Annual Report of the

Cancer Data Registry of Idaho

Cancer in Idaho – 2009

December 2011

CDRI Cancer Data Registry of Idaho

Idaho Hospital Association

IDAHO DEPARTMENT OF HEALTH & WELFARE

CANCER IN IDAHO - 2009

December 2011

A Publication of the
Cancer Data Registry of Idaho

PREFACE

"Cancer in Idaho - 2009," the thirty-third annual report of the Cancer Data Registry of Idaho (CDRI), contains data on cancer cases diagnosed during 2009 among Idaho residents. These data can be used by public health officials, hospital administrators, physicians, the Comprehensive Cancer Alliance for Idaho, and others to effectively plan services, prioritize health resource allocations, develop and measure prevention and intervention strategies, and identify high risk populations within the state of Idaho.

ACKNOWLEDGMENTS

SUGGESTED CITATION:
Johnson CJ, Carson SL. *Cancer in Idaho, 2009.* Boise, ID: Cancer Data Registry of Idaho; December 2010.

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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.

CDRI works closely with the Comprehensive Cancer Alliance for Idaho (CCAI), the Idaho Comprehensive Cancer Control Program, and other organizations to lessen the burden of cancer in Idaho.

History and Funding of the Registry

CDRI was established in 1969 and became population-based in 1971. The Idaho State Legislature has provided guidelines for the establishment, requirements, and funding of the statewide cancer registry. The operations of the registry are mandated by Idaho Code 57-1703 through 57-1707. Funding is appropriated in Idaho Code 57-1701 and 63-2520, which delineates a portion (less than one percent) of the cigarette tax to be dedicated to fund the statewide cancer registry. Through the National Program of Cancer Registries (NPCR), additional funding has been awarded to CDRI from the Centers for Disease Control and Prevention (CDC) to enhance timely, complete and accurate data collection, computerization, and reporting of reliable data.

Collection of Data

Each Idaho hospital, outpatient surgery center, and pathology laboratory is responsible for the complete ascertainment of all data on cancer diagnoses and treatments provided in its facility within six months of diagnosis. Sources for identifying eligible cases include:

◆ hospitals,
◆ outpatient surgery centers,
◆ private pathology laboratories,
◆ free-standing radiation centers,
◆ physicians (for patients not receiving cancer diagnoses and/or treatment in the above sources),
◆ death certificates, and
◆ other state cancer registries reporting an Idaho resident with cancer (as negotiated).

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

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

Reported cases contain the following data:

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

Primary site, behavior, grade, and histology were coded according to the *International Classification of Diseases for Oncology, 3rd edition*.[2] Stage of disease variables were coded using SEER's *Summary Staging Manual 2000*, the *AJCC Manual for Staging of Cancer, 6th edition*, and the *Collaborative Staging Manual, Version 1.04*.[3,4,5] SEER Summary Stage was derived from Collaborative Staging variables. All other variables were coded following the rules of the North American Association of Central Cancer Registries (NAACCR), the National Cancer Institute's SEER program, and the American College of Surgeons Commission on Cancer.[6-8] Beginning with cases diagnosed in 2007, new rules for coding multiple primaries and histologies were applied.[9] These rules standardize the process of determining the number of primary cases and provide guidance for identifying histologic lineages.

Reportable Cases

All in-situ or malignant neoplasms are reportable to CDRI. The database includes all cases of carcinoma, sarcoma, melanoma, lymphoma, and leukemia, diagnosed by histology/cytology, radiology, laboratory testing, clinical observation, and autopsy.

Also reportable are benign tumors of the brain, meninges, pineal gland, and pituitary gland.

Basal and squamous cell carcinomas of the skin are excluded except when occurring on a mucous membrane or if the AJCC stage group is II, III, or IV.

Under Idaho Code and as recommended by NAACCR, cervix in-situ cases are not currently reportable.

Confidentiality of Data

Idaho state law ensures the protection of confidential data and restricts the release of identifying data. Only aggregate data are published. The same law protects report sources from any liability for reporting confidential data to CDRI. Persons with access to confidential data are required to sign a pledge of confidentiality and are subject to penalty if they, through negligence or willful misconduct, disclose confidential data.

Quality Assurance

To assure validity and reliability of data presented, CDRI has many mechanisms in place to check data for quality and completeness. CDRI uses GenEDITS Plus software which has standard edits using algorithms that check the content of data fields against an encoded set of acceptable possible contents and flags the acceptability of coded data. Edits include field edits, inter-field edits, and inter-record edits. Edits check for unlikely sex/site, site/histology and site/age combinations. In addition to computerized edits, cases are manually reviewed for errors.

Records are also routinely checked for duplicate entries. Duplicate case checking is performed both manually and electronically using several methodologies.

CDRI has met NPCR program standards and is recognized as a "gold standard registry" for quality, completeness and timeliness as designated by NAACCR. These designations enable Idaho data to be included in *United States Cancer Statistics* and all NAACCR volumes of *"Cancer Incidence in North America."*

Executive Summary

Data Presentation

This report is comprised of seven sections. Section I focuses on the 23 most common cancer sites and all sites combined and presents age-adjusted incidence rates, numbers of cases, numbers of deaths, counts by county, stage of disease at time of diagnosis, risk factors, special notes, age-adjusted incidence rate comparisons by health district, and age-specific rates by gender. Comparison rates from the National Cancer Institute's SEER program and the Centers for Disease Control and Prevention's National Program of Cancer Registries (NPCR)[10] are provided. Only registries whose data meet specified data quality criteria are included in NPCR statistics. For the latest NPCR data (2008 incidence), all areas except the District of Columbia and Virginia are included. The SEER and NPCR data combined represent approximately 97% of the U.S. population. Section II depicts incidence data by site and gender for invasive and in-situ cases. Section III depicts mortality data by site and gender. Section IV contains a table of age-specific cancer rates, per 100,000, by site and gender. Section V contains a table of observed versus expected numbers of cancer cases by health district. For more detailed statistics by county, see CDRI's County Cancer Profiles at www.idcancer.org. Section VI contains tables of age-specific risks of developing and dying from cancer for males and females. Section VII shows cancer incidence trends in Idaho for the period 1975-2009.

Descriptive Summary by Gender and Race and Ethnicity

The data presented in this report cover cancer cases diagnosed among Idaho residents between January 1, 2009, and December 31, 2009. In this time frame, there were 7,669 cases of in-situ and invasive cancer diagnosed among Idaho residents (3,971 among males and 3,698 among females). By race and ethnicity, there were 7,102 cases among non-Hispanic whites, 214 among Hispanic whites, 22 cases among Blacks, 62 cases among Native Americans, and 56 cases among Asians/Pacific Islanders. Two hundred thirteen cases were coded as other or missing race. The number of cancer cases treated in outpatient settings and reported only by pathology laboratories has increased over the last several years. CDRI has conducted matches with the Indian Health Service and Northwest Portland Area Indian Health Board to improve the accuracy of race information collected on Native Americans, and uses the NAACCR Hispanic Identification Algorithm to identify Hispanics by birthplace/race/surname. For more detailed statistics by race and ethnicity, see Cancer in Idaho by Race and Ethnicity: 1990-2001.[11]

Trends

There was a 0.5% decrease in the age-adjusted cancer incidence rates as published in the 2008 and 2009 annual reports. There was a notable increase in melanoma incidence that likely reflects improved case reporting from non-hospital sources. The incidence rate of oral cavity and pharynx cancers was the highest observed in more than two decades. See Section VII for more detailed long term trends in cancer incidence.

Population Description

The population of the state of Idaho on July 1, 2009, was estimated to be 1,545,801 (775,918 males and 769,883 females). Population estimates were obtained from the National Center for Health Statistics.[12] Idaho is comprised of 44 counties grouped into seven health districts. The composition of the health districts and their population estimates by gender as used in this report are shown below:

Health District	Counties	Male	Female
District 1	Benewah, Bonner, Boundary, Kootenai, Shoshone	106,365	107,297
District 2	Clearwater, Latah, Lewis, Idaho, Nez Perce	52,855	51,641
District 3	Adams, Canyon, Gem, Owyhee, Payette, Washington	143,508	143,080
District 4	Ada, Boise, Elmore, Valley	217,330	212,317
District 5	Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, Twin Falls	90,828	89,166
District 6	Bannock, Bear Lake, Bingham, Butte, Caribou, Franklin, Oneida, Power	83,123	84,167
District 7	Bonneville, Clark, Custer, Fremont, Jefferson, Lemhi, Madison, Teton	99,721	99,978

SUMMARY MEASURES OF CANCER BURDEN IN IDAHO - 2009

Primary Site	Incident Cases	Deaths	Median Age at Diagnosis	Median Age at Death	Estimated Prevalence Count	Total Number of YPLL Before Age 75	Average Number of YPLL per Death, Persons Aged Less than 75 Years	% Change Incidence Rate 2008 to 2009
All Sites	7,045	2,451	66.0	73.0	52,158	17,077	11.9	-0.5%
Bladder	325	56	71.0	84.0	2,313	122	8.1	-2.0%
Brain	93	75	58.0	63.0	526	1,247	21.1	-15.4%
Breast	977	189	62.0	69.0	10,756	1,733	14.4	1.0%
Cervix	36	16	51.0	65.0	805	197	15.1	-20.1%
Colorectal	612	211	69.0	75.0	4,363	1,292	12.2	-2.5%
Corpus Uteri	198	20	61.0	64.0	2,223	197	16.4	4.7%
Esophagus	67	62	63.0	67.0	140	579	12.1	-12.5%
Hodgkin Lymphoma	40	6	41.5	58.0	711	109	27.3	-20.3%
Kidney	243	58	66.0	67.5	1403	505	11.7	11.2%
Larynx	44	10	70.5	69.5	353	39	4.9	1.6%
Leukemia	226	96	66.0	72.5	1288	705	12.4	7.0%
Liver and Bile Duct	80	55	60.0	63.0	94	536	14.1	8.0%
Lung and Bronchus	776	638	71.0	72.0	1,452	3,840	9.9	-7.8%
Melanoma of Skin	392	57	61.0	66.0	3,766	711	16.2	21.6%
Myeloma	102	55	71.0	77.0	314	216	8.6	15.1%
Non-Hodgkin Lymphoma	286	103	68.0	73.0	1,996	685	12.4	-10.8%
Oral Cavity and Pharynx	216	41	64.5	68.0	1,400	317	11.3	22.5%
Ovary	91	57	63.0	66.0	700	603	14.4	-7.1%
Pancreas	167	156	72.0	73.0	156	971	9.6	0.9%
Prostate	1,120	165	67.0	82.0	11,045	242	5.9	0.9%
Stomach	63	37	71.0	72.0	239	203	9.2	-21.8%
Testis	47	3	38.0	-	926	-	-	4.1%
Thyroid	247	14	48.0	71.5	2,351	121	15.1	-6.4%

Notes:

Incident cases include all invasive and bladder in situ cases newly diagnosed among Idaho residents in 2009.

Cancer prevalence is the number of people alive today who have been diagnosed with cancer. This includes individuals who were newly diagnosed, are in active treatment, have completed active treatment, and those living with progressive symptoms of their disease. Limited-duration prevalence was estimated from long-term incidence and survival rates from 1970 to 2009 but underestimates complete prevalence due to an unknown number of live cases diagnosed prior to 1970.

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

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

Technical Notes

Age-adjusted Incidence Rates

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

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

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

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

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

Of the total number of invasive and in-situ cases for 2009 (7,669), a total of 7,045 cases (6,877 invasive and 168 bladder in-situ) were used for calculating age-adjusted incidence rates. Of the 7,045 cases, 3,754 occurred among males and 3,291 occurred among females.

Age-specific Incidence Rates

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

Observed vs. Expected Numbers of Cases

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

Risk and Associated Factors

The "risk and associated factors" subsections in Section I were developed from extracts of *Cancer Epidemiology and Prevention*, the American Cancer Society's *Clinical Oncology*, and the *U.S. Department of Health and Human Services 11th Report on Carcinogens*.[13-15] Socio-economic status is abbreviated as SES in Section I text.

Mean/Median/Mode

Measures of central tendency are helpful to describe a group of individual values in a simple and concise manner.

Mean, also known as the arithmetic average, is the sum of all observations divided by the number of observations.

Median is the middle value when the observations are ranked in order from the smallest to the largest.

Mode is the value which occurs most frequently in a group of observed values.

Confidence Intervals

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

Cancer Case Definition

A "cancer case" is defined as a primary cancer site (where the cancer started), not a metastatic cancer site (where the cancer spread to). Since an individual can have more than one primary cancer site during their lifetime, the number of incident cancer cases is greater than the number of persons who are diagnosed with cancer.

Limitations to Data Interpretation and Comparison

Rates based on population estimates: In non-census years, state and county population figures are estimates. Errors in the estimates will impact the rates.

Rate comparisons: Age-adjusted incidence rates and age-specific rates based on small numbers of cases (fewer than 10 cases) may be unstable. In comparing rates among geographic areas (counties, health districts, or states), factors such as the absolute numbers of cases and differences in demographics should be considered. Interpretations without consideration of these factors may be misleading or inaccurate.

Racial misclassification: Many source documents used to report cancer do not specify race of the patient, or misclassify race. For more detailed statistics by race and ethnicity, see *Cancer in Idaho by Race and Ethnicity: 1990-2001*.[11]

Standard Site Analyses Categories

To facilitate interpretation of data and comparisons across registries, CDRI uses standardized groupings of site analysis categories. These groupings are consistent with the National Cancer Institute's SEER Program, the Center for Disease Control and Prevention's National Program of Cancer Registries (NPCR), and are adopted by NAACCR.[6,7] Most neoplasms are grouped by the organ where they occur. Neoplasms of the lymphatic, hematopoietic, and reticuloendothelial systems are grouped by their histologies (leukemias, lymphomas, etc.), and not by the anatomic site where they occurred. Melanoma of the skin is a combination of both anatomic site and histologic type. See http://seer.cancer.gov/siterecode/icdo3_d01272003/ for groupings of codes.

NPCR

The Centers for Disease Control and Prevention's National Program of Cancer Registries (NPCR) supports central cancer registries in 45 states (including Idaho), the District of Columbia, Puerto Rico, and the U.S. Pacific Island Jurisdictions. These data represent 96% of the U.S. population.

SEER

Part of the National Cancer Institute, the Surveillance, Epidemiology, and End Results (SEER) program consists of several population-based cancer registries throughout the U.S. SEER cancer statistics are designed to be representative of the U.S. population, and are included for reference in Section I of this report. SEER rates included data from 17 registries and were calculated using SEER*Stat.[16]

Stage at Time of Diagnosis

Staging measures the extent of disease at the time of initial diagnosis. Summary staging attempts to group cases with similar prognoses into categories of:

◆ in-situ (non-invasive),
◆ localized (cancer confined to the primary site),
◆ regional (direct extension of tumor to adjacent organs, and/or lymph nodes),
◆ distant (metastasis to tissues or lymph nodes remote from the primary site), or
◆ unstaged.

Limited-Duration Prevalence

Limited-duration prevalence represents the number of people alive on a certain day who had a diagnosis of the disease within some past number of years. SEER*Stat's prevalence calculations use the counting method to estimate prevalence from incidence and follow-up data. The counting method estimates prevalence by counting the number of persons who are known to be alive at a specific calendar time and adjusting for those lost to follow-up.

Risks of Developing and Dying from Cancer

Cancer incidence and mortality risks were estimated using DEVCAN Version 6.6.0 software.[17] DEVCAN was used to calculate the probability of developing or dying of cancer using Idaho-specific cancer incidence and mortality data for the years 2005-2009. The estimates generated are similar to estimates derived using incidence data from the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute, mortality data from the National Center for Health Statistics, and population estimates from census data. DEVCAN was developed by Information Management Services, Inc. in consultation with the Applied Research Branch of the National Cancer Institute. DEVCAN uses a standard multiple decrement life table.

Trend Analyses

Joinpoint Version 3.5.2 software was used to model trends in age-adjusted cancer incidence rates.[18] For each joinpoint time segment, the estimated annual percent change (EAPC) was calculated by fitting a least squares regression line to the natural logarithm of the rates using calendar year as a covariate. Heteroscedastic errors in annual rates were incorporated into the models based on the standard errors for the rates by primary site category and year. The software used a grid search to find the maximum likelihood estimates of the joinpoints for multiple models (0 to 4 joinpoints) per primary site category and sex. Model selection was performed using Monte Carlo methods.

SECTION I

**2009 SUMMARY ON ALL SITES COMBINED
AND
23 MOST COMMON SITES**

ALL SITES

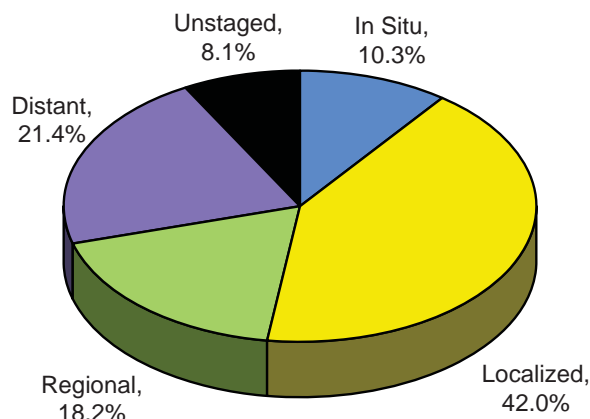## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	452.3	510.4	405.6
# of new invasive cases	6,877	3,624	3,253
# of new in-situ cases	792	347	445
# of deaths	2,451	1,326	1,125

Total Cases by County

County	Cases	County	Cases	County	Cases
Ada	1,861	Cassia	92	Lewis	36
Adams	22	Clark	3	Lincoln	20
Bannock	301	Clearwater	57	Madison	89
Bear Lake	28	Custer	19	Minidoka	97
Benewah	62	Elmore	109	Nez Perce	263
Bingham	192	Franklin	51	Oneida	16
Blaine	83	Fremont	64	Owyhee	55
Boise	48	Gem	134	Payette	110
Bonner	261	Gooding	83	Power	39
Bonneville	460	Idaho	90	Shoshone	98
Boundary	79	Jefferson	94	Teton	29
Butte	15	Jerome	96	Twin Falls	437
Camas	9	Kootenai	871	Valley	74
Canyon	818	Latah	134	Washington	58
Caribou	37	Lemhi	60		

Stage at Diagnosis - All Sites

- Unstaged, 8.1%
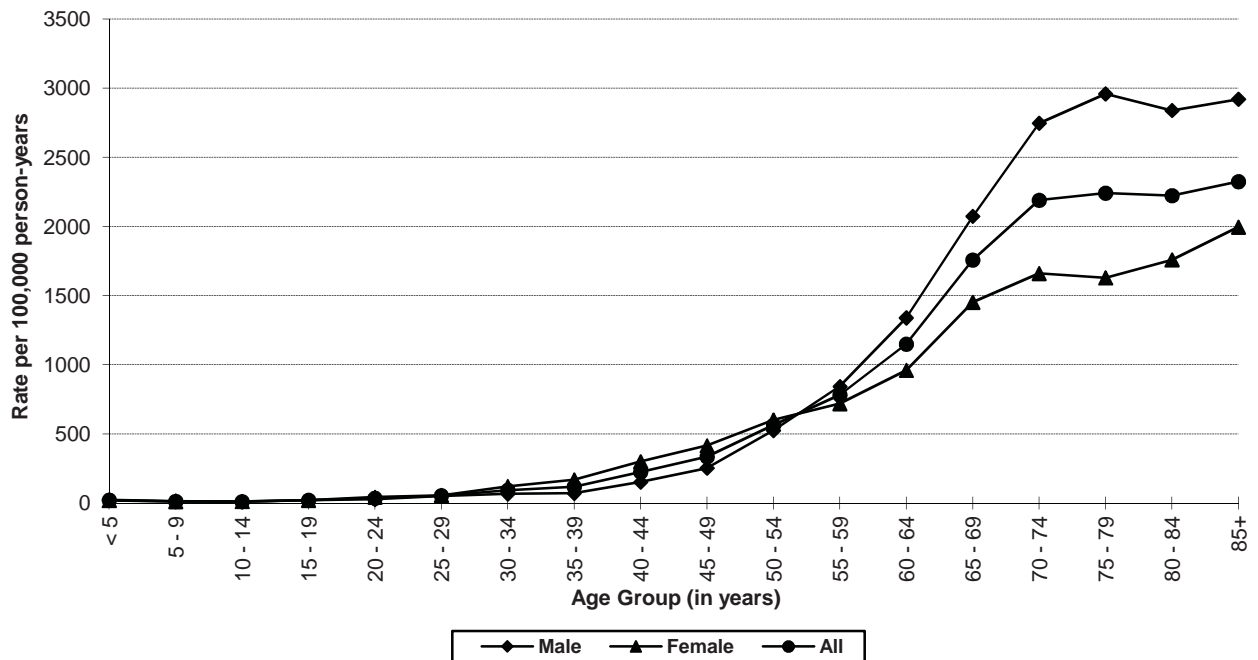- In Situ, 10.3%
- Distant, 21.4%
- Localized, 42.0%
- Regional, 18.2%

Risk and Associated Factors

Age	Rates usually increase steadily with age. Most cases occur among adults in mid-life or older.
Gender	Males have higher incidence rates than females for most cancer types.
Race & SES	Rates are higher for African Americans than for Caucasians and other races. Rates are generally higher among lower income groups.
Occupation	Risk for cancer is greater with some kinds of workplace exposures, such as some chemicals, asbestos, and radiation.
Diet	Diets that are low in fresh fruits and vegetables have been associated with increased incidence of several cancers.
Other	Tobacco use is the single most important risk factor for cancer incidence and mortality. Most cancers manifest a tendency to aggregate in families – close relatives of a cancer patient can be considered to have increased risk of that neoplasm, but not all forms of cancer. Excess risk is usually 2-3 times baseline, but in some (rare) families may be hundreds-fold.

Special Notes

Mean age-adjusted incidence rate across health districts:	442.5
95% confidence interval on the mean age-adjusted incidence rate:	420.3- 464.6
Median age-adjusted incidence rate of health districts:	440.6
Range of age-adjusted incidence rate for health districts:	396.6- 484.4
SEER 17 rate (2008, all races):	456.7
NPCR rate (2008, all races):	462.9

The incidence rates for all cancers combined were similar for males and females in Idaho until approximately age 55-59, after which rates for males rose dramatically. The highest rates for both males and females were observed in age groups after age 70, peaking in the age group 75-79 for males and 85+ for females. Health District 4 had statistically significantly more cases of cancer than expected based upon rates for the remainder of Idaho, and Health Districts 2 and 6 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

Health District	Rate
State	452.3
HD1	468.8
HD2	417.3
HD3	452.9
HD4	484.4
HD5	440.6
HD6	396.6
HD7	436.6
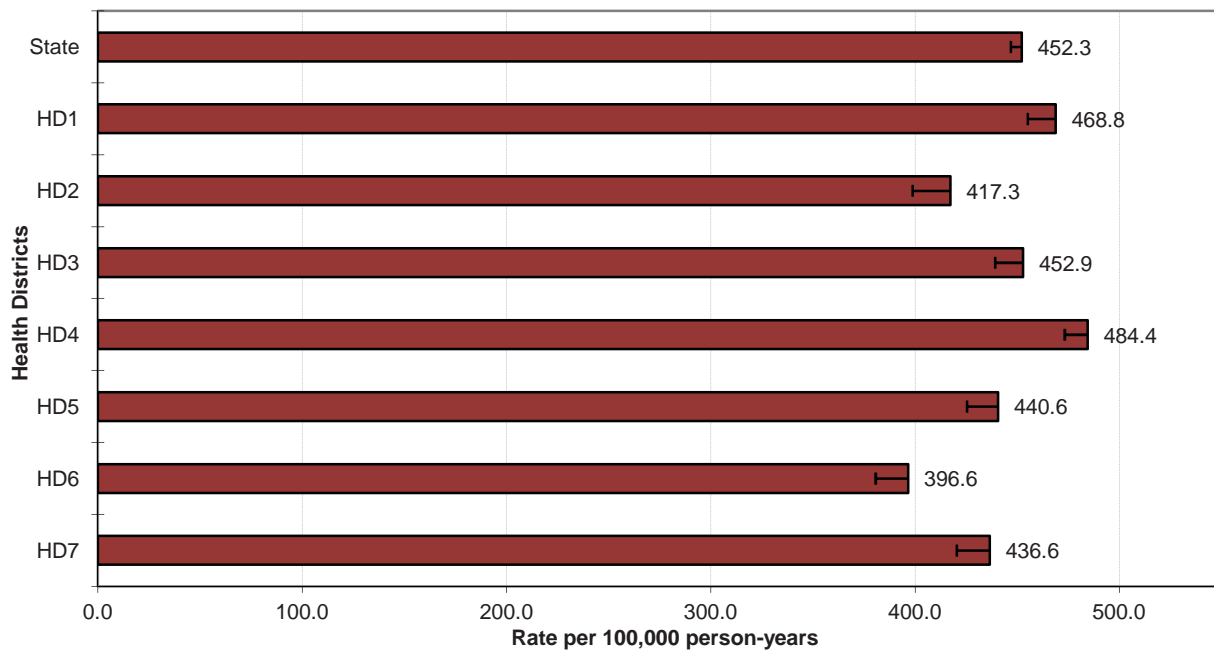
BLADDER

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	21.2	35.8	9.1
# of new invasive cases	157	119	38
# of new in-situ cases	168	130	38
# of deaths	56	42	14

Stage at Diagnosis - Bladder

In Situ, 51.7%
Localized, 29.5%
Regional, 9.8%
Distant, 3.4%
Unstaged, 5.5%

Total Cases by County

Ada	65	Cassia	2	Lewis	1
Adams	-	Clark	-	Lincoln	-
Bannock	20	Clearwater	6	Madison	1
Bear Lake	1	Custer	2	Minidoka	5
Benewah	2	Elmore	7	Nez Perce	15
Bingham	10	Franklin	1	Oneida	1
Blaine	3	Fremont	2	Owyhee	5
Boise	2	Gem	5	Payette	3
Bonner	14	Gooding	3	Power	3
Bonneville	19	Idaho	5	Shoshone	6
Boundary	5	Jefferson	6	Teton	1
Butte	-	Jerome	4	Twin Falls	19
Camas	-	Kootenai	39	Valley	4
Canyon	25	Latah	6	Washington	1
Caribou	3	Lemhi	3		

Risk and Associated Factors

Age	Rates usually increase steadily with age.
Gender	Males have substantially higher rates than females.
Race	Incidence rates are higher in Caucasians.
Occupation	Truck drivers, likely via exposure to motor exhaust, are at increased risk. Occupational exposures, including manufacturers of certain dyes, painters, and aluminum, rubber, cable, and leather workers, have been shown to increase risk of bladder cancer. Exposure to permanent hair dyes may increase risk.
Other	Tobacco consumption has been associated with a 2- to 5-fold higher incidence of bladder cancer and is attributable for a greater number of cases than other risk factors. Cyclophosphamide, a chemotherapeutic agent, and 4-amino-diphenyl are known human bladder carcinogens. *Schistosoma hematobium* may cause bladder tumors. Nitrate and arsenic in drinking water, and chlorinated surface water as a source for drinking water, have each been shown to increase the risk of bladder cancer.

Special Notes
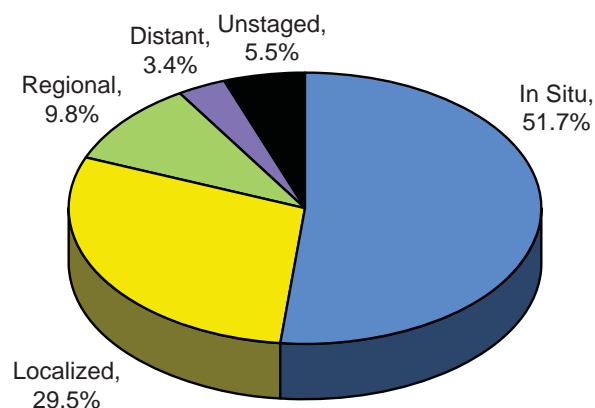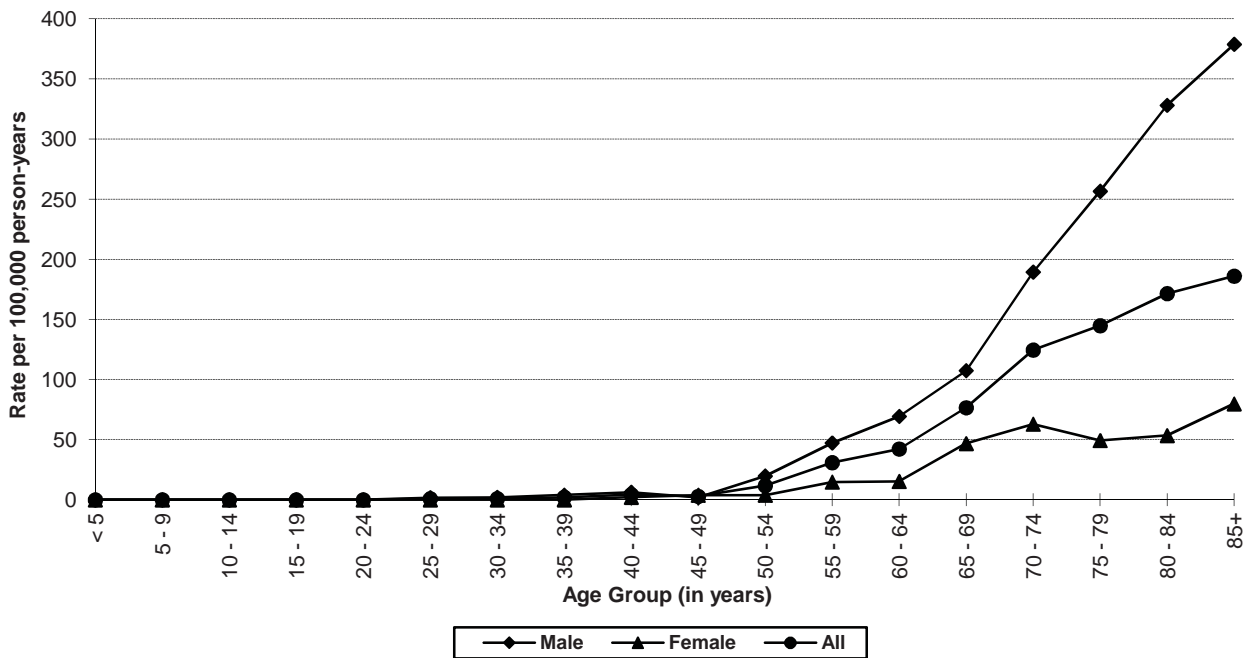
Mean age-adjusted incidence rate across health districts:	21.3
95% confidence interval on the mean age-adjusted incidence rate:	18.6- 23.9
Median age-adjusted incidence rate of health districts:	21.0
Range of age-adjusted incidence rate for health districts:	15.7- 26.0
SEER 17 rate (2008, all races):	20.3
NPCR rate (2008, all races):	20.5

There were few cases of bladder cancer among persons aged less than 50 years. Bladder cancer incidence rates increased with age, peaking in the age group 85+ for both males and females. Health District 3 had statistically significantly fewer cases of bladder cancer than expected based upon rates for the remainder of Idaho.

State Bladder Cancer Incidence
Age-specific Rates

Rate per 100,000 person-years vs **Age Group (in years)**

Legend: ◆ Male ▲ Female ● All

Bladder Cancer Incidence
Age-adjusted Rates by Health District

Health Districts vs **Rate per 100,000 person-years**

Health District	Rate
State	21.2
HD1	26.0
HD2	23.2
HD3	15.7
HD4	21.0
HD5	18.3
HD6	24.5
HD7	20.2

BRAIN

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	6.2	8.2	4.3
# of new invasive cases	93	60	33
# of new in-situ cases	0	0	0
# of deaths	75	51	24

Total Cases by County

County		County		County	
Ada	20	Cassia	1	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	-	Clearwater	1	Madison	3
Bear Lake	1	Custer	-	Minidoka	1
Benewah	1	Elmore	-	Nez Perce	2
Bingham	3	Franklin	-	Oneida	-
Blaine	1	Fremont	-	Owyhee	1
Boise	1	Gem	2	Payette	-
Bonner	1	Gooding	-	Power	1
Bonneville	5	Idaho	1	Shoshone	3
Boundary	1	Jefferson	-	Teton	2
Butte	-	Jerome	2	Twin Falls	6
Camas	-	Kootenai	9	Valley	1
Canyon	15	Latah	4	Washington	3
Caribou	-	Lemhi	-		

Stage at Diagnosis - Brain

- Unstaged, 10.8%
- Distant, 1.1%
- Regional, 6.5%
- Localized, 81.7%

Risk and Associated Factors

Age	This is the second most common cancer among children, following leukemia. Adult malignant brain tumors are most common after age 60.
Gender	Males typically have higher rates than females.
Race & SES	The incidence rate is higher in Caucasians and higher social classes.
Genetics	Certain genetic factors may cause an increased risk of some malignant brain tumors, including gliomas, but the proportion of brain tumors attributable to inheritance is likely no more than 4%. Molecular tests that may be useful in screening for recurrences are being developed.
Occupation	Vinyl chloride and ionizing radiation exposure are risk factors. Many occupational and environmental exposures have shown suggestive associations with elevated rates of brain cancer. Roofers, sheet metal workers, and rubber and plastic workers may be at elevated risk. Specific exposures underlying these associations have been suggested but not established.
Other	Human Immunodeficiency Virus (HIV) infected individuals and organ transplant recipients have an increased risk of developing brain lymphoma.

Special Notes
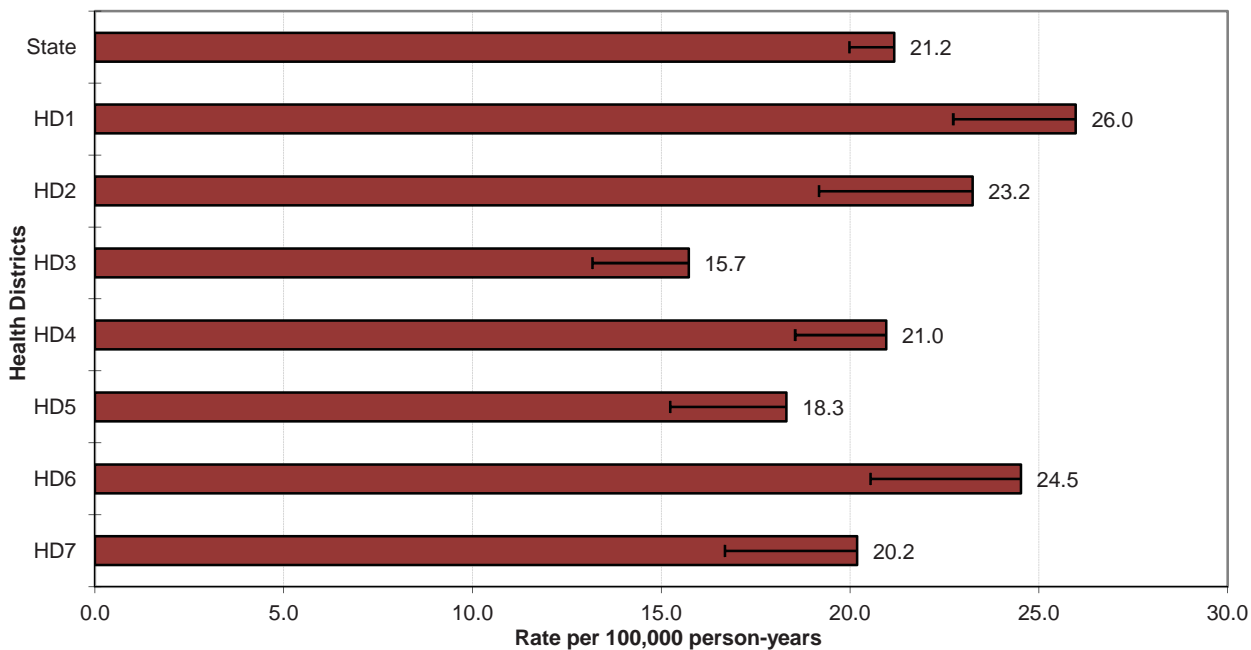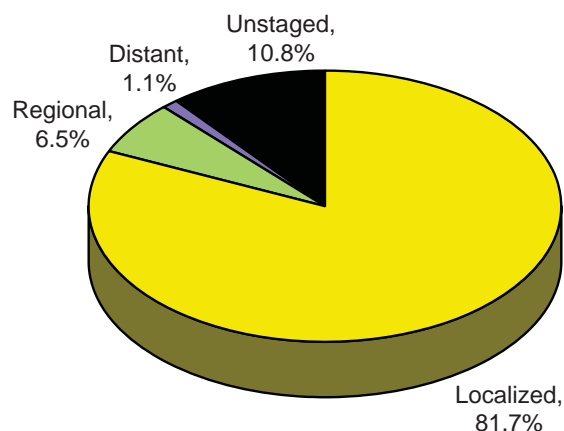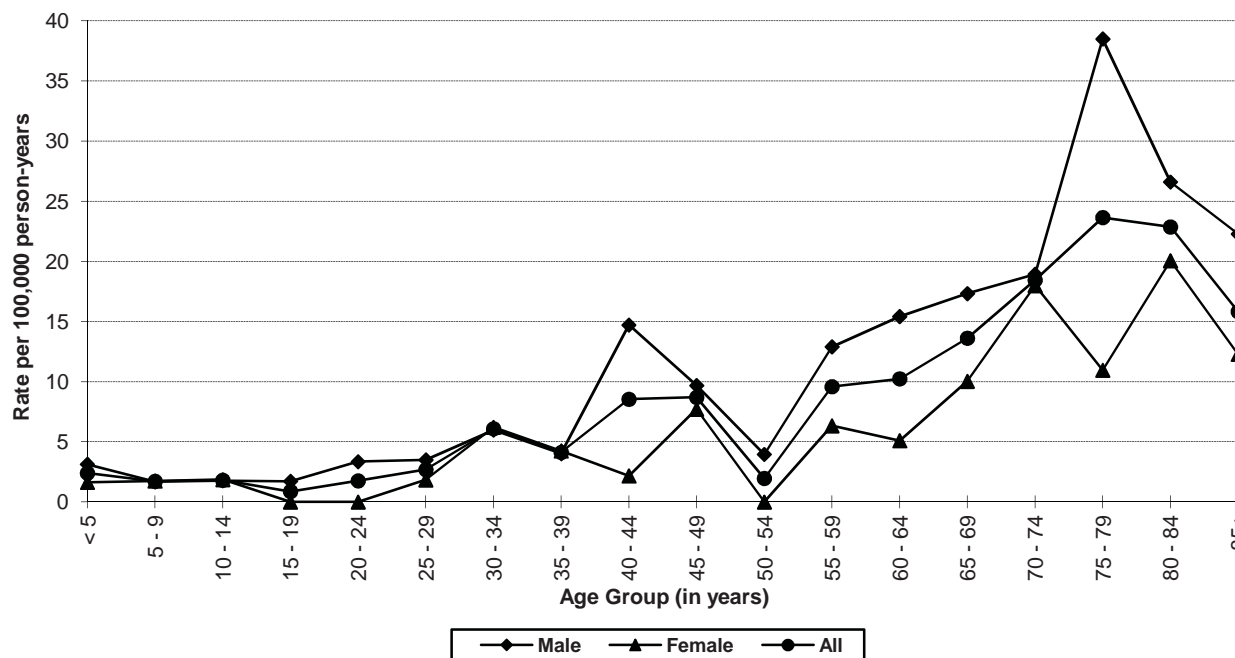
Mean age-adjusted incidence rate across health districts:	6.2
95% confidence interval on the mean age-adjusted incidence rate:	5.0- 7.5
Median age-adjusted incidence rate of health districts:	6.4
Range of age-adjusted incidence rate for health districts:	3.2- 8.7
SEER 17 rate (2008, all races):	5.9
NPCR rate (2008, all races):	6.2

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

State Brain Cancer Incidence
Age-specific Rates

Brain Cancer Incidence
Age-adjusted Rates by Health District
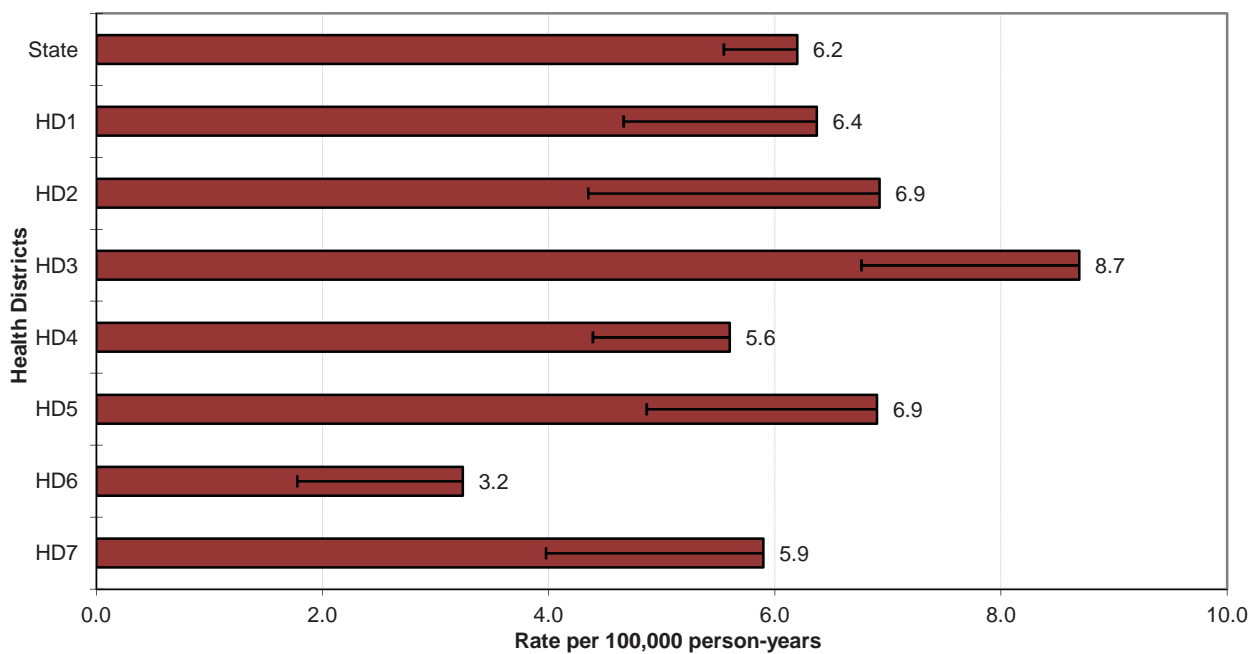
BRAIN & OTHER CNS NON-MALIGNANT

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	8.8	6.7	11.1
# of new cases	136	49	87

Total Cases by County

County		County		County	
Ada	43	Cassia	2	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	1	Clearwater	1	Madison	1
Bear Lake	-	Custer	1	Minidoka	2
Benewah	-	Elmore	1	Nez Perce	4
Bingham	1	Franklin	1	Oneida	-
Blaine	-	Fremont	1	Owyhee	-
Boise	1	Gem	2	Payette	3
Bonner	7	Gooding	-	Power	-
Bonneville	11	Idaho	1	Shoshone	1
Boundary	-	Jefferson	4	Teton	-
Butte	-	Jerome	1	Twin Falls	9
Camas	-	Kootenai	15	Valley	2
Canyon	15	Latah	-	Washington	1
Caribou	3	Lemhi	-		

Background

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

Special Notes

Mean age-adjusted incidence rate across health districts:	7.9
95% confidence interval on the mean age-adjusted incidence rate:6.8-	5.7- 10.2
Median age-adjusted incidence rate of health districts:	8.5
Range of age-adjusted incidence rate for health districts:	3.6- 12.3
SEER 17 rate (2008, all races):	9.8

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

State Brain & other CNS non-Malignant Incidence Age-specific Rates
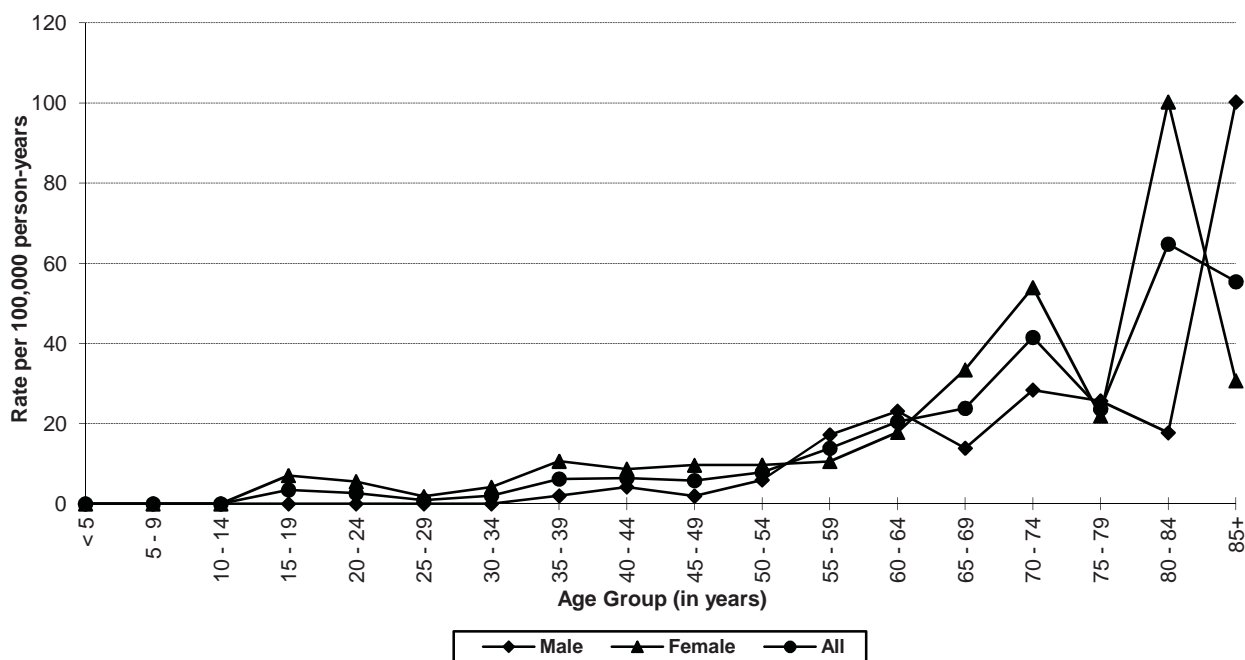
Brain & other CNS non-Malignant Incidence Age-adjusted Rates by Health District

Health Districts	Rate per 100,000 person-years
State	8.8
HD1	8.5
HD2	4.6
HD3	8.5
HD4	12.3
HD5	8.1
HD6	3.6
HD7	10.0

BREAST

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	62.6	1.1	119.8
# of new invasive cases	977	8	969
# of new in-situ cases	220	2	218
# of deaths	189	4	185

Stage at Diagnosis - Breast

Distant, 3.9%
Unstaged, 2.3%
In Situ, 18.4%
Regional, 23.8%
Localized, 51.6%

Total Cases by County

County		County		County	
Ada	311	Cassia	14	Lewis	7
Adams	5	Clark	0	Lincoln	4
Bannock	46	Clearwater	6	Madison	14
Bear Lake	4	Custer	1	Minidoka	23
Benewah	8	Elmore	8	Nez Perce	53
Bingham	25	Franklin	6	Oneida	0
Blaine	16	Fremont	9	Owyhee	5
Boise	10	Gem	27	Payette	28
Bonner	37	Gooding	9	Power	2
Bonneville	66	Idaho	7	Shoshone	14
Boundary	11	Jefferson	14	Teton	2
Butte	4	Jerome	10	Twin Falls	71
Camas	3	Kootenai	143	Valley	9
Canyon	120	Latah	26	Washington	8
Caribou	4	Lemhi	7		

Risk and Associated Factors

Age — Rates increase steadily with age. Age is the single most important risk factor for breast cancer. A 60-year-old white American woman's risk of developing breast cancer is fourteen times that of a 30-year-old American woman.

Race & SES — Caucasians have higher incidence rates, as do women in higher income groups.

Genetics — Specific genes associated with breast cancers have been identified and are being studied. Identical twins of women with breast cancer have triple the risk of getting the disease themselves.

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

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

Special Notes
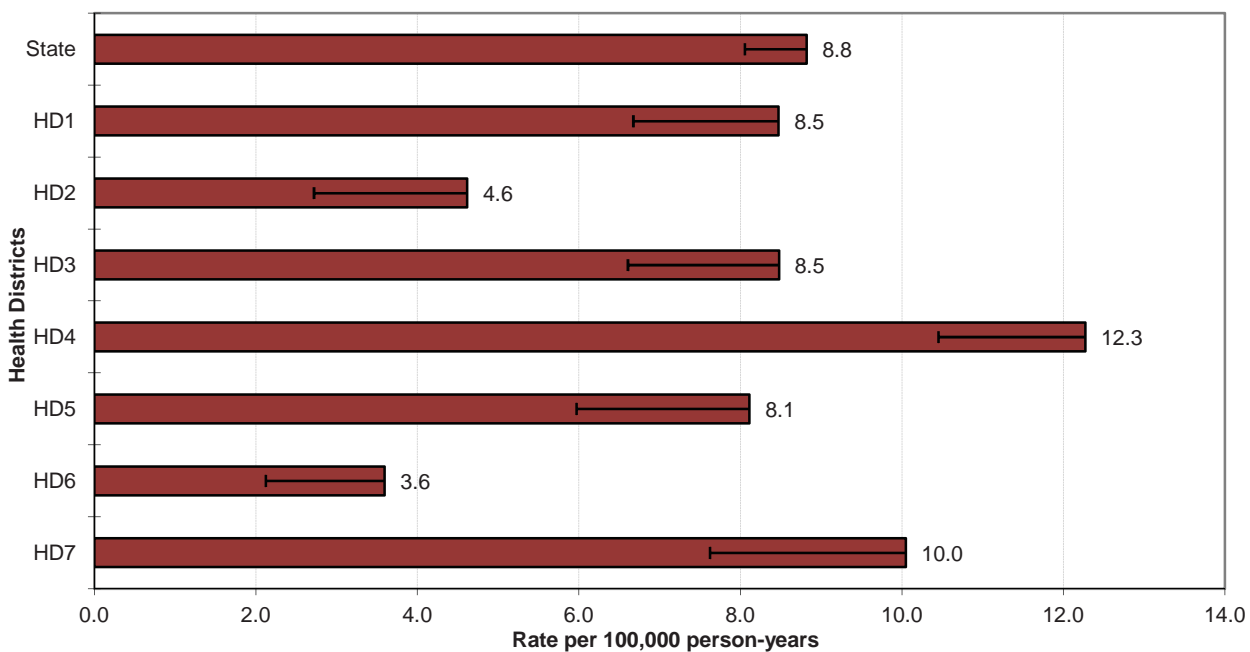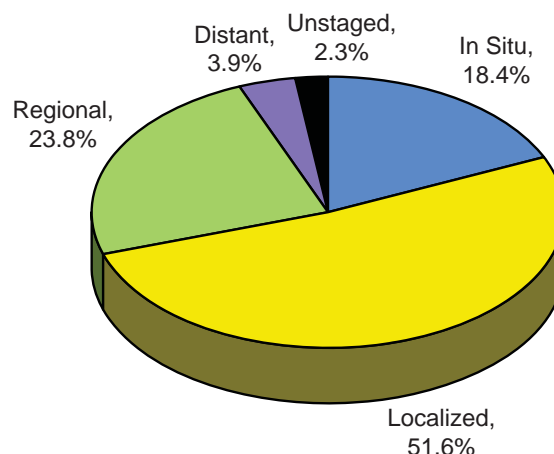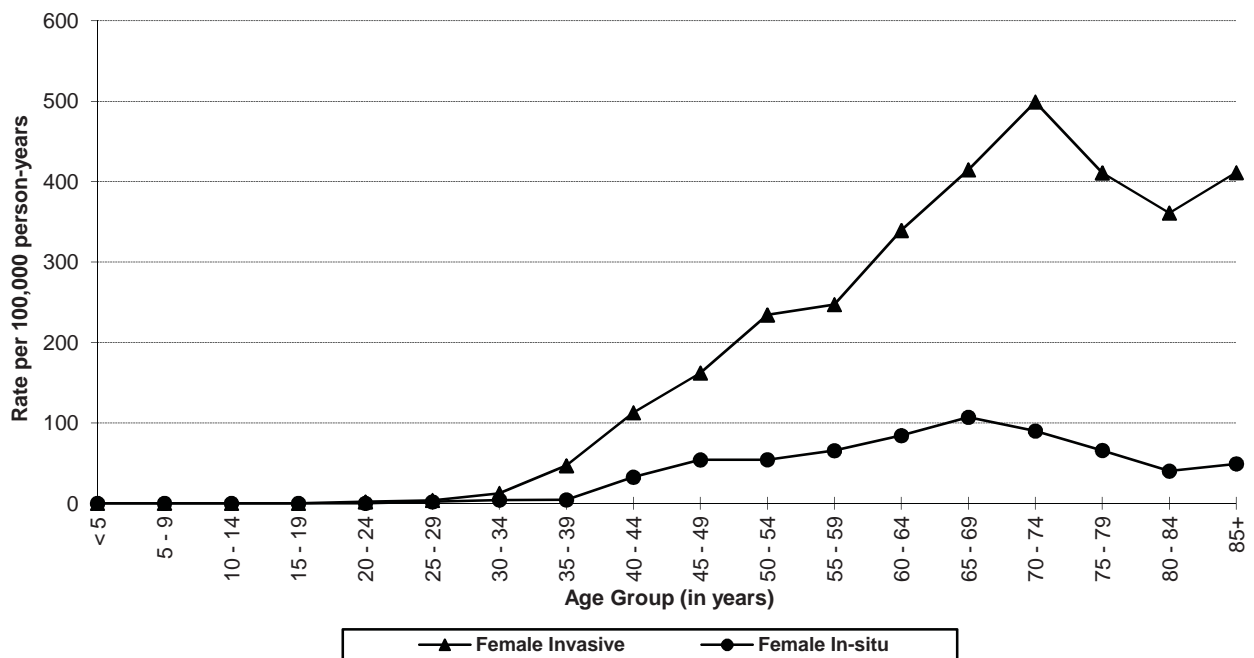
Mean age-adjusted incidence rate across health districts:	117.0
95% confidence interval on the mean age-adjusted incidence rate:	109.3- 124.7
Median age-adjusted incidence rate of health districts:	119.9
Range of age-adjusted incidence rate for health districts:	98.5- 129.0
SEER 17 rate (2008, all races):	125.0
NPCR rate (2008, all races):	121.7

The vast majority of breast cancer cases occur among females. In Idaho during the year 2009, there were 8 cases of invasive breast cancer among males. The age-specific incidence rates of female breast cancer in Idaho increased with age, peaking in the age group 70-74 for invasive cases. No cases were observed in women less than 20 years of age. Health District 6 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho.

State Female Breast Cancer Incidence
Age-specific Rates

Rate per 100,000 person-years (y-axis)

Age Group (in years) (x-axis): <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+

Legend: ▲ Female Invasive ● Female In-situ

Female Breast Cancer Incidence
Age-adjusted Rates by Health District

Health Districts (y-axis)

Health District	Rate
State	119.8
HD1	121.8
HD2	108.0
HD3	119.9
HD4	124.3
HD5	129.0
HD6	98.5
HD7	117.6

Rate per 100,000 person-years (x-axis): 0.0, 20.0, 40.0, 60.0, 80.0, 100.0, 120.0, 140.0, 160.0
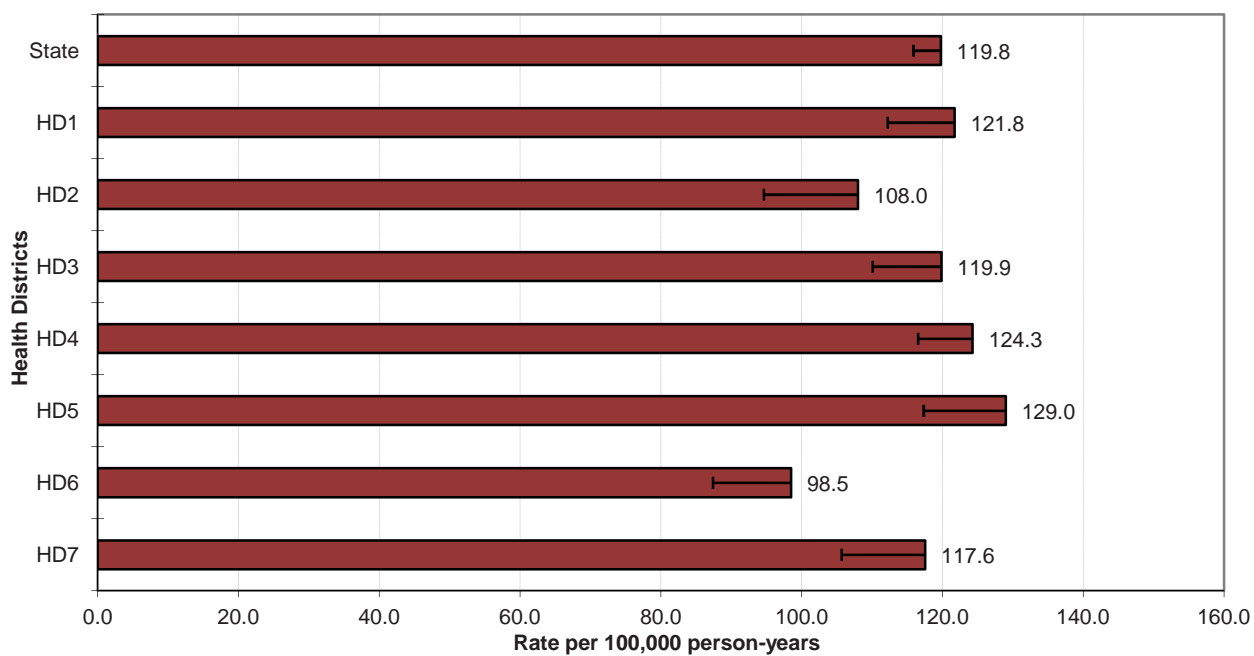
CERVIX

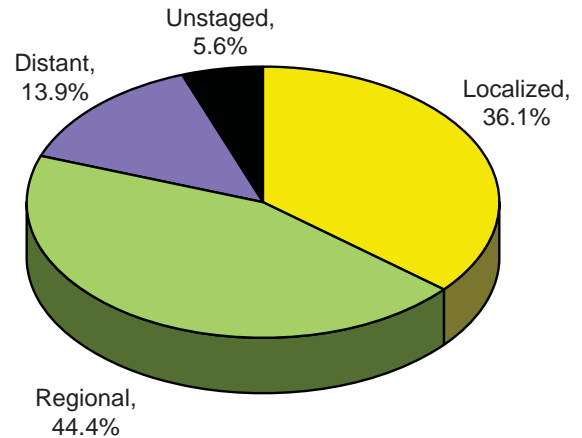## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	4.8
# of new invasive cases	-	-	36
# of new in-situ cases	-	-	n/a
# of deaths	-	-	16

Total Cases by County

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

Stage at Diagnosis - Cervix

Unstaged, 5.6%
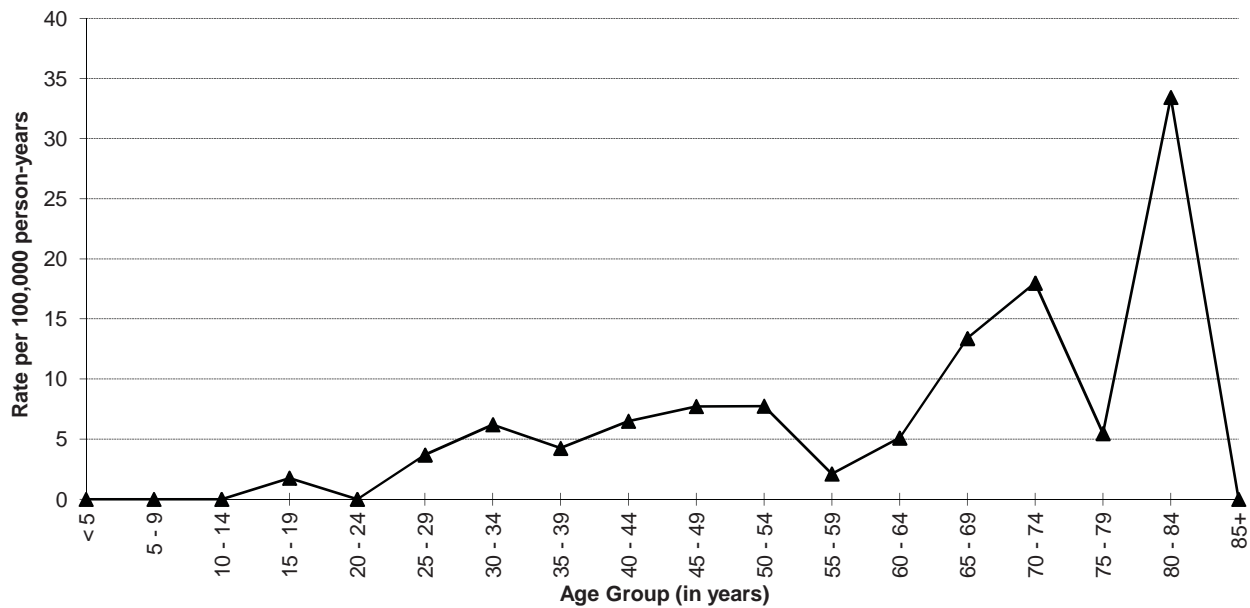Distant, 13.9%
Localized, 36.1%
Regional, 44.4%

Risk and Associated Factors

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

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

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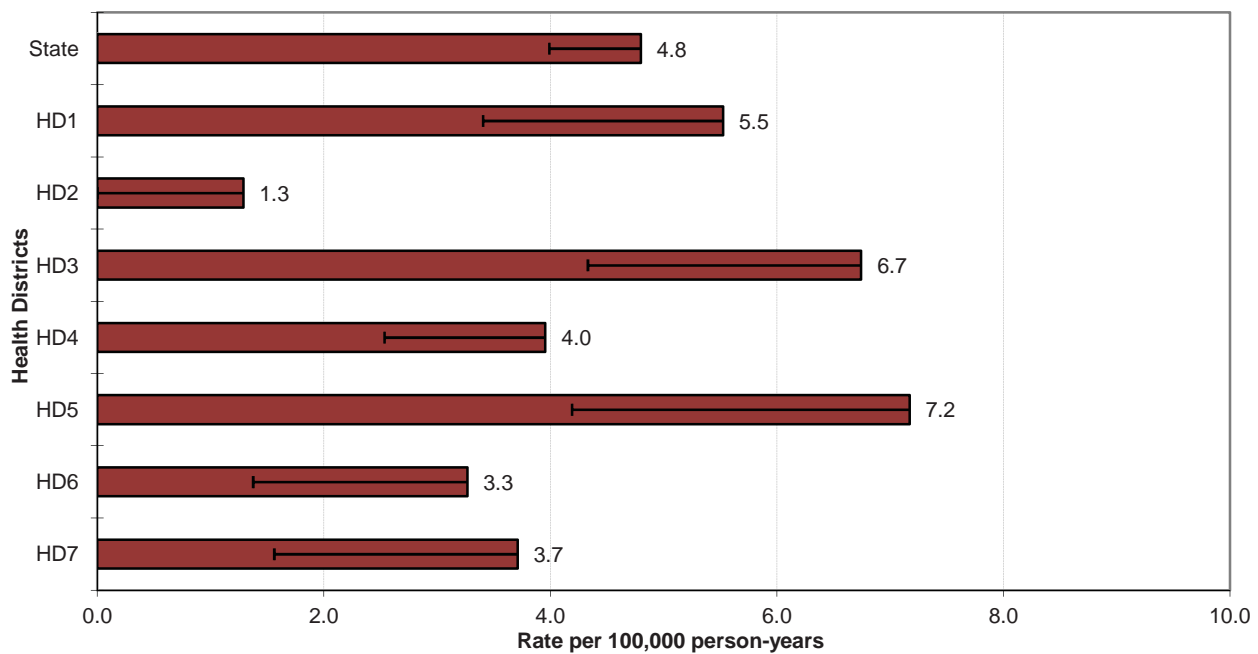
Special Notes

Mean age-adjusted incidence rate across health districts:	4.5
95% confidence interval on the mean age-adjusted incidence rate:	3.0- 6.1
Median age-adjusted incidence rate of health districts:	4.0
Range of age-adjusted incidence rate for health districts:	1.3- 7.2
SEER 17 rate (2008, all races):	8.0
NPCR rate (2008, all races):	8.0

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

State Cervical Cancer Incidence
Age-specific Rates

Rate per 100,000 person-years vs **Age Group (in years)**

Age Group	Rate
< 5	0
5 - 9	0
10 - 14	0
15 - 19	1.8
20 - 24	0
25 - 29	3.7
30 - 34	6.2
35 - 39	4.3
40 - 44	6.5
45 - 49	7.7
50 - 54	7.7
55 - 59	2.0
60 - 64	5.0
65 - 69	13.3
70 - 74	17.8
75 - 79	5.3
80 - 84	33.3
85+	0

Cervical Cancer Incidence
Age-adjusted Rates by Health District

Health Districts vs **Rate per 100,000 person-years**

Health District	Rate
State	4.8
HD1	5.5
HD2	1.3
HD3	6.7
HD4	4.0
HD5	7.2
HD6	3.3
HD7	3.7

COLORECTAL

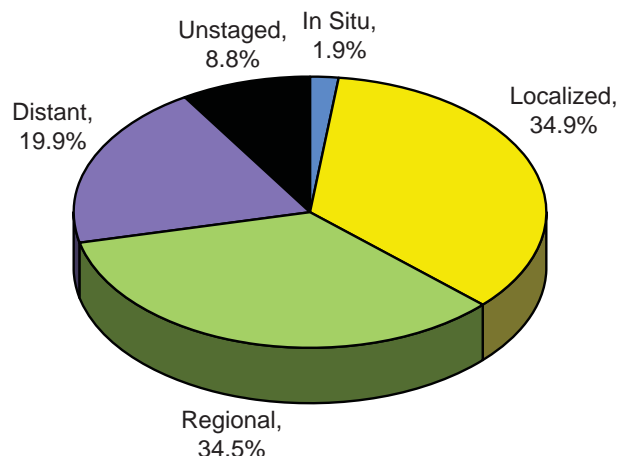## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	39.3	45.5	33.0
# of new invasive cases	612	337	275
# of new in-situ cases	12	6	6
# of deaths	211	115	96

Total Cases by County

| County	Cases	County	Cases	County	Cases
Ada	143	Cassia	6	Lewis	5
Adams	-	Clark	-	Lincoln	1
Bannock	35	Clearwater	4	Madison	7
Bear Lake	4	Custer	-	Minidoka	14
Benewah	6	Elmore	12	Nez Perce	13
Bingham	16	Franklin	7	Oneida	-
Blaine	3	Fremont	6	Owyhee	4
Boise	1	Gem	6	Payette	7
Bonner	30	Gooding	10	Power	4
Bonneville	35	Idaho	16	Shoshone	9
Boundary	7	Jefferson	7	Teton	1
Butte	3	Jerome	12	Twin Falls	43
Camas	-	Kootenai	71	Valley	5
Canyon	52	Latah	4	Washington	4
Caribou	4	Lemhi	5		

Stage at Diagnosis - Colorectal

- Unstaged, 8.8%
- In Situ, 1.9%
- Localized, 34.9%
- Distant, 19.9%
- Regional, 34.5%

Risk and Associated Factors

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

Gender — Incidence rates are slightly higher in males.

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

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

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

Special Notes

Mean age-adjusted incidence rate across health districts:	38.5
95% confidence interval on the mean age-adjusted incidence rate:	33.1- 43.9
Median age-adjusted incidence rate of health districts:	39.4
Range of age-adjusted incidence rate for health districts:	29.0- 46.8
SEER 17 rate (2008, all races):	45.1
NPCR rate (2008, all races):	44.6

Few cases of colorectal cancer were diagnosed in persons less than 40 years of age. There was a steep increase in age-specific incidence rates starting at age 55. Health District 1 had significantly more cases than expected based upon rates for the remainder of Idaho, and Health Districts 2 and 3 had statistically significantly fewer cases than expected.

State Colorectal Cancer Incidence Age-specific Rates

Colorectal Cancer Incidence Age-adjusted Rates by Health District
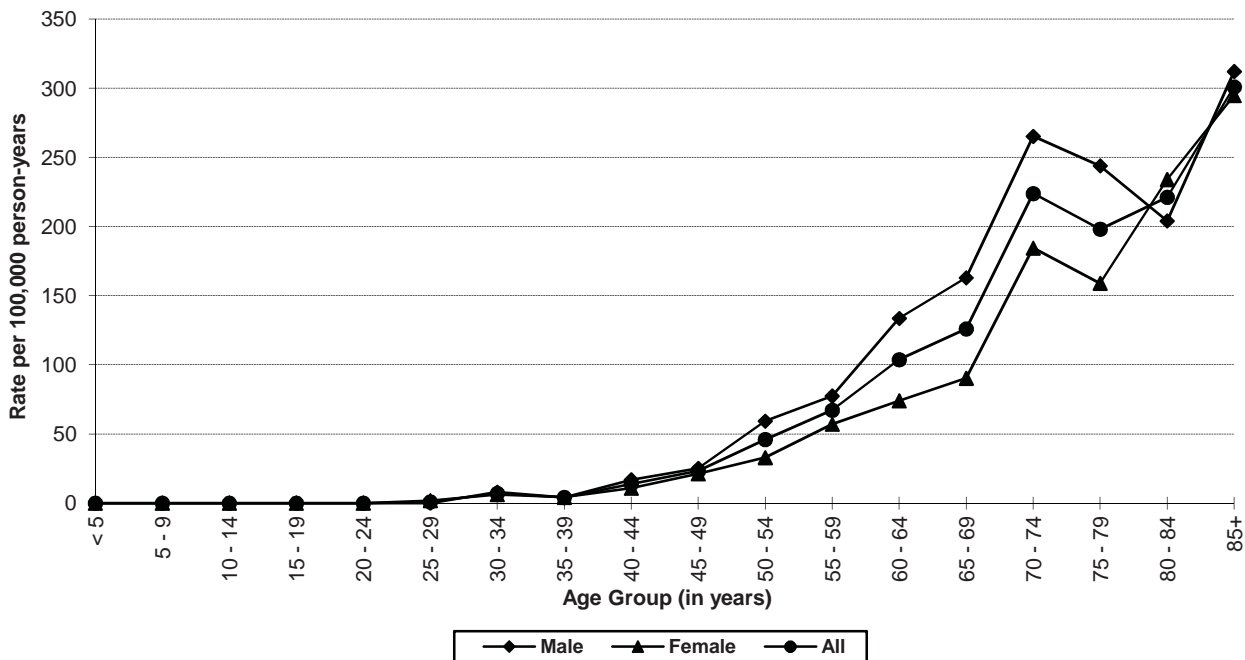
Health District	Rate
State	39.3
HD1	46.8
HD2	29.0
HD3	30.0
HD4	39.4
HD5	45.9
HD6	43.3
HD7	35.2
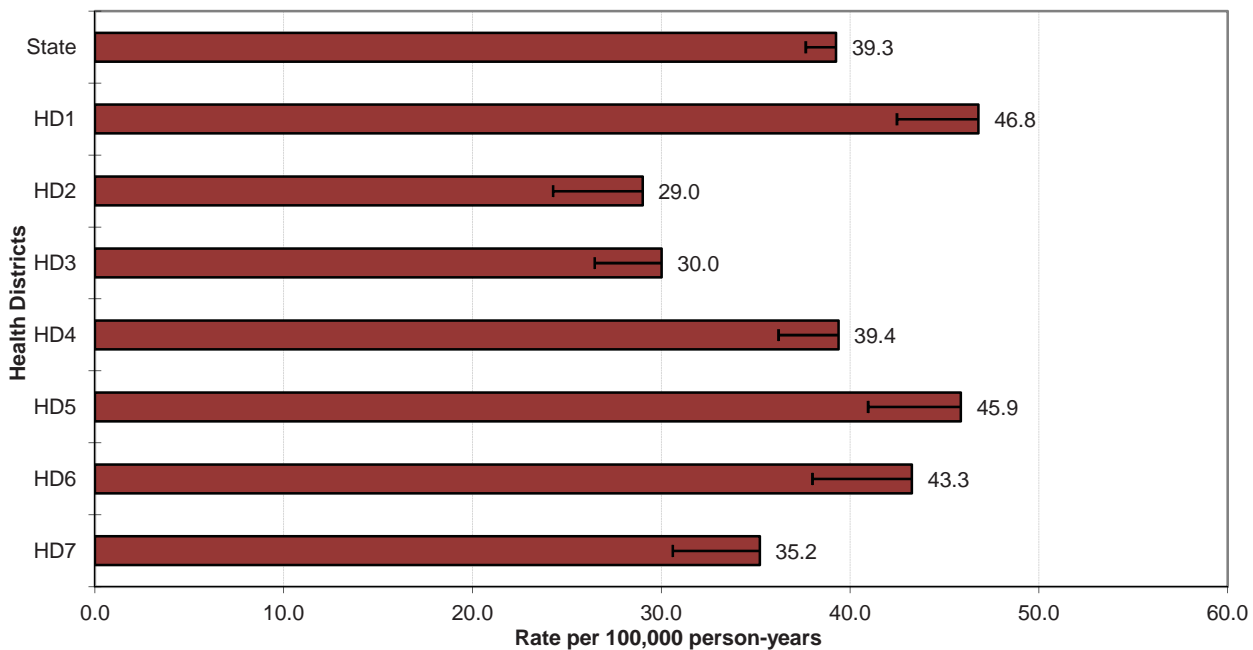
CORPUS UTERI

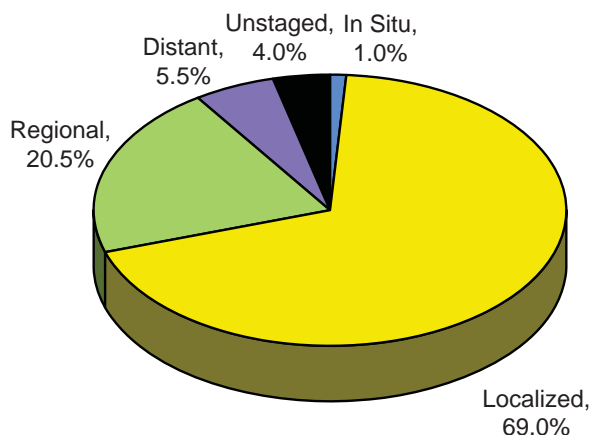## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	24.0
# of new invasive cases	-	-	198
# of new in-situ cases	-	-	2
# of deaths	-	-	20

Stage at Diagnosis - Corpus Uteri

Unstaged, 4.0%
In Situ, 1.0%
Distant, 5.5%
Regional, 20.5%
Localized, 69.0%

Total Cases by County

County		County		County	
Ada	38	Cassia	3	Lewis	1
Adams	1	Clark	-	Lincoln	-
Bannock	7	Clearwater	3	Madison	4
Bear Lake	1	Custer	-	Minidoka	3
Benewah	1	Elmore	-	Nez Perce	4
Bingham	4	Franklin	1	Oneida	-
Blaine	4	Fremont	2	Owyhee	-
Boise	1	Gem	6	Payette	-
Bonner	5	Gooding	5	Power	2
Bonneville	13	Idaho	5	Shoshone	3
Boundary	5	Jefferson	2	Teton	1
Butte	-	Jerome	3	Twin Falls	18
Camas	2	Kootenai	22	Valley	3
Canyon	19	Latah	4	Washington	3
Caribou	-	Lemhi	1		

Risk and Associated Factors

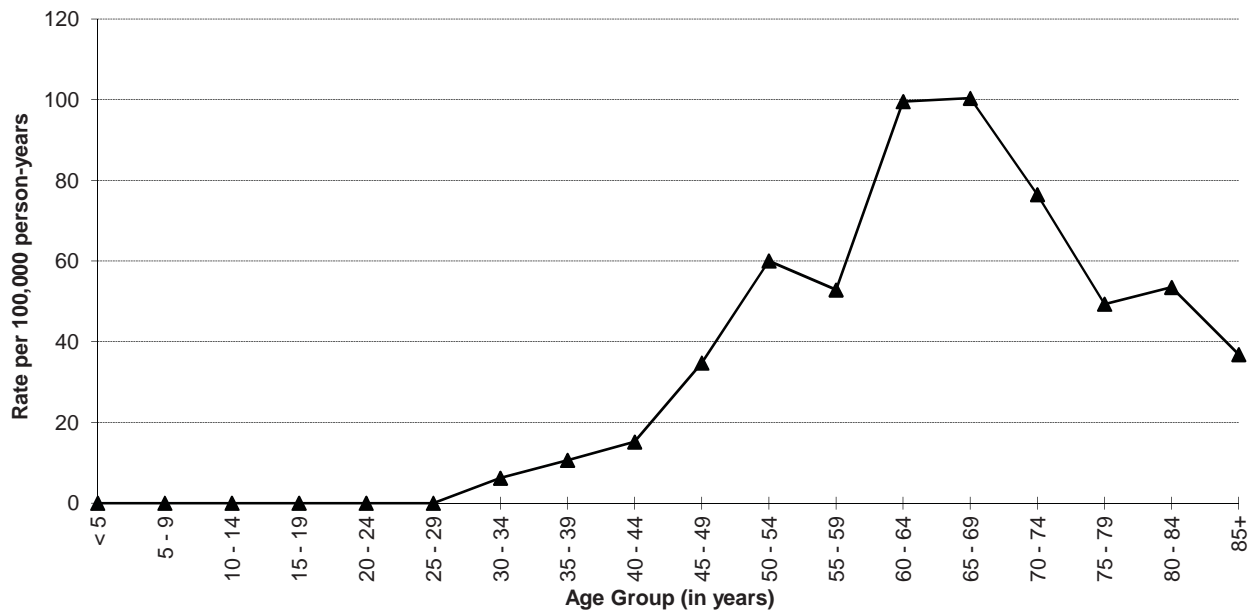**Age** Occurs predominantly after menopause, with median age 58 and peaking at the 65 to 75 age group.

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

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

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

Hormonal Factors that elevate levels of estrogen or decrease progesterone levels enhance the risk. Women who have never carried a pregnancy to term are at a relatively high risk. Risk decreases as the number of pregnancies increases. An increased incidence of endometrial cancer has been found in association with prolonged, unopposed estrogen exposure as well as with tamoxifen treatment of breast cancer. Use of combination oral contraceptives (estrogen and progestin) decreases risk of endometrial cancer by about 50%.
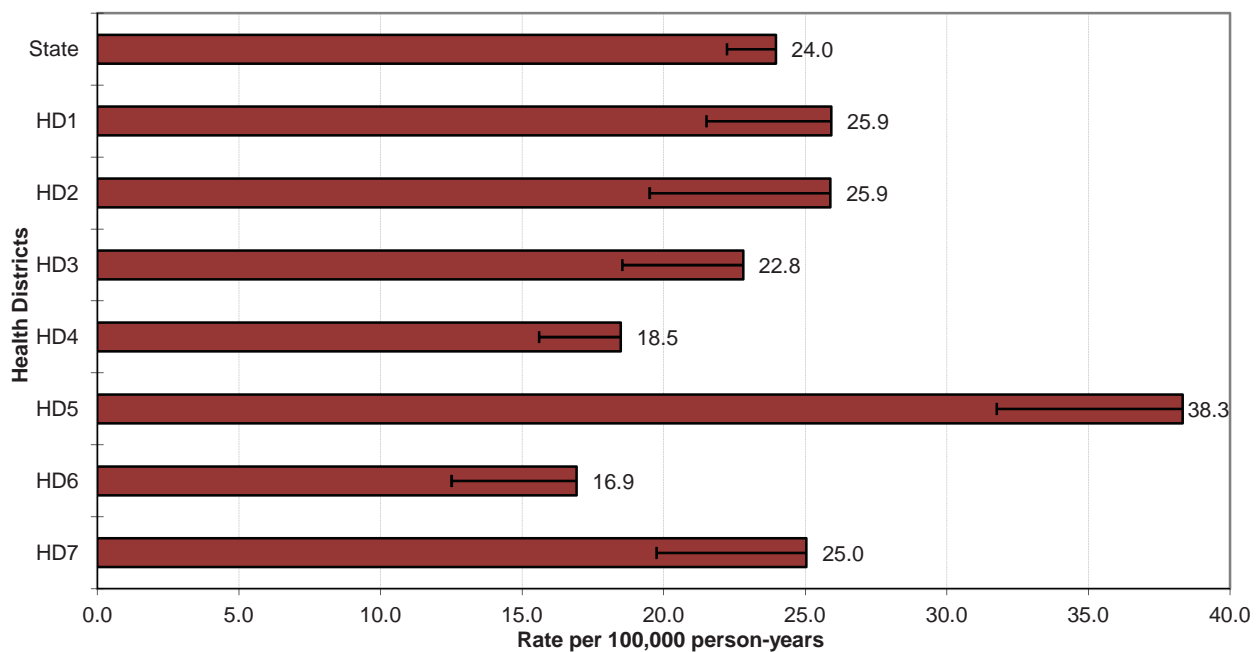
Special Notes

Mean age-adjusted incidence rate across health districts:	24.8
95% confidence interval on the mean age-adjusted incidence rate:	19.6- 29.9
Median age-adjusted incidence rate of health districts:	25.0
Range of age-adjusted incidence rate for health districts:	16.9- 38.3
SEER 17 rate (2008, all races):	24.4
NPCR rate (2008, all races):	23.6

Few cases of endometrial cancer were diagnosed in persons less than 35 years of age. After age 55, there was a sharp increase in age-specific rates, peaking in the age group 65-69. Health District 5 had significantly more cases than expected based upon rates for the remainder of Idaho.

State Corpus Uteri Cancer Incidence
Age-specific Rates

Rate per 100,000 person-years vs Age Group (in years)

Corpus Uteri Cancer Incidence
Age-adjusted Rates by Health District

Health District	Rate per 100,000 person-years
State	24.0
HD1	25.9
HD2	25.9
HD3	22.8
HD4	18.5
HD5	38.3
HD6	16.9
HD7	25.0

ESOPHAGUS

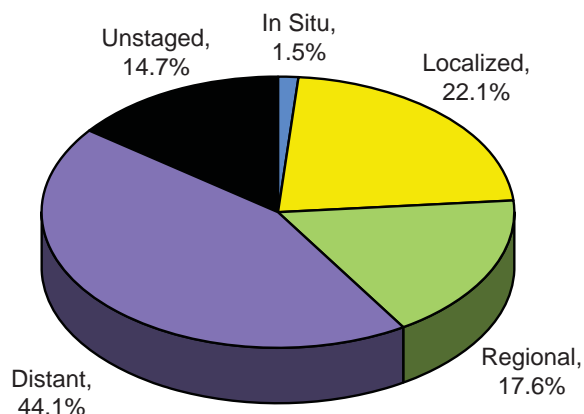## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.1	6.9	1.5
# of new invasive cases	67	53	14
# of new in-situ cases	1	1	0
# of deaths	62	55	7

Stage at Diagnosis - Esophagus

In Situ, 1.5%
Localized, 22.1%
Regional, 17.6%
Distant, 44.1%
Unstaged, 14.7%

Total Cases by County

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

Risk and Associated Factors

|	
Age	Incidence of esophageal cancer is highest after age 55.
Gender	It is predominantly a disease of the male, with male-to-female ratios of about 3:1 or more.
Race & SES	United States data show that African Americans are affected more than Caucasians. Risk is higher among lower SES strata.
Occupation	Chimney sweeps exposed to soot are at higher risk.
Other	Tobacco use (cigarettes or spit tobacco) and heavy alcohol consumption are major risk factors for cancer of the esophagus. The risk is particularly increased when these two factors are both present. In Western Europe and North America, 90% or more of the risk of esophageal cancer can be attributed to alcohol and tobacco. Drinking "burning hot" beverages may increase the risk of esophageal cancer.

Special Notes

Mean age-adjusted incidence rate across health districts:	4.3
95% confidence interval on the mean age-adjusted incidence rate:	3.3- 5.3
Median age-adjusted incidence rate of health districts:	4.2
Range of age-adjusted incidence rate for health districts:	2.4- 5.8
SEER 17 rate (2008, all races):	4.4
NPCR rate (2008, all races):	4.9

Few cases of esophageal cancer were diagnosed in person less than 40 years of age. The age-specific incidence rates peaked in the age group 80-84 for both males and females. Health District 4 had significantly fewer cases than expected based upon rates for the remainder of Idaho.

State Esophageal Cancer Incidence
Age-specific Rates
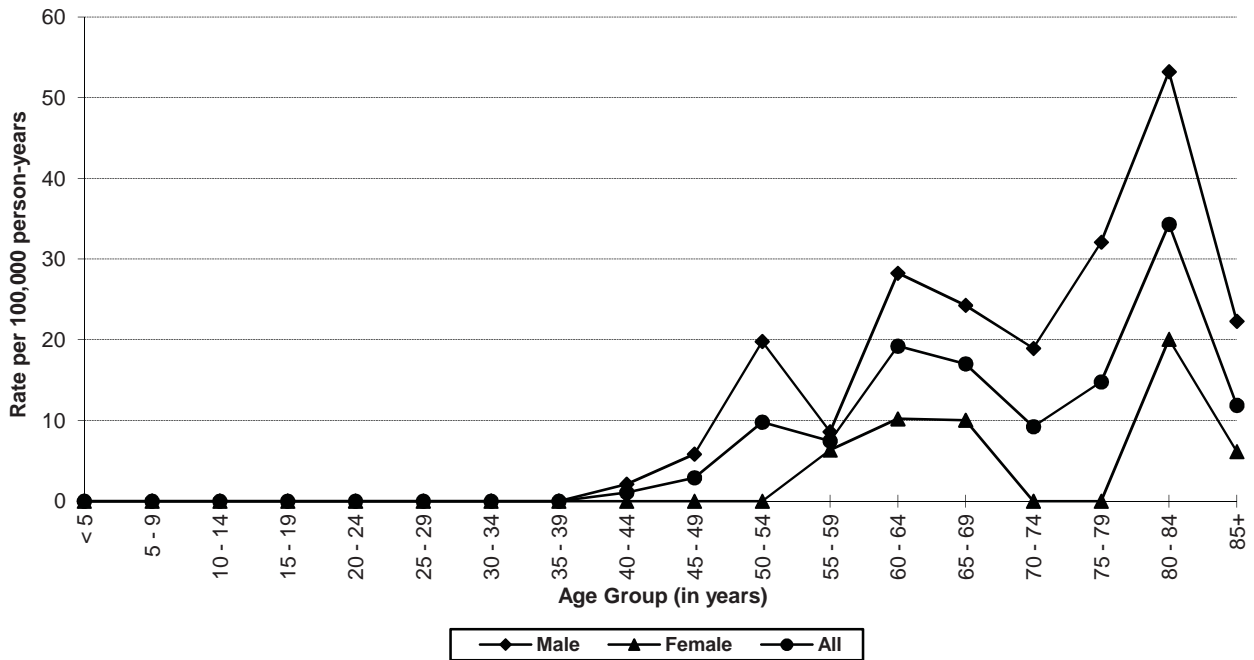
Esophageal Cancer Incidence
Age-adjusted Rates by Health District
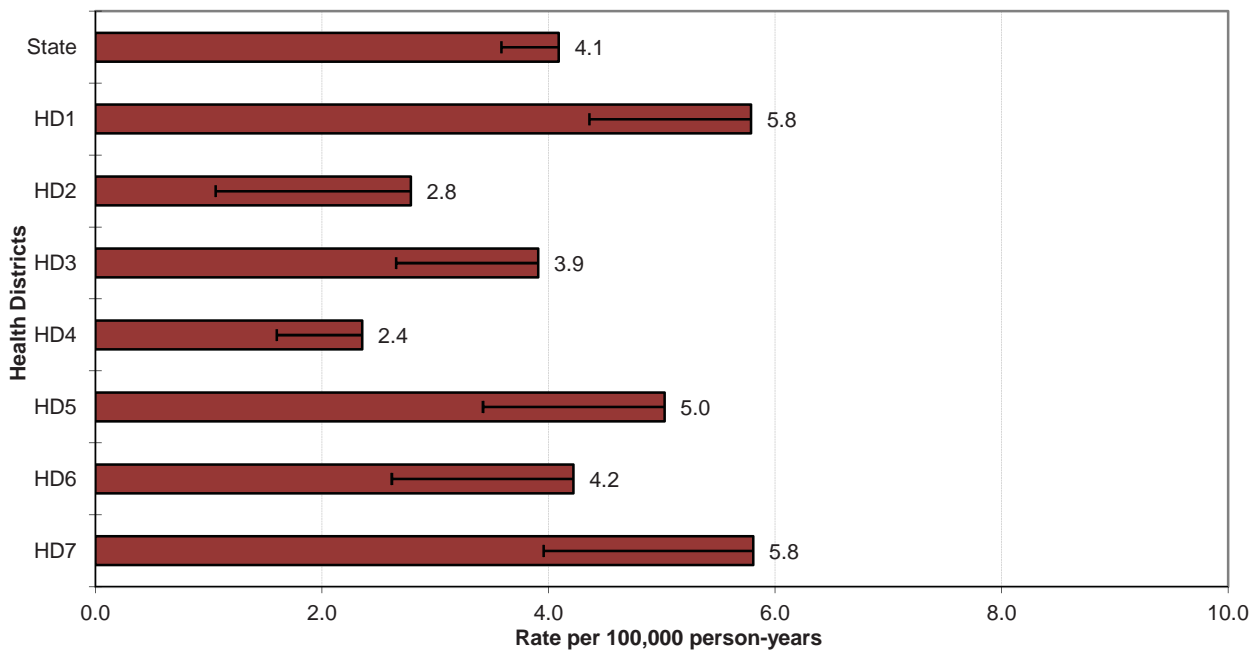
HODGKIN LYMPHOMA

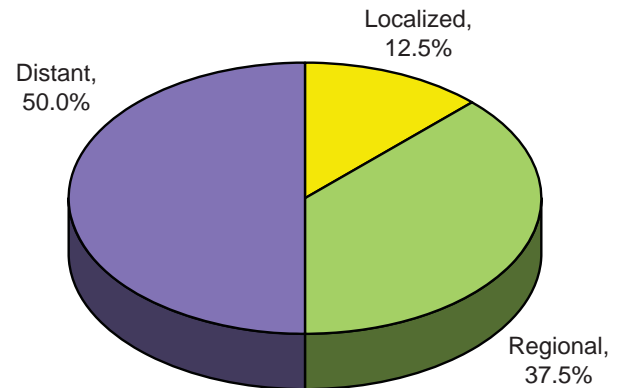## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	2.6	2.5	2.6
# of new invasive cases	40	19	21
# of new in-situ cases	0	0	0
# of deaths	6	3	3

Total Cases by County

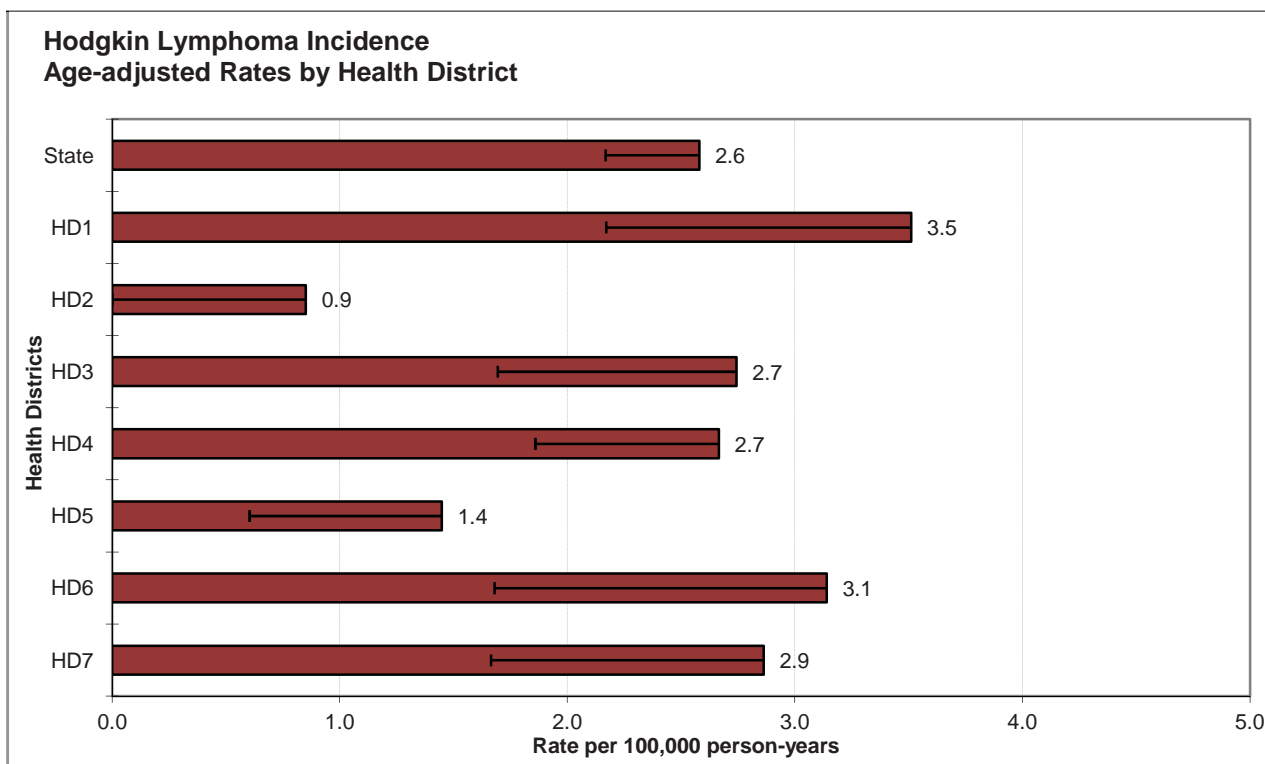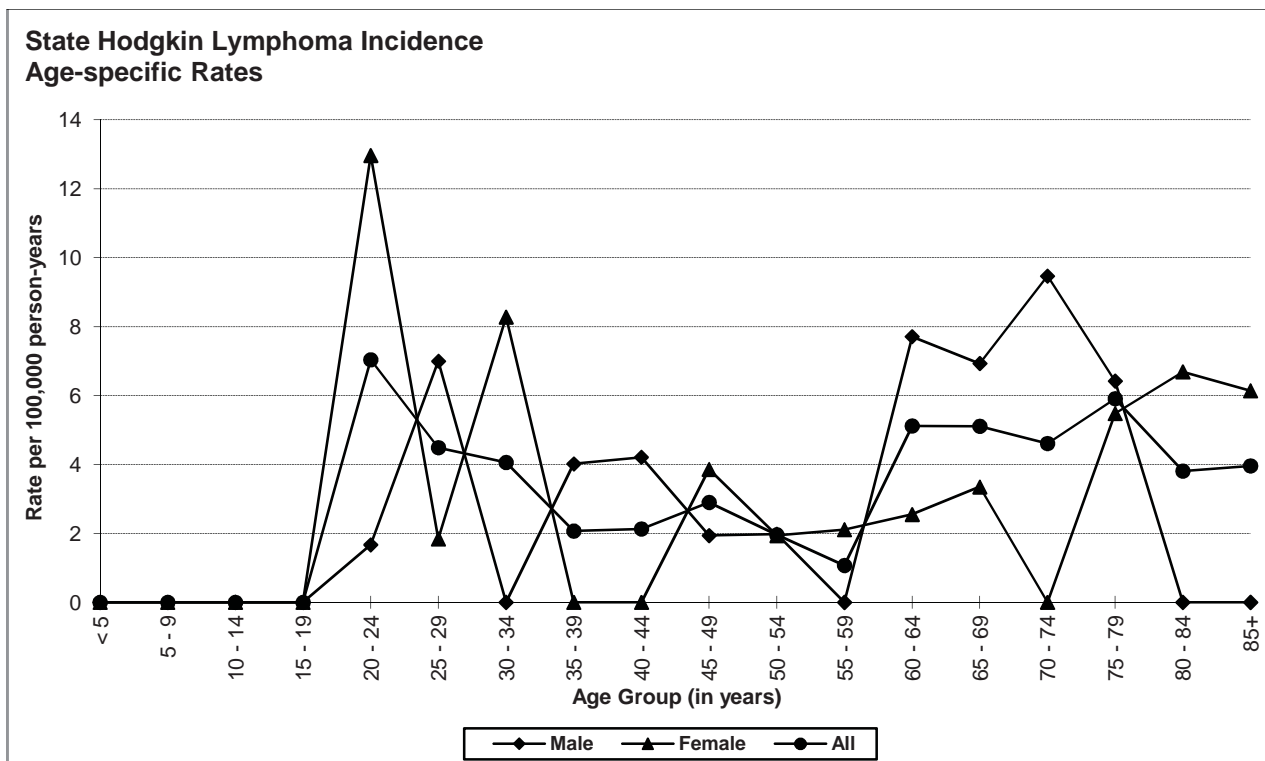| County		County		County	
Ada	9	Cassia	1	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	2	Clearwater	-	Madison	1
Bear Lake	-	Custer	-	Minidoka	-
Benewah	-	Elmore	1	Nez Perce	1
Bingham	1	Franklin	1	Oneida	-
Blaine	1	Fremont	1	Owyhee	-
Boise	-	Gem	1	Payette	-
Bonner	-	Gooding	-	Power	1
Bonneville	3	Idaho	-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

Stage at Diagnosis - Hodgkin Lymphoma

Localized, 12.5%
Distant, 50.0%
Regional, 37.5%

Risk and Associated Factors

Age	High rates are seen in young adults and in later age groups especially among males.
Gender	Males typically have slightly higher rates than females.
Race & SES	Hodgkin lymphoma is more common among Caucasians than among African Americans. Hodgkin lymphoma is more common in higher income groups.
Genetics	Genetic factors are thought to play an important role in the etiology of Hodgkin lymphoma, but these are yet to be adequately defined.
Other	Small family size and ensuing delayed exposure to childhood infections is thought to be responsible for a portion of Hodgkin lymphoma cases. Certain viral infections, especially Epstein-Barr virus, and AIDS increase the risk of Hodgkin lymphoma. With current treatment, Hodgkin disease, which was once highly fatal, is among the most curable of all cancers.

Special Notes

Mean age-adjusted incidence rate across health districts:	2.5
95% confidence interval on the mean age-adjusted incidence rate:	1.8- 3.2
Median age-adjusted incidence rate of health districts:	2.7
Range of age-adjusted incidence rate for health districts:	0.9- 3.5
SEER 17 rate (2008, all races):	2.8
NPCR rate (2008, all races):	2.9

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

State Hodgkin Lymphoma Incidence
Age-specific Rates

Hodgkin Lymphoma Incidence
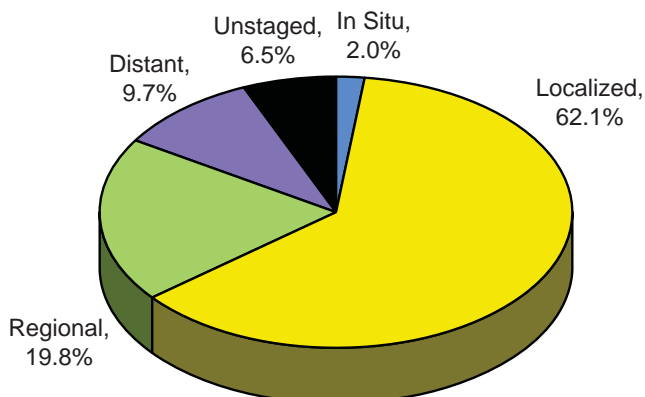**Age-adjusted Rates by Health District**

KIDNEY AND RENAL PELVIS

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	15.4	20.0	11.3
# of new invasive cases	243	150	93
# of new in-situ cases	5	3	2
# of deaths	58	40	18

Total Cases by County

| County		County		County	
Ada	60	Cassia	4	Lewis	3
Adams	-	Clark	-	Lincoln	1
Bannock	7	Clearwater	-	Madison	4
Bear Lake	-	Custer	-	Minidoka	1
Benewah	1	Elmore	3	Nez Perce	12
Bingham	4	Franklin	-	Oneida	1
Blaine	-	Fremont	2	Owyhee	3
Boise	1	Gem	3	Payette	-
Bonner	8	Gooding	2	Power	1
Bonneville	15	Idaho	2	Shoshone	2
Boundary	2	Jefferson	3	Teton	1
Butte	-	Jerome	3	Twin Falls	13
Camas	-	Kootenai	29	Valley	5
Canyon	42	Latah	7	Washington	2
Caribou	-	Lemhi	1		

Stage at Diagnosis - Kidney and Renal Pelvis

Unstaged, 6.5%
In Situ, 2.0%
Distant, 9.7%
Localized, 62.1%
Regional, 19.8%

Risk and Associated Factors

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

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

Genetics — Wilm's tumor often occurs with congenital defects.

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

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

Special Notes

Mean age-adjusted incidence rate across health districts:	15.1
95% confidence interval on the mean age-adjusted incidence rate:	12.2- 18.1
Median age-adjusted incidence rate of health districts:	15.1
Range of age-adjusted incidence rate for health districts:	7.8- 19.7
SEER 17 rate (2008, all races):	15.5
NPCR rate (2008, all races):	15.7

There were few cases of kidney or renal pelvis cancer among persons aged less than 40 years. The age-specific incidence rates peaked in the age group 80-84 for males and 85+ for females. Health District 3 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 6 had statistically significantly fewer cases than expected.

State Kidney & Renal Pelvis Cancer Incidence
Age-specific Rates
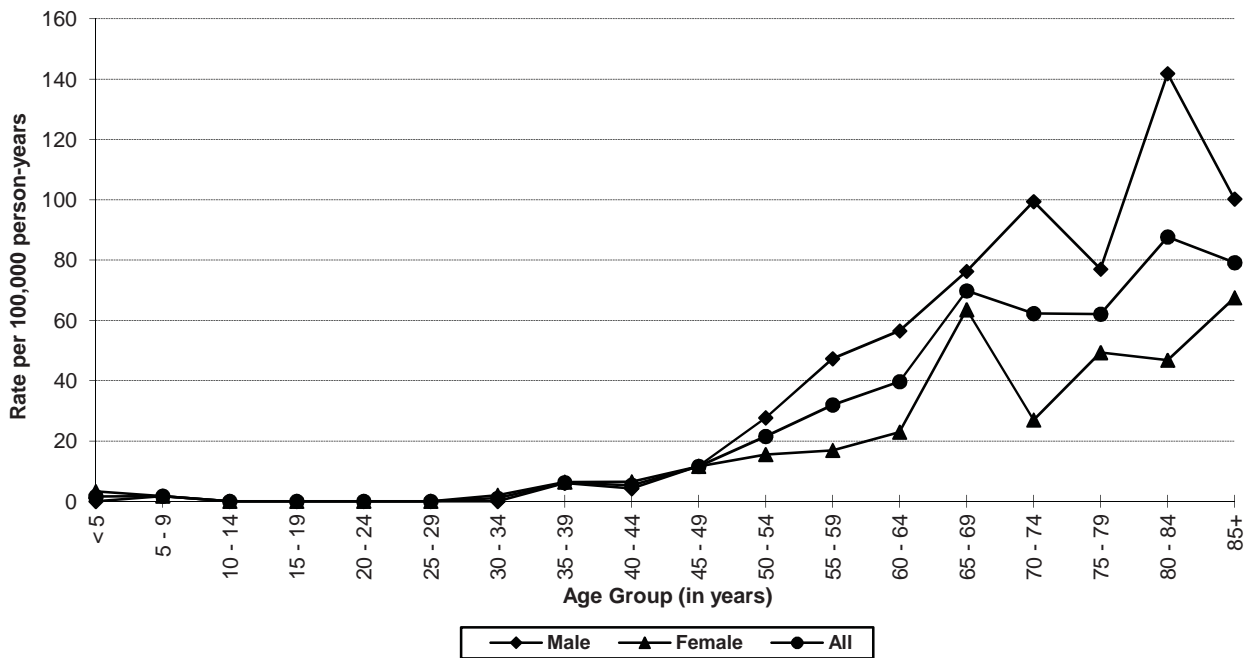
Kidney & Renal Pelvis Cancer Incidence
Age-adjusted Rates by Health District
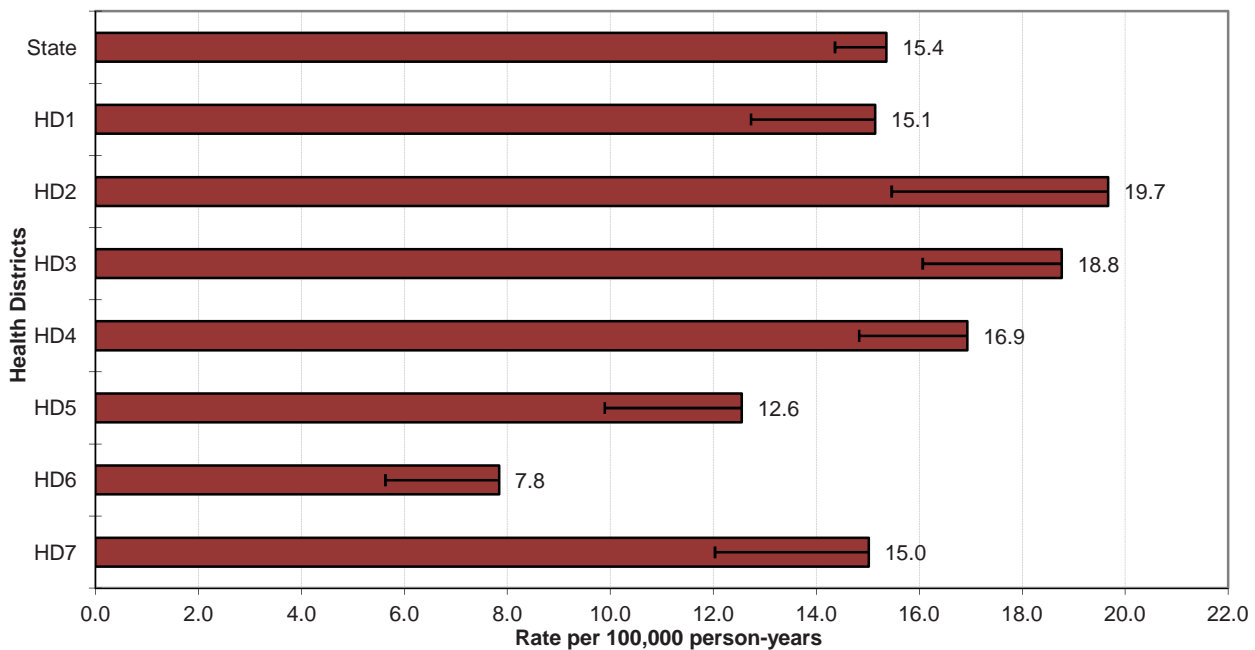
LARYNX

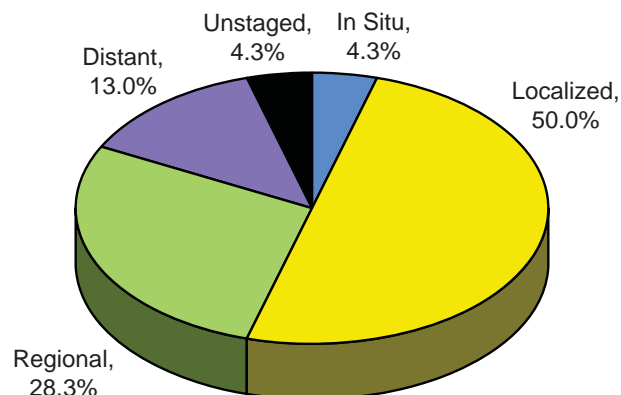## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	2.8	4.1	1.8
# of new invasive cases	44	30	14
# of new in-situ cases	2	1	1
# of deaths	10	5	5

Total Cases by County

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

Stage at Diagnosis - Larynx

Unstaged, 4.3%
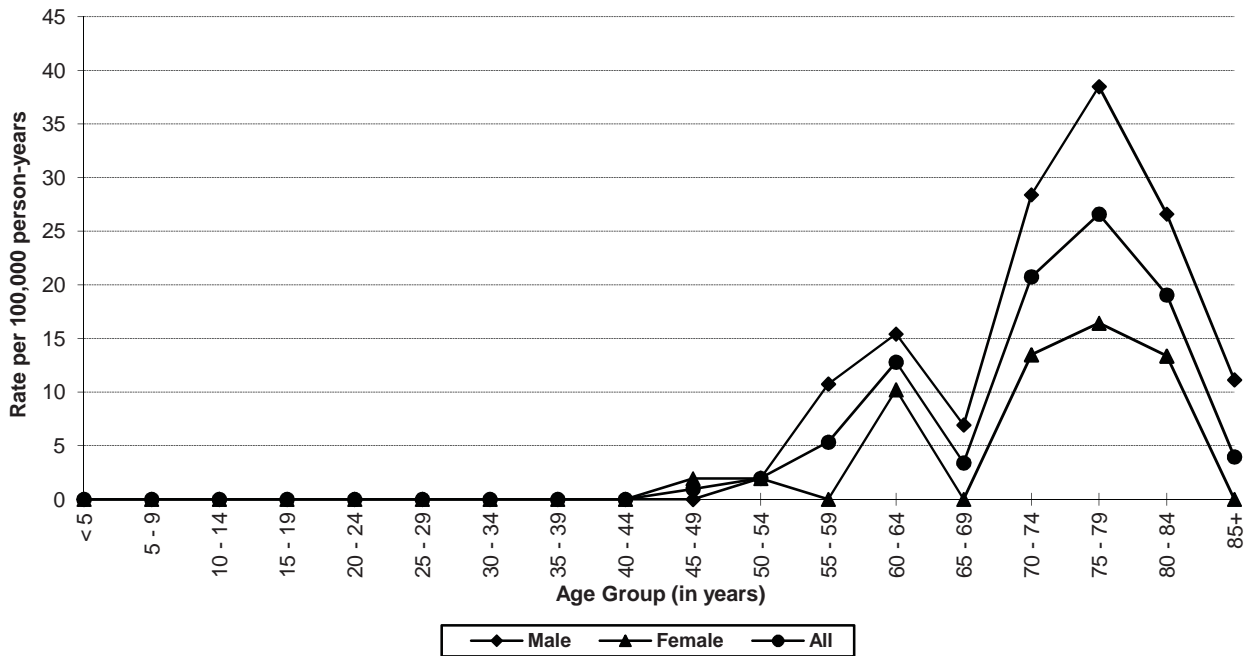In Situ, 4.3%
Distant, 13.0%
Localized, 50.0%
Regional, 28.3%

Risk and Associated Factors

|	
Age	Rates increase with age, with the vast majority of cases occurring after age 55.
Gender	Laryngeal cancers are much more common in males than females.
Race & SES	Generally in the United States, African Americans have higher incidence rates than Caucasians. Lower income groups experience higher rates.
Occupation	Laryngeal cancer has been associated with exposures to asbestos and wood dust.
Diet	Diets low in fresh fruits and vegetables may increase the risk.
Other	Cigarette smoking and alcohol use are both major risk factors. The combination of alcohol consumption and tobacco use (smoking or spit tobacco) acts greatly to increase the risk. A patient with a single laryngeal cancer who continues to smoke and drink alcohol has an enhanced risk of developing a second laryngeal tumor.

Special Notes

Mean age-adjusted incidence rate across health districts:	2.6
95% confidence interval on the mean age-adjusted incidence rate:	1.6- 3.6
Median age-adjusted incidence rate of health districts:	3.0
Range of age-adjusted incidence rate for health districts:	0.7- 4.4
SEER 17 rate (2008, all races):	3.2
NPCR rate (2008, all races):	3.7

There were few cases of laryngeal cancer among persons aged less than 50 years. The age-specific incidence rates for males were more than twice those for females in most age groups. The age-specific incidence rates peaked in the age group 75-79 for both males and females.   No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.

State Laryngeal Cancer Incidence
Age-specific Rates

Laryngeal Cancer Incidence
Age-adjusted Rates by Health District
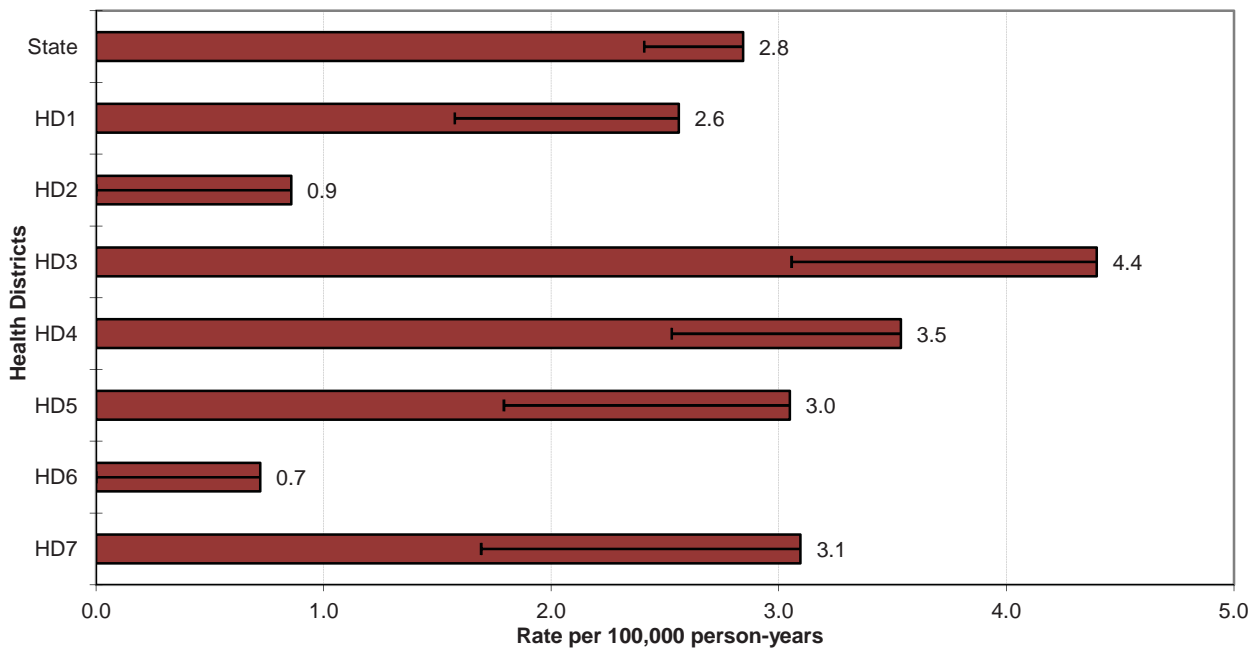
LEUKEMIA

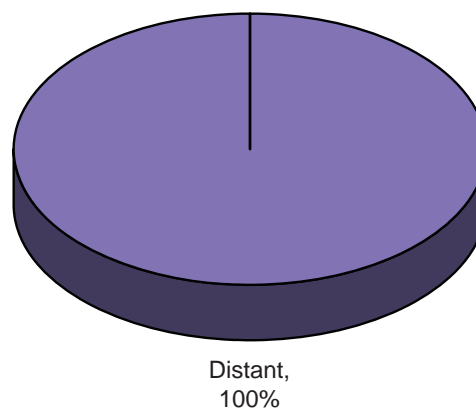## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	14.8	19.3	10.7
# of new invasive cases	226	139	87
# of new in-situ cases	0	0	0
# of deaths	96	58	38

Stage at Diagnosis - Leukemia

Distant,
100%

Total Cases by County

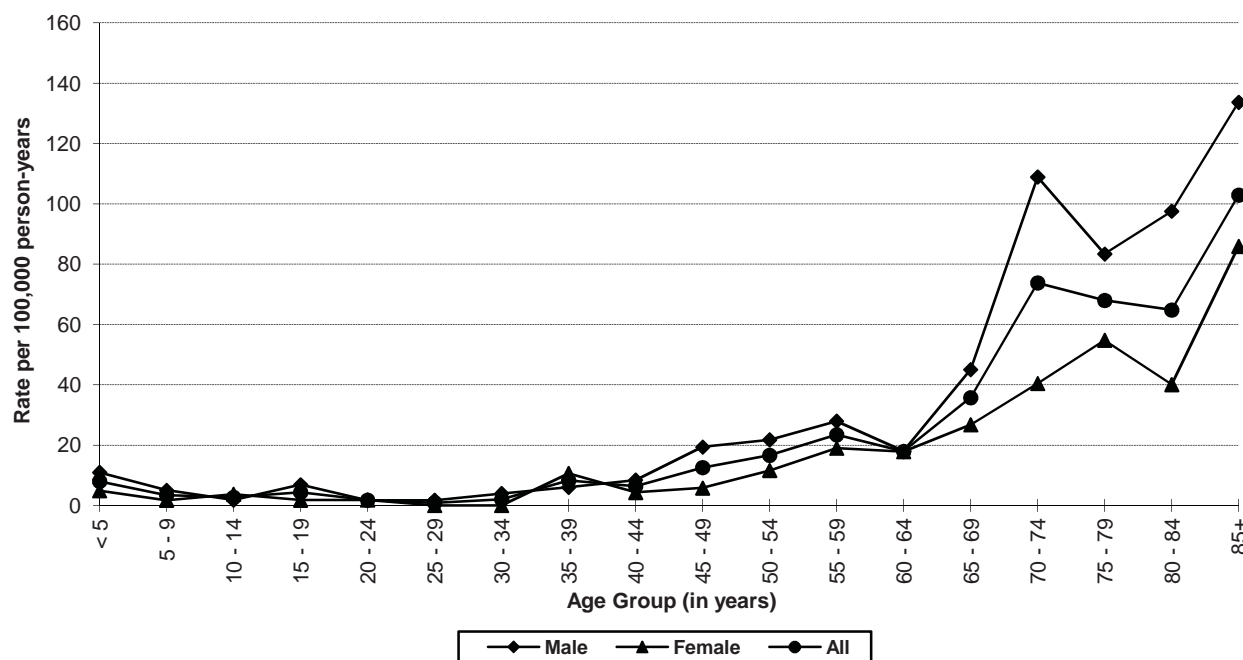| County		County		County	
Ada	53	Cassia	4	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	8	Clearwater	-	Madison	4
Bear Lake	1	Custer	1	Minidoka	1
Benewah	2	Elmore	2	Nez Perce	4
Bingham	6	Franklin	3	Oneida	-
Blaine	2	Fremont	1	Owyhee	2
Boise	1	Gem	3	Payette	3
Bonner	11	Gooding	5	Power	-
Bonneville	22	Idaho	1	Shoshone	1
Boundary	6	Jefferson	5	Teton	-
Butte	-	Jerome	2	Twin Falls	18
Camas	-	Kootenai	22	Valley	3
Canyon	21	Latah	4	Washington	-
Caribou	1	Lemhi	2		

Risk and Associated Factors

|	
Age	This is the most common form of cancer in children. Incidence usually increases with age in adults. The highest rates occur in individuals over age 60.
Gender	Males have higher incidence rates than females for chronic myelogenous leukemia (CML), acute lymphoblastic leukemia (ALL), and chronic lymphocytic leukemia (CLL).
Race	ALL is less common among African Americans. CLL is rare in Asians.
Genetics	Certain congenital defects, such as trisomy 21, Fanconi's anemia, Bloom syndrome, and ataxia-telangectasia, increase risk in children for various types of leukemia.
Occupation	Benzene is a known cause of leukemia (predominantly acute myelogenous leukemia [AML]). Chimney sweeps exposed to soot are at higher risk.
Other	Ionizing radiation exposure increases the risk (except for CLL). Environmental exposure to low frequency, non-ionizing radiation and its association with leukemia incidence is being investigated. Treatment with some chemotherapeutic agents for other cancers increases the risk of leukemia. Exposure to herbicides used during the Vietnam War, including Agent Orange, has been associated with increased incidence of CLL. The antibiotic chloramphenicol likely causes leukemia. Autoimmune diseases and several viruses, including HTLV-I and EBV, have been linked to certain types of leukemia.

Special Notes

Mean age-adjusted incidence rate across health districts:	14.4
95% confidence interval on the mean age-adjusted incidence rate:	11.2- 17.5
Median age-adjusted incidence rate of health districts:	14.8
Range of age-adjusted incidence rate for health districts:	7.4- 19.7
SEER 17 rate (2008, all races):	12.3
NPCR rate (2008, all races):	11.9

The age-specific incidence distribution of leukemia for Idaho is quite similar to the typical pattern described by the SEER program of the National Cancer Institute. The rates are higher for males than females for all types of leukemia with the exception of acute myelogenous leukemia (AML), which has no predilection for age or sex. Generally, the incidence of leukemia is higher in older age groups. Health District 2 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho.

State Leukemia Incidence
Age-specific Rates

Leukemia Incidence
Age-adjusted Rates by Health District

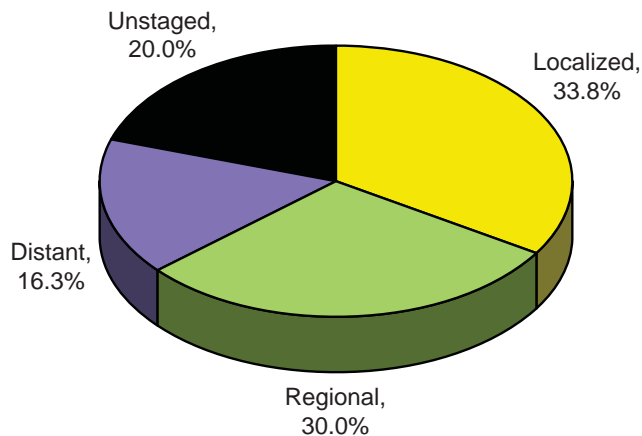| Health District	Rate
State	14.8
HD1	17.7
HD2	7.4
HD3	12.4
HD4	14.8
HD5	16.9
HD6	11.5
HD7	19.7
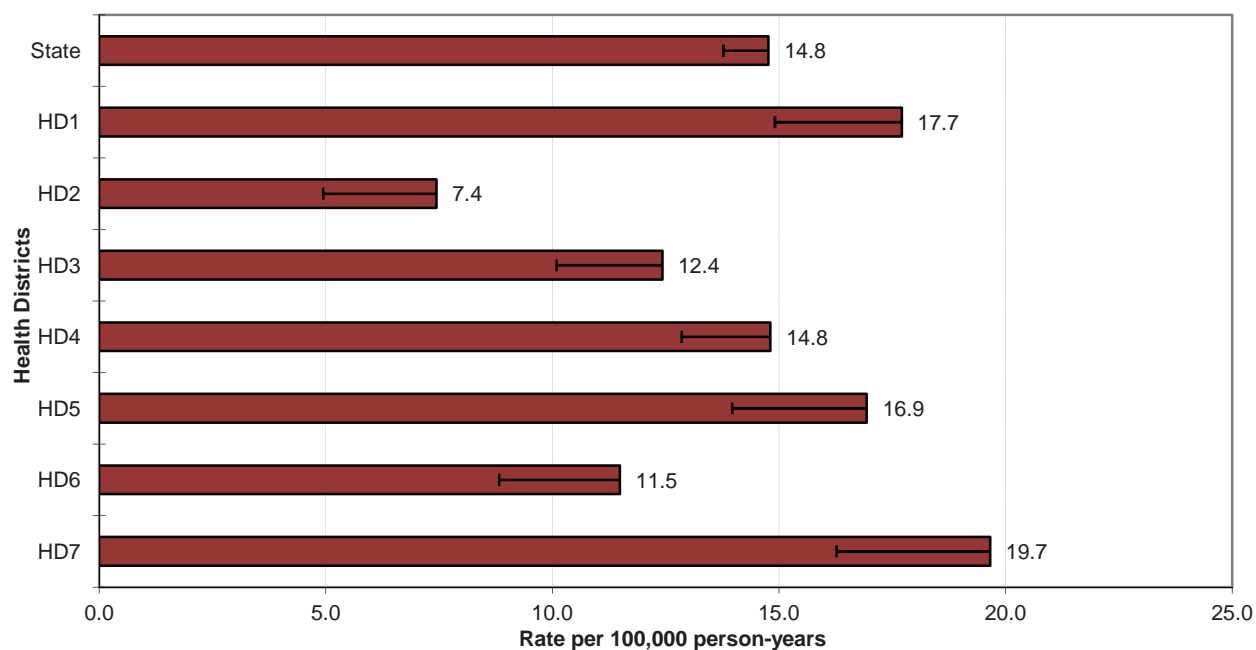
LIVER AND BILE DUCT

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.8	7.7	2.0
# of new invasive cases	80	63	17
# of new in-situ cases	0	0	0
# of deaths	55	34	21

Stage at Diagnosis - Liver and Bile Duct

Unstaged, 20.0%
Localized, 33.8%
Distant, 16.3%
Regional, 30.0%

Total Cases by County

| County		County		County	
Ada	18	Cassia	-	Lewis	-
Adams	-	Clark	-	Lincoln	-
Bannock	3	Clearwater	1	Madison	-
Bear Lake	-	Custer	-	Minidoka	-
Benewah	2	Elmore	1	Nez Perce	4
Bingham	1	Franklin	-	Oneida	1
Blaine	2	Fremont	-	Owyhee	1
Boise	-	Gem	3	Payette	1
Bonner	2	Gooding	1	Power	-
Bonneville	2	Idaho	1	Shoshone	3
Boundary	1	Jefferson	2	Teton	-
Butte	-	Jerome	2	Twin Falls	4
Camas	-	Kootenai	11	Valley	-
Canyon	10	Latah	-	Washington	-
Caribou	1	Lemhi	2		

Risk and Associated Factors

|	
Age	The incidence rate of liver cancer increases with age.
Gender	Rates are usually higher among males than females.
Race	Incidence is higher among Asians and African Americans than the remainder of the population.
Diet	Aflatoxins, which are present in certain foods such as peanut butter, are classified as a known human carcinogen, causing liver cancer.
Occupation	Thorium dioxide (an x-ray contrast medium) exposure increases liver cancer risk. Exposure to vinyl chloride used in plastic production is associated with an increased risk of angiosar coma of the liver. Chimney sweeps exposed to soot are at higher risk.
Other	Hepatitis B and Hepatitis C infections are significant causes of hepatocellular carcinoma. Cirrhosis of the liver due to viral hepatitis, alcoholism, or toxic chemical exposure accounts for 50-80% of patients diagnosed with liver cancer. Long-term use of oral contraceptives increases risk of hepatocellular carcinoma.

Special Notes

Mean age-adjusted incidence rate across health districts:	4.6
95% confidence interval on the mean age-adjusted incidence rate:	3.7- 5.6
Median age-adjusted incidence rate of health districts:	4.5
Range of age-adjusted incidence rate for health districts:	2.8- 6.7
SEER 17 rate (2008, all races):	7.2
NPCR rate (2008, all races):	6.6

There were few cases of liver cancer among persons less than 45 years of age. Age-specific incidence rates generally increased with age, peaking in the age group 80-84 for males and 85+ for females. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.

State Liver & Bile Duct Cancer Incidence
Age-specific Rates
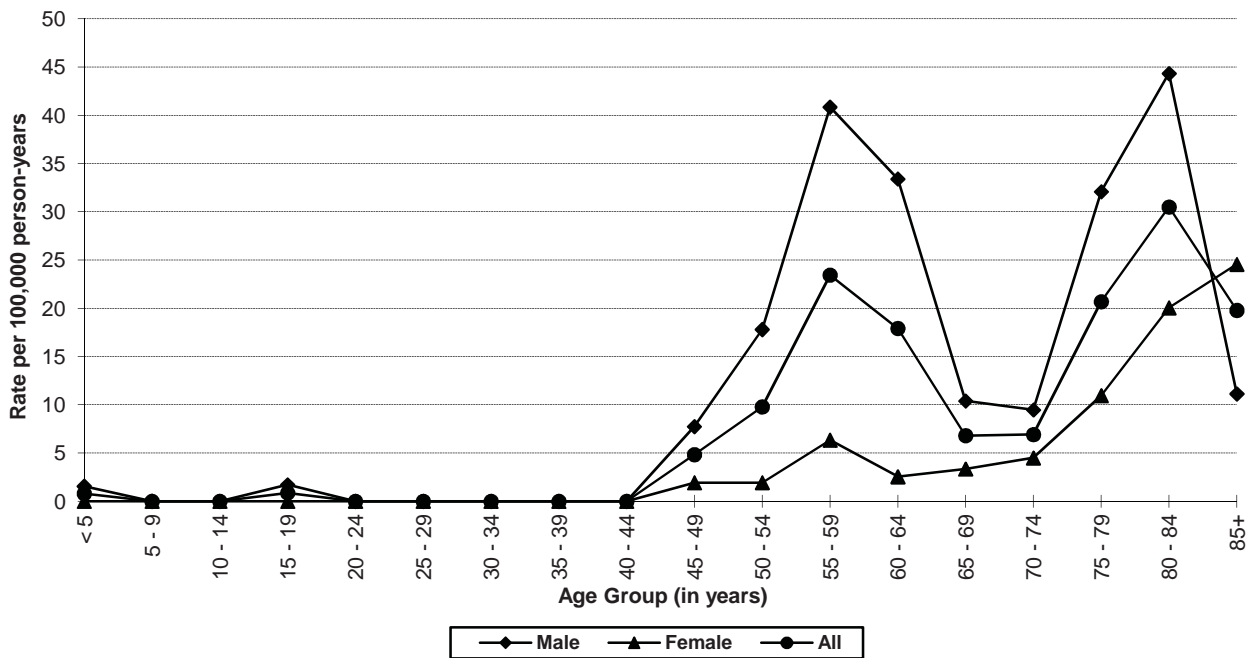
Liver and Bile Duct Cancer Incidence
Age-adjusted Rates by Health District
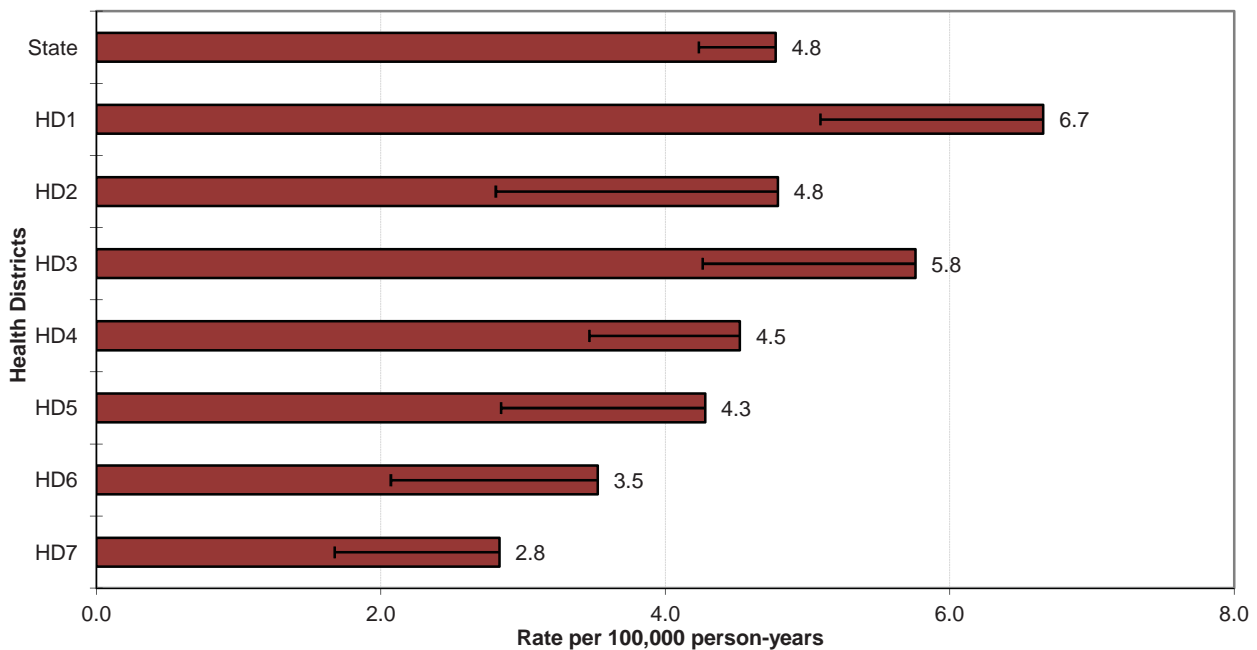
LUNG AND BRONCHUS

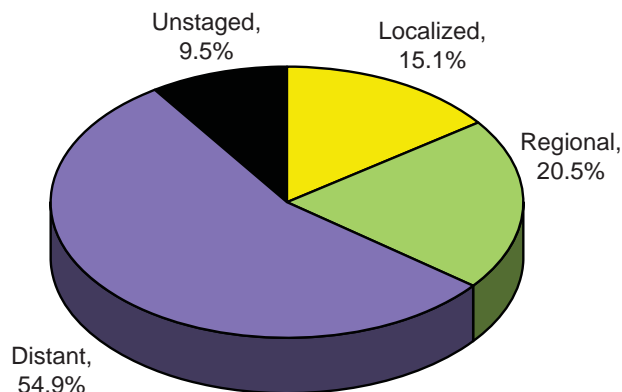## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	50.3	59.2	42.8
# of new invasive cases	776	421	355
# of new in-situ cases	0	0	0
# of deaths	638	338	300

Total Cases by County

County	#	County	#	County	#
Ada	177	Cassia	8	Lewis	5
Adams	1	Clark	-	Lincoln	2
Bannock	30	Clearwater	5	Madison	1
Bear Lake	1	Custer	3	Minidoka	10
Benewah	9	Elmore	17	Nez Perce	45
Bingham	26	Franklin	1	Oneida	1
Blaine	5	Fremont	5	Owyhee	7
Boise	2	Gem	17	Payette	18
Bonner	27	Gooding	6	Power	5
Bonneville	31	Idaho	9	Shoshone	19
Boundary	7	Jefferson	6	Teton	4
Butte	1	Jerome	6	Twin Falls	55
Camas	2	Kootenai	80	Valley	5
Canyon	91	Latah	13	Washington	6
Caribou	1	Lemhi	6		

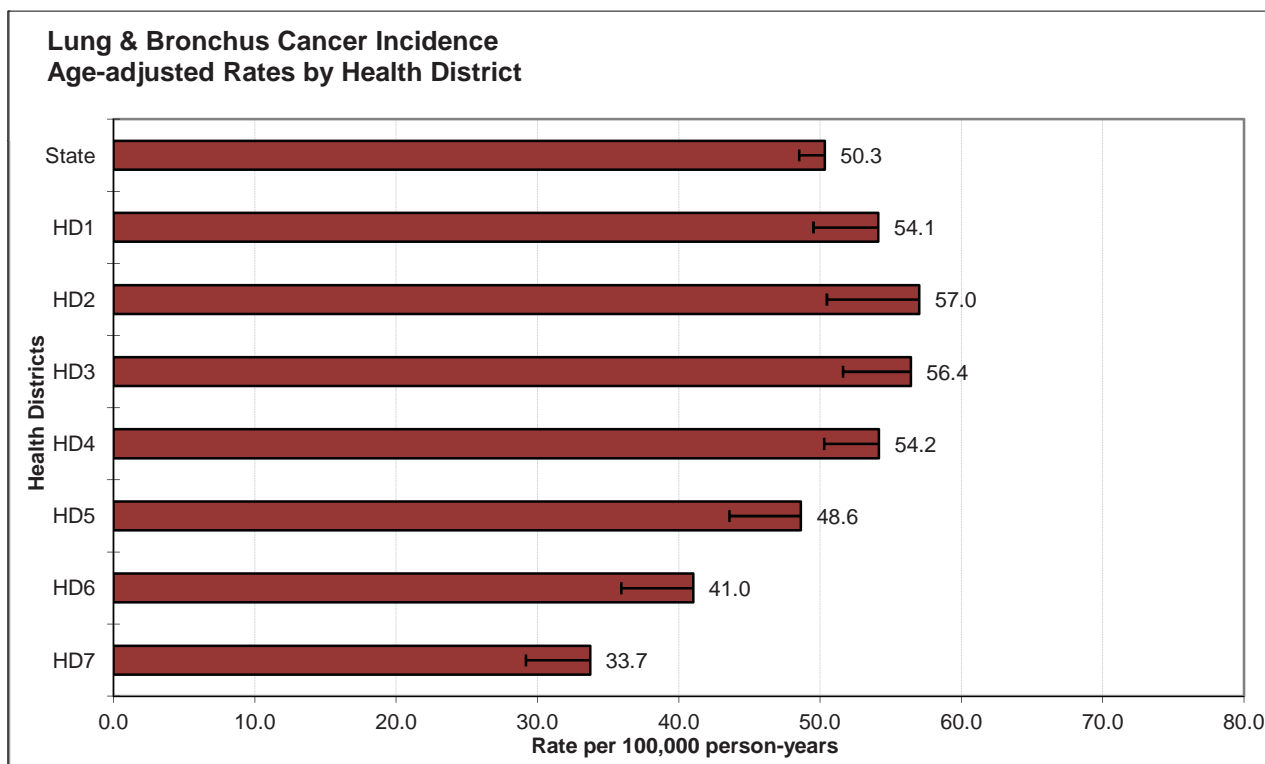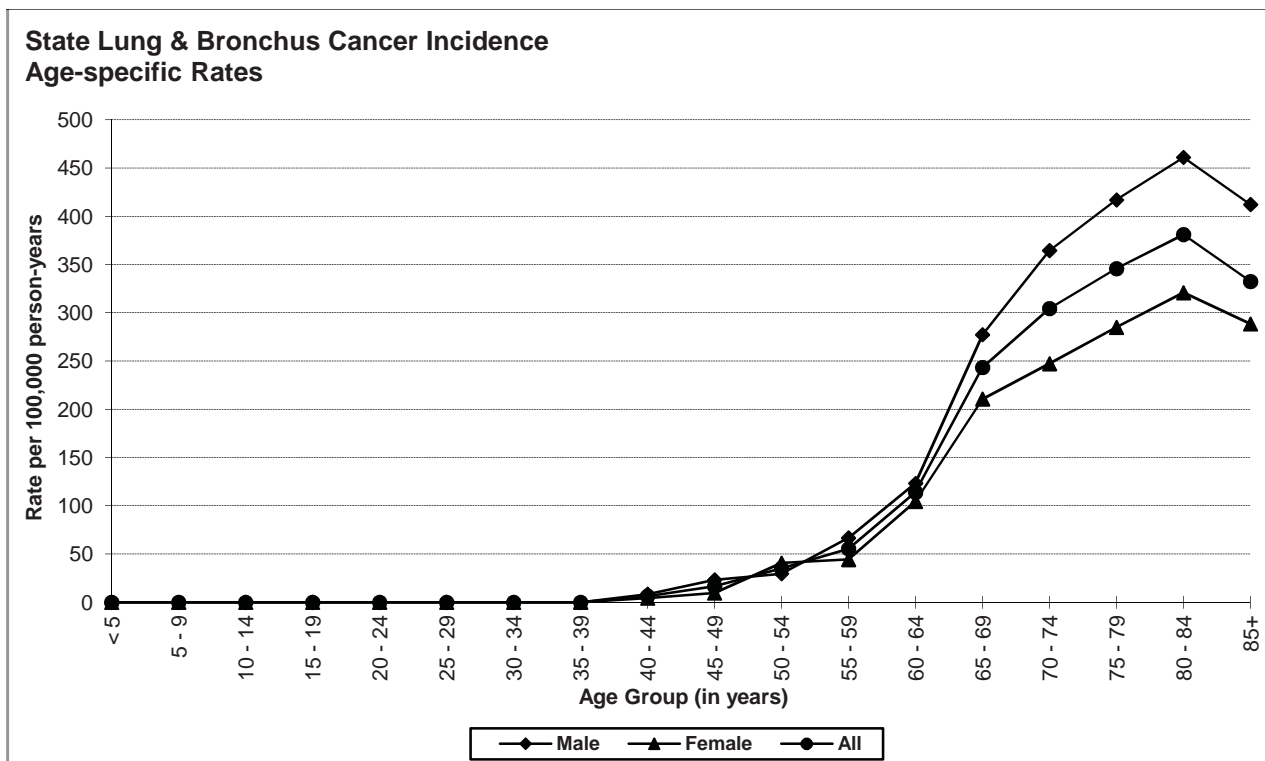## Stage at Diagnosis - Lung and Bronchus

Unstaged, 9.5%
Localized, 15.1%
Regional, 20.5%
Distant, 54.9%

Risk and Associated Factors

Age	Lung cancer incidence rates increase with age.
Gender	The incidence is currently higher in males than in females, but the gap is narrowing due to increased smoking rates among women.
Race & SES	Generally, incidence is higher among African Americans than other racial groups, and is also higher in lower income groups.
Diet	Diets low in consumption of fresh fruits and vegetables contribute to increased risk.
Occupation	Occupational or environmental exposures to asbestos, cadmium, chromium, coal tars, crystalline silica dust, polycyclic aromatic hydrocarbons, radon, soot, chlorpyrifos insecticides, ionizing radiation, and other substances increase the risk.
Other	Cigarette smoking, including exposure to second-hand smoke, is the most important risk factor, accounting for over 85% of lung cancer deaths. Evidence exists that rates are about 1.3 times higher, adjusted for smoking, in urban areas than rural areas due to air pollution, mostly from motor vehicles.

Special Notes

Mean age-adjusted incidence rate across health districts:	49.3
95% confidence interval on the mean age-adjusted incidence rate:	42.8- 55.9
Median age-adjusted incidence rate of health districts:	54.1
Range of age-adjusted incidence rate for health districts:	33.7- 57.0
SEER 17 rate (2008, all races):	59.2
NPCR rate (2008, all races):	65.5

There were few cases of lung cancer among persons less than 50 years of age. The age-specific incidence rates for males were uniformly higher than the rates for females after age 55. The incidence rates increased with age, peaking in the age group 80-84 for both males and females. Health District 7 had statistically significantly fewer cases than expected based upon rates for the remainder of Idaho.

State Lung & Bronchus Cancer Incidence
Age-specific Rates

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

MELANOMA OF SKIN

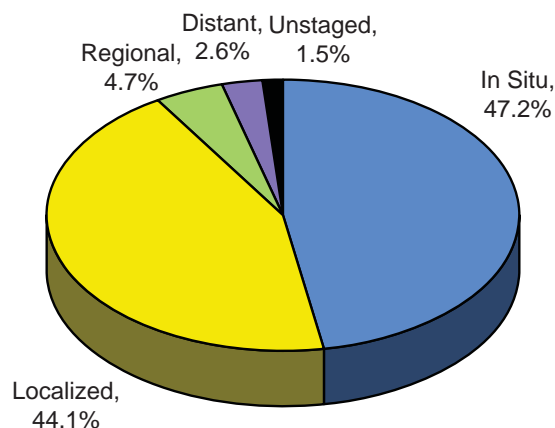## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	25.3	29.1	22.4
# of new invasive cases	392	217	175
# of new in-situ cases	350	191	159
# of deaths	57	39	18

Total Cases by County

County		County		County	
Ada	186	Cassia	11	Lewis	1
Adams	2	Clark	1	Lincoln	-
Bannock	24	Clearwater	7	Madison	10
Bear Lake	1	Custer	1	Minidoka	10
Benewah	6	Elmore	7	Nez Perce	18
Bingham	10	Franklin	1	Oneida	-
Blaine	15	Fremont	6	Owyhee	8
Boise	4	Gem	14	Payette	8
Bonner	27	Gooding	7	Power	6
Bonneville	59	Idaho	1	Shoshone	7
Boundary	8	Jefferson	10	Teton	4
Butte	-	Jerome	6	Twin Falls	21
Camas	1	Kootenai	114	Valley	8
Canyon	76	Latah	13	Washington	3
Caribou	3	Lemhi	8		

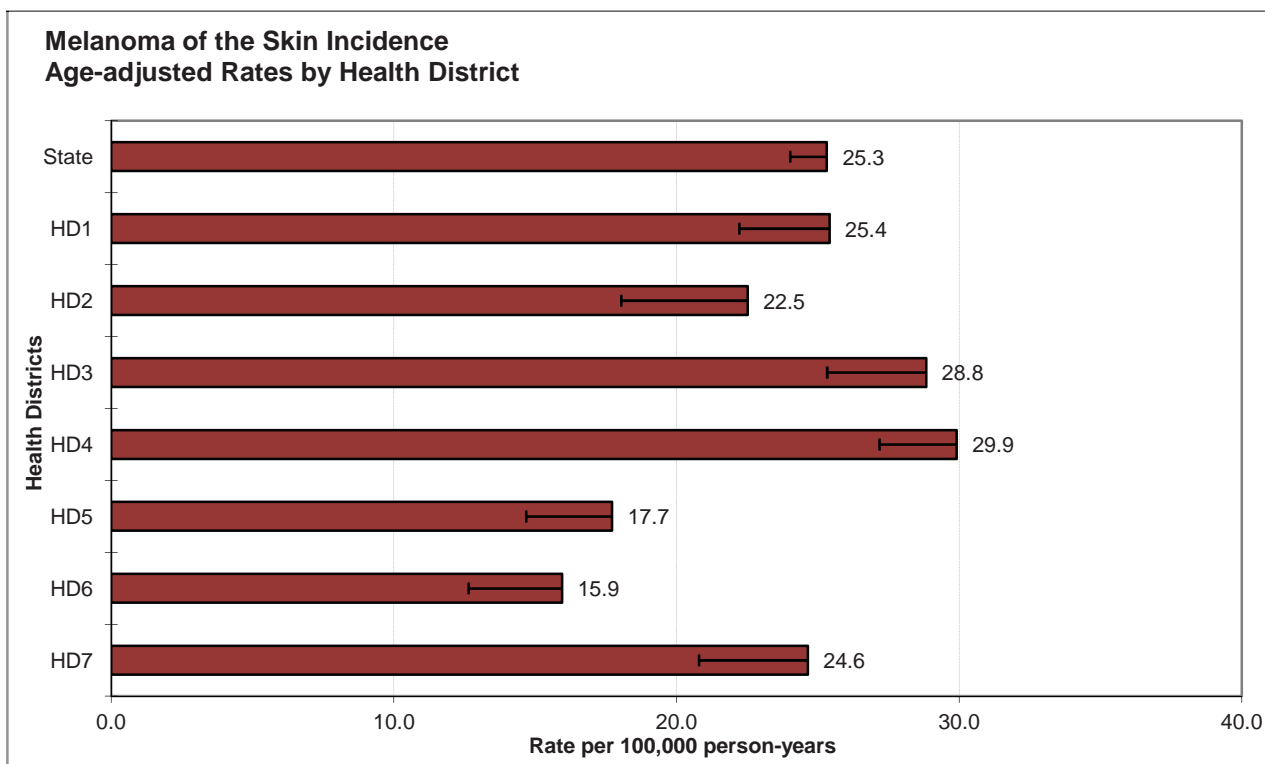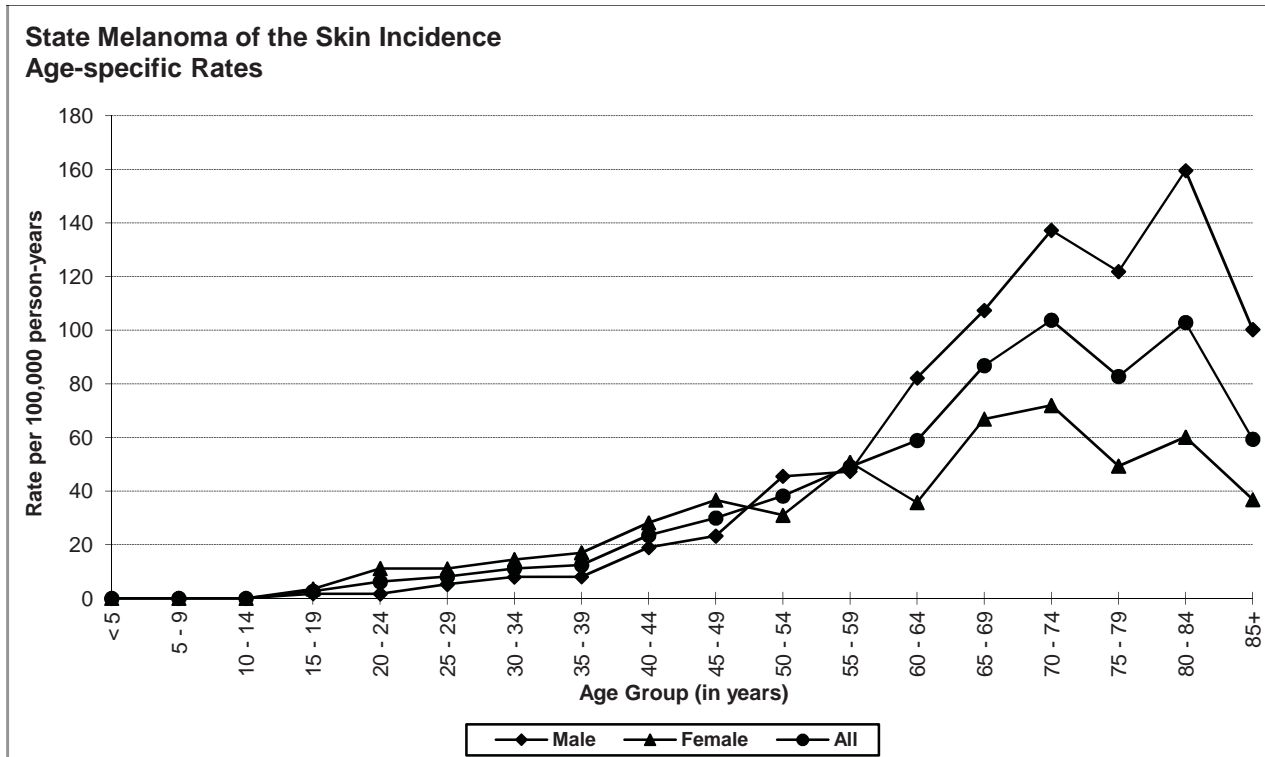## Stage at Diagnosis - Melanoma of Skin

Distant, 2.6%
Unstaged, 1.5%
Regional, 4.7%
In Situ, 47.2%
Localized, 44.1%

Risk and Associated Factors

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

Gender — Incidence rates are higher among females than males in younger age groups, and higher in males than females in older age groups.

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

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

Special Notes

Mean age-adjusted incidence rate across health districts:	23.6
95% confidence interval on the mean age-adjusted incidence rate:	19.7- 27.5
Median age-adjusted incidence rate of health districts:	24.6
Range of age-adjusted incidence rate for health districts:	15.9- 29.9
SEER 17 rate (2008, all races):	21.0
NPCR rate (2008, all races):	18.6

There were few cases of melanoma of the skin among persons less than 25 years of age. The age-specific incidence rates were higher among males after age 60. Health District 4 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health Districts 5 and 6 had statistically significantly fewer cases than expected.

State Melanoma of the Skin Incidence
Age-specific Rates

Legend: Male, Female, All

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

Health District	Rate per 100,000 person-years
State	25.3
HD1	25.4
HD2	22.5
HD3	28.8
HD4	29.9
HD5	17.7
HD6	15.9
HD7	24.6

MYELOMA

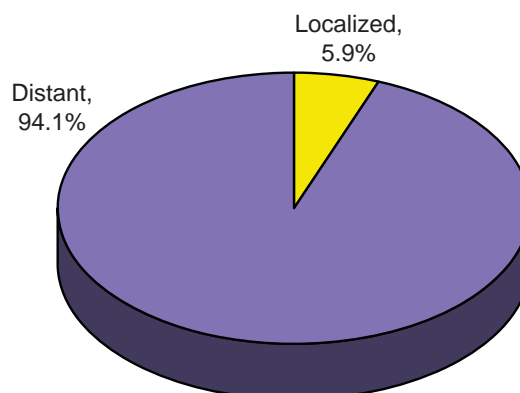## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	6.6	8.1	5.3
# of new invasive cases	102	58	44
# of new in-situ cases	0	0	0
# of deaths	55	29	26

Total Cases by County

County		County		County	
Ada	24	Cassia	-	Lewis	1
Adams	-	Clark	-	Lincoln	1
Bannock	3	Clearwater	-	Madison	1
Bear Lake	-	Custer	2	Minidoka	1
Benewah	-	Elmore	2	Nez Perce	3
Bingham	2	Franklin	3	Oneida	1
Blaine	1	Fremont	-	Owyhee	1
Boise	1	Gem	-	Payette	-
Bonner	2	Gooding	1	Power	1
Bonneville	6	Idaho	2	Shoshone	2
Boundary	1	Jefferson	-	Teton	1
Butte	-	Jerome	4	Twin Falls	3
Camas	-	Kootenai	17	Valley	-
Canyon	13	Latah	1	Washington	-
Caribou	-	Lemhi	1		

Stage at Diagnosis - Myeloma

Localized, 5.9%

Distant, 94.1%

Risk and Associated Factors

|	
Age	Multiple myeloma is an age-dependent cancer; incidence rates increase with age and it rarely occurs before age 40.
Gender	Rates for males are somewhat higher than for females.
Race	African Americans have higher incidence rates than Caucasians.
Genetics	Genetic factors play an important role in its development but how so is not completely understood. Familial factors and chronic antigenic stimulation have also been implicated.
Other	Multiple myeloma has been associated with lymphomas such as Burkitt's and non-Hodgkin lymphomas. Studies have suggested several possible viral etiologies, and multiple myeloma has been linked to ionizing radiation exposure. Several specific chemical and physical substances have been linked to myeloma risk in one or more studies. Truck drivers, painters, and agricultural workers are at increased risk for multiple myeloma. Individuals with monoclonal gammopathy of unknown significance are predisposed to develop multiple myeloma.

Special Notes

Mean age-adjusted incidence rate across health districts:	6.5
95% confidence interval on the mean age-adjusted incidence rate:	5.5- 7.4
Median age-adjusted incidence rate of health districts:	6.3
Range of age-adjusted incidence rate for health districts:	5.1- 8.8
SEER 17 rate (2008, all races):	5.6
NPCR rate (2008, all races):	5.6

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 50-54. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.

**State Myeloma Incidence
Age-specific Rates**
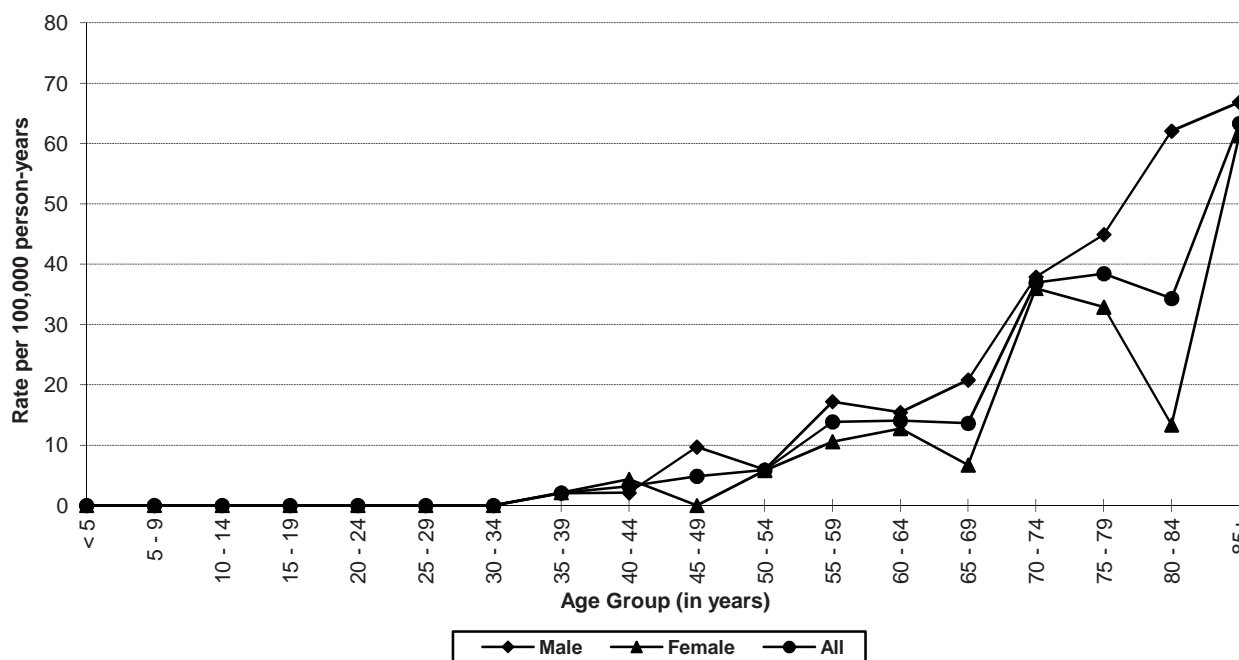
**Myeloma Incidence
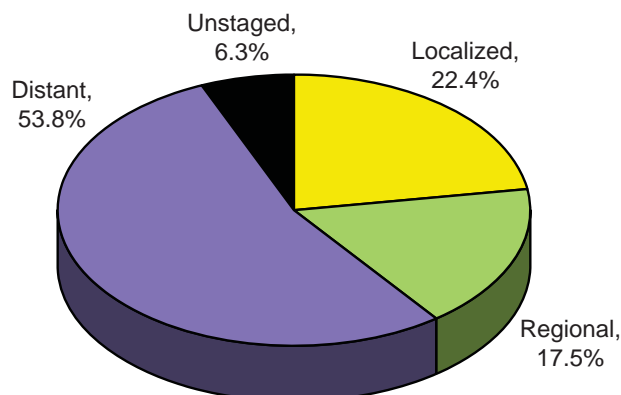Age-adjusted Rates by Health District**
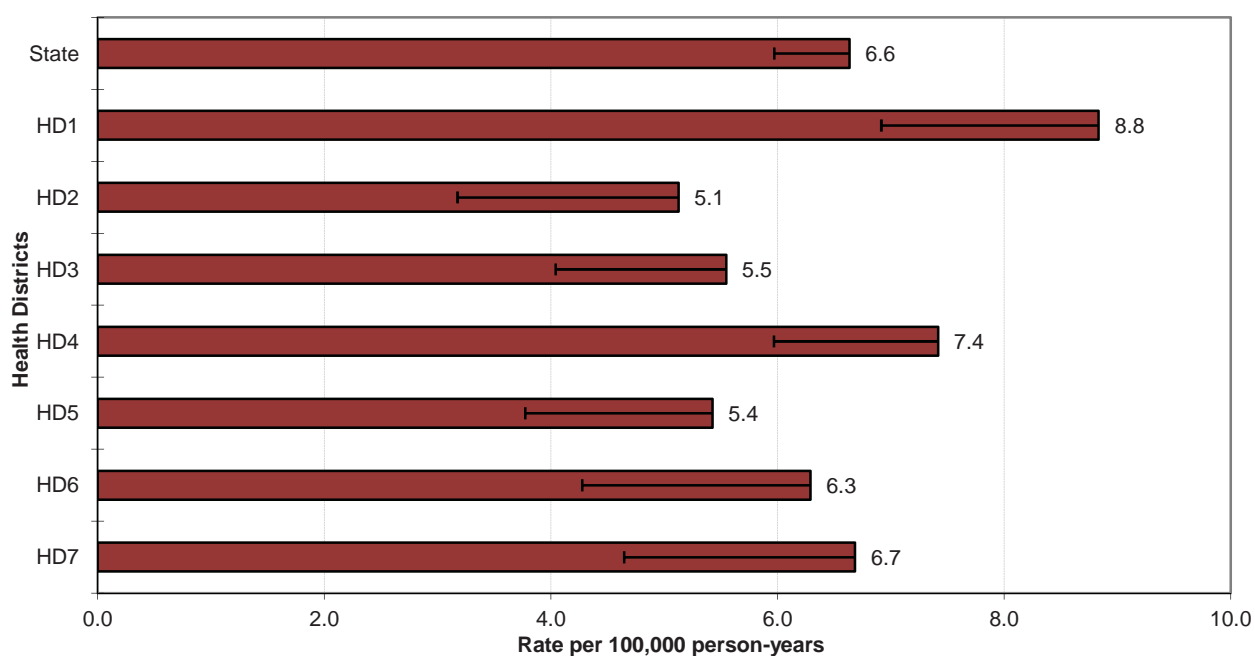
NON-HODGKIN LYMPHOMA

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	18.5	18.6	18.3
# of new invasive cases	286	136	150
# of new in-situ cases	0	0	0
# of deaths	103	56	47

Total Cases by County

| County	#	County	#	County	#
Ada	77	Cassia	5	Lewis	1
Adams	1	Clark	-	Lincoln	1
Bannock	10	Clearwater	4	Madison	2
Bear Lake	-	Custer	1	Minidoka	5
Benewah	-	Elmore	5	Nez Perce	9
Bingham	6	Franklin	3	Oneida	1
Blaine	2	Fremont	1	Owyhee	1
Boise	-	Gem	6	Payette	3
Bonner	12	Gooding	1	Power	2
Bonneville	12	Idaho	3	Shoshone	5
Boundary	3	Jefferson	3	Teton	3
Butte	1	Jerome	1	Twin Falls	13
Camas	-	Kootenai	26	Valley	3
Canyon	45	Latah	4	Washington	2
Caribou	1	Lemhi	2		

Stage at Diagnosis - Non-Hodgkin Lymphoma

Unstaged, 6.3%
Localized, 22.4%
Distant, 53.8%
Regional, 17.5%

Risk and Associated Factors

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

Gender Males have higher rates than females.

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

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

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

Special Notes

Mean age-adjusted incidence rate across health districts:	17.7
95% confidence interval on the mean age-adjusted incidence rate:	14.9- 20.6
Median age-adjusted incidence rate of health districts:	17.1
Range of age-adjusted incidence rate for health districts:	14.2- 23.2
SEER 17 rate (2008, all races):	19.5
NPCR rate (2008, all races):	18.9

The age-specific incidence rates of non-Hodgkin lymphoma increased with age, peaking in the age group 85+ for both males and females. Health District 3 had statistically significantly more cases than expected based upon rates for the remainder of Idaho.

**State Non-Hodgkin Lymphoma Incidence
Age-specific Rates**
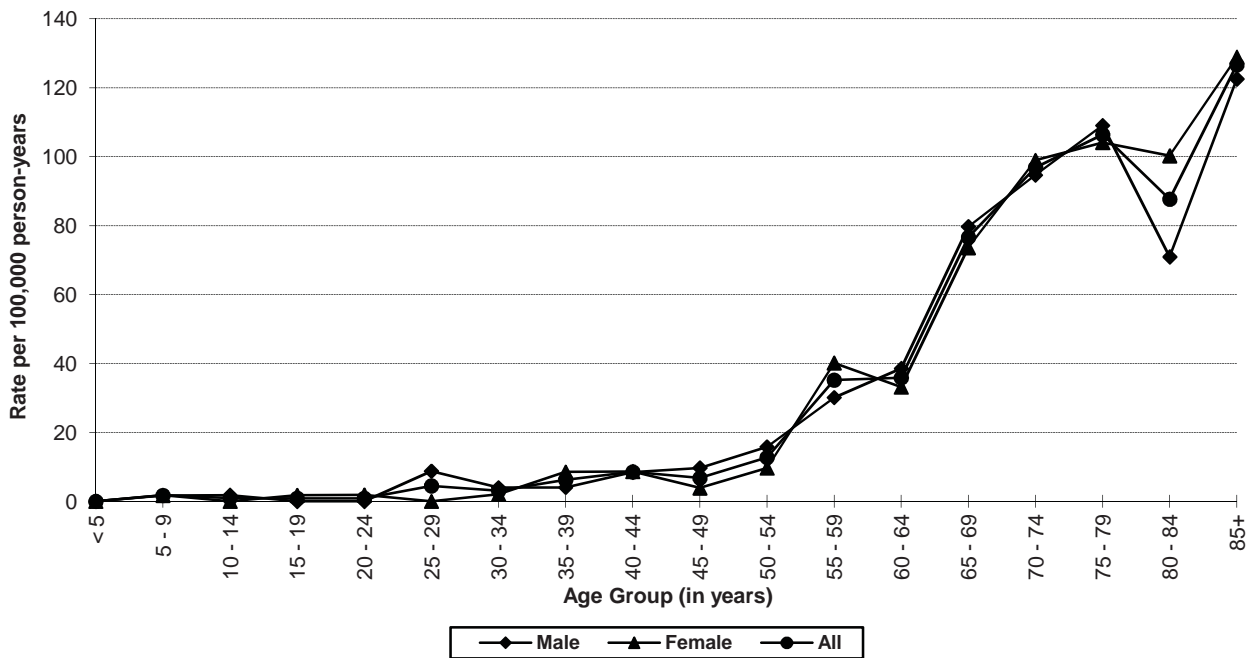
**Non-Hodgkin Lymphoma Incidence
Age-adjusted Rates by Health District**

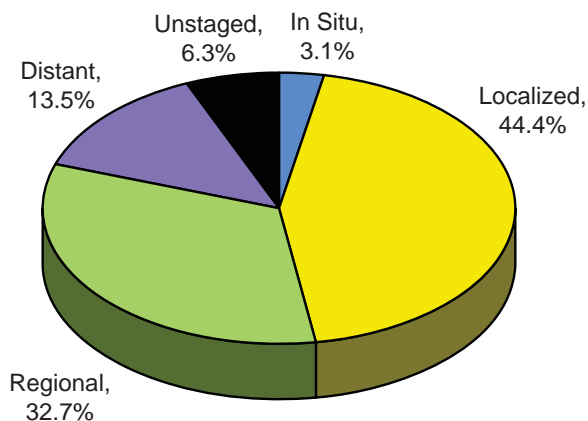| Health District	Rate
State	18.5
HD1	17.1
HD2	17.3
HD3	23.2
HD4	22.9
HD5	14.7
HD6	14.9
HD7	14.2
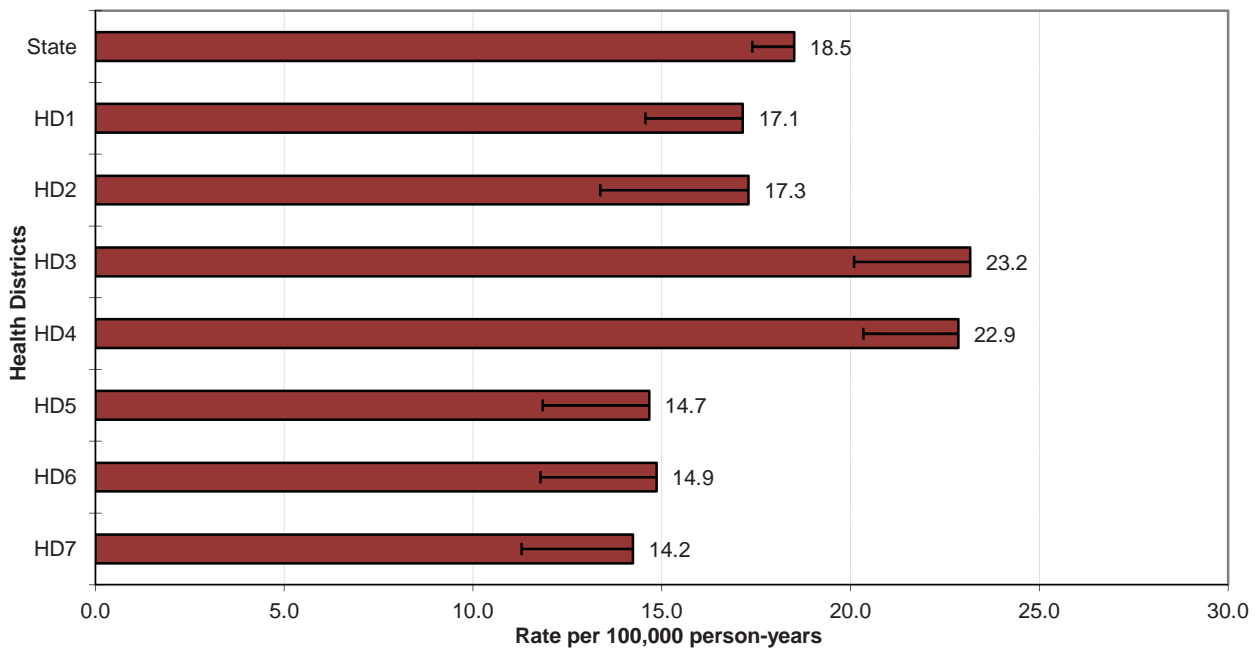
ORAL CAVITY AND PHARYNX

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	13.8	20.1	8.0
# of new invasive cases	216	151	65
# of new in-situ cases	7	5	2
# of deaths	41	29	12

Stage at Diagnosis - Oral Cavity and Pharynx

Unstaged, 6.3%
In Situ, 3.1%
Distant, 13.5%
Localized, 44.4%
Regional, 32.7%

Total Cases by County

County	#	County	#	County	#
Ada	54	Cassia	3	Lewis	-
Adams	-	Clark	1	Lincoln	-
Bannock	12	Clearwater	2	Madison	3
Bear Lake	-	Custer	-	Minidoka	3
Benewah	1	Elmore	3	Nez Perce	6
Bingham	11	Franklin	-	Oneida	1
Blaine	2	Fremont	1	Owyhee	-
Boise	1	Gem	4	Payette	3
Bonner	8	Gooding	3	Power	2
Bonneville	15	Idaho	3	Shoshone	1
Boundary	1	Jefferson	4	Teton	-
Butte	1	Jerome	5	Twin Falls	21
Camas	-	Kootenai	20	Valley	2
Canyon	18	Latah	1	Washington	1
Caribou	2	Lemhi	3		

Risk and Associated Factors

Age	Most cases occur in people over age 60.
Gender	Males have higher incidence rates than females, 2-6 times higher in most parts of the world.
Race & SES	Rates are higher for African Americans than for Caucasians. Rates are also higher among lower income groups.
Diet	Diets low in fresh fruit and vegetable consumption are associated with increased risk.
Other	Smoking and spit tobacco use are major risk factors for cancers of the oral cavity and pharynx. Alcohol use, especially excessive, is a major risk factor. Combined exposure to tobacco and alcohol multiply the risks of each other. It is estimated that smoking and drinking account for 75% of all oral cancers in the United States. Approximately 15% of oral cavity and pharyngeal cancers in the United States are attributable to infection with oncogenic human papillomavirus (HPV) types. Patients with late stage oropharyngeal cancer have better outcomes if their tumors were linked to HPV versus tobacco and alcohol.

Special Notes

Mean age-adjusted incidence rate across health districts:	13.8
95% confidence interval on the mean age-adjusted incidence rate:	11.5- 16.1
Median age-adjusted incidence rate of health districts:	14.2
Range of age-adjusted incidence rate for health districts:	10.1- 18.0
SEER 17 rate (2008, all races):	10.7
NPCR rate (2008, all races):	11.0

There were few cases of oral cavity and pharyngeal cancers among persons less than 45 years of age. The age-specific incidence rates generally increased with age after age 49, peaking in the age group 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.

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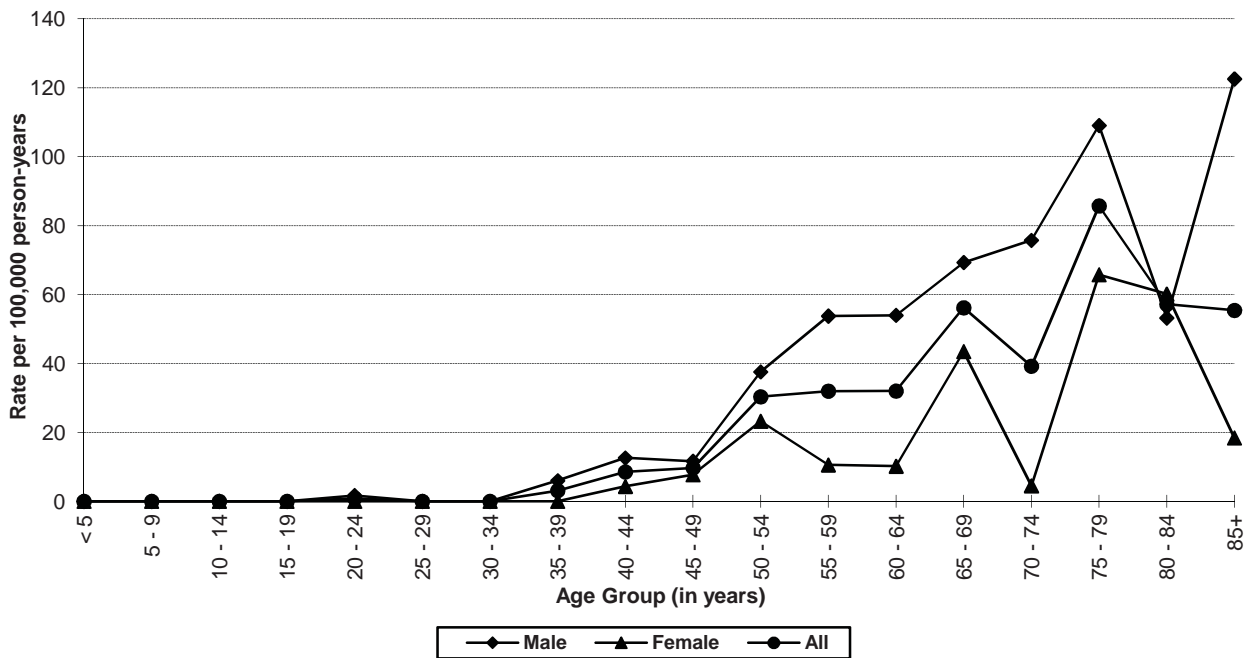
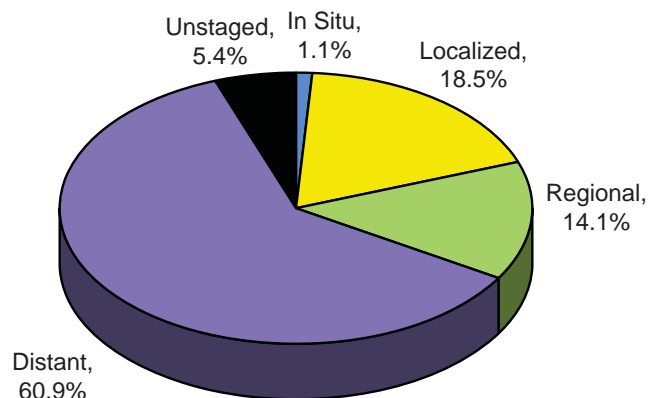## Oral Cavity & Pharyngeal Cancer Incidence Age-adjusted Rates by Health District
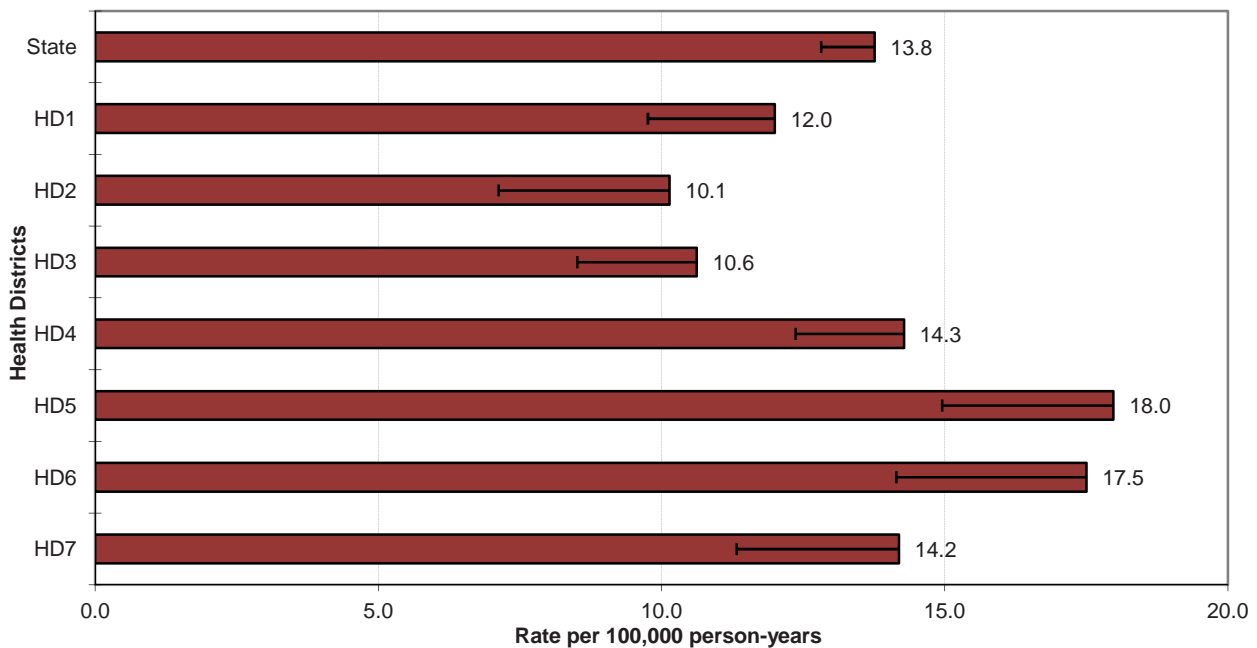
OVARY

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	-	10.9
# of new invasive cases	-	-	91
# of new in-situ cases	-	-	1
# of deaths	-	-	57

Total Cases by County

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

Stage at Diagnosis - Ovary

Unstaged, 5.4%
In Situ, 1.1%
Localized, 18.5%
Regional, 14.1%
Distant, 60.9%

Risk and Associated Factors
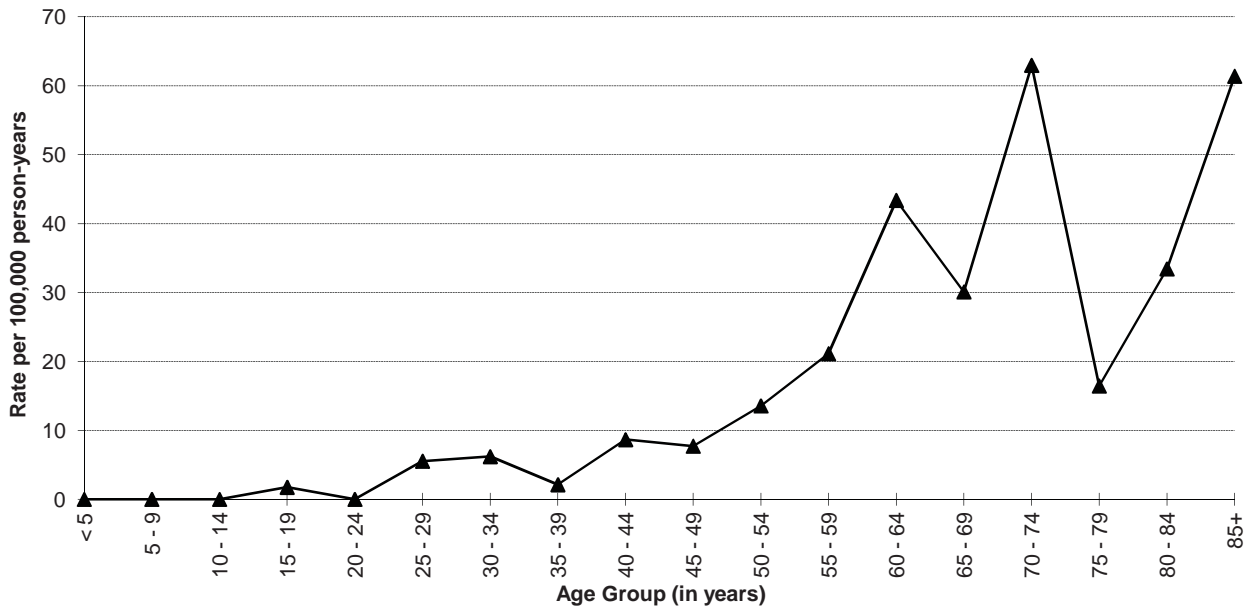
Age	The rate of ovarian cancer increases with age, and it is primarily a disease of older women.
Race & SES	Incidence rates are slightly higher among Caucasian females than African Americans. Rates are higher among upper income groups.
Genetics	The most important risk factor for ovarian cancer is a family history of a first-degree relative (mother, daughter, or sister) with the disease. The risk is higher still in women with two or more first-degree relatives with ovarian cancer.
Hormonal	Risk of ovarian cancer is significantly reduced via suppression of ovulation through pregnancy or oral contraceptive use. Highest risk is in post-menopausal women. Ovarian cancer is also associated with a personal history of breast, endometrial, and colon cancers.
Diet	Dietary animal fat may increase the risk.
Other	High dose (>100 rads) ionizing radiation roughly doubles the risk of ovarian cancer.

Special Notes

Mean age-adjusted incidence rate across health districts:	10.7
95% confidence interval on the mean age-adjusted incidence rate:	8.9- 12.5
Median age-adjusted incidence rate of health districts:	11.0
Range of age-adjusted incidence rate for health districts:	6.5- 13.8
SEER 17 rate (2008, all races):	12.5
NPCR rate (2008, all races):	12.2

There were few cases of ovarian cancer among females aged less than 40 years. The age-specific incidence rates of ovarian cancer generally increased with age starting in the 45-49 age group. The highest age-specific rate was for women aged 70-74. No health districts had statistically significantly more, or fewer, cases than expected based upon rates for the remainder of Idaho.

State Ovarian Cancer Incidence
Age-specific Rates

Rate per 100,000 person-years

Age Group (in years)

Ovarian Cancer Incidence
Age-adjusted Rates by Health District

Health District	Rate
State	10.9
HD1	13.8
HD2	10.1
HD3	11.4
HD4	11.0
HD5	6.5
HD6	9.1
HD7	12.9

Health Districts

Rate per 100,000 person-years
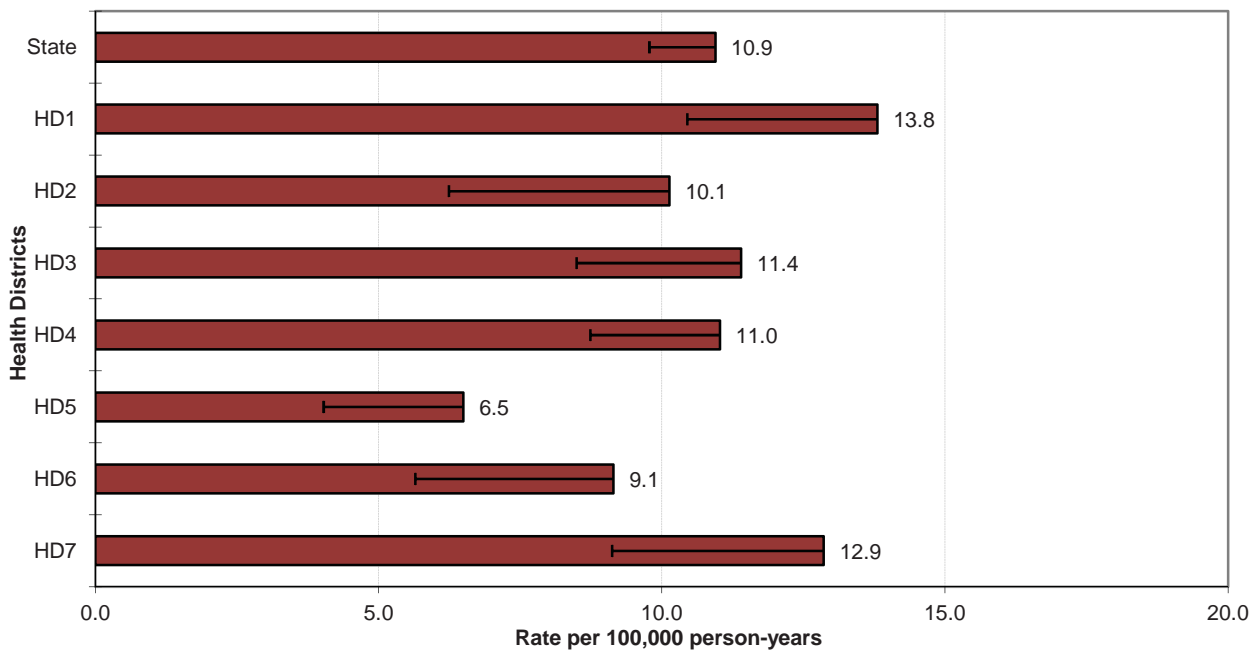
PANCREAS

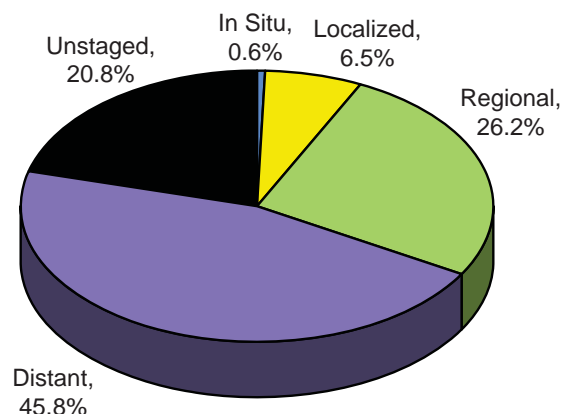## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	10.7	12.2	9.2
# of new invasive cases	167	90	77
# of new in-situ cases	1	0	1
# of deaths	156	82	74

Stage at Diagnosis - Pancreas

In Situ, 0.6%
Localized, 6.5%
Regional, 26.2%
Distant, 45.8%
Unstaged, 20.8%

Total Cases by County

County		County		County	
Ada	51	Cassia	2	Lewis	2
Adams	-	Clark	-	Lincoln	1
Bannock	7	Clearwater	2	Madison	2
Bear Lake	3	Custer	-	Minidoka	2
Benewah	2	Elmore	-	Nez Perce	3
Bingham	5	Franklin	4	Oneida	-
Blaine	3	Fremont	-	Owyhee	1
Boise	1	Gem	1	Payette	4
Bonner	7	Gooding	-	Power	-
Bonneville	8	Idaho	3	Shoshone	1
Boundary	-	Jefferson	3	Teton	-
Butte	1	Jerome	-	Twin Falls	14
Camas	-	Kootenai	17	Valley	1
Canyon	10	Latah	4	Washington	-
Caribou	1	Lemhi	2		

Risk and Associated Factors

**Age** Pancreatic cancer increases with age and is rare in persons younger than 40 years old.

Gender Incidence rates of pancreatic cancer are about 50% higher in males than females.

Race In the United States, the incidence is higher in African Americans.

Diet Investigators have generally found increased risks associated with animal protein and fat consumption, and decreased risks associated with vegetables and fruit intake. The normal range of body mass index (>=18 - <25 kg/m2) has been associated with decreased risk of pancreatic cancer.

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

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

Special Notes

Mean age-adjusted incidence rate across health districts:	10.6
95% confidence interval on the mean age-adjusted incidence rate:	8.8- 12.4
Median age-adjusted incidence rate of health districts:	10.5
Range of age-adjusted incidence rate for health districts:	6.3- 13.6
SEER 17 rate (2008, all races):	12.0
NPCR rate (2008, all races):	11.8

There were few cases of pancreatic cancer among persons aged less than 45 years. The age-specific incidence rates of pancreatic cancer generally increased after age 54. Health District 4 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health District 3 had statistically significantly fewer cases than expected.

State Pancreas Cancer Incidence
Age-specific Rates
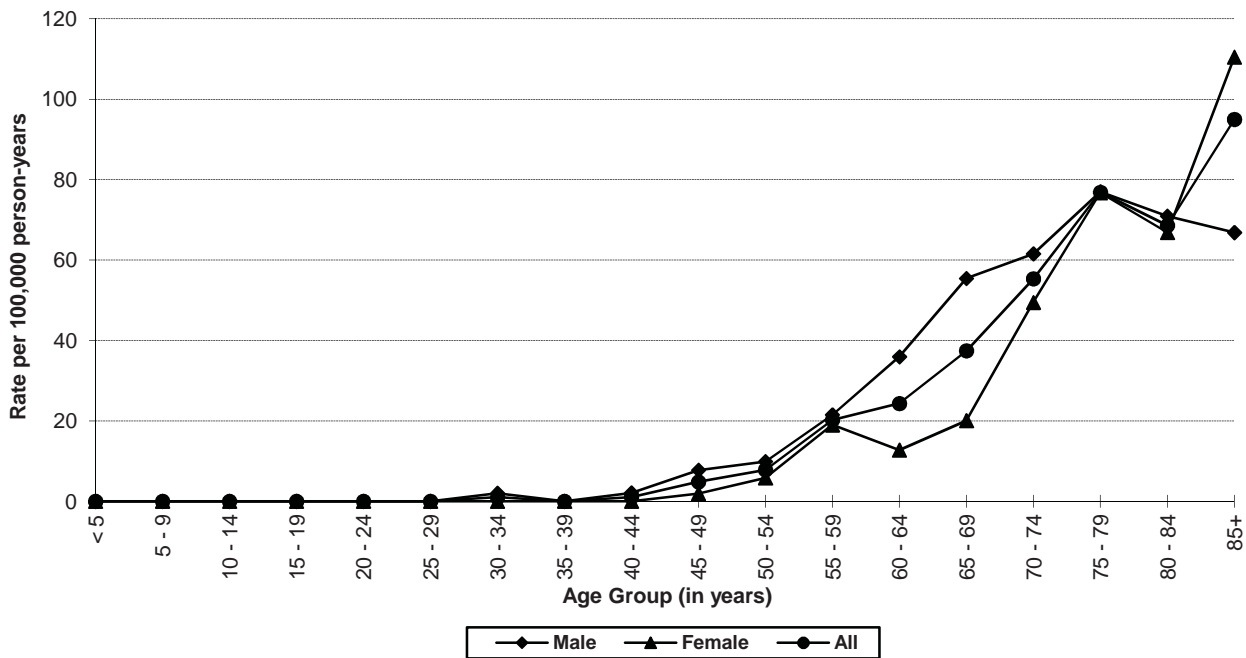
Pancreas Cancer Incidence
Age-adjusted Rates by Health District
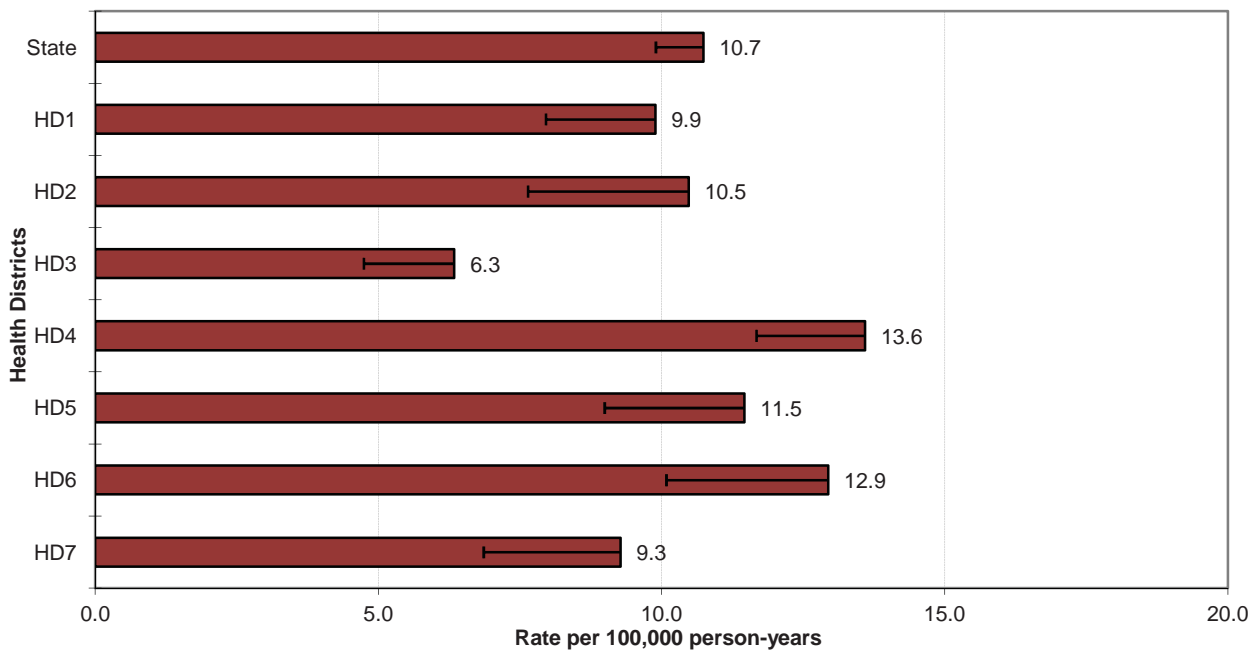
PROSTATE

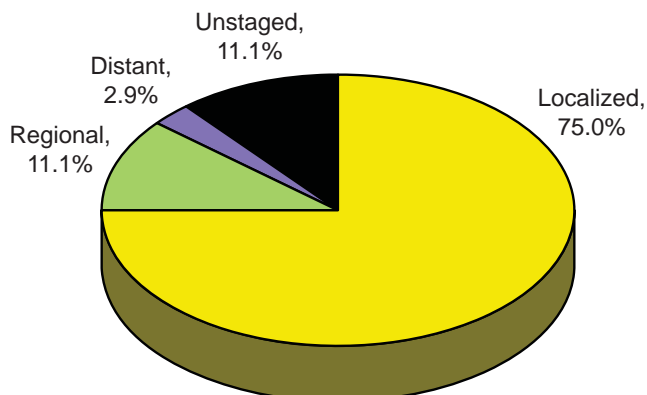## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	148.5	-
# of new invasive cases	-	1120	-
# of new in-situ cases	-	0	-
# of deaths	-	165	-

Stage at Diagnosis - Prostate

Unstaged, 11.1%
Distant, 2.9%
Regional, 11.1%
Localized, 75.0%

Total Cases by County

| County	Cases	County	Cases	County	Cases
Ada	270	Cassia	16	Lewis	4
Adams	10	Clark	-	Lincoln	3
Bannock	37	Clearwater	7	Madison	15
Bear Lake	7	Custer	4	Minidoka	8
Benewah	10	Elmore	17	Nez Perce	42
Bingham	35	Franklin	8	Oneida	5
Blaine	11	Fremont	11	Owyhee	6
Boise	16	Gem	14	Payette	16
Bonner	23	Gooding	20	Power	5
Bonneville	69	Idaho	18	Shoshone	11
Boundary	11	Jefferson	13	Teton	5
Butte	3	Jerome	21	Twin Falls	57
Camas	-	Kootenai	101	Valley	11
Canyon	122	Latah	25	Washington	14
Caribou	7	Lemhi	10		

Risk and Associated Factors

Age	Prostate cancer is rarely diagnosed before age 50, and it is primarily a disease of older men.
Race	African American males have substantially higher incidence and mortality rates than Caucasian males.
Genetics	A family history of prostate cancer is associated with increased risk.
Diet	Dietary fat has been implicated in several international, regional, and case-control studies.
Other	Environmental and familial factors may contribute to an increased incidence but no specific factor in these two groups of potential risk factors has been clearly identified. Three risk factors are well established: age, family history, and ethnic group/country of residence. Farming is the most consistent occupational risk factor for prostate cancer. Methyl bromide pesticide application has been identified as a risk factor by the Agricultural Health Study. It is likely that only a very small proportion of all prostate cancer cases can be attributed to a specific industrial chemical exposure.

Special Notes

Mean age-adjusted incidence rate across health districts:	147.2
95% confidence interval on the mean age-adjusted incidence rate:	135.4- 158.9
Median age-adjusted incidence rate of health districts:	148.1
Range of age-adjusted incidence rate for health districts:	117.3- 163.4
SEER 17 rate (2008, all races):	146.7
NPCR rate (2008, all races):	144.6

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

**State Prostate Cancer Incidence
Age-specific Rates**
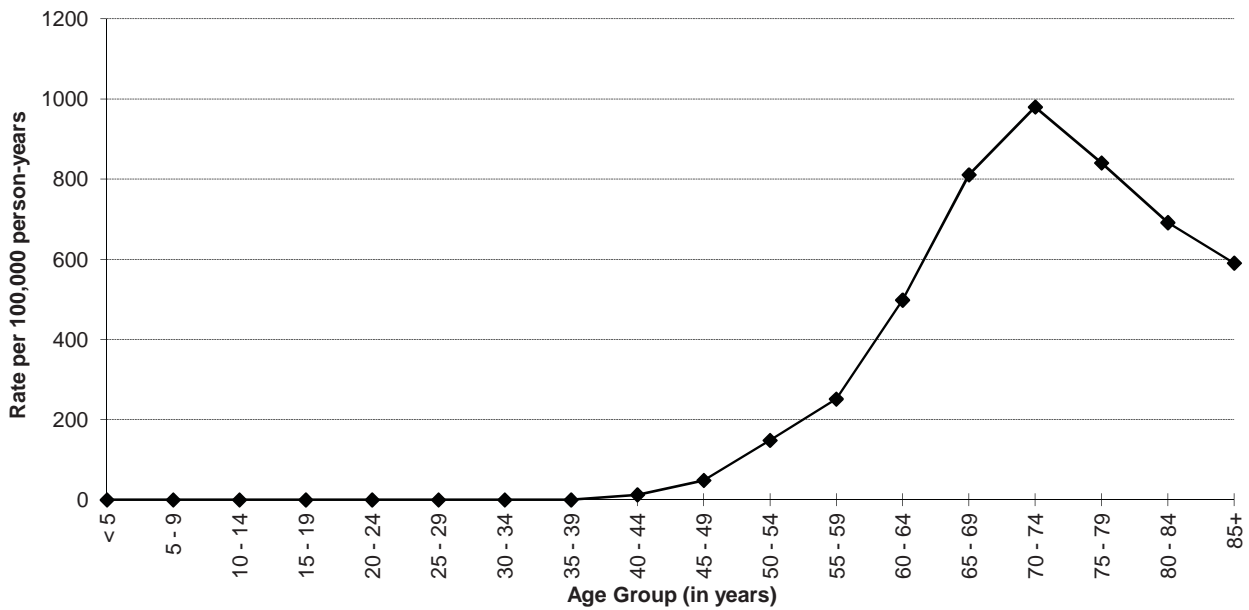
**Prostate Cancer Incidence
Age-adjusted Rates by Health District**
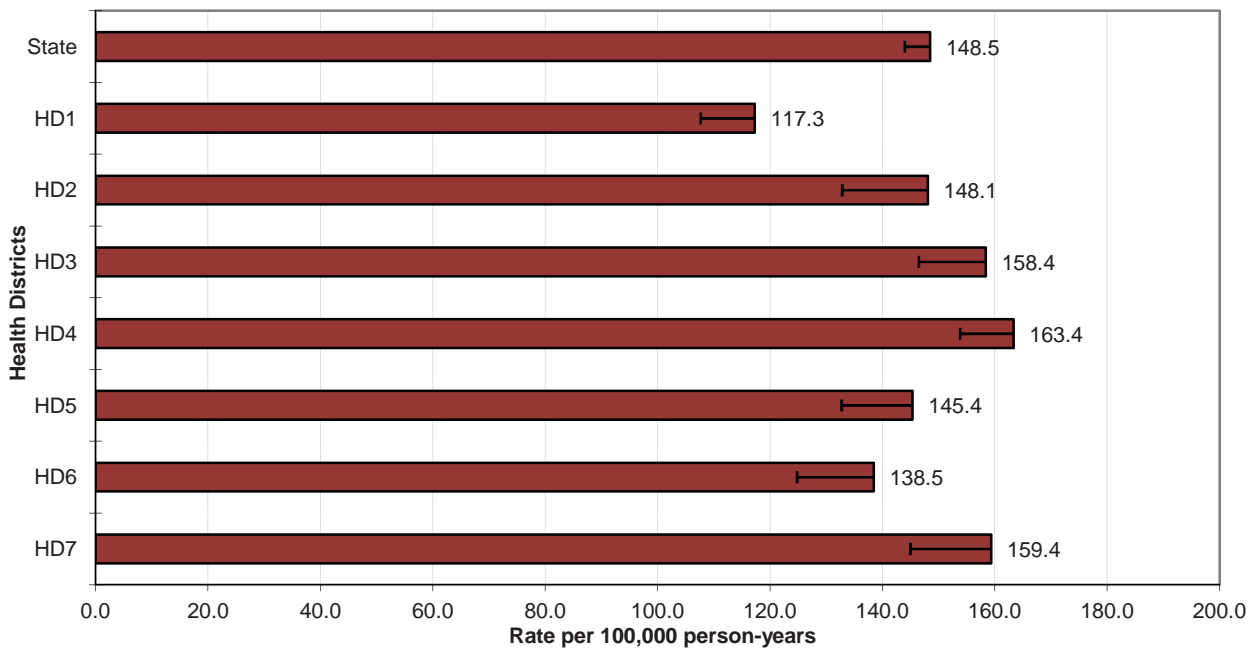
STOMACH

Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	4.2	7.0	1.9
# of new invasive cases	63	49	14
# of new in-situ cases	0	0	0
# of deaths	37	21	16

Stage at Diagnosis - Stomach

Unstaged, 22.2%
Localized, 17.5%
Regional, 22.2%
Distant, 38.1%

Total Cases by County

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

Risk and Associated Factors

Age Stomach cancer incidence rates increase with age.

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

Race & SES Incidence rates are higher among African Americans and Asians, and incidence is also higher in lower SES groups.

Diet Increased risk has been attributed to diets high in smoked foods and foods high in nitrates. Salt and salted foods contribute to stomach cancer risk. Diets high in fresh fruits and vegetables seem to be protective.

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

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

Special Notes
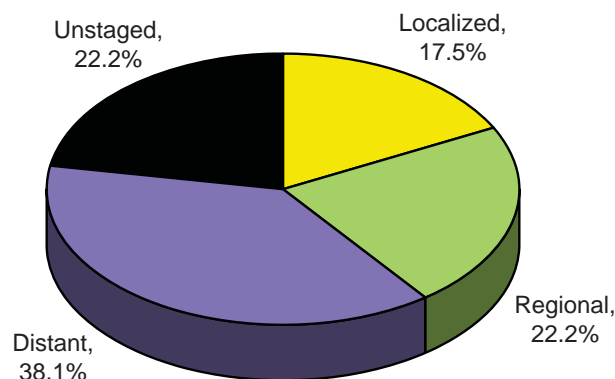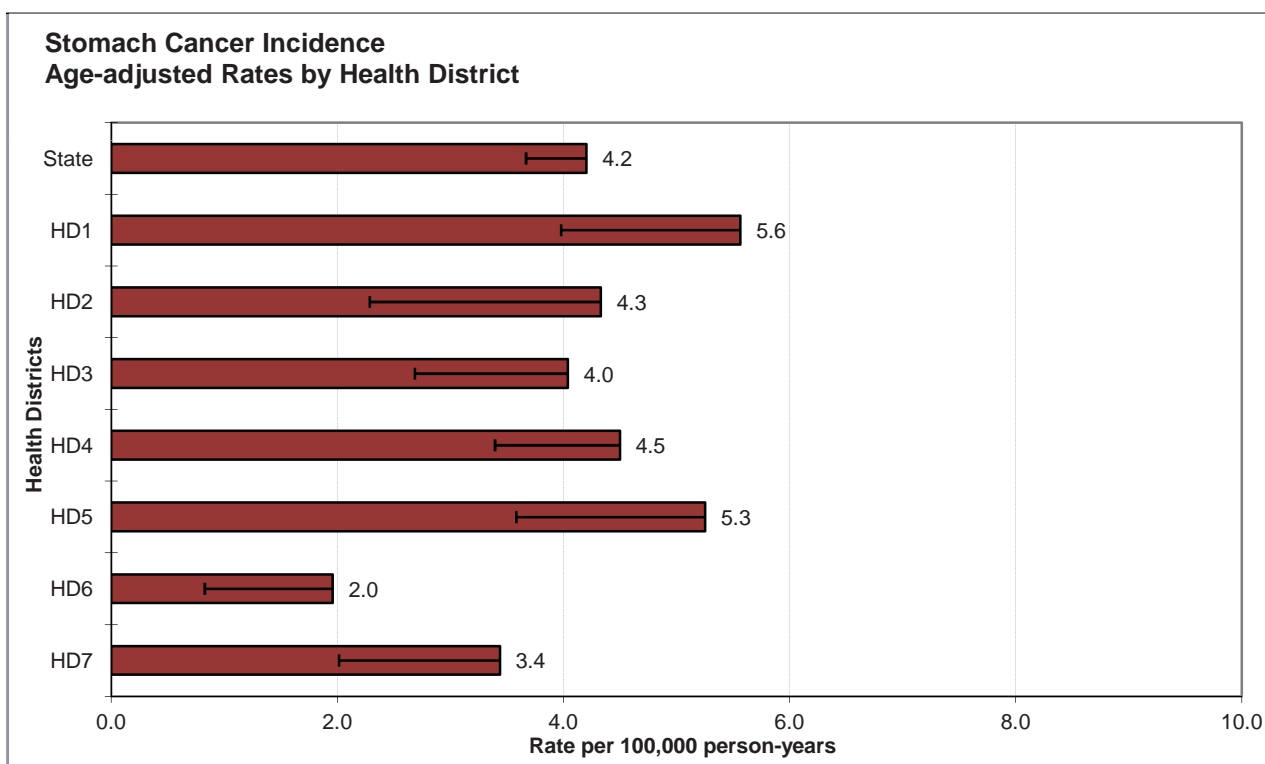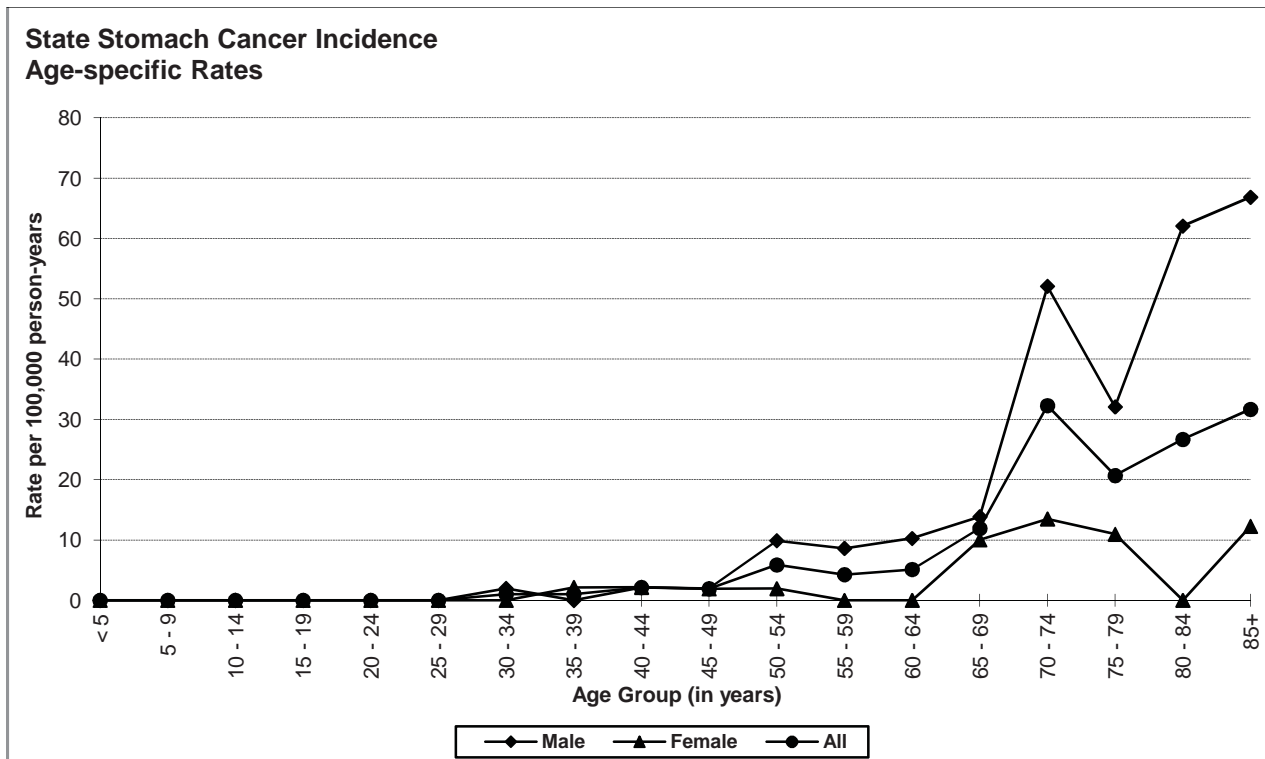
Mean age-adjusted incidence rate across health districts:	4.2
95% confidence interval on the mean age-adjusted incidence rate:	3.3- 5.0
Median age-adjusted incidence rate of health districts:	4.3
Range of age-adjusted incidence rate for health districts:	2.0- 5.6
SEER 17 rate (2008, all races):	7.3
NPCR rate (2008, all races):	6.5

There were few cases of stomach cancer among persons aged less than 50 years. The age-specific incidence rates of stomach cancer increased with age, peaking in the 85+ age group for males and 70-74 age group for females. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.

State Stomach Cancer Incidence
Age-specific Rates

Rate per 100,000 person-years vs **Age Group (in years)**

Legend: ◆ Male ▲ Female ● All

Stomach Cancer Incidence
Age-adjusted Rates by Health District

Health Districts vs **Rate per 100,000 person-years**

Health District	Rate
State	4.2
HD1	5.6
HD2	4.3
HD3	4.0
HD4	4.5
HD5	5.3
HD6	2.0
HD7	3.4

TESTIS

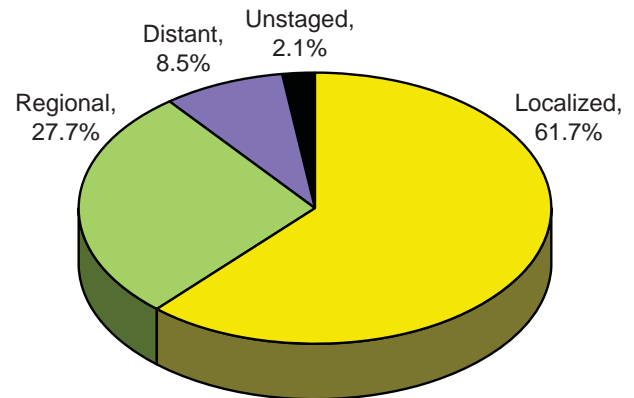## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	-	6.4	-
# of new invasive cases	-	47	-
# of new in-situ cases	-	0	-
# of deaths	-	3	-

Stage at Diagnosis - Testis

Distant, 8.5%
Unstaged, 2.1%
Regional, 27.7%
Localized, 61.7%

Total Cases by County

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

Risk and Associated Factors

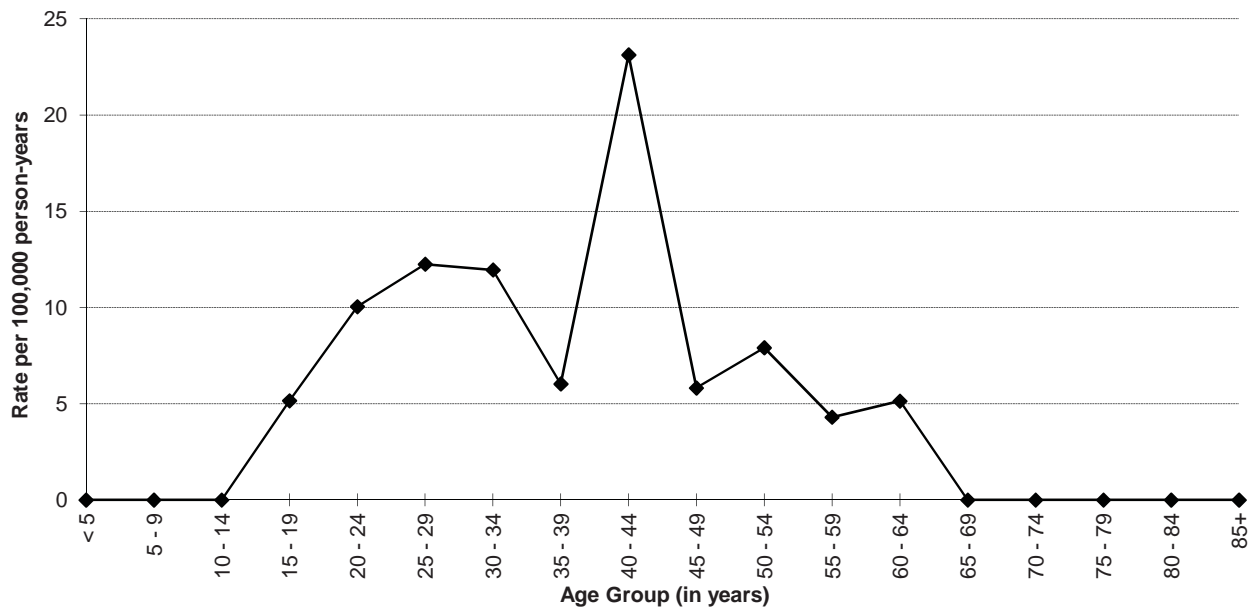**Age** Testicular cancer is the most common cancer in young males, especially males between the ages of 20 and 34.

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

Other Undescended testis, a minor abnormality that can usually be detected and corrected with surgery in childhood, is responsible for a substantially high risk for testicular cancer when uncorrected. The extent to which surgical correction reduces cancer risk is unclear. Some evidence suggests that males exposed in utero to diethylstilbestrol (DES) are at increased risk. With current treatment the cure rates for testicular cancer are greater than 80%.

Special Notes

Mean age-adjusted incidence rate across health districts:	6.6
95% confidence interval on the mean age-adjusted incidence rate:	5.5- 7.7
Median age-adjusted incidence rate of health districts:	7.3
Range of age-adjusted incidence rate for health districts:	3.6- 7.9
SEER 17 rate (2008, all races):	5.5
NPCR rate (2008, all races):	5.3

The highest age-specific incidence rate was in the 40-44 age group. No health district had statistically significantly fewer or more cases than expected based upon rates for the remainder of Idaho.

State Testis Cancer Incidence
Age-specific Rates

Rate per 100,000 person-years (y-axis)

Age Group (in years) (x-axis): < 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+

Testis Cancer Incidence
Age-adjusted Rates by Health District

Health Districts (y-axis)

Health District	Rate
State	6.4
HD1	5.6
HD2	7.3
HD3	7.7
HD4	6.7
HD5	3.6
HD6	7.3
HD7	7.9

Rate per 100,000 person-years
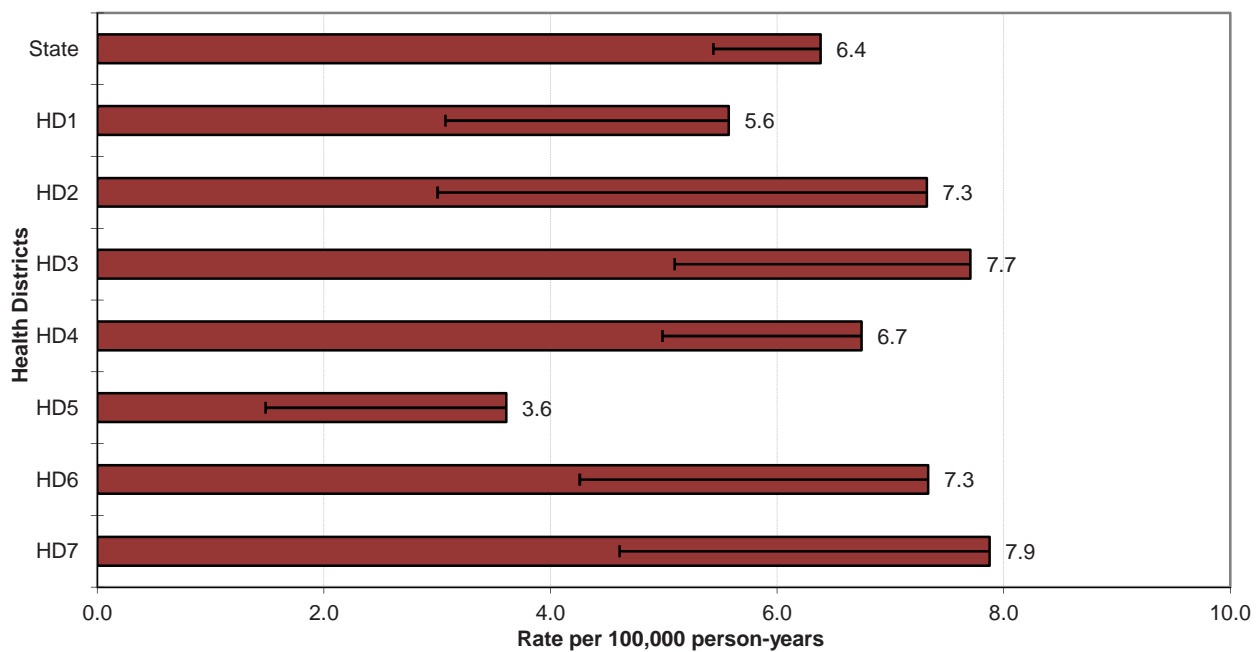
THYROID

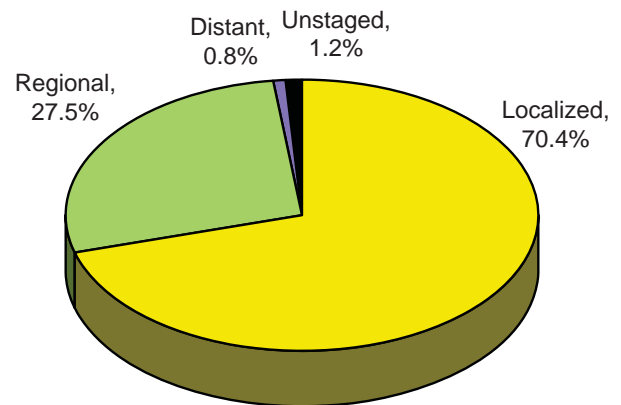## Incidence and Mortality Summary

	Total	Male	Female
Age-adjusted incidence rate per 100,000	16.5	7.6	25.7
# of new invasive cases	247	58	189
# of new in-situ cases	0	0	0
# of deaths	14	6	8

Stage at Diagnosis - Thyroid

Distant, 0.8%
Unstaged, 1.2%
Regional, 27.5%
Localized, 70.4%

Total Cases by County

County		County		County	
Ada	78	Cassia	3	Lewis	-
Adams	-	Clark	-	Lincoln	1
Bannock	7	Clearwater	1	Madison	6
Bear Lake	3	Custer	1	Minidoka	-
Benewah	1	Elmore	5	Nez Perce	3
Bingham	9	Franklin	3	Oneida	1
Blaine	2	Fremont	3	Owyhee	-
Boise	4	Gem	3	Payette	1
Bonner	4	Gooding	-	Power	-
Bonneville	25	Idaho	3	Shoshone	2
Boundary	1	Jefferson	6	Teton	2
Butte	1	Jerome	5	Twin Falls	6
Camas	-	Kootenai	19	Valley	6
Canyon	27	Latah	3	Washington	-
Caribou	1	Lemhi	1		

## Risk and Associated Factors

Age	Though relatively unusual, thyroid cancer is one of the most common malignancies affecting adolescents and adults up to 50 years of age.
Gender	Two-thirds of the cases are among females.
Race & SES	The incidence is higher in Caucasians and in upper income groups.
Hormonal	Hormonal factors are believed to contribute to the increased risk in females. This is demonstrated by the sharp increase in incidence among women after menarche.
Other	Occupational and environmental exposures to ionizing radiation have been associated with higher rates of thyroid cancer. Radiation exposure to the head and neck in childhood is a well-known risk factor. Family history of thyroid cancer substantially increases the risk. Death due to thyroid cancer under age 40 is rare. Prognosis worsens with each decade of age over 50, partially because anaplastic thyroid cancer, which has a high fatality rate, more often occurs among older patients.

Special Notes

Mean age-adjusted incidence rate across health districts:	15.4
95% confidence interval on the mean age-adjusted incidence rate:	10.9- 20.0
Median age-adjusted incidence rate of health districts:	13.2
Range of age-adjusted incidence rate for health districts:	8.9- 24.9
SEER 17 rate (2008, all races):	12.5
NPCR rate (2008, all races):	12.5

The age-specific incidence rates of thyroid cancer were typically higher for females than males. Health Districts 4 and 7 had statistically significantly more cases than expected based upon rates for the remainder of Idaho, and Health Districts 1 and 5 had statistically significantly fewer cases than expected.

State Thyroid Cancer Incidence
Age-specific Rates

Thyroid Cancer Incidence
Age-adjusted Rates by Health District
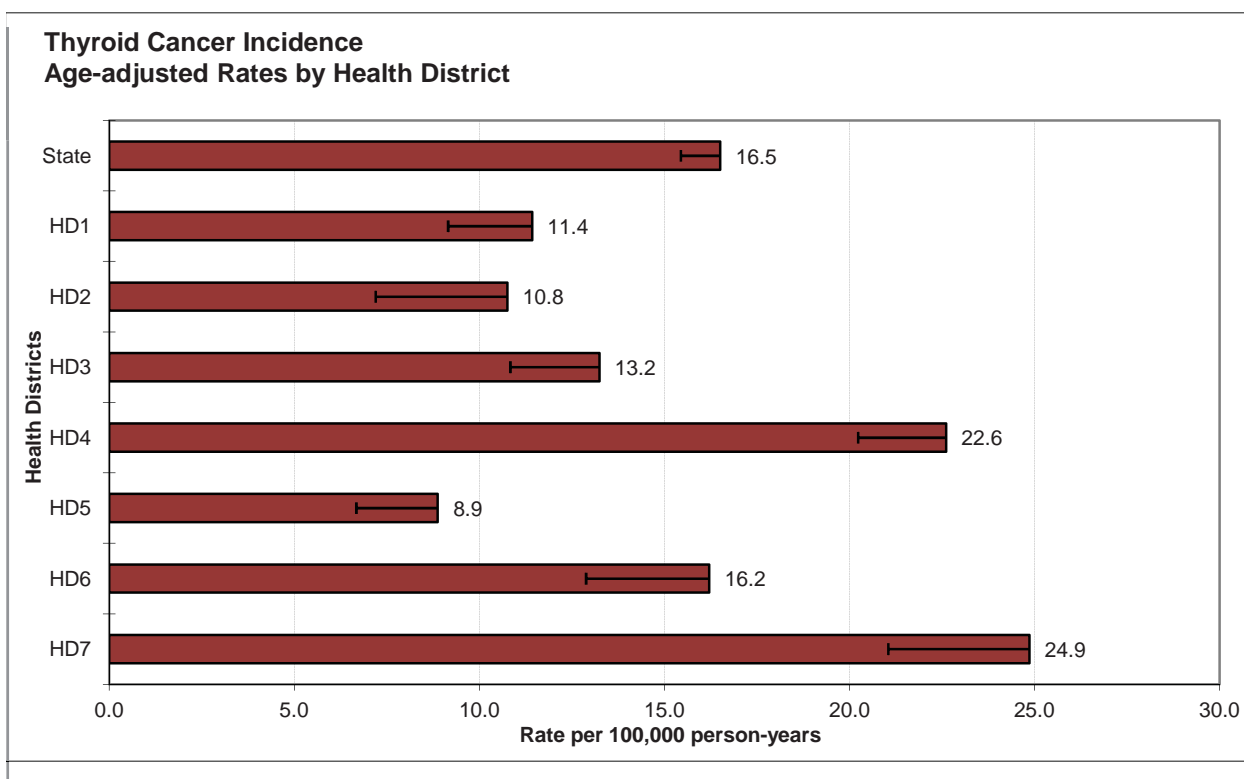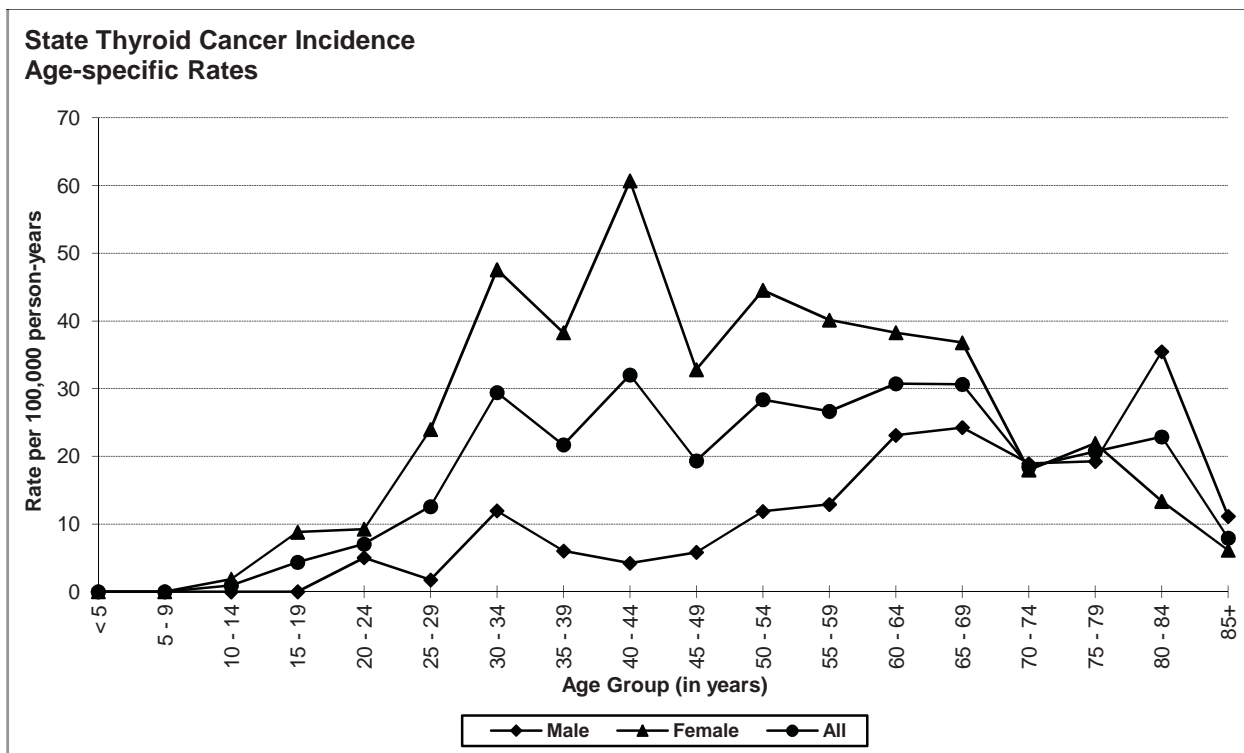
SECTION II

STATE OF IDAHO – 2009
INCIDENCE DATA BY SITE AND GENDER

Primary Site of Cancer	Invasive			In situ		
	Total	Male	Female	Total	Male	Female
All Sites	6,877	3,624	3,253	792	347	445
Oral Cavity and Pharynx	216	151	65	7	5	2
Lip	52	36	16	4	2	2
Tongue	57	38	19	1	1	-
Salivary Gland	21	10	11	1	1	-
Floor of Mouth	8	8	-	-	-	-
Gum and Other Mouth	27	17	10	-	-	-
Nasopharynx	8	6	2	-	-	-
Tonsil	26	23	3	-	-	-
Oropharynx	6	4	2	1	1	-
Hypopharynx	6	4	2	-	-	-
Other Oral Cavity and Pharynx	5	5	-	-	-	-
Digestive System	1,109	647	462	18	8	10
Esophagus	67	53	14	1	1	-
Stomach	63	49	14	-	-	-
Small Intestine	28	16	12	-	-	-
Colon and Rectum	612	337	275	12	6	6
Colon excluding Rectum	423	226	197	11	6	5
Cecum	84	35	49	2	1	1
Appendix	12	8	4	-	-	-
Ascending Colon	74	37	37	2	1	1
Hepatic Flexure	22	14	8	2	1	1
Transverse Colon	45	24	21	1	1	-
Splenic Flexure	16	10	6	-	-	-
Descending Colon	20	13	7	2	1	1
Sigmoid Colon	113	63	50	2	1	1
Large Intestine, NOS	37	22	15	-	-	-
Rectum and Rectosigmoid Junction	189	111	78	1	-	1
Rectosigmoid Junction	30	15	15	-	-	-
Rectum	159	96	63	1	-	1
Anus, Anal Canal and Anorectum	32	11	21	2	-	2
Liver and Intrahepatic Bile Duct	80	63	17	-	-	-
Liver	74	60	14	-	-	-
Intrahepatic Bile Duct	6	3	3	-	-	-
Gallbladder	14	6	8	2	1	1
Other Biliary	23	13	10	-	-	-
Pancreas	167	90	77	1	-	1
Retroperitoneum	4	2	2	-	-	-
Peritoneum, Omentum and Mesentery	12	2	10	-	-	-
Other Digestive Organs	7	5	2	-	-	-
Respiratory System	845	466	379	3	2	1
Nose, Nasal Cavity and Middle Ear	12	4	8	1	1	-
Larynx	44	30	14	2	1	1
Lung and Bronchus	776	421	355	-	-	-
Pleura	11	11	-	-	-	-
Trachea, Mediastinum and Other Respiratory Organs	2	-	2	-	-	-
Skin excluding Basal and Squamous	417	234	183	350	191	159
Melanoma of the Skin	392	217	175	350	191	159
Other Non-Epithelial Skin	25	17	8	-	-	-
Breast	977	8	969	220	2	218

Primary Site of Cancer	Invasive			In situ		
	Total	Male	Female	Total	Male	Female
Female Genital System	368	n/a	368	11	n/a	11
Cervix Uteri	36	n/a	36	-	n/a	-
Corpus and Uterus, NOS	208	n/a	208	2	n/a	2
Corpus Uteri	198	n/a	198	2	n/a	2
Uterus, NOS	10	n/a	10	-	n/a	-
Ovary	91	n/a	91	1	n/a	1
Vagina	6	n/a	6	-	n/a	-
Vulva	20	n/a	20	7	n/a	7
Other Female Genital Organs	7	n/a	7	1	n/a	1
Male Genital System	1,174	1,174	n/a	3	3	n/a
Prostate	1,120	1,120	n/a	-	-	n/a
Testis	47	47	n/a	-	-	n/a
Penis	6	6	n/a	3	3	n/a
Other Male Genital Organs	1	1	n/a	-	-	n/a
Urinary System	418	283	135	179	135	44
Urinary Bladder	157	119	38	168	130	38
Kidney and Renal Pelvis	243	150	93	5	3	2
Ureter	8	4	4	3	1	2
Other Urinary Organs	10	10	-	3	1	2
Brain and Other Nervous System	97	61	36	-	-	-
Brain	93	60	33	-	-	-
Cranial Nerves Other Nervous System	4	1	3	-	-	-
Endocrine System	256	65	191	-	-	-
Thyroid	247	58	189	-	-	-
Other Endocrine including Thymus	9	7	2	-	-	-
Lymphoma	326	155	171	-	-	-
Hodgkin Lymphoma	40	19	21	-	-	-
Non-Hodgkin Lymphoma	286	136	150	-	-	-
Myeloma	102	58	44	-	-	-
Leukemia	226	139	87	-	-	-
Lymphocytic Leukemia	114	70	44	-	-	-
Acute Lymphocytic Leukemia	24	13	11	-	-	-
Chronic Lymphocytic Leukemia	85	53	32	-	-	-
Other Lymphocytic Leukemia	5	4	1	-	-	-
Myeloid and Monocytic Leukemia	99	62	37	-	-	-
Acute Myeloid Leukemia	55	38	17	-	-	-
Acute Monocytic Leukemia	1	-	1	-	-	-
Chronic Myeloid Leukemia	40	22	18	-	-	-
Other Myeloid/Monocytic Leukemia	3	2	1	-	-	-
Other Leukemia	13	7	6	-	-	-
Other Acute Leukemia	3	-	3	-	-	-
Aleukemic, Subleukemic and NOS	10	7	3	-	-	-
Other or Unknown Sites	346	183	163	1	1	-
Bones and Joints	20	13	7	-	-	-
Soft Tissue including Heart	48	23	25	-	-	-
Eye and Orbit	19	9	10	1	1	-
Miscellaneous	259	138	121	-	-	-

SECTION III

STATE OF IDAHO – 2009
MORTALITY RATES BY SITE AND GENDER

Idaho Resident Cancer Mortality Rates - 2009

Cause of Death	Total Rate	Total Deaths	Total Pop	Male Rate	Male Deaths	Male Pop	Female Rate	Female Deaths	Female Pop
All Causes of Death	717.4	11,068	1,545,801	839.0	5,703	775,918	614.4	5,365	769,883
All Malignant Cancers	159.0	2,451	1,545,801	190.6	1,326	775,918	134.6	1,125	769,883
Bladder	3.6	56	1,545,801	6.6	42	775,918	1.5	14	769,883
Brain and Other Nervous System	4.9	75	1,545,801	7.0	51	775,918	2.9	24	769,883
Breast	12.3	189	1,545,801	0.6	4	775,918	22.6	185	769,883
Cervix	1.0	16	1,545,801	-	-	775,918	2.0	16	769,883
Colorectal	13.6	211	1,545,801	16.6	115	775,918	11.3	96	769,883
Corpus Uteri	1.2	20	1,545,801	-	-	775,918	2.3	20	769,883
Esophagus	3.9	62	1,545,801	7.4	55	775,918	0.9	7	769,883
Hodgkin Lymphoma	0.4	6	1,545,801	0.4	3	775,918	0.4	3	769,883
Kidney	3.7	58	1,545,801	5.5	40	775,918	2.2	18	769,883
Larynx	0.7	10	1,545,801	0.7	5	775,918	0.6	5	769,883
Leukemia	6.4	96	1,545,801	8.5	58	775,918	4.5	38	769,883
Liver and Bile Duct	3.3	55	1,545,801	4.2	34	775,918	2.4	21	769,883
Lung and Bronchus	41.5	638	1,545,801	47.8	338	775,918	36.2	300	769,883
Melanoma of the Skin	3.6	57	1,545,801	5.3	39	775,918	2.1	18	769,883
Myeloma	3.6	55	1,545,801	4.2	29	775,918	3.1	26	769,883
Non-Hodgkin Lymphoma	6.6	103	1,545,801	7.8	56	775,918	5.2	47	769,883
Oral Cavity and Pharynx	2.6	41	1,545,801	3.8	29	775,918	1.5	12	769,883
Ovary	3.6	57	1,545,801	-	-	775,918	6.9	57	769,883
Pancreas	10.1	156	1,545,801	11.3	82	775,918	8.9	74	769,883
Prostate	11.0	165	1,545,801	26.3	165	775,918	-	-	769,883
Stomach	2.4	37	1,545,801	3.2	21	775,918	1.9	16	769,883
Testis	0.2	3	1,545,801	0.4	3	775,918	-	-	769,883
Thyroid	0.9	14	1,545,801	0.8	6	775,918	0.9	8	769,883

Data source: Bureau of Vital Records and Health Statistics (BVRHS), Idaho Department of Health and Welfare, 2010.[19]

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

Cause of death categories are based on SEER cause of death recodes (http://seer.cancer.gov/codrecode/), which differ from official BVRHS cancer mortality categories. Death counts may differ from official BVRHS statistics due to late filings.

SECTION IV

**2009 AGE SPECIFIC INCIDENCE RATES
PER 100,000 POPULATION
BY SITE AND GENDER**

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	20.8	12.0	10.0	20.0	34.3	53.0	92.4	117.8	224.2	333.7	562.8	780.3	1148.5	1756.8	2189.1	2240.7	2222.4	2323.7
Male	23.5	13.5	8.8	20.6	26.8	50.8	65.7	70.4	151.4	252.0	524.3	843.1	1338.7	2072.8	2746.2	2958.0	2837.9	2919.6
Female	18.0	10.5	11.2	19.4	42.6	55.3	120.0	168.0	299.2	415.1	600.5	718.6	959.6	1451.9	1659.8	1627.9	1758.4	1995.3
Bladder																		
All	0.0	0.0	0.0	0.0	0.0	0.9	1.0	2.1	4.3	2.9	11.8	30.9	42.3	76.6	124.6	144.9	171.5	186.1
Male	0.0	0.0	0.0	0.0	0.0	1.8	2.0	4.0	6.3	1.9	19.8	47.3	69.4	107.5	189.4	256.7	328.1	378.9
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.9	3.9	14.8	15.3	46.8	63.0	49.3	53.5	79.8
Brain																		
All	2.4	1.7	1.8	0.9	1.8	2.7	6.1	4.1	8.5	8.7	2.0	9.6	10.2	13.6	18.5	23.7	22.9	15.8
Male	3.1	1.7	1.8	1.7	3.4	3.5	6.0	4.0	14.7	9.7	4.0	12.9	15.4	17.3	18.9	38.5	26.6	22.3
Female	1.6	1.8	1.9	0.0	0.0	1.8	6.2	4.3	2.2	7.7	0.0	6.3	5.1	10.0	18.0	11.0	20.1	12.3
Brain & Other Central Nervous System (Non-Malignant)																		
All	0.0	0.0	0.0	3.5	2.6	0.9	2.0	6.2	6.4	5.8	7.8	13.9	20.5	23.8	41.5	23.7	64.8	55.4
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.2	1.9	5.9	17.2	23.1	13.9	28.4	25.7	17.7	100.3
Female	0.0	0.0	0.0	7.1	5.6	1.8	4.1	10.6	8.7	9.7	9.7	10.6	17.9	33.5	54.0	21.9	100.3	30.7
Breast																		
Female Invasive	0.0	0.0	0.0	0.0	1.9	3.7	12.4	46.8	112.7	162.2	234.4	247.3	339.4	414.8	499.3	411.1	361.0	411.4
Female In-situ	0.0	0.0	0.0	0.0	0.0	1.8	4.1	4.3	32.5	54.1	54.2	65.5	84.2	107.1	90.0	65.8	40.1	49.1
Cervix																		
Female	0.0	0.0	0.0	1.8	0.0	3.7	6.2	4.3	6.5	7.7	7.8	2.1	5.1	13.4	18.0	5.5	33.4	0.0
Colorectal																		
All	0.0	0.0	0.0	0.0	0.0	0.9	7.1	4.1	13.9	23.2	46.0	67.2	103.7	126.0	223.8	198.1	221.1	300.9
Male	0.0	0.0	0.0	0.0	0.0	0.0	8.0	4.0	16.8	25.2	59.4	77.4	133.6	162.9	265.2	243.8	204.0	312.0
Female	0.0	0.0	0.0	0.0	0.0	1.8	6.2	4.3	10.8	21.2	32.9	57.1	74.0	90.3	184.4	159.0	234.0	294.7
Corpus Uteri																		
Female	0.0	0.0	0.0	0.0	0.0	0.0	6.2	10.6	15.2	34.8	60.1	52.8	99.5	100.4	76.5	49.3	53.5	36.8
Esophagus																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.9	9.8	7.5	19.2	17.0	9.2	14.8	34.3	11.9
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	5.8	19.8	8.6	28.3	24.3	18.9	32.1	53.2	22.3
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	10.2	10.0	0.0	0.0	20.1	6.1

AGE SPECIFIC CANCER RATES, PER 100,000 POPULATION, BY SITE AND GENDER — 2009

Age (years)	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Hodgkin Lymphoma																		
All	0.0	0.0	0.0	0.0	7.0	4.5	4.1	2.1	2.1	2.9	2.0	1.1	5.1	5.1	4.6	5.9	3.8	4.0
Male	0.0	0.0	0.0	0.0	1.7	7.0	0.0	4.0	4.2	1.9	2.0	0.0	7.7	6.9	9.5	6.4	0.0	0.0
Female	0.0	0.0	0.0	0.0	13.0	1.8	8.3	0.0	0.0	3.9	1.9	2.1	2.6	3.4	0.0	5.5	6.7	6.1
Kidney & Renal Pelvis																		
All	1.6	1.7	0.0	0.0	0.0	0.0	1.0	6.2	5.3	11.6	21.5	32.0	39.7	69.8	62.3	62.1	87.7	79.2
Male	0.0	1.7	0.0	0.0	0.0	0.0	0.0	6.0	4.2	11.6	27.7	47.3	56.5	76.3	99.4	77.0	141.9	100.3
Female	3.3	1.8	0.0	0.0	0.0	0.0	2.1	6.4	6.5	11.6	15.5	16.9	23.0	63.6	27.0	49.3	46.8	67.5
Larynx																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	5.3	12.8	3.4	20.8	26.6	19.1	4.0
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	10.8	15.4	6.9	28.4	38.5	26.6	11.1
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	0.0	10.2	0.0	13.5	16.4	13.4	0.0
Leukemia																		
All	8.0	3.4	2.7	4.4	1.8	0.9	2.0	8.3	6.4	12.6	16.6	23.5	17.9	35.8	73.8	68.0	64.8	102.9
Male	11.0	5.1	1.8	6.9	1.7	1.8	4.0	6.0	8.4	19.4	21.8	28.0	18.0	45.1	108.9	83.4	97.6	133.7
Female	4.9	1.8	3.7	1.8	1.9	0.0	0.0	10.6	4.3	5.8	11.6	19.0	17.9	26.8	40.5	54.8	40.1	86.0
Liver & Bile Duct																		
All	0.8	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	4.8	9.8	23.5	17.9	6.8	6.9	20.7	30.5	19.8
Male	1.6	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	7.8	17.8	40.9	33.4	10.4	9.5	32.1	44.3	11.1
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	6.3	2.6	3.4	4.5	11.0	20.1	24.6
Lung & Bronchus																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	16.4	35.2	55.4	114.0	243.4	304.5	345.9	381.2	332.5
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	23.3	29.7	66.7	123.3	277.3	364.6	417.1	461.2	412.3
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	9.7	40.7	44.4	104.6	210.8	247.4	285.0	320.9	288.6
Melanoma of the Skin																		
All	0.0	0.0	0.0	2.6	6.2	8.1	11.2	12.4	23.5	30.0	38.2	49.0	58.9	86.8	103.8	82.8	102.9	59.4
Male	0.0	0.0	0.0	1.7	1.7	5.3	8.0	8.0	18.9	23.3	45.5	47.3	82.2	107.5	137.3	121.9	159.6	100.3
Female	0.0	0.0	0.0	3.5	11.1	11.1	14.5	17.0	28.2	36.7	31.0	50.7	35.7	66.9	72.0	49.3	60.2	36.8
Myeloma																		
All	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	3.2	4.8	5.9	13.9	14.1	13.6	36.9	38.4	34.3	63.3
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.1	9.7	5.9	17.2	15.4	20.8	37.9	44.9	62.1	66.9
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.3	0.0	5.8	10.6	12.8	6.7	36.0	32.9	13.4	61.4

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

2009

Age (years)	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Non-Hodgkin Lymphoma																		
All	0.0	1.7	0.9	0.9	0.9	4.5	3.0	6.2	8.5	6.8	12.7	35.2	35.9	76.6	96.9	106.4	87.7	126.7
Male	0.0	1.7	1.8	0.0	0.0	8.8	4.0	4.0	8.4	9.7	15.8	30.1	38.5	79.7	94.7	109.1	71.0	122.6
Female	0.0	1.8	0.0	1.8	1.9	0.0	2.1	8.5	8.7	3.9	9.7	40.2	33.2	73.6	99.0	104.1	100.3	128.9
Oral Cavity & Pharynx																		
All	0.0	0.0	0.0	0.0	0.9	0.0	0.0	3.1	8.5	9.7	30.3	32.0	32.0	56.2	39.2	85.7	57.2	55.4
Male	0.0	0.0	0.0	0.0	1.7	0.0	0.0	6.0	12.6	11.6	37.6	53.8	54.0	69.3	75.8	109.1	53.2	122.6
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	7.7	23.2	10.6	10.2	43.5	4.5	65.8	60.2	18.4
Ovary																		
Female	0.0	0.0	0.0	1.8	0.0	5.5	6.2	2.1	8.7	7.7	13.6	21.1	43.4	30.1	63.0	16.4	33.4	61.4
Pancreas																		
All	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.1	4.8	7.8	20.3	24.3	37.5	55.4	76.9	68.6	95.0
Male	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.1	7.8	9.9	21.5	36.0	55.5	61.6	77.0	71.0	66.9
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	5.8	19.0	12.8	20.1	49.5	76.7	66.9	110.5
Prostate																		
Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6	48.5	148.4	251.6	498.5	811.1	980.1	840.6	691.7	590.6
Stomach																		
All	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	2.1	1.9	5.9	4.3	5.1	11.9	32.3	20.7	26.7	31.7
Male	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.1	1.9	9.9	8.6	10.3	13.9	52.1	32.1	62.1	66.9
Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.2	1.9	1.9	0.0	0.0	10.0	13.5	11.0	0.0	12.3
Testis																		
Male	0.0	0.0	0.0	5.2	10.1	12.3	12.0	6.0	23.1	5.8	7.9	4.3	5.1	0.0	0.0	0.0	0.0	0.0
Thyroid																		
All	0.0	0.0	0.9	4.4	7.0	12.6	29.4	21.7	32.0	19.3	28.4	26.7	30.7	30.6	18.5	20.7	22.9	7.9
Male	0.0	0.0	0.0	0.0	5.0	1.8	12.0	6.0	4.2	5.8	11.9	12.9	23.1	24.3	18.9	19.3	35.5	11.1
Female	0.0	0.0	1.9	8.8	9.3	24.0	47.6	38.3	60.7	32.8	44.6	40.2	38.3	36.8	18.0	21.9	13.4	6.1

2009 OBSERVED VS. EXPECTED NUMBERS BY HEALTH DISTRICT

2009 OBSERVED VERSUS EXPECTED NUMBERS
BY
HEALTH DISTRICT

ALL SEXES

	HD 1		HD 2		HD 3		HD 4		HD 5		HD 6		HD 7	
	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP	OBS	EXP
All Sites	1,226	1,174.3	533	580.6 +	1,113	1,107.0	1,926	1,749.8 *	854	874.5	640	748.8 *	744	775.8
Bladder	66	53.1	33	27.7	39	53.9 +	78	80.1	36	42.1	39	33.7	34	35.0
Brain	15	14.4	8	6.8	21	13.8	22	26.5	12	11.1	5	10.3	10	10.8
Brain & CNS non-Malignant	23	22.0	6	11.6	21	21.5	47	30.7 *	15	17.0	6	15.3 +	18	14.7
Breast	173	161.3	72	78.2	155	152.1	265	250.3	130	117.8	81	104.1 +	101	107.7
Breast (in-situ)	40	36.2	27	16.1 +	38	33.5	73	53.2 +	20	27.4	10	24.3 *	12	25.8 *
Cervix	7	5.4	1	2.8	8	5.3	8	10.3	6	4.1	3	3.7	3	4.2
Colorectal	122	99.9 +	38	52.5 +	73	100.7 *	159	151.5	89	75.0	69	63.5	60	66.9
Corpus Uteri	36	32.8	17	15.1	29	31.0	42	56.3	36	22.4 *	15	21.2	23	21.6
Esophagus	17	10.3	3	5.7	10	10.4	10	19.6 +	10	8.1	7	7.0	10	7.0
Hodgkin lymphoma	7	5.6	1	3.3	7	6.1	11	11.0	3	4.7	5	4.2	6	4.8
Kidney & renal pelvis	41	41.0	24	19.5	49	36.2 +	67	60.1	23	31.1	13	26.9 *	26	26.7
Larynx	7	7.8	1	4.0	11	6.1	13	10.3	6	5.4	1	5.1	5	4.8
Leukemia	42	35.1	9	19.0 +	29	37.5	59	57.3	33	27.4	19	24.6	35	24.4
Liver & bile duct	19	12.2	6	6.5	15	11.8	19	21.3	9	9.9	6	8.8	6	9.2
Lung & bronchus	142	131.6	77	66.0	140	119.7	201	186.4	94	99.0	66	83.4	56	86.8 *
Melanoma of skin	67	63.7	27	31.1	69	59.7	124	96.0 *	35	49.0 +	24	42.7 *	43	43.8
Myeloma	22	16.2	7	8.8	14	16.5	27	25.5	11	13.1	10	10.8	11	11.0
N-H Lymphoma	46	48.3	21	24.0	58	42.9 +	85	68.7	28	36.8	24	30.7	24	32.1
Oral cavity & pharynx	30	37.9	12	18.1	26	35.0	58	54.9	36	25.2 +	28	22.1	25	23.6
Ovary	18	14.6	7	7.2	16	14.1	24	23.7	7	11.7	7	9.7	12	9.7
Pancreas	27	28.7	14	14.4	16	28.3 +	52	37.6 +	22	21.1	21	17.2	15	18.3
Prostate	156	203.7 *	96	92.9	182	174.2	314	264.4 *	136	139.4	107	118.6	127	120.9
Stomach	13	10.2	5	5.4	9	10.2	17	15.6	10	7.7	3	7.0	6	6.9
Testis	5	6.7	3	3.3	9	7.2	15	13.7	3	5.5	6	4.7	6	6.0
Thyroid	27	39.4 +	10	17.9	31	40.4	93	62.2 *	17	30.1 +	25	25.2	44	26.7 *
Pediatric (age 0-19)	8	8.7	2	4.3	14	12.9	24	17.3	9	9.0	7	9.0	10	11.8

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

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

2009 OBSERVED VERSUS EXPECTED NUMBERS
BY
HEALTH DISTRICT

MALES

	HD 1 OBS	HD 1 EXP	HD 2 OBS	HD 2 EXP	HD 3 OBS	HD 3 EXP	HD 4 OBS	HD 4 EXP	HD 5 OBS	HD 5 EXP	HD 6 OBS	HD 6 EXP	HD 7 OBS	HD 7 EXP
All Sites	635	648.6	295	317.6	585	581.1	1,025	908.7 *	455	465.5	338	400.6 *	416	414.7
Bladder	51	41.5	23	22.0	33	39.8	63	59.1	28	32.0	25	26.4	26	27.2
Brain	6	9.9	6	4.4	15	8.4	15	16.9	11	6.7	2	6.7	5	7.2
Brain & CNS non-Malignant	12	7.6	1	4.5	11	7.0	13	12.2	6	6.1	2	5.4	4	5.5
Breast	1	1.5	2	0.6	2	1.1	1	2.2	2	0.8	0	1.0	0	1.0
Breast (in-situ)	1	0.2	0	0.2	1	0.2	0	0.8	0	0.3	0	0.2	0	0.2
Cervix	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Colorectal	65	56.9	23	28.7	35	55.2 *	94	81.0	48	40.9	34	35.4	37	37.0
Corpus Uteri	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Esophagus	10	8.9	2	4.6	7	8.3	9	15.1	9	6.2	7	5.4	9	5.4
Hodgkin lymphoma	4	2.8	1	1.4	4	2.8	4	5.7	1	2.3	2	1.9	3	2.1
Kidney & renal pelvis	24	26.2	10	12.8	29	22.0	41	36.8	16	18.9	10	16.5	20	16.1
Larynx	4	5.6	1	2.7	7	4.2	9	6.8	5	3.5	0	3.6	4	3.2
Leukemia	19	23.0	4	11.9 +	19	22.5	38	34.3	22	16.6	13	14.9	24	14.9 +
Liver & bile duct	14	9.8	5	5.0	12	9.1	17	16.3	5	8.0	4	7.1	6	7.2
Lung & bronchus	76	73.4	45	36.1	73	64.3	109	99.7	51	53.1	36	45.3	31	47.8 +
Melanoma of skin	40	36.0	14	17.9	37	32.8	67	52.3	19	27.5	13	23.7 +	25	23.9
Myeloma	15	8.9	3	5.1	5	9.7	19	13.3	4	7.7	7	6.0	5	6.6
N-H Lymphoma	30	21.6	12	11.2	22	21.1	35	34.6	13	17.3	12	14.5	12	15.5
Oral cavity & pharynx	23	26.4	7	12.8	18	24.1	42	38.1	29	16.9 *	14	16.1	18	16.6
Ovary	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pancreas	14	16.0	7	7.7	11	14.4	25	21.5	14	10.8	10	9.3	9	10.0
Prostate	156	207.1 *	96	94.7	182	171.0	314	261.5 *	136	138.6	107	118.9	127	122.2
Stomach	9	8.3	4	4.3	9	7.3	10	12.9	9	5.8	2	5.5	6	5.3
Testis	5	6.6	3	3.3	9	7.2	15	14.0	3	5.5	6	4.6	6	5.9
Thyroid	11	9.0	3	4.7	2	10.2 *	21	14.0	4	7.2	4	6.2	13	5.9 +
Pediatric (age 0-19)	4	4.7	1	2.4	6	7.3	14	9.1	7	4.6	4	4.8	4	6.3

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

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

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	591	532.1 +	238	264.9	528	522.5	901	834.7 +	399	407.6	302	349.3 +	328	362.7
Bladder	15	12.4	10	6.1	6	13.5 +	15	20.1	8	10.0	14	7.3 +	8	8.0
Brain	9	4.4	2	2.4	6	5.3	7	9.7	1	4.4	3	3.5	5	3.5
Brain & CNS non-Malignant	11	14.4	5	7.1	10	14.6	34	18.3 *	9	10.9	4	9.8	14	9.2
Breast	172	159.3	70	76.6	153	152.8	264	248.2	128	117.2	81	103.4 +	101	106.0
Breast (in-situ)	39	36.1	27	15.8 +	37	33.7	73	52.2 *	20	27.2	10	24.1 *	12	25.4 *
Cervix	7	5.4	1	2.7	8	5.3	8	10.3	6	4.1	3	3.8	3	4.3
Colorectal	57	43.2 +	15	23.9	38	45.2	65	70.4	41	34.0	35	28.2	23	30.0
Corpus Uteri	36	32.9	17	14.9	29	31.4	42	56.1	36	22.4 *	15	21.2	23	21.5
Esophagus	7	1.5 *	1	1.2	3	2.1	1	4.4	1	1.9	0	1.6	1	1.6
Hodgkin lymphoma	3	2.9	0	1.9	3	3.3	7	5.3	2	2.4	3	2.3	3	2.7
Kidney & renal pelvis	17	14.9	14	6.8 +	20	14.0	26	23.2	7	12.2	3	10.5 +	6	10.7
Larynx	3	2.3	0	1.3	4	1.9	4	3.4	1	1.9	1	1.5	1	1.6
Leukemia	23	12.2 *	5	7.2	10	14.9	21	22.8	11	10.9	6	9.7	11	9.5
Liver & bile duct	5	2.3	1	1.5	3	2.6	2	5.1	4	1.9	2	1.8	0	2.0
Lung & bronchus	66	58.7	32	30.2	67	55.1	92	86.2	43	45.8	30	38.1	25	39.2 +
Melanoma of skin	27	28.1	13	13.3	32	26.7	57	43.4	16	21.4	11	19.1	18	19.9
Myeloma	7	7.4	4	3.7	9	6.7	8	12.2	7	5.4	3	4.8	6	4.5
N-H Lymphoma	16	26.7 +	9	12.8	36	21.8 *	50	34.0 +	15	19.5	12	16.3	12	16.7
Oral cavity & pharynx	7	11.6	5	5.4	8	10.7	16	16.8	7	8.3	14	6.0 *	7	7.1
Ovary	18	14.5	7	7.1	16	14.3	24	23.8	7	11.7	7	9.7	12	9.7
Pancreas	13	12.6	7	6.7	5	13.8 +	27	16.3 +	8	10.3	11	7.8	6	8.3
Prostate	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Stomach	4	2.0	1	1.2	0	2.7	7	2.5 +	1	1.8	1	1.5	0	1.7
Testis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thyroid	16	30.9 *	7	13.2	29	30.2	72	47.8 *	13	22.7 +	21	19.2	31	21.0 +
Pediatric (age 0-19)	4	3.9	1	2.0	8	5.6	10	8.1	2	4.3	3	4.2	6	5.4

+ 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 64	1 in 20	1 in 9	1 in 5	1 in 3	1 in 2
40		1 in 28	1 in 10	1 in 5	1 in 3	1 in 2
50			1 in 15	1 in 5	1 in 3	1 in 2
60				1 in 8	1 in 4	1 in 2
70					1 in 5	1 in 3
80						1 in 4

If your current age is:	Then your risk of <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 635	1 in 137	1 in 45	1 in 17	1 in 9	1 in 5
40		1 in 173	1 in 48	1 in 18	1 in 9	1 in 5
50			1 in 65	1 in 19	1 in 9	1 in 5
60				1 in 26	1 in 10	1 in 5
70					1 in 14	1 in 6
80						1 in 8

For Males

If your current age is:	Then your risk of <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 129	1 in 34	1 in 11	1 in 4	1 in 2	1 in 2
40		1 in 46	1 in 11	1 in 4	1 in 2	1 in 2
50			1 in 14	1 in 4	1 in 2	1 in 2
60				1 in 6	1 in 2	1 in 2
70					1 in 3	1 in 2
80						1 in 2

If your current age is:	Then your risk of <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 753	1 in 166	1 in 44	1 in 15	1 in 7	1 in 4
40		1 in 210	1 in 46	1 in 15	1 in 7	1 in 4
50			1 in 58	1 in 16	1 in 7	1 in 4
60				1 in 21	1 in 8	1 in 4
70					1 in 11	1 in 5
80						1 in 6

Risks of Developing and Dying from Cancer

Female Breast Cancer

If your current age is:	Then your risk of <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
30	1 in 269	1 in 59	1 in 25	1 in 14	1 in 9	1 in 8
40		1 in 75	1 in 28	1 in 14	1 in 10	1 in 8
50			1 in 42	1 in 17	1 in 11	1 in 8
60				1 in 27	1 in 13	1 in 10
70					1 in 23	1 in 13
80						1 in 22

If your current age is:	Then your risk of <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
30	1 in 2516	1 in 582	1 in 212	1 in 99	1 in 57	1 in 37
40		1 in 749	1 in 229	1 in 102	1 in 58	1 in 37
50			1 in 323	1 in 116	1 in 62	1 in 38
60				1 in 173	1 in 73	1 in 41
70					1 in 115	1 in 49
80						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
30	1 in 13976	1 in 314	1 in 42	1 in 12	1 in 7	1 in 6
40		1 in 317	1 in 41	1 in 12	1 in 7	1 in 5
50			1 in 46	1 in 12	1 in 7	1 in 5
60				1 in 15	1 in 7	1 in 6
70					1 in 11	1 in 7
80						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
30	1 in *	1 in 21038	1 in 1574	1 in 312	1 in 81	1 in 28
40		1 in 20721	1 in 1550	1 in 307	1 in 80	1 in 28
50			1 in 1626	1 in 303	1 in 78	1 in 27
60				1 in 349	1 in 77	1 in 26
70					1 in 85	1 in 24
80						1 in 23

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

Risks of Developing and Dying from Cancer

Colon/Rectal Cancer in Females

If your current age is:	Then your risk of <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 1745	1 in 411	1 in 139	1 in 61	1 in 33	1 in 21
40		1 in 533	1 in 150	1 in 62	1 in 33	1 in 21
50			1 in 204	1 in 69	1 in 35	1 in 21
60				1 in 100	1 in 40	1 in 23
70					1 in 59	1 in 27
80						1 in 36

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 23717	1 in 1805	1 in 541	1 in 218	1 in 100	1 in 52
40		1 in 1935	1 in 548	1 in 218	1 in 100	1 in 51
50			1 in 750	1 in 241	1 in 103	1 in 52
60				1 in 341	1 in 115	1 in 53
70					1 in 157	1 in 57
80						1 in 68

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 1844	1 in 416	1 in 128	1 in 50	1 in 27	1 in 20
40		1 in 528	1 in 135	1 in 51	1 in 27	1 in 19
50			1 in 176	1 in 54	1 in 28	1 in 20
60				1 in 73	1 in 31	1 in 21
70					1 in 45	1 in 24
80						1 in 36

| 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 10078	1 in 1710	1 in 528	1 in 188	1 in 93	1 in 53
40		1 in 2029	1 in 549	1 in 188	1 in 92	1 in 53
50			1 in 730	1 in 201	1 in 93	1 in 53
60				1 in 261	1 in 101	1 in 53
70					1 in 141	1 in 58
80						1 in 68

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
30	1 in 573	1 in 224	1 in 137	1 in 95	1 in 70	1 in 57
40		1 in 365	1 in 177	1 in 113	1 in 79	1 in 62
50			1 in 338	1 in 159	1 in 99	1 in 74
60				1 in 288	1 in 135	1 in 90
70					1 in 227	1 in 118
80						1 in 186

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
30	1 in 9793	1 in 4571	1 in 1991	1 in 1159	1 in 703	1 in 453
40		1 in 8495	1 in 2476	1 in 1303	1 in 751	1 in 471
50			1 in 3426	1 in 1509	1 in 808	1 in 489
60				1 in 2591	1 in 1015	1 in 548
70					1 in 1509	1 in 629
80						1 in 818

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
30	1 in 720	1 in 257	1 in 122	1 in 65	1 in 43	1 in 34
40		1 in 392	1 in 145	1 in 71	1 in 45	1 in 35
50			1 in 223	1 in 84	1 in 49	1 in 37
60				1 in 125	1 in 58	1 in 42
70					1 in 93	1 in 54
80						1 in 88

| 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
30	1 in 5146	1 in 2248	1 in 1024	1 in 451	1 in 267	1 in 190
40		1 in 3933	1 in 1259	1 in 486	1 in 278	1 in 195
50			1 in 1797	1 in 539	1 in 290	1 in 199
60				1 in 721	1 in 324	1 in 210
70					1 in 507	1 in 254
80						1 in 353

CANCER TRENDS IN IDAHO
1975-2009

All Sites

**Trends in Age-adjusted Incidence Rates**
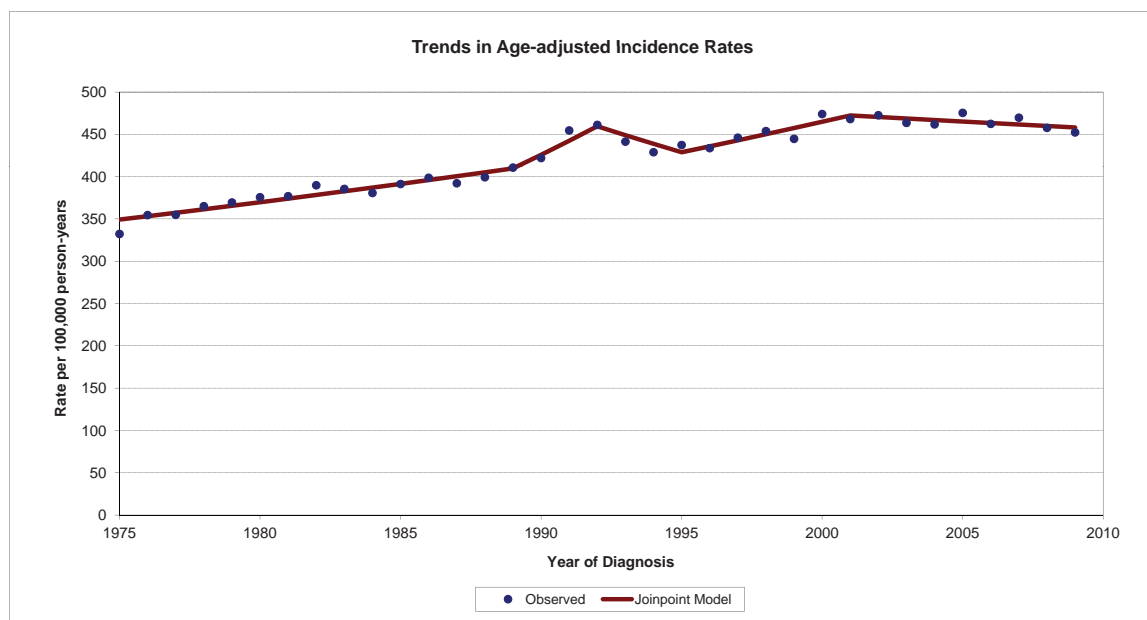
Cancer incidence increased at a rate of about 1.2% per year in Idaho from 1975 to 1989, and at a rate of about 1.6% per year from 1995 to 2001. Between 1989 and 1995, the trend was predominately influenced by prostate cancer incidence among males. Since 2001, the overall incidence trend has been stable. Cancer incidence trends over time were different for males and females. For males, much of the overall trend is due to the trend in prostate cancer incidence. For females, much of the overall trend is due to the trend in breast cancer incidence.

Bladder

Trends in Age-adjusted Incidence Rates
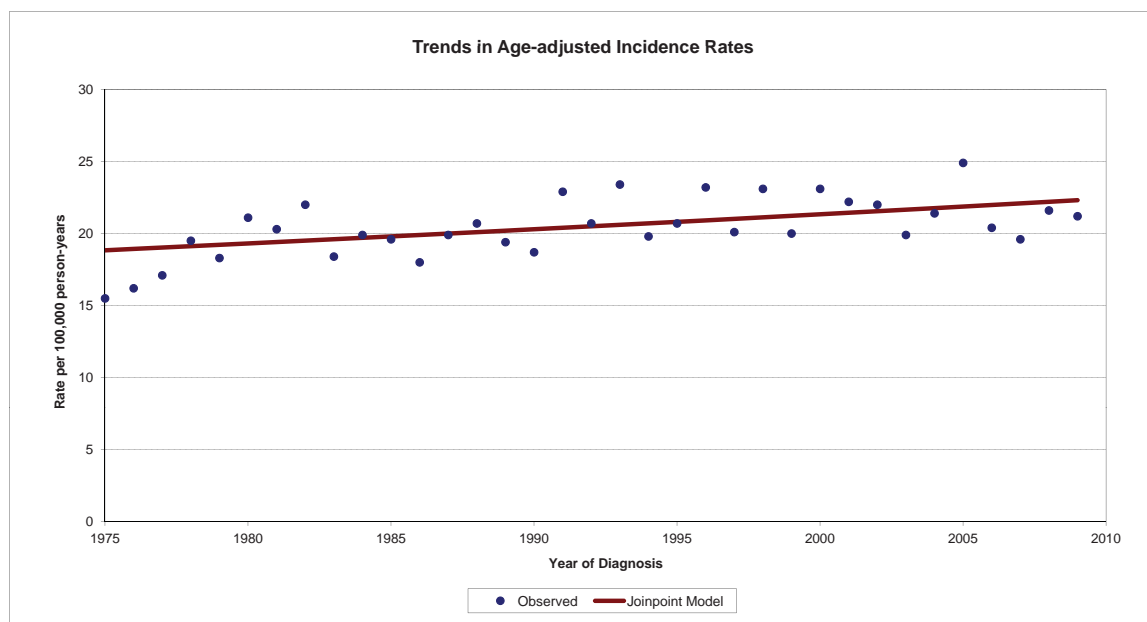
Bladder cancer incidence includes in-situ and invasive cases. Bladder cancer incidence increased at a rate of about 0.5% per year in Idaho from 1975 to 2009. Most of the increase in bladder cancer incidence is attributable to males, who have rates of bladder cancer incidence about 4-5 times those of females.

Brain

Trends in Age-adjusted Incidence Rates
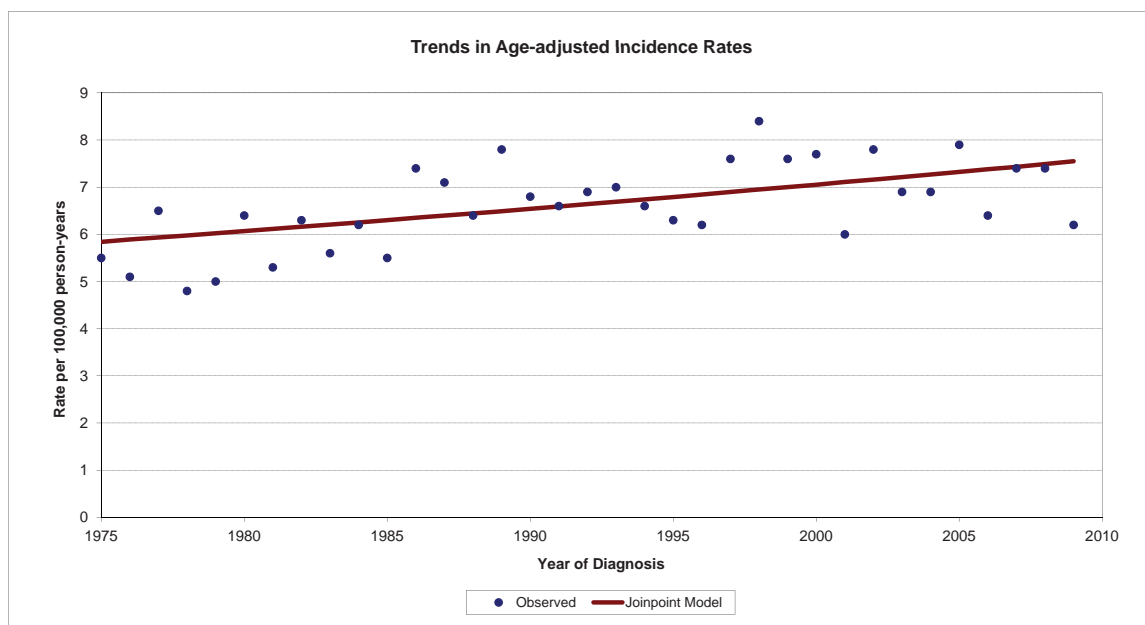
Malignant brain cancer incidence increased at a rate of about 0.8% per year in Idaho from 1975 to 2009. The trends for males and females are similar, though males have higher rates than females.

Brain and Other CNS, Non-Malignant

Trends in Age-adjusted Incidence Rates
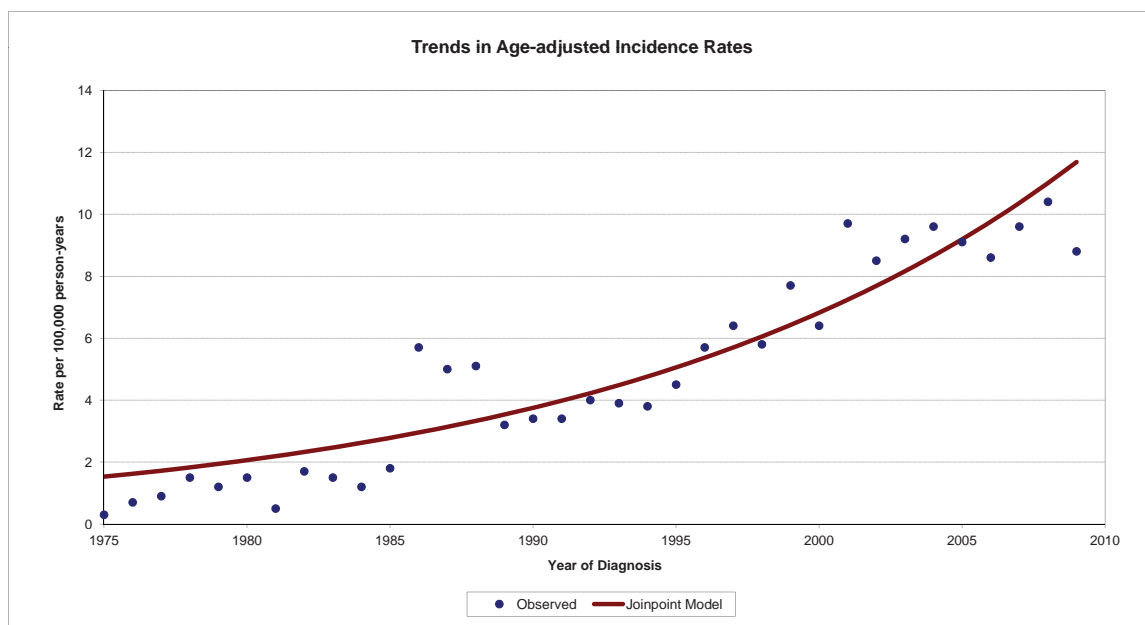
Non-malignant brain and other central nervous system tumors include those with benign and borderline behavior. Non-malignant brain and other CNS tumor incidence increased at a rate of about 6.2 % per year in Idaho from 1975 to 2009.

Breast Female

Trends in Age-adjusted Incidence Rates
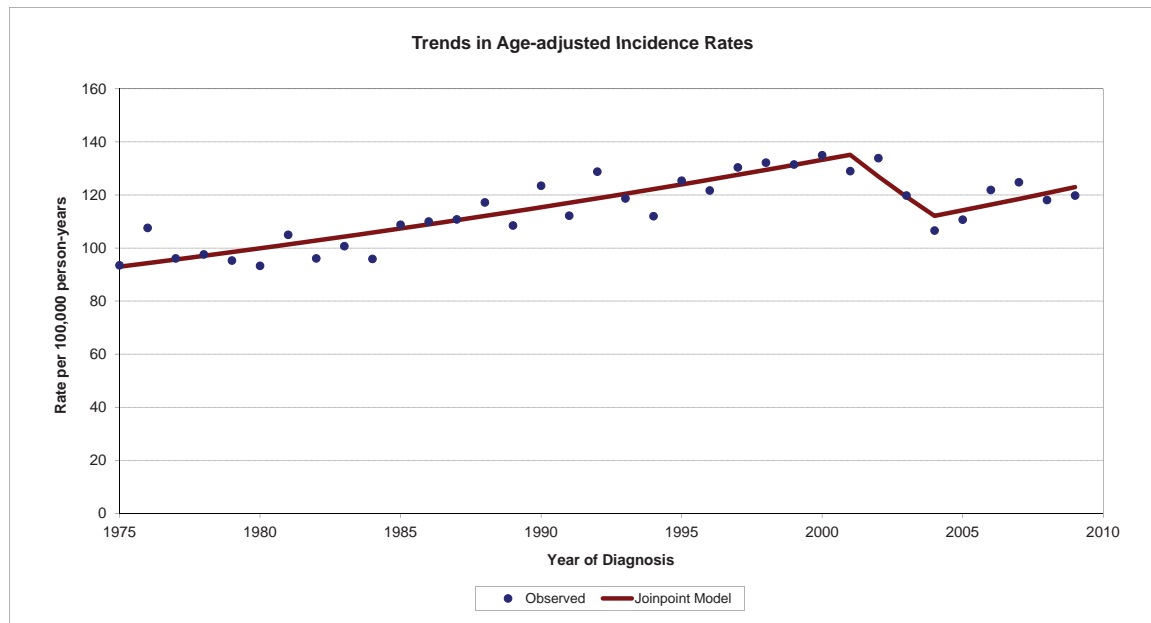
Invasive breast cancer incidence increased at a rate of about 1.5% per year among female Idahoans from 1975 to 2001, after which the rate decreased by about 6.0% per year until 2004, then increased by about 1.9% per year. The sharp decrease may have been due in part to a decrease in the use of hormone replacement therapy. In-situ breast cancer rates increased at a rate of about 14.6% per year from 1975 to 1990, after which the rate of increase slowed to about 2.1% per year (data not shown).

Cervix

Trends in Age-adjusted Incidence Rates
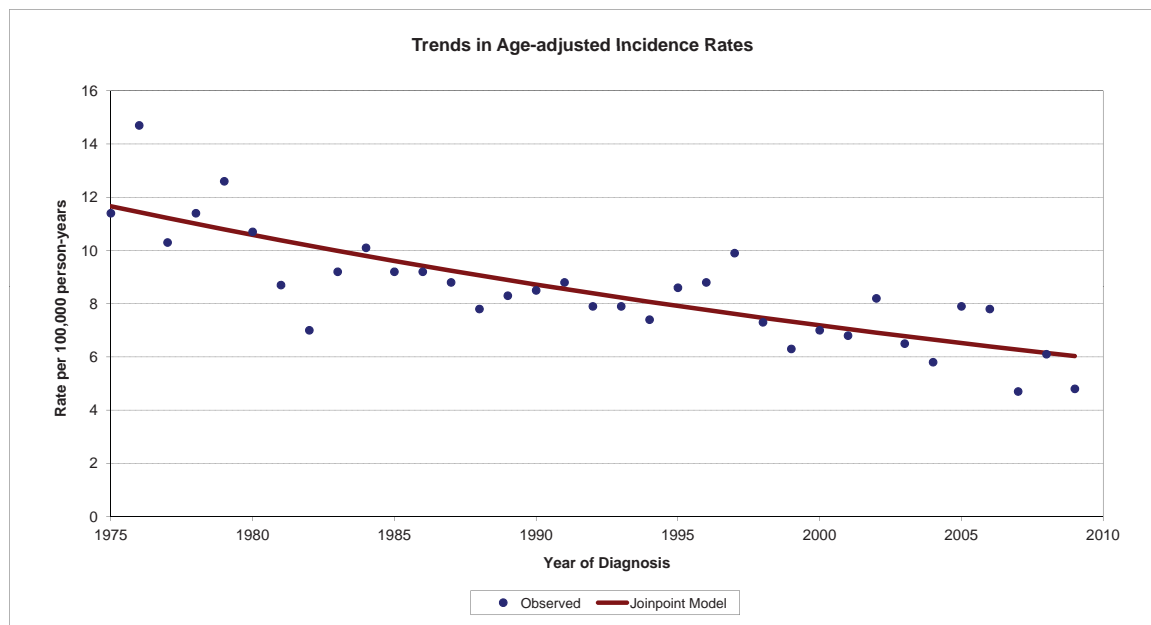
Invasive cervical cancer incidence has decreased about 1.9% per year in Idaho from 1975 to 2009.

Colorectal

**Trends in Age-adjusted Incidence Rates**
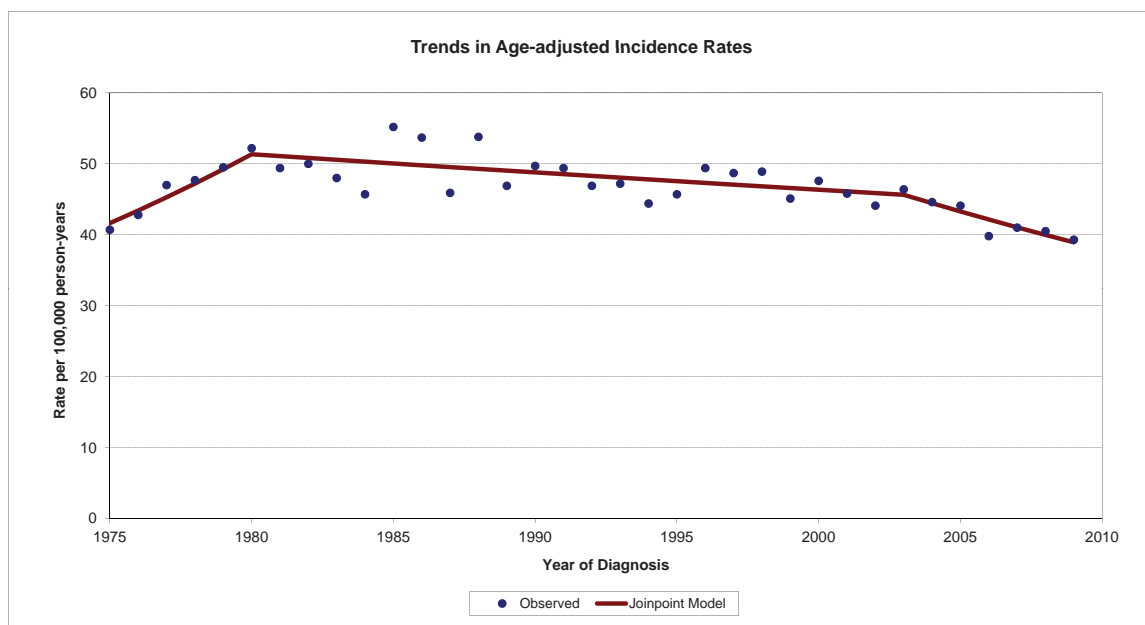
Colorectal cancer incidence increased at a rate of about 4.3% per year in Idaho from 1975 to 1980. From 1980 to 2003, the rate decreased about 0.5% per year, then the rate decreased about 2.6% per year from 2003 to 2009. Colorectal cancer incidence trends over time were different for males and females. For males, rates increased from 1975 to 1988, then decreased. For females, rates decreased slowly across the entire time series.

Corpus Uteri

**Trends in Age-adjusted Incidence Rates**
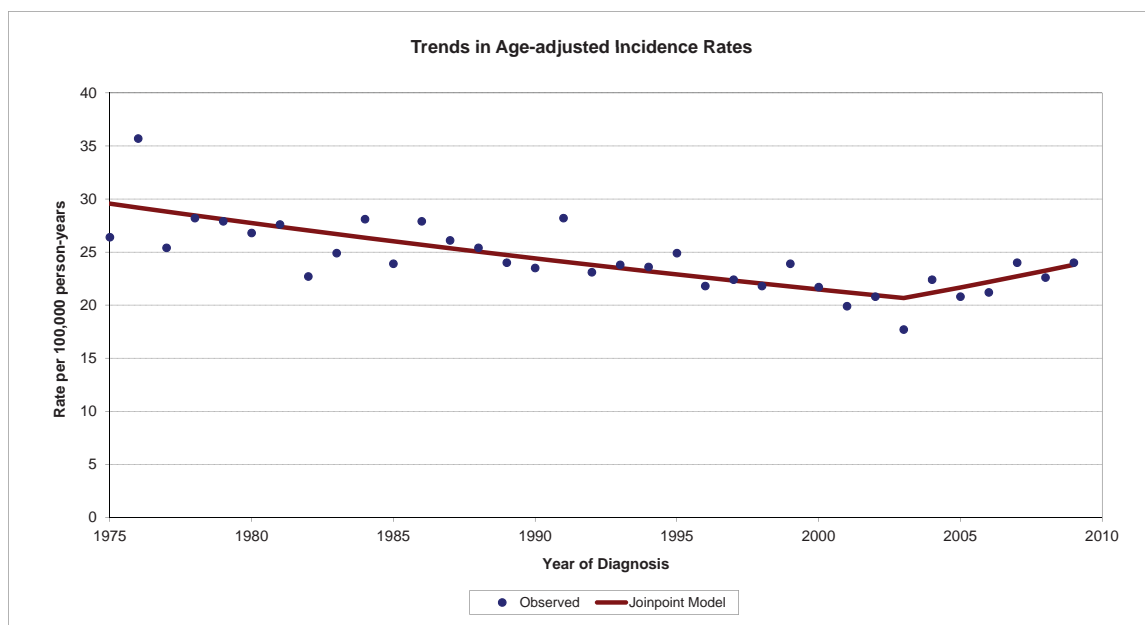
Corpus uteri cancer incidence decreased at a rate of about 1.3% per year among female Idahoans from 1975 to 2003, then increased about 2.4% per year from 2003 to 2009.

Esophagus


Trends in Age-adjusted Incidence Rates
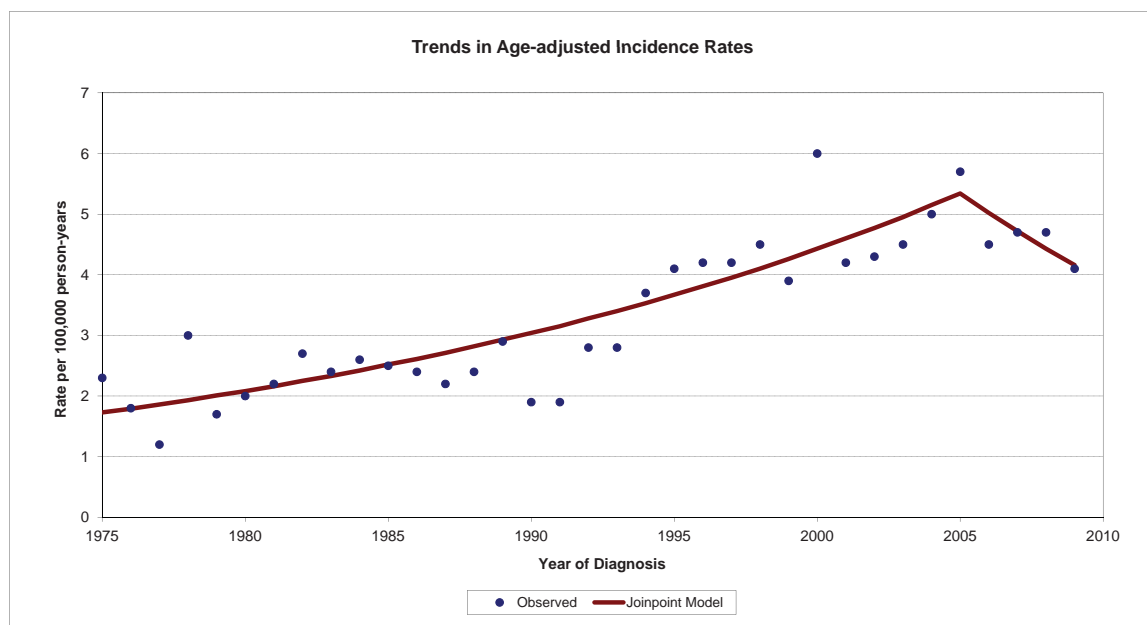
Esophageal cancer incidence increased at a rate of about 3.8% per year in Idaho from 1975 to 2005. From 2005 to 2009, the rate decreased about 6% per year. Overall, the rate of increase was higher for males (3.4% per year) than for females (1.6% per year), and rates of esophageal cancers among males were about 3-4 times higher than those among females.

Hodgkin Lymphoma

**Trends in Age-adjusted Incidence Rates**
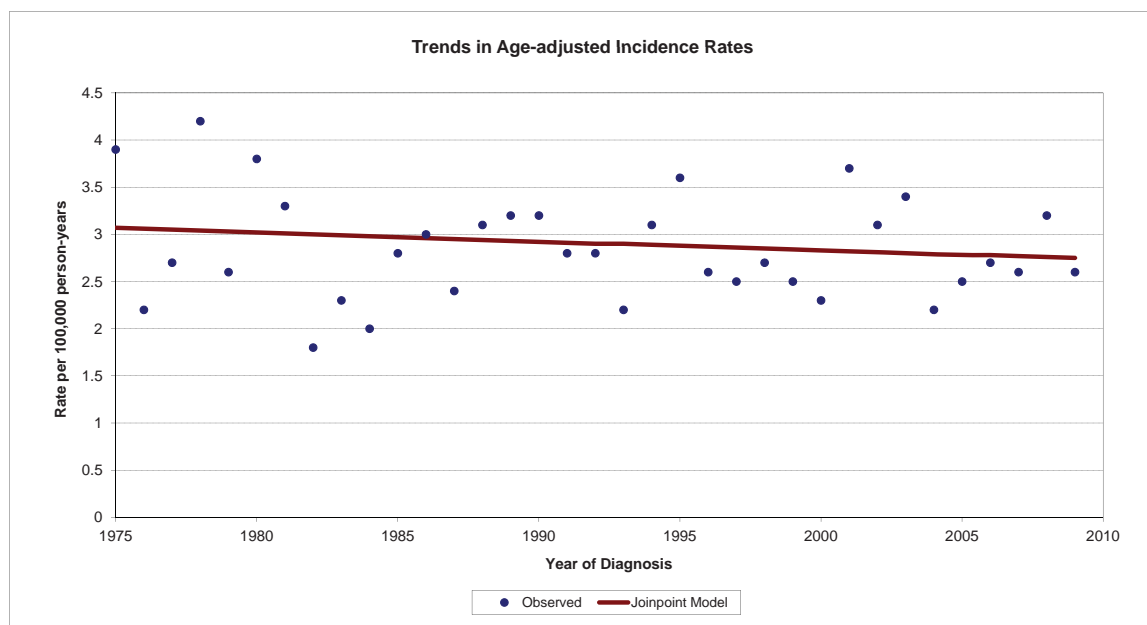
There was no statistically significant trend in Hodgkin lymphoma incidence in Idaho from 1975 to 2009; rates were stable but showed year-to-year variability due to the relatively small numbers of cases diagnosed annually.

Kidney and Renal Pelvis

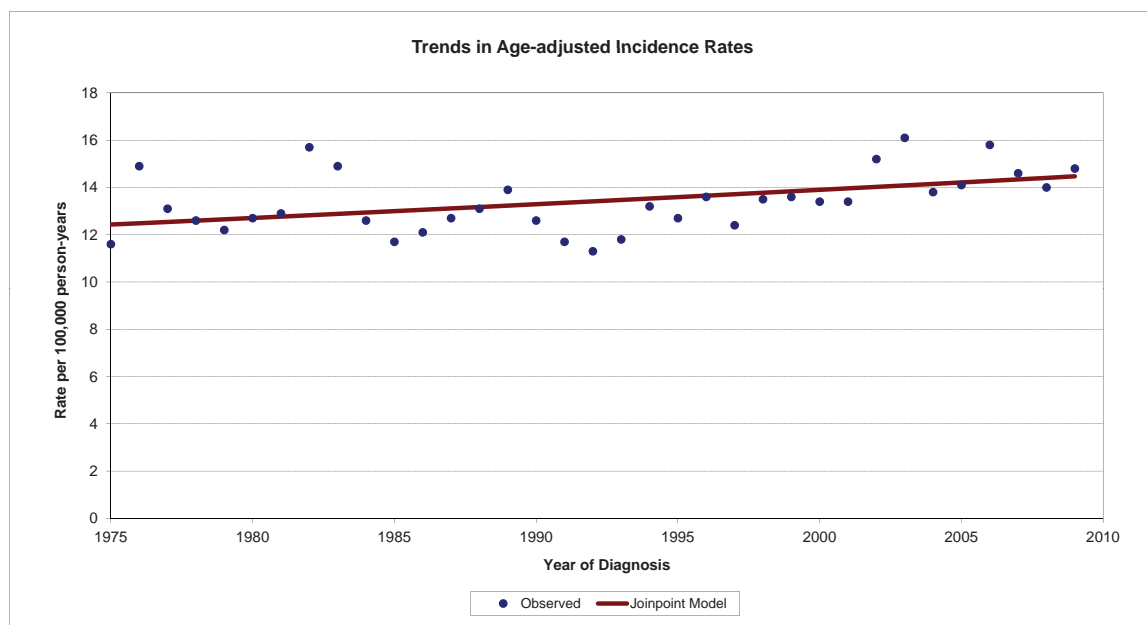**Trends in Age-adjusted Incidence Rates**
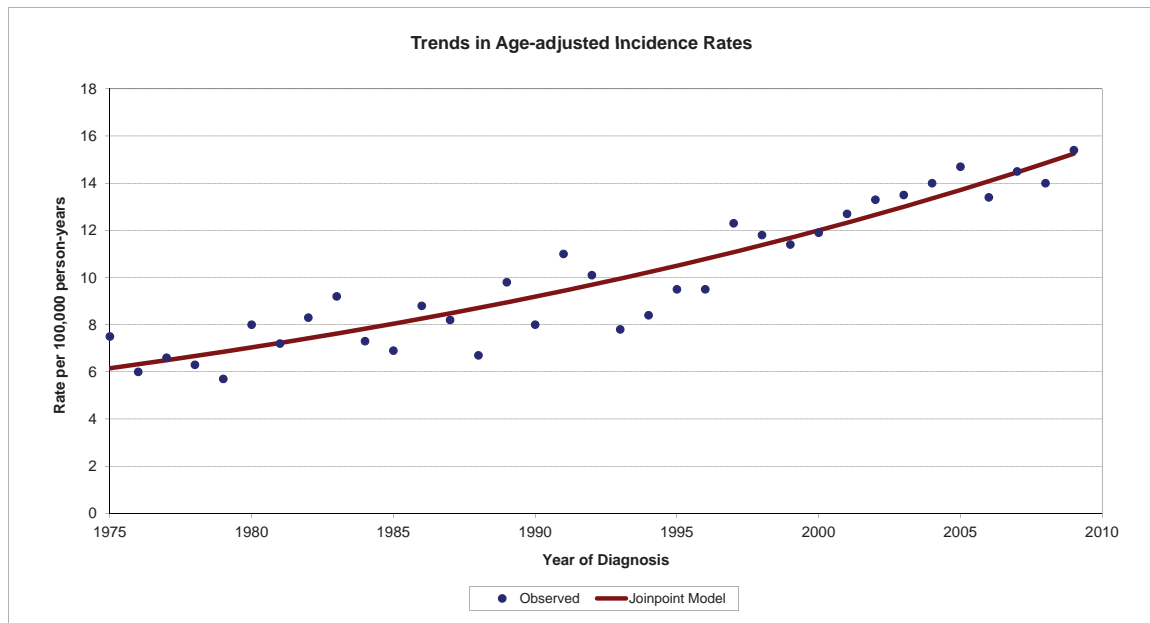
Kidney and renal pelvis cancer incidence increased at a rate of about 2.7% per year in Idaho from 1975 to 2009. The rate of increase was similar for males and females, although rates of kidney and renal pelvis cancers among males were about twice as high as among females.

## Larynx

Trends in Age-adjusted Incidence Rates
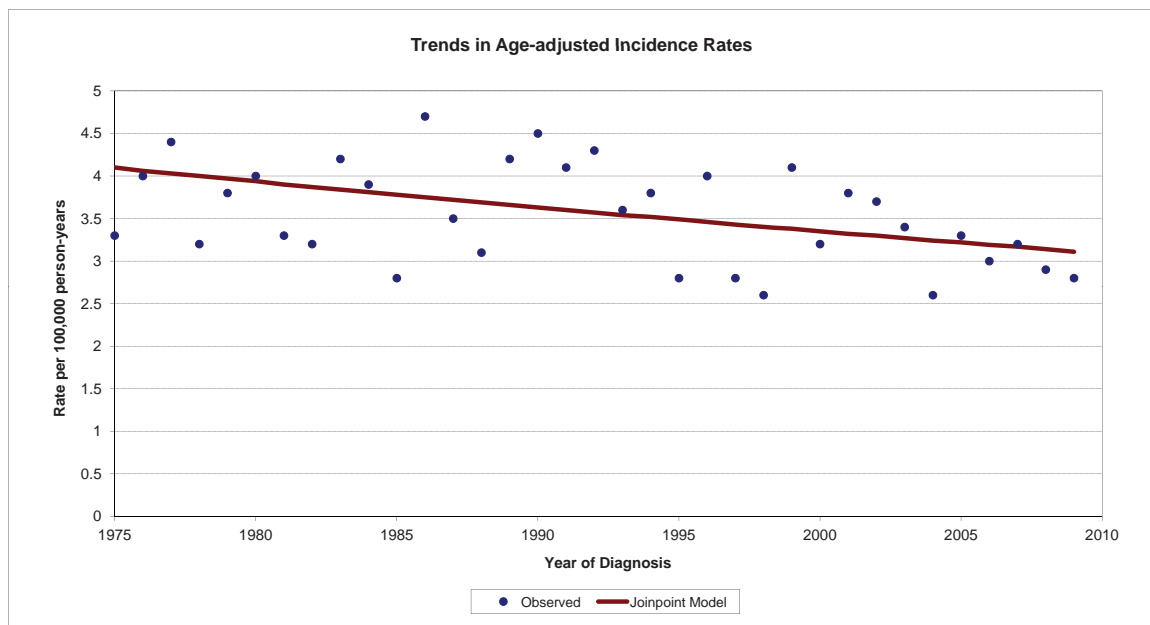
Laryngeal cancer incidence decreased about 0.8% per year in Idaho from 1975 to 2009; rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually. The rate of decrease was similar for males and females, although rates of laryngeal cancers among males were about 4 times as high as among females.

Leukemia

**Trends in Age-adjusted Incidence Rates**

Leukemia incidence increased about 0.4% per year in Idaho from 1975 to 2009; rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually.

Liver and Bile Duct
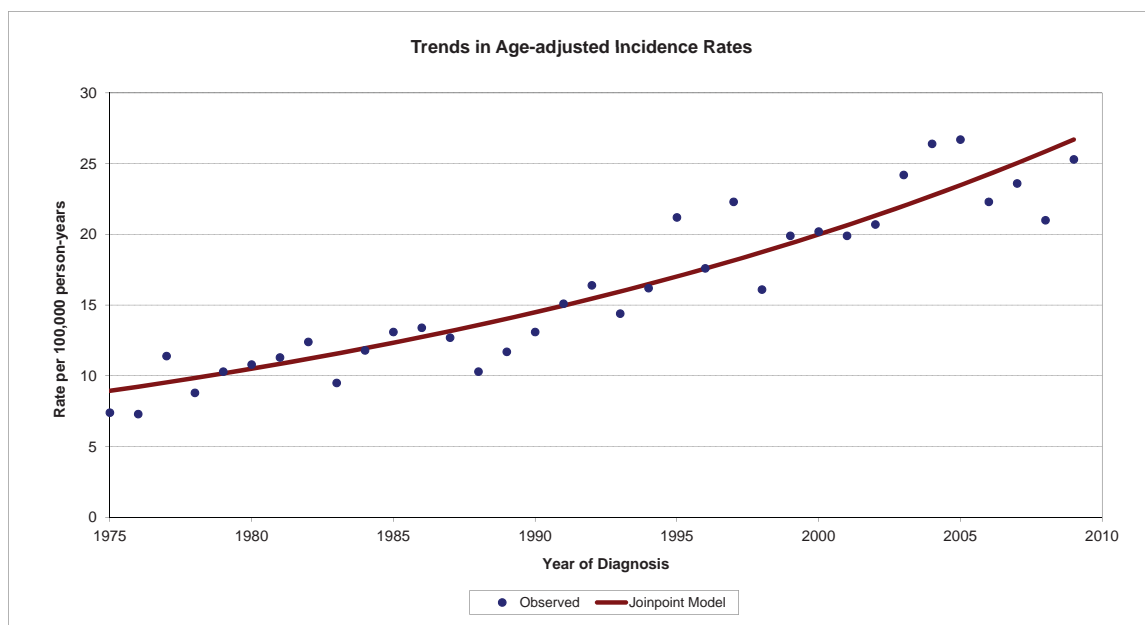
Trends in Age-adjusted Incidence Rates
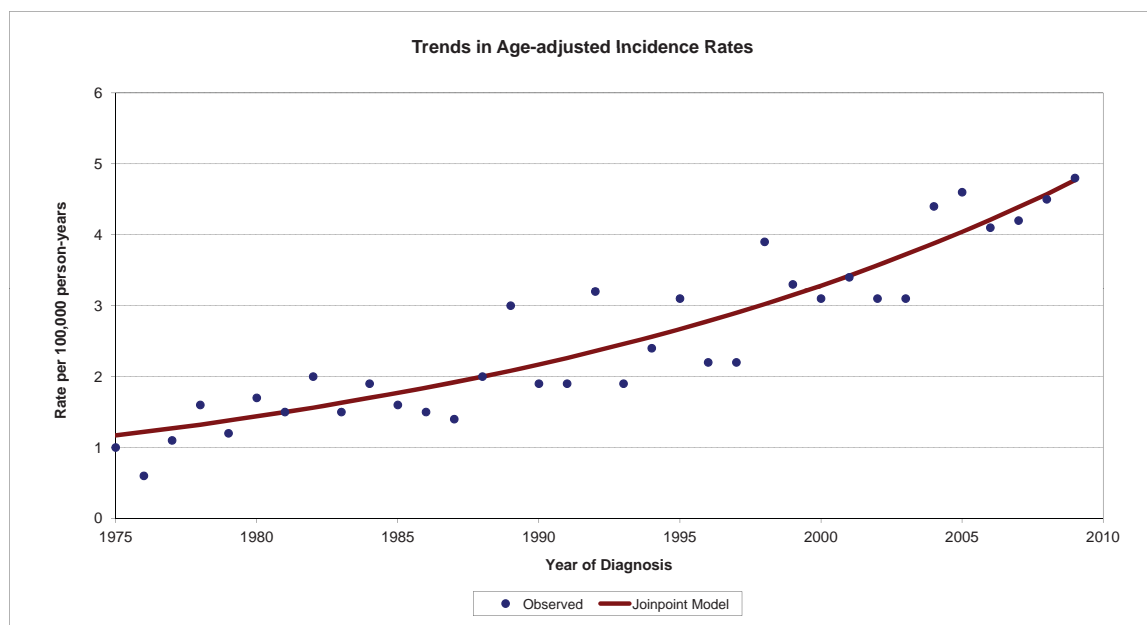
Liver cancer incidence increased at a rate of about 4.2% per year in Idaho from 1975 to 2009. The rate of increase was higher for males (5.1% per year) than for females (2.6% per year), and rates of liver cancers among males were about twice as high as among females.

Lung and Bronchus


Trends in Age-adjusted Incidence Rates
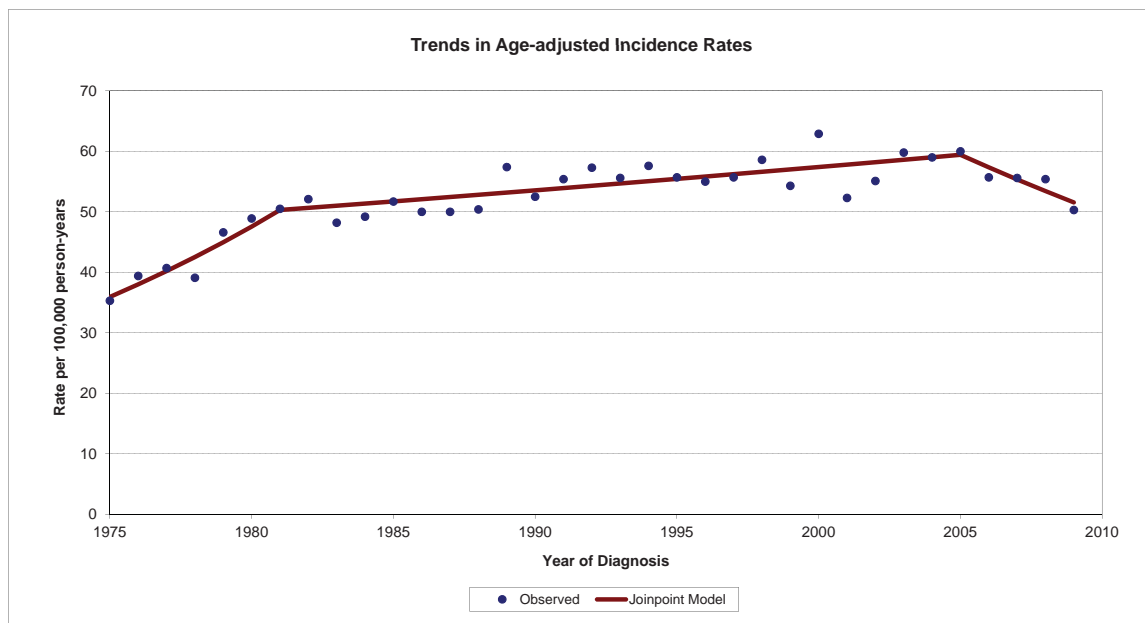
Lung cancer incidence increased at a rate of about 5.8% per year in Idaho from 1975 to 1981, after which the rate of increase lessened to about 0.7% per year until 2005. From 2005 to 2009, the rate has decreased about 3.5% per year. Lung cancer incidence trends over time were different for males and females. For males, lung cancer incidence increased at a rate of about 5.2% per year from 1975 to 1981, and then decreased by about 0.7% per year. For females, lung cancer incidence increased at a rate of about 6.2% per year from 1975 to 1988, after which the rate of increase lessened to about 1.8% per year until 2006. From 2006 to 2009, lung cancer incidence among females decreased about 4.3% per year. Historically, lung cancer incidence rates have been two or more times higher among males as among females, but the gap is continuing to narrow, reflecting long-term trends in smoking prevalence.

Melanoma
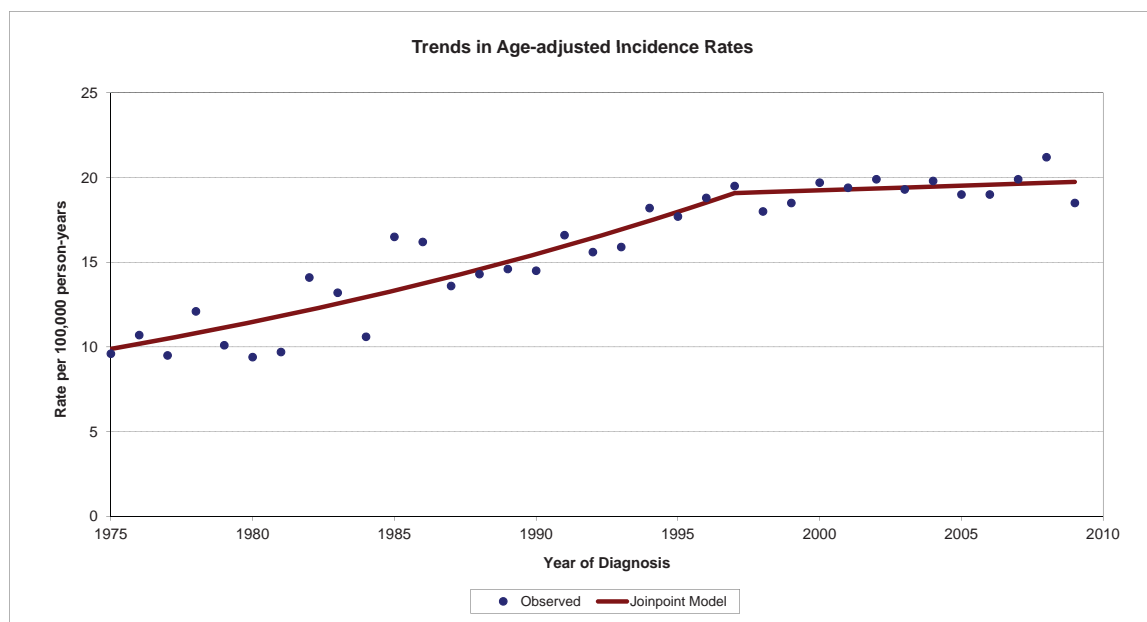

Trends in Age-adjusted Incidence Rates

The incidence of melanoma of the skin increased at a rate of about 3.3% per year in Idaho from 1975 to 2009. The rate of increase was higher for males (3.8% per year) than for females (2.7% per year), and rates of melanoma incidence among males were higher than among females. The incidence of in-situ melanoma of the skin increased at a higher rate (8.4% per year from 1980 to 2009) than for the invasive cases depicted in the graph.

Myeloma

**Trends in Age-adjusted Incidence Rates**
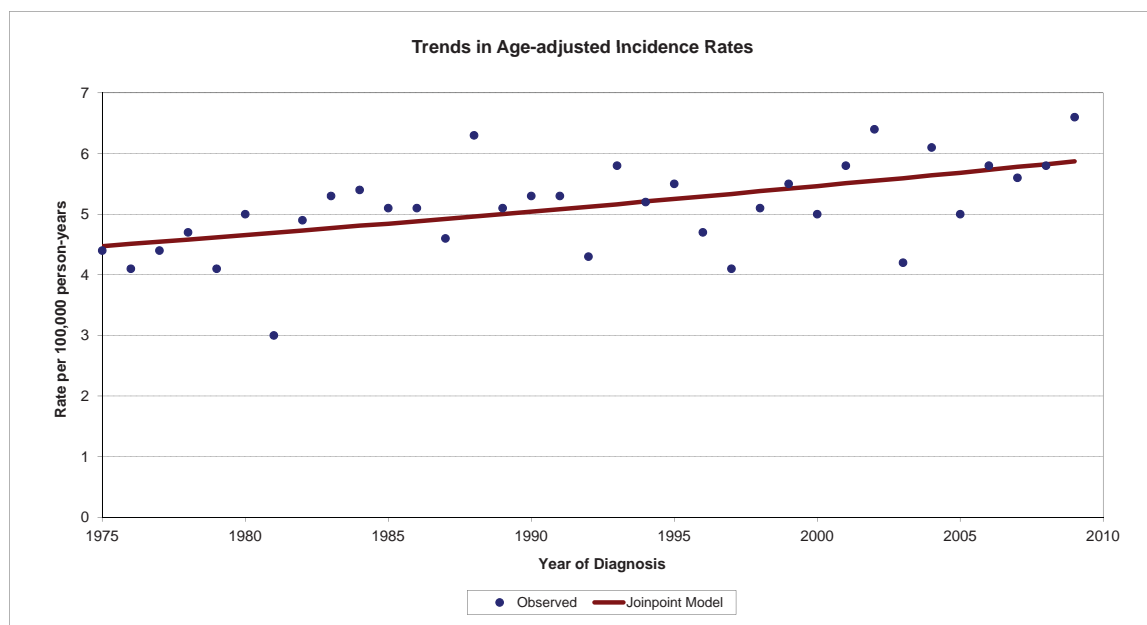
The incidence of myeloma increased at a rate of about 0.8% per year in Idaho from 1975 to 2009. The rate of increase was higher for males (1.2% per year) than for females (no significant trend), and rates of myeloma incidence among males were higher than among females.

Non-Hodgkin Lymphoma


Trends in Age-adjusted Incidence Rates

The incidence of non-Hodgkin lymphoma increased at a rate of about 3.0% per year in Idaho from 1975 to 1997, after which there has been no significant trend. Non-Hodgkin lymphoma incidence trends over time were similar for males and females, but rates of non-Hodgkin lymphoma incidence among males were higher than among females.

Oral Cavity and Pharynx

Trends in Age-adjusted Incidence Rates
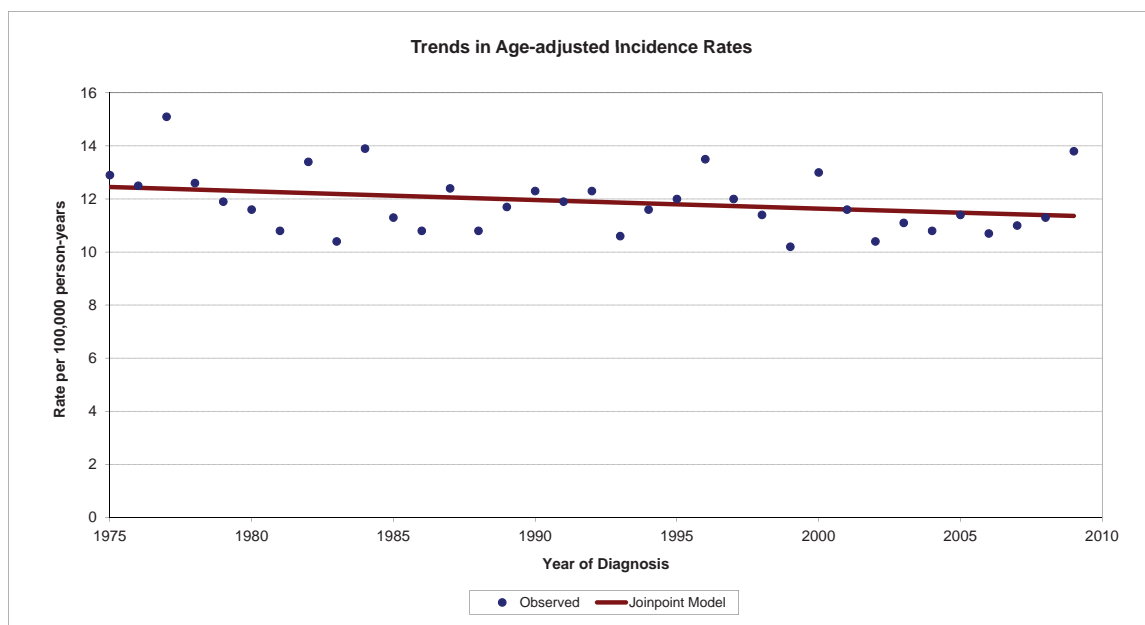
The incidence of cancers of the oral cavity and pharynx decreased at a rate of about 0.3% per year in Idaho from 1975 to 2009. The rate of decrease was higher for males (0.7% per year) than for females (no significant trend), and rates of cancers of the oral cavity and pharynx were about 3 times higher among males than among females. This latter result likely reflects differences in long-term prevalence trends for tobacco use and alcohol consumption between males and females.

Ovary

Trends in Age-adjusted Incidence Rates
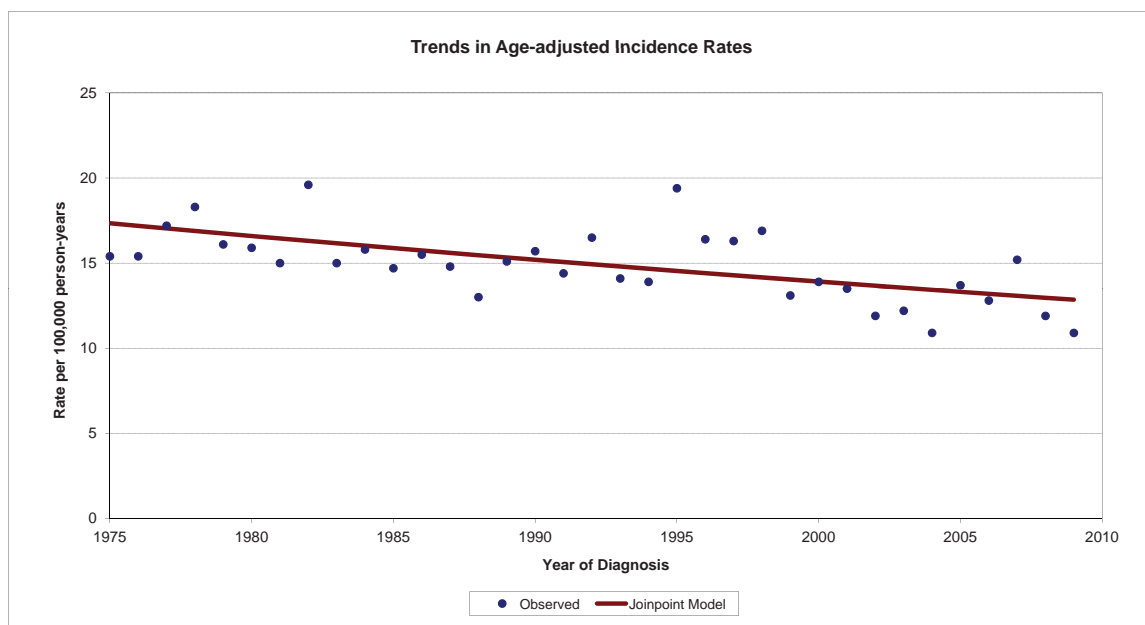
The incidence of ovarian cancer among females in Idaho decreased about 0.9% per year from 1975 to 2009. Part of the decrease may have been due to a decrease in the use of hormone replacement therapy.

Pancreas

**Trends in Age-adjusted Incidence Rates**
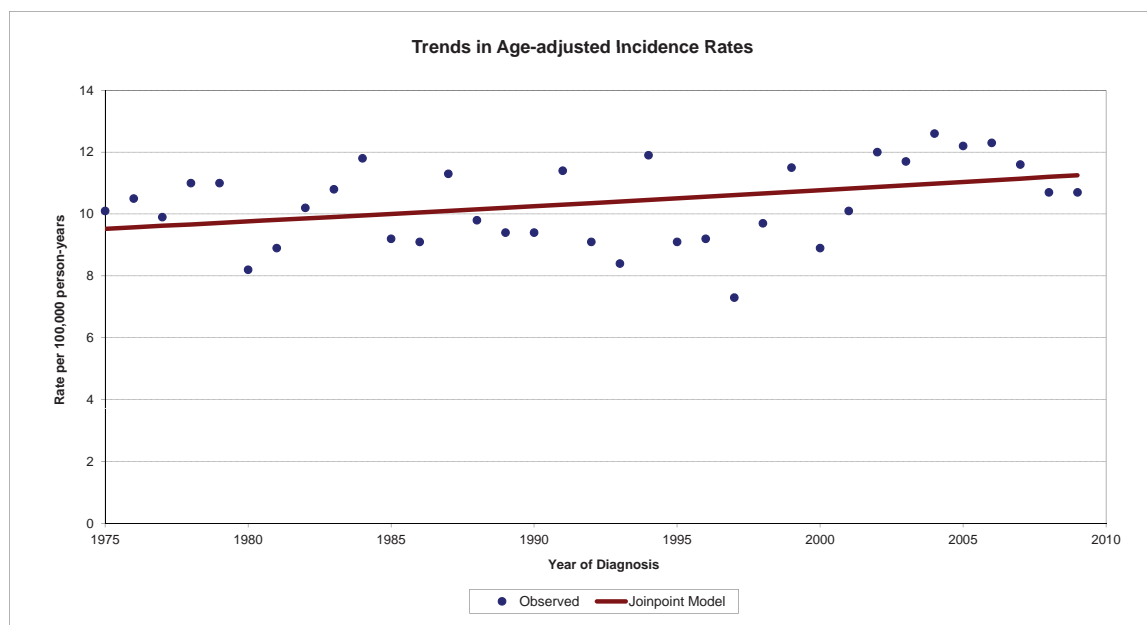
Pancreas cancer incidence increase at a rate of about 0.5% per year in Idaho from 1975 to 2009; rates showed year-to-year variability due to the relatively small numbers of cases diagnosed annually. The rate of increase was higher for females (1.1% per year) than for males (no significant trend), and rates of pancreas cancer incidence among males were higher than among females.

Prostate

**Trends in Age-adjusted Incidence Rates**
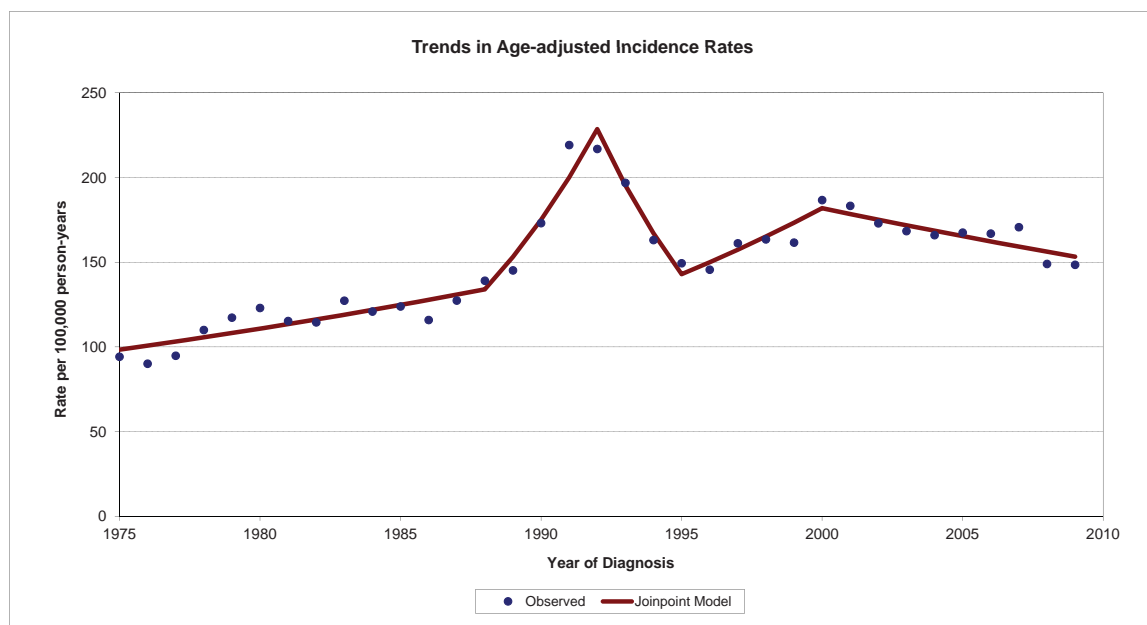
Trends in prostate cancer incidence are complicated, owing to the adoption of the Prostate-Specific Antigen (PSA) screening test in the late 1980s and early 1990s. From 1975 to 1988, prostate cancer incidence increased in Idaho at a rate of about 2.4% per year. From 1988 to 1992, prostate cancer incidence increased at a rate of about 14.3% per year. For the period 1992 to 1995, prostate cancer rates dropped by about 14.5% per year. From 1995 to 2000, the rates increased about 4.9% per year. Since 2000, the rate has decreased about 1.9% per year. Overall, there is an increasing trend in prostate cancer incidence punctuated by a large increase and concomitant decrease associated with widespread adoption of the PSA test, which likely detected many indolent cases.

Stomach

Trends in Age-adjusted Incidence Rates
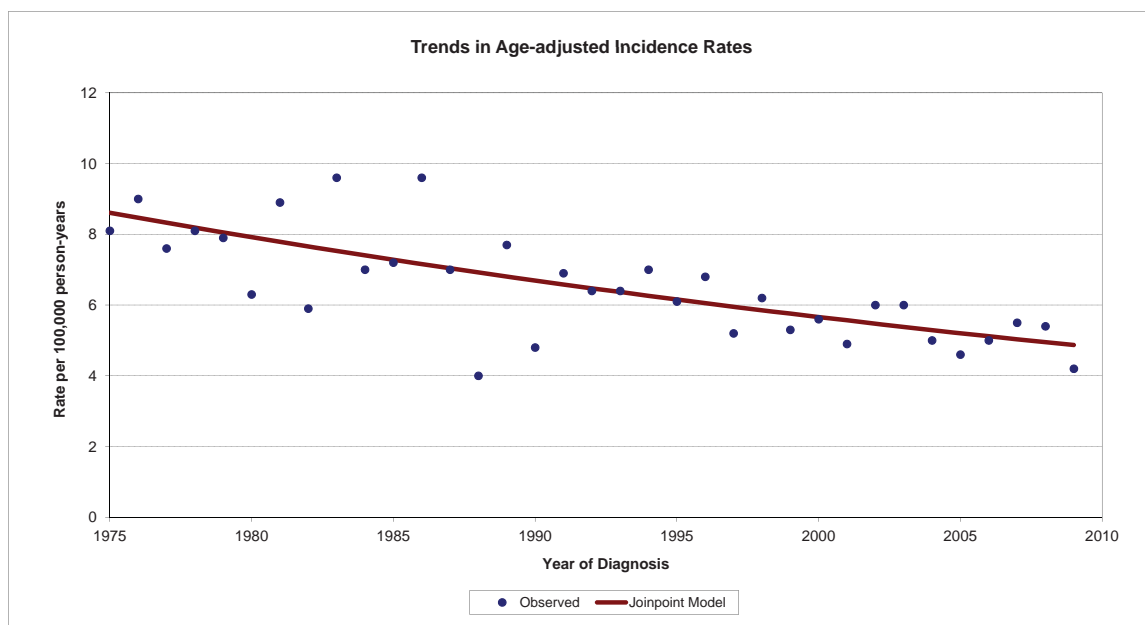
Stomach cancer incidence decreased at a rate of about 1.7% per year in Idaho from 1975 to 2009. Stomach cancer incidence trends over time were similar for males and females although stomach cancer incidence rates among males were about twice as high as among females.

Testis
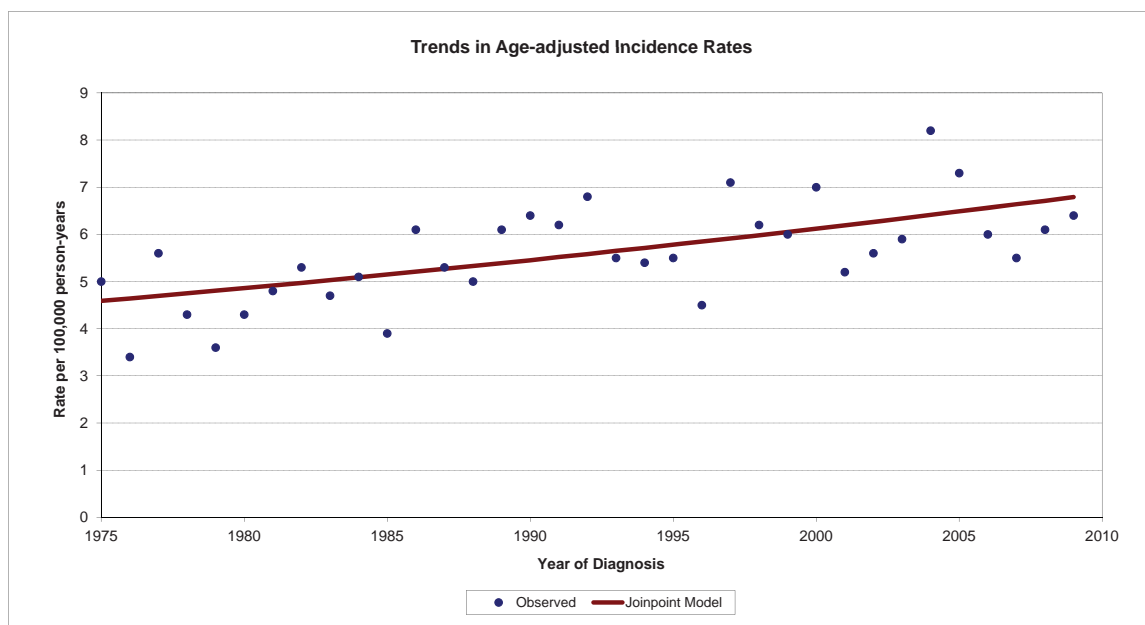
Trends in Age-adjusted Incidence Rates

Testis cancer incidence increased at a rate of about 1.2% per year in Idaho from 1975 to 2009.

Thyroid

Trends in Age-adjusted Incidence Rates

Thyroid cancer incidence was essentially stable in Idaho from 1975 to 1995, after which rates increased by about 9.1% per year. Thyroid cancer incidence trends over time were different for males and females. For males, thyroid cancer incidence increased at a rate of about 4.3% per year from 1975 to 2009. For females, thyroid cancer incidence was stable from 1975 to 1995, after which rates increased by about 9.6% per year. Historically, thyroid cancer incidence rates have been about 3 times higher among females as among males.

Pediatric (age 0 to 19) Cancer
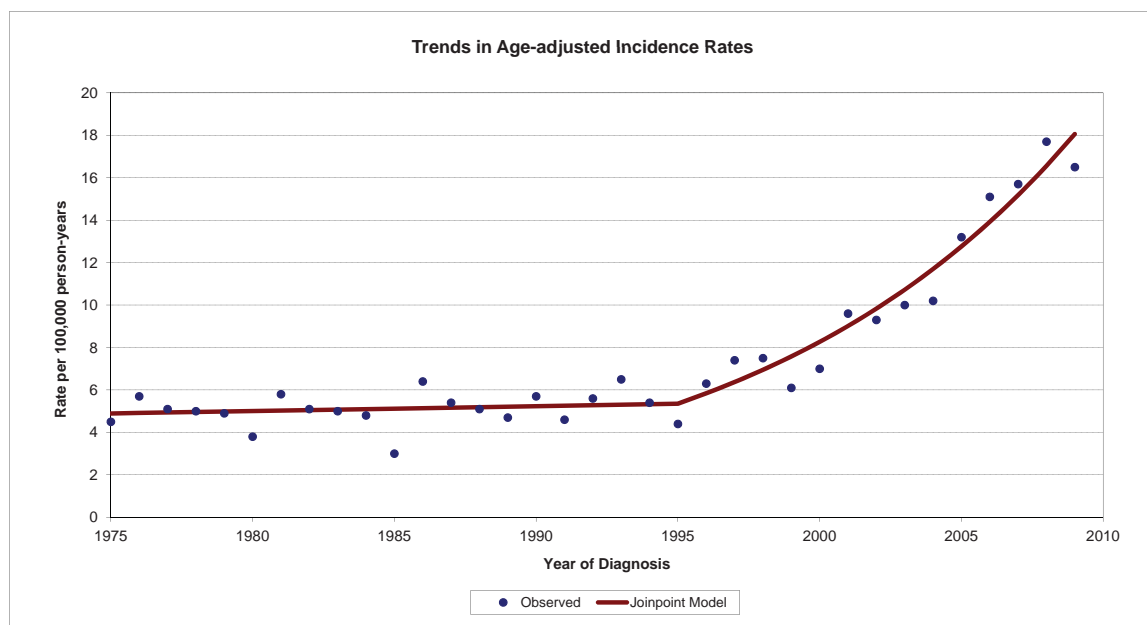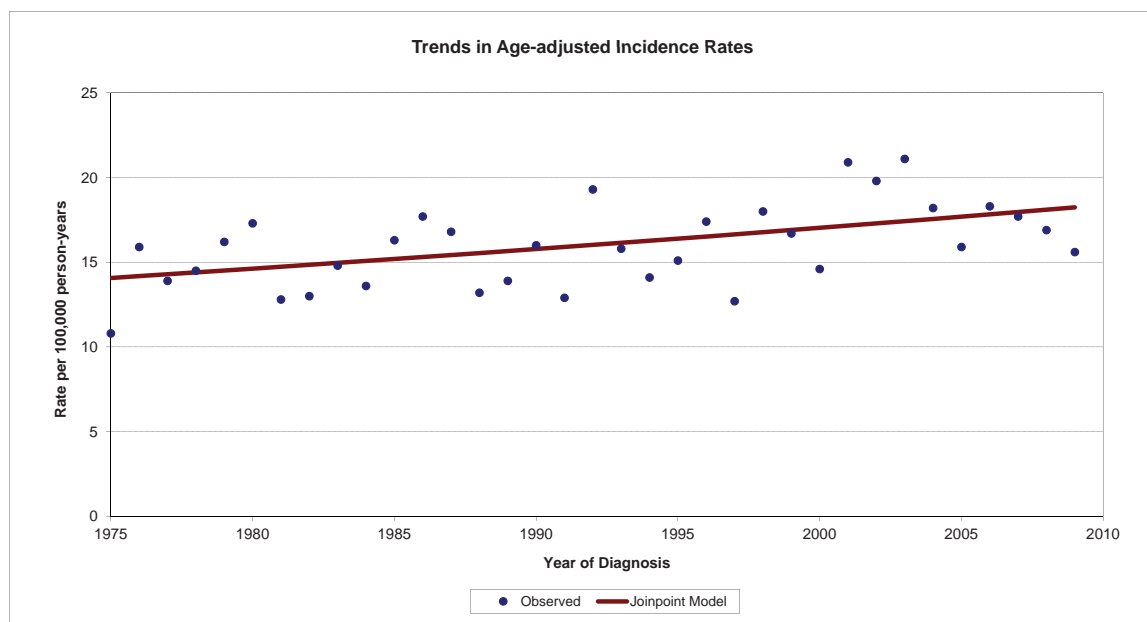
Trends in Age-adjusted Incidence Rates

Pediatric cancer incidence increased at a rate of about 0.8% per year in Idaho from 1975 to 2009. Pediatric cancer incidence trends over time were similar for males and females although pediatric cancer incidence rates among males were slightly higher than among females. For more detailed information on pediatric cancer in Idaho, see: http://www.idcancer.org/specialreports.html.

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Cancer in Idaho - 2009

APPENDICES

APPENDIX A

2000 U.S. STANDARD POPULATION

Age Group	2000 US Standard Population (Census P25-1130)
0	3,794,901
1-4	15,191,619
5-9	19,919,840
10-14	20,056,779
15-19	19,819,518
20-24	18,257,225
25-29	17,722,067
30-34	19,511,370
35-39	22,179,956
40-44	22,479,229
45-49	19,805,793
50-54	17,224,359
55-59	13,307,234
60-64	10,654,272
65-69	9,409,940
70-74	8,725,574
75-79	7,414,559
80-84	4,900,234
85+	4,259,173
Total	274,633,642

Source: SEER Program, National Cancer Institute, 2010. [16]

APPENDIX B

2009 POPULATION BY HEALTH DISTRICT, GENDER, AND AGE GROUP

	HD 1	HD 2	HD 3	HD 4	HD 5	HD 6	HD 7	STATE
Males								
< 5	6,718	2,954	12,142	16,668	8,125	7,612	10,223	63,948
5 to 9	6,800	2,841	11,191	15,893	7,343	7,077	8,639	59,458
10 to 14	7,398	2,950	10,739	15,017	6,711	6,541	7,724	56,631
15 to 19	7,498	4,493	11,438	14,436	6,953	6,666	8,491	58,173
20 to 24	6,035	6,325	12,155	15,542	5,989	7,600	10,364	59,718
25 to 29	7,082	3,563	10,612	18,367	6,349	5,591	7,094	57,133
30 to 34	6,139	2,461	9,398	16,933	5,682	4,273	5,927	50,204
35 to 39	6,194	2,979	9,300	16,733	5,229	4,712	5,553	49,748
40 to 44	6,545	2,900	8,399	15,415	5,332	4,426	5,259	47,553
45 to 49	7,698	3,423	8,951	15,398	6,077	5,065	5,926	51,589
50 to 54	7,962	3,640	8,630	14,282	6,108	5,444	5,683	50,544
55 to 59	7,876	3,464	7,838	12,595	5,425	5,147	5,322	46,495
60 to 64	7,073	3,090	6,760	10,229	4,538	3,993	4,203	38,919
65 to 69	5,336	2,351	5,220	6,866	3,556	2,934	3,156	28,850
70 to 74	3,929	1,891	3,840	4,870	2,642	2,157	2,298	21,120
75 to 79	2,771	1,438	2,915	3,518	1,933	1,763	1,727	15,585
80 to 84	1,884	1154	2,127	2,620	1,506	1,239	1186	11,276
85+	1427	938	1,853	1,948	1330	883	946	8,974
Total	106,365	52,855	143,508	217,330	90,828	83,123	99,721	775,918
	HD 1	**HD 2**	**HD 3**	**HD 4**	**HD 5**	**HD 6**	**HD 7**	**STATE**
Females								
< 5	6,360	2,904	11,664	15,741	7,711	7,415	9,686	60,988
5 to 9	6,778	2,693	10,670	15,361	6,965	6,752	8,199	57,074
10 to 14	6,945	2,744	10,072	14,343	6,438	6,321	7,329	53,825
15 to 19	6,814	4,042	10,695	13,250	6,258	6,735	10,595	56,771
20 to 24	5,622	5,557	11,175	13,745	5,239	7,681	8,972	53,991
25 to 29	6,543	3,418	10,421	18,039	5,625	5,173	6,829	54,211
30 to 34	6,130	2,195	9,183	16,180	5,155	4,233	5,733	48,329
35 to 39	6,362	2,598	8,789	14,708	5,041	4,679	5,590	47,021
40 to 44	6,771	2,806	8,114	14,233	5,194	4,631	5,179	46,130
45 to 49	7,976	3,475	8,962	15,142	5,968	5,383	5,874	51,801
50 to 54	8,525	3,738	8,877	14,449	6,186	5,450	5,774	51,627
55 to 59	8,280	3,471	8,088	12,763	5,494	5,038	5,291	47,317
60 to 64	7,115	2,998	6,886	10,080	4,630	4,010	4,256	39,185
65 to 69	5,413	2,453	5,559	7,165	3,684	2,983	3,241	29,892
70 to 74	3,904	1,815	4,069	5,310	2,827	2,374	2,347	22,232
75 to 79	2,959	1,696	3,519	4,327	2,433	1,984	1,955	18,244
80 to 84	2,388	1,382	2,892	3,582	2,051	1,596	1,581	14,957
85+	2,412	1,656	3,445	3,899	2,267	1,729	1547	16,288
Total	107,297	51,641	143,080	212,317	89,166	84,167	99,978	769,883
Total	213,662	104,496	286,588	429,647	179,994	167,290	199,699	1,545,801

Source: National Center for Health Statistics, 2010.