15.4	2.5%
Myeloma	65	42	68.0	76.5	208	184	9.2	-17.9%
Non-Hodgkin Lymphoma	255	98	69.0	74.0	1,512	651	12.5	-4.4%
Oral Cavity and Pharynx	154	41	61.0	68.0	1,116	322	12.9	5.2%
Ovary	95	56	70.0	75.0	664	402	13.0	21.3%
Pancreas	160	165	72.0	73.0	126	1,052	11.2	-2.5%
Prostate	1,028	161	67.0	82.0	8,455	371	7.4	2.2%
Stomach	59	39	72.0	76.0	185	259	14.4	-6.6%
Testis	51	5	32.0	57.0	737	93	23.3	-8.4%
Thyroid	176	8	47.0	78.0	1,495	13	6.5	30.2%

Notes:

Incident cases include all invasive and bladder in situ cases newly diagnosed among Idaho residents in 2005.

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 2005 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).

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 B 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 C).[7]

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 2005 (6,742), a total of 6,283 cases (6,102 invasive and 181 bladder in-situ) were used for calculating age-adjusted incidence rates. Of the 6,283 cases, 3,454 occurred among males and 2,829 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*.[8-10] 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*.[15]

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.[4,5] 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 Appendix A 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.[11]

USCS

United States Cancer Statistics (USCS) includes data from SEER and NPCR registries whose data meet specified data quality criteria.[18] For the latest USCS report (2002 incidence data), 44 states, 6 metropolitan areas, and the District of Columbia are included, representing 93% 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 extensive 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 the past x 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 6.1.1 software.[12] DEVCAN was used to calculate the probability of developing or dying of cancer using Idaho-specific cancer incidence and mortality data for the years 2001-2005. 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 3.0 software was used to model trends in age-adjusted cancer incidence rates.[17] 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 3 joinpoints) per primary site category and sex. Model selection was performed using Monte Carlo methods.

SECTION I

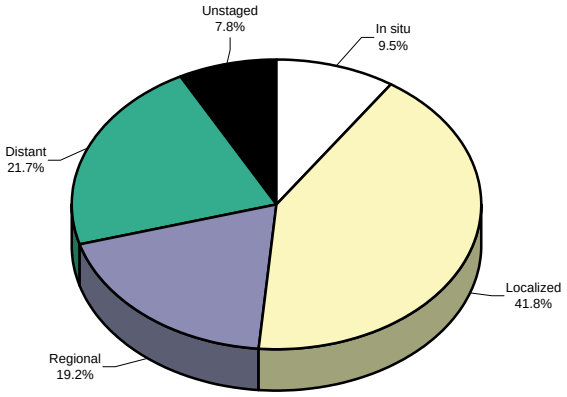
2005 SUMMARY ON ALL SITES COMBINED
AND
23 MOST COMMON SITES

ALL SITES

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	456.7	543.7	387.5
# of new invasive cases	6,102	3,307	2,795
# of new in-situ cases	640	288	352
# of deaths	2,356	1,273	1,083

Stage at Diagnosis - All Sites



Total Cases By County

Ada	1,573	Cassia	75	Lewis	45
Adams	23	Clark	1	Lincoln	12
Bannock	281	Clearwater	49	Madison	54
Bear Lake	27	Custer	23	Minidoka	92
Benewah	53	Elmore	117	Nez Perce	229
Bingham	158	Franklin	16	Oneida	15
Blaine	90	Fremont	50	Owyhee	54
Boise	25	Gem	97	Payette	109
Bonner	255	Gooding	81	Power	23
Bonneville	335	Idaho	76	Shoshone	87
Boundary	51	Jefferson	86	Teton	23
Butte	20	Jerome	80	Twin Falls	402
Camas	6	Kootenai	779	Valley	60
Canyon	717	Latah	139	Washington	66
Caribou	24	Lemhi	48		

Risk and Associated Factors

Age Rates usually increase steadily with age. Most cases are adults in mid-life or older.

Gender Males have a higher incidence than females for most cancer types.

Race & SES Rates are higher for African Americans than for Caucasians and other ethnic groups. 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.

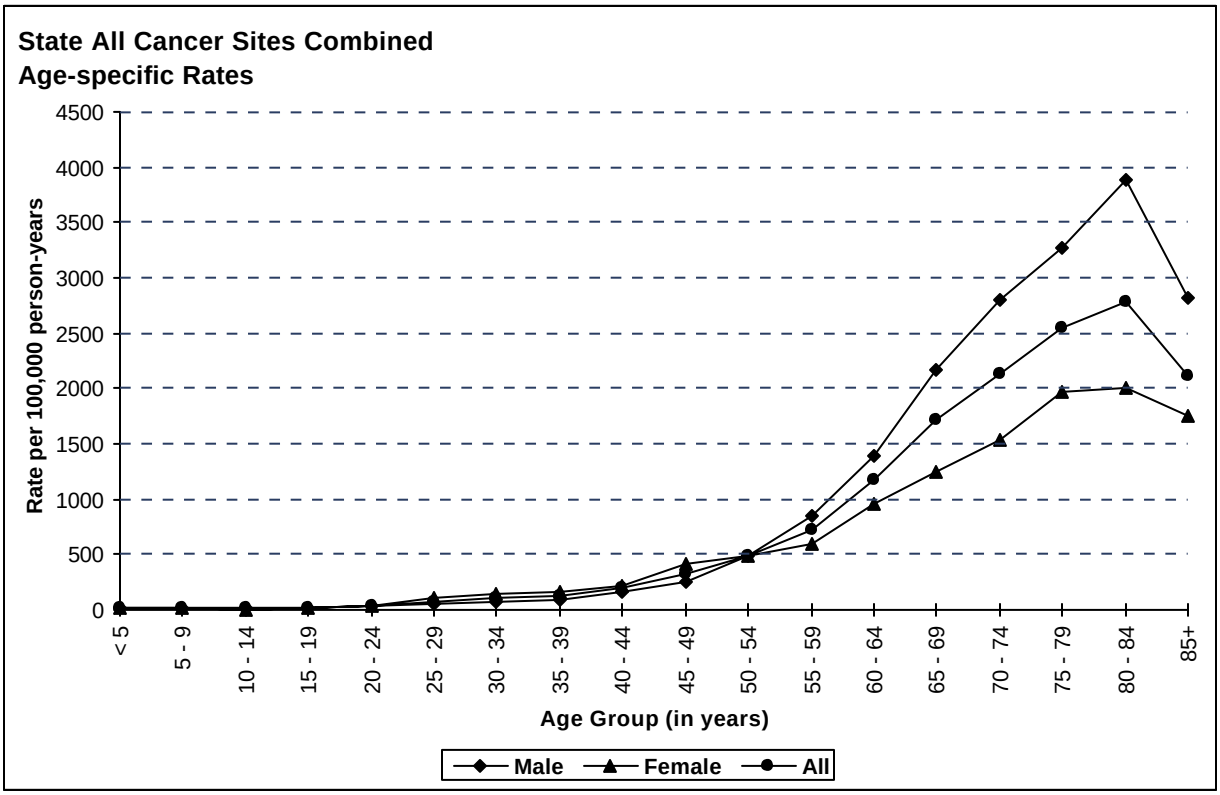
Diet Diets that are low in fresh fruits and vegetables have been associated with increased incidence of several cancers.

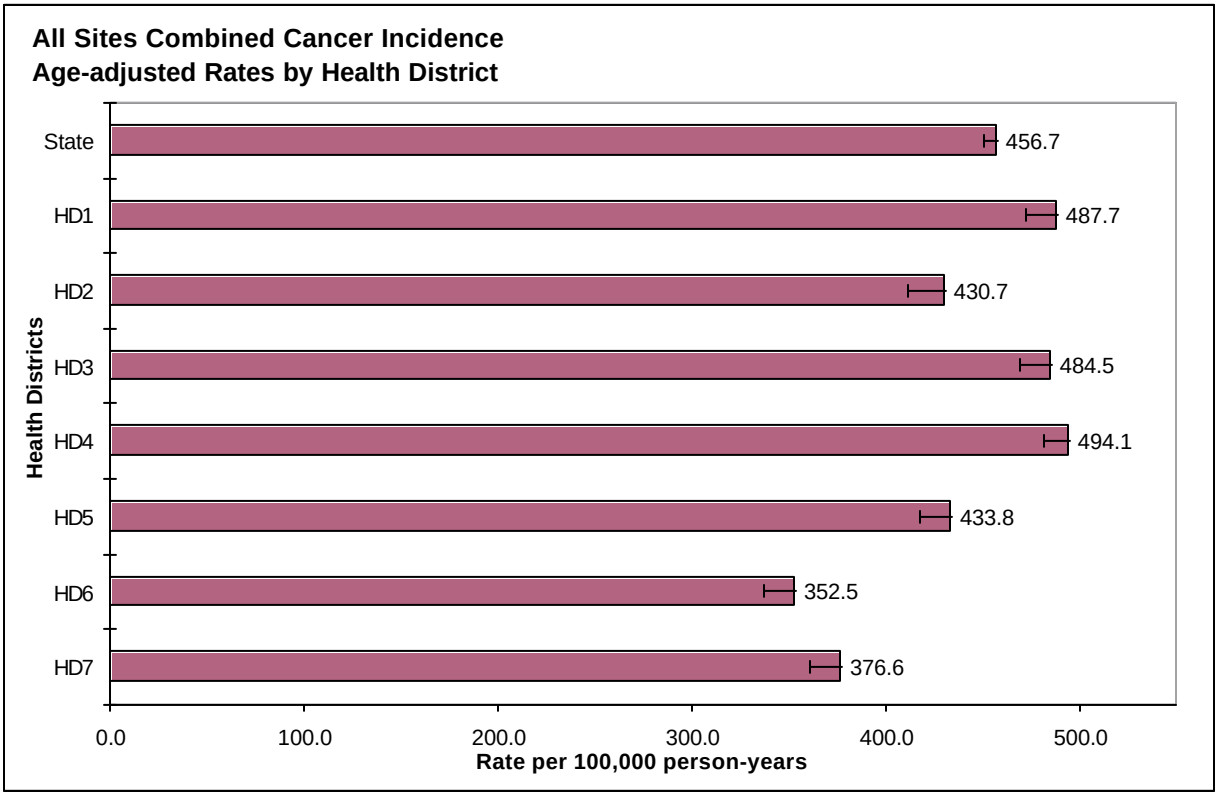
Other Tobacco use is the single most important risk factor for cancer incidence and mortality. Most cancers manifest a tendency to aggregate in families - close relatives of a cancer patient can be considered to have increased risk of that neoplasm, but not all forms of cancer. Excess risk is usually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

Special Notes

Mean age-adjusted incidence rate across health districts:	437.1
95% confidence interval on the mean age-adjusted incidence rate:	395.5 - 478.8
Median age-adjusted incidence rate of health districts:	433.8
Range of age-adjusted incidence rate for health districts:	352.5 - 494.1
SEER 17 rate (2003, all races):	452.6
USCS rate (2002, all races):	462.2

The incidence rates for all cancers combined were similar for males and females in Idaho until approximately age 55-59, after which rates for males rose dramatically. The highest rates for both males and females were observed in age groups after age 70, peaking in the age group 80-84 for males and females. Health Districts 1 and 4 had statistically significantly more cases of cancer than expected based upon rates for the remainder of Idaho, and Health Districts 6 and 7 had statistically significantly fewer cases than expected.


State All Cancer Sites Combined
Age-specific Rates
Rate per 100,000 person-years
4500
4000
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

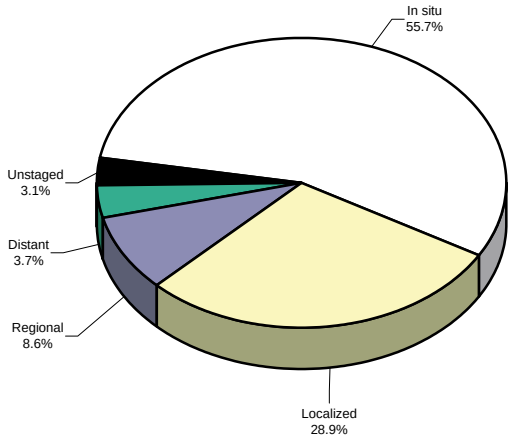

All Sites Combined Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
456.7
487.7
430.7
484.5
494.1
433.8
352.5
376.6
0.0
100.0
200.0
300.0
400.0
500.0
Rate per 100,000 person-years

BLADDER

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	24.3	42.1	9.3
# of new invasive cases	144	108	36
# of new in-situ cases	181	147	34
# of deaths	58	42	16

Stage at Diagnosis - Bladder



Total Cases By County

Ada	82	Cassia	7	Lewis	5
Adams	-	Clark	-	Lincoln	1
Bannock	13	Clearwater	3	Madison	-
Bear Lake	-	Custer	1	Minidoka	4
Benewah	2	Elmore	7	Nez Perce	10
Bingham	12	Franklin	1	Oneida	1
Blaine	5	Fremont	2	Owyhee	5
Boise	1	Gem	5	Payette	4
Bonner	8	Gooding	3	Power	2
Bonneville	13	Idaho	3	Shoshone	4
Boundary	4	Jefferson	2	Teton	3
Butte	2	Jerome	1	Twin Falls	16
Camas	-	Kootenai	38	Valley	1
Canyon	34	Latah	6	Washington	1
Caribou	1	Lemhi	3		

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.

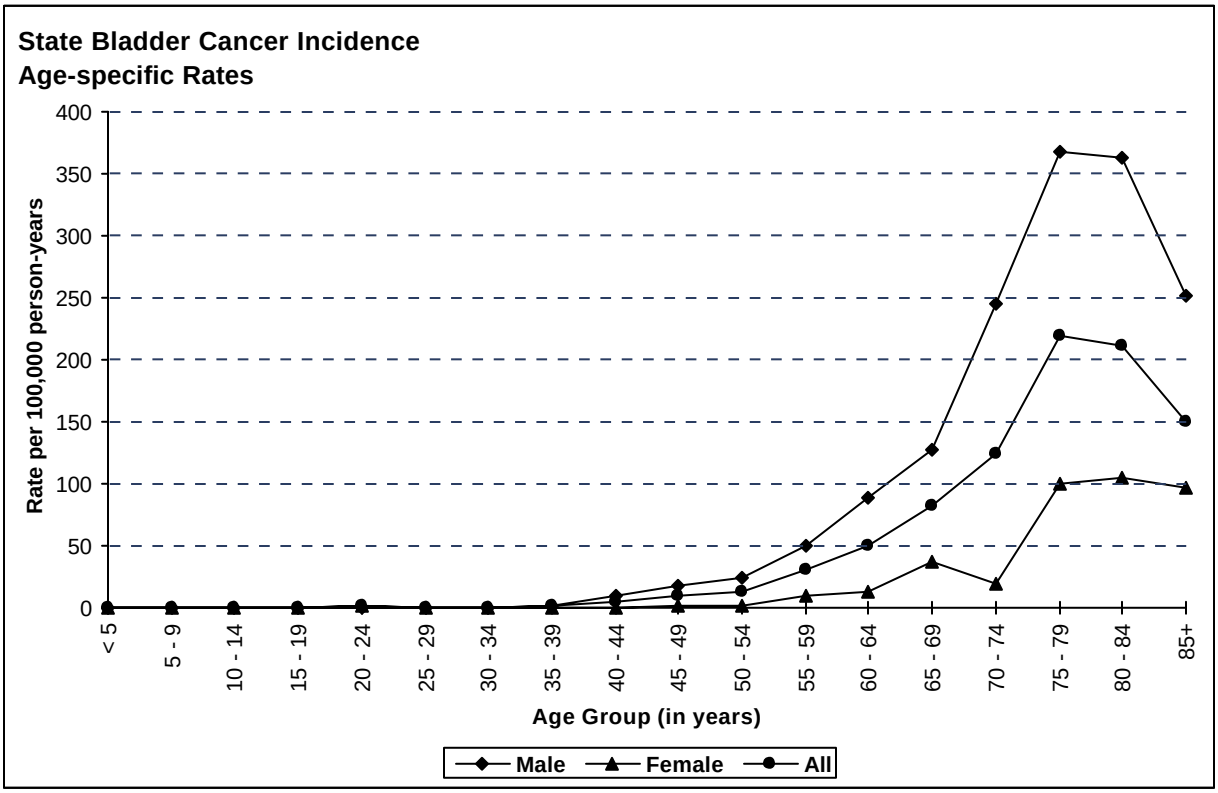
Occupation Truck drivers, likely via exposure to motor exhaust, are at increased risk. Occupational exposures, including manufacturers of certain dyes, painters, and aluminum, rubber, cable, and leather workers, have been shown to increase risk of bladder cancer. Exposure to permanent hair dyes may increase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

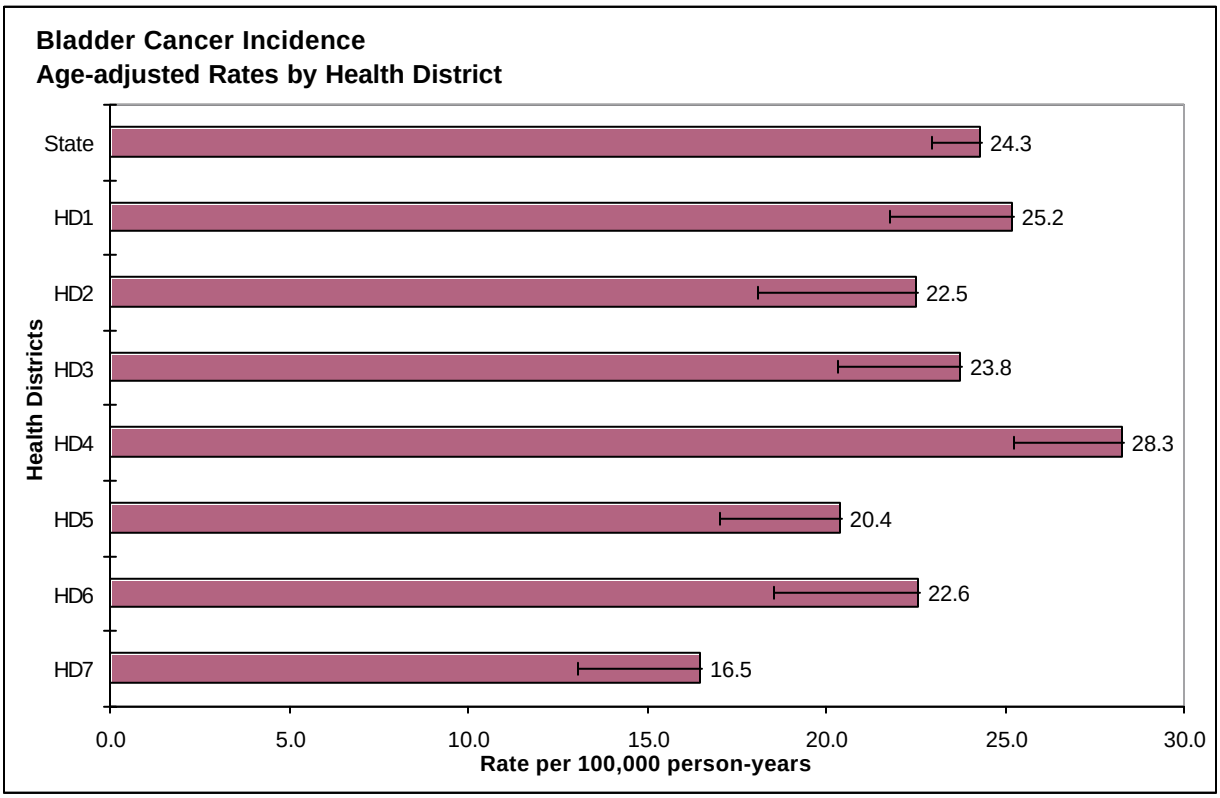
Other Tobacco consumption has been associated with a 2- to 5-fold higher incidence of bladder cancer and is attributable for a greater number of cases than other risk factors. Cyclophosphamide, a chemotherapeutic agent, and 4-amino-diphenyl are known human bladder carcinogens. Schistosoma hematobium 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:	22.7
95% confidence interval on the mean age-adjusted incidence rate:	20.0 - 25.5
Median age-adjusted incidence rate of health districts:	22.6
Range of age-adjusted incidence rate for health districts:	16.5 - 28.3
SEER 17 rate (2003, all races):	20.6
USCS rate (2002, all races):	21.0

There were few cases of bladder cancer among persons aged less than 50 years. Bladder cancer incidence rates increased with age, peaking in the age group 75-79 for males and 80-84 for females. Health District 4 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 based upon rates for the remainder of Idaho.


State Bladder Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
400
350
300
250
200
150
100
50
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All

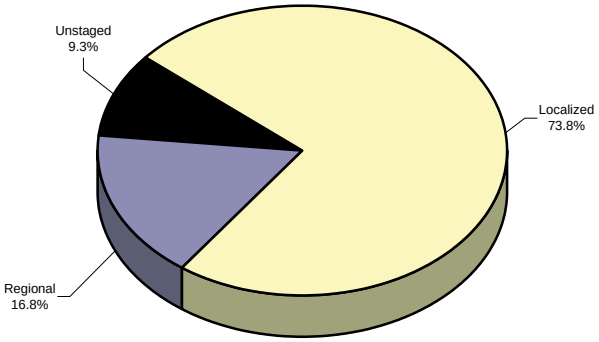

Bladder Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
24.3
25.2
22.5
23.8
28.3
20.4
22.6
16.5
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Rate per 100,000 person-years

BRAIN

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	7.6	8.1	7.1
# of new invasive cases	107	55	52
# of new in-situ cases	0	0	0
# of deaths	79	42	37

Stage at Diagnosis - Brain



Total Cases By County

Ada	31	Cassia	-	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	6	Clearwater	1	Madison	-
Bear Lake	-	Custer	-	Minidoka	4
Benewah	-	Elmore	-	Nez Perce	4
Bingham	5	Franklin	1	Oneida	-
Blaine	-	Fremont	-	Owyhee	1
Boise	-	Gem	3	Payette	5
Bonner	3	Gooding	-	Power	-
Bonneville	7	Idaho	-	Shoshone	-
Boundary	-	Jefferson	1	Teton	-
Butte	-	Jerome	-	Twin Falls	11
Camas	1	Kootenai	8	Valley	2
Canyon	12	Latah	1	Washington	-
Caribou	-	Lemhi	-		

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 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.

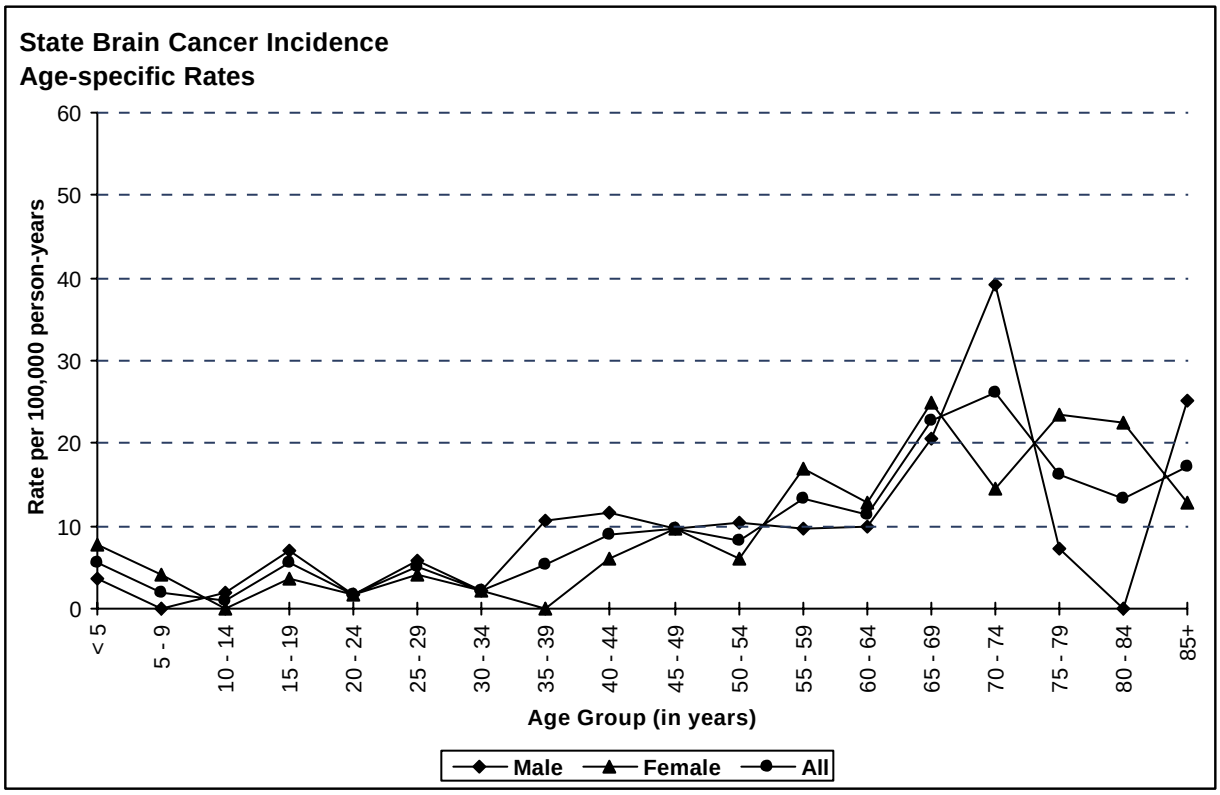
Occupation Vinyl chloride and ionizing radiation exposure are risk factors. Many occupational and environmental exposures have shown suggestive associations with elevated rates of brain cancer. Roofers, sheet metal workers, and rubber and plastic workers may be at elevated risk. Specific exposures underlying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

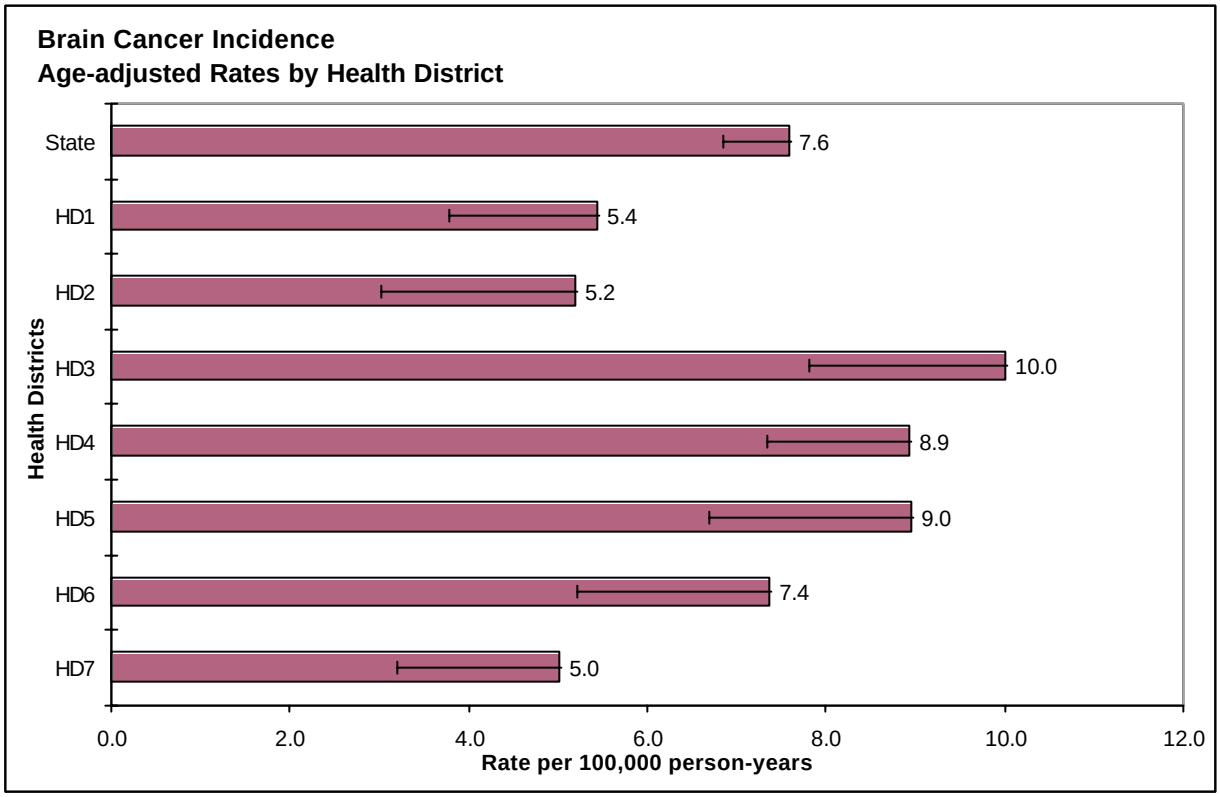
Other Human Immunodeficiency Virus (HIV) infected individuals and organ transplant recipients have an increased risk of developing brain lymphoma.

Special Notes

Mean age-adjusted incidence rate across health districts:	7.3
95% confidence interval on the mean age-adjusted incidence rate:	5.7 - 8.8
Median age-adjusted incidence rate of health districts:	7.4
Range of age-adjusted incidence rate for health districts:	5.0 - 10.0
SEER 17 rate (2003, all races):	6.0
USCS rate (2002, all races):	6.1

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
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 Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
7.6
5.4
5.2
10.0
8.9
9.0
7.4
5.0
0.0
2.0
4.0
6.0
8.0
10.0
12.0
Rate per 100,000 person-years

BRAIN AND OTHER CNS NON-MALIGNANT

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	7.9	3.8	11.5
# of new cases	110	25	85

Total Cases By County

Ada	33	Cassia	1	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	3	Clearwater	1	Madison	-
Bear Lake	-	Custer	-	Minidoka	1
Benewah	1	Elmore	6	Nez Perce	1
Bingham	2	Franklin	-	Oneida	-
Blaine	2	Fremont	1	Owyhee	-
Boise	-	Gem	2	Payette	1
Bonner	1	Gooding	1	Power	1
Bonneville	8	Idaho	2	Shoshone	-
Boundary	1	Jefferson	2	Teton	-
Butte	-	Jerome	1	Twin Falls	8
Camas	-	Kootenai	14	Valley	-
Canyon	12	Latah	1	Washington	2
Caribou	-	Lemhi	1		

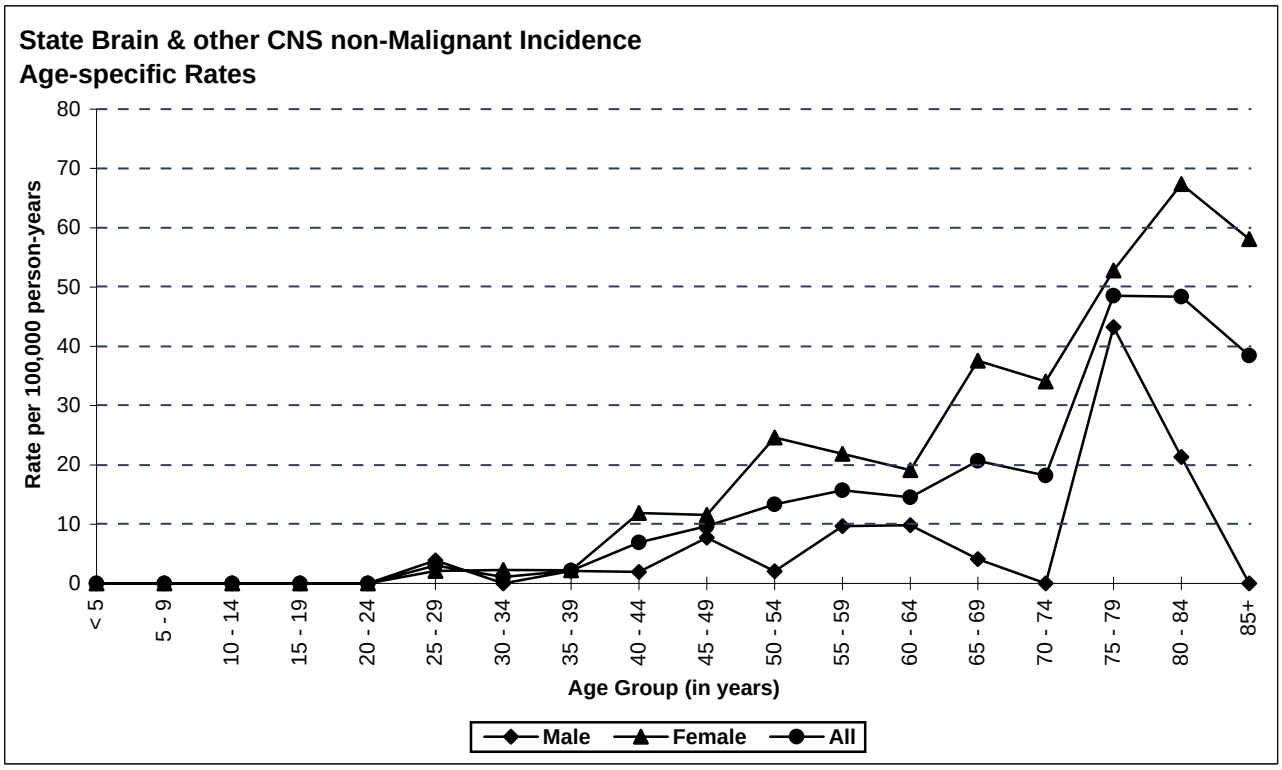
Background

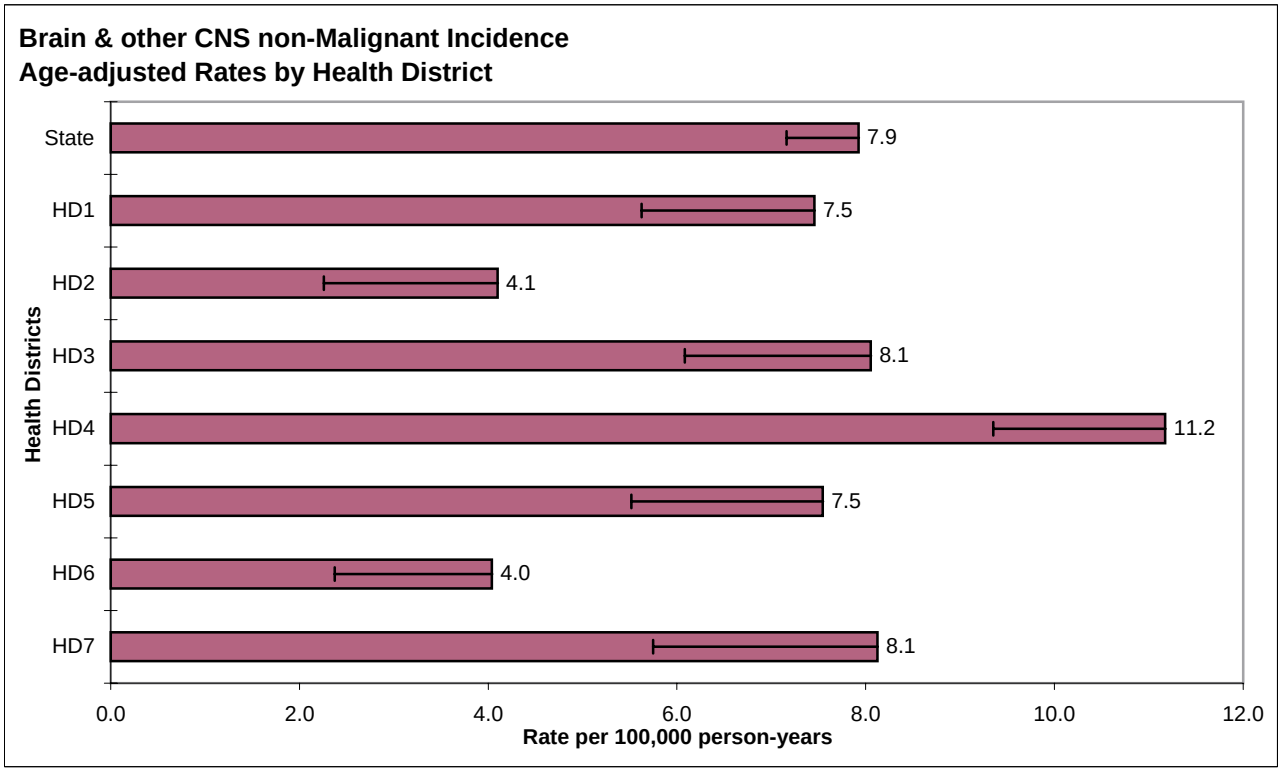
In 2007, as a result of Public Law 107-260, the publication United States Cancer Statistics 2004 Incidence and Mortality will include tables for non-malignant brain tumors. Until that time, the only reference data are from the Central Brain Tumor Registry of the United States (CBTRUS), which has reported on data submitted from eighteen state central cancer registries, including Idaho. The aggregated CBTRUS rate for the latest reporting period, 1998-2002, was 7.4 cases of non-malignant brain and central nervous system tumors per 100,000 population.

Special Notes

Mean age-adjusted incidence rate across health districts:	7.2	
95% confidence interval on the mean age-adjusted incidence rate:	5.4 -	9.1
Median age-adjusted incidence rate of health districts:	7.5	
Range of age-adjusted incidence rate for health districts:	4.0 -	11.2
CBTRUS rate (1998-2002, all races):	7.4	

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
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

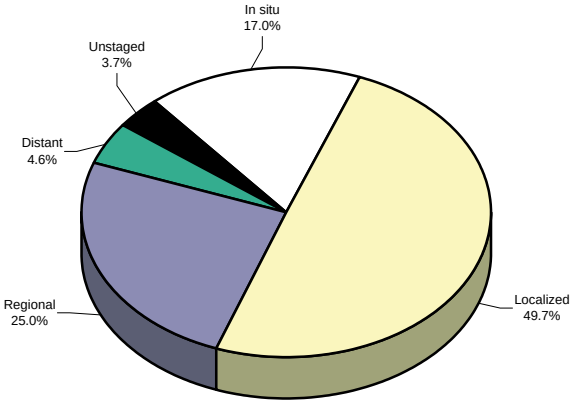

Brain & other CNS non-Malignant Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
7.9
7.5
4.1
8.1
11.2
7.5
4.0
8.1
0.0
2.0
4.0
6.0
8.0
10.0
12.0
Rate per 100,000 person-years

BREAST

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	56.2	1.5	106.0
# of new invasive cases	784	10	774
# of new in-situ cases	161	0	161
# of deaths	144	0	144

Stage at Diagnosis - Breast



Total Cases By County

Ada	239	Cassia	7	Lewis	5
Adams	4	Clark	1	Lincoln	1
Bannock	37	Clearwater	9	Madison	7
Bear Lake	4	Custer	3	Minidoka	6
Benewah	6	Elmore	18	Nez Perce	36
Bingham	18	Franklin	3	Oneida	1
Blaine	15	Fremont	8	Owyhee	8
Boise	6	Gem	11	Payette	15
Bonner	35	Gooding	17	Power	1
Bonneville	49	Idaho	11	Shoshone	11
Boundary	8	Jefferson	11	Teton	2
Butte	5	Jerome	15	Twin Falls	68
Camas	1	Kootenai	100	Valley	10
Canyon	90	Latah	24	Washington	10
Caribou	-	Lemhi	4		

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.

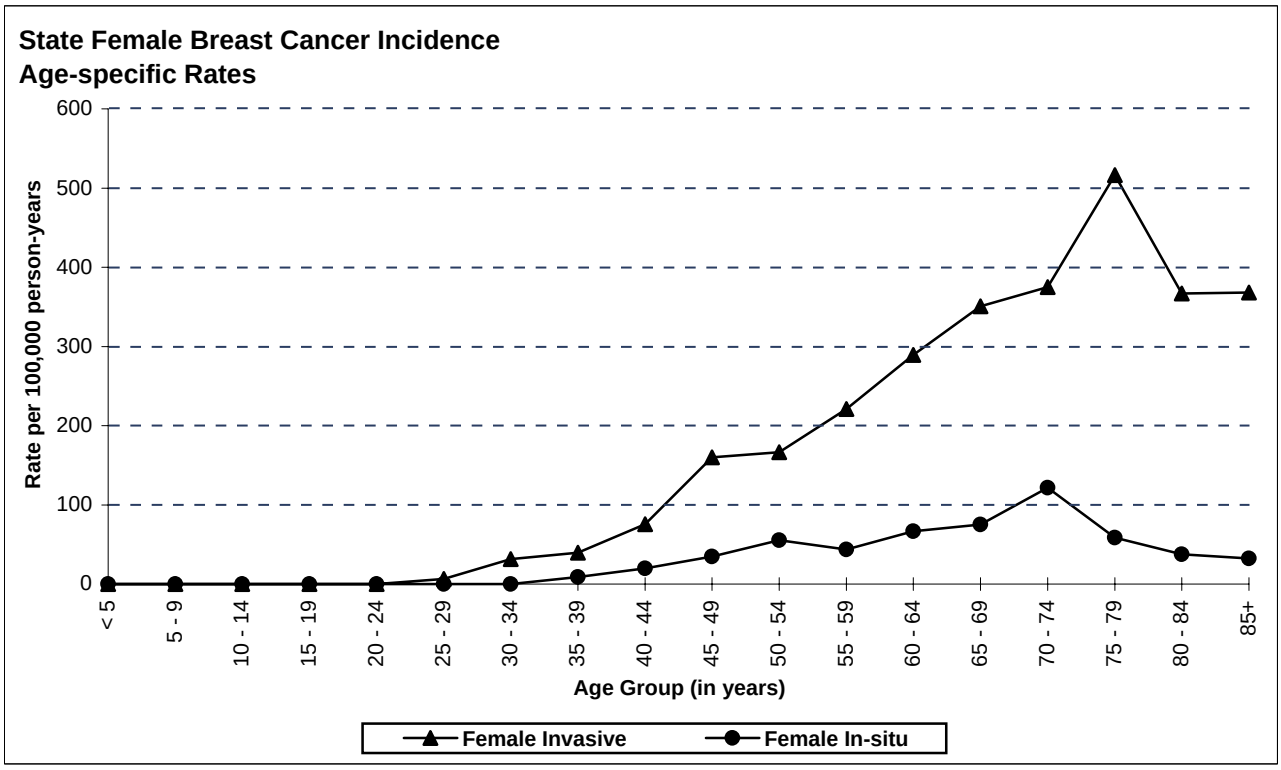
Hormonal There is evidence of hormonal influence in the risk of developing breast cancer. Longer intervals of menarche to the first full-term pregnancy and menarche to menopause, as well as menarche before age 13, have been associated with higher risks of breast cancer. Cumulative estrogen exposure,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

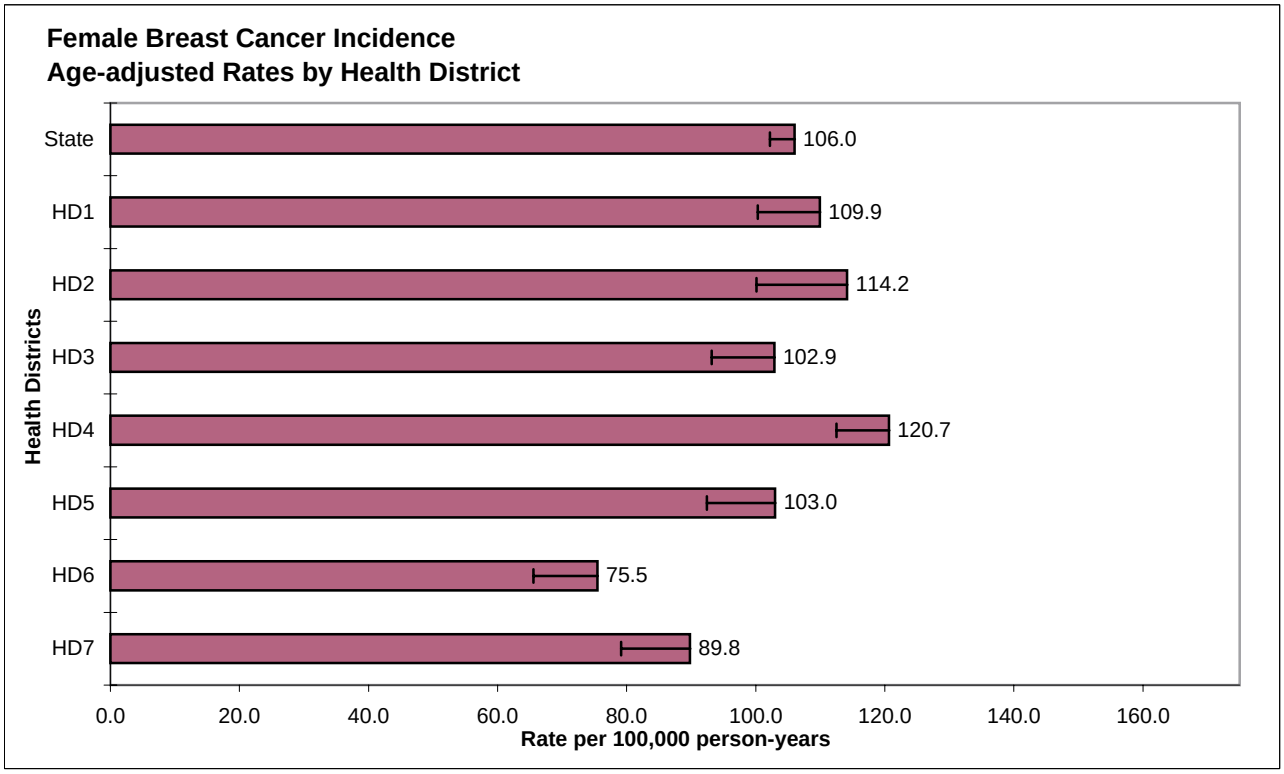
Other Alcohol consumption, high dietary fat intake, obesity (in postmenopausal women), sedentary life-style, and having a mother or sister with breast cancer have all been implicated as associated risk factors. Weight gain of 55 lbs or more after age 18 is associated with a 45% increased risk. The recent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

Special Notes

Mean age-adjusted incidence rate across health districts:	102.3
95% confidence interval on the mean age-adjusted incidence rate:	90.9 - 113.6
Median age-adjusted incidence rate of health districts:	103.0
Range of age-adjusted incidence rate for health districts:	75.5 - 120.7
SEER 17 rate (2003, all races):	121.2
USCS rate (2002, all races):	124.9

The vast majority of breast cancer cases occur among females. In Idaho during the year 2005, there were ten cases of invasive breast cancer among males. The age-specific incidence rates of female breast cancer in Idaho in 2005 increased with age, peaking in the age group 75-79 for invasive cases. No cases were observed in women less than 25 years of age. Health District 4 had statistically significantly more cases of invasive female breast cancer than expected based upon rates for the remainder of Idaho, and Health District 6 had statistically significantly fewer cases than expected.


State Female Breast Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
600
500
400
300
200
100
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Female Invasive
Female In-situ

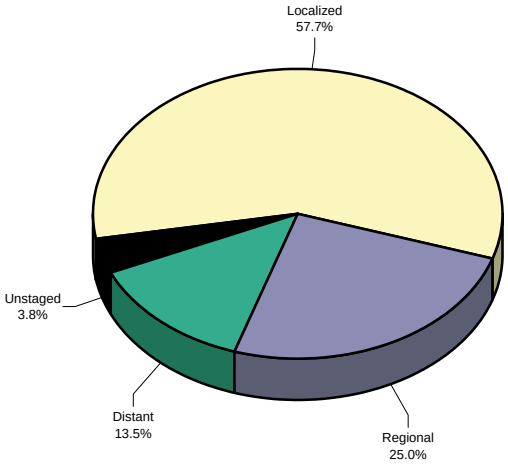

Female Breast Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
106.0
109.9
114.2
102.9
120.7
103.0
75.5
89.8
0.0
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
Rate per 100,000 person-years

CERVIX

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	7.4
# of new invasive cases	-	-	52
# of new in-situ cases	-	-	n/a
# of deaths	-	-	13

Stage at Diagnosis - Cervix



Total Cases By County

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

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.

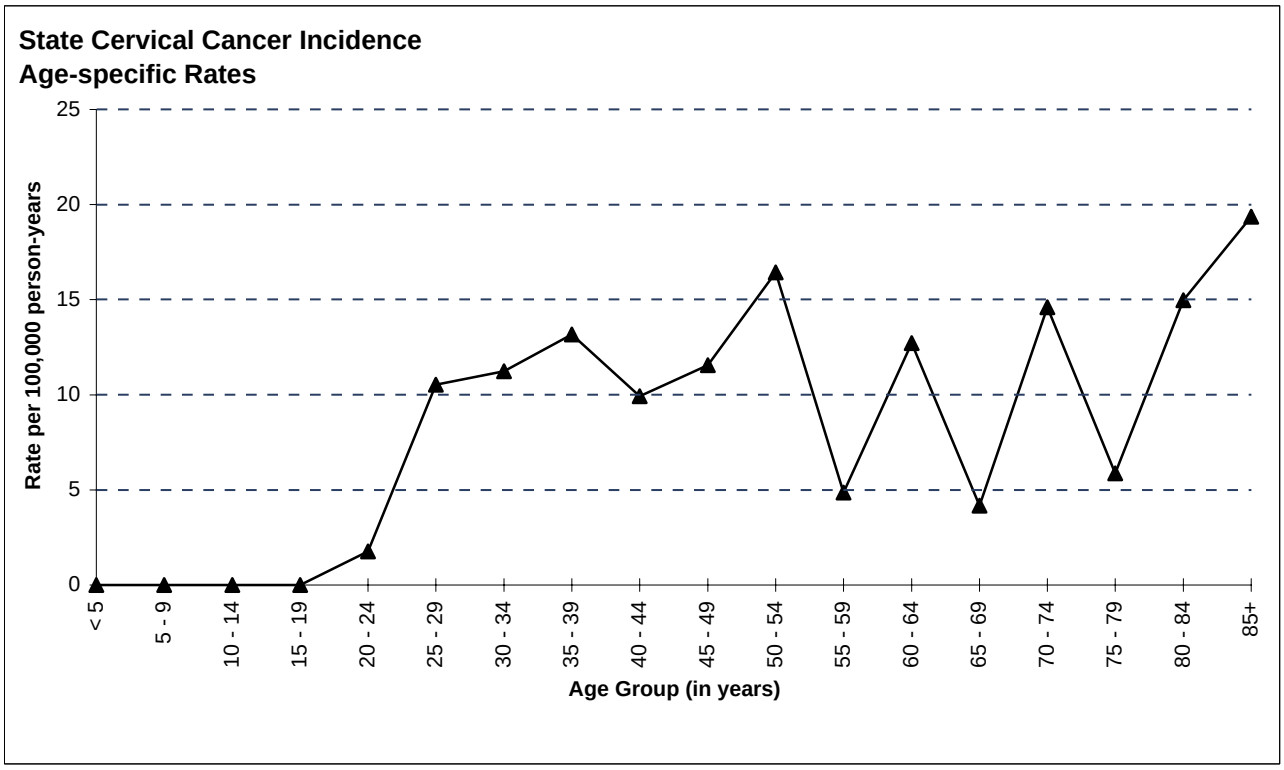
Race & SES African American females, as well as women in lower income groups, have been shown to experience higher rates.

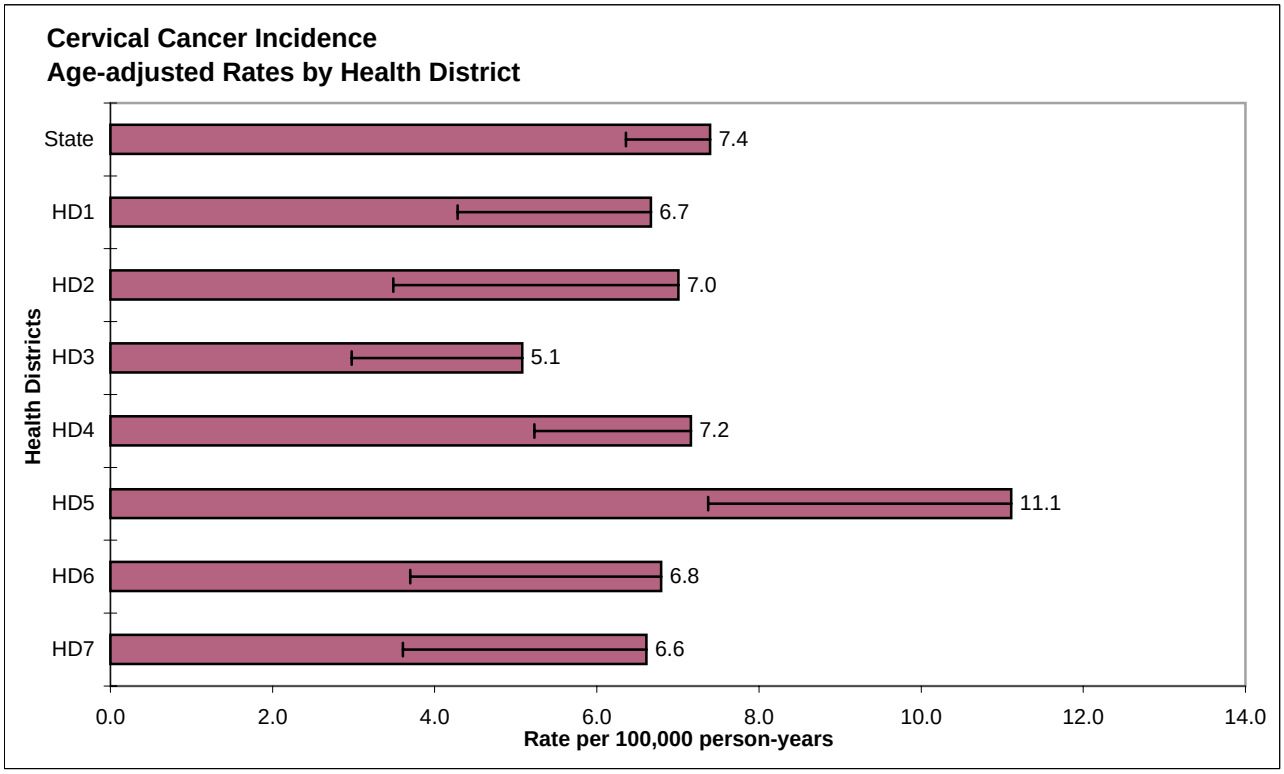
Other The large majority of cervical cancer cases worldwide can be attributed to human papilloma virus (HPV) infection. Of the at least 70 types of HPV known, types 16 and 18 are most closely associated with malignancy. Other risk factors that may be correlates, cofactors, or independent risk factors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

Special Notes

Mean age-adjusted incidence rate across health districts:	7.2
95% confidence interval on the mean age-adjusted incidence rate:	5.8 - 8.6
Median age-adjusted incidence rate of health districts:	6.8
Range of age-adjusted incidence rate for health districts:	5.1 - 11.1
SEER 17 rate (2003, all races):	8.1
USCS rate (2002, all races):	8.7

Increased screening with routine Pap tests, particularly among older and low-income women, has increased diagnostic rates and helped to reduce the incidence of invasive disease. Today, the vast majority of cases in younger women is diagnosed before the invasive stage, with cure rates approaching 100%. These pre-invasive cases are not included in this report. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.


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

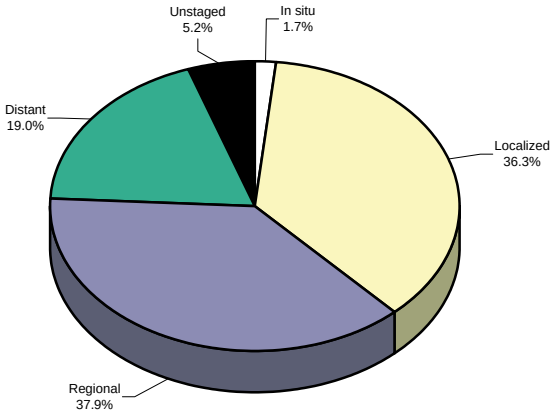

Cervical Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
7.4
6.7
7.0
5.1
7.2
11.1
6.8
6.6
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
Rate per 100,000 person-years

COLORECTAL

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	43.2	51.7	36.4
# of new invasive cases	591	321	270
# of new in-situ cases	10	1	9
# of deaths	207	92	115

Stage at Diagnosis - Colorectal



Total Cases By County

Ada	126	Cassia	7	Lewis	5
Adams	4	Clark	-	Lincoln	1
Bannock	35	Clearwater	2	Madison	12
Bear Lake	3	Custer	1	Minidoka	13
Benewah	7	Elmore	6	Nez Perce	16
Bingham	14	Franklin	2	Oneida	2
Blaine	4	Fremont	8	Owyhee	3
Boise	1	Gem	7	Payette	15
Bonner	25	Gooding	8	Power	-
Bonneville	29	Idaho	12	Shoshone	8
Boundary	8	Jefferson	7	Teton	1
Butte	2	Jerome	9	Twin Falls	34
Camas	-	Kootenai	71	Valley	4
Canyon	54	Latah	16	Washington	10
Caribou	-	Lemhi	7		

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 Specific genetic alterations have been recognized in several hereditary conditions with high risk of colon cancer, such as familial polyposis. These conditions account for about fifteen percent of colon cancer cases.

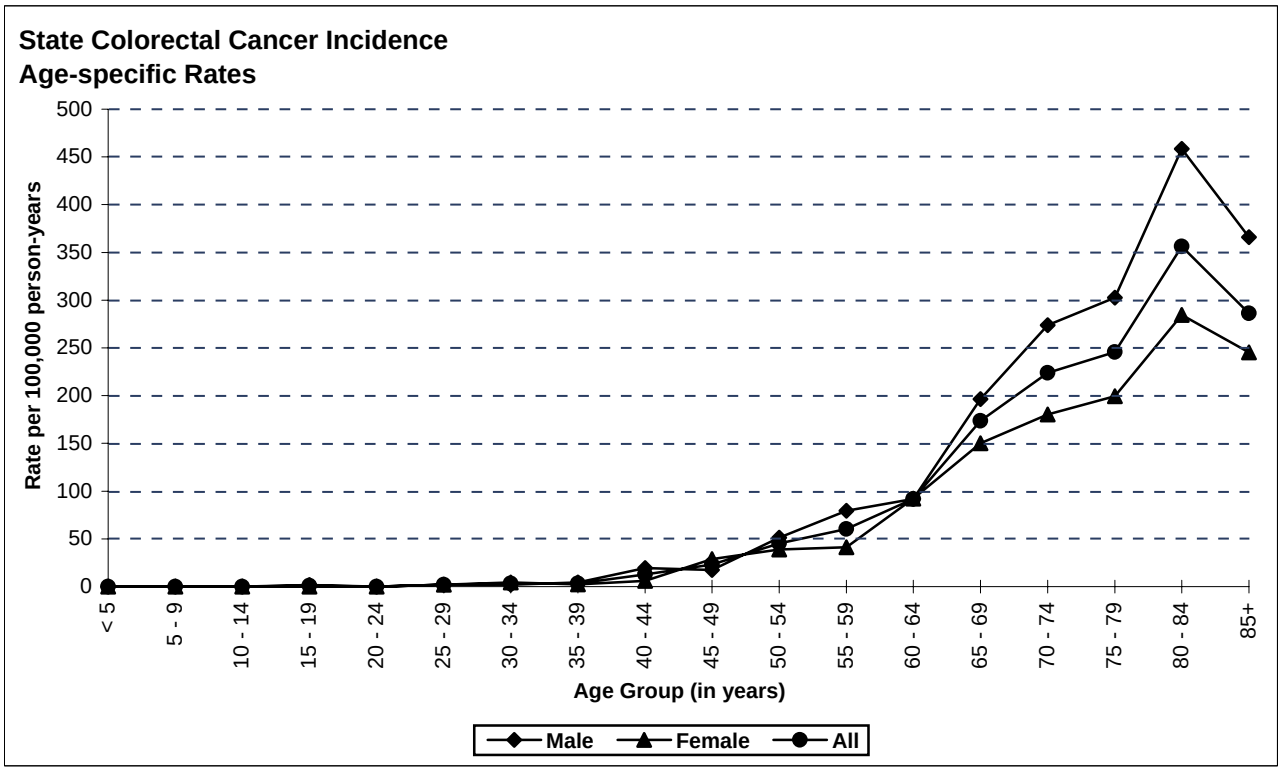
Diet Strong evidence that high calorie diets and diets high in fat and low in fiber contribute to increased risk of colon cancer has been shown.

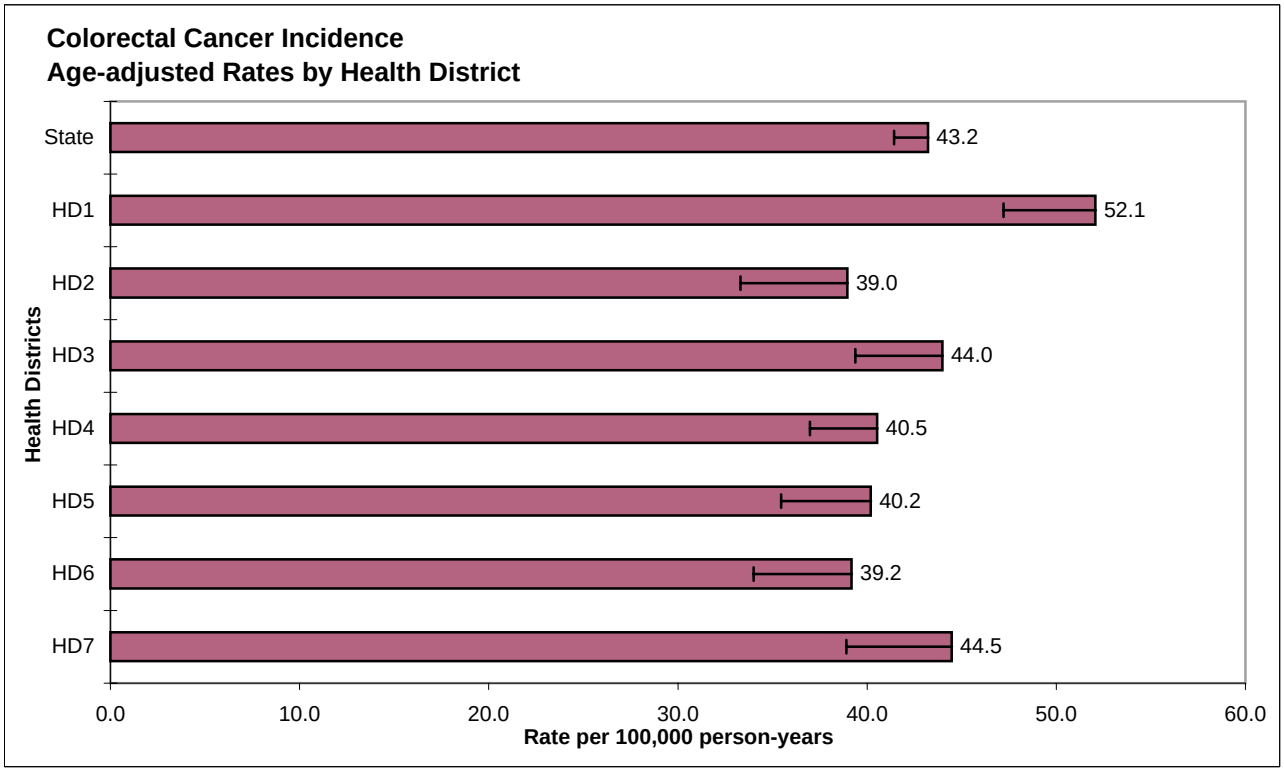
Other Individuals with a close family history of this cancer and those with a personal history of certain other cancers are at increased risk. Physical inactivity, obesity, and tobacco use are known risk factors for colorectal cancer. The use of NSAIDs, including aspirin, may help prevent colon cancer. 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:	42.8	
95% confidence interval on the mean age-adjusted incidence rate:	39.3 -	46.2
Median age-adjusted incidence rate of health districts:	40.5	
Range of age-adjusted incidence rate for health districts:	39.0 -	52.1
SEER 17 rate (2003, all races):	50.1	
USCS rate (2002, all races):	52.0	

Few cases of colorectal cancer were diagnosed in persons less than 35 years of age. There was a steep increase in age-specific incidence rates starting at age 55 and peaking in the age group 80-84 for males and females. Health District 1 had statistically significantly more cases of colorectal cancer than expected based upon rates for the remainder of Idaho.


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

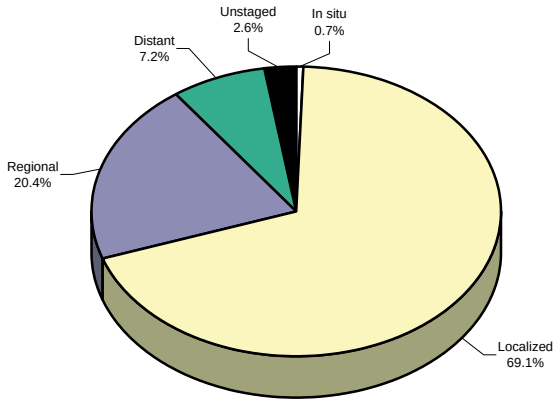

Colorectal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
43.2
52.1
39.0
44.0
40.5
40.2
39.2
44.5
0.0
10.0
20.0
30.0
40.0
50.0
60.0
Rate per 100,000 person-years

CORPUS UTERI

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	20.3
# of new invasive cases	-	-	151
# of new in-situ cases	-	-	1
# of deaths	-	-	10

Stage at Diagnosis - Corpus Uteri



Total Cases By County

Ada	30	Cassia	2	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	5	Clearwater	1	Madison	3
Bear Lake	-	Custer	-	Minidoka	3
Benewah	-	Elmore	3	Nez Perce	6
Bingham	9	Franklin	-	Oneida	1
Blaine	4	Fremont	-	Owyhee	1
Boise	-	Gem	1	Payette	1
Bonner	5	Gooding	4	Power	1
Bonneville	4	Idaho	2	Shoshone	4
Boundary	-	Jefferson	2	Teton	2
Butte	-	Jerome	2	Twin Falls	11
Camas	-	Kootenai	19	Valley	1
Canyon	18	Latah	1	Washington	2
Caribou	1	Lemhi	2		

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.

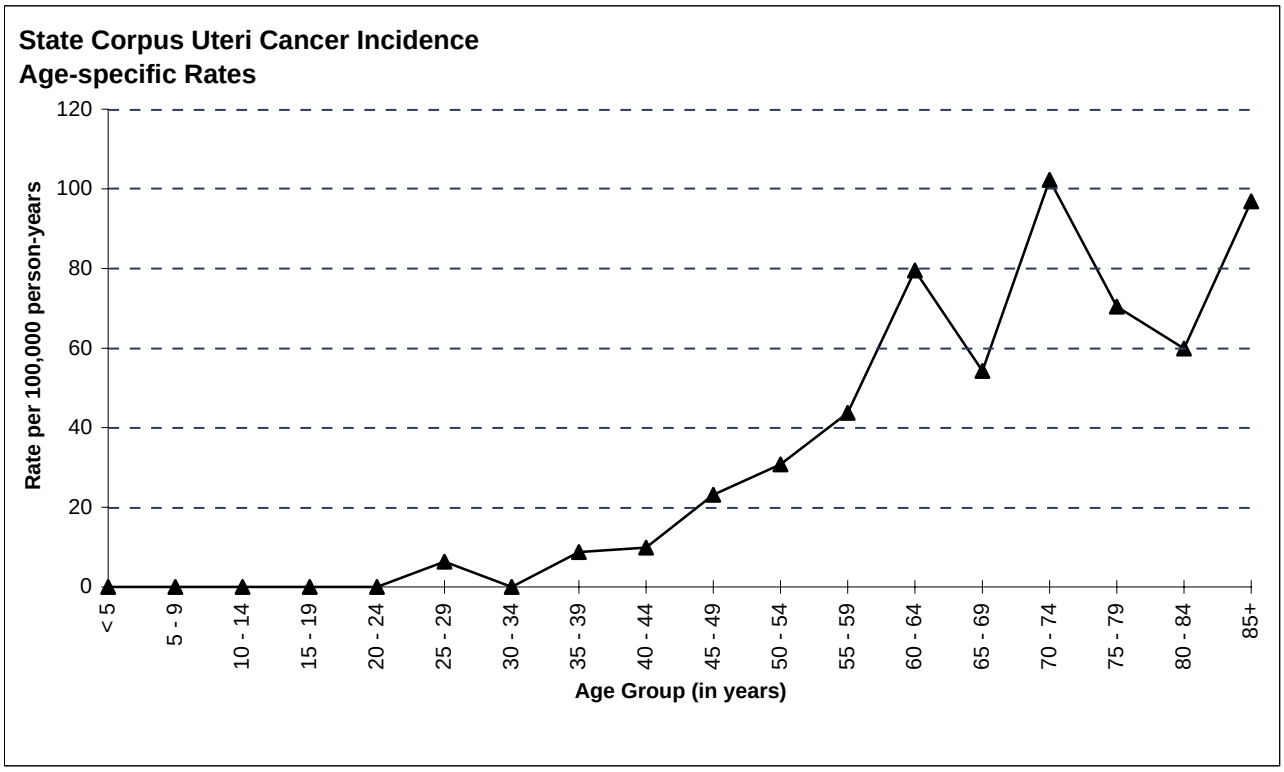
Diet Dietary fat may play a role in increased risk. Obesity and hypertension are common associated conditions of endometrial cancer.

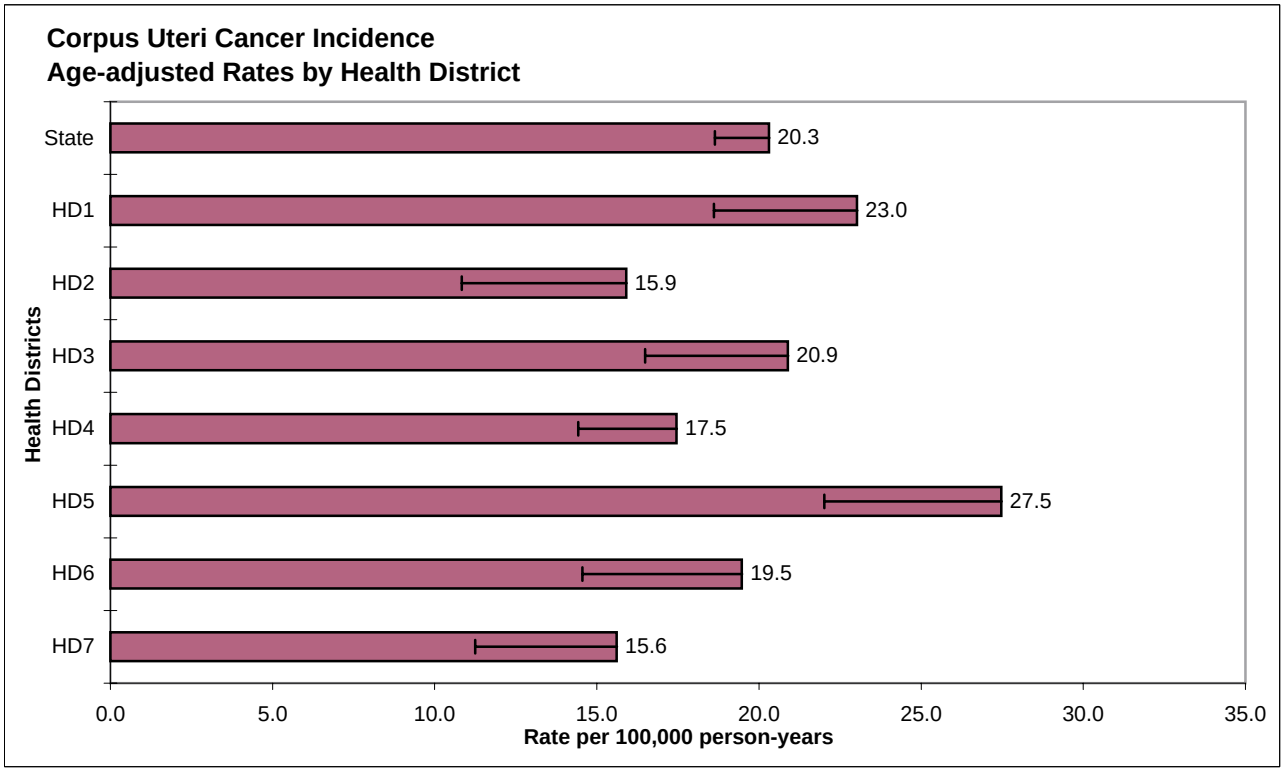
Hormonal Factors that elevate levels of estrogen or decrease progesterone levels enhance the risk. Women who have never carried a pregnancy to term are at a relatively high risk. Risk decreases as the number of pregnancies increases. An increased incidence of endometrial cancer has been found in association 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:	20.0	
95% confidence interval on the mean age-adjusted incidence rate:	16.8 -	23.1
Median age-adjusted incidence rate of health districts:	19.5	
Range of age-adjusted incidence rate for health districts:	15.6 -	27.5
SEER 17 rate (2003, all races):	22.4	
USCS rate (2002, all races):	22.8	

Few cases of endometrial cancer were diagnosed in persons less than 35 years of age. After age 49, there was a sharp increase in age-specific rates, peaking in the age group 70-74. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.


State Corpus Uteri Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
120
100
80
60
40
20
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)

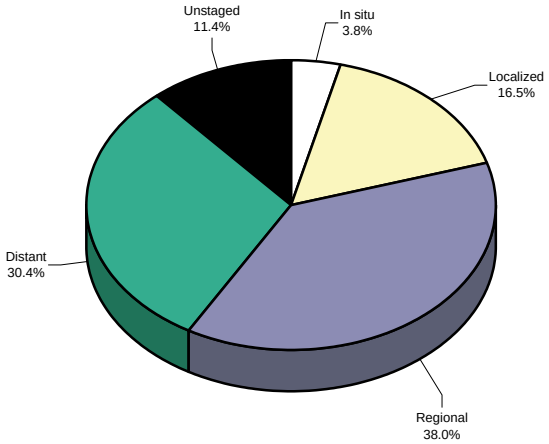

Corpus Uteri Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
20.3
23.0
15.9
20.9
17.5
27.5
19.5
15.6
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
Rate per 100,000 person-years

ESOPHAGUS

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.6	10.1	1.6
# of new invasive cases	76	64	12
# of new in-situ cases	3	1	2
# of deaths	56	45	11

Stage at Diagnosis - Esophagus



Total Cases By County

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

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.

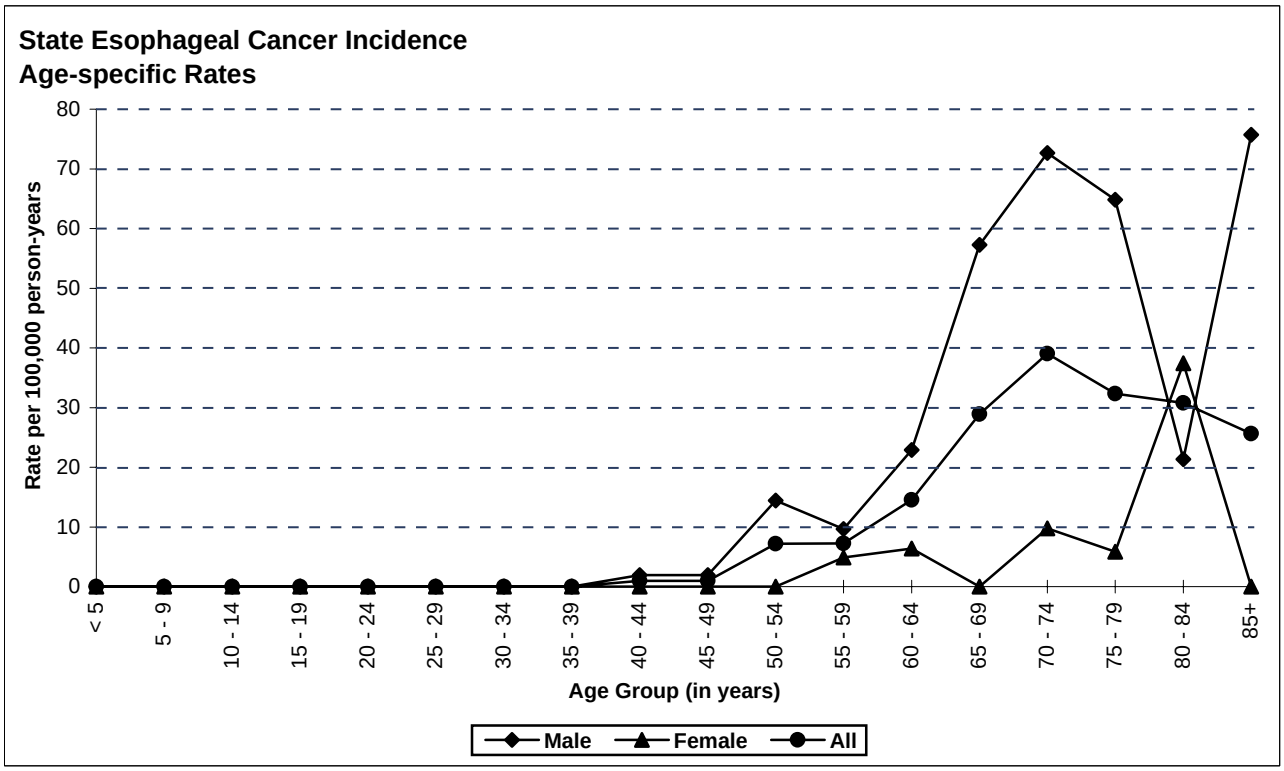
Occupation Chimney sweeps exposed to soot are at higher risk.

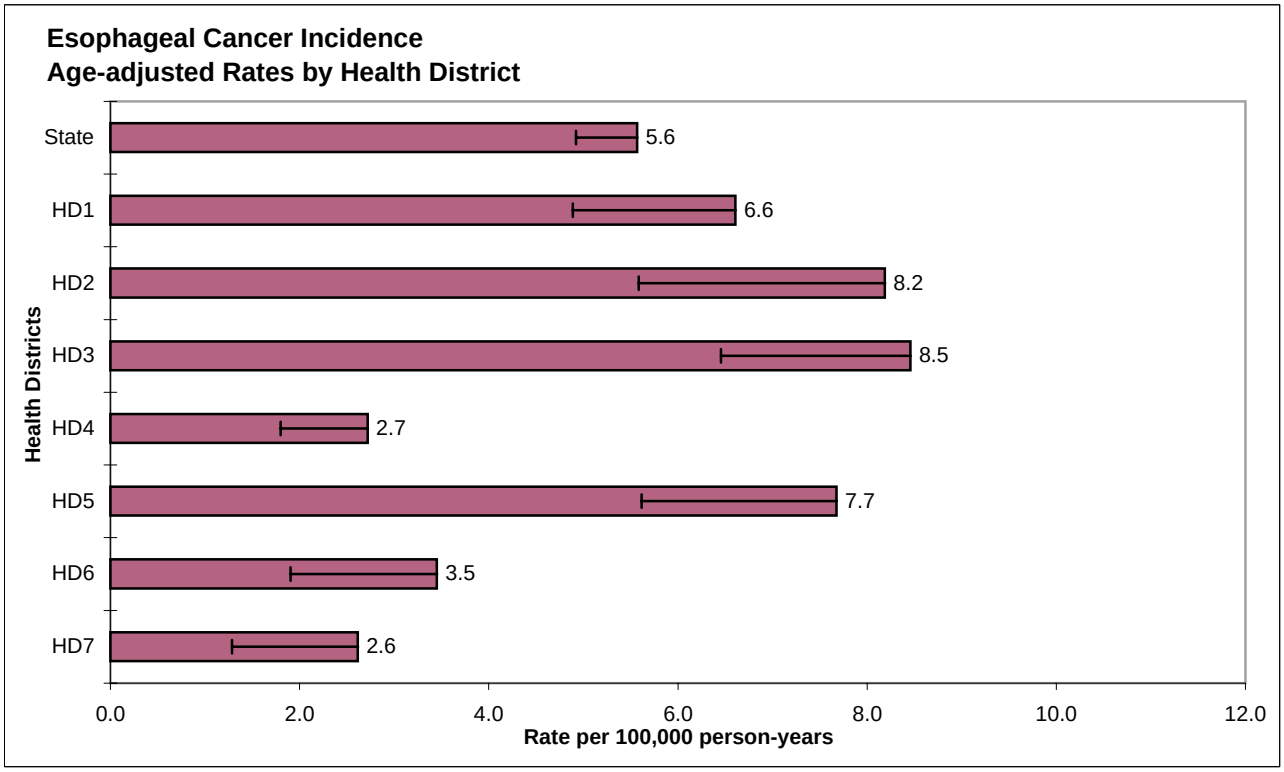
Other Tobacco use (cigarettes or spit tobacco) and heavy alcohol consumption are major risk factors for cancer of the esophagus. The risk is particularly increased when these two factors are both present. In Western Europe and North America, 90% or more of the risk of esophageal cancer can be attributed 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:	5.7	
95% confidence interval on the mean age-adjusted incidence rate:	3.7 -	7.6
Median age-adjusted incidence rate of health districts:	6.6	
Range of age-adjusted incidence rate for health districts:	2.6 -	8.5
SEER 17 rate (2003, all races):	4.4	
USCS rate (2002, all races):	4.8	

No cases of esophageal cancer were diagnosed in person less than 35 years of age. The age-specific incidence rates peaked in the age group 85+ for males and 80-84 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 significantly 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
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
5.6
6.6
8.2
8.5
2.7
7.7
3.5
2.6
0.0
2.0
4.0
6.0
8.0
10.0
12.0
Rate per 100,000 person-years

HODGKIN LYMPHOMA

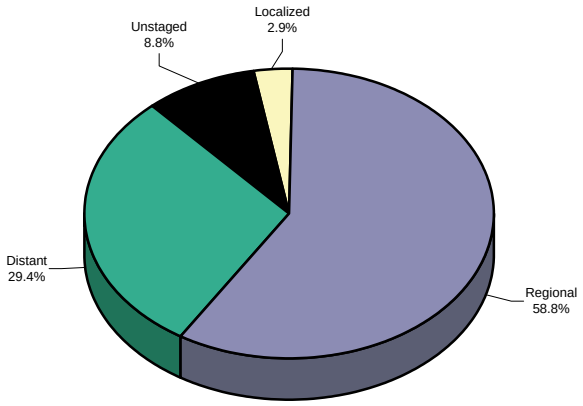
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	2.4	2.1	2.8
# of new invasive cases	34	14	20
# of new in-situ cases	0	0	0
# of deaths	6	2	4

Total Cases By County

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

Race & SES Hodgkin lymphoma is more common among Caucasians than among African Americans. Hodgkin lymphoma is more common in higher income groups.

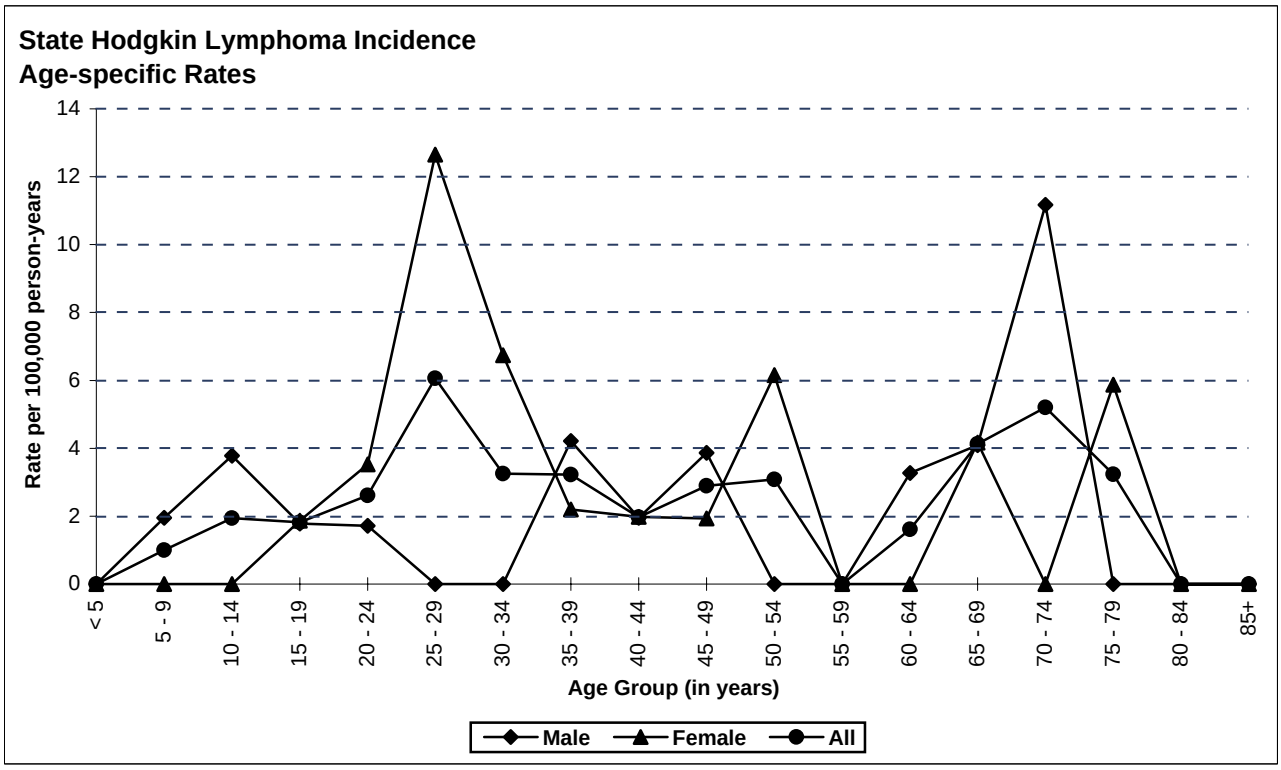
Genetics Genetic factors are thought to play an important role in the etiology of Hodgkin lymphoma, but these are yet to be adequately defined.

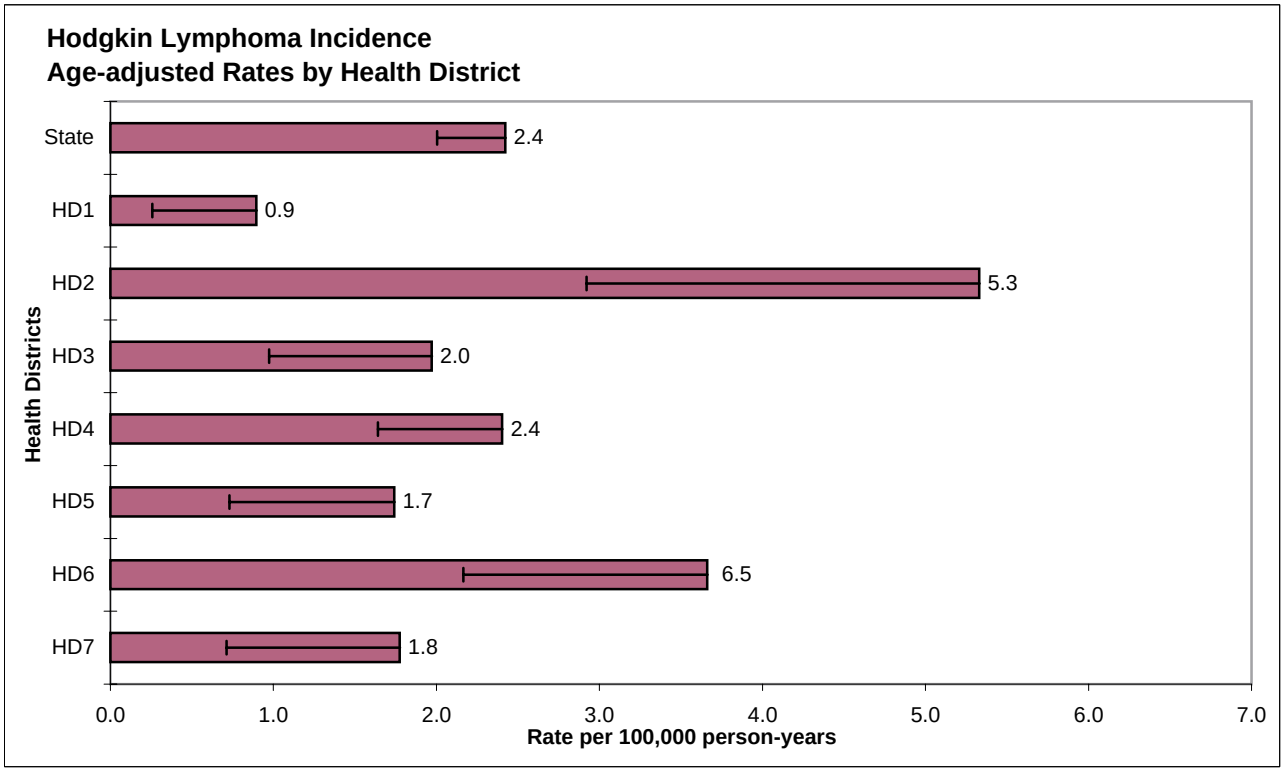
Other Small family size and ensuing delayed exposure to childhood infections is thought to be responsible for a portion of Hodgkin lymphoma cases. Certain viral infections, especially Epstein-Barr virus, and AIDS increase the risk of Hodgkin lymphoma. With current treatment, Hodgkin disease, which was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

Special Notes

Mean age-adjusted incidence rate across health districts:	2.5	
95% confidence interval on the mean age-adjusted incidence rate:	1.4 -	3.6
Median age-adjusted incidence rate of health districts:	2.0	
Range of age-adjusted incidence rate for health districts:	0.9 -	5.3
SEER 17 rate (2003, all races):	2.7	
USCS rate (2002, 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

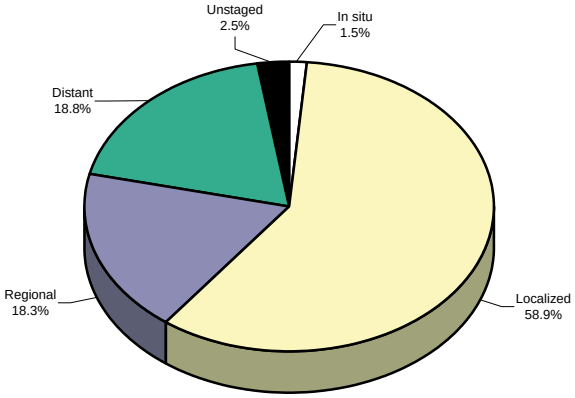

Hodgkin Lymphoma Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
2.4
0.9
5.3
2.0
2.4
1.7
6.5
1.8
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
Rate per 100,000 person-years

KIDNEY AND RENAL PELVIS

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	13.9	20.0	8.6
# of new invasive cases	194	133	61
# of new in-situ cases	3	1	2
# of deaths	47	30	17

Stage at Diagnosis - Kidney



Total Cases By County

Ada	54	Cassia	1	Lewis	2
Adams	-	Clark	-	Lincoln	-
Bannock	11	Clearwater	4	Madison	-
Bear Lake	-	Custer	1	Minidoka	1
Benewah	2	Elmore	4	Nez Perce	4
Bingham	4	Franklin	-	Oneida	-
Blaine	1	Fremont	1	Owyhee	2
Boise	1	Gem	3	Payette	3
Bonner	4	Gooding	-	Power	1
Bonneville	10	Idaho	-	Shoshone	6
Boundary	4	Jefferson	3	Teton	-
Butte	-	Jerome	5	Twin Falls	6
Camas	-	Kootenai	26	Valley	-
Canyon	27	Latah	3	Washington	2
Caribou	1	Lemhi	-		

Risk and Associated Factors

Age Both adults and children are at risk for kidney cancer. Renal cell carcinoma accounts for 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.

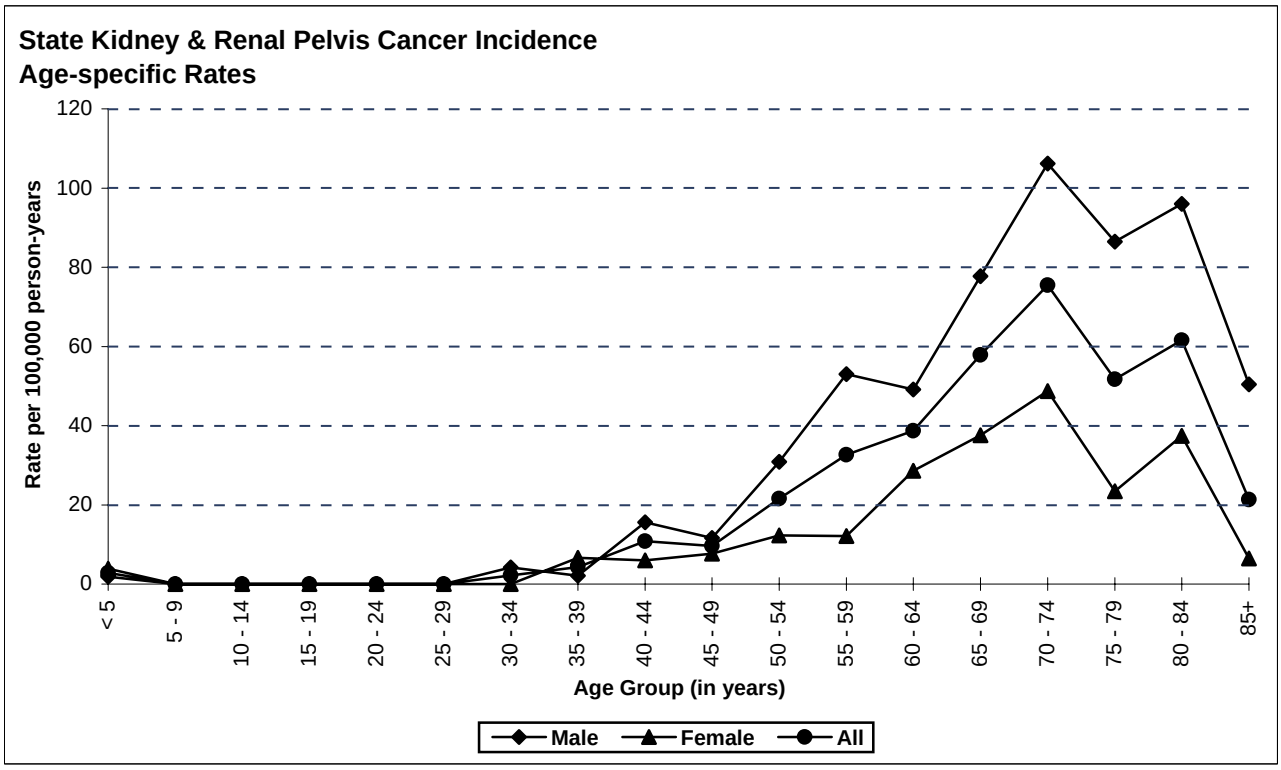
Occupation Certain occupations, such as laundry and leather workers, have been associated with increased risk due to chemical exposure.

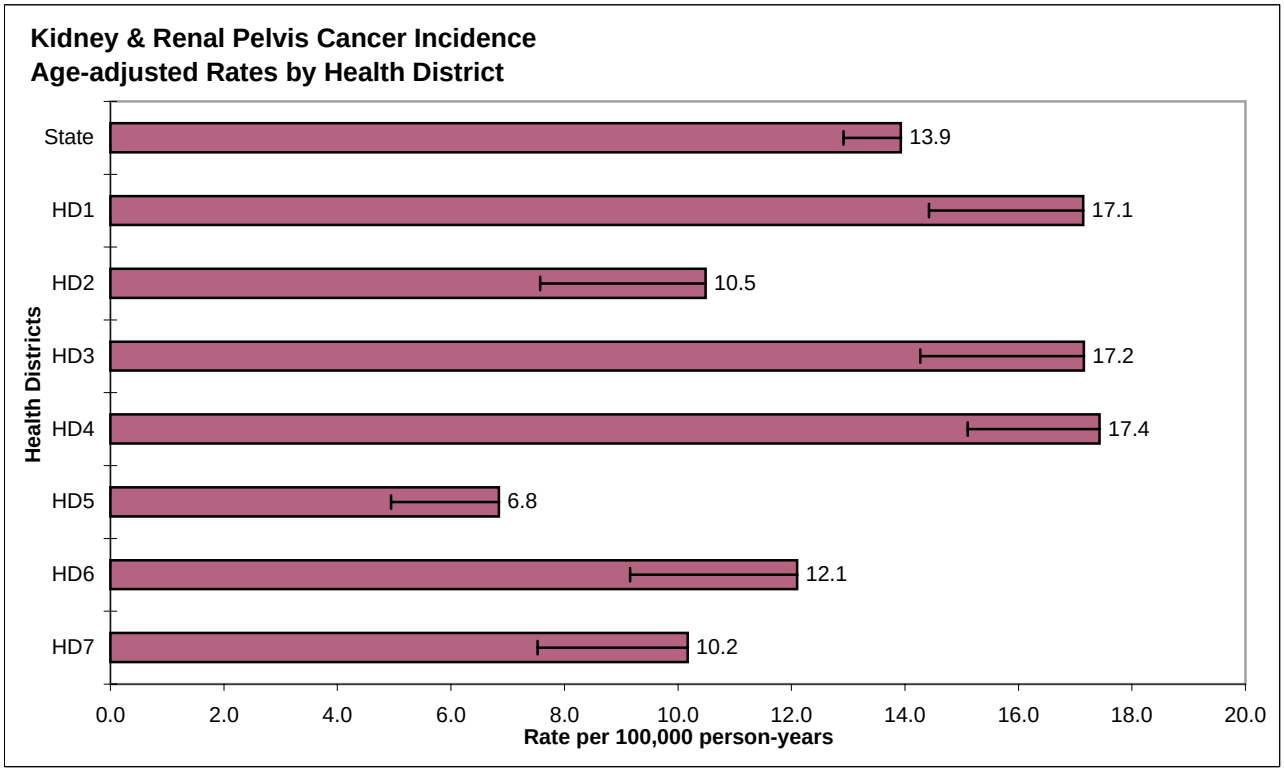
Other Cigarette smoking is strongly associated with renal pelvis and ureter cancers. Smokers are at twice the risk of developing kidney cancer as non-smokers. Analgesic mixtures containing phenacetin increase the risk of kidney cancer. Obesity is a risk factor for kidney cancer. High dietary protein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

Special Notes

Mean age-adjusted incidence rate across health districts:	13.0
95% confidence interval on the mean age-adjusted incidence rate:	9.9 - 16.2
Median age-adjusted incidence rate of health districts:	12.1
Range of age-adjusted incidence rate for health districts:	6.8 - 17.4
SEER 17 rate (2003, all races):	13.1
USCS rate (2002, all races):	13.1

There were few cases of kidney or renal pelvis cancer among persons aged less than 35 years. The highest incidence among males and females was in the age group 70-74. Health District 5 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho.


State Kidney & Renal Pelvis Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
120
100
80
60
40
20
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All


Kidney & Renal Pelvis Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
13.9
17.1
10.5
17.2
17.4
6.8
12.1
10.2
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

LARYNX

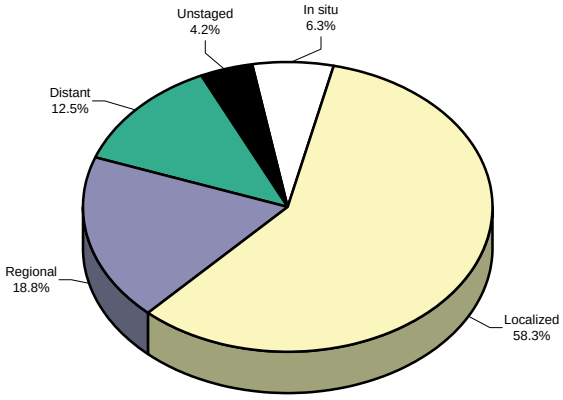
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	3.3	5.5	1.2
# of new invasive cases	45	37	8
# of new in-situ cases	3	1	2
# of deaths	10	8	2

Total Cases By County

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

Stage at Diagnosis - Larynx



Risk and Associated Factors

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

Gender 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 such as asbestos and wood dust.

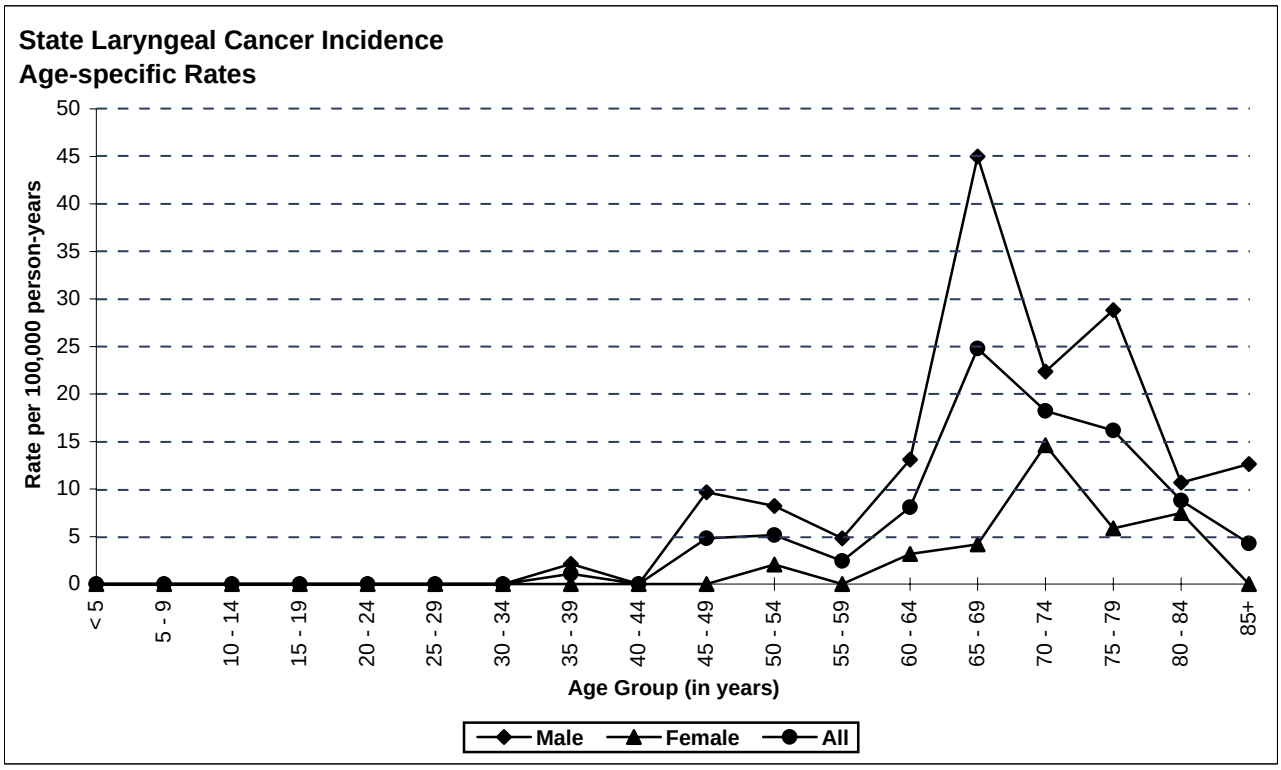
Diet Diets low in fresh fruits and vegetables may increase the risk.

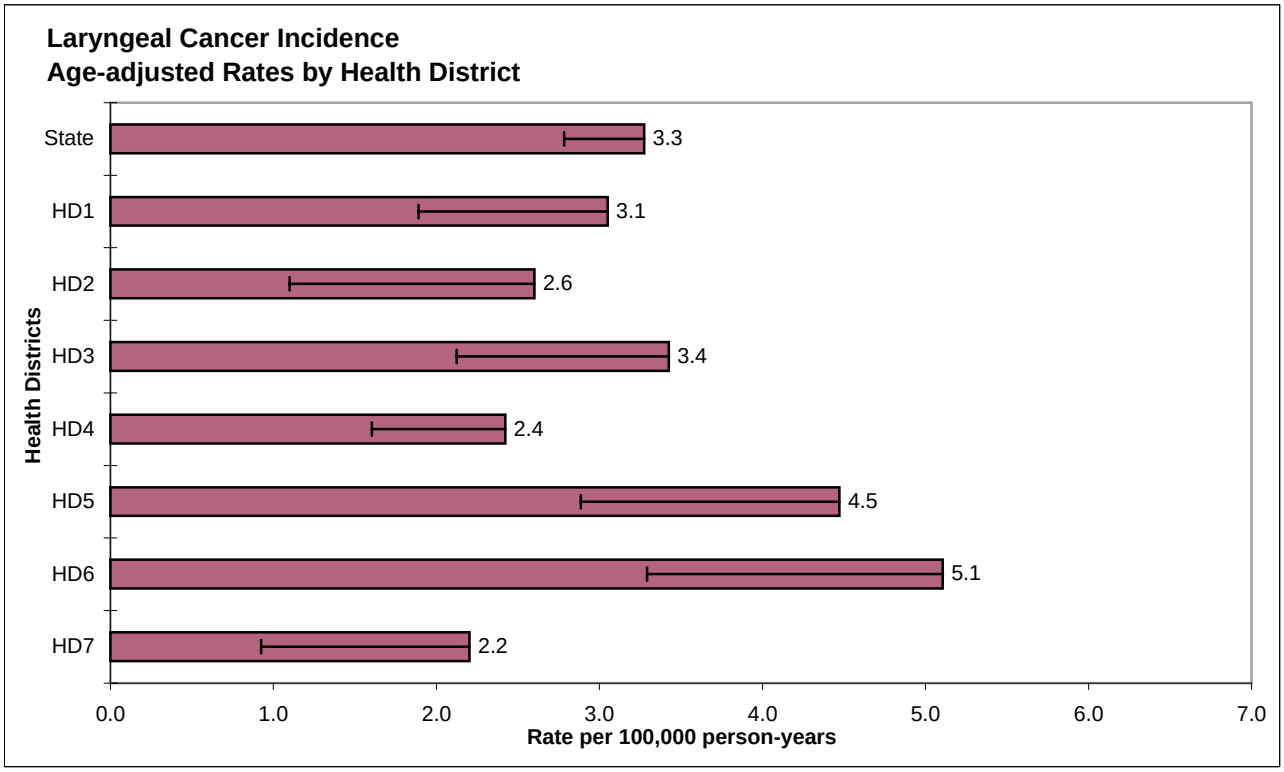
Other Cigarette smoking and alcohol use are both major risk factors. The combination of alcohol consumption and tobacco use (smoking or spit tobacco) acts greatly to increase the risk. A patient with a single laryngeal cancer who continues to smoke and drink alcohol has an enhanced risk of developing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

Special Notes

Mean age-adjusted incidence rate across health districts:	3.3	
95% confidence interval on the mean age-adjusted incidence rate:	2.5 -	4.1
Median age-adjusted incidence rate of health districts:	3.1	
Range of age-adjusted incidence rate for health districts:	2.2 -	5.1
SEER 17 rate (2003, all races):	3.5	
USCS rate (2002, all races):	4.0	

There were few cases of laryngeal cancer among persons aged less than 45 years. The age-specific incidence rates for males were more than twice those for females in most age groups. The highest incidence rate among males was in the age group 65-69 and for females was in the age group 70-74. 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
50
45
40
35
30
25
20
15
10
5
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All


Laryngeal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
3.3
3.1
2.6
3.4
2.4
4.5
5.1
2.2
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
Rate per 100,000 person-years

LEUKEMIA

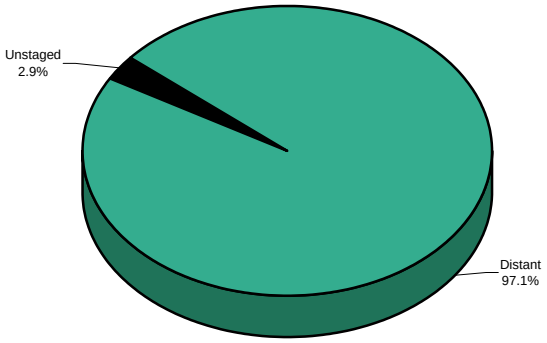
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	12.9	15.9	10.7
# of new invasive cases	175	98	77
# of new in-situ cases	0	0	0
# of deaths	107	56	51

Total Cases By County

Ada	36	Cassia	3	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	3	Clearwater	-	Madison	-
Bear Lake	1	Custer	-	Minidoka	3
Benewah	1	Elmore	5	Nez Perce	4
Bingham	6	Franklin	-	Oneida	-
Blaine	3	Fremont	-	Owyhee	2
Boise	-	Gem	1	Payette	3
Bonner	7	Gooding	5	Power	-
Bonneville	11	Idaho	3	Shoshone	1
Boundary	1	Jefferson	8	Teton	-
Butte	-	Jerome	2	Twin Falls	11
Camas	-	Kootenai	23	Valley	2
Canyon	23	Latah	3	Washington	1
Caribou	-	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 a higher incidence 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.

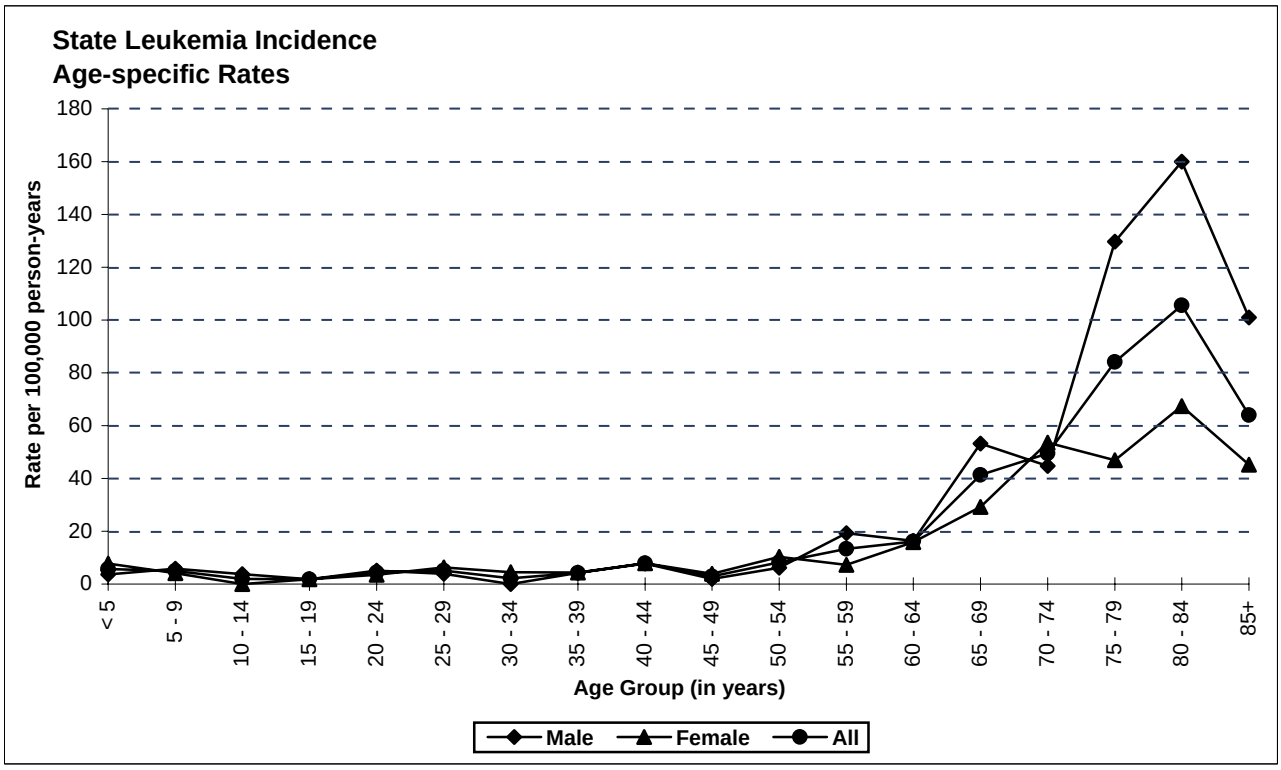
Occupation Benzene is a known cause of leukemia (predominantly acute myelogenous leukemia [AML]). Chimney sweeps exposed to soot are at higher risk.

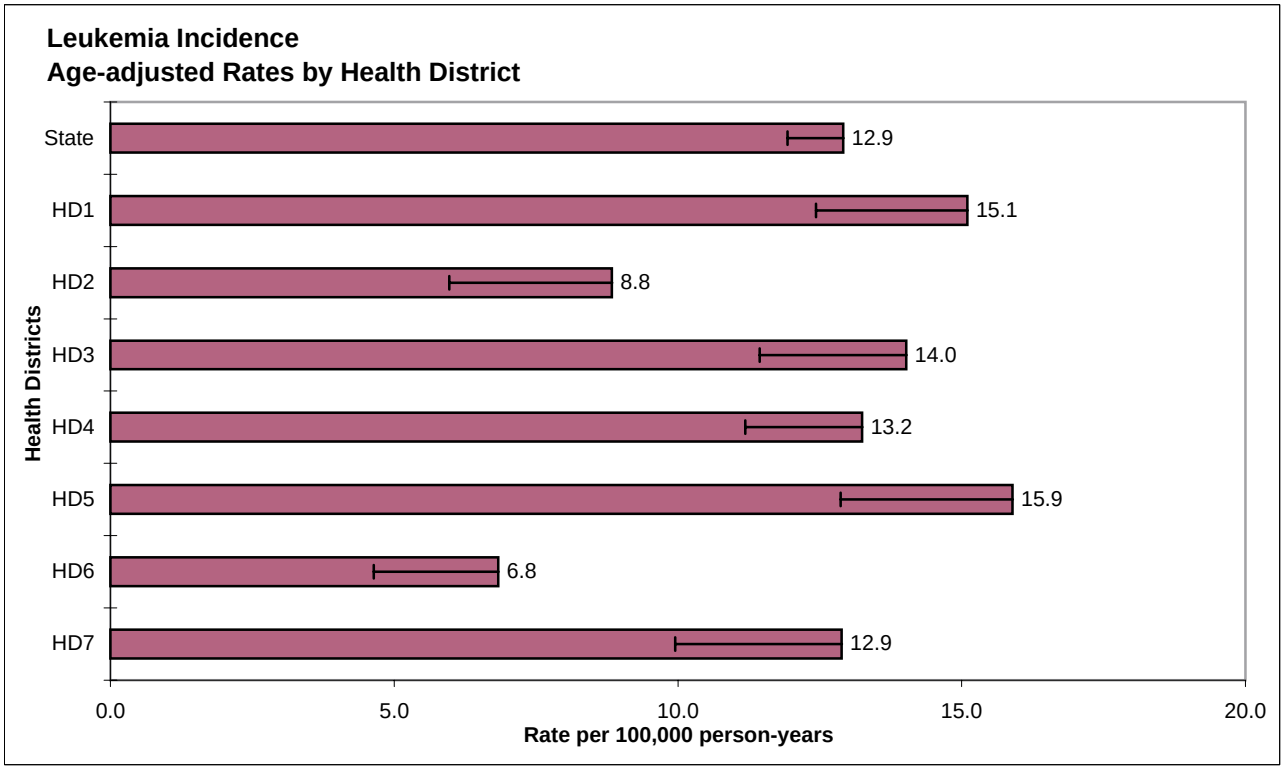
Other Ionizing radiation exposure increases the risk (except for CLL). Environmental exposure to low frequency, non-ionizing radiation and its association with leukemia incidence is being investigated. Treatment with some chemotherapeutic agents for other cancers increases the risk of leukemia. Exposure 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:	12.4
95% confidence interval on the mean age-adjusted incidence rate:	9.9 - 14.9
Median age-adjusted incidence rate of health districts:	13.2
Range of age-adjusted incidence rate for health districts:	6.8 - 15.9
SEER 17 rate (2003, all races):	11.6
USCS rate (2002, all races):	11.3

The age-specific incidence distribution of leukemia for Idaho is quite similar to the typical pattern described by the SEER program of the National Cancer Institute. The rates are higher for males than females for all types of leukemia with the exception of acute myelogenous leukemia (AML), which has no predilection for age or sex. Generally, the incidence of leukemia is higher in older age groups. Health District 6 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho.


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

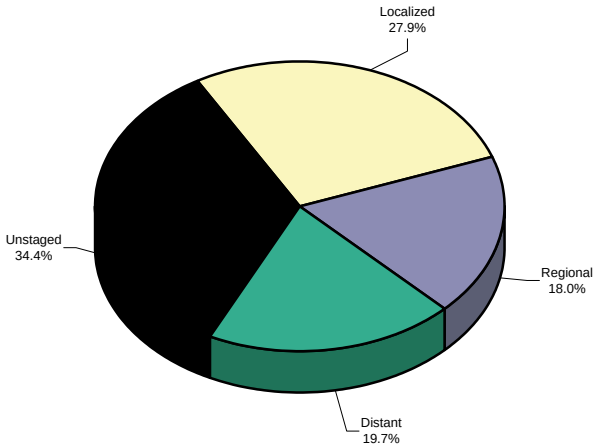

Leukemia Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
12.9
15.1
8.8
14.0
13.2
15.9
6.8
12.9
0.0
5.0
10.0
15.0
20.0
Rate per 100,000 person-years

LIVER AND BILE DUCT

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.3	7.5	1.2
# of new invasive cases	61	52	9
# of new in-situ cases	0	0	0
# of deaths	63	46	17

Stage at Diagnosis - Liver



Total Cases By County

Ada	15	Cassia	1	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	-	Clearwater	-	Madison	1
Bear Lake	-	Custer	1	Minidoka	-
Benewah	-	Elmore	3	Nez Perce	-
Bingham	1	Franklin	-	Oneida	-
Blaine	-	Fremont	1	Owyhee	-
Boise	1	Gem	1	Payette	-
Bonner	1	Gooding	1	Power	-
Bonneville	1	Idaho	-	Shoshone	2
Boundary	-	Jefferson	1	Teton	-
Butte	-	Jerome	1	Twin Falls	3
Camas	-	Kootenai	11	Valley	2
Canyon	11	Latah	-	Washington	-
Caribou	-	Lemhi	-		

Risk and Associated Factors

Age The incidence rate of liver cancer increases with age.

Gender Rates are usually higher in males than in females.

Race Incidence is higher in Asians and African Americans than for the rest 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.

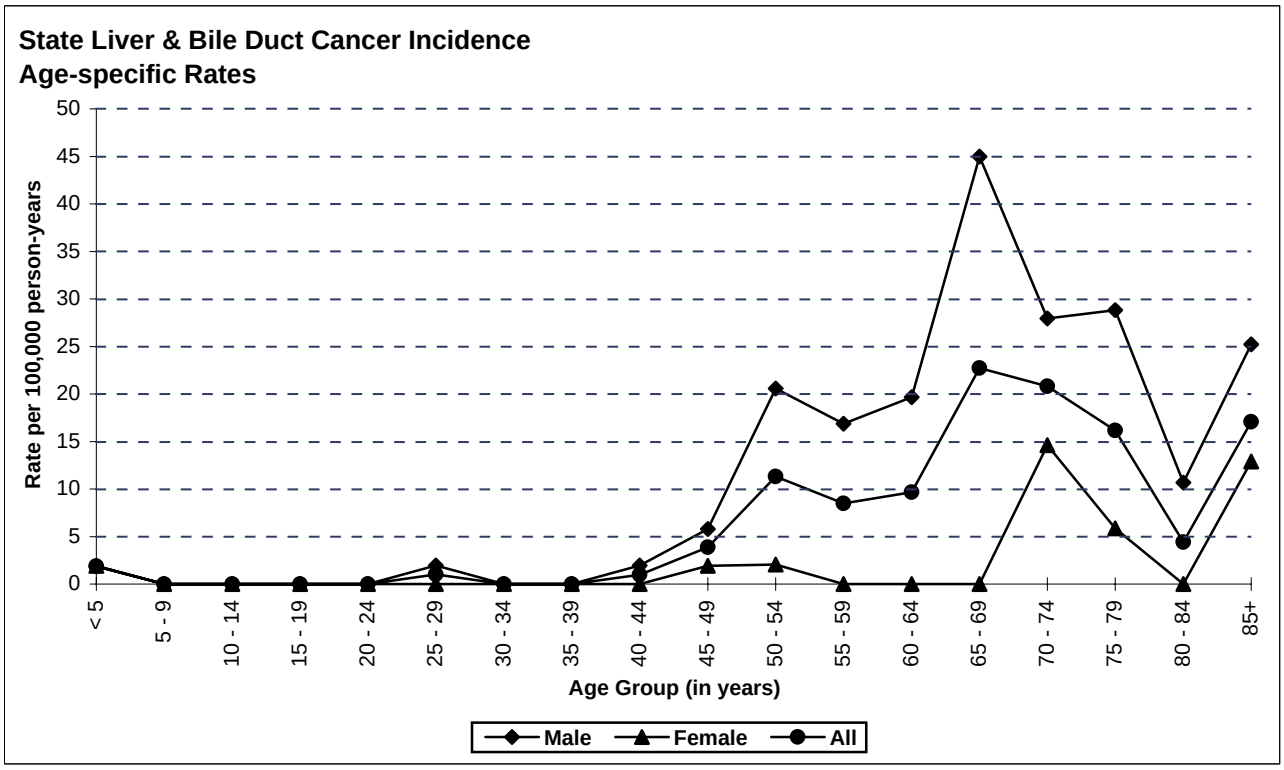
Occupation Thorium dioxide (an x-ray contrast medium) exposure increases liver cancer risk. Exposure to vinyl chloride used in plastic production is associated with an increased risk of angiosarcoma of the liver. Chimney sweeps exposed to soot are at higher risk.

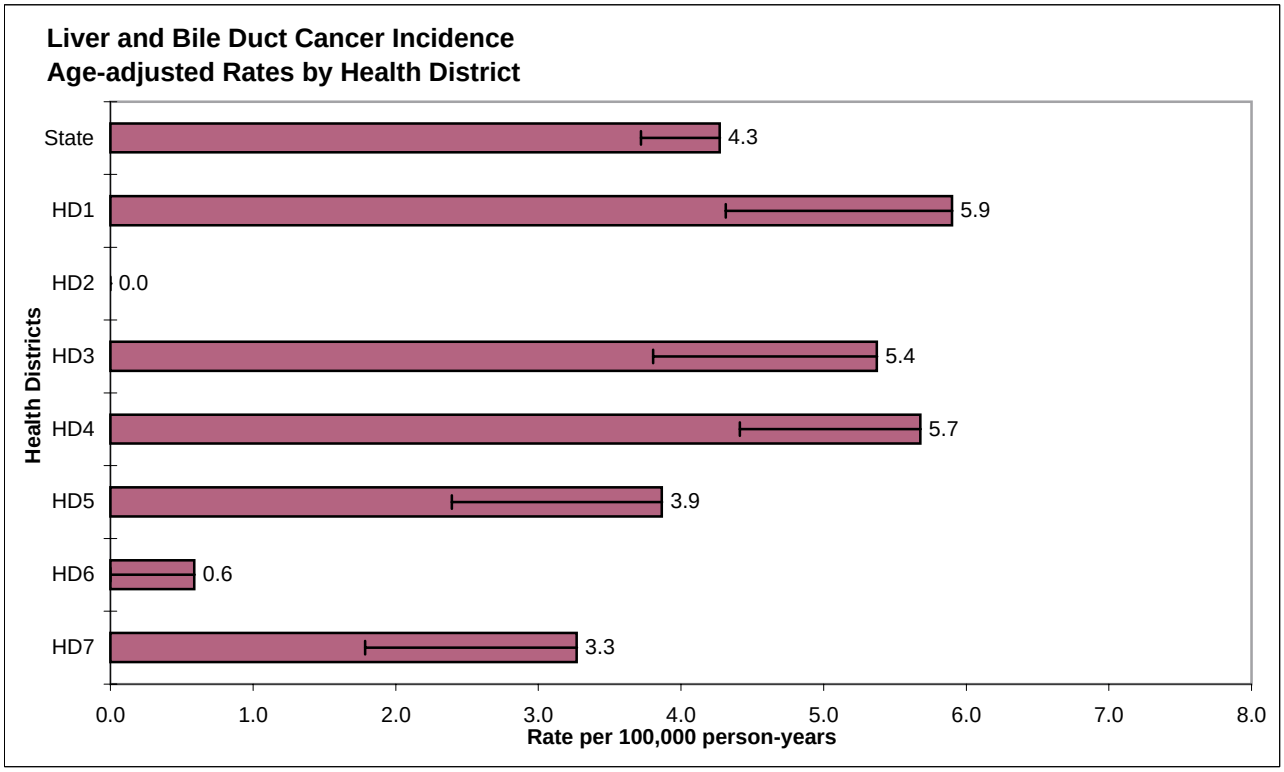
Other Hepatitis B and Hepatitis C infections are significant causes of hepatocellular carcinoma. Cirrhosis of the liver due to viral hepatitis, alcoholism, or toxic chemical exposure accounts for 50-80% of patients diagnosed with liver cancer. Long-term use of oral contraceptives increases risk of hepatocellular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

Special Notes

Mean age-adjusted incidence rate across health districts:	3.5	
95% confidence interval on the mean age-adjusted incidence rate:	1.7 -	5.3
Median age-adjusted incidence rate of health districts:	3.9	
Range of age-adjusted incidence rate for health districts:	0.0 -	5.9
SEER 17 rate (2003, all races):	6.1	
USCS rate (2002, all races):	5.2	

There were few cases of liver cancer among persons less than 45 years of age. Age-specific incidence rates increased with age, peaking in the age group 65-69 for males and 70-74 for females. Health Districts 2 and 6 had statistically significantly fewer 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
50
45
40
35
30
25
20
15
10
5
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All

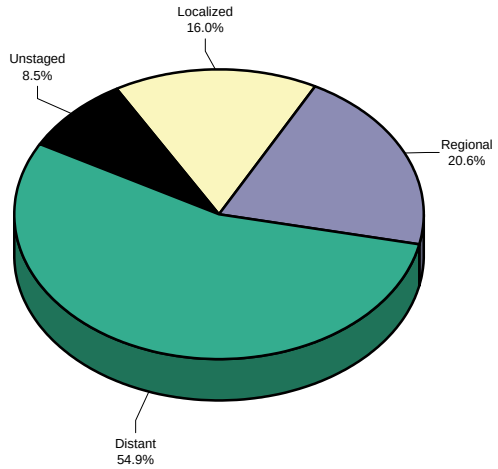

Liver and Bile Duct Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
4.3
5.9
0.0
5.4
5.7
3.9
0.6
3.3
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
Rate per 100,000 person-years

LUNG AND BRONCHUS

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	58.4	70.6	49.4
# of new invasive cases	787	428	359
# of new in-situ cases	0	0	0
# of deaths	606	349	257

Stage at Diagnosis - Lung and Bronchus



Total Cases By County

Ada	182	Cassia	9	Lewis	6
Adams	3	Clark	-	Lincoln	2
Bannock	23	Clearwater	9	Madison	4
Bear Lake	2	Custer	4	Minidoka	15
Benewah	4	Elmore	19	Nez Perce	31
Bingham	14	Franklin	-	Oneida	-
Blaine	7	Fremont	4	Owyhee	7
Boise	4	Gem	19	Payette	18
Bonner	34	Gooding	12	Power	3
Bonneville	22	Idaho	12	Shoshone	17
Boundary	5	Jefferson	8	Teton	2
Butte	3	Jerome	13	Twin Falls	42
Camas	3	Kootenai	91	Valley	8
Canyon	90	Latah	14	Washington	12
Caribou	5	Lemhi	5		

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 in 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.

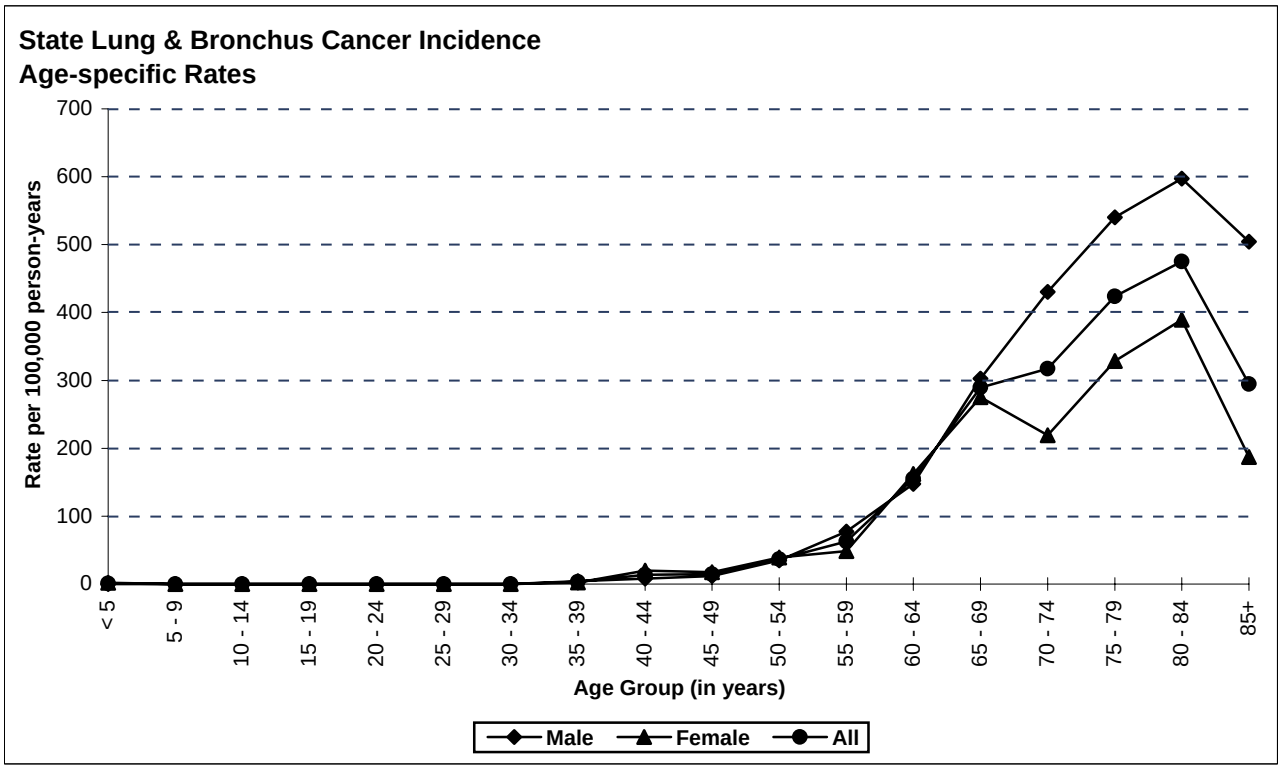
Occupation Occupational or environmental exposures to asbestos, cadmium, chromium, coal tars, crystalline silica dust, polycyclic aromatic hydrocarbons, radon, soot, chlorpyrifos insecticides, ionizing radiation, and other substances increase the risk.

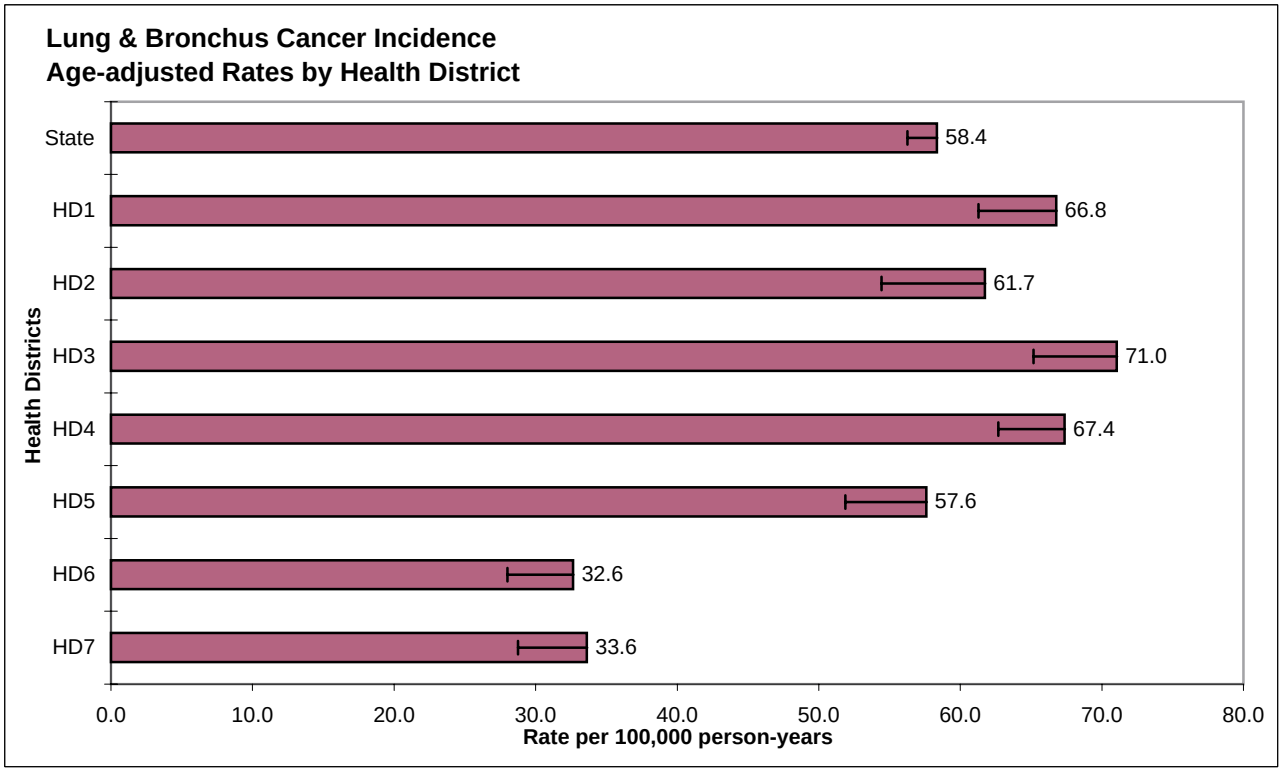
Other Cigarette smoking, including exposure to second-hand smoke, is the most important risk factor, accounting for over 85% of lung cancer deaths. Evidence exists that rates are about 1.3 times higher, adjusted for smoking, in urban areas than rural areas due to air pollution, mostly from motor vehicles.

Special Notes

Mean age-adjusted incidence rate across health districts:	55.8
95% confidence interval on the mean age-adjusted incidence rate:	43.9 - 67.7
Median age-adjusted incidence rate of health districts:	61.7
Range of age-adjusted incidence rate for health districts:	32.6 - 71.0
SEER 17 rate (2003, all races):	62.6
USCS rate (2002, all races):	67.5

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 65. The incidence rates increased with age, peaking in the age group 80-84 for males and females. Health Districts 3 and 4 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health Districts 6 and 7 had statistically significantly fewer 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

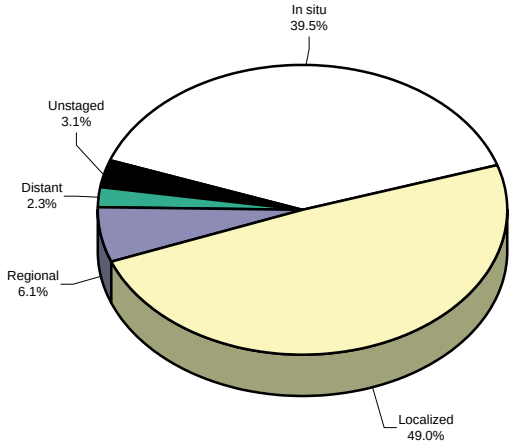

Lung & Bronchus Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
58.4
66.8
61.7
71.0
67.4
57.6
32.6
33.6
0.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
Rate per 100,000 person-years

MELANOMA OF SKIN

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	25.6	30.2	21.8
# of new invasive cases	349	194	155
# of new in-situ cases	228	119	109
# of deaths	47	30	17

Stage at Diagnosis - Melanoma of Skin



Total Cases By County

Ada	101	Cassia	3	Lewis	2
Adams	-	Clark	-	Lincoln	2
Bannock	25	Clearwater	1	Madison	6
Bear Lake	2	Custer	2	Minidoka	3
Benewah	5	Elmore	4	Nez Perce	10
Bingham	9	Franklin	1	Oneida	-
Blaine	10	Fremont	3	Owyhee	2
Boise	1	Gem	6	Payette	-
Bonner	37	Gooding	3	Power	3
Bonneville	51	Idaho	3	Shoshone	4
Boundary	5	Jefferson	9	Teton	2
Butte	-	Jerome	3	Twin Falls	28
Camas	-	Kootenai	124	Valley	4
Canyon	46	Latah	14	Washington	-
Caribou	1	Lemhi	3		

Risk and Associated Factors

Age Melanoma is extremely uncommon before puberty. Rates increase with age.

Gender It occurs more frequently in males than females.

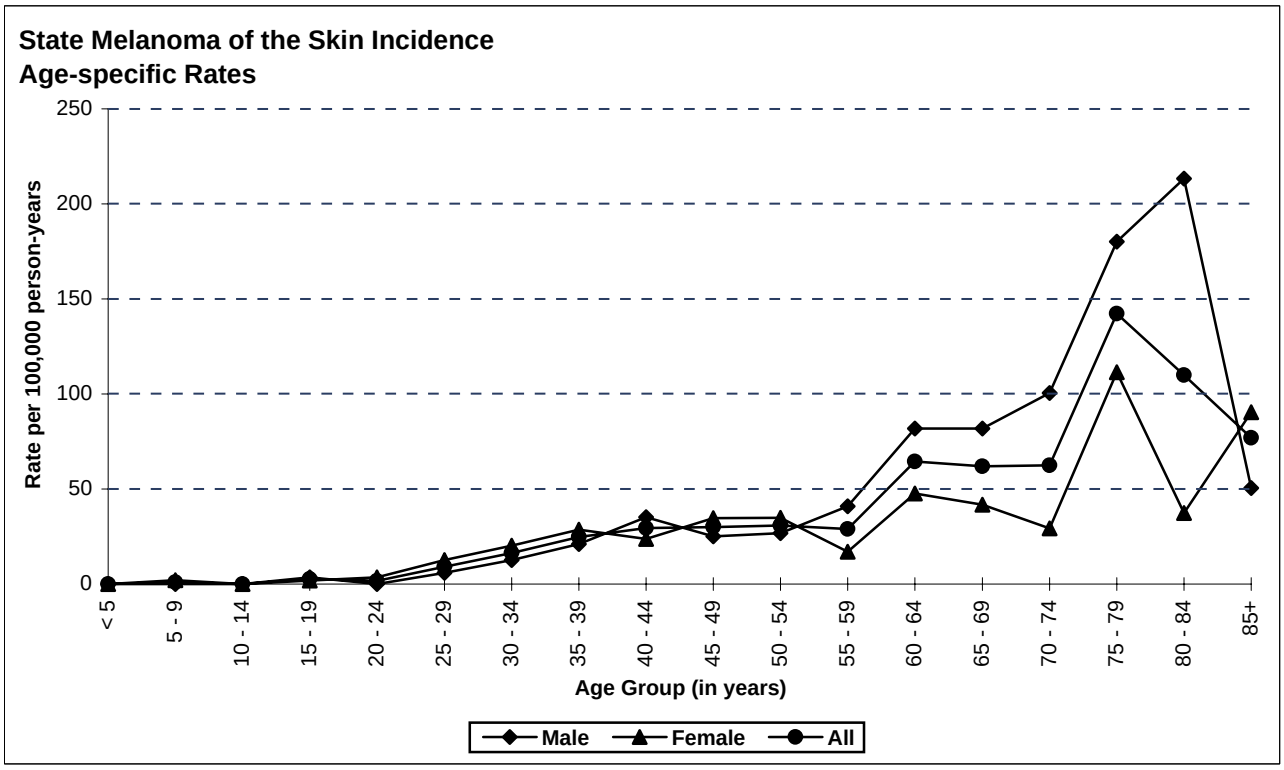
Race & SES The incidence rate is highest in Caucasians and is uncommon in African Americans. It has an increased incidence in higher income groups (indoor workers).

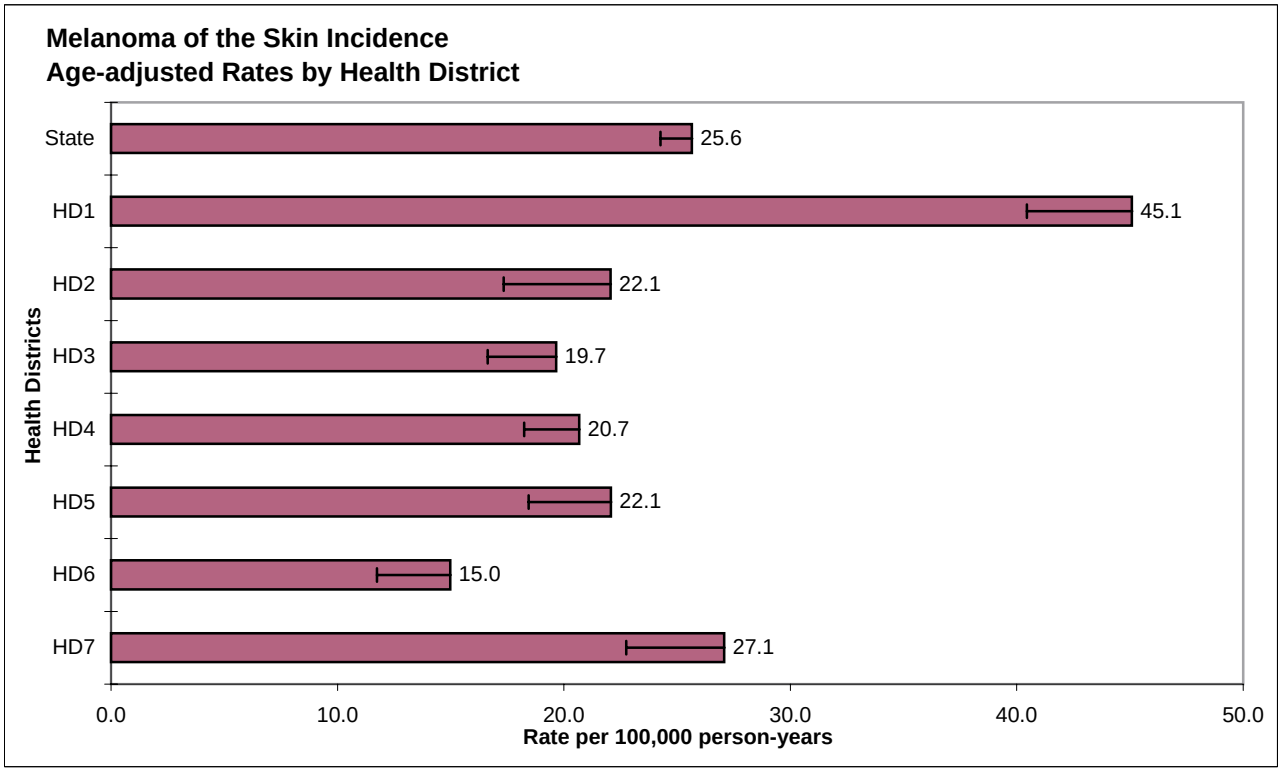
Other Ultra-violet light exposure, especially blistering sunburns during childhood, is a major risk factor. Melanoma incidence rates are increased around the world. Blue eyes, fair or red hair and pale complexion are well-known risk factors for melanoma. Apart from race and age, number of melanocytic 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:	24.5
95% confidence interval on the mean age-adjusted incidence rate:	17.3 - 31.7
Median age-adjusted incidence rate of health districts:	22.1
Range of age-adjusted incidence rate for health districts:	15.0 - 45.1
SEER 17 rate (2003, all races):	17.9
USCS rate (2002, all races):	16.6

There were few cases of melanoma of the skin among persons less than 25 years of age. The age-specific incidence rates were generally higher among males after age 50. Health District 1 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health Districts 4 and 6 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho.


State Melanoma of the Skin Incidence
Age-specific Rates
Rate per 100,000 person-years
250
200
150
100
50
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All

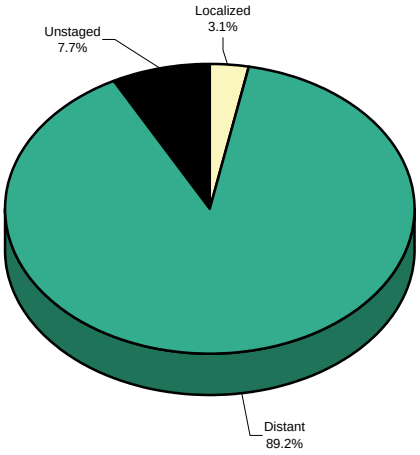

Melanoma of the Skin Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
25.6
45.1
22.1
19.7
20.7
22.1
15.0
27.1
0.0
10.0
20.0
30.0
40.0
50.0
Rate per 100,000 person-years

MYELOMA

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.7	6.4	3.3
# of new invasive cases	65	41	24
# of new in-situ cases	0	0	0
# of deaths	42	25	17

Stage at Diagnosis - Myeloma



Total Cases By County

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

Risk and Associated Factors

Age Multiple myeloma is an age-dependent cancer. It increases with age and rarely occurs before age 40.

Gender Rates for males are somewhat higher than for females.

Race African Americans have a higher incidence rate, sometimes twice the rate for Caucasians.

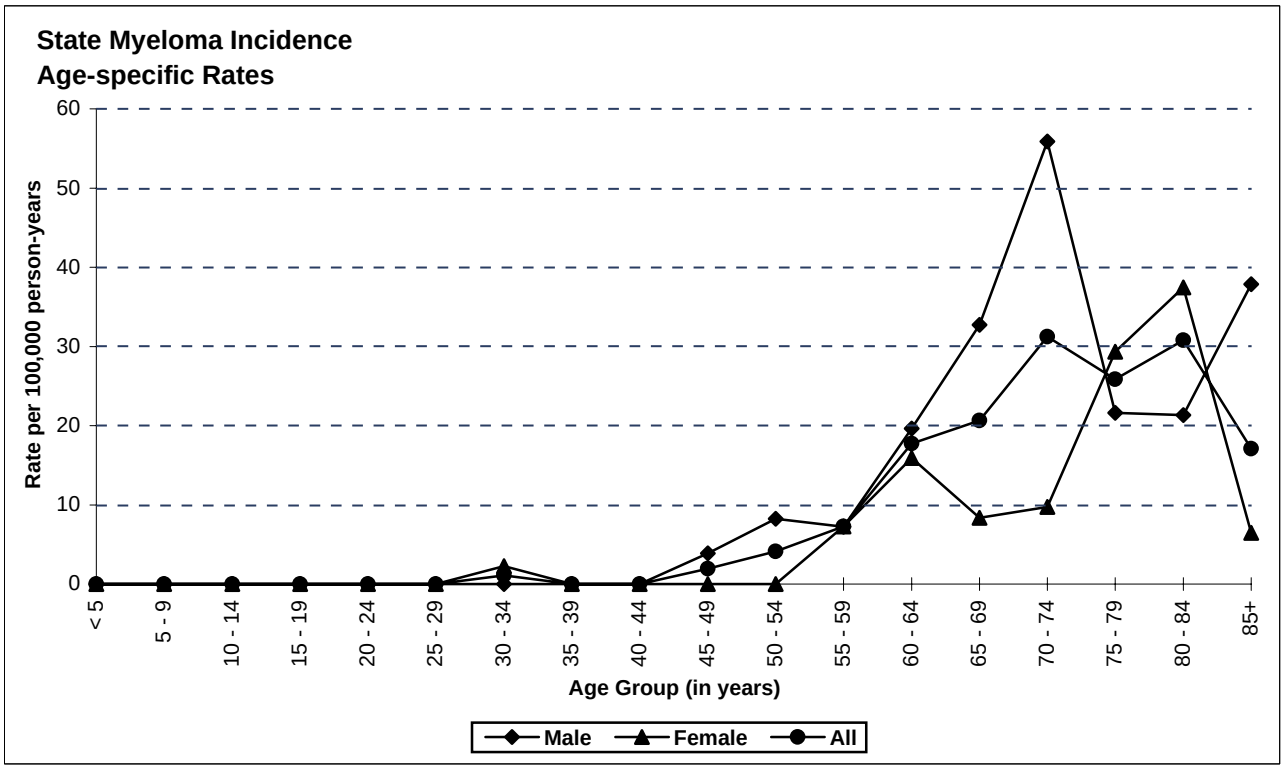
Genetics Genetic factors play an important role in its development but how so is not completely understood. Familial factors and chronic antigenic stimulation have also been implicated.

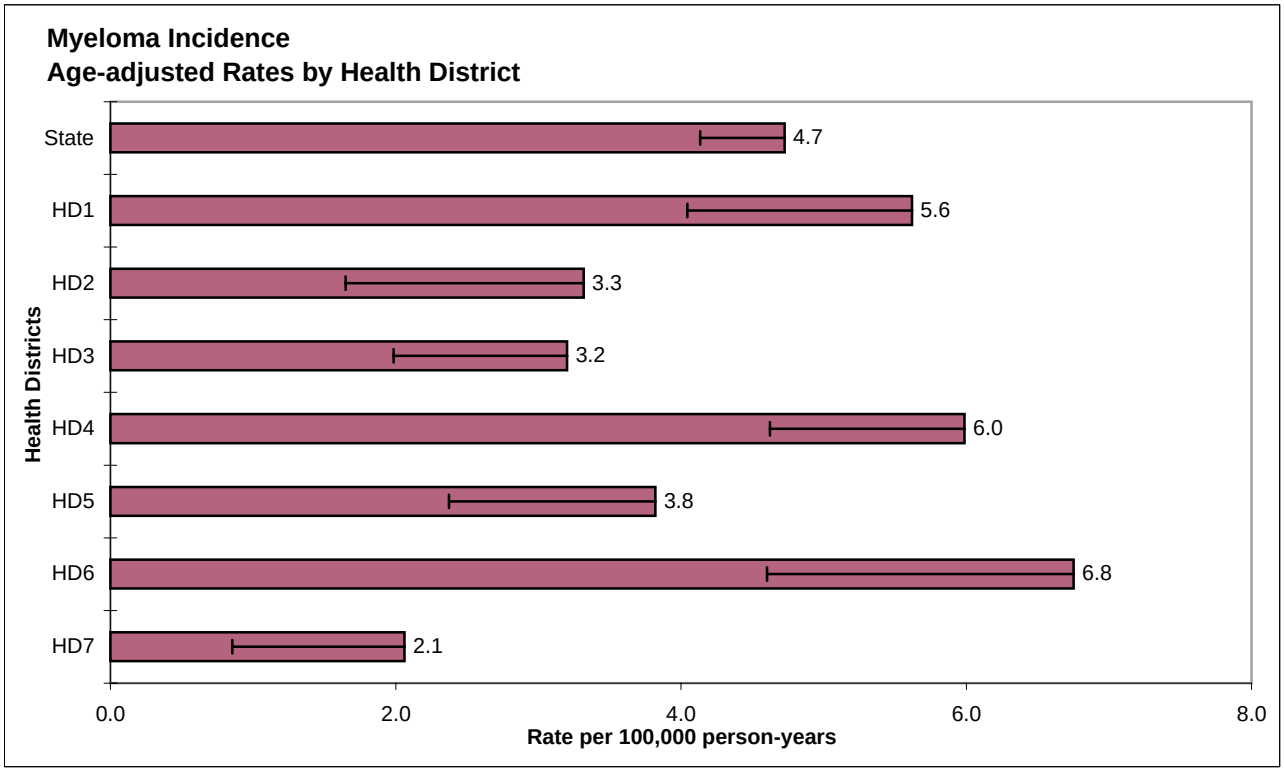
Other Multiple myeloma has been associated with lymphomas such as Burkitt's, and non-Hodgkin lymphomas. Studies have suggested several possible viral etiologies, and multiple myeloma has been linked to ionizing radiation exposure. Several specific chemical and physical substances have been linked to myeloma risk in one or more studies. Truck drivers, painters, and agricultural workers are at increased risk of 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:	4.4	
95% confidence interval on the mean age-adjusted incidence rate:	3.1 -	5.7
Median age-adjusted incidence rate of health districts:	3.8	
Range of age-adjusted incidence rate for health districts:	2.1 -	6.8
SEER 17 rate (2003, all races):	5.1	
USCS rate (2002, all races):	5.2	

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
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

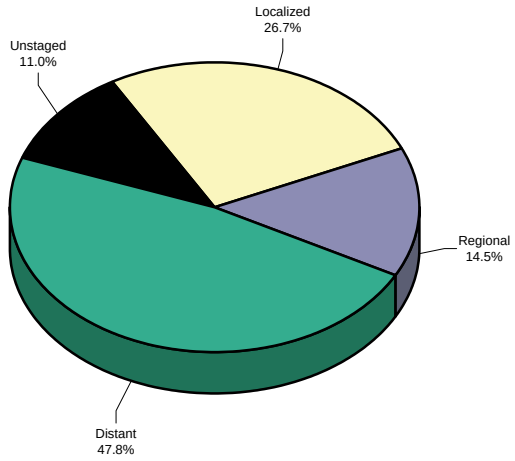

Myeloma Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
4.7
5.6
3.3
3.2
6.0
3.8
6.8
2.1
0.0
2.0
4.0
6.0
8.0
Rate per 100,000 person-years

NON-HODGKIN LYMPHOMA

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	18.6	22.7	14.8
# of new invasive cases	255	147	108
# of new in-situ cases	0	0	0
# of deaths	98	65	33

Stage at Diagnosis - Non-Hodgkin Lymphoma



Total Cases By County

Ada	58	Cassia	3	Lewis	1
Adams	1	Clark	-	Lincoln	2
Bannock	8	Clearwater	3	Madison	4
Bear Lake	-	Custer	1	Minidoka	6
Benewah	2	Elmore	5	Nez Perce	13
Bingham	7	Franklin	1	Oneida	-
Blaine	-	Fremont	1	Owyhee	1
Boise	1	Gem	4	Payette	8
Bonner	6	Gooding	2	Power	2
Bonneville	16	Idaho	2	Shoshone	4
Boundary	-	Jefferson	4	Teton	-
Butte	1	Jerome	-	Twin Falls	11
Camas	-	Kootenai	28	Valley	1
Canyon	33	Latah	2	Washington	6
Caribou	-	Lemhi	4		

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.

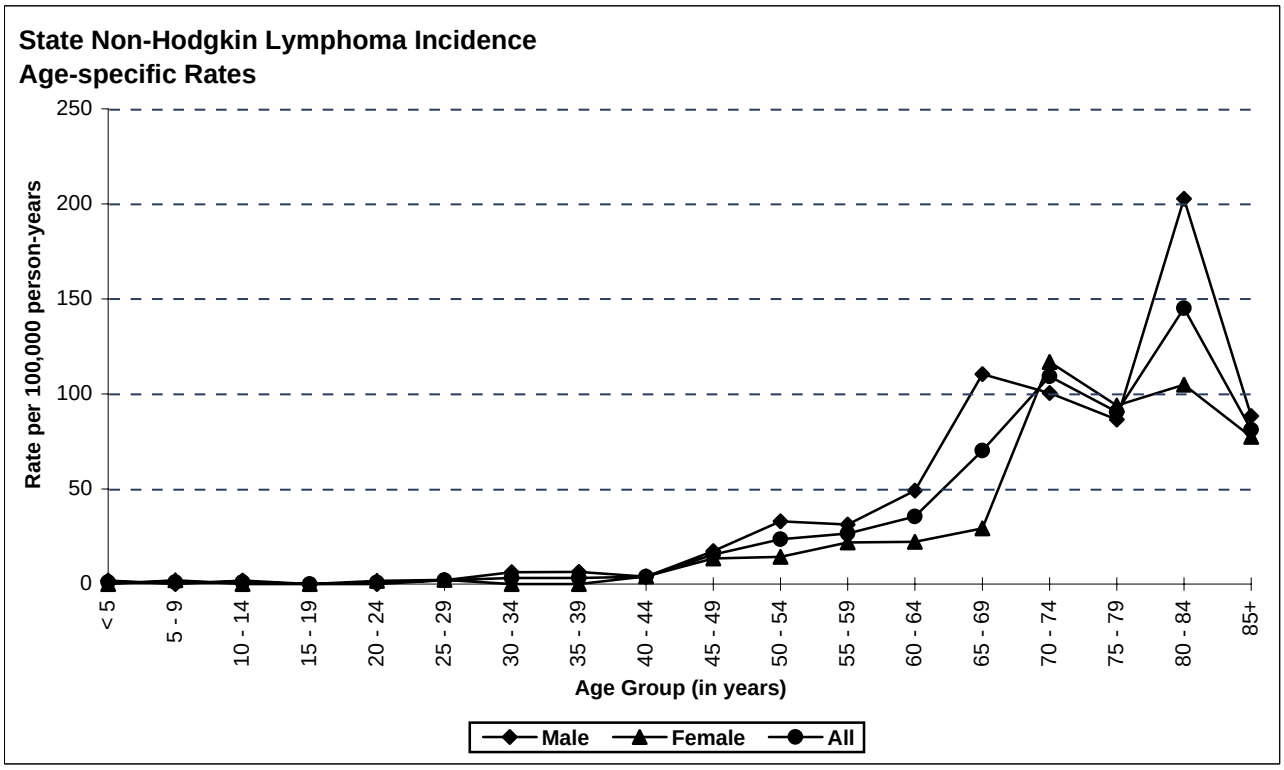
Occupation Ethylene oxide exposure at plants producing sterilized medical supplies and spices is a risk factor.

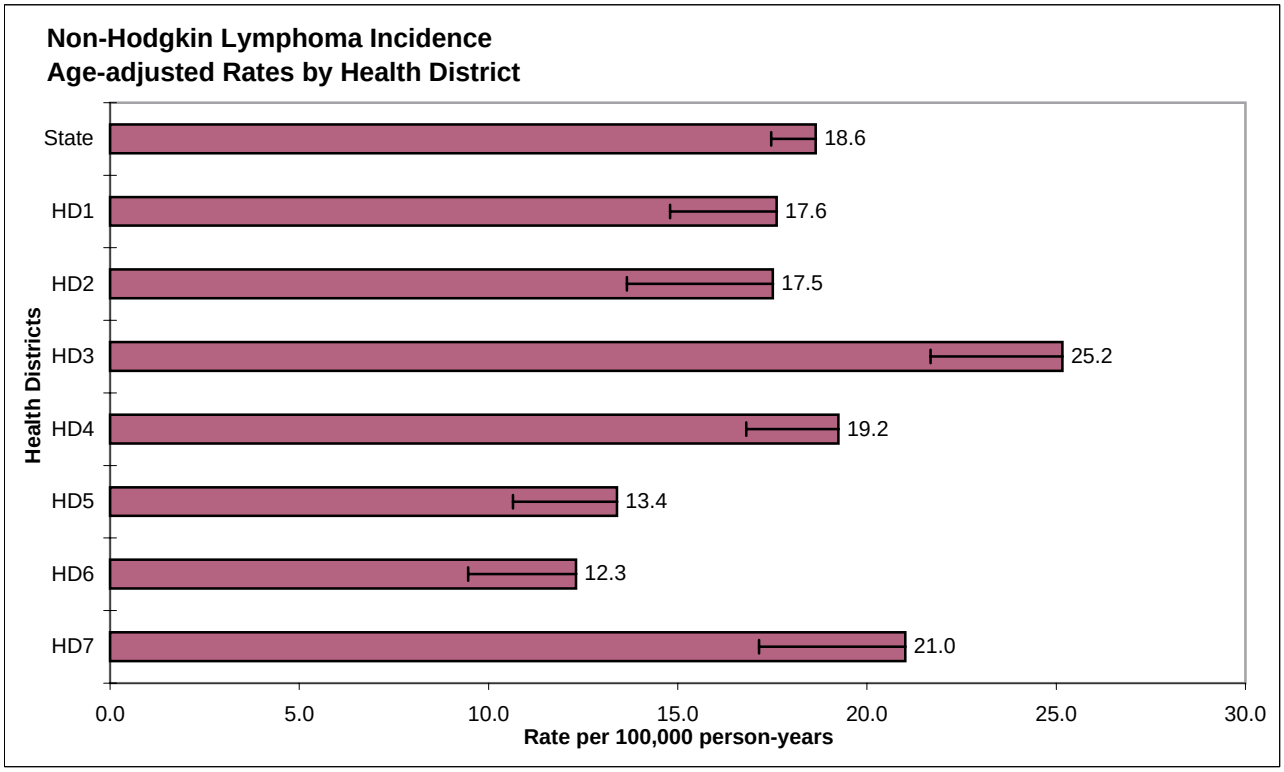
Other Non-Hodgkin lymphoma (NHL) develops with increased frequency in individuals infected with certain viruses, including HTLV-I, HIV, and EBV. Exposures to agricultural chemicals and PCBs have also been implicated. Treatment with some immunosuppressants increases the risk of NHL among organ transplant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

Special Notes

Mean age-adjusted incidence rate across health districts:	18.0	
95% confidence interval on the mean age-adjusted incidence rate:	14.8 -	21.3
Median age-adjusted incidence rate of health districts:	17.6	
Range of age-adjusted incidence rate for health districts:	12.3 -	25.2
SEER 17 rate (2003, all races):	18.9	
USCS rate (2002, all races):	18.4	

The age-specific incidence rates of non-Hodgkin lymphoma increased with age, peaking in the age group 80-84 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.


State Non-Hodgkin Lymphoma Incidence
Age-specific Rates
Rate per 100,000 person-years
250
200
150
100
50
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All

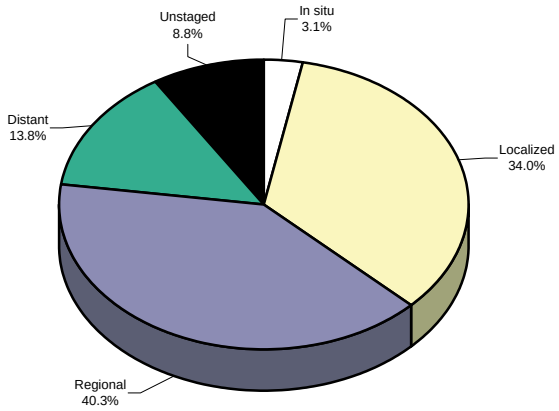

Non-Hodgkin Lymphoma Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
18.6
17.6
17.5
25.2
19.2
13.4
12.3
21.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Rate per 100,000 person-years

ORAL CAVITY AND PHARYNX

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	10.9	16.0	6.1
# of new invasive cases	154	110	44
# of new in-situ cases	5	4	1
# of deaths	41	29	12

Stage at Diagnosis - Oral Cavity



Total Cases By County

Ada	44	Cassia	-	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	6	Clearwater	1	Madison	-
Bear Lake	-	Custer	-	Minidoka	-
Benewah	4	Elmore	6	Nez Perce	3
Bingham	1	Franklin	1	Oneida	1
Blaine	7	Fremont	1	Owyhee	2
Boise	2	Gem	3	Payette	-
Bonner	7	Gooding	-	Power	-
Bonneville	6	Idaho	2	Shoshone	4
Boundary	-	Jefferson	3	Teton	-
Butte	-	Jerome	1	Twin Falls	11
Camas	-	Kootenai	19	Valley	-
Canyon	13	Latah	2	Washington	2
Caribou	1	Lemhi	2		

Risk and Associated Factors

Age Most cases occur in people over age 60.

Gender Males have a higher incidence 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.

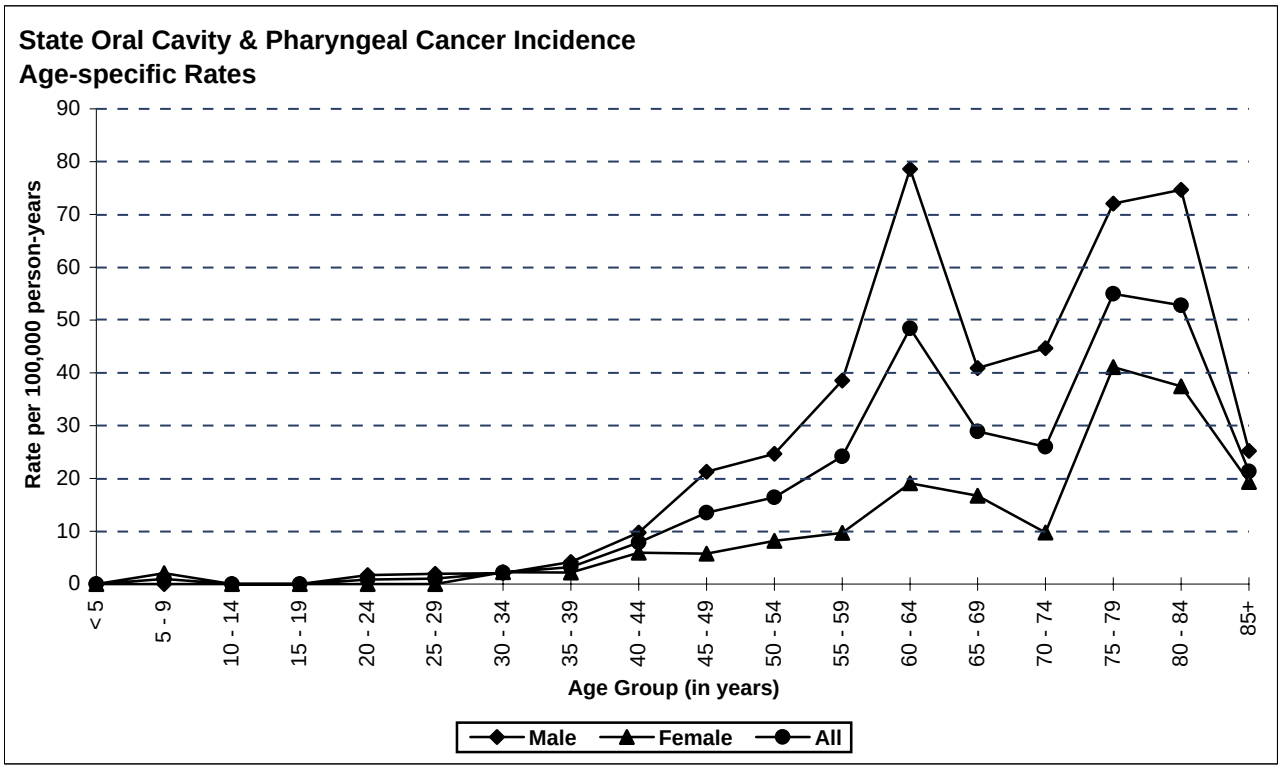
Diet Increased risk is associated with diets low in fresh fruit and vegetable consumption.

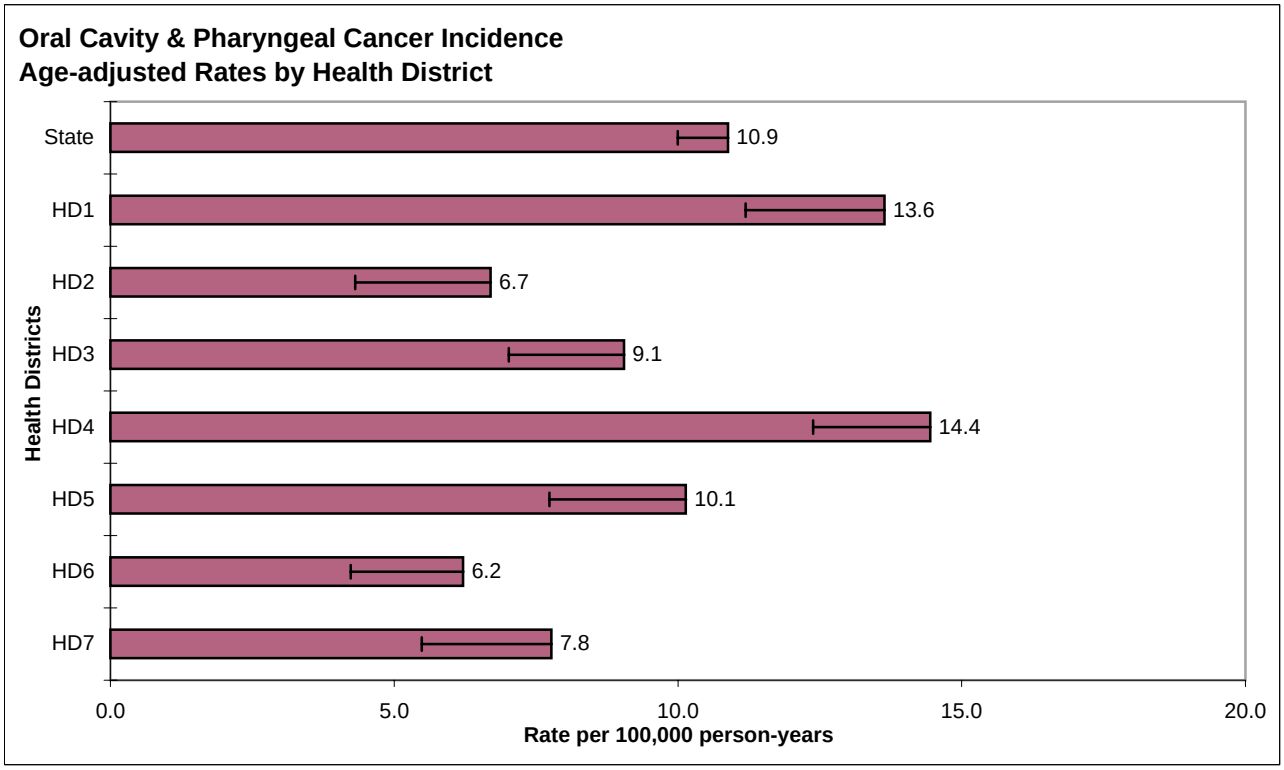
Other Smoking and spit tobacco are major risk factors for cancers of the oral cavity and pharynx. Alcohol use, especially excessive, is a major risk factor. Combined exposure to tobacco and alcohol multiply the risks of each other. It is estimated that smoking and drinking account for 75% of all oral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

Special Notes

Mean age-adjusted incidence rate across health districts:	9.7	
95% confidence interval on the mean age-adjusted incidence rate:	7.3 -	12.1
Median age-adjusted incidence rate of health districts:	9.1	
Range of age-adjusted incidence rate for health districts:	6.2 -	14.4
SEER 17 rate (2003, all races):	10.1	
USCS rate (2002, 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 50, peaking in the age group 60-64 for males and 75-79 for females. Health District 4 had statistically significantly 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
90
80
70
60
50
40
30
20
10
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All

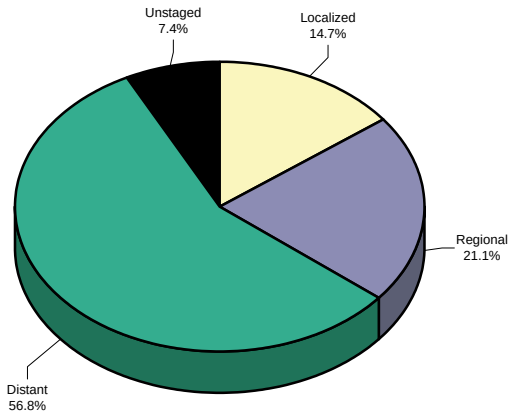

Oral Cavity & Pharyngeal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
10.9
13.6
6.7
9.1
14.4
10.1
6.2
7.8
0.0
5.0
10.0
15.0
20.0
Rate per 100,000 person-years

OVARY

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	12.6
# of new invasive cases	-	-	95
# of new in-situ cases	-	-	0
# of deaths	-	-	56

Stage at Diagnosis - Ovary



Total Cases By County

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

Risk and Associated Factors

Age The rate of ovarian cancer increases with age, and it is primarily a disease of older women.

Race & SES Rates are slightly higher in Caucasian females than in African American females. The rate is 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. It is also associated with a personal history of breast, endometrial, and colon cancers.

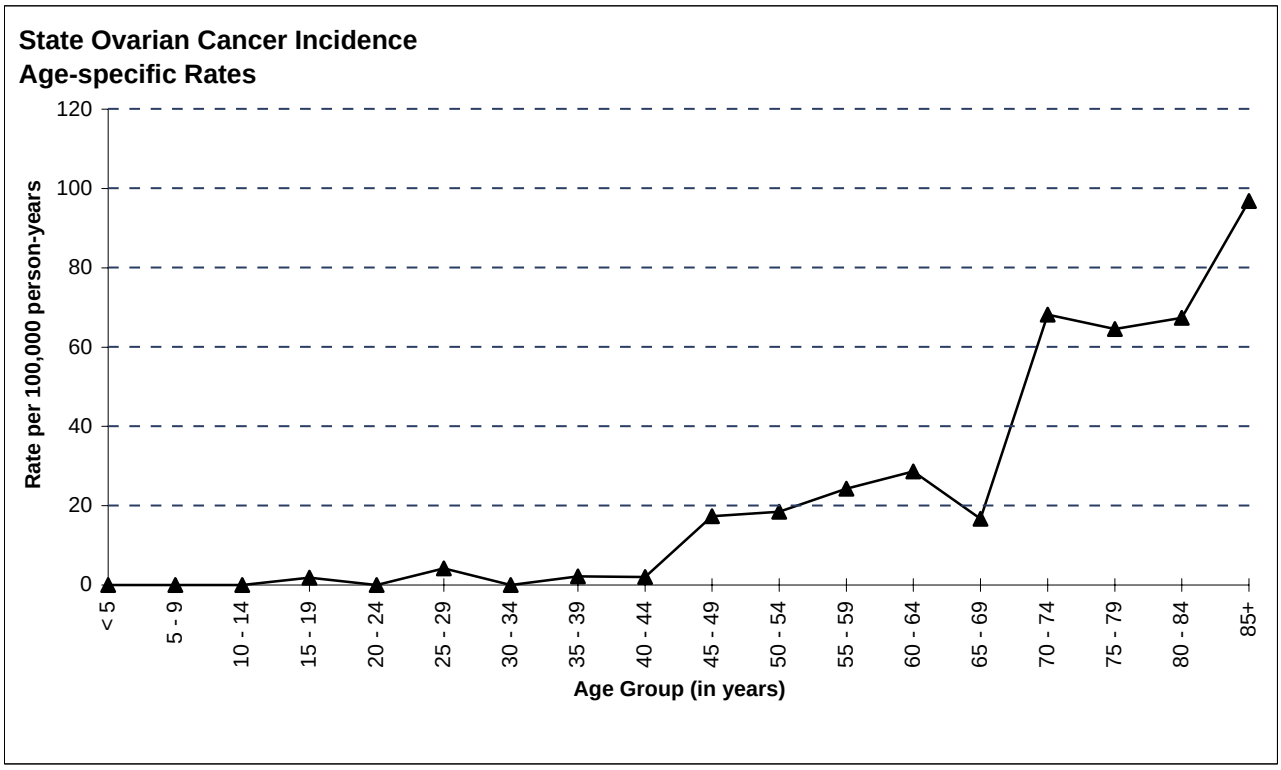
Diet Dietary animal fat may increase the risk.

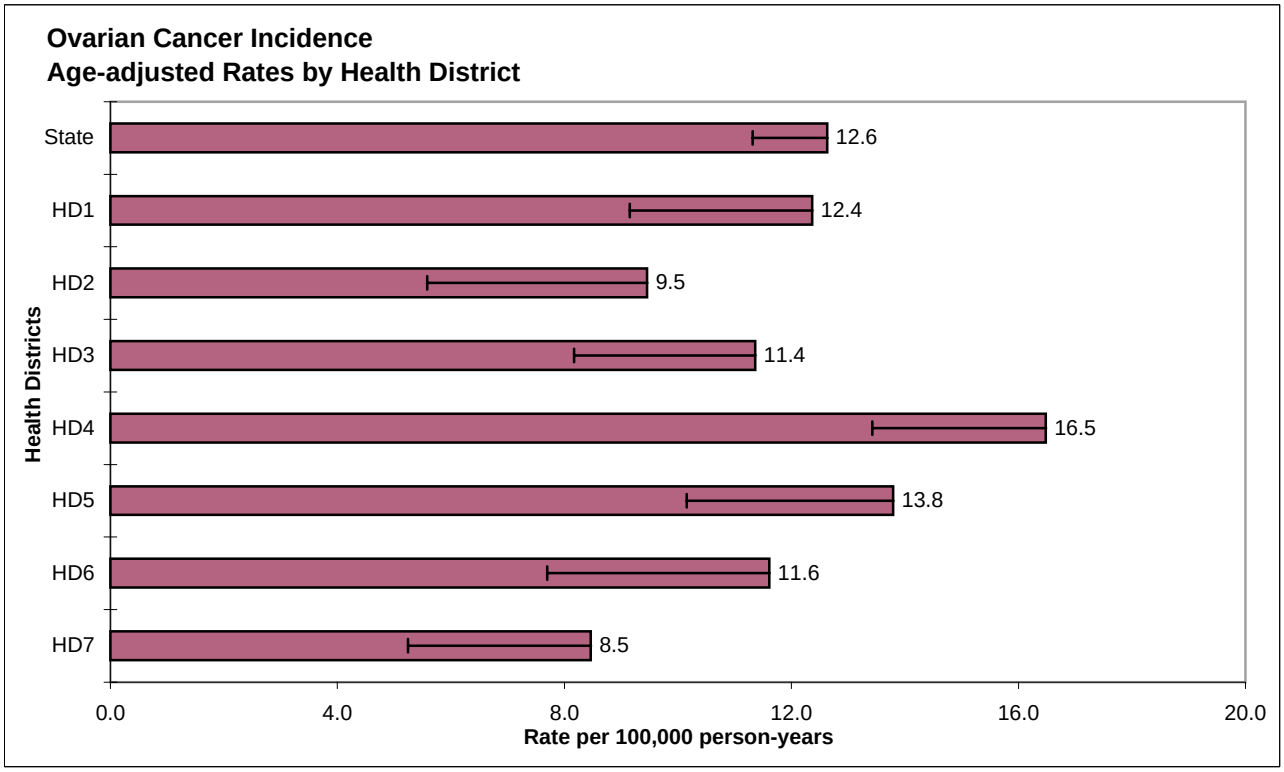
Other High dose (>100 rads) ionizing radiation roughly doubles the risk of ovarian cancer.

Special Notes

Mean age-adjusted incidence rate across health districts:	11.9	
95% confidence interval on the mean age-adjusted incidence rate:	10.0 -	13.9
Median age-adjusted incidence rate of health districts:	11.6	
Range of age-adjusted incidence rate for health districts:	8.5 -	16.5
SEER 17 rate (2003, all races):	12.9	
USCS rate (2002, all races):	13.1	

There were few cases of ovarian cancer among persons 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 85+. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.


State Ovarian 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)

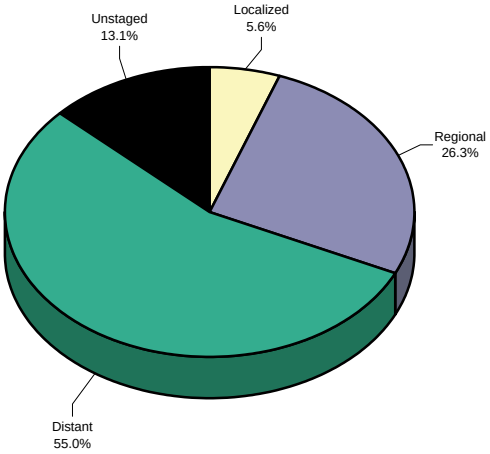

Ovarian Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
12.6
12.4
9.5
11.4
16.5
13.8
11.6
8.5
0.0
4.0
8.0
12.0
16.0
20.0
Rate per 100,000 person-years

PANCREAS

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	11.8	12.0	11.6
# of new invasive cases	160	74	86
# of new in-situ cases	0	0	0
# of deaths	165	72	93

Stage at Diagnosis - Pancreas



Total Cases By County

Ada	39	Cassia	3	Lewis	1
Adams	1	Clark	-	Lincoln	-
Bannock	9	Clearwater	-	Madison	-
Bear Lake	-	Custer	-	Minidoka	4
Benewah	1	Elmore	4	Nez Perce	4
Bingham	2	Franklin	-	Oneida	1
Blaine	5	Fremont	-	Owyhee	4
Boise	-	Gem	3	Payette	2
Bonner	3	Gooding	3	Power	1
Bonneville	11	Idaho	-	Shoshone	3
Boundary	-	Jefferson	3	Teton	-
Butte	1	Jerome	-	Twin Falls	6
Camas	-	Kootenai	17	Valley	1
Canyon	21	Latah	2	Washington	3
Caribou	-	Lemhi	2		

Risk and Associated Factors

Age Rates increase with age. It is rare in people younger than 40 years old.

Gender Incidence is about 50% higher in males.

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.

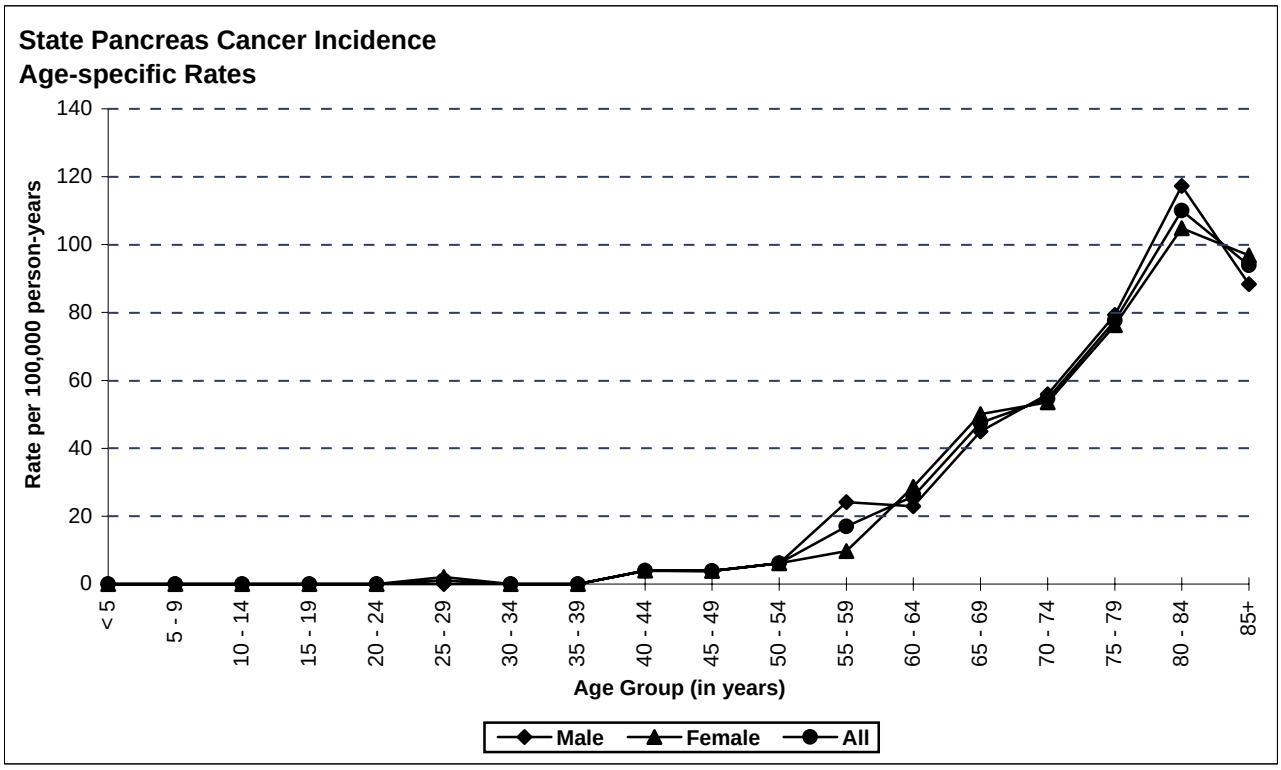
Occupation Persons in certain occupations are believed to be at higher risk, such as chemists, metal workers, and persons employed in the manufacture of benzidine and betanaphthylene.

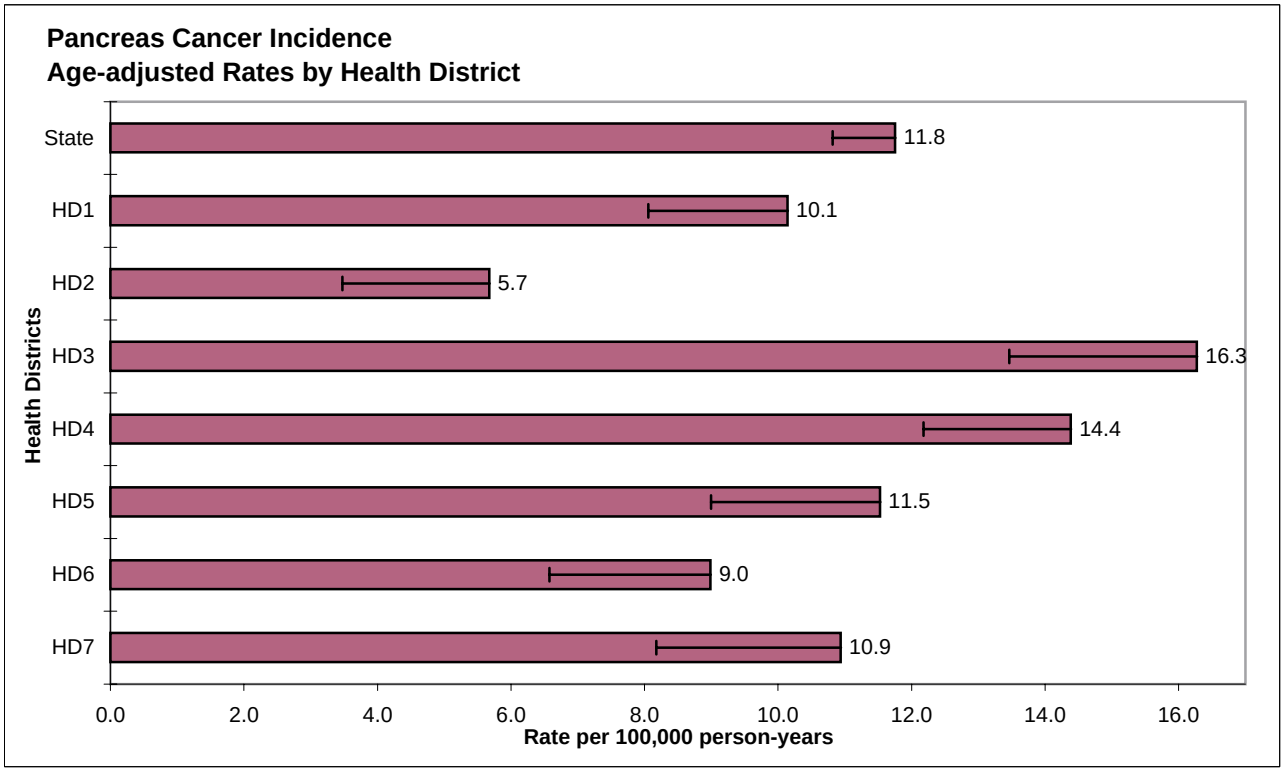
Other Pancreatic cancer is more common among smokers than non-smokers. Familial clustering has been observed in some studies. Pancreatic cancer usually progresses to an advanced stage before symptoms develop. It is rapidly fatal in over 90% of cases.

Special Notes

Mean age-adjusted incidence rate across health districts:	11.1
95% confidence interval on the mean age-adjusted incidence rate:	8.6 - 13.7
Median age-adjusted incidence rate of health districts:	10.9
Range of age-adjusted incidence rate for health districts:	5.7 - 16.3
SEER 17 rate (2003, all races):	11.0
USCS rate (2002, all races):	10.8

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. Health District 3 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 2 had statistically significantly fewer cases than expected.


State Pancreas Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
140
120
100
80
60
40
20
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All

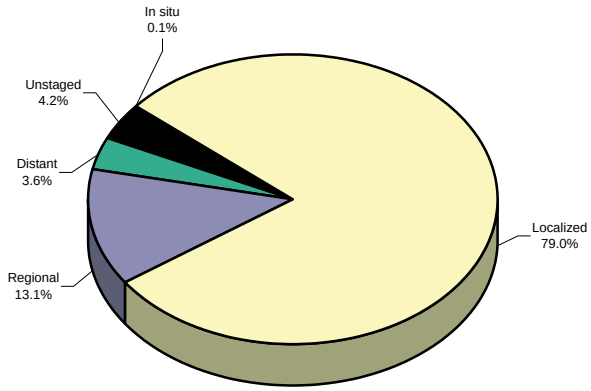

Pancreas Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
11.8
10.1
5.7
16.3
14.4
11.5
9.0
10.9
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
Rate per 100,000 person-years

PROSTATE

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	159.6	-
# of new invasive cases	-	1028	-
# of new in-situ cases	-	1	-
# of deaths	-	161	-

Stage at Diagnosis - Prostate



Total Cases By County

Ada	233	Cassia	15	Lewis	7
Adams	8	Clark	-	Lincoln	-
Bannock	42	Clearwater	8	Madison	3
Bear Lake	7	Custer	7	Minidoka	16
Benewah	9	Elmore	12	Nez Perce	48
Bingham	25	Franklin	1	Oneida	5
Blaine	16	Fremont	7	Owyhee	7
Boise	3	Gem	21	Payette	14
Bonner	31	Gooding	10	Power	4
Bonneville	45	Idaho	10	Shoshone	7
Boundary	9	Jefferson	11	Teton	8
Butte	3	Jerome	12	Twin Falls	74
Camas	-	Kootenai	88	Valley	16
Canyon	105	Latah	20	Washington	9
Caribou	5	Lemhi	6		

Risk and Associated Factors

Age It is rarely diagnosed before age 50, and it is primarily a disease of older men.

Race African American males have a substantially higher rate than Caucasian males.

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

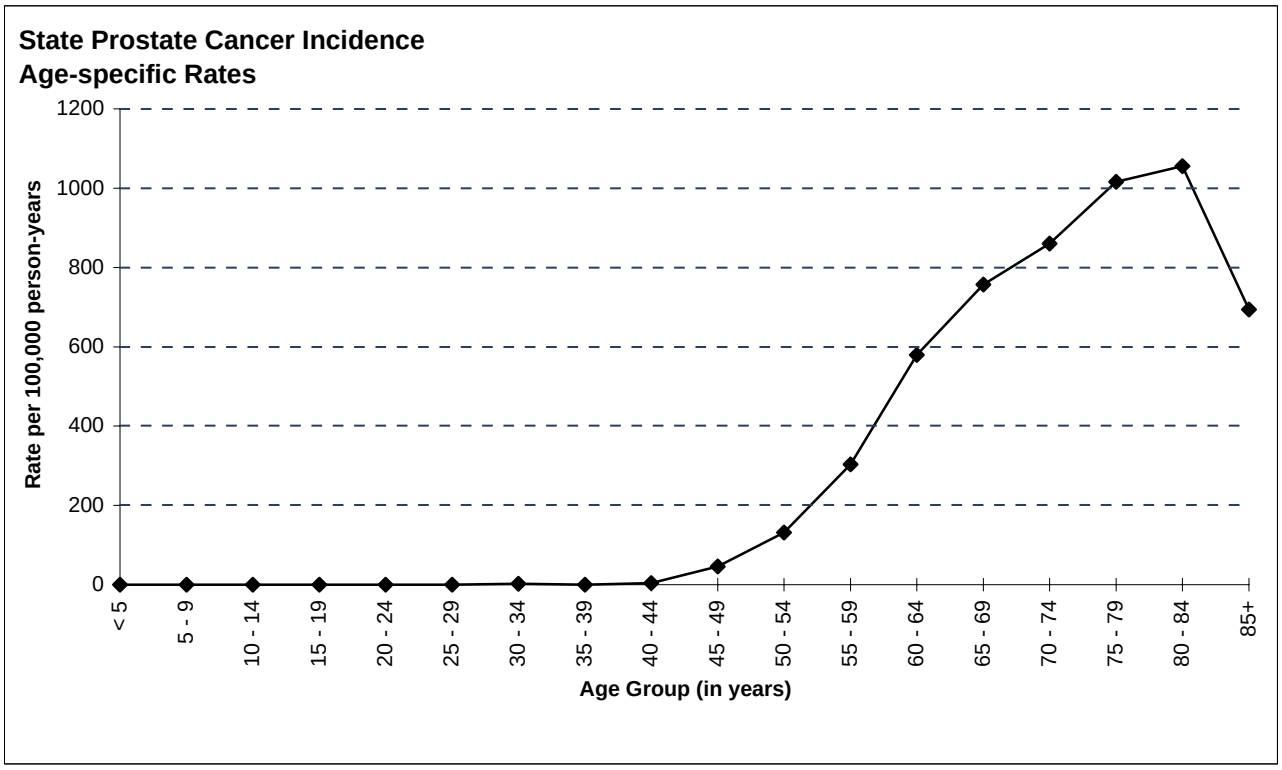
Diet Dietary fat has been implicated in several international, regional, and case-control studies.

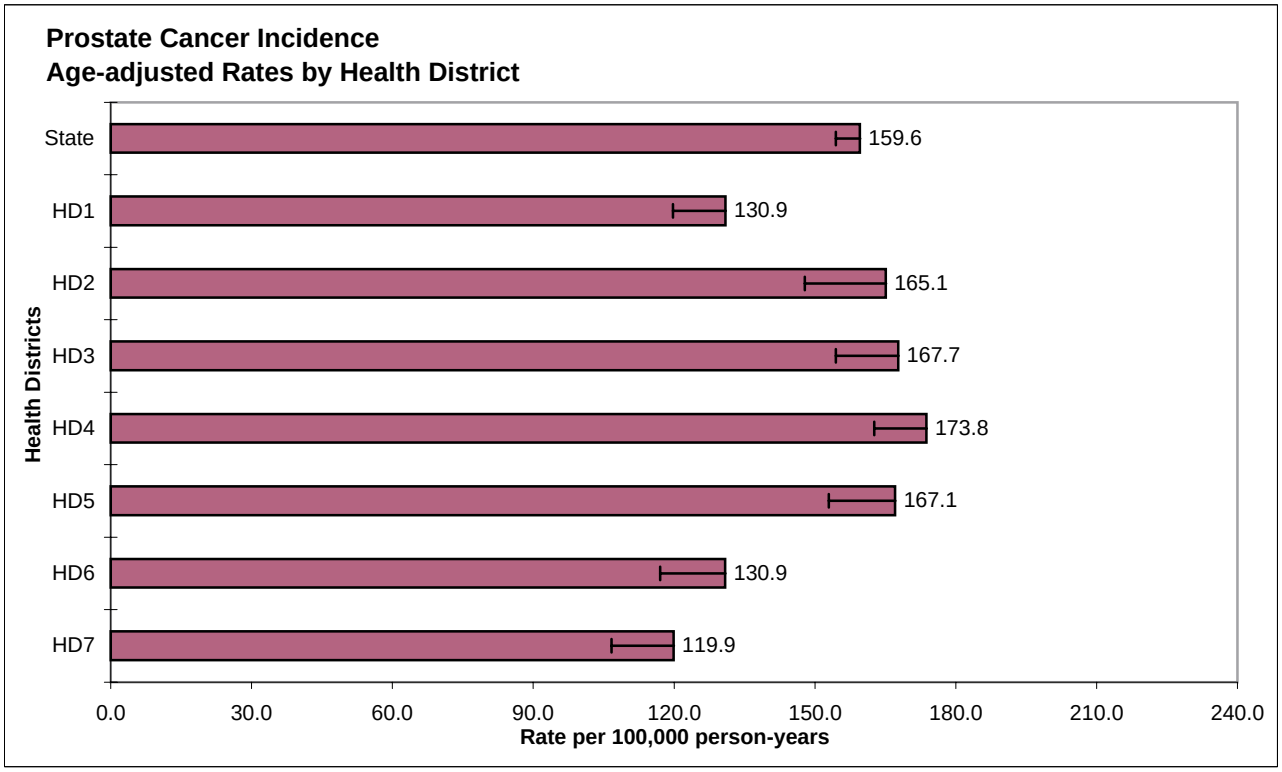
Other Environmental and familial factors may contribute to an increased incidence but no specific factor in these two groups of potential risk factors has been clearly identified. Three risk factors are well established: age, family history, and ethnic group/country of residence. Farming is the most 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:	150.8
95% confidence interval on the mean age-adjusted incidence rate:	134.1 - 167.4
Median age-adjusted incidence rate of health districts:	165.1
Range of age-adjusted incidence rate for health districts:	119.9 - 173.8
SEER 17 rate (2003, all races):	157.0
USCS rate (2002, all races):	161.2

The age-specific incidence rate distribution of prostate cancer in Idaho in 2005 is similar to that reported by the National Cancer Institute's SEER program. There were few cases of prostate cancer among persons aged less than 45 years. The age-specific incidence rates of prostate cancer increased with age, peaking in the 80-84 age group. Health Districts 1, 6 and 7 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho.


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)

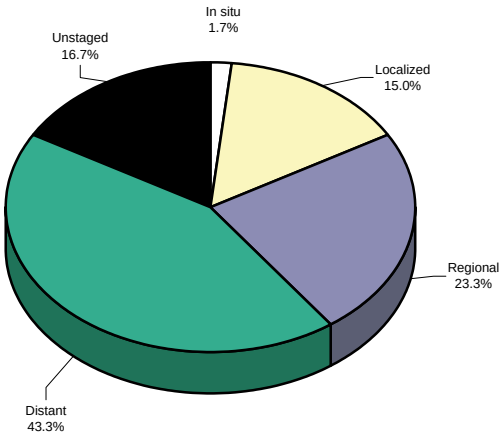

Prostate Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
159.6
130.9
165.1
167.7
173.8
167.1
130.9
119.9
0.0
30.0
60.0
90.0
120.0
150.0
180.0
210.0
240.0
Rate per 100,000 person-years

STOMACH

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.4	6.1	2.7
# of new invasive cases	59	39	20
# of new in-situ cases	1	1	0
# of deaths	39	20	19

Stage at Diagnosis - Stomach



Total Cases By County

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

Risk and Associated Factors

Age Rates increase with age.

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

Race & SES There is a higher incidence in African Americans, as well as 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.

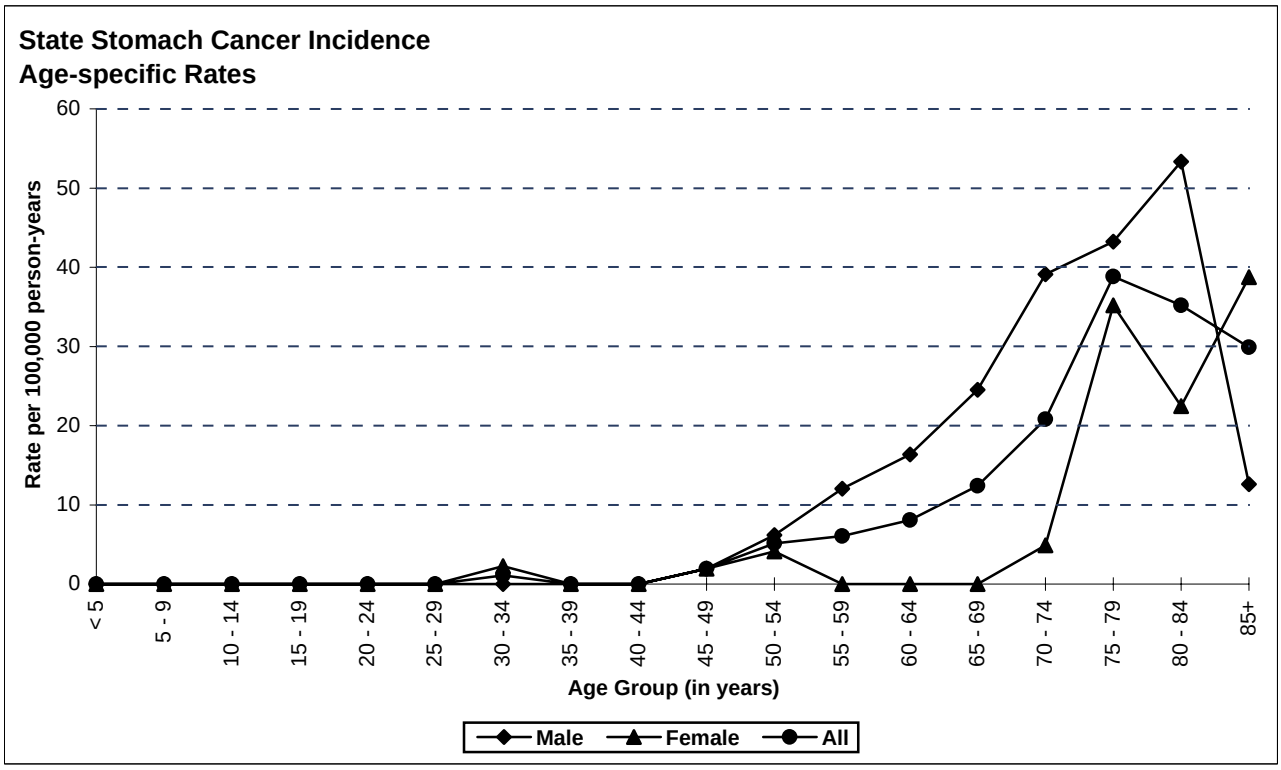
Occupation Elevated rates have been found in certain occupational groups, especially coal miners and asbestos workers and occupations with mineral dust exposure.

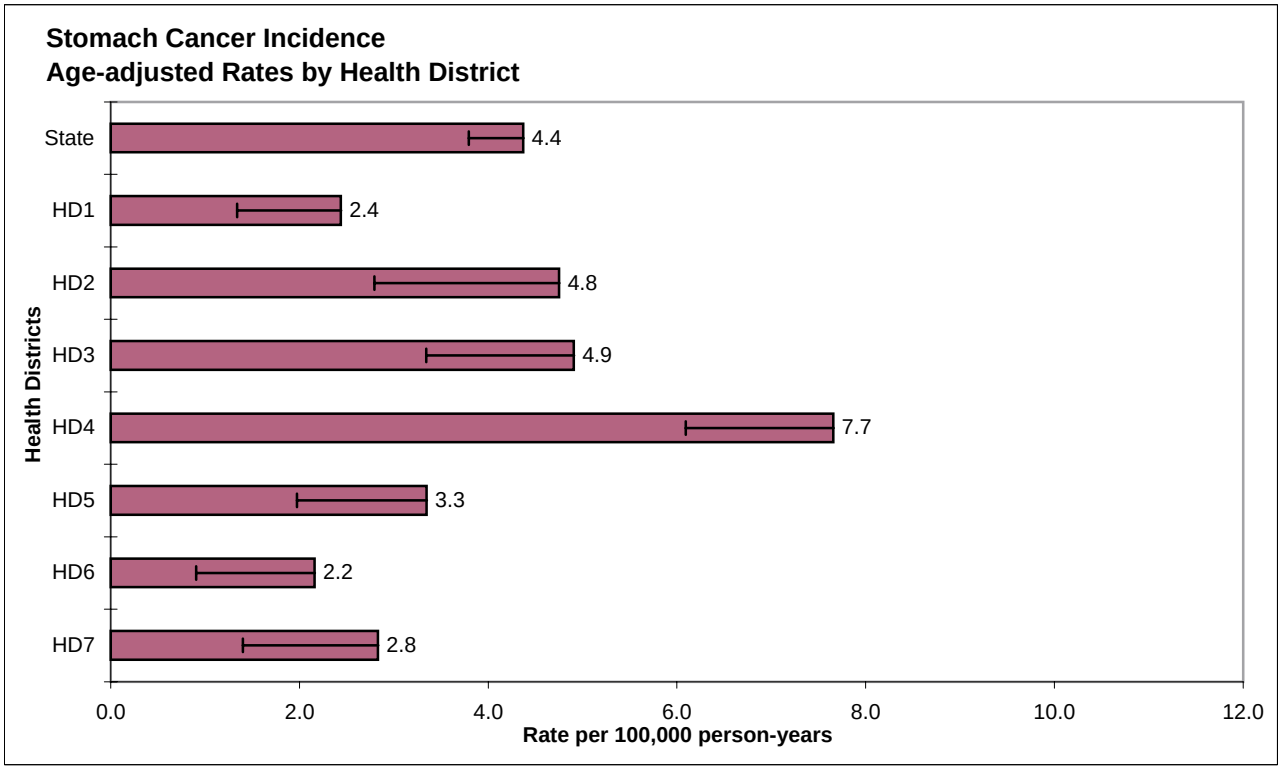
Other Stomach cancer has recently been linked to peptic ulcer disease and to certain bacteria associated with increased risk for both diseases.

Special Notes

Mean age-adjusted incidence rate across health districts:	4.0	
95% confidence interval on the mean age-adjusted incidence rate:	2.6 -	5.4
Median age-adjusted incidence rate of health districts:	3.3	
Range of age-adjusted incidence rate for health districts:	2.2 -	7.7
SEER 17 rate (2003, all races):	7.8	
USCS rate (2002, all races):	7.1	

There were few cases of stomach cancer among persons aged less than 50 years. The age-specific incidence rates of stomach cancer increased with age, peaking in the 80-84 age group for males and 85+ age group for females. Health District 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

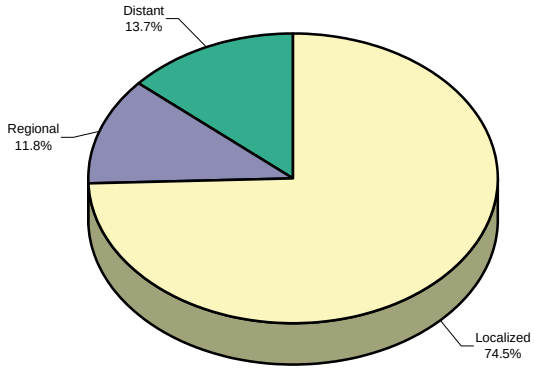

Stomach Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
4.4
2.4
4.8
4.9
7.7
3.3
2.2
2.8
0.0
2.0
4.0
6.0
8.0
10.0
12.0
Rate per 100,000 person-years

TESTIS

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	7.0	-
# of new invasive cases	-	51	-
# of new in-situ cases	-	0	-
# of deaths	-	5	-

Stage at Diagnosis - Testis



Total Cases By County

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

Risk and Associated Factors

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

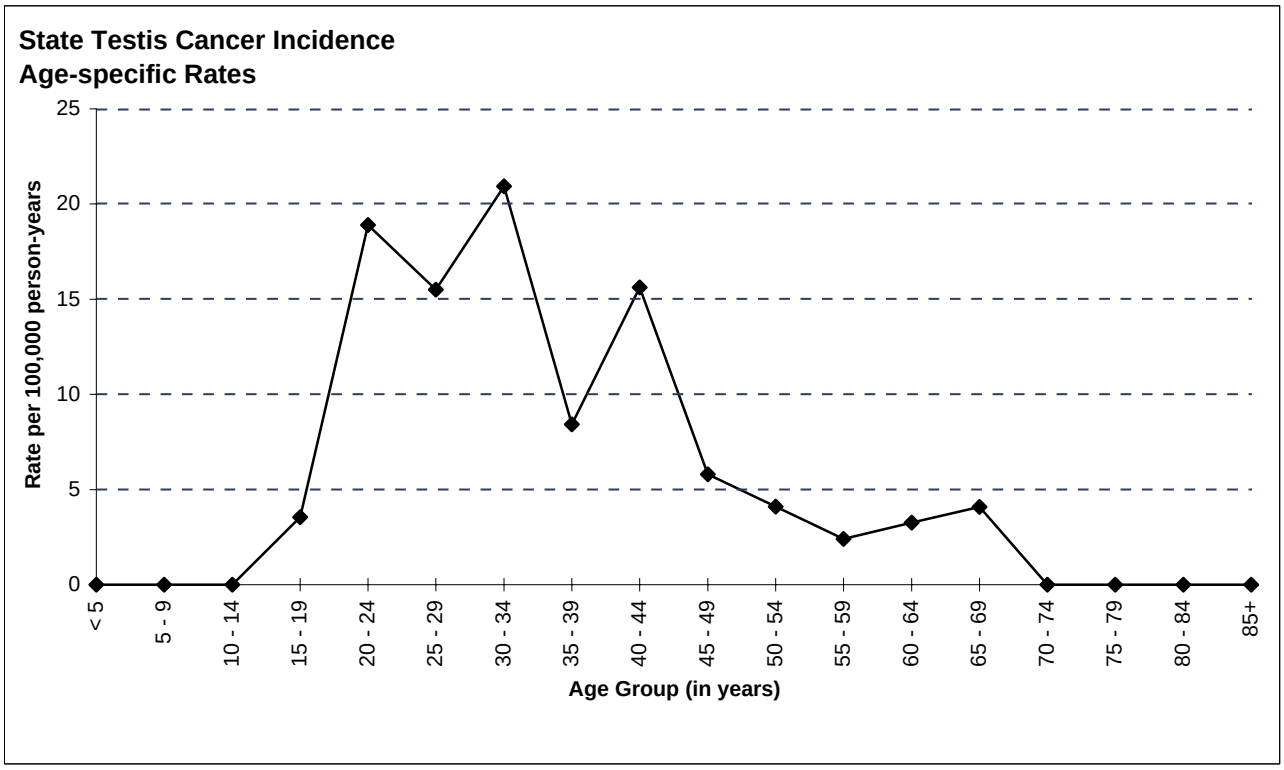
Race & SES Incidence rates are substantially higher in Caucasian males than in African American males. Incidence of testicular cancer is highest in highest socioeconomic classes.

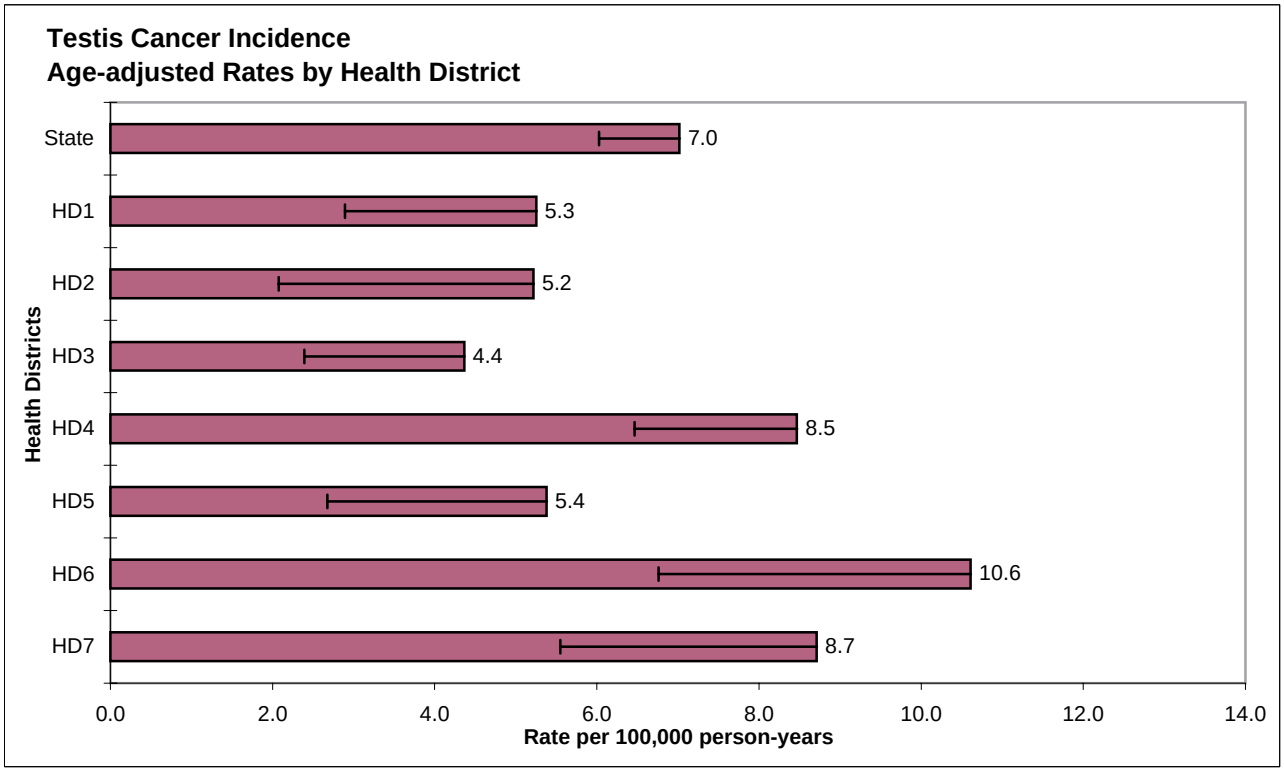
Other Undescended testis, a minor abnormality that can usually be detected and corrected with surgery in childhood, is responsible for a substantially high risk for testicular cancer when uncorrected. The extent to which surgical correction reduces cancer risk is unclear. Some evidence suggests that 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:	6.9
95% confidence interval on the mean age-adjusted incidence rate:	5.1 - 8.6
Median age-adjusted incidence rate of health districts:	5.4
Range of age-adjusted incidence rate for health districts:	4.4 - 10.6
SEER 17 rate (2003, all races):	5.2
USCS rate (2002, all races):	5.1

The highest age-specific incidence rate was in the 30-34 age group. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.


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

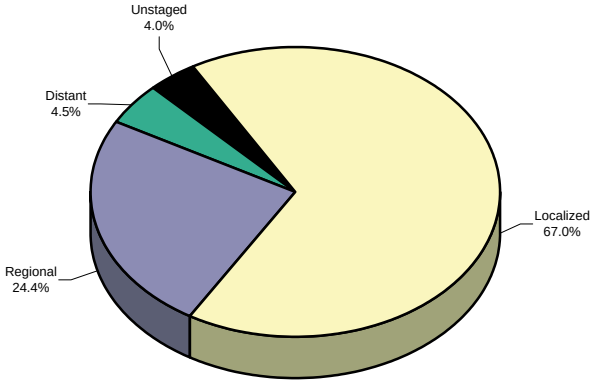

Testis Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
7.0
5.3
5.2
4.4
8.5
5.4
10.6
8.7
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
Rate per 100,000 person-years

THYROID

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	12.6	5.8	19.6
# of new invasive cases	176	40	136
# of new in-situ cases	0	0	0
# of deaths	8	1	7

Stage at Diagnosis - Thyroid



Total Cases By County

Ada	54	Cassia	1	Lewis	2
Adams	-	Clark	-	Lincoln	-
Bannock	4	Clearwater	1	Madison	3
Bear Lake	-	Custer	-	Minidoka	3
Benewah	1	Elmore	7	Nez Perce	3
Bingham	4	Franklin	-	Oneida	1
Blaine	1	Fremont	3	Owyhee	-
Boise	-	Gem	1	Payette	4
Bonner	6	Gooding	-	Power	-
Bonneville	22	Idaho	1	Shoshone	-
Boundary	-	Jefferson	-	Teton	1
Butte	1	Jerome	1	Twin Falls	8
Camas	-	Kootenai	13	Valley	1
Canyon	26	Latah	1	Washington	-
Caribou	1	Lemhi	1		

Risk and Associated Factors

Age Though relatively unusual, it is still 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.

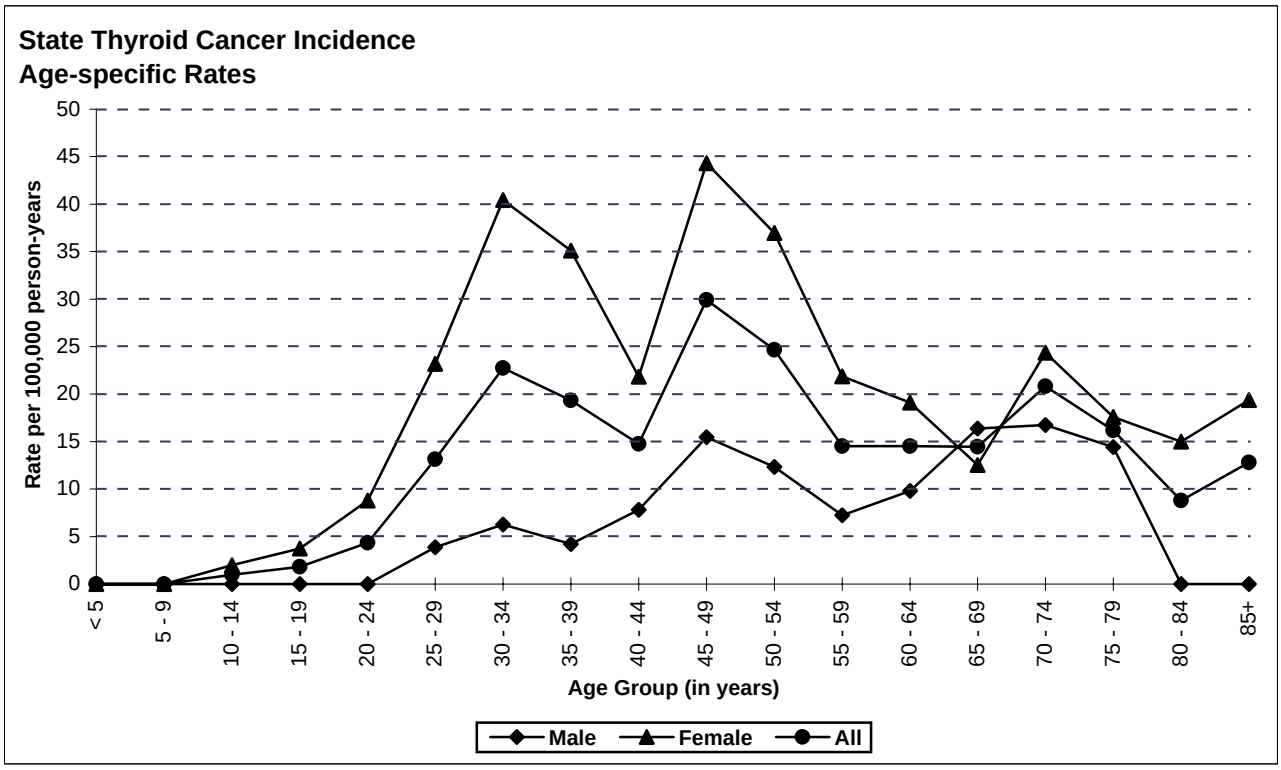
Hormonal Hormonal factors are believed to contribute to the increased risk in females. This is demonstrated by the sharp increase in incidence among women after menarche.

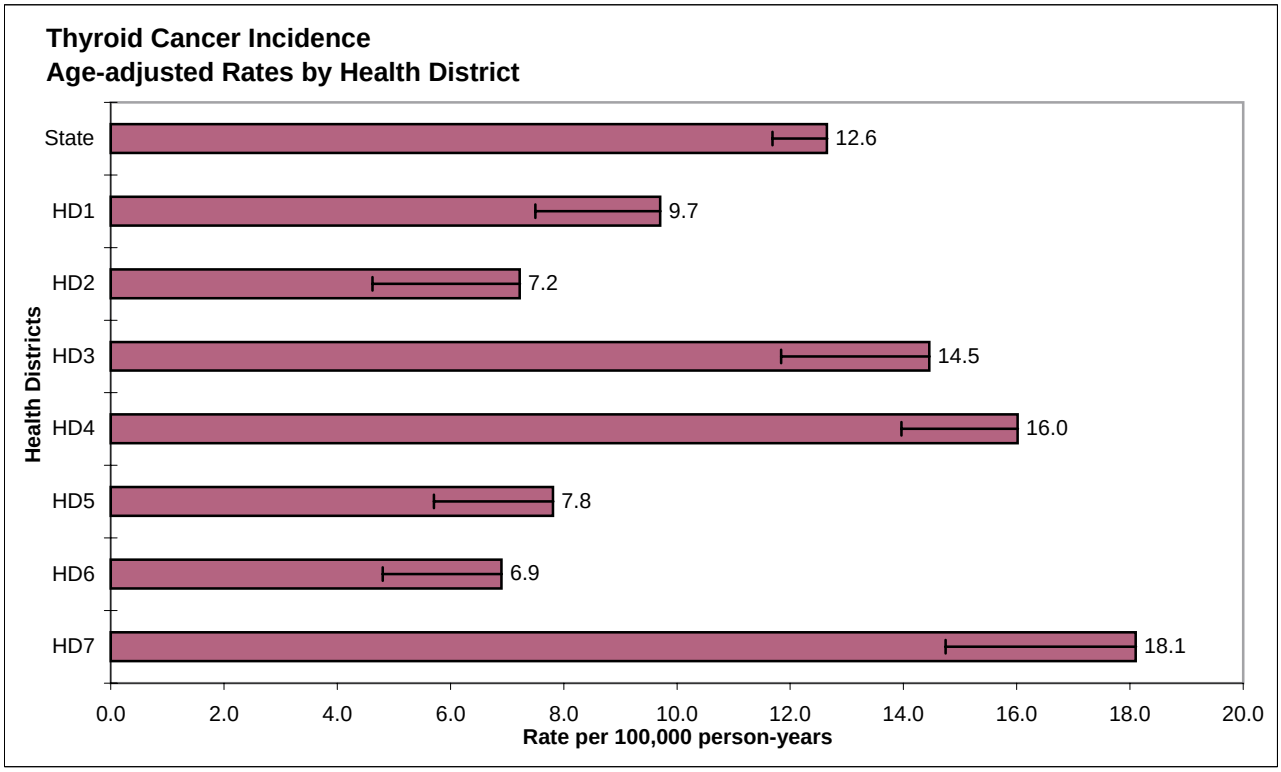
Other Occupational and environmental exposures to ionizing radiation have been associated with higher rates of thyroid cancer. Radiation exposure to the head and neck in childhood is a well-known risk factor. Family history of thyroid cancer substantially increases the risk. Death due to thyroid cancer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

Special Notes

Mean age-adjusted incidence rate across health districts:	11.5	
95% confidence interval on the mean age-adjusted incidence rate:	8.0 -	14.9
Median age-adjusted incidence rate of health districts:	9.7	
Range of age-adjusted incidence rate for health districts:	6.9 -	18.1
SEER 17 rate (2003, all races):	8.9	
USCS rate (2002, all races):	8.2	

The age-specific incidence rates of thyroid cancer were typically higher for females than males. Health Districts 4 and 7 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 6 had statistically significantly fewer cases than expected.


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


Thyroid Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
12.6
9.7
7.2
14.5
16.0
7.8
6.9
18.1
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

SECTION II

STATE OF IDAHO - 2005
INCIDENCE DATA BY SITE AND GENDER

Idaho Resident Cancer Cases (invasive) - 2005

PRIMARY SITE OF CANCER	TOTAL	SEX	
		Male	Female
TOTAL NEW CANCER CASES (invasive)	6,102	3,307	2,795
BUCCAL CAVITY AND PHARYNX	154	110	44
Lip	19	16	3
Tongue	43	32	11
Major salivary glands	16	8	8
Gum and other mouth	19	9	10
Nasopharynx	6	5	1
Oropharynx	3	2	1
Hypopharynx	7	6	1
Tonsil and other buccal cavity	41	32	9
DIGESTIVE SYSTEM	1,036	587	449
Esophagus	76	64	12
Stomach	59	39	20
Small intestine	32	14	18
Colon excluding rectum	417	221	196
Rectum, rectosigmoid and anus	187	103	84
Liver & bile duct	61	52	9
Gallbladder and other biliary	26	15	11
Pancreas	160	74	86
Peritoneum and retroperitoneum	17	4	13
Other digestive	1	1	-
RESPIRATORY SYSTEM	855	484	371
Larynx	45	37	8
Lung and bronchus	787	428	359
Trachea, pleura, and other	23	19	4
SKIN	364	204	160
Melanoma of skin	349	194	155
Other skin cancers	15	10	5
BREAST	784	10	774
FEMALE GENITAL SYSTEM	320	n/a	320
Cervix uteri	52	n/a	52
Corpus uteri	151	n/a	151
Ovary	95	n/a	95
Vagina	-	n/a	-
Vulva	17	n/a	17
Uterus, NOS and other female genital organs	5	n/a	5
MALE GENITAL SYSTEM	1,083	1,083	n/a
Prostate gland	1,028	1,028	n/a
Testis	51	51	n/a
Penis and other male genital organs	4	4	n/a
URINARY SYSTEM	349	248	101
Urinary bladder	144	108	36
Kidney and renal pelvis	194	133	61
Ureter and other urinary organs	11	7	4
LYMPHATIC AND HEMATOPOIETIC TISSUE	529	300	229
Hodgkin lymphoma	34	14	20
Non-Hodgkin lymphoma	255	147	108
Multiple myeloma	65	41	24
Acute lymphocytic leukemia	20	12	8
Chronic lymphocytic leukemia	55	32	23
Acute Myeloid leukemia	52	25	27
Chronic Myeloid leukemia	24	10	14
Other leukemia	24	19	5
OTHER OR UNKNOWN SITES	628	281	347
Eye	13	9	4
Brain	107	55	52
Other nervous system	15	5	10
Thyroid gland	176	40	136
Other endocrine	7	5	2
Bones and joints	15	9	6
Soft tissue (including heart)	39	23	16
Other sites, Ill-defined sites or unknown sites	256	135	121

Idaho Resident Cancer Cases (in-situ) - 2005

PRIMARY SITE OF CANCER	TOTAL	SEX	
		Male	Female
TOTAL NEW CANCER CASES (in-situ)	640	288	352
BUCCAL CAVITY AND PHARYNX	5	4	1
Lip	2	2	-
Tongue	2	1	1
Major salivary glands	-	-	-
Gum and other mouth	-	-	-
Nasopharynx	-	-	-
Oropharynx	-	-	-
Hypopharynx	-	-	-
Tonsil and other buccal cavity	1	1	-
DIGESTIVE SYSTEM	16	4	12
Esophagus	3	1	2
Stomach	1	1	-
Small intestine	-	-	-
Colon excluding rectum	8	1	7
Rectum, rectosigmoid and anus	4	1	3
Liver & bile duct	-	-	-
Gallbladder and other biliary	-	-	-
Pancreas	-	-	-
Peritoneum and retroperitoneum	-	-	-
Other digestive	-	-	-
RESPIRATORY SYSTEM	5	1	4
Larynx	3	1	2
Lung and bronchus	-	-	-
Trachea, pleura, and other	2	-	2
SKIN	228	119	109
Melanoma of skin	228	119	109
Other skin cancers	-	-	-
BREAST	161	-	161
FEMALE GENITAL SYSTEM	26	n/a	26
Cervix uteri	-	n/a	-
Corpus uteri	1	n/a	1
Ovary	-	n/a	-
Vagina	4	n/a	4
Vulva	21	n/a	21
Uterus, NOS and other female genital organs	-	n/a	-
MALE GENITAL SYSTEM	2	2	n/a
Prostate gland	1	1	n/a
Testis	-	-	n/a
Penis and other male genital organs	1	1	n/a
URINARY SYSTEM	197	158	39
Urinary bladder	181	147	34
Kidney and renal pelvis	3	1	2
Ureter and other urinary organs	13	10	3
LYMPHATIC AND HEMATOPOIETIC TISSUE	-	-	-
Hodgkin lymphoma	-	-	-
Non-Hodgkin lymphoma	-	-	-
Multiple myeloma	-	-	-
Acute lymphocytic leukemia	-	-	-
Chronic lymphocytic leukemia	-	-	-
Acute Myeloid leukemia	-	-	-
Chronic Myeloid leukemia	-	-	-
Other leukemia	-	-	-
OTHER OR UNKNOWN SITES	-	-	-
Eye	-	-	-
Brain	-	-	-
Other nervous system	-	-	-
Thyroid gland	-	-	-
Other endocrine	-	-	-
Bones and joints	-	-	-
Soft tissue (including heart)	-	-	-
Other sites, Ill-defined sites or unknown sites	-	-	-

SECTION III

STATE OF IDAHO - 2005
MORTALITY DATA BY SITE AND GENDER

Idaho Resident Cancer Deaths - 2005

ICD-10 CODE	SITE OF MALIGNANT NEOPLASM	TOTAL	SEX	
			Male	Female
C00-C97	TOTAL MALIGNANT NEOPLASM DEATHS	2,356	1,273	1,083
C00-C14	LIP, ORAL CAVITY AND PHARYNX	41	29	12
C00	Lip	-	-	-
C01-C02	Tongue	12	7	5
C10-C13, C14.0	Pharynx	15	14	1
C03-C09, C14.2-C14.8	Other and unspecified sites within the lip, oral cavity, and pharynx	14	8	6
C15-C26	DIGESTIVE ORGANS	550	285	265
C15	Esophagus	56	45	11
C16	Stomach	39	20	19
C17	Small intestine	7	3	4
C18	Colon	176	78	98
C19-C20	Rectosigmoid junction and rectum	29	14	15
C21	Anus and anal canal	3	3	-
C22.0, C22.2-C22.9	Liver	45	36	9
C22.1	Intrahepatic bile duct	18	10	8
C23-C24	Gallbladder and extrahepatic bile ducts	9	3	6
C25	Pancreas	165	72	93
C26	Other and ill-defined digestive organs	3	1	2
C30-C39	RESPIRATORY AND INTRATHORACIC ORGANS	622	362	260
C30-C31	Nasal cavity, middle ear, and accessory sinuses	4	4	-
C32	Larynx	10	8	2
C33-C34	Trachea, bronchus, and lung	606	349	257
C37-C38	Thymus, heart, mediastinum, and pleura	2	1	1
C39	Other and ill-defined sites in the respiratory system and intrathoracic organs	-	-	-
C40-C41	BONE AND ARTICULAR CARTILAGE	8	5	3
C43-C44	MELANOMA AND OTHER MALIGNANT NEOPLASMS OF SKIN	63	43	20
C43	Melanoma of skin	47	30	17
C44	Other malignant neoplasms of skin	16	13	3
C45-C49	MESOTHELIAL AND SOFT TISSUE	34	24	10
C45	Mesothelioma	13	13	-
C46	Kaposi's sarcoma	-	-	-
C47-C49	Other mesothelial and soft tissue	21	11	10
C50	BREAST	144	-	144
C51-C58	FEMALE GENITAL ORGANS	105	-	105
C51-C52	Vulva and vagina	5	-	5
C53	Cervix uteri	13	-	13
C54-C55	Corpus uteri and uterus, part unspecified	31	-	31
C56	Ovary	56	-	56
C57	Other and unspecified female genital organs	-	-	-
C58	Placenta	-	-	-

Idaho Resident Cancer Deaths - 2005

ICD-10 CODE	SITE OF MALIGNANT NEOPLASM	TOTAL	SEX	
			Male	Female
C60-C63	MALE GENITAL ORGANS	167	167	-
C61	Prostate	161	161	-
C62	Testis	5	5	-
C60, C63	Penis and other and unspecified male genital organs	1	1	-
C64-C68	URINARY TRACT	109	74	35
C64-C65	Kidney and renal pelvis	47	30	17
C67	Bladder	58	42	16
C66, C68	Other and unspecified sites within the urinary tract	4	2	2
C69	EYE AND ADNEXA	-	-	-
C70-C72	MENINGES, BRAIN, AND OTHER PARTS OF CENTRAL NERVOUS SYSTEM	81	43	38
C71	Brain	79	42	37
C70, C72	Other parts of central nervous system	2	1	1
C73-C75	THYROID AND OTHER ENDOCRINE GLANDS	11	4	7
C76-C80, C97	OTHER MALIGNANT NEOPLASMS OF OTHER AND UNSPECIFIED SITES	166	88	78
C81-C96	LYMPHOID, HEMATOPOIETIC, AND RELATED TISSUE	255	149	106
C81	Hodgkin disease	6	2	4
C82-C85	Non-Hodgkin lymphoma	98	65	33
C88	Malignant immunoproliferative diseases	2	1	1
C90	Multiple myeloma and malignant plasma cell neoplasms	42	25	17
C91	Lymphoid leukemia	31	13	18
C92	Myeloid leukemia	58	31	27
C93	Monocytic leukemia	2	1	1
C94-C95	Other and unspecified leukemia	16	11	5
C96	Other and unspecified malignant neoplasms of lymphoid, hematopoietic, and related tissue	-	-	-

* Source: Bureau of Health Policy and Vital Statistics, Idaho Department of Health and Welfare.[13]

The manner of coding the underlying cause of death changed in 1999 from the ninth revision (ICD-9) to the tenth revision of the International Classification of Diseases (ICD-10). The introduction of ICD-10 resulted in a major reclassification of all causes of death from a numeric classification to an alphanumeric classification. The tenth revision also resulted in new titles for causes, the inclusion of terms and titles from one category to another, regroupings of diseases, and modifications of the coding rules. The introduction of ICD-10 created discontinuities in trend data for some causes of death; therefore, the numbers of deaths in 1999 and later years by site of malignant neoplasm may not be comparable to previously published data for numbers of deaths by site for years prior to 1999. The extent of the discontinuity is measured using a comparability ratio. The National Center for Health Statistics has constructed comparability ratios for the leading causes of death to measure the discontinuity between the data tabulated by the tenth revision and data tabulated by the ninth revision. The comparability ratio for malignant neoplasms based on ICD-10 (codes C00-C97) to ICD-9 (codes 140-208) is 1.01. For more information on ICD, comparability ratios, or Idaho cancer mortality trends, contact the Bureau of Health Policy and Vital Statistics, Idaho Department of Health and Welfare, at (208) 334-6658.

SECTION IV

2005 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** **2005**

Age (years)	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80 - 84	85+
All Cancers																		
All	21.7	12.0	10.7	20.1	33.1	73.7	100.8	122.5	192.9	330.0	491.2	716.1	1171.5	1712.6	2125.6	2551.5	2784.6	2113.6
Male	16.6	9.8	15.1	23.1	30.9	48.5	67.0	88.5	168.0	249.4	495.8	841.0	1391.9	2163.8	2810.1	3263.5	3881.8	2813.2
Female	27.0	14.4	6.0	16.9	35.3	101.2	137.0	158.0	218.2	410.4	486.7	590.2	957.5	1252.2	1529.0	1971.6	2014.2	1755.6
Bladder																		
All	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.1	4.9	9.7	13.4	30.2	50.0	82.6	124.9	219.9	211.2	149.4
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	9.8	17.4	24.7	50.6	88.4	126.8	245.8	367.4	362.6	252.3
Female	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	1.9	2.1	9.7	12.7	37.6	19.5	99.8	104.8	96.8
Brain																		
All	5.7	2.0	1.0	5.5	1.7	5.1	2.2	5.4	8.9	9.7	8.2	13.3	11.3	22.7	26.0	16.2	13.2	17.1
Male	3.7	0.0	1.9	7.1	1.7	5.8	2.1	10.5	11.7	9.7	10.3	9.6	9.8	20.5	39.1	7.2	0.0	25.2
Female	7.7	4.1	0.0	3.7	1.8	4.2	2.3	0.0	6.0	9.6	6.2	17.0	12.7	25.0	14.6	23.5	22.5	12.9
Brain & Other Central Nervous System (Non-Malignant)																		
All	0.0	0.0	0.0	0.0	0.0	3.0	1.1	2.2	6.9	9.7	13.4	15.7	14.5	20.7	18.2	48.5	48.4	38.4
Male	0.0	0.0	0.0	0.0	0.0	3.9	0.0	2.1	2.0	7.7	2.1	9.6	9.8	4.1	0.0	43.2	21.3	0.0
Female	0.0	0.0	0.0	0.0	0.0	2.1	2.3	2.2	11.9	11.6	24.6	21.9	19.1	37.6	34.1	52.8	67.4	58.1
Breast																		
Female Invasive	0.0	0.0	0.0	0.0	0.0	6.3	31.5	39.5	75.4	159.9	166.3	221.0	289.5	350.6	374.9	516.4	366.9	367.9
Female In-situ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	19.8	34.7	55.4	43.7	66.8	75.1	121.7	58.7	37.4	32.3
Cervix																		
Female	0.0	0.0	0.0	0.0	1.8	10.5	11.2	13.2	9.9	11.6	16.4	4.9	12.7	4.2	14.6	5.9	15.0	19.4
Colorectal																		
All	0.0	0.0	0.0	0.9	0.0	2.0	3.3	3.2	12.8	23.2	45.2	60.5	92.0	173.5	223.7	245.8	356.3	286.1
Male	0.0	0.0	0.0	1.8	0.0	1.9	2.1	4.2	19.5	17.4	51.4	79.5	91.7	196.3	273.7	302.6	458.6	365.8
Female	0.0	0.0	0.0	0.0	0.0	2.1	4.5	2.2	6.0	28.9	39.0	41.3	92.3	150.3	180.2	199.5	284.5	245.3
Corpus Uteri																		
Female	0.0	0.0	0.0	0.0	0.0	6.3	0.0	8.8	9.9	23.1	30.8	43.7	79.5	54.3	102.3	70.4	59.9	96.8
Esophagus																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	7.2	7.3	14.5	28.9	39.0	32.3	30.8	25.6
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.9	14.4	9.6	22.9	57.3	72.6	64.8	21.3	75.7
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	6.4	0.0	9.7	5.9	37.4	0.0

IDAHO **AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER** **2005**

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	1.0	1.9	1.8	2.6	6.1	3.3	3.2	2.0	2.9	3.1	0.0	1.6	4.1	5.2	3.2	0.0	0.0
Male	0.0	2.0	3.8	1.8	1.7	0.0	0.0	4.2	2.0	3.9	0.0	0.0	3.3	4.1	11.2	0.0	0.0	0.0
Female	0.0	0.0	0.0	1.9	3.5	12.7	6.7	2.2	2.0	1.9	6.2	0.0	0.0	4.2	0.0	5.9	0.0	0.0
Kidney & Renal Pelvis																		
All	2.8	0.0	0.0	0.0	0.0	0.0	2.2	4.3	10.8	9.7	21.6	32.7	38.7	57.9	75.5	51.7	61.6	21.4
Male	1.9	0.0	0.0	0.0	0.0	0.0	4.2	2.1	15.6	11.6	30.9	53.0	49.1	77.7	106.2	86.5	96.0	50.5
Female	3.9	0.0	0.0	0.0	0.0	0.0	0.0	6.6	6.0	7.7	12.3	12.1	28.6	37.6	48.7	23.5	37.4	6.5
Larynx																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	4.8	5.1	2.4	8.1	24.8	18.2	16.2	8.8	4.3
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	9.7	8.2	4.8	13.1	45.0	22.4	28.8	10.7	12.6
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	3.2	4.2	14.6	5.9	7.5	0.0
Leukemia																		
All	5.7	5.0	1.9	1.8	4.4	5.1	2.2	4.3	7.9	2.9	8.2	13.3	16.1	41.3	49.4	84.1	105.6	64.1
Male	3.7	5.9	3.8	1.8	5.2	3.9	0.0	4.2	7.8	1.9	6.2	19.3	16.4	53.2	44.7	129.7	160.0	100.9
Female	7.7	4.1	0.0	1.9	3.5	6.3	4.5	4.4	7.9	3.9	10.3	7.3	15.9	29.2	53.6	46.9	67.4	45.2
Liver & Bile Duct																		
All	1.9	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	3.9	11.3	8.5	9.7	22.7	20.8	16.2	4.4	17.1
Male	1.9	0.0	0.0	0.0	0.0	1.9	0.0	0.0	2.0	5.8	20.6	16.9	19.7	45.0	27.9	28.8	10.7	25.2
Female	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.1	0.0	0.0	0.0	14.6	5.9	0.0	12.9
Lung & Bronchus																		
All	0.9	0.0	0.0	0.0	0.0	0.0	0.0	3.2	13.8	14.5	37.0	62.9	154.9	289.2	317.4	423.6	475.1	294.6
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	7.8	11.6	35.0	77.1	147.4	302.7	430.2	540.3	597.2	504.6
Female	1.9	0.0	0.0	0.0	0.0	0.0	0.0	2.2	19.8	17.3	39.0	48.6	162.2	275.5	219.1	328.6	389.4	187.2
Melanoma of the Skin																		
All	0.0	1.0	0.0	2.7	1.7	9.1	16.3	24.7	29.5	29.9	30.8	29.0	64.6	62.0	62.4	142.3	110.0	76.9
Male	0.0	0.0	0.0	3.6	0.0	5.8	12.6	21.1	35.2	25.1	26.8	41.0	81.9	81.8	100.6	180.1	213.3	50.5
Female	0.0	2.1	0.0	1.9	3.5	12.7	20.2	28.5	23.8	34.7	34.9	17.0	47.7	41.7	29.2	111.5	37.4	90.4
Myeloma																		
All	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.9	4.1	7.3	17.8	20.7	31.2	25.9	30.8	17.1
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	8.2	7.2	19.7	32.7	55.9	21.6	21.3	37.9
Female	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	7.3	15.9	8.4	9.7	29.3	37.4	6.5

IDAHO **AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER** **2005**

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	0.9	1.0	1.0	0.0	0.9	2.0	3.3	3.2	3.9	15.4	23.6	26.6	35.5	70.2	109.3	90.6	145.2	81.1
Male	1.9	0.0	1.9	0.0	0.0	1.9	6.3	6.3	3.9	17.4	32.9	31.3	49.1	110.4	100.6	86.5	202.6	88.3
Female	0.0	2.1	0.0	0.0	1.8	2.1	0.0	0.0	4.0	13.5	14.4	21.9	22.3	29.2	116.9	93.9	104.8	77.5
Oral Cavity & Pharynx																		
All	0.0	1.0	0.0	0.0	0.9	1.0	2.2	3.2	7.9	13.5	16.4	24.2	48.4	28.9	26.0	55.0	52.8	21.4
Male	0.0	0.0	0.0	0.0	1.7	1.9	2.1	4.2	9.8	21.3	24.7	38.6	78.6	40.9	44.7	72.0	74.7	25.2
Female	0.0	2.1	0.0	0.0	0.0	0.0	2.3	2.2	6.0	5.8	8.2	9.7	19.1	16.7	9.7	41.1	37.4	19.4
Ovary																		
Female	0.0	0.0	0.0	1.9	0.0	4.2	0.0	2.2	2.0	17.3	18.5	24.3	28.6	16.7	68.2	64.6	67.4	96.8
Pancreas																		
All	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	3.9	3.9	6.2	16.9	25.8	47.5	54.6	77.6	110.0	93.9
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	3.9	6.2	24.1	22.9	45.0	55.9	79.3	117.3	88.3
Female	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	4.0	3.9	6.2	9.7	28.6	50.1	53.6	76.3	104.8	96.8
Prostate																		
Male	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	3.9	46.4	131.7	303.6	579.7	756.7	860.3	1015.8	1055.8	693.8
Stomach																		
All	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.9	5.1	6.1	8.1	12.4	20.8	38.8	35.2	29.9
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	6.2	12.1	16.4	24.5	39.1	43.2	53.3	12.6
Female	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	1.9	4.1	0.0	0.0	0.0	4.9	35.2	22.5	38.7
Testis																		
Male	0.0	0.0	0.0	3.6	18.9	15.5	20.9	8.4	15.6	5.8	4.1	2.4	3.3	4.1	0.0	0.0	0.0	0.0
Thyroid																		
All	0.0	0.0	1.0	1.8	4.4	13.1	22.8	19.4	14.8	29.9	24.7	14.5	14.5	14.5	20.8	16.2	8.8	12.8
Male	0.0	0.0	0.0	0.0	0.0	3.9	6.3	4.2	7.8	15.5	12.3	7.2	9.8	16.4	16.8	14.4	0.0	0.0
Female	0.0	0.0	2.0	3.7	8.8	23.2	40.4	35.1	21.8	44.3	37.0	21.9	19.1	12.5	24.4	17.6	15.0	19.4

SECTION V

2005 OBSERVED VS. EXPECTED NUMBERS BY HEALTH DISTRICT

2005 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	1,104	1,020.8+	508	531.9	1,023	962.8	1,678	1,505.7*	781	821.7	530	705.1*	571	710.2*
Bladder	56	53.9	27	28.9	49	51.3	91	71.9+	37	44.4	32	36.0	24	36.8+
Brain	11	17.6	6	8.3	21	15.8	33	26.5	16	12.9	12	11.9	8	13.2
Brain & CNS non-Malignant	17	18.0	5	9.4	17	16.9	39	24.2*	14	14.2	6	12.7	12	12.2
Breast	134	127.4	69	64.1	116	120.0	226	189.1*	100	100.7	60	88.2*	74	88.4
Breast (in-situ)	26	26.7	16	12.8	22	24.4	47	39.7	30	18.9+	9	18.6+	11	18.9
Cervix	8	7.7	4	3.8	6	8.5	14	14.6	9	5.9	5	5.6	5	6.0
Colorectal	117	94.7+	48	51.7	93	91.8	135	143.9	73	79.0	58	65.3	65	64.4
Corpus Uteri	28	24.3	10	12.8	23	23.1	34	39.2	26	18.5	16	16.5	13	17.2
Esophagus	15	12.4	10	6.3	18	10.6+	9	21.1*	14	9.4	5	8.7	4	8.9
Hodgkin lymphoma	2	5.3	5	2.2	4	5.7	10	8.9	3	4.1	6	3.5	3	4.3
Kidney & renal pelvis	41	30.3	13	16.2	36	28.2	59	46.2	13	26.6*	17	21.7	15	22.4
Larynx	7	7.7	3	3.8	7	6.8	9	11.6	8	5.5	8	4.6	3	5.3
Leukemia	33	26.7	10	15.0	30	27.3	43	43.6	28	22.0	10	20.5+	20	19.7
Liver & bile duct	14	9.3	0	5.5*	12	8.7	21	13.1	7	7.9	1	7.4*	5	7.1
Lung & bronchus	151	128.8	72	68.8	149	118.1*	213	178.6+	103	104.7	50	90.5*	49	90.5*
Melanoma of skin	97	47.7*	23	28.4	43	55.9	75	95.8+	38	45.0	22	39.5*	40	38.9
Myeloma	13	10.5	4	5.7	7	10.6	20	14.2	7	8.8	10	6.8	3	7.7
N-H Lymphoma	40	42.6	21	21.7	53	36.9+	65	61.2	24	34.9	19	29.1	30	27.9
Oral cavity & pharynx	32	23.9	8	12.9	20	23.9	51	35.4+	18	19.8	10	17.5	12	17.9
Ovary	15	15.6	6	8.3	13	15.1	30	21.2	15	12.1	9	10.5	7	10.9
Pancreas	24	27.1	7	14.8+	34	23.5+	44	36.4	21	21.5	14	17.9	16	17.5
Prostate	144	180.4*	93	88.3	163	156.8	264	241.1	143	133.5	92	115.0+	87	116.8*
Stomach	5	10.9	6	5.1	10	9.1	25	10.6*	6	8.1	3	6.9	4	6.7
Testis	5	7.1	3	3.7	5	8.8	18	13.5	4	6.0	8	5.3	8	6.1
Thyroid	20	27.6	8	13.1	31	26.3	62	44.4+	14	21.9	11	19.9+	30	18.7+
Pediatric (age 0-19)	8	8.6	4	4.1	11	11.5	18	17.4	11	7.9	6	8.9	9	9.9

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

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

2005 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	572	585.6	287	303.9	584	517.8*	887	807.9*	433	451.9	301	389.3*	327	390.6*
Bladder	43	43.7	21	23.3	42	38.7	67	56.6	29	34.5	26	28.4	20	29.0
Brain	7	8.7	4	4.2	10	8.1	15	14.9	11	6.1	5	6.1	3	6.9
Brain & CNS non-Malignant	3	4.3	4	1.9	5	3.5	3	7.6	4	3.0	1	3.0	5	2.6
Breast	1	1.8	1	0.8	1	1.7	1	2.8	3	1.0	1	1.1	2	1.0
Breast (in-situ)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cervix	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Colorectal	65	52.4	31	28.4	55	48.3	6	78.4	32	43.9	27	36.2	43	34.4
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	10.4	6	5.7	15	8.8	9	17.0	11	8.0	4	7.4	4	7.5
Hodgkin lymphoma	0	2.4	1	1.0	2	2.2	3	3.9	2	1.6	3	1.4	2	1.6
Kidney & renal pelvis	26	21.7	10	11.3	26	18.8	41	31.0	7	18.4*	12	14.9	11	15.3
Larynx	5	6.5	3	3.2	6	5.4	8	9.4	6	4.5	6	3.8	3	4.3
Leukemia	11	17.0	9	8.5	15	15.5	30	21.6	19	11.9	4	11.8+	10	11.2
Liver & bile duct	11	8.2	0	4.8+	9	7.5	19	10.8+	6	6.6	1	6.3+	5	6.0
Lung & bronchus	71	74.5	35	39.4	99	60.2*	103	97.1	56	57.0	30	49.3*	34	48.5+
Melanoma of skin	49	28.0*	12	16.4	23	30.6	44	50.4	21	25.2	16	21.6	24	21.3
Myeloma	9	6.7	3	3.7	5	6.4	1	9.3	5	5.4	6	4.4	1	5.0
N-H Lymphoma	20	25.5	11	12.7	29	21.2	36	35.5	15	19.6	14	16.4	21	15.8
Oral cavity & pharynx	18	18.2	7	9.2	17	16.2	35	25.9	12	14.1	9	12.4	10	12.7
Ovary	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pancreas	14	12.3	3	7.0	15	10.7	16	17.8	12	9.5	7	8.3	7	8.3
Prostate	144	184.2*	93	91.1	163	154.4	264	235.7	143	132.9	92	115.9+	87	117.4*
Stomach	2	7.7+	2	3.6	6	5.9	21	5.5*	3	5.4	1	4.7	4	4.4
Testis	5	7.0	3	3.8	5	8.7	18	13.9	4	6.1	8	5.2	8	5.9
Thyroid	3	6.9	2	3.1	4	6.4	3	10.3	5	4.8	3	4.5	10	3.8+
Pediatric (age 0-19)	6	4.3	3	2.2	6	5.9	8	9.5	5	4.2	3	4.5	3	5.2

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

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

2005 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	532	441.6*	221	231.5	439	443.1	791	686.8*	348	369.0	229	317.3*	244	320.8*
Bladder	13	11.0	6	6.2	7	12.2	24	14.1+	8	9.8	6	7.8	4	7.9
Brain	4	8.9	2	4.1	11	7.6	18	11.6	5	6.7	7	5.7	5	6.2
Brain & CNS non-Malignant	14	13.7	1	7.4+	12	13.4	36	16.7*	10	11.2	5	9.7	7	9.6
Breast	133	124.8	68	61.9	115	119.7	225	187.4*	97	99.9	59	86.9*	72	87.2
Breast (in-situ)	26	26.6	16	12.6	22	24.7	47	39.9	30	18.9+	9	18.6+	11	18.8
Cervix	8	7.8	4	3.7	6	8.6	14	14.5	9	5.9	5	5.7	5	6.0
Colorectal	52	42.6	17	23.5	38	43.4	69	64.7	41	35.1	31	29.2	22	30.1
Corpus Uteri	28	24.1	10	12.5	23	23.3	34	39.6	26	18.5	16	16.4	13	17.1
Esophagus	1	2.2	4	0.8+	3	1.7	0	3.8+	3	1.4	1	1.3	0	1.4
Hodgkin lymphoma	2	2.9	4	1.2	2	3.6	7	4.9	1	2.4	3	2.1	1	2.7
Kidney & renal pelvis	15	8.9	3	5.0	10	9.3	18	14.9	6	8.1	5	6.9	4	7.1
Larynx	2	1.2	0	0.7	1	1.3	1	2.2	2	0.9	2	0.7	0	1.0
Leukemia	22	9.9*	1	6.6+	15	11.7	13	21.7	9	10.1	6	8.8	10	8.5
Liver & bile duct	3	1.1	0	0.8	3	1.1	2	2.3	1	1.2	0	1.1	0	1.1
Lung & bronchus	80	55.2*	37	29.9	50	57.9	110	79.9*	47	47.7	20	41.3*	15	42.1*
Melanoma of skin	48	19.9*	11	12.0	20	25.2	31	44.7+	17	19.7	6	18.1*	16	17.6
Myeloma	4	3.9	1	2.1	2	4.1	9	4.8	2	3.4	4	2.4	2	2.7
N-H Lymphoma	20	17.2	10	9.1	24	15.6	29	25.5	9	15.3	5	12.6+	9	12.1
Oral cavity & pharynx	14	5.8*	1	3.8	3	7.6	16	9.5	6	5.7	1	5.2	2	5.2
Ovary	15	15.5	6	8.1	13	15.2	30	21.6	15	12.1	9	10.5	7	10.9
Pancreas	10	14.8	4	7.8	19	12.8	28	18.5+	9	12.0	7	9.6	9	9.3
Prostate	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Stomach	3	3.3	4	1.5	4	3.2		5.1	3	2.7	2	2.2	0	2.4
Testis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thyroid	17	21.0	6	9.8	27	20.1	49	33.5+	9	16.9	8	15.7	20	15.0
Pediatric (age 0-19)	2	4.3	1	1.9	5	5.7	10	8.0	6	3.7	3	4.3	6	4.6

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

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

SECTION VI

RISKS OF 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 75	1 in 23	1 in 10	1 in 5	1 in 3	1 in 2
40		1 in 32	1 in 11	1 in 5	1 in 3	1 in 2
50			1 in 16	1 in 6	1 in 3	1 in 2
60				1 in 9	1 in 4	1 in 3
70					1 in 6	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 788	1 in 143	1 in 44	1 in 17	1 in 8	1 in 5
40		1 in 173	1 in 46	1 in 17	1 in 8	1 in 5
50			1 in 62	1 in 18	1 in 9	1 in 5
60				1 in 25	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 35	1 in 11	1 in 4	1 in 2	1 in 2
40		1 in 48	1 in 12	1 in 4	1 in 2	1 in 2
50			1 in 15	1 in 5	1 in 2	1 in 2
60				1 in 6	1 in 3	1 in 2
70					1 in 3	1 in 2
80						1 in 2

If your current age is:	Then your risk of dying from cancer by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 572	1 in 140	1 in 41	1 in 14	1 in 7	1 in 4
40		1 in 183	1 in 44	1 in 15	1 in 7	1 in 4
50			1 in 56	1 in 15	1 in 7	1 in 4
60				1 in 20	1 in 7	1 in 4
70					1 in 10	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 264	1 in 63	1 in 27	1 in 14	1 in 10	1 in 8
40		1 in 81	1 in 29	1 in 15	1 in 10	1 in 8
50			1 in 44	1 in 18	1 in 11	1 in 9
60				1 in 28	1 in 14	1 in 10
70					1 in 24	1 in 14
80						1 in 24

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 2954	1 in 495	1 in 184	1 in 94	1 in 55	1 in 36
40		1 in 590	1 in 194	1 in 96	1 in 56	1 in 36
50			1 in 284	1 in 113	1 in 61	1 in 38
60				1 in 181	1 in 74	1 in 42
70					1 in 113	1 in 49
80						1 in 65

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 11939	1 in 354	1 in 41	1 in 12	1 in 7	1 in 5
40		1 in 359	1 in 40	1 in 12	1 in 7	1 in 5
50			1 in 44	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 10

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 23746	1 in 1807	1 in 271	1 in 77	1 in 28
40		1 in 23386	1 in 1780	1 in 267	1 in 76	1 in 28
50			1 in 1867	1 in 262	1 in 74	1 in 27
60				1 in 285	1 in 72	1 in 25
70					1 in 82	1 in 24
80						1 in 22

Note: * Risks are not precise - best estimates are 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 2030	1 in 437	1 in 160	1 in 64	1 in 33	1 in 21
40		1 in 553	1 in 172	1 in 65	1 in 33	1 in 21
50			1 in 245	1 in 72	1 in 35	1 in 21
60				1 in 98	1 in 38	1 in 22
70					1 in 56	1 in 25
80						1 in 34

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 8829	1 in 2078	1 in 697	1 in 232	1 in 107	1 in 51
40		1 in 2697	1 in 751	1 in 237	1 in 108	1 in 51
50			1 in 1022	1 in 255	1 in 110	1 in 51
60				1 in 326	1 in 119	1 in 52
70					1 in 167	1 in 55
80						1 in 62

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 1808	1 in 404	1 in 122	1 in 48	1 in 26	1 in 18
40		1 in 512	1 in 129	1 in 49	1 in 26	1 in 18
50			1 in 167	1 in 52	1 in 26	1 in 18
60				1 in 71	1 in 29	1 in 19
70					1 in 42	1 in 22
80						1 in 30

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 6843	1 in 1459	1 in 492	1 in 170	1 in 80	1 in 49
40		1 in 1826	1 in 522	1 in 172	1 in 79	1 in 49
50			1 in 709	1 in 184	1 in 80	1 in 49
60				1 in 233	1 in 85	1 in 49
70					1 in 114	1 in 53
80						1 in 65

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 537	1 in 242	1 in 143	1 in 96	1 in 70	1 in 56
40		1 in 437	1 in 193	1 in 115	1 in 79	1 in 62
50			1 in 340	1 in 154	1 in 95	1 in 71
60				1 in 268	1 in 126	1 in 86
70					1 in 211	1 in 113
80						1 in 180

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 20069	1 in 4832	1 in 2344	1 in 1192	1 in 662	1 in 406
40		1 in 6314	1 in 2634	1 in 1258	1 in 679	1 in 412
50			1 in 4435	1 in 1541	1 in 747	1 in 432
60				1 in 2266	1 in 862	1 in 459
70					1 in 1246	1 in 516
80						1 in 661

Melanoma in Males

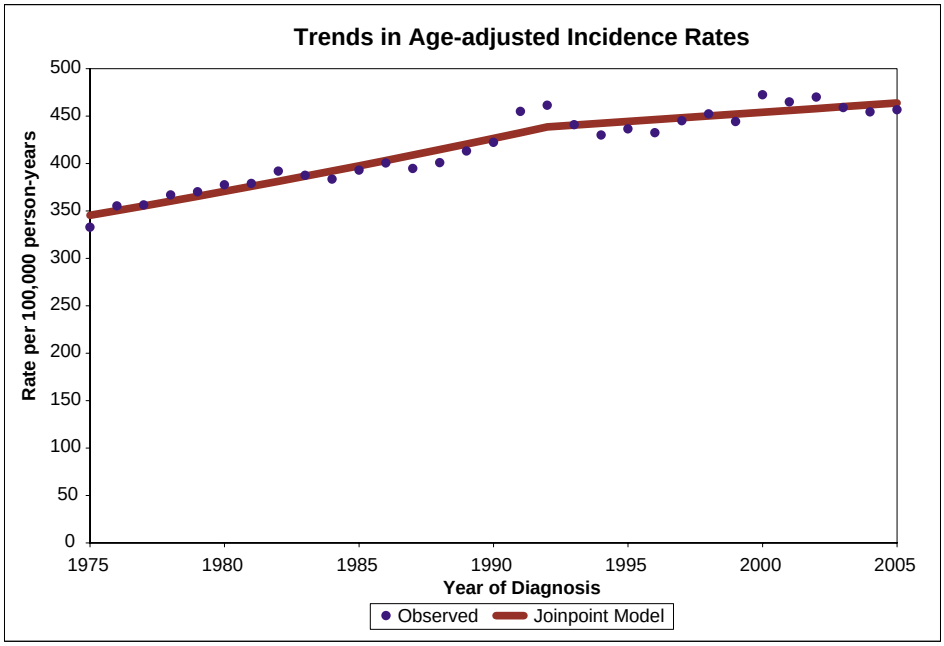
If your current age is:	Then your risk of developing melanoma by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 751	1 in 279	1 in 131	1 in 72	1 in 48	1 in 39
40		1 in 436	1 in 156	1 in 78	1 in 50	1 in 40
50			1 in 234	1 in 92	1 in 55	1 in 43
60				1 in 140	1 in 67	1 in 48
70					1 in 108	1 in 63
80						1 in 98

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 4418	1 in 1842	1 in 991	1 in 445	1 in 263	1 in 198
40		1 in 3111	1 in 1258	1 in 487	1 in 276	1 in 204
50			1 in 2047	1 in 560	1 in 293	1 in 212
60				1 in 721	1 in 321	1 in 221
70					1 in 494	1 in 272
80						1 in 399

SECTION VII

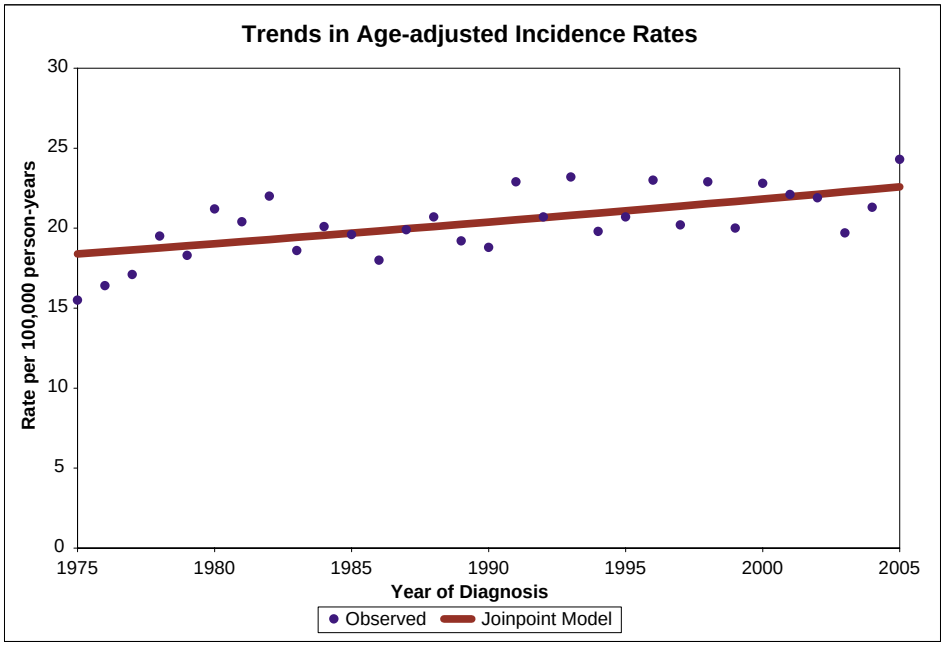
CANCER TRENDS IN IDAHO
1975-2005

All Sites



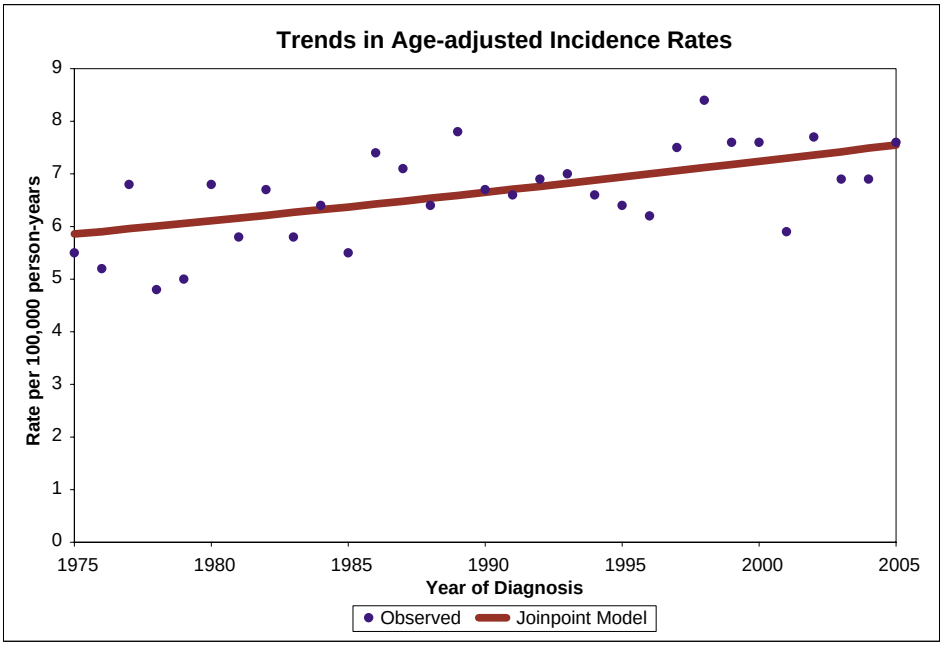
Cancer incidence increased at a rate of about 1.4% per year in Idaho from 1975 to 1992, after which the rate of increase lessened to about 0.4% per year. Cancer incidence trends over time were different for males and females. For males, much of the overall trend is due to the trend in prostate cancer incidence. For females, much of the overall trend is due to the trend in breast cancer incidence.

Bladder



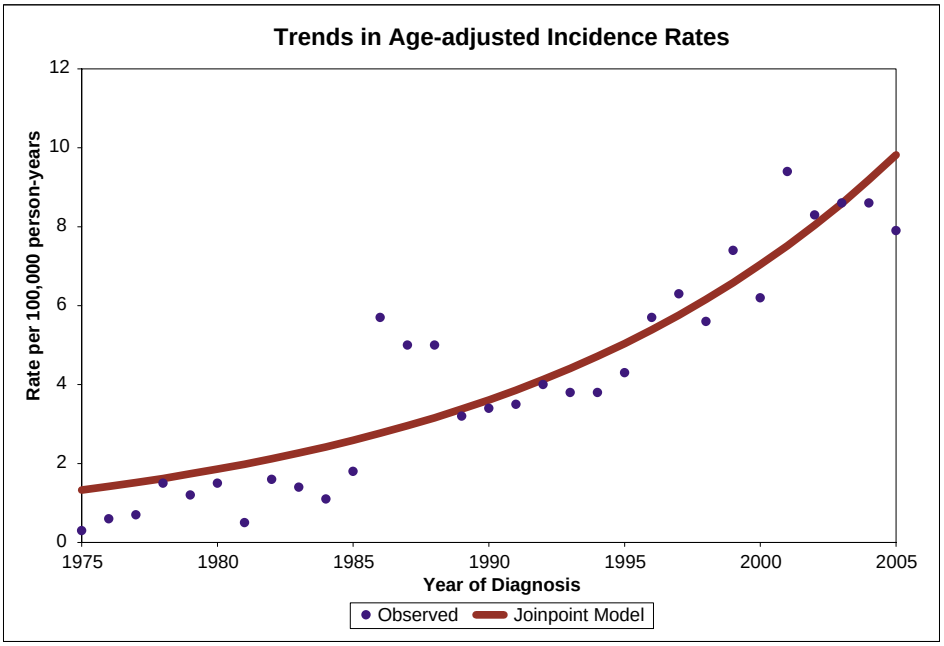
Bladder cancer incidence includes in-situ and invasive cases. Bladder cancer incidence increased at a rate of about 0.7% per year in Idaho from 1975 to 2005. Most of the increase in bladder cancer incidence is attributable to males, who have rates of bladder cancer incidence about 4-5 times those of females.

Brain



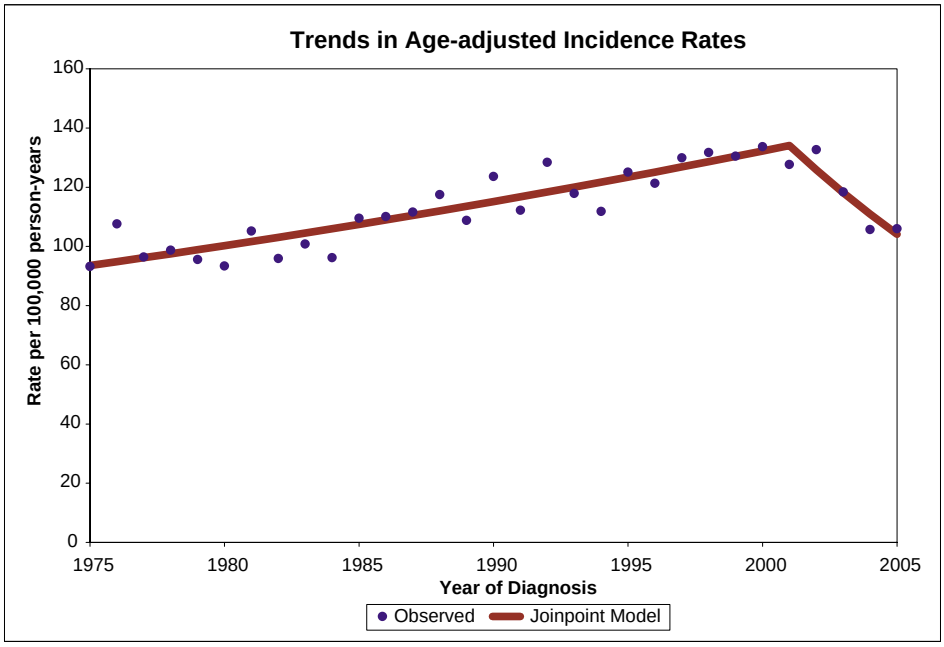
Malignant brain cancer incidence increased at a rate of about 0.8% per year in Idaho from 1975 to 2005. Most of the increase in malignant brain cancer incidence is attributable to males, whose rates increased about 1.1% per year.

Brain and Other CNS, Non-Malignant



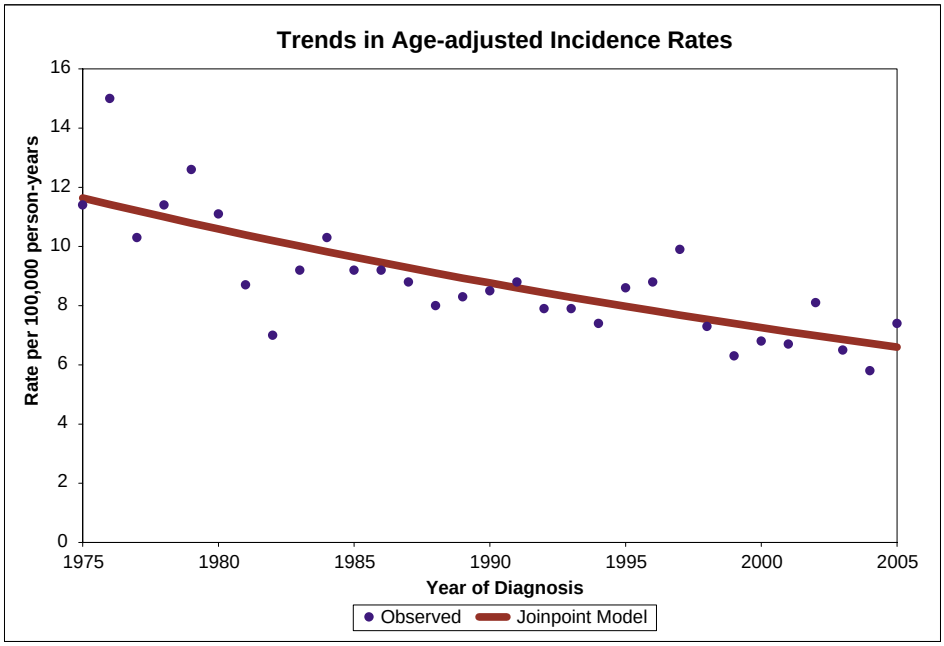
Non-malignant brain cancer includes tumors with benign and borderline behavior. Non-malignant brain cancer incidence increased at a rate of about 6.9 % per year in Idaho from 1975 to 2005.

Breast



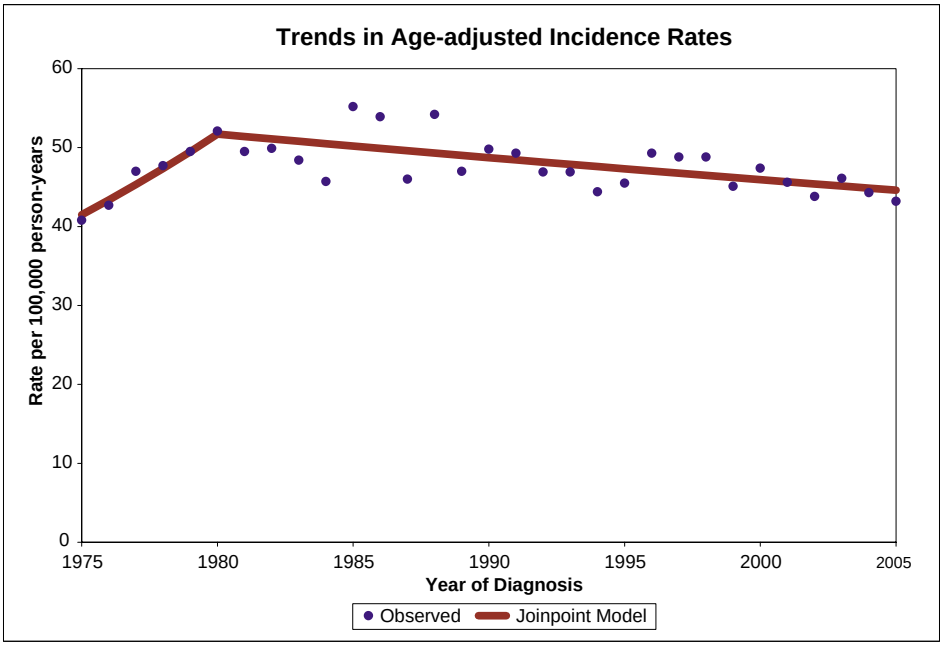
Invasive breast cancer incidence increased at a rate of about 1.4% per year among female Idahoans from 1975 to 2001, after which the rate decreased by about 6% per year. This may be due to a decrease in the use of hormone replacement therapy. In-situ breast cancer rates have increased about 5.8% per year since 1975 (data not shown).

Cervix



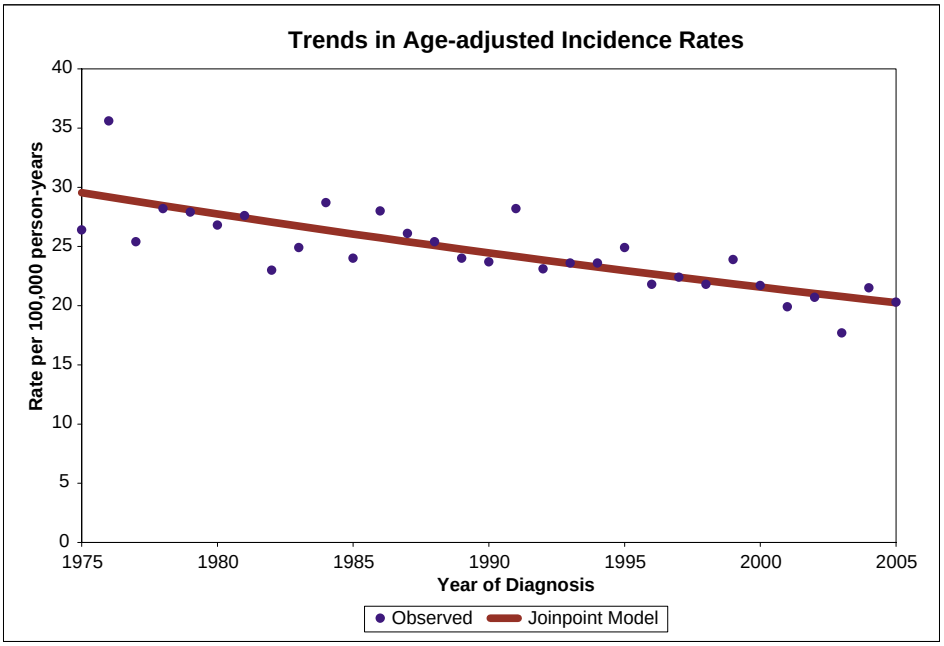
Invasive cervical cancer incidence has decreased about 2% per year in Idaho from 1975 to 2005.

Colorectal



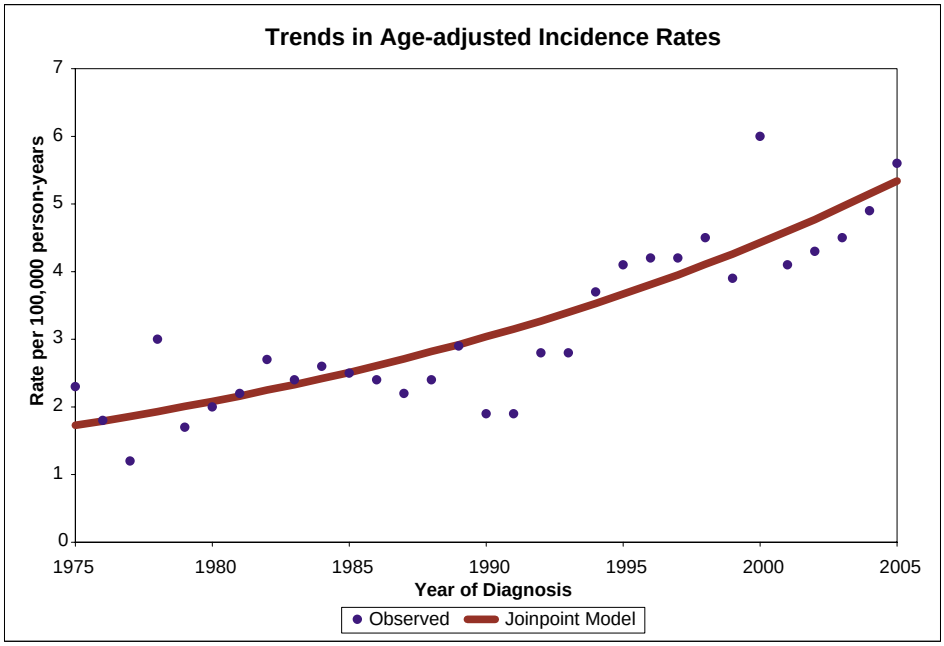
Colorectal cancer incidence increased at a rate of about 4.5% per year in Idaho from 1975 to 1980, after which the rate decreased about 0.6% per year. Colorectal cancer incidence trends over time were different for males and females. For males, rates increased from 1975 to 1988, then decreased. For females, rates decreased slowly across the entire time series.

Corpus Uteri



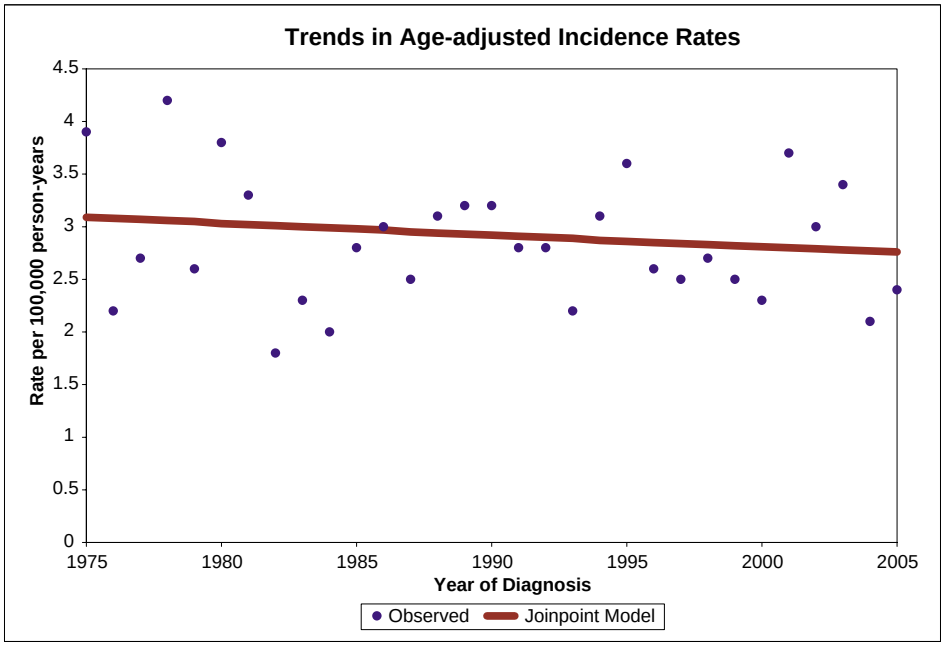
Corpus uteri cancer incidence decreased at a rate of about 1.3% per year among female Idahoans from 1975 to 2005.

Esophagus



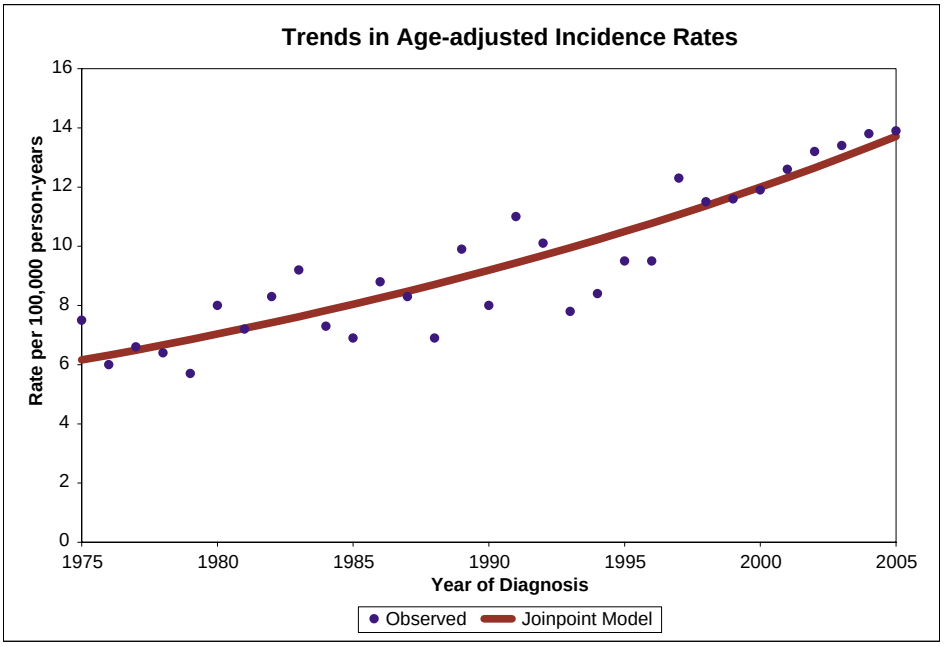
Esophageal cancer incidence increased at a rate of about 3.8% per year in Idaho from 1975 to 2005. The rate of increase was higher for males (4.0% per year) than for females (2.6% per year), and rates of esophageal cancers among males were about 3-4 times those among females.

Hodgkin Lymphoma



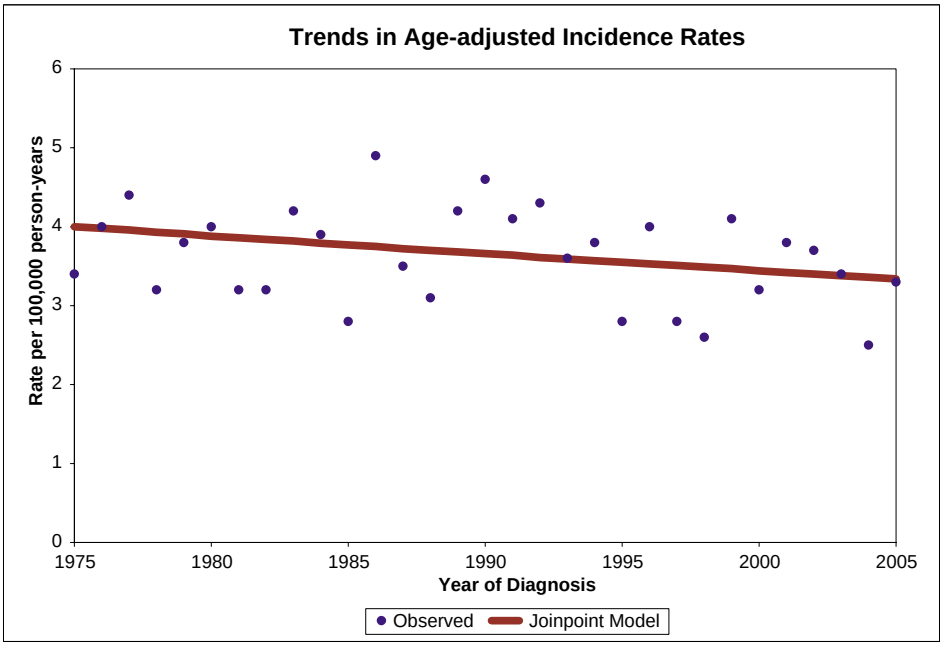
There was no statistically significant trend in Hodgkin lymphoma incidence in Idaho from 1975 to 2005; rates were stable but showed year-to-year variability due to the relatively small numbers of cases diagnosed annually.

Kidney and Renal Pelvis



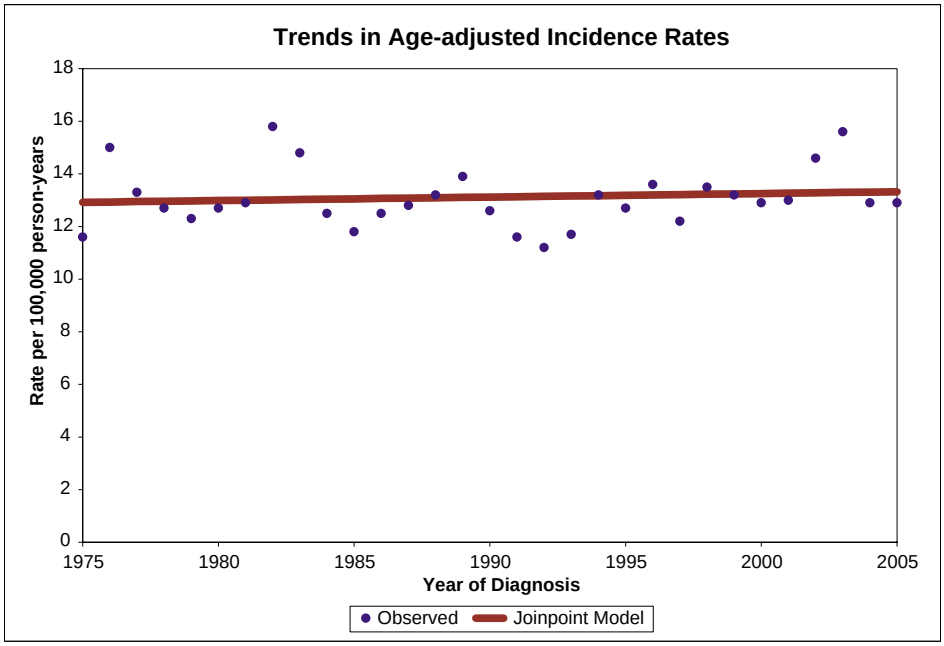
Kidney and renal pelvis cancer incidence increased at a rate of about 2.7% per year in Idaho from 1975 to 2005. The rate of increase was similar for males and females, although rates of kidney and renal pelvis cancers among males were about twice as high as among females.

Larynx



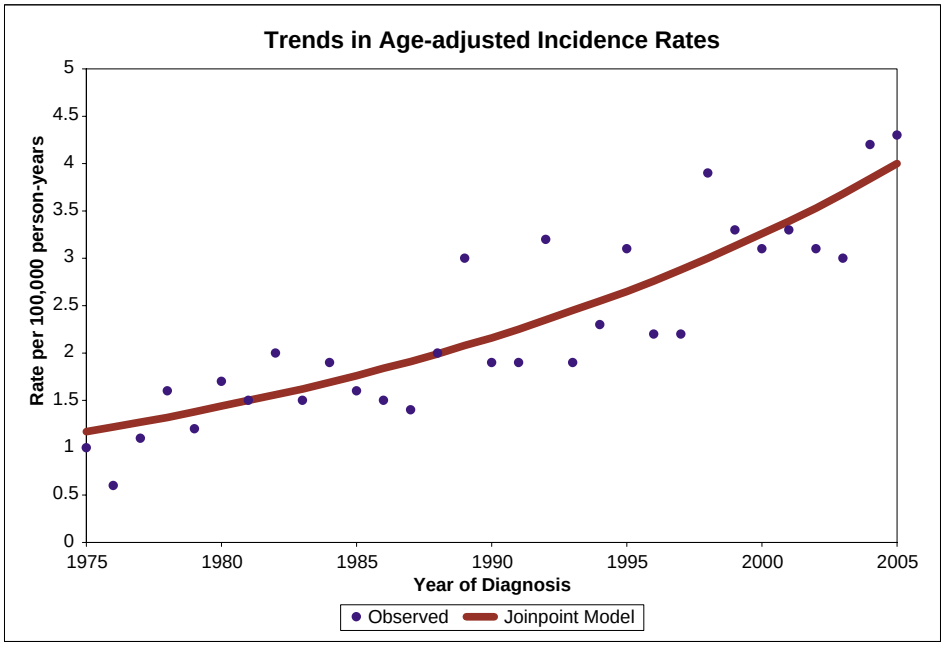
There was no statistically significant trend in laryngeal cancer incidence in Idaho from 1975 to 2005; rates decreased by about 0.6% per year but showed year-to-year variability due to the relatively small numbers of cases diagnosed annually. The rate of decrease was similar for males and females, although rates of laryngeal cancers among males were about 4 times as high as among females.

Leukemia



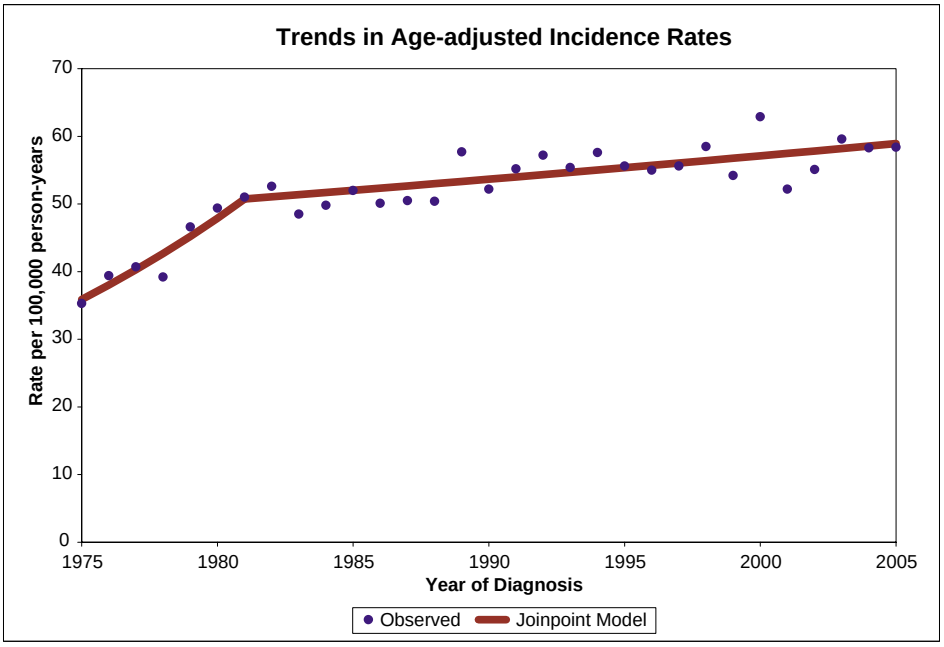
There was no statistically significant trend in leukemia incidence in Idaho from 1975 to 2005; rates were stable but showed year-to-year variability due to the relatively small numbers of cases diagnosed annually.

Liver and Bile Duct



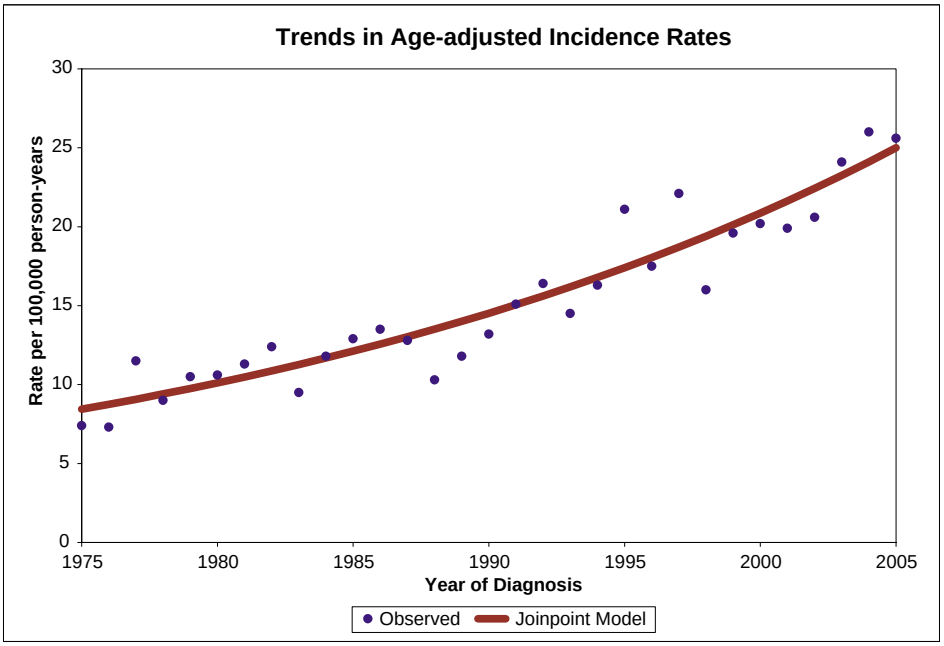
Liver cancer incidence increased at a rate of about 4.2% per year in Idaho from 1975 to 2005. The rate of increase was higher for males (5.1% per year) than for females (2.5% per year), and rates of liver cancers among males were about twice as high as among females.

Lung and Bronchus



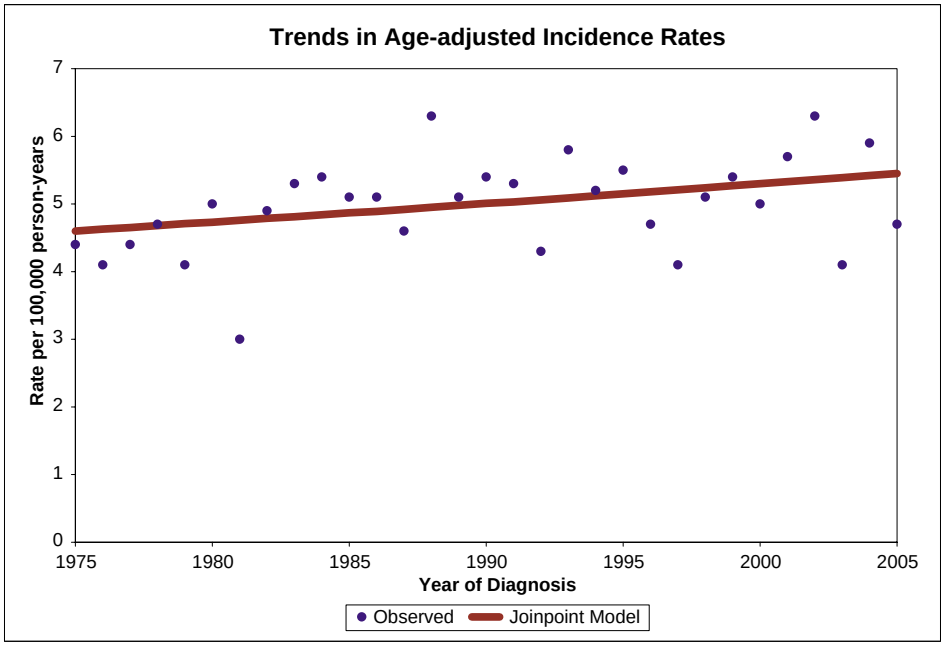
Lung cancer incidence increased at a rate of about 6.0% per year in Idaho from 1975 to 1981, after which the rate of increase lessened to about 0.6% per year. Lung cancer incidence trends over time were different for males and females. For males, lung cancer incidence increased at a rate of about 4.8% per year from 1975 to 1981, and then decreased by about 0.5% per year. For females, lung cancer incidence increased at a rate of about 6.1% per year from 1975 to 1988, after which the rate of increase lessened to about 1.7% per year. Historically, lung cancer incidence rates have been two or more times higher among males as among females, but the gap is continuing to narrow, reflecting long-term trends in smoking prevalence.

Melanoma



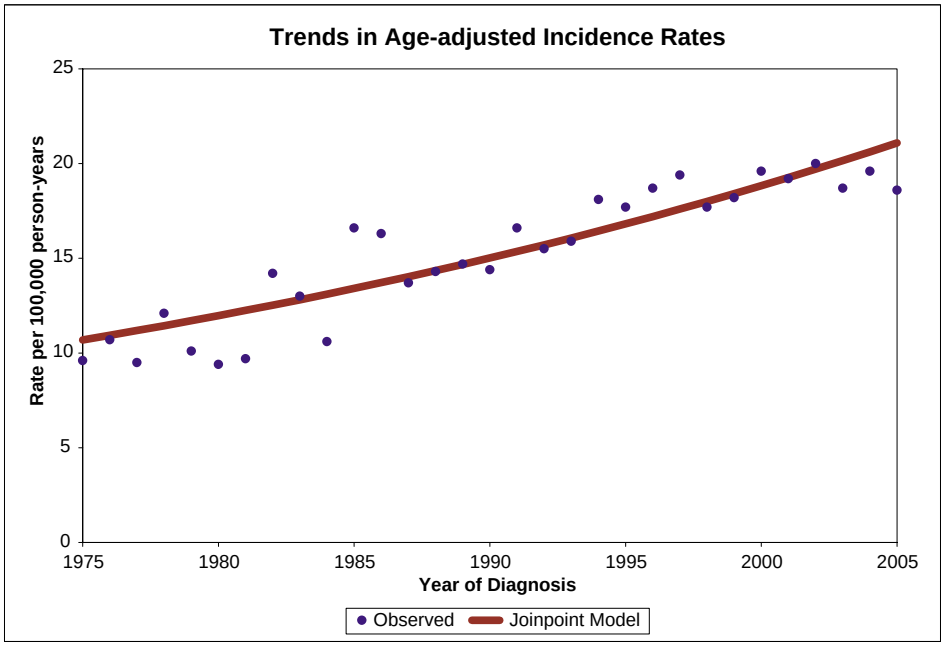
The incidence of melanoma of the skin increased at a rate of about 3.7% per year in Idaho from 1975 to 2005. The rate of increase was higher for males (4.3% per year) than for females (3.0% per year), and rates of melanoma incidence among males were higher than among females. The incidence of in-situ melanoma of the skin increased at a higher rate (11.0% per year from 1980 to 2005) than for the invasive cases depicted in the graph.

Myeloma



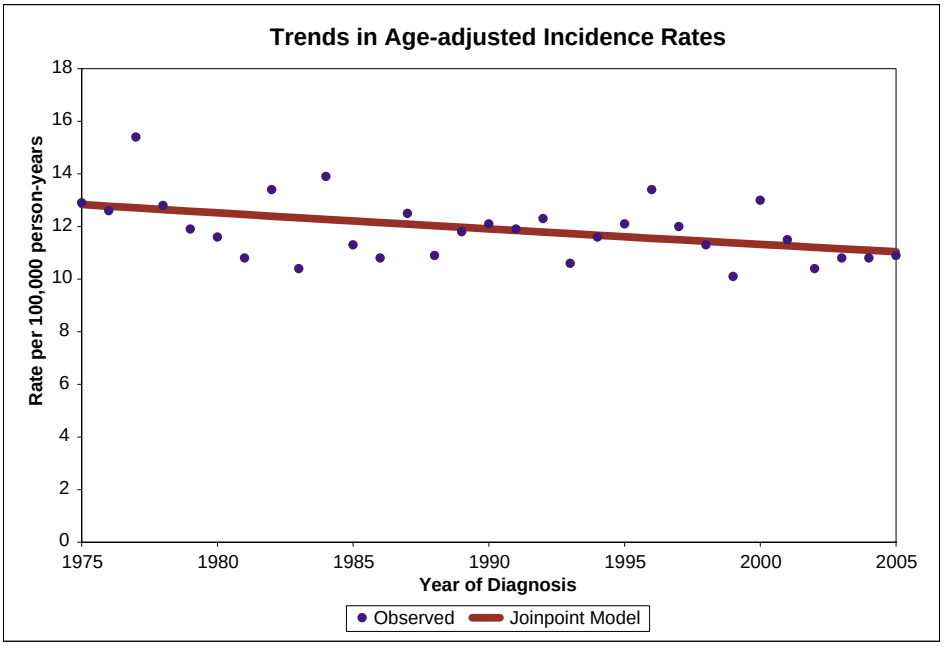
The incidence of myeloma increased at a rate of about 0.6% per year in Idaho from 1975 to 2005. The rate of increase was higher for males (1.2% per year) than for females (no significant trend), and rates of myeloma incidence among males were higher than among females.

Non-Hodgkin Lymphoma



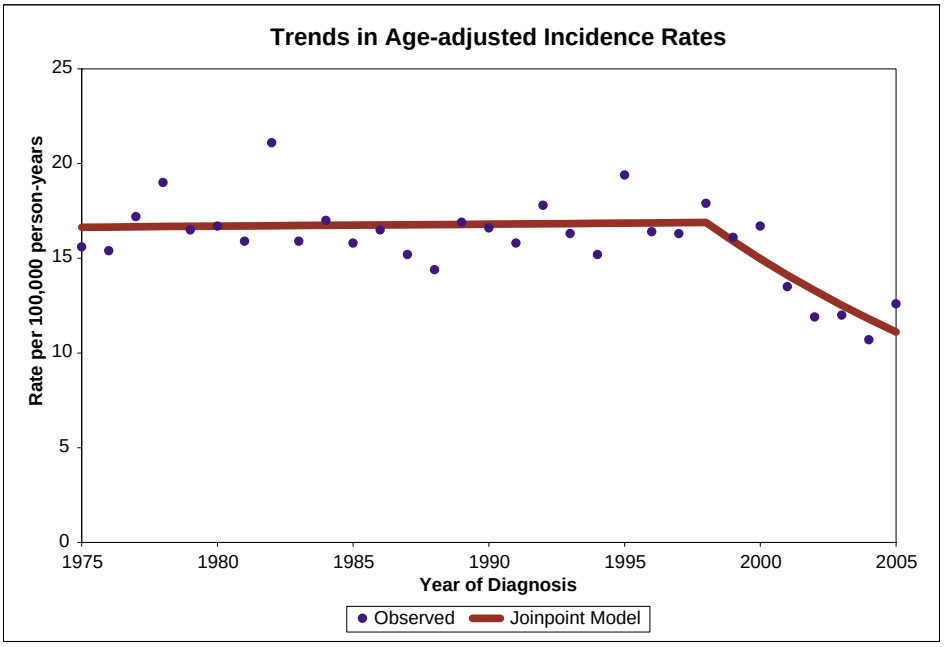
The incidence of non-Hodgkin lymphoma increased at a rate of about 2.3% per year in Idaho from 1975 to 2005. The rate of increase was higher for females (2.6% per year) than for males (2.0% per year), and rates of non-Hodgkin lymphoma incidence among males were higher than among females.

Oral Cavity



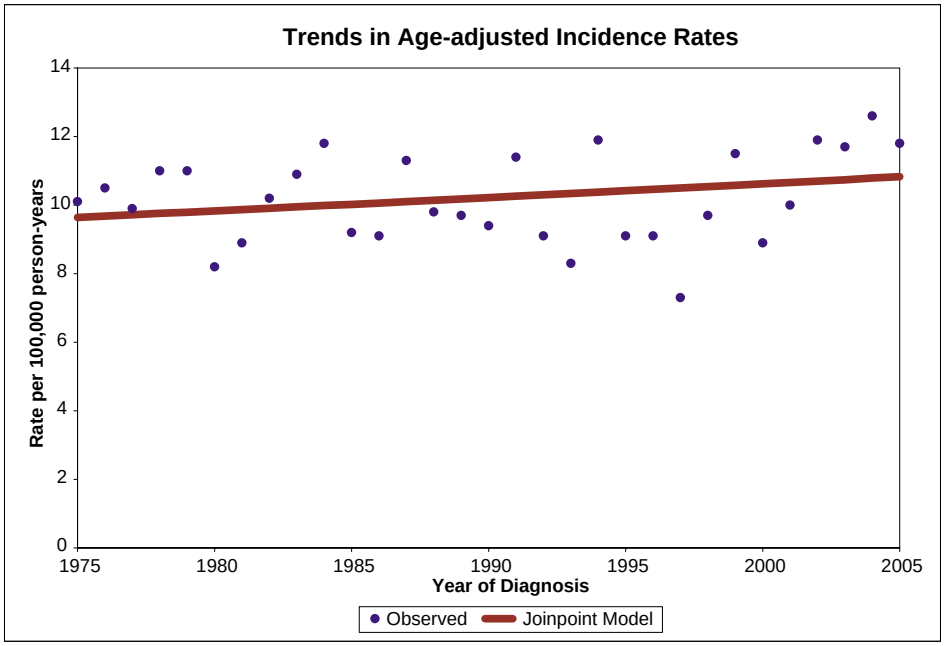
The incidence of cancers of the oral cavity and pharynx decreased at a rate of about 0.5% per year in Idaho from 1975 to 2005. The rate of decrease was higher for males (0.8% per year) than for females (no significant trend), and rates of cancers of the oral cavity and pharynx were about 3 times higher among males than among females. This latter result likely reflects differences in long-term prevalence trends for smoking and alcohol consumption between males and females.

Ovary



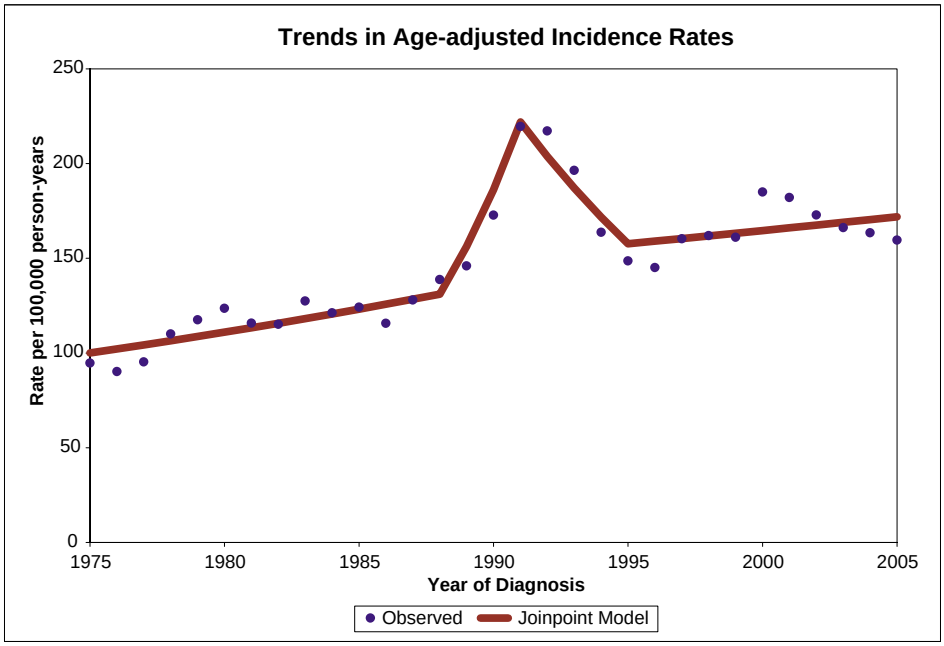
The incidence of ovarian cancer among females in Idaho was essentially stable from 1975 to 1998. From 1998 to 2005, ovarian cancer incidence decreased by about 5.8% per year.

Pancreas



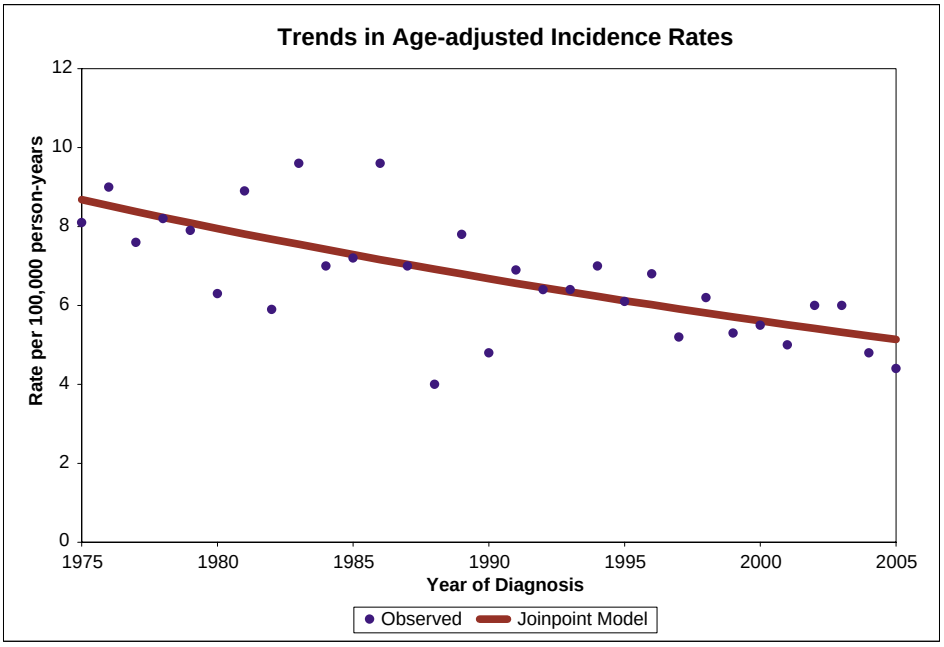
There was no statistically significant trend in pancreas cancer incidence in Idaho from 1975 to 2005; rates were stable but showed year-to-year variability due to the relatively small numbers of cases diagnosed annually. The rate of increase was higher for females (1.2% per year) than for males (no significant trend), and rates of pancreas cancer incidence among males were higher than among females.

Prostate



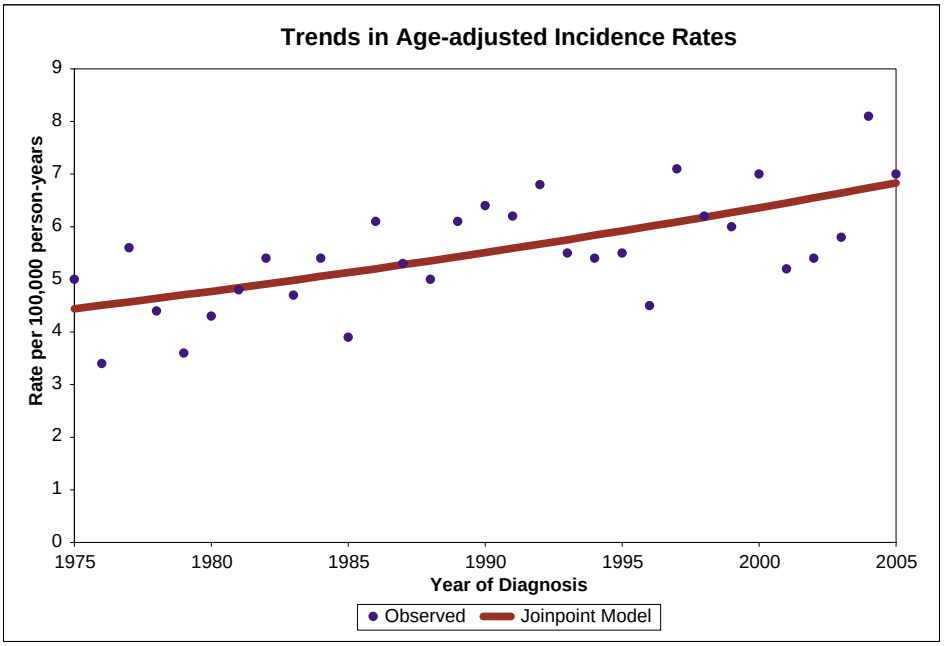
Trends in prostate cancer incidence are complicated, owing to the adoption of the Prostate-Specific Antigen (PSA) screening test in the late 1980s and early 1990s. From 1975 to 1988, prostate cancer incidence increased in Idaho at a rate of about 2.1% per year. From 1988 to 1991, prostate cancer incidence increased at a rate of about 19.2% per year. For the period 1995 to 2005, prostate cancer incidence rates had dropped to near the trend predicted from the 1975-1988 time series. 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



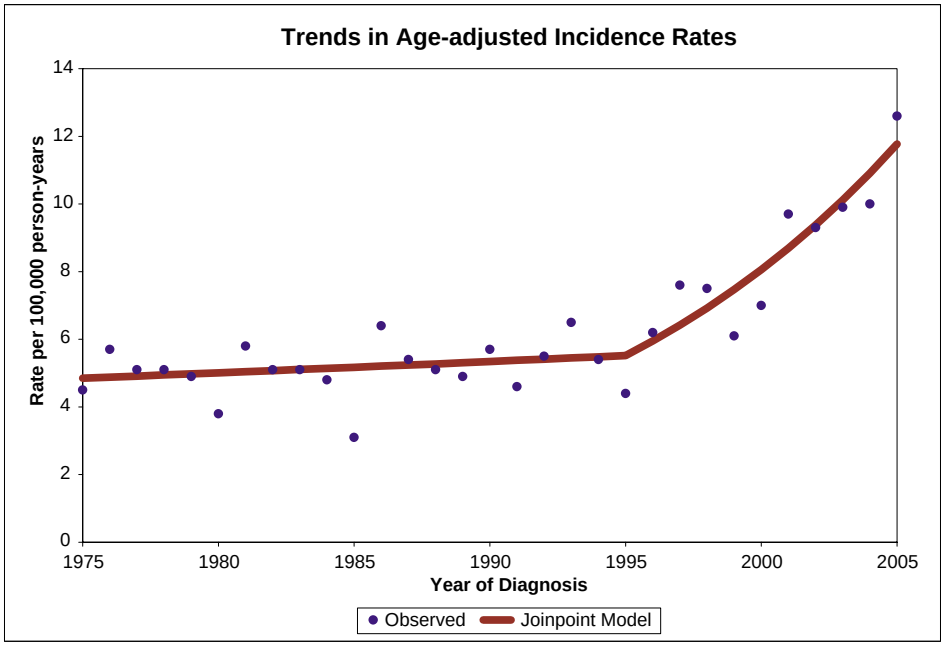
Stomach cancer incidence decreased at a rate of about 1.7% per year in Idaho from 1975 to 2005. Stomach cancer incidence trends over time were similar for males and females although stomach cancer incidence rates among males were about twice as high as among females.

Testis



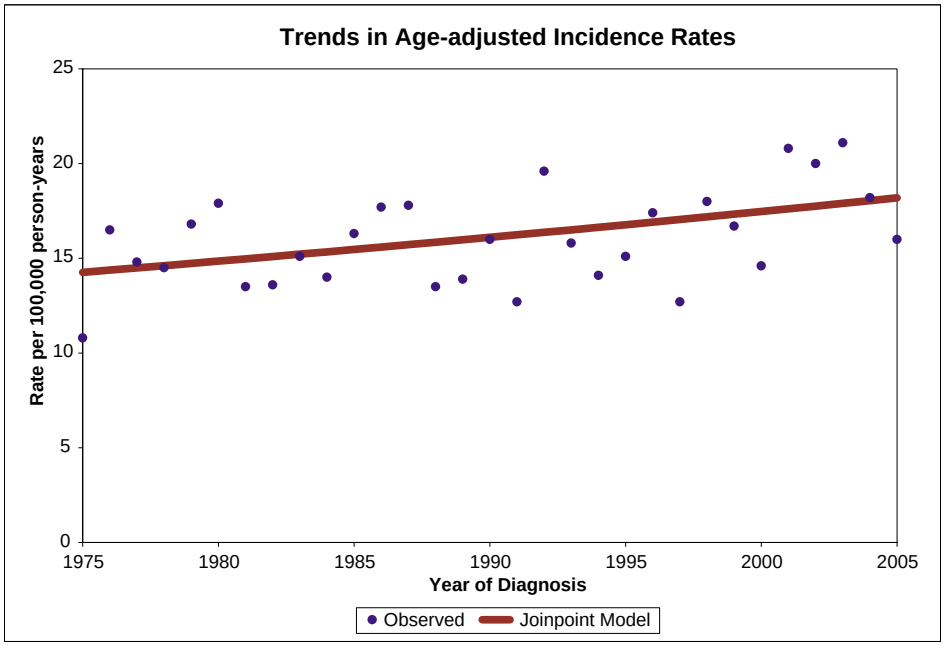
Testis cancer incidence increased at a rate of about 1.4% per year in Idaho from 1975 to 2005.

Thyroid



Thyroid cancer incidence was essentially stable in Idaho from 1975 to 1995, after which rates increased by about 7.9% 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 3.2% per year from 1975 to 2005. For females, thyroid cancer incidence was stable from 1975 to 1994, after which rates increased by about 7.8% 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 2005. 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.

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APPENDICES

APPENDIX A

STANDARD SITE ANALYSIS CATEGORIES

SITE CATEGORY Categories in SMALL CAPITALS are aggregated from the groups indented under them	PRIMARY SITE CODE EXCLUDES histologic types 9590-9989
BUCCAL CAVITY & PHARYNX	
Lip	C00.0 - C00.9
Tongue	C01.9 - C02.9
Salivary Glands	C07.9 - C08.9
Floor of Mouth	C04.0 - C04.9
Gum and Other Mouth	C03.0 - C03.9 C05.0 - C05.9 C06.0 - C06.9
Nasopharynx	C11.0 - C11.9
Tonsil	C09.0 - C09.9
Oropharynx	C10.0 - C10.9
Hypopharynx	C12.9 C13.0 - C13.9
Other Buccal Cavity and Pharynx	C14.0 C14.2 - C14.8
DIGESTIVE SYSTEM	
Esophagus	C15.0 - C15.9
Stomach	C16.0 - C16.9
Small Intestine	C17.0 - C17.9
COLON (Excluding Rectum)	
Cecum	C18.0
Appendix	C18.1
Ascending Colon	C18.2
Hepatic Flexure	C18.3
Transverse Colon	C18.4
Splenic Flexure	C18.5
Descending Colon	C18.6
Sigmoid Colon	C18.7
Large Intestine, NOS	C18.8 - C18.9, C26.0

SITE CATEGORY Categories in SMALL CAPITALS are aggregated from the groups indented under them	PRIMARY SITE CODE EXCLUDES histologic types 9590-9989
RECTUM AND RECTOSIGMOID	
Rectosigmoid Junction	C19.9
Rectum	C20.9
Anus, Anal Canal, & Anorectum	C21.0 - C21.2 C21.8
Liver	C22.0
Intrahepatic Bile Duct	C22.1
Gallbladder	C23.9
Other Biliary	C24.0 - C24.9
Pancreas	C25.0 - C25.9
Retroperitoneum	C48.0
Peritoneum, Omentum, & Mesentery	C48.1 - C48.2
Other Digestive Organs	C26.8 - C26.9 C48.8
RESPIRATORY SYSTEM	
Nasal Cavity, Middle Ear, & Accessory Sinuses	C30.0 - C30.1 C31.0 - C31.9
Larynx	C32.0 - C32.9
Lung and Bronchus	C34.0 - C34.9
Pleura	C38.4
Trachea, Mediastinum, & Other Respiratory Organs	C33.9 C38.1 - C38.3 C38.8 C39.0 C39.8 C39.9
BONES AND JOINTS	C40.0 - C41.9
SOFT TISSUE (Including Heart)	C38.0 C47.0 - C47.9 C49.0 - 49.9

SITE CATEGORY Categories in SMALL CAPITALS are aggregated from the groups indented under them	PRIMARY SITE CODE EXCLUDES histologic types 9590-9989
SKIN (Excluding Basal and Squamous)	
Melanomas - Skin	C44.0 - C44.9 Histology Types 8720 - 8790 ONLY
Other Non - Epithelial	C44.0 - C44.9 Also Excluding Histology Types 8000 - 8004 8010 - 8045 8050 - 8082 8090 - 8110 8720 - 8790 9590 - 9989
BREAST	C50.0 - C50.9
FEMALE GENITAL SYSTEM	
Cervix Uteri	C53.0 - C53.9
Corpus Uteri	C54.0 - C54.9
Uterus, NOS	C55.9
Ovary	C56.9
Vagina	C52.9
Vulva	C51.0 - C51.9
Other Female Genital Organs	C57.0 - C58.9
MALE GENITAL SYSTEM	
Prostate	C61.9
Testis	C62.0 - C62.9
Penis	C60.0 - C60.9
Other Male Genital Organs	C63.0 - C63.9
URINARY SYSTEM	
Bladder	C67.0 - C67.9
Kidney and Renal Pelvis	C64.9 C65.9
Ureter	C66.9
Other Urinary Organs	C68.0 - C68.9
EYE AND ORBIT	C69.0 - C69.9

SITE CATEGORY Categories in SMALL CAPITALS are aggregated from the groups indented under them	PRIMARY SITE CODE EXCLUDES histologic types 9590-9989
BRAIN AND OTHER NERVOUS SYSTEM	
Brain	C71.0 - C71.9 Also excludes: 9530 - 9539 And 9590 - 9989
Other Nervous System	A) C71.0 - C71.9 (meningioma) Histologic Type: 9530 - 9539 ONLY B) C70.0 - C70.9 C) C72.0 - C72.9
ENDOCRINE SYSTEM	
Thyroid	C73.9
Other Endocrine (Including Thymus)	C37.9 C74.0 - C74.9 C75.0 - C75.9

SITE CATEGORY **Categories in SMALL CAPITALS are aggregated from the groups indented under them**	PRIMARY SITE CODE	HISTOLOGY
LYMPHOMAS		
Hodgkin Disease		
Nodal	C02.4, C09.8, C09.9, C11.1, C14.2, C37.9 C42.2 C77.0 - C77.9	Types: 9650 - 9667 ONLY
Extranodal	For All Other Sites Exclude Sites: C02.4, C09.8, C09.9, C11.1, C14.2, C37.9, C42.2 C77.0 - C77.9	Types: 9650 - 9667 ONLY
Non - Hodgkin Disease		
Nodal	C02.4, C09.8, C09.9, C11.1, C14.2, C37.9, C42.2 C77.0 - C77.9	Types: 9590 - 9596 9670 - 9729, 9823, 9827 ONLY
Extranodal	For All Other Sites Excluding Sites: C02.4, C09.8, C09.9, C11.1, C14.2, C37.9, C42.2 C77.0 - C77.9	Types: 9590 - 9595 9670 - 9729 ONLY Types: 9823, 9827 For All Other Sites Except C42.0, C42.1, C42.4
MULTIPLE MYELOMA	For All Sites	Types: 9731 - 9732 ONLY

SITE CATEGORY **Categories in SMALL CAPITALS are aggregated from groups indented under them**	HISTOLOGY
LEUKEMIAS	
Lymphocytic	
Acute Lymphocytic	Type: 9821, 9828, ONLY
Chronic Lymphocytic	Type: 9823 ONLY
Other Lymphocytic	Type: 9820, 9822, 9824, 9825, 9826, ONLY
Granulocytic (Myeloid)	
Acute Granulocytic	Type: 9840, 9861, 9866, 9867, 9871 - 9874 ONLY
Chronic Granulocytic	Type: 9863, 9868, ONLY
Other Granulocytic	Type: 9860, 9862, 9864, ONLY
Monocytic	
Acute Monocytic	Type: 9891 ONLY
Chronic Monocytic	Type: 9893 ONLY
Other Monocytic	Type: 9890, 9892, 9894, ONLY
Other	
Other Acute	Type: 9801, 9841, 9931, 9932 ONLY
Other Chronic	Type: 9803, 9842 ONLY
Aleukemic, Subleukemic, & NOS	Type: 9800, 9802, 9804, 9830, 9850, 9870, 9880, 9900, 9910, 9930, 9940, 9941 ONLY Type 9827 For Sites C42.0, C42.1, C42.4 ONLY

SITE CATEGORY **Categories in SMALL CAPITALS are aggregated from groups indented under them**	PRIMARY SITE CODE **EXCLUDES histologic types 9590-9989**
ILL- DEFINED AND UNSPECIFIED SITES	A) Type: 9720 - 9723, 9740, 9741, 9760 - 9764, 9950 - 9989 ONLY For All Sites B) C76.0 - C76.8, C80.9 Type 8000 - 9589 C) C42.0 - C42.4 Type 8000 - 9589 D) C77.0 - C77.9 Type 8000 - 9589
INVALID SITE	Site or histology code not within valid range or site code not found in this table.

Source: “Standards for Completeness, Quality, Analysis, and Management of Data, Vol III”. American Association of Central Cancer Registries, September 2002. [14]

APPENDIX B

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, 2006.[11]

APPENDIX C

2005 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	5,881	2,808	9,583	14,483	6,680	6,994	7,736	54,165
5 to 9	6,463	2,649	8,989	13,830	6,219	6,453	6,653	51,256
10 to 14	7,162	3,020	9,097	13,959	6,450	6,272	6,994	52,954
15 to 19	7,630	4,371	8,755	13,773	6,824	6,877	8,095	56,325
20 to 24	6,720	5,450	8,788	14,909	6,475	7,084	8,796	58,222
25 to 29	6,007	3,467	9,121	15,329	5,616	5,712	6,346	51,598
30 to 34	6,184	3,002	8,271	15,803	5,225	4,581	4,703	47,769
35 to 39	6,190	2,805	7,687	16,186	5,234	4,498	4,884	47,484
40 to 44	7,255	3,360	7,797	15,802	6,156	5,023	5,808	51,201
45 to 49	7,712	3,579	7,274	15,031	6,317	5,713	6,105	51,731
50 to 54	7,776	3,672	6,665	13,508	5,885	5,437	5,661	48,604
55 to 59	7,122	3,267	5,830	11,306	4,913	4,488	4,574	41,500
60 to 64	5,223	2,494	4,434	7,673	3,882	3,289	3,540	30,535
65 to 69	4,407	2,195	3,705	5,594	3,081	2,712	2,754	24,448
70 to 74	3,274	1,678	2,725	3,839	2,366	2,035	1,983	17,900
75 to 79	2,425	1,399	2,117	2,994	1,871	1,572	1,503	13,881
80 to 84	1,537	866	1,559	2,017	1,360	1,043	995	9,377
85+	1257	845	1,446	1,590	1225	796	768	7,927
Total	100,225	50,927	113,843	197,626	85,779	80,579	87,898	716,877
	HD 1	**HD 2**	**HD 3**	**HD 4**	**HD 5**	**HD 6**	**HD 7**	**STATE**
Females								
< 5	5,815	2,663	9,088	13,827	6,310	6,762	7,407	51,872
5 to 9	6,113	2,519	8,594	13,341	5,831	6,065	6,315	48,778
10 to 14	6,710	2,767	8,639	13,043	6,180	6,086	6,495	49,920
15 to 19	6,891	3,896	8,109	12,488	6,331	6,540	9,151	53,406
20 to 24	6,601	5,310	8,496	13,793	5,962	7,655	8,908	56,725
25 to 29	5,945	2,685	8,878	13,896	4,688	5,215	6,126	47,433
30 to 34	5,855	2,653	7,925	13,736	4,889	4,771	4,692	44,521
35 to 39	6,553	2,764	7,286	14,127	5,082	4,740	5,006	45,558
40 to 44	7,314	3,286	7,542	15,300	6,126	5,180	5,663	50,411
45 to 49	8,218	3,708	7,262	14,757	6,115	5,748	6,092	51,900
50 to 54	8,086	3,542	6,942	13,517	5,866	5,282	5,465	48,700
55 to 59	7,033	3,161	5,785	10,994	5,132	4,495	4,574	41,174
60 to 64	5,327	2,555	4,839	7,819	3,898	3,322	3,677	31,437
65 to 69	4,095	1,965	3,765	5,689	3,127	2,685	2,631	23,957
70 to 74	3,527	1,819	3,166	4,743	2,798	2,306	2,178	20,537
75 to 79	2,810	1,552	2,779	3,780	2,391	1,784	1,946	17,042
80 to 84	2,128	1,229	2,213	3,145	1,865	1,440	1,335	13,355
85+	2,324	1,464	2,674	3,607	2,247	1,687	1490	15,493
Total	101,345	49,538	113,982	191,602	84,838	81,763	89,151	712,219
Total	201,570	100,465	227,825	389,228	170,617	162,342	177,049	1,429,096

Source: National Center for Health Statistics, 2006.