

VII. Selected Sites

D. Lung Cancer

Lung cancer is Oregon's leading cause of cancer-related death and is the state's 3rd most frequently reported cancer. Tobacco use is the primary cause of lung cancer. In 2001, 82% of lung cancer deaths were linked to tobacco use in Oregon. An estimated 500,000 Oregon adults smoke cigarettes. The 2001 Oregon lung cancer mortality rate of 55.9 was 25% above the Healthy People 2010 target of 44.9 deaths per 100,000 persons.

A brief overview of Oregon's lung cancer data shows the following: (See Figure 51.)

1. In 2001, 2,478 new cases of lung cancer were diagnosed in Oregonians; all but 2 were invasive. There were 1,981 Oregonians who died of lung cancer. Age-adjusted incidence and mortality rates were higher for men than women.
2. The current five-year trend for lung cancer incidence rates is a 1% annual decrease both nationally and in Oregon. Mortality rates have been declining at 2% per year in Oregon and 1% per year nationally.
3. Oregon's age-adjusted 2001 incidence rate of 70.2 per 100,000 was 12% higher than the national rate of 62.6. The excess is due to a 27% higher rate of lung cancer among Oregon women than their national counterparts. Among men, the Oregon 2001 incidence rate was similar to the national rate. Oregon's 2001 mortality rate was similar to the 2000 national rate. However, while the mortality rate for Oregon men was 11% lower than the national rate, the 2001 lung cancer mortality rate for Oregon women was 15% higher than the national rate.
4. Of the 41 states with central registries meeting national data quality standards in 2000, Oregon ranked 26th for men and 9th for women in lung cancer incidence. Of all states, Oregon's lung cancer mortality rate ranked 29th for men but 6th for women in 2000.
5. African American men have the highest rate of lung cancer incidence and mortality. Consistent with national data, Hispanics in Oregon have the lowest lung cancer mortality rates. Asian/Pacific Islanders have the lowest lung cancer incidence rates in Oregon. Lung cancer incidence rates among American Indian/Alaskan Natives (AI/AN) in Oregon are higher than the national rates for this population. Lung cancer is the most frequently diagnosed cancer among AI/AN males.

6. In 2001, only 18% of lung cancers among Oregonians were diagnosed at an early stage. Currently, there are no effective tests to screen for lung cancer in the early stages.
7. During 1997-2001, Oregon's M/I ratio for lung cancer was 0.82, suggesting a poor prognosis for this disease. The M/I ratio was worse for men than women. Lung cancer is the leading cancer site for YPLL with 4,368 years lost annually.

Figure 51

Lung Cancer Fast Facts				
Oregon 2001				
	Total¹	Male	Female	
Cancer Incidence				
All Cases Total	2,478	1,263	1,215	
In situ	2	2	0	
Localized	407	181	226	
Regional	651	352	299	
Distant	1,177	596	581	
Unstaged	241	132	109	
Invasive Rates				
Oregon Crude	71.3	73.3	69.4	
Oregon Age-adjusted	70.2	80.4	62.8	
Oregon Annual Current Trend (5-Year)	-1.1	*-2.5	+0.6	
US Age-adjusted ²	62.6	80.8	49.6	
US Annual Trend ²	*-0.7	*-1.8	*0.7	
Cancer Mortality				
Total Deaths	1,981	1,051	930	
Mortality Rates				
Oregon Crude	57.1	61.1	53.1	
Oregon Age-adjusted	55.9	68.1	47.4	
Oregon Annual Current Trend (5-Year)	-2.1	-3.9	+0.6	
US Age-adjusted ³	56.1	76.7	41.3	
US Annual Trend ²	*-0.7	*-1.8	*+0.6	
Prognosis & Burden⁴				
Prognosis: M/I Ratio	0.82	0.85	0.79	
Burden: YPLL before age 65	4,368	2,347	2,020	

* Indicates a statistically significant trend

¹ Total counts may exceed male/female combined due to additional sex coding

² Annual Report to Nation on Cancer; 2002; Annual average age-adjusted rate 96-00

³ 2000 mortality rate calculated from CDC Wonder: <http://wonder.cdc.gov>

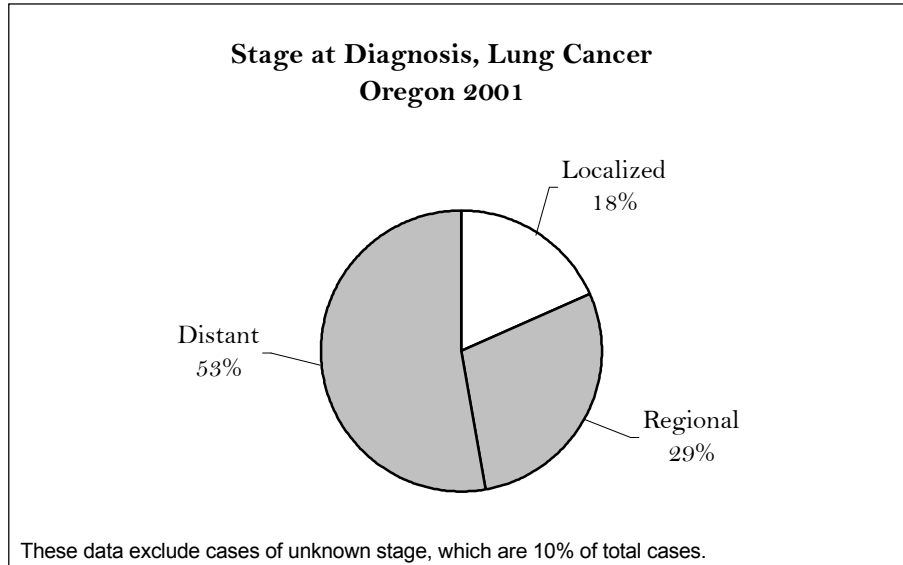
⁴ Calculations based on combined years 1997 - 2001

M/I = Mortality-to-Incidence Ratio

YPLL = Years of Potential Life Lost

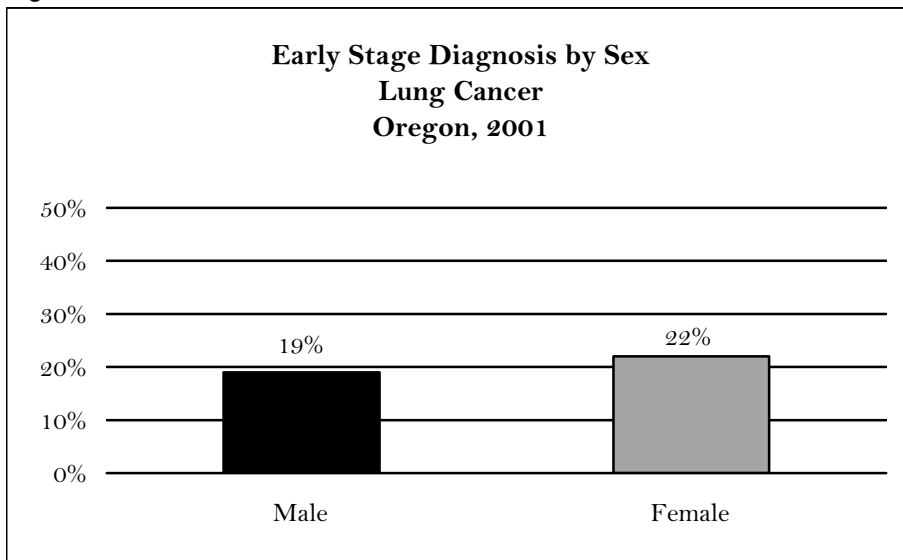
Stage at Diagnosis

Figure 52



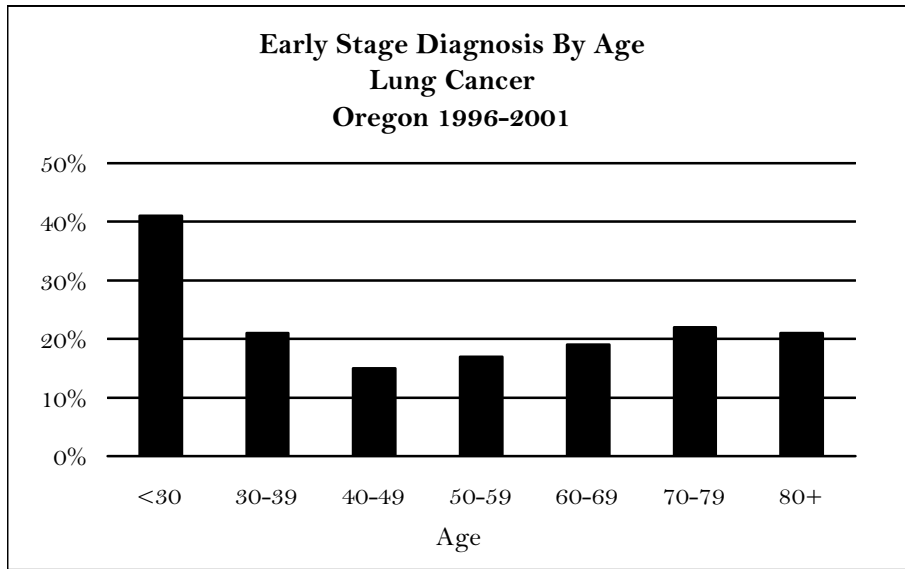
Lung cancer is usually asymptomatic in the early stages, and currently there are no generally accepted screening methods for lung cancer. Therefore, the majority of lung cancers are diagnosed at a late stage. (See Figure 52.) However, there are clinical trials in progress to evaluate spiral CT, computed tomography (an x-ray imaging technique) as a potential screening tool to detect early stage lung cancer. Late detection contributes to the fact that lung cancer has one of the poorest prognoses of all cancers.

Figure 53



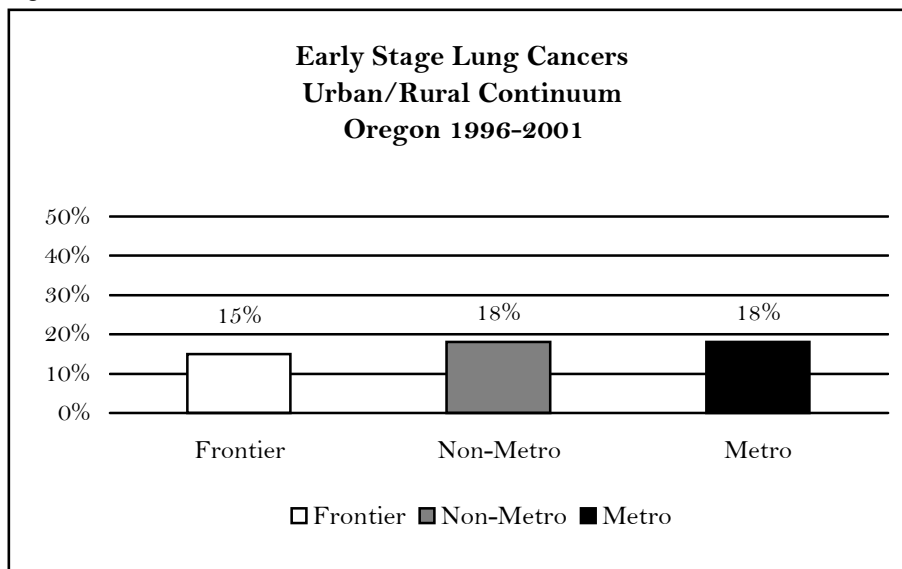
There are some consistent patterns in the percentage of early stage diagnoses for lung cancer by sex, age, and population density. Women have a higher percentage of early stage diagnoses. (See Figure 53.)

Figure 54



Oregonians diagnosed before age 40 have a higher percentage of early stage diagnoses. After age 40, the percentage of early stage diagnoses increases with age. (See Figure 54.)

Figure 55

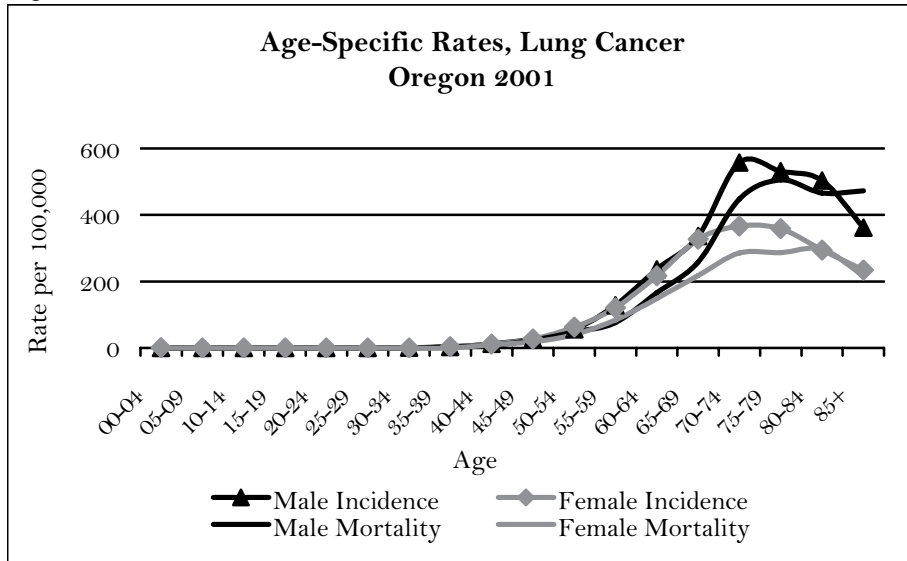


The percentage of lung cancer diagnosed at an early stage is similar for Metro and Non-Metro counties, Frontier counties have a lower percentage of early stage cases. (See Figure 55.)

Age-Specific Incidence and Mortality

Lung cancer incidence increases with age until age 75 when rates begin to taper off. Oregon's age-specific data show incidence rates higher among men than women for all age groups. Mortality rates show similar sex and age patterns. (See Figure 56.)

Figure 56

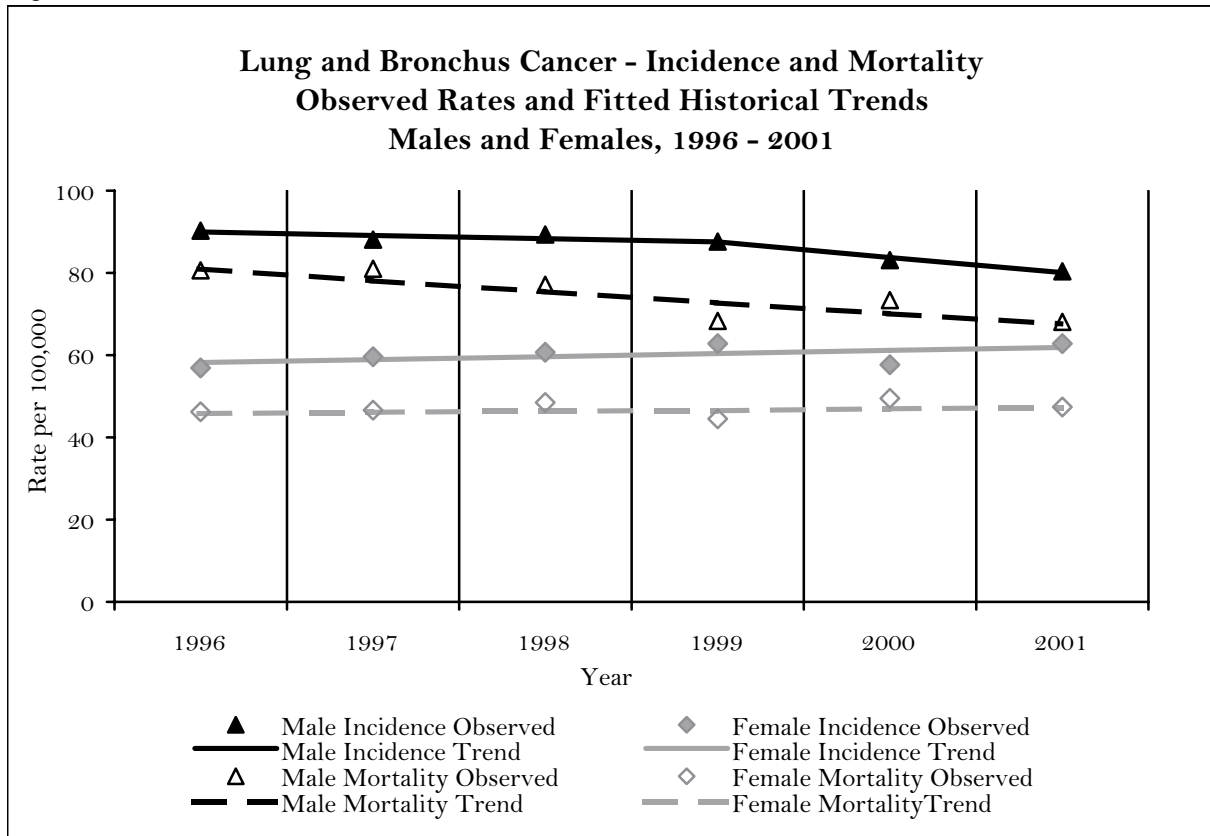


Historical Trends (1996-2001)

Lung cancer incidence for men in Oregon has been changing in the last few years. Initially, from years 1996-1999, lung cancer incidence for men decreased 1% a year. But since 1999, lung cancer incidence decreased more rapidly at 4% a year. The rates of lung cancer incidence for women show a constant, upward trend of 1% annually since 1996. (See Figure 57.)

The Annual Percent Change (APC) for lung cancer mortality for both men and women has not varied since 1996. (See Figure 57.) Mortality for Oregon men parallels incidence with a 4% annual decrease while mortality for women has been increasing 1% per year. However, lung cancer mortality is difficult to compare over this time period due to changes in coding in 1999 that significantly impact the mortality numbers for lung cancer. Please see the *Technical Section* for information about the change to ICD-10 mortality coding.

Figure 57



Regional Variation (Combined Five-Year Rates: 1997-2001)

Lung cancer incidence is higher in the northwest and southwest portion of Oregon as well as in a small area of central Oregon around Crook County. (See Figure 58.) Incidence is lower in the central and eastern parts of the state. Lung cancer mortality is higher in both the north and the south of the coastal region and, again, in the area around Crook County. (See Figure 59.) Mortality is lower in the southern and eastern portions of the state.

The high incidence and mortality in the Crook County region, as well as the northern and southern tips of the Oregon coast, may indicate areas that would benefit from targeted tobacco cessation programs.

Figure 58 Lung Cancer Incidence
1997 - 2001
Regional Variation

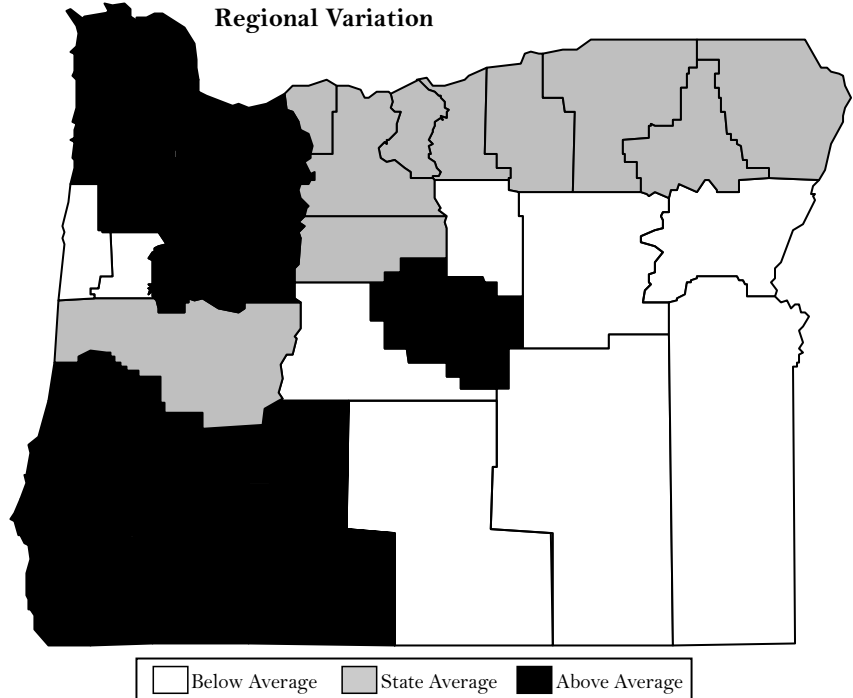


Figure 59 Lung Cancer Mortality
1997 - 2001
Regional Variation

