CANCER IN IDAHO - 2003

A Publication of the
Cancer Data Registry of Idaho

CANCER DATA
REGISTRY OF IDAHO

A Program of the
Idaho Hospital Association

IDAHO HOSPITAL
ASSOCIATION

Editors:

Christopher J. Johnson, MPH, Epidemiologist
Stacey L. Carson, RHIT, CTR, Vice President and Executive Director/CDRI

Contributors:

Denise Jozwik, RHIT, CTR, Assistant Director
Jessica Shew, CTR, Cancer Data Controller
Deanna Schmidt, RHIT, CTR, Cancer Registry Consultant

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CANCER DATA REGISTRY OF IDAHO
P.O. Box 1278
Boise, Idaho 83701-1278
208-338-5100 ext 213 (phone)
208-338-7800 (FAX)
http://www.idcancer.org

PREFACE

"*Cancer in Idaho - 2003*," the twenty-seventh annual report of the Cancer Data Registry of Idaho (CDRI), contains data on cancer cases diagnosed during 2003 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, the Bureau of Clinical and Preventive Services, the Bureau of Community and Environmental Health, and the Office of Epidemiology and Food Protection 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. 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*" and "*AJCC Manual for Staging of Cancer, 6th edition*."[2-3] 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, or 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 various methodologies.

Idaho data have qualified for inclusion in all volumes of NAACCR's publication of "*Cancer Incidence in North America*." In order to be included, states must meet standards for quality and completeness.

Executive Summary

Data Presentation

This report is comprised of five 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. 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. Section VI contains tables of age-specific risks of developing and dying from cancer for males and females. For more detailed statistics by county, see CDRI's "County Cancer Profiles" at www.idcancer.org.

Population Description

The population of the state of Idaho on July 1, 2003, was estimated to be 1,366,332 (684,815 males and 681,517 females). Population estimates were obtained from the U.S. Bureau of the Census.[7] Idaho is comprised of 44 counties grouped into seven health districts. The composition of the health districts, as well as 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	93,804	95,034
District 2	Clearwater, Latah, Lewis, Idaho, Nez Perce	51,008	49,340
District 3	Adams, Canyon, Gem, Owyhee, Payette, Washington	106,511	106,954
District 4	Ada, Boise, Elmore, Valley	186,965	182,037
District 5	Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, Twin Falls	83,826	83,618
District 6	Bannock, Bear Lake, Bingham, Butte, Caribou, Franklin, Oneida, Power	78,641	79,625
District 7	Bonneville, Clark, Custer, Fremont, Jefferson, Lemhi, Madison, Teton	84,060	84,909

Descriptive Summary by Gender and Race and Ethnicity

The data presented in this report cover those cases diagnosed among Idaho residents between January 1, 2003, and December 31, 2003. In this time frame, there were 6,187 cases of cancer diagnosed among Idaho residents (3,209 among males and 2,978 among females). By race and ethnicity, there were 5,847 cases among non-Hispanic whites, 184 among Hispanic whites, 10 cases among Blacks, 26 cases among Native Americans, 15 cases among Asians/Pacific Islanders, and 13 cases among other races. Race was missing for 105 cases. The majority of cases with missing race and/or ethnicity were reported by out-of-state sources. The number of cancer cases treated in outpatient settings and reported only by pathology laboratories has increased over the last several years. Many of such cases are reported with missing demographic variables, causing tabulations of cases by race to be skewed. CDRI is actively working to improve the data quality of cases reported by pathology laboratories only. 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 slight decrease in the number of reported cases from 2002 to 2003 (a decrease of 18 cases from 2002 to 2003 as of one year after close of calendar year). Cancer sites with notable decreases from 2002 to 2003 were cervix, endometrium, and myeloma. There was a notable increase from 2002 to 2003 in the number of skin melanoma cases.

Summary Measures of Cancer Burden

New for 2003 is a table of summary measures of cancer burden in Idaho. This table includes 2003 numbers of cancer cases, cancer deaths, median ages at diagnosis and death, estimated cancer prevalence, and years of potential life lost before age 75 by persons who died of cancer. It is hoped that this information will be useful in Idaho's comprehensive cancer control efforts.

SUMMARY MEASURES OF CANCER BURDEN IN IDAHO - 2003

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 2002 to 2003
All Sites	5,790	2,318	67.0	73.0	37,471	17,051	13.6	-2.9%
Bladder	248	54	74.0	81.5	1,833	180	10.6	-9.7%
Brain	87	83	56.0	59.0	386	1,576	21.0	-12.8%
Breast	811	172	61.0	67.5	8,198	1,826	16.6	-11.5%
Cervix	42	14	48.5	71.0	633	141	15.6	-21.0%
Colorectal	584	216	72.0	75.0	3,546	1,261	12.1	4.3%
Endometrium	119	16	64.0	74.5	1,872	69	8.6	-15.8%
Esophagus	60	57	66.0	66.0	77	520	12.1	11.8%
Hodgkin Lymphoma	46	6	28.5	71.0	558	72	18.0	9.9%
Kidney	166	64	63.0	71.0	825	564	13.4	-3.7%
Larynx	42	16	66.0	80.0	310	57	14.3	-10.0%
Leukemia	191	125	70.0	75.0	811	1,240	20.3	5.0%
Liver	37	41	64.0	64.0	33	550	19.6	-4.3%
Lung	734	591	71.0	72.0	1,053	3,565	10.3	7.2%
Melanoma of Skin	307	45	59.0	68.0	2,366	603	22.3	15.2%
Myeloma	47	38	73.0	77.0	205	192	12.0	-40.6%
Non-Hodgkin Lymphoma	233	111	70.0	76.0	1,378	785	14.8	-9.5%
Oral Cavity and Pharynx	139	31	64.0	72.0	1,081	239	12.6	0.7%
Ovary	75	55	65.0	71.0	686	362	11.0	-5.8%
Pancreas	145	128	69.0	74.0	109	851	12.9	-5.6%
Prostate	948	150	69.0	82.0	7,619	224	6.8	-4.1%
Stomach	73	30	71.0	77.0	172	163	11.6	-3.7%
Testis	38	1	36.5	-	670	-	-	8.0%
Thyroid	131	12	49.0	65.5	1,300	120	15.0	7.7%

Notes:

Incident cases include all invasive and bladder in situ cases newly diagnosed among Idaho residents in 2003.

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 2003 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 to be compared with rates from other geographic areas 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 U.S. Bureau of the Census (see Appendix C).[7]

In conformity with 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 2003 (6,187), a total of 5,790 cases (5,651 invasive and 139 bladder in-situ) were used for calculating age-adjusted incidence rates. Of the 5,790 cases, 3,081 occurred among males and 2,709 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. This can result in substantial bias, and is the reason why race-specific rates are not published in this report. 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 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 for Section I were calculated using SEER*Stat. [11] For comparisons between Idaho and SEER rates, see the CDRI publication *Cancer Trends in Idaho, 1971-1998*.

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.

Risks of Developing and Dying from Cancer

Cancer incidence and mortality risks were estimated using DEVCAN Version 5.3 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 1999-2003. 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.

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.

SECTION I

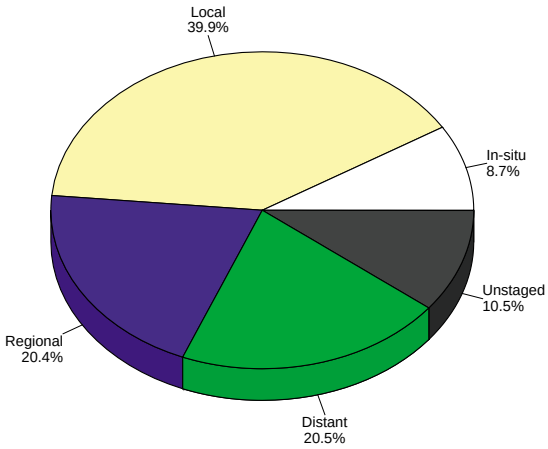
2003 SUMMARY ON ALL SITES COMBINED
AND
23 MOST COMMON SITES

ALL SITES

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	446.5	520.5	392.7
# of new invasive cases	5,651	2,970	2,681
# of new in-situ cases	536	239	297
# of deaths	2,318	1,239	1,079

Stage at Diagnosis - All Sites



Total Cases By County

Ada	1,465	Cassia	90	Lewis	44
Adams	21	Clark	-	Lincoln	19
Bannock	289	Clearwater	42	Madison	51
Bear Lake	20	Custer	20	Minidoka	94
Benewah	63	Elmore	91	Nez Perce	233
Bingham	147	Franklin	42	Oneida	22
Blaine	69	Fremont	60	Owyhee	41
Boise	18	Gem	89	Payette	83
Bonner	211	Gooding	72	Power	17
Bonneville	355	Idaho	69	Shoshone	95
Boundary	58	Jefferson	65	Teton	20
Butte	26	Jerome	72	Twin Falls	366
Camas	4	Kootenai	656	Valley	57
Canyon	607	Latah	128	Washington	65
Caribou	35	Lemhi	37		

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.

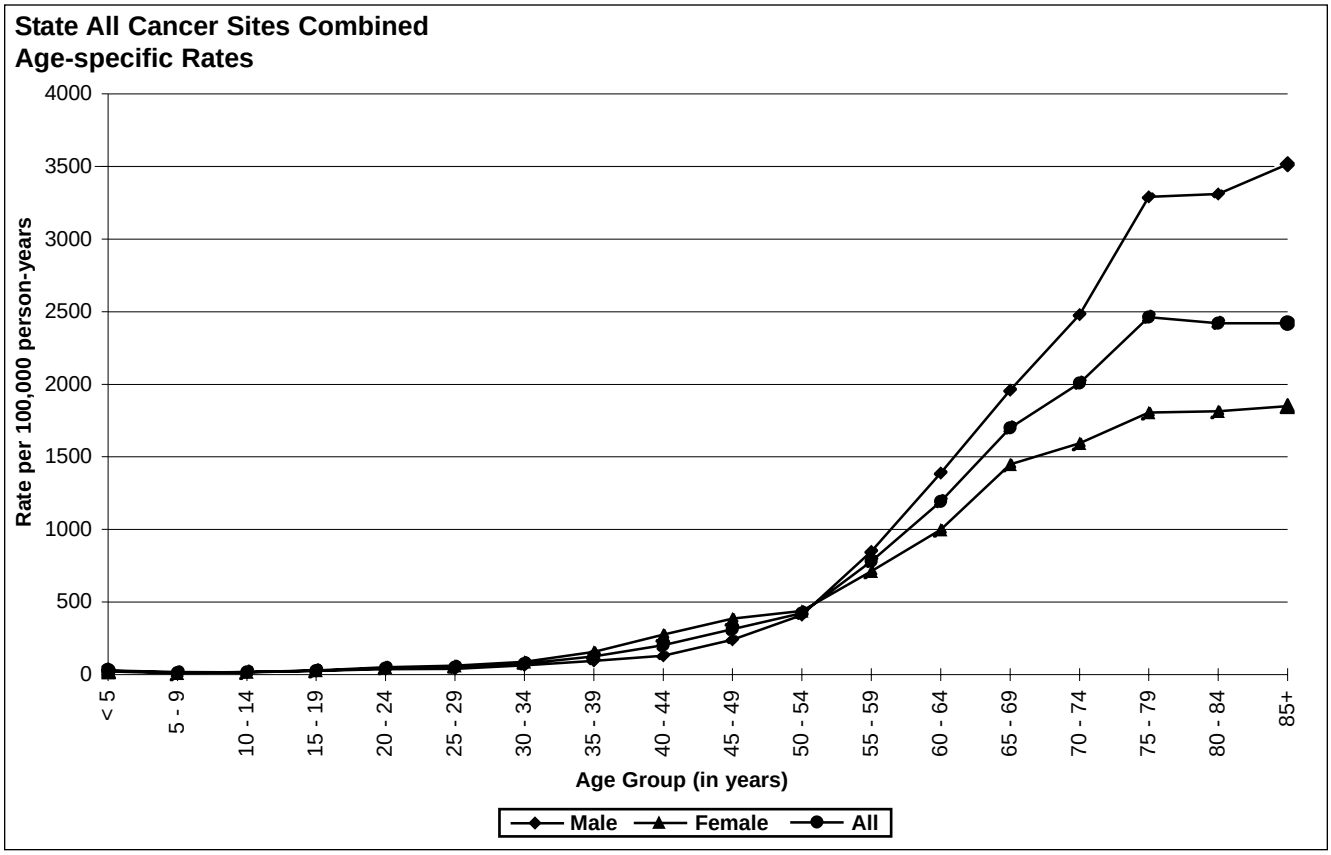
Diet Diets that are low in fresh fruits and vegetables have been associated with increased incidence of several cancers.

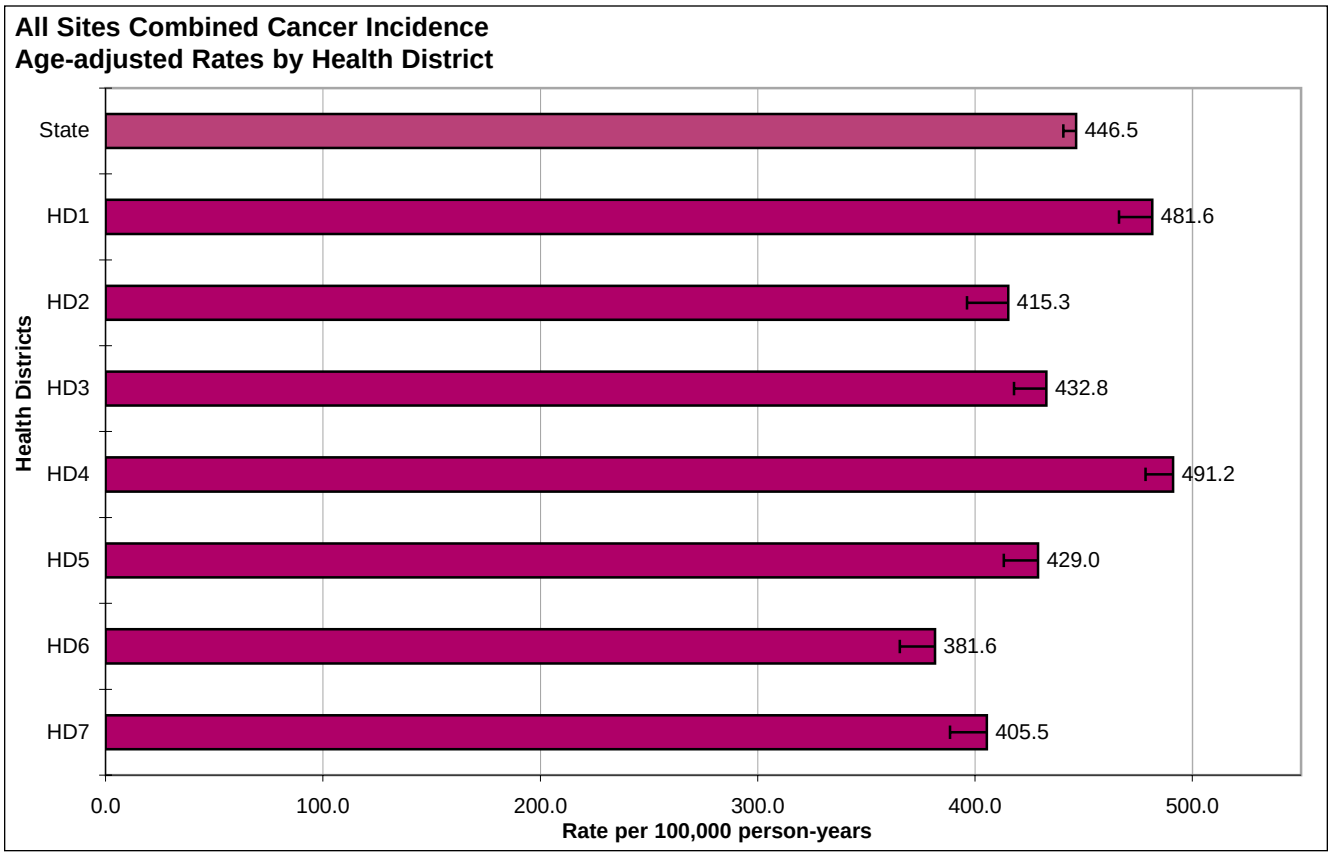
Other Tobacco use is the single most important risk factor for cancer incidence and mortality. Most cancers manifest a tendency to aggregate in families - close relatives of a cancer patient can be considered to have increased risk of that neoplasm, but not all forms of cancer. Excess risk is usually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

Special Notes

Mean age-adjusted incidence rate across health districts:	433.8
95% confidence interval on the mean age-adjusted incidence rate:	404.4 - 463.3
Median age-adjusted incidence rate of health districts:	429.0
Range of age-adjusted incidence rate for health districts:	381.6 - 491.2
SEER rate (2001, Whites):	478.2

The incidence rates for all cancers combined were similar for males and females in Idaho until approximately age 60-64, after which rates for males rose dramatically. The highest rates for both males and females were observed in age groups after age 70, peaking in the age group 85+ for males and females. Health Districts 1 ($p<0.05$) and 4 ($p<0.01$) had statistically significantly more cases of cancer than expected based upon rates for the remainder of Idaho, and Health Districts 6 ($p<0.01$) and 7 ($p<0.01$) had statistically significantly fewer cases than expected.


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

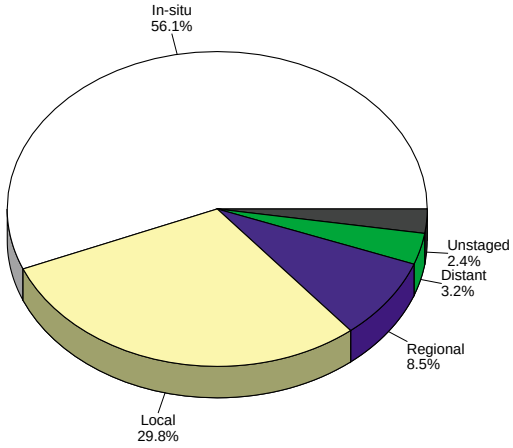

All Sites Combined Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
446.5
481.6
415.3
432.8
491.2
429.0
381.6
405.5
0.0
100.0
200.0
300.0
400.0
500.0
Rate per 100,000 person-years

BLADDER

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	19.3	34.9	7.0
# of new invasive cases	109	89	20
# of new in-situ cases	139	111	28
# of deaths	54	44	10

Stage at Diagnosis - Bladder



Total Cases By County

Ada	54	Cassia	1	Lewis	5
Adams	1	Clark	-	Lincoln	-
Bannock	15	Clearwater	2	Madison	4
Bear Lake	1	Custer	-	Minidoka	4
Benewah	1	Elmore	7	Nez Perce	9
Bingham	5	Franklin	-	Oneida	-
Blaine	1	Fremont	2	Owyhee	1
Boise	-	Gem	4	Payette	4
Bonner	10	Gooding	4	Power	-
Bonneville	14	Idaho	3	Shoshone	1
Boundary	7	Jefferson	1	Teton	1
Butte	4	Jerome	3	Twin Falls	11
Camas	-	Kootenai	27	Valley	2
Canyon	17	Latah	8	Washington	7
Caribou	2	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.

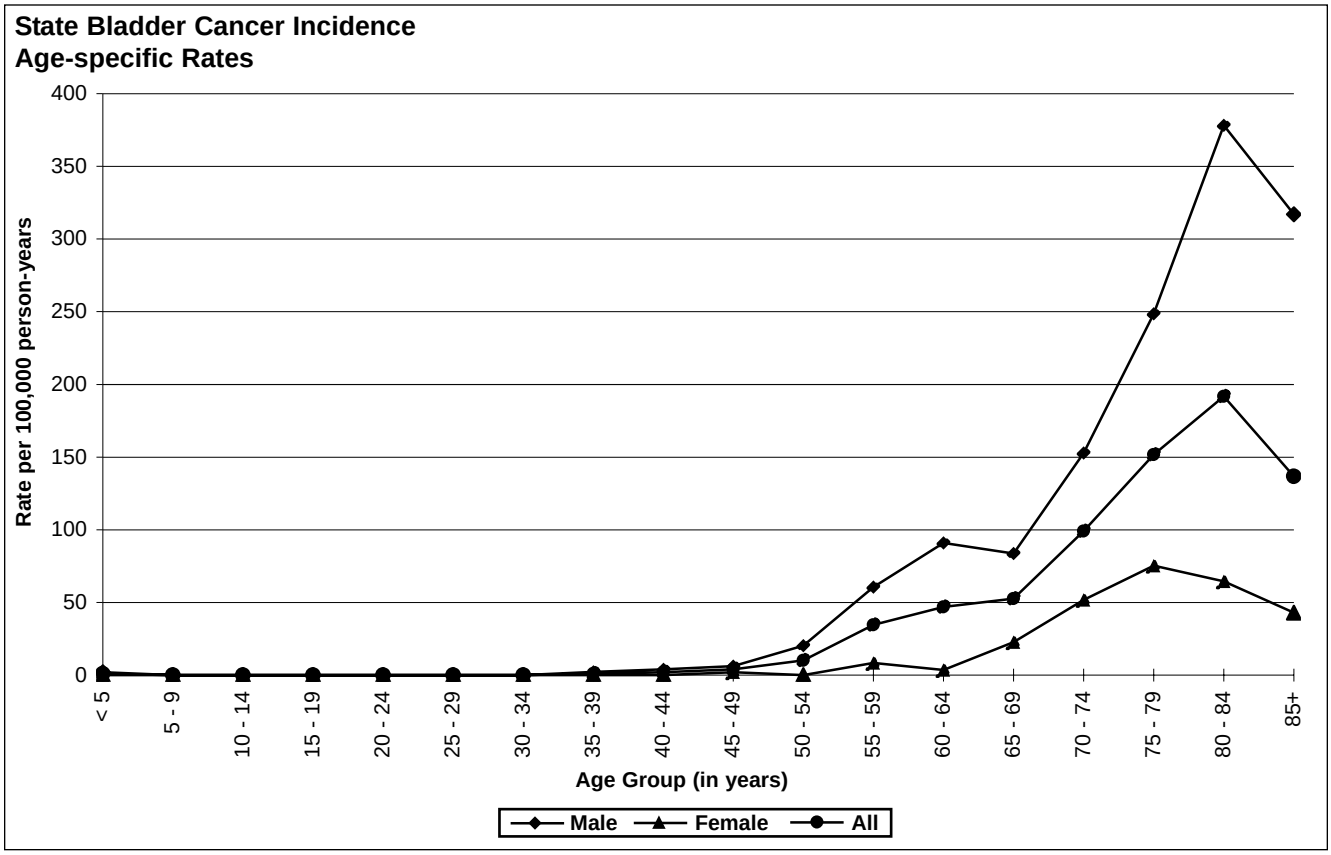
Occupation Truck drivers, likely via exposure to motor exhaust, are at increased risk. Occupational exposures, including those to manufacturers of certain dyes, painters, and aluminum, rubber, cable, and leather workers, have been shown to increase risk of bladder cancer. Exposure to permanent hair dyes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

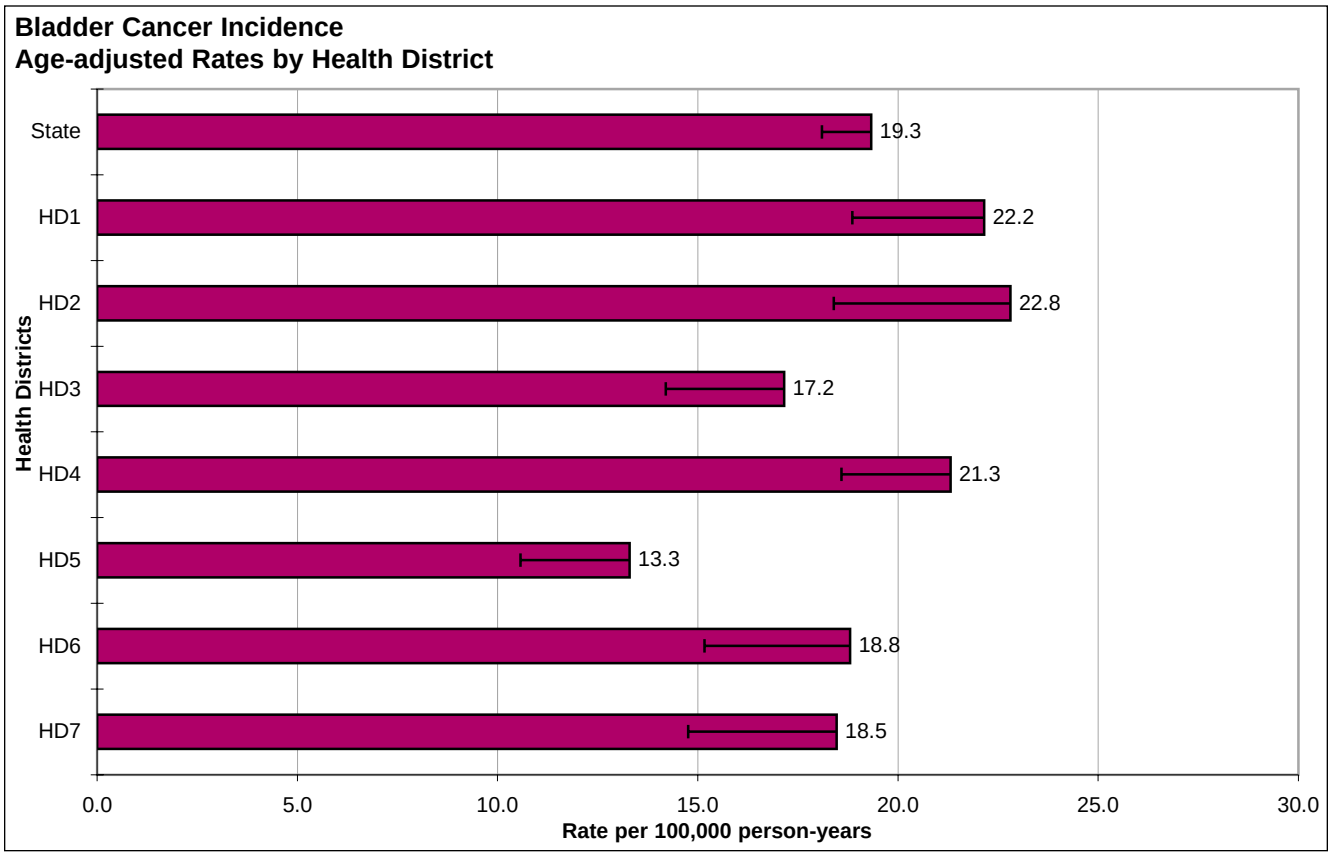
Other Tobacco consumption has been associated with a 2- to 5-fold higher incidence of bladder tumor and is attributable for a greater number of cases than other risk factors. Cyclophosphamide, a chemotherapeutic agent, and 4-amino-diphenyl are known human bladder carcinogens. Schistosoma hematobium may 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:	19.1
95% confidence interval on the mean age-adjusted incidence rate:	16.7 - 21.6
Median age-adjusted incidence rate of health districts:	18.8
Range of age-adjusted incidence rate for health districts:	13.3 - 22.8
SEER rate (2001, Whites):	23.1

There were few cases of bladder cancer among persons aged less than 40 years. Bladder cancer incidence rates increased with age, peaking in the age group 80-84 for males and 75-79 for females. Health District 5 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho ($p<0.05$).


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

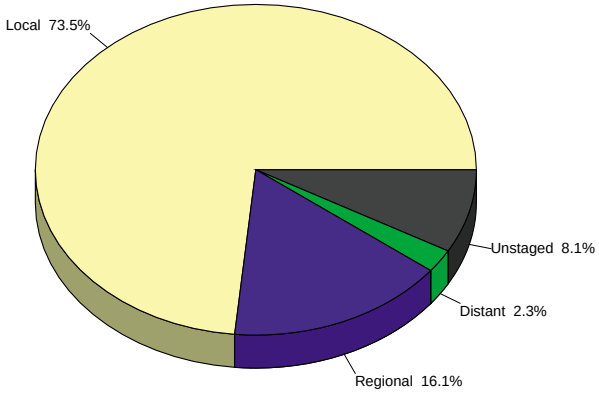

Bladder Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
19.3
22.2
22.8
17.2
21.3
13.3
18.8
18.5
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Rate per 100,000 person-years

BRAIN

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	6.5	7.3	5.6
# of new invasive cases	87	48	39
# of new in-situ cases	0	0	0
# of deaths	83	54	29

Stage at Diagnosis - Brain



Total Cases By County

Ada	24	Cassia	-	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	7	Clearwater	-	Madison	-
Bear Lake	-	Custer	-	Minidoka	-
Benewah	1	Elmore	2	Nez Perce	3
Bingham	6	Franklin	-	Oneida	-
Blaine	-	Fremont	3	Owyhee	1
Boise	-	Gem	2	Payette	3
Bonner	1	Gooding	3	Power	1
Bonneville	3	Idaho	2	Shoshone	1
Boundary	-	Jefferson	-	Teton	1
Butte	1	Jerome	-	Twin Falls	5
Camas	-	Kootenai	6	Valley	-
Canyon	10	Latah	-	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.

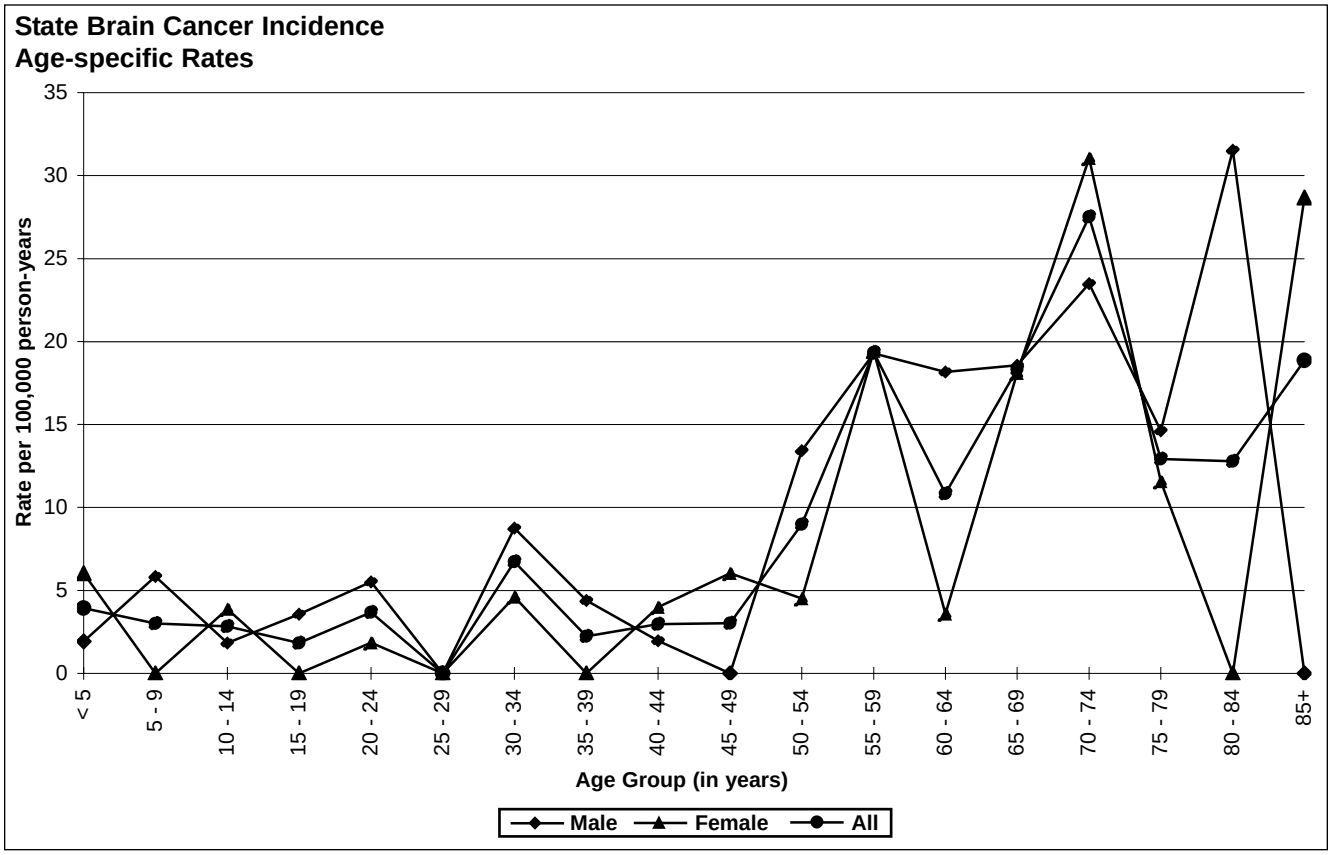
Occupation Vinyl chloride and ionizing radiation exposure are risk factors. Many occupational and environmental exposures have shown suggestive associations with elevated rates of brain cancer. Roofers, sheet metal workers, and rubber and plastic workers may be at elevated risk. Specific exposures underlying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

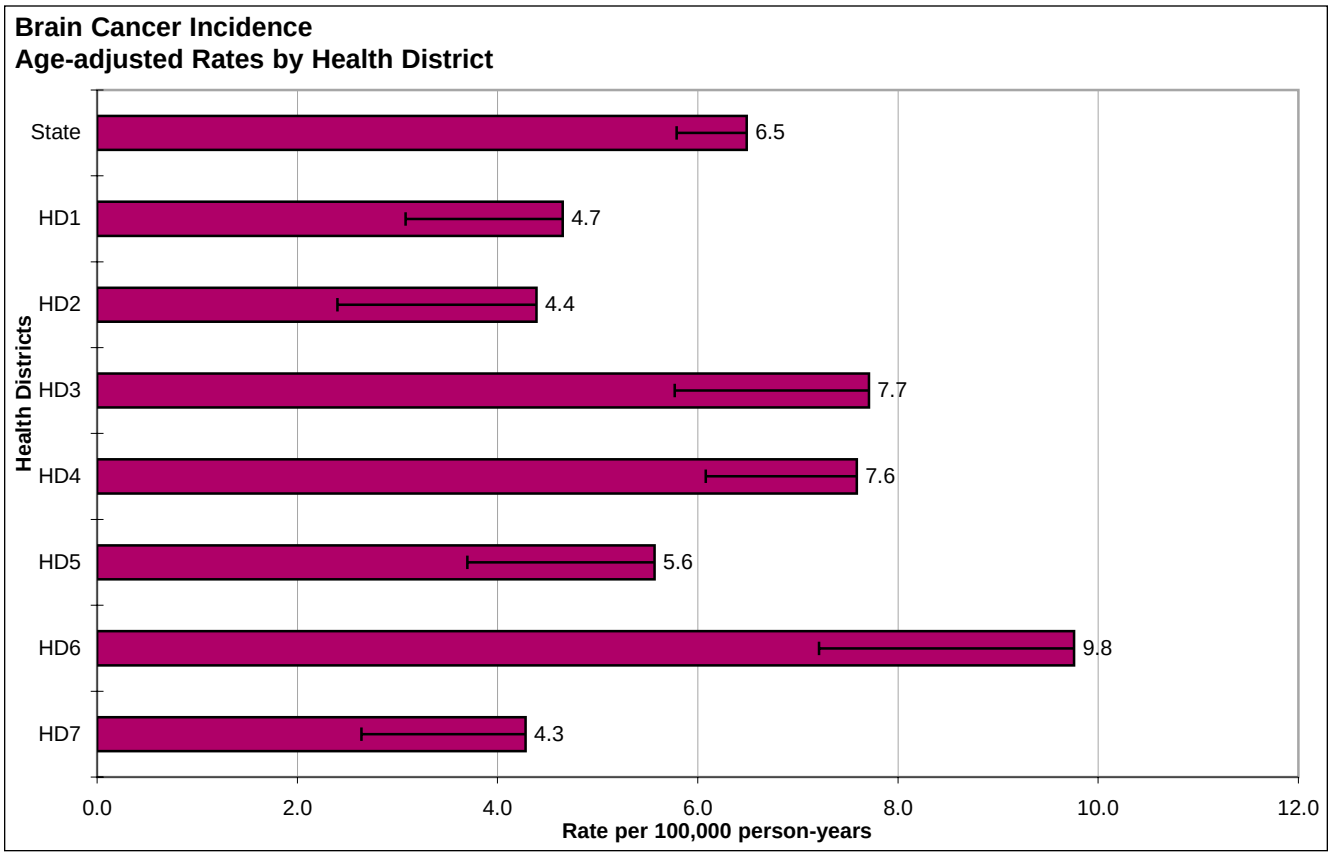
Other Human Immunodeficiency Virus (HIV) infected individuals and organ transplant recipients have an increased risk of developing brain lymphoma.

Special Notes

Mean age-adjusted incidence rate across health districts:	6.3	
95% confidence interval on the mean age-adjusted incidence rate:	4.7 -	7.8
Median age-adjusted incidence rate of health districts:	5.6	
Range of age-adjusted incidence rate for health districts:	4.3 -	9.8
SEER rate (2001, Whites):	6.6	

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
35
30
25
20
15
10
5
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All

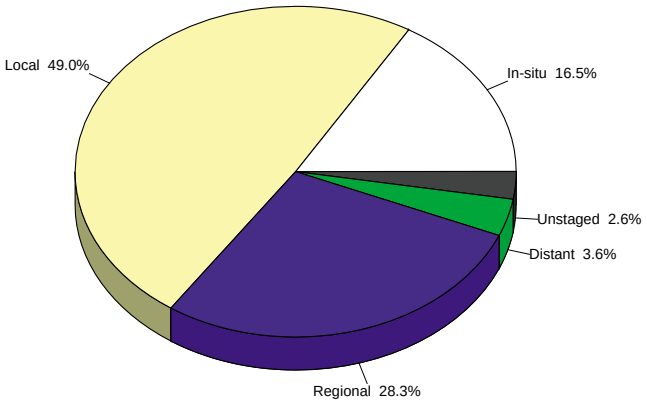

Brain Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
6.5
4.7
4.4
7.7
7.6
5.6
9.8
4.3
0.0
2.0
4.0
6.0
8.0
10.0
12.0
Rate per 100,000 person-years

BREAST

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	62.0	1.8	117.6
# of new invasive cases	811	10	801
# of new in-situ cases	160	1	159
# of deaths	172	0	172

Stage at Diagnosis - Breast



Total Cases By County

Ada	256	Cassia	16	Lewis	6
Adams	3	Clark	-	Lincoln	1
Bannock	36	Clearwater	8	Madison	1
Bear Lake	1	Custer	3	Minidoka	15
Benewah	9	Elmore	17	Nez Perce	26
Bingham	25	Franklin	13	Oneida	2
Blaine	12	Fremont	8	Owyhee	5
Boise	1	Gem	10	Payette	17
Bonner	20	Gooding	10	Power	3
Bonneville	57	Idaho	10	Shoshone	19
Boundary	7	Jefferson	9	Teton	2
Butte	4	Jerome	15	Twin Falls	57
Camas	1	Kootenai	122	Valley	10
Canyon	79	Latah	21	Washington	8
Caribou	8	Lemhi	5		

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.

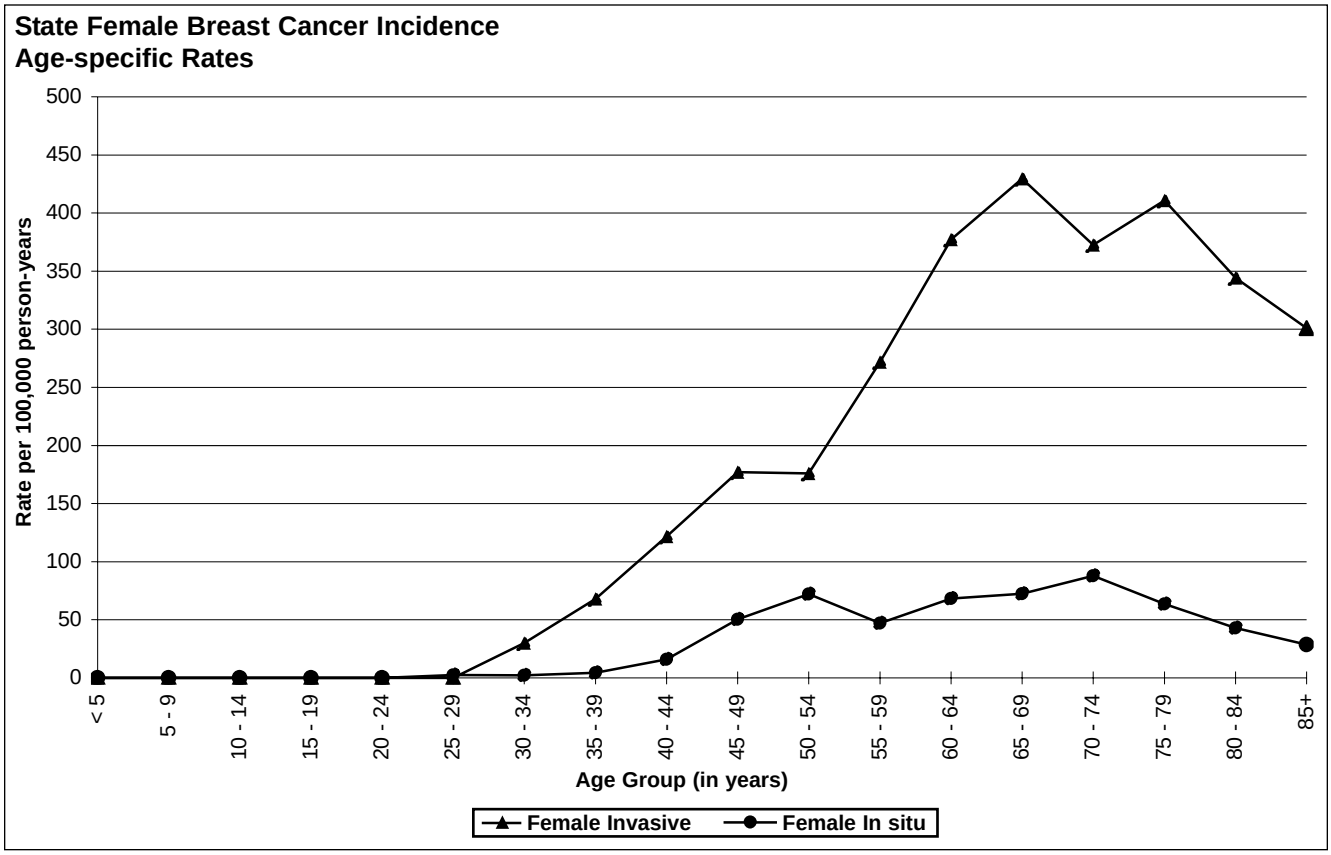
Hormonal There is evidence of hormonal influence in the risk of developing breast cancer. Longer intervals of menarche to the first full-term pregnancy and menarche to menopause, as well as menarche before age 13, have been associated with higher risks of breast cancer. Cumulative estrogen exposure,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

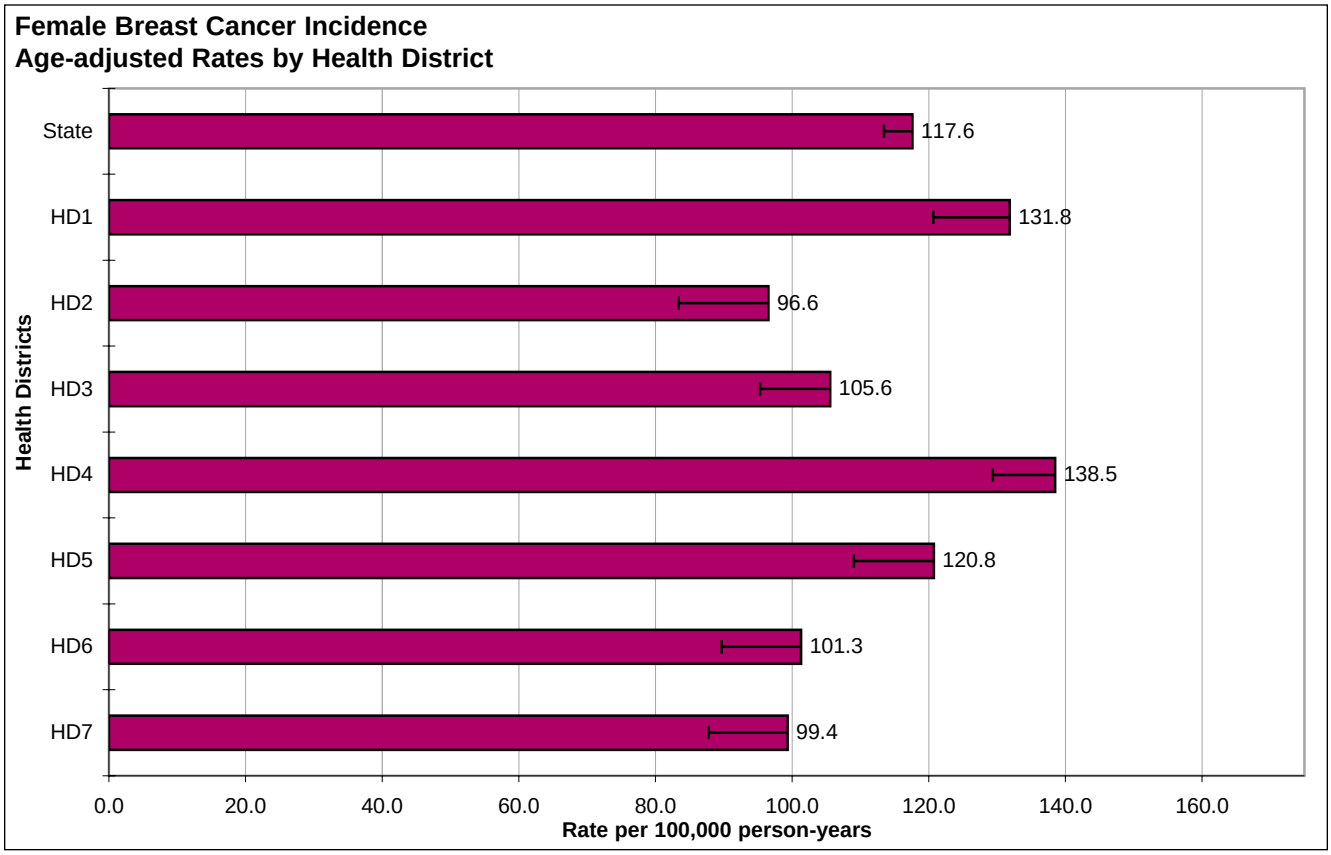
Other Alcohol consumption, high dietary fat intake, obesity (in postmenopausal women), sedentary life-style, and having a mother or sister with breast cancer have all been implicated as associated risk factors. Epstein-Barr virus may increase the risk of metastasis.

Special Notes

Mean age-adjusted incidence rate across health districts:	113.4
95% confidence interval on the mean age-adjusted incidence rate:	100.9 - 125.9
Median age-adjusted incidence rate of health districts:	105.6
Range of age-adjusted incidence rate for health districts:	96.6 -138.5
SEER rate (2000, White females):	140.8

The vast majority of breast cancer cases occur among females. In Idaho during the year 2003, there were ten cases of invasive breast cancer among males. The age-specific incidence rates of female breast cancer in Idaho in 2003 increased with age, peaking in the age group 65-69 for invasive cases and 70-74 for in situ. No cases were observed in women less than 25 years of age. Health District 4 ($p<0.01$ had statistically significantly more cases of female breast cancer than expected based upon rates for the remainder of Idaho.


State Female Breast Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
500
450
400
350
300
250
200
150
100
50
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Female Invasive
Female In situ


Female Breast Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
117.6
131.8
96.6
105.6
138.5
120.8
101.3
99.4
0.0
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
Rate per 100,000 person-years

CERVIX

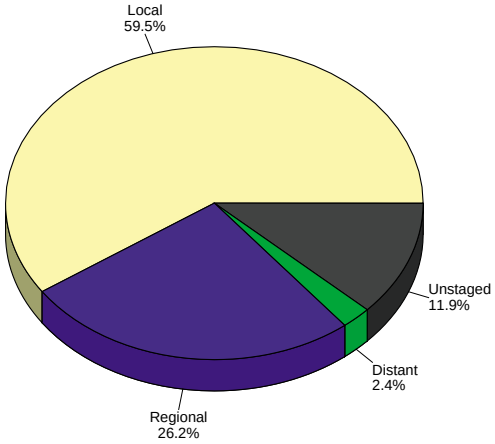
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	6.4
# of new invasive cases	-	-	42
# of new in-situ cases	-	-	n/a
# of deaths	-	-	14

Total Cases By County

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

Stage at Diagnosis - Cervix



(cervix in-situ not reported)

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.

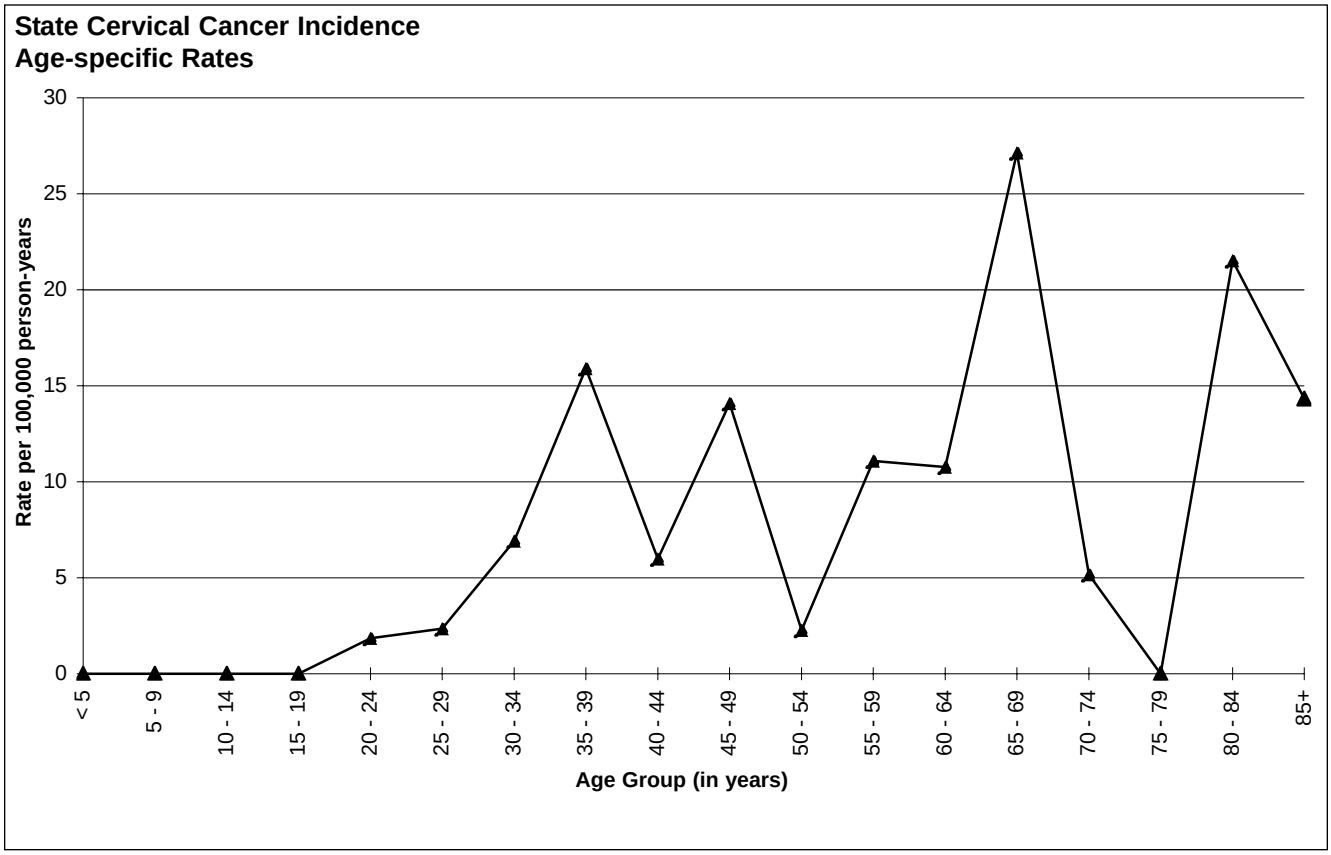
Race & SES African American females, as well as women in lower income groups, have been shown to experience higher rates.

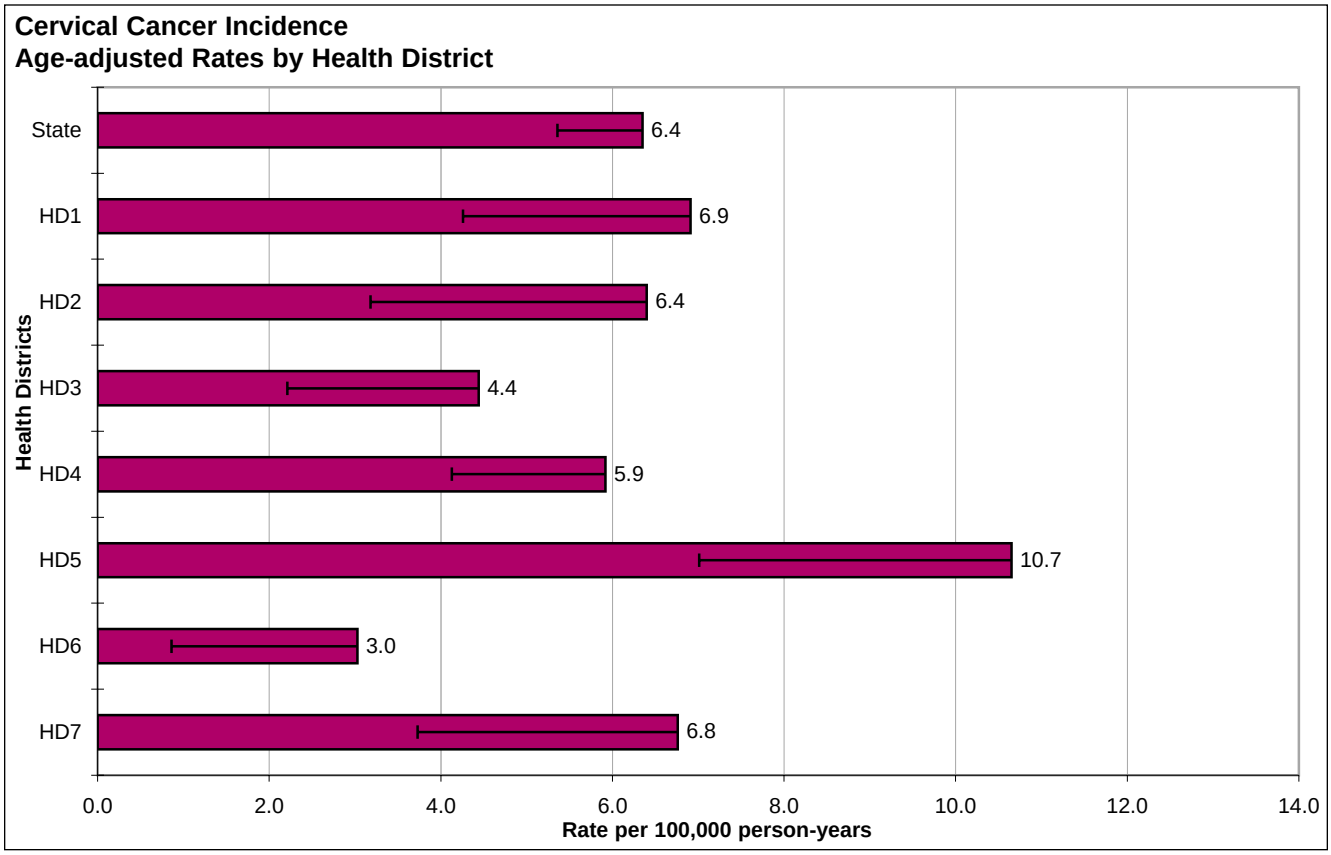
Other The large majority of cervical cancer cases worldwide can be attributed to human papilloma virus (HPV) infection. Of the at least 70 types of HPV known, types 16 and 18 are most closely associated with malignancy. Other risk factors that may be correlates, cofactors, or independent risk factors 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:	6.3
95% confidence interval on the mean age-adjusted incidence rate:	4.5 - 8.1
Median age-adjusted incidence rate of health districts:	6.4
Range of age-adjusted incidence rate for health districts:	3.0 - 10.7
SEER rate (2001, Whites):	7.3

No cases of invasive cervical cancer were diagnosed in females less than 20 years of age. Increased screening with routine Pap tests, particularly among older and low-income women, has increased diagnostic rates and helped to reduce the incidence of invasive disease. Today, the vast majority of cases in younger women is diagnosed before the invasive stage, with cure rates approaching 100%. These pre-invasive cases are not included in this report. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.


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

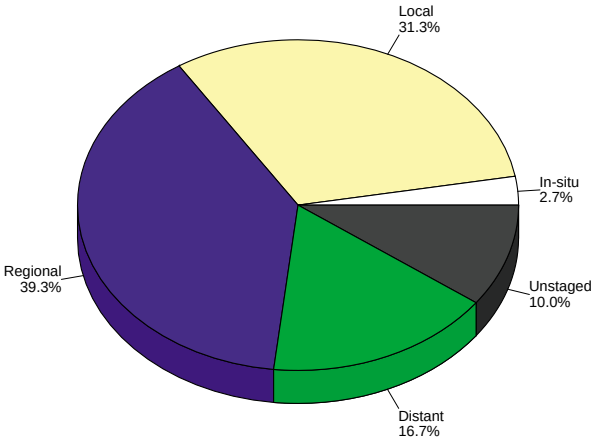

Cervical Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
6.4
6.9
6.4
4.4
5.9
10.7
3.0
6.8
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
Rate per 100,000 person-years

COLORECTAL

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	45.2	52.5	39.4
# of new invasive cases	584	304	280
# of new in-situ cases	16	9	7
# of deaths	216	114	102

Stage at Diagnosis - Colorectal



Total Cases By County

Ada	120	Cassia	6	Lewis	3
Adams	1	Clark	-	Lincoln	4
Bannock	26	Clearwater	4	Madison	8
Bear Lake	2	Custer	3	Minidoka	10
Benewah	4	Elmore	14	Nez Perce	28
Bingham	11	Franklin	7	Oneida	2
Blaine	3	Fremont	8	Owyhee	4
Boise	-	Gem	10	Payette	8
Bonner	30	Gooding	3	Power	2
Bonneville	32	Idaho	8	Shoshone	12
Boundary	5	Jefferson	4	Teton	3
Butte	2	Jerome	8	Twin Falls	44
Camas	-	Kootenai	60	Valley	7
Canyon	67	Latah	16	Washington	7
Caribou	1	Lemhi	-		

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 six percent of colon cancer cases.

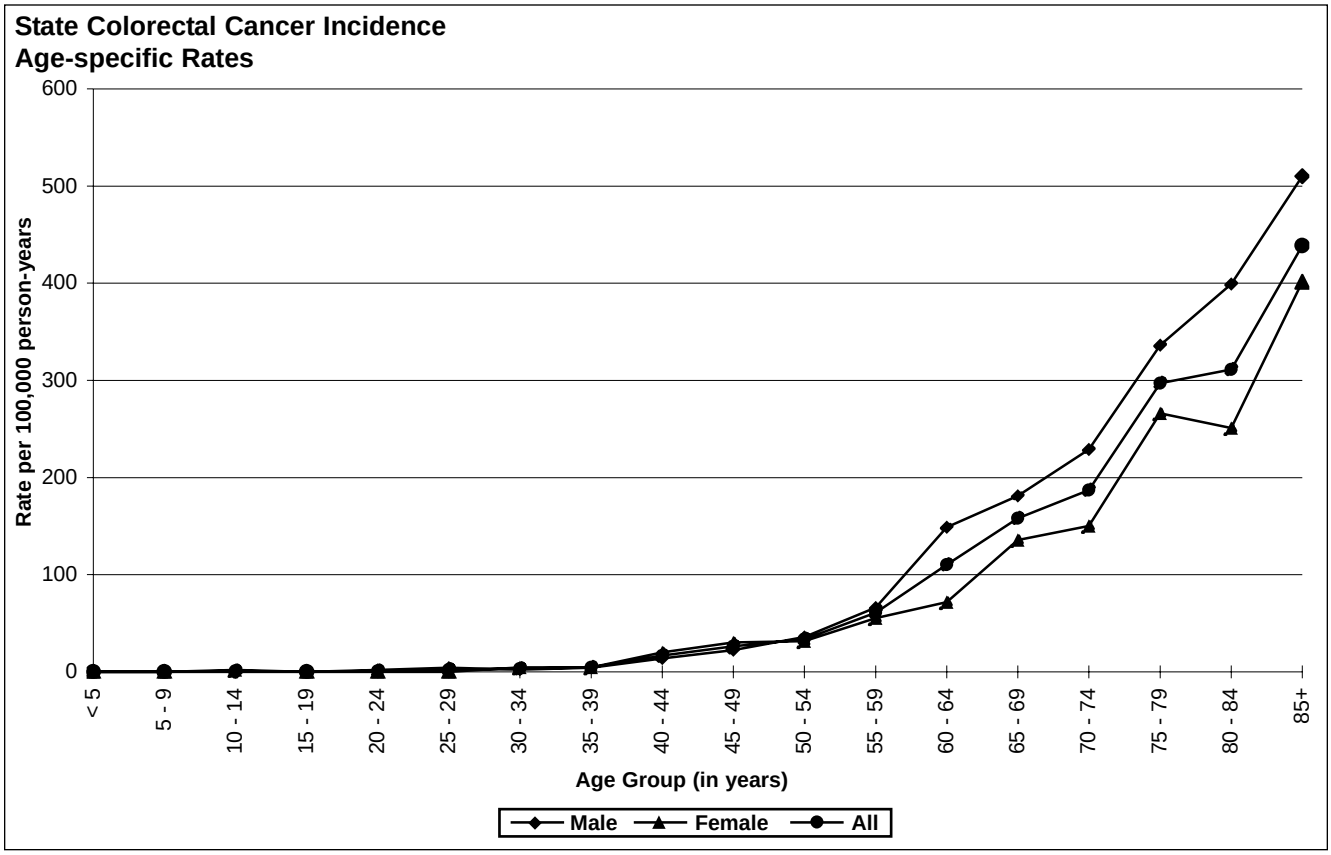
Diet Strong evidence that high calorie diets and diets high in fat and low in fiber contribute to increased risk of colon cancer has been shown.

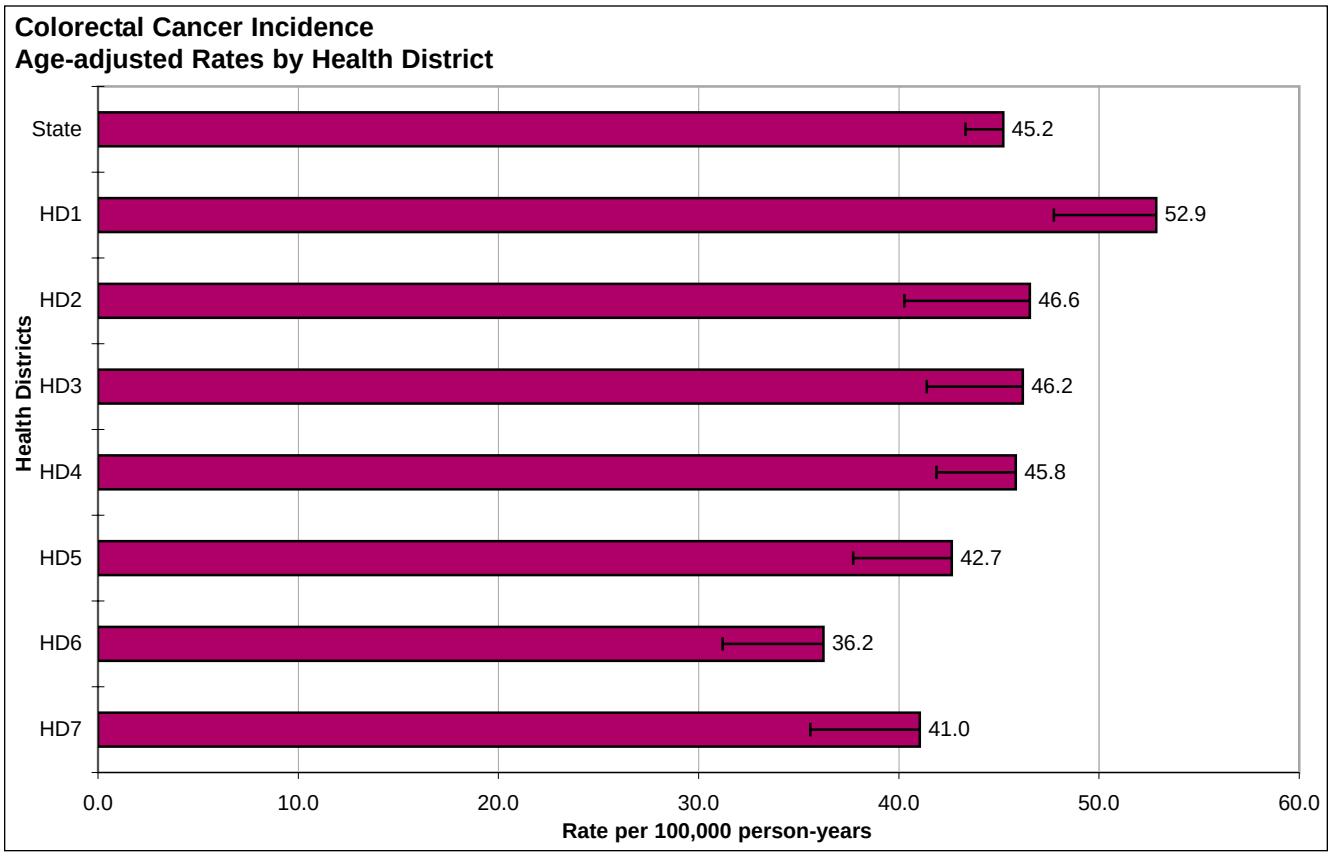
Other Individuals with a close family history of this cancer and those with a personal history of certain other cancers are at increased risk. Regular, moderate physical activity is associated with lower rates of this cancer. The use of NSAIDs, including aspirin, may help prevent colon cancer. Inflammatory 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:	44.5
95% confidence interval on the mean age-adjusted incidence rate:	40.6 - 48.3
Median age-adjusted incidence rate of health districts:	45.8
Range of age-adjusted incidence rate for health districts:	36.2 - 52.9
SEER rate (2001, Whites):	51.1

Few cases of colorectal cancer were diagnosed in persons less than 30 years of age. There was a steep increase in age-specific incidence rates starting at age 55 and peaking in the age group 85+ for males and females. No health district had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.


State Colorectal 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)
Male
Female
All

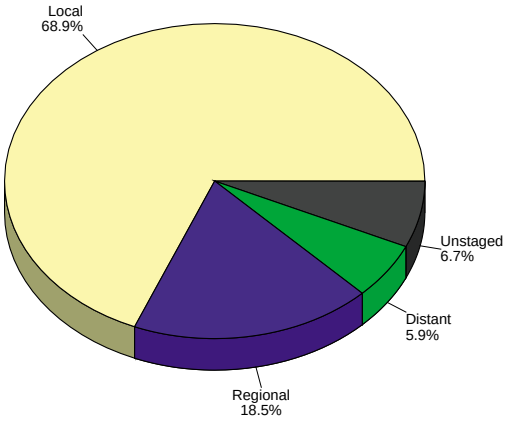

Colorectal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
45.2
52.9
46.6
46.2
45.8
42.7
36.2
41.0
0.0
10.0
20.0
30.0
40.0
50.0
60.0
Rate per 100,000 person-years

ENDOMETRIUM

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	17.3
# of new invasive cases	-	-	119
# of new in-situ cases	-	-	0
# of deaths	-	-	16

Stage at Diagnosis - Endometrium



Total Cases By County

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

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.

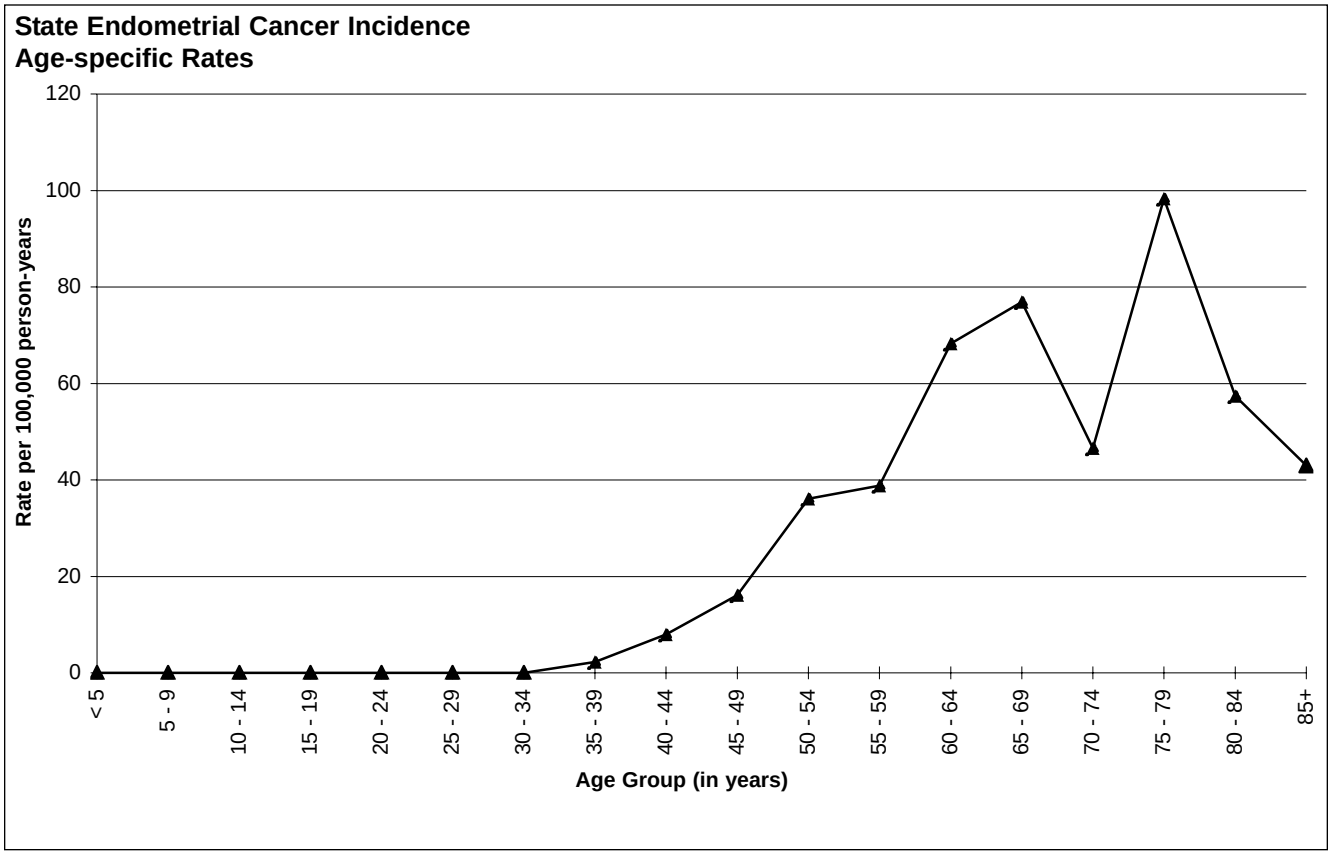
Diet Dietary fat may play a role in increased risk. Obesity and hypertension are common associated conditions of endometrial cancer.

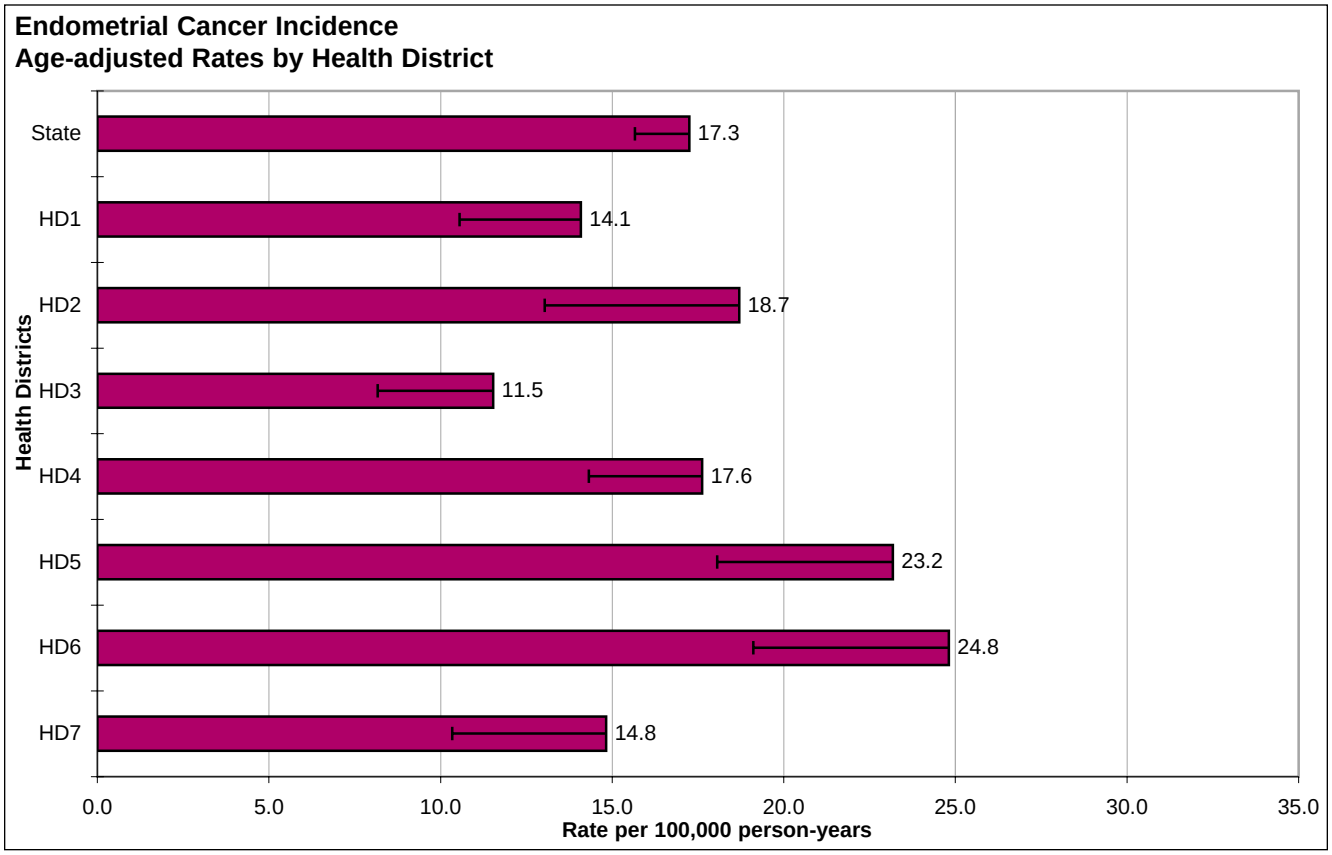
Hormonal Factors that elevate levels of estrogen or decrease progesterone levels enhance the risk. Women who have never carried a pregnancy to term are at a relatively high risk. Risk decreases as the number of pregnancies increases. An increased incidence of endometrial cancer has been found in association 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:	17.8
95% confidence interval on the mean age-adjusted incidence rate:	14.2 - 21.4
Median age-adjusted incidence rate of health districts:	17.6
Range of age-adjusted incidence rate for health districts:	11.5 - 24.8
SEER rate (2001, Whites):	26.1

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


State Endometrial 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)

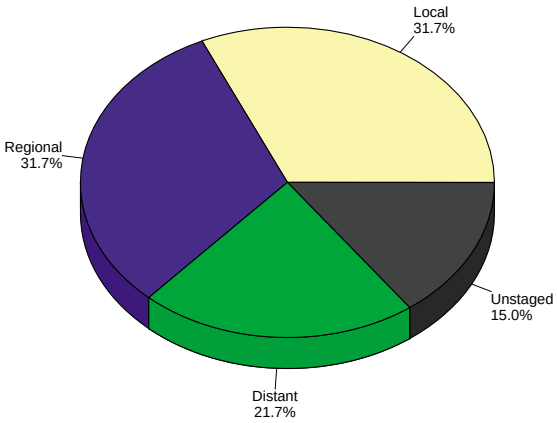

Endometrial Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
17.3
14.1
18.7
11.5
17.6
23.2
24.8
14.8
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
Rate per 100,000 person-years

ESOPHAGUS

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.6	8.1	1.6
# of new invasive cases	60	49	11
# of new in-situ cases	0	0	0
# of deaths	57	49	8

Stage at Diagnosis - Esophagus



Total Cases By County

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

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.

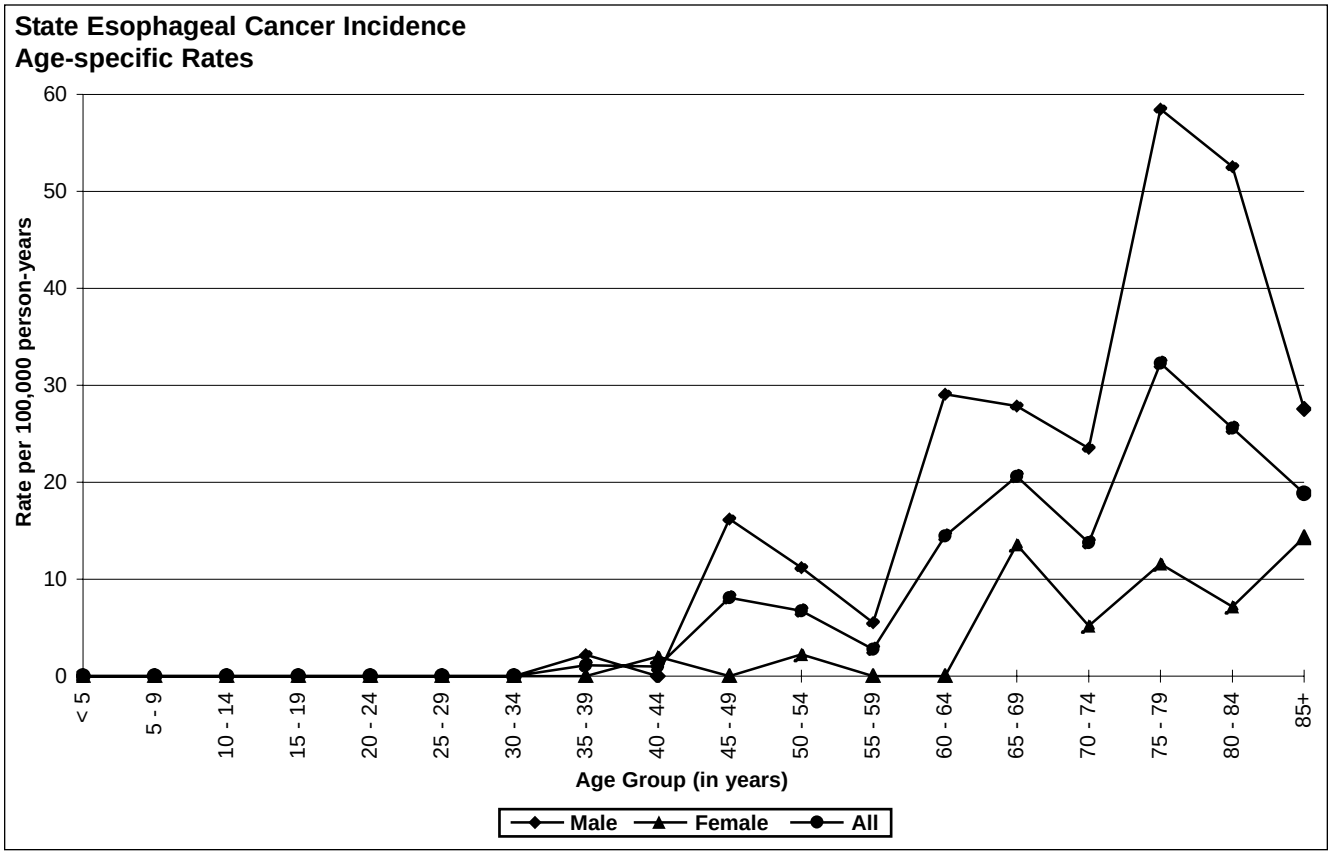
Occupation Chimney sweeps exposed to soot are at higher risk.

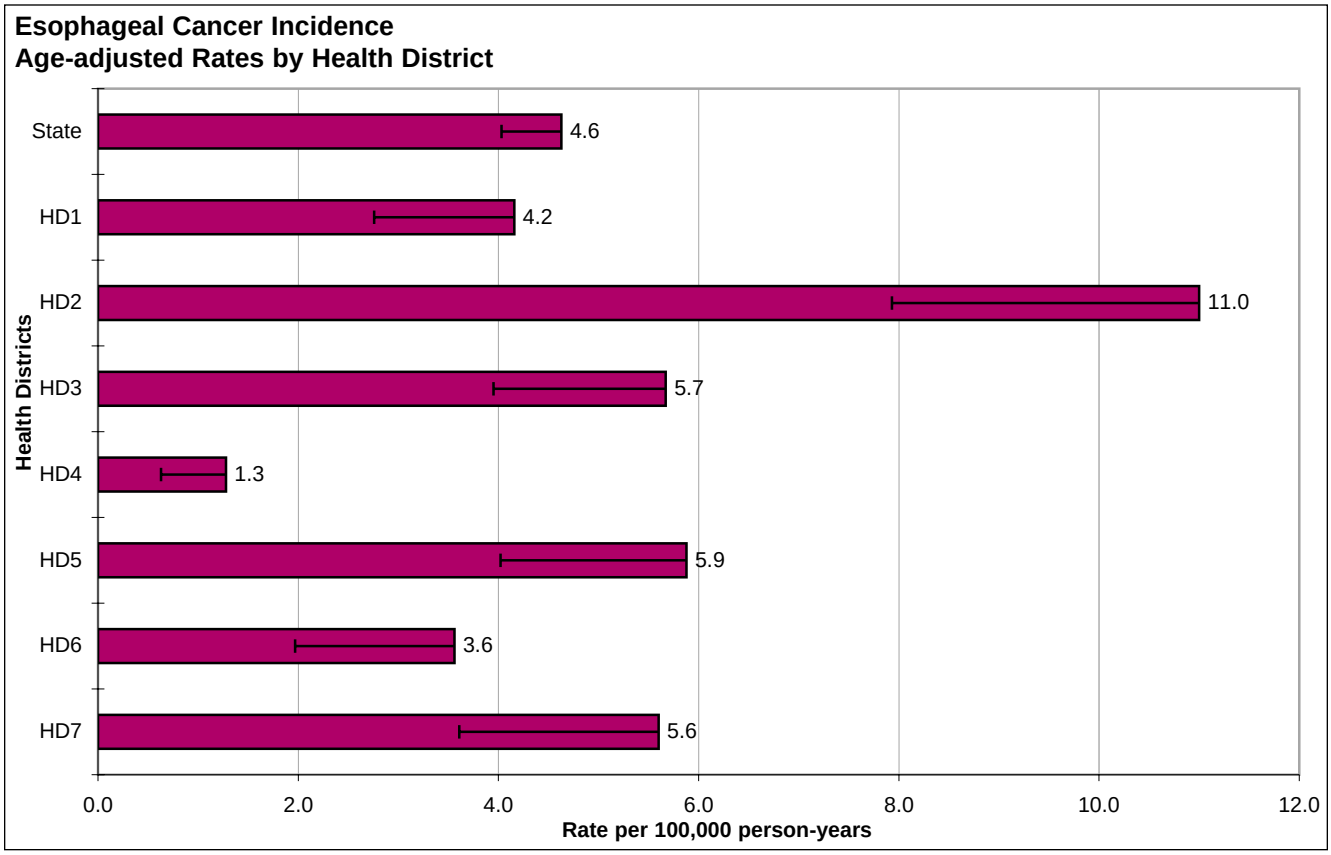
Other Tobacco use (cigarettes or spit tobacco) and heavy alcohol consumption are major risk factors for cancer of the esophagus. The risk is particularly increased when these two factors are both present. In Western Europe and North America, 90% or more of the risk of esophageal cancer can be attributed 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:	5.3
95% confidence interval on the mean age-adjusted incidence rate:	3.1 - 7.5
Median age-adjusted incidence rate of health districts:	5.6
Range of age-adjusted incidence rate for health districts:	1.3 - 11.0
SEER rate (2001, Whites):	4.7

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 75-79 for males and 85+ for females. Health District 2 had statistically significantly more cases than expected based upon rates for the remainder of Idaho ($p<0.01$), and Health District 4 had significantly fewer cases than expected based upon rates for the remainder of Idaho ($p<0.01$).


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

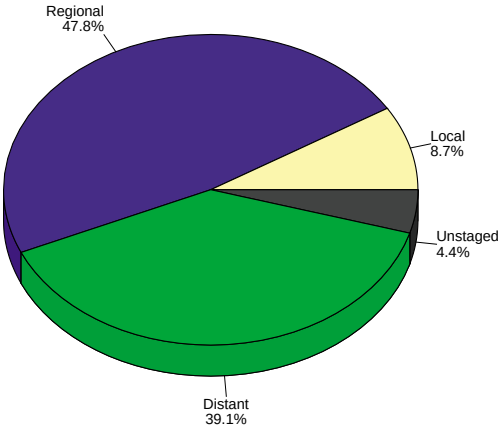

Esophageal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
4.6
4.2
11.0
5.7
1.3
5.9
3.6
5.6
0.0
2.0
4.0
6.0
8.0
10.0
12.0
Rate per 100,000 person-years

HODGKIN'S LYMPHOMA

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	3.3	3.4	3.3
# of new invasive cases	46	23	23
# of new in-situ cases	0	0	0
# of deaths	6	4	2

Stage at Diagnosis - Hodgkin's Lymphoma



(includes extranodal sites)

Total Cases By County

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

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's lymphoma is more common among Caucasians than among African Americans. Hodgkin's lymphoma is more common in higher income groups.

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

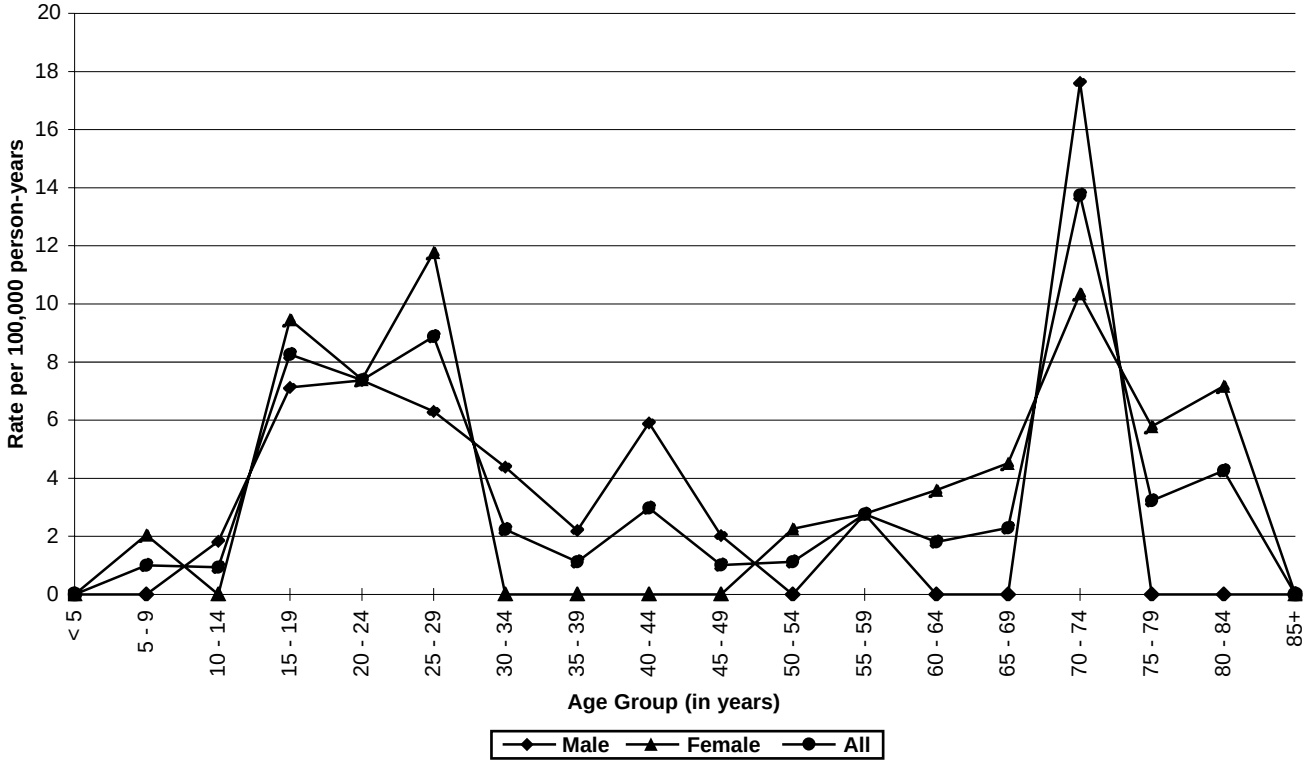
Other Small family size and ensuing delayed exposure to childhood infections is thought to be responsible for a portion of Hodgkin's lymphoma cases. Certain viral infections, especially Epstein-Barr virus, and AIDS increase the risk of Hodgkin's lymphoma. With current treatment, Hodgkin's disease, which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

Special Notes

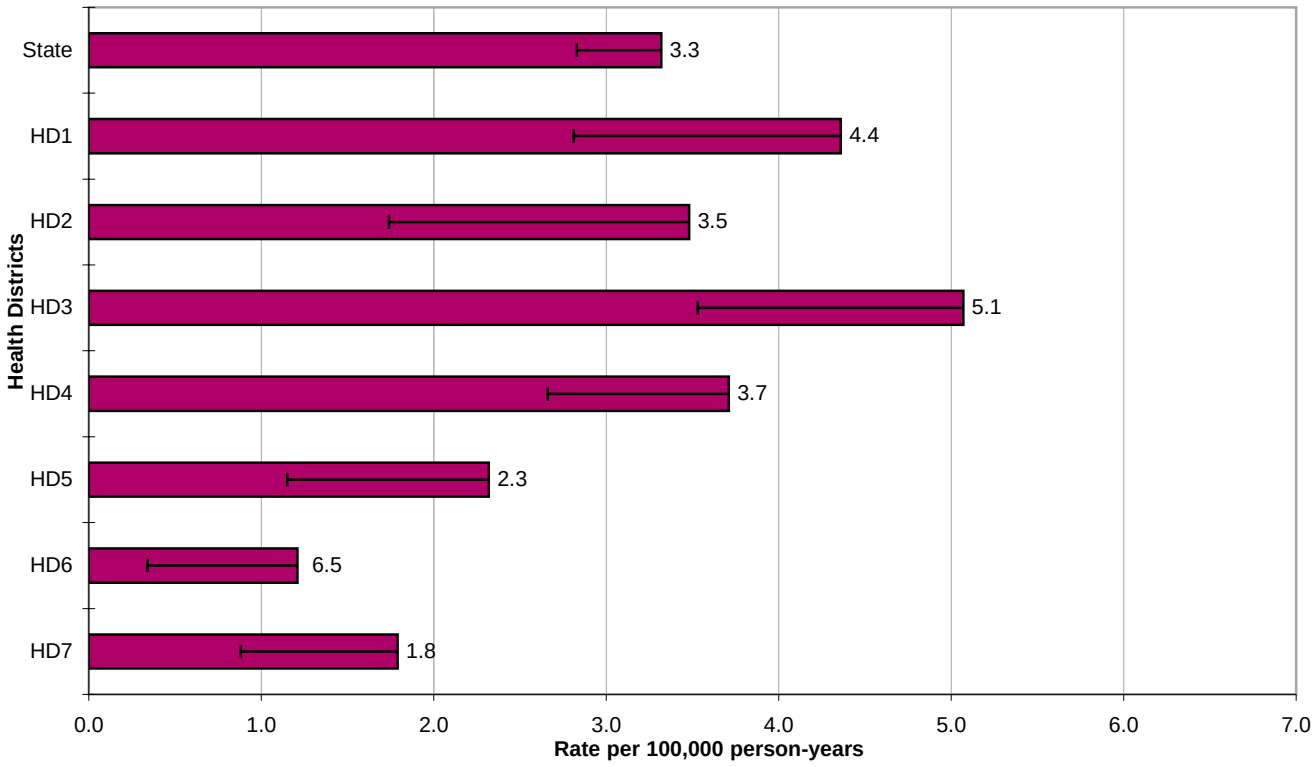
Mean age-adjusted incidence rate across health districts:	3.1	
95% confidence interval on the mean age-adjusted incidence rate:	2.1 -	4.2
Median age-adjusted incidence rate of health districts:	3.5	
Range of age-adjusted incidence rate for health districts:	1.2 -	5.1
SEER rate (2001, Whites):	2.7	

The age-related incidence of Hodgkin's 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's Lymphoma Incidence
Age-specific Rates



Hodgkin's Lymphoma Incidence
Age-adjusted Rates by Health District



KIDNEY

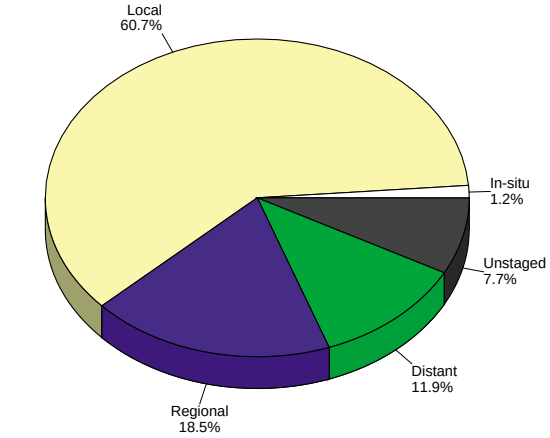
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	12.7	16.6	9.1
# of new invasive cases	166	103	63
# of new in-situ cases	2	2	0
# of deaths	64	48	16

Total Cases By County

Ada	44	Cassia	-	Lewis	2
Adams	1	Clark	-	Lincoln	1
Bannock	6	Clearwater	-	Madison	1
Bear Lake	-	Custer	1	Minidoka	4
Benewah	-	Elmore	1	Nez Perce	13
Bingham	2	Franklin	-	Oneida	1
Blaine	-	Fremont	-	Owyhee	1
Boise	1	Gem	1	Payette	3
Bonner	8	Gooding	3	Power	-
Bonneville	10	Idaho	4	Shoshone	-
Boundary	-	Jefferson	2	Teton	1
Butte	3	Jerome	1	Twin Falls	7
Camas	-	Kootenai	18	Valley	2
Canyon	15	Latah	3	Washington	4
Caribou	1	Lemhi	3		

Stage at Diagnosis - Kidney



(includes renal pelvis)

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.

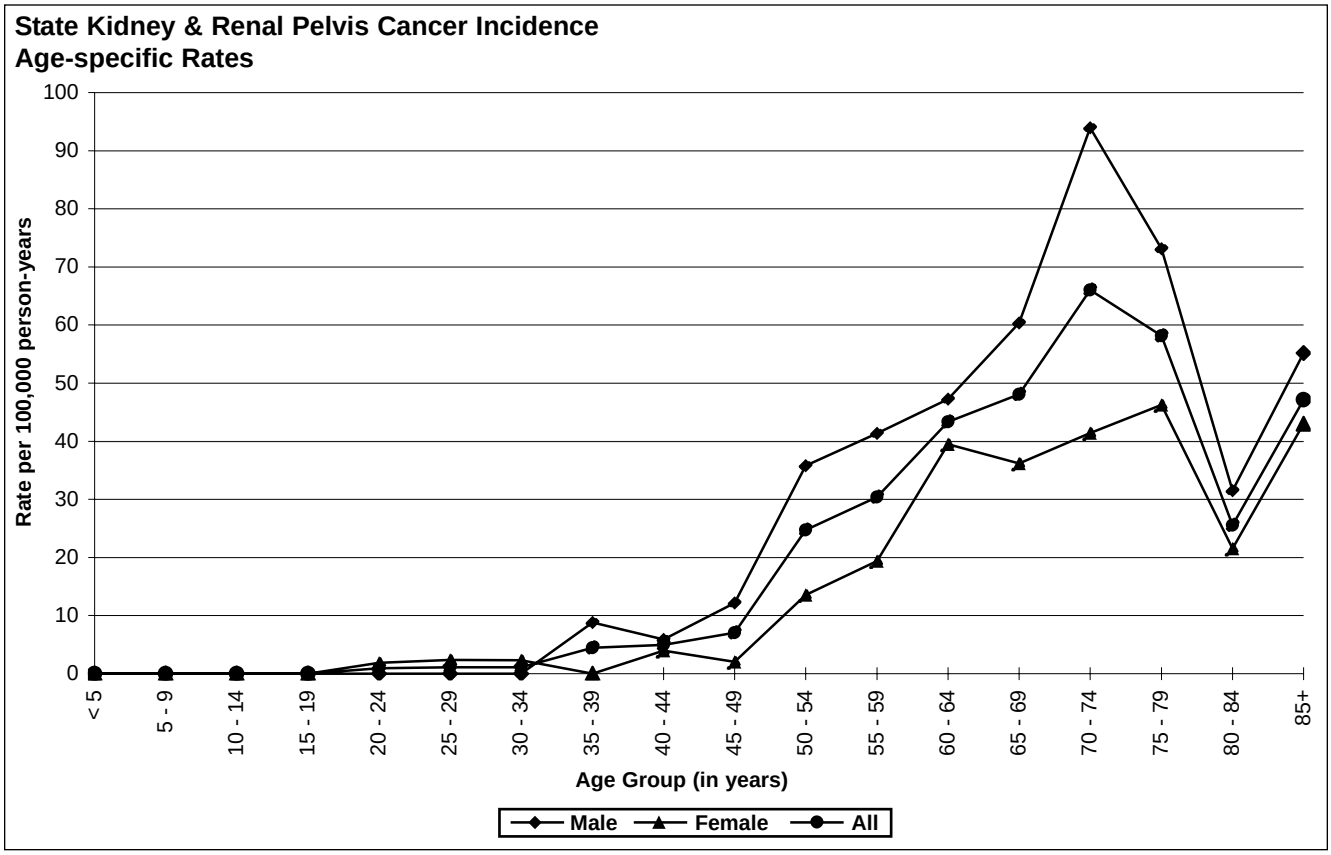
Occupation Certain occupations, such as laundry and leather workers, have been associated with increased risk due to chemical exposure.

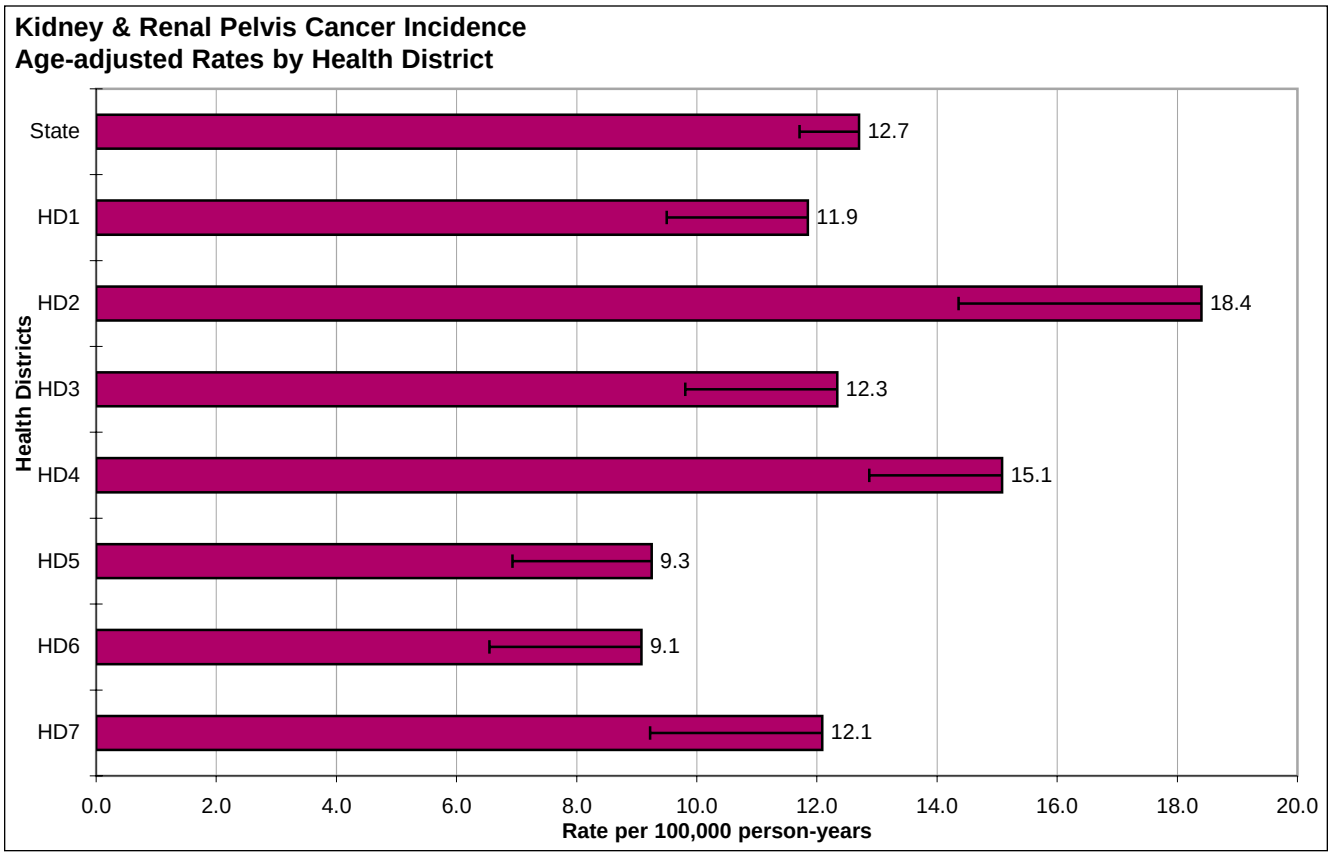
Other Cigarette smoking is strongly associated with renal pelvis and ureter cancers. Smokers are at twice the risk of developing kidney cancer as non-smokers. Analgesic mixtures containing phenacetin increase the risk of kidney cancer. Obesity is a risk factor for kidney cancer. High dietary protein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

Special Notes

Mean age-adjusted incidence rate across health districts:	12.6
95% confidence interval on the mean age-adjusted incidence rate:	10.2 - 15.0
Median age-adjusted incidence rate of health districts:	12.1
Range of age-adjusted incidence rate for health districts:	9.1 - 18.4
SEER rate (2001, Whites):	12.2

There were few cases of kidney or renal pelvis cancer among persons aged less than 35 years. The highest incidence among males was in the age group 70-74. The highest incidence among females was in the age group 75-79. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.


State Kidney & Renal Pelvis Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
100
90
80
70
60
50
40
30
20
10
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All

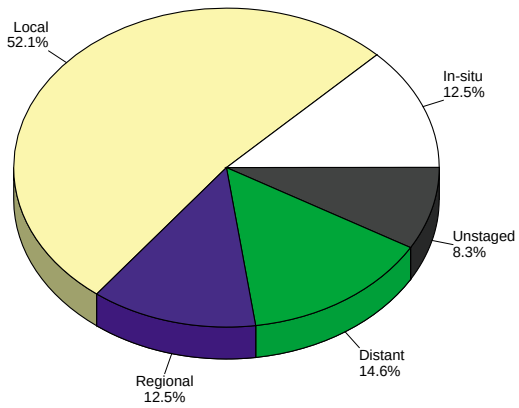

Kidney & Renal Pelvis Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
12.7
11.9
18.4
12.3
15.1
9.3
9.1
12.1
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0
20.0
Rate per 100,000 person-years

LARYNX

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	3.2	6.0	1.0
# of new invasive cases	42	35	7
# of new in-situ cases	6	6	0
# of deaths	16	10	6

Stage at Diagnosis - Larynx



Total Cases By County

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

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.

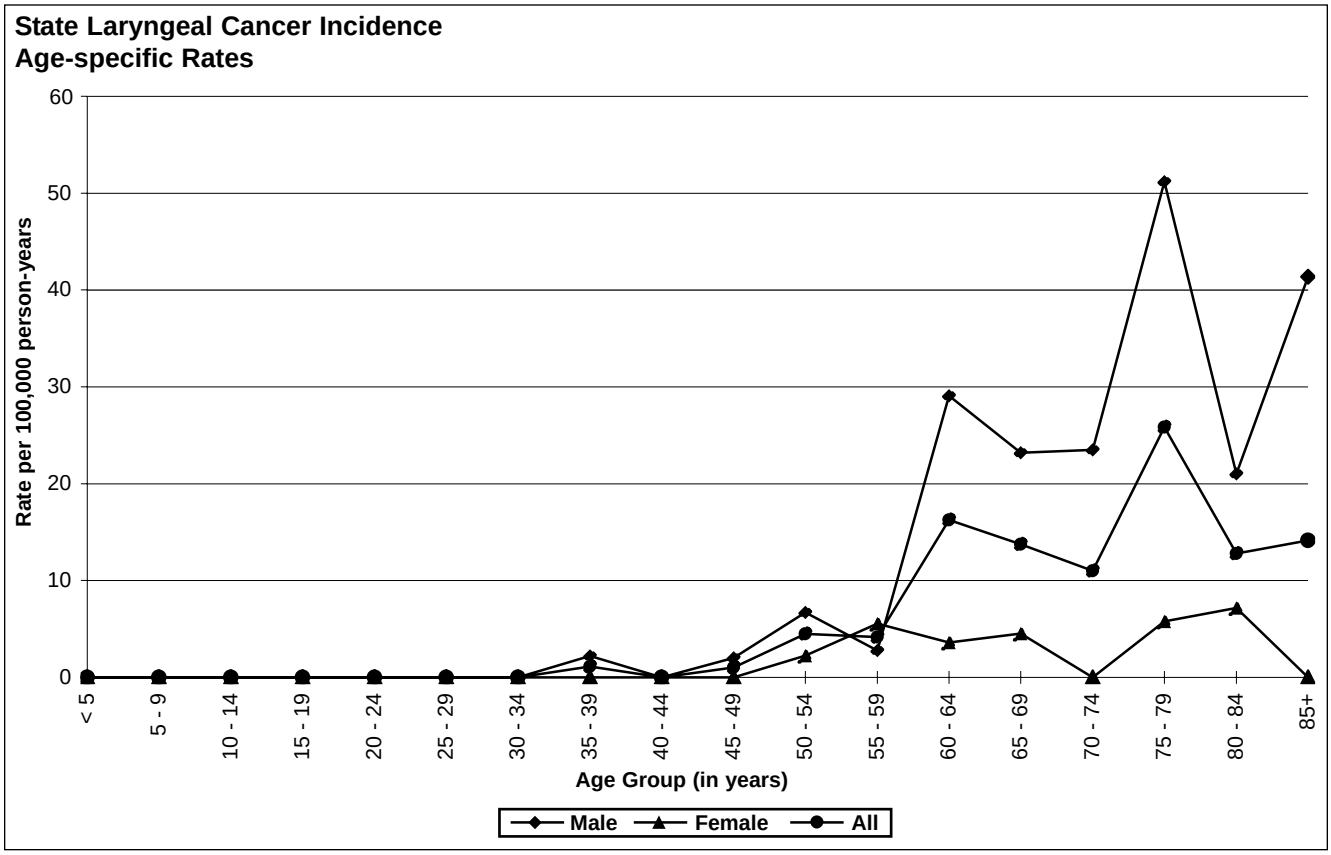
Diet Diets low in fresh fruits and vegetables may increase the risk.

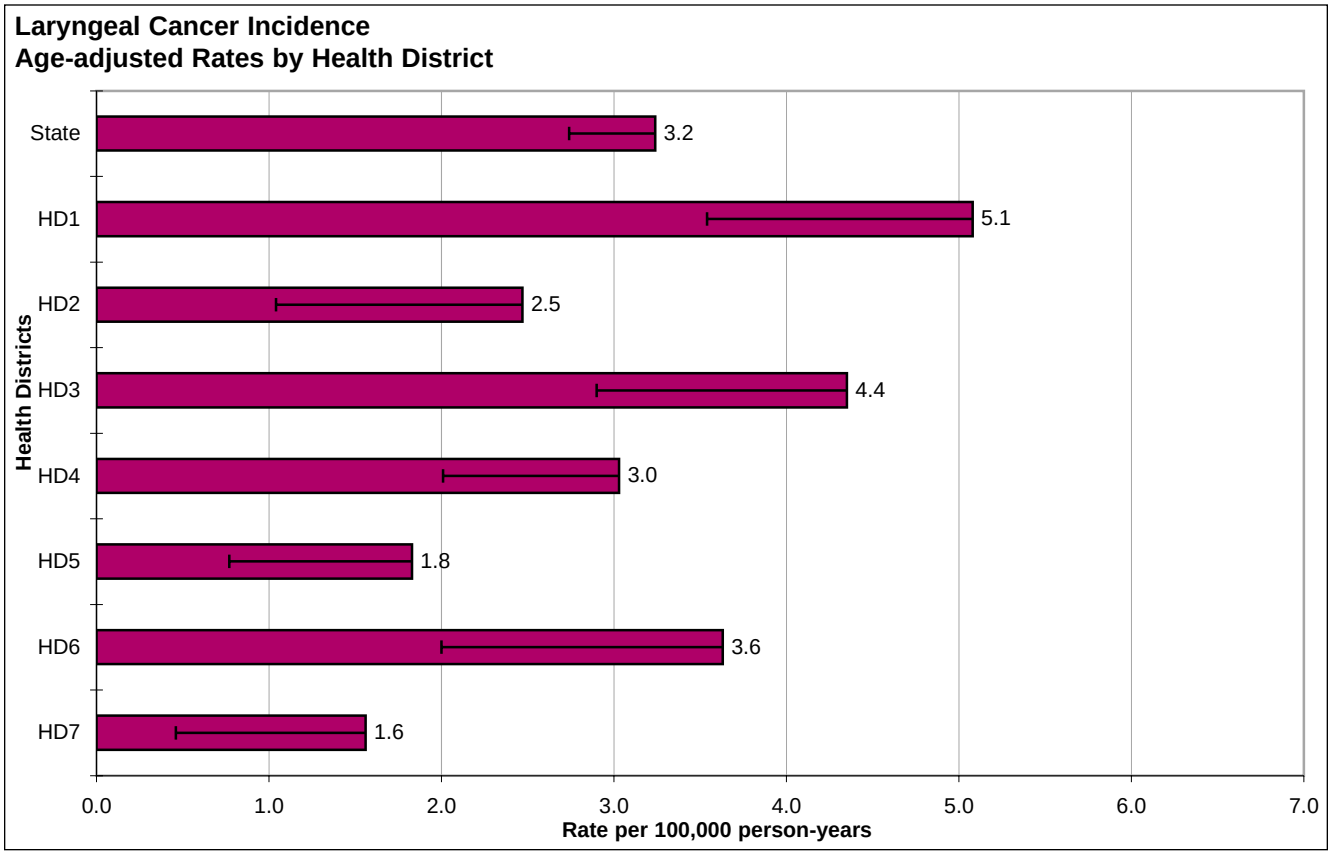
Other Cigarette smoking and alcohol use are both major risk factors. The combination of alcohol consumption and tobacco use (smoking or spit tobacco) acts greatly to increase the risk. A patient with a single laryngeal cancer who continues to smoke and drink alcohol has an enhanced risk of developing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

Special Notes

Mean age-adjusted incidence rate across health districts:	3.1	
95% confidence interval on the mean age-adjusted incidence rate:	2.2 -	4.1
Median age-adjusted incidence rate of health districts:	3.0	
Range of age-adjusted incidence rate for health districts:	1.6 -	5.1
SEER rate (2001, Whites):	3.5	

There were no cases of laryngeal cancer among persons aged less than 35 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 75-79. The highest incidence rate among females was in the age group 80-84. 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
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


Laryngeal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
3.2
5.1
2.5
4.4
3.0
1.8
3.6
1.6
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
Rate per 100,000 person-years

LEUKEMIA

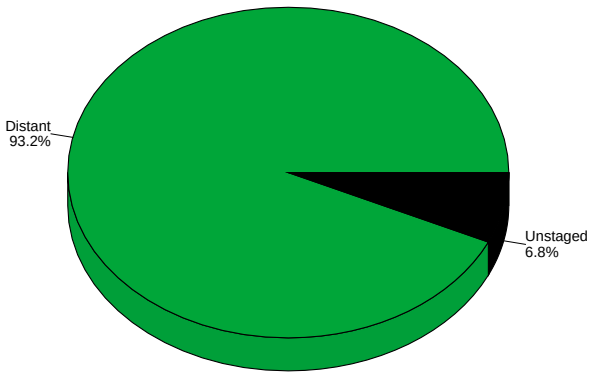
Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	14.6	18.0	11.8
# of new invasive cases	191	106	85
# of new in-situ cases	0	0	0
# of deaths	125	74	51

Total Cases By County

Ada	50	Cassia	1	Lewis	2
Adams	3	Clark	-	Lincoln	2
Bannock	7	Clearwater	-	Madison	2
Bear Lake	3	Custer	-	Minidoka	3
Benewah	2	Elmore	1	Nez Perce	8
Bingham	4	Franklin	-	Oneida	-
Blaine	1	Fremont	3	Owyhee	1
Boise	1	Gem	3	Payette	2
Bonner	3	Gooding	3	Power	-
Bonneville	13	Idaho	3	Shoshone	4
Boundary	2	Jefferson	2	Teton	-
Butte	1	Jerome	4	Twin Falls	10
Camas	-	Kootenai	16	Valley	1
Canyon	19	Latah	2	Washington	2
Caribou	4	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.

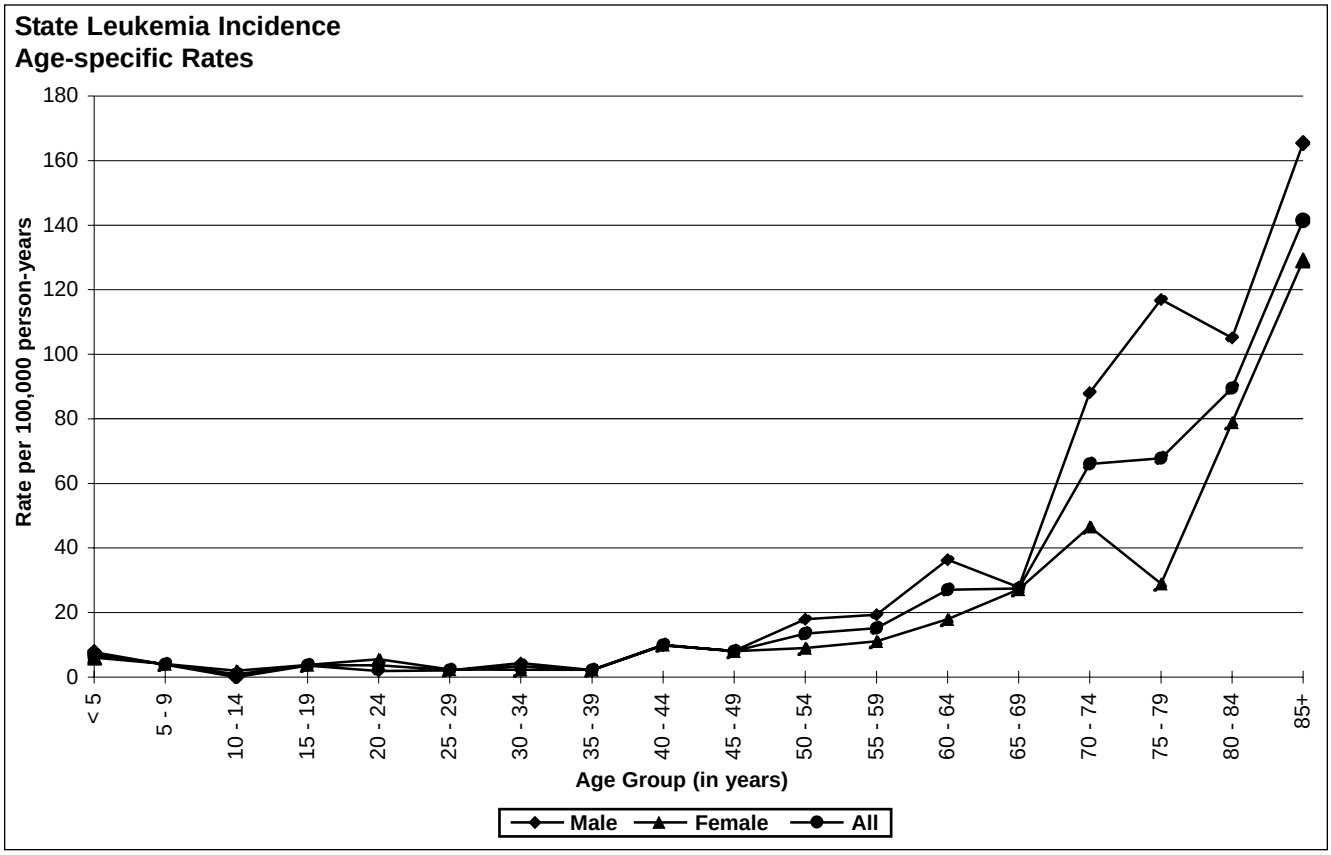
Occupation Benzene is a known cause of leukemia (predominantly acute myelogenous leukemia [AML]). Chimney sweeps exposed to soot are at higher risk.

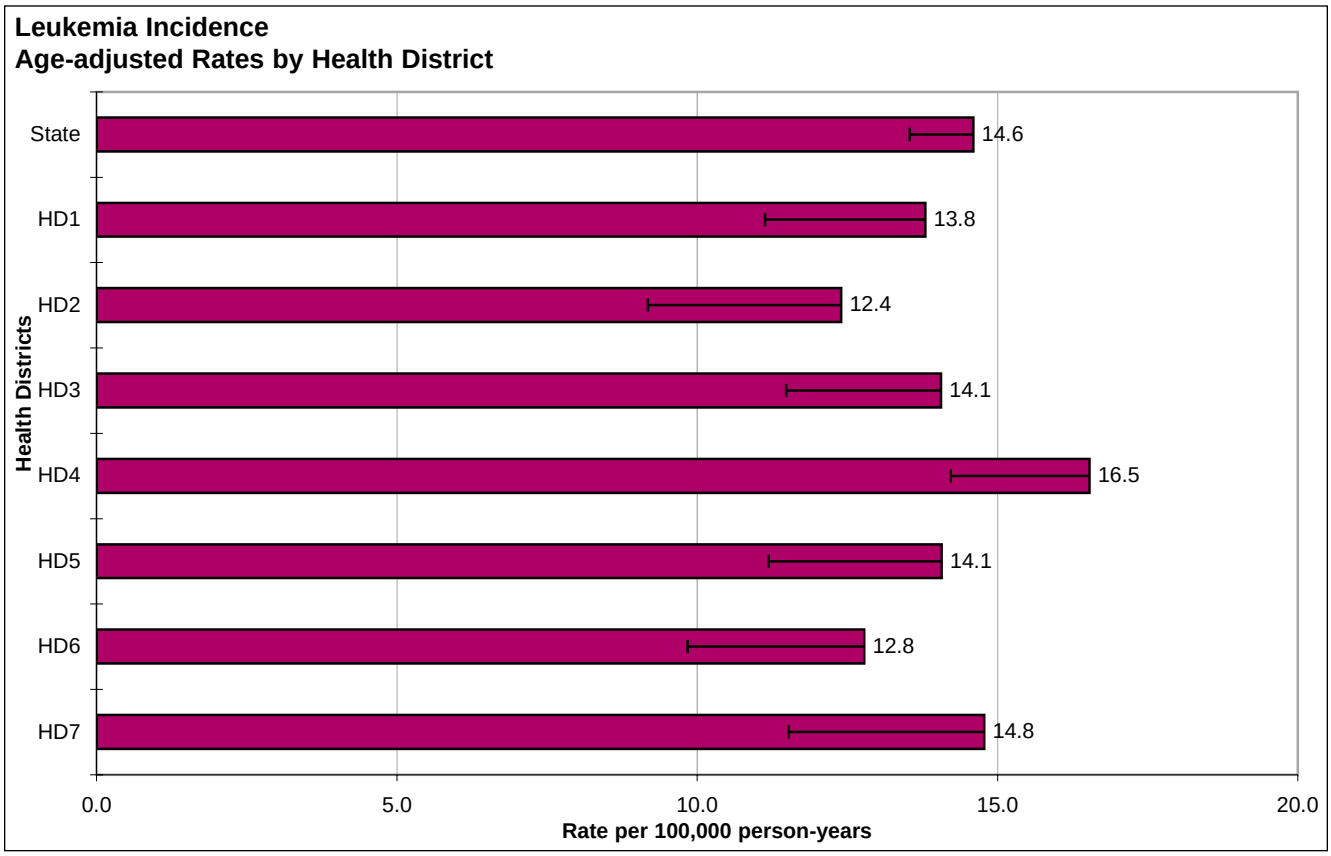
Other Ionizing radiation exposure increases the risk (except for CLL). Environmental exposure to low frequency, non-ionizing radiation and its association with leukemia incidence is being investigated. Treatment with some chemotherapeutic agents for other cancers increases the risk of leukemia. Exposure 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:	14.1
95% confidence interval on the mean age-adjusted incidence rate:	13.1 - 15.1
Median age-adjusted incidence rate of health districts:	14.1
Range of age-adjusted incidence rate for health districts:	12.4 - 16.5
SEER rate (2001, Whites):	12.8

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

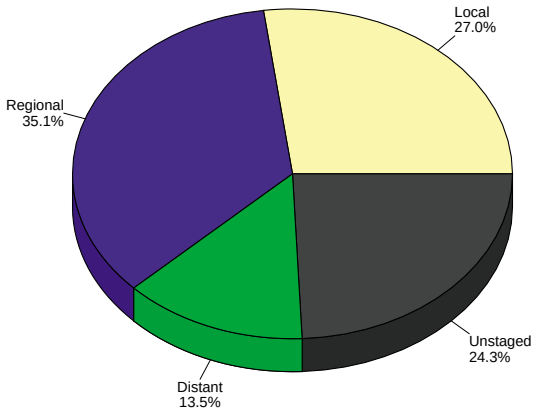

Leukemia Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
14.6
13.8
12.4
14.1
16.5
14.1
12.8
14.8
0.0
5.0
10.0
15.0
20.0
Rate per 100,000 person-years

LIVER AND BILE DUCT

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	2.9	4.1	1.8
# of new invasive cases	37	25	12
# of new in-situ cases	0	0	0
# of deaths	41	26	15

Stage at Diagnosis - Liver



Total Cases By County

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

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.

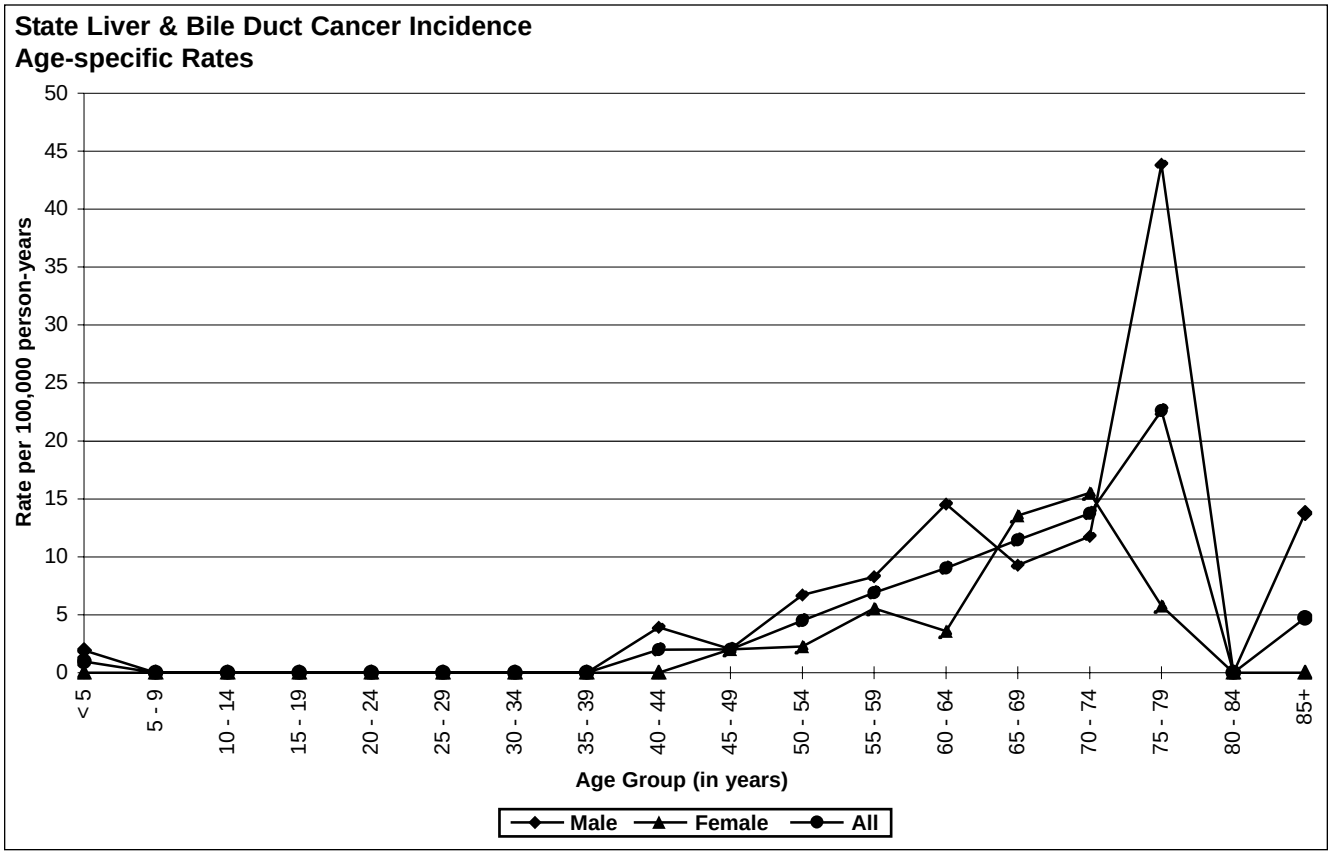
Occupation Thorium dioxide (an x-ray contrast medium) exposure increases liver cancer risk. Exposure to vinyl chloride used in plastic production is associated with an increased risk of angiosarcoma of the liver. Chimney sweeps exposed to soot are at higher risk.

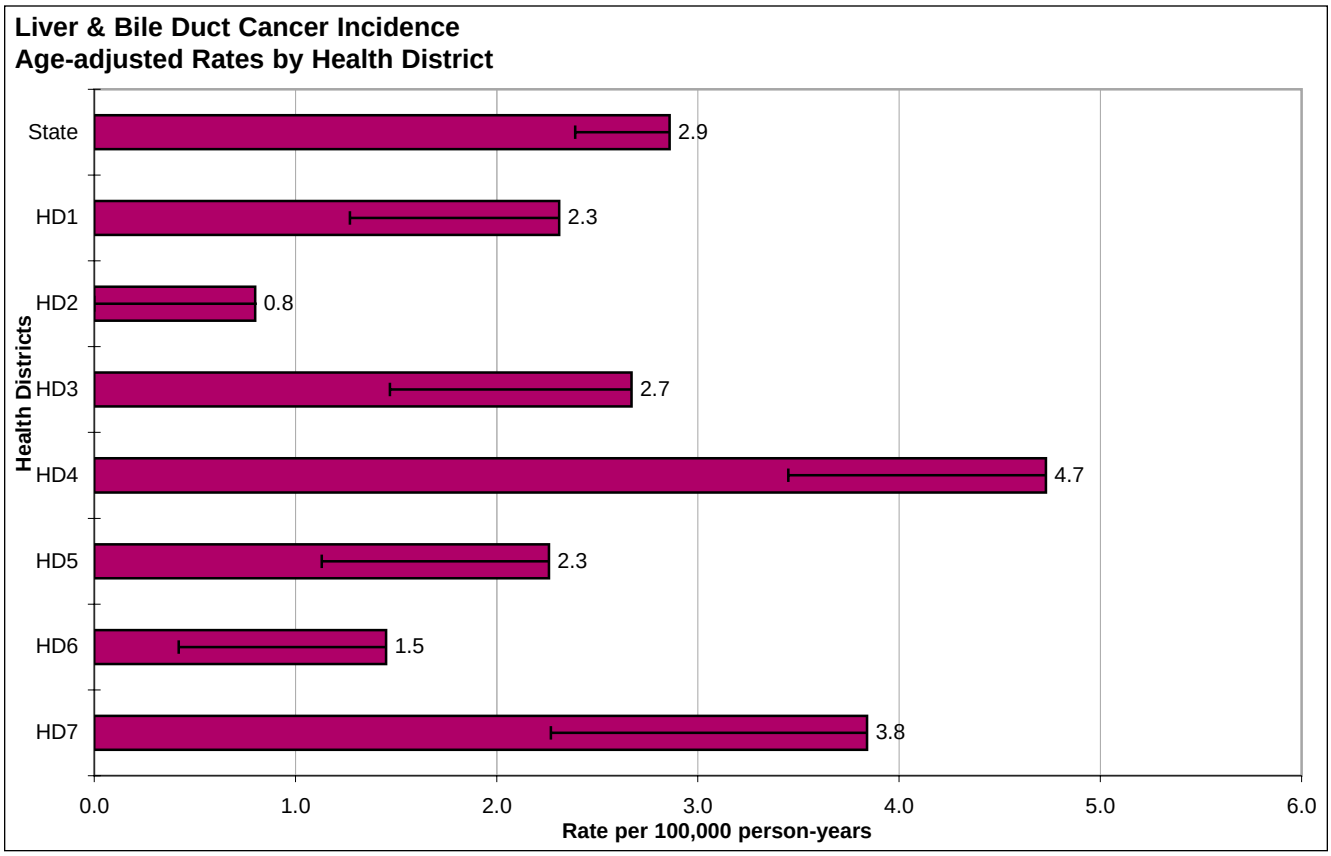
Other Hepatitis B and Hepatitis C infections are significant causes of hepatocellular carcinoma. Cirrhosis of the liver due to viral hepatitis, alcoholism, or toxic chemical exposure accounts for 50-80% of patients diagnosed with liver cancer. Long-term use of oral contraceptives increases risk of hepatocellular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

Special Notes

Mean age-adjusted incidence rate across health districts:	2.6	
95% confidence interval on the mean age-adjusted incidence rate:	1.6 -	3.6
Median age-adjusted incidence rate of health districts:	2.3	
Range of age-adjusted incidence rate for health districts:	0.8 -	4.7
SEER rate (2001, Whites):	4.0	

There were few cases of liver cancer among persons less than 40 years of age. Age-specific incidence rates increased with age, peaking in the age group 75-79 for males and 70-74 for females. Health District 4 had statistically significantly more cases than expected based upon rates for the remainder of Idaho ($p<0.05$).


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

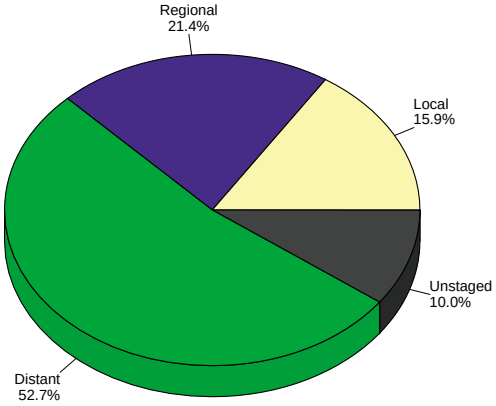

Liver & Bile Duct Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
2.9
2.3
0.8
2.7
4.7
2.3
1.5
3.8
0.0
1.0
2.0
3.0
4.0
5.0
6.0
Rate per 100,000 person-years

LUNG AND BRONCHUS

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	57.7	69.6	48.4
# of new invasive cases	734	402	332
# of new in-situ cases	0	0	0
# of deaths	591	315	276

Stage at Diagnosis - Lung and Bronchus



Total Cases By County

Ada	185	Cassia	12	Lewis	9
Adams	2	Clark	-	Lincoln	3
Bannock	35	Clearwater	6	Madison	1
Bear Lake	2	Custer	1	Minidoka	10
Benewah	10	Elmore	12	Nez Perce	42
Bingham	9	Franklin	-	Oneida	-
Blaine	5	Fremont	2	Owyhee	8
Boise	5	Gem	18	Payette	10
Bonner	30	Gooding	10	Power	1
Bonneville	31	Idaho	5	Shoshone	21
Boundary	9	Jefferson	4	Teton	-
Butte	2	Jerome	5	Twin Falls	42
Camas	1	Kootenai	71	Valley	8
Canyon	80	Latah	7	Washington	13
Caribou	1	Lemhi	6		

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.

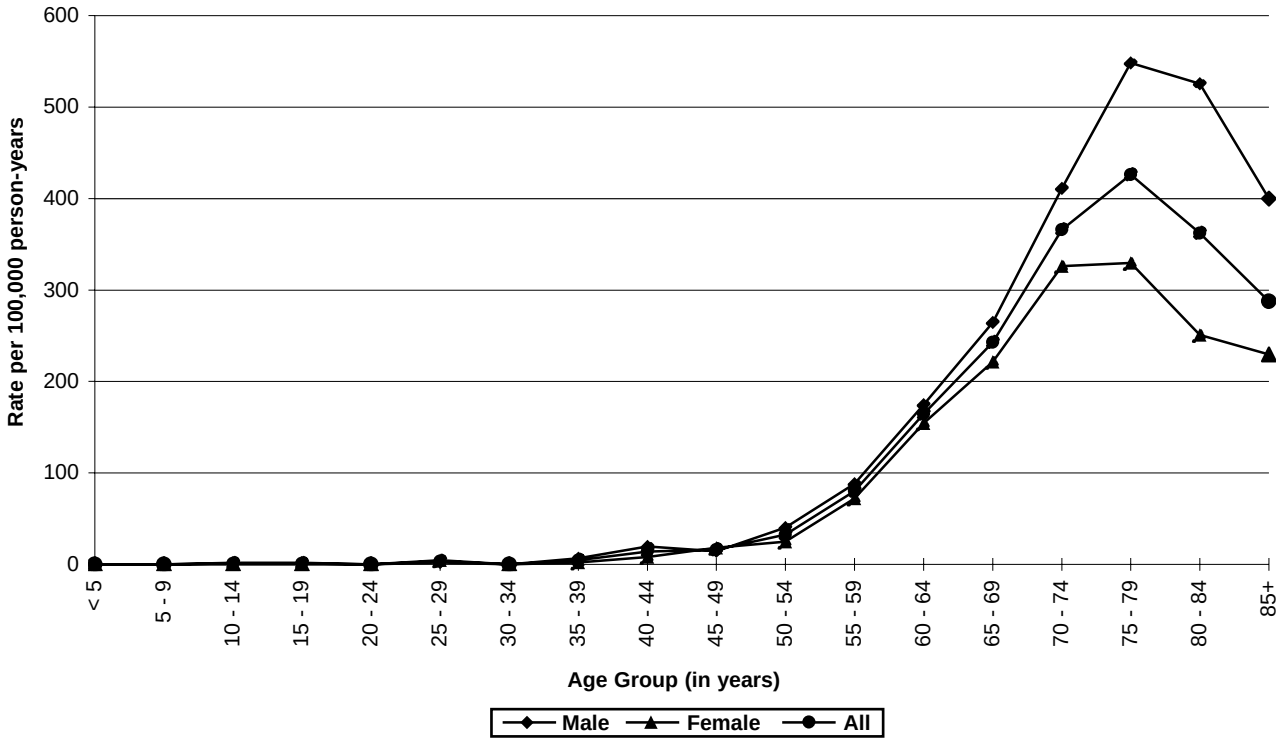
Other Cigarette smoking, including exposure to second-hand smoke, is the most important risk factor, accounting for over 85% of lung cancer deaths. Evidence exists that rates are about 1.3 times higher, adjusted for smoking, in urban areas than rural areas due to air pollution, mostly from motor vehicles.

Special Notes

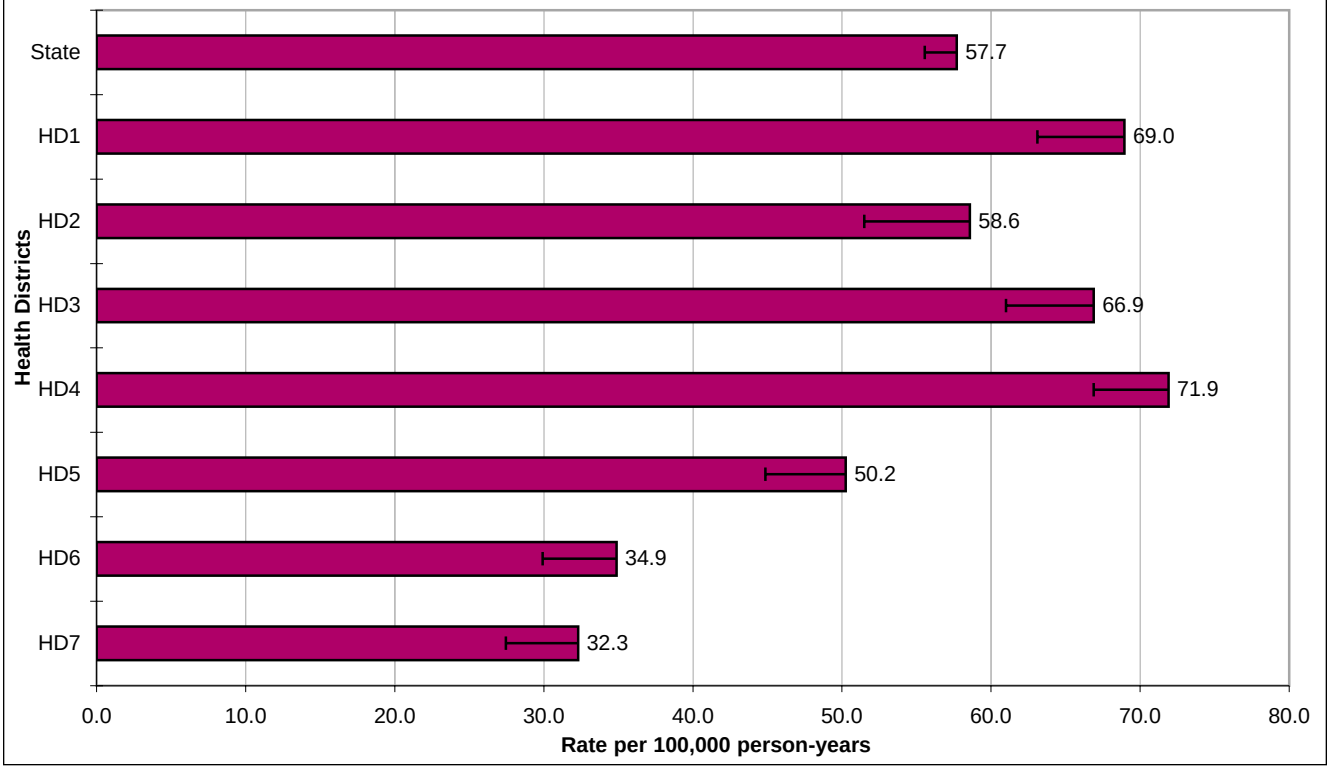
Mean age-adjusted incidence rate across health districts:	54.8
95% confidence interval on the mean age-adjusted incidence rate:	42.8 - 66.8
Median age-adjusted incidence rate of health districts:	58.6
Range of age-adjusted incidence rate for health districts:	32.3 - 71.9
SEER rate (2001, Whites):	62.1

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 60. The incidence rates increased with age, peaking in the age group 75-79 for males and females. Health Districts 1 ($p<0.05$) and 4 ($p<0.01$) had statistically significantly more cases than expected based upon rates for the remainder of Idaho. Health Districts 6 ($p<0.01$) and 7 ($p<0.01$) had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho.

State Lung & Bronchus Cancer Incidence
Age-specific Rates



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

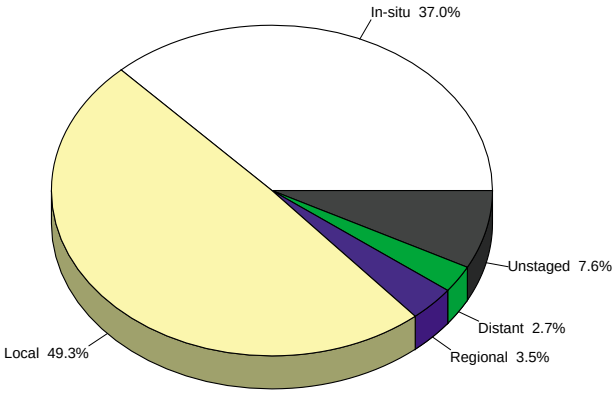


MELANOMA OF SKIN

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	23.6	28.6	19.9
# of new invasive cases	307	174	133
# of new in-situ cases	180	94	86
# of deaths	45	27	18

Stage at Diagnosis - Melanoma of Skin



Total Cases By County

Ada	123	Cassia	3	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	29	Clearwater	4	Madison	2
Bear Lake	2	Custer	-	Minidoka	4
Benewah	5	Elmore	4	Nez Perce	14
Bingham	10	Franklin	1	Oneida	3
Blaine	9	Fremont	9	Owyhee	2
Boise	-	Gem	8	Payette	1
Bonner	16	Gooding	6	Power	4
Bonneville	23	Idaho	2	Shoshone	4
Boundary	2	Jefferson	9	Teton	3
Butte	2	Jerome	6	Twin Falls	24
Camas	-	Kootenai	57	Valley	6
Canyon	45	Latah	9	Washington	1
Caribou	4	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.

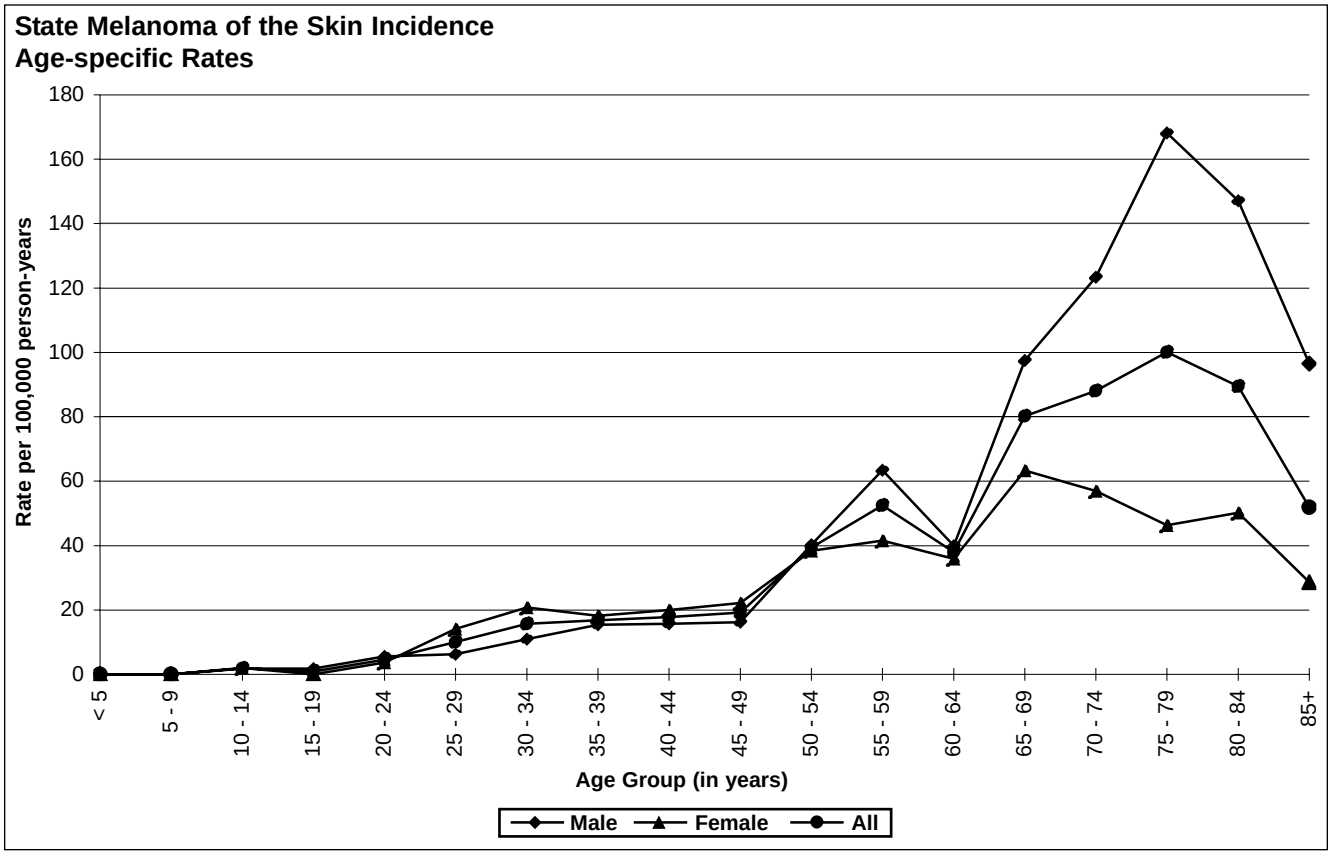
Race & SES The incidence rate is highest in Caucasians and is uncommon in African Americans. It has an increased incidence in higher income groups (indoor workers).

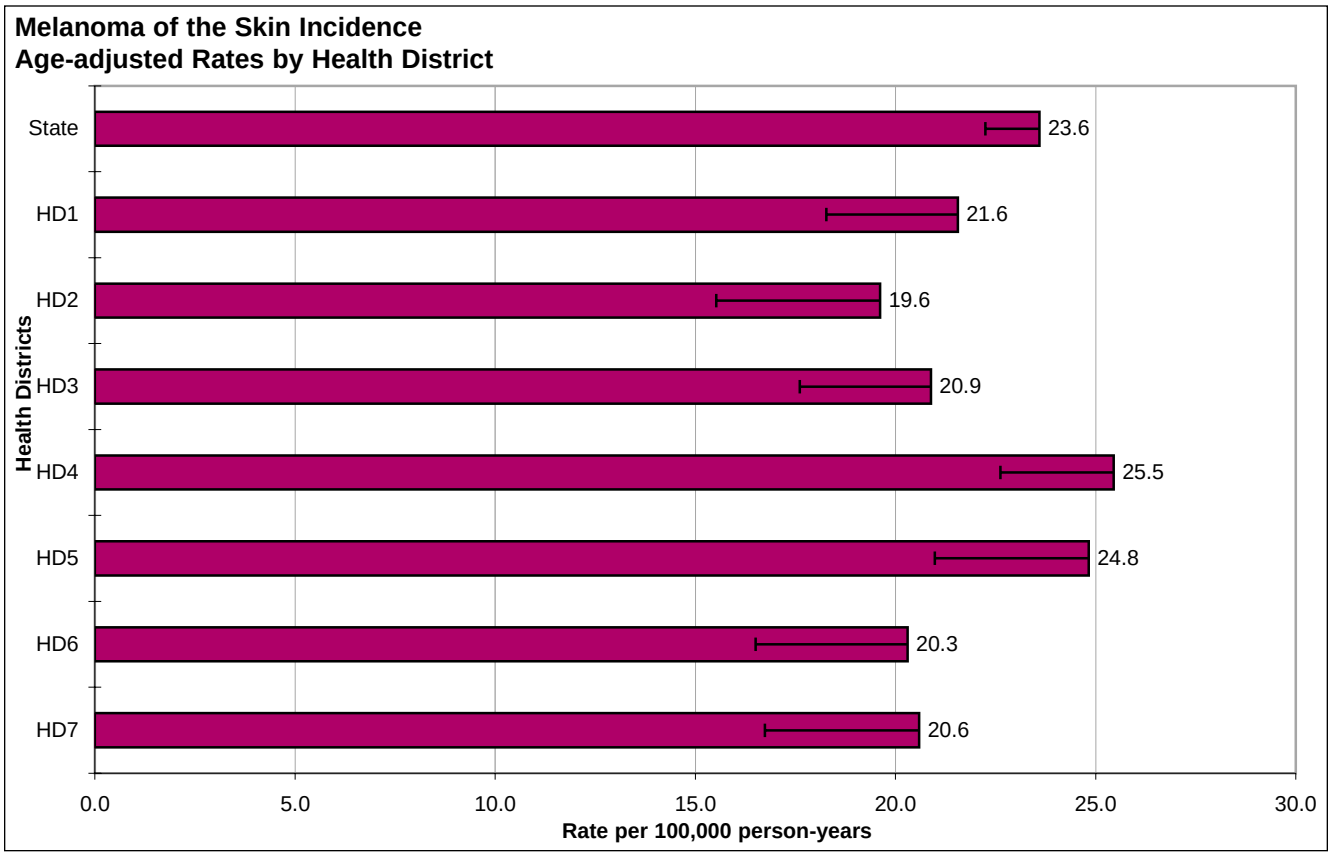
Other Ultra-violet light exposure, especially blistering sunburns during childhood, is a major risk factor. Melanoma incidence rates are increased around the world. Blue eyes, fair or red hair and pale complexion are well-known risk factors for melanoma. Apart from race and age, number of melanocytic 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:	21.9
95% confidence interval on the mean age-adjusted incidence rate:	20.2 - 23.6
Median age-adjusted incidence rate of health districts:	20.9
Range of age-adjusted incidence rate for health districts:	19.6 - 25.5
SEER rate (2001, Whites):	22.6

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


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

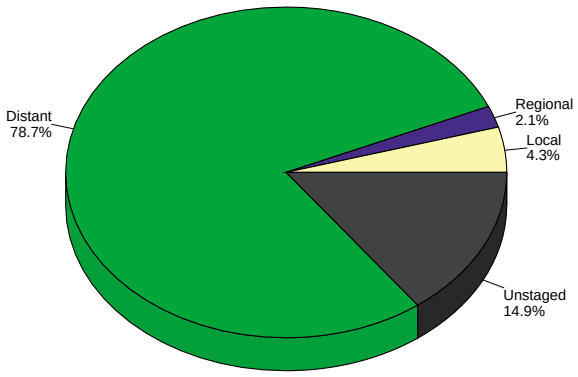

Melanoma of the Skin Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
23.6
21.6
19.6
20.9
25.5
24.8
20.3
20.6
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Rate per 100,000 person-years

MYELOMA

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	3.6	4.6	2.9
# of new invasive cases	47	27	20
# of new in-situ cases	0	0	0
# of deaths	38	18	20

Stage at Diagnosis - Myeloma



Total Cases By County

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

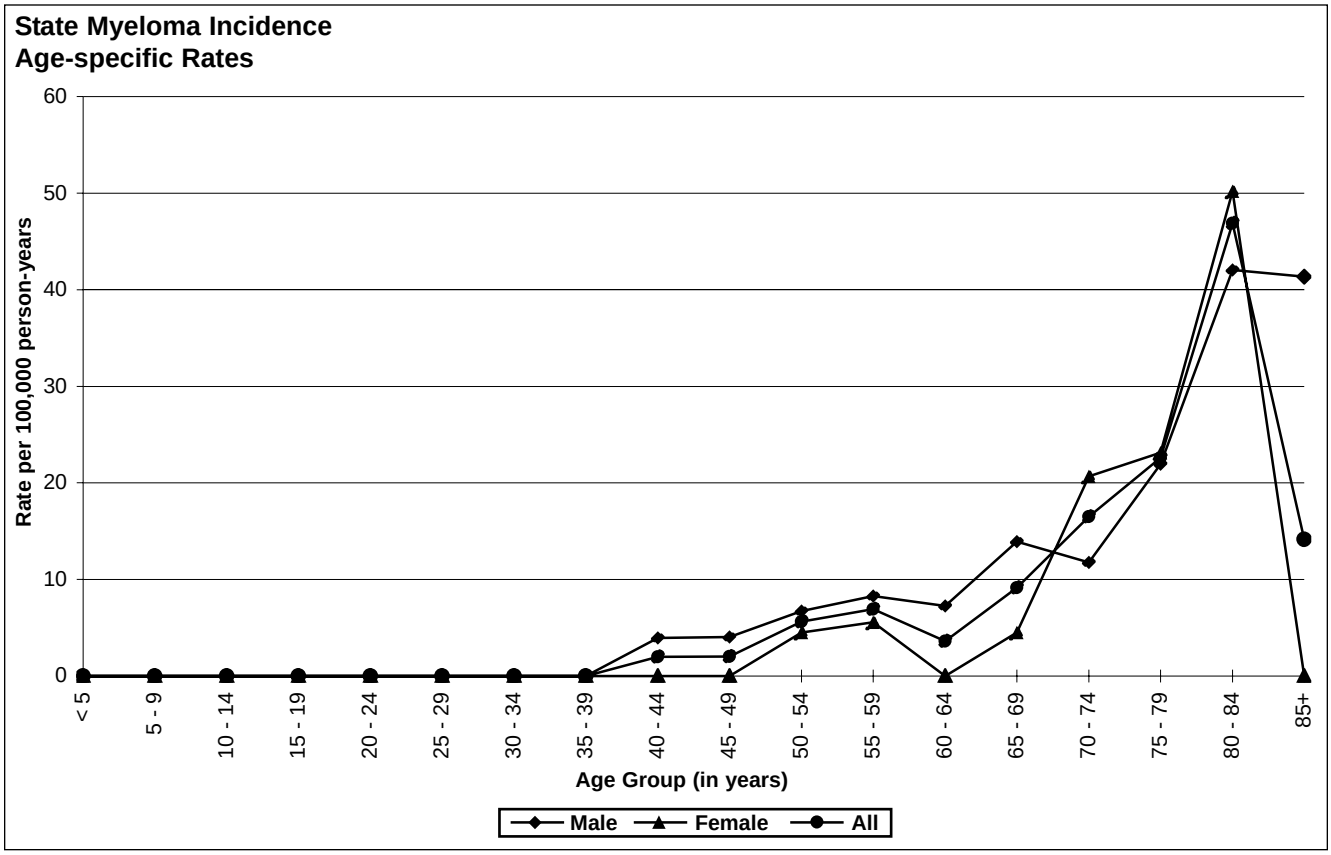
Genetics Genetic factors play an important role in its development but how so is not completely understood. Familial factors and chronic antigenic stimulation have also been implicated.

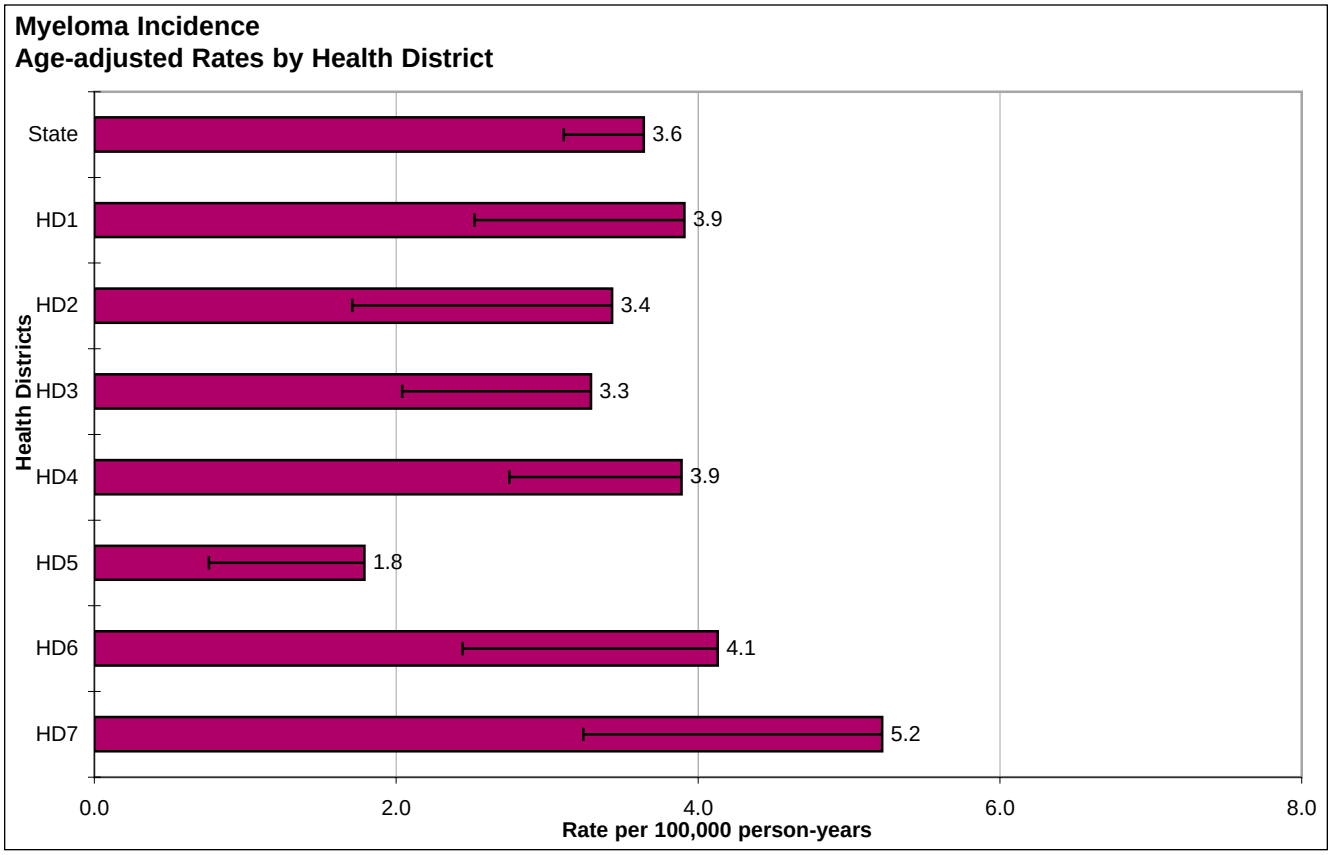
Other Multiple myeloma has been associated with lymphomas such as Burkitt's, and non-Hodgkin's lymphomas. Studies have suggested several possible viral etiologies, and multiple myeloma has been linked to ionizing radiation exposure. Several specific chemical and physical substances have been linked to 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:	3.7
95% confidence interval on the mean age-adjusted incidence rate:	2.9 - 4.4
Median age-adjusted incidence rate of health districts:	3.9
Range of age-adjusted incidence rate for health districts:	1.8 - 5.2
SEER rate (2001, Whites):	5.0

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

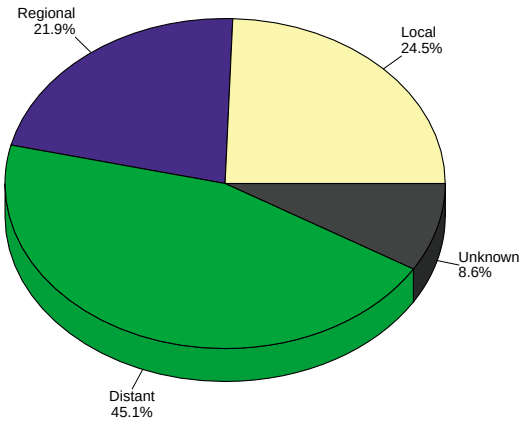

Myeloma Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
3.6
3.9
3.4
3.3
3.9
1.8
4.1
5.2
0.0
2.0
4.0
6.0
8.0
Rate per 100,000 person-years

NON-HODGKIN'S LYMPHOMA

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	18.1	18.9	17.5
# of new invasive cases	233	112	121
# of new in-situ cases	0	0	0
# of deaths	111	62	49

Stage at Diagnosis - Non-Hodgkin's Lymphoma



(includes extra-nodal sites)

Total Cases By County

Ada	65	Cassia	4	Lewis	2
Adams	2	Clark	-	Lincoln	1
Bannock	12	Clearwater	2	Madison	2
Bear Lake	1	Custer	-	Minidoka	7
Benewah	3	Elmore	6	Nez Perce	5
Bingham	5	Franklin	2	Oneida	-
Blaine	2	Fremont	-	Owyhee	1
Boise	-	Gem	4	Payette	3
Bonner	7	Gooding	1	Power	1
Bonneville	17	Idaho	3	Shoshone	1
Boundary	3	Jefferson	1	Teton	2
Butte	2	Jerome	-	Twin Falls	16
Camas	-	Kootenai	20	Valley	1
Canyon	23	Latah	3	Washington	2
Caribou	-	Lemhi	1		

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.

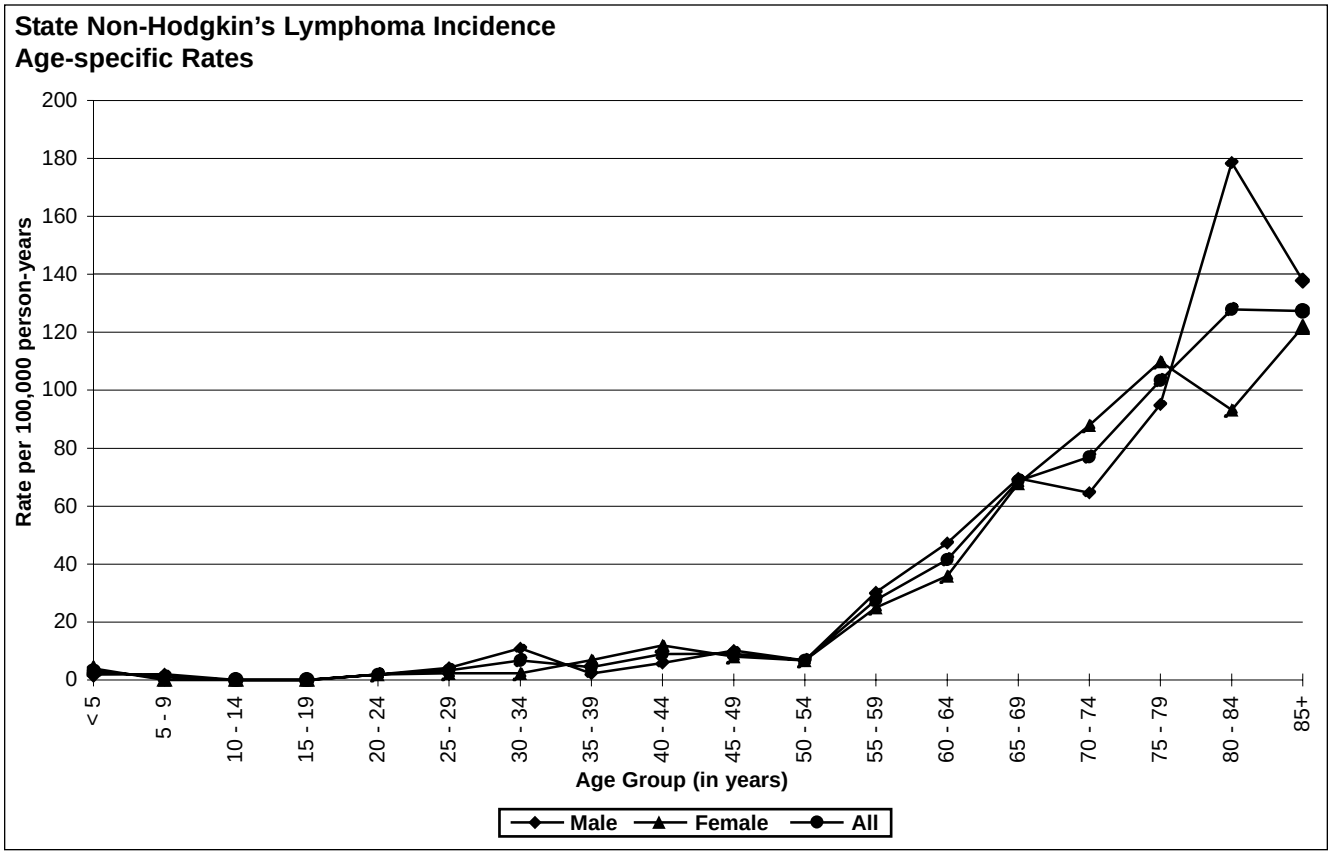
Occupation Ethylene oxide exposure at plants producing sterilized medical supplies and spices is a risk factor.

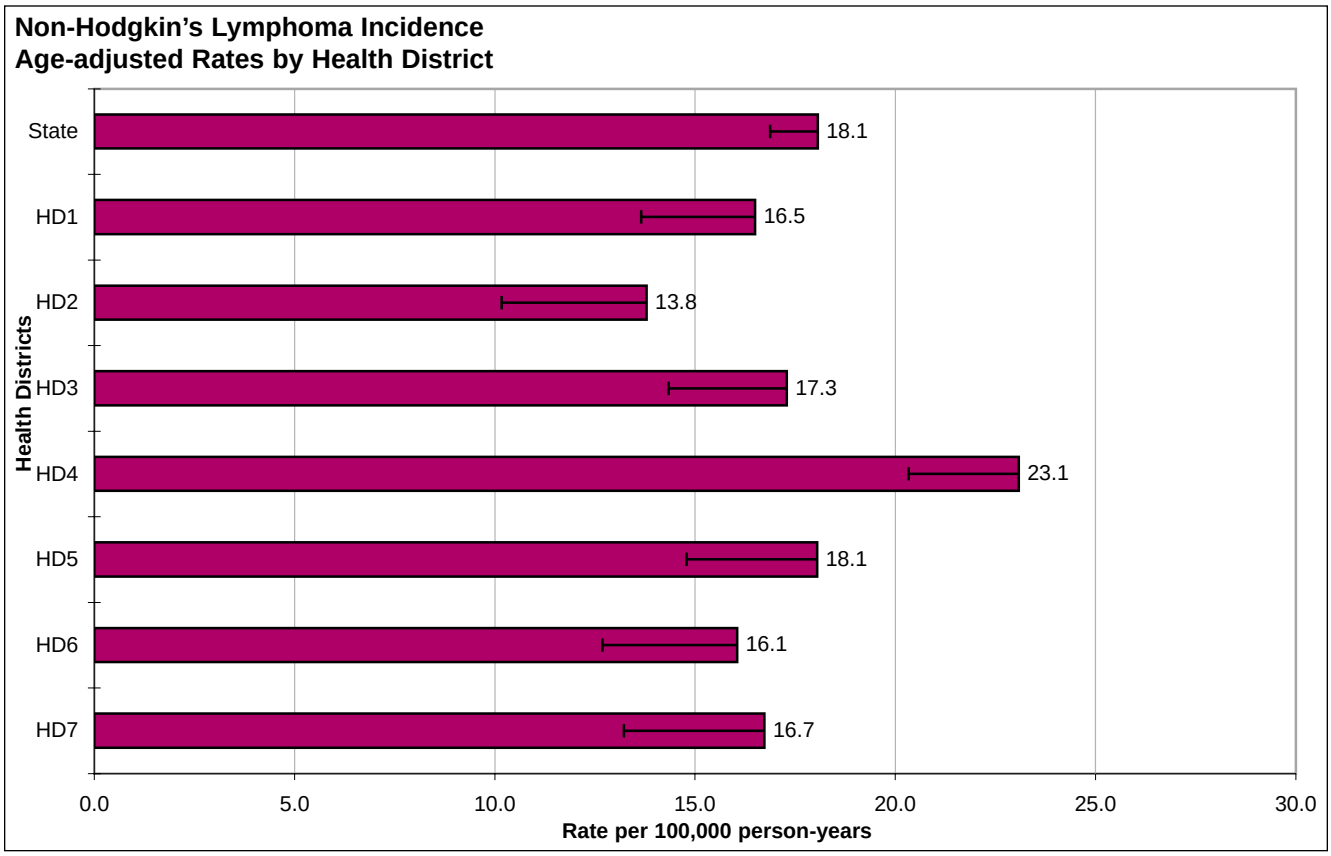
Other Non-Hodgkin's lymphoma (NHL) develops with increased frequency in individuals infected with certain viruses, including HTLV-I, HIV, and EBV. Exposures to agricultural chemicals and PCBs have also been implicated. Treatment with some immunosuppressants increases the risk of NHL among organ transplant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

Special Notes

Mean age-adjusted incidence rate across health districts:	17.4
95% confidence interval on the mean age-adjusted incidence rate:	15.2 - 19.5
Median age-adjusted incidence rate of health districts:	16.7
Range of age-adjusted incidence rate for health districts:	13.8 - 23.1
SEER rate (2001, Whites):	19.7

The age-specific incidence rates of non-Hodgkin's lymphoma increased with age, peaking in the age group 80-84 for males and 85+ for females. Health District 4 ($p<0.01$) had statistically significantly more cases than expected based upon rates for the remainder of Idaho.


State Non-Hodgkin's Lymphoma Incidence
Age-specific Rates
Rate per 100,000 person-years
200
180
160
140
120
100
80
60
40
20
0
< 5
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Group (in years)
Male
Female
All

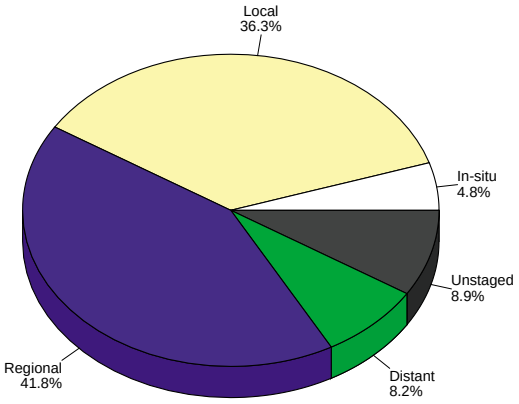

Non-Hodgkin's Lymphoma Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
18.1
16.5
13.8
17.3
23.1
18.1
16.1
16.7
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Rate per 100,000 person-years

ORAL CAVITY AND PHARYNX

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	10.6	16.6	5.2
# of new invasive cases	139	103	36
# of new in-situ cases	7	5	2
# of deaths	31	22	9

Stage at Diagnosis - Oral Cavity



Total Cases By County

Ada	29	Cassia	2	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	4	Clearwater	1	Madison	3
Bear Lake	-	Custer	1	Minidoka	2
Benewah	4	Elmore	1	Nez Perce	7
Bingham	-	Franklin	-	Oneida	1
Blaine	3	Fremont	1	Owyhee	1
Boise	1	Gem	-	Payette	3
Bonner	4	Gooding	3	Power	-
Bonneville	5	Idaho	2	Shoshone	3
Boundary	-	Jefferson	2	Teton	-
Butte	-	Jerome	4	Twin Falls	19
Camas	-	Kootenai	21	Valley	-
Canyon	15	Latah	-	Washington	-
Caribou	1	Lemhi	1		

Risk and Associated Factors

Age Most cases occur in people over age 60.

Gender Males have a higher incidence than females, 2-6x 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.

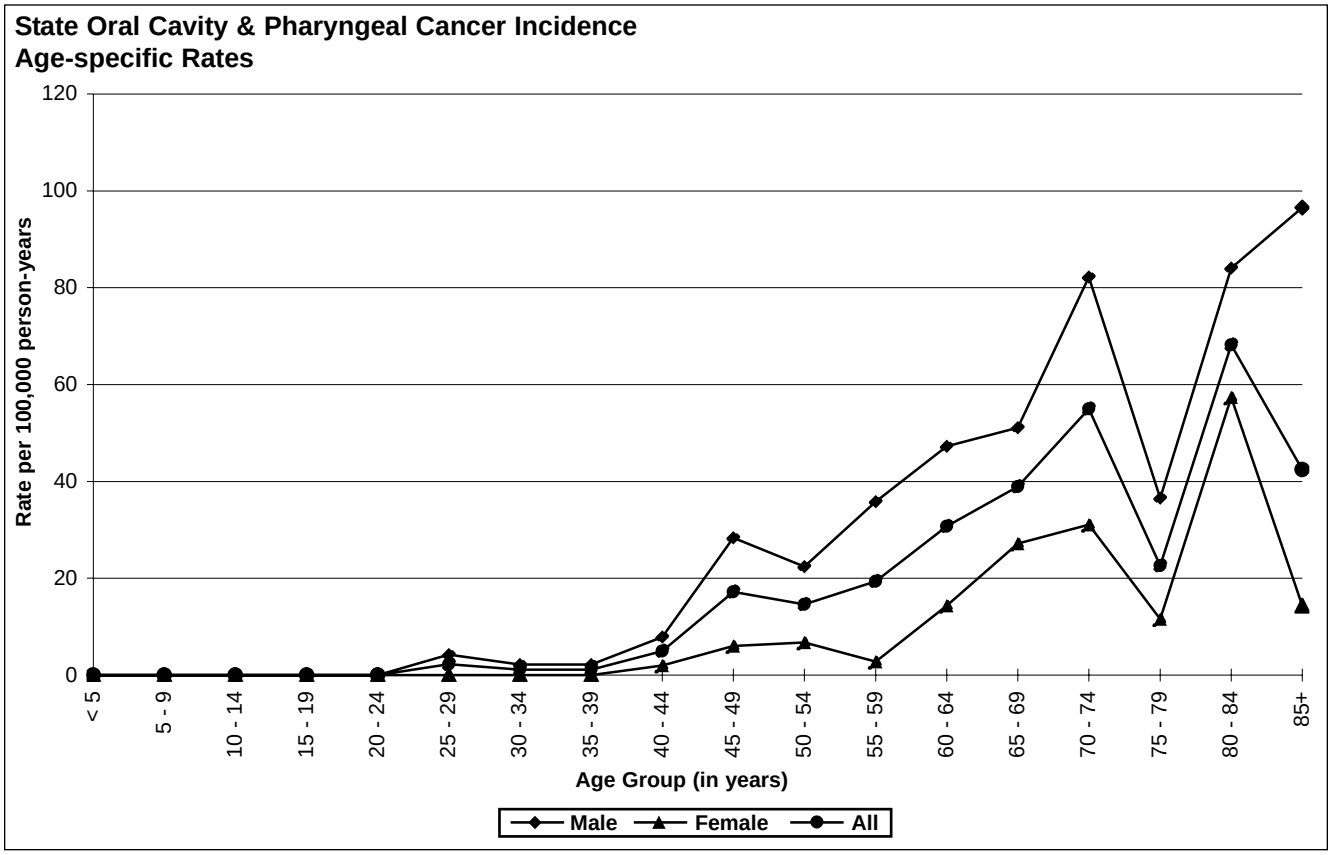
Diet Increased risk is associated with diets low in fresh fruit and vegetable consumption.

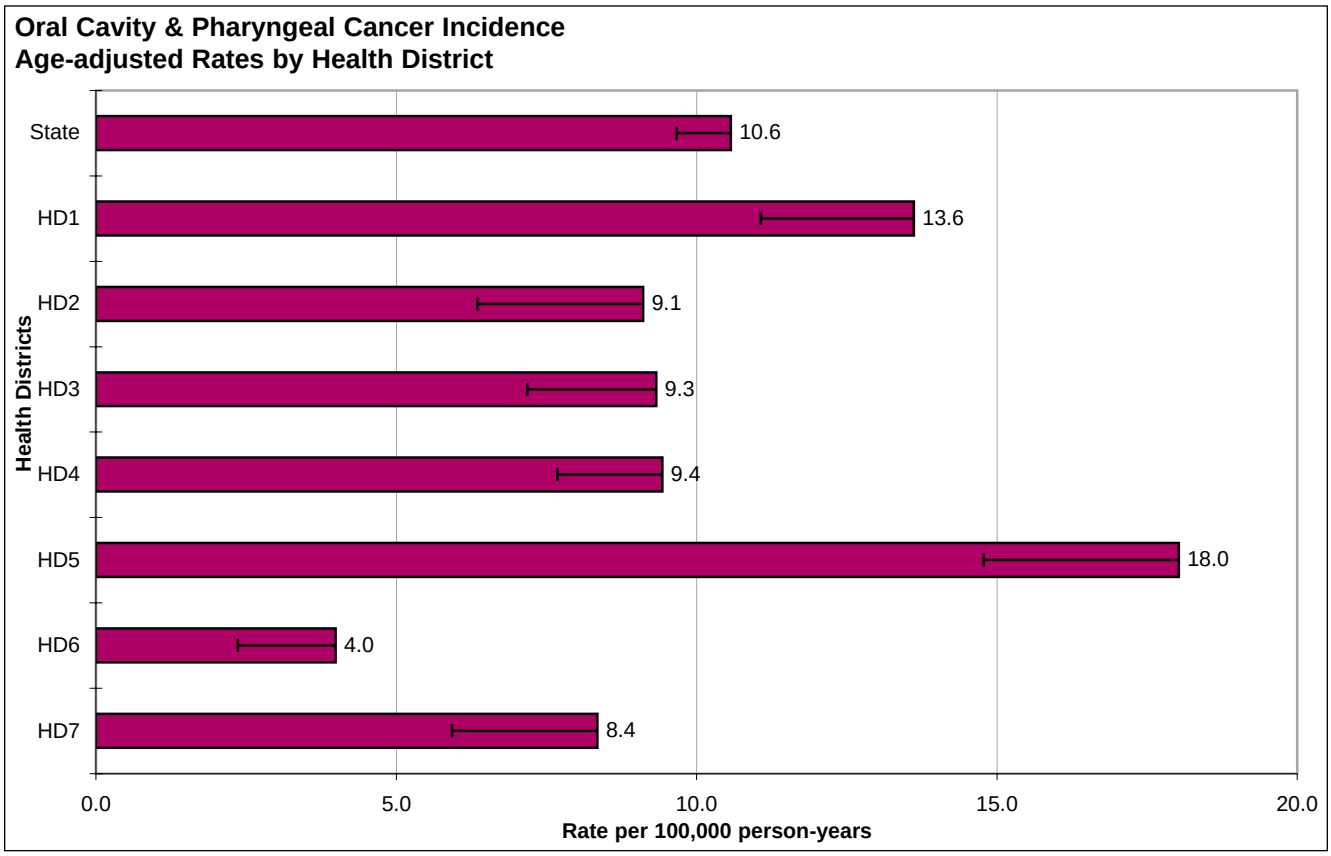
Other Smoking and spit tobacco are major risk factors for cancers of the oral cavity and pharynx. Alcohol use, especially excessive, is a major risk factor. Combined exposure to tobacco and alcohol multiply the risks of each other. It is estimated that smoking and drinking account for 75% of all oral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

Special Notes

Mean age-adjusted incidence rate across health districts:	10.3
95% confidence interval on the mean age-adjusted incidence rate:	7.0 - 13.5
Median age-adjusted incidence rate of health districts:	9.3
Range of age-adjusted incidence rate for health districts:	4.0 - 18.0
SEER rate (2001, Whites):	10.5

There were few cases among persons less than 40 years of age. The age-specific incidence rates generally increased with age after age 50, peaking in the age group 85+ for males and 80-84 for females. Health District 5 had statistically significantly more cases than expected based upon rates for the remainder of Idaho ($p<0.01$), and Health District 6 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho ($p<0.01$).


State Oral Cavity & Pharyngeal 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

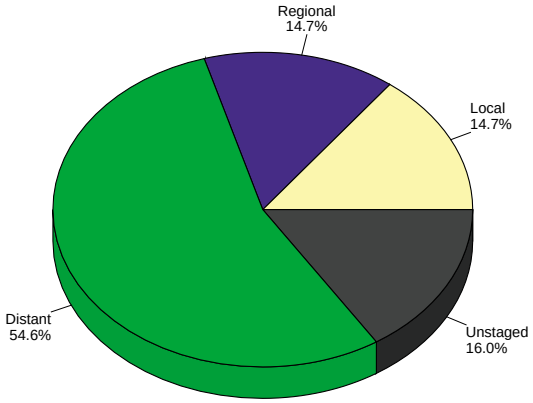

Oral Cavity & Pharyngeal Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
10.6
13.6
9.1
9.3
9.4
18.0
4.0
8.4
0.0
5.0
10.0
15.0
20.0
Rate per 100,000 person-years

OVARY

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	11.2
# of new invasive cases	-	-	75
# of new in-situ cases	-	-	0
# of deaths	-	-	55

Stage at Diagnosis - Ovary



Total Cases By County

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

Risk and Associated Factors

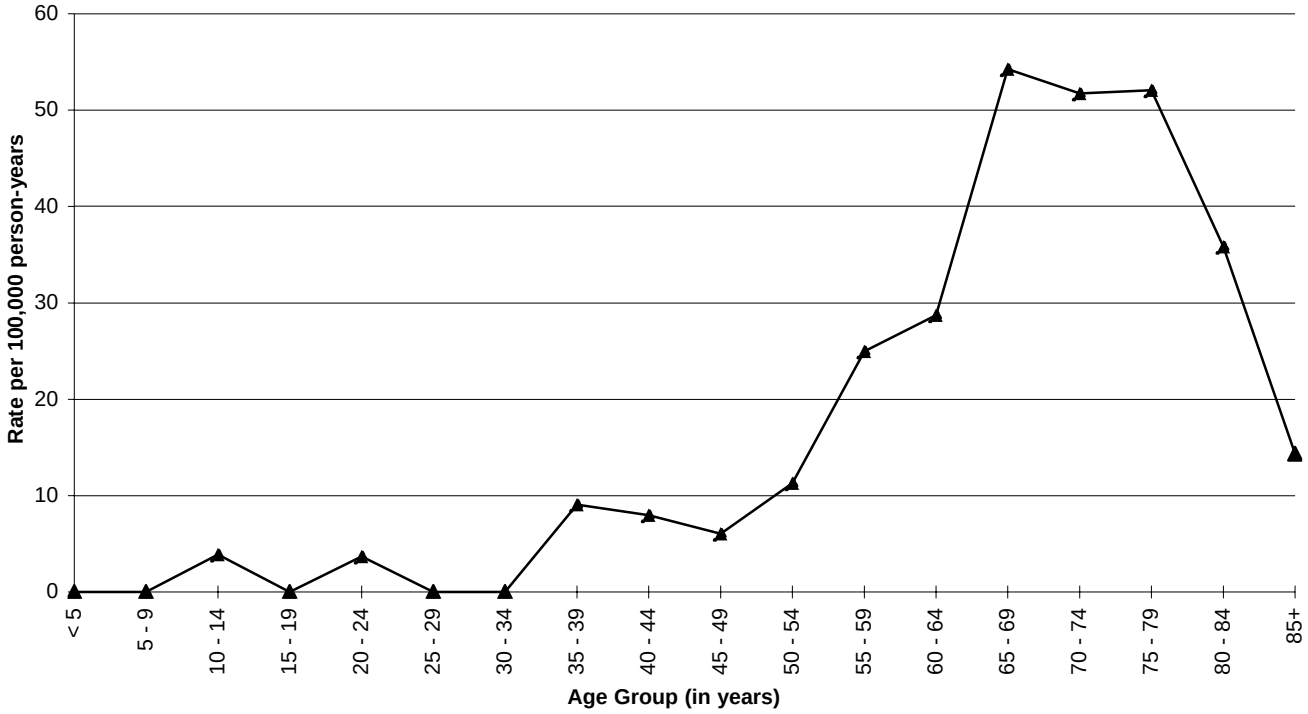
Age	The rate of ovarian cancer increases with age and it is primarily a disease of older women.
Race & SES	Rates are slightly higher in Caucasian females than in African American females. The rate is higher among upper income groups.
Genetics	The most important risk factor for ovarian cancer is a family 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

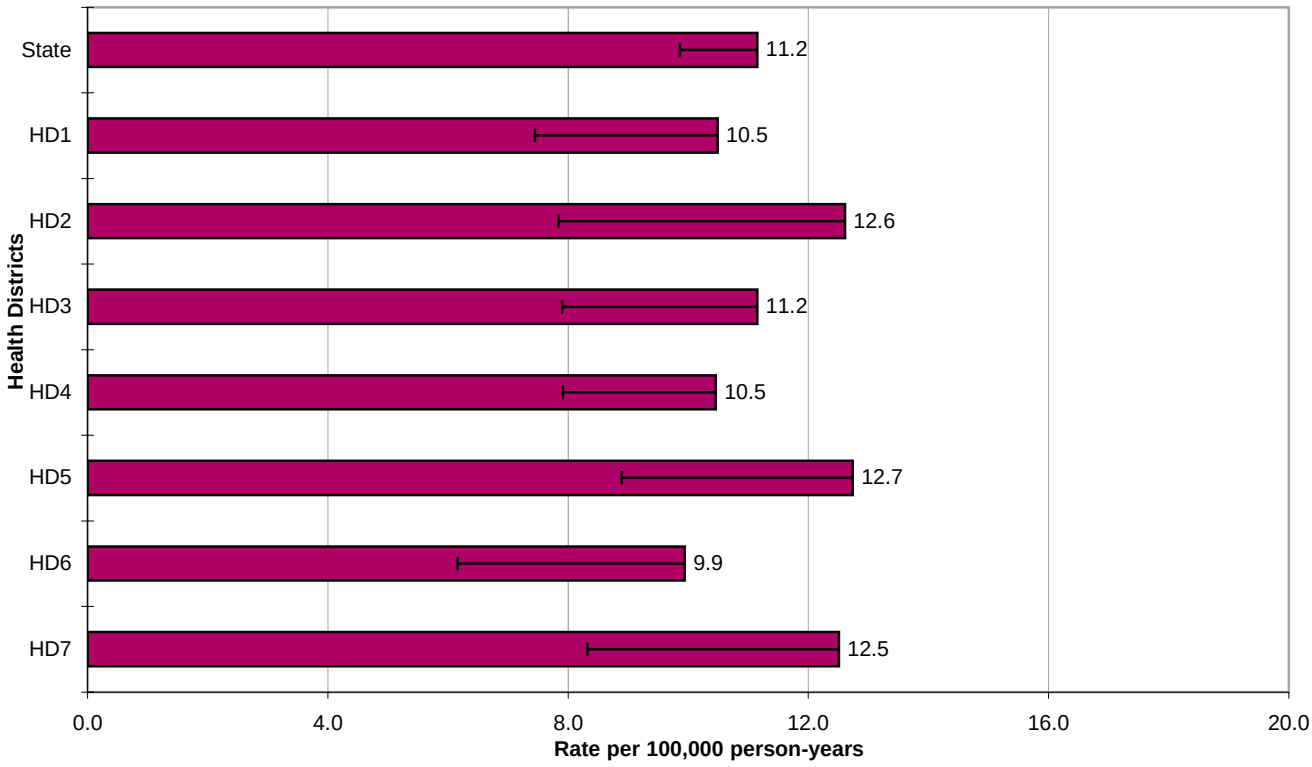
Mean age-adjusted incidence rate across health districts:	11.4
95% confidence interval on the mean age-adjusted incidence rate:	10.5 - 12.3
Median age-adjusted incidence rate of health districts:	11.2
Range of age-adjusted incidence rate for health districts:	9.9 - 12.7
SEER rate (2001, Whites):	14.9

There were few cases of ovarian cancer among persons aged less than 35 years. The age-specific incidence rates of ovarian cancer increased with age starting in the 45-49 age group. The highest age-specific rate was for women aged 65-69. 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



Ovarian Cancer Incidence
Age-adjusted Rates by Health District

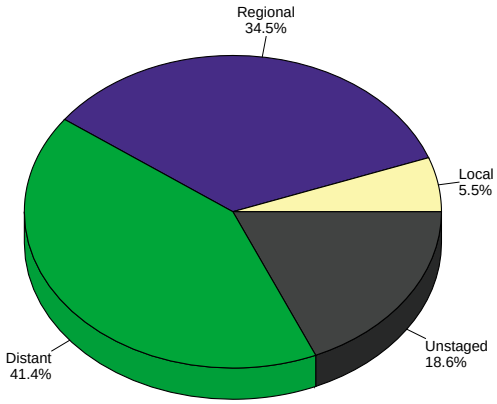


PANCREAS

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	11.1	11.4	10.6
# of new invasive cases	145	70	75
# of new in-situ cases	0	0	0
# of deaths	128	64	64

Stage at Diagnosis - Pancreas



Total Cases By County

Ada	30	Cassia	1	Lewis	2
Adams	1	Clark	-	Lincoln	1
Bannock	9	Clearwater	1	Madison	1
Bear Lake	1	Custer	2	Minidoka	3
Benewah	2	Elmore	2	Nez Perce	3
Bingham	6	Franklin	2	Oneida	1
Blaine	3	Fremont	-	Owyhee	3
Boise	1	Gem	-	Payette	2
Bonner	2	Gooding	2	Power	-
Bonneville	10	Idaho	1	Shoshone	1
Boundary	2	Jefferson	1	Teton	1
Butte	1	Jerome	5	Twin Falls	4
Camas	-	Kootenai	13	Valley	2
Canyon	18	Latah	2	Washington	2
Caribou	1	Lemhi	-		

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.

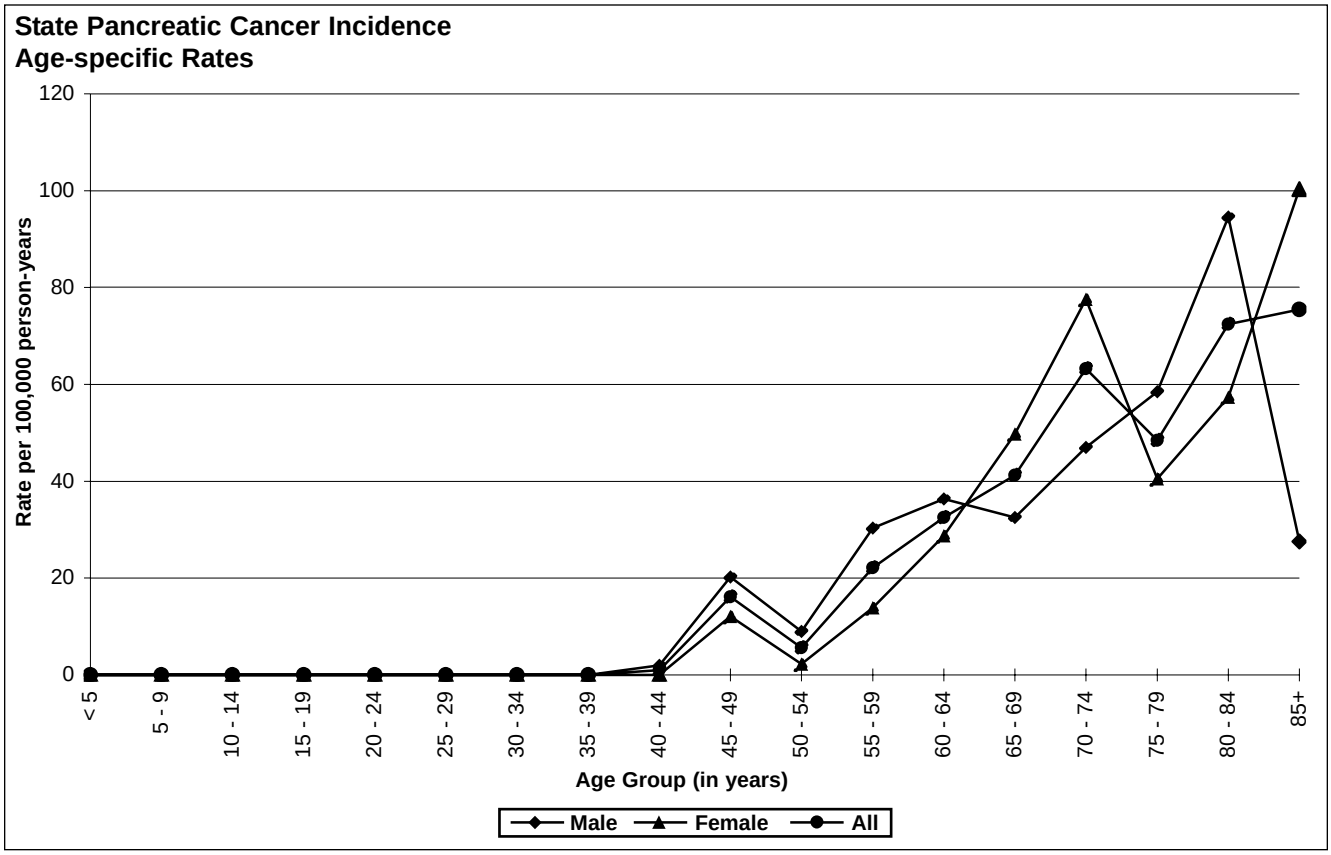
Occupation Persons in certain occupations are believed to be at higher risk, such as chemists, metal workers, and persons employed in the manufacture of benzidine and betanaphthylene.

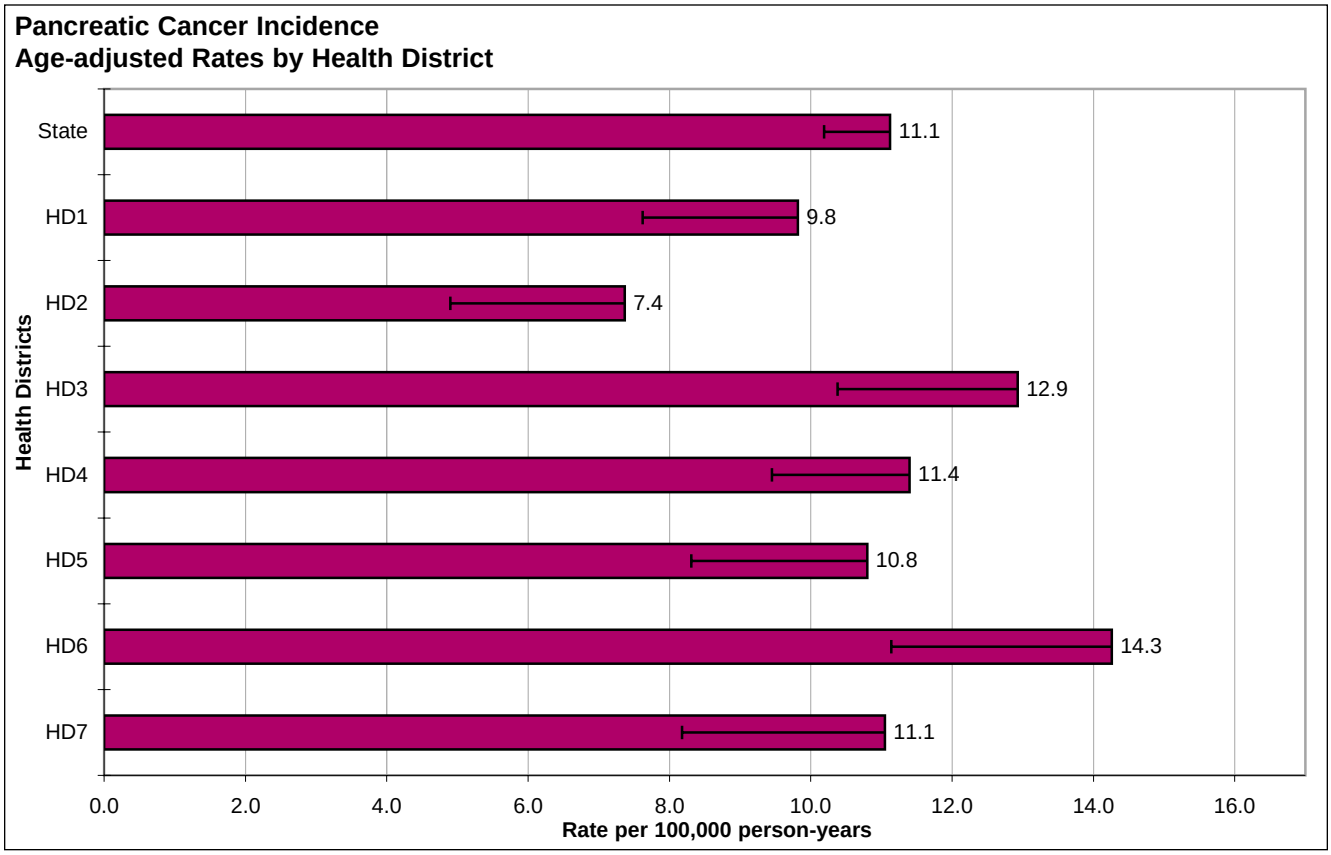
Other Pancreatic cancer is more common among smokers than non-smokers. Familial clustering has been observed in some studies. Pancreatic cancer usually progresses to an advanced stage before symptoms develop. It is rapidly fatal in over 90% of cases.

Special Notes

Mean age-adjusted incidence rate across health districts:	11.1
95% confidence interval on the mean age-adjusted incidence rate:	9.5 - 12.7
Median age-adjusted incidence rate of health districts:	11.1
Range of age-adjusted incidence rate for health districts:	7.4 - 14.3
SEER rate (2001, Whites):	10.5

There were few cases of pancreatic cancer among persons aged less than 45 years. The age-specific incidence rates of pancreatic cancer increased sharply after age 60. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.


State Pancreatic 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

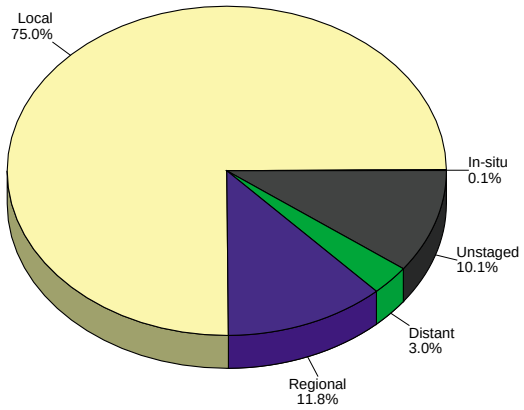

Pancreatic Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
11.1
9.8
7.4
12.9
11.4
10.8
14.3
11.1
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
Rate per 100,000 person-years

PROSTATE

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	161.3	-
# of new invasive cases	-	948	-
# of new in-situ cases	-	1	-
# of deaths	-	150	-

Stage at Diagnosis - Prostate



Total Cases By County

Ada	209	Cassia	19	Lewis	5
Adams	1	Clark	-	Lincoln	1
Bannock	39	Clearwater	7	Madison	11
Bear Lake	6	Custer	3	Minidoka	19
Benewah	9	Elmore	8	Nez Perce	29
Bingham	36	Franklin	11	Oneida	3
Blaine	26	Fremont	13	Owyhee	5
Boise	2	Gem	14	Payette	11
Bonner	30	Gooding	13	Power	3
Bonneville	56	Idaho	15	Shoshone	9
Boundary	9	Jefferson	13	Teton	1
Butte	2	Jerome	14	Twin Falls	44
Camas	1	Kootenai	90	Valley	9
Canyon	88	Latah	20	Washington	9
Caribou	5	Lemhi	10		

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.

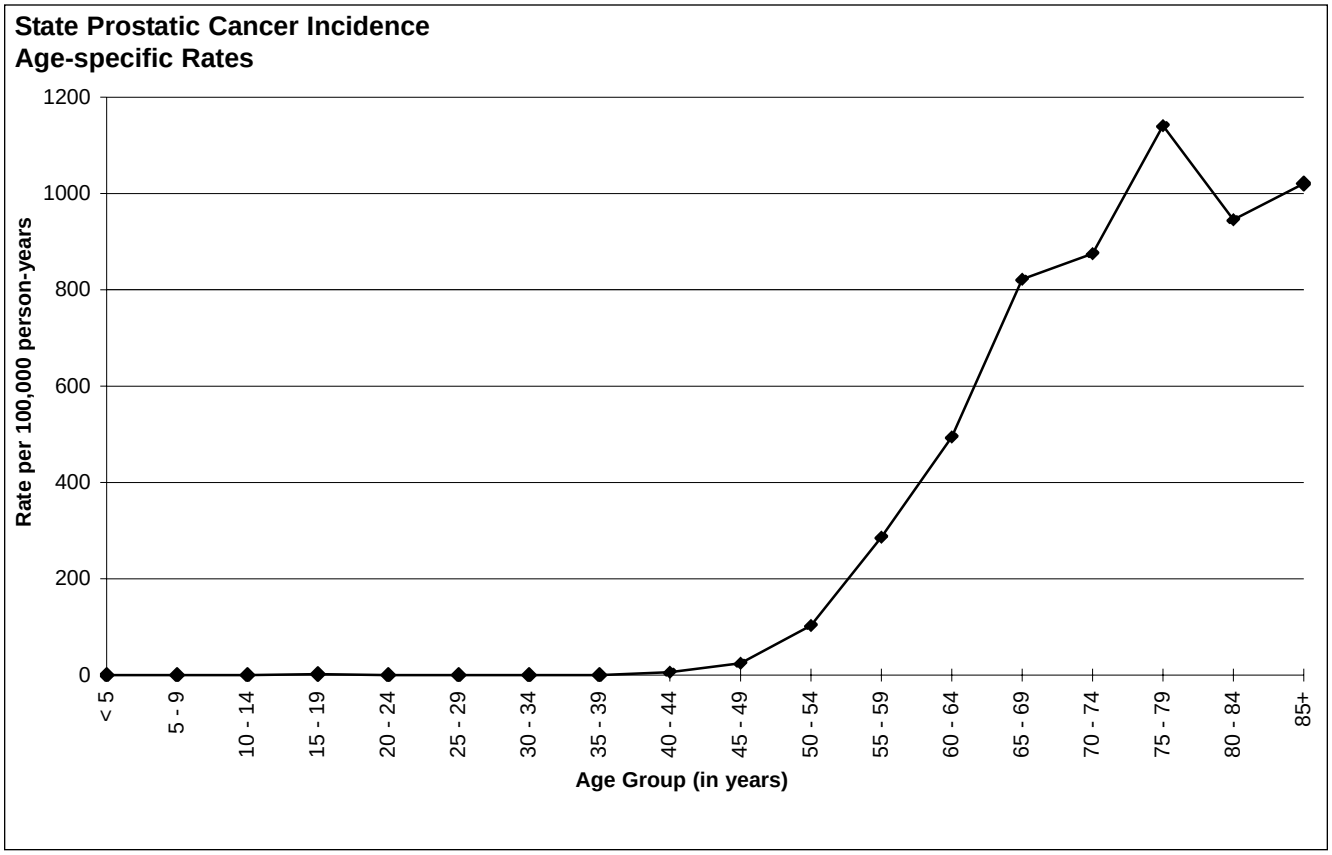
Diet Dietary fat has been implicated in several international, regional, and case-control studies.

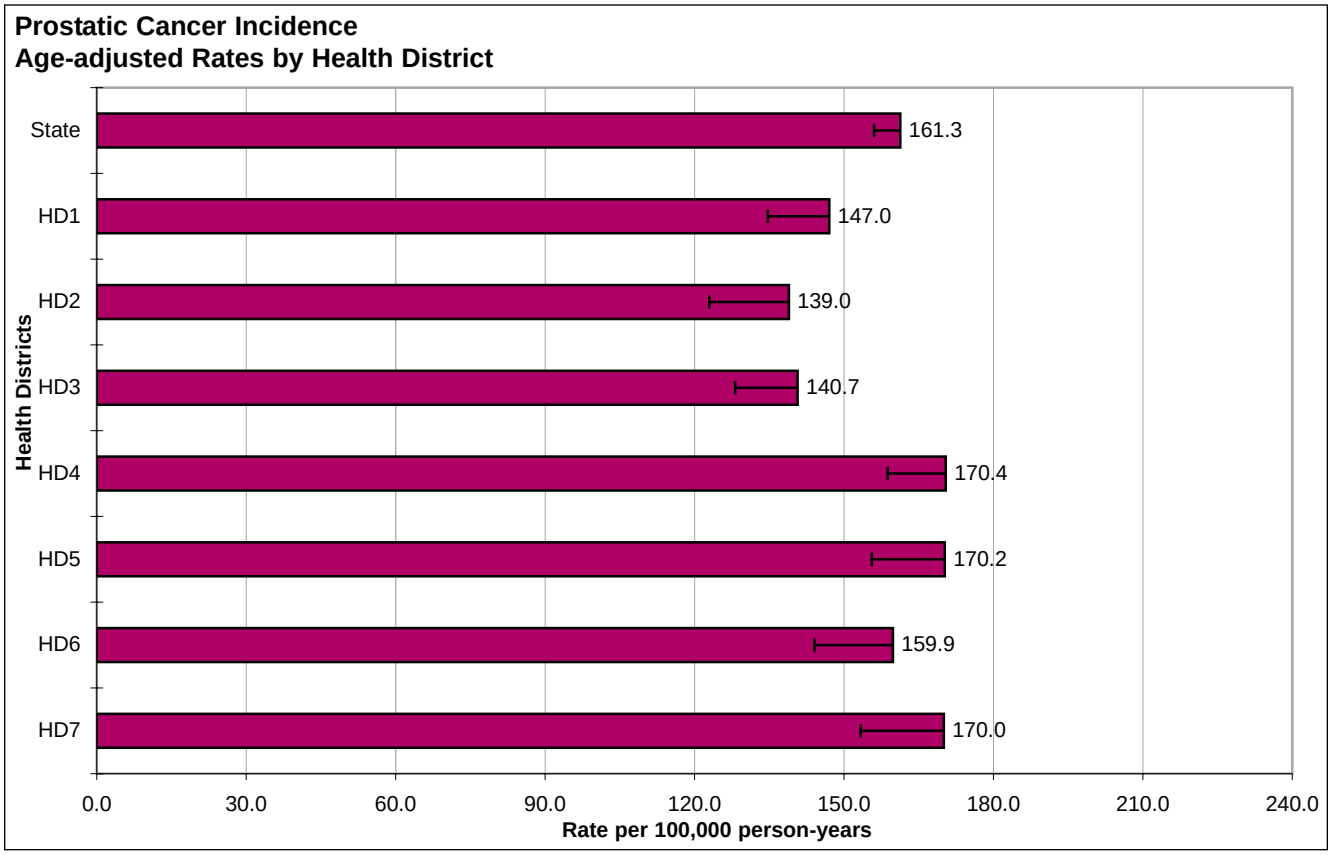
Other Environmental and familial factors may contribute to an increased incidence but no specific factor in these two groups of potential risk factors has been clearly identified. Three risk factors are well established: age, family history, and ethnic group/country of residence. Farming is the most 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:	156.7
95% confidence interval on the mean age-adjusted incidence rate:	146.2 - 167.3
Median age-adjusted incidence rate of health districts:	159.9
Range of age-adjusted incidence rate for health districts:	139.0 - 170.4
SEER rate (2001, Whites):	173.5

The age-specific incidence rate distribution of prostate cancer in Idaho in 2003 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 40 years. The age-specific incidence rates of prostate cancer increased with age, peaking in the 75-79 age group. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.


State Prostatic 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)

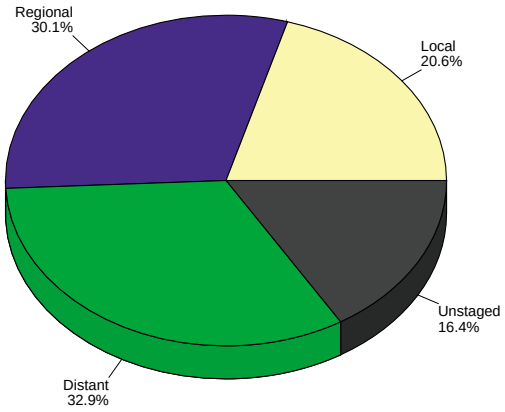

Prostatic Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
161.3
147.0
139.0
140.7
170.4
170.2
159.9
170.0
0.0
30.0
60.0
90.0
120.0
150.0
180.0
210.0
240.0
Rate per 100,000 person-years

STOMACH

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.7	8.7	3.3
# of new invasive cases	73	50	23
# of new in-situ cases	0	0	0
# of deaths	30	21	9

Stage at Diagnosis - Stomach



Total Cases By County

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

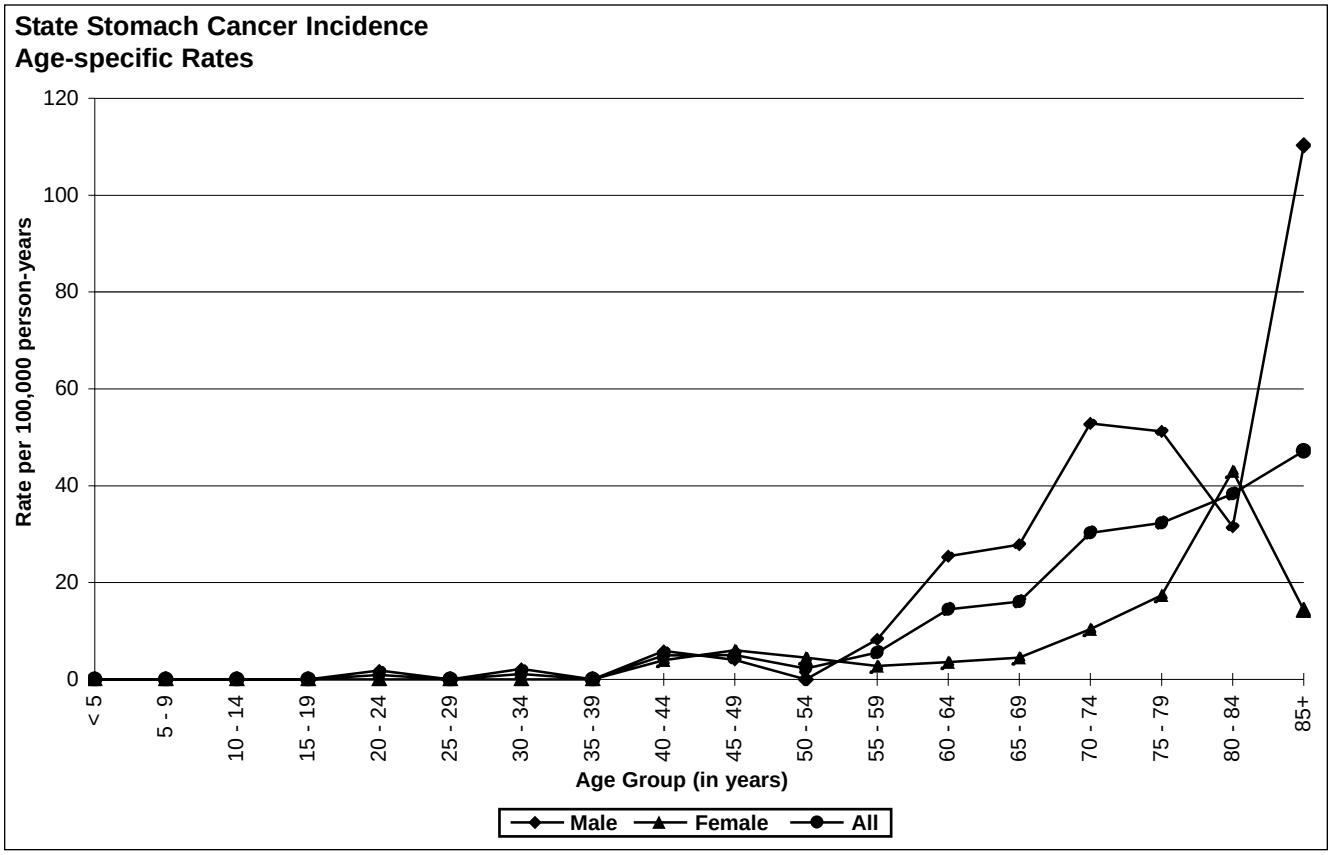
Risk and Associated Factors

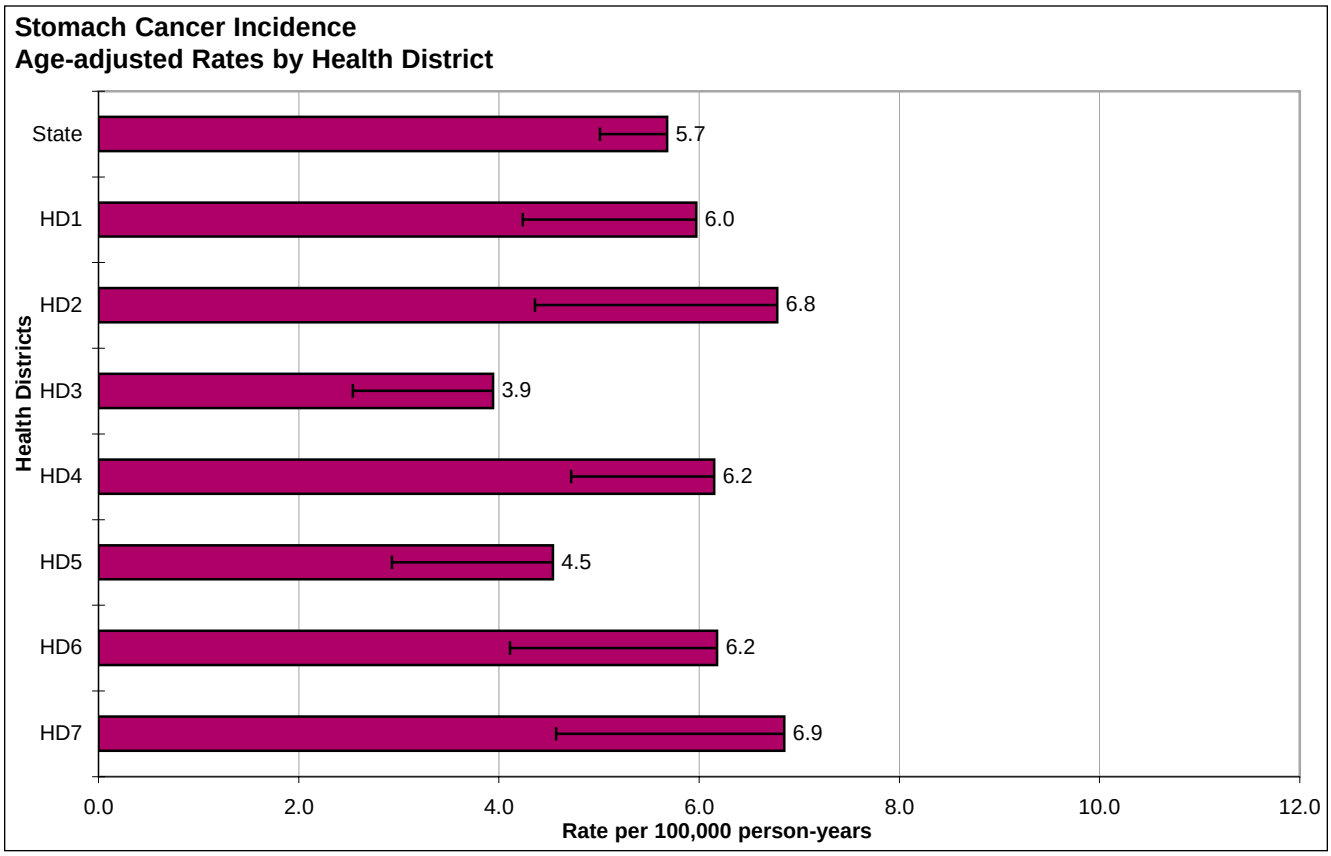
Age	Rates increase with age.
Gender	Incidence rates for males are usually more than twice as high as for females.
Race & SES	There is a higher incidence in African Americans, as well as Asians, and incidence is also higher in lower SES groups.
Diet	Increased risk has been attributed to diets high in 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:	5.8
95% confidence interval on the mean age-adjusted incidence rate:	5.0 - 6.6
Median age-adjusted incidence rate of health districts:	6.2
Range of age-adjusted incidence rate for health districts:	3.9 - 6.9
SEER rate (2001, Whites):	6.3

There were few cases of stomach cancer among persons aged less than 55 years. The age-specific incidence rates of stomach cancer increased with age, peaking in the 85+ age group for males and 80-84 age group for females. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.


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

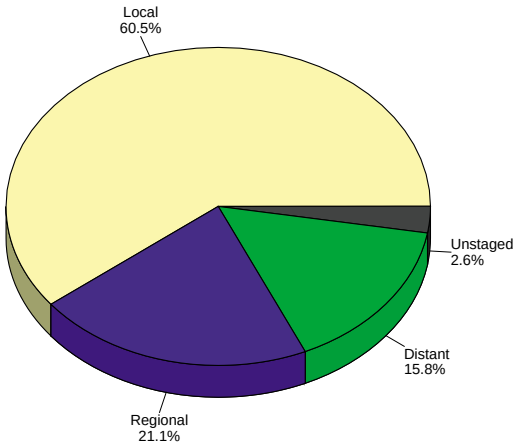

Stomach Cancer Incidence
Age-adjusted Rates by Health District
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
5.7
6.0
6.8
3.9
6.2
4.5
6.2
6.9
Health Districts
0.0
2.0
4.0
6.0
8.0
10.0
12.0
Rate per 100,000 person-years

TESTIS

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	5.9	-
# of new invasive cases	-	38	-
# of new in-situ cases	-	0	-
# of deaths	-	1	-

Stage at Diagnosis - Testis



Total Cases By County

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

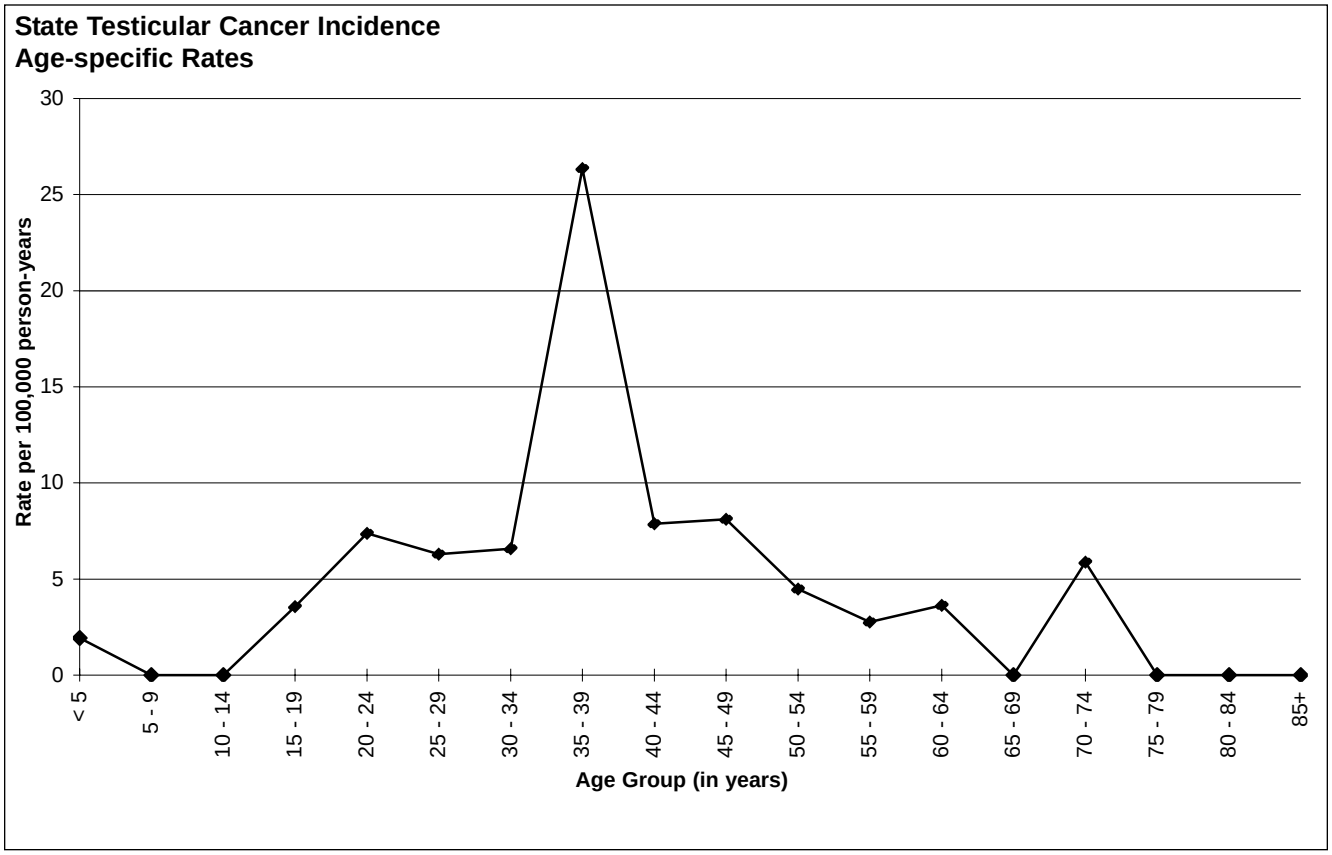
Race & SES Incidence rates are substantially higher in Caucasian males than in African American males. Incidence of testicular cancer is highest in highest socioeconomic classes.

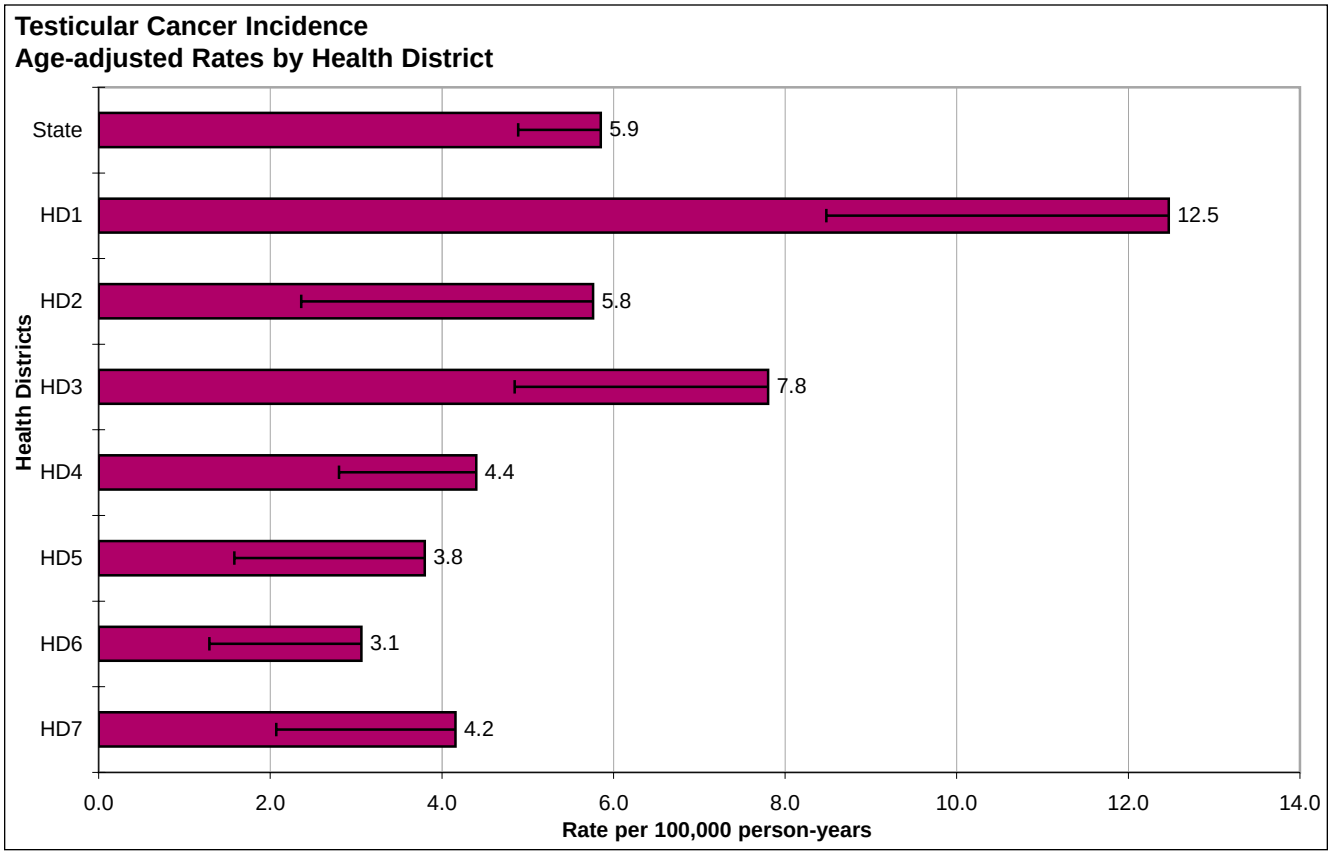
Other Undescended testis, a minor abnormality that can usually be detected and corrected with surgery in childhood, is responsible for a substantially high risk for testicular cancer when uncorrected. The extent to which surgical correction reduces cancer risk is unclear. Some evidence suggests that 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:	5.9
95% confidence interval on the mean age-adjusted incidence rate:	3.5 - 8.4
Median age-adjusted incidence rate of health districts:	4.4
Range of age-adjusted incidence rate for health districts:	3.1 - 12.5
SEER rate (2001, Whites):	6.3

The highest age-specific incidence rate was in the 35-39 age group. Health District 1 had statistically significantly more cases than expected based upon rates for the remainder of Idaho ($p<0.05$).


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

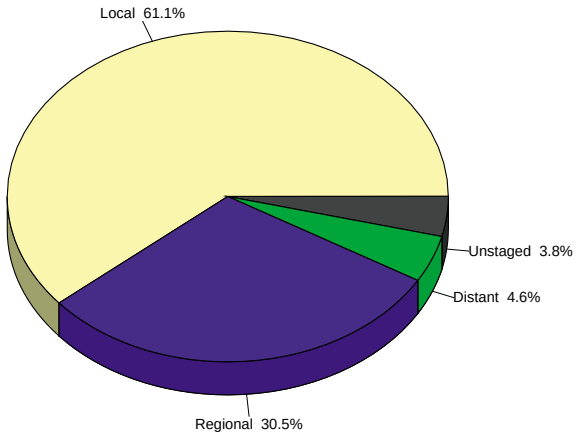

Testicular Cancer Incidence
Age-adjusted Rates by Health District
Health Districts
State
HD1
HD2
HD3
HD4
HD5
HD6
HD7
5.9
12.5
5.8
7.8
4.4
3.8
3.1
4.2
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
Rate per 100,000 person-years

THYROID

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	9.7	4.7	14.9
# of new invasive cases	131	31	100
# of new in-situ cases	0	0	0
# of deaths	12	8	4

Stage at Diagnosis - Thyroid



Total Cases By County

Ada	45	Cassia	4	Lewis	-
Adams	2	Clark	-	Lincoln	-
Bannock	4	Clearwater	1	Madison	1
Bear Lake	-	Custer	-	Minidoka	2
Benewah	-	Elmore	1	Nez Perce	2
Bingham	3	Franklin	1	Oneida	1
Blaine	-	Fremont	1	Owyhee	-
Boise	-	Gem	1	Payette	2
Bonner	4	Gooding	1	Power	-
Bonneville	13	Idaho	1	Shoshone	1
Boundary	1	Jefferson	3	Teton	2
Butte	-	Jerome	1	Twin Falls	4
Camas	-	Kootenai	14	Valley	-
Canyon	12	Latah	-	Washington	-
Caribou	3	Lemhi	-		

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.

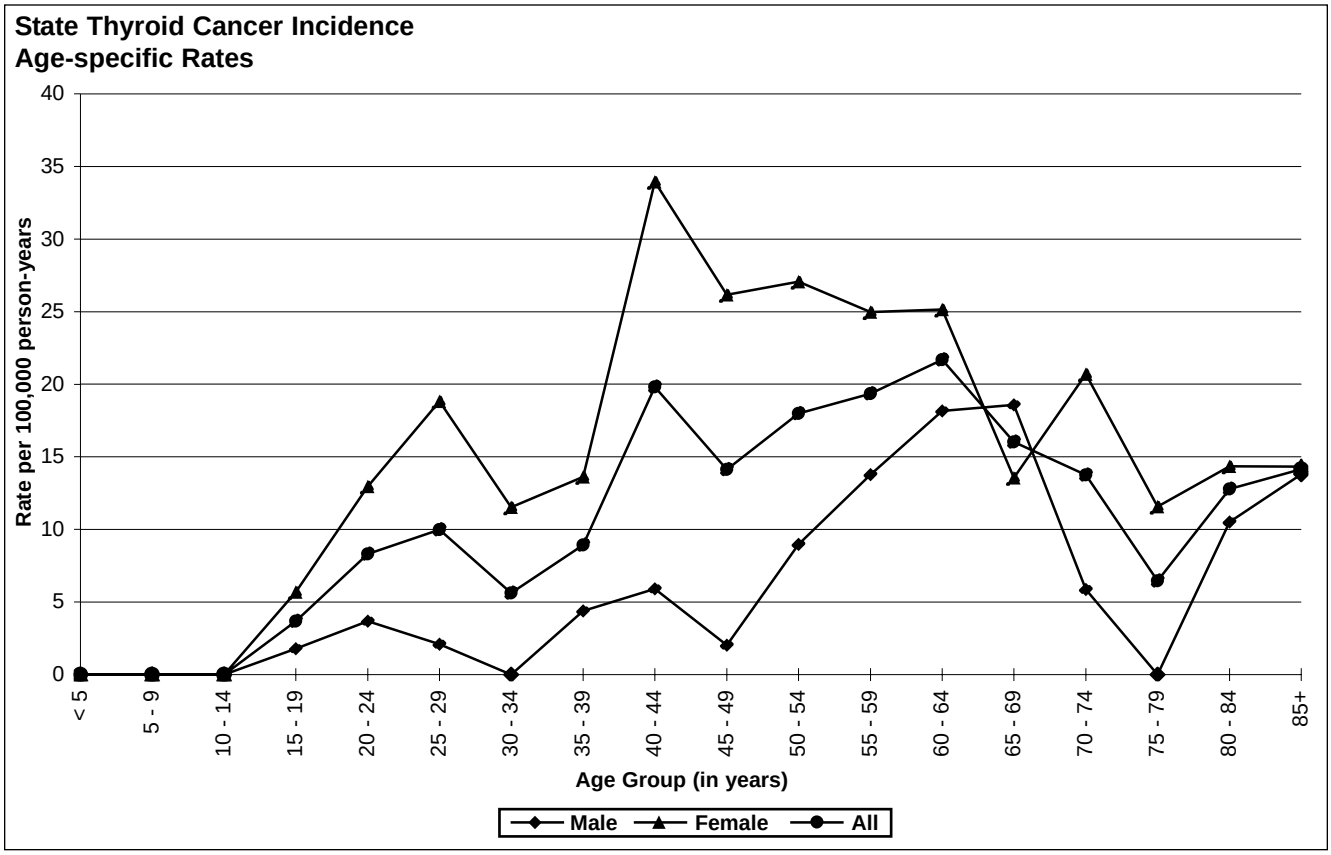
Hormonal Hormonal factors are believed to contribute to the increased risk in females. This is demonstrated by the sharp increase in incidence among women after menarche.

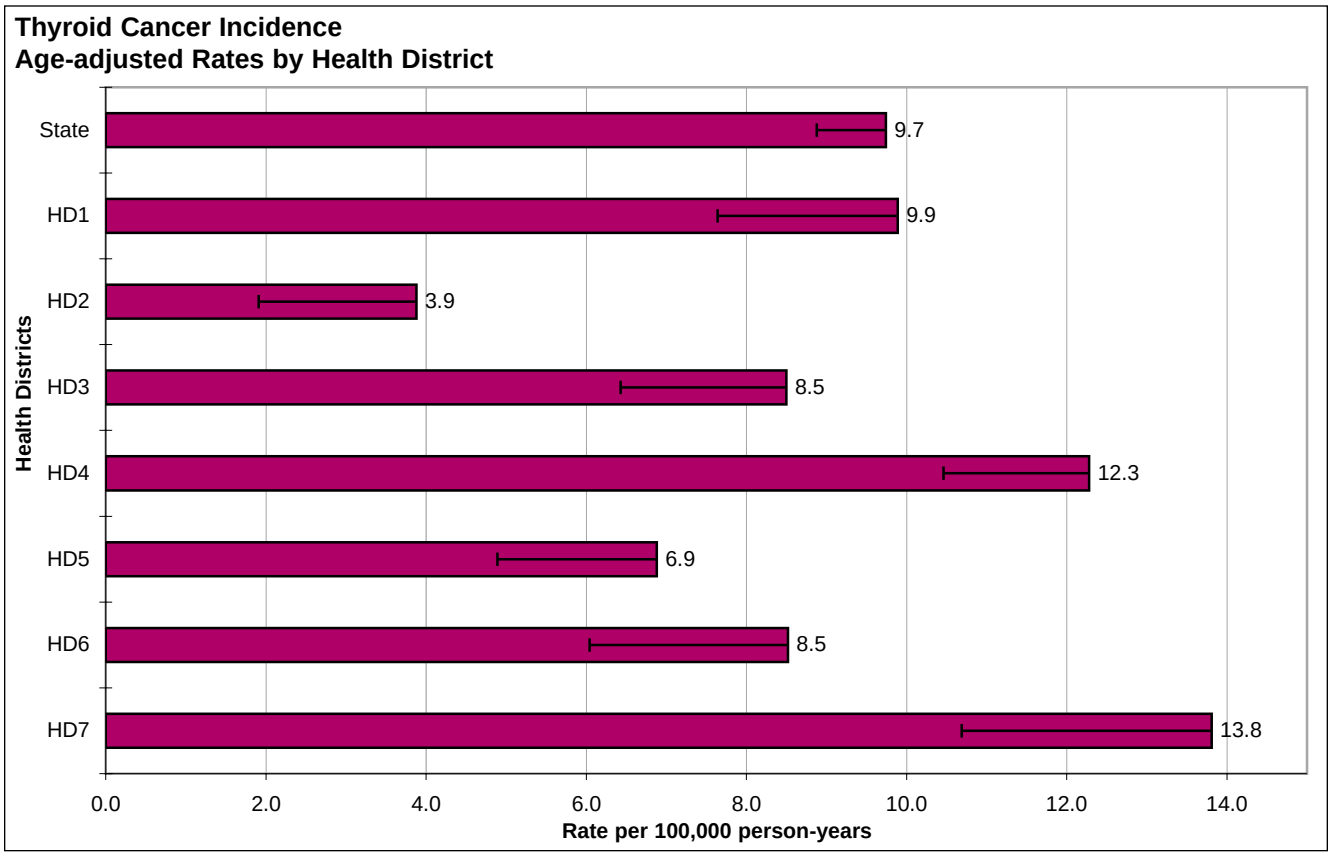
Other Occupational and environmental exposures to ionizing radiation have been associated with higher rates of thyroid cancer. Radiation exposure to the head and neck in childhood is a well-known risk factor. Family history of thyroid cancer substantially increases the risk. Death due to thyroid cancer 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:	9.1
95% confidence interval on the mean age-adjusted incidence rate:	6.7 - 11.6
Median age-adjusted incidence rate of health districts:	8.5
Range of age-adjusted incidence rate for health districts:	3.9 - 13.8
SEER rate (2001, Whites):	8.4

The age-specific incidence rates of thyroid cancer were typically higher for females than males. Health District 4 had statistically significantly more cases than expected based upon rates for the remainder of Idaho ($p<0.05$), and Health District 2 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho ($p<0.05$).


State Thyroid Cancer Incidence
Age-specific Rates
Rate per 100,000 person-years
0
5
10
15
20
25
30
35
40
< 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
9.7
9.9
3.9
8.5
12.3
6.9
8.5
13.8
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
Rate per 100,000 person-years

SECTION II

STATE OF IDAHO - 2003
INCIDENCE DATA BY SITE AND GENDER

Idaho Resident Cancer Cases (invasive) - 2003

PRIMARY SITE OF CANCER	TOTAL	SEX	
		Male	Female
TOTAL NEW CANCER CASES (invasive)	5,651	2,970	2,681
BUCCAL CAVITY AND PHARYNX	139	103	36
Lip	27	22	5
Tongue	28	19	9
Major salivary glands	15	9	6
Gum and other mouth	29	19	10
Nasopharynx	8	6	2
Oropharynx	4	3	1
Hypopharynx	5	5	-
Tonsil and other buccal cavity	23	20	3
DIGESTIVE SYSTEM	997	540	457
Esophagus	60	49	11
Stomach	73	50	23
Small intestine	24	12	12
Colon excluding rectum	442	219	223
Rectum, rectosigmoid and anus	161	92	69
Liver & bile duct	37	25	12
Gallbladder and other biliary	37	17	20
Pancreas	145	70	75
Peritoneum and retroperitoneum	17	6	11
Other digestive	1	-	1
RESPIRATORY SYSTEM	793	446	347
Larynx	42	35	7
Lung and bronchus	734	402	332
Trachea, pleura, and other	17	9	8
SKIN	324	183	141
Melanoma of skin	307	174	133
Other skin cancers	17	9	8
BREAST	811	10	801
FEMALE GENITAL SYSTEM	255	n/a	255
Cervix uteri	42	n/a	42
Corpus uteri (endometrium)	119	n/a	119
Ovary	75	n/a	75
Vagina	4	n/a	4
Vulva	9	n/a	9
Uterus, NOS and other female genital organs	6	n/a	6
MALE GENITAL SYSTEM	989	989	n/a
Prostate gland	948	948	n/a
Testis	38	38	n/a
Penis and other male genital organs	3	3	n/a
URINARY SYSTEM	281	194	87
Urinary bladder	109	89	20
Kidney and renal pelvis	166	103	63
Ureter and other urinary organs	6	2	4
LYMPHATIC AND HEMATOPOIETIC TISSUE	517	268	249
Hodgkin's lymphoma	46	23	23
Non-Hodgkin's lymphoma	233	112	121
Multiple myeloma	47	27	20
Acute lymphocytic leukemia	21	11	10
Chronic lymphocytic leukemia	60	30	30
Acute myeloid leukemia	63	42	21
Chronic myeloid leukemia	23	10	13
Other leukemia	24	13	11
OTHER OR UNKNOWN SITES	545	237	308
Eye	5	3	2
Brain	87	48	39
Other nervous system	6	2	4
Thyroid gland	131	31	100
Other endocrine	5	2	3
Bones and joints	14	7	7
Soft tissue (including heart)	28	19	9
Other sites, Ill-defined sites or unknown sites	269	125	144

Idaho Resident Cancer Cases (in-situ) - 2003

PRIMARY SITE OF CANCER	TOTAL	SEX	
		Male	Female
TOTAL NEW CANCER CASES (in-situ)	536	239	297
BUCCAL CAVITY AND PHARYNX	7	5	2
Lip	3	3	-
Tongue	1	-	1
Major salivary glands	-	-	-
Gum and other mouth	2	2	-
Nasopharynx	-	-	-
Oropharynx	-	-	-
Hypopharynx	-	-	-
Tonsil and other buccal cavity	1	-	1
DIGESTIVE SYSTEM	16	9	7
Esophagus	-	-	-
Stomach	-	-	-
Small intestine	-	-	-
Colon excluding rectum	13	7	6
Rectum, rectosigmoid and anus	3	2	1
Liver & bile duct	-	-	-
Gallbladder and other biliary	-	-	-
Pancreas	-	-	-
Peritoneum and retroperitoneum	-	-	-
Other digestive	-	-	-
RESPIRATORY SYSTEM	6	6	-
Larynx	6	6	-
Lung and bronchus	-	-	-
Trachea, pleura, and other	-	-	-
SKIN	180	94	86
Melanoma of skin	180	94	86
Other skin cancers	-	-	-
BREAST	160	1	159
FEMALE GENITAL SYSTEM	15	n/a	15
Cervix uteri	n/a	n/a	n/a
Corpus uteri (endometrium)	-	n/a	-
Ovary	-	n/a	-
Vagina	1	n/a	1
Vulva	14	n/a	14
Uterus, NOS and other female genital organs	-	n/a	-
MALE GENITAL SYSTEM	4	4	n/a
Prostate gland	1	1	n/a
Testis	-	-	n/a
Penis and other male genital organs	3	3	n/a
URINARY SYSTEM	146	118	28
Urinary bladder	139	111	28
Kidney and renal pelvis	2	2	-
Ureter and other urinary organs	5	5	-
LYMPHATIC AND HEMATOPOIETIC TISSUE	-	-	-
Hodgkin's lymphoma	-	-	-
Non-Hodgkins lymphoma	-	-	-
Multiple myeloma	-	-	-
Acute lymphocytic	-	-	-
Chronic lymphocytic	-	-	-
Acute Myeloid	-	-	-
Chronic Myeloid	-	-	-
Other	-	-	-
OTHER OR UNKNOWN SITES	2	2	-
Eye	2	2	-
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 - 2003
MORTALITY DATA BY SITE AND GENDER

Idaho Resident Cancer Deaths - 2003

ICD-10 CODE	SITE OF MALIGNANT NEOPLASM	TOTAL	SEX	
			Male	Female
C00-C97	TOTAL MALIGNANT NEOPLASM DEATHS	2,318	1,239	1,079
C00-C14	LIP, ORAL CAVITY AND PHARYNX	31	22	9
C00	Lip	-	-	-
C01-C02	Tongue	13	9	4
C10-C13, C14.0	Pharynx	5	3	2
C03-C09, C14.2-C14.8	Other and unspecified sites within the lip, oral cavity, and pharynx	13	10	3
C15-C26	DIGESTIVE ORGANS	507	288	219
C15	Esophagus	57	49	8
C16	Stomach	30	21	9
C17	Small intestine	9	6	3
C18	Colon	174	85	89
C19-C20	Rectosigmoid junction and rectum	39	27	12
C21	Anus and anal canal	3	-	3
C22.0, C22.2-C22.9	Liver	30	19	11
C22.1	Intrahepatic bile duct	11	7	4
C23-C24	Gallbladder and extrahepatic bile ducts	19	7	12
C25	Pancreas	128	64	64
C26	Other and ill-defined digestive organs	7	3	4
C30-C39	RESPIRATORY AND INTRATHORACIC ORGANS	610	327	283
C30-C31	Nasal cavity, middle ear, and accessory sinuses	2	1	1
C32	Larynx	16	10	6
C33-C34	Trachea, bronchus, and lung	591	315	276
C37-C38	Thymus, heart, mediastinum, and pleura	1	1	-
C39	Other and ill-defined sites in the respiratory system and intrathoracic organs	-	-	-
C40-C41	BONE AND ARTICULAR CARTILAGE	4	1	3
C43-C44	MELANOMA AND OTHER MALIGNANT NEOPLASMS OF SKIN	63	38	25
C43	Melanoma of skin	45	27	18
C44	Other malignant neoplasms of skin	18	11	7
C45-C49	MESOTHELIAL AND SOFT TISSUE	27	16	11
C45	Mesothelioma	11	10	1
C46	Kaposi's sarcoma	-	-	-
C47-C49	Other mesothelial and soft tissue	16	6	10
C50	BREAST	172	-	172
C51-C58	FEMALE GENITAL ORGANS	97	-	97
C51-C52	Vulva and vagina	3	-	3
C53	Cervix uteri	14	-	14
C54-C55	Corpus uteri and uterus, part unspecified	24	-	24
C56	Ovary	55	-	55
C57	Other and unspecified female genital organs	1	-	1
C58	Placenta	-	-	-

Idaho Resident Cancer Deaths - 2003

ICD-10 CODE	SITE OF MALIGNANT NEOPLASM	TOTAL	SEX	
			Male	Female
C60-C63	MALE GENITAL ORGANS	153	153	-
C61	Prostate	150	150	-
C62	Testis	1	1	-
C60, C63	Penis and other and unspecified male genital organs	2	2	-
C64-C68	URINARY TRACT	120	93	27
C64-C65	Kidney and renal pelvis	64	48	16
C67	Bladder	54	44	10
C66, C68	Other and unspecified sites within the urinary tract	2	1	1
C69	EYE AND ADNEXA	-	-	-
C70-C72	MENINGES, BRAIN, AND OTHER PARTS OF CENTRAL NERVOUS SYSTEM	83	54	29
C71	Brain	82	54	28
C70, C72	Other parts of central nervous system	1	-	1
C73-C75	THYROID AND OTHER ENDOCRINE GLANDS	15	8	7
C76-C80, C97	OTHER MALIGNANT NEOPLASMS OF OTHER AND UNSPECIFIED SITES	155	80	75
C81-C96	LYMPHOID, HEMATOPOIETIC, AND RELATED TISSUE	281	159	122
C81	Hodgkin's disease	6	4	2
C82-C85	Non-Hodgkin's lymphoma	111	62	49
C88	Malignant immunoproliferative diseases	1	1	-
C90	Multiple myeloma and malignant plasma cell neoplasms	39	19	20
C91	Lymphoid leukemia	39	23	16
C92	Myeloid leukemia	58	33	25
C93	Monocytic leukemia	1	-	1
C94-C95	Other and unspecified leukemia	26	17	9
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

2003 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** **2003**

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	25.6	13.0	17.0	27.5	43.4	49.9	75.2	125.1	202.1	313.9	423.6	780.9	1192.2	1699.6	2007.9	2460.8	2420.4	2419.2
Male	28.9	17.5	16.5	26.7	36.8	39.9	63.5	94.5	129.8	241.0	409.7	848.7	1388.3	1959.1	2478.3	3290.2	3309.5	3515.8
Female	22.2	8.2	17.5	28.4	50.0	61.2	87.5	156.7	275.4	386.2	437.6	712.6	998.4	1446.9	1593.5	1804.7	1813.8	1849.2
Bladder																		
All	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.0	4.0	10.1	34.6	47.0	52.7	99.0	151.8	191.8	136.8
Male	1.9	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.9	6.1	20.2	60.6	90.9	83.6	152.7	248.6	378.2	317.1
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	8.3	3.6	22.6	51.7	75.2	64.5	43.0
Brain																		
All	3.9	3.0	2.8	1.8	3.7	0.0	6.7	2.2	3.0	3.0	9.0	19.4	10.8	18.3	27.5	12.9	12.8	18.9
Male	1.9	5.9	1.8	3.6	5.5	0.0	8.8	4.4	2.0	0.0	13.4	19.3	18.2	18.6	23.5	14.6	31.5	0.0
Female	6.0	0.0	3.9	0.0	1.9	0.0	4.6	0.0	4.0	6.0	4.5	19.4	3.6	18.1	31.0	11.6	0.0	28.7
Breast																		
Female Invasive	0.0	0.0	0.0	0.0	0.0	0.0	29.9	68.1	121.7	177.0	175.9	271.8	377.1	429.5	372.5	410.7	344.1	301.0
Female In situ	0.0	0.0	0.0	0.0	0.0	2.4	2.3	4.5	16.0	50.3	72.2	47.1	68.2	72.3	88.0	63.6	43.0	28.7
Cervix Uteri																		
Female	0.0	0.0	0.0	0.0	1.9	2.4	6.9	15.9	6.0	14.1	2.3	11.1	10.8	27.1	5.2	0.0	21.5	14.3
Colorectal																		
All	0.0	0.0	0.9	0.0	0.9	2.2	3.4	4.5	16.8	26.2	33.7	60.8	110.2	158.1	187.0	297.1	311.1	438.6
Male	0.0	0.0	0.0	0.0	1.8	4.2	2.2	4.4	13.8	22.3	35.8	66.1	149.0	181.1	229.0	336.3	399.2	510.1
Female	0.0	0.0	1.9	0.0	0.0	0.0	4.6	4.5	20.0	30.2	31.6	55.5	71.8	135.6	150.0	266.1	250.9	401.4
Endometrium																		
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	8.0	16.1	36.1	38.8	68.2	76.9	46.6	98.3	57.4	43.0
Esophagus																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.0	8.1	6.7	2.8	14.5	20.6	13.8	32.3	25.6	18.9
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	16.2	11.2	5.5	29.1	27.9	23.5	58.5	52.5	27.6
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.3	0.0	0.0	13.6	5.2	11.6	7.2	14.3
Hodgkin's Lymphoma																		
All	0.0	1.0	0.9	8.3	7.4	8.9	2.2	1.1	3.0	1.0	1.1	2.8	1.8	2.3	13.8	3.2	4.3	0.0
Male	0.0	0.0	1.8	7.1	7.4	6.3	4.4	2.2	5.9	2.0	0.0	2.8	0.0	0.0	17.6	0.0	0.0	0.0
Female	0.0	2.1	0.0	9.5	7.4	11.8	0.0	0.0	0.0	0.0	2.3	2.8	3.6	4.5	10.4	5.8	7.2	0.0

IDAHO **AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER** **2003**

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+
Kidney & Renal Pelvis																		
All	0.0	0.0	0.0	0.0	0.9	1.1	1.1	4.5	5.0	7.1	24.7	30.4	43.4	48.1	66.0	58.1	25.6	47.2
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	5.9	12.2	35.8	41.3	47.3	60.4	94.0	73.1	31.5	55.2
Female	0.0	0.0	0.0	0.0	1.9	2.4	2.3	0.0	4.0	2.0	13.5	19.4	39.5	36.2	41.4	46.3	21.5	43.0
Larynx																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.0	4.5	4.2	16.3	13.7	11.0	25.8	12.8	14.2
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	2.0	6.7	2.8	29.1	23.2	23.5	51.2	21.0	41.4
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	5.6	3.6	4.5	0.0	5.8	7.2	0.0
Leukemia																		
All	6.9	4.0	0.9	3.7	3.7	2.2	3.4	2.2	9.9	8.1	13.5	15.2	27.1	27.5	66.0	67.8	89.5	141.5
Male	7.7	3.9	0.0	3.6	1.8	2.1	4.4	2.2	9.8	8.1	17.9	19.3	36.3	27.9	88.1	117.0	105.1	165.5
Female	6.0	4.1	1.9	3.8	5.6	2.4	2.3	2.3	10.0	8.1	9.0	11.1	18.0	27.1	46.6	28.9	78.9	129.0
Liver & Bile Duct																		
All	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	4.5	6.9	9.0	11.5	13.8	22.6	0.0	4.7
Male	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	2.0	6.7	8.3	14.5	9.3	11.8	43.9	0.0	13.8
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.3	5.6	3.6	13.6	15.5	5.8	0.0	0.0
Lung & Bronchus																		
All	0.0	0.0	0.9	0.9	0.0	3.3	0.0	4.5	13.9	16.2	32.6	80.2	164.4	242.8	365.8	426.3	362.2	287.7
Male	0.0	0.0	1.8	1.8	0.0	2.1	0.0	6.6	19.7	14.2	40.3	88.2	174.5	264.6	411.1	548.4	525.3	399.8
Female	0.0	0.0	0.0	0.0	0.0	4.7	0.0	2.3	8.0	18.1	24.8	72.1	154.4	221.6	325.9	329.7	250.9	229.4
Melanoma of the Skin																		
All	0.0	0.0	1.9	0.9	4.6	10.0	15.7	16.8	17.8	19.2	39.3	52.5	37.9	80.2	88.0	100.1	89.5	51.9
Male	0.0	0.0	1.8	1.8	5.5	6.3	11.0	15.4	15.7	16.2	40.3	63.4	40.0	97.5	123.3	168.2	147.1	96.5
Female	0.0	0.0	1.9	0.0	3.7	14.1	20.7	18.2	20.0	22.1	38.4	41.6	35.9	63.3	56.9	46.3	50.2	28.7
Myeloma																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	5.6	6.9	3.6	9.2	16.5	22.6	46.9	14.2
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	4.1	6.7	8.3	7.3	13.9	11.8	21.9	42.0	41.4
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	5.6	0.0	4.5	20.7	23.1	50.2	0.0
Non-Hodgkin's Lymphoma																		
All	3.0	1.0	0.0	0.0	1.9	3.3	6.7	4.5	8.9	9.1	6.7	27.6	41.6	68.7	77.0	103.3	127.8	127.3
Male	1.9	2.0	0.0	0.0	1.8	4.2	11.0	2.2	5.9	10.1	6.7	30.3	47.3	69.6	64.6	95.1	178.6	137.9
Female	4.0	0.0	0.0	0.0	1.9	2.4	2.3	6.8	12.0	8.1	6.8	25.0	35.9	67.8	88.0	109.9	93.2	121.9

IDAHO **AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER** **2003**

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+
Oral Cavity & Pharynx																		
All	0.0	0.0	0.0	0.0	0.0	2.2	1.1	1.1	5.0	17.2	14.6	19.4	30.7	38.9	55.0	22.6	68.2	42.4
Male	0.0	0.0	0.0	0.0	0.0	4.2	2.2	2.2	7.9	28.4	22.4	35.8	47.3	51.1	82.2	36.6	84.1	96.5
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	6.0	6.8	2.8	14.4	27.1	31.0	11.6	57.4	14.3
Ovary																		
Female	0.0	0.0	3.9	0.0	3.7	0.0	0.0	9.1	8.0	6.0	11.3	25.0	28.7	54.3	51.7	52.1	35.8	14.3
Pancreas																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	16.2	5.6	22.1	32.5	41.2	63.3	48.4	72.4	75.5
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	20.3	9.0	30.3	36.3	32.5	47.0	58.5	94.6	27.6
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	2.3	13.9	28.7	49.7	77.6	40.5	57.4	100.3
Prostate																		
Male	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	5.9	24.3	103.0	286.6	494.3	821.7	875.0	1140.6	945.6	1020.3
Stomach																		
All	0.0	0.0	0.0	0.0	0.9	0.0	1.1	0.0	5.0	5.1	2.3	5.5	14.5	16.0	30.3	32.3	38.4	47.2
Male	0.0	0.0	0.0	0.0	1.8	0.0	2.2	0.0	5.9	4.1	0.0	8.3	25.4	27.9	52.9	51.2	31.5	110.3
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	6.0	4.5	2.8	3.6	4.5	10.4	17.4	43.0	14.3
Testis																		
Male	1.9	0.0	0.0	3.6	7.4	6.3	6.6	26.4	7.9	8.1	4.5	2.8	3.6	0.0	5.9	0.0	0.0	0.0
Thyroid																		
All	0.0	0.0	0.0	3.7	8.3	10.0	5.6	8.9	19.8	14.1	18.0	19.4	21.7	16.0	13.8	6.5	12.8	14.2
Male	0.0	0.0	0.0	1.8	3.7	2.1	0.0	4.4	5.9	2.0	9.0	13.8	18.2	18.6	5.9	0.0	10.5	13.8
Female	0.0	0.0	0.0	5.7	13.0	18.8	11.5	13.6	33.9	26.2	27.1	25.0	25.1	13.6	20.7	11.6	14.3	14.3

SECTION V

2003 OBSERVED VS. EXPECTED NUMBERS BY HEALTH DISTRICT

2003 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	993	918.4 +	485	514.0	863	899.7	1,527	1348.7 *	745	780.4	555	660.0 *	575	649.6
Bladder	46	39.1	27	22.5	34	40.0	63	55.1	24	35.8 +	27	27.9	25	27.2
Brain	9	14.1	5	7.2	16	12.9	26	21.1	9	11.5	15	9.2	7	10.5
Breast	143	128.3	57	70.1	110	124.5	239	193.6 *	108	105.8	77	91.5	75	91.7
Breast (insitu)	35	24.4 +	16	13.2	15	25.1 +	49	38.1	19	21.0	15	18.2	11	18.8
Cervix	7	6.2	4	3.3	4	6.8	11	11.4	9	4.7	2	4.9	5	4.6
Colorectal	108	91.1	56	52.9	94	91.4	138	136.0	76	80.6	52	67.0	57	64.2
Endometrium	16	20.2	11	10.4	12	19.1	29	29.2	21	14.9	19	12.6	11	13.5
Esophagus	9	9.8	13	4.5 *	11	8.9	4	17.9 *	10	7.8	5	6.9	8	6.5
Hodgkin's lymphoma	8	5.9	4	3.6	11	6.4	13	11.6	4	5.8	2	5.9	4	6.3
Kidney & renal pelvis	26	27.4	21	13.8	24	25.3	48	37.9	16	22.7	13	19.2	18	18.5
Larynx	11	6.1	3	3.8	9	6.0	9	10.1	3	6.1	5	4.6	2	5.0
Leukemia	27	29.9	15	16.8	30	30.1	53	43.4	24	26.0	19	22.0	21	21.4
Liver & bile duct	5	6.3	1	3.4	5	5.6	14	7.5 +	4	5.0	2	4.4	6	3.9
Lung & bronchus	141	116.3 +	69	66.7	131	111.2	210	157.8 *	88	102.1	50	86.7 *	45	85.0
Melanoma of skin	44	49.1	23	26.1	41	47.6	84	76.1	42	39.4	29	34.8	29	35.1
Myeloma	8	7.5	4	4.3	7	7.3	12	11.0	3	6.9	6	5.2	7	4.9
N-H Lymphoma	34	37.5	15	21.4	35	36.7	72	50.6 *	31	31.6	23	26.5	23	25.9
Oral cavity & pharynx	29	21.2	11	12.2	19	21.5	30	35.3	31	16.5 *	6	16.7 *	12	15.8
Ovary	12	12.1	7	6.4	12	11.3	17	18.9	11	9.8	7	8.6	9	8.5
Pancreas	20	24.3	9	13.5	26	21.8	35	34.1	19	19.8	21	15.7	15	16.0
Prostate	147	158.6	76	87.2	127	150.4	228	215.1	137	127.8	105	106.6	107	104.1
Stomach	12	11.5	8	6.5	8	12.0	19	16.6	8	10.2	9	8.1	9	8.0
Testis	10	4.4 +	3	2.7	7	5.6	8	12.5	3	4.7	3	4.3	4	4.6
Thyroid	20	19.5	4	11.0 +	17	19.9	46	31.1 +	12	16.8	12	14.9	20	15.0
Pediatric (age 0-19)	8	11.3	2	5.7	13	14.8	26	20.9	13	10.6	13	10.8	12	11.8

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

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

2003 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	547	501.0 +	262	283.9	475	470.5	758	699.5 +	389	420.3	297	352.5 *	315	347.3
Bladder	38	32.2	24	18.4	24	32.3	47	43.9	22	28.6	24	22.2	20	22.3
Brain	4	7.9	4	3.9	8	7.2	13	12.1	5	6.2	9	5.0	5	5.6
Breast	1	1.9	1	0.9	3	1.3	4	1.6	0	1.6	0	1.3	1	1.1
Breast (insitu)	0	0.2	1	0.0 *	0	0.2	0	0.4	0	0.1	0	0.1	0	0.1
Cervix	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Colorectal	57	49.0	30	28.2	55	45.5	69	68.8	36	42.6	24	35.3	30	34.1
Endometrium	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Esophagus	7	8.2	11	3.7 *	11	6.7	1	15.1 *	9	6.1	3	5.8	7	5.3
Hodgkin's lymphoma	5	2.8	2	1.8	7	2.9	7	6.1	0	3.2	0	3.0	2	3.0
Kidney & renal pelvis	22	16.3	15	8.4	14	15.4	27	24.7	5	14.7 *	9	11.9	11	11.6
Larynx	9	5.3	3	3.3	7	5.1	7	8.2	2	5.2	5	3.8	2	4.2
Leukemia	19	16.5	6	9.8	19	15.8	26	24.0	12	14.6	10	12.3	13	11.7
Liver & bile duct	3	4.3	1	2.3	4	3.7	12	4.2 *	1	3.6	1	3.1	3	2.8
Lung & bronchus	87	63.4 *	29	38.5	77	59.0 +	109	85.3 +	44	56.5	31	47.3 +	25	47.1 *
Melanoma of skin	25	28.5	10	15.8	25	26.3	44	42.4	30	21.8	14	20.1	16	20.0
Myeloma	3	4.7	4	2.3	5	3.9	7	6.5	0	4.3 +	4	2.9	4	2.8
N-H Lymphoma	12	19.2	5	10.8	12	18.3	33	24.5	20	14.4	12	12.5	18	11.7
Oral cavity & pharynx	25	15.2 +	6	9.3	16	15.3	20	26.9	22	12.3 +	5	12.3 +	8	12.0
Ovary	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	.0	0	0.0
Pancreas	8	12.3	6	6.3	15	9.7	15	17.2	7	9.7	13	7.2	6	8.1
Prostate	147	163.3	76	90.0	127	147.9	228	207.8	137	128.0	105	107.1	107	105.3
Stomach	10	7.9	5	4.6	5	8.3	14	10.4	6	7.0	3	6.0	7	5.4
Testis	10	4.3 +	3	2.8	7	5.6	8	12.9	3	4.7	3	4.2	4	4.5
Thyroid	5	4.8	0	2.8	5	4.5	13	5.7 +	4	3.9	2	3.6	2	3.8
Pediatric (age 0-19)	4	6.3	2	3.1	5	8.7	15	11.3	8	5.7	6	6.2	8	6.3

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

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

2003 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	446	423.4	223	233.0	388	427.4	769	636.7 *	356	361.3	258	308.5 *	260	303.9 +
Bladder	8	7.6	3	4.5	10	7.3	16	9.7	2	7.5 +	3	5.7	5	5.1
Brain	5	6.2	1	3.3	8	5.7	13	9.1	4	5.3	6	4.2	2	4.8
Breast	142	125.6	56	67.8	107	124.7	235	192.5 *	108	104.4	77	90.2	74	90.2
Breast (insitu)	35	24.0 +	15	12.9	15	25.3 +	49	37.8	19	20.9	15	18.0	11	18.6
Cervix	7	6.2	4	3.2	4	6.9	11	11.3	9	4.7	2	5.0	5	4.7
Colorectal	51	42.6	26	25.0	39	45.8	69	66.5	40	38.1	28	31.7	27	30.3
Endometrium	16	20.0	11	10.1	12	19.4	29	29.6	21	15.0	19	12.5	11	13.4
Esophagus	2	1.7	2	0.9	0	2.1	3	2.6	1	1.6	2	1.1	1	1.2
Hodgkin's lymphoma	3	3.1	2	1.8	4	3.6	6	5.6	4	2.6	2	2.9	2	3.2
Kidney & renal pelvis	4	11.2 +	6	5.4	10	9.7	21	13.2	11	8.0	4	7.4	7	7.0
Larynx	2	1.0	0	0.7	2	0.9	2	1.7	1	0.9	0	0.9	0	0.9
Leukemia	8	13.5	9	7.1	11	14.2	27	18.9	12	11.4	9	9.8	8	9.8
Liver & bile duct	2	2.0	0	1.1	1	2.0	2	3.3	3	1.4	1	1.4	3	1.1
Lung & bronchus	54	53.3	40	28.6	54	52.0	101	71.3 *	44	45.7	19	39.5 *	20	38.1 *
Melanoma of skin	19	20.9	13	10.4	16	21.2	40	33.1	12	17.6	15	14.8	13	15.1
Myeloma	5	2.8	0	2.0	2	3.4	5	4.5	3	2.7	2	2.3	3	2.0
N-H Lymphoma	22	18.3	10	10.7	23	18.4	39	26.0 +	11	17.3	11	13.9	5	14.2 *
Oral cavity & pharynx	4	6.1	5	3.0	3	6.1	10	8.1	9	4.2	1	4.4	4	3.9
Ovary	12	11.9	7	6.2	12	11.4	17	19.0	11	9.8	7	8.6	9	8.5
Pancreas	12	11.8	3	7.2	11	12.0	20	17.1	12	10.0	8	8.5	9	8.0
Prostate	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Stomach	2	3.9	3	1.9	3	3.7	5	5.9	2	3.3	6	2.1 +	2	2.6
Testis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thyroid	15	14.8	4	8.1	12	15.5	33	25.0	8	12.8	10	11.4	18	11.2
Pediatric (age 0-19)	4	5.0	0	2.6	8	6.2	11	9.5	5	4.9	7	4.7	4	5.5

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

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

SECTION VI

RISKS OF 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 81	1 in 23	1 in 10	1 in 5	1 in 3	1 in 2
40		1 in 31	1 in 11	1 in 5	1 in 3	1 in 2
50			1 in 16	1 in 6	1 in 3	1 in 2
60				1 in 8	1 in 4	1 in 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 617	1 in 130	1 in 40	1 in 16	1 in 8	1 in 5
40		1 in 163	1 in 42	1 in 16	1 in 8	1 in 5
50			1 in 56	1 in 17	1 in 8	1 in 5
60				1 in 24	1 in 9	1 in 5
70					1 in 14	1 in 6
80						1 in 9

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 128	1 in 37	1 in 11	1 in 4	1 in 2	1 in 2
40		1 in 51	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 597	1 in 137	1 in 40	1 in 14	1 in 7	1 in 4
40		1 in 175	1 in 42	1 in 14	1 in 7	1 in 4
50			1 in 53	1 in 15	1 in 7	1 in 4
60				1 in 19	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 274	1 in 57	1 in 24	1 in 13	1 in 9	1 in 7
40		1 in 74	1 in 26	1 in 14	1 in 9	1 in 8
50			1 in 39	1 in 16	1 in 10	1 in 8
60				1 in 26	1 in 13	1 in 10
70					1 in 23	1 in 13
80						1 in 22

If your current age is:	Then your risk of dying from breast cancer by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 1967	1 in 410	1 in 155	1 in 81	1 in 50	1 in 33
40		1 in 514	1 in 166	1 in 84	1 in 51	1 in 34
50			1 in 241	1 in 99	1 in 56	1 in 35
60				1 in 160	1 in 70	1 in 40
70					1 in 110	1 in 47
80						1 in 61

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 15272	1 in 421	1 in 42	1 in 12	1 in 7	1 in 5
40		1 in 427	1 in 42	1 in 12	1 in 7	1 in 5
50			1 in 45	1 in 12	1 in 7	1 in 5
60				1 in 15	1 in 7	1 in 5
70					1 in 10	1 in 7
80						1 in 11

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 19976	1 in 1742	1 in 249	1 in 71	1 in 28
40		1 in 19679	1 in 1717	1 in 245	1 in 70	1 in 27
50			1 in 1825	1 in 241	1 in 68	1 in 26
60				1 in 260	1 in 66	1 in 25
70					1 in 75	1 in 23
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 1932	1 in 452	1 in 159	1 in 63	1 in 32	1 in 20
40		1 in 584	1 in 172	1 in 64	1 in 33	1 in 20
50			1 in 239	1 in 71	1 in 34	1 in 20
60				1 in 96	1 in 38	1 in 21
70					1 in 55	1 in 24
80						1 in 31

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 11473	1 in 2742	1 in 682	1 in 237	1 in 104	1 in 51
40		1 in 3572	1 in 719	1 in 240	1 in 104	1 in 51
50			1 in 883	1 in 252	1 in 105	1 in 51
60				1 in 338	1 in 115	1 in 52
70					1 in 155	1 in 55
80						1 in 63

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 2038	1 in 428	1 in 129	1 in 47	1 in 26	1 in 19
40		1 in 533	1 in 136	1 in 47	1 in 26	1 in 18
50			1 in 177	1 in 50	1 in 26	1 in 19
60				1 in 66	1 in 29	1 in 19
70					1 in 43	1 in 23
80						1 in 31

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 7767	1 in 1386	1 in 437	1 in 148	1 in 70	1 in 45
40		1 in 1662	1 in 456	1 in 148	1 in 70	1 in 44
50			1 in 610	1 in 158	1 in 71	1 in 44
60				1 in 200	1 in 75	1 in 45
70					1 in 102	1 in 49
80						1 in 60

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 712	1 in 282	1 in 160	1 in 105	1 in 77	1 in 64
40		1 in 464	1 in 204	1 in 122	1 in 86	1 in 69
50			1 in 357	1 in 163	1 in 103	1 in 80
60				1 in 286	1 in 139	1 in 99
70					1 in 241	1 in 134
80						1 in 223

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 15961	1 in 5420	1 in 2130	1 in 1181	1 in 638	1 in 465
40		1 in 8138	1 in 2437	1 in 1265	1 in 659	1 in 474
50			1 in 3413	1 in 1469	1 in 703	1 in 494
60				1 in 2471	1 in 848	1 in 554
70					1 in 1154	1 in 638
80						1 in 1062

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 757	1 in 292	1 in 130	1 in 74	1 in 52	1 in 43
40		1 in 469	1 in 155	1 in 81	1 in 54	1 in 44
50			1 in 224	1 in 95	1 in 60	1 in 48
60				1 in 153	1 in 76	1 in 56
70					1 in 126	1 in 75
80						1 in 119

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 4071	1 in 1613	1 in 934	1 in 454	1 in 286	1 in 217
40		1 in 2633	1 in 1194	1 in 504	1 in 303	1 in 226
50			1 in 2118	1 in 604	1 in 332	1 in 240
60				1 in 791	1 in 369	1 in 253
70					1 in 584	1 in 315
80						1 in 443

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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's 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's 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	United States 2000 Standard Million Population
0-4	69,135
5-9	72,533
10-14	73,032
15-19	72,169
20-24	66,478
25-29	64,529
30-34	71,044
35-39	80,762
40-44	81,851
45-49	72,118
50-54	62,716
55-59	48,454
60-64	38,793
65-69	34,264
70-74	31,773
75-79	26,999
80-84	17,842
85 +	15,508
Total	1,000,000

Source: SEER Program, National Cancer Institute, 2004. [11]

APPENDIX C

2003 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	5,778	2,848	9,137	13,804	6,396	6,908	7,032	51,903
5 to 9	6,374	2,820	8,971	13,819	6,258	6,402	6,668	51,312
10 to 14	7,418	3,234	9,044	13,943	6,901	6,732	7,321	54,593
15 to 19	7,349	4,340	8,754	13,638	7,086	7,110	7,857	56,134
20 to 24	6,416	4,645	8,225	13,856	6,475	6,519	8,171	54,307
25 to 29	4,878	4,047	7,593	14,347	5,027	5,307	6,441	47,640
30 to 34	5,406	3,137	7,583	15,618	4,905	4,588	4,445	45,682
35 to 39	5,852	2,937	7,000	15,341	5,246	4,335	4,811	45,522
40 to 44	7,063	3,504	7,412	15,536	6,242	5,300	5,792	50,849
45 to49	7,361	3,791	6,769	14,091	6,126	5,603	5,641	49,382
50 to 54	7,304	3,551	6,051	12,287	5,365	5,047	5,062	44,667
55 to 59	6,048	2,994	5,101	9,691	4,571	3,880	4,007	36,292
60 to 64	4,741	2,429	4,119	6,393	3,555	3,045	3,233	27,515
65 to 69	3,893	1,999	3,224	4,705	2,876	2,402	2,442	21,541
70 to 74	3,032	1,603	2,529	3,678	2,295	2,016	1,875	17,028
75 to 79	2,283	1,375	2,130	2,811	1,885	1,643	1,550	13,677
80 to 84	1,465	1007	1,553	2,067	1,412	1,001	1013	9,518
85+	1143	747	1,316	1,340	1205	803	699	7,253
Total	93,804	51,008	106,511	186,965	83,826	78,641	84,060	684,815
	HD 1	**HD 2**	**HD 3**	**HD 4**	**HD 5**	**HD 6**	**HD 7**	**STATE**
Females								
< 5	5,824	2,667	8,633	13,442	6,235	6,326	6,502	49,629
5 to 9	5,986	2,657	8,500	13,136	6,040	6,093	6,366	48,778
10 to 14	6,825	3,078	8,646	13,182	6,533	6,538	6,786	51,588
15 to 19	6,826	3,929	8,243	12,703	6,631	6,794	7,716	52,842
20 to 24	6,023	4,173	7,916	12,488	5,814	6,805	10,823	54,042
25 to 29	4,879	3,239	7,211	12,908	4,490	5,177	4,585	42,489
30 to 34	5,592	2,728	7,307	13,965	4,764	4,570	4,493	43,419
35 to 39	6,064	2,845	6,756	13,739	5,182	4,612	4,836	44,034
40 to 44	7,347	3,511	7,220	14,713	6,013	5,546	5,759	50,109
45 to49	7,910	3,734	6,758	14,063	6,048	5,506	5,691	49,710
50 to 54	7,266	3,393	6,189	12,140	5,436	4,957	4,952	44,333
55 to 59	6,072	2,946	5,299	9,304	4,602	3,860	3,980	36,063
60 to 64	4,706	2,442	4,228	6,555	3,654	3,029	3,232	27,846
65 to 69	3,694	1,916	3,494	5,091	2,993	2,525	2,404	22,117
70 to 74	3,170	1,752	2,978	4,297	2,721	2,239	2,172	19,329
75 to 79	2,827	1,554	2,766	3,875	2,439	1,889	1,938	17,288
80 to 84	2,075	1,351	2,380	3,214	1,971	1,587	1,371	13,949
85+	1,948	1,425	2,430	3,222	2,052	1,572	1303	13,952
Total	95,034	49,340	106,954	182,037	83,618	79,625	84,909	681,517
Total	188,838	100,348	213,465	369,002	167,444	158,266	168,969	1,366,332

Source: U.S. Census Bureau, 2004.