

OREGON PUBLIC HEALTH DIVISION • DEPARTMENT OF HUMAN SERVICES

LUNG CANCER IN OREGON: WHERE WE ARE, AND WHAT WE CAN DO ABOUT IT

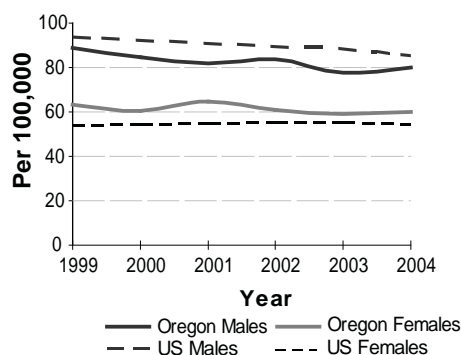
Lung cancer remains the deadliest cancer in Oregon and nationally, causing nearly 30 percent of all cancer deaths. In this issue of the *CD Summary*, we review the epidemiology of lung cancer in Oregon, touch briefly on the status of screening guidelines for this condition and review what clinicians can do to tackle this disease.

THE NUMBERS

In 2005, 2,594 new cases of lung cancer were reported to the Oregon state cancer registry. During the same time period, 2,097 Oregonians died of lung cancer, for a mortality-to-incidence ratio of 0.81. The median age at diagnosis was 70 years, and the median age at death was 71.

The age-adjusted incidence rate in 2005 was 68.1 new cancers per 100,000 Oregonians, putting the state slightly above the national average (67.4). While rates remain higher among men, this excess is driven by lung cancers among Oregon women, whose age-adjusted incidence rate, 60.3 per 100,000, is well above the national average for females (54.2), ranking the state 12th overall. By contrast, lung cancer incidence for Oregon males (79.1) is actually below the national average for men (85.3) and ranks 30th among the 50 states.

Figure 1 Oregon and US lung cancer incidence, by sex, 1999–2004



Source: Oregon State Cancer Registry and NPCR.

Since 1999, the incidence of lung cancer in men has been declining, while the incidence among women has been flat (Figure 1).

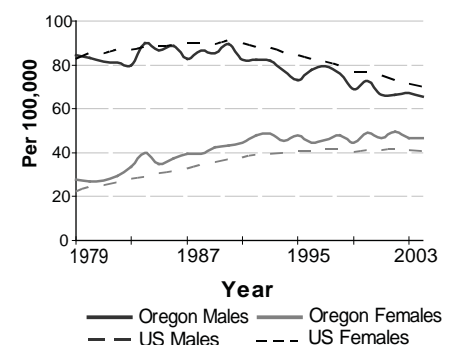
There is a similar gender disparity in lung cancer mortality, with Oregon women exceeding the national rate (45.7 vs. 40.9) and Oregon men falling below it (66.9 vs. 70.3). While lung cancer mortality among men in Oregon has been trending downward in recent years, lung cancer mortality among women, like incidence, has been flat (see Figure 2). Given the roughly 30-year latency between smoking induction and clinical onset of disease,¹ and the fact that nationally more than 40% of men and 30% of women were smokers up until the early 1980s², lung cancer will be with us for a long time to come.

There are also regional differences in the burden of lung cancer around the state. Several counties have lung cancer incidence rates significantly higher than the state average, including Columbia, Coos, Douglas, Josephine, Lincoln, Morrow, and Multnomah. All but one of these (Morrow) have significantly higher lung cancer mortality as well. While we can't necessarily tie these cancers to current smoking practices (it would be more informative to look at smoking prevalence figures from thirty or forty years ago), it is perhaps not coincidental that four of these counties (Columbia, Coos, Douglas, and Lincoln) have rates of current smoking that significantly exceed the state average.

Between 1996 and 2004, African American men had rates of lung cancer incidence that were significantly higher than non-Latino white men (127 vs. 85 per 100,000), while Native American women had significantly higher lung cancer incidence

rates than their non-Latina white counterparts (78 vs. 61 per 100,000). Not surprisingly, tobacco appears to be playing an important role here as well. Based on surveys conducted in Oregon during 2004 and 2005, African Americans (29.9%) and Native Americans (38.3%) smoke at higher rates than non-Latino whites (20.2%).

Figure 2 US and Oregon lung cancer age-adjusted mortality by sex, 1979–2004



Source: Oregon Center for Health Statistics and National Center for Health Statistics.

The lethality of the disease is sobering. At least in part, it is due to the advanced stage at which most cases are diagnosed. Here in Oregon, only 17% of cases are diagnosed at a local or *in situ* stage, while almost three-fourths of cases are diagnosed when regional or distant spread has already occurred. Another 9% are “unstaged,” typically meaning the person affected was so ill that the decision was made not to undertake procedures necessary for further staging (Figure 3, *verso*). For more information about the burden of lung cancer and other malignancies in Oregon, visit our website: <http://oregon.gov/DHS/ph/OSCAR>

WHAT ABOUT SCREENING?

Part of the solution to the high mortality from lung cancer might come from development of a safe, cost-effective strategy to screen for

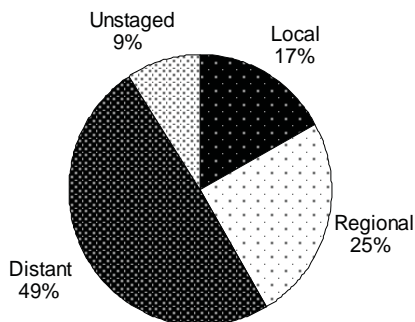


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the condition among asymptomatic people at risk. Some have touted the use of low-dose helical CT as a screening tool. Such screening can pick up tumors less than a centimeter in size. In one series of 83 patients, surgical resection of non-small cell lung cancers of this size resulted in disease-specific survival of 91% at 10 years of follow-up.³ Helical CT also identifies other, benign nubbins of tissue, but can't distinguish the malignant from the non-malignant. In fact, "abnormal" findings occur in 25-60% of scans among smokers and former smokers, many of them false positives,⁴ resulting in more than trivial morbidity from invasive diagnostic procedures.

Figure 3 Lung cancer cases by stage, 2005



Source: Oregon State Cancer Registry.

Citing the potential for significant harms from screening and the lack of sufficient evidence that any proposed screening strategy for lung cancer consistently decreases mortality, the U.S. Preventive Services Task Force

concludes that there is insufficient evidence to recommend for or against screening asymptomatic persons for lung cancer at this time.⁵ In 2007, the American College of Chest Surgeons went further, recommending against screening of asymptomatic individuals unless it is done in the context of well-designed clinical trials.⁶ A large randomized trial, the National Lung Screening Trial, is currently in progress.⁴ Stay tuned.

PREVENTING LUNG CANCER

While early detection could help reduce the burden of lung cancer, avoidance of the disease altogether is even better. Based on death certificate data, physicians implicate tobacco use in 81% of lung cancer deaths in Oregon. Much of the balance is caused by environmental exposures to radon, asbestos, arsenic, chromium, nickel, and secondhand smoke.

Although the risk of lung cancer remains elevated even after quitting, in a prospective cohort study among women, smoking cessation cut the risk by more than half after five years, and by 80% after ten years, compared to current smokers.⁷ The Oregon Tobacco Quit Line is available to support your patients' efforts to kick their addiction to tobacco (800-QUIT-NOW or, en Español, 877-2NO FUME). The Quit Line offers free information and counseling, as well as free nicotine patches or gum for eligible callers. Also, you can set up a system in your office to make

sure every patient is asked about smoking status, advised to quit, assessed for readiness to kick the habit, and if ready, assisted through appropriate pharmacotherapy, counseling or Quit Line referral. (Visit <http://oregon.gov/DHS/ph/tobacco/quitresources.shtml> for forms and information.) Newly updated *Clinical Practice Guidelines* for treating tobacco use and dependence are available online at www.surgeongeneral.gov/tobacco/#clinician.

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