

VII. Selected Sites

A. Female Breast Cancer

The major risk factors for breast cancer are sex (female) and age (older). These risk factors, like heredity, cannot be controlled. Although having a first-degree relative (i.e., mother or sister) with breast cancer increases an individual's risk, over 80% of breast cancer patients have no family history of the disease. However, early detection through routine mammograms and clinical breast exams helps to decrease severity of illness and mortality rates.

As seen nationally, breast cancer is the most common cancer and the 2nd leading cause of cancer death among women in Oregon during 2001. The Oregon female breast cancer mortality rate of 26.6 for 2001 was 19% above the Healthy People 2010 target of 22.3 deaths per 100,000 women.

A brief overview of breast cancer in Oregon shows the following: (See Figure 19.)

1. In 2001, 3,372 new cases of female breast cancer were diagnosed among Oregon women. Of these, 2,761 were invasive cases. In all, 523 women died of breast cancer. (There were 16 men diagnosed with invasive breast cancer, and 7 men died of breast cancer.)
2. Current five-year trends show age-adjusted female breast cancer incidence rates have been decreasing slightly in Oregon (<1%) and increasing slightly nationally (<1%). The age-adjusted mortality rate has been declining 2% annually in Oregon and nationally.
3. Oregon's age-adjusted 2001 incidence rate was 8% higher than the average rate for 1996-2000. However, Oregon's 2001 mortality rate was similar to the 2000 national mortality rate.
4. Of the 41 states with central registries meeting national data quality standards in 2000, Oregon and Massachusetts were 4th highest in breast cancer incidence (Washington state ranked 1st in breast cancer incidence). Among all 50 states, Oregon ranked 40th for breast cancer mortality in 2000.
5. Breast is the leading cancer incidence site for all Oregon women regardless of race/ethnicity. It is the leading cause of cancer mortality for Asian/Pacific Islander and White, Hispanic women, and it is the 2nd leading cause of cancer mortality for White, Non-Hispanic, African American, and American Indian/Alaskan Native women.

6. In Oregon in 2001, 18% of breast cancers were diagnosed at the *in situ* stage, 57% were diagnosed at the localized stage, and 25% were diagnosed at later stages. (See Figure 19.)
7. During 1997-2001, Oregon's M/I ratio for female breast cancer was 0.19, suggesting a relatively good prognosis for this disease. However, breast cancer is the 2nd leading cancer site for YPLL with an average of 2,644 years lost annually.

Figure 19

Female Breast Cancer Fast Facts	
Oregon 2001	Female
Cancer Incidence	
All Cases Total	3,372
In situ	611
Localized	1,861
Regional	755
Distant	82
Unstaged	63
Invasive Rates	
Oregon Crude	157.7
Oregon Age-adjusted	145.2
Oregon Current Annual Trend (5-Year)	-0.3
US Age-adjusted ¹	135.0
US Annual Trend ¹	*+0.6
Cancer Mortality	
Total Deaths	523
Mortality Rates	
Oregon Crude	29.9
Oregon Age-adjusted	26.6
Oregon Current Annual Trend (5-Year)	-1.5
US Age-adjusted ²	26.8
US Annual Trend ¹	*-2.3
Prognosis & Burden³	
Prognosis: M/I Ratio	0.19
Burden: YPLL before age 65	2,644

* Indicates a statistically significant trend

¹ Annual Report to Nation on Cancer; 2002, Annual average age-adjusted rate 96-00

² 2000 mortality rate calculated from CDC Wonder: <http://wonder.cdc.gov>

³ Calculations based on combined years 1997 - 2001

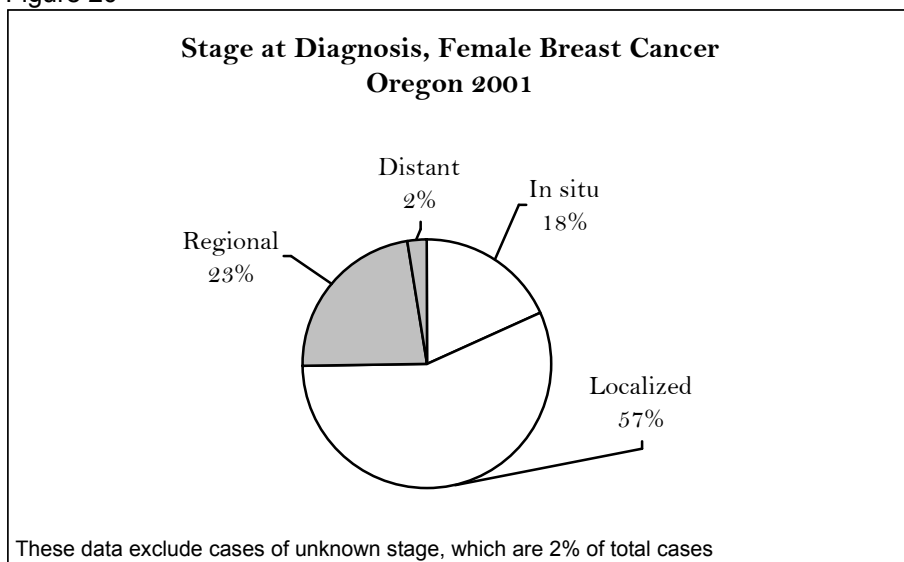
M/I = Mortality-to-Incidence Ratio

YPLL = Years of Potential Life Lost

Stage at Diagnosis

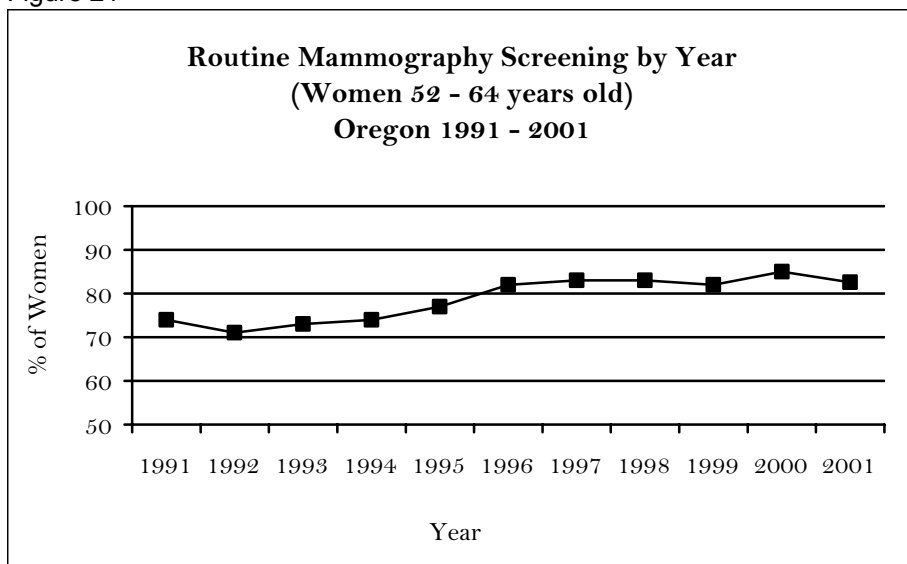
At present, the cause of most breast cancers is unknown. However, mortality can be reduced by early detection through mammography and clinical breast examination. Breast cancers detected at early stages are the most easily treated. Although there is some controversy over the benefits of mammography screening for women 40-49 years of age, there is agreement on the benefits for women ages 50 and older. Routine screening is now recommended for women starting at age 40. (See Section IV-C of *Cancer Overview* for mammography recommendations.)

Figure 20



In 2001, nearly 75% of females were diagnosed at an early stage. (See Figure 20.) Although the percentage of *in situ* cases has been increasing over the past few years, 2001 is the first year to have an overall increase in the percentage of early stage with a 3% increase from 1996.

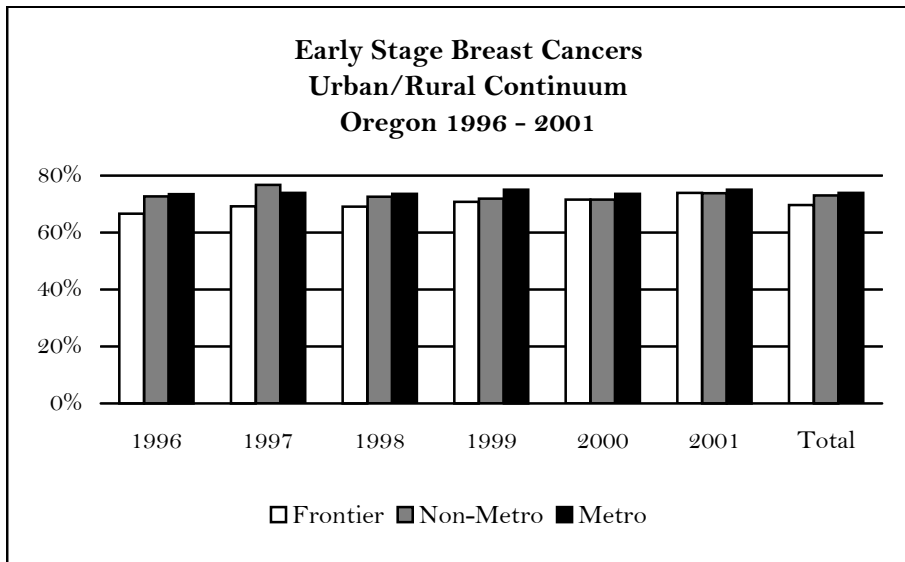
Figure 21



During the past decade, rates of routine mammographic screening (women aged 52 or older receiving a mammogram within the last two years) have been steadily increasing in Oregon. (See Figure 21.)

Where a woman lives could influence whether or not her breast cancer is diagnosed at an early, more treatable stage. Historically, there had been a higher percentage of *in situ* diagnoses in the Portland metropolitan area compared to the rest of the state. Differences in access to screening facilities and differences with transportation among urban and non-urban areas are plausible explanations. Using census categories, which divide counties into Frontier (extremely rural [<6 persons per square mile]), Non-Metro (rural), and Metro we can evaluate the percentage of early stage diagnoses by population density.

Figure 24



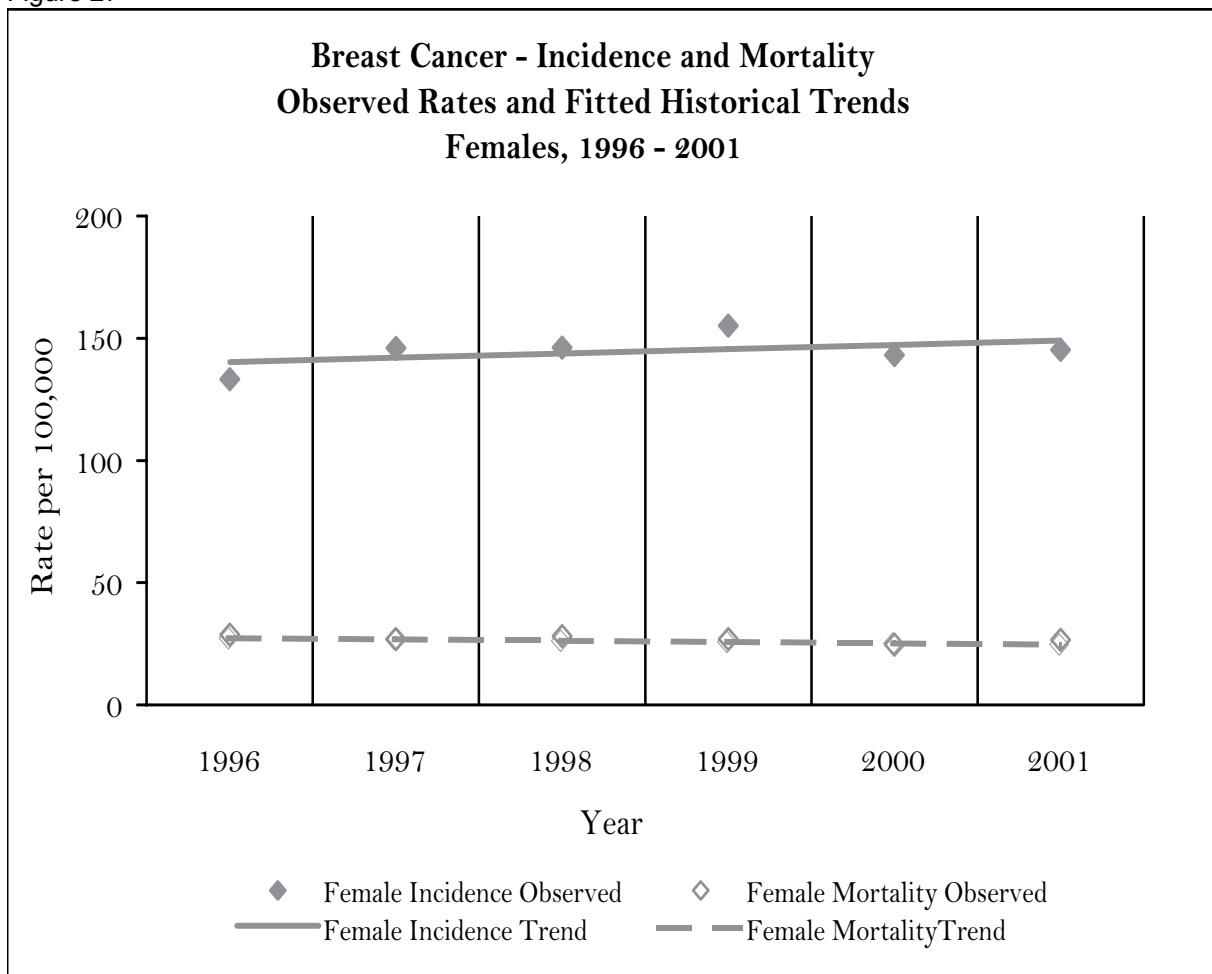
Increasing population density correlates with the increasing percentage of early stage diagnoses. (See Figure 24.) Please review *Appendix B* for a list of counties and urban/rural codes.

While there has been little improvement in the percentage of early stage breast cancer among women living in Metro and Non-Metro counties, there has been a 10% increase for women living in Frontier counties since 1996.

Historical Trends (1996-2001)

Female breast cancer incidence in Oregon has increased 2% annually while mortality has conversely decreased by 2% annually. This is consistent with national patterns of an annual increase of 1% in incidence and an annual decrease of 2% a year for the past decade. The divergence is likely due to a combination of increased screening as well as improved treatments for breast cancer. (See Figure 27.)

Figure 27



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

The area along the I-5 corridor, along with a section of south/central Oregon, have a higher rate of breast cancer incidence than the remainder of the state. (See Figure 28.) The eastern portion of the state has a lower rate of breast cancer along with the northern and southern tips of the coast.

Breast cancer mortality is higher in the northeast portion of the state, the region of Oregon around Crook County, the south central region, and the central coast region. Mortality is lower in the central and southern portions of eastern Oregon, the northern and southern tips of the coast, and the region of Deschutes County. (See Figure 29.)

The Crook County area and the northeast region have low breast cancer incidence but high mortality, which may represent areas in need of targeted screening efforts. The northern and southern tips of the Oregon coast have both low breast cancer incidence and mortality and may be of epidemiologic importance in determining the risk factors for breast cancer.

Figure 28 Female Breast Cancer Incidence
1997 - 2001
Regional Variation

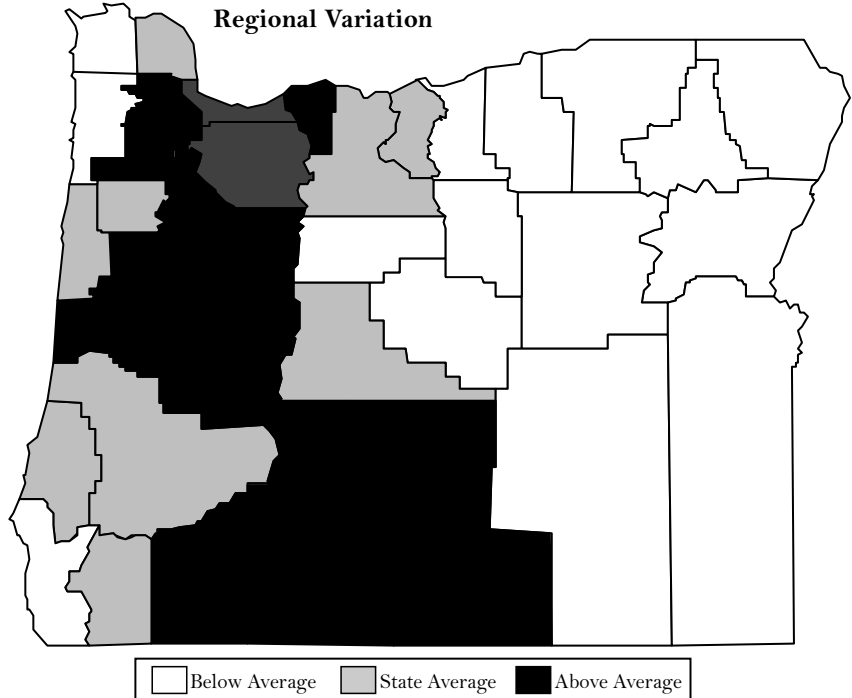


Figure 29 Female Breast Cancer Mortality
1996 - 2001
Regional Variation

