

OREGON PUBLIC HEALTH DIVISION • OREGON HEALTH AUTHORITY

CANCER IN OREGON

“Down to their innate molecular core, cancer cells are hyperactive, survival-endowed, scrappy, fecund, inventive copies of ourselves.”

— Siddhartha Mukherjee, *The Emperor of All Maladies*

Cancer strikes fear in the hearts of many patients, and with reason: in 2009, 19,386 new cases of cancer were diagnosed in Oregon residents, and 7,568 Oregonians died from cancer, making cancer the leading cause of death overall.* In addition to the obvious personal toll, cancer is expensive: in 2009, 4.7 million adult hospitalizations in the U.S. were cancer-related, costing the economy \$20 billion;¹ in Oregon, 13,524 hospitalizations were cancer-related, costing more than \$520 million. This *CD Summary* presents current data on the most common cancers in Oregon and describes trends in cancer screening.

OSCaR

The Oregon State Cancer Registry (OSCaR) includes data on reportable cancers diagnosed after January 1, 1996 in Oregon residents. Reportable cancers include *in situ* and/or invasive cancers, with the exception of basal and squamous cell carcinoma of the skin (excluding genitalia). OSCaR's mission is to provide accurate data on cancer in Oregon for cancer control activities, public health policy-making and epidemiological research.

EPIDEMIOLOGY

The impact of cancer varies by sex, age and race/ethnicity. Overall, men have higher cancer incidence and mortality than women: in 2009, cancer incidence was 13% higher in men than

women, and cancer mortality was 40% higher. Cancer incidence increases with increasing age: 55% of invasive cancers are diagnosed in persons in the age group ≥ 65 years which has approximately 15% of the population.

The leading sites of cancer incidence and mortality for Oregon men and women are shown in Figures 1 and 2. Prostate cancer is the leading cancer among men, with 2,703 cases diagnosed; breast cancer is the leading cancer among women, with 2,994 new invasive cases diagnosed. Lung cancer is the third most common cancer overall in Oregon, and the leading cause of cancer death.

Breast cancer. Female breast cancer incidence in Oregon (age-adjusted incidence = 131.6 cases per 100,000 women) is slightly higher than the national rate (123.3).[†] Although significant improvements have taken place in early detection and treatment, breast cancer continues to be the second leading cause of cancer deaths in Oregon women; in 2009, 453 Oregon women died from breast cancer (mortality rate = 18.9 deaths per 100,000 women).

Prostate cancer. The incidence of prostate cancer in Oregon men (130) is slightly lower than the national rate (137.8). While many men die *with* prostate cancer rather than *from* it, 436 Oregon men died of this cancer in 2009. Prostate cancer mortality in Oregon men (24.8) was slightly higher than nationally (22).

Lung cancer. In 2009, 2,624 Oregonians were diagnosed with lung cancer (incidence = 61.6) compared to the incidence nationally (64.3). While lung cancer incidence in men has steadily declined over the years (thanks 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

Figure 1. Leading sites of cancer incidence and mortality, Oregon men, 2009

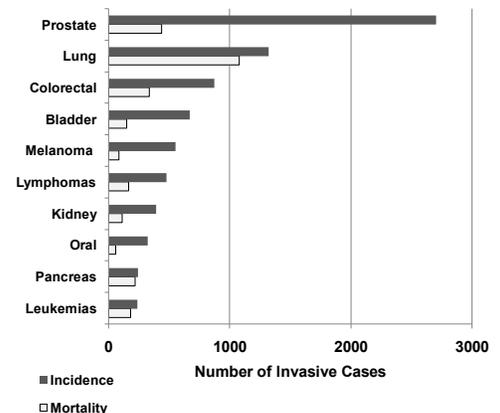
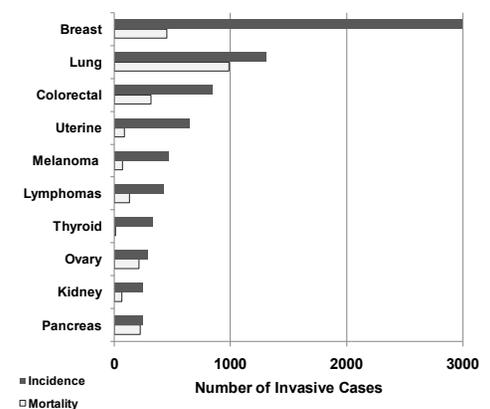


Figure 2. Leading sites of cancer incidence and mortality, Oregon women, 2009



deaths (mortality rate = 48.5 in Oregon which is the same as the national rate).

Colorectal cancer. Colorectal cancer was the 4th leading cause of cancer incidence in Oregon: 1,716 Oregonians were diagnosed with colorectal cancer in 2009. Colorectal cancer is the second leading cause of cancer death (647) in Oregon. Oregon's colorectal cancer death rate (14.9) is slightly less than the national rate (15.7)

Melanoma. In 2009, melanoma was the 5th most common cancer in Oregon. 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 (28.8 compared to 18.8 nationally). This may be partly due to improved out-patient reporting of mela-

* The data in this *CD Summary* come from: 2009 Oregon State Cancer Registry data; 2009 Oregon death certificate data; 2010 Behavioral Risk Factor Surveillance System (BRFSS); and 2009 Oregon Hospital Discharge Index data. The cancer deaths reported here are slightly higher than those reported by the Oregon Center for Health Statistics (CHS), since OSCaR includes certain blood disorders not coded as cancer by CHS.

[†] National incidence rates accessed from <http://faststats.naaccr.org/> and national death rates accessed from: <http://statecancerprofiles.cancer.gov/>



If you need this material in an alternate format, call us at 971-673-1111.

IF YOU WOULD PREFER to have your CD Summary delivered by e-mail, zap your request to cd.summary@state.or.us. Please include your full name and mailing address (not just your e-mail address), so that we can purge you from our print mailing list, thereby saving trees, taxpayer dollars, postal worker injuries, etc.

noma cases in Oregon.

OBESITY-RELATED CANCERS

Growing scientific evidence suggests that recent increases in cancer incidence in the U.S. may be associated with the increasing prevalence of obesity. Obesity has been linked to a higher risk for many cancers, including: adenocarcinoma of the esophagus, colon cancer, post menopausal breast cancer, endometrial cancer, and kidney cancer. In a recent study, it was estimated that approximately 6% of cancers could be attributed to obesity.² According to the 2010 BRFSS data, almost 28% of Oregonians are obese.

CANCER SCREENING

Mammography. Early detection through screening and cancer awareness programs has played a significant role in reducing the impact of breast cancer: only one in four women diagnosed with breast cancer had regional or distant metastasis in 2009. In 2009, the recommendation for breast cancer screening was modified, which recommends biennial screening mammography for women aged 50 to 74 years.³ According to the 2010 Oregon BRFSS, 75% of women aged 50 to 74 years had a mammogram within the past 2 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 screening. The U.S. Preventive Services Task Force recommends that adults aged 50 to 75 years be screened for colorectal cancer with

any of the following regimens: annual high-sensitivity fecal occult blood testing; sigmoidoscopy every 5 years combined with high-sensitivity fecal occult blood testing every 3 years; or screening colonoscopy at intervals of 10 years.³ In 2010, 59% of Oregonians aged 50 to 75 years reported being screened according to these recommendations. Having health insurance makes a difference here too: 78% of Oregonians without insurance have NOT been appropriately screened compared to 36% of Oregonians with insurance.

PREVENTING CANCER

Following individual and population level interventions for preventing primary cancer risk factors (avoiding carcinogens such as tobacco smoke), and implementing appropriate screening (mammography), more than half of cancer cases could be avoided.⁴

Clearly, our work is cut out for us: currently 20% of adult Oregonians still smoke. If smoking were eliminated among Oregonians, 80–90% of lung cancer cases would be prevented as would many cancers of the head and neck, bladder, and GI tract.

NEW OSCaR REPORTING RULES

During the last year, the Oregon Administrative Rules were amended to require Oregon pathology laboratories to report diagnoses of certain premalignant 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 us to track the incidence of Human Papilloma Virus (HPV)-related conditions

after the advent of HPV vaccine. In some instances, the Public Health Division may contact health care providers of reported cases to collect supplemental information about the reported cases.

FOR MORE INFORMATION

- About OSCaR and OSCaR Administrative Rules: www.healthoregon.org/oscar, or you can contact Jeff Soule at 971-673-0986, for more information.
- The Oregon Tobacco Quit line: 1-800-QUIT-NOW (1-800-784-8669) or 1-877-2NO-FUME (1-877-266-3863) or online at www.quitnow.net/oregon/.
- The Oregon Partnership for Cancer Control: <http://public.health.oregon.gov/diseasesconditions/chronicdisease/cancer/pages/opcc.aspx>

REFERENCES

1. Price RA, Stranges E, Elixhauser A. Cancer Hospitalizations for Adults, 2009: Statistical Brief #125. Healthcare Cost and Utilization Project (HCUP) Statistical Briefs. Agency for Health Care Policy and Research (US); 2006–2012 Feb. Available at: www.ncbi.nlm.nih.gov/books/NBK92614/
2. Polednak AP. Estimating the number of U.S. incident cancers attributable to obesity and the impact on temporal trends in incidence rates for obesity-related cancers. *Cancer Detection and Prevention* 2008;32:190–9.
3. U.S. Preventive Services Task Force. Screening for Breast Cancer: Recommendation Statement. Updated December 2009. Accessed <http://www.uspreventiveservicestaskforce.org/uspstf09/breastcancer/brcanrs.htm>
4. Colditz GA, Wolin KY, and Gehlert S. Applying what we know to accelerate cancer prevention. *Sci Transl Med* 2012;4:127rv4. Accessed <http://stm.sciencemag.org/content/4/127/127rv4.full.html>