

# Cancer in Idaho - 2001



## Annual Report of the Cancer Data Registry of Idaho

April 2003



P.O. BOX 1278  
BOISE, ID 83701 - 1278  
PHONE: 208.338.5100  
FAX: 208.338.7800

# **CANCER IN IDAHO - 2001**

**A Publication of the  
Cancer Data Registry of Idaho**



**A Program of the  
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

**April 2003**

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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 - 2001,” the twenty-fifth annual report of the Cancer Data Registry of Idaho (CDRI), contains data on cancer cases diagnosed during 2001 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 Vital Records and Health Statistics, the Bureau of Clinical and Preventive Services, the Bureau of Health Promotion, and the Bureau of Environmental Health and Safety 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 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.”*<sup>1</sup> Stage of disease variables were coded using *“SEER’s Summary Staging Manual 2000”* and *“AJCC Manual for Staging of Cancer, 5th edition.”*<sup>2-3</sup> All other variables were coded following the rules of the North American Association of Central Cancer Registries, the SEER program, and the American College of Surgeons.<sup>4-6</sup>

### **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 the North American Association of Central Cancer Registries, 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 24 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.

### Population Description

At the time of the writing of this report, the U.S. Bureau of the Census<sup>7</sup> had released 2001 population estimates for the state of Idaho and Idaho counties, but not the detailed age by sex by county estimates required for rate calculations in this text. The Census population estimate for the state of Idaho on July 1, 2001, was 1,321,006. County estimates by age and sex for 2001 were developed by the Bureau of Health Policy and Vital Statistics by applying April 1, 2000, Census age and sex proportions to the July 1, 2001, county total population estimates from the U.S. Bureau of the Census. The sum of rounded estimates by age and sex do not sum to Idaho total estimates provided by the Census Bureau. 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:

<u>Health District</u>	<u>Counties</u>	<u>Male</u>	<u>Female</u>
District 1	Benewah, Bonner, Boundary, Kootenai, Shoshone	90,654	91,481
District 2	Clearwater, Latah, Lewis, Idaho, Nez Perce	50,313	48,846
District 3	Adams, Canyon, Gem, Owyhee, Payette, Washington	99,869	100,687
District 4	Ada, Boise, Elmore, Valley	180,280	175,934
District 5	Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, Twin Falls	82,068	81,495
District 6	Bannock, Bear Lake, Bingham, Butte, Caribou, Franklin, Oneida, Power	78,327	79,197
District 7	Bonneville, Clark, Custer, Fremont, Jefferson, Lemhi, Madison, Teton	80,662	81,157

## **Descriptive Summary by Gender and Race and Ethnicity**

The data presented in this report cover those cases diagnosed among Idaho residents between January 1, 2001, and December 31, 2001. In this time frame, there were 5,753 cases of cancer diagnosed among Idaho residents (2,971 among males and 2,782 among females). By race and ethnicity, there were 5,582 cases among non-Hispanic whites, 75 among Hispanic whites, 5 cases among Blacks, 29 cases among Native Americans, 20 cases among Asians/Pacific Islanders, and 6 cases among other races. Race was missing for 33 cases, and 2 cases among whites had unknown ethnicity. 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 race missing, 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.

## **Trends**

There were approximately the same numbers of cases diagnosed in 2001 as in 2000 (a decrease of 3 cases from 2000 to 2001 as of one year after close of calendar year). However, there were some large differences by cancer site. Cancer sites with notable increases from 2000 to 2001 were Hodgkin's lymphoma, larynx, liver, plasma cell tumors, pancreas, and thyroid. Cancer sites with notable decreases from 2000 to 2001 were brain, esophagus, and testis. Thyroid cancer incident cases increased 40% over 2000 levels, with increases of 50% or more in Health Districts 1, 3, and 4.

## 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 Idaho Bureau of Health Policy and Vital Statistics (see Appendix C).

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 2001 (5,753), a total of

5,417 cases (5,270 invasive and 147 bladder in-situ) were used for calculating age-adjusted incidence rates. Of the 5,417 cases, 2,875 occurred among males and 2,542 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  $p \leq 0.05$  and (\*) for  $p \leq 0.01$ . 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 the 1993 annual report of the Washington State Cancer Registry, the “American Cancer Society Textbook of Clinical Oncology,” and the U.S. Department of Health and Human Services 9th Report on Carcinogens.<sup>8-10</sup> 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.

### **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.<sup>4,5</sup> 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 rates for Section 1 were calculated using SEER\*Stat.<sup>11</sup>

## 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. For comparisons between Idaho and SEER rates, see the CDRI publication *Cancer Trends in Idaho, 1971-1988*.

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.

## 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
- ◆ unknown.

## Risks of Developing and Dying from Cancer

Cancer incidence and mortality risks were estimated using DEVCAN Version 4.2 software.<sup>12</sup> DEVCAN was used to calculate the probability of developing or dying of cancer using Idaho-specific cancer incidence and mortality data for the years 1997-2001. 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

# **SECTION I**

## **2001 SUMMARY ON ALL SITES COMBINED AND 24 MOST COMMON SITES**



# ALL SITES

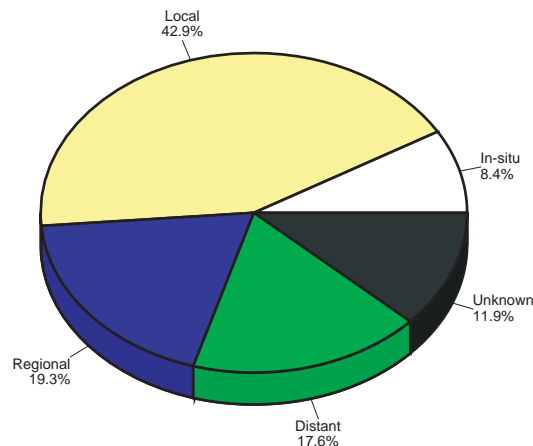
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	446.5	518.6	392.4
# of new invasive cases	5,270	2,754	2,516
# of new in-situ cases	483	217	266
# of deaths	2,093	1,112	981

## Total Cases By County

Ada	1,312	Cassia	79	Lewis	33
Adams	22	Clark	3	Lincoln	11
Bannock	256	Clearwater	42	Madison	38
Bear Lake	26	Custer	23	Minidoka	96
Benewah	68	Elmore	75	Nez Perce	219
Bingham	127	Franklin	45	Oneida	20
Blaine	76	Fremont	47	Owyhee	37
Boise	18	Gem	90	Payette	105
Bonner	225	Gooding	63	Power	17
Bonneville	327	Idaho	77	Shoshone	102
Boundary	58	Jefferson	70	Teton	15
Butte	13	Jerome	80	Twin Falls	336
Camas	6	Kootenai	594	Valley	47
Canyon	536	Latah	110	Washington	50
Caribou	37	Lemhi	35		

Stage at Diagnosis - All Sites



## Risk and Associated Factors

<b>Age</b>	Rates usually increase steadily with age. Most cases are adults in mid-life or older.
<b>Gender</b>	Males have a higher incidence than females for most cancer types.
<b>Race &amp; SES</b>	Rates are higher for African Americans than for Caucasians and other ethnic groups. Rates are generally higher among lower income groups.
<b>Occupation</b>	Risk for cancer is greater with some kinds of workplace exposures, such as some chemicals, asbestos, and radiation.
<b>Diet</b>	Diets that are low in fresh fruits and vegetables have been associated with increased incidence of several cancers.
<b>Other</b>	Tobacco use is the single most important risk factor for cancer incidence and mortality.

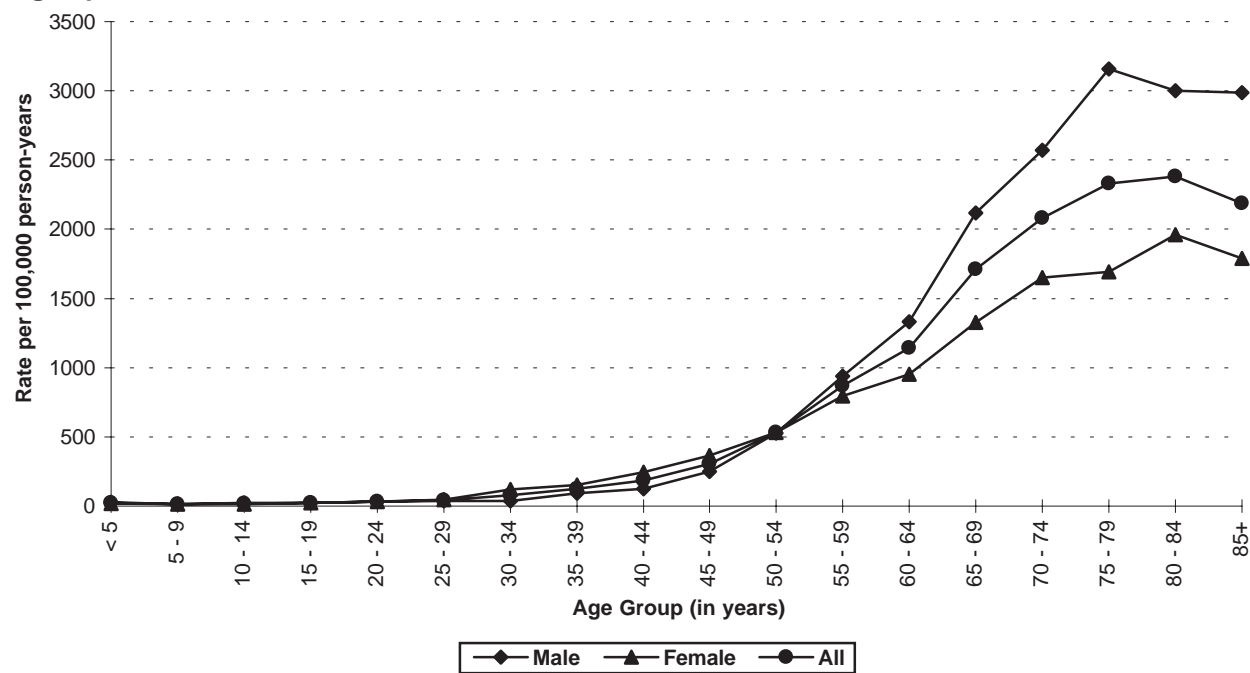
## Special Notes

Mean age-adjusted incidence rate across health districts:	432.1
95% confidence interval on the mean age-adjusted incidence rate:	398.8 - 465.4
Median age-adjusted incidence rate of health districts:	422.4
Range of age-adjusted incidence rate for health districts:	377.4 - 503.7
SEER rate (1999, Whites):	466.7

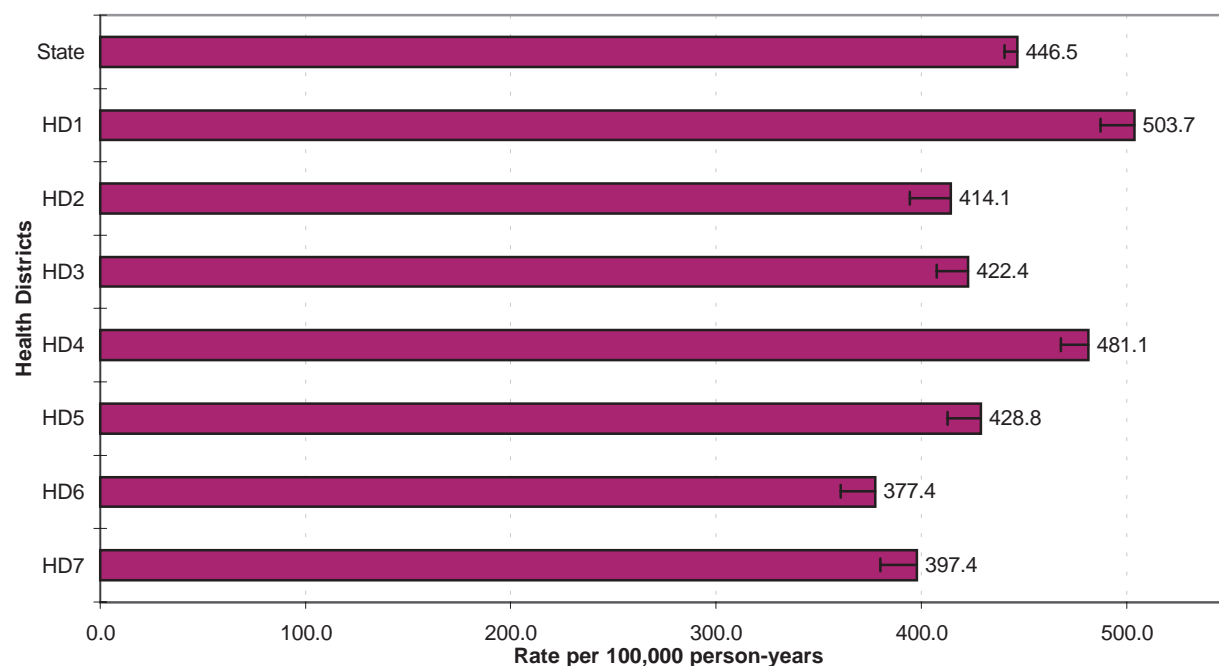
The incidence rates for all cancers combined were similar for males and females in Idaho until approximately age 60-64, after which rates for males rose dramatically. The highest rates for both males and females were observed in age groups after age 70, peaking in the age group 75-79 for males and 80-84 for females. Health Districts 1 ( $p < 0.01$ ) 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



### All Sites Combined Cancer Incidence Age-adjusted Rates by Health District



# BLADDER

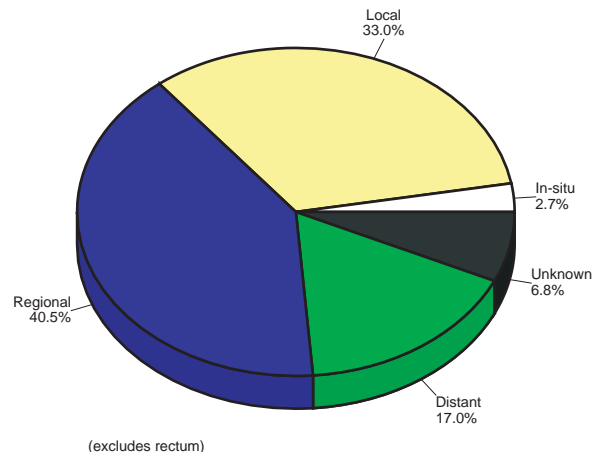
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	21.6	37.7	8.6
# of new invasive cases	111	79	32
# of new in-situ cases	147	121	26
# of deaths	64	40	24

## Total Cases By County

Ada	55	Cassia	6	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	13	Clearwater	-	Madison	1
Bear Lake	-	Custer	1	Minidoka	4
Benewah	3	Elmore	4	Nez Perce	6
Bingham	5	Franklin	-	Oneida	1
Blaine	-	Fremont	2	Owyhee	4
Boise	1	Gem	4	Payette	5
Bonner	16	Gooding	5	Power	2
Bonneville	14	Idaho	2	Shoshone	3
Boundary	3	Jefferson	3	Teton	-
Butte	4	Jerome	7	Twin Falls	15
Camas	-	Kootenai	23	Valley	5
Canyon	26	Latah	8	Washington	2
Caribou	1	Lemhi	1		

Stage at Diagnosis - Colon



## Risk and Associated Factors

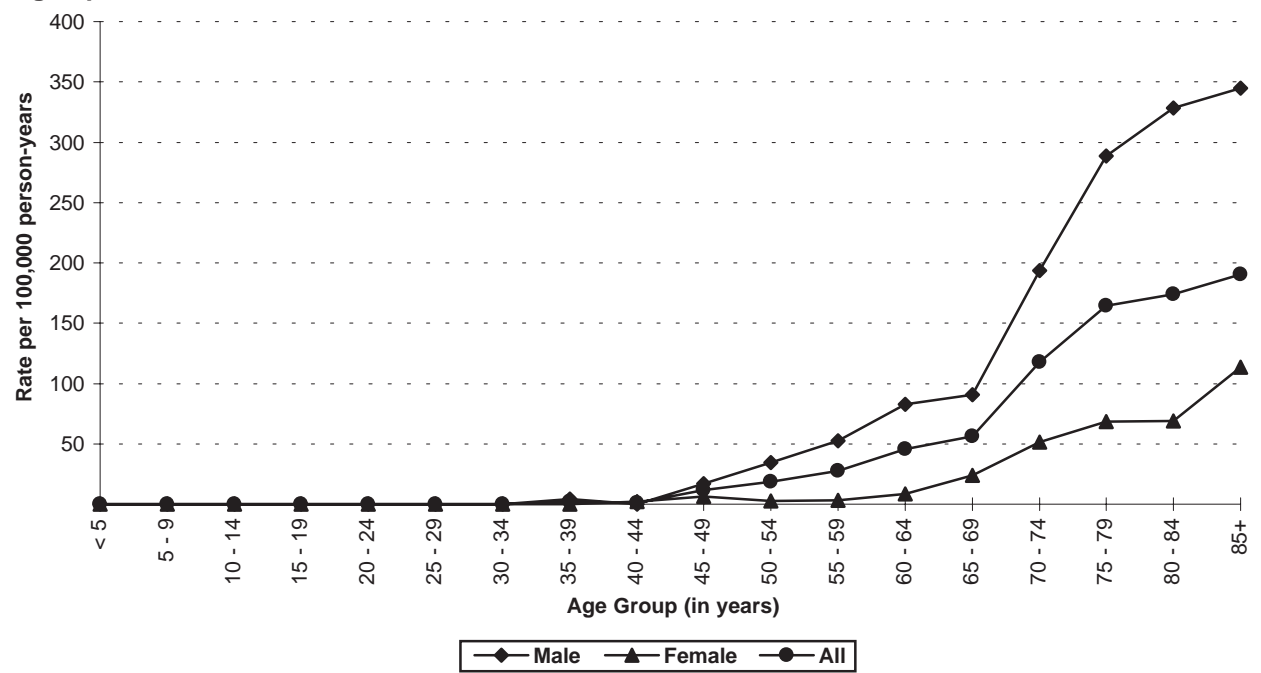
<b>Age</b>	Rates usually increase steadily with age.
<b>Gender</b>	Males have substantially higher rates than females.
<b>Race</b>	Incidence rates are slightly higher in African Americans.
<b>Occupation</b>	Occupational exposures, most prominently aniline dye used in textile, rubber, and cable industries, are associated with a large proportion of cases. Exposure to permanent hair dyes increases risk.
<b>Other</b>	Tobacco consumption has been associated with a six-fold higher incidence of bladder tumor. Cyclophosphamide, a chemotherapeutic agent, and 4-amino-diphenyl are known human bladder carcinogens. Beta-naphthylamine and tobacco tar have been implicated in animal studies as possible causative factors. Chronic infections, calculus disease, and <i>Schistosoma hematobium</i> may also cause bladder tumors. Nitrate and arsenic in drinking water have each been shown to increase the risk of bladder cancer.

## Special Notes

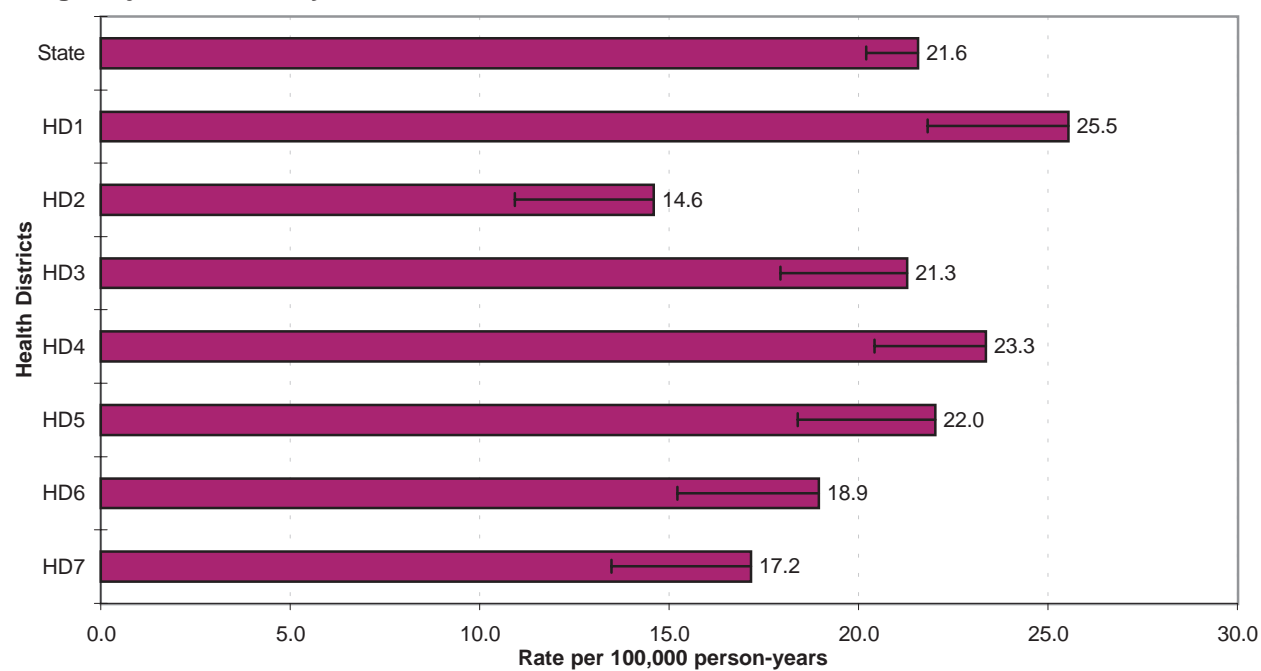
Mean age-adjusted incidence rate across health districts:	20.4
95% confidence interval on the mean age-adjusted incidence rate:	17.6 - 23.2
Median age-adjusted incidence rate of health districts:	21.3
Range of age-adjusted incidence rate for health districts:	14.6 - 25.5
SEER rate (1999, Whites):	21.6

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

### State Bladder Cancer Incidence Age-specific Rates



### Bladder Cancer Incidence Age-adjusted Rates by Health District



# BRAIN

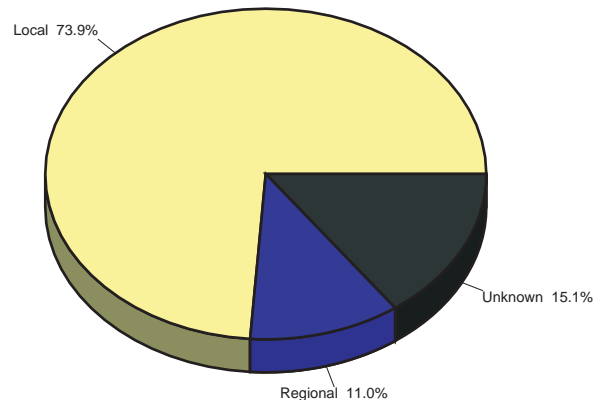
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.7	8.6	3.2
# of new invasive cases	73	52	21
# of new in-situ cases	0	0	0
# of deaths	62	40	22

## Total Cases By County

Ada	18	Cassia	-	Lewis	2
Adams	-	Clark	-	Lincoln	-
Bannock	3	Clearwater	-	Madison	-
Bear Lake	-	Custer	-	Minidoka	-
Benewah	-	Elmore	2	Nez Perce	1
Bingham	-	Franklin	1	Oneida	1
Blaine	1	Fremont	1	Owyhee	-
Boise	1	Gem	1	Payette	-
Bonner	2	Gooding	-	Power	-
Bonneville	7	Idaho	-	Shoshone	2
Boundary	3	Jefferson	2	Teton	1
Butte	1	Jerome	-	Twin Falls	3
Camas	-	Kootenai	5	Valley	1
Canyon	11	Latah	2	Washington	-
Caribou	-	Lemhi	1		

Stage at Diagnosis - Brain



## Risk and Associated Factors

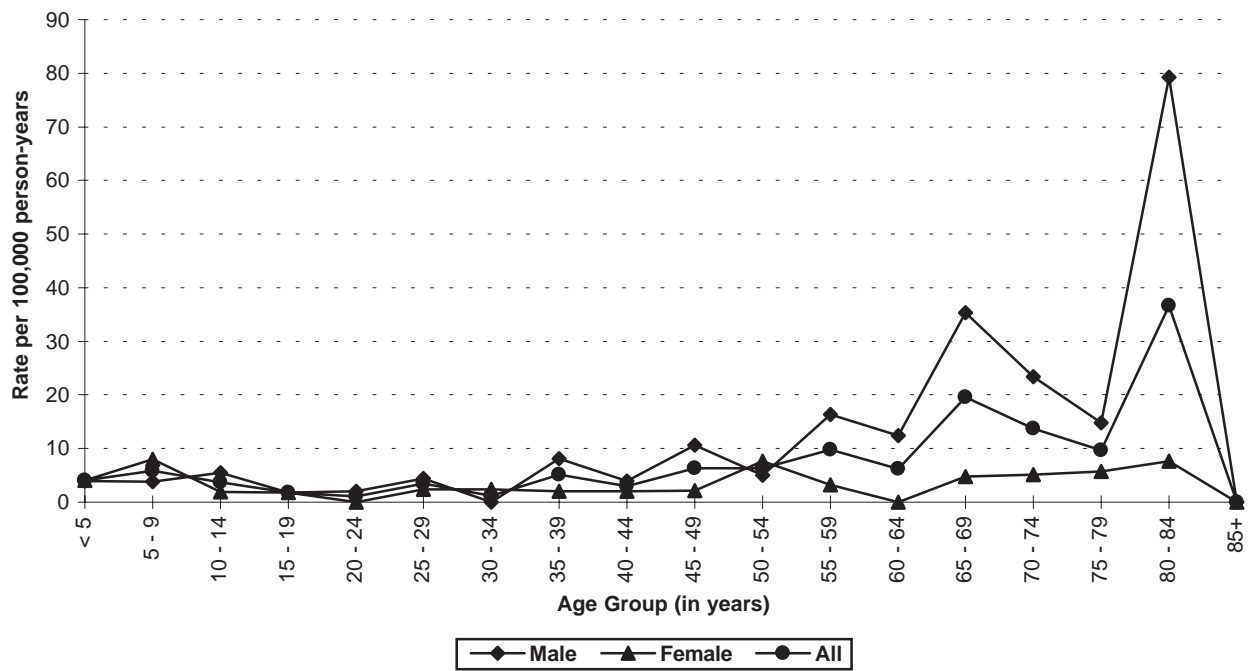
<b>Age</b>	This is the second most common cancer among children, following leukemia. Adult malignant brain tumors are most common after age 60.
<b>Gender</b>	Males have higher rates than females.
<b>Race &amp; SES</b>	The incidence rate is higher in Caucasians and higher social classes.
<b>Genetics</b>	Certain genetic factors may cause an increased risk of some malignant brain tumors, including gliomas. Molecular tests that may be useful in screening for recurrences are being developed.
<b>Occupation</b>	Vinyl chloride is a known human carcinogen, with exposure causing brain cancer and other types of cancer. Many occupational and environmental exposures have shown suggestive associations with elevated rates of brain cancer, including radiation, and agricultural chemicals. Roofers, sheet metal workers, and rubber and plastic workers may be at elevated risk. Studies about these associations are still inconclusive.
<b>Other</b>	Human Immunodeficiency Virus (HIV) infected individuals have an increased risk of developing brain lymphoma.

## Special Notes

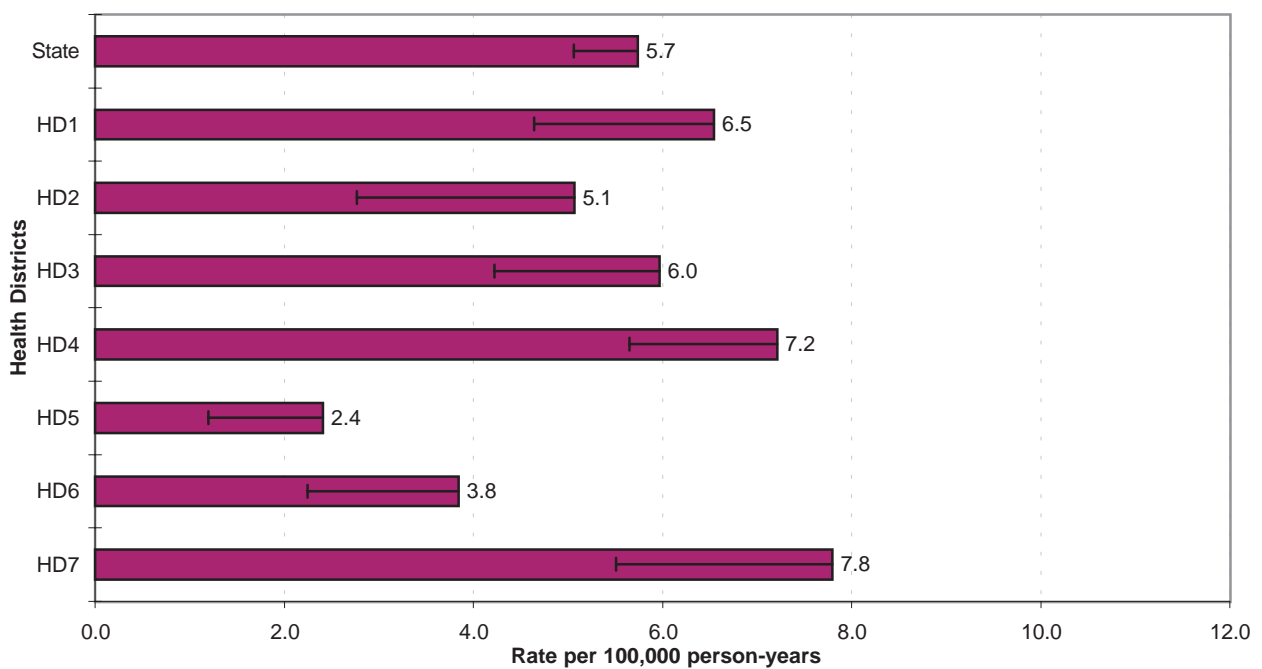
Mean age-adjusted incidence rate across health districts:	5.5
95% confidence interval on the mean age-adjusted incidence rate:	4.1 - 7.0
Median age-adjusted incidence rate of health districts:	6.0
Range of age-adjusted incidence rate for health districts:	2.4 - 7.8
SEER rate (1999, Whites):	6.9

The age-related incidence of brain cancer is typically bimodal, usually with a peak in infancy and childhood, a gradual rise in young adulthood, and a broader, sustained peak during the fifth to eighth decade of life. This trend is difficult to discern in Idaho's population due to the relatively small number of cases observed annually, which increases the variability in age-specific rates. Health District 5 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho ( $p < 0.05$ ).

### State Brain Cancer Incidence Age-specific Rates



### Brain Cancer Incidence Age-adjusted Rates by Health District



# BREAST

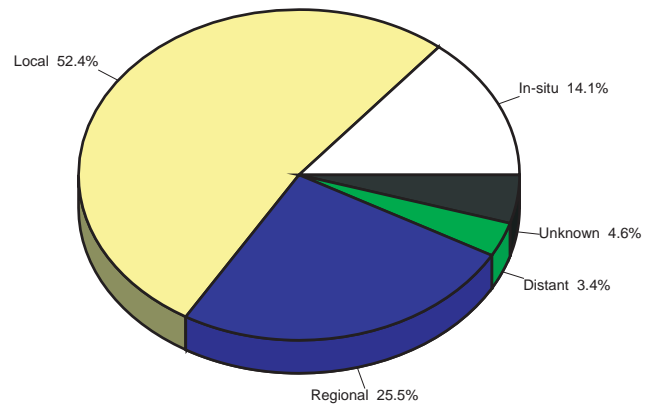
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	67.9	2.8	127.1
# of new invasive cases	828	15	813
# of new in-situ cases	136	0	136
# of deaths	132	1	131

## Total Cases By County

Ada	252	Cassia	10	Lewis	4
Adams	-	Clark	-	Lincoln	2
Bannock	58	Clearwater	9	Madison	5
Bear Lake	6	Custer	4	Minidoka	12
Benewah	11	Elmore	9	Nez Perce	38
Bingham	22	Franklin	9	Oneida	3
Blaine	11	Fremont	9	Owyhee	5
Boise	3	Gem	7	Payette	22
Bonner	33	Gooding	11	Power	5
Bonneville	52	Idaho	11	Shoshone	17
Boundary	14	Jefferson	12	Teton	3
Butte	2	Jerome	13	Twin Falls	44
Camas	2	Kootenai	98	Valley	11
Canyon	82	Latah	20	Washington	9
Caribou	6	Lemhi	6		

## Stage at Diagnosis - Breast



## Risk and Associated Factors

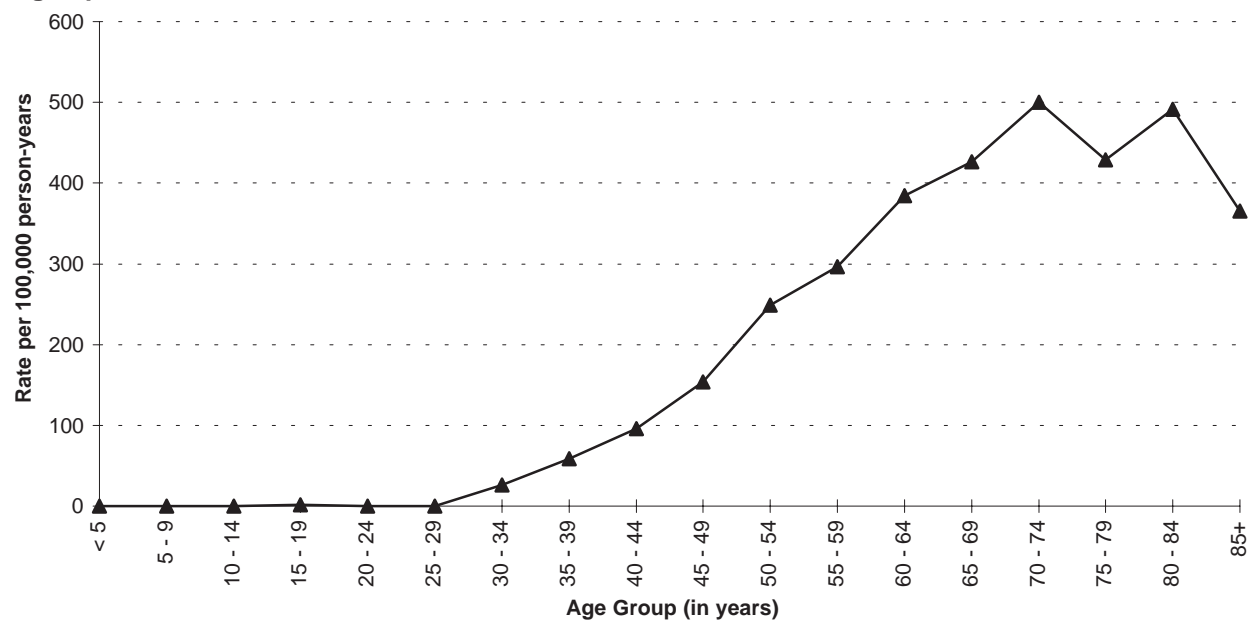
<b>Age</b>	Rates increase steadily with age. Age is the single most important risk factor for breast cancer. A 60-year old white American woman's risk of developing breast cancer is fourteen times that of a 30-year old American woman.
<b>Race &amp; SES</b>	Caucasians have higher incidence rates as do women in higher income groups.
<b>Genetics</b>	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.
<b>Hormonal</b>	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.
<b>Other</b>	High dietary fat intake, obesity, 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

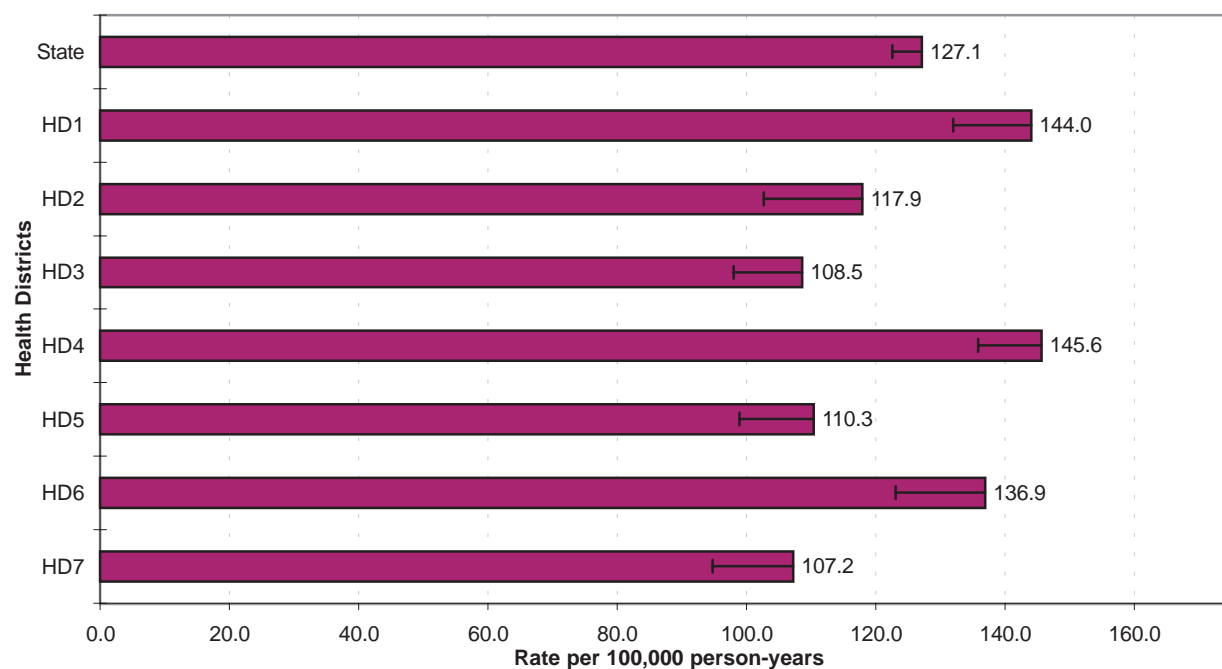
Mean age-adjusted incidence rate across health districts:	124.3
95% confidence interval on the mean age-adjusted incidence rate:	111.6 - 137.1
Median age-adjusted incidence rate of health districts:	117.9
Range of age-adjusted incidence rate for health districts:	107.2 - 145.6
SEER rate (1999, White females):	140.8

The vast majority of breast cancer cases occur among females. In Idaho during the year 2001, there were fifteen cases of invasive breast cancer among males. The age-specific incidence rates of female breast cancer in Idaho in 2001 increased with age, peaking in the age group 70-74. No cases were observed in women less than 25 years of age. Health District 4 had statistically significantly more cases of female breast cancer than expected based upon rates for the remainder of Idaho ( $p < 0.01$ ).

### State Female Breast Cancer Incidence Age-specific Rates



### Female Breast Cancer Incidence Age-adjusted Rates by Health District



# CERVIX

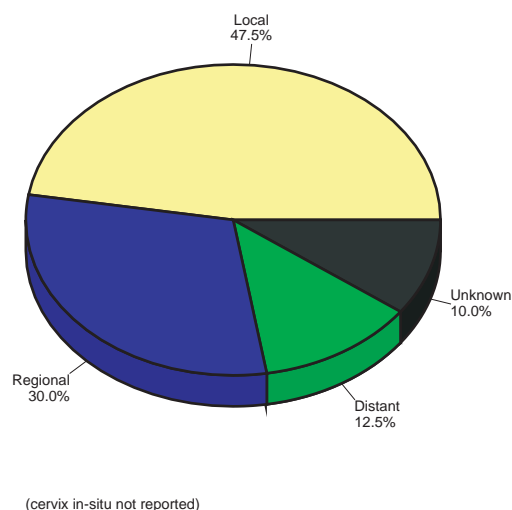
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	6.4
# of new invasive cases	-	-	40
# of new in-situ cases	-	-	n/a
# of deaths	-	-	19

## Total Cases By County

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

## Stage at Diagnosis - Cervix



## Risk and Associated Factors

<b>Age</b>	Cervical cancer occurs in adult women of any age. However, the majority of invasive cases are diagnosed in older women.
<b>Race &amp; SES</b>	African American females, as well as women in lower income groups, have been shown to experience higher rates.
<b>Other</b>	Strong risk factors for cervical cancer and its precursors include: early age at first intercourse (less than 16 years old), a history of multiple sexual partners, a large number of pregnancies, a history of genital human papilloma virus infection or other sexually transmitted disease, and the presence of other genital tract neoplasia. Exposure to cigarette smoke is also a known risk factor, although by unknown mechanisms. Diethylstilbestrol use during pregnancy increased clear-cell adenocarcinoma in daughters exposed in utero.

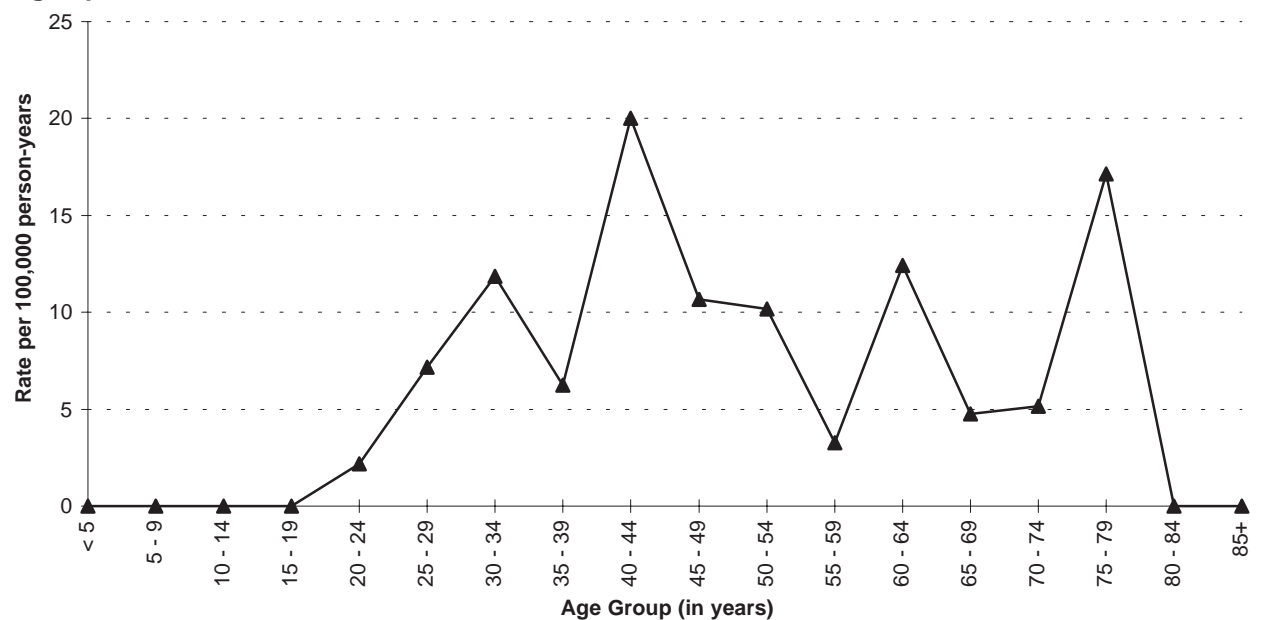
## Special Notes

Mean age-adjusted incidence rate across health districts:	6.0
95% confidence interval on the mean age-adjusted incidence rate:	4.1 - 7.8
Median age-adjusted incidence rate of health districts:	6.0
Range of age-adjusted incidence rate for health districts:	2.2 - 8.8
SEER rate (1999, Whites):	8.8

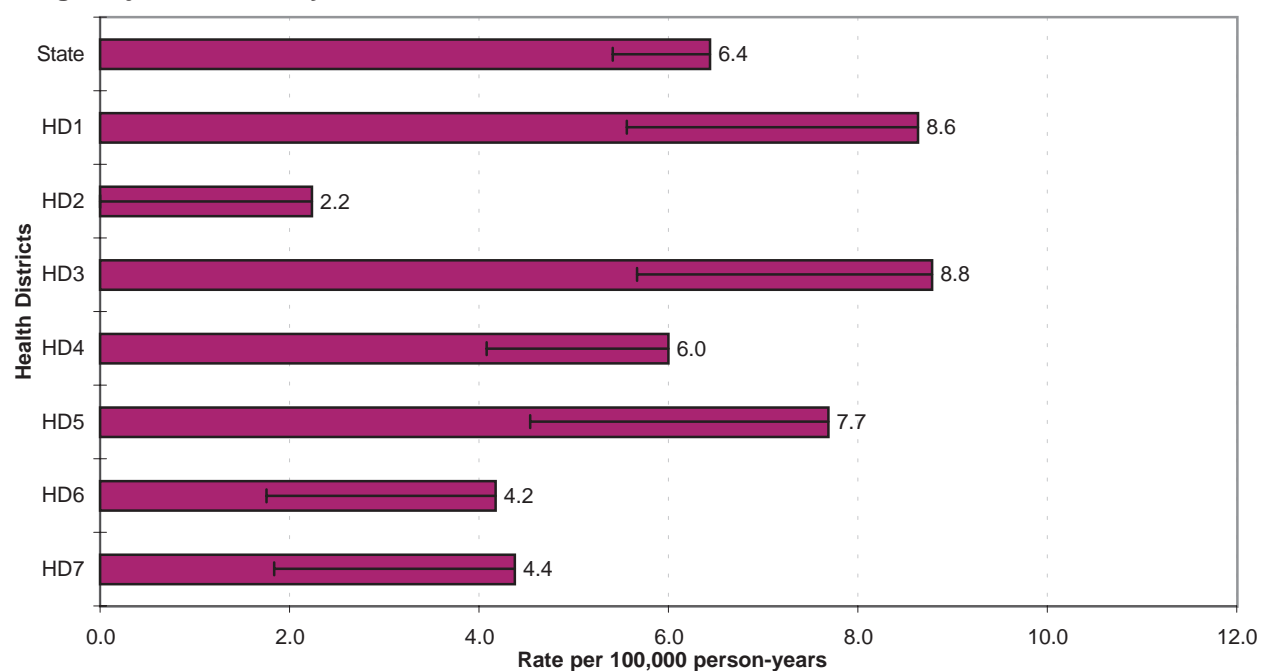
No cases of invasive cervical cancer were diagnosed in females less than 15 years of age. Increased screening with routine Pap tests, particularly among older and low-income women, has increased diagnostic rates and helped to reduce the incidence of invasive disease. Today, the vast majority of cases 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



### Cervical Cancer Incidence Age-adjusted Rates by Health District



# COLON (excluding rectum)

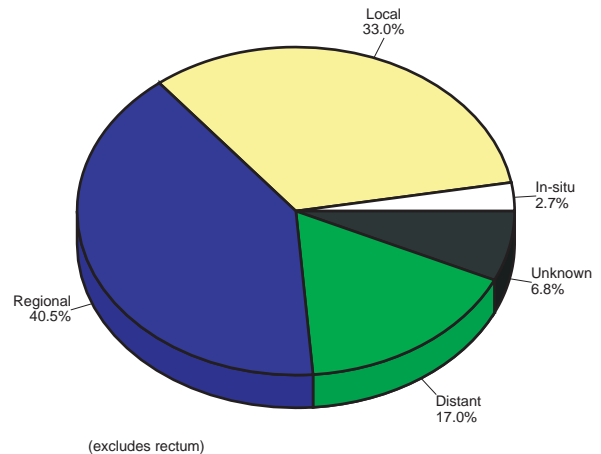
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	33.5	34.2	32.6
# of new invasive cases	401	183	218
# of new in-situ cases	11	4	7
# of deaths	152	81	71

## Total Cases By County

Ada	83	Cassia	4	Lewis	3
Adams	-	Clark	1	Lincoln	-
Bannock	22	Clearwater	4	Madison	1
Bear Lake	1	Custer	6	Minidoka	11
Benewah	7	Elmore	7	Nez Perce	26
Bingham	2	Franklin	4	Oneida	2
Blaine	3	Fremont	2	Owyhee	2
Boise	2	Gem	9	Payette	6
Bonner	17	Gooding	3	Power	1
Bonneville	25	Idaho	7	Shoshone	7
Boundary	1	Jefferson	2	Teton	-
Butte	1	Jerome	11	Twin Falls	32
Camas	-	Kootenai	35	Valley	2
Canyon	44	Latah	5	Washington	8
Caribou	1	Lemhi	-		

Stage at Diagnosis - Colon



## Risk and Associated Factors

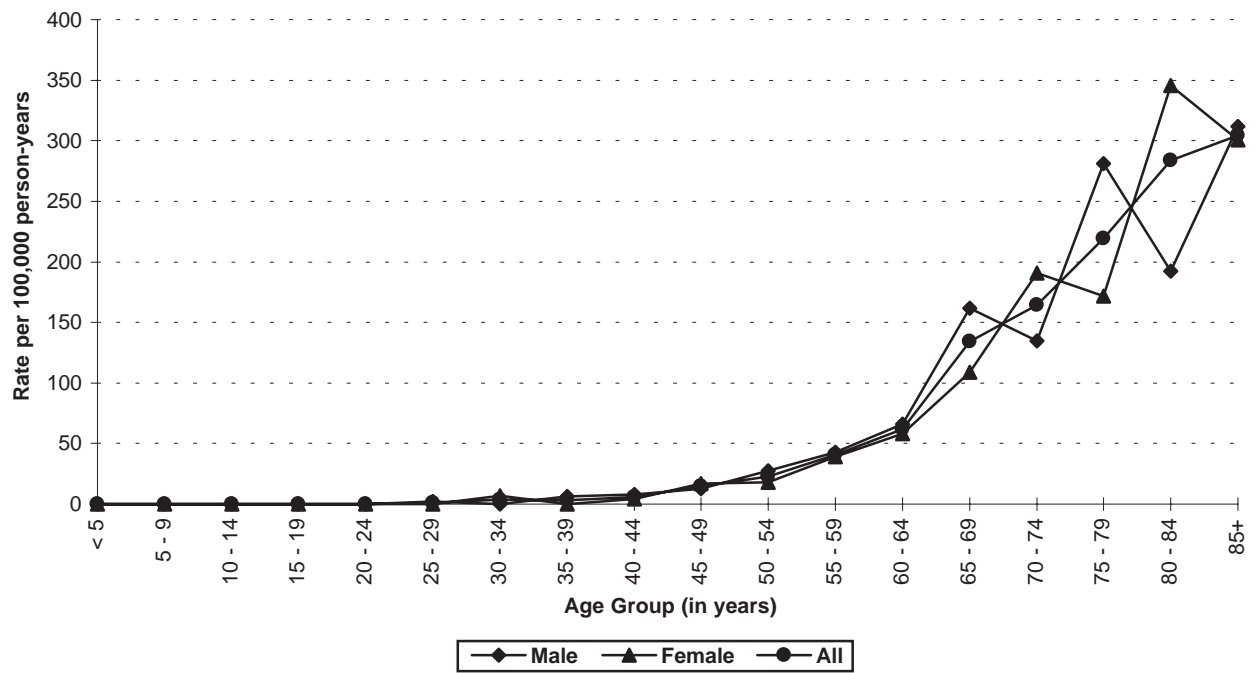
<b>Age</b>	Rates increase with age; the vast majority of cases occur after age 50.
<b>Gender</b>	Incidence rates are slightly higher in males.
<b>Genetics</b>	Specific genetic alterations have been recognized in several hereditary conditions with high risk of colon cancer, such as familial polyposis. These conditions account for about six percent of colon cancer cases.
<b>Diet</b>	Strong evidence that diets high in fat and low in fiber contribute to increased risk of colon cancer has been shown.
<b>Other</b>	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.

## Special Notes

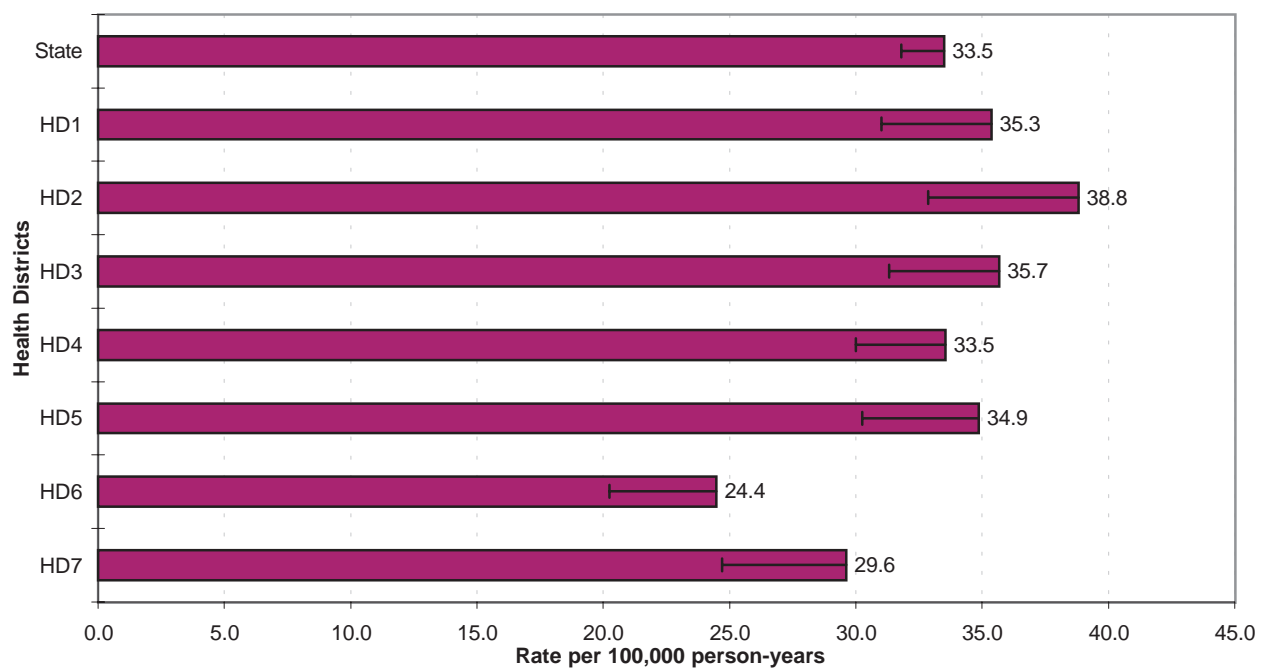
Mean age-adjusted incidence rate across health districts:	33.2
95% confidence interval on the mean age-adjusted incidence rate:	29.7 - 36.7
Median age-adjusted incidence rate of health districts:	34.9
Range of age-adjusted incidence rate for health districts:	24.4 - 38.8
SEER rate (1999, Whites):	37.1

No cases of colon 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 80-84 for females. Health District 6 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho ( $p < 0.05$ ).

### State Colon Cancer Incidence Age-specific Rates



### Colon Cancer Incidence Age-adjusted Rates by Health District



# ENDOMETRIUM

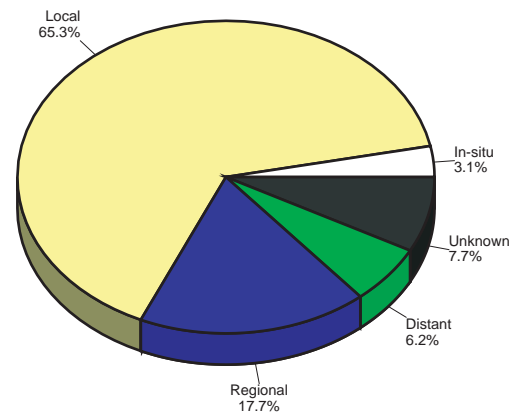
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	19.7
# of new invasive cases	-	-	126
# of new in-situ cases	-	-	4
# of deaths	-	-	16

## Total Cases By County

Ada	24	Cassia	-	Lewis	-
Adams	2	Clark	-	Lincoln	-
Bannock	2	Clearwater	1	Madison	2
Bear Lake	-	Custer	-	Minidoka	1
Benewah	2	Elmore	2	Nez Perce	2
Bingham	1	Franklin	1	Oneida	-
Blaine	2	Fremont	1	Owyhee	-
Boise	-	Gem	2	Payette	2
Bonner	5	Gooding	1	Power	-
Bonneville	13	Idaho	1	Shoshone	3
Boundary	2	Jefferson	-	Teton	1
Butte	-	Jerome	3	Twin Falls	7
Camas	-	Kootenai	15	Valley	1
Canyon	22	Latah	3	Washington	1
Caribou	1	Lemhi	-		

## Stage at Diagnosis - Endometrium



## Risk and Associated Factors

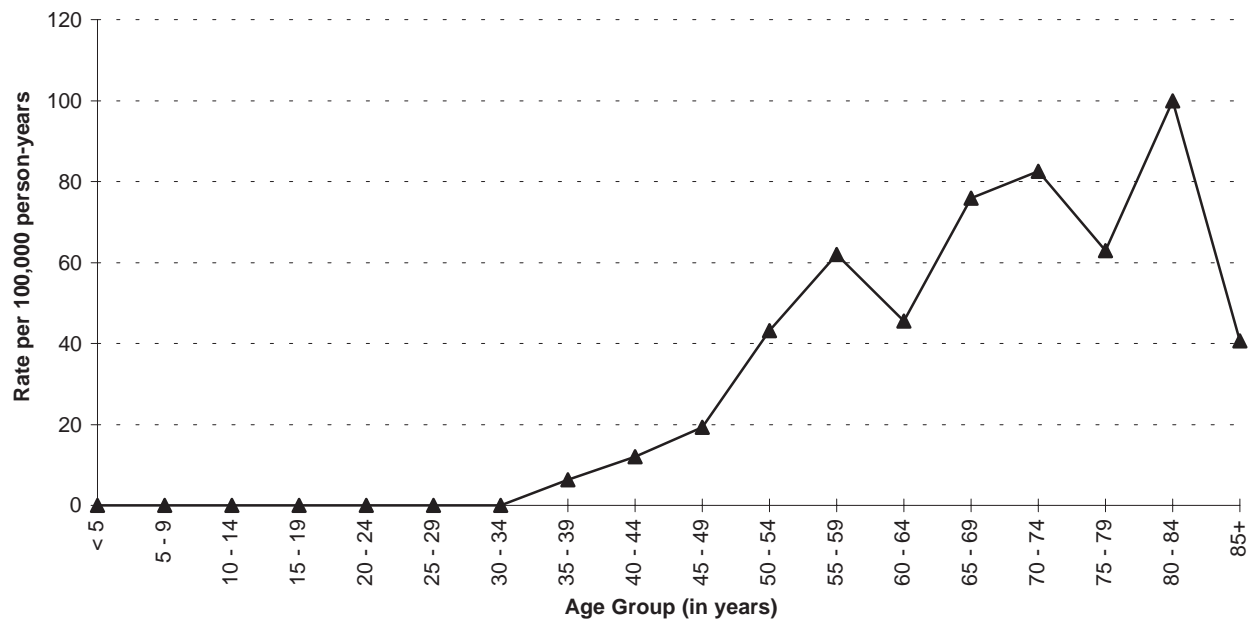
<b>Age</b>	Occurs predominantly after menopause, with median age 58 and peaking at the 50 to 60 age group.
<b>Race &amp; SES</b>	Caucasian women have higher rates than African American women.
<b>Genetics</b>	Familial tendency has been observed.
<b>Diet</b>	Dietary fat may play a role in increased risk. Obesity and hypertension are common associated conditions of endometrial cancer.
<b>Hormonal</b>	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.

## Special Notes

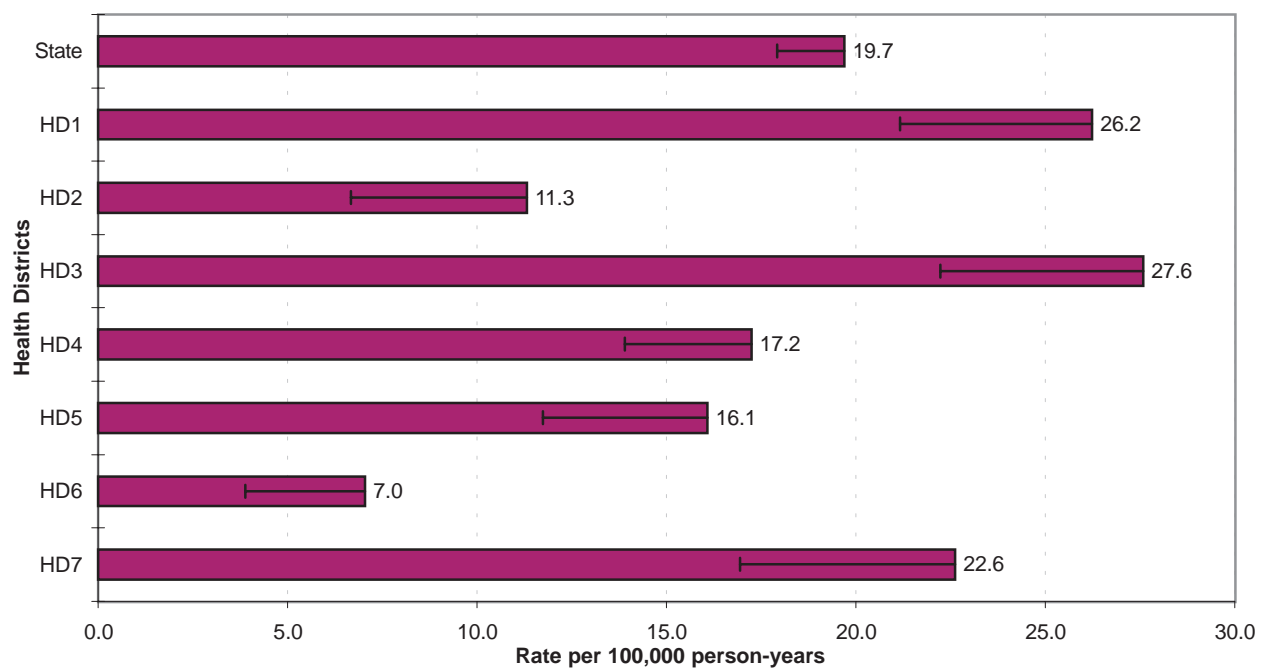
Mean age-adjusted incidence rate across health districts:	18.3
95% confidence interval on the mean age-adjusted incidence rate:	12.6 - 23.9
Median age-adjusted incidence rate of health districts:	17.2
Range of age-adjusted incidence rate for health districts:	7.0 - 27.6
SEER rate (1999, Whites):	25.2

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 80-84. Health District 3 ( $p < 0.05$ ) had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 6 ( $p < 0.01$ ) had statistically significantly fewer cases than expected.

### State Endometrial Cancer Incidence Age-specific Rates



### Endometrial Cancer Incidence Age-adjusted Rates by Health District



# ESOPHAGUS

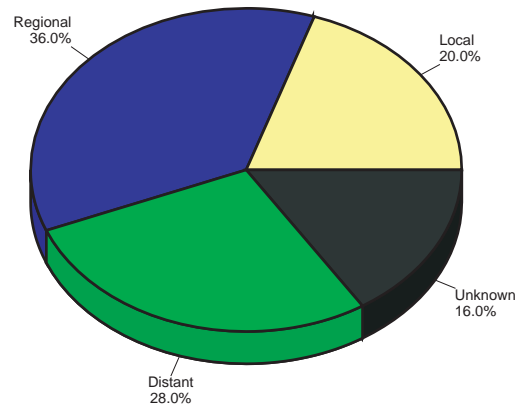
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.1	6.4	2.2
# of new invasive cases	50	36	14
# of new in-situ cases	0	0	0
# of deaths	52	40	12

## Total Cases By County

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

## Stage at Diagnosis - Esophagus



## Risk and Associated Factors

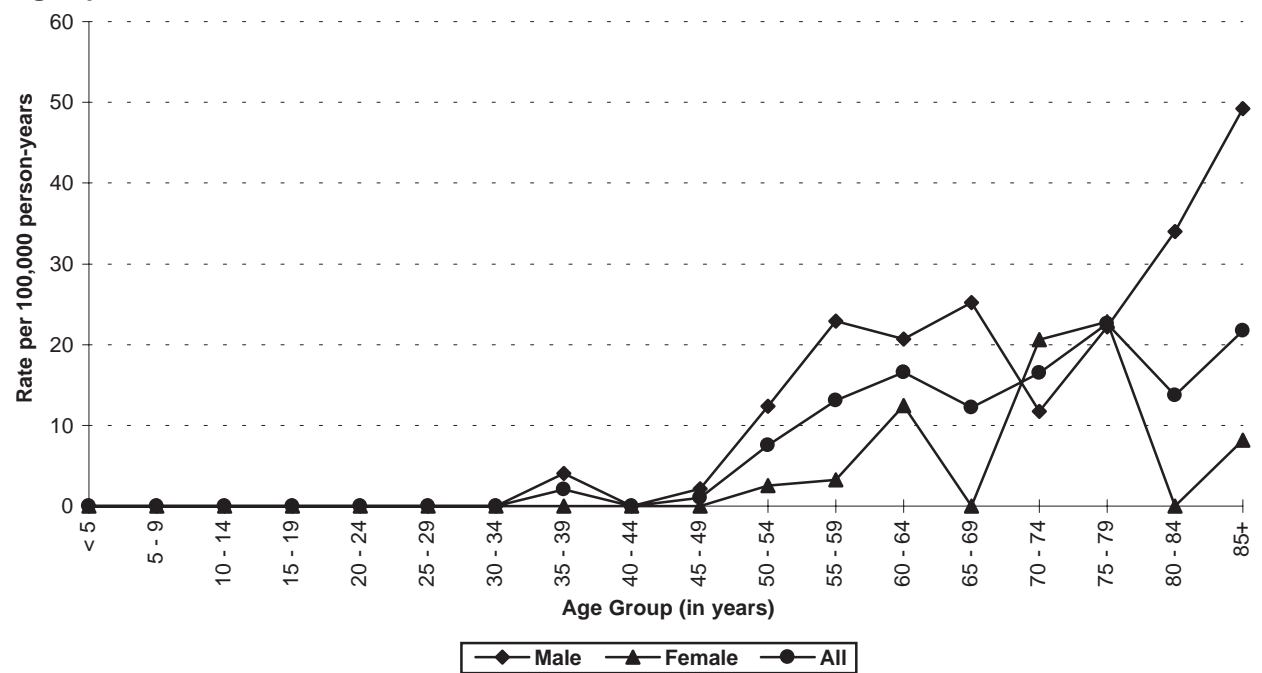
<b>Age</b>	Incidence of esophageal cancer is highest after age 55.
<b>Gender</b>	It is predominantly a disease of the male, with male-to-female ratios of about 3:1 or more.
<b>Race &amp; SES</b>	United States data show that African Americans are affected more than Caucasians.
<b>Occupation</b>	Chimney sweeps exposed to soot are at higher risk.
<b>Other</b>	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.

## Special Notes

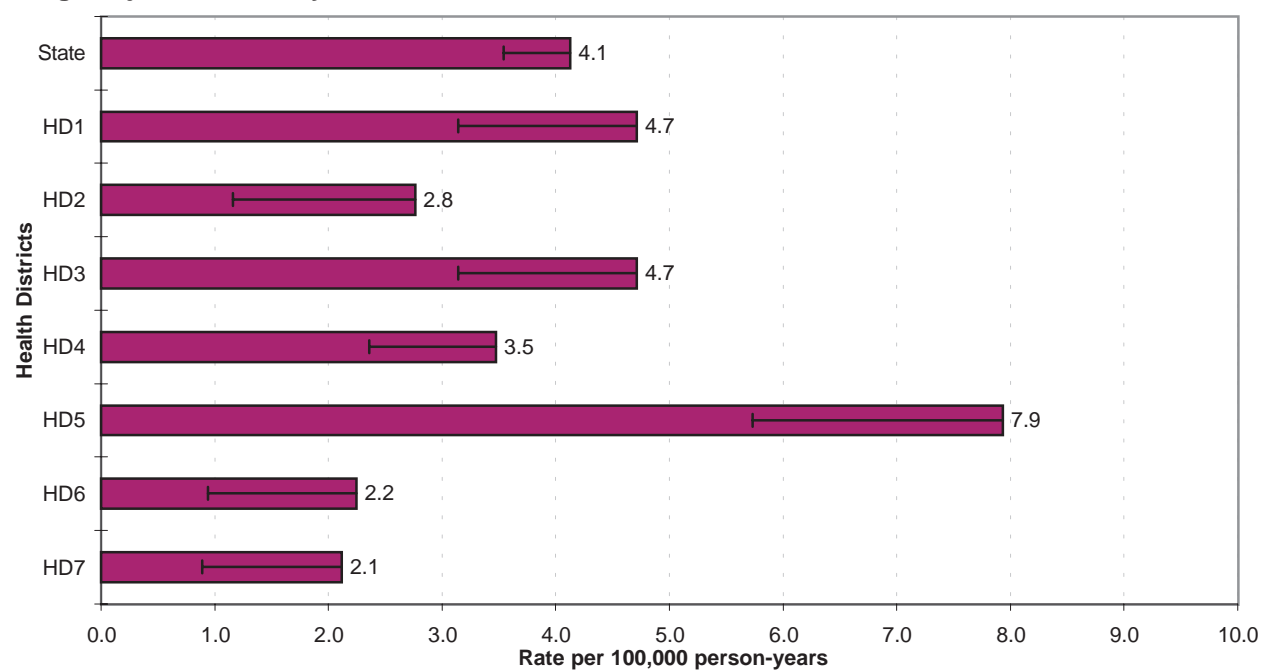
Mean age-adjusted incidence rate across health districts:	4.0
95% confidence interval on the mean age-adjusted incidence rate:	2.5 - 5.5
Median age-adjusted incidence rate of health districts:	3.5
Range of age-adjusted incidence rate for health districts:	2.1 - 7.9
SEER rate (1999, Whites):	4.6

No cases of esophageal cancer were diagnosed in person less than 35 years of age. The age-specific incidence rates peaked in the age group 85+ for males and 75-79 for females. Health District 5 had statistically significantly more cases than expected based upon rates for the remainder of Idaho ( $p < 0.01$ ).

### State Esophageal Cancer Incidence Age-specific Rates



### Esophageal Cancer Incidence Age-adjusted Rates by Health District



# HODGKIN'S LYMPHOMA

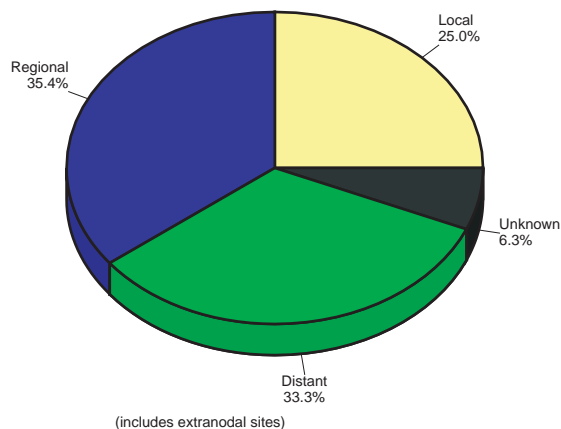
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	3.6	3.6	3.7
# of new invasive cases	48	24	24
# of new in-situ cases	0	0	0
# of deaths	6	5	1

## Total Cases By County

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

## Stage at Diagnosis - Hodgkins Lymphoma



## Risk and Associated Factors

<b>Age</b>	High rates are seen in young adults and in later age groups especially among males.
<b>Gender</b>	Males have higher rates than females.
<b>Race &amp; SES</b>	There is a lower incidence among African Americans. Hodgkin's lymphoma is more common in higher income groups.
<b>Genetics</b>	Genetic factors are thought to play an important role in the etiology of Hodgkin's lymphoma, but these are yet to be adequately defined.
<b>Other</b>	Certain viral infections are thought to also increase risk but no clear association has been established. With current treatment, Hodgkin's disease, which was once highly fatal, is among the most curable of all cancers.

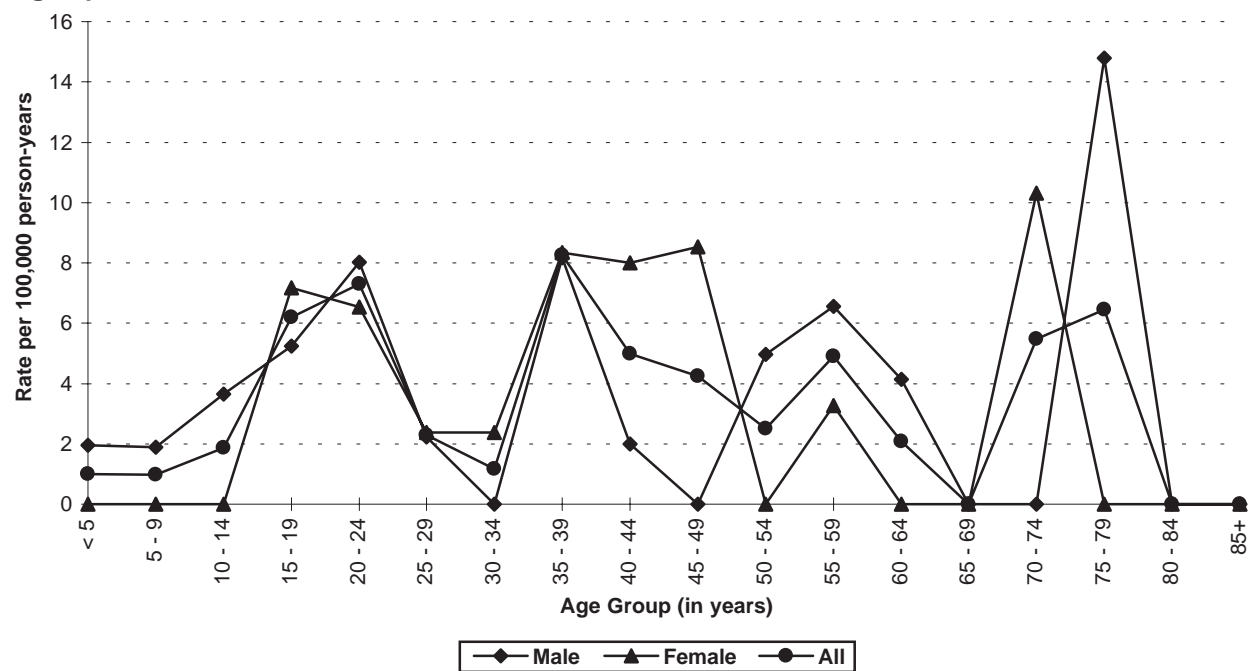
## Special Notes

Mean age-adjusted incidence rate across health districts:	3.5
95% confidence interval on the mean age-adjusted incidence rate:	2.4 - 4.6
Median age-adjusted incidence rate of health districts:	3.2
Range of age-adjusted incidence rate for health districts:	1.9 - 6.6
SEER rate (1999, Whites):	3.0

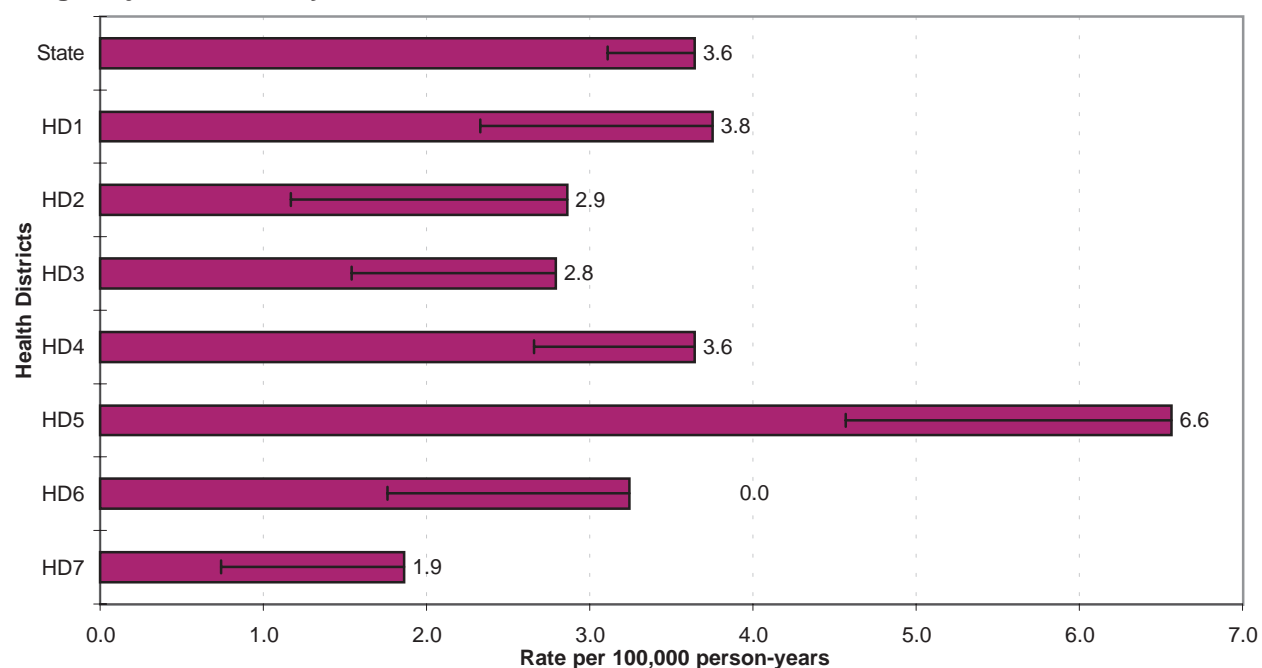
The age-related incidence of Hodgkin's lymphoma is typically bimodal, usually with a peak in the late 20s to early 30s, and another peak in the ninth decade of life. This trend is difficult to discern in Idaho's population due to the relatively small number of cases observed annually, which increases the variability in age-specific rates. Health District 5 had statistically significantly more cases than expected based upon rates for the remainder of Idaho ( $p < 0.01$ ).



### State Hodgkin's Lymphoma Incidence Age-specific Rates



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



# KIDNEY

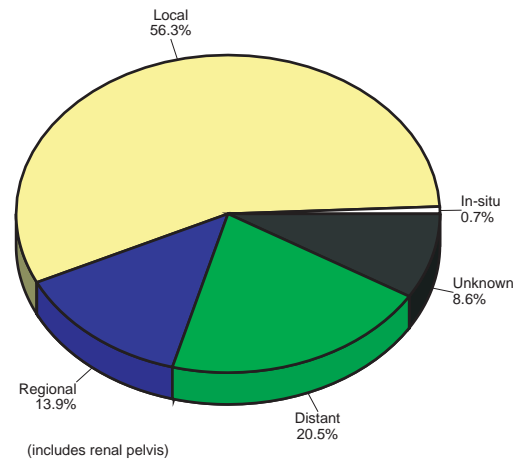
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	12.3	16.3	8.5
# of new invasive cases	150	94	56
# of new in-situ cases	1	1	0
# of deaths	58	35	23

## Total Cases By County

Ada	38	Cassia	2	Lewis	-
Adams	1	Clark	-	Lincoln	1
Bannock	4	Clearwater	1	Madison	1
Bear Lake	-	Custer	-	Minidoka	-
Benewah	4	Elmore	2	Nez Perce	5
Bingham	1	Franklin	-	Oneida	1
Blaine	3	Fremont	2	Owyhee	2
Boise	1	Gem	1	Payette	2
Bonner	8	Gooding	2	Power	-
Bonneville	12	Idaho	1	Shoshone	3
Boundary	-	Jefferson	2	Teton	-
Butte	-	Jerome	1	Twin Falls	8
Camas	1	Kootenai	22	Valley	3
Canyon	12	Latah	-	Washington	1
Caribou	1	Lemhi	1		

## Stage at Diagnosis - Kidney



## Risk and Associated Factors

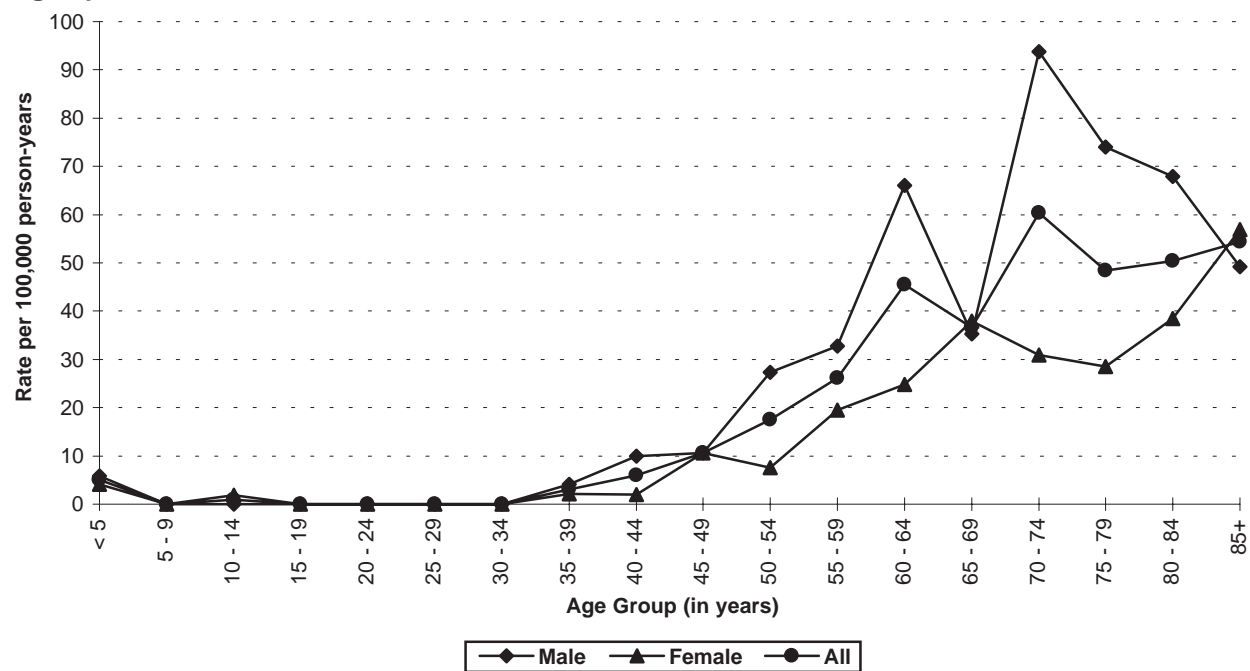
<b>Age</b>	Both adults and children are at risk for kidney cancer. Renal cell carcinoma accounts for 80% of all adult kidney cancers. Wilm's tumor (nephroblastoma) affects predominantly children under age 5 and accounts for the majority of childhood kidney cancers.
<b>Gender</b>	Renal cell carcinoma affects males twice as often as females.
<b>Genetics</b>	Wilm's tumor often occurs with congenital defects.
<b>Occupation</b>	Certain occupations, such as laundry and leather workers, have an increased risk due to chemical exposure.
<b>Other</b>	Cigarette smoking is strongly associated with adult kidney cancer. Smokers are at twice the risk of developing kidney cancer as non-smokers. Analgesic mixtures containing phenacetin increase the risk of kidney cancer.

## Special Notes

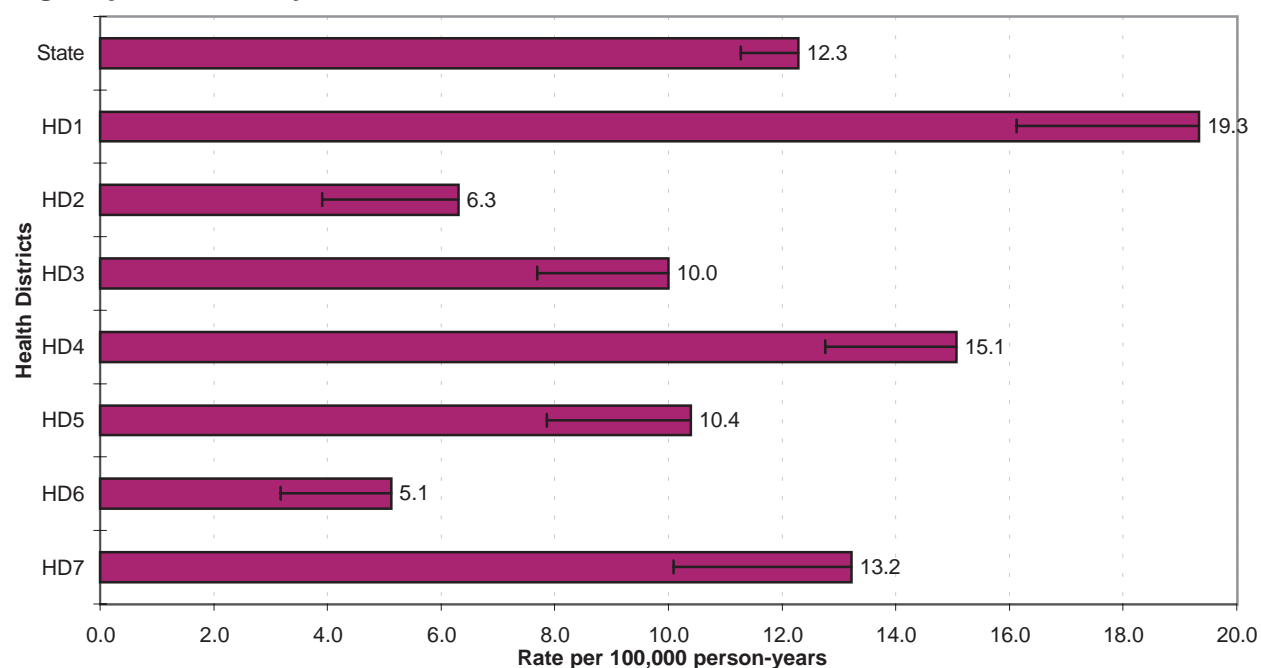
Mean age-adjusted incidence rate across health districts:	11.3
95% confidence interval on the mean age-adjusted incidence rate:	7.7 - 15.0
Median age-adjusted incidence rate of health districts:	10.4
Range of age-adjusted incidence rate for health districts:	5.1 - 19.3
SEER rate (1999, Whites):	11.1

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 85+. Health Districts 1 ( $p < 0.01$ ) and 3 ( $p < 0.05$ ) had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 6 ( $p < 0.01$ ) had statistically significantly fewer cases than expected.

### State Kidney & Renal Pelvis Cancer Incidence Age-specific Rates



### Kidney & Renal Pelvis Cancer Incidence Age-adjusted Rates by Health District



# LARYNX

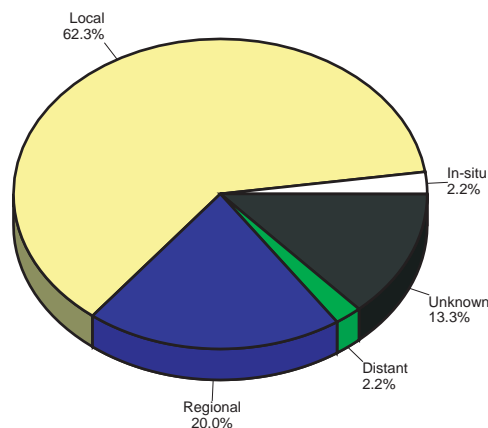
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	3.7	6.0	1.8
# of new invasive cases	44	33	11
# of new in-situ cases	1	0	1
# of deaths	18	15	3

## Total Cases By County

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

Stage at Diagnosis - Larynx



## Risk and Associated Factors

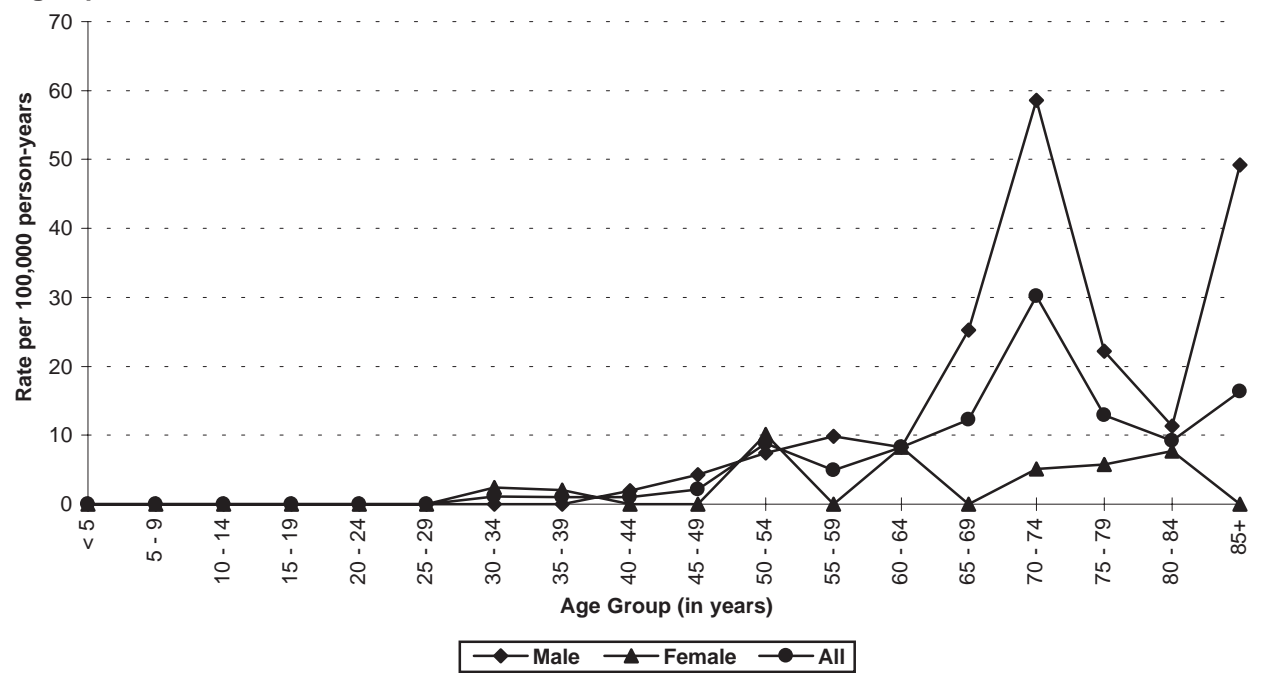
<b>Age</b>	Rates increase with age, with the vast majority of cases occurring after age 55.
<b>Gender</b>	Much more common in males than females.
<b>Race &amp; SES</b>	Generally in the United States, African Americans have higher incidence rates than Caucasians. Lower income groups experience higher rates.
<b>Occupation</b>	Laryngeal cancer has been associated with exposures such as asbestos and wood dust.
<b>Diet</b>	Diets low in fresh fruits and vegetables may increase the risk.
<b>Other</b>	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

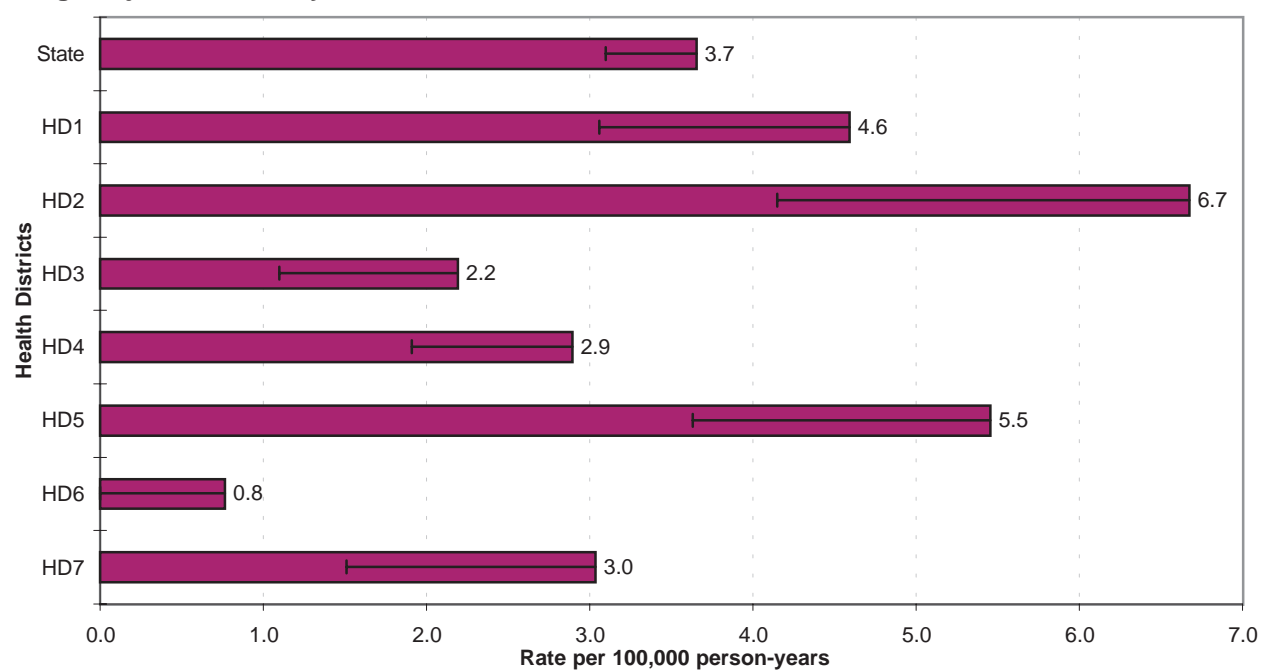
Mean age-adjusted incidence rate across health districts:	3.7
95% confidence interval on the mean age-adjusted incidence rate:	2.2 - 5.2
Median age-adjusted incidence rate of health districts:	3.0
Range of age-adjusted incidence rate for health districts:	0.8 - 6.7
SEER rate (1999, Whites):	3.9

There were no cases of laryngeal cancer among persons aged less than 30 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 70-74. The highest incidence rate among females was in the age group 50-54. 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



### Laryngeal Cancer Incidence Age-adjusted Rates by Health District



# LEUKEMIA

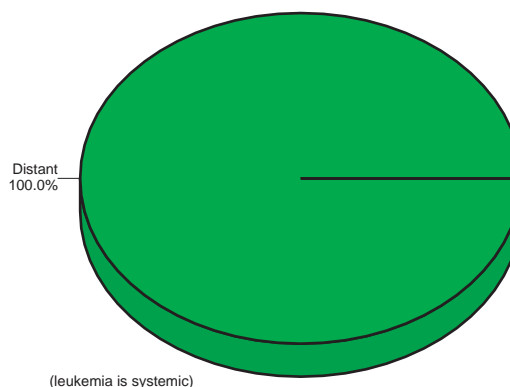
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	12.3	15.0	10.2
# of new invasive cases	152	85	67
# of new in-situ cases	0	0	0
# of deaths	92	47	45

## Total Cases By County

Ada	30	Cassia	5	Lewis	3
Adams	-	Clark	-	Lincoln	-
Bannock	2	Clearwater	-	Madison	2
Bear Lake	2	Custer	-	Minidoka	1
Benewah	1	Elmore	3	Nez Perce	3
Bingham	1	Franklin	-	Oneida	1
Blaine	-	Fremont	2	Owyhee	1
Boise	-	Gem	1	Payette	3
Bonner	7	Gooding	1	Power	-
Bonneville	13	Idaho	2	Shoshone	3
Boundary	2	Jefferson	3	Teton	1
Butte	-	Jerome	1	Twin Falls	9
Camas	-	Kootenai	20	Valley	2
Canyon	19	Latah	2	Washington	-
Caribou	3	Lemhi	2		

## Stage at Diagnosis - Leukemia



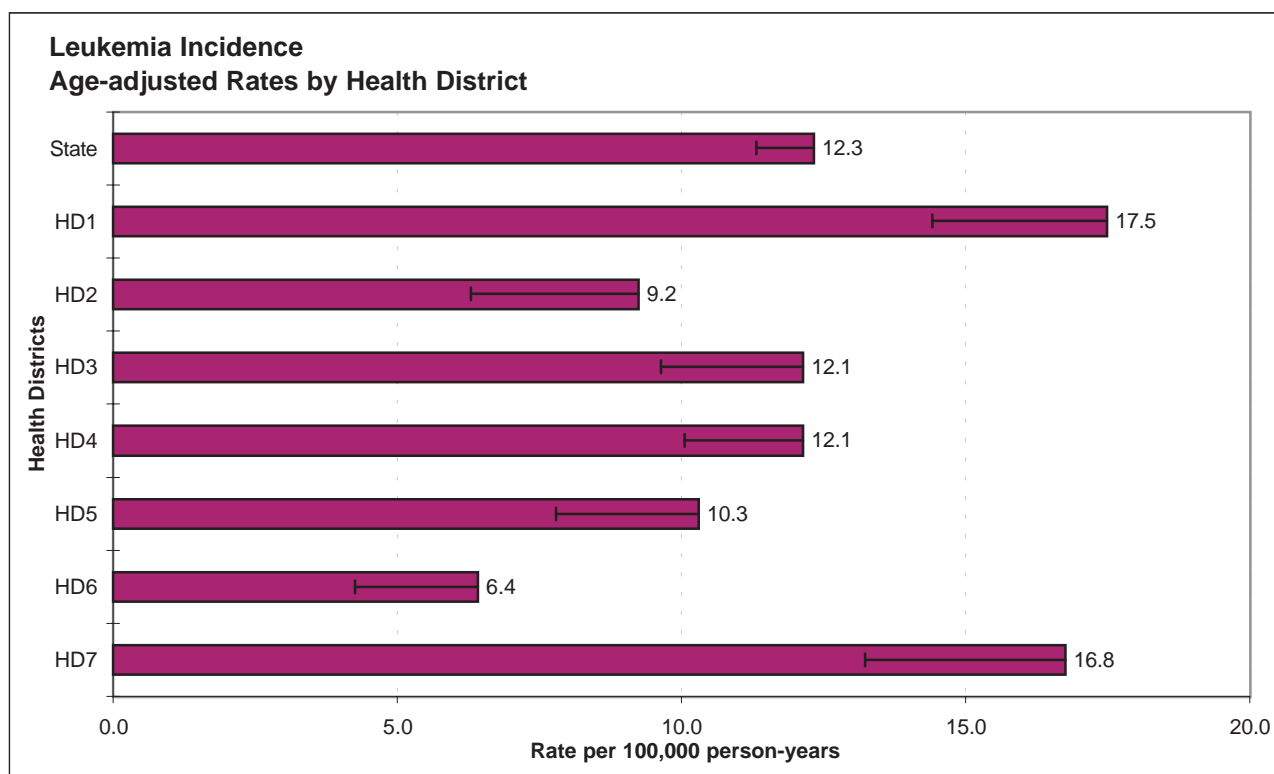
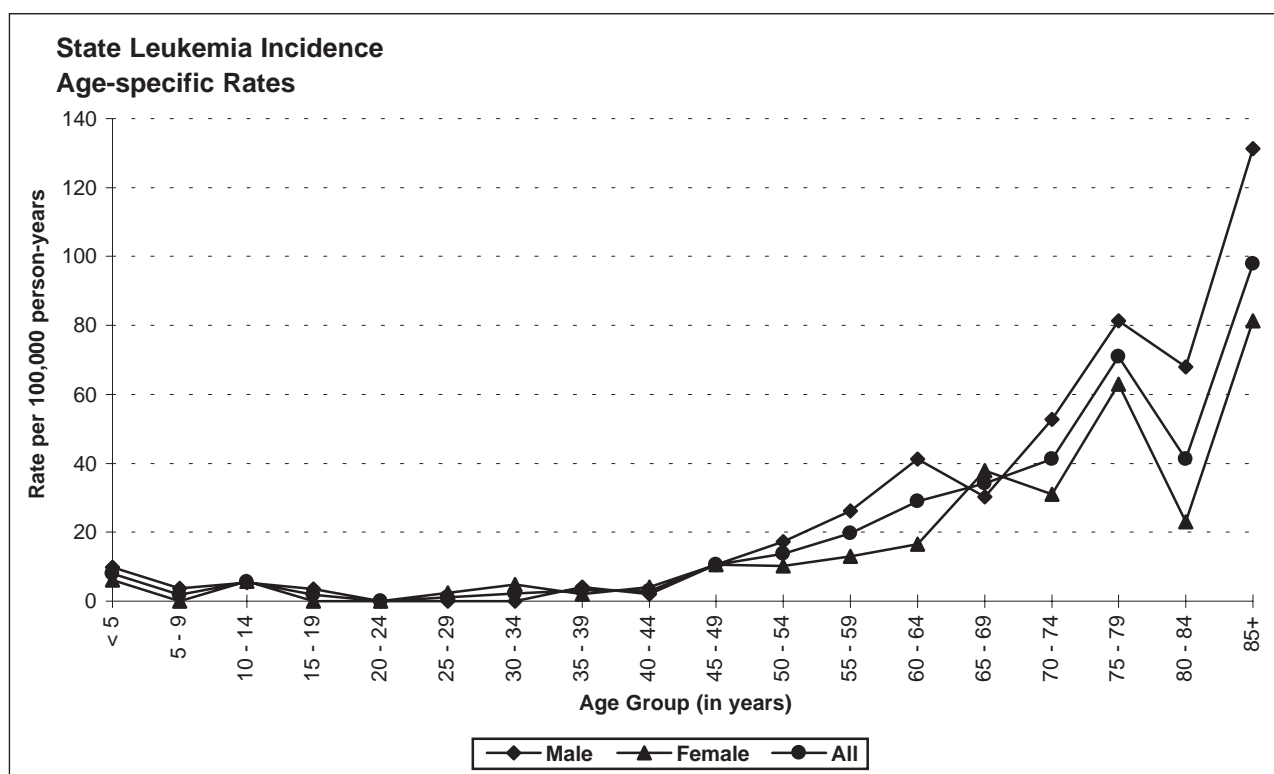
## Risk and Associated Factors

<b>Age</b>	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.
<b>Gender</b>	Males have a higher incidence than females for chronic myelogenous leukemia (CML), acute lymphoblastic leukemia (ALL), and chronic lymphocytic leukemia (CLL).
<b>Race</b>	ALL is less common among African Americans. CLL is rare in Asians.
<b>Genetics</b>	Certain congenital defects such as trisomy 21, Fanconi's anemia, Bloom syndrome, and ataxia-telangiectasia, increase risk in children for various types of leukemia.
<b>Occupation</b>	Benzene is a known cause of leukemia (predominantly acute myelogenous leukemia [AML]). Chimney sweeps exposed to soot are at higher risk.
<b>Other</b>	Ionizing radiation exposure increases the risk. 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.

## Special Notes

Mean age-adjusted incidence rate across health districts:	12.1
95% confidence interval on the mean age-adjusted incidence rate:	9.1 - 15.0
Median age-adjusted incidence rate of health districts:	12.1
Range of age-adjusted incidence rate for health districts:	6.4 - 17.5
SEER rate (1999, Whites):	11.3

The age-specific incidence distribution of leukemia for Idaho is quite similar to the typical pattern described by the SEER program of the National Cancer Institute. The rates are higher for males than females for all types of leukemia with the exception of acute myelogenous leukemia (AML), which has no predilection for age or sex. Generally, the incidence of leukemia is higher in older age groups. Health District 1 ( $p < 0.01$ ) had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 6 ( $p < 0.05$ ) had statistically significantly fewer cases than expected.



# LIVER

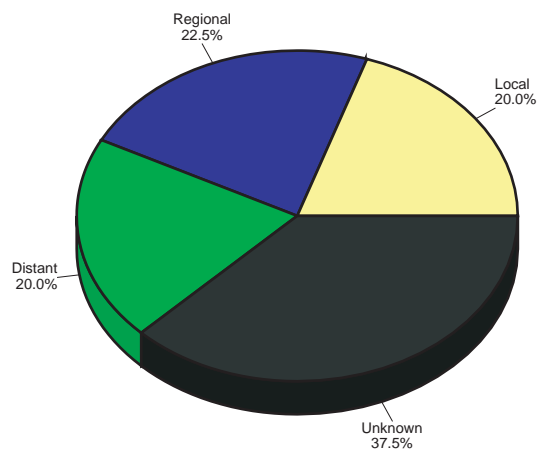
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	3.3	5.0	1.9
# of new invasive cases	40	28	12
# of new in-situ cases	0	0	0
# of deaths	38	24	14

## Total Cases By County

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

Stage at Diagnosis - Liver



## Risk and Associated Factors

<b>Age</b>	The incidence rate of liver cancer increases with age.
<b>Gender</b>	Rates are usually higher in males than in females.
<b>Race</b>	Incidence is higher in Asians and African Americans than for the rest of the population.
<b>Diet</b>	Aflatoxins, which are present in certain foods such as peanut butter, are classified as a known human carcinogen, causing liver cancer.
<b>Occupation</b>	Thorium dioxide 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.
<b>Other</b>	Cigarette smoking increases the risk. 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.

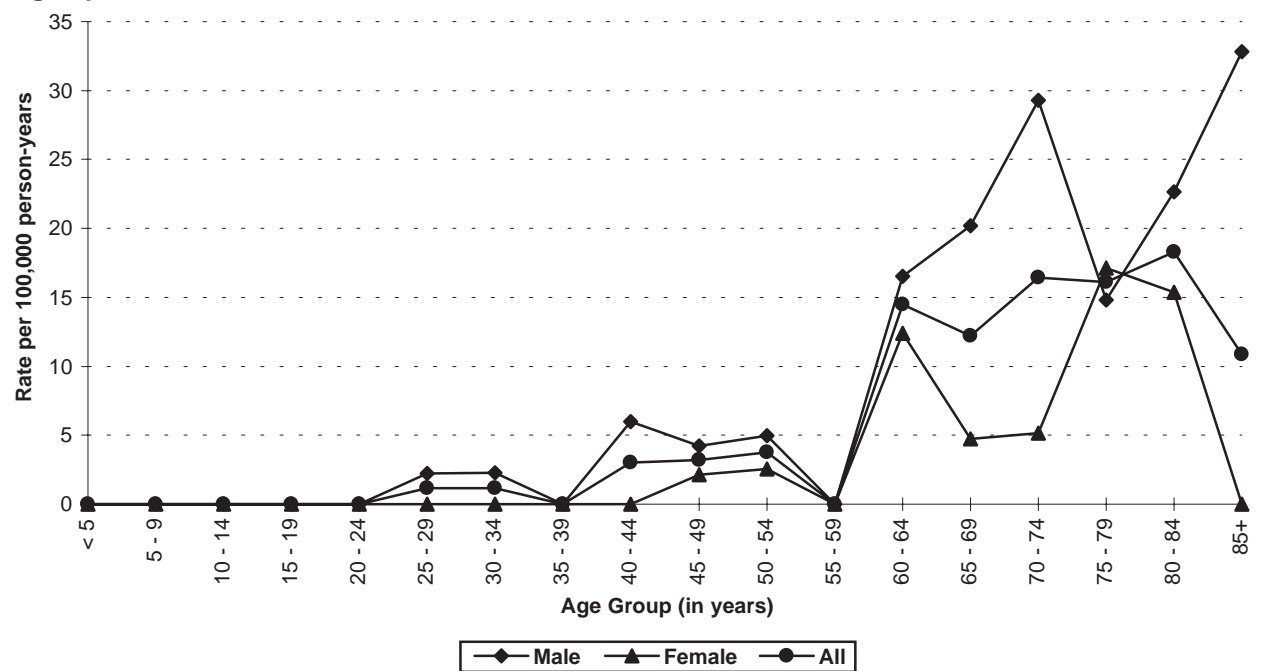
## Special Notes

Mean age-adjusted incidence rate across health districts:	3.1
95% confidence interval on the mean age-adjusted incidence rate:	2.2 - 4.0
Median age-adjusted incidence rate of health districts:	3.1
Range of age-adjusted incidence rate for health districts:	1.8 - 4.9
SEER rate (1999, Whites):	4.8

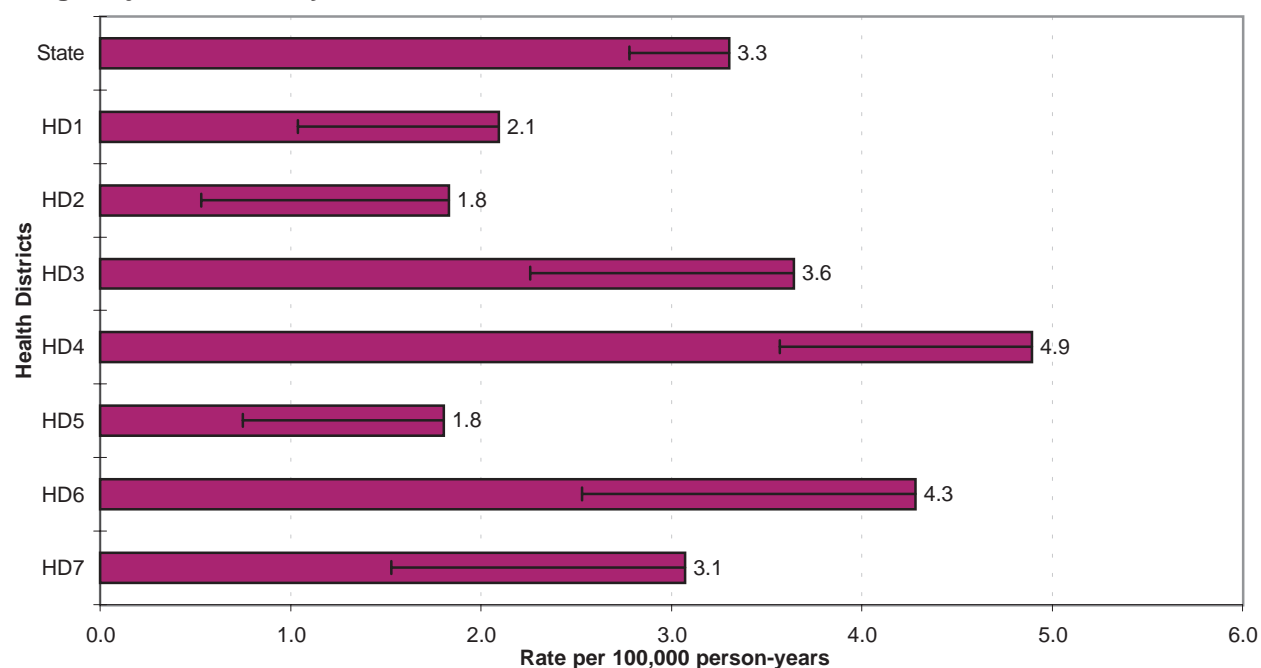
There were few cases of liver cancer among persons less than 40 years of age. Age-specific incidence rates increased with age, peaking in the age group 85+ for males and 75-79 for females. Health District 4 had statistically significantly more cases of liver cancer than expected based upon rates for the remainder of Idaho ( $p < 0.05$ ).



### State Liver and Bile Duct Incidence Age-specific Rates



### Liver and Bile Duct Cancer Incidence Age-adjusted Rates by Health District



# LUNG

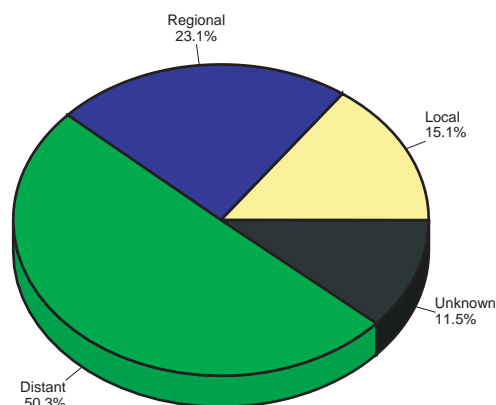
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	51.3	63.8	41.7
# of new invasive cases	615	346	269
# of new in-situ cases	0	0	0
# of deaths	538	311	227

## Total Cases By County

Ada	140	Cassia	6	Lewis	3
Adams	3	Clark	-	Lincoln	2
Bannock	18	Clearwater	6	Madison	2
Bear Lake	-	Custer	2	Minidoka	7
Benewah	6	Elmore	9	Nez Perce	25
Bingham	10	Franklin	3	Oneida	-
Blaine	10	Fremont	5	Owyhee	5
Boise	1	Gem	12	Payette	12
Bonner	28	Gooding	3	Power	-
Bonneville	32	Idaho	8	Shoshone	18
Boundary	8	Jefferson	1	Teton	2
Butte	1	Jerome	5	Twin Falls	46
Camas	-	Kootenai	80	Valley	4
Canyon	69	Latah	9	Washington	8
Caribou	-	Lemhi	5		

## Stage at Diagnosis - Lung and Bronchus



## Risk and Associated Factors

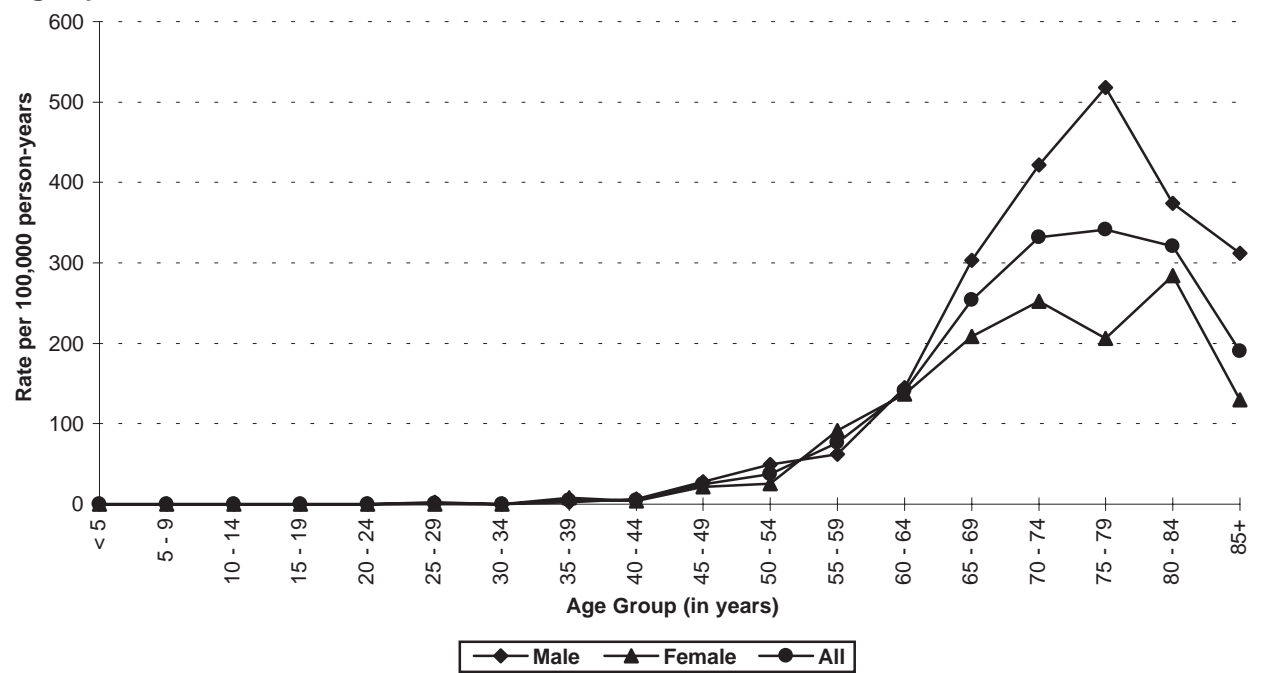
<b>Age</b>	Lung cancer incidence rates increase with age.
<b>Gender</b>	The incidence is currently higher in males than in females, but the gap is narrowing due to increased smoking rates in women.
<b>Race &amp; SES</b>	Generally, incidence is higher among African Americans than other racial groups and is also higher in lower income groups.
<b>Diet</b>	Diets low in consumption of fresh fruits and vegetables contribute to increased risk.
<b>Occupation</b>	Occupational or environmental exposures to asbestos, cadmium, chromium, coal tars, crystalline silica dust, polycyclic aromatic hydrocarbons, radon, soot, and other substances increase the risk.
<b>Other</b>	Cigarette smoking, including exposure to second-hand smoke, is the most important risk factor, accounting for over 85% of lung cancer deaths.

## Special Notes

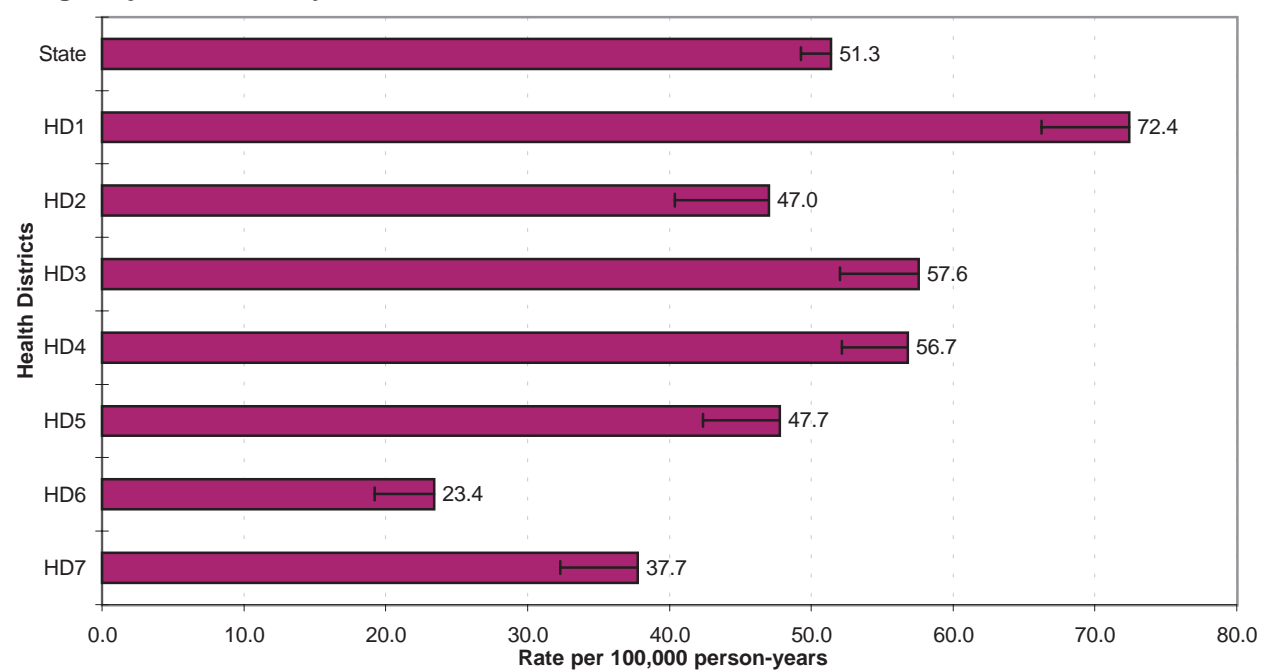
Mean age-adjusted incidence rate across health districts:	48.9
95% confidence interval on the mean age-adjusted incidence rate:	37.3 - 60.5
Median age-adjusted incidence rate of health districts:	47.7
Range of age-adjusted incidence rate for health districts:	23.4 - 72.4
SEER rate (1999, Whites):	60.1

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 80-84 for females. Health District 1 ( $p < 0.01$ ) had statistically significantly more cases than expected based upon rates for the remainder of Idaho. Health Districts 6 ( $p < 0.01$ ) and 7 ( $p < 0.05$ ) 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

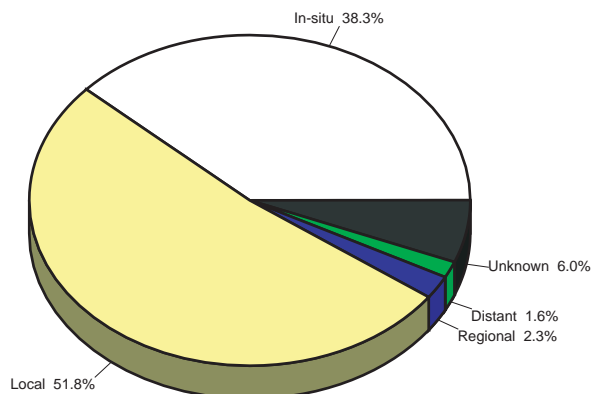
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	19.4	22.7	16.6
# of new invasive cases	238	132	106
# of new in-situ cases	148	73	75
# of deaths	39	30	9

## Total Cases By County

Ada	77	Cassia	5	Lewis	3
Adams	1	Clark	-	Lincoln	3
Bannock	12	Clearwater	2	Madison	2
Bear Lake	3	Custer	3	Minidoka	4
Benewah	5	Elmore	4	Nez Perce	14
Bingham	9	Franklin	4	Oneida	-
Blaine	11	Fremont	2	Owyhee	-
Boise	1	Gem	6	Payette	2
Bonner	14	Gooding	3	Power	2
Bonneville	17	Idaho	5	Shoshone	6
Boundary	6	Jefferson	7	Teton	1
Butte	-	Jerome	3	Twin Falls	11
Camas	-	Kootenai	48	Valley	5
Canyon	34	Latah	5	Washington	4
Caribou	3	Lemhi	2		

## Stage at Diagnosis - Melanoma of Skin



## Risk and Associated Factors

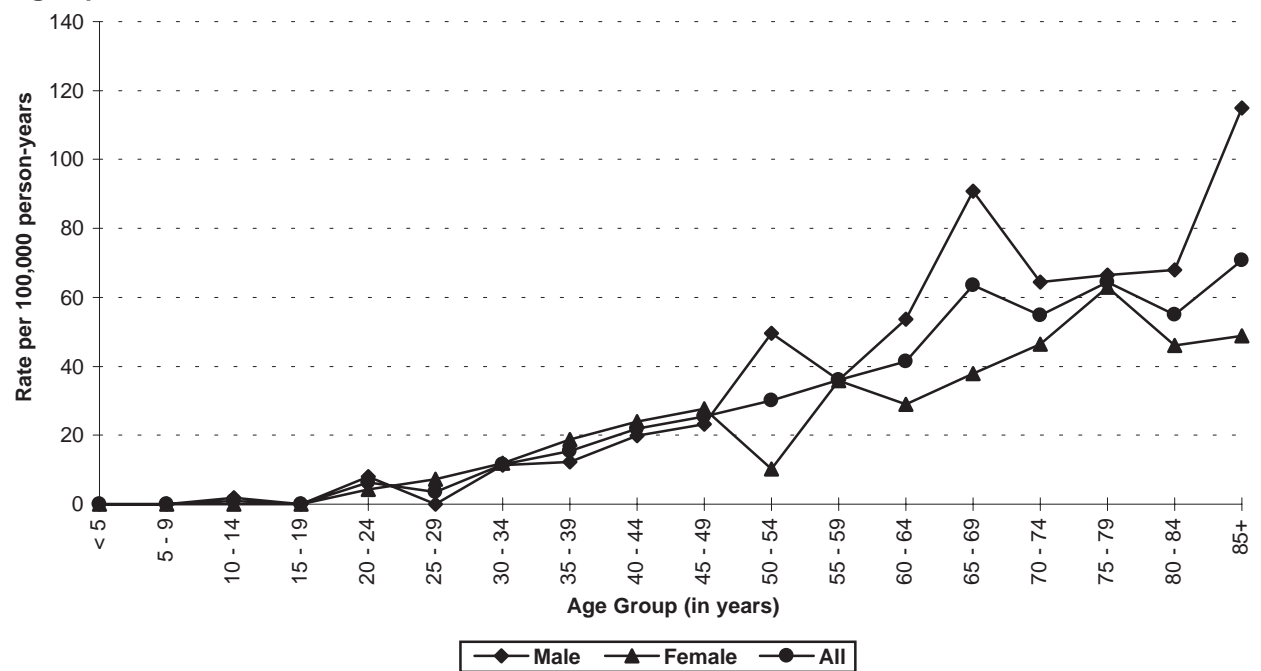
<b>Age</b>	Melanoma is extremely uncommon before puberty. Rates increase with age.
<b>Gender</b>	It occurs more frequently in males than females.
<b>Race &amp; SES</b>	The incidence rate is highest in Caucasians and is uncommon in African Americans. It has an increased incidence in higher income groups.
<b>Occupation</b>	Persons working in occupations associated with increased sun exposure have a higher incidence.
<b>Other</b>	Ultra-violet light exposure, especially blistering sunburns during childhood, is a major risk factor. Melanoma has been on the increase nationally for several decades. People with light skin and individuals with numerous or atypical moles are at increased risk.

## Special Notes

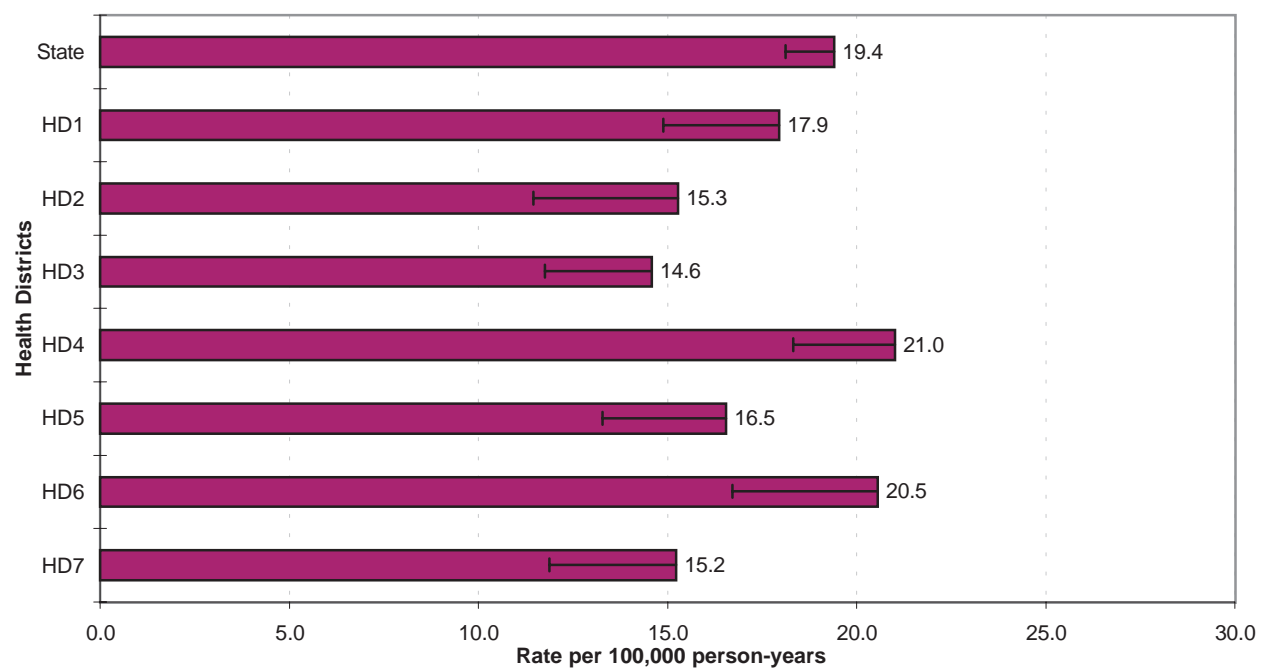
Mean age-adjusted incidence rate across health districts:	17.3
95% confidence interval on the mean age-adjusted incidence rate:	15.4 - 19.2
Median age-adjusted incidence rate of health districts:	16.5
Range of age-adjusted incidence rate for health districts:	14.6 - 21.0
SEER rate (1999, Whites):	19.2

There were few cases of melanoma of the skin among persons less than 30 years of age. The age-specific incidence rates were generally higher among males after age 50. No health districts had statistically significantly more or fewer cases than expected based upon rates for the remainder of Idaho.

### State Melanoma of the Skin Incidence Age-specific Rates



### Melanoma of the Skin Incidence Age-adjusted Rates by Health District



# MYELOMA

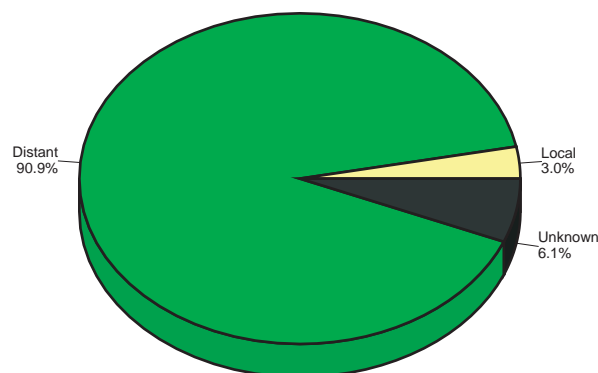
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	5.5	6.6	4.5
# of new invasive cases	66	36	30
# of new in-situ cases	0	0	0
# of deaths	40	22	18

## Total Cases By County

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

Stage at Diagnosis - Multiple Myeloma



## Risk and Associated Factors

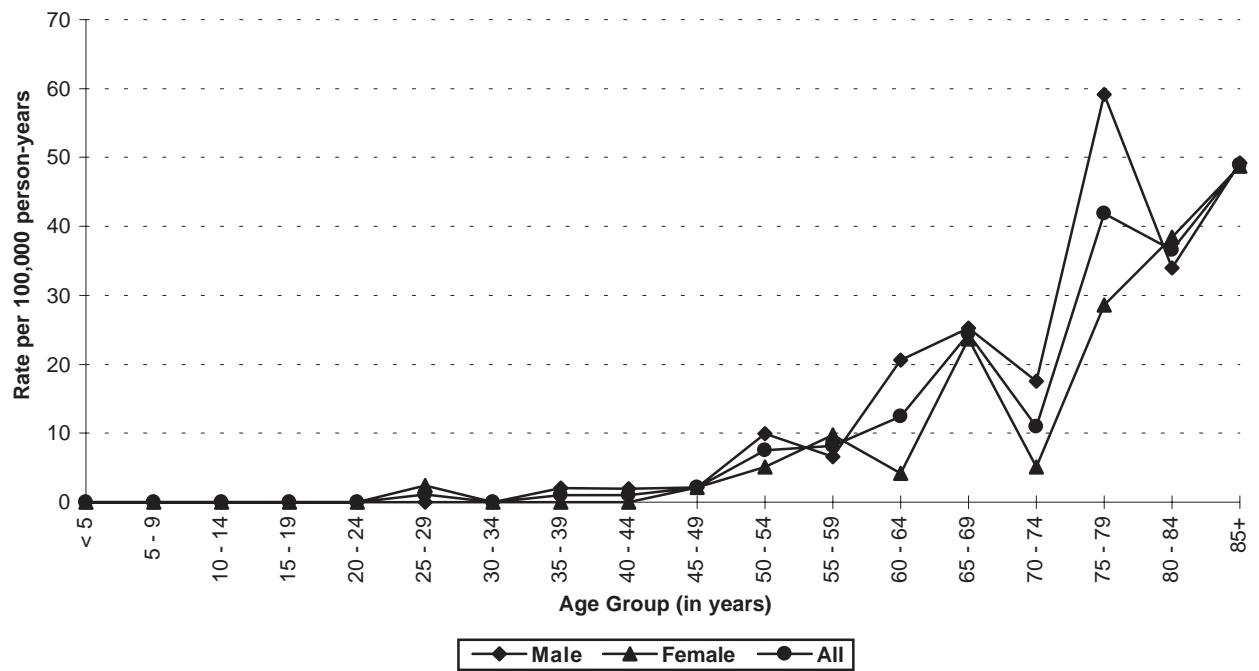
<b>Age</b>	Multiple myeloma is an age-dependent cancer. It increases with age and rarely occurs before age 40.
<b>Gender</b>	Rates for males and females are usually similar.
<b>Race</b>	African Americans have a higher incidence rate, sometimes twice the rate for Caucasians.
<b>Genetics</b>	Genetic factors play an important role in its development but how so is not completely understood. Familial factors and chronic antigenic stimulation have also been implicated.
<b>Other</b>	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 radiation exposures of nuclear workers. Specific environmental exposures such as herbicides and radiation may also play an important role in the incidence of multiple myeloma.

## Special Notes

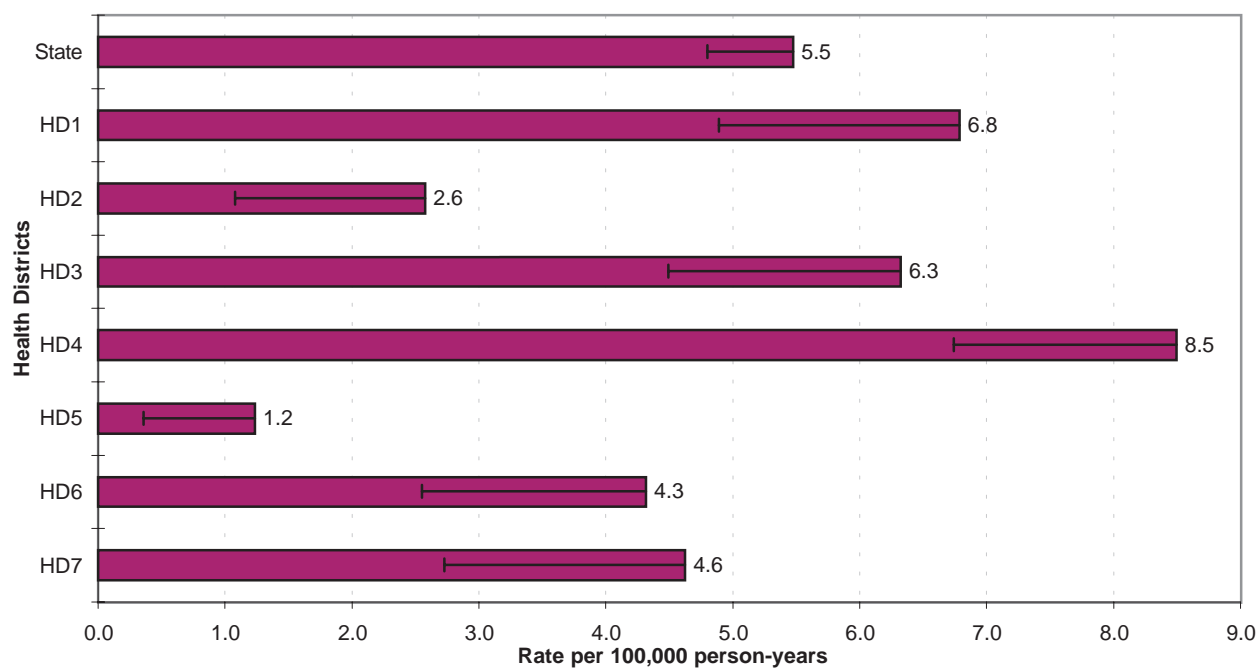
Mean age-adjusted incidence rate across health districts:	4.9
95% confidence interval on the mean age-adjusted incidence rate:	3.0 - 6.8
Median age-adjusted incidence rate of health districts:	4.6
Range of age-adjusted incidence rate for health districts:	1.2 - 8.5
SEER rate (1999, Whites):	4.6

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. Health District 4 ( $p < 0.01$ ) had statistically significantly more cases than expected based upon rates for the remainder of Idaho. Health District 5 ( $p < 0.01$ ) had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho.

### State Myeloma Incidence Age-specific Rates



### Myeloma Incidence Age-adjusted Rates by Health District

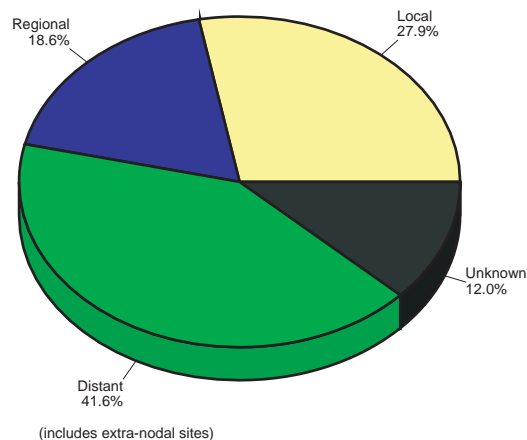


# NON-HODGKIN'S LYMPHOMA

## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	18.5	20.3	17.1
# of new invasive cases	226	115	111
# of new in-situ cases	0	0	0
# of deaths	98	49	49

## State at Diagnosis - Non-Hodgkins Lymphoma



## Total Cases By County

Ada	48	Cassia	5	Lewis	1
Adams	1	Clark	-	Lincoln	-
Bannock	8	Clearwater	2	Madison	1
Bear Lake	3	Custer	-	Minidoka	6
Benewah	-	Elmore	3	Nez Perce	10
Bingham	6	Franklin	2	Oneida	-
Blaine	4	Fremont	2	Owyhee	3
Boise	-	Gem	8	Payette	3
Bonner	10	Gooding	3	Power	-
Bonneville	22	Idaho	3	Shoshone	4
Boundary	1	Jefferson	6	Teton	1
Butte	-	Jerome	3	Twin Falls	9
Camas	1	Kootenai	17	Valley	-
Canyon	20	Latah	4	Washington	3
Caribou	1	Lemhi	1		

## Risk and Associated Factors

<b>Age</b>	Rates increase with age reaching the highest levels in the eight and ninth decades of life.
<b>Gender</b>	Males have higher rates than females.
<b>Race &amp; SES</b>	Generally in the United States incidence rates are slightly lower in African Americans. Rates are higher in upper income groups.
<b>Occupation</b>	Ethylene oxide exposure at plants producing sterilized medical supplies and spices is a risk factor.
<b>Other</b>	Non-Hodgkin's lymphoma (NHL) develops with increased frequency in individuals infected with certain viruses, particularly the human immunodeficiency virus (HIV), which causes acquired immunodeficiency syndrome (AIDS). Exposures to agricultural chemicals and high-dose radiation exposures have also been implicated. Treatment with some immunosuppressants increases the risk of NHL among organ transplant patients. Epstein-Barr virus may increase the risk of metastasis.

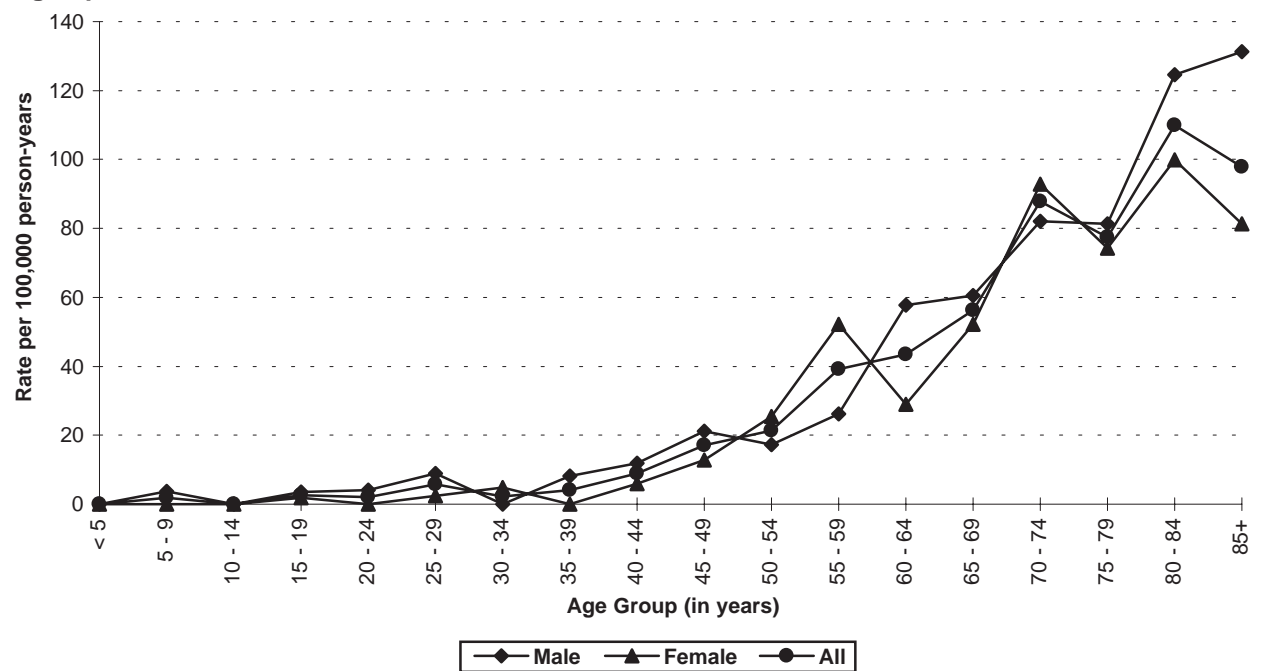
## Special Notes

Mean age-adjusted incidence rate across health districts:	18.7
95% confidence interval on the mean age-adjusted incidence rate:	16.4 - 21.0
Median age-adjusted incidence rate of health districts:	18.8
Range of age-adjusted incidence rate for health districts:	14.6 - 24.5
SEER rate (1999, Whites):	19.5

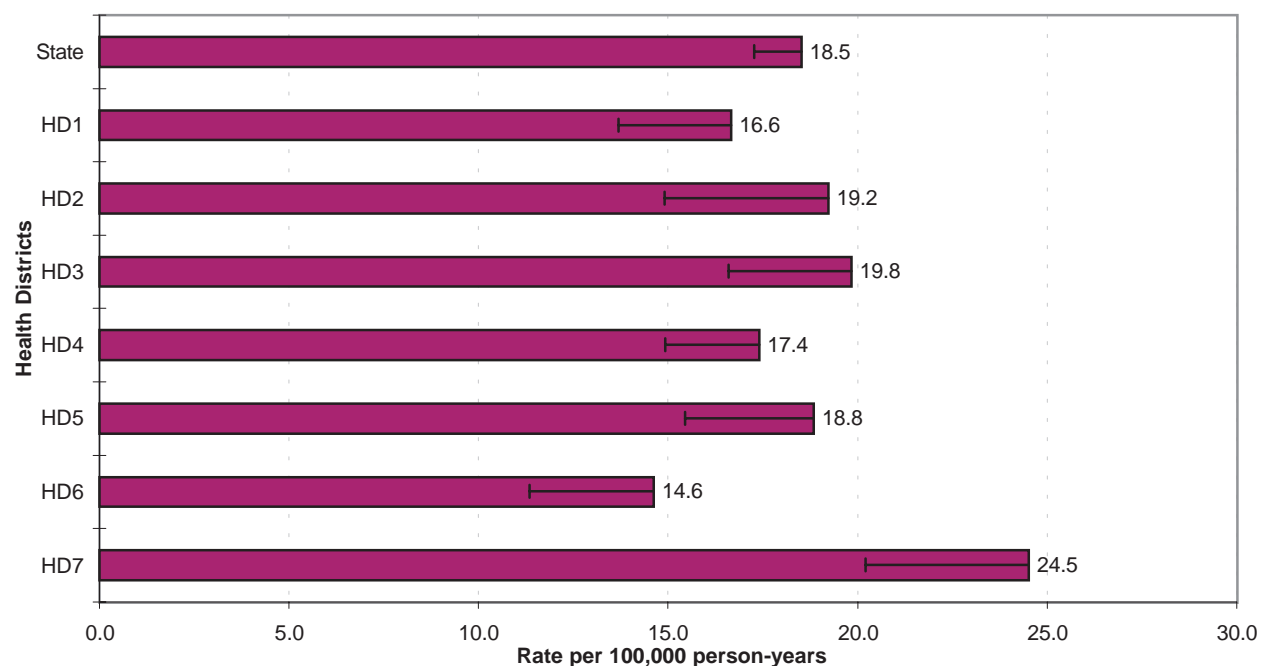
The age-specific incidence rates of non-Hodgkin's lymphoma increased with age, peaking in the age group 85+ for males and 80-84 for females. No health districts had statistically significantly more or fewer cases than expected based upon rates for the remainder of Idaho.



### State Non-Hodgkin's Lymphoma Incidence Age-specific Rates



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



# ORAL CAVITY AND PHARYNX

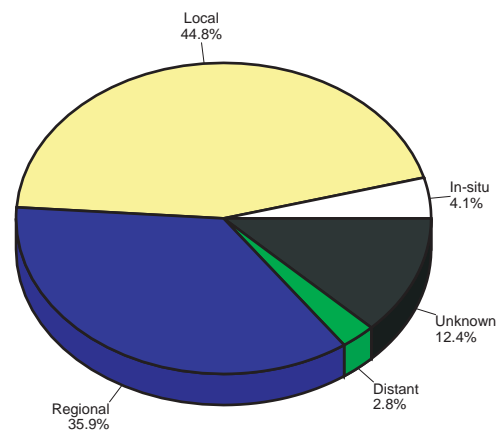
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	11.4	17.1	6.4
# of new invasive cases	139	98	41
# of new in-situ cases	6	6	0
# of deaths	39	25	14

## Total Cases By County

Ada	19	Cassia	2	Lewis	1
Adams	1	Clark	-	Lincoln	1
Bannock	8	Clearwater	1	Madison	1
Bear Lake	1	Custer	1	Minidoka	3
Benewah	3	Elmore	3	Nez Perce	4
Bingham	5	Franklin	2	Oneida	1
Blaine	4	Fremont	4	Owyhee	2
Boise	1	Gem	3	Payette	1
Bonner	5	Gooding	2	Power	1
Bonneville	6	Idaho	2	Shoshone	1
Boundary	1	Jefferson	1	Teton	1
Butte	-	Jerome	3	Twin Falls	16
Camas	-	Kootenai	12	Valley	1
Canyon	8	Latah	2	Washington	3
Caribou	4	Lemhi	1		

Stage at Diagnosis - Oral Cavity



## Risk and Associated Factors

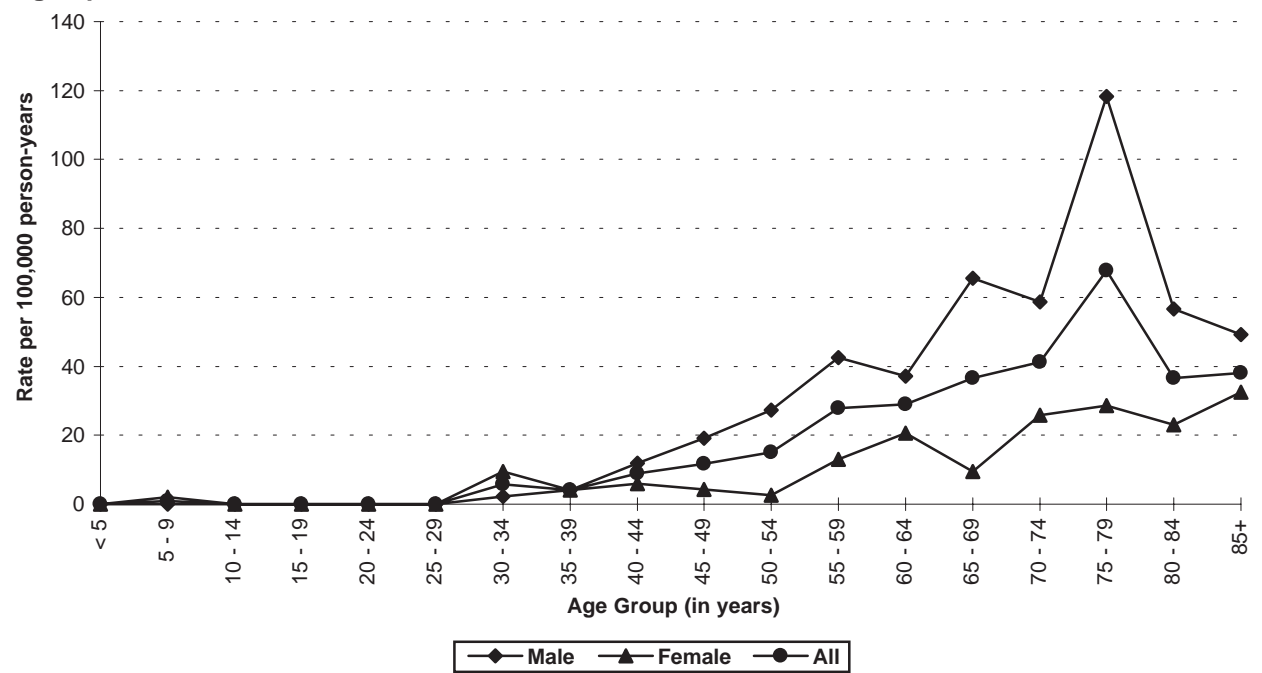
<b>Age</b>	Most cases occur in people over age 60.
<b>Gender</b>	Males have a higher incidence than females.
<b>Race &amp; SES</b>	Rates are higher for African Americans than for Caucasians. Rates are also higher among lower income groups.
<b>Diet</b>	Increased risk is associated with diets low in fresh fruit and vegetable consumption.
<b>Occupation</b>	Increased risk with textile and leather manufacturing industries.
<b>Other</b>	Smoking and spit tobacco are major risk factors for cancers of the oral cavity and pharynx. Over 90% of cases are associated with tobacco use. Alcohol use, especially excessive, is a major risk factor. Combined exposure to tobacco and alcohol results in substantially higher risk.

## Special Notes

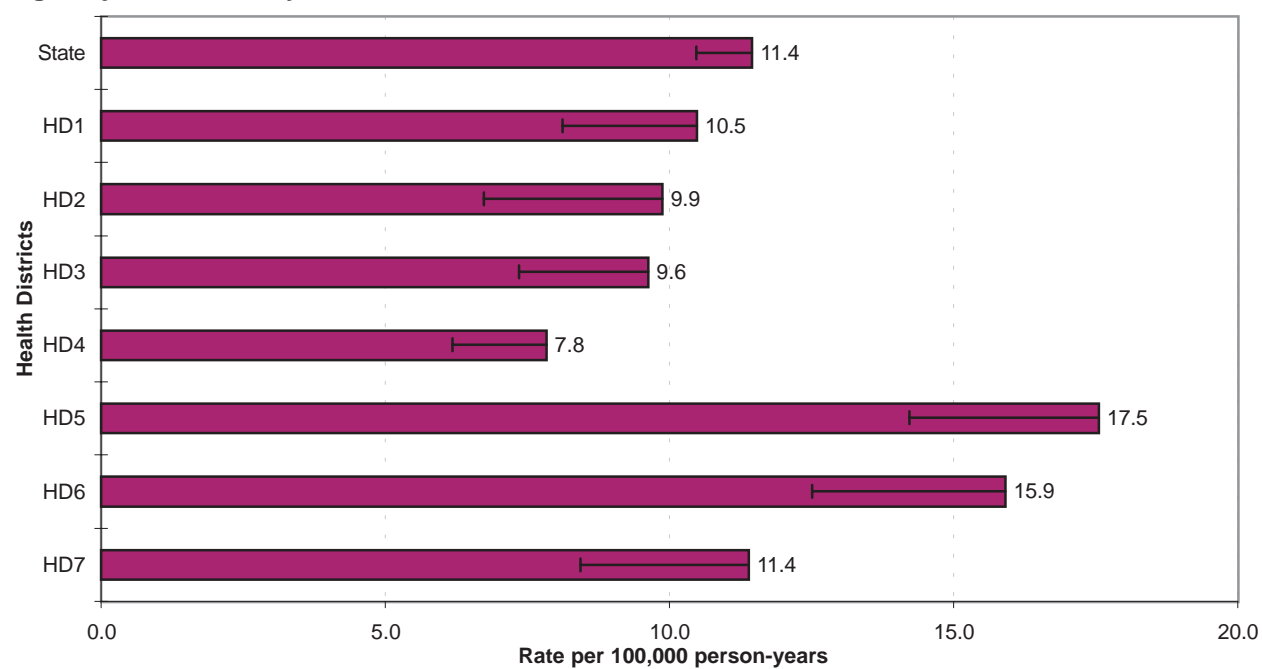
Mean age-adjusted incidence rate across health districts:	11.8
95% confidence interval on the mean age-adjusted incidence rate:	9.2 - 14.4
Median age-adjusted incidence rate of health districts:	10.5
Range of age-adjusted incidence rate for health districts:	7.8 - 17.5
SEER rate (1999, Whites):	9.9

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 75-79 for males and 85+ for females. Health District 5 had statistically significantly more cases than expected ( $p < 0.01$ ), and Health District 4 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho ( $p < 0.05$ ).

### State Oral Cavity & Pharyngeal Cancer Incidence Age-specific Rates



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



# OVARY

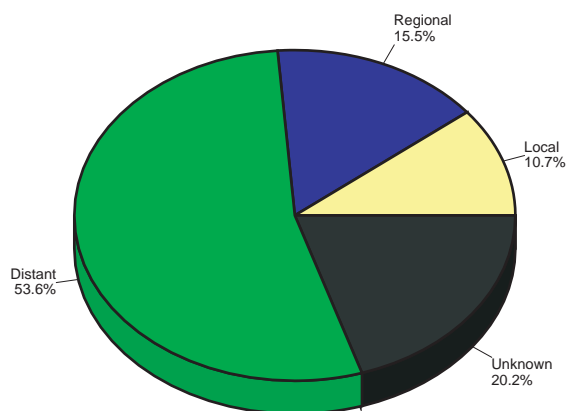
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	12.9
# of new invasive cases	-	-	84
# of new in-situ cases	-	-	0
# of deaths	-	-	74

## Total Cases By County

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

Stage at Diagnosis - Ovary



## Risk and Associated Factors

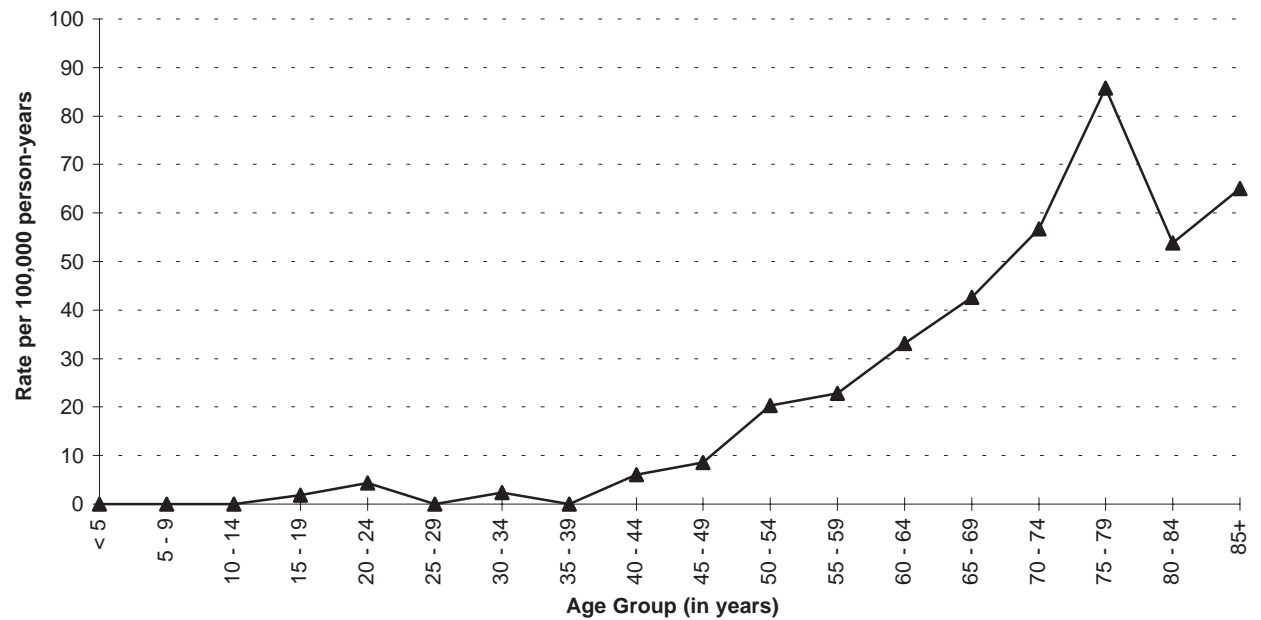
<b>Age</b>	The rate of ovarian cancer increases with age and it is primarily a disease of older women.
<b>Race &amp; SES</b>	Rates are slightly higher in Caucasian females than in African American females. The rate is higher among upper income groups.
<b>Genetics</b>	The most important risk factor for 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.
<b>Hormonal</b>	Risk of ovarian cancer is significantly reduced among women having at least one live-born child, a history of breast-feeding, or sustained oral contraceptive use. Highest risk is in post-menopausal women. It is also associated with a personal history of breast, endometrial, and colon cancers.
<b>Diet</b>	Dietary fat may increase the risk.

## Special Notes

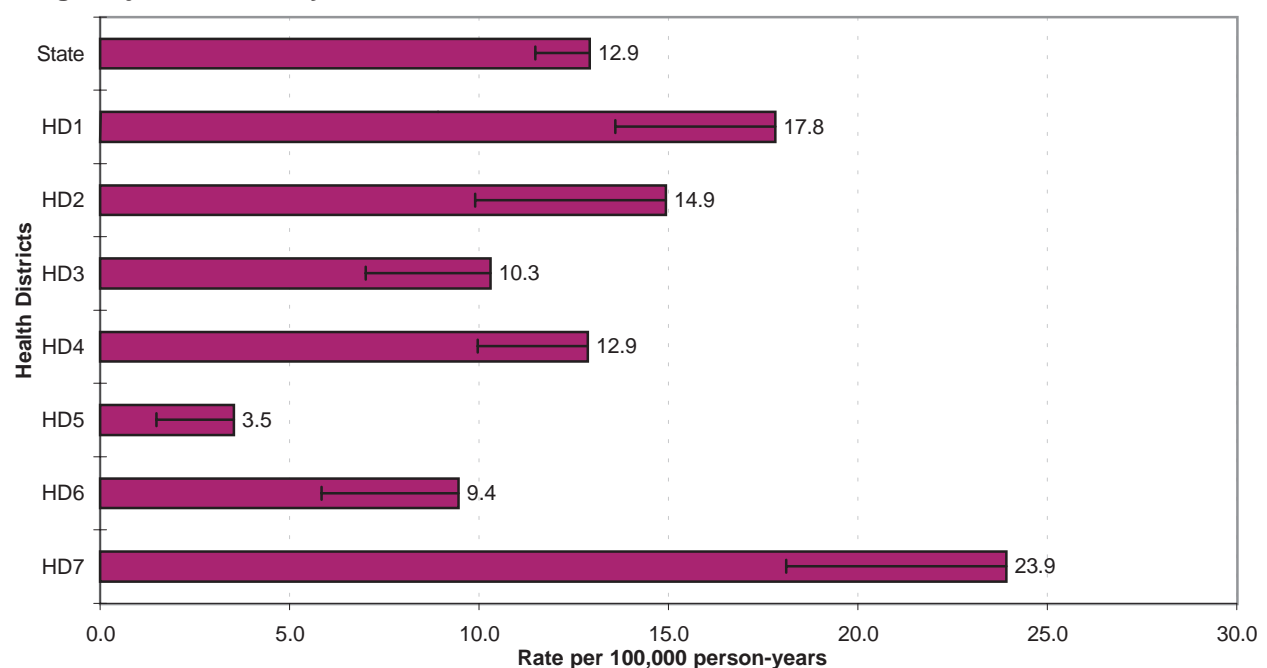
Mean age-adjusted incidence rate across health districts:	13.2
95% confidence interval on the mean age-adjusted incidence rate:	8.4 -18.1
Median age-adjusted incidence rate of health districts:	12.9
Range of age-adjusted incidence rate for health districts:	3.5 - 23.9
SEER rate (1999, Whites):	17.7

There were few cases of ovarian cancer among persons aged less than 40 years. The age-specific incidence rates of ovarian cancer increased with age starting in the 35-39 age group. The highest age-specific rate was for women aged 75-79. Health District 7 had statistically significantly more cases of ovarian cancer than expected based upon rates for the remainder of Idaho ( $p < 0.01$ ). Health District 5 had statistically significantly fewer cases of ovarian cancer than expected based upon rates for the remainder of Idaho ( $p < 0.01$ ).

### State Ovarian Cancer Incidence Age-specific Rates



### Ovarian Cancer Incidence Age-adjusted Rates by Health District



# PANCREAS

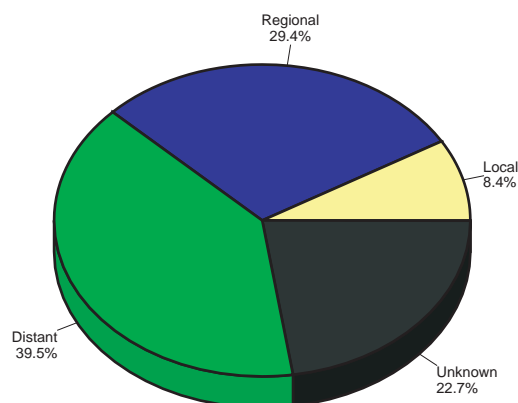
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	9.9	11.3	8.8
# of new invasive cases	119	60	59
# of new in-situ cases	0	0	0
# of deaths	122	61	61

## Total Cases By County

Ada	36	Cassia	1	Lewis	-
Adams	1	Clark	-	Lincoln	-
Bannock	5	Clearwater	1	Madison	3
Bear Lake	1	Custer	-	Minidoka	-
Benewah	1	Elmore	2	Nez Perce	4
Bingham	1	Franklin	1	Oneida	-
Blaine	1	Fremont	2	Owyhee	-
Boise	-	Gem	2	Payette	2
Bonner	6	Gooding	1	Power	1
Bonneville	7	Idaho	1	Shoshone	3
Boundary	1	Jefferson	2	Teton	-
Butte	-	Jerome	1	Twin Falls	6
Camas	-	Kootenai	13	Valley	-
Canyon	8	Latah	4	Washington	1
Caribou	-	Lemhi	-		

## Stage at Diagnosis - Pancreas



## Risk and Associated Factors

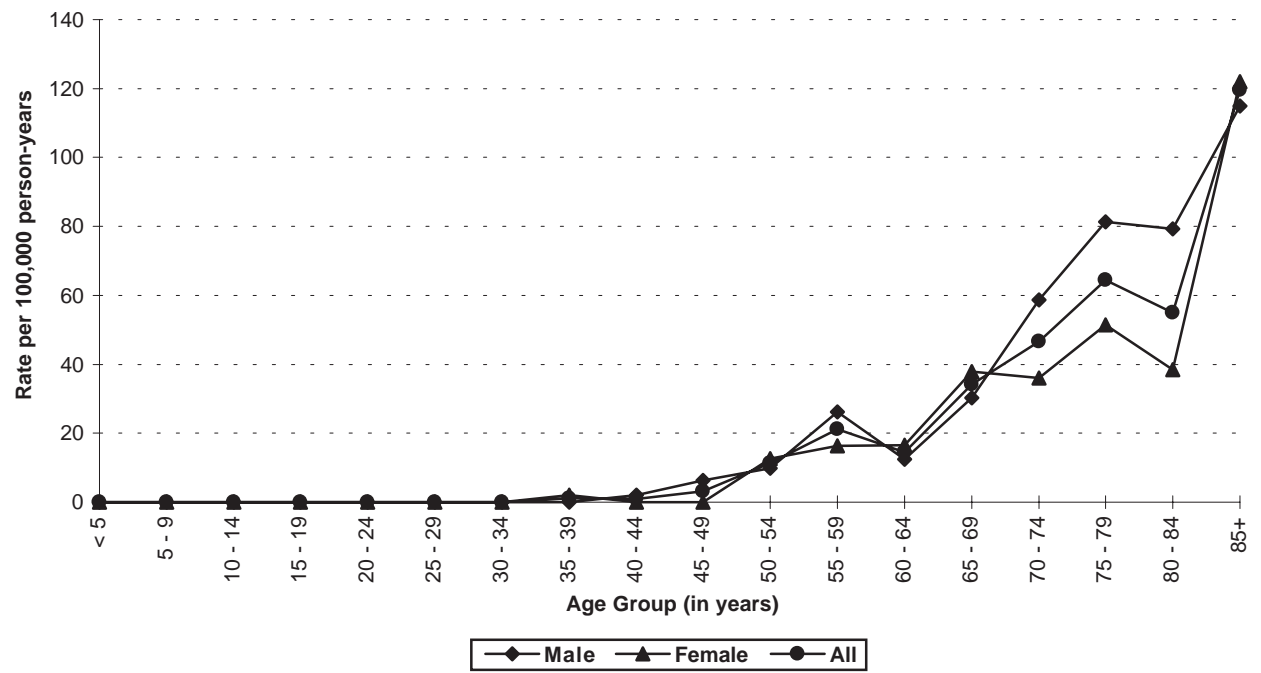
<b>Age</b>	Rates increase with age. It is rare in people younger than 40 years old.
<b>Gender</b>	Incidence is slightly higher in males.
<b>Race</b>	In the United States, the incidence is higher in African Americans, Native Americans, and Hispanics, than in the population at large.
<b>Diet</b>	High dietary fat intake has been implicated as a potential risk factor.
<b>Occupation</b>	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.
<b>Other</b>	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

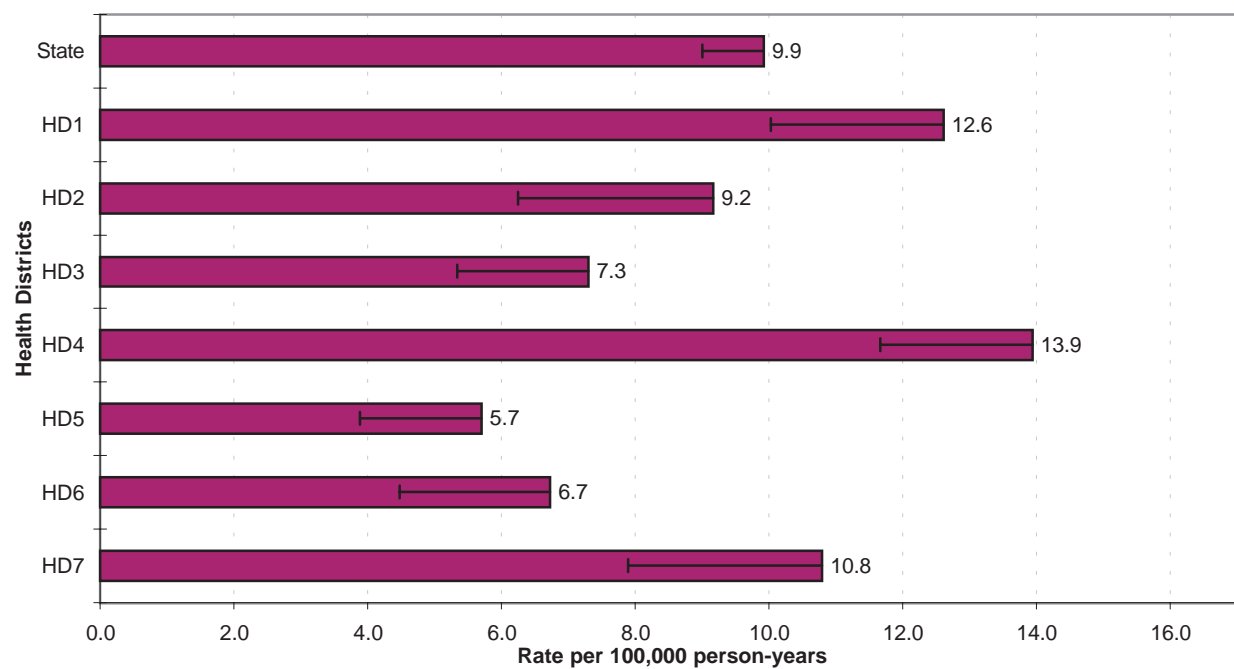
Mean age-adjusted incidence rate across health districts:	9.5
95% confidence interval on the mean age-adjusted incidence rate:	7.2 - 11.8
Median age-adjusted incidence rate of health districts:	9.2
Range of age-adjusted incidence rate for health districts:	5.7 - 13.9
SEER rate (1999, Whites):	10.1

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. Health District 4 had statistically significantly more cases than expected based upon rates for the remainder of Idaho ( $p < 0.01$ ).

### State Pancreatic Cancer Incidence Age-specific Rates



### Pancreatic Cancer Incidence Age-adjusted Rates by Health District



# PROSTATE

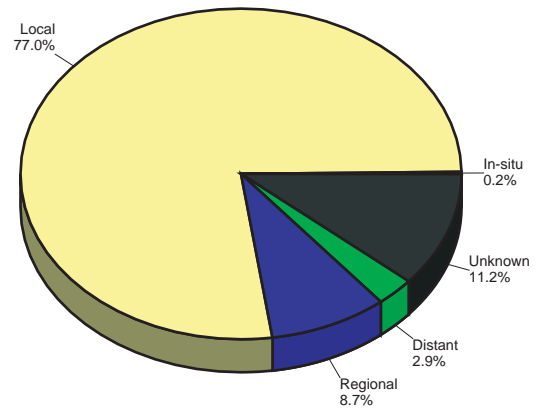
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	175.6	-
# of new invasive cases	-	970	-
# of new in-situ cases	-	2	-
# of deaths	-	133	-

## Total Cases By County

Ada	225	Cassia	11	Lewis	6
Adams	8	Clark	-	Lincoln	1
Bannock	52	Clearwater	6	Madison	8
Bear Lake	5	Custer	1	Minidoka	20
Benewah	12	Elmore	5	Nez Perce	50
Bingham	34	Franklin	11	Oneida	6
Blaine	13	Fremont	10	Owyhee	8
Boise	2	Gem	14	Payette	18
Bonner	32	Gooding	12	Power	3
Bonneville	42	Idaho	17	Shoshone	8
Boundary	5	Jefferson	19	Teton	2
Butte	3	Jerome	10	Twin Falls	64
Camas	1	Kootenai	79	Valley	5
Canyon	72	Latah	20	Washington	4
Caribou	12	Lemhi	8		

Stage at Diagnosis - Prostate



## Risk and Associated Factors

<b>Age</b>	It is rarely diagnosed before age 50, and it is primarily a disease of older men.
<b>Race</b>	African American males have a substantially higher rate than Caucasian males.
<b>Genetics</b>	A family history of prostate cancer is associated with increased risk.
<b>Diet</b>	Dietary fat has been implicated in some studies.
<b>Other</b>	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.

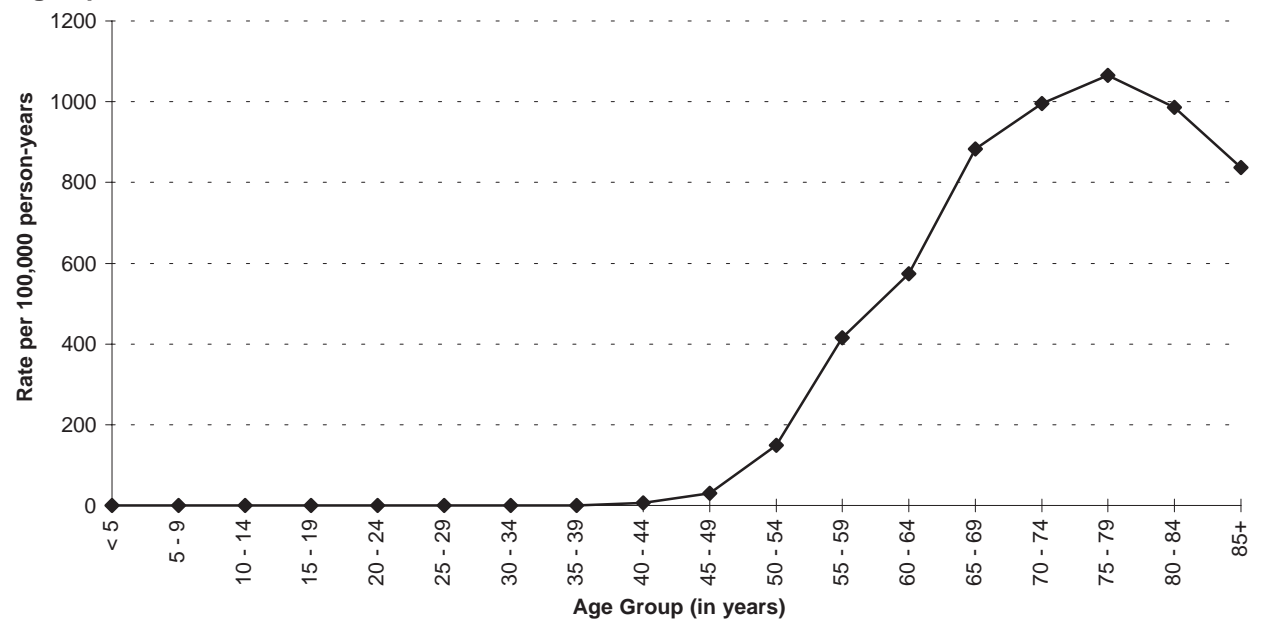
## Special Notes

Mean age-adjusted incidence rate across health districts:	170.9
95% confidence interval on the mean age-adjusted incidence rate:	154.4 - 187.4
Median age-adjusted incidence rate of health districts:	172.9
Range of age-adjusted incidence rate for health districts:	143.6 - 199.0
SEER rate (1999, Whites):	162.3

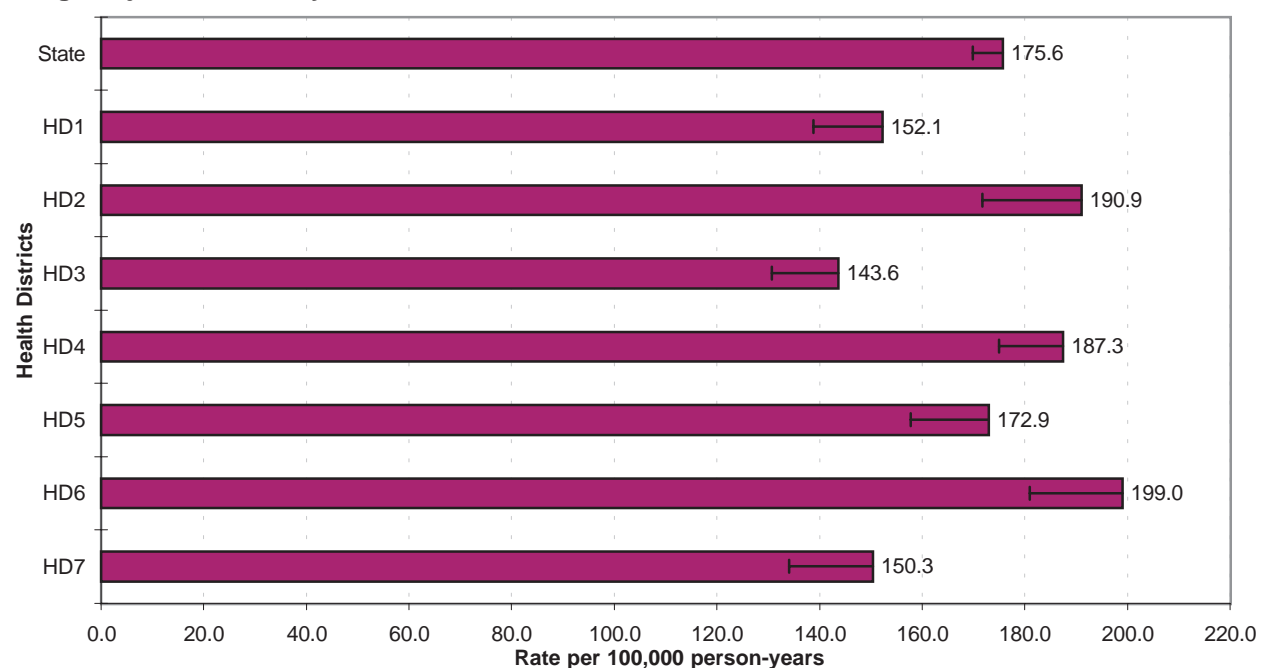
The age-specific incidence rate distribution of prostate cancer in Idaho in 2001 is similar to that reported by the National Cancer Institute's SEER program. There were no cases of prostate cancer among persons aged less than 45 years. The age-specific incidence rates of prostate cancer increased with age, peaking in the 75-79 age group. Health Districts 1 ( $p < 0.05$ ) and 3 ( $p < 0.01$ ) had statistically significantly fewer cases based upon rates for the remainder of Idaho.



### State Prostatic Cancer Incidence Age-specific Rates



### Prostatic Cancer Incidence Age-adjusted Rates by Health District



# RECTUM

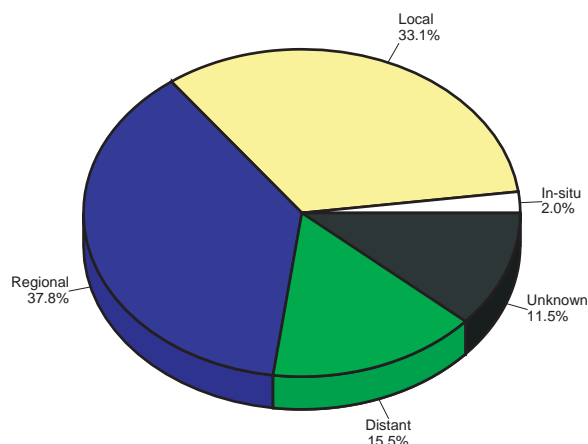
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	12.0	15.8	8.8
# of new invasive cases	145	87	58
# of new in-situ cases	3	3	0
# of deaths	31	22	9

## Total Cases By County

Ada	21	Cassia	4	Lewis	2
Adams	-	Clark	-	Lincoln	-
Bannock	8	Clearwater	4	Madison	-
Bear Lake	1	Custer	-	Minidoka	1
Benewah	2	Elmore	4	Nez Perce	6
Bingham	3	Franklin	-	Oneida	1
Blaine	1	Fremont	-	Owyhee	2
Boise	-	Gem	4	Payette	-
Bonner	10	Gooding	3	Power	-
Bonneville	7	Idaho	1	Shoshone	1
Boundary	1	Jefferson	1	Teton	1
Butte	-	Jerome	6	Twin Falls	10
Camas	1	Kootenai	18	Valley	-
Canyon	17	Latah	3	Washington	2
Caribou	-	Lemhi	1		

Stage at Diagnosis - Rectum and Rectosigmoid



## Risk and Associated Factors

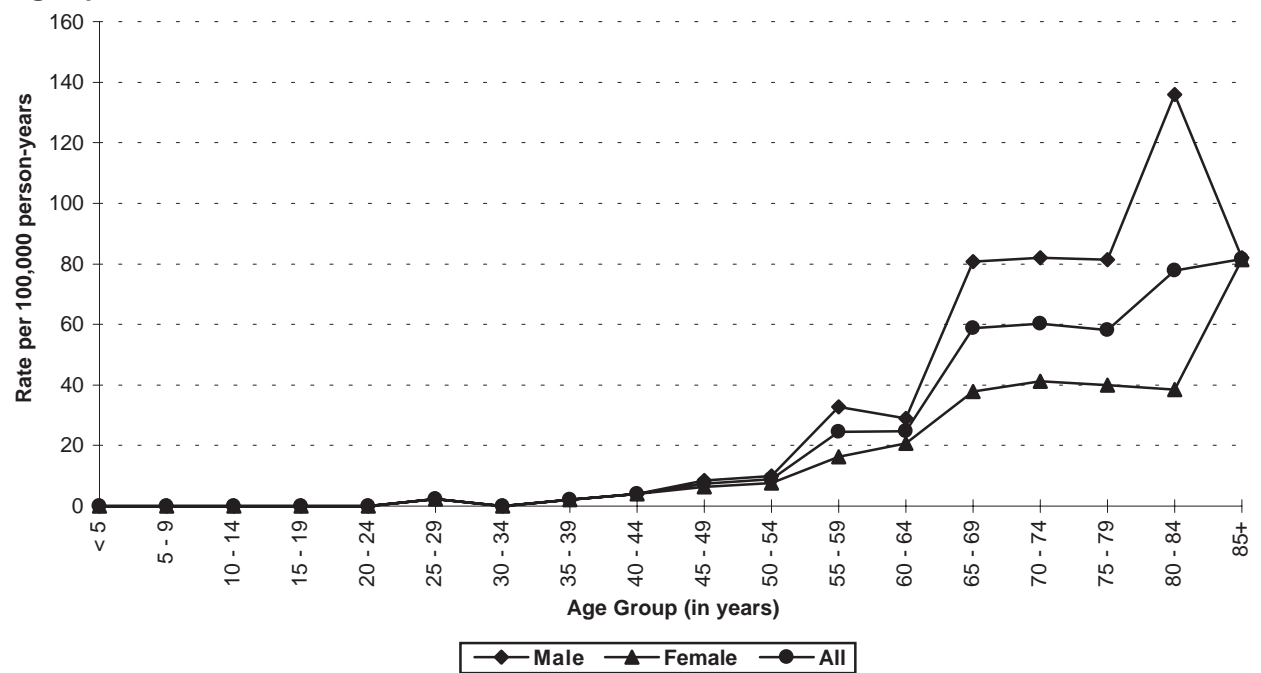
<b>Age</b>	Rates increase with age and the vast majority of cases occur after age 50.
<b>Gender</b>	Incidence rates are higher in males.
<b>Genetics</b>	Specific genetic alterations have been recognized in several hereditary conditions with high risk of rectal cancer. These conditions account for about six percent of rectal cancer cases.
<b>Diet</b>	Strong evidence exists that diets high in fat and low in fiber contribute to increased risk of rectal cancer.
<b>Other</b>	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.

## Special Notes

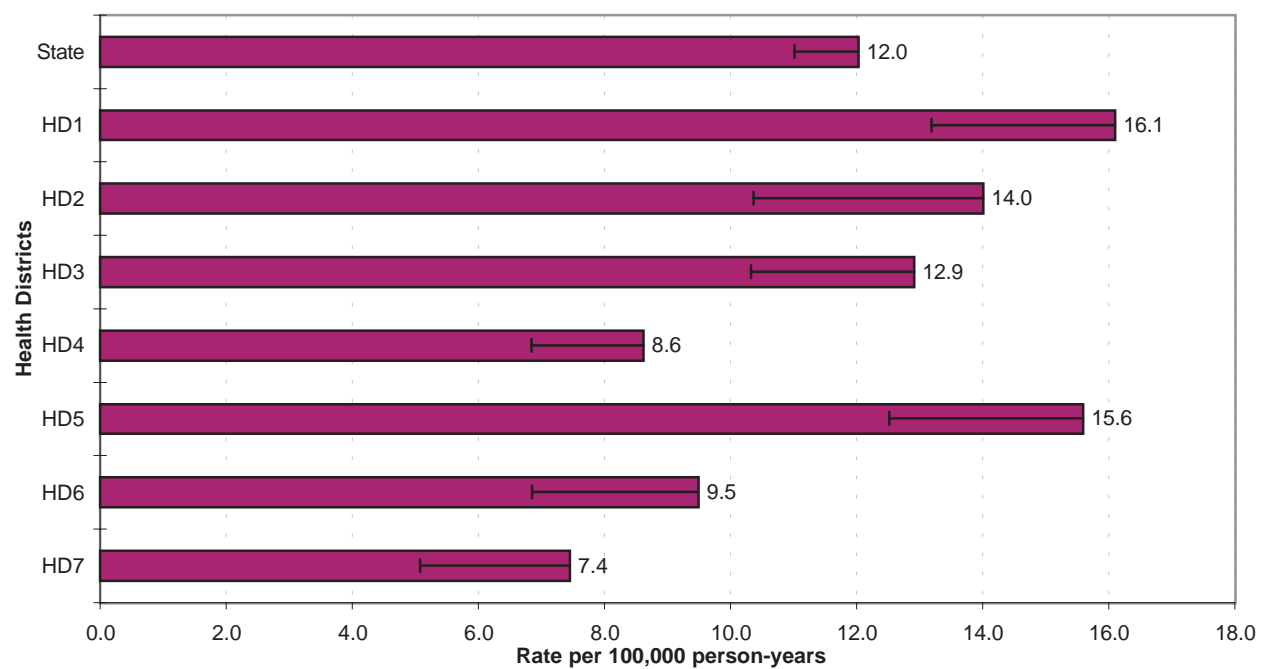
Mean age-adjusted incidence rate across health districts:	12.0
95% confidence interval on the mean age-adjusted incidence rate:	9.4 - 14.6
Median age-adjusted incidence rate of health districts:	12.9
Range of age-adjusted incidence rate for health districts:	7.4 - 16.1
SEER rate (1999, Whites):	14.8

There were few cases of rectal cancer among persons aged less than 45 years. The age-specific incidence rates of rectal cancer generally increased with age, peaking in the 80-84 age group for males and 85+ for females. Health District 1 had statistically significantly more cases than expected based upon rates for the remainder of Idaho ( $p < 0.05$ ). Health District 4 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho ( $p < 0.05$ ).

### State Rectal & Rectosigmoid Cancer Incidence Age-specific Rates



### Rectal & Rectosigmoid Cancer Incidence Age-adjusted Rates by Health District



# STOMACH

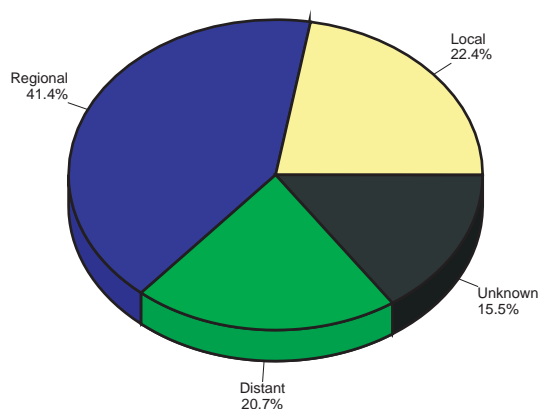
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.8	6.8	3.2
# of new invasive cases	58	37	21
# of new in-situ cases	0	0	0
# of deaths	28	11	17

## Total Cases By County

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

Stage at Diagnosis - Stomach



## Risk and Associated Factors

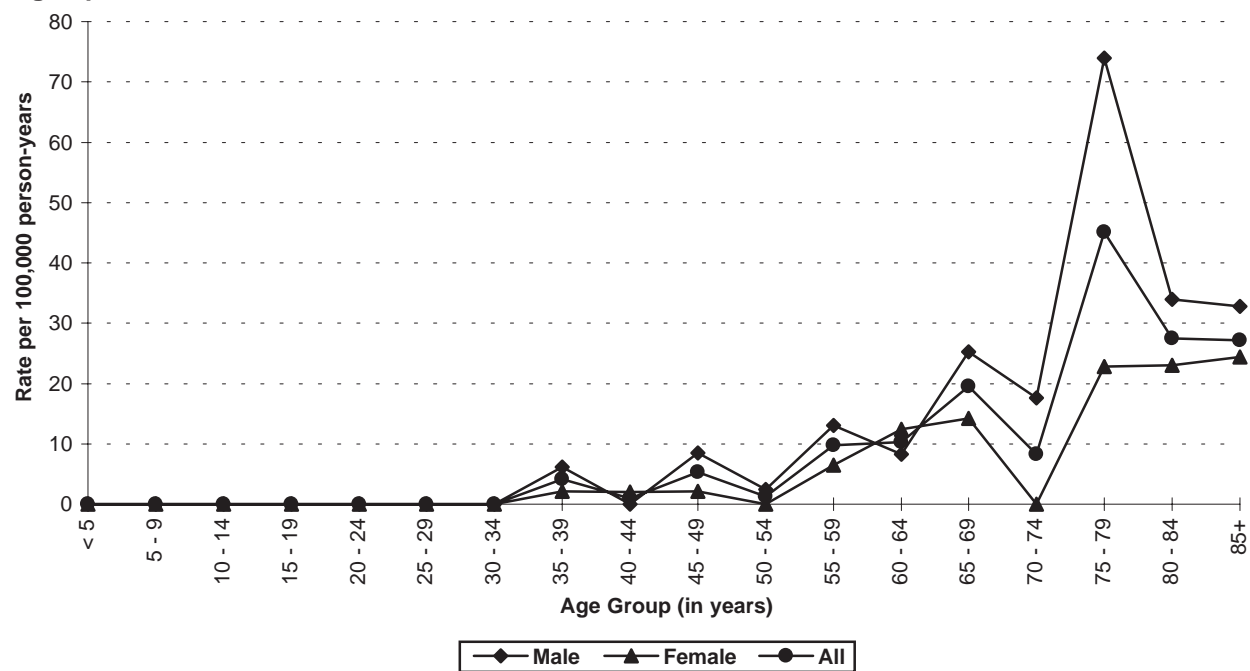
<b>Age</b>	Rates increase with age.
<b>Gender</b>	Incidence rates for males are usually more than twice as high as for females.
<b>Race &amp; SES</b>	There is a higher incidence in African Americans, as well as Asians, and incidence is also higher in lower income groups.
<b>Diet</b>	Increased risk has been attributed to diets high in smoked foods and foods high in nitrates. Diets high in fresh fruits and vegetables seem to be protective.
<b>Occupation</b>	Elevated rates have been found in certain occupational groups, especially coal miners and asbestos workers.
<b>Other</b>	Stomach cancer has recently been linked to peptic ulcer disease and to certain bacteria associated with increased risk for both diseases.

## Special Notes

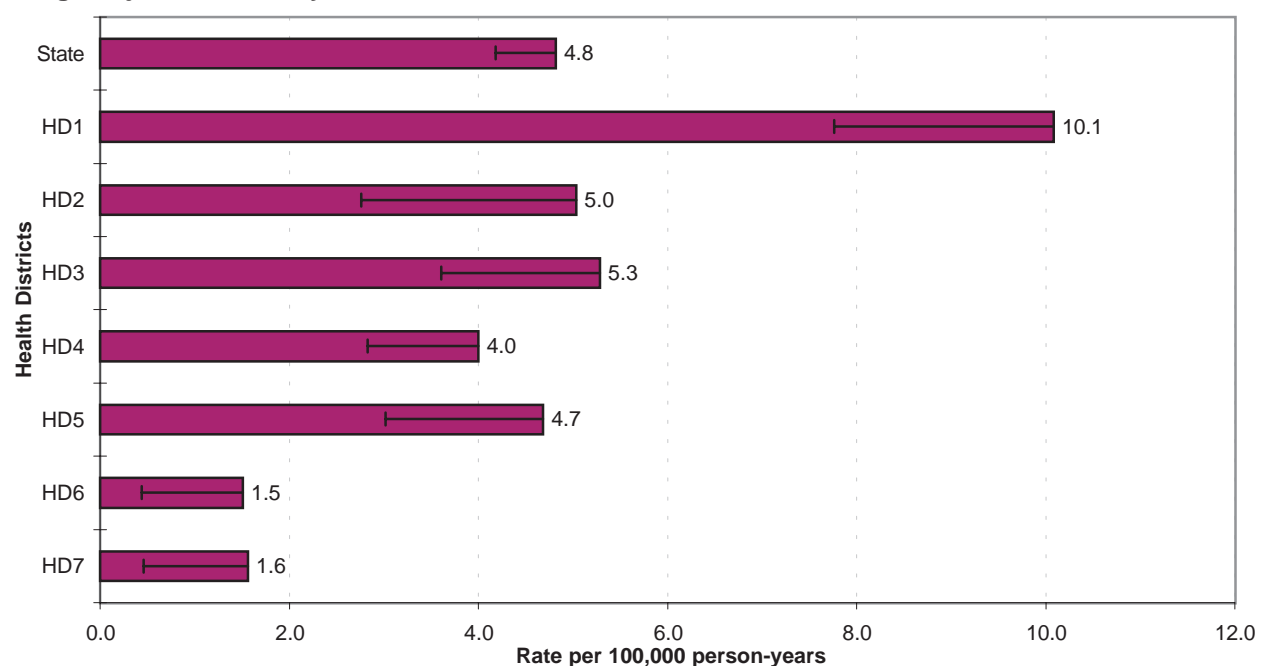
Mean age-adjusted incidence rate across health districts:	4.6
95% confidence interval on the mean age-adjusted incidence rate:	2.5 - 6.7
Median age-adjusted incidence rate of health districts:	4.7
Range of age-adjusted incidence rate for health districts:	1.5 - 10.1
SEER rate (1999, Whites):	7.6

There were no cases of stomach cancer among persons aged less than 35 years. The age-specific incidence rates of stomach cancer increased with age, peaking in the 75-79 age group for males and 85+ for females. Health District 1 had statistically significantly more cases than expected based upon rates for the remainder of Idaho ( $p < 0.01$ ).

### State Stomach Cancer Incidence Age-specific Rates



### Stomach Cancer Incidence Age-adjusted Rates by Health District



# TESTIS

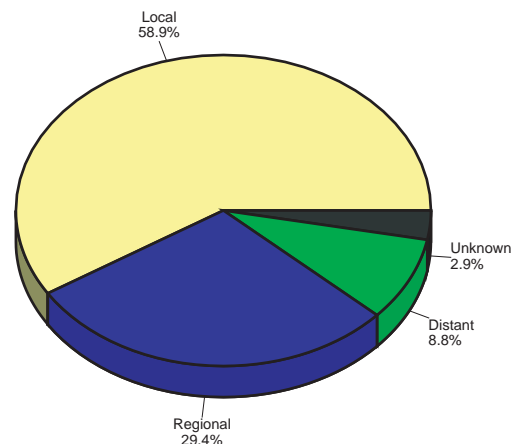
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	5.3	-
# of new invasive cases	-	34	-
# of new in-situ cases	-	0	-
# of deaths	-	2	-

## Total Cases By County

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

Stage at Diagnosis - Testis



## Risk and Associated Factors

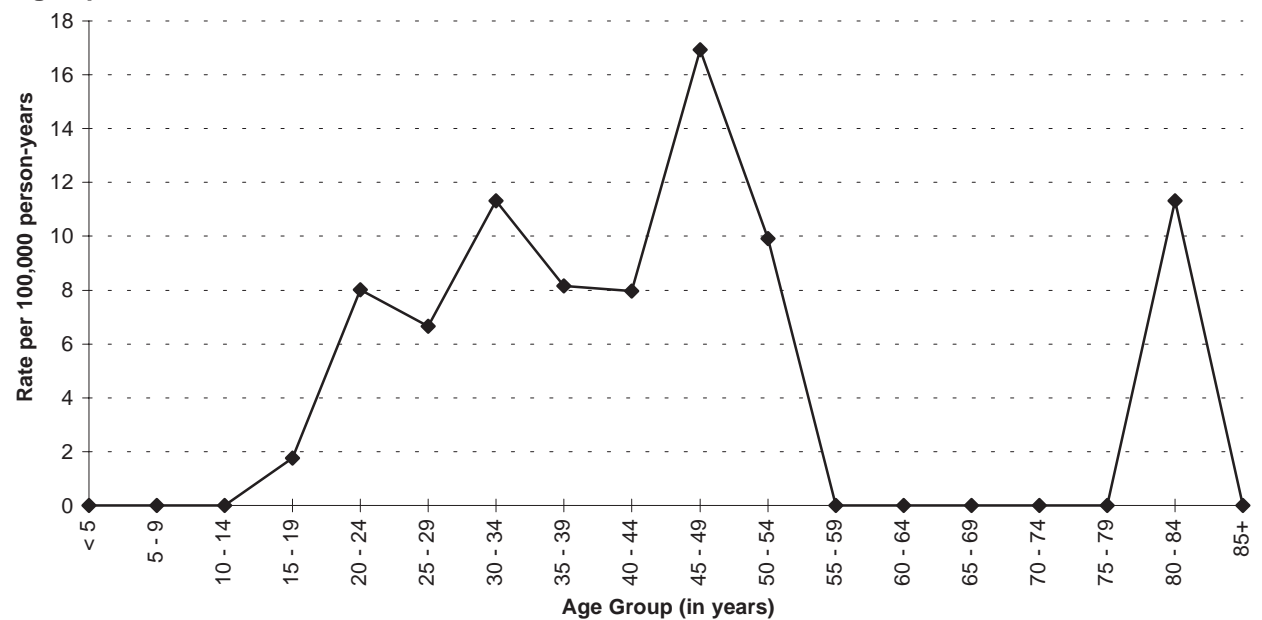
<b>Age</b>	This is the most common cancer in young males, especially males between the ages of 20 and 34.
<b>Race</b>	Incidence rates are substantially higher in Caucasian males than in African American males.
<b>Other</b>	Undescended testis, a minor abnormality that can usually be detected and corrected 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

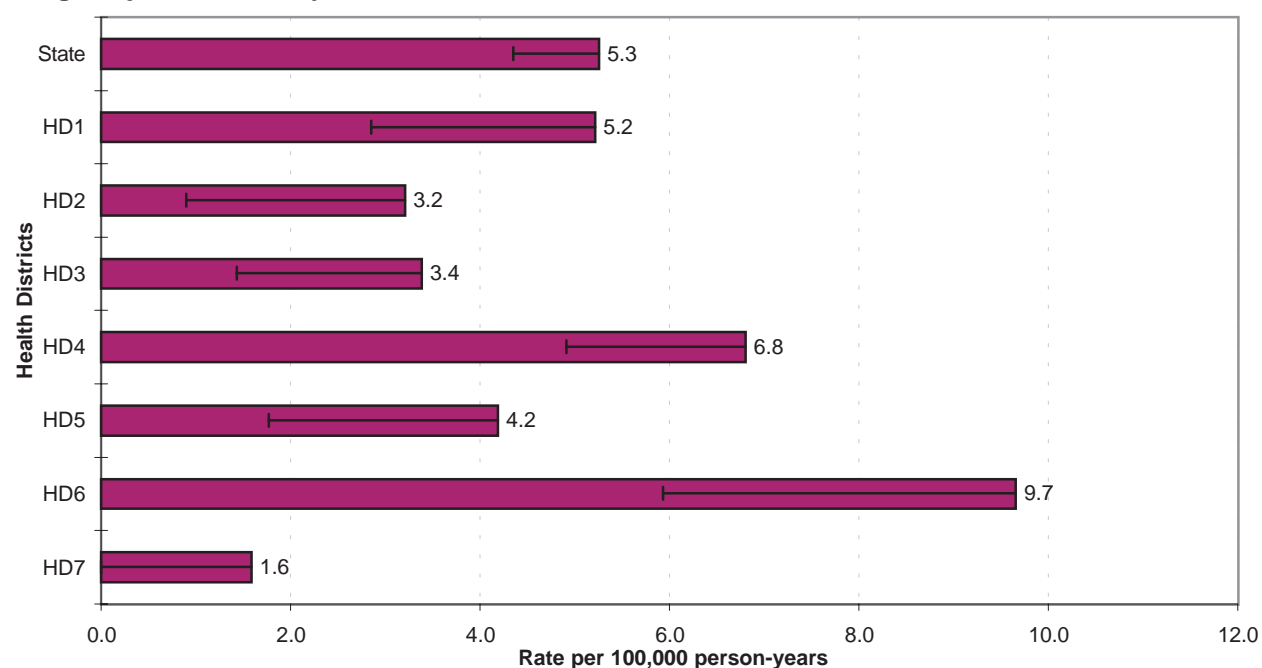
Mean age-adjusted incidence rate across health districts:	4.9
95% confidence interval on the mean age-adjusted incidence rate:	2.9 - 6.8
Median age-adjusted incidence rate of health districts:	4.2
Range of age-adjusted incidence rate for health districts:	1.6 - 9.7
SEER rate (1999, Whites):	6.0

There were no cases of testicular cancer among persons aged 55-74 years. The highest age-specific incidence rate was in the 45-49 age group. Health District 6 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



### Testicular Cancer Incidence Age-adjusted Rates by Health District



# THYROID

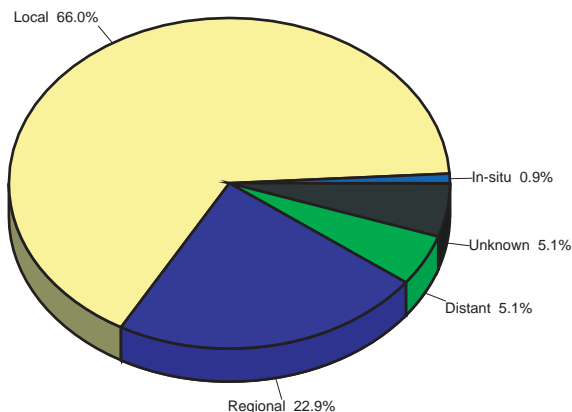
## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	9.4	4.6	14.3
# of new invasive cases	118	28	90
# of new in-situ cases	0	0	0
# of deaths	9	4	5

## Total Cases By County

Ada	42	Cassia	-	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	1	Clearwater	-	Madison	2
Bear Lake	-	Custer	1	Minidoka	2
Benewah	1	Elmore	3	Nez Perce	1
Bingham	-	Franklin	1	Oneida	-
Blaine	3	Fremont	-	Owyhee	-
Boise	1	Gem	2	Payette	4
Bonner	2	Gooding	1	Power	-
Bonneville	7	Idaho	-	Shoshone	1
Boundary	1	Jefferson	3	Teton	-
Butte	1	Jerome	1	Twin Falls	7
Camas	-	Kootenai	13	Valley	1
Canyon	11	Latah	3	Washington	1
Caribou	-	Lemhi	1		

## Stage at Diagnosis - Thyroid



## Risk and Associated Factors

<b>Age</b>	Though relatively unusual, it is still one of the most common malignancies affecting adolescents and adults up to 50 years of age.
<b>Gender</b>	Two-thirds of the cases are among females.
<b>Race &amp; SES</b>	The incidence is higher in Caucasians and in upper income groups.
<b>Hormonal</b>	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.
<b>Other</b>	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.

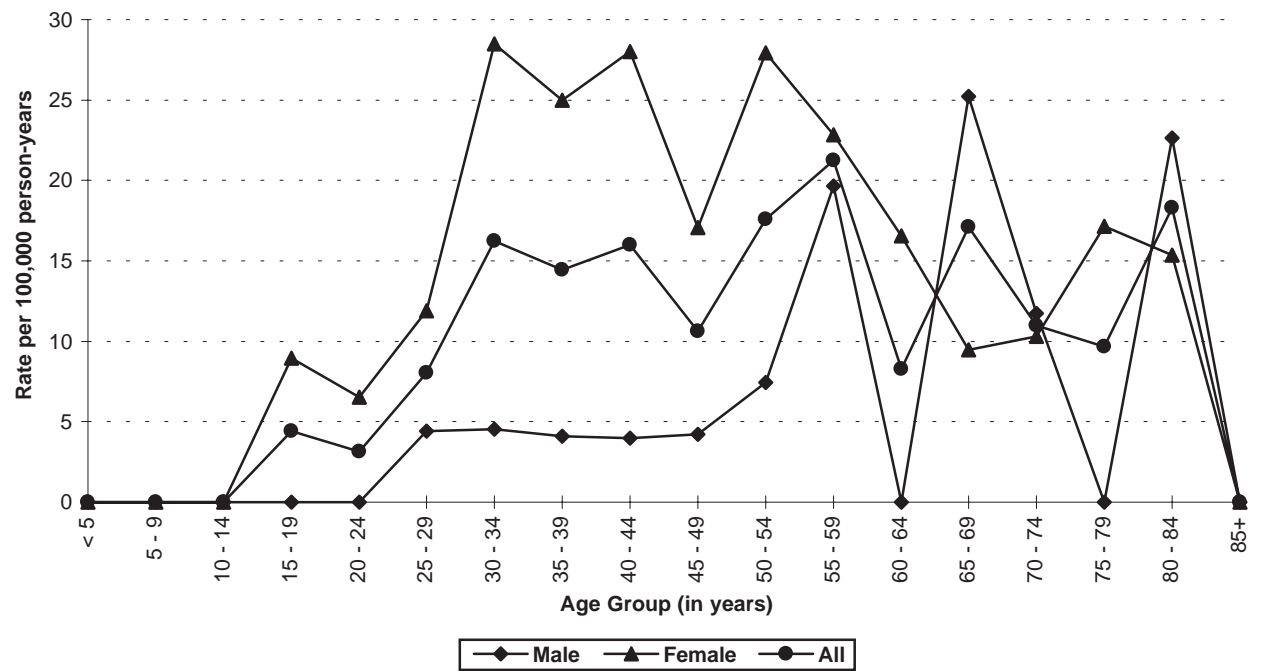
## Special Notes

Mean age-adjusted incidence rate across health districts:	8.3
95% confidence interval on the mean age-adjusted incidence rate:	5.4 - 11.2
Median age-adjusted incidence rate of health districts:	9.5
Range of age-adjusted incidence rate for health districts:	2.2 - 13.9
SEER rate (1999, Whites):	7.4

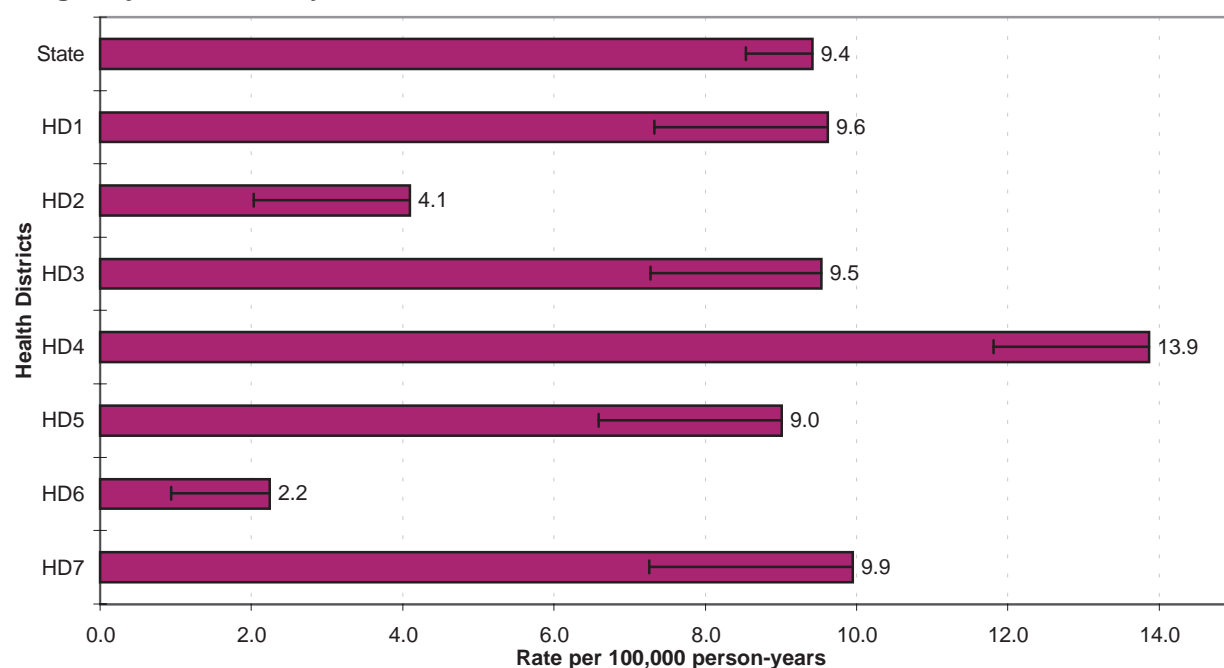
There were no cases of thyroid cancer among persons aged less than 15 years. The age-specific incidence rates of thyroid cancer were typically higher for females than males. Health District 4 had statistically significantly more cases than expected based upon rates for the remainder of Idaho ( $p < 0.01$ ). Health District 6 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho ( $p < 0.01$ ).



### State Thyroid Cancer Incidence Age-specific Rates



### Thyroid Cancer Incidence Age-adjusted Rates by Health District





## **SECTION II**

### **STATE OF IDAHO - 2001 INCIDENCE DATA BY SITE AND GENDER**

# Idaho Resident Cancer Cases (in-situ) - 2001

PRIMARY SITE OF CANCER	TOTAL	SEX	
		Male	Female
TOTAL NEW CANCER CASES (in-situ)	483	217	266
<b>BUCCAL CAVITY AND PHARYNX</b>	<b>6</b>	<b>6</b>	<b>0</b>
Lip	3	3	0
Tongue	1	1	0
Major salivary glands	0	0	0
Gum and other mouth	2	2	0
Nasopharynx	0	0	0
Oropharynx	0	0	0
Hypopharynx	0	0	0
Tonsil and other buccal cavity	0	0	0
<b>DIGESTIVE SYSTEM</b>	<b>15</b>	<b>8</b>	<b>7</b>
Esophagus	0	0	0
Stomach	0	0	0
Small intestine	1	1	0
Colon excluding rectum	11	4	7
Rectum, rectosigmoid and anus	3	3	0
Liver & bile duct	0	0	0
Gallbladder and other biliary	0	0	0
Pancreas	0	0	0
Peritoneum and retroperitoneum	0	0	0
Other digestive	0	0	0
<b>RESPIRATORY SYSTEM</b>	<b>1</b>	<b>0</b>	<b>1</b>
Larynx	1	0	1
Lung and bronchus	0	0	0
Trachea, pleura, and other	0	0	0
<b>SKIN</b>	<b>148</b>	<b>73</b>	<b>75</b>
Melanoma of skin	148	73	75
Other skin cancers	0	0	0
<b>BREAST</b>	<b>136</b>	<b>0</b>	<b>136</b>
<b>FEMALE GENITAL SYSTEM</b>	<b>17</b>	<b>n/a</b>	<b>17</b>
Cervix uteri	n/a	n/a	n/a
Corpus uteri (endometrium)	4	n/a	4
Ovary	0	n/a	0
Vagina	2	n/a	2
Vulva	11	n/a	11
Uterus, NOS and other female genital organs	0	n/a	0
<b>MALE GENITAL SYSTEM</b>	<b>6</b>	<b>6</b>	<b>n/a</b>
Prostate gland	2	2	n/a
Testis	0	0	n/a
Penis and other male genital organs	4	4	n/a
<b>URINARY SYSTEM</b>	<b>152</b>	<b>124</b>	<b>28</b>
Urinary bladder	147	121	26
Kidney and renal pelvis	1	1	0
Ureter and other urinary organs	4	2	2
<b>LYMPHATIC AND HEMATOPOIETIC TISSUE</b>	<b>0</b>	<b>0</b>	<b>0</b>
Hodgkin's lymphoma	0	0	0
Non-Hodgkins lymphoma	0	0	0
Multiple myeloma	0	0	0
Acute lymphocytic	0	0	0
Chronic lymphocytic	0	0	0
Acute Myeloid	0	0	0
Chronic Myeloid	0	0	0
Other	0	0	0
<b>OTHER OR UNKNOWN SITES</b>	<b>0</b>	<b>0</b>	<b>0</b>
Eye	2	0	2
Brain	0	0	0
Other nervous system	0	0	0
Thyroid gland	0	0	0
Other endocrine	0	0	0
Bones and joints	0	0	0
Soft tissue (including heart)	0	0	0
Other sites, Ill-defined sites or unknown sites	2	0	2

### Idaho Resident Cancer Cases (invasive) - 2001

PRIMARY SITE OF CANCER	TOTAL	SEX	
		Male	Female
<b>TOTAL NEW CANCER CASES (invasive)</b>	<b>5,270</b>	<b>2,754</b>	<b>2,516</b>
<b>BUCCAL CAVITY AND PHARYNX</b>	<b>139</b>	<b>98</b>	<b>41</b>
Lip	36	31	5
Tongue	37	23	14
Major salivary glands	15	8	7
Gum and other mouth	25	16	9
Nasopharynx	2	1	1
Oropharynx	3	3	0
Hypopharynx	5	3	2
Tonsil and other buccal cavity	16	13	3
<b>DIGESTIVE SYSTEM</b>	<b>909</b>	<b>470</b>	<b>439</b>
Esophagus	50	36	14
Stomach	58	37	21
Small intestine	30	12	18
Colon excluding rectum	401	183	218
Rectum, rectosigmoid and anus	167	94	73
Liver & bile duct	40	28	12
Gallbladder and other biliary	23	11	12
Pancreas	119	60	59
Peritoneum and retroperitoneum	17	6	11
Other digestive	4	3	1
<b>RESPIRATORY SYSTEM</b>	<b>684</b>	<b>395</b>	<b>289</b>
Larynx	44	33	11
Lung and bronchus	615	346	269
Trachea, pleura, and other	25	16	9
<b>SKIN</b>	<b>251</b>	<b>137</b>	<b>114</b>
Melanoma of skin	238	132	106
Other skin cancers	13	5	8
<b>BREAST</b>	<b>828</b>	<b>15</b>	<b>813</b>
<b>FEMALE GENITAL SYSTEM</b>	<b>275</b>	<b>n/a</b>	<b>275</b>
Cervix uteri	40	n/a	40
Corpus uteri (endometrium)	126	n/a	126
Ovary	84	n/a	84
Vagina	2	n/a	2
Vulva	9	n/a	9
Uterus, NOS and other female genital organs	14	n/a	14
<b>MALE GENITAL SYSTEM</b>	<b>1009</b>	<b>1009</b>	<b>n/a</b>
Prostate gland	970	970	n/a
Testis	34	34	n/a
Penis and other male genital organs	5	5	n/a
<b>URINARY SYSTEM</b>	<b>271</b>	<b>180</b>	<b>91</b>
Urinary bladder	111	79	32
Kidney and renal pelvis	150	94	56
Ureter and other urinary organs	10	7	3
<b>LYMPHATIC AND HEMATOPOIETIC TISSUE</b>	<b>492</b>	<b>260</b>	<b>232</b>
Hodgkin's lymphoma	48	24	24
Non-Hodgkins lymphoma	226	115	111
Multiple myeloma	66	36	30
Acute lymphocytic leukemia	18	10	8
Chronic lymphocytic leukemia	51	35	16
Acute myeloid leukemia	48	24	24
Chronic myeloid leukemia	12	6	6
Other leukemia	23	10	13
<b>OTHER OR UNKNOWN SITES</b>	<b>412</b>	<b>190</b>	<b>222</b>
Eye	9	1	8
Brain	73	52	21
Other nervous system	9	4	5
Thyroid gland	118	28	90
Other endocrine	4	1	3
Bones and joints	6	4	2
Soft tissue (including heart)	33	20	13
Other sites, Ill-defined sites or unknown sites	160	80	80



## **SECTION III**

### **STATE OF IDAHO - 2001 MORTALITY DATA BY SITE AND GENDER**

### Idaho Resident Cancer Deaths - 2001

ICD-10 CODE	SITE OF MALIGNANT NEOPLASM	TOTAL	SEX	
			Male	Female
C00-C97	TOTAL MALIGNANT NEOPLASM DEATHS	2,093	1,112	981
C00-C14	LIP, ORAL CAVITY AND PHARYNX	39	25	14
C00	Lip	1	1	-
C01-C02	Tongue	4	2	2
C10-C13, C14.0	Pharynx	16	12	4
C03-C09, C14.2-C14.8	Other and unspecified sites within the lip, oral cavity, and pharynx	18	10	8
C15-C26	DIGESTIVE ORGANS	450	253	197
C15	Esophagus	52	40	12
C16	Stomach	28	11	17
C17	Small intestine	4	2	2
C18	Colon	152	81	71
C19-C20	Rectosigmoid junction and rectum	31	22	9
C21	Anus and anal canal	3	-	3
C22.0, C22.2-C22.9	Liver	24	17	7
C22.1	Intrahepatic bile duct	14	7	7
C23-C24	Gallbladder and extrahepatic bile ducts	11	5	6
C25	Pancreas	122	61	61
C26	Other and ill-defined digestive organs	9	7	2
C30-C39	RESPIRATORY AND INTRATHORACIC ORGANS	563	330	233
C30-C31	Nasal cavity, middle ear, and accessory sinuses	5	3	2
C32	Larynx	18	15	3
C33-C34	Trachea, bronchus, and lung	539	311	228
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	6	6	-
C43-C44	MELANOMA AND OTHER MALIGNANT NEOPLASMS OF SKIN	52	38	14
C43	Melanoma of skin	39	30	9
C44	Other malignant neoplasms of skin	13	8	5
C45-C49	MESOTHELIAL AND SOFT TISSUE	27	12	15
C45	Mesothelioma	8	6	2
C46	Kaposi's sarcoma	-	-	-
C47-C49	Other mesothelial and soft tissue	19	6	13
C50	BREAST	132	1	131
C51-C58	FEMALE GENITAL ORGANS	125	-	125
C51-C52	Vulva and vagina	4	-	4
C53	Cervix uteri	19	-	19
C54-C55	Corpus uteri and uterus, part unspecified	28	-	28
C56	Ovary	74	-	74
C57	Other and unspecified female genital organs	-	-	-
C58	Placenta	-	-	-



### Idaho Resident Cancer Deaths - 2001

ICD-10 CODE	SITE OF MALIGNANT NEOPLASM	TOTAL	SEX	
			Male	Female
C60-C63	MALE GENITAL ORGANS	135	135	-
C61	Prostate	133	133	-
C62	Testis	2	2	-
C60, C63	Penis and other and unspecified male genital organs	-	-	-
C64-C68	URINARY TRACT	125	78	47
C64-C65	Kidney and renal pelvis	58	35	23
C67	Bladder	64	40	24
C66, C68	Other and unspecified sites within the urinary tract	3	3	-
C69	EYE AND ADNEXA	1	-	1
C70-C72	MENINGES, BRAIN, AND OTHER PARTS OF CENTRAL NERVOUS SYSTEM	63	40	23
C71	Brain	62	40	22
C70, C72	Other parts of central nervous system	1	-	1
C73-C75	THYROID AND OTHER ENDOCRINE GLANDS	10	4	6
C76-C80, C97	OTHER MALIGNANT NEOPLASMS OF OTHER AND UNSPECIFIED SITES	128	67	61
C81-C96	LYMPHOID, HEMATOPOIETIC, AND RELATED TISSUE	237	123	114
C81	Hodgkin's disease	6	5	1
C82-C85	Non-Hodgkin's lymphoma	98	49	49
C88	Malignant immunoproliferative diseases	1	-	1
C90	Multiple myeloma and malignant plasma cell neoplasms	40	22	18
C91	Lymphoid leukemia	32	15	17
C92	Myeloid leukemia	54	29	25
C93	Monocytic leukemia	1	1	-
C94-C95	Other and unspecified leukemia	5	2	3
C96	Other and unspecified malignant neoplasms of lymphoid, hematopoietic, and related tissue	-	-	-

\* Source: Idaho Bureau of Health Policy and Vital Statistics, Idaho Department of Health and Welfare. <sup>13</sup>

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**

### **2001 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														2001			
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		22.0	14.6	17.8	22.1	31.3	41.3	78.8	122.7	185.7	306.0	529.5	867.5	1140.9	1711.1	2081.4	2330.8	2380.0	2184.9
Male		27.4	15.1	21.9	21.0	30.1	37.7	38.5	93.9	125.5	247.6	525.8	939.8	1330.0	2119.6	2572.5	3157.6	3001.5	2986.5
Female		16.4	14.0	13.5	23.3	32.6	45.3	121.0	152.0	246.2	364.9	533.3	795.5	951.4	1327.3	1649.4	1691.8	1958.5	1787.9
Bladder																			
All		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.0	11.7	18.8	27.8	45.5	56.2	117.9	164.4	173.9	190.2
Male		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	16.9	34.7	52.4	82.6	90.8	193.4	288.4	328.5	344.6
Female		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	6.4	2.5	3.3	8.3	23.7	51.5	68.6	69.1	113.8
Brain																			
All		4.0	5.8	3.8	1.8	1.0	3.4	1.2	5.2	3.0	6.4	6.3	9.8	6.2	19.6	13.7	9.7	36.6	0.0
Male		3.9	3.8	5.5	1.8	2.0	4.4	0.0	8.2	4.0	10.6	5.0	16.4	12.4	35.3	23.4	14.8	79.3	0.0
Female		4.1	8.0	1.9	1.8	0.0	2.4	2.4	2.1	2.0	2.1	7.6	3.3	0.0	4.7	5.2	5.7	7.7	0.0
Breast																			
Female		0.0	0.0	0.0	1.8	0.0	0.0	26.1	58.3	96.1	153.7	248.9	296.7	384.7	426.6	500.0	428.7	491.6	365.7
Cervix Uteri																			
Female		0.0	0.0	0.0	0.0	2.2	7.2	11.9	6.3	20.0	10.7	10.2	3.3	12.4	4.7	5.2	17.2	0.0	0.0
Colon																			
All		0.0	0.0	0.0	0.0	0.0	1.2	3.5	3.1	6.0	14.9	22.6	40.8	62.0	134.4	164.5	219.2	283.8	304.4
Male		0.0	0.0	0.0	0.0	0.0	2.2	0.0	6.1	8.0	12.7	27.3	42.6	66.1	161.5	134.8	281.0	192.6	311.8
Female		0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	4.0	17.1	17.8	39.1	57.9	109.0	190.7	171.5	345.6	300.7
Endometrium																			
Female		0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	12.0	19.2	43.2	62.0	45.5	75.9	82.5	62.9	99.9	40.6
Esophagus																			
All		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	1.1	7.5	13.1	16.5	12.2	16.5	22.6	13.7	21.7
Male		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	2.1	12.4	22.9	20.7	25.2	11.7	22.2	34.0	49.2
Female		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.3	12.4	0.0	20.6	22.9	0.0	8.1
Hodgkin's Lymphoma																			
All		1.0	1.0	1.9	6.2	7.3	2.3	1.2	8.3	5.0	4.3	2.5	4.9	2.1	0.0	5.5	6.5	0.0	0.0
Male		2.0	1.9	3.7	5.2	8.0	2.2	0.0	8.2	2.0	0.0	5.0	6.6	4.1	0.0	0.0	14.8	0.0	0.0
Female		0.0	0.0	0.0	7.2	6.5	2.4	2.4	8.3	8.0	8.5	0.0	3.3	0.0	0.0	10.3	0.0	0.0	0.0

IDAHO		AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER												2001				
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+
<b>Kidney &amp; Renal Pelvis</b>																		
All	5.0	0.0	0.9	0.0	0.0	0.0	0.0	3.1	6.0	10.6	17.6	26.1	45.5	36.7	60.3	48.4	50.4	54.4
Male	5.9	0.0	0.0	0.0	0.0	0.0	0.0	4.1	10.0	10.6	27.3	32.8	66.1	35.3	93.8	74.0	68.0	49.2
Female	4.1	0.0	1.9	0.0	0.0	0.0	0.0	2.1	2.0	10.7	7.6	19.6	24.8	37.9	30.9	28.6	38.4	56.9
<b>Larynx</b>																		
All	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.0	1.0	2.1	8.8	4.9	8.3	12.2	30.2	12.9	9.2	16.3
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.2	7.4	9.8	8.3	25.2	58.6	22.2	11.3	49.2
Female	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.1	0.0	0.0	10.2	0.0	8.3	0.0	5.2	5.7	7.7	0.0
<b>Leukemia</b>																		
All	8.0	1.9	5.6	1.8	0.0	1.2	2.3	3.1	3.0	10.6	13.8	19.6	28.9	34.2	41.1	70.9	41.2	97.8
Male	9.8	3.8	5.5	3.5	0.0	0.0	0.0	4.1	2.0	10.6	17.4	26.2	41.3	30.3	52.7	81.3	68.0	131.3
Female	6.2	0.0	5.8	0.0	0.0	2.4	4.7	2.1	4.0	10.7	10.2	13.0	16.6	37.9	30.9	62.9	23.0	81.3
<b>Liver &amp; Bile Duct</b>																		
All	0.0	0.0	0.0	0.0	0.0	1.2	1.2	0.0	3.0	3.2	3.8	0.0	14.5	12.2	16.5	16.1	18.3	10.9
Male	0.0	0.0	0.0	0.0	0.0	2.2	2.3	0.0	6.0	4.2	5.0	0.0	16.5	20.2	29.3	14.8	22.7	32.8
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.5	0.0	12.4	4.7	5.2	17.2	15.4	0.0
<b>Lung &amp; Bronchus</b>																		
All	0.0	0.0	0.0	0.0	0.0	1.2	0.0	5.2	5.0	24.4	37.6	76.8	140.5	254.2	331.8	341.7	320.4	190.2
Male	0.0	0.0	0.0	0.0	0.0	2.2	0.0	2.0	6.0	27.5	49.6	62.2	144.6	302.8	421.9	517.6	373.8	311.8
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	4.0	21.3	25.4	91.3	136.5	208.6	252.6	205.8	284.2	130.0
<b>Melanoma of the Skin</b>																		
All	0.0	0.0	0.9	0.0	6.3	3.4	11.6	15.5	22.0	25.5	30.1	35.9	41.3	63.6	54.9	64.5	54.9	70.7
Male	0.0	0.0	1.8	0.0	8.0	0.0	11.3	12.2	19.9	23.3	49.6	36.0	53.7	90.8	64.5	66.6	68.0	114.9
Female	0.0	0.0	0.0	0.0	4.4	7.2	11.9	18.7	24.0	27.7	10.2	35.9	29.0	37.9	46.4	62.9	46.1	48.8
<b>Myeloma</b>																		
All	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.0	1.0	2.1	7.5	8.2	12.4	24.4	11.0	41.9	36.6	48.9
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.1	9.9	6.6	20.7	25.2	17.6	59.2	34.0	49.2
Female	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	2.1	5.1	9.8	4.1	23.7	5.2	28.6	38.4	48.8
<b>Non-Hodgkin's Lymphoma</b>																		
All	0.0	1.9	0.0	2.7	2.1	5.7	2.3	4.1	9.0	17.0	21.3	39.2	43.4	56.2	87.8	77.4	109.8	97.8
Male	0.0	3.8	0.0	3.5	4.0	8.9	0.0	8.2	12.0	21.2	17.4	26.2	57.8	60.6	82.0	81.3	124.6	131.3
Female	0.0	0.0	0.0	1.8	0.0	2.4	4.7	0.0	6.0	12.8	25.4	52.2	29.0	52.2	92.8	74.3	99.9	81.3

IDAHO		AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER																2001	
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	1.0	0.0	0.0	0.0	0.0	5.8	4.1	9.0	11.7	15.1	27.8	28.9	36.7	41.1	67.7	36.6	38.1
Male		0.0	0.0	0.0	0.0	0.0	0.0	2.3	4.1	12.0	19.0	27.3	42.6	37.2	65.6	58.6	118.3	56.6	49.2
Female		0.0	2.0	0.0	0.0	0.0	0.0	9.5	4.2	6.0	4.3	2.5	13.0	20.7	9.5	25.8	28.6	23.0	32.5
Ovary																			
Female		0.0	0.0	0.0	1.8	4.4	0.0	2.4	0.0	6.0	8.5	20.3	22.8	33.1	42.7	56.7	85.7	53.8	65.0
Pancreas																			
All		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	3.2	11.3	21.2	14.5	34.2	46.6	64.5	54.9	119.6
Male		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	6.4	9.9	26.2	12.4	30.3	58.6	81.3	79.3	114.9
Female		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	12.7	16.3	16.6	37.9	36.1	51.4	38.4	121.9
Prostate																			
Male		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	29.6	148.8	415.9	574.1	883.2	996.2	1064.9	985.4	836.9
Rectum & Rectosigmoid																			
All		0.0	0.0	0.0	0.0	0.0	2.3	0.0	2.1	4.0	7.4	8.8	24.5	24.8	58.7	60.3	58.0	77.8	81.5
Male		0.0	0.0	0.0	0.0	0.0	2.2	0.0	2.0	4.0	8.5	9.9	32.8	28.9	80.8	82.0	81.3	135.9	82.1
Female		0.0	0.0	0.0	0.0	0.0	2.4	0.0	2.1	4.0	6.4	7.6	16.3	20.7	37.9	41.2	40.0	38.4	81.3
Stomach																			
All		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	1.0	5.3	1.3	9.8	10.3	19.6	8.2	45.1	27.5	27.2
Male		0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	8.5	2.5	13.1	8.3	25.2	17.6	74.0	34.0	32.8
Female		0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.0	2.1	0.0	6.5	12.4	14.2	0.0	22.9	23.0	24.4
Testis																			
Male		0.0	0.0	0.0	1.8	8.0	6.7	11.3	8.2	8.0	16.9	9.9	0.0	0.0	0.0	0.0	0.0	11.3	0.0
Thyroid																			
All		0.0	0.0	0.0	4.4	3.1	8.0	16.2	14.4	16.0	10.6	17.6	21.2	8.3	17.1	11.0	9.7	18.3	0.0
Male		0.0	0.0	0.0	0.0	0.0	4.4	4.5	4.1	4.0	4.2	7.4	19.7	0.0	25.2	11.7	0.0	22.7	0.0
Female		0.0	0.0	0.0	9.0	6.5	11.9	28.5	25.0	28.0	17.1	27.9	22.8	16.6	9.5	10.3	17.2	15.4	0.0

## SECTION V

### 2001 OBSERVED VS. EXPECTED NUMBERS BY HEALTH DISTRICT

# 2001 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	969	836.3*	443	482.0	801	855.6	1377	1250.5*	707	740.8	523	631.7*	528	603.5*
Bladder	48	39.5	16	24.5	41	41.4	65	56.1	37	36.0	26	30.0	22	28.5
Brain	12	10.7	5	5.9	12	11.2	22	17.5	4	10.3+	6	8.9	12	8.0
Breast	148	128.9	64	72.4	111	129.8	232	191.8*	95	113.0	100	93.0	77	92.7
Cervix	8	5.4	1	3.2	8	5.5	10	11.5	6	4.7	3	4.6	3	4.5
Colon	67	62.6	43	36.2	68	63.8	92	90.6	58	55.9	34	47.9+	37	43.9
Endometrium	27	18.9	6	11.5	27	18.0+	27	31.6	14	17.4	5	15.5*	16	13.6
Esophagus	9	7.9	3	4.6	9	7.6	10	12.2	13	5.8*	3	6.0	3	5.8
Hodgkin's lymphoma	7	6.5	3	3.8	5	7.4	14	12.3	11	5.1*	5	5.8	3	6.5
Kidney and renal pelvis	37	21.3*	7	13.5	19	24.0	44	32.7+	17	20.8	7	18.4*	18	16.3
Larynx	9	6.7	7	3.6	4	7.4	9	10.6	9	5.4	1	5.5	4	4.9
Leukemia	33	21.8*	10	13.2	24	23.6	35	36.3	17	20.8	9	18.5+	23	16.0
Liver & bile duct	4	6.8	2	3.7	7	6.1	14	8.2+	3	5.8	6	4.4	4	4.4
Lung and bronchus	140	91.0*	51	56.3	109	95.3	154	135.9	79	86.3	32	75.6*	49	69.5+
Melanoma of skin	35	37.2	16	20.5	27	37.8	63	60.1	26	32.0	29	26.7	21	27.1
Myeloma	13	9.9	3	6.4	12	10.4	24	13.0*	2	10.4*	6	7.9	6	7.3
Non-Hodgkin's lymphoma	32	36.1	20	19.9	38	34.7	51	55.0	31	30.6	20	26.7	33	23.9
Oral cavity and pharynx	20	22.4	10	12.2	18	22.0	23	37.6+	28	17.2*	22	15.0	15	15.4
Ovary	18	12.2	9	7.4	10	13.8	20	20.0	3	12.8*	7	10.0	17	8.4*
Pancreas	24	17.9	10	11.1	14	20.0	38	24.0*	10	17.6	9	14.2	14	12.6
Prostate	136	161.7+	99	86.5	124	158.5*	237	214.4	132	133.9	125	109.3	89	108.5
Rectum & rectosigmoid	31	21.6+	15	12.9	25	22.4	24	36.6+	26	19.0	13	17.1	10	16.4
Stomach	19	7.3*	5	5.2	10	9.0	12	14.1	8	7.9	2	7.2	2	6.9
Testis	5	4.6	2	2.6	3	5.2	13	8.7	3	4.2	7	3.4	1	4.3
Thyroid	18	17.2	4	9.7	18	17.3	47	27.2*	14	14.8	3	14.6*	14	13.4

+ Statistically significant difference at p=0.05 or less.

\* Statistically significant difference at p=0.01 or less.

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



# 2001 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	498	459.0	253	262.6	420	452.3	709	639.9*	383	397.2	295	335.1+	269	324.5*
Bladder	35	31.8	10	19.7+	32	31.6	54	40.8+	29	28.1	20	23.4	18	22.3
Brain	9	7.8	3	4.4	8	7.9	15	12.4	4	7.3	4	6.3	9	5.5
Breast	3	2.4	2	1.4	2	2.5	4	3.2	1	2.3	1	1.8	2	1.6
Cervix	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colon	24	30.6	19	16.8	37	27.5	44	39.9	26	25.5	14	21.9	18	20.3
Endometrium	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Esophagus	5	6.0	2	3.3	6	5.5	9	8.2	9	4.2+	3	4.2	2	4.2
Hodgkin's lymphoma	5	2.9	3	1.8	4	3.5	5	7.0	4	2.8	1	3.1	2	3.2
Kidney and renal pelvis	24	13.4*	4	8.6	11	14.8	25	21.1	13	12.6	3	11.7+	13	10.1
Larynx	6	5.3	6	2.7+	2	5.7	6	7.8	8	4.0+	1	4.2	3	3.7
Leukemia	20	12.1+	5	7.5	12	13.4	22	19.2	7	12.2	5	10.5	14	8.9
Liver & bile duct	4	4.5	1	2.7	4	4.3	9	6.0	2	4.0	6	2.9	2	3.2
Lung and bronchus	79	52.3*	34	32.2	64	52.6	75	76.4	46	48.7	20	42.5*	27	39.6+
Melanoma of skin	22	20.5	10	11.5	15	20.7	36	32.4	9	18.7+	17	14.7	14	14.8
Myeloma	7	5.5	0	3.6	7	5.3	13	7.0+	1	5.6	4	4.1	4	3.9
Non-Hodgkin's lymphoma	15	18.7	11	10.2	21	17.1	26	27.9	19	15.0	13	13.3	9	13.3
Oral cavity and pharynx	13	16.4	8	8.7	14	15.0	18	25.2	16	12.7	15	10.7	11	10.9
Ovary	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pancreas	10	9.6	5	5.7	9	9.6	16	12.7	8	8.4	6	7.0	6	6.6
Prostate	136	165.6*	99	88.9	124	156.6*	237	207.0+	132	134.6	125	109.8	89	109.4
Rectum & rectosigmoid	23	12.5*	7	8.1	14	13.4	17	20.5	11	12.3	9	10.1	5	10.1
Stomach	10	5.1+	4	3.3	5	5.9	10	7.9	5	5.1	1	4.6	2	4.4
Testis	5	4.5	2	2.7	3	5.2	13	8.9	3	4.2	7	3.4+	1	4.3
Thyroid	6	4.0	2	2.3	4	4.2	8	7.4	5	3.4	0	3.5	3	3.1

+ Statistically significant difference at p=0.05 or less.

\* Statistically significant difference at p=0.01 or less.

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

# 2001 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	471	381.7*	190	221.7+	381	402.5	668	600.7*	324	345.0	228	297.4*	259	279.9
Bladder	13	8.2	6	5.3	9	9.6	11	14.0	8	8.2	6	6.7	4	6.4
Brain	3	3.0	2	1.5	4	3.2	7	5.0	0	3.1	2	2.6	3	2.5
Breast	145	125.3	62	69.7	109	128.7	228	190.4*	94	110.6	99	91.0	75	90.7
Cervix	8	5.5	1	3.1	8	5.5	10	11.3	6	4.7	3	4.6	3	4.5
Colon	43	32.0	24	19.4	31	36.4	48	50.9	32	30.3	20	25.6	19	23.7
Endometrium	27	18.7	6	11.3	27	18.2+	27	32.0	14	17.4	5	15.5*	16	13.5
Esophagus	4	1.9	1	1.3	3	2.1	1	3.9	4	1.6	0	1.8	1	1.6
Hodgkin's lymphoma	2	3.6	0	2.0	1	3.9	9	5.4	7	2.3*	4	2.7	1	3.3
Kidney and renal pelvis	13	8.0	3	5.0	8	9.1	19	11.5+	4	8.2	4	6.7	5	6.2
Larynx	3	1.5	1	0.9	2	1.6	3	2.6	1	1.5	0	1.4	1	1.2
Leukemia	13	9.8	5	5.7	12	10.2	13	17.0	10	8.7	4	8.1	9	7.0
Liver & bile duct	0	2.3	1	1.0	3	1.7	5	2.2	1	1.8	0	1.6	2	1.2
Lung and bronchus	61	39.0*	17	24.5	45	42.7	79	57.9*	33	37.8	12	33.1*	22	30.0
Melanoma of skin	13	16.8	6	9.0	12	17.1	27	27.6	17	13.4	12	12.0	7	12.3
Myeloma	6	4.4	3	2.8	5	5.0	11	6.0+	1	4.8	2	3.8	2	3.4
Non-Hodgkin's lymphoma	17	17.4	9	9.8	17	17.6	25	27.0	12	15.6	7	13.3	24	10.6*
Oral cavity and pharynx	7	6.1	2	3.6	4	6.9	5	12.1+	12	4.5*	7	4.4	4	4.6
Ovary	18	12.1	9	7.2	10	13.9	20	20.3	3	12.7*	7	10.0	17	8.3*
Pancreas	14	8.3+	5	5.4	5	10.4	22	11.1*	2	9.2+	3	7.2	8	6.0
Prostate	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rectum & rectosigmoid	8	9.2	8	5.0	11	8.9	7	15.8+	15	6.8*	4	7.0	5	6.4
Stomach	9	2.2*	1	2.0	5	3.1	2	6.0	3	2.8	1	2.6	0	2.5
Testis	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thyroid	12	13.4	2	7.3	14	13.2	39	19.6*	9	11.4	3	11.2+	11	10.4

+ Statistically significant difference at p=0.05 or less.

\* Statistically significant difference at p=0.01 or less.

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

## **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 <u>developing cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 80	1 in 23	1 in 9.4	1 in 4.8	1 in 3	1 in 2.2
40		1 in 31	1 in 10	1 in 5	1 in 3	1 in 2.2
50			1 in 15	1 in 5.6	1 in 3.2	1 in 2.3
60				1 in 8.2	1 in 3.7	1 in 2.5
70					1 in 5.6	1 in 2.9
80						1 in 4*

If your current age is:	Then your risk of <u>dying from cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 534	1 in 126	1 in 39	1 in 15	1 in 8	1 in 5.1
40		1 in 164	1 in 41	1 in 16	1 in 8	1 in 5.1
50			1 in 54	1 in 17	1 in 8.3	1 in 5.2
60				1 in 23	1 in 9.4	1 in 5.5
70					1 in 14	1 in 6.4
80						1 in 8.7*

### For Males

If your current age is:	Then your risk of <u>developing cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 136	1 in 40	1 in 12	1 in 4.4	1 in 2.5	1 in 1.9
40		1 in 55	1 in 12	1 in 4.4	1 in 2.5	1 in 1.9
50			1 in 15	1 in 4.6	1 in 2.5	1 in 1.9
60				1 in 5.9	1 in 2.6	1 in 1.9
70					1 in 3.5	1 in 2.1
80						1 in 2.6*

If your current age is:	Then your risk of <u>dying from cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 759	1 in 153	1 in 40	1 in 14	1 in 6.6	1 in 4.3
40		1 in 189	1 in 41	1 in 14	1 in 6.5	1 in 4.2
50			1 in 51	1 in 14	1 in 6.6	1 in 4.2
60				1 in 19	1 in 7.1	1 in 4.3
70					1 in 9.6	1 in 4.7
80						1 in 5.9*

Note: \* Risks are not precise - best estimates are shown.

## Risks of Developing and Dying from Cancer

### Female Breast Cancer

If your current age is:	Then your risk of <u>developing breast cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
<b>30</b>	1 in 252	1 in 58	1 in 23	1 in 13	1 in 8.7	1 in 7.1
<b>40</b>		1 in 74	1 in 25	1 in 13	1 in 8.9	1 in 7.2
<b>50</b>			1 in 37	1 in 16	1 in 9.9	1 in 7.7
<b>60</b>				1 in 26	1 in 13	1 in 9.2
<b>70</b>					1 in 21	1 in 12
<b>80</b>						1 in 21*

If your current age is:	Then your risk of <u>dying from breast cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
<b>30</b>	1 in 2250	1 in 424	1 in 142	1 in 76	1 in 47	1 in 32
<b>40</b>		1 in 518	1 in 151	1 in 78	1 in 48	1 in 33
<b>50</b>			1 in 209	1 in 90	1 in 52	1 in 34
<b>60</b>				1 in 152	1 in 66	1 in 39
<b>70</b>					1 in 104	1 in 47
<b>80</b>						1 in 65*

### Prostate Cancer

If your current age is:	Then your risk of <u>developing prostate cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
<b>30</b>	1 in 23771	1 in 546	1 in 46	1 in 13	1 in 7	1 in 5.7
<b>40</b>		1 in 550	1 in 45	1 in 13	1 in 6.9	1 in 5.6
<b>50</b>			1 in 48	1 in 12	1 in 6.8	1 in 5.5
<b>60</b>				1 in 16	1 in 7.2	1 in 5.7
<b>70</b>					1 in 11	1 in 7
<b>80</b>						1 in 12*

If your current age is:	Then your risk of <u>dying from prostate cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
<b>30</b>	1 in *	1 in 46285	1 in 1711	1 in 243	1 in 70	1 in 27
<b>40</b>		1 in 45556	1 in 1684	1 in 239	1 in 69	1 in 27
<b>50</b>			1 in 1699	1 in 233	1 in 68	1 in 26
<b>60</b>				1 in 254	1 in 66	1 in 25
<b>70</b>					1 in 75	1 in 23
<b>80</b>						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 <u>developing colon/rectal cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 2747	1 in 614	1 in 161	1 in 59	1 in 29	1 in 18
40		1 in 783	1 in 169	1 in 60	1 in 29	1 in 18
50			1 in 212	1 in 64	1 in 30	1 in 18
60				1 in 87	1 in 33	1 in 19
70					1 in 48	1 in 21
80						1 in 28*

If your current age is:	Then your risk of <u>dying from colon/rectal cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 7094	1 in 2360	1 in 536	1 in 208	1 in 101	1 in 48
40		1 in 3506	1 in 575	1 in 213	1 in 101	1 in 48
50			1 in 676	1 in 223	1 in 103	1 in 47
60				1 in 318	1 in 116	1 in 49
70					1 in 163	1 in 52
80						1 in 57*

### Colon/Rectal Cancer in Males

If your current age is:	Then your risk of <u>developing colon/rectal cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 2677	1 in 507	1 in 140	1 in 48	1 in 25	1 in 18
40		1 in 616	1 in 145	1 in 48	1 in 25	1 in 18
50			1 in 185	1 in 51	1 in 25	1 in 18
60				1 in 65	1 in 27	1 in 18
70					1 in 39	1 in 21
80						1 in 31*

If your current age is:	Then your risk of <u>dying from colon/rectal cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 11345	1 in 1627	1 in 431	1 in 146	1 in 69	1 in 42
40		1 in 1870	1 in 441	1 in 146	1 in 69	1 in 42
50			1 in 560	1 in 154	1 in 69	1 in 41
60				1 in 199	1 in 74	1 in 42
70					1 in 99	1 in 45
80						1 in 53*

Note: \* Risks are not precise - best estimates are shown.

## Risks of Developing and Dying from Cancer

### Melanoma in Females

If your current age is:	Then your risk of <u>developing melanoma</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
<b>30</b>	1 in 763	1 in 294	1 in 174	1 in 112	1 in 81	1 in 66
<b>40</b>		1 in 472	1 in 223	1 in 130	1 in 90	1 in 71
<b>50</b>			1 in 414	1 in 176	1 in 109	1 in 83
<b>60</b>				1 in 293	1 in 142	1 in 99
<b>70</b>					1 in 247	1 in 133
<b>80</b>						1 in 215*

If your current age is:	Then your risk of <u>dying from melanoma</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
<b>30</b>	1 in 23237	1 in 7954	1 in 2280	1 in 1415	1 in 688	1 in 455
<b>40</b>		1 in 11989	1 in 2506	1 in 1494	1 in 703	1 in 460
<b>50</b>			1 in 3116	1 in 1678	1 in 735	1 in 471
<b>60</b>				1 in 3489	1 in 923	1 in 532
<b>70</b>					1 in 1119	1 in 560
<b>80</b>						1 in 841*

### Melanoma in Males

If your current age is:	Then your risk of <u>developing melanoma</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
<b>30</b>	1 in 703	1 in 277	1 in 135	1 in 80	1 in 58	1 in 47
<b>40</b>		1 in 449	1 in 164	1 in 88	1 in 62	1 in 49
<b>50</b>			1 in 251	1 in 107	1 in 70	1 in 54
<b>60</b>				1 in 174	1 in 90	1 in 64
<b>70</b>					1 in 156	1 in 85
<b>80</b>						1 in 120*

If your current age is:	Then your risk of <u>dying from melanoma</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
<b>30</b>	1 in 5175	1 in 1695	1 in 945	1 in 475	1 in 310	1 in 234
<b>40</b>		1 in 2481	1 in 1138	1 in 514	1 in 325	1 in 242
<b>50</b>			1 in 2044	1 in 631	1 in 364	1 in 260
<b>60</b>				1 in 856	1 in 415	1 in 279
<b>70</b>					1 in 678	1 in 350
<b>80</b>						1 in 467*

Note: \* Risks are not precise - best estimates are shown.





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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 (ICD-O-2) 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

<b>SITE CATEGORY</b> Categories in SMALL CAPITALS are aggregated from the groups indented under them	<b>PRIMARY SITE CODE (ICD-O-2)</b> 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

<b>SITE CATEGORY</b> <b>Categories in SMALL CAPITALS are aggregated from the groups indented under them</b>	<b>PRIMARY SITE CODE (ICD-O-2)</b> <b>EXCLUDES histologic types 9590-9989</b>
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

<b>SITE CATEGORY</b> Categories in SMALL CAPITALS are aggregated from the groups indented under them	<b>PRIMARY SITE CODE</b> 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

<b>SITE CATEGORY</b> Categories in SMALL CAPITALS are aggregated from the groups indented under them	<b>PRIMARY SITE CODE</b>	<b>HISTOLOGY</b>
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 - 9595 9670 - 9717, 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 - 9719 ONLY  Types: 9823, 9827 For All Other Sites Except C42.0, C42.1, C42.4
MULTIPLE MYELOMA	For All Sites	Types: 9731 - 9732 ONLY



<b>SITE CATEGORY</b> Categories in SMALL CAPITALS are aggregated from groups indented under them	<b>HISTOLOGY</b>
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, and 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

<b>SITE CATEGORY</b> <b>Categories in SMALL CAPITALS are aggregated from groups indented under them</b>	<b>PRIMARY SITE CODE</b> <b>EXCLUDES histologic types 9590-9989</b>
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. <sup>14</sup>

## 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, 2001. <sup>11</sup>



## APPENDIX C

### 2001 POPULATION BY HEALTH DISTRICT, GENDER, AND AGE GROUP

	HD 1	HD 2	HD 3	HD 4	HD 5	HD 6	HD 7	STATE
<b>Males</b>								
< 5	6,103	2,829	8,713	13,821	6,356	6,750	6,602	51,174
5 to 9	6,847	3,160	8,918	13,901	6,614	6,605	6,947	52,992
10 to 14	7,489	3,344	8,447	13,814	7,008	7,210	7,509	54,821
15 to 19	7,168	4,633	8,405	13,390	7,360	7,575	8,679	57,210
20 to 24	4,867	5,042	6,856	13,970	5,420	6,266	7,442	49,863
25 to 29	5,038	3,428	6,977	14,955	5,001	5,193	4,540	45,132
30 to 34	5,422	2,981	6,811	14,860	5,023	4,524	4,502	44,123
35 to 39	6,522	3,311	7,197	15,681	5,844	4,993	5,463	49,011
40 to 44	7,146	3,633	6,874	14,951	6,224	5,575	5,794	50,197
45 to 49	7,356	3,662	6,404	13,204	5,800	5,401	5,432	47,259
50 to 54	6,669	3,234	5,566	11,133	4,881	4,445	4,389	40,317
55 to 59	5,064	2,547	4,513	7,604	3,957	3,362	3,491	30,538
60 to 64	4,234	2,211	3,658	5,356	3,192	2,794	2,765	24,210
65 to 69	3,482	1,823	3,020	4,254	2,683	2,344	2,209	19,815
70 to 74	2,939	1,635	2,667	3,525	2,385	2,027	1,887	17,065
75 to 79	2,070	1,322	2,264	2,849	1,953	1,530	1,535	13,523
80 to 84	1,311	894	1,476	1,811	1,396	1,027	914	8,829
85+	927	624	1,103	1,201	971	706	562	6,094
<b>Total</b>	<b>90,654</b>	<b>50,313</b>	<b>99,869</b>	<b>180,280</b>	<b>82,068</b>	<b>78,327</b>	<b>80,662</b>	<b>662,173</b>
	HD 1	HD 2	HD 3	HD 4	HD 5	HD 6	HD 7	STATE
<b>Females</b>								
< 5	5,765	2,675	8,377	13,337	5,937	6,330	6,250	48,671
5 to 9	6,358	2,933	8,422	13,034	6,351	6,370	6,504	49,972
10 to 14	6,987	3,266	8,094	12,942	6,706	6,862	7,121	51,978
15 to 19	6,578	4,194	7,734	12,871	6,675	7,420	10,248	55,720
20 to 24	4,707	4,284	6,702	12,766	4,778	6,397	6,328	45,962
25 to 29	4,984	2,803	6,835	13,160	4,696	5,065	4,424	41,967
30 to 34	5,597	2,751	6,425	13,416	4,862	4,567	4,536	42,154
35 to 39	6,798	3,307	7,035	14,548	5,742	5,205	5,382	48,017
40 to 44	7,629	3,673	6,867	14,391	6,053	5,656	5,689	49,958
45 to 49	7,553	3,548	6,435	13,134	5,706	5,217	5,264	46,857
50 to 54	6,492	3,078	5,591	10,525	4,963	4,356	4,374	39,379
55 to 59	5,069	2,589	4,693	7,545	3,906	3,355	3,514	30,671
60 to 64	4,032	2,018	3,792	5,575	3,263	2,795	2,699	24,174
65 to 69	3,474	1,904	3,291	4,697	2,960	2,504	2,265	21,095
70 to 74	3,079	1,718	3,207	4,253	2,775	2,160	2,209	19,401
75 to 79	2,700	1,584	2,864	4,042	2,416	2,016	1,874	17,496
80 to 84	1,863	1,238	2,219	2,941	1,930	1,520	1,309	13,020
85+	1,816	1,283	2,104	2,757	1,776	1,402	1,167	12,305
<b>Total</b>	<b>91,481</b>	<b>48,846</b>	<b>100,687</b>	<b>175,934</b>	<b>81,495</b>	<b>79,197</b>	<b>81,157</b>	<b>658,797</b>
<b>Total</b>	<b>182,135</b>	<b>99,159</b>	<b>200,556</b>	<b>356,214</b>	<b>163,563</b>	<b>157,524</b>	<b>161,819</b>	<b>1,320,970</b>

Source: Bureau of Health Policy and Vital Statistics, 2003.