

CANCER IN OREGON 2010



Oregon State Cancer Registry
May 2013

Cancer in Oregon, 2010

Oregon State Cancer Registry (OSCaR)

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May 31, 2013

Dear Associates:

The Oregon State Cancer Registry (OSCaR) is pleased to present *Cancer in Oregon, 2010*. This report contains complete cancer surveillance data for the years 2006-2010; trends for selected sites also include data from 2001-2010. For complete historical data, see earlier reports of Cancer in Oregon, which are available on our website: www.healthoregon.org/oscar. This report uses current methods for cancer data analysis that conform to national standards; see the technical documentation for specific details.

The information in this report is available due to the diligent efforts of hospital-based cancer registrars, as well as staff from hospitals, ambulatory surgery centers, pathology laboratories, numerous physician offices, and other states in which Oregon residents are diagnosed with and/or treated for cancer. Their cooperation in reporting timely, accurate, and complete cancer incidence data is deeply appreciated.

OSCaR would also like to acknowledge the following organizations that have been supportive of cancer reporting in Oregon: Oregon Medical Association (OMA), Oregon Cancer Registrars' Association (OCRA), the Oregon Association of Hospitals and Health Systems (OAHHS), and the Oregon State Cancer Registry Advisory Committee. We would also like to acknowledge our primary funding source, the Centers for Disease Control and Prevention (CDC), National Program of Cancer Registries (NPCR).

Sincerely,



Donald K. Shipley, MS
Cancer Control Program Manager
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Introduction

The purpose of the registry shall be to provide information to design, target, monitor, facilitate, and evaluate efforts to determine the causes or sources of cancer and benign tumors among the residents of Oregon and to reduce the burden of cancer and benign tumors in Oregon.

The Oregon State Cancer Registry (OSCaR) was established in 1995 by the Oregon Legislature to conduct statewide cancer surveillance and to guide cancer control program planning. The registry began collecting information on all reportable cancers diagnosed in Oregon as of January 1, 1996. OSCaR's mission is to provide accurate data on cancer in Oregon for cancer control activities, public health policy-making, and epidemiological research.

Reportable cancers include *in situ* and/or invasive cancers, with these exceptions: basal and squamous cell carcinoma of the skin (excluding genitalia), and carcinoma *in situ* of the cervix. During the last year, the Oregon Administrative Rules were amended to require Oregon pathology laboratories to report diagnoses of certain pre-malignant conditions, including high grade squamous intraepithelial neoplasia and adenocarcinoma of the cervix, vagina and vulva, and carcinoma *in situ* of the anus. This revision allows tracking of the incidence of Human Papilloma Virus (HPV)-related conditions after the advent of the HPV vaccine. In some instances, the Public Health Division may contact health care providers of reported cases to collect supplemental information about the cases.

Cancer incidence data provided in this report comes from the Oregon State Cancer Registry; cancer mortality data from the Oregon Center for Health Statistics; and screening information from the 2010 Behavioral Risk Factor Surveillance System (BRFSS) database. Starting in 2010, Oregon BRFSS used a new technique called "raking" to weight the data to be representative of all Oregon adults. This raking weighting method has been applied to the data reported in this document. Population data used for the rates were obtained from the National Center for Health Statistics.

All incidence rates reported were calculated using invasive cancers (which include *in situ* bladder cancers). All incidence and mortality rates are age-adjusted to the 2000 U.S. standard population (19 age groups-Census P25-1130). To reduce ethnic misclassification and to improve ethnicity data, North American Association of Central Cancer Registries (NAACCR) Hispanic/Latino Identification Algorithm (NHIA)¹ was used. If the total cancer counts were 10 or fewer, the resulting rates were suppressed as they may not be reliable.

¹ NAACCR Race and Ethnicity Work Group. NAACCR Guideline for Enhancing Hispanic/Latino Identification: Revised NAACCR Hispanic/Latino Identification Algorithm [NHIA v2.2.1]. Springfield (IL): North American Association of Central Cancer Registries. September 2011.

Executive Summary

“Cancer in Oregon, 2010” provides an overview of all cancers diagnosed in Oregon. This information is useful for cancer prevention programs, clinicians, policy makers, and the public for understanding the impact of cancer among Oregonians.

In 2010, 20,870 new reportable cancers were diagnosed in Oregon residents. Of those, 10,191 were diagnosed among men and 10,674 among women—18,610 were invasive and 2,260 were *in situ*. A total of 7,743 Oregonians died from cancer, making cancer the leading cause of death overall. For state rankings, see <http://apps.nccd.cdc.gov/uscs/cancersrankedbystate.aspx>.

The impact of cancer varies by sex, age and race/ethnicity. Overall in 2010, women had higher cancer incidence but lower mortality compared to men. Cancer incidence increases with increasing age: 55% of invasive cancers were diagnosed in persons in the age group >65 years, which is approximately 14% of the total 2010 population.

When compared among race groups, in 2010, a total of 17,882 (93.5%) invasive cancers were diagnosed among Whites, 252 (1.3%) among African Americans (AA), 368 (1.9%) among Asian Pacific Islanders (API), and 182 (1%) among American Indian/Alaska Natives (AI/AN). A total of 621 (3.3%) reported cancer cases were diagnosed among Hispanics. Hispanics (incidence rate=352.1 per 100,000 population) were less likely to be diagnosed with cancer than non-Hispanics (rate=439.5 per 100,000 population).

In 2010, breast cancer was still the leading cancer among women, with 2,868 new invasive cases diagnosed. The age-

adjusted incidence rate was 124.3 cases per 100,000 population in women (which was lower than the 2009 rate 132 per 100,000 population). Oregon consistently has one of the higher female breast cancer incidence rates and was 7th among the states in 2009. Although significant improvements have taken place in early detection and treatment, breast cancer continues to be the 2nd leading cause of cancer deaths in Oregon women; in 2010, 555 Oregon women died from breast cancer (mortality rate = 22.9 deaths per 100,000 population). However, the state mortality rates are close to national rates, ranking 48th in 2009.

Prostate cancer was the leading cancer among men, with 2,623 new cases diagnosed in 2010. The incidence of prostate cancer (120.6 per 100,000 population) was lower than the 2009 rate (130.2 per 100,000 population). Many men die with prostate cancer rather than from it; in 2010, 397 Oregon men died of this cancer. Prostate cancer was the 2nd leading cause of cancer deaths among men and the mortality rate was 21.7 per 100,000 population.

Lung cancer was the 2rd most common cancer among both Oregon men and women, and the leading cause of cancer death. In 2010, 2,500 Oregonians were diagnosed with lung cancer (incidence rate = 56.6 per 100,000 population), which is comparatively a lower rate than in 2009 (62.9 per 100,000 population).

In 2009, Oregon ranked 33rd nationally for lung cancer incidence. While lung cancer incidence in men has steadily declined over the years (due to decreases in smoking rates), the incidence in women remains relatively flat. Lung cancer is the deadliest cancer in Oregon: 2,062 Oregonians died of lung cancer, accounting for 27% of cancer deaths (mortality rate = 47 per 100,000 population).

Colorectal cancer was the 3rd leading cause of cancer incidence for both men and women with 1,614 Oregonians diagnosed with invasive colorectal cancer in 2010. The 2010 incidence rate (36.9 per 100,000 population) was slightly lower than the 2009 rate (40.8 per 100,000 population). Colorectal cancer was the 3rd most common cause of cancer death for Oregon men and women. A total of 645 Oregonians died of this cancer; the mortality rate was 14.6 per 100,000 population. In 2009, Oregon ranked 39th in incidence and 36th in mortality.

In 2010, melanoma was the 5th most common cancer in Oregon for both men and women. There were 1,137 new invasive cases reported; the incidence rate was 26.3 per 100,000 population, which is higher than the 2009 rate (24.6 per 100,000 population). For the past few years, Oregon's melanoma incidence has been higher than the U.S rate; in 2008 Oregon had the highest rate in the nation (29.1 compared to 19.4 nationally). This may be partly due to improved out-patient reporting of melanoma cases in Oregon. In 2010, 146 Oregonians died of this cancer and the rate was 3.3 per 100,000 population. In 2009, Oregon was one of the top five states for having higher mortality rates.

Bladder cancer was the 4th most common cancer diagnosed among men with 738 new invasive cases diagnosed in 2010.

Uterine cancer was the 4th leading cancer among women with 620 new invasive cases reported in 2010.

The age-adjusted incidence and mortality rates for all cancers combined declined for both men and women from 2001 to 2010. Overall, there was an Annual Percentage Change (APC) of -1.6 among men and -0.6 among women for all sites combined incidence.

All Cancers, Oregon 2010

CANCER DATA

This report includes data reported to the Oregon State Cancer Registry on all cancer cases diagnosed in Oregon in the year 2010. A total of 20,870 new cancer cases were reported: 49% were among men and 51% among women. Oregon's age-adjusted incidence rate for all invasive cancers was 434 per 100,000 population, and the mortality rate was 175 deaths per 100,000 population. A total of 7,743 Oregonians died from cancer, making cancer the leading cause of death (24% of all deaths) in 2010.

Approximately 51% of reported cases were diagnosed at either the *in situ* or localized stage, and 40% with regional or distant spread of disease.

All Cancers Combined, Malignant by Oregon County, 2010

Oregon		20,870	
Baker	102	Lake	48
Benton	383	Lane	1,804
Clackamas	2,056	Lincoln	388
Clatsop	234	Linn	734
Columbia	271	Malheur	170
Coos	518	Marion	1,810
Crook	145	Morrow	59
Curry	165	Multnomah	3,554
Deschutes	1,000	Polk	420
Douglas	699	Sherman	^
Gilliam	^	Tillamook	169
Grant	48	Umatilla	370
Harney	49	Union	174
Hood River	114	Wallowa	59
Jackson	1,253	Wasco	157
Jefferson	73	Washington	2,227
Josephine	627	Wheeler	12
Klamath	460	Yamhill	499

^ Count less than 11.

All Cancers - Fast Facts

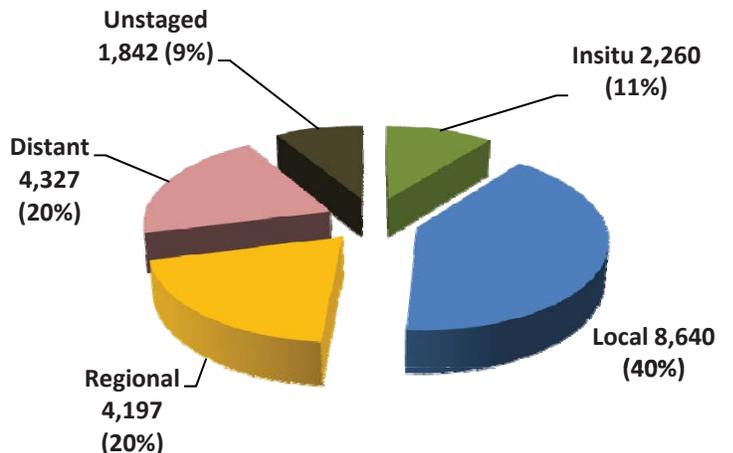
Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	10,191	10,674	20,870
<i>Invasive Cases</i>	9,234	9,371	18,610
<i>In-situ Cases</i>	957	1,303	2,260
Rates			
Crude Rate	507.6	489.2	498.4
Age-adjusted Rate	468.1	410.5	434.2
¹ US Age-adjusted Rate (2009)	523.5	414.3	459.0
² Oregon APC (2006-2010)	-2.9	-1.1	-2.0
Cancer Mortality			
Total Cancer Deaths 2010	4,003	3,740	7,743
Rates			
Crude Rate	210.7	193.0	201.7
Age-adjusted Rate	205.1	153.3	175.1
US Age-adjusted Rate (2009)	211.9	146.4	173.1

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

All Cancers, Stage at Diagnosis Oregon 2010



LEADING SITES

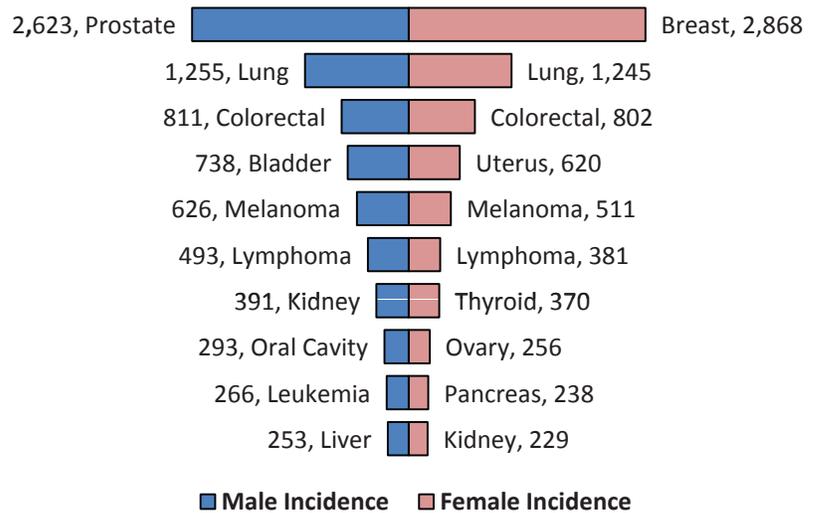
The following graphs show the leading sites of cancer incidence and mortality in 2010 for Oregon men and women. Prostate cancer was the leading site for men, with 2,623 new invasive cases diagnosed in 2010 (incidence rate of 120.6 per 100,000 population); and breast cancer was the leading site among women, with 2,868 new cases diagnosed in 2010 (incidence rate of 124.3 per 100,000 population).

Lung cancer is the 2nd most common cancer diagnosed but still the leading cause of all cancer deaths—accounting for 27% of cancer deaths. Tobacco use among Oregonians is still the leading cause of preventable deaths (22% of all deaths). It is estimated that the elimination of smoking could prevent 80-90% of lung cancer incidences and would prevent a significant number of other smoking-related cancers. In 2010, there were 2,500 new lung cancer diagnoses and 2,062 deaths from lung cancer.

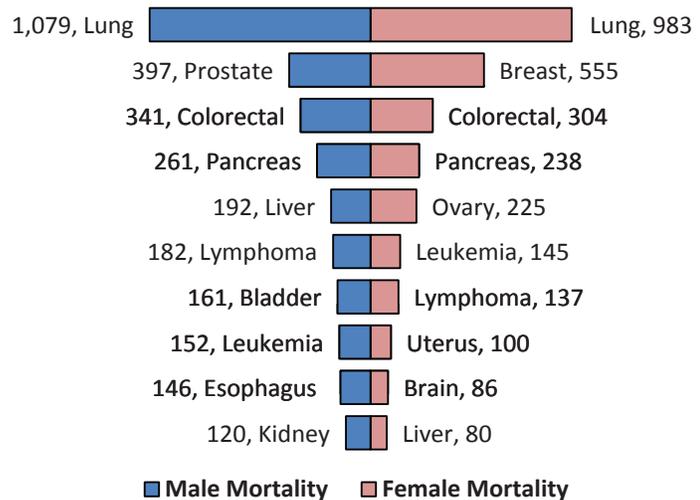
Colorectal cancer ranked 4th in Oregon with 1,614 new invasive cases diagnosed in 2010 and 645 deaths caused by this cancer.

Oregon is still among the top ten states in the nation for melanoma incidence. In 2010, 1,137 new melanoma cases were reported (incidence rate of 26.3 per 100,000 population).

Leading Sites of Cancer Incidence, by Gender, Oregon 2010



Leading Sites of Cancer Mortality, by Gender, Oregon 2010

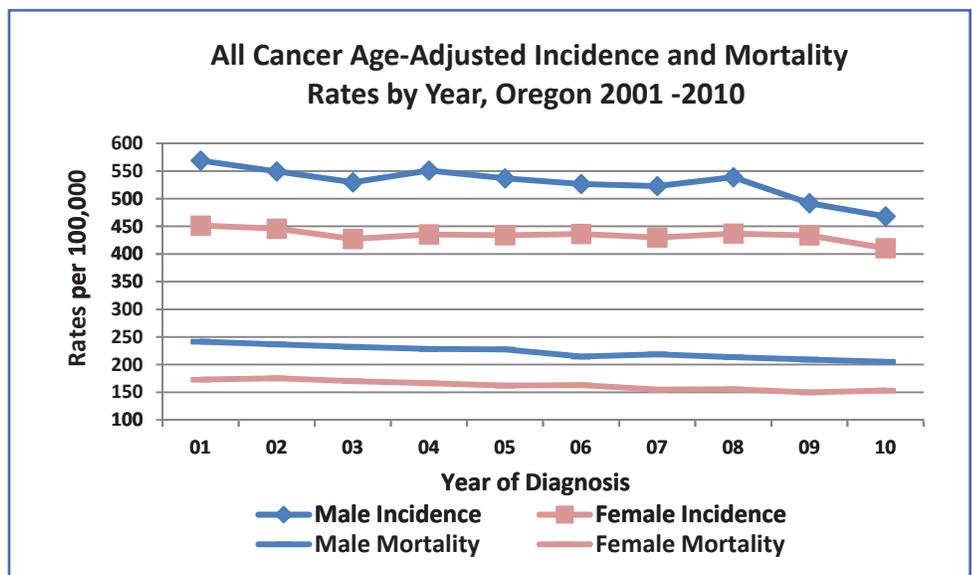
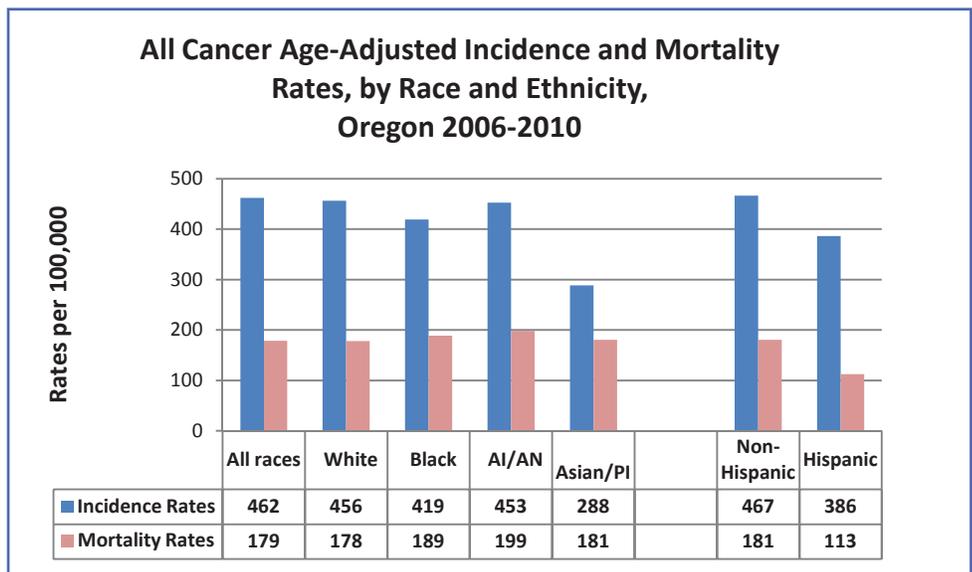
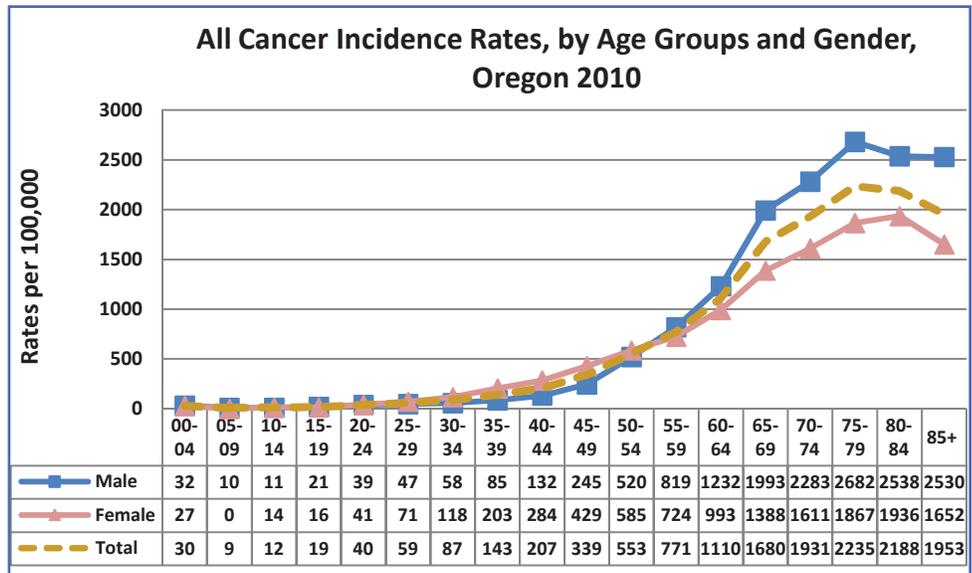


Approximately 55% of invasive cancers were diagnosed among Oregonians ≥ 65 of age. The incidence rates among men and women did not differ for all cancers until age 59, after which the rates for men remained consistently higher.

According to 2006-2010 combined data, 93.4% of all invasive cancers were diagnosed among Whites, 1.1% among African Americans (AA), 1.8% among Asian Pacific Islanders (API), and 1% among American Indian/Alaska Natives (AI/AN). A total of 3% of reported cancer cases were diagnosed among people of Hispanic origin.

The age-adjusted incidence and mortality rates for all cancers combined declined for both men and women from 2001 to 2010. Overall, there was an Annual Percentage Change (APC) of -1.6 among men and -0.6 among women for all sites combined incidence.

The incidence rates among men decreased from 569 per 100,000 population in 2001 to 468 in 2010, which an approximately 18% decline. Among women, incidence rates decreased from 451 per 100,000 population in 2001 to 411 in 2010, which represents a decrease of approximately 9%. From 2001 to 2010, there was a 15% decrease in mortality rates among men and an 11% decrease among females.



CANCER SCREENING

Mammography

Early detection through screening and cancer awareness programs has played a significant role in reducing the impact of breast cancer. Approximately one in four women diagnosed with breast cancer had regional or distant metastasis in 2010. In 2009, the recommendation for breast cancer screening was modified, which recommends biennial screening mammography for women 50-74 years of age.¹ According to the 2010 Oregon BRFSS, 75% of women ages 50 to 74 years had a mammogram within the past two years. Lacking health insurance is a major barrier to mammography: 64% of women without health insurance are NOT current on their breast cancer screening compared to only 19% of women with insurance.

Colorectal Cancer Screening

The U.S. Preventive Services Task Force recommends that adults 50-75 years of age be screened for colorectal cancer with any of the following regimens: annual high-sensitivity fecal occult blood testing, sigmoidoscopy every five years combined with high-sensitivity fecal occult blood testing every three years, or screening colonoscopy at intervals of ten years.¹ In 2010, 59% of Oregonians 50-75 years of age reported being screened according to these recommendations. Having health insurance makes a difference: 78% of Oregonians without insurance have NOT been appropriately screened compared to 36% of Oregonians with insurance.

¹ Recommendations for Adults. U.S. Preventive Services Task Force. <http://www.uspreventiveservicestaskforce.org/adultrec.htm>

Cervical Cancer Screening

Screening prevents cervical cancer by detecting pre-cancerous conditions when they can be effectively treated. In 2010, 17% of Oregon women between the ages of 21-65 years have NOT had a Pap test within the past three years. Around 84% of urban residents and 79% of rural residents reported being current on their cervical cancer screenings.

Bladder Cancer, Oregon 2010

In 2010, a total of 943 Oregonians were diagnosed with cancer of the urinary bladder—among them 421 (45%) were invasive and 522 (55%) were *in situ*.

During the same year, 222 Oregonians died from this cancer.

The age-adjusted incidence rate was 21.6 per 100,000 population and the mortality rate was 4.9 deaths per 100,000 population. Both incidence and mortality rates were higher among men. Among men, the incidence rate was 37.8 per 100,000 population compared to 8.5 per 100,000 population among women. Approximately 84% of reported cases were diagnosed at an *in situ* or localized stage, 12% with regional or distant stage of disease, and 4% were unstaged.

Bladder Cancer - Fast Facts

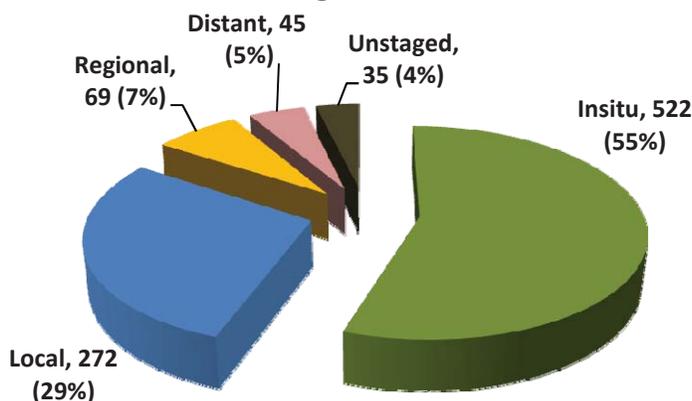
Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	738	205	943
<i>Invasive</i>	327	94	421
<i>In situ</i>	411	111	522
Rates			
Crude Rate	38.8	10.6	24.6
Age-adjusted Rate	37.8	8.5	21.6
¹ US Age-adjusted Rate (2009)	36.1	8.9	20.5
² Oregon APC (2006-2010)	0.1	-0.9	-0.2
Cancer Mortality			
Total Cancer Deaths 2010	161	61	222
Rates			
Crude Rate	8.5	3.1	5.8
Age-adjusted Rate	8.5	2.2	4.9
US Age-adjusted Rate (2009)	7.6	2.1	4.3

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

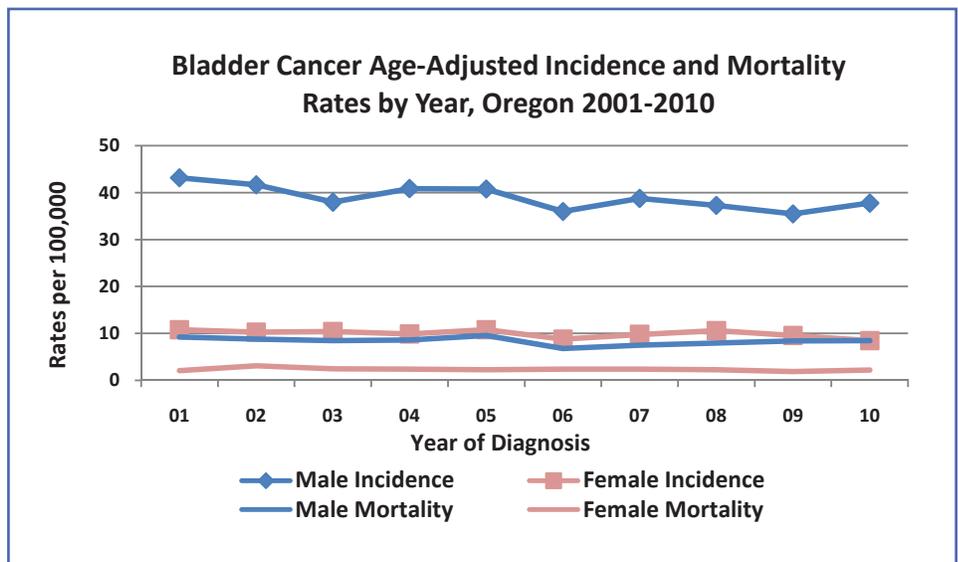
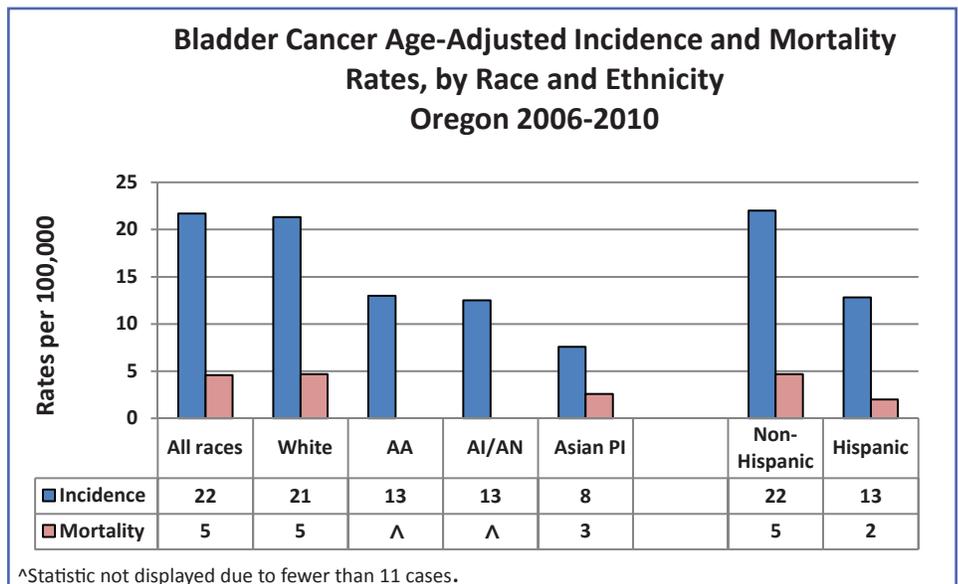
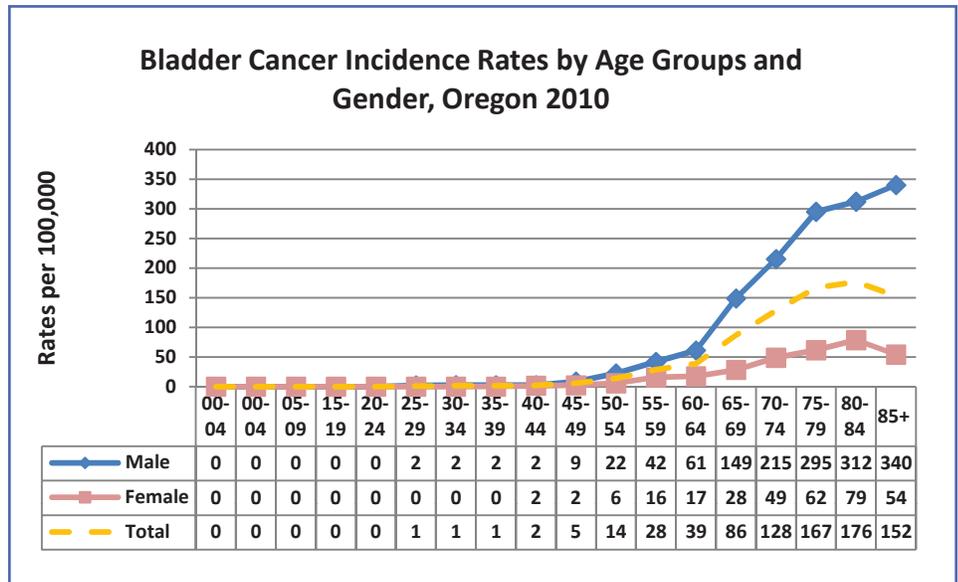
Bladder Cancer, Stage at Diagnosis, Oregon 2010



The age-specific incidence rates started increasing at age 50 for bladder cancer and were consistently higher for all older age groups. The rates for men aged 50 and older remained higher compared to women.

According to 2006-2010 combined data, 93.7% of all bladder cancers were diagnosed among Whites, 0.6% among African Americans (AA), 0.8% among Asian Pacific Islanders (API), and 0.5% among American Indian/Alaska Natives (AI/AN). A total of 73 (1.6%) of reported cancer cases were diagnosed among Hispanics. Hispanics were less likely to be diagnosed with this cancer than non-Hispanics.

Between 2001 and 2010, the incidence rates of bladder cancer for both men and women dropped an average of 1.6% annually. However, mortality rates remained stable over the 10 year period for both men and women.



Brain and CNS Cancer, Oregon 2010

In 2010, a total of 282 Oregonians were diagnosed with a malignant tumor of the brain or central nervous system (CNS). During the same year, 198 Oregonians died of this cancer.

The age-adjusted incidence rate was 6.7 per 100,000 population and the mortality rate was 4.6 deaths per 100,000 population. Approximately 76% of reported cases were diagnosed at a localized stage, 19% with regional or distant stage of disease, and 5% were unstaged.

Brain and CNS Cancer - Fast Facts

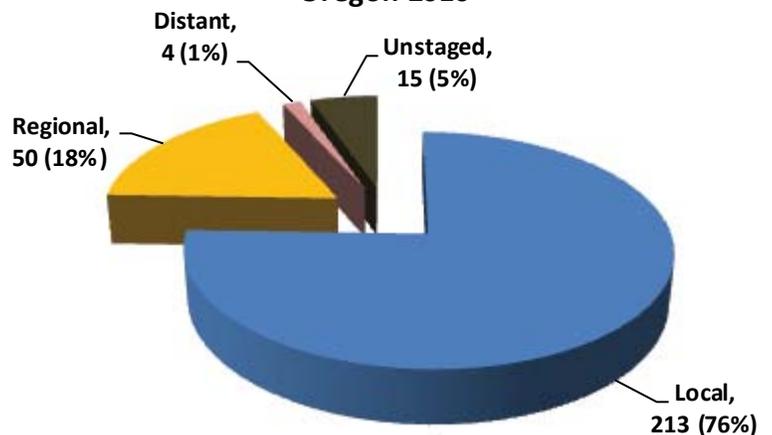
Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	148	134	282
<i>Invasive</i>	148	134	282
<i>In situ</i>	0	0	0
Rates			
Crude Rate	7.8	6.9	7.3
Age-adjusted Rate	7.2	6.2	6.7
¹ US Age-adjusted Rate (2009)	7.6	5.5	6.5
² Oregon APC (2006-2010)	-3.9	-3.0	-3.3
Cancer Mortality			
Total Cancer Deaths 2010	112	86	198
Rates			
Crude Rate	5.9	4.4	5.2
Age-adjusted Rate	5.4	3.9	4.6
US Age-adjusted Rate (2009)	5.3	3.6	4.4

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

Brain and CNS Cancer, Stage at Diagnosis, Oregon 2010

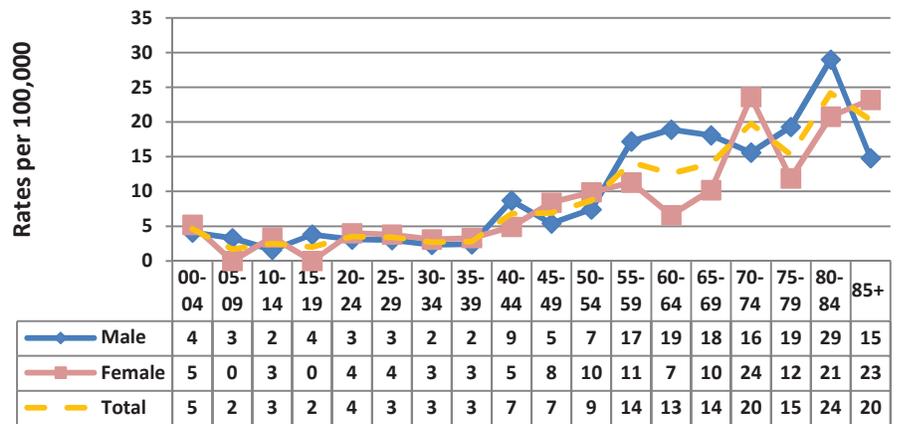


The age-specific incidence rates for brain and CNS cancer were higher for 55 and older age groups.

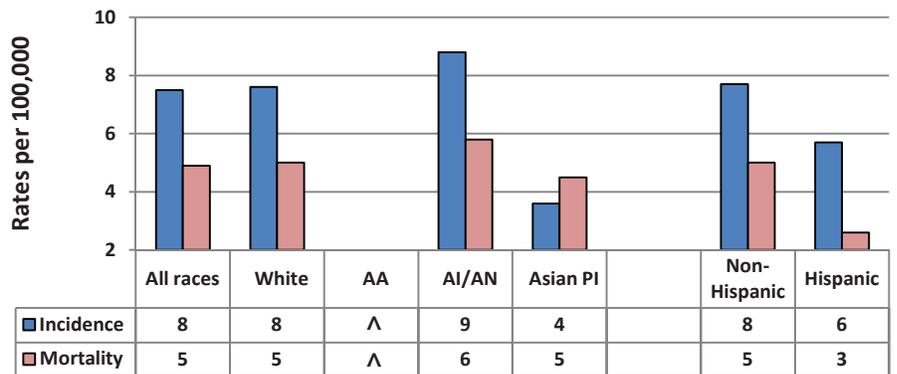
According to 2006-2010 combined data, 94.8% of all brain or central nervous system cancers were diagnosed among Whites, 0.3% among African Americans (AA), 1.7% among Asian Pacific Islanders (API), and 1.4% among American Indian/Alaska Natives (AI/AN). A total of 70 (4.6%) reported cancer cases were diagnosed among Hispanics. American Indian/Alaska Natives had the highest incidence and mortality rates and Asian Pacific Islanders had the lowest incidence.

During the ten-year period from 2001-2010, the incidence rates of invasive brain or central nervous system cancer dropped an average of 0.2% annually.

Brain and CNS Cancer Incidence Rates by Age Groups and Gender, Oregon 2010

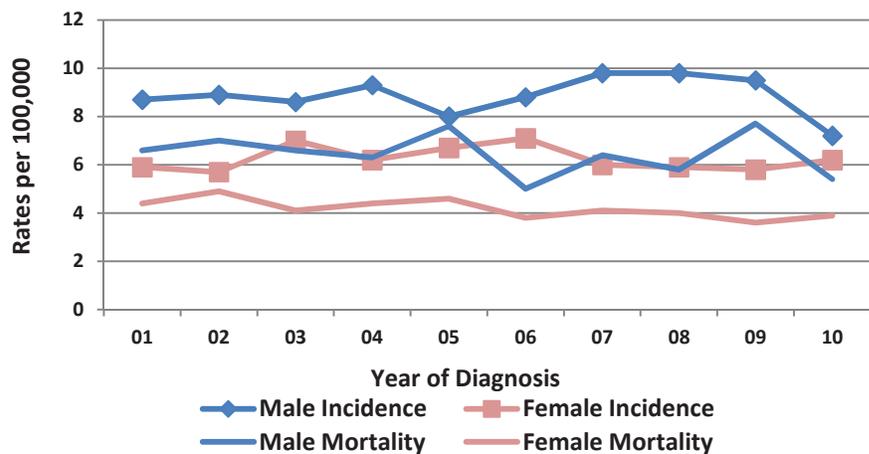


Brain and CNS Cancer Age-Adjusted Incidence and Mortality Rates, by Race and Ethnicity, Oregon 2006-2010



^Statistic not displayed due to fewer than 11 cases.

Brain and CNS Age-Adjusted Incidence and Mortality Rates by Year, Oregon 2001-2010



Brain and CNS Tumors, Non-Malignant, Oregon 2010

This report includes primary non-malignant tumors of the brain and central nervous system, pituitary and pineal glands. A total of 396 non-malignant tumors were diagnosed and reported in 2010. Of these, 355 were considered benign and 41 were considered borderline malignant. The age-adjusted incidence rate was 9.7 per 100,000 population. Non-malignant brain and CNS tumors do not contain cancer cells and do not invade tissues around them or spread to other parts of the body, but they may press on sensitive areas of the brain causing serious health problems. The greatest numbers of non-malignant tumors were of the cerebral meninges (145), Pituitary gland (102) and acoustic nerve (45).

About three-fifths (61%) of non-malignant tumors occurred in females. Overall, the rates were highest among ages 60-84. According to 2006-2010 combined data, African Americans had the highest incidence rate of 19.0 per 100,000 population as compared to Whites 11.7 per 100,000 population. Approximately 5.2% (130) tumors were diagnosed among Hispanics.

Brain and CNS Tumors - Non-Malignant

Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cases 2010	154	242	396
Rates			
Crude Rate	10.3	8.1	12.5
Age-adjusted Rate	7.8	11.5	9.7
Cancer Mortality			
Total Deaths 2010	7	7	14
Rates			
Crude Rate	0.4	0.4	0.4
Age-adjusted Rate	0.4	0.3	0.3

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

Brain and CNS Tumors, Non-Malignant by Primary Site, Oregon 2010

Total Cases	396
Cerebral meninges	145
Pituitary gland	102
Acoustic nerve	45
Meninges, NOS	28
Spinal meninges	15
Spinal cord	13
Ventricle, NOS	8
Frontal lobe	7
Cerebellum, NOS	6
Cranial nerve, NOS	5
Craniopharyngeal duct	5
Temporal lobe	3
Brain stem	3
Pineal gland	3
Brain, NOS	2
Cauda equina	2
Cerebrum	1
Occipital lobe	1
Overlapping lesion of brain	1
Nervous system, NOS	1

Female Breast Cancer, Oregon 2010

In 2010, breast cancer was still the leading site among women, with 3,534 new cases reported—among them 2,868 (81%) were invasive and 666 (19%) were *in situ*. During the same year 555 Oregon women died due to breast cancer. Breast cancer was the second most common cause of cancer-related death among Oregon women.

The age-adjusted incidence rate was 124.3 per 100,000 population, and the mortality rate was 22.9 deaths per 100,000 population. Approximately 73% of reported cases were diagnosed at either the *in situ* or localized stage, 26% with regional or distant stage of disease, and 1% were unstaged.

Female Breast Cancer - Fast Facts

Oregon 2010	Female
Cancer Incidence	
Total Female Breast Cancer Cases 2010	3,534
<i>Invasive Cases</i>	2,868
<i>In-situ Cases</i>	666
Rates	
Crude Rate	148.0
Age-adjusted Rate	124.3
¹ US Age-adjusted Rate (2009)	123.1
² Oregon APC (2006-2010)	-1.1
Cancer Mortality	
Total Female Breast Cancer Deaths 2010	555
Rates	
Crude Rate	28.6
Age-adjusted Rate	22.9
US Age-adjusted Rate (2009)	22.2

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

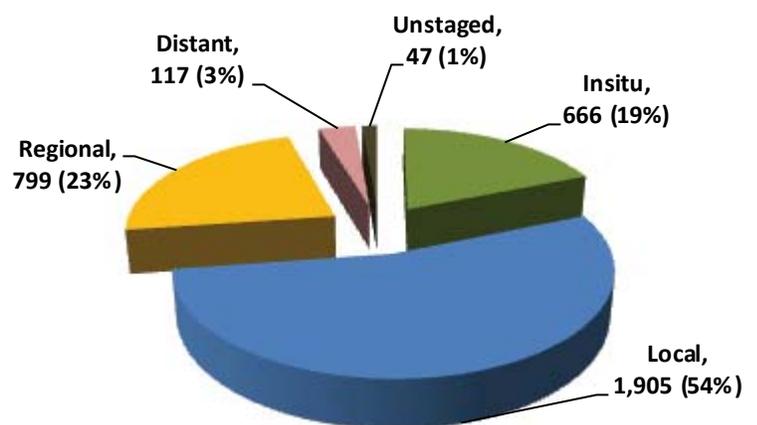
²APC = Average Annual Percent Change

Female Breast Cancer, Malignant by Oregon County, 2010

Oregon	3,534
Baker	14
Benton	71
Clackamas	378
Clatsop	41
Columbia	42
Coos	68
Crook	20
Curry	21
Deschutes	156
Douglas	99
Gilliam	^
Grant	^
Harney	^
Hood River	16
Jackson	213
Jefferson	^
Josephine	95
Klamath	55
Lake	^
Lane	329
Lincoln	53
Linn	122
Malheur	26
Marion	247
Morrow	^
Multnomah	667
Polk	68
Sherman	^
Tillamook	24
Umatilla	46
Union	36
Wallowa	^
Wasco	20
Washington	457
Wheeler	^
Yamhill	105

^ Count less than 11.

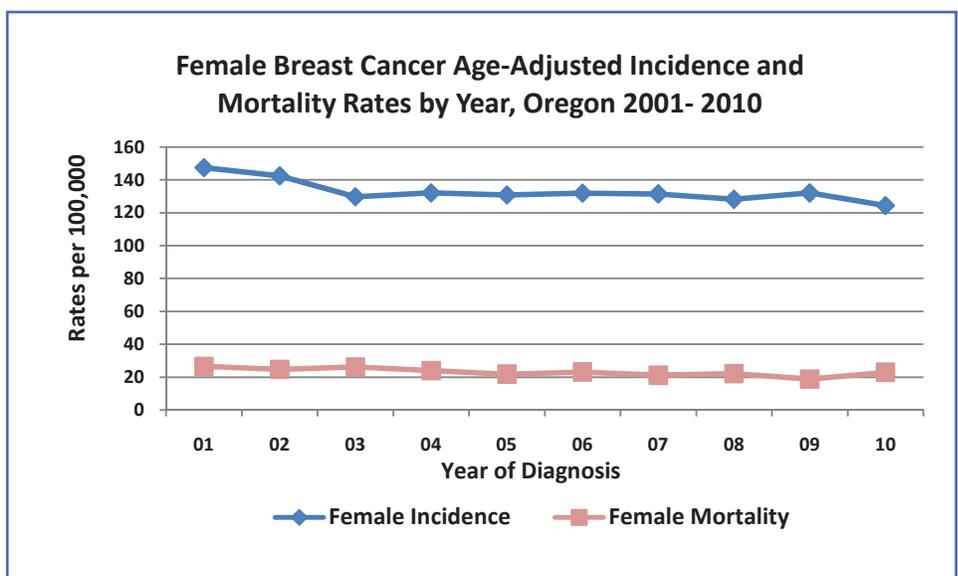
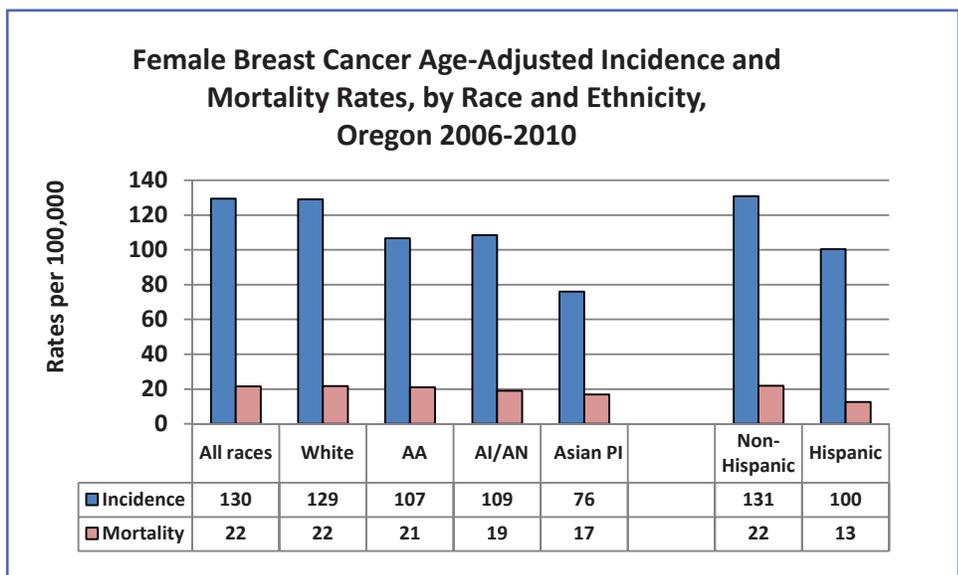
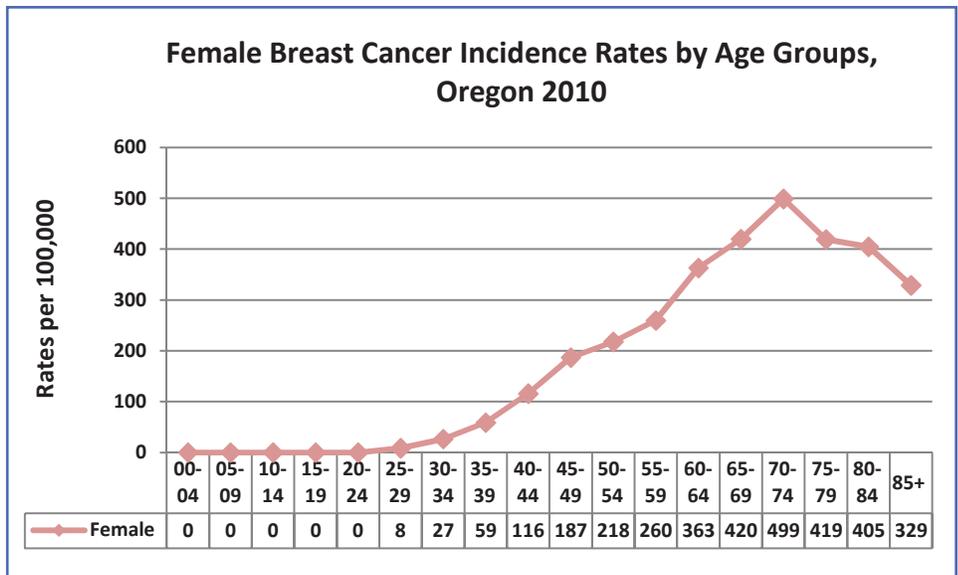
Female Breast Cancer, Stage at Diagnosis, Oregon 2010



Oregon's age-specific incidence rates for breast cancer sharply increased at age 45 and reached the maximum between ages 70-74; after age 74, the rates started to decline. Approximately 63% of invasive cancers were diagnosed among women between 50-74 years of age.

According to 2006-2010 combined data, 93.9% of all invasive breast cancers were diagnosed among Whites, 1% among African Americans (AA), 2.1% among Asian Pacific Islanders (API), and 1% among American Indian/Alaska Natives (AI/AN). A total of 439 (3%) invasive breast cancer cases were diagnosed among Hispanics. Hispanic women were less likely to be diagnosed with breast cancer than non-Hispanics. White women had the highest breast cancer incidence and mortality rates and Asian Pacific Islanders had the lowest.

During the ten-year period from 2001-2010, incidence rates of invasive breast cancer among Oregon women dropped an average of 1.3% each year. The breast cancer incidence rates among women decreased from 147 per 100,000 population in 2001 to 124 per 100,000 population in 2010, which is an approximately 16% decline. Between 2001 and 2010, there was a 14% decrease in female breast cancer mortality rates.



Cervical Cancer, Oregon 2010

In 2010, a total of 114 Oregon women were diagnosed with invasive cervical cancer and 37 died of this cancer.

The age-adjusted incidence rate for cervical cancer was 5.8 per 100,000 population, and the mortality rate was 1.7 deaths per 100,000 population. Cervical cancer cases with *in situ* stage are not reportable to the state registry. Approximately 45% of reported cases were diagnosed at a localized stage, 53% with regional or distant stage of disease, and 2% were unstaged.

Cervical Cancer - Fast Facts

Oregon 2010 **Female**

Cancer Incidence

Total Cancer Cases 2010	114
<i>Invasive</i>	114
<i>In situ</i>	0

Rates

Crude Rate	5.9
Age-adjusted Rate	5.8
¹ US Age-adjusted Rate (2009)	7.9
² Oregon APC (2006-2010)	-2.9

Cancer Mortality

Total Cancer Deaths 2010	37
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Rates

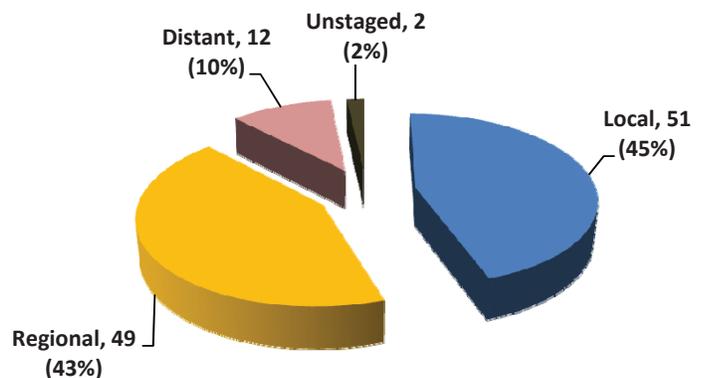
Crude Rate	1.9
Age-adjusted Rate	1.7
US Age-adjusted Rate (2009)	2.3

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

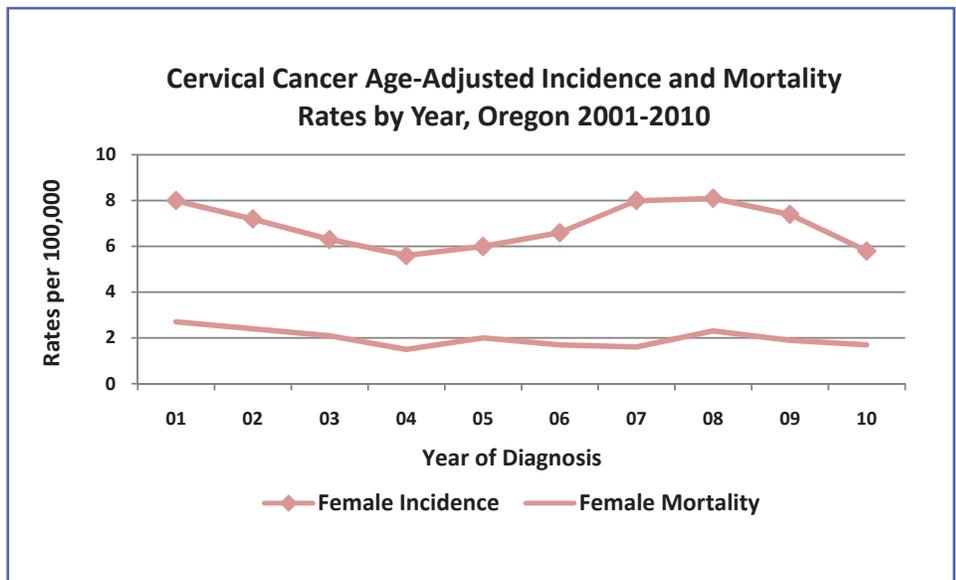
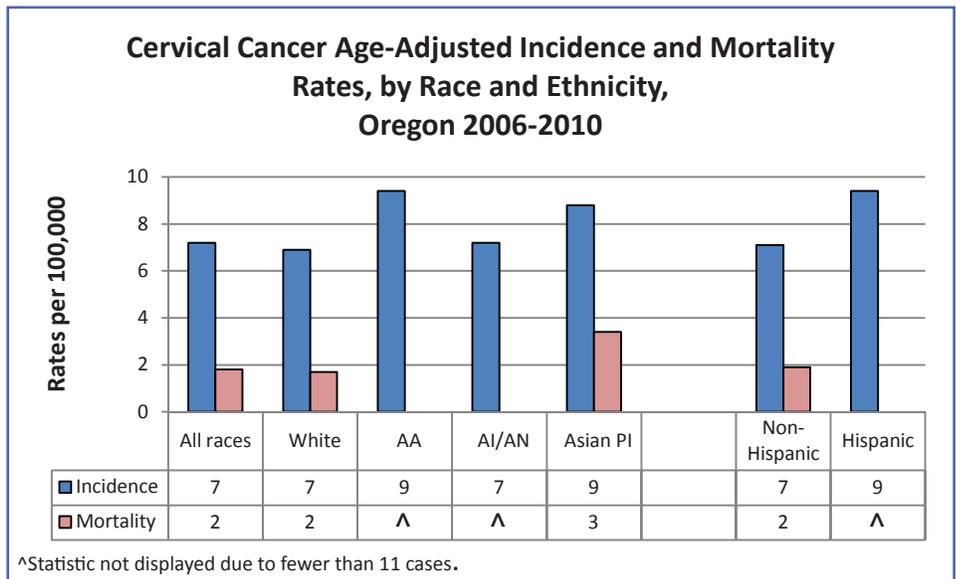
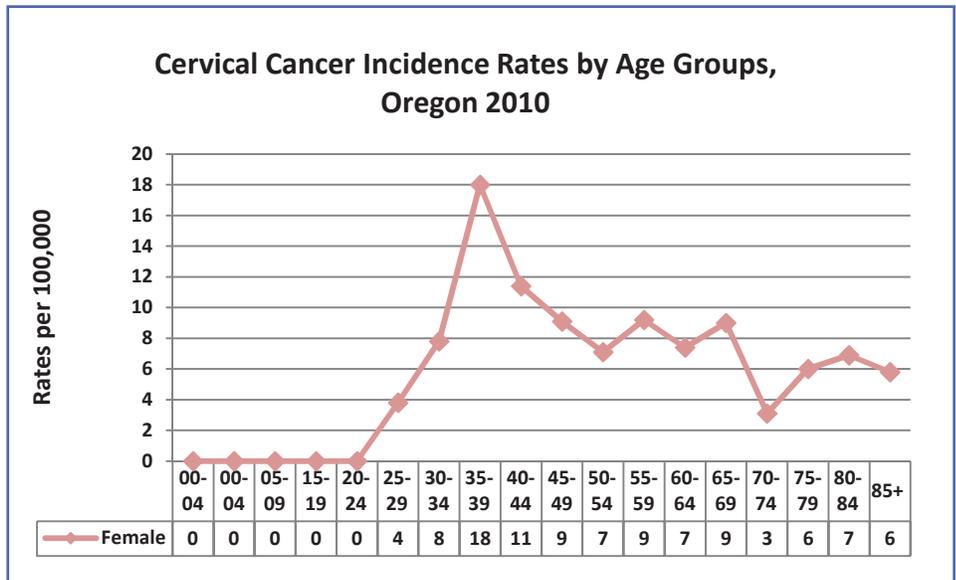
Cervical Cancer, Stage at Diagnosis, Oregon 2010



The incidence rate for cervical cancer was highest for women between ages 35 and 39. Approximately 83% of cases were diagnosed between 21 and 64 years of age.

According to 2006-2010 combined data, 89% of all cervical cancers were diagnosed among Whites, 2% among African Americans (AA), 5.6% among Asian Pacific Islanders (API), and 1.9% among American Indian/Alaska Natives (AI/AN). A total of 64 (9.2%) of reported cancer cases were diagnosed among Hispanics. Hispanics were more likely to be diagnosed with this cancer than non-Hispanics. American Indian/Alaska Natives, Asian Pacific Islanders and African Americans had the highest incidence rates compared to Whites.

During the ten-year period from 2001-2010, incidence rates of invasive cervical cancer dropped an average of 0.1% annually. The mortality rates decreased from 2.7 per 100,000 population in 2001 to 1.7 per 100,000 population in 2010.



Childhood Cancer, Oregon 2010

This report includes all childhood cancers classified by the International Classification of Childhood Cancer, Edition 3 (ICCC-3); for details of this classification please see Appendix E.

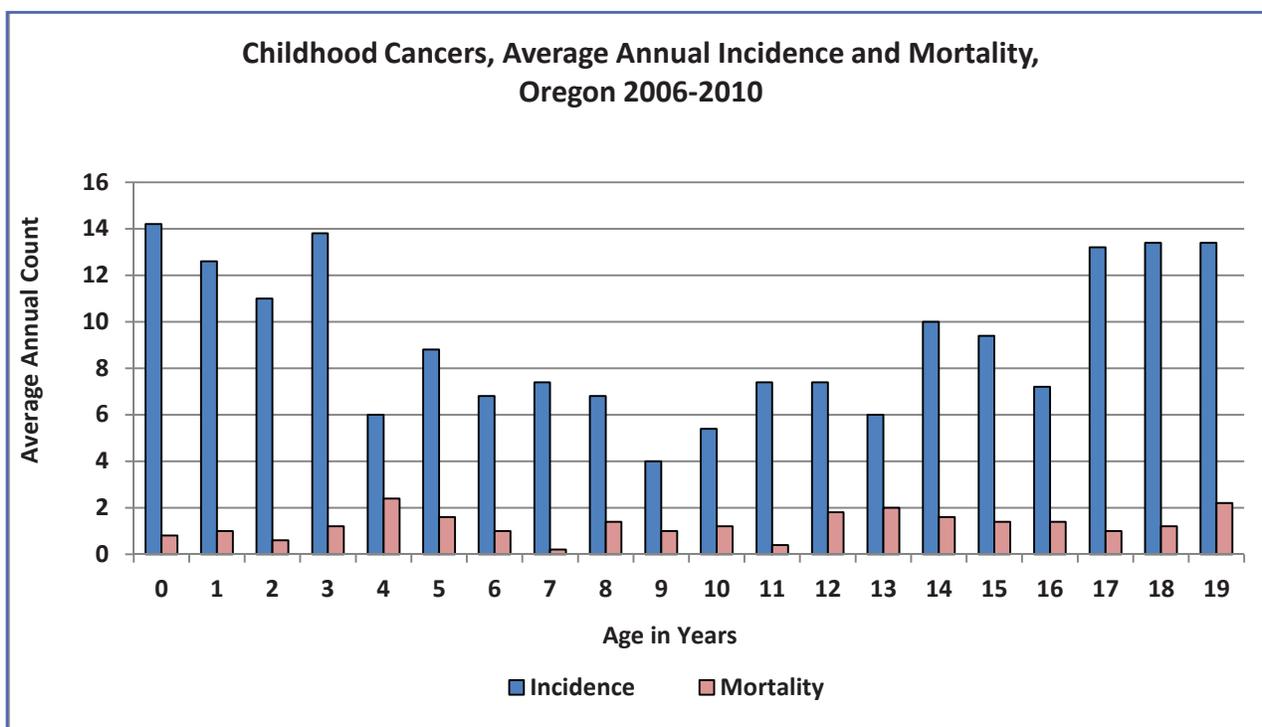
In 2010, a total of 171 Oregonians under age 20 were diagnosed with a childhood cancer; 123 were under age 15. The age-adjusted incidence rate was 17.5 per 100,000 children under age 20. Leukemia, especially Lymphoid Leukemia, was the most common diagnosis among children; tumors of the central nervous system were the second highest with 25 new cases diagnosed in 2010. During the same period, 27 children died of childhood cancers; the mortality rate was 2.8 per 100,000 children under age 20.

During the ten-year period from 2001-2010, incidence rates of childhood cancers increased an average of 0.3% annually. The mortality rates remained stable over the 10 year period.

Childhood Cancers (ages 0-19) - Fast Facts

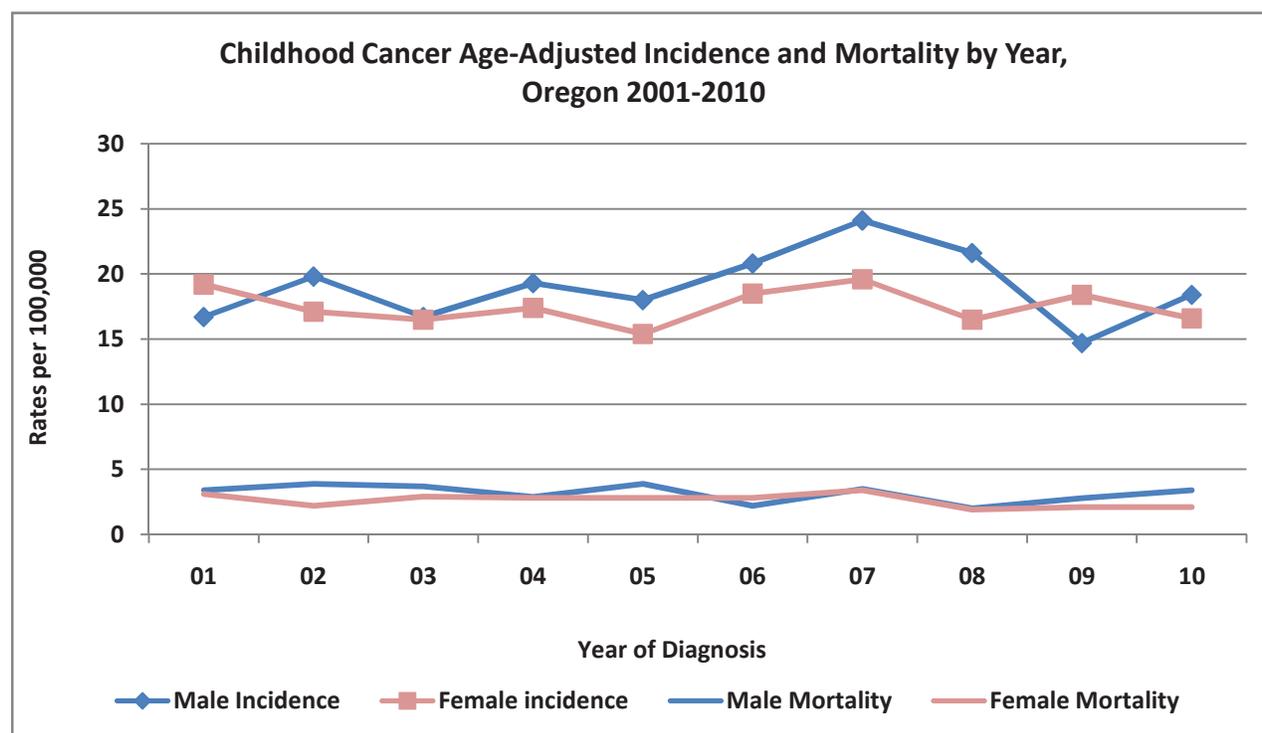
Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	92	79	171
<i>Ages 0-14</i>	65	58	123
<i>Ages 15-19</i>	27	21	48
Age-adjusted Rate	18.4	16.6	17.5
Cancer Mortality			
Total Cancer Deaths 2010	17	10	27
<i>Ages 0-14</i>	13	7	20
<i>Ages 15-19</i>	4	3	7
Age-adjusted Rate	3.4	2.1	2.8

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population.



Childhood Cancer Rates by Age Group (Ages 0-19) Oregon 2006-2010

	<5		05-10		11-14		15-19		Total	
	Count	Rate								
Total Childhood Cancers	288	24.6	169	14.5	181	15.0	283	22.0	921	18.9
I Leukemias, myeloproliferative & myelodysplastic disease	100	8.5	61	5.2	43	3.6	43	3.3	247	5.1
I(a) Lymphoid leukemias(1)	80	6.8	48	4.1	33	2.7	28	2.2	189	3.9
I(b) Acute myeloid leukemias	14	1.2	10	0.9	8	0.7	9	0.7	41	0.8
II Lymphomas and reticuloendothelial neoplasms	19	1.6	16	1.4	30	2.5	65	5.1	130	2.6
II(a) Hodgkin lymphomas(1)	0	0.0	2	0.2	16	1.3	40	3.1	58	1.2
II(b) Non-Hodgkin lymphomas (except Burkitt lymphoma)	9	0.8	9	0.8	10	0.8	16	1.2	44	0.9
II(c) Burkitt lymphoma	2	0.2	5	0.4	4	0.3	8	0.6	19	0.4
III CNS and misc intracranial and intraspinal neoplasms	50	4.3	50	4.3	44	3.6	30	2.3	174	3.6
IV Neuroblastoma and other peripheral nervous cell tumors	32	2.7	4	0.3	1	0.1	0	0.0	37	0.8
V Retinoblastoma	24	2.0	2	0.2	0	0.0	0	0.0	26	0.5
VI Renal tumors	26	2.2	11	0.9	1	0.1	4	0.3	42	0.9
VII Hepatic tumors	7	0.6	0	0.0	1	0.1	3	0.2	11	0.2
VIII Malignant bone tumors	2	0.2	9	0.8	20	1.7	20	1.6	51	1.0
VIII(a) Osteosarcomas	1	0.1	4	0.3	14	1.2	14	1.1	33	0.7
VIII(c) Ewing tumor and related sarcomas of bone	1	0.1	4	0.3	5	0.4	5	0.4	15	0.3
IX Soft tissue and other extrasosseous sarcomas	8	0.7	5	0.4	16	1.3	13	1.0	42	0.9
X Germ cell & trophoblastic tumors & neoplasms of gonads	6	0.5	3	0.3	7	0.6	37	2.9	53	1.1
XI Other malignant epithelial neoplasms and melanomas	7	0.6	7	0.6	18	1.5	62	4.8	94	1.9
XII Other and unspecified malignant neoplasms	1	0.1	0	0.0	0	0.0	3	0.2	4	0.1
Not classified by ICCO or in situ	6	0.5	1	0.1	0	0.0	3	0.2	10	0.2



Colorectal Cancer, Oregon 2010

Colorectal cancer was the third most common cancer diagnosed in Oregon among men and women in 2010, with a total of 1,650 new cases reported; among them only 36 cases had an *in situ* diagnosis. Colorectal cancer continued to be the third leading cause of cancer death among men and women, which accounted for a total of 645 deaths in Oregon in 2010. The age-adjusted incidence and mortality rates for men were slightly higher than women; the incidence rates for men and women were 40.6 and 33.9 per 100,000 population respectively.

Nearly 37% of colorectal cancer cases were diagnosed at a localized stage (when the cancer can be treated effectively); 57% were diagnosed at a regional or distant stage.

Colorectal Cancers, Malignant by Oregon Counties, 2010

Oregon	1,650	Lake	^
Baker	^	Lane	132
Benton	26	Lincoln	41
Clackamas	139	Linn	47
Clatsop	22	Malheur	18
Columbia	24	Marion	139
Coos	46	Morrow	^
Crook	13	Multnomah	286
Curry	17	Polk	35
Deschutes	60	Sherman	0
Douglas	59	Tillamook	15
Gilliam	^	Umatilla	26
Grant	^	Union	17
Harney	^	Wallowa	^
HoodRiver	11	Wasco	17
Jackson	101	Washington	174
Jefferson	^	Wheeler	^
Josephine	62	Yamhill	37
Klamath	48		

^ Count less than 11.

Colorectal Cancer - Fast Facts

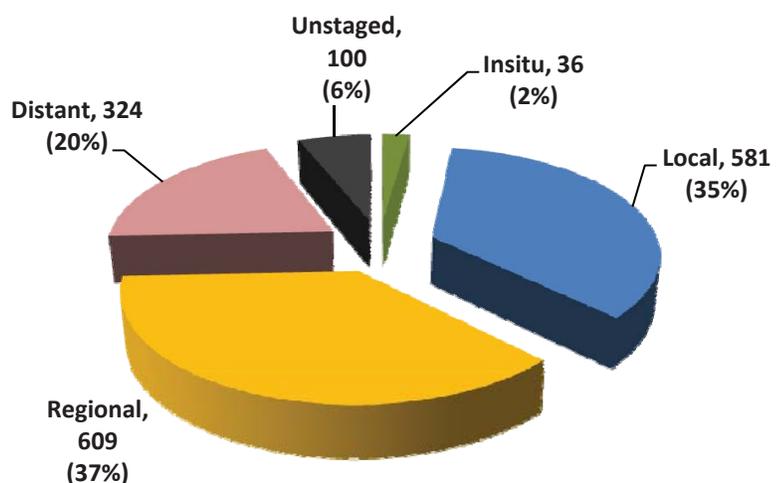
Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Colorectal Cancer Cases 2010	829	820	1,650
<i>Invasive Cases</i>	811	802	1,614
<i>In-situ Cases</i>	18	18	36
Rates			
Crude Rate	42.7	41.4	42.0
Age-adjusted Rate	40.6	33.9	36.9
¹ US Age-adjusted Rate (2009)	49.2	37.1	42.5
² Oregon APC (2006-2010)	-4.0	-2.9	-3.6
Cancer Mortality			
Total Cancer Deaths 2010	341	304	645
Rates			
Crude Rate	17.9	15.7	16.8
Age-adjusted Rate	17.4	12.2	14.6
US Age-adjusted Rate (2009)	19.1	13.1	15.7

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

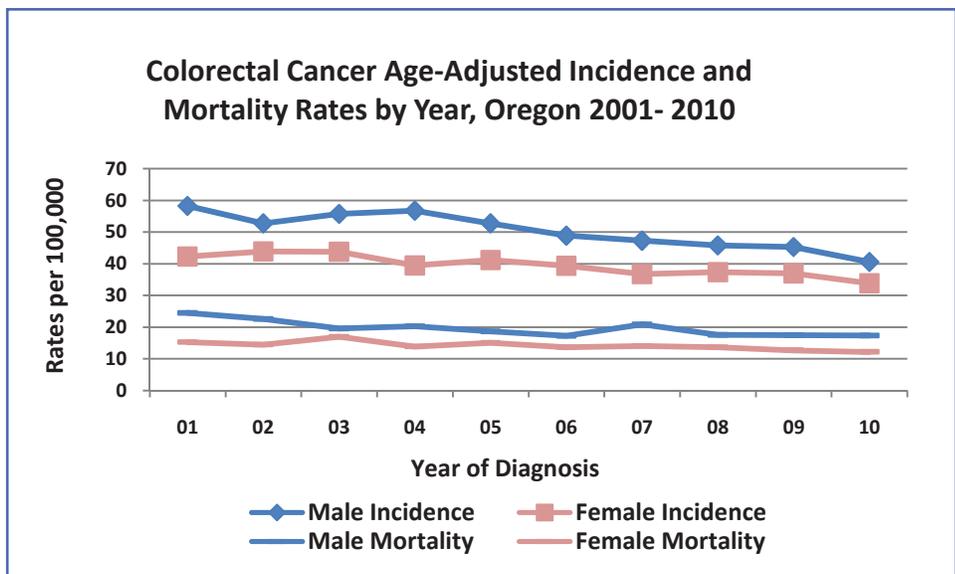
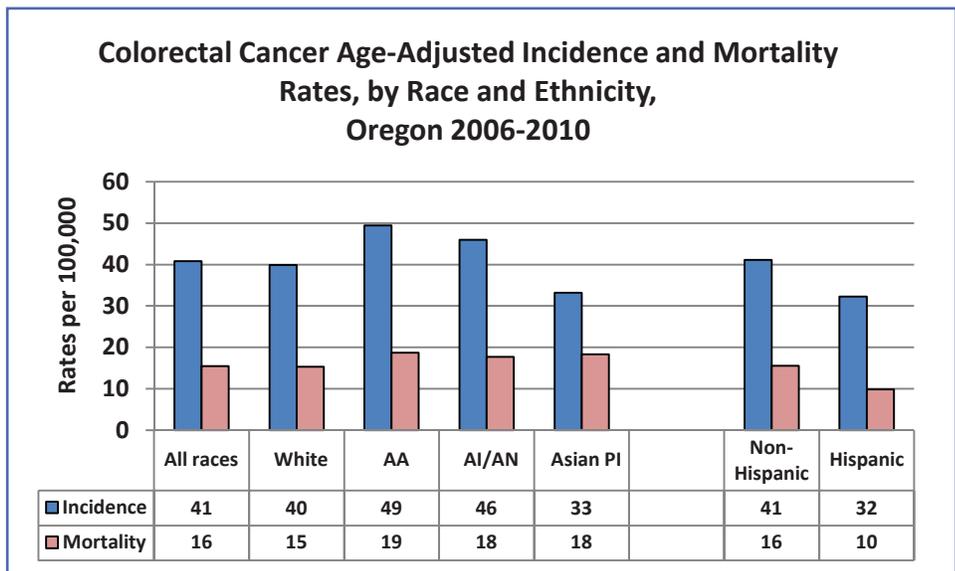
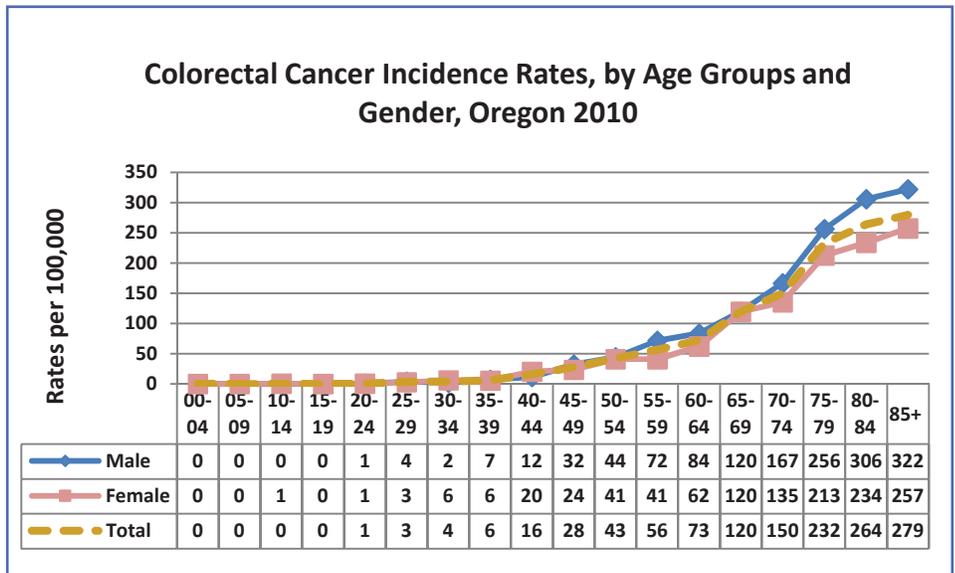
Colorectal Cancer, Stage at Diagnosis, Oregon 2010



The incidence rates for colorectal cancer varied less between men and women until age 69; after that the rates started increasing sharply among both men and women but more so for Oregon men. The highest incidence rate of 322 per 100,000 population was observed among men over age 84.

According to 2006-2010 combined data, 92.9% of all colorectal cancers were diagnosed among Whites, 1.5% among African Americans (AA), 2.2% among Asian Pacific Islanders (API), and 1.1% among American Indian/Alaska Natives (AI/AN). A total of 234 (2.7%) invasive cancer cases were diagnosed among Hispanics. The colorectal cancer incidence rate was higher for African Americans (AA) and the American Indian/Alaskan Native (AI/AN) population as compared to other races. Hispanics had lower rates than non-Hispanics.

During the ten-year period from 2001-2010, overall, the incidence rates of invasive colorectal cancer among Oregonians dropped an average of 2.9% annually. The incidence rates among men dropped from 58.3 per 100,000 population in 2001 to 40.6 in 2010, which is approximately a 30% decline. Among women there was a 20% drop in incidence rates between 2001 and 2010.



Esophageal Cancer, Oregon 2010

In 2010, a total of 220 Oregonians were diagnosed with esophageal cancer and 187 died of this cancer. There were 6 cases with an *in situ* diagnosis and 214 with an invasive cancer.

The age-adjusted incidence rate for esophageal cancer was 4.8 per 100,000 population, and the mortality rate was 4.2 deaths per 100,000 population. Incidence and mortality from esophageal cancer were higher for men. Among men, the incidence rate was 8.4 per 100,000 population while among women the incidence rate was 1.8 per 100,000 population. Approximately 18% of reported cases were diagnosed at an *in situ* or localized stage, 69% with regional or distant stage of disease, and 14% were unstaged.

Esophageal Cancer - Fast Facts

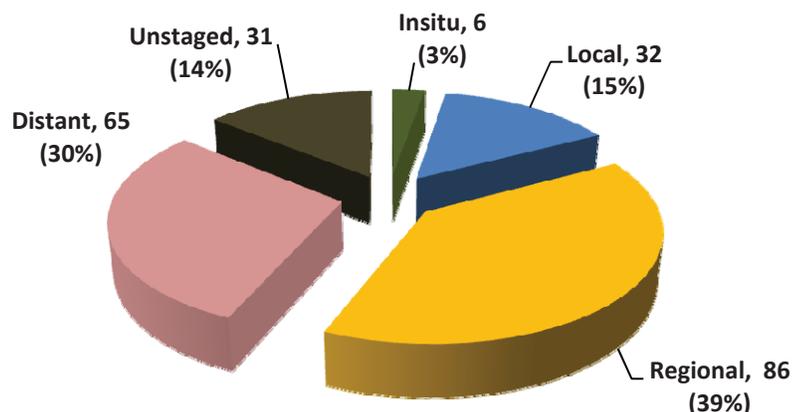
Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	175	45	220
<i>Invasive</i>	170	44	214
<i>Insitu</i>	5	1	6
Rates			
Crude Rate	8.9	2.3	5.6
Age-adjusted Rate	8.4	1.8	4.8
¹ US Age-adjusted Rate (2009)	8.5	1.9	4.8
² Oregon APC (2006-2010)	-4.4	-2.6	-3.8
Cancer Mortality			
Total Cancer Deaths 2010	146	41	187
Rates			
Crude Rate	7.4	1.6	4.2
Age-adjusted Rate	7.7	2.1	4.9
US Age-adjusted Rate (2009)	7.5	1.5	4.2

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

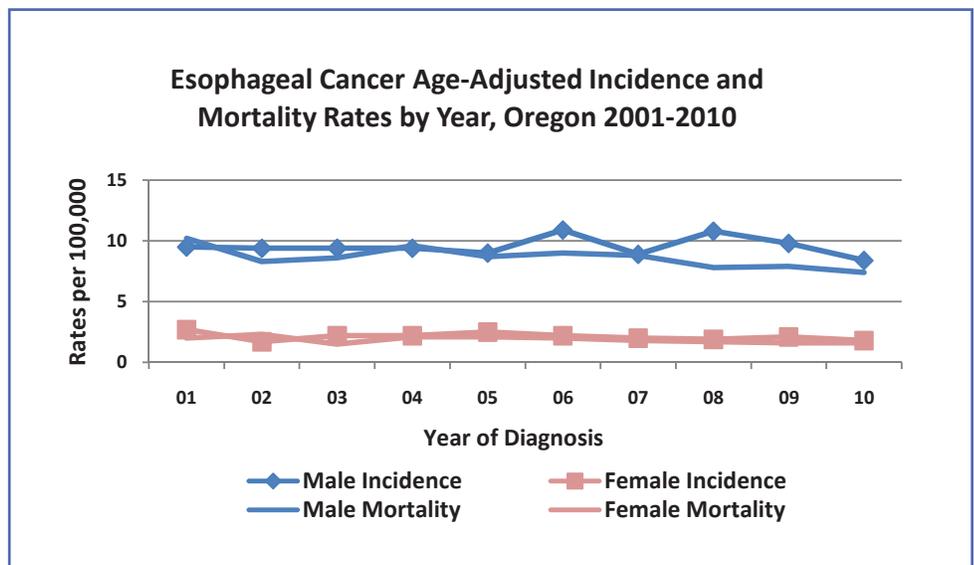
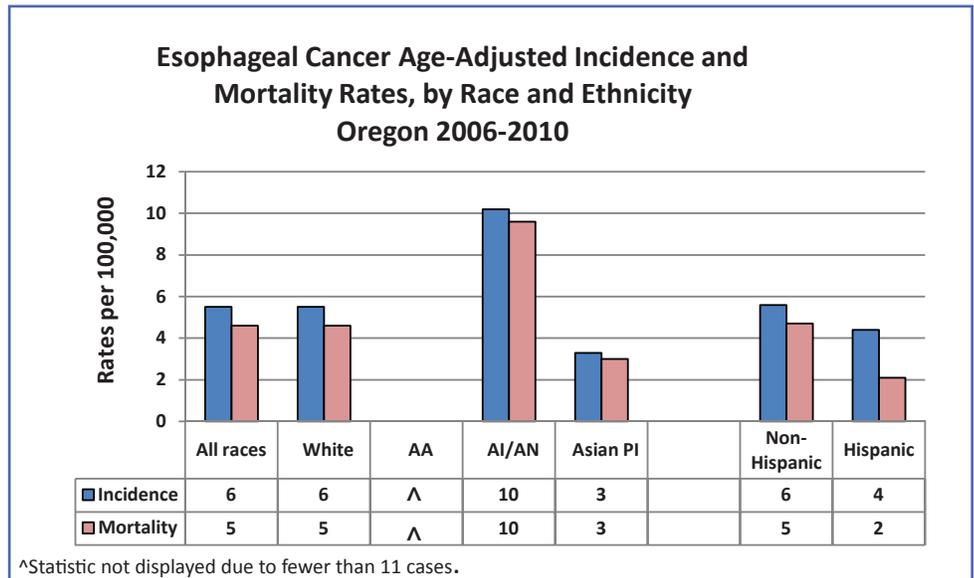
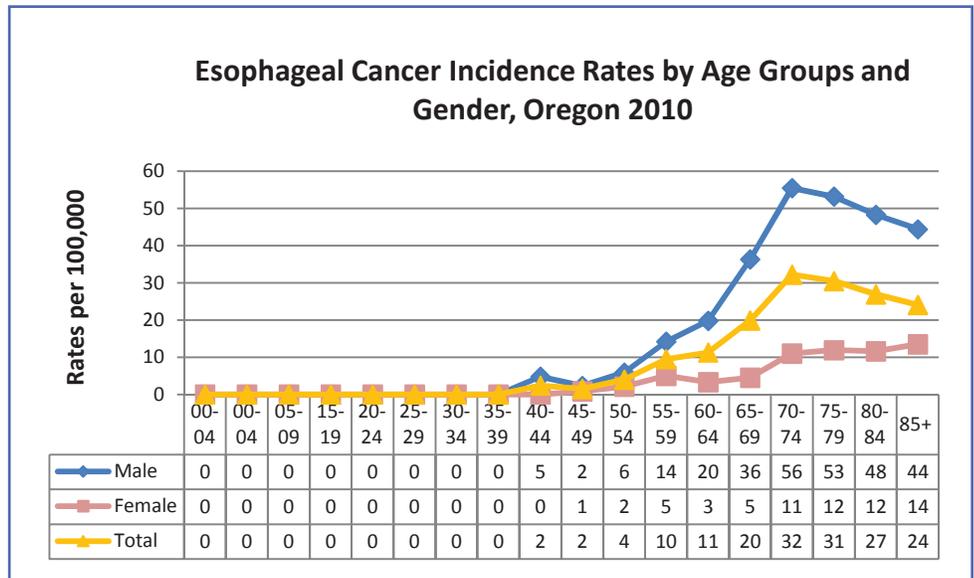
Esophageal Cancer, Stage at Diagnosis, Oregon 2010



The age-specific incidence rates started increasing around age 55 for esophageal cancer, and were consistently higher for all older age groups. The rates for men ages 55 and above remained consistently higher compared to women.

According to 2006-2010 combined data, 94.5% of all esophageal cancers were diagnosed among Whites, 0.9% among African Americans (AA), 1.7% among Asian Pacific Islanders (API), and 1.5% among American Indian/Alaska Natives (AI/AN). A total of 30 (2.6%) reported cancer cases were diagnosed among Hispanics. American Indian/Alaska Natives had the highest incidence and mortality rates and Asian Pacific Islanders had the lowest rates.

During the ten-year period from 2001-2010, incidence rates for invasive esophageal cancer for women decreased an average of 2.2% annually, but rates for men remained stable. The mortality rates of men decreased from 10 per 100,000 population in 2001 to 7 per 100,000 population in 2010, but rates for women remained stable over the same ten-year period.



Hodgkin Lymphoma, Oregon 2010

In 2010, a total of 107 Oregonians were diagnosed with Hodgkin lymphoma and 17 died from this cancer. The age-adjusted incidence rate for Hodgkin lymphoma was 2.8 per 100,000 population, and the mortality rate was less than one death per 100,000 population. Approximately 15% of reported cases were diagnosed at a localized stage, 79% with regional or distant stage of disease, and 6% were unstaged.

Hodgkin Lymphoma - Fast Facts

Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	62	45	107
<i>Invasive</i>	62	45	107
<i>In situ</i>	0	0	0
Rates			
Crude Rate	3.3	2.3	2.8
Age-adjusted Rate	3.2	2.4	2.8
¹ US Age-adjusted Rate (2009)	3.1	2.4	2.7
² Oregon APC (2006-2010)	-1.9	-0.4	-1.3
Cancer Mortality			
Total Cancer Deaths 2010	11	6	17
Rates			
Crude Rate	0.6	^	0.4
Age-adjusted Rate	0.5	^	0.4
US Age-adjusted Rate (2009)	0.5	^	0.4

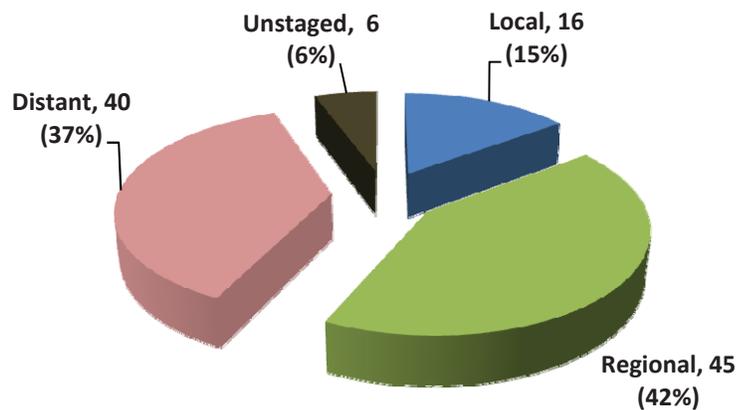
Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

^Statistic not displayed due to fewer than 11 cases.

²APC = Average Annual Percent Change

Hodgkin Lymphoma, Stage at Diagnosis, Oregon 2010

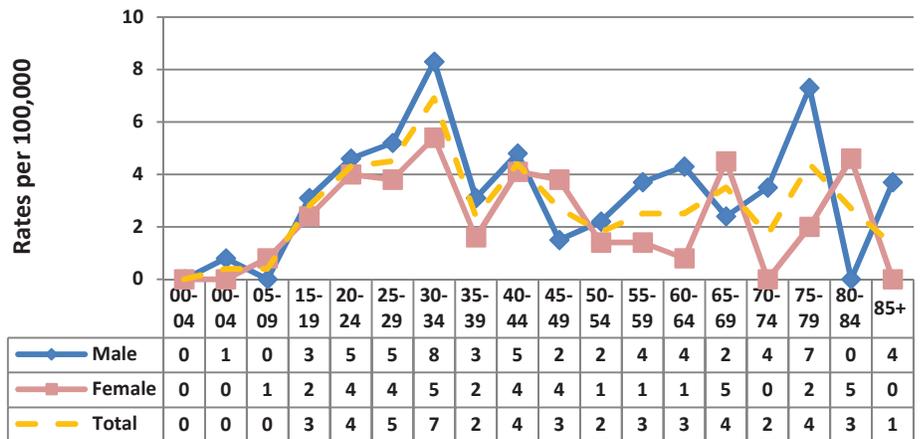


The incidence of Hodgkin lymphoma varied between age groups. Men had slightly higher rates than women.

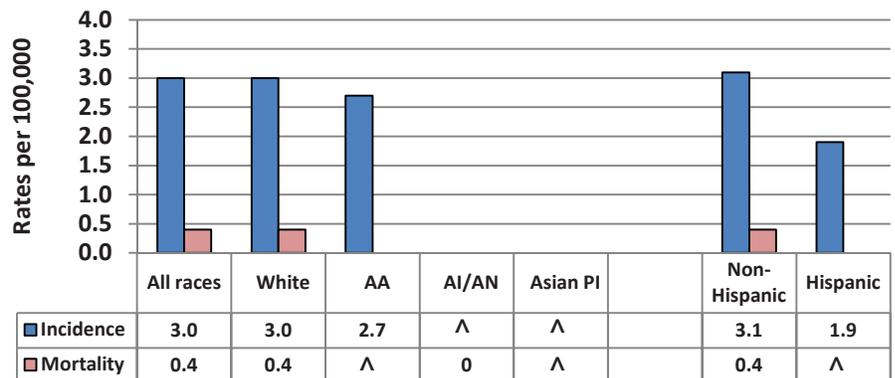
According to 2006-2010 combined data, 92.5% of all Hodgkin lymphoma cases were diagnosed among Whites, 1.9% among African Americans (AA), 1.4% among Asian Pacific Islanders (API), and 1% among American Indian/Alaska Natives (AI/AN). A total of 31 (5.4%) reported cancer cases were diagnosed among Hispanics. American Indian/Alaska Natives and Asian Pacific Islanders had case counts less than 11 so the rates were suppressed.

During the ten-year period from 2001-2010, incidence rates of Hodgkin lymphoma increased an average of 1.3% annually. For men and women, the rates increased annually at 2.1% and 0.7% respectively.

Hodgkin Lymphoma Incidence Rates by Age Groups and Gender, Oregon 2010

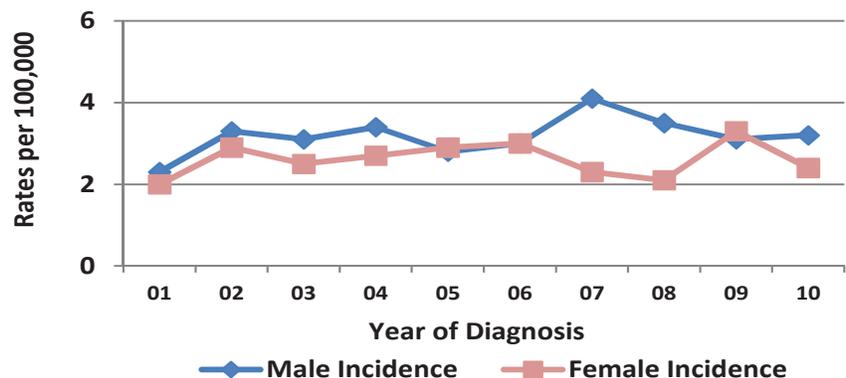


Hodgkin Lymphoma Age-Adjusted Incidence and Mortality Rates, by Race and Ethnicity, Oregon 2006-2010



ΛStatistic not displayed due to fewer than 11 cases.

Hodgkin Lymphoma Age-Adjusted Incidence Rates by Year, Oregon 2001-2010



Kidney Cancer, Oregon 2010

In 2010, a total of 635 Oregonians were diagnosed with kidney cancer and 185 died from this cancer. There were 13 *in situ* cancers and 622 invasive cancers.

The age-adjusted incidence rate for kidney cancer was 14 per 100,000 population, and the mortality rate was 4.2 deaths per 100,000 population. Incidence and mortality rates for kidney cancer were higher for men. Among men, the incidence rate was 18.6 per 100,000 population while among women the incidence rate was 10 per 100,000 population. Approximately 68% of reported cases were diagnosed at an *in situ* or localized stage, 29% with regional or distant stage of disease, and 3% were unstaged.

Kidney Cancer - Fast Facts

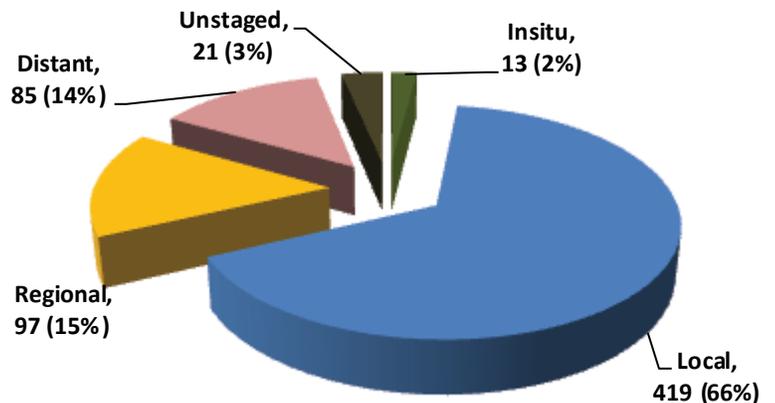
Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	398	235	635
<i>Invasive</i>	391	229	622
<i>Insitu</i>	7	6	13
Rates			
Crude Rate	20.6	11.8	16.2
Age-adjusted Rate	18.6	10.0	14.0
¹ US Age-adjusted Rate (2009)	21.1	11.2	15.7
² Oregon APC (2006-2010)	-0.1	-1.0	-0.3
Cancer Mortality			
Total Cancer Deaths 2010	120	65	185
Rates			
Crude Rate	6.3	3.4	4.8
Age-adjusted Rate	6.1	2.7	4.2
US Age-adjusted Rate (2009)	5.8	2.5	3.9

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

Kidney Cancer, Stage at Diagnosis, Oregon 2010

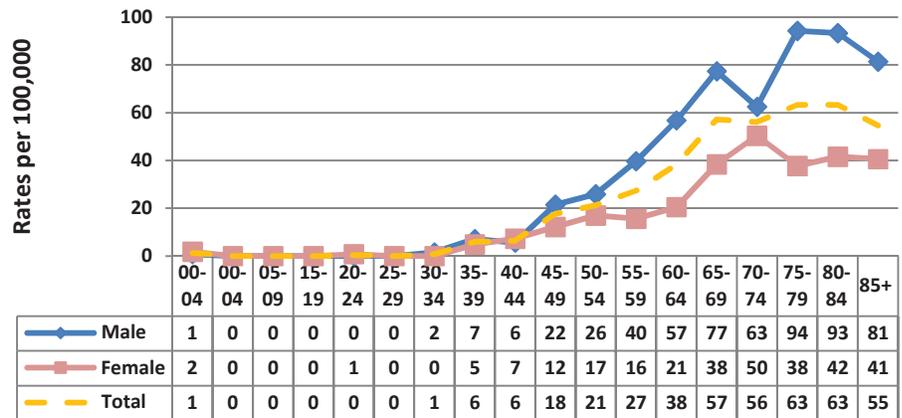


The age-specific incidence rates for kidney cancer started increasing at age 35, and were consistently higher for all older age groups. The rates for men ages 35 and above remained consistently higher compared to women of same ages.

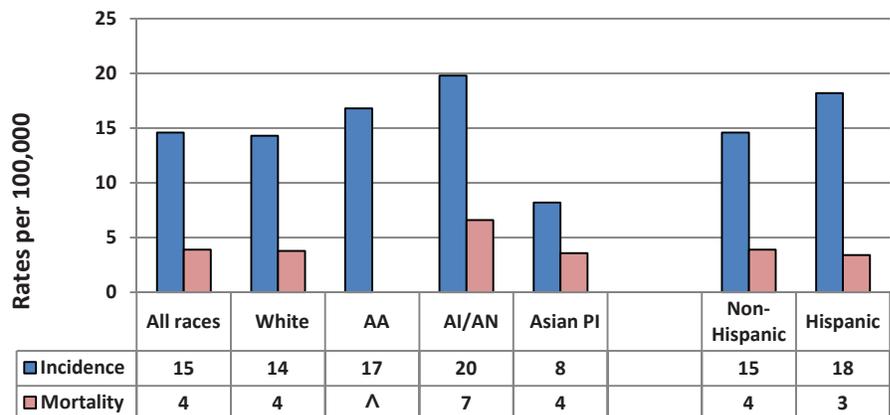
According to 2006-2010 combined data, 92.4% of all kidney cancers were diagnosed among Whites, 1.5% among African Americans (AA), 1.6% among Asian Pacific Islanders (API), and 1.7% among American Indian/Alaska Natives (AI/AN). A total of 154 (5%) invasive cancer cases were diagnosed among Hispanics. Hispanics were more likely to be diagnosed with this cancer than non-Hispanics. American Indian/Alaska Natives had the highest incidence rates and Asian Pacific Islanders had the lowest rates.

During the ten-year period from 2001-2010, incidence rates of kidney cancer dropped an average of 2.6% annually. The mortality rates did not vary much during this time period.

Kidney Cancer Incidence Rates by Age Groups and Gender, Oregon 2010

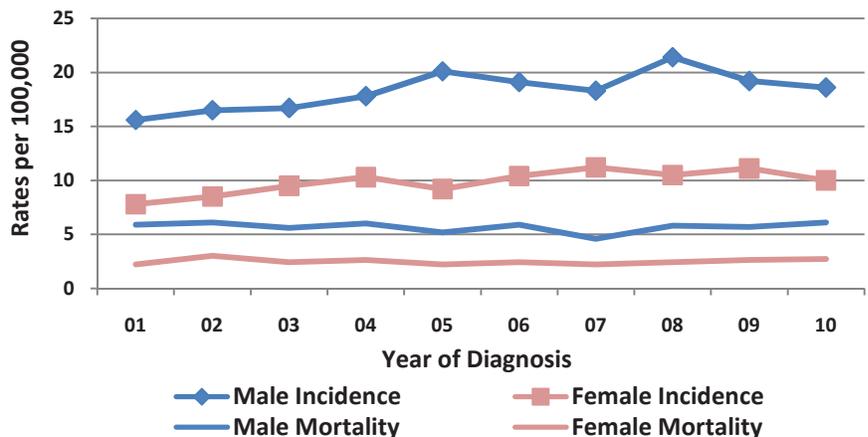


Kidney Cancer Age-Adjusted Incidence and Mortality Rates, by Race and Ethnicity, Oregon 2006-2010



^Statistic not displayed due to fewer than 11 cases.

Kidney Cancer Age-Adjusted Incidence and Mortality Rates by Year, Oregon 2001-2010



Leukemia, Oregon 2010

In 2010, a total of 475 Oregonians were diagnosed with leukemia and 297 died of this cancer. The age-adjusted incidence rate for leukemia was 11.1 per 100,000 population, and the mortality rate was 6.8 deaths per 100,000 population.

Leukemia - Fast Facts

Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	266	209	475
<i>Invasive</i>	266	209	475
<i>Insitu</i>	0	0	0
Rates			
Crude Rate	14.0	10.8	12.4
Age-adjusted Rate	13.5	9.0	11.1
¹ US Age-adjusted Rate (2009)	15.4	9.3	11.9
² Oregon APC (2006-2010)	-2.8	-2.1	-2.5
Cancer Mortality			
Total Cancer Deaths 2010	152	145	297
Rates			
Crude Rate	8.0	7.5	7.7
Age-adjusted Rate	8.0	5.8	6.8
US Age-adjusted Rate (2009)	9.5	5.2	7.0

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

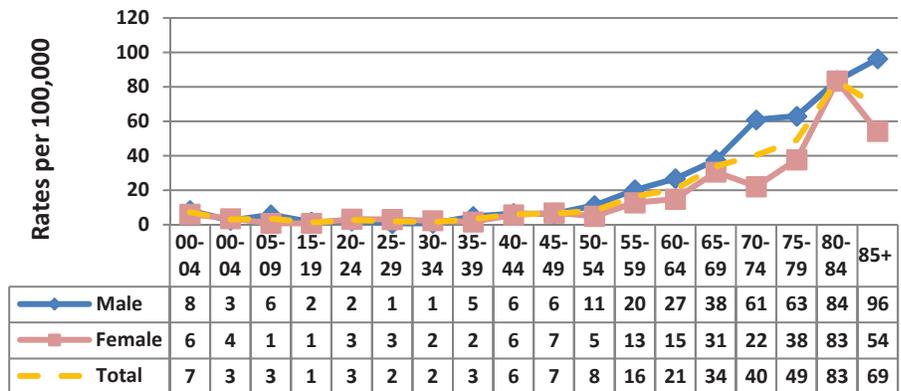
²APC = Average Annual Percent Change

The age-specific incidence rates for leukemia were higher for 50 and older age groups.

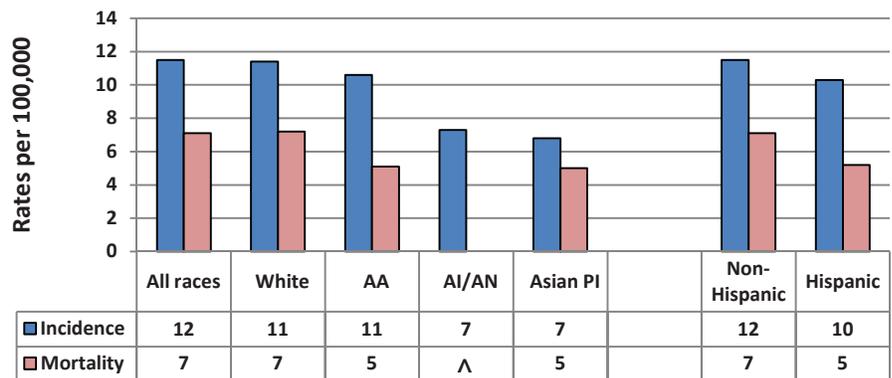
According to 2006-2010 combined data, 93.6% of all leukemia cases were diagnosed among Whites, 1.4% among African Americans (AA), 1.9% among Asian Pacific Islanders (API), and 0.9% among American Indian/Alaska Natives (AI/AN). A total of 132 (5.6%) reported cancer cases were diagnosed among Hispanics. Hispanics were less likely to be diagnosed with this cancer than non-Hispanics. African Americans and Whites had the highest incidence rates.

During the ten-year period from 2001-2010, incidence rates of leukemia dropped an average of 1.1% annually.

Leukemia Incidence Rates by Age Groups and Gender, Oregon 2010

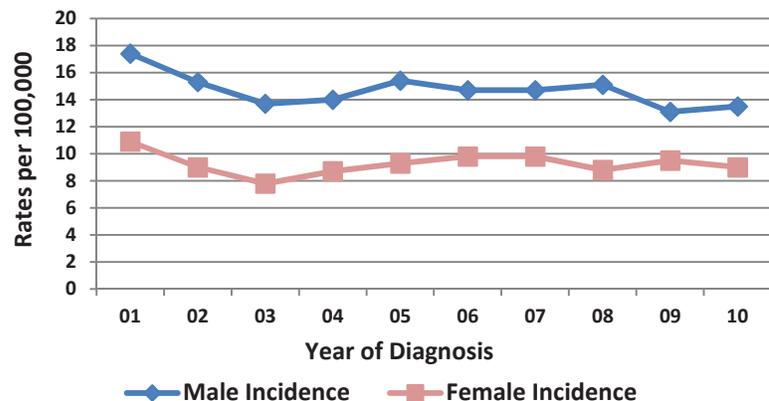


Leukemia Age-Adjusted Incidence and Mortality Rates, by Race and Ethnicity, Oregon 2006-2010



^Statistic not displayed due to fewer than 11 cases.

Leukemia Age-Adjusted Incidence and Mortality Rates by Year, Oregon 2001-2010



Liver and Intrahepatic Bile Duct Cancer, Oregon 2010

In 2010, a total of 347 Oregonians were diagnosed with liver cancer and 272 died of this cancer. The age-adjusted incidence rate for liver cancer was 7.4 per 100,000 population, and the mortality rate was 5.9 deaths per 100,000 population. Incidence and mortality rates for kidney cancer were higher for men. Among men, the incidence rate was 11.3 per 100,000 population, while among women, the incidence rate was 4 per 100,000 population. Approximately 36% of reported cases were diagnosed at a localized stage, 48% with regional or distant stage of disease, and 16% were unstaged.

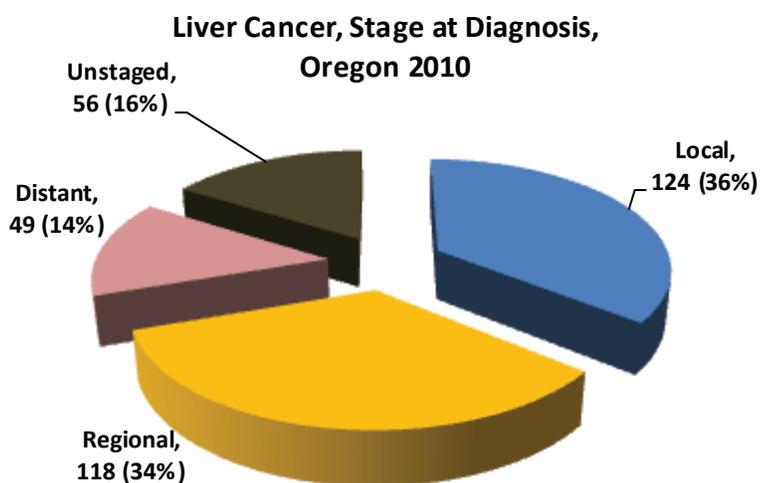
Liver and Intrahepatic Bile Duct - Fast Facts

Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	253	94	347
<i>Invasive</i>	253	94	347
<i>In situ</i>	0	0	0
Rates			
Crude Rate	13.3	4.8	9.0
Age-adjusted Rate	11.3	4.0	7.4
¹ US Age-adjusted Rate (2009)	11.0	3.7	7.1
² Oregon APC (2006-2010)	8.5	5.9	7.7
Cancer Mortality			
Total Cancer Deaths 2010	192	80	272
Rates			
Crude Rate	10.1	4.1	7.1
Age-adjusted Rate	8.9	3.1	5.9
US Age-adjusted Rate (2009)	8.6	3.4	5.8

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

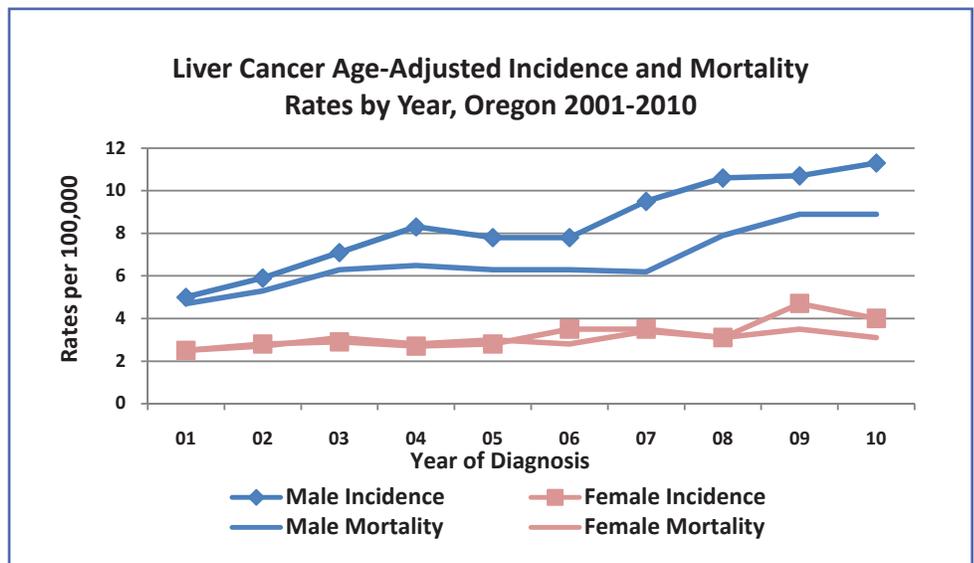
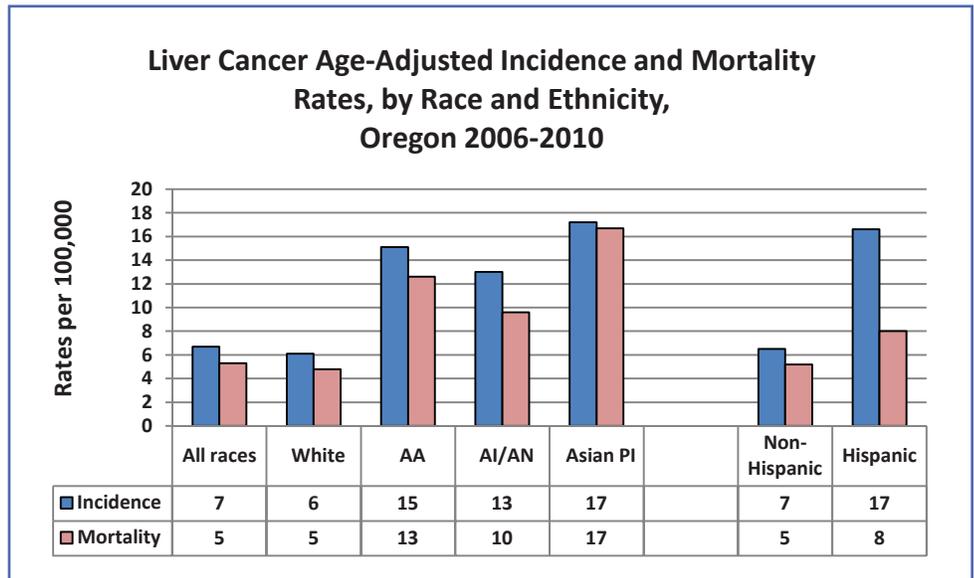
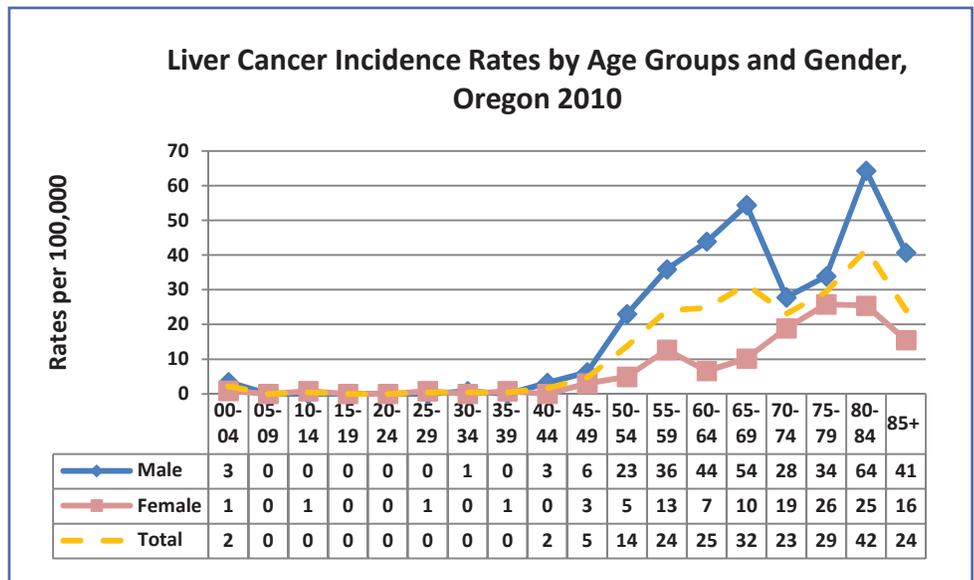
²APC = Average Annual Percent Change



The age-specific incidence rates for liver cancer were higher for 50 and older age groups. The rates were consistently higher for men compared to women.

According to 2006-2010 combined data, 85.8% of all liver cancers were diagnosed among Whites, 2.8% among African Americans (AA), 7.1% among Asian Pacific Islanders (API), and 2.6% among American Indian/Alaska Natives (AI/AN). A total of 114 (7.6%) reported cancer cases were diagnosed among Hispanics. Hispanics were more likely to be diagnosed with this cancer than non-Hispanics. Asian Pacific Islanders had the highest incidence and mortality rates among all races. African Americans and American Indian/Alaska Natives also had higher incidence rates, twice the rates of Whites.

During the ten-year period from 2001-2010, incidence rates of invasive liver cancer increased an average of 7.6% annually. The mortality rates among men increased from 5 per 100,000 population in 2001 to 9 per 100,000 population in 2010, but for women, the rates did not vary much over the same period.



Lung Cancer, Oregon 2010

In 2010, lung cancer was the second leading cancer site among both men and women, and still continues to be the leading cause of cancer death for all Oregonians. There were 2,503 new lung cancer cases reported in 2010, and 2,062 Oregonians died from lung cancer. The age-adjusted incidence and mortality rates were higher for men compared to women. The incidence and mortality rates for men were 62.3 and 54.8 per 100,000 population respectively. The incidence and mortality rates for women were 52.3 and 41.0 per 100,000 population respectively.

In 2010, only 18% of lung cancers were detected at an early stage, and approximately 74% were detected at a late stage.

Lung Cancer, Malignant by Oregon County, 2010

Oregon		2,503	
Baker	11	Lake	^
Benton	27	Lane	239
Clackamas	257	Lincoln	62
Clatsop	28	Linn	90
Columbia	34	Malheur	16
Coos	85	Marion	203
Crook	13	Morrow	^
Curry	26	Multnomah	422
Deschutes	100	Polk	46
Douglas	108	Sherman	0
Gilliam	^	Tillamook	27
Grant	^	Umatilla	42
Harney	^	Union	15
Hood River	^	Wallowa	^
Jackson	156	Wasco	28
Jefferson	13	Washington	199
Josephine	100	Wheeler	^
Klamath	53	Yamhill	62

^ Count less than 11.

Lung Cancer - Fast Facts

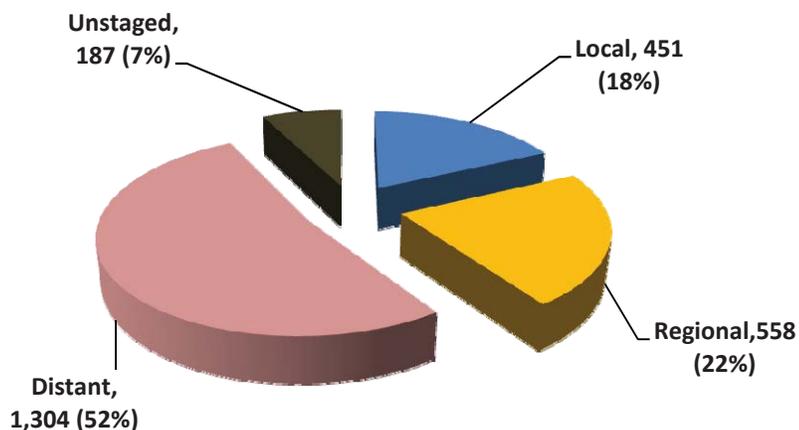
Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Lung Cancer Cases 2010	1,257	1,246	2,503
<i>Invasive Cases</i>	1,255	1,245	2,500
<i>In-situ Cases</i>	2	1	3
Rates			
Crude Rate	66.1	64.2	65.1
Age-adjusted Rate	62.3	52.3	56.6
¹ US Age-adjusted Rate (2009)	78.2	54.1	64.3
² Oregon APC (2006-2010)	-4.3	-2.9	-3.5
Cancer Mortality			
Total Lung Cancer Deaths 2010	1,079	983	2,062
Rates			
Crude Rate	56.8	50.7	53.7
Age-adjusted Rate	54.8	41.0	47.0
US Age-adjusted Rate (2009)	62.0	38.6	48.5

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

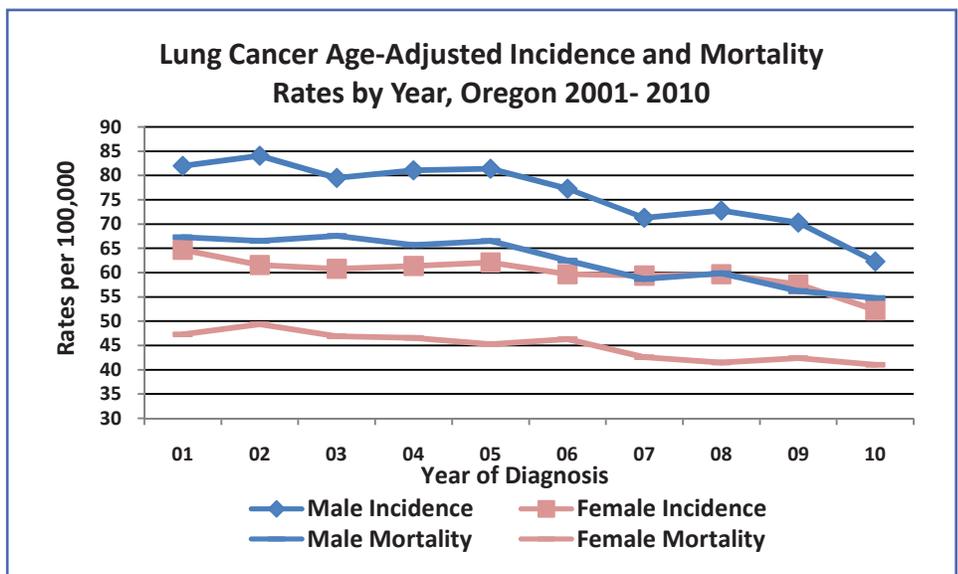
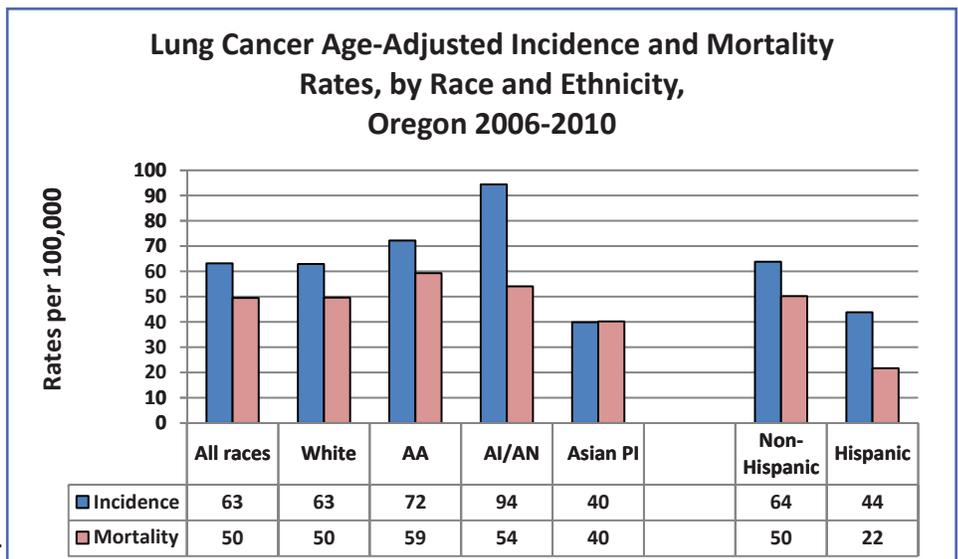
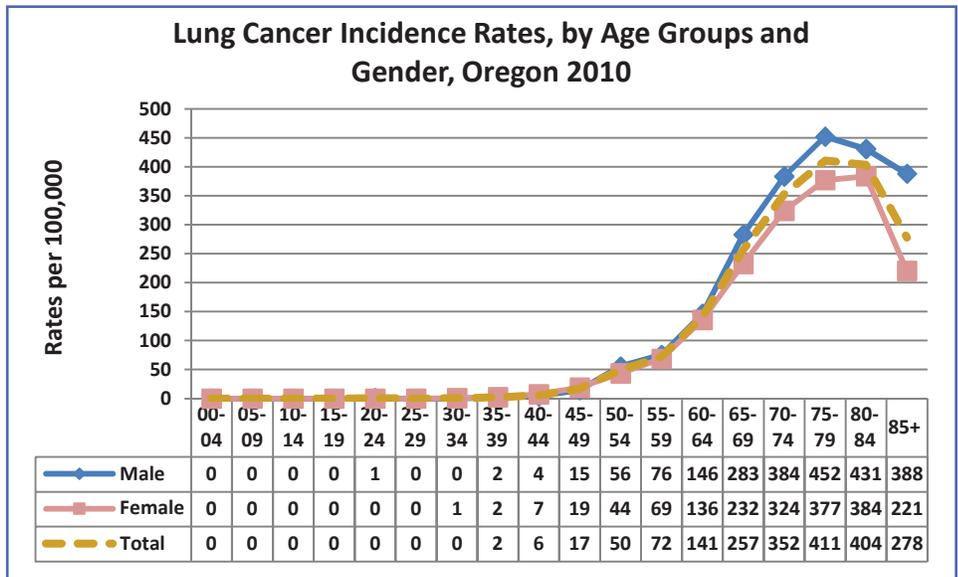
Lung Cancer, Stage at Diagnosis, Oregon 2010



Among all age groups, lung cancer incidence rates were higher for men compared to women. There was a dramatic increase in the rates of lung cancer incidence for both men and women between ages 60 and 84; after that, the rates started to decline. Approximately 75% of lung cancers were diagnosed between these ages.

According to 2006-2010 combined data, 94.9% of all lung cancers were diagnosed among Whites, 1.3% among African Americans (AA), 1.6% among Asian Pacific Islanders (API), and 1.3% among American Indian/Alaska Natives (AI/AN). A total of 249 (1.9%) reported cancer cases were diagnosed among Hispanics. American Indian/Alaska Natives (AI/AN) had the highest lung cancer incidence rates as compared to any other race, and African Americans (AA) had the second highest rates. At the same time, both AI/ANs and AA also had higher lung cancer mortality rates. Asian/Pacific Islanders were less likely to be diagnosed with lung cancer, and had the lowest mortality rates.

Lung cancer incidence rates for men decreased 2.7% annually from 2001 to 2010; for women, the decrease was comparably lower for the same time period—about 1.6% annually. For men, mortality rates decreased from 67.3 in 2001 to 54.8 per 100,000 population in 2010. For women, the mortality rates decreased from 47.3 in 2001 to 41.0 per 100,000 population in 2010.



Melanoma, Oregon 2010

Melanoma was the fifth most frequently diagnosed cancer site among men and women in 2010. A total of 1,986 new melanomas were reported—among them, 1,137 were invasive and 849 were *in situ*. Melanoma was the cause of death for 146 Oregonians. The age-adjusted incidence rates and mortality rates were higher for men compared to women. The incidence rates for men and women were 30.5 and 23.3 per 100,000 population respectively.

In 2010, only 6% of cases were diagnosed at an advanced stage.

Melanoma, Malignant by Oregon County, 2010

Oregon		1,986	
Baker	11	Lake	^
Benton	52	Lane	112
Clackamas	227	Lincoln	34
Clatsop	12	Linn	56
Columbia	30	Malheur	^
Coos	23	Marion	201
Crook	23	Morrow	^
Curry	^	Multnomah	394
Deschutes	123	Polk	45
Douglas	85	Sherman	0
Gilliam	^	Tillamook	25
Grant	^	Umatilla	35
Harney	^	Union	13
Hood River	15	Wallowa	^
Jackson	89	Wasco	18
Jefferson	^	Washington	232
Josephine	19	Wheeler	^
Klamath	39	Yamhill	25

^ Count less than 11.

Melanoma Cancer - Fast Facts

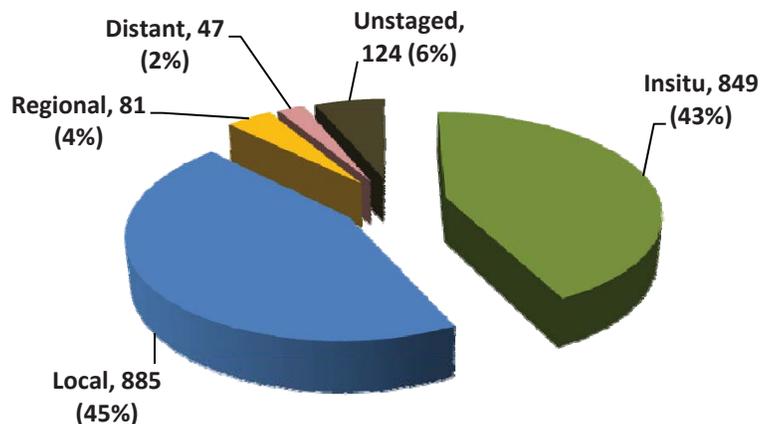
Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Melanoma Cancer Cases 2010	1,087	899	1,986
<i>Invasive Cases</i>	626	511	1,137
<i>In-situ Cases</i>	461	388	849
Rates			
Crude Rate	32.9	26.4	29.6
Age-adjusted Rate	30.5	23.3	26.3
¹ US Age-adjusted Rate (2009)	24.7	15.8	19.4
² Oregon APC (2006-2010)	1.2	1.1	1.2
Cancer Mortality			
Total Melanoma Cancer Deaths 2010	91	55	146
Rates			
Crude Rate	4.8	2.8	3.8
Age-adjusted Rate	4.6	2.4	3.3
US Age-adjusted Rate (2009)	4.2	1.8	2.8

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

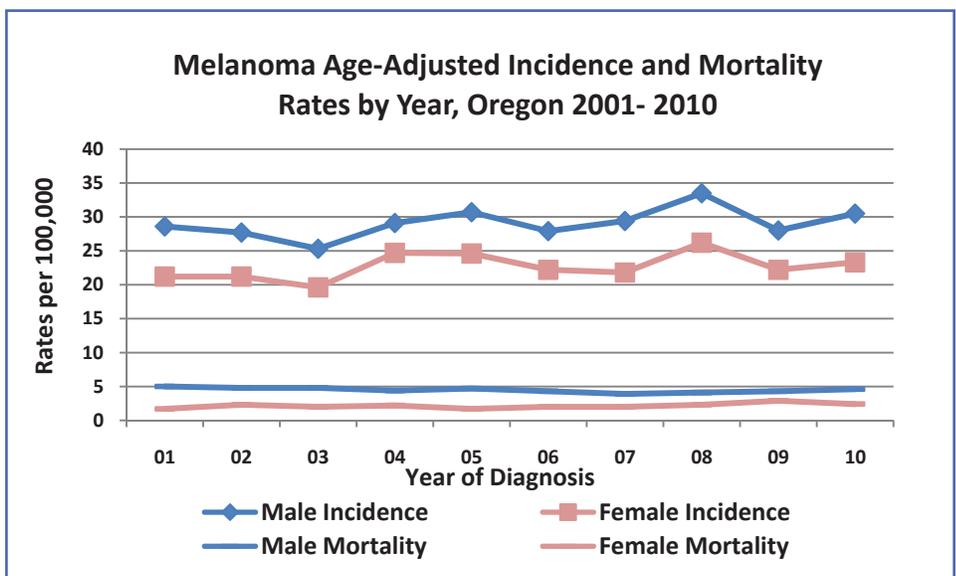
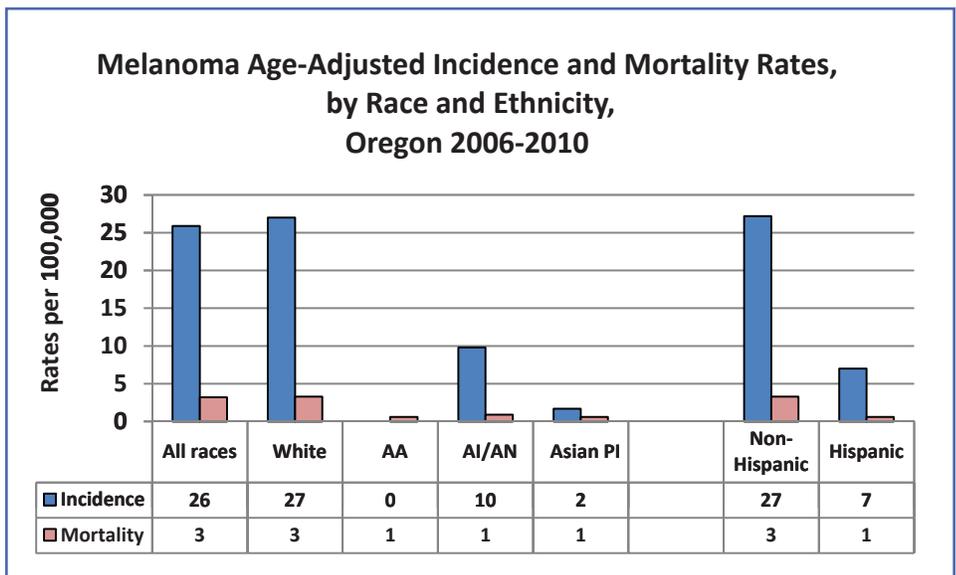
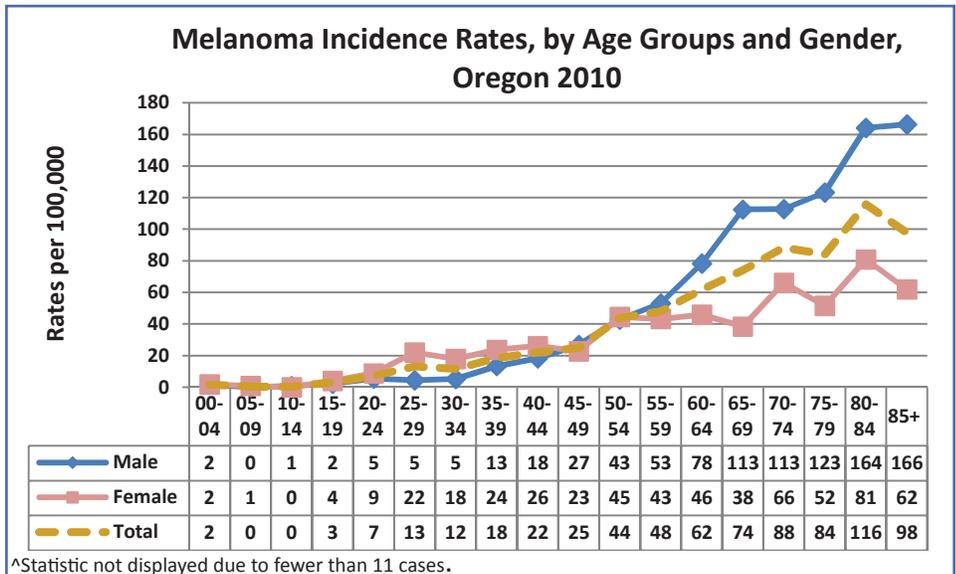
Melanoma, Stage at Diagnosis, Oregon 2010



Melanoma incidence rates were comparably higher for women until age 44; for men, the rates started to increase sharply from age 55 and remained consistently higher for older age groups. Around 24% of invasive melanomas were diagnosed in women ages 20 to 44, whereas for men only 10% were diagnosed between these ages. However, a higher percentage (63%) of men were diagnosed with this cancer after 60 years of age.

According to 2006-2010 combined data, 97.4% of all melanoma cancers were diagnosed among Whites, 0.1% among African Americans (AA), 0.2% among Asian Pacific Islanders (API), and 0.5% among American Indian/Alaska Natives (AI/AN). A total of 62 (1.2%) reported cancer cases were diagnosed among Hispanics. Whites had the highest melanoma incidence rates, and African Americans (AA) and Asians Pacific Islanders (Asians PI) had the lowest rates.

For Oregon men, melanoma incidence rates increased 1.2% annually from 2001 to 2010, and for women, the annual percentage increase was 1.3%. Mortality rates remained stable over these years.



Non-Hodgkin Lymphoma, Oregon 2010

In 2010, a total of 767 Oregonians were diagnosed with Non-Hodgkin lymphoma, and 302 died of this cancer. The age-adjusted incidence rate for Non-Hodgkin lymphoma was 17.8 per 100,000 population, and the mortality rate was 6.8 deaths per 100,000 population. Incidence rates were much higher for men compared to women. The incidence rate for men was 21.8 per 100,000 population, and for women it was 14.5 per 100,000 population. Approximately 24% of reported cases were diagnosed at a localized stage, 67% with regional or distant stage of disease, and 10% were unstaged.

Non-Hodgkin Lymphoma - Fast Facts

Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	431	336	767
<i>Invasive</i>	431	336	767
<i>Insitu</i>	0	0	0
Rates			
Crude Rate	22.7	17.3	20.0
Age-adjusted Rate	21.8	14.5	17.8
¹ US Age-adjusted Rate (2009)	22.8	15.8	18.9
² Oregon APC (2006-2010)	-2.2	-0.5	-1.5
Cancer Mortality			
Total Cancer Deaths 2010	171	131	302
Rates			
Crude Rate	9.0	6.8	7.9
Age-adjusted Rate	8.9	5.2	6.8
US Age-adjusted Rate (2009)	8.1	4.9	6.3

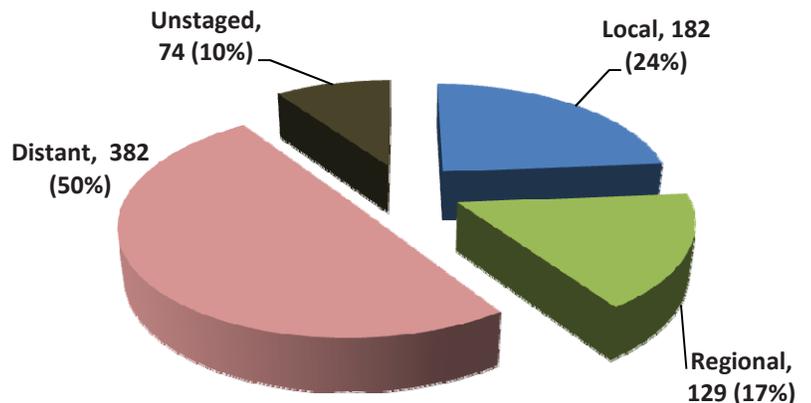
Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

[^]Statistic not displayed due to fewer than 11 cases.

²APC = Average Annual Percent Change

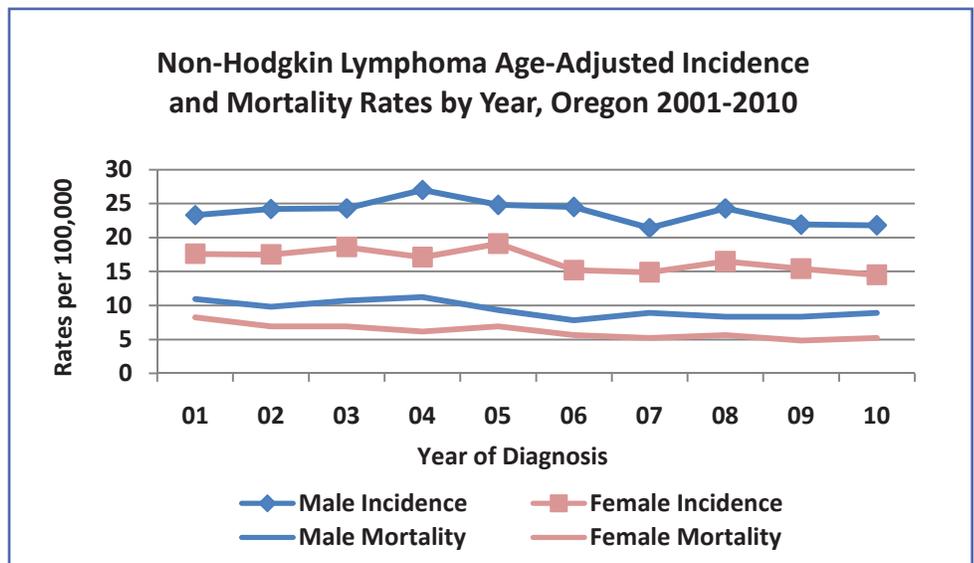
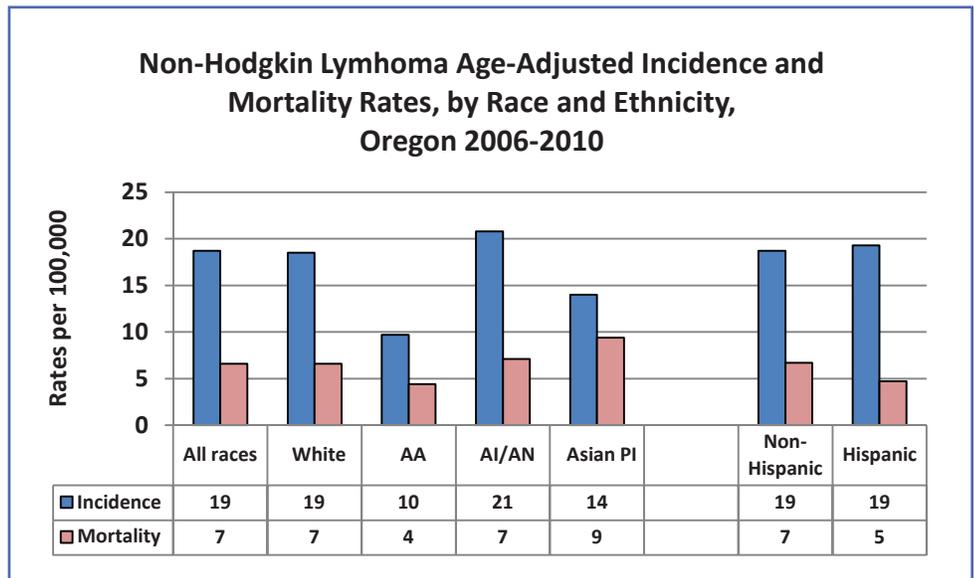
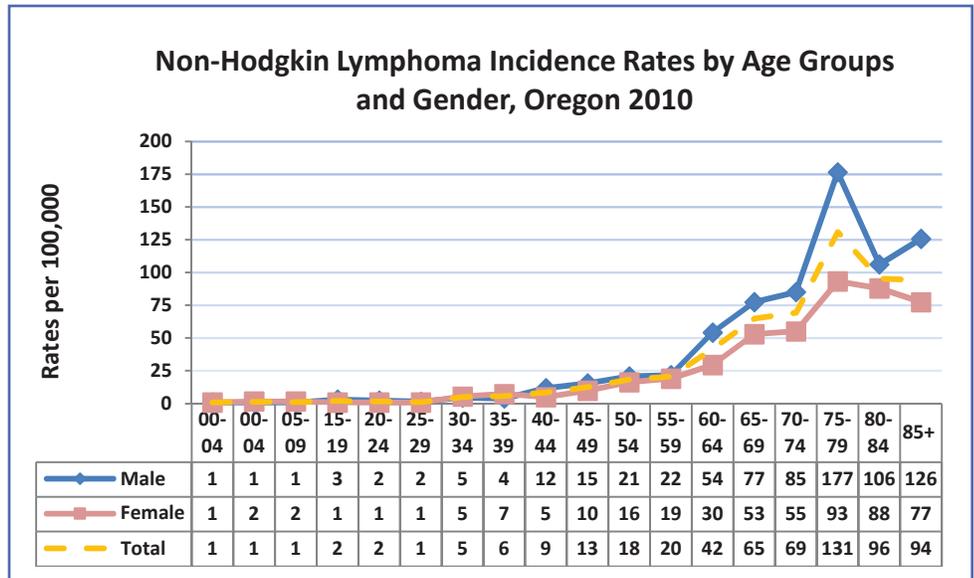
Non-Hodgkin Lymphoma, Stage at Diagnosis, Oregon 2010



The age-specific incidence rates for Non-Hodgkin lymphoma were higher for 45 and above age groups.

According to 2006-2010 combined data, 93.6% of all Non-Hodgkin lymphoma cases were diagnosed among Whites, 0.8% among African Americans (AA), 2.1% among Asian Pacific Islanders (API), and 1.1% among American Indian/Alaska Natives (AI/AN). A total of 150 (3.9%) reported cancer cases were diagnosed among Hispanics. American Indian/Alaska Natives had the highest incidence rates among all races.

During the ten-year period from 2001-2010, incidence rates of Non-Hodgkin lymphoma dropped an average of 1.7% annually. For men and women the rates decreased annually at 1.2% and 2.4% respectively. For men, the mortality rates decreased from 11 per 100,000 population in 2001 to 9 per 100,000 population in 2010. For women, the rates decreased from 8 per 100,000 population in 2001 to 5 per 100,000 population in 2010.



Oral and Pharyngeal Cancer, Oregon 2010

In 2010, a total of 455 Oregonians were diagnosed with oral and pharyngeal cancer, and 98 died of this cancer. The age-adjusted incidence rate for oral and pharyngeal cancer was 9.5 per 100,000 population, and the mortality rate was 2.1 deaths per 100,000 population. The incidence and mortality of oral and pharyngeal cancers were higher for men. Among men, the incidence rate was 13.1 per 100,000 population while among women the incidence was 6.1 per 100,000 population. Nearly 38% of reported cases were diagnosed at an *in situ* or localized stage, 60% with regional or distant stage of disease, and 2% were unstaged.

Oral and Pharyngeal Cancer - Fast Facts

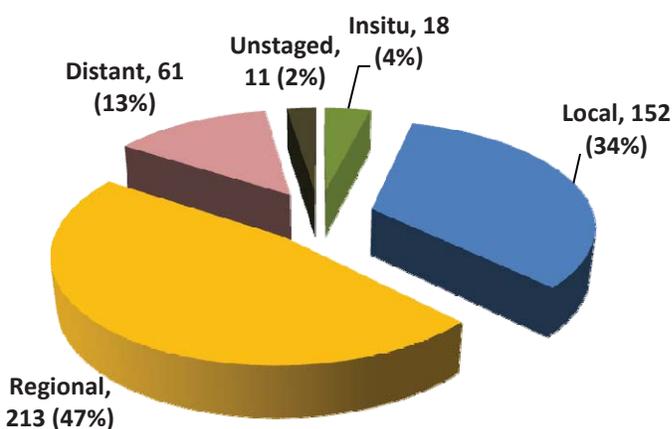
Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	305	150	455
<i>Invasive</i>	293	144	437
<i>Insitu</i>	12	6	18
Rates			
Crude Rate	15.4	7.4	11.4
Age-adjusted Rate	13.1	6.1	9.5
¹ US Age-adjusted Rate (2009)	16.5	6.1	10.9
² Oregon APC (2006-2010)	-4.0	0.5	-2.3
Cancer Mortality			
Total Cancer Deaths 2010	70	28	98
Rates			
Crude Rate	3.7	1.4	2.6
Age-adjusted Rate	3.2	1.1	2.1
US Age-adjusted Rate (2009)	3.7	1.3	2.4

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

Oral and Pharyngeal Cancer, Stage at Diagnosis, Oregon 2010

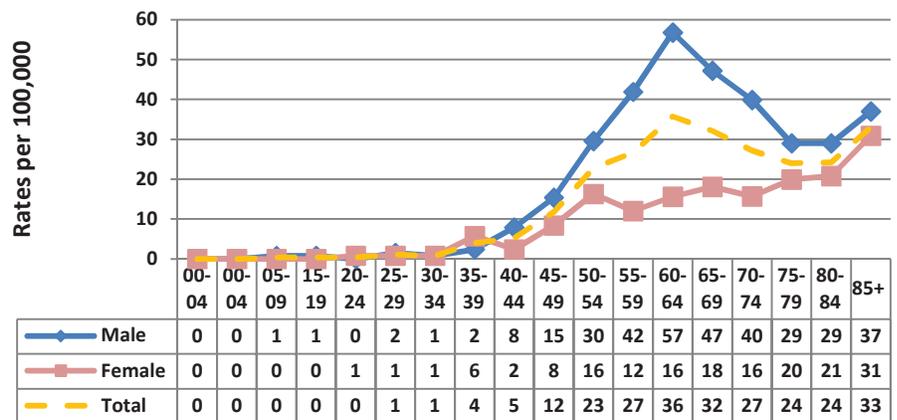


The age-specific incidence rates for oral and pharyngeal cancer were higher for 40 and older age groups. Approximately 78% of cases were diagnosed between 40 and 74 years of age, and the rates were consistently higher for men compared to women.

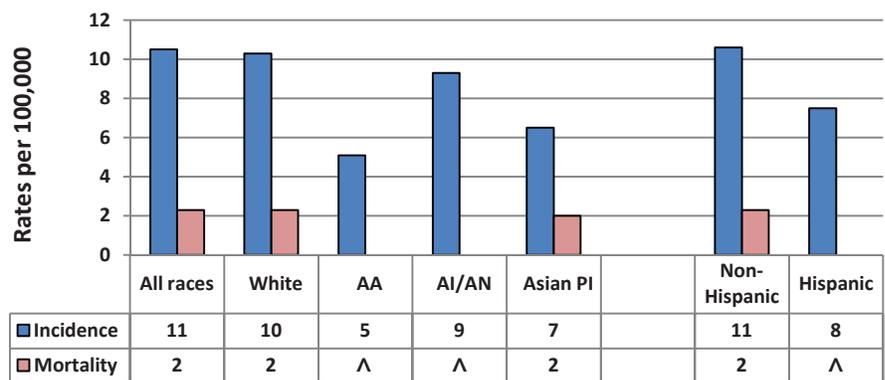
According to 2006-2010 combined data, 93.2% of all oral and pharyngeal cancers were diagnosed among Whites, 0.6% among African Americans (AA), 2% among Asian Pacific Islanders (API), and 0.9% among American Indian/Alaska Natives (AI/AN). A total of 55 (2.4%) reported cancer cases were diagnosed among Hispanics.

During the ten-year period from 2001-2010, incidence rates of invasive oral and pharyngeal cancer dropped an average of 1.2% annually. For men and women the rates dropped annually at 1.5% and 0.8% respectively. For men, the mortality rates decreased from 4 per 100,000 population in 2001 to 3 per 100,000 population in 2010. For women, the rates decreased from 2 per 100,000 population in 2001 to 1 per 100,000 population in 2010.

Oral and Pharyngeal Cancer Incidence Rates by Age Groups and Gender, Oregon 2010

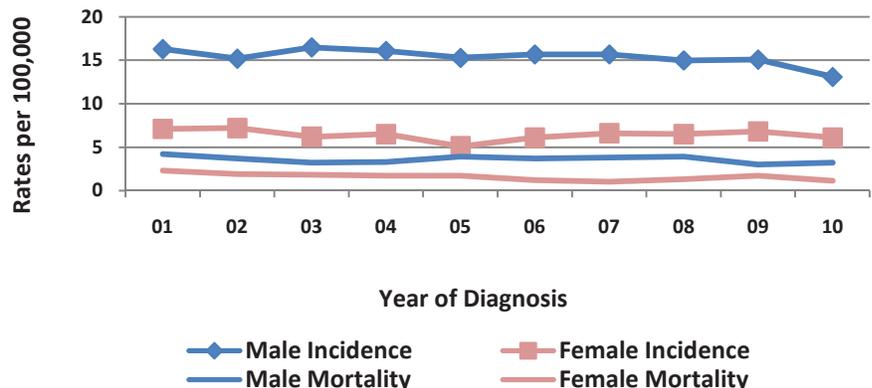


Oral and Pharyngeal Cancer Age-Adjusted Incidence and Mortality Rates, by Race and Ethnicity, Oregon 2006-2010



^Statistic not displayed due to fewer than 11 cases.

Oral and Pharyngeal Cancer Age-Adjusted Incidence and Mortality Rates by Year, Oregon 2001-2010



Ovarian Cancer, Oregon 2010

In 2010, a total of 259 Oregon women were diagnosed with ovarian cancer and 225 died from ovarian cancer. The age-adjusted incidence rate for ovarian cancer was 11 per 100,000 population, and the mortality rate was 9.1 deaths per 100,000 population. Approximately 12% of reported cases were diagnosed at an *in situ* or localized stage, 81% with regional or distant stage of disease, and 7% were unstaged.

Ovarian Cancer - Fast Facts

Oregon 2010 **Female**

Cancer Incidence

Total Cancer Cases 2010	259
<i>Invasive</i>	256
<i>Insitu</i>	3

Rates

Crude Rate	13.2
Age-adjusted Rate	11.0
¹ US Age-adjusted Rate (2009)	11.8
² Oregon APC (2006-2010)	-7.1

Cancer Mortality

Total Cancer Deaths 2010	225
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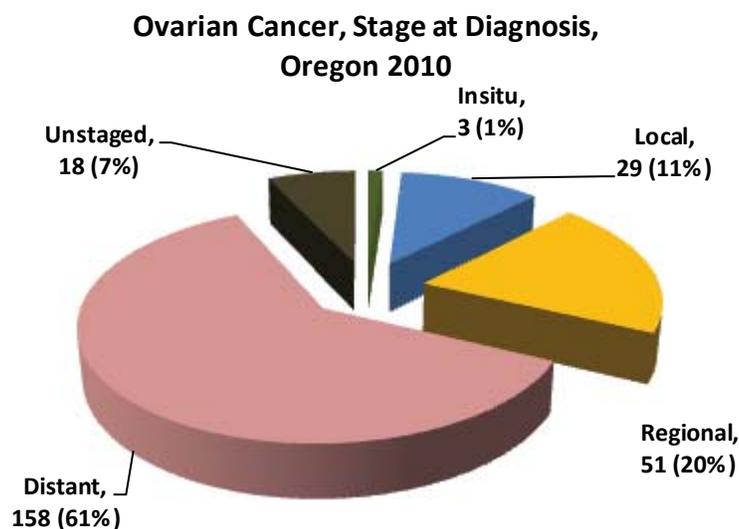
Rates

Crude Rate	11.6
Age-adjusted Rate	9.1
US Age-adjusted Rate (2009)	7.8

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

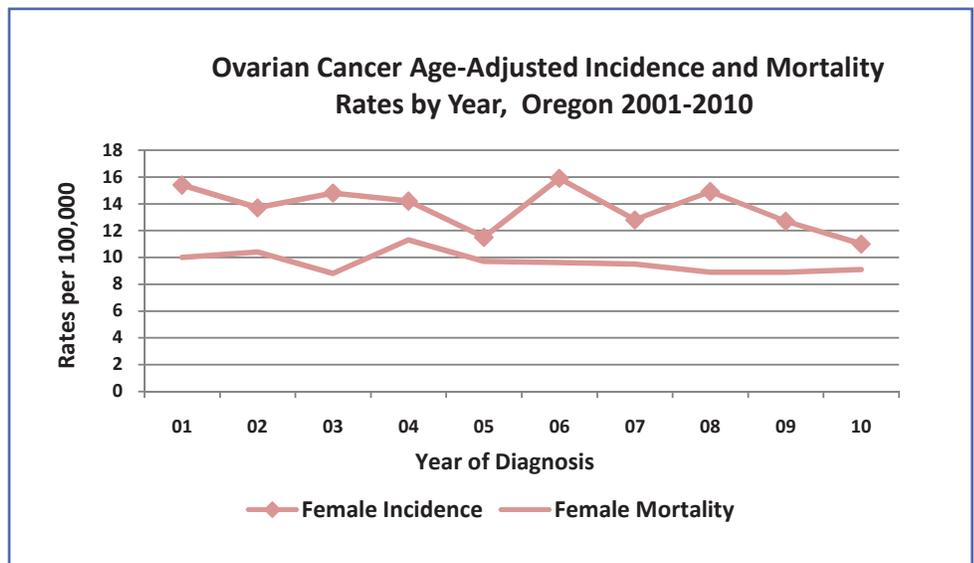
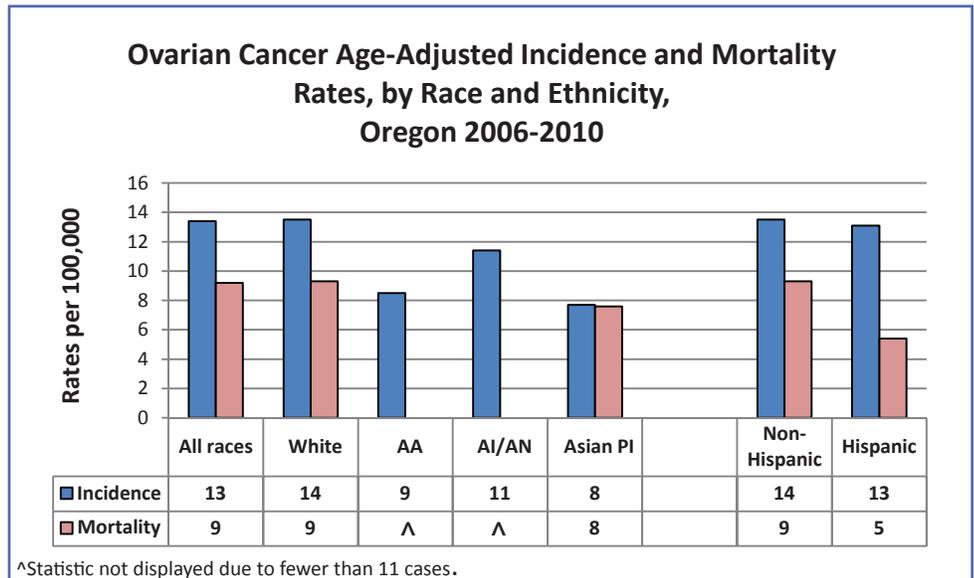
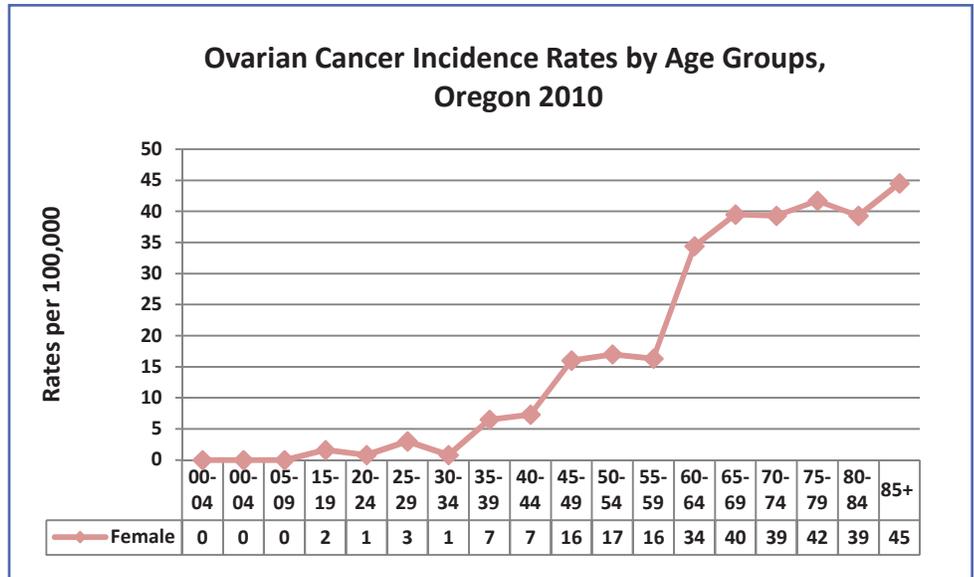
²APC = Average Annual Percent Change



The age-specific incidence rates started increasing at age 35 for ovarian cancer and were consistently higher for all older age groups. Women ages 85 and above had the highest incidence rate of 45 per 100,000 population.

According to 2006-2010 combined data, 95% of all ovarian cancers were diagnosed among Whites, 0.7% among African Americans (AA), 2.1% among Asian Pacific Islanders (API), and 0.8% among American Indian/Alaska Natives (AI/AN). A total of 54 (3.6%) reported cancer cases were diagnosed among Hispanics. The incidence rates were almost similar for both Hispanics and non-Hispanics.

During the ten-year period from 2001-2010, incidence rates for ovarian cancer decreased an average of 2% annually. The mortality rates decreased from 10 per 100,000 population to 9 per 100,000 population between 2001 and 2010.



Pancreatic Cancer, Oregon 2010

Pancreatic cancer is a deadly disease as it is usually diagnosed at a late stage. In 2010, a total of 489 Oregonians were diagnosed with pancreatic cancer. In 2010, it was the fourth leading cause of cancer deaths for both men and women. Pancreatic cancer was responsible for 499 deaths in 2010, which is more than the total number of cases reported for that year.

The age-adjusted incidence rate for pancreatic cancer was 11 per 100,000 population, and the mortality rate was 11.3 deaths per 100,000 population. Men have a slightly higher risk for this cancer than women. Approximately 8% of reported cases were diagnosed at a localized stage, 80% with regional or distant stage of disease, and 12% were unstaged.

Pancreatic Cancer - Fast Facts

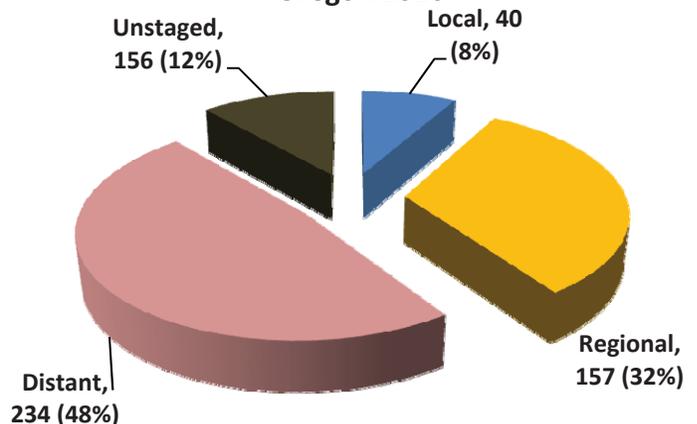
Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	251	238	489
<i>Invasive</i>	249	238	487
<i>Insitu</i>	2	0	2
Rates			
Crude Rate	13.1	12.3	12.7
Age-adjusted Rate	12.3	9.9	11.0
¹ US Age-adjusted Rate (2009)	13.5	10.3	11.7
² Oregon APC (2006-2010)	-0.6	-1.6	-1.0
Cancer Mortality			
Total Cancer Deaths 2010	261	238	499
Rates			
Crude Rate	13.7	12.3	13.0
Age-adjusted Rate	13.1	9.7	11.3
US Age-adjusted Rate (2009)	12.5	9.5	10.8

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

Pancreatic Cancer, Stage at Diagnosis, Oregon 2010

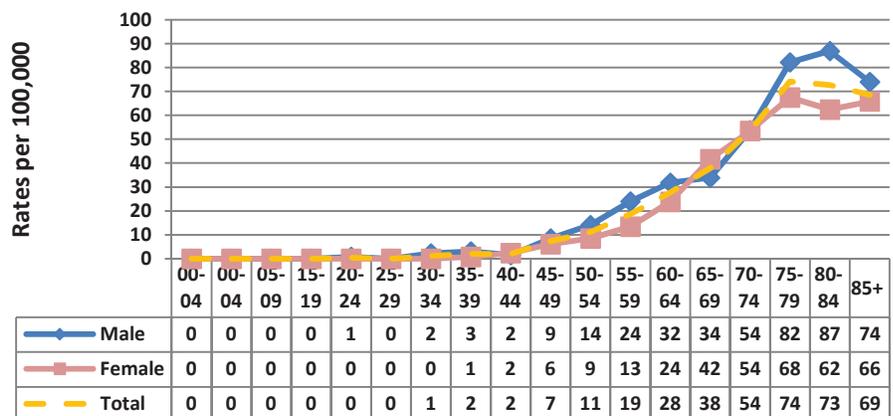


The incidence rates for pancreatic cancer started increasing at age 45, and were consistently higher for all older age groups. Around 50% of total cases were diagnosed among people over 69 years of age.

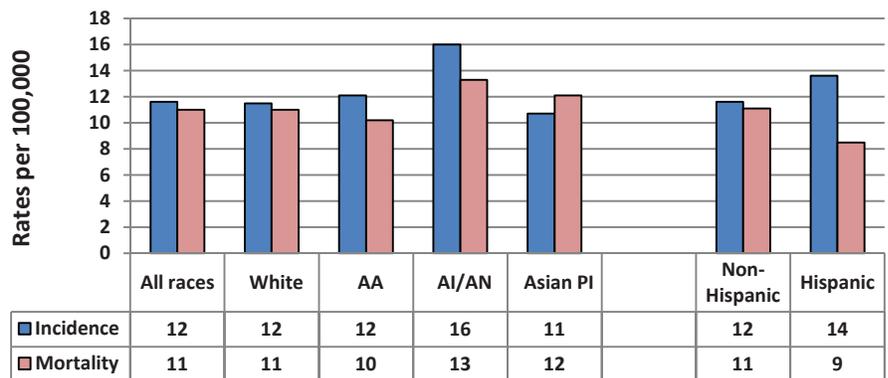
According to 2006-2010 combined data, 94.2% of all pancreatic cancers were diagnosed among Whites, 1.3% were among African Americans (AA), 2.3% among Asian Pacific Islanders (API), and 1.3% among American Indian/Alaska Natives (AI/AN). A total of 82 (3.3%) reported cancer cases were diagnosed among Hispanics. Hispanics were more likely to be diagnosed with this cancer than non-Hispanics. American Indian/Alaska Natives had the highest incidence and mortality rates.

During the ten-year period from 2001-2010, incidence rates of pancreatic cancer increased an average of 0.6% annually.

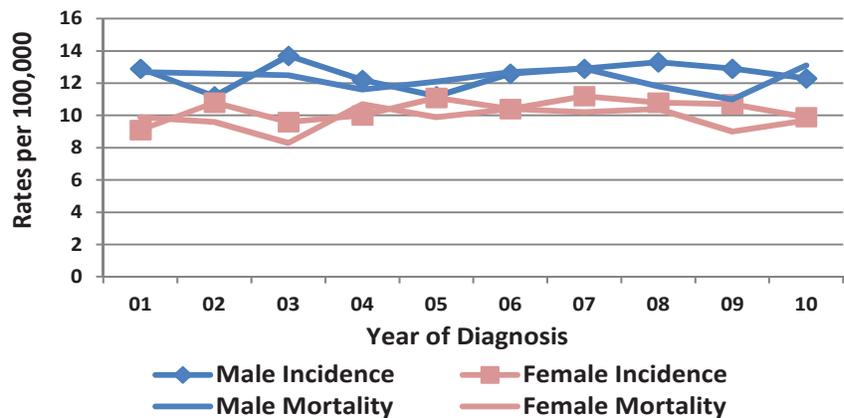
Pancreatic Cancer Incidence Rates by Age Groups and Gender, Oregon 2010



Pancreatic Cancer Age-Adjusted Incidence and Mortality Rates, by Race and Ethnicity, Oregon 2006-2010



Pancreatic Cancer Age-Adjusted Incidence and Mortality Rates by Year, Oregon 2001-2010



Prostate Cancer, Oregon 2010

Prostate cancer still continues to be the leading site of cancer among Oregon men, with a total of 2,623 new invasive cases reported in 2010. It is the second leading cause of cancer deaths in Oregon men, which accounted for a total of 397 deaths. Oregon's age-adjusted incidence rate was 120.6 per 100,000 population, and the mortality rate was 21.7 per 100,000 population.

While the majority of cases (approximately 73%) were diagnosed at an early stage, around 21% were still diagnosed at a late stage. Approximately 6% of cases were unstaged.

Prostate Cancers, Malignant by Oregon Counties, 2010

Oregon	2,623	Lake	^
Baker	14	Lane	243
Benton	50	Lincoln	46
Clackamas	228	Linn	96
Clatsop	23	Malheur	24
Columbia	25	Marion	230
Coos	92	Morrow	12
Crook	22	Multnomah	370
Curry	21	Polk	68
Deschutes	178	Sherman	^
Douglas	91	Tillamook	18
Gilliam	0	Umatilla	63
Grant	13	Union	24
Harney	^	Wallowa	^
HoodRiver	14	Wasco	25
Jackson	159	Washington	236
Jefferson	^	Wheeler	^
Josephine	74	Yamhill	59
Klamath	70		

^ Count less than 11.

Prostate Cancer - Fast Facts

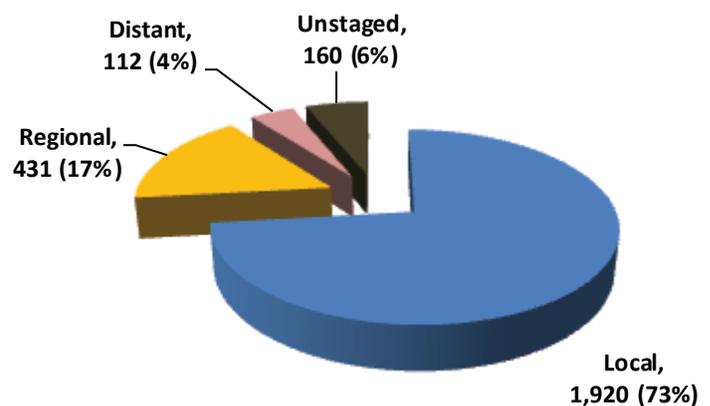
Oregon 2010	Male
Cancer Incidence	
Total Prostate Cancer Cases 2010	2,623
<i>Invasive Cases</i>	2,623
Rates	
Crude Rate	138.1
Age-adjusted Rate	120.6
¹ US Age-adjusted Rate (2009)	137.7
² Oregon APC (2006-2010)	-5.1
Cancer Mortality	
Total Prostate Cancer Deaths 2010	397
Rates	
Crude Rate	20.9
Age-adjusted Rate	21.7
US Age-adjusted Rate (2009)	22.0

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

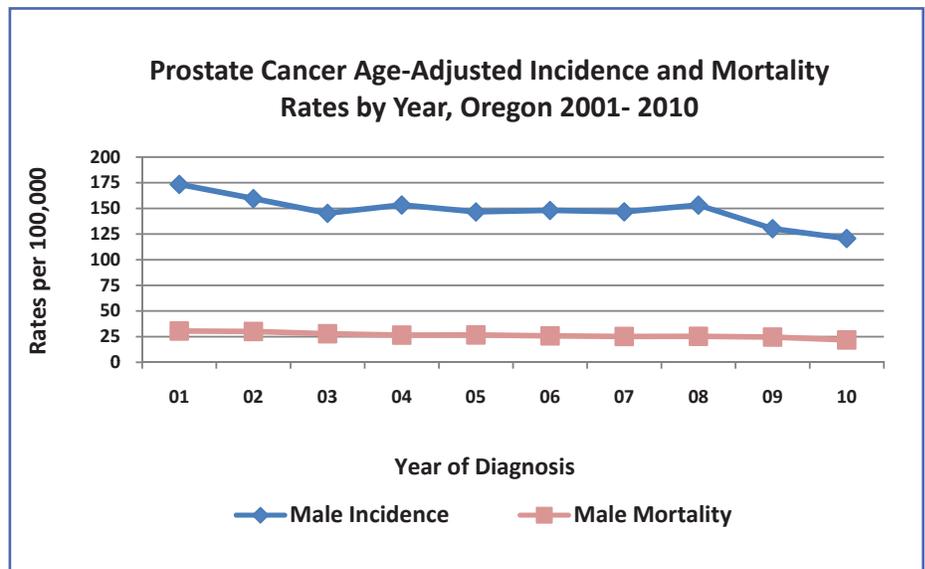
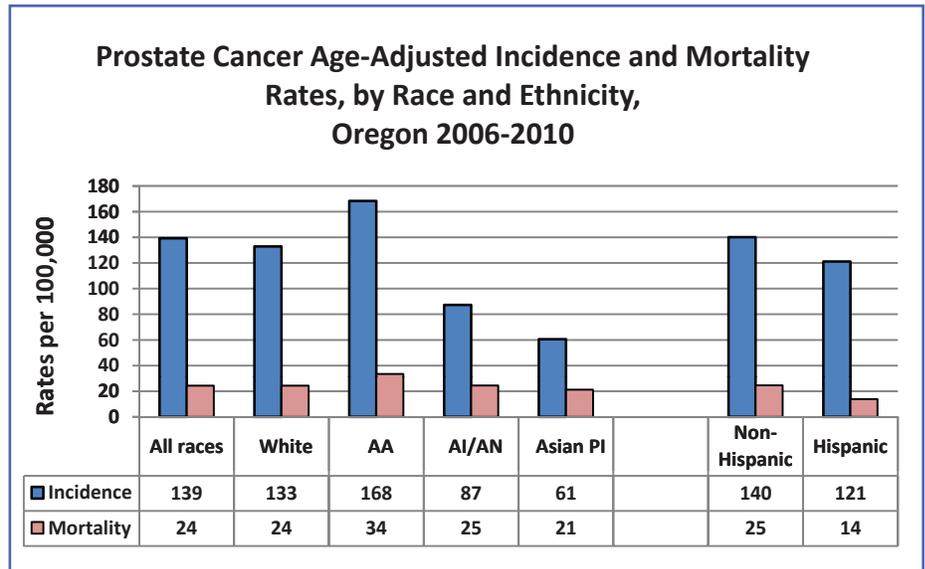
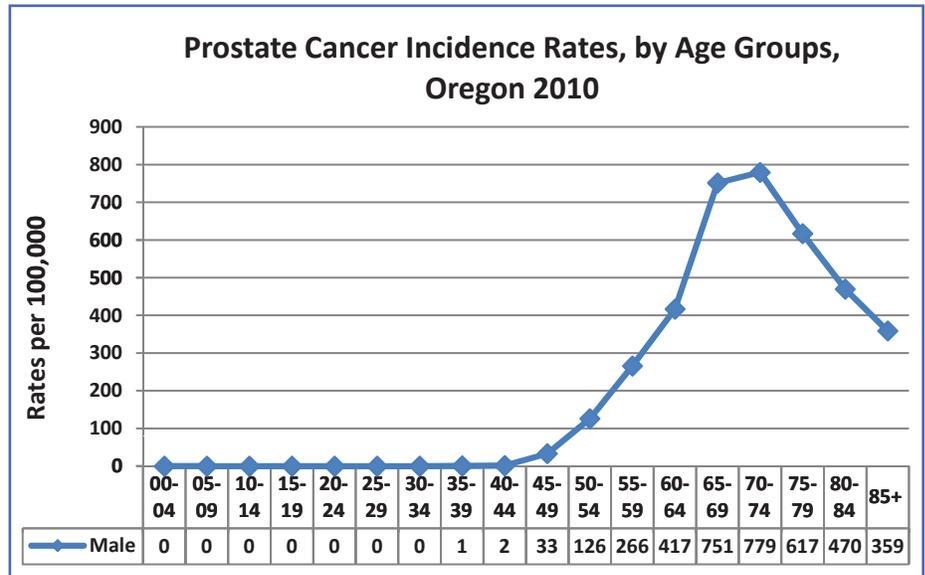
Prostate Cancer, Stage at Diagnosis, Oregon 2010



Oregon's age-specific incidence rates for prostate cancer sharply increased from age 45 and reached the maximum between ages 70-74; after age 74 the rates declined.

According to 2006-2010 combined data, 90.8% of all prostate cancers were diagnosed among Whites, 1.6% among African Americans (AA), 1.1% among Asian Pacific Islanders (API), and 0.5% among American Indian/Alaska Natives (AI/AN). A total of 351 (2.5%) reported cancer cases were diagnosed among Hispanics. African Americans (AA) had the highest incidence and mortality rates among all race groups, and Asian Pacific Islanders had the least risk for prostate cancer. Hispanic men were less likely to be diagnosed with prostate cancer than non-Hispanics.

During the ten-year period from 2001-2010, the incidence of invasive prostate cancer among Oregon men dropped an average of 2.7% each year. The prostate cancer incidence rates among men decreased from 173.4 in 2001 to 120.6 per 100,000 population in 2010, which is an approximately 31% decline. The mortality rates decreased from 30.4 in 2001 to 21.7 per 100,000 population in 2010.



Stomach Cancer, Oregon 2010

In 2010, a total of 229 Oregonians were diagnosed with stomach cancer, and among them only one case had an *in situ* diagnosis. In 2010, 127 Oregonians died of this cancer. The age-adjusted incidence rate for stomach cancer was 5.2 per 100,000 population, and the mortality rate was 2.9 deaths per 100,000 population. Men have a slightly higher risk for this cancer than women. Approximately 22% of the reported cases were diagnosed at a localized stage, 66% with regional or distant stage of disease, and 12% were unstaged.

Stomach Cancer - Fast Facts

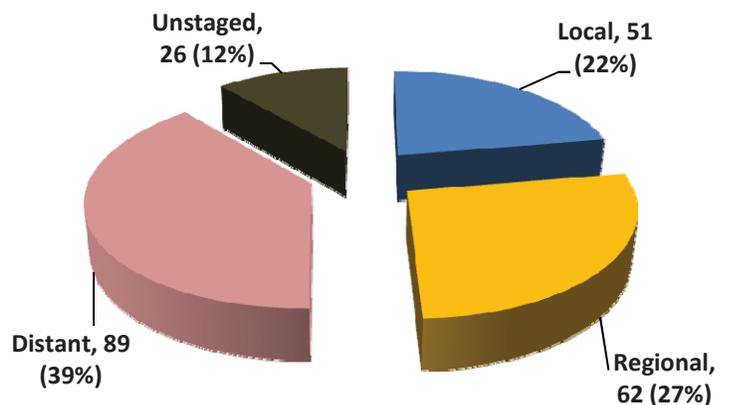
Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	149	79	229
<i>Invasive</i>	148	79	228
<i>In situ</i>	1	0	1
Rates			
Crude Rate	7.8	4.1	5.9
Age-adjusted Rate	7.4	3.3	5.2
¹ US Age-adjusted Rate (2009)	9.1	4.5	6.5
² Oregon APC (2006-2010)	3.1	-4.0	0.7
Cancer Mortality			
Total Cancer Deaths 2010	72	55	127
Rates			
Crude Rate	3.8	2.8	3.3
Age-adjusted Rate	3.7	2.3	2.9
US Age-adjusted Rate (2009)	4.7	2.4	3.4

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

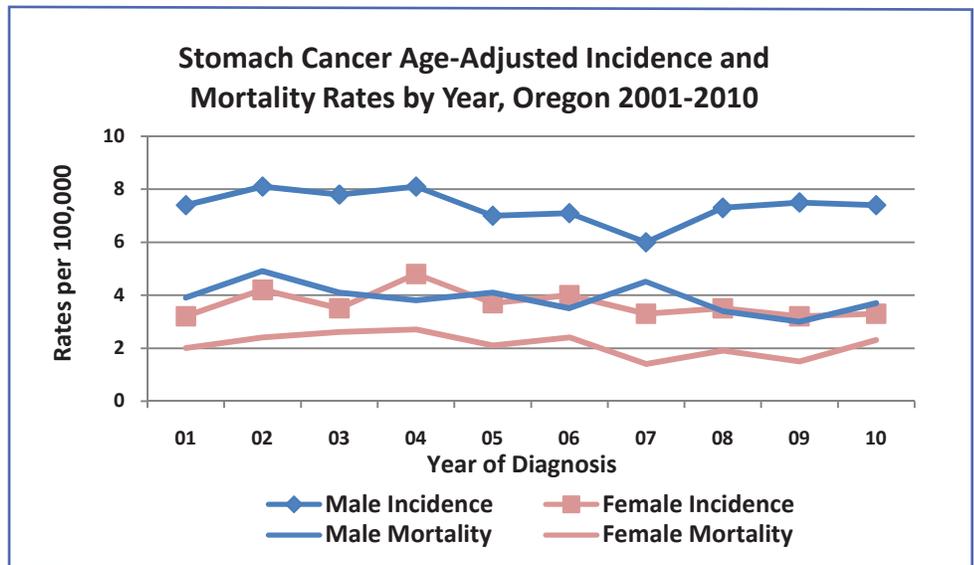
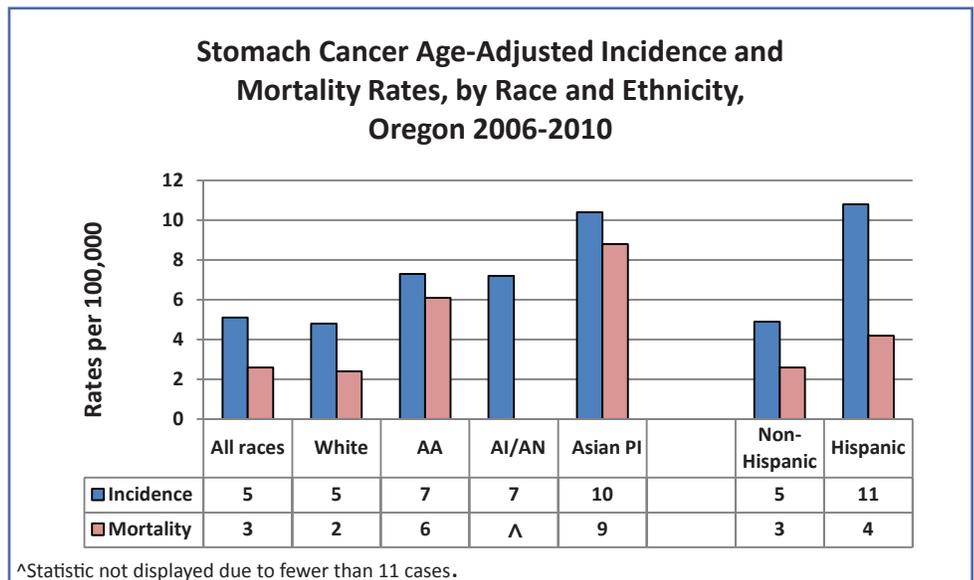
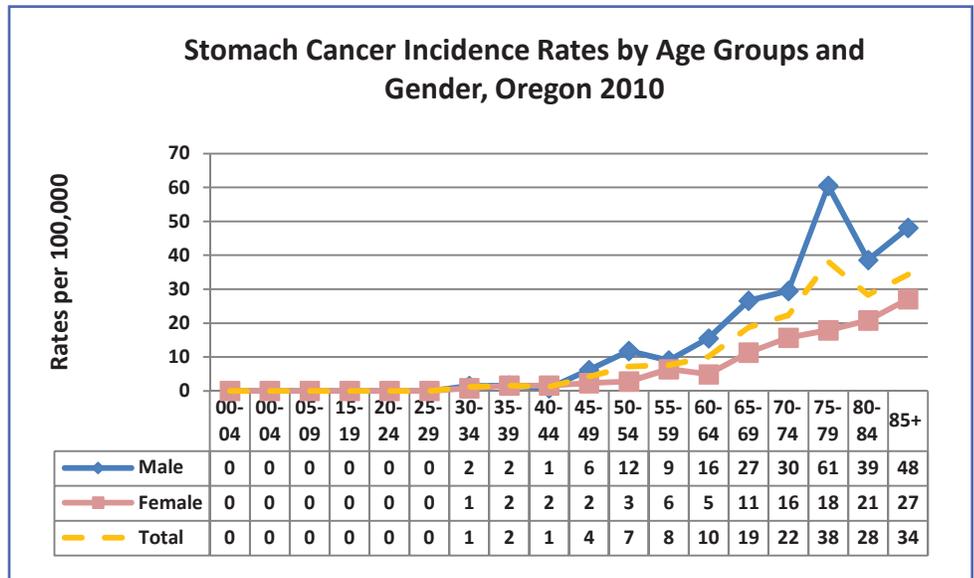
Stomach Cancer, Stage at Diagnosis, Oregon 2010



The incidence rates for stomach cancer were consistently higher for age 60 and above, and the rates for men were higher than women for all older age groups.

According to 2006-2010 combined data, 89.1% of all stomach cancers were diagnosed among Whites, 1.7% among African Americans (AA), 5.5% among Asian Pacific Islanders (API), and 1.2% among American Indian/Alaska Natives (AI/AN). A total of 77 (7.2%) reported cancer cases were diagnosed among Hispanics. Hispanics were more likely to be diagnosed with stomach cancer than non-Hispanics. Asian Pacific Islanders had the highest incidence and mortality rates and Whites had the lowest rates.

During the ten-year period from 2001-2010, incidence rates of invasive stomach cancer dropped an average of 1.1% annually. The mortality rates did not vary much over the ten year period for both men and women.



Thyroid Cancer, Oregon 2010

In 2010, a total of 479 Oregonians were diagnosed with thyroid cancer and 18 died from this cancer. The age-adjusted incidence rate for thyroid cancer was 12 per 100,000 population, and the mortality rate was less than one death per 100,000 population. Incidence and mortality rates of thyroid cancer were much higher for women. Among women, the incidence rate was 18.6 per 100,000 population while among men the incidence rate was 5.5 per 100,000 population. Approximately 63% of reported cases were diagnosed at a localized stage, 36% with regional or distant stage of disease, and 1% were unstaged.

Thyroid Cancer - Fast Facts

Oregon 2010	Male	Female	Total
Cancer Incidence			
Total Cancer Cases 2010	109	370	479
<i>Invasive</i>	109	370	479
<i>Insitu</i>	0	0	0
Rates			
Crude Rate	5.7	19.1	12.5
Age-adjusted Rate	5.5	18.6	12.0
¹ US Age-adjusted Rate (2009)	6.6	19.7	13.2
² Oregon APC (2006-2010)	-0.4	4.3	3.1
Cancer Mortality			
Total Cancer Deaths 2010	4	12	18
Rates			
Crude Rate	^	0.6	0.5
Age-adjusted Rate	^	0.5	0.4
US Age-adjusted Rate (2009)	^	0.5	0.5

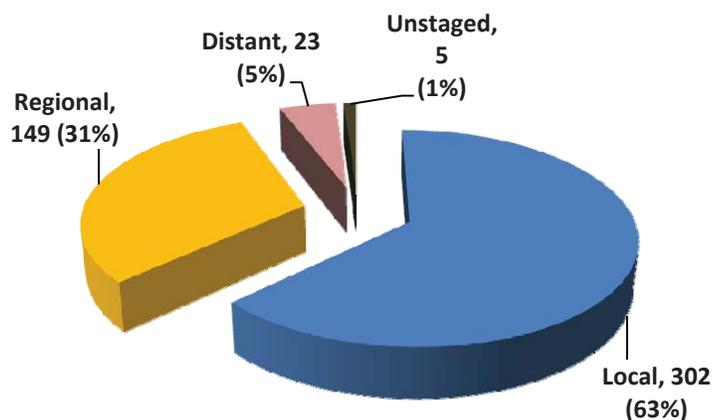
Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

^Statistic not displayed due to fewer than 11 cases.

²APC = Average Annual Percent Change

Thyroid Cancer, Stage at Diagnosis, Oregon 2010

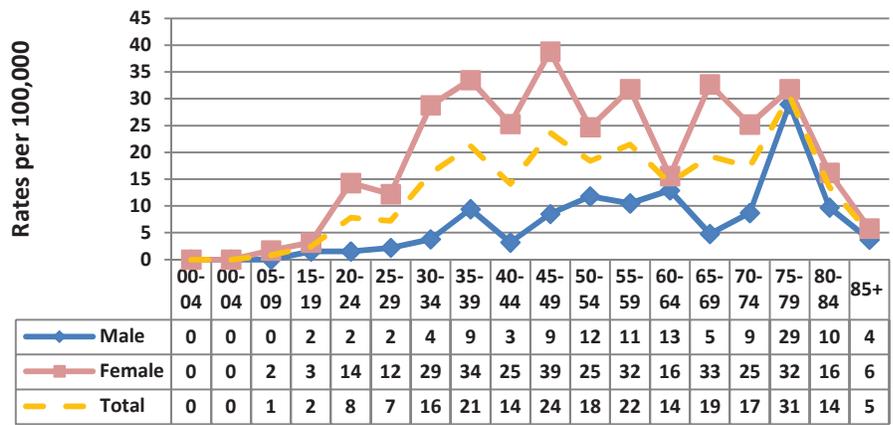


The incidence rates for thyroid cancer started increasing at age 20, and remained high for all ages. The rates were consistently higher for women than men among all age groups.

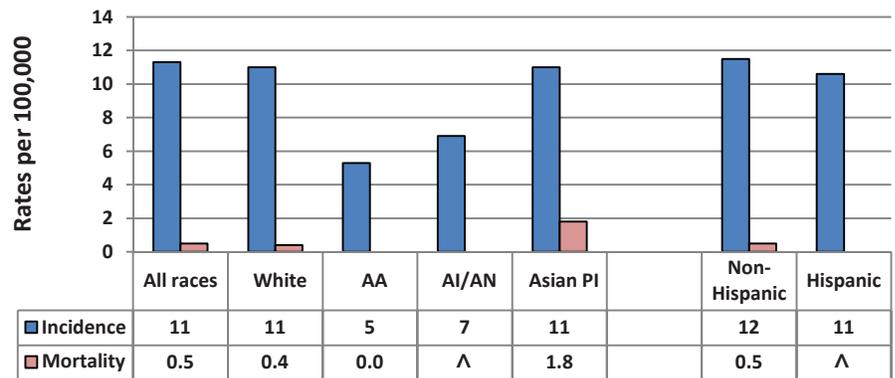
According to 2006-2010 combined data, 90% of all thyroid cancers were diagnosed among Whites, 0.8% among African Americans (AA), 3.9% among Asian Pacific Islanders (API), and 0.9% among American Indian/Alaska Natives (AI/AN). A total of 134 (6%) reported cancer cases were diagnosed among Hispanics. Whites and Asian Pacific Islanders had the highest incidence rates.

During the ten-year period from 2001-2010, the incidence rates for thyroid cancer increased an average of 6.7% annually. For men and women, the rates increased annually at 5% and 7.2% respectively. As the number of deaths due to thyroid cancers were fewer than 11, rates are not displayed in the graph.

Thyroid Cancer Incidence Rates by Age Groups and Gender, Oregon 2010

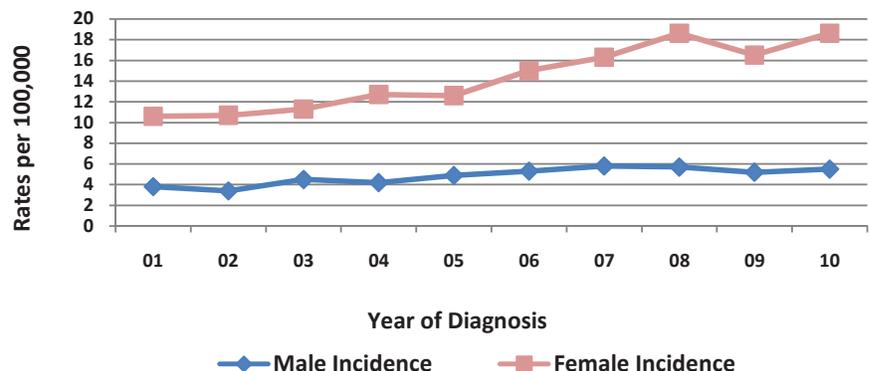


Thyroid Cancer Age-Adjusted Incidence and Mortality Rates, by Race and Ethnicity, Oregon 2006-2010



∧Statistic not displayed due to fewer than 11 cases.

Thyroid Cancer Age-Adjusted Incidence Rates by Year, Oregon 2001-2010



Uterine Cancer, Oregon 2010

In 2010, a total of 626 Oregon women were diagnosed with uterine cancer and 100 women died of this cancer. The age-adjusted incidence rate for uterine cancer was 25.9 per 100,000 population, and the mortality rate was 4.3 deaths per 100,000 population. Approximately 72% of reported cases were diagnosed at an *in situ* or localized stage, 24% with regional or distant stage, and 4% were unstaged.

Uterine Cancer - Fast Facts

Oregon 2010 Female

Cancer Incidence

Total Cancer Cases 2010	626
<i>Invasive</i>	620
<i>Insitu</i>	6

Rates

Crude Rate	32.0
Age-adjusted Rate	25.9
¹ US Age-adjusted Rate (2009)	25.1
² Oregon APC (2006-2010)	2.8

Cancer Mortality

Total Cancer Deaths 2010	100
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Rates

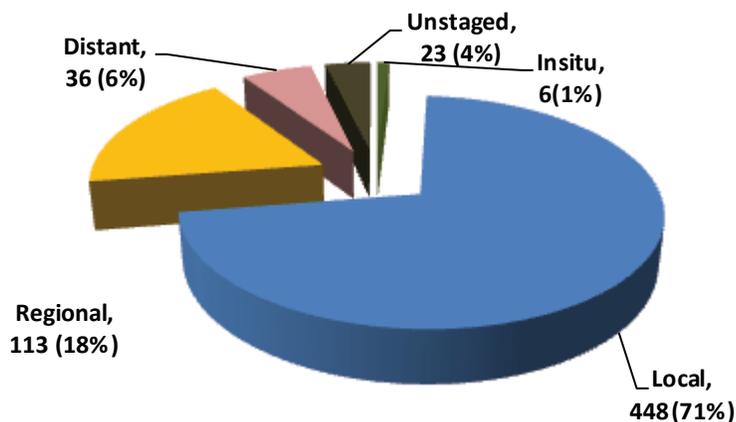
Crude Rate	5.2
Age-adjusted Rate	4.3
US Age-adjusted Rate (2009)	4.2

Note: Incidence and mortality rates are per 100,000 population, age-adjusted to the 19-age-group 2000 U.S. standard population. Total number includes male, female and other genders.

¹U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

²APC = Average Annual Percent Change

Uterine Cancer, Stage at Diagnosis, Oregon 2010



The rates started increasing at age 30 for uterine cancer and remained high for all older ages. Women between 65 to 69 years of age had the highest rate of 113 per 100,000 population. Around 87% of cases were diagnosed among women over 49 years of age.

According to 2006-2010 combined data, 94.4% of all uterine cancers were diagnosed among Whites, 0.6% among African Americans (AA), 1.9% among Asian Pacific Islanders (API), and 0.8% among American Indian/Alaska Natives (AI/AN). A total of 79 (2.7%) reported cancer cases were diagnosed among Hispanics. Hispanics were less likely to be diagnosed with this cancer than non-Hispanics. Whites had the highest incidence and mortality rates.

During the ten-year period from 2001-2010, incidence rates of invasive uterine cancer increased an average of 1.5% annually. The mortality rates remained stable over the ten year period.

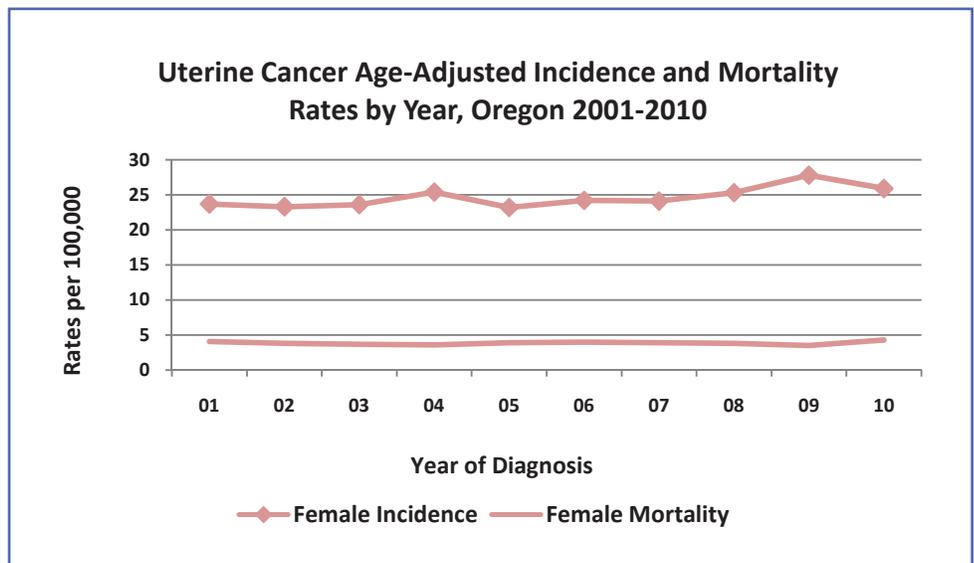
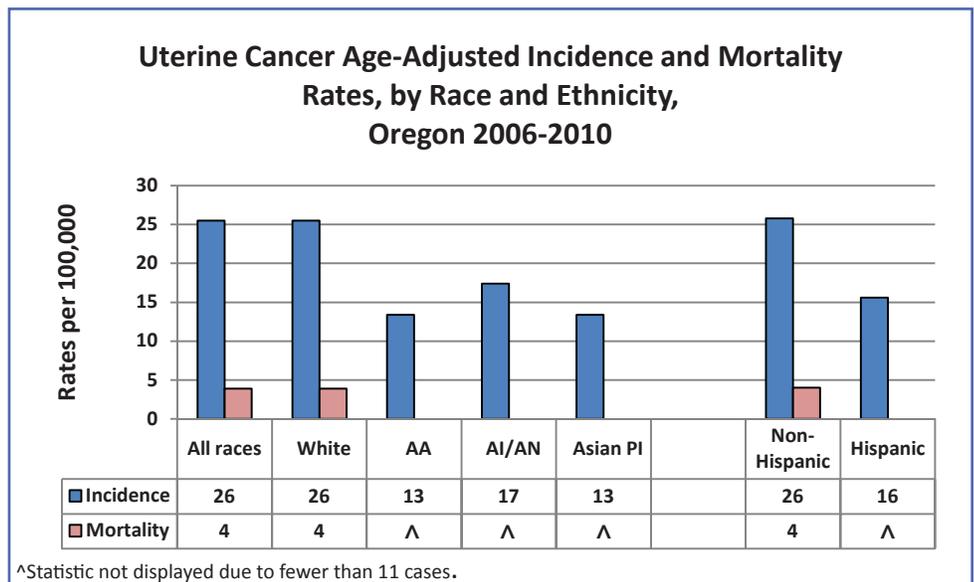
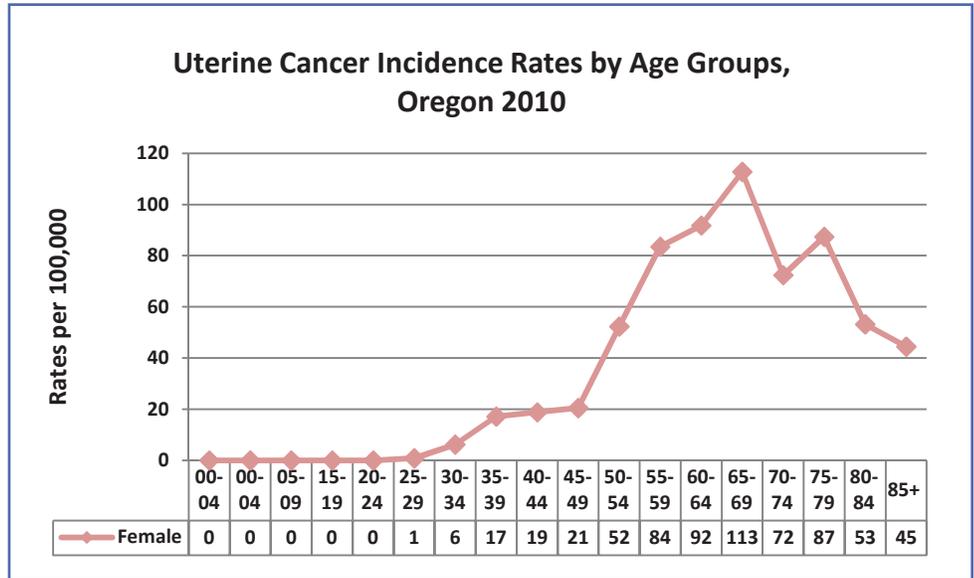


Table 1: Oregon Cancer Incidence by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend
All Sites	Average	19,499	462.3	9,896	508.7	9,601	429.2
	5-Year PC		-8.3		-11.1		-5.9
	2006	19,059	473.7	9,673	526.6	9,386	436.3
	2007	19,308	468.9	9,863	522.9	9,445	429.8
	2008	20,285	480.3	10,488	538.8	9,797	436.8
	2009	19,709	456.8	9,811	491.8	9,896	433.7
	2010	19,132	434.2	9,645	468.1	9,482	410.5
Bones and Joints	Average	37	1.0	22	1.2	15	0.8
	5-Year PC		23.4		22.9		26.8
	2006	29	0.7	18	0.9	11	0.6
	2007	50	1.3	26	1.5	24	1.1
	2008	36	1.0	23	1.3	13	0.7
	2009	34	0.9	20	1.0	14	0.8
	2010	36	0.9	22	1.1	14	0.7
Brain\Other Nervous System	Average	302	7.5	174	9.0	128	6.2
	5-Year PC		-14.5		-17.9		-12.8
	2006	304	7.8	164	8.8	140	7.1
	2007	307	7.8	186	9.8	121	6.0
	2008	311	7.8	188	9.8	123	5.9
	2009	307	7.5	184	9.5	123	5.8
	2010	282	6.7	148	7.2	134	6.2
Brain	Average	288	7.1	168	8.7	120	5.7
	5-Year PC		-15.1		-17.2		-15.1
	2006	289	7.4	159	8.5	130	6.5
	2007	295	7.4	179	9.4	116	5.7
	2008	296	7.4	180	9.4	116	5.6
	2009	294	7.2	179	9.2	115	5.5
	2010	266	6.3	145	7.0	121	5.5
Breast	Average	2,911	68.8	19	1.0	2,891	129.5
	5-Year PC		-6.7		-14.1		-5.8
	2006	2,849	70.3	17	0.9	2,832	131.9
	2007	2,890	69.9	17	0.8	2,873	131.4
	2008	2,900	68.2	27	1.5	2,873	128.1
	2009	3,030	70.1	19	1.0	3,011	132.0
	2010	2,885	65.6	17	0.8	2,868	124.3

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

All Sites includes invasive cases only except for bladder, which includes in situ.

~ Statistic could not be calculated.

^ Rate is not displayed for fewer than 11 cases due to instability of rates based on small numbers.

n/a = Not applicable.

PC= Percent changes were calculated using 2006 and 2010 rates.

Total count may exceed male and female combined due to additional sex coding.

Table 1: Oregon Cancer Incidence by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend
Digestive System	Average	3,297	77.7	1,785	92.2	1,512	65.4
	5-Year PC		-7.4		-6.9		-7.8
	2006	3,220	79.8	1,711	93.8	1,509	67.8
	2007	3,224	77.5	1,738	92.1	1,486	65.0
	2008	3,369	79.2	1,852	95.4	1,517	65.2
	2009	3,401	78.8	1,841	92.9	1,560	66.7
	2010	3,273	73.9	1,782	87.3	1,489	62.5
Colon and Rectum	Average	1,719	40.8	869	45.4	849	36.8
	5-Year PC		-16.0		-16.9		-14.0
	2006	1,764	43.9	885	48.9	879	39.4
	2007	1,724	41.7	885	47.3	839	36.8
	2008	1,750	41.4	883	45.8	867	37.4
	2009	1,741	40.8	882	45.3	859	37.0
	2010	1,614	36.9	811	40.6	802	33.9
Esophagus	Average	235	5.5	188	9.7	47	2.0
	5-Year PC		-21.3		-23.4		-16.5
	2006	248	6.1	199	10.9	49	2.2
	2007	216	5.2	171	8.9	45	2.0
	2008	252	5.9	208	10.8	44	1.9
	2009	244	5.7	191	9.8	53	2.1
	2010	214	4.8	170	8.4	44	1.8
Gallbladder	Average	38	0.9	13	0.7	24	1.0
	5-Year PC		16.0		~		10.8
	2006	29	0.7	8	^	21	1.0
	2007	44	1.0	18	0.9	26	1.1
	2008	40	0.9	17	0.9	23	1.0
	2009	37	0.9	12	0.6	25	1.0
	2010	38	0.8	11	0.6	27	1.1
Liver\Intrahepatic Bile Duct	Average	298	6.7	211	10.0	87	3.8
	5-Year PC		32.9		45.5		12.5
	2006	234	5.6	155	7.8	79	3.5
	2007	269	6.3	189	9.5	80	3.5
	2008	295	6.7	223	10.6	72	3.1
	2009	346	7.5	235	10.7	111	4.7
	2010	347	7.4	253	11.3	94	4.0

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

~ Statistic could not be calculated.

^ Rate is not displayed for fewer than 11 cases due to instability of rates based on small numbers.

n/a = Not applicable.

PC= Percent changes were calculated using 2006 and 2010 rates.

Total count may exceed male and female combined due to additional sex coding.

Table 1: Oregon Cancer Incidence by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend
Liver	Average	267	6.0	198	9.4	69	3.0
	5-Year PC		28.2		39.4		4.3
	2006	210	5.0	149	7.5	61	2.8
	2007	242	5.6	177	8.8	65	2.8
	2008	276	6.2	213	10.1	63	2.7
	2009	303	6.6	217	9.8	86	3.7
	2010	303	6.4	235	10.4	68	2.9
Pancreas	Average	494	11.6	245	12.8	249	10.6
	5-Year PC		-3.7		-2.9		-5.0
	2006	456	11.4	226	12.6	230	10.4
	2007	505	12.0	242	12.9	263	11.2
	2008	515	12.0	256	13.3	259	10.8
	2009	507	11.7	253	12.9	254	10.7
	2010	487	11.0	249	12.3	238	9.9
Small Intestine	Average	86	2.0	47	2.4	39	1.7
	5-Year PC		24.3		20.1		23.6
	2006	74	1.8	41	2.2	33	1.5
	2007	93	2.3	51	2.7	42	1.9
	2008	67	1.6	42	2.2	25	1.1
	2009	97	2.2	45	2.3	52	2.2
	2010	99	2.2	54	2.6	45	1.9
Stomach	Average	214	5.1	134	7.1	79	3.5
	5-Year PC		-2.7		5.2		-16.9
	2006	217	5.4	127	7.1	90	4.0
	2007	186	4.5	112	6.0	74	3.3
	2008	215	5.2	138	7.3	77	3.5
	2009	222	5.2	146	7.5	76	3.2
	2010	228	5.2	148	7.4	79	3.3
Endocrine System	Average	470	11.9	122	6.2	348	17.6
	5-Year PC		15.8		3.6		20.6
	2006	424	11.0	118	6.0	306	15.9
	2007	450	11.7	123	6.6	327	16.8
	2008	513	13.0	134	6.8	379	19.2
	2009	457	11.3	111	5.5	346	17.0
	2010	506	12.7	124	6.2	382	19.2

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Total count may exceed male and female combined due to additional sex coding.

Table 1: Oregon Cancer Incidence by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend
Thyroid	Average	444	11.3	108	5.5	336	17.0
	5-Year PC		18.2		3.8		23.6
	2006	393	10.2	104	5.3	289	15.0
	2007	427	11.1	109	5.8	318	16.3
	2008	480	12.2	113	5.7	367	18.6
	2009	441	10.9	105	5.2	336	16.5
	2010	479	12.0	109	5.5	370	18.6
Eye and Orbit	Average	50	1.2	27	1.4	23	1.1
	5-Year PC		-16.3		-33.4		2.8
	2006	49	1.2	25	1.4	24	1.2
	2007	56	1.4	32	1.6	24	1.2
	2008	43	1.0	25	1.3	18	0.8
	2009	58	1.4	35	1.8	23	1.0
	2010	43	1.0	18	0.9	25	1.2
Genital System - Female	Average	1,124	50.4	n/a	n/a	1,124	50.4
	5-Year PC		-5.5		n/a		-5.5
	2006	1,078	50.4	n/a	n/a	1,078	50.4
	2007	1,058	48.6	n/a	n/a	1,058	48.6
	2008	1,187	53.0	n/a	n/a	1,187	53.0
	2009	1,192	52.5	n/a	n/a	1,191	52.5
	2010	1,104	47.6	n/a	n/a	1,104	47.6
Cervix	Average	139	7.2	n/a	n/a	138	7.2
	5-Year PC		-11.5		n/a		-11.5
	2006	124	6.6	n/a	n/a	124	6.6
	2007	153	8.0	n/a	n/a	153	8.0
	2008	158	8.1	n/a	n/a	158	8.1
	2009	144	7.4	n/a	n/a	143	7.4
	2010	114	5.8	n/a	n/a	114	5.8
Ovary	Average	302	13.4	n/a	n/a	302	13.4
	5-Year PC		-30.9		n/a		-30.9
	2006	343	15.9	n/a	n/a	343	15.9
	2007	284	12.8	n/a	n/a	284	12.8
	2008	340	14.9	n/a	n/a	340	14.9
	2009	289	12.7	n/a	n/a	289	12.7
	2010	256	11.0	n/a	n/a	256	11.0

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Total count may exceed male and female combined due to additional sex coding.

Table 1: Oregon Cancer Incidence by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend
Uterus	Average	586	25.5	n/a	n/a	586	25.5
	5-Year PC		7.1		n/a		7.1
	2006	531	24.2	n/a	n/a	531	24.2
	2007	538	24.1	n/a	n/a	538	24.1
	2008	586	25.3	n/a	n/a	586	25.3
	2009	655	27.8	n/a	n/a	655	27.8
	2010	620	25.9	n/a	n/a	620	25.9
Genital System - Male	Average	2,951	146.7	2,951	146.7	n/a	n/a
	5-Year PC		-17.7		-17.7		n/a
	2006	2,905	155.1	2,905	155.1	n/a	n/a
	2007	3,004	155.3	3,004	155.3	n/a	n/a
	2008	3,243	161.2	3,243	161.2	n/a	n/a
	2009	2,851	136.6	2,851	136.6	n/a	n/a
	2010	2,752	127.6	2,752	127.6	n/a	n/a
Prostate	Average	2,815	139.3	2,815	139.3	n/a	n/a
	5-Year PC		-18.5		-18.5		n/a
	2006	2,779	148.0	2,779	148.0	n/a	n/a
	2007	2,848	146.6	2,848	146.6	n/a	n/a
	2008	3,096	153.2	3,096	153.2	n/a	n/a
	2009	2,731	130.2	2,731	130.2	n/a	n/a
	2010	2,623	120.6	2,623	120.6	n/a	n/a
Testis	Average	118	6.5	118	6.5	n/a	n/a
	5-Year PC		0.0		0.0		n/a
	2006	108	6.0	108	6.0	n/a	n/a
	2007	135	7.5	135	7.5	n/a	n/a
	2008	126	6.9	126	6.9	n/a	n/a
	2009	109	5.9	109	5.9	n/a	n/a
	2010	112	6.0	112	6.0	n/a	n/a
Leukemia	Average	472	11.5	265	14.2	208	9.4
	5-Year PC		-7.6		-8.2		-8.2
	2006	469	12.0	262	14.7	207	9.8
	2007	480	12.1	268	14.7	212	9.8
	2008	474	11.6	279	15.1	195	8.8
	2009	464	11.0	248	13.1	216	9.5
	2010	475	11.1	266	13.5	209	9.0

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Table 1: Oregon Cancer Incidence by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend
Lymphoma	Average	893	21.7	497	26.1	396	17.9
	5-Year PC		-7.9		-9.0		-7.0
	2006	888	22.4	505	27.5	383	18.1
	2007	848	21.1	472	25.4	376	17.1
	2008	949	22.8	535	27.8	414	18.5
	2009	907	21.5	480	25.0	427	18.7
	2010	874	20.6	493	25.0	381	16.9
Hodgkin Lymphoma	Average	115	3.0	64	3.4	51	2.6
	5-Year PC		-7.3		7.5		-21.1
	2006	112	3.0	56	3.0	56	3.0
	2007	120	3.1	75	4.1	45	2.3
	2008	107	2.8	67	3.5	40	2.1
	2009	127	3.2	60	3.1	67	3.3
	2010	107	2.8	62	3.2	45	2.4
Non-Hodgkin Lymphoma	Average	779	18.7	433	22.8	346	15.3
	5-Year PC		-8.0		-11.0		-4.3
	2006	776	19.4	449	24.5	327	15.2
	2007	728	17.9	397	21.4	331	14.9
	2008	842	20.0	468	24.3	374	16.5
	2009	780	18.3	420	21.9	360	15.4
	2010	767	17.8	431	21.8	336	14.5
Mesothelioma	Average	46	1.1	33	1.8	14	0.6
	5-Year PC		-19.6		-38.2		24.9
	2006	62	1.6	45	2.7	17	0.7
	2007	40	1.0	28	1.6	12	0.5
	2008	31	0.8	24	1.4	7	^
	2009	45	1.1	34	1.9	11	0.5
	2010	54	1.2	32	1.7	22	0.9
Myeloma	Average	208	4.9	122	6.4	87	3.7
	5-Year PC		-21.5		-7.1		-41.2
	2006	226	5.6	122	6.8	104	4.7
	2007	218	5.2	132	7.1	86	3.8
	2008	199	4.7	110	5.7	89	3.8
	2009	202	4.7	115	6.1	87	3.5
	2010	197	4.4	130	6.3	67	2.8

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Table 1: Oregon Cancer Incidence by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend
Oral Cavity and Pharynx	Average	452	10.5	307	14.9	146	6.4
	5-Year PC		-10.7		-17.0		0.7
	2006	433	10.6	300	15.7	133	6.1
	2007	454	10.9	306	15.7	148	6.6
	2008	459	10.5	313	15.0	146	6.5
	2009	479	10.8	321	15.1	158	6.8
	2010	437	9.5	293	13.1	144	6.1
Respiratory System	Average	2,799	66.6	1,449	76.1	1,350	59.3
	5-Year PC		-15.1		-19.0		-11.7
	2006	2,823	70.6	1,497	83.2	1,326	61.2
	2007	2,791	68.0	1,416	76.7	1,375	61.6
	2008	2,889	68.7	1,499	78.5	1,390	60.8
	2009	2,844	66.3	1,468	75.7	1,375	59.3
	2010	2,648	59.9	1,363	67.4	1,285	54.0
Larynx	Average	116	2.7	90	4.5	26	1.1
	5-Year PC		-17.7		-27.3		19.5
	2006	123	3.0	102	5.4	21	1.0
	2007	128	3.0	91	4.6	37	1.7
	2008	112	2.6	95	4.6	17	0.8
	2009	107	2.4	80	4.0	27	1.1
	2010	111	2.5	84	3.9	27	1.1
Lung and Bronchus	Average	2,652	63.2	1,339	70.6	1,313	57.7
	5-Year PC		-15.7		-19.5		-12.4
	2006	2,681	67.2	1,386	77.3	1,295	59.7
	2007	2,637	64.4	1,310	71.3	1,327	59.4
	2008	2,748	65.4	1,383	72.8	1,365	59.7
	2009	2,696	62.9	1,361	70.3	1,334	57.6
	2010	2,500	56.6	1,255	62.3	1,245	52.3
Skin (Excludes Basal and Squamous)	Average	1,132	27.3	616	31.6	515	24.4
	5-Year PC		5.6		8.9		2.2
	2006	1,046	26.3	550	29.6	496	24.0
	2007	1,068	26.1	599	31.1	469	22.5
	2008	1,265	30.7	692	35.6	573	27.3
	2009	1,079	25.7	580	29.0	499	23.4
	2010	1,201	27.8	661	32.3	540	24.6

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Table 1: Oregon Cancer Incidence by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend
Melanoma of the Skin	Average	1,073	25.9	585	29.9	488	23.2
	5-Year PC		7.1		9.0		4.9
	2006	977	24.5	519	27.9	458	22.2
	2007	1,019	25.0	569	29.4	450	21.8
	2008	1,199	29.1	652	33.5	547	26.2
	2009	1,033	24.6	560	28.0	473	22.2
	2010	1,137	26.3	626	30.5	511	23.3
Soft Tissue including Heart	Average	132	3.3	75	4.0	57	2.7
	5-Year PC		15.1		33.2		-3.5
	2006	121	3.1	60	3.2	61	3.0
	2007	128	3.1	78	4.0	50	2.3
	2008	146	3.6	81	4.3	65	3.0
	2009	122	3.0	76	4.0	46	2.1
	2010	145	3.5	82	4.3	63	2.9
Urinary System	Average	1,563	37.1	1,091	57.5	472	20.6
	5-Year PC		0.0		2.3		-5.4
	2006	1,469	36.3	1,025	56.4	444	20.0
	2007	1,548	37.6	1,063	57.8	485	21.6
	2008	1,618	38.6	1,123	59.7	495	21.5
	2009	1,582	36.7	1,092	56.2	490	21.1
	2010	1,598	36.4	1,152	57.7	444	18.9
Bladder	Average	910	21.7	688	37.1	222	9.5
	5-Year PC		3.0		5.1		-3.7
	2006	841	21.0	641	36.0	200	8.8
	2007	928	22.6	701	38.8	227	9.8
	2008	935	22.3	688	37.3	247	10.6
	2009	903	21.0	673	35.5	230	9.6
	2010	943	21.6	738	37.8	205	8.5
Kidney and Renal Pelvis	Average	621	14.6	383	19.3	238	10.6
	5-Year PC		-3.1		-2.6		-4.6
	2006	592	14.5	364	19.1	228	10.4
	2007	593	14.4	350	18.3	243	11.2
	2008	656	15.6	418	21.4	238	10.5
	2009	644	14.9	392	19.2	252	11.1
	2010	622	14.0	391	18.6	229	10.0

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Table 1: Oregon Cancer Incidence by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend	Invasive Cancer Counts	Rate/Current Trend
Miscellaneous Sites	Average	649	15.4	334	18.0	315	13.4
	5-Year PC		-13.9		-19.5		-7.7
	2006	652	16.3	337	19.3	315	13.9
	2007	685	16.6	366	20.4	319	13.7
	2008	645	15.4	334	18.0	311	13.3
	2009	648	14.9	330	17.2	318	13.0
	2010	614	14.0	304	15.5	310	12.9

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Table 2: Oregon Cancer Mortality by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend
All Malignant Cancers	Average	7,564	178.7	3,927	212.0	3,637	155.1
	5-Year PC		-4.7		-4.4		-5.9
	2006	7,401	183.7	3,759	214.6	3,642	162.9
	2007	7,493	181.2	3,934	218.6	3,559	154.8
	2008	7,607	179.8	3,946	213.3	3,661	155.4
	2009	7,576	174.5	3,995	209.2	3,581	149.9
	2010	7,743	175.1	4,003	205.1	3,740	153.3
Bones and Joints	Average	16	0.4	9	0.5	7	0.3
	5-Year PC		5.8		~		~
	2006	16	0.4	13	0.7	3	^
	2007	14	0.4	7	^	7	^
	2008	11	0.3	4	^	7	^
	2009	21	0.5	15	0.8	6	^
	2010	17	0.4	6	^	11	0.6
Brain/Other Nervous System	Average	204	4.9	119	6.1	84	3.9
	5-Year PC		7.0		8.6		2.2
	2006	175	4.3	95	5.0	80	3.8
	2007	211	5.2	122	6.4	89	4.1
	2008	204	4.8	113	5.8	91	4.0
	2009	230	5.5	154	7.7	76	3.6
	2010	198	4.6	112	5.4	86	3.9
Breast	Average	512	11.9	4	0.2	508	21.6
	5-Year PC		-2.2		~		-0.6
	2006	521	12.7	3	^	518	23.1
	2007	496	11.8	6	^	490	21.1
	2008	531	12.3	6	^	525	22.1
	2009	457	10.3	4	^	453	18.8
	2010	555	12.4	0	^	555	22.9
Digestive System	Average	1,762	41.3	991	51.9	771	32.3
	5-Year PC		-1.3		2.5		-7.2
	2006	1,691	41.6	929	51.5	762	33.6
	2007	1,791	43.0	1,011	54.8	780	33.2
	2008	1,759	41.2	959	50.2	800	33.3
	2009	1,736	39.4	996	50.2	740	30.5
	2010	1,831	41.1	1,058	52.8	773	31.1

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Table 2: Oregon Cancer Mortality by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend
Colon and Rectum	Average	658	15.5	338	18.1	320	13.3
	5-Year PC		-4.8		1.0		-10.8
	2006	624	15.3	308	17.3	316	13.7
	2007	713	17.2	379	20.9	334	14.1
	2008	659	15.6	326	17.6	333	13.7
	2009	647	14.8	334	17.5	313	12.7
	2010	645	14.6	341	17.4	304	12.2
Esophagus	Average	197	4.6	156	8.2	41	1.7
	5-Year PC		-16.8		-17.5		-18.4
	2006	209	5.1	162	9.0	47	2.0
	2007	205	4.9	164	8.8	41	1.8
	2008	192	4.5	152	7.8	40	1.7
	2009	193	4.4	156	7.9	37	1.6
	2010	187	4.2	146	7.4	41	1.6
Gallbladder	Average	24	0.6	9	0.5	15	0.7
	5-Year PC		5.3		~		33.2
	2006	28	0.7	12	0.7	16	0.7
	2007	23	0.5	7	^	16	0.7
	2008	18	0.5	9	^	9	^
	2009	19	0.4	6	^	13	0.5
	2010	32	0.7	9	^	23	1.0
Liver/Intrahepatic Bile Duct	Average	233	5.3	158	7.7	75	3.2
	5-Year PC		32.0		42.9		10.5
	2006	184	4.5	121	6.3	63	2.8
	2007	199	4.7	121	6.2	78	3.4
	2008	236	5.4	162	7.9	74	3.1
	2009	274	6.1	192	8.9	82	3.5
	2010	272	5.9	192	8.9	80	3.1
Liver	Average	173	3.9	129	6.2	44	1.9
	5-Year PC		19.2		30.2		-12.6
	2006	142	3.4	103	5.2	39	1.7
	2007	145	3.4	98	4.9	47	2.0
	2008	176	4.0	129	6.2	47	1.9
	2009	214	4.6	165	7.4	49	2.1
	2010	188	4.0	149	6.8	39	1.5

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~ Statistic could not be calculated.

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n/a = Not applicable.

PC= Percent changes were calculated using 2006 and 2010 rates.

Table 2: Oregon Cancer Mortality by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend
Pancreas	Average	469	11.0	234	12.3	235	9.9
	5-Year PC		-1.6		3.1		-7.3
	2006	461	11.5	228	12.7	233	10.4
	2007	473	11.4	236	12.9	237	10.2
	2008	475	11.1	226	11.8	249	10.4
	2009	438	9.9	218	11.0	220	9.0
	2010	499	11.3	261	13.1	238	9.7
Small Intestine	Average	16	0.4	9	0.5	7	0.3
	5-Year PC		19.6		~		~
	2006	13	0.3	10	^	3	^
	2007	17	0.4	9	^	8	^
	2008	14	0.3	6	^	8	^
	2009	18	0.4	11	0.6	7	^
	2010	18	0.4	11	0.6	7	^
Stomach	Average	110	2.6	66	3.6	44	1.9
	5-Year PC		4.1		6.2		-4.3
	2006	113	2.8	60	3.5	53	2.4
	2007	117	2.8	82	4.5	35	1.4
	2008	104	2.5	61	3.4	43	1.9
	2009	88	2.1	56	3.0	32	1.5
	2010	127	2.9	72	3.7	55	2.3
Endocrine System	Average	33	0.8	13	0.7	19	0.8
	5-Year PC		-2.4		~		-11.4
	2006	32	0.8	10	^	22	1.0
	2007	35	0.9	20	1.1	15	0.7
	2008	32	0.8	12	0.6	20	0.8
	2009	30	0.7	11	0.6	19	0.8
	2010	34	0.8	13	0.7	21	0.9
Thyroid	Average	20	0.5	8	0.4	12	0.5
	5-Year PC		10.5		~		~
	2006	16	0.4	6	^	10	^
	2007	27	0.7	14	0.8	13	0.6
	2008	21	0.5	7	^	14	0.5
	2009	20	0.5	8	^	12	0.5
	2010	18	0.4	6	^	12	0.5

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~ Statistic could not be calculated.

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n/a = Not applicable.

PC= Percent changes were calculated using 2006 and 2010 rates.

Table 2: Oregon Cancer Mortality by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend
Eye and Orbit	Average	4	0.1	2	^	2	^
	5-Year PC		~		~		~
	2006	2	^	0	^	2	^
	2007	2	^	2	^	0	^
	2008	4	^	2	^	2	^
	2009	4	^	1	^	3	^
	2010	6	^	3	^	3	^
Female Genital System	Average	367	15.9	n/a	n/a	367	15.9
	5-Year PC		-0.7		n/a		-0.7
	2006	363	16.3	n/a	n/a	363	16.3
	2007	349	15.7	n/a	n/a	349	15.7
	2008	369	15.9	n/a	n/a	369	15.9
	2009	365	15.3	n/a	n/a	365	15.3
	2010	390	16.2	n/a	n/a	390	16.2
Cervix	Average	39	1.8	n/a	n/a	39	1.8
	5-Year PC		-3.8		n/a		-3.8
	2006	37	1.7	n/a	n/a	37	1.7
	2007	31	1.6	n/a	n/a	31	1.6
	2008	50	2.3	n/a	n/a	50	2.3
	2009	40	1.9	n/a	n/a	40	1.9
	2010	37	1.7	n/a	n/a	37	1.7
Ovary	Average	214	9.2	n/a	n/a	214	9.2
	5-Year PC		-5.5		n/a		-5.5
	2006	213	9.6	n/a	n/a	213	9.6
	2007	212	9.5	n/a	n/a	212	9.5
	2008	206	8.9	n/a	n/a	206	8.9
	2009	213	8.9	n/a	n/a	213	8.9
	2010	225	9.1	n/a	n/a	225	9.1
Corpus and Uterus	Average	91	3.9	n/a	n/a	91	3.9
	5-Year PC		8.2		n/a		8.2
	2006	91	4.0	n/a	n/a	91	4.0
	2007	88	3.9	n/a	n/a	88	3.9
	2008	90	3.8	n/a	n/a	90	3.8
	2009	87	3.5	n/a	n/a	87	3.5
	2010	100	4.3	n/a	n/a	100	4.3

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n/a = Not applicable.

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Table 2: Oregon Cancer Mortality by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend
Male Genital System	Average	428	24.7	428	24.7	n/a	n/a
	5-Year PC		-15.7		-15.7		n/a
	2006	426	26.0	426	26.0	n/a	n/a
	2007	425	25.6	425	25.6	n/a	n/a
	2008	446	25.8	446	25.8	n/a	n/a
	2009	442	24.8	442	24.8	n/a	n/a
	2010	401	21.9	401	21.9	n/a	n/a
Prostate	Average	422	24.4	422	24.4	n/a	n/a
	5-Year PC		-15.7		-15.7		n/a
	2006	421	25.7	421	25.7	n/a	n/a
	2007	418	25.1	418	25.1	n/a	n/a
	2008	436	25.3	436	25.3	n/a	n/a
	2009	436	24.5	436	24.5	n/a	n/a
	2010	397	21.7	397	21.7	n/a	n/a
Testis	Average	3	0.2	3	0.2	n/a	n/a
	5-Year PC		~		~		n/a
	2006	4	^	4	^	n/a	n/a
	2007	2	^	2	^	n/a	n/a
	2008	5	^	5	^	n/a	n/a
	2009	1	^	1	^	n/a	n/a
	2010	2	^	2	^	n/a	n/a
Leukemia	Average	296	7.1	167	9.2	129	5.4
	5-Year PC		-11.3		-25.4		9.5
	2006	302	7.6	182	10.7	120	5.3
	2007	273	6.6	148	8.0	125	5.5
	2008	301	7.2	170	9.8	131	5.6
	2009	307	7.1	183	9.8	124	5.1
	2010	297	6.8	152	8.0	145	5.8
Lymphoma	Average	299	7.1	165	9.0	135	5.6
	5-Year PC		3.3		15.0		-10.3
	2006	282	6.9	145	8.2	137	6.0
	2007	297	7.2	165	9.4	132	5.7
	2008	304	7.2	163	8.9	141	5.9
	2009	295	6.8	168	8.8	127	5.1
	2010	319	7.2	182	9.4	137	5.4

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n/a = Not applicable.

PC= Percent changes were calculated using 2006 and 2010 rates.

Table 2: Oregon Cancer Mortality by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend
Hodgkin Lymphoma	Average	18	0.4	10	0.5	8	0.3
	5-Year PC		1.1		~		~
	2006	15	0.4	7	^	8	^
	2007	18	0.5	9	^	9	^
	2008	20	0.5	12	0.6	8	^
	2009	18	0.4	10	^	8	^
	2010	17	0.4	11	0.5	6	^
Non-Hodgkin Lymphoma	Average	282	6.6	155	8.5	127	5.3
	5-Year PC		3.4		13.4		-8.5
	2006	267	6.6	138	7.8	129	5.6
	2007	279	6.8	156	8.9	123	5.2
	2008	284	6.7	151	8.3	133	5.6
	2009	277	6.3	158	8.3	119	4.8
	2010	302	6.8	171	8.9	131	5.2
Mesothelioma	Average	42	1.0	31	1.8	11	0.5
	5-Year PC		-11.8		-14.4		~
	2006	46	1.2	36	2.1	10	^
	2007	41	1.0	29	1.7	12	0.5
	2008	32	0.8	23	1.3	9	^
	2009	50	1.2	35	2.0	15	0.6
	2010	43	1.0	33	1.8	10	^
Myeloma	Average	149	3.6	84	4.7	65	2.7
	5-Year PC		-12.7		6.3		-31.3
	2006	150	3.7	69	4.0	81	3.5
	2007	168	4.1	109	6.2	59	2.6
	2008	145	3.5	89	4.9	56	2.4
	2009	140	3.3	74	4.0	66	2.7
	2010	142	3.2	81	4.3	61	2.4
Oral Cavity and Pharynx	Average	99	2.3	69	3.5	30	1.3
	5-Year PC		-8.2		-11.6		-6.1
	2006	95	2.3	68	3.7	27	1.2
	2007	94	2.2	70	3.8	24	1.0
	2008	104	2.5	75	3.9	29	1.3
	2009	103	2.3	60	3.0	43	1.7
	2010	98	2.1	70	3.2	28	1.1

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Table 2: Oregon Cancer Mortality by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend
Respiratory System	Average	2,110	50.4	1,117	59.8	992	43.2
	5-Year PC		-11.3		-11.7		-11.8
	2006	2,149	54.0	1,126	63.9	1,023	46.7
	2007	2,064	50.4	1,093	60.0	971	43.0
	2008	2,125	50.6	1,147	61.3	978	42.2
	2009	2,111	49.4	1,109	57.9	1,002	43.2
	2010	2,100	47.9	1,112	56.5	988	41.2
Larynx	Average	32	0.8	24	1.3	8	0.4
	5-Year PC		13.6		29.4		^
	2006	25	0.6	20	1.1	5	^
	2007	29	0.7	22	1.2	7	^
	2008	35	0.8	21	1.1	14	0.6
	2009	41	0.9	29	1.6	12	0.5
	2010	31	0.7	28	1.4	3	^
Lung and Bronchus	Average	2,070	49.5	1,089	58.4	981	42.7
	5-Year PC		-11.5		-12.3		-11.4
	2006	2,114	53.2	1,100	62.5	1,014	46.3
	2007	2,031	49.6	1,069	58.7	962	42.6
	2008	2,081	49.6	1,120	59.9	961	41.5
	2009	2,062	48.2	1,078	56.2	984	42.4
	2010	2,062	47.0	1,079	54.8	983	41.0
Skin (Excludes Basal and Squamous)	Average	172	4.1	108	5.7	64	2.8
	5-Year PC		6.7		1.0		17.5
	2006	163	4.1	111	6.3	52	2.5
	2007	158	3.7	100	5.3	58	2.4
	2008	158	3.7	98	5.1	60	2.6
	2009	191	4.4	107	5.7	84	3.6
	2010	192	4.4	124	6.4	68	2.9
Melanoma of the Skin	Average	133	3.2	81	4.2	52	2.3
	5-Year PC		11.2		5.4		20.4
	2006	118	3.0	77	4.3	41	2.0
	2007	123	2.8	76	3.9	47	2.0
	2008	129	3.1	78	4.1	51	2.3
	2009	151	3.5	83	4.3	68	2.9
	2010	146	3.3	91	4.6	55	2.4

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Table 2: Oregon Cancer Mortality by Site, Sex, and Year (2006-2010)

Primary Site	Year	Total		Male		Female	
		Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend	Annual Cancer Deaths	Rate/Current Trend
Soft Tissue including Heart	Average	63	1.5	31	1.7	32	1.4
	5-Year PC		-8.5		-9.5		-6.4
	2006	58	1.4	29	1.6	29	1.3
	2007	68	1.6	36	2.0	32	1.4
	2008	65	1.6	28	1.5	37	1.6
	2009	69	1.7	36	1.9	33	1.4
	2010	56	1.3	28	1.4	28	1.2
Urinary System	Average	375	8.8	256	14.0	119	4.9
	5-Year PC		10.5		14.3		-0.2
	2006	344	8.5	226	13.1	118	5.1
	2007	341	8.1	227	12.7	114	4.7
	2008	383	9.0	267	14.5	116	4.8
	2009	389	8.9	271	14.4	118	4.6
	2010	418	9.4	288	15.0	130	5.1
Bladder	Average	197	4.6	140	7.9	57	2.2
	5-Year PC		15.6		25.7		-8.9
	2006	170	4.2	113	6.8	57	2.4
	2007	191	4.6	133	7.5	58	2.4
	2008	200	4.7	142	8.0	58	2.3
	2009	204	4.7	153	8.4	51	1.9
	2010	222	4.9	161	8.5	61	2.2
Kidney and Renal Pelvis	Average	165	3.9	107	5.6	58	2.5
	5-Year PC		7.7		2.8		12.1
	2006	161	3.9	106	5.9	55	2.4
	2007	136	3.2	84	4.6	52	2.2
	2008	169	3.9	114	5.8	55	2.4
	2009	176	4.0	112	5.7	64	2.6
	2010	185	4.2	120	6.1	65	2.7
Miscellaneous Sites	Average	524	12.3	269	14.6	255	10.6
	5-Year PC		1.1		7.4		-6.6
	2006	477	11.8	228	13.2	249	11.0
	2007	570	13.8	300	16.8	270	11.5
	2008	511	12.1	269	14.5	242	10.1
	2009	529	11.9	275	14.3	254	10.2
	2010	532	12.0	273	14.2	259	10.3

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Table 3: Oregon Cancer Incidence and Mortality by County (2001-2010)

Table 3a

All Cancers Combined	Incidence					Mortality			
	2001-2005		2006-2010		Difference	2001-2005		2006-2010	
County	Count	Rate	Count	Rate		Count	Rate	Count	Rate
Oregon	90,378	483.1	97,493	462.3	↓	36,571	195.0	37,819	178.7
Baker	530	448.1	528	430.5		242	191.6	250	187.1
Benton	1,693	472.0	1,860	448.3		543	151.5	671	157.7
Clackamas	8,737	487.2	9,632	462.5	↓	3,282	186.6	3,611	175.3
Clatsop	1,036	472.3	1,190	495.6		461	203.4	481	200.0
Columbia	1,197	508.6	1,296	463.8	↓	522	234.8	521	195.0
Coos	2,382	528.9	2,352	479.6	↓	1,068	227.0	1,028	204.8
Crook	633	504.3	686	479.9		211	167.0	244	165.8
Curry	931	459.7	908	440.9		419	201.4	454	209.4
Deschutes	3,623	509.6	4,330	487.7		1,207	173.9	1,417	162.8
Douglas	3,534	506.9	3,484	442.6	↓	1,494	207.9	1,563	189.2
Gilliam	89	636.8	68	484.4		28	214.4	31	197.8
Grant	213	410.7	227	391.2		104	190.4	95	148.0
Harney	224	479.0	208	401.0		86	188.0	91	172.0
Hood River	476	460.2	500	432.1		190	177.1	177	149.5
Jackson	5,991	514.0	6,222	473.3	↓	2,327	192.4	2,395	175.1
Jefferson	439	407.6	459	380.4		192	192.4	214	189.1
Josephine	2,813	484.2	3,052	480.8		1,292	214.3	1,319	196.3
Klamath	1,883	486.4	1,974	464.8		784	201.4	809	189.2
Lake	274	518.6	260	456.5		114	216.4	94	161.8
Lane	8,622	476.5	9,002	442.0	↓	3,616	197.3	3,704	179.4
Lincoln	1,598	491.5	1,757	480.0		670	205.3	718	196.3
Linn	2,915	481.6	3,317	491.6		1,278	205.7	1,382	201.0
Malheur	690	409.7	782	439.8		267	152.5	301	164.7
Marion	7,153	487.4	7,914	488.8		2,981	202.8	2,992	182.7
Morrow	277	529.2	260	442.1	↓	106	209.7	101	175.9
Multnomah	15,517	489.4	16,127	468.2	↓	6,457	208.0	6,321	189.5
Polk	1,792	492.5	2,037	481.6		701	175.0	735	167.2
Sherman	47	389.9	63	481.5		17	131.0	25	173.2
Tillamook	779	438.4	853	442.7		342	192.1	330	167.0
Umatilla	1,635	451.4	1,749	445.3		682	188.9	719	184.8
Union	666	471.5	730	470.8		276	187.0	288	175.3
Wallowa	224	430.0	278	479.6		89	165.4	98	160.4
Wasco	777	512.5	761	467.3		314	199.5	309	181.4
Washington	8,900	451.6	10,110	432.2	↓	3,283	175.7	3,390	153.3
Wheeler	47	339.8	49	363.6		22	167.6	20	145.4
Yamhill	2,038	467.5	2,458	472.2		904	208.4	921	176.0

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

↓The rate ratio indicates that the incidence rate for 2006-2010 is significantly lower than the rate for 2001-2005 (p<0.05).

Table 3: Oregon Cancer Incidence and Mortality by County (2001-2010)

Table 3b

Breast Cancer Female	Incidence					Mortality			
	2001-2005		2006-2010		Difference	2001-2005		2006-2010	
County	Count	Rate	Count	Rate		Count	Rate	Count	Rate
Oregon	13,660	136.2	14,457	129.5	↓	2,555	24.6	2,541	21.6
Baker	76	129.1	64	102.7		12	17.0	19	25.9
Benton	283	145.6	296	135.4		37	18.0	51	21.3
Clackamas	1,436	144.8	1,537	135.7		235	24.0	279	23.9
Clatsop	146	124.1	165	132.6		33	26.0	29	22.1
Columbia	166	131.9	186	126.1		30	24.4	27	17.5
Coos	289	124.1	291	120.1		52	19.7	53	19.8
Crook	98	157.4	76	110.1	↓	14	20.9	20	26.2
Curry	107	106.6	119	115.2		17	16.3	27	21.9
Deschutes	487	128.8	603	129.5		86	22.5	91	18.5
Douglas	451	126.7	454	111.1		93	25.2	77	17.7
Gilliam	^	^	12	176.0		3	^	2	^
Grant	25	98.1	25	85.4		8	^	2	^
Harney	37	154.1	21	86.8		8	^	5	^
Hood River	67	120.6	76	126.5		19	31.4	12	17.4
Jackson	875	143.1	865	125.5	↓	152	23.2	174	24.1
Jefferson	67	129.1	66	109.0		13	25.4	8	^
Josephine	392	133.6	404	124.5		82	25.7	81	23.0
Klamath	254	130.4	234	109.9		48	24.0	64	28.4
Lake	31	115.4	36	126.5		6	^	5	^
Lane	1,271	132.3	1,386	129.5		258	25.8	234	21.0
Lincoln	236	135.1	224	113.8		57	31.3	58	28.5
Linn	382	120.6	463	130.4		80	24.2	81	21.5
Malheur	85	105.5	102	116.3		15	15.2	13	12.9
Marion	1,106	140.5	1,063	123.1	↓	217	26.8	184	20.2
Morrow	28	107.7	34	117.4		7	^	8	^
Multnomah	2,490	141.5	2,614	138.1		453	25.5	436	22.5
Polk	279	144.5	289	131.2		51	23.8	50	20.9
Sherman	^	^	^	^		1	^	2	^
Tillamook	119	128.4	128	129.7		28	29.5	15	15.1
Umatilla	226	120.9	234	117.0		49	24.9	42	20.7
Union	98	133.6	102	131.6		13	15.4	16	16.5
Wallowa	32	119.5	26	86.9		8	^	4	^
Wasco	110	144.8	103	123.0		20	24.4	19	22.2
Washington	1,569	140.8	1,765	135.3		276	25.3	291	22.2
Wheeler	^	^	^	^		1	^	2	^
Yamhill	321	139.5	384	142.2		73	29.8	60	20.9

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

↓The rate ratio indicates that the incidence rate for 2006-2010 is significantly lower than the rate for 2001-2005 ($p < 0.05$).

^Statistic not displayed due to fewer than 11 cases.

Table 3: Oregon Cancer Incidence and Mortality by County (2001-2010)

Table 3c

<i>Colorectal Cancer</i>	Incidence					Mortality			
	2001-2005		2006-2010		Difference	2001-2005		2006-2010	
County	Count	Rate	Count	Rate		Count	Rate	Count	Rate
Oregon	9,018	47.9	8,593	40.8	↓	3,348	17.7	3,288	15.5
Baker	49	39.7	45	35.1		15	11.5	32	24.0
Benton	160	43.6	157	38.0		51	14.1	43	10.1
Clackamas	888	49.9	795	38.6	↓	296	16.8	311	15.0
Clatsop	115	52.6	117	49.1		58	25.4	42	17.5
Columbia	115	49.4	139	51.4		51	22.9	52	19.9
Coos	199	42.1	189	38.3		81	16.8	82	16.8
Crook	63	49.6	58	38.2		22	17.4	22	14.2
Curry	99	47.2	79	34.4		39	18.4	43	19.1
Deschutes	339	48.4	330	37.5	↓	111	16.1	109	12.2
Douglas	375	52.4	317	40.2	↓	147	20.5	144	17.3
Gilliam	11	73.3	^	^		5	^	3	^
Grant	26	47.6	23	37.3		11	18.5	17	27.2
Harney	18	39.2	23	47.9		8	^	8	^
Hood River	48	46.2	41	34.5		12	11.6	12	11.0
Jackson	611	51.2	539	40.8	↓	214	17.5	205	14.8
Jefferson	38	35.5	42	37.3		20	20.5	16	14.2
Josephine	314	52.2	241	36.4	↓	108	17.6	89	12.8
Klamath	203	51.4	207	49.9		84	21.6	94	21.9
Lake	24	43.2	18	34.7		8	^	5	^
Lane	809	43.9	759	37.0	↓	281	15.2	302	14.6
Lincoln	196	58.7	174	46.8	↓	66	20.1	64	17.6
Linn	313	50.9	281	41.3	↓	118	18.8	104	15.1
Malheur	73	42.3	69	37.7		37	20.6	34	18.3
Marion	754	50.6	732	45.2	↓	331	22.1	271	16.4
Morrow	36	69.4	28	50.1		14	27.5	9	^
Multnomah	1,466	46.6	1,449	42.9	↓	574	18.2	555	16.5
Polk	193	50.8	211	48.6		73	17.2	54	11.8
Sherman	^	^	^	^		0	0.0	0	0.0
Tillamook	63	33.1	82	42.2		24	12.8	34	17.0
Umatilla	184	51.1	175	45.4		68	18.8	80	20.4
Union	75	51.7	76	47.4		41	27.6	34	20.0
Wallowa	27	46.9	23	35.6		5	^	11	17.3
Wasco	80	49.8	72	44.4		28	17.0	23	13.7
Washington	837	44.1	849	37.1	↓	274	14.5	303	13.4
Wheeler	^	^	^	^		3	^	1	^
Yamhill	211	47.2	234	45.4		70	16.2	80	15.3

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

↓The rate ratio indicates that the incidence rate for 2006-2010 is significantly lower than the rate for 2001-2005 (p<0.05).

^Statistic not displayed due to fewer than 11 cases.

Table 3: Oregon Cancer Incidence and Mortality by County (2001-2010)

Table 3d

Lung Cancer	Incidence					Mortality			
	2001-2005		2006-2010		Difference	2001-2005		2006-2010	
	County	Count	Rate	Count		Rate	Count	Rate	Count
Oregon	13,042	70.2	13,262	63.2	↓	10,278	55.2	10,350	49.5
Baker	83	68.0	80	60.6		72	58.4	61	46.1
Benton	176	49.6	213	51.9		136	38.4	181	43.1
Clackamas	1,193	68.8	1,197	59.0	↓	869	49.9	930	45.8
Clatsop	156	70.1	172	72.1		110	49.2	154	64.7
Columbia	195	84.1	201	76.4		171	74.2	160	61.8
Coos	414	88.3	408	80.3		365	76.8	328	64.6
Crook	101	77.8	98	62.2		71	55.3	71	47.1
Curry	180	84.5	155	69.4		121	57.1	118	52.3
Deschutes	435	61.7	493	56.5		346	49.4	384	44.6
Douglas	577	78.6	618	74.5		440	59.6	489	58.6
Gilliam	12	85.0	^	^		5	^	8	^
Grant	32	61.0	34	53.6		26	48.8	22	34.5
Harney	25	51.3	36	63.9		24	50.3	28	50.1
Hood River	60	59.2	65	57.7		60	56.8	44	39.3
Jackson	866	72.6	850	62.2	↓	667	55.7	633	46.5
Jefferson	68	61.3	62	51.4		48	44.8	61	51.1
Josephine	490	80.2	502	74.0		426	69.4	394	58.0
Klamath	263	66.3	311	69.8		225	56.7	215	48.5
Lake	39	69.0	33	55.9		26	46.3	23	38.9
Lane	1,324	73.2	1,267	61.8	↓	1,049	57.9	1,070	52.1
Lincoln	275	81.0	287	75.4		216	63.7	224	59.7
Linn	464	76.0	507	73.3		367	59.7	391	57.1
Malheur	99	58.4	98	54.1		69	40.2	70	38.6
Marion	961	66.2	1,043	64.6		807	55.5	834	51.7
Morrow	52	97.3	41	69.9		35	68.5	33	57.2
Multnomah	2,373	78.4	2,193	67.4	↓	1,802	59.5	1,701	52.7
Polk	234	64.4	242	57.1		171	45.6	184	42.8
Sherman	^	^	^	^		6	^	9	^
Tillamook	121	64.8	146	72.3		98	53.6	104	52.0
Umatilla	215	59.8	222	56.8		205	56.4	171	44.3
Union	83	57.9	84	52.7		70	47.9	69	42.8
Wallowa	22	44.9	32	50.5		19	38.3	21	33.1
Wasco	125	80.6	141	84.8		98	62.4	108	63.3
Washington	1,021	56.4	1,067	49.6	↓	803	44.3	811	38.3
Wheeler	12	81.2	^	^		10	^	4	^
Yamhill	289	67.0	337	64.6		245	56.4	242	46.6

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

↓The rate ratio indicates that the incidence rate for 2006-2010 is significantly lower than the rate for 2001-2005 (p<0.05).

^Statistic not displayed due to fewer than 11 cases.

Table 3: Oregon Cancer Incidence and Mortality by County (2001-2010)

Table 3e

Melanoma of Skin	Incidence					Mortality			
	2001-2005		2006-2010		Difference	2001-2005		2006-2010	
	Count	Rate	Count	Rate		Count	Rate	Count	Rate
Oregon	4,580	24.7	5,365	25.9	↑	605	3.2	667	3.2
Baker	^	^	24	21.1		1	^	5	^
Benton	92	25.1	128	29.9		10	^	10	^
Clackamas	500	27.2	645	31.5	↑	55	3.0	70	3.3
Clatsop	35	17.2	51	23.3		8	^	6	^
Columbia	54	21.9	77	28.0		8	^	6	^
Coos	99	25.5	79	16.2	↓	15	3.6	18	3.9
Crook	31	27.3	47	37.6		6	^	4	^
Curry	37	22.7	25	12.5		4	^	6	^
Deschutes	234	33.0	321	36.3		27	3.9	44	4.8
Douglas	227	36.0	239	34.7		20	3.0	27	3.5
Gilliam	^	^	^	^		3	^	2	^
Grant	^	^	15	27.8		4	^	2	^
Harney	^	^	15	31.1		1	^	1	^
Hood River	27	25.5	29	24.9		1	^	0	0.0
Jackson	309	28.7	356	29.0		46	4.0	55	4.0
Jefferson	19	17.3	25	20.4		6	^	4	^
Josephine	114	22.2	134	24.5		30	5.7	32	5.1
Klamath	49	13.6	66	15.7		10	^	13	3.6
Lake	^	^	13	25.2		4	^	2	^
Lane	426	24.0	332	17.0	↓	63	3.4	54	2.8
Lincoln	53	19.5	82	26.4		8	^	10	^
Linn	126	21.4	151	23.9		23	3.9	27	4.0
Malheur	20	12.1	19	11.3		3	^	7	^
Marion	369	25.2	443	27.8		41	2.8	50	3.1
Morrow	11	23.3	^	^		0	0.0	1	^
Multnomah	804	23.8	915	25.4		92	2.8	85	2.4
Polk	93	26.4	111	28.5		8	^	16	3.7
Sherman	0	0.0	0	0.0		0	0.0	0	0.0
Tillamook	28	18.0	57	31.5	↑	8	^	6	^
Umatilla	55	15.2	90	23.1	↑	11	3.0	20	5.2
Union	24	18.0	27	16.8		2	^	5	^
Wallowa	^	^	12	25.8		1	^	2	^
Wasco	39	28.8	36	23.1		8	^	5	^
Washington	566	26.3	687	27.9		62	3.1	57	2.4
Wheeler	^	^	^	^		0	0.0	0	0.0
Yamhill	91	20.9	98	19.0		16	3.7	15	3.1

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

↓The rate ratio indicates that the incidence rate for 2006-2010 is significantly lower than the rate for 2001-2005 (p<0.05).

↑The rate ratio indicates that the incidence rate for 2006-2010 is significantly higher than the rate for 2001-2005 (p<0.05).

^Statistic not displayed due to fewer than 11 cases.

Table 3: Oregon Cancer Incidence and Mortality by County (2001-2010)

Table 3f

Prostate Cancer	Incidence					Mortality			
	2001-2005		2006-2010			2001-2005		2006-2010	
	Count	Rate	Count	Rate	Difference	Count	Rate	Count	Rate
Oregon	13,210	155.3	14,077	139.3	↓	2,110	28.2	2,108	24.4
Baker	87	146.1	84	124.6		23	43.6	19	33.1
Benton	331	208.3	299	150.4	↓	30	21.8	42	24.3
Clackamas	1,221	151.3	1,349	133.4	↓	193	29.1	183	22.6
Clatsop	160	151.8	172	141.3		24	26.0	38	37.8
Columbia	157	140.7	153	105.3	↓	31	35.5	26	24.9
Coos	389	171.3	415	163.2		44	20.7	48	21.1
Crook	112	179.1	111	134.7	↓	9	^	16	23.1
Curry	158	151.6	111	99.1	↓	34	33.1	25	23.4
Deschutes	700	200.8	787	173.8	↓	64	22.9	86	24.4
Douglas	532	150.8	449	110.3	↓	83	26.1	86	23.3
Gilliam	13	195.5	^	^		3	^	1	^
Grant	46	173.5	45	137.9		9	^	6	^
Harney	43	171.8	41	150.5		5	^	5	^
Hood River	99	214.3	74	131.9	↓	10	^	11	24.4
Jackson	960	174.7	920	142.7	↓	143	27.1	127	21.0
Jefferson	71	122.8	65	102.9		10	^	18	48.4
Josephine	417	143.2	426	130.2		89	33.1	85	27.6
Klamath	284	146.8	269	119.4	↓	41	24.5	45	23.7
Lake	45	153.5	46	144.0		7	^	4	^
Lane	1,294	155.7	1,442	146.0		193	26.1	210	24.2
Lincoln	253	156.7	257	140.3		28	22.0	32	20.2
Linn	452	160.2	452	140.0	↓	67	25.3	80	27.8
Malheur	123	152.6	151	169.4		17	22.8	20	24.5
Marion	1,051	163.7	1,210	162.6		173	29.1	177	26.8
Morrow	41	145.2	57	189.3		2	^	10	^
Multnomah	1,832	137.9	1,969	128.4	↓	382	33.2	315	25.5
Polk	313	189.8	367	181.7		47	27.5	45	23.6
Sherman	11	162.1	13	194.1		3	^	1	^
Tillamook	122	135.1	115	115.9		18	27.6	23	27.7
Umatilla	265	155.0	273	141.0		38	26.4	37	22.2
Union	119	178.5	124	156.6		24	39.4	14	20.9
Wallowa	48	173.6	58	181.8		15	60.3	6	^
Wasco	119	163.6	133	157.7		12	18.6	19	23.5
Washington	1,089	133.8	1,299	127.6		183	27.6	194	24.0
Wheeler	11	158.4	^	^		3	^	1	^
Yamhill	242	125.4	318	127.9		53	30.2	53	23.2

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

↓The rate ratio indicates that the incidence rate for 2006-2010 is significantly lower than the rate for 2001-2005 (p<0.05).

^Statistic not displayed due to fewer than 11 cases.

Technical Section

TECHNICAL NOTES

To understand the data provided in *Cancer in Oregon*, it is important to understand the sources of data, collection methods, data quality, and the significance of reported measures. The following information provides background for understanding and interpreting the data contained in this report.

DATA SOURCES

Oregon Incidence Data

All cancer incidence data were obtained directly from the Oregon State Cancer Registry (OSCaR). Reportable diagnoses include all malignant neoplasms diagnosed beginning January 1, 1996, that are *in situ* or invasive with the following exceptions: basal and squamous cell carcinoma of the skin (except of genitalia), and carcinoma *in situ* of the cervix. In addition, beginning with cases diagnosed January 1, 2004, benign brain and central nervous system tumors also became reportable, though they are not included in total incidence counts. (See Appendix A – Reportable Incidence Cases.)

By law, all reportable cancers and benign brain and CNS tumors diagnosed or treated in Oregon must be reported to OSCaR by the patient's physician. In practice, most of the cases included in this report were reported by hospital cancer registrars who are trained to collect and report cases according to national standards. Since cancer reporting started in Oregon in 1996, 89% of new cancer diagnoses have come from hospitals, 9% from physician offices, and 1% were identified from review of death certificates. The remaining cases were identified by review of pathology reports from laboratories or by autopsy. Many of the physician office cases were initially identified through follow-up on laboratory reports and death certificates.

The majority of cancer diagnoses reported to OSCaR reflect the first primary cancer diagnosed for the patient. However, nearly 20% of the cancer diagnoses occur in individuals with a previous cancer diagnosis.

Cancer data presented in this report follow nationally accepted standards for groupings of site categories for analysis. Cancer groupings for analysis are classified using the National Cancer Institute's SEER Program SEER Site Recodes. (Please see Appendix C–SEER Site Recodes, Incidence.) The majority of neoplasms are grouped by the site in which they originate. Neoplasms of the lymphatic, hematopoietic, and reticuloendothelial systems, however, are grouped by their histologies (leukemias, lymphomas, etc.) and not by the primary site where they occurred. Melanoma of the skin is a combination of both anatomic site and histological type.

Oregon Mortality Data

All cancer mortality data were obtained from Oregon's Center for Health Statistics (CHS) death certificate database. CHS is the state's repository for all vital records and is a major information source for vital statistics and health survey data about Oregonians. Because of different age groups used in age-adjusting, mortality rates in this report are not comparable to rates published by CHS.

Beginning with deaths occurring in 1999, cause of death has been classified using the tenth revision of the International Classification of Disease (ICD-10). The ICD-10 system is closely compatible with the ICD-Oncology (ICD-O) system used for reporting cancer cases, based on site of origin, whereas the ICD-9 system was not. (See Appendix D-SEER Site Recodes, Mortality, for cancer causes of death used in this report and a comparison of ICD-9 and ICD-10.)

For mortality years 1996-1998, the ICD-9 codes did not directly match ICD-O codes. Therefore, discrepancies exist for those years between CHS counts and the mortality counts reported in this publication. With the change to ICD-10 coding system in 1999, mortality coding matches exactly for most sites. However, since 2001, the Registry includes newly reportable cancers which are excluded from the CHS cancer counts: polycythaemia vera, refractory anemia and other myelodysplastic syndromes,

chronic myeloproliferative disease, and essential thrombocythaemia. (See *Appendix B—Mortality Codes for Cancer Deaths, Mortality Codes Newly Reportable in 2001* for a complete list of these causes of death; for further information see *Comparability of Cause of Death Between ICD–9 and ICD–10: Preliminary Estimates in National Vital Statistics Report*, Vol. 49, No. 2, May 18, 2001, Anderson, Minino, Hoyert, Rosenberg.)

Population Data

Population denominators used to calculate Oregon incidence and mortality rates are from the Population Estimates Branch of the US Census Bureau. Denominator data for 1996–2010 were based on the National Center for Health Statistics (NCHS) estimates of the July 2001–July 2010, United States resident population from the Bridged-race Vintage 2006 postcensal population estimate by year, county, single-year of age, bridged-race, Hispanic origin, and sex prepared under a collaborative arrangement with the US Census Bureau and available on the Internet: http://www.cdc.gov/nchs/nvss/bridged_race.htm.

Beginning with the 2000 US Census, respondents have had the option of self-ascribing more than one race. Because cancer registry data continue to be reported with ascription to a single race, it is essential to have comparable numerator data (cancer counts) and denominator data (population counts) to calculate rates. Therefore, population data for the year 2000 and forward are from the 2000 US Census bridged data set, which uses allocation probabilities developed by NCHS to assign the Census’s multiple race variables and 31 race categories to a single-race variable with four race categories. For specific information about the bridging methodology, see the NCHS website: http://www.cdc.gov/nchs/nvss/bridged_race.htm#methodology.

Screening Data

Cancer screening data were obtained from the Behavioral Risk Factor Surveillance System (BRFSS) maintained by Oregon’s Center

for Health Statistics. BRFSS is an ongoing random-digit-dialed telephone survey of adults concerning health-related behaviors. Information is used to guide Health Promotion and Disease Prevention programs. BRFSS includes questions on health behavior risk factors such as seat belt use, diet, weight control, tobacco and alcohol use, physical exercise, preventive health screening, and use of preventive and other health care services. See the Oregon BRFSS website: <http://public.health.oregon.gov/BirthDeathCertificates/Surveys/AdultBehaviorRisk/Pages/index.aspx>

National Data

National incidence and mortality data for 2009 and national cancer incidence rankings were obtained from the U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 *Incidence and Mortality Web-based Report*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Available at: www.cdc.gov/uscs.

DATA QUALITY AND CASE COMPLETENESS

Internal Data Review

When OSCaR receives reports, they are closely reviewed and edited for quality control. The accuracy and usability of OSCaR data has increased through efforts on several different levels. Registry operations and linkage projects including monthly linkage with vital statistics death information help ensure that Registry data are reviewed and corrected on many levels.

Audits. OSCaR conducts random audits of reporting hospitals and facilities across the state to assess quality and completeness of data maintained in the central registry. Hospitals are divided into groups for random selection based on hospital size. In addition, the Registry audits case-reporting completeness from hospitals anytime there is a reduction in case reporting. **Case Completeness.** Identifying missed cases through review of pathology reports and death

certificates is part of normal Registry procedure. In addition, through data sharing agreements, neighboring states supply records for Oregon residents diagnosed out of state.

Death Clearance. Death clearance is a death certificate review process used to identify additional cases by comparing cancer cases identified from the death certificate file with cases in the Registry file. Deaths due to cancers that have not been reported to the Registry are investigated by contacting the physician who certified the death. After physician inquiry is completed, cases found through the death certificate that do not have a physician report are classified as death certificate only (DCO) cases. Cases for which a response and full report are received are classified as physician office reports. Deaths due to cancer diagnosed prior to the Registry's starting date, January 1, 1996, are not added to the Registry.

Due to increased review, more death-certificate only cases were identified from 1999 to present. DCO cases differ from other cases due to increased severity of disease but are categorized as "unknown stage" due to lack of staging information.

Linkages. As a part of data quality improvement process OSCaR staff regularly conduct record linkages with various health databases. One such notable data quality effort involves assessing and correcting race misclassification for American Indian/Alaska Native patients. Through a cooperative effort between the Oregon State Cancer Registry and the Northwest Portland Area Indian Health Board (NPAIHB), a linkage is done annually with local tribal clinic registry data to determine if AI/ANs have been misclassified as another race. One-fourth of the AI/AN cases currently in the OSCaR database were identified through data linkages. In recent years, record linkages with the Social Security Death Index, National Death Index, and Indian Health Services have been conducted to identify and update survival data on patients who moved out of state and died in another state.

External Data Review

Federal funding requires that OSCaR be audited by an outside agency every five years to assess the quality and completeness of registry data. In July 2009, Macro International Inc. conducted an audit of OSCaR data. The final audit report estimated OSCaR's overall case completeness rate at 99.3%, and the overall data accuracy rate for 27 essential data elements at 97.7%. OSCaR was commended for these excellent results.

The North American Association of Central Cancer Registries (NAACCR) annually reviews cancer registries for their ability to produce complete, accurate, and timely data. The NAACCR certification program recognizes registries that meet the highest standards with a Gold or Silver Certification. OSCaR data for diagnosis year 2009 received Gold Certification. OSCaR has received gold certification for 12 of 13 years of complete data. Additional information about NAACCR certification is available on the web: http://www.naacr.org/index.asp?Col_SectionKey=11&Col_ContentID=54.

EPIDEMIOLOGICAL MEASURES

Cancer Counts

All malignant and non-malignant brain and CNS tumors diagnosed among Oregon residents are reported to OSCaR. Cases are categorized based on the International Classification of Diseases for Oncology (ICD-O) and are presented using the Surveillance, Epidemiology, and End Results (SEER) Program SEERSite recodes.

Cancer counts represent the number of primary cancers reported to OSCaR, not the number of persons with cancer. People diagnosed with more than one primary tumor count as more than one "case". About 20% of the cases reported to OSCaR occur in a person who has already been diagnosed with another cancer.

The overall number of cancers is reported in two ways - total cancers and invasive cancers. With the exception of *in situ* bladder cancers,

the invasive cancer category excludes *in situ* cancers. The total cancer category includes all cancers, regardless of stage at diagnosis, with the exception of *in situ* cervical cancer and basal and squamous cell carcinoma of the non-genital skin since they are not reported to the Registry.

The total count may exceed the sum of male and female counts due to the inclusion in the total of persons identified in case reports as hermaphrodites and transsexuals.

Cancer Rates

In analyzing Oregon’s cancer data, we looked at various measures commonly used in epidemiologic studies of cancer. One measure is a rate. Rates help compare the burden of disease across populations of various sizes. Incidence rates are calculated using the total number of new invasive primary cancers (and *in situ* bladder cancers) diagnosed in a specific time period as the numerator and the population as the denominator.

Incidence rates provide information on the frequency with which cancers occur in the population. Only invasive cancers (and *in situ* bladder cancers) are included in rate calculations. The mortality rate describes the frequency of deaths due to invasive (and *in situ* bladder) cancer. Unless otherwise noted, all rates in this report are per 100,000 population. Rates based on counts of fewer than 11 cases are considered unstable and are not displayed in tables.

Crude Rates. Crude rates are used when a summary measurement of burden is needed and there is no need to adjust for age. Since cancer risk is very dependent upon age, age-adjusted rates are more useful for comparison among regions, time periods, etc. Crude rates are not included in the tables in the annual report but are still reported for individual sites in the *FastFacts* sections.

The following population denominators were used to calculate crude rates:

Oregon’s Population

Year	Total	Male	Female
1996	3,247,111	1,604,527	1,642,584
1997	3,304,310	1,634,309	1,670,001
1998	3,352,449	1,659,190	1,693,259
1999	3,393,941	1,681,715	1,712,226
2000	3,429,708	1,701,061	1,728,647
2001	3,467,937	1,720,048	1,747,889
2002	3,513,424	1,742,298	1,771,126
2003	3,547,376	1,758,571	1,788,805
2004	3,569,463	1,769,086	1,800,377
2005	3,613,202	1,789,755	1,823,447
2006	3,670,883	1,817,766	1,853,117
2007	3,722,417	1,843,070	1,879,347
2008	3,768,748	1,865,213	1,903,535
2009	3,808,600	1,885,391	1,923,209
2010	3,838,332	1,900,035	1,938,297

Age-Adjusted Rates. Age-adjusted rates are calculated to allow comparisons between two different populations with different age distributions. Age-adjusted rates are expressed as events per 100,000 population individuals per year. All age-adjusted rates in this report are calculated using the Year 2000 standard population with 19 age groups (<1, 1-4, 5-9, 10-14, 15-19, 20-24...85+).

Cancer Trends

All trend data should be interpreted with caution. Over the years, changes in coding and collection standards have occurred, which affect the comparability of the data. In 1999, the national change from ICD-9 classification to ICD-10 changed how cause of death is recorded and how cancer mortality data correlate with cancer incidence data. In 2001, major changes affecting coding for staging and cancer reporting came into effect for cases collected by cancer registries nationwide.

Trends were calculated using one-year averages of the age-adjusted rates as endpoints. The trends are used to compare general Oregon trends with national trends based on direction (increase or decrease) and slope (rapid or slow change). This trend analysis is intended to describe broad, temporal changes of cancer rates in Oregon.

Trends are affected by a number of factors including the following:

- improved reporting from hospitals
- recent increases in treatment at outpatient facilities
- changes in reporting requirements
- changes in coding instructions
- changes in demographic characteristics of underlying populations
- random variation, and true changes in the cancer burden

All trends are based on rates per 100,000 population that are age-adjusted to the 19-age-group Year 2000 Standard Population (Census P25-1130, <http://seer.cancer.gov/stdpopulations/stdpop.19ages.html>).

Geographic Comparisons

County Comparisons. This report compares incidence and mortality rates of counties between two time periods. These analyses may help understand variations in incidence trends in a county probably because of efforts to reduce cancer burden in that county. Because some counties with small populations only have a few cases reported, rates for those counties are unstable and must be interpreted with caution.

Regional Comparisons. It is important to recognize that multiple factors influence geographic variation in cancer rates. Despite the multitude of factors influencing cancer variation by region, these maps may be used to suggest regions to target screening and prevention programs or to expand treatment facilities.

In addition to random variation, the following are also responsible for geographic variation of cancer rates:

Population Demographics. Some cancers have different rates among different racial or ethnic groups. For example, breast cancer rates are generally higher in White women and prostate cancer rates are generally higher in black men. Therefore, racial makeup of an area should be considered when evaluating regional differences.

Screening. In areas with higher cancer screening rates, more cancers will be diagnosed. For several cancers, notably cervical, breast, and colorectal, a higher percentage of early stage diagnoses associated with higher screening rates can result in more favorable prognosis for these cancers. Comparing both incidence and mortality rates is important to gain a more complete picture of regional cancer differences.

Reporting. Although OSCaR has a total case completeness rate of over 95%, cancer reporting may differ by region in terms of completeness and type of report source (hospital vs. physician office).

Software

All incidence and mortality counts were generated using SEER*Stat [Surveillance Research Program, National Cancer Institute SEER*Stat software (<http://www.seer.cancer.gov/seerstat>) Version 8.0.4, April 11, 2013]. Data were formatted for SEER*Stat using SEER Prep [Surveillance Research Program, National Cancer Institute SEER*Prep software (<http://www.seer.cancer.gov/seerprep/>) Version 2.4.5, January 2011]. Trends were calculated using age-adjusted rates and reported as an annual percent change (APC). The APC is calculated by fitting a weighted, least-squares regression line to the natural logarithm of the rates using year as a regression variable.

GLOSSARY

Age - The age of the patient is in completed years at the time of diagnosis or death.

Age-Adjusted Rate - The age-adjusted rate is “the rate that would occur if the observed age-specific rates were present in a population with an age distribution equal to that of a standard population” (Anderson RN, Rosenberg HM. Age standardization of death rates: Implementation of the Year 2000 Standard. National Vital Statistics Reports; vol. 47 no. 3. Hyattsville, Maryland: National Center for Health Statistics, 1998).

Since cancer rates vary with age and populations vary with respect to their age distribution, cancer incidence and mortality rates are age-adjusted to allow comparison of rates. In this report, age-adjusted rates are calculated by the direct method, multiplying age-specific rates by the age distribution of the 2000 United States Standard Population with 19 age groups.

Age-Specific Rate - The age-specific rate is the average annual rate per 100,000 population for a specific age group.

Annual Percent Change - The Annual Percent Change (APC), or trend, is the average percent change in the annual rate among years for the time period analyzed. This is calculated using SEER methodology.

Benign - A benign tumor has abnormal growth without cancerous behavior. It is non-malignant. A benign tumor can be life threatening because of rapid growth or its location.

Childhood Cancer - This report includes all cancers occurring in individuals under the age of 20 in the section on childhood cancer. Children’s cancer rates are usually expressed per 1,000,000 population. The International Classification of Childhood Cancer (ICCC), which emphasizes tumor morphology, is used for defining tumors occurring in children.

Confidence Interval - Confidence intervals show range of random variation. When two confidence

intervals do not overlap, the two rates are considered statistically significantly different and the difference between the two rates is more than that expected by random chance. However, with a 95% confidence interval, we expect that five times out of 100, the differences will occur by chance. With 36 counties and 20 cancer sites, we might see as many as 36 instances where the rate for a county is statistically significantly different from the state rate just by chance. Confidence intervals were calculated using SEER methodology.

Crude Rate - The crude rate is the number of events in the population, without regard to the age distribution of the population.

Ethnicity - Hispanic or Latino ethnicity is calculated separately from race and includes Mexican, Puerto Rican, Cuban, South or Central American (other than Brazil), and other specified Hispanic, Latino, or Spanish. To reduce ethnic misclassification and to improve ethnicity data, NAACCR Hispanic/Latino Identification Algorithm (NHIA)1 was used.

ICD-9 - The Ninth Revision of the International Classification of Diseases. Mortality data for years 1996-1998 are recorded using ICD-9. This classification system is not directly compatible with the ICD-O classification system used for cancer reporting.

ICD-10 - The 10th Revision of the International Classification of Diseases. Mortality data recording converted to ICD-10 beginning with death year 1999. This classification system mirrors the ICD-O system used for cancer reporting.

ICD-O-3 - ICD-O-3 is the Third Edition of the International Classification of Diseases for Oncology, a variation of the ICD system specifically designed for cancer coding. Cancer incidence is reported to the Registry using the ICD-O system. The ICD-10 cancer site classifications closely follow this system.

Incidence - Cancer incidence is the annual or average annual count of new invasive cancers and *in situ* bladder cancers. Cancer incidence is the number of new diagnoses and not the same as the number of Oregonians living with cancer.

Malignant - A tumor made up of cancer cells of a type that can spread to other parts of the body is considered malignant.

Metastatic/Distant - The most advanced stage of a cancer in which cells from the original tumor break away, travel to other parts of the body, and continue to grow. Although the cancer has spread to an additional site or sites, it is still named after the original site of the tumor. These cancers are classified as late-stage cancers.

Mortality - Cancer mortality is the annual or average annual number of deaths due to cancer.

NAACCR (North American Association of Central Cancer Registries) - NAACCR is a professional organization that develops and promotes uniform data standards for cancer registration; provides education and training; certifies population-based registries; aggregates and publishes data from central cancer registries; and promotes the use of cancer surveillance data and systems for cancer control and epidemiologic research, public health programs, and patient care to reduce the burden of cancer in North America.

NPCR (National Program of Cancer Registries) - NPCR was established at the Centers for Disease Control and Prevention by the passage of Public Law 102-515. NPCR collects information on cancer cases from registries covering 96% of the nation's population.

Prevalence - Cancer prevalence is the number of people in a specific population living with cancer.

Primary Site - The primary site is the human organ or system in which the malignancy originates.

Race - In this report, race consists of one variable with four race categories: African

American, American Indian/Alaskan Native, Asian/Pacific Islander, and White.

SEER (Surveillance, Epidemiology, and End Results) - The National Cancer Institute provides information on cancer incidence and survival in the United States through the SEER program.

Stage at Diagnosis - Stage at diagnosis describes how far a tumor has spread from its site of origin at the time of diagnosis. The cancer stages, in order of severity and spread, are *in situ*, localized, regional, and distant. Local, regional and distant stages are considered invasive. A number of cancers are also reported as unstaged (unknown stage at diagnosis). Except for *in situ* bladder cancer, *in situ* cancers are not included in the calculation of incidence rates. All reported cancers are included in the calculation of stage at diagnosis.

Appendix A-Reportable Incidence Cases

Comprehensive ICD-9-CM Casefinding Code List for Reportable Tumors (Effective Date: 1/1/2010)	
ICD-9-CM Code [^]	Explanation of Code
140.0 – 209.36	Malignant Neoplasms
209.70 – 209.79	Secondary neuroendocrine tumors
225.0 – 225.9	Benign neoplasm of brain and spinal cord neoplasm
227.3 – 227.4	Benign neoplasm of pituitary gland, craniopharyngeal duct (pouch) and pineal gland
227.9	Benign neoplasm; endocrine gland, site unspecified
228.02	Hemangioma; of intracranial structures
228.1	Lymphangioma, any site
230.0 – 234.9	Carcinoma in situ*
236.0	Endometrial stroma, low grade
237.0 – 237.9	Neoplasm of uncertain behavior [borderline] of endocrine glands and nervous system
238.4	Polycythemia vera
238.6 – 238.79	Other lymphatic and hematopoietic tissues
239.6 – 239.89	Neoplasms of unspecified nature
273.2	Other paraproteinemias
273.3	Macroglobulinemia
288.3	Eosinophilia
288.4	Hemophagocytic syndromes
795.06	Papanicolaou smear of cervix with cytologic evidence of malignancy
795.16	Papanicolaou smear of vagina with cytologic evidence of malignancy
796.76	Papanicolaou smear of anus with cytologic evidence of malignancy
V10.0 – V10.91	Personal history of malignancy
V12.41	Personal history of benign neoplasm of the brain

Exclusions: Basal/Squamous cell carcinoma of skin, except of genitalia, and *in situ carcinoma of cervix uteri and PIN are NOT reportable. Note: VIN 3, VAIN 3, AIN 3 (squamous intraepithelial neoplasia Grade 3) and, juvenile astrocytoma, pilocytic astrocytoma, and piloid astrocytoma are reportable to the Oregon State Cancer Registry.

[^] International Classification of Diseases, Ninth Revision, Clinical Modification, 2009.

Appendix B–Mortality Codes for Cancer Deaths

Mortality Codes Newly Reportable in 2001

ICD-9	ICD-O Histology (Site C42.1)	ICD-10	Added to Miscellaneous Mortality Category
238.4 207.1	9950/3	D45.0	Polycythemia vera
284.9 238.7	9980/3 9982/3 9983/3 9984/3 9985/3 9986/3 9987/3 9989/3	D46.0	Myelodysplastic syndrome
238.7	9960/3 9961/3	D47.1	Chronic myeloproliferative disease (myelofibrosis with myeloid metaplasia, myeloproliferative disease, NOS, myelosclerosis (megakaryocytic) with myeloid metaplasia)
238.7	9962/3	D47.3	Essential (hemorrhagic) thrombocytopenia (idiopathic hemorrhagic thrombocytopenia)

Appendix C–SEER Site Recodes, Incidence

SEER Site Recode for Incidence, ICD-O-3 Definition

Site Group	ICD-O-3 Site	ICD-O-3 Histology (Type)	Recode	
Oral Cavity and Pharynx				
Lip	C000-C009	excluding 9050-9055, 9140, 9590-9992	20010	
Tongue	C019-C029		20020	
Salivary Gland	C079-C089		20030	
Floor of Mouth	C040-C049		20040	
Gum and Other Mouth	C030-C039, C050-C059, C060-C069		20050	
Nasopharynx	C110-C119		20060	
Tonsil	C090-C099		20070	
Oropharynx	C100-C109		20080	
Hypopharynx	C129, C130-C139		20090	
Other Oral Cavity and Pharynx	C140, C142-C148		20100	
Digestive System				
Esophagus	C150-C159		excluding 9050-9055, 9140, 9590-9992	21010
Stomach	C160-C169	21020		
Small Intestine	C170-C179	21030		
Colon and Rectum				
Colon excluding Rectum				
Cecum	C180	excluding 9050-9055, 9140, 9590-9992	21041	
Appendix	C181		21042	
Ascending Colon	C182		21043	
Hepatic Flexure	C183		21044	
Transverse Colon	C184		21045	
Splenic Flexure	C185		21046	
Descending Colon	C186		21047	
Sigmoid Colon	C187		21048	
Large Intestine, NOS	C188-C189, C260		21049	
Rectum and Rectosigmoid Junction				
Rectosigmoid Junction	C199	excluding 9050-9055, 9140, 9590-9992	21051	
Rectum	C209		21052	
Anus, Anal Canal and Anorectum	C210-C212, C218		21060	
Liver and Intrahepatic Bile Duct				
Liver	C220	excluding 9050-9055, 9140, 9590-9992	21071	
Intrahepatic Bile Duct	C221		21072	
Gallbladder	C239		21080	
Other Biliary	C240-C249		21090	
Pancreas	C250-C259		21100	
Retroperitoneum	C480		21110	
Peritoneum, Omentum and Mesentery	C481-C482		21120	
Other Digestive Organs	C268-C269, C488		21130	
Respiratory System				
Nose, Nasal Cavity and Middle Ear	C300-C301, C310-C319	excluding 9050-9055, 9140, 9590-9992	22010	

Appendix C–SEER Site Recodes, Incidence (Continued)

Larynx	C320-C329		22020
Lung and Bronchus	C340-C349		22030
Pleura	C384		22050
Trachea, Mediastinum and Other Respiratory Organs	C339, C381-C383, C388, C390, C398, C399		22060
Bones and Joints	C400-C419	excluding 9050-9055, 9140, 9590-9992	23000
Soft Tissue including Heart	C380, C470-C479, C490-C499	excluding 9050-9055, 9140, 9590-9992	24000
Skin excluding Basal and Squamous			
Melanoma of the Skin	C440-C449	8720-8790	25010
Other Non-Epithelial Skin	C440-C449	excluding 8000-8005, 8010-8046, 8050-8084, 8090-8110, 8720-8790, 9050-9055, 9140, 9590-9992	25020
Breast	C500-C509	excluding 9050-9055, 9140, 9590-9992	26000
Female Genital System			
Cervix Uteri	C530-C539	excluding 9050-9055, 9140, 9590-9992	27010
Corpus and Uterus, NOS			
Corpus Uteri	C540-C549	excluding 9050-9055, 9140, 9590-9992	27020
Uterus, NOS	C559		27030
Ovary	C569		27040
Vagina	C529		27050
Vulva	C510-C519		27060
Other Female Genital Organs	C570-C589		27070
Male Genital System			
Prostate	C619	excluding 9050-9055, 9140, 9590-9992	28010
Testis	C620-C629		28020
Penis	C600-C609		28030
Other Male Genital Organs	C630-C639		28040
Urinary System			
Urinary Bladder	C670-C679	excluding 9050-9055, 9140, 9590-9992	29010
Kidney and Renal Pelvis	C649, C659		29020
Ureter	C669		29030
Other Urinary Organs	C680-C689		29040
Eye and Orbit	C690-C699	excluding 9050-9055, 9140, 9590-9992	30000
Brain and Other Nervous System			
Brain	C710-C719	excluding 9050-9055, 9140, 9530-9539, 9590-9992	31010
Cranial Nerves Other Nervous System	C710-C719 C700-C709, C720-C729	9530-9539 excluding 9050-9055, 9140, 9590-9992	31040
Endocrine System			
Thyroid	C739	excluding 9050-9055, 9140, 9590-9992	32010
Other Endocrine including Thymus	C379, C740-C749, C750-C759		32020
Lymphoma			
Hodgkin Lymphoma			
Hodgkin - Nodal	C024, C098-C099, C111, C142, C379, C422, C770-C779	9650-9667	33011
Hodgkin - Extranodal	All other sites		33012
Non-Hodgkin Lymphoma			

Appendix C–SEER Site Recodes, Incidence (Continued)

NHL - Nodal	C024, C098,C099, C111,C142, C379,C422, C770-C779	9590-9597, 9670-9671, 9673, 9675, 9678- 9680, 9684, 9687-9691, 9695, 9698-9702, 9705, 9708-9709, 9712, 9714-9719, 9724- 9729, 9735, 9737-9738, 9811-9818, 9823, 9827, 9837	33041
NHL - Extranodal	All sites except C024, C098-C099, C111, C142, C379, C422, C770-C779	9590-9597, 9670-9671, 9673, 9675, 9678- 9680, 9684, 9687-9691, 9695, 9698-9702, 9705, 9708-9709, 9712, 9714-9719, 9724- 9729, 9735, 9737-9738	33042
	All sites except C024, C098-C099, C111, C142, C379, C420-C422, C424, C770-C779	9811-9818, 9823, 9827, 9837	
Myeloma		9731-9732, 9734	34000
Leukemia			
Lymphocytic Leukemia			
Acute Lymphocytic Leukemia		9826, 9835-9836	35011
	C420, C421, C424	9811-9818, 9837	
Chronic Lymphocytic Leukemia	C420, C421, C424	9823	35012
Other Lymphocytic Leukemia		9820, 9832-9834, 9940	35013
Myeloid and Monocytic Leukemia			
Acute Myeloid Leukemia		9840, 9861, 9865-9867, 9869, 9871-9874, 9895-9897, 9898, 9910-9911, 9920	35021
Acute Monocytic Leukemia		9891	35031
Chronic Myeloid Leukemia		9863, 9875-9876, 9945-9946	35022
Other Myeloid/Monocytic Leukemia		9860, 9930	35023
Other Leukemia			
Other Acute Leukemia		9801, 9805-9809, 9931	35041
Aleukemic, subleukemic and NOS		9733, 9742, 9800, 9831, 9870, 9948, 9963- 9964	35043
	C420, C421, C424	9827	
Mesothelioma		9050-9055	36010
Kaposi Sarcoma		9140	36020
Miscellaneous		9740-9741, 9750-9769, 9950, 9960-9962, 9965-9967, 9970-9971, 9975, 9980, 9982- 9987, 9989, 9991-9992	37000
	C760-C768, C809	excluding 9050-9055, 9140, 9590-9992	
	C420-C424		
	C770-C779		
Invalid	Site or histology code not within valid range or site code not found in this table.		99999

* This table was updated for Hematopoietic codes based on *WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues (2008)*.

^ Subject to change based on evolving ICD-O-3 coding rules.

Appendix D–SEER Site Recodes, Mortality

Cancer Causes of Death	ICD-9 - 1996-1998	ICD-10 - 1999+	Recode
All Malignant Cancers	140-208, 238.6	C00-C97	--
Oral Cavity and Pharynx			
Lip	140	C00	20010
Tongue	141	C01-C02	20020
Salivary Gland	142	C07-C08	20030
Floor of Mouth	144	C04	20040
Gum and Other Mouth	143, 145	C03, C05-C06	20050
Nasopharynx	147	C11	20060
Tonsil	146.0-146.2	C09	20070
Oropharynx	146.3-146.9	C10	20080
Hypopharynx	148	C12-C13	20090
Other Oral Cavity and Pharynx	149	C14	20100
Digestive System			
Esophagus	150	C15	21010
Stomach	151	C16	21020
Small Intestine	152	C17	21030
Colon and Rectum			
Colon excluding Rectum	153, 159.0	C18, C26.0	21040
Rectum and Rectosigmoid Junction	154.0-154.1	C19-C20	21050
Anus, Anal Canal and Anorectum	154.2-154.3, 154.8	C21	21060
Liver and Intrahepatic Bile Duct			
Liver	155.0, 155.2	C22.0, C22.2-C22.4, C22.7, C22.9	21071
Intrahepatic Bile Duct	155.1	C22.1	21072
Gallbladder	156	C23	21080
Other Biliary	156.1-156.2, 156.8-156.9	C24	21090
Pancreas	157	C25	21100
Retroperitoneum	158	C48.0	21110
Peritoneum, Omentum and Mesentery	158.8-158.9	C45.1,C48.1-C48.2	21120
Other Digestive Organs	159.8-159.9	C26.8-C26.9, C48.8	21130
Respiratory System			
Nose, Nasal Cavity and Middle Ear	160	C30-C31	22010
Larynx	161	C32	22020
Lung and Bronchus	162.2-162.5, 162.8-162.9	C34	22030
Pleura	163	C38.4,C45.0	22050
Trachea, Mediastinum and Other Respiratory Organs	162.0, 164.2-164.3, 164.8-164.9, 165	C33, C38.1-C38.3, C38.8, C39	22060
Bones and Joints	170	C40-C41	23000
Soft Tissue Include Heart	164.1, 171	C47,C49,C38.0,C45.2	24000
Skin excluding Basal and Squamous			
Melanoma of the Skin	172	C43	25010
Other Non-Epithelial Skin	173	C44, C46	25020
Breast	174-175	C50	26000
Female Genital System			
Cervix Uteri	180	C53	27010
Corpus and Uterus, NOS			
Corpus Uteri	182	C54	27020
Uterus, NOS	179	C55	27030

Appendix D–SEER Site Recodes, Mortality (Continued)

Cancer Causes of Death	ICD-9 - 1996-1998	ICD-10 - 1999+	Recode
Ovary	183	C56	27040
Vagina	184	C52	27050
Vulva	184.1-184.4	C51	27060
Other Female Genital Organs	181, 183.2-183.5, 183.8-183.9, 184.8-184.9	C57-C58	27070
Male Genital System			
Prostate	185	C61	28010
Testis	186	C62	28020
Penis	187.1-187.4	C60	28030
Other Male Genital Organs	187.5-187.9	C63	28040
Urinary System			
Urinary Bladder	188	C67	29010
Kidney and Renal Pelvis	189.0-189.1	C64-C65	29020
Ureter	189.2	C66	29030
Other Urinary Organs	189.3-189.4, 189.8-189.9	C68	29040
Eye and Orbit	190	C69	30000
Brain and Other Nervous System	191, 192	C70, C71, C72	31010
Endocrine System			
Thyroid	193	C73	32010
Other Endocrine including Thymus	164.0, 194	C37, C74-C75	32020
Lymphoma			
Hodgkin Lymphoma	201	C81	33010
Non-Hodgkin Lymphoma	200, 202.0-202.2, 202.8-202.9	C82-C85, C96.3	33040
Myeloma	203.0, 238.6	C90.0, C90.2	34000
Leukemia			
Lymphocytic Leukemia			
Acute Lymphocytic Leukemia	204	C91.0	35011
Chronic Lymphocytic Leukemia	204.1	C91.1	35012
Other Lymphocytic Leukemia	202.4, 204.2, 204.8-204.9	C91.2-C91.4, C91.7, C91.9	35013
Myeloid and Monocytic Leukemia			
Acute myeloid	205.0, 207.0, 207.2	C92.0, C92.4-C92.5, C94.0, C94.2	35021
Acute Monocytic Leukemia	206	C93.0	35031
Chronic Myeloid Leukemia	205.1	C92.1	35022
Other Myeloid/Monocytic Leukemia	205.2-205.3, 205.8-205.9, 206.1-206.2, 206.8-206.9	C92.2-C92.3, C92.7, C92.9, C93.1-C93.2, C93.7, C93.9	35023
Other Leukemia			
Other Acute Leukemia	208	C94.4, C94.5, C95.0	35041
Aleukemic, subleukemic and NOS	203.1, 207.1, 207.8, 208.1-208.2, 208.8-208.9	C90.1, C91.5, C94.1, C94.3, C94.7, C95.1, C95.2, C95.7, C95.9	35043
Mesothelioma	N/A	C45	36010
Kaposi Sarcoma	N/A	C46	36020
Miscellaneous Malignant Cancer	159.1, 195-199, 202.3, 202.5-202.6, 203.8	C26.1, C45.7+, C45.9+, C76-C80, C88, C96.0-C96.2, C96.7, C96.9, C97	37000
In Situ, Benign or Unknown Behavior Neoplasms	210-237, 238.0-238.5, 238.7-238.9, 239	D00-D48	38000

Appendix E—International Classification of Childhood Cancers (ICCC)

Site/Histology Recodes Based on ICCC

Site Group	ICD-O-3 Site	ICD-O-3 Histology (Type)	ICD-O-3 Behavior	Extended Classif	Main Classific
I Leukemias, myeloproliferative diseases, and myelodysplastic diseases					
(a) Lymphoid leukemias					
(a.1) Precursor cell leukemias	C000-C809	9835-9836	3	001	011
	C420-C421, C424	9811-9818, 9837			
(a.2) Mature B-cell leukemias	C000-C809	9826, 9832-9833, 9940	3	002	011
	C420-C421, C424	9823			
(a.3) Mature T-cell and NK cell leukemias	C000-C809	9831, 9834, 9948	3	003	011
	C420-C421, C424	9827			
(a.4) Lymphoid leukemia, NOS	C000-C809	9820	3	004	011
(b) Acute myeloid leukemias	C000-C809	9840, 9861, 9865-9867, 9869-9874, 9891, 9895-9898, 9910-9911, 9920, 9931	3	005	012
(c) Chronic myeloproliferative diseases	C000-C809	9863, 9875-9876, 9950, 9960-9964	3	006	013
(d) Myelodysplastic syndrome and other myeloproliferative diseases	C000-C809	9945-9946, 9975, 9980, 9982-9987, 9989, 9991-9992	3	007	014
(e) Unspecified and other specified leukemias	C000-C809	9800-9801, 9805-9809, 9860, 9930, 9965-9967, 9971	3	008	015
II Lymphomas and reticuloendothelial neoplasms					
(a) Hodgkin lymphomas	C000-C809	9650-9655, 9659, 9661-9665, 9667	3	009	021
(b) Non-Hodgkin lymphomas (except Burkitt lymphoma)					
(b.1) Precursor cell lymphomas	C000-C809	9727-9729	3	010	022
	C000-C419, C422-C423, C425-C809	9811-9818, 9837			
(b.2) Mature B-cell lymphomas (except Burkitt lymphoma)	C000-C809	9597, 9670-9671, 9673, 9675, 9678-9680, 9684, 9688-9691, 9695, 9698-9699, 9712, 9731-9735, 9737-9738, 9761-9762, 9764-9766, 9769, 9970	3	011	022
	C000-C419, C422-C423, C425-C809	9823			
(b.3) Mature T-cell and NK-cell lymphomas	C000-C809	9700-9702, 9705, 9708-9709, 9714, 9716-9719, 9724-9726, 9767-9768	3	012	022
	C000-C419, C422-C423, C425-C809	9827			
(b.4) Non-Hodgkin lymphomas, NOS	C000-C809	9591, 9760	3	013	022
(c) Burkitt lymphoma	C000-C809	9687	3	014	023
(d) Miscellaneous lymphoreticular neoplasms	C000-C809	9740-9742, 9750-9759	3	015	024
(e) Unspecified lymphomas	C000-C809	9590, 9596	3	016	025

Appendix E–ICCC (Continued)

III CNS and miscellaneous intracranial and intraspinal neoplasms					
(a) Ependymomas and choroid plexus tumor					
(a.1) Ependymomas	C000-C809	9383, 9391-9394	0,1,3	017	031
(a.2) Choroid plexus tumor	C000-C809	9390	0,1,3	018	031
(b) Astrocytomas	C723	9380	0,1,3	019	032
	C000-C809	9384, 9400-9411, 9420-9424, 9440-9442	0,1,3	019	032
(c) Intracranial and intraspinal embryonal tumors					
(c.1) Medulloblastomas	C000-C809	9470-9472, 9474, 9480	0,1,3	020	033
(c.2) PNET	C000-C809	9473	0,1,3	021	033
(c.3) Medulloepithelioma	C700-C729	9501-9504	0,1,3	022	033
(c.4) Atypical teratoid/rhabdoid tumor	C000-C809	9508	0,1,3	023	033
(d) Other gliomas					
(d.1) Oligodendrogliomas	C000-C809	9450, 9451, 9460	0,1,3	024	034
(d.2) Mixed and unspecified gliomas	C700-C722, C724-C729, C751, C753	9380	0,1,3	025	034
	C000-C809	9382	0,1,3	025	034
(d.3) Neuroepithelial glial tumors of uncertain origin	C000-C809	9381, 9430, 9444	0,1,3	026	034
(e) Other specified intracranial and intraspinal neoplasms					
(e.1) Pituitary adenomas and carcinomas	C000-C809	8270-8281, 8300	0,1,3	027	035
(e.2) Tumors of the sellar region (craniopharyngiomas)	C000-C809	9350-9352, 9582	0,1,3	028	035
(e.3) Pineal parenchymal tumors	C000-C809	9360-9362	0,1,3	029	035
(e.4) Neuronal and mixed neuronal-glia tumors	C000-C809	9412-9413, 9492, 9493, 9505-9507	0,1,3	030	035
(e.5) Meningiomas	C000-C809	9530-9539	0,1,3	031	035
(f) Unspecified intracranial and intraspinal neoplasms	C700-C729, C751-C753	8000-8005	0,1,3	032	036
IV Neuroblastoma and other peripheral nervous cell tumors					
(a) Neuroblastoma and ganglioneuroblastoma	C000-C809	9490, 9500	3	033	041
(b) Other peripheral nervous cell tumors	C000-C809	8680-8683, 8690-8693, 8700, 9520-9523	3	034	042
	C000-C699, C739-C768, C809	9501-9504	3	034	042
V Retinoblastoma	C000-C809	9510-9514	3	035	050

Appendix E–ICCC (Continued)

VI Renal tumors					
(a) Nephroblastoma and other nonepithelial renal tumors					
(a.1) Nephroblastoma	C000-C809	8959, 8960	3	036	061
(a.2) Rhabdoid renal tumor	C649	8963	3	037	061
(a.3) Kidney sarcomas	C000-C809	8964-8967	3	038	061
(a.4) pPNET of kidney	C649	9364	3	039	061
(b) Renal carcinomas	C649	8010-8041, 8050-8075, 8082, 8120-8122, 8130-8141, 8143, 8155, 8190-8201, 8210-8211, 8221-8231, 8240-8241, 8244-8246, 8260-8263, 8290, 8310, 8320, 8323, 8401, 8430, 8440, 8480-8490, 8504, 8510, 8550, 8560-8576	3	040	062
	C000-C809	8311-8312, 8316-8319, 8361	3	040	062
(c) Unspecified malignant renal tumors	C649	8000-8005	3	041	063
VII Hepatic tumors					
(a) Hepatoblastoma	C000-C809	8970	3	042	071
(b) Hepatic carcinomas	C220, C221	8010-8041, 8050-8075, 8082, 8120-8122, 8140-8141, 8143, 8155, 8190-8201, 8210-8211, 8230, 8231, 8240-8241, 8244-8246, 8260-8264, 8310, 8320, 8323, 8401, 8430, 8440, 8480-8490, 8504, 8510, 8550, 8560-8576	3	043	072
	C000-C809	8160-8180	3	043	072
(c) Unspecified malignant hepatic tumors	C220-C221	8000-8005	3	044	073
VIII Malignant bone tumors					
(a) Osteosarcomas	C400-C419, C760-C768, C809	9180-9187, 9191-9195, 9200	3	045	081
(b) Chondrosarcomas	C400-C419, C760-C768, C809	9210, 9220, 9240	3	046	082
	C000-C809	9221, 9230, 9241-9243	3	046	082
(c) Ewing tumor and related sarcomas of bone					
(c.1) Ewing tumor and Askin tumor of bone	C400-C419, C760-C768, C809	9260	3	047	083
	C400-C419	9365	3	047	083
(c.2) pPNET of bone	C400-C419	9363-9364	3	048	083
(d) Other specified malignant bone tumors					
(d.1) Malignant fibrous neoplasms of bone	C400-C419	8810-8811, 8823, 8830	3	049	084
	C000-C809	8812, 9262	3	049	084

Appendix E–ICCC (Continued)

(d.2) Malignant chordomas	C000-C809	9370-9372	3	050	084
(d.3) Odontogenic malignant tumors	C000-C809	9270-9275, 9280-9282, 9290, 9300-9302, 9310-9312, 9320-9322, 9330, 9340-9342	3	051	084
(d.4) Miscellaneous malignant bone tumors	C000-C809	9250, 9261	3	052	084
(e) Unspecified malignant bone tumors	C400-C419	8000-8005, 8800-8801, 8803-8805	3	053	085
IX Soft tissue and other extrasosseous sarcomas					
(a) Rhabdomyosarcomas	C000-C809	8900-8905, 8910, 8912, 8920, 8991	3	054	091
(b) Fibrosarcomas, peripheral nerve sheath tumors, and other fibrous neoplasms					
(b.1) Fibroblastic and myofibroblastic tumors	C000-C399, C440-C768, C809	8810-8811, 8813-8815, 8821, 8823, 8834-8835	3	055	092
	C000-C809	8820, 8822, 8824-8827, 9150, 9160	3	055	092
(b.2) Nerve sheath tumors	C000-C809	9540-9571	3	056	092
(b.3) Other fibromatous neoplasms	C000-C809	9491, 9580	3	057	092
(c) Kaposi sarcoma	C000-C809	9140	3	058	093
(d) Other specified soft tissue sarcomas					
(d.1) Ewing tumor and Askin tumor of soft tissue	C000-C399, C470-C759	9260	3	059	094
	C000-C399, C470-C639, C659-C768, C809	9365	3	059	094
(d.2) pPNET of soft tissue	C000-C399, C470-C639, C659-C699, C739-C768, C809	9364	3	060	094
(d.3) Extrarenal rhabdoid tumor	C000-C639, C659-C699, C739-C768, C809	8963	3	061	094
(d.4) Liposarcomas	C000-C809	8850-8858, 8860-8862, 8870, 8880-8881	3	062	094
(d.5) Fibrohistiocytic tumors	C000-C399, C440-C768, C809	8830	3	063	094
	C000-C809	8831-8833, 8836, 9251-9252	3	063	094
(d.6) Leiomyosarcomas	C000-C809	8890-8898	3	064	094
(d.7) Synovial sarcomas	C000-C809	9040-9044	3	065	094
(d.8) Blood vessel tumors	C000-C809	9120-9125, 9130-9133, 9135-9136, 9141-9142, 9161, 9170-9175	3	066	094
(d.9) Osseous and chondromatous neoplasms of soft tissue	C490-C499	9180, 9210, 9220, 9240	3	067	094
	C000-C809	9231	3	067	094
(d.10) Alveolar soft parts sarcoma	C000-C809	9581	3	068	094

Appendix E–ICCC (Continued)

(d.11) Miscellaneous soft tissue sarcomas	C000-C809	8587, 8710-8713, 8806, 8840-8842, 8921, 8982, 8990, 9373	3	069	094
(e) Unspecified soft tissue sarcomas	C000-C399, C440-C768, C809	8800-8805	3	070	095
X Germ cell tumors, trophoblastic tumors, and neoplasms of gonads					
(a) Intracranial and intraspinal germ cell tumors					
(a.1) Intracranial and intraspinal germinomas	C700-C729, C751-C753	9060-9065	0,1,3	071	101
(a.2) Intracranial and intraspinal teratomas	C700-C729, C751-C753	9080-9084	0,1,3	072	101
(a.3) Intracranial and intraspinal embryonal carcinomas	C700-C729, C751-C753	9070, 9072	0,1,3	073	101
(a.4) Intracranial and intraspinal yolk sac tumor	C700-C729, C751-C753	9071	0,1,3	074	101
(a.5) Intracranial and intraspinal choriocarcinoma	C700-C729, C751-C753	9100	0,1,3	075	101
(a.6) Intracranial and intraspinal tumors of mixed forms	C700-C729, C751-C753	9085, 9101	0,1,3	076	101
(b) Malignant extracranial and extragonadal germ cell tumors					
(b.1) Malignant germinomas of extracranial and extragonadal sites	C000-C559, C570-C619, C630-C699, C739-C750, C754-C768, C809	9060-9065	3	077	102
(b.2) Malignant teratomas of extracranial and extragonadal sites	C000-C559, C570-C619, C630-C699, C739-C750, C754-C768, C809	9080-9084	3	078	102
(b.3) Embryonal carcinomas of extracranial and extragonadal sites	C000-C559, C570-C619, C630-C699, C739-C750, C754-C768, C809	9070, 9072	3	079	102
(b.4) Yolk sac tumor of extracranial and extragonadal sites	C000-C559, C570-C619, C630-C699, C739-C750, C754-C768, C809	9071	3	080	102
(b.5) Choriocarcinomas of extracranial and extragonadal sites	C000-C559, C570-C619, C630-C699, C739-C750, C754-C768, C809	9100, 9103, 9104	3	081	102
(b.6) Other and unspecified malignant mixed germ cell tumors of extracranial and extragonadal sites	C000-C559, C570-C619, C630-C699, C739-C750, C754-C768, C809	9085, 9101-9102, 9105	3	082	102
(c) Malignant gonadal germ cell tumors					
(c.1) Malignant gonadal germinomas	C569, C620-C629	9060-9065	3	083	103

Appendix E–ICCC (Continued)

(c.2) Malignant gonadal teratomas	C569, C620-C629	9080-9084, 9090-9091	3	084	103
(c.3) Gonadal embryonal carcinomas	C569, C620-C629	9070, 9072	3	085	103
(c.4) Gonadal yolk sac tumor	C569, C620-C629	9071	3	086	103
(c.5) Gonadal choriocarcinoma	C569, C620-C629	9100	3	087	103
(c.6) Malignant gonadal tumors of mixed forms	C569, C620-C629	9085, 9101	3	088	103
(c.7) Malignant gonadal gonadoblastoma	C569, C620-C629	9073	3	089	103
(d) Gonadal carcinomas	C569, C620-C629	8010-8041, 8050-8075, 8082, 8120-8122, 8130-8141, 8143, 8190-8201, 8210-8211, 8221-8241, 8244-8246, 8260-8263, 8290, 8310, 8313, 8320, 8323, 8380-8384, 8430, 8440, 8480-8490, 8504, 8510, 8550, 8560-8573, 9000, 9014, 9015	3	090	104
	C000-C809	8441-8444, 8450-8451, 8460-8473	3	090	104
(e) Other and unspecified malignant gonadal tumors	C000-C809	8590-8671	3	091	105
	C569, C620-C629	8000-8005	3	091	105
XI Other malignant epithelial neoplasms and malignant melanomas					
(a) Adrenocortical carcinomas	C000-C809	8370-8375	3	092	111
(b) Thyroid carcinomas	C739	8010-8041, 8050-8075, 8082, 8120-8122, 8130-8141, 8190, 8200-8201, 8211, 8230, 8231, 8244-8246, 8260-8263, 8290, 8310, 8320, 8323, 8430, 8440, 8480-8481, 8510, 8560-8573	3	093	112
	C000-C809	8330-8337, 8340-8347, 8350	3	093	112
(c) Nasopharyngeal carcinomas	C110-C119	8010-8041, 8050-8075, 8082-8083, 8120-8122, 8130-8141, 8190, 8200-8201, 8211, 8230-8231, 8244-8246, 8260-8263, 8290, 8310, 8320, 8323, 8430, 8440, 8480-8481, 8500-8576	3	094	113
(d) Malignant melanomas	C000-C809	8720-8780, 8790	3	095	114
(e) Skin carcinomas	C440-C449	8010-8041, 8050-8075, 8078, 8082, 8090-8110, 8140, 8143, 8147, 8190, 8200, 8240, 8246-8247, 8260, 8310, 8320, 8323, 8390-8420, 8430, 8480, 8542, 8560, 8570-8573, 8940, 8941	3	096	115

Appendix E–ICCC (Continued)

(f.1) Carcinomas of salivary glands	C079-C089	8010-8084, 8120-8157, 8190-8264, 8290, 8310, 8313-8315, 8320-8325, 8360, 8380-8384, 8430-8440, 8452-8454, 8480-8586, 8588-8589, 8940-8941, 8983, 9000, 9010-9016, 9020, 9030	3	097	116
(f.2) Carcinomas of colon and rectum	C180, C182-C189, C199, C209, C210-C218	8010-8084, 8120-8157, 8190-8264, 8290, 8310, 8313-8315, 8320-8325, 8360, 8380-8384, 8430-8440, 8452-8454, 8480-8586, 8588-8589, 8940-8941, 8983, 9000, 9010-9016, 9020, 9030	3	098	116
(f.3) Carcinomas of appendix	C181	8010-8084, 8120-8157, 8190-8264, 8290, 8310, 8313-8315, 8320-8325, 8360, 8380-8384, 8430-8440, 8452-8454, 8480-8586, 8588-8589, 8940-8941, 8983, 9000, 9010-9016, 9020, 9030	3	099	116
(f.4) Carcinomas of lung	C340-C349	8010-8084, 8120-8157, 8190-8264, 8290, 8310, 8313-8315, 8320-8325, 8360, 8380-8384, 8430-8440, 8452-8454, 8480-8586, 8588-8589, 8940-8941, 8983, 9000, 9010-9016, 9020, 9030	3	100	116
(f.5) Carcinomas of thymus	C379	8010-8084, 8120-8157, 8190-8264, 8290, 8310, 8313-8315, 8320-8325, 8360, 8380-8384, 8430-8440, 8452-8454, 8480-8586, 8588-8589, 8940-8941, 8983, 9000, 9010-9016, 9020, 9030	3	101	116
(f.6) Carcinomas of breast	C500-C509	8010-8084, 8120-8157, 8190-8264, 8290, 8310, 8313-8315, 8320-8325, 8360, 8380-8384, 8430-8440, 8452-8454, 8480-8586, 8588-8589, 8940-8941, 8983, 9000, 9010-9016, 9020, 9030	3	102	116
(f.7) Carcinomas of cervix uteri	C530-C539	8010-8084, 8120-8157, 8190-8264, 8290, 8310, 8313-8315, 8320-8325, 8360, 8380-8384, 8430-8440, 8452-8454, 8480-8586, 8588-8589, 8940-8941, 8983, 9000, 9010-9016, 9020, 9030	3	103	116

Appendix E–ICCC (Continued)

(f.8) Carcinomas of bladder	C670-C679	8010-8084, 8120-8157, 8190-8264, 8290, 8310, 8313-8315, 8320-8325, 8360, 8380-8384, 8430-8440, 8452-8454, 8480-8586, 8588-8589, 8940-8941, 8983, 9000, 9010-9016, 9020, 9030	3	104	116
(f.9) Carcinomas of eye	C690-C699	8010-8084, 8120-8157, 8190-8264, 8290, 8310, 8313-8315, 8320-8325, 8360, 8380-8384, 8430-8440, 8452-8454, 8480-8586, 8588-8589, 8940-8941, 8983, 9000, 9010-9016, 9020, 9030	3	105	116
(f.10) Carcinomas of other specified sites	C000-069, C090-C109, C129-C179, C239-C339, C380-C399, C480-C488, C510-C529, C540-C549, C559, C570-C619, C630-C639, C659-C669, C680-C689, C700-C729, C750-C759	8010-8084, 8120-8157, 8190-8264, 8290, 8310, 8313-8315, 8320-8325, 8360, 8380-8384, 8430-8440, 8452-8454, 8480-8586, 8588-8589, 8940-8941, 8983, 9000, 9010-9016, 9020, 9030	3	106	116
(f.11) Carcinomas of unspecified site	C760-C768, C809	8010-8084, 8120-8157, 8190-8264, 8290, 8310, 8313-8315, 8320-8325, 8360, 8380-8384, 8430-8440, 8452-8454, 8480-8586, 8588-8589, 8940-8941, 8983, 9000, 9010-9016, 9020, 9030	3	107	116
XII Other and unspecified malignant neoplasms					
(a) Other specified malignant tumors					
(a.1) Gastrointestinal stromal tumor	C000-C809	8936	3	108	121
(a.2) Pancreatoblastoma	C000-C809	8971	3	109	121
(a.3) Pulmonary blastoma and pleuropulmonary blastoma	C000-C809	8972, 8973	3	110	121
(a.4) Other complex mixed and stromal neoplasms	C000-C809	8930-8935, 8950-8951, 8974-8981	3	111	121
(a.5) Mesothelioma	C000-C809	9050-9055	3	112	121
(a.6) Other specified malignant tumors	C000-C809	9110	3	113	121
	C000-C399, C470-C759	9363	3	113	121
(b) Other unspecified malignant tumors	C000-C218, C239-C399, C420-C559, C570-C619, C630-C639, C659-C699, C739-C750, C754-809	8000-8005	3	114	122

* This table was updated for Hematopoietic codes based on *WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues (2008)*.

^ Subject to change based on evolving ICD-O-3 coding rules.