VII. Selected Sites

B. Cervical Cancer

Cancer of the cervix is associated with early onset of sexual activity and multiple sexual partners. The most important risk factor is infection by specific types of human papilloma virus (HPV), which are a group of communicable viruses that also cause genital warts. Currently, human papilloma virus infection cannot be cured, but precancerous cell growths caused by HPV infection can be treated before the development of cancer.

Cervical cancer used to be a common cause of cancer death for all women and remains a leading cause in some areas of the world. In the United States, the number of deaths due to cervical cancer have declined drastically due to the use of the Papanicolaou (Pap) test. Cervical cancer could be largely eradicated with regular, population-based Pap test screening. The Oregon cervical cancer mortality rate of 2.7 in 2001 was 35% above the Healthy People 2010 target of 2.0 per 100,000 women.

Because the numbers are low, some data included in the cervical section are five-year aggregates (1997-2001) to ensure stable descriptions. A brief overview of Oregon's cervical cancer rates shows the following: (See Figure 30.)

1. In 2001, 142 new cases of invasive cervical cancer were diagnosed in Oregon, and 51 women died due to cervical cancer. *In situ* stage diagnoses are not reportable to OSCaR because they are often indistinguishable from pre-cancerous disease.

2. Current five-year trends show age-adjusted cervical cancer incidence in Oregon has been decreasing 3% annually from 1997-2001. Nationally, cervical cancer incidence has been decreasing 6% annually for 1996-2000. These decreases are statistically significant. The mortality rates of cervical cancer in Oregon decreased 4% annually during 1997-2001.

3. Oregon's 2001 incidence rate of 8.0 per 100,000 was 9% below the national rate of 8.7 for 1996-2000. Oregon's 2001 mortality rate of 2.7 was similar to the 2000 national rate of 2.8.

4. Although cervical cancer rates are extremely low, this is the 2nd leading cancer site for White, Hispanic women in Oregon and the 3rd leading cancer site for this population nationally. This suggests a potential target population for Pap testing.

5. In 2001, 54% of cervical cancer cases were diagnosed at the localized stage, which is an increase from 49% in 2000.

6. During 1997-2001, Oregon's M/I ratio for cervical cancer was 0.29, and cervical cancer led to 447 YPLL annually. Oregon ranked 38th nationally in cervical cancer mortality, an area for public health intervention.

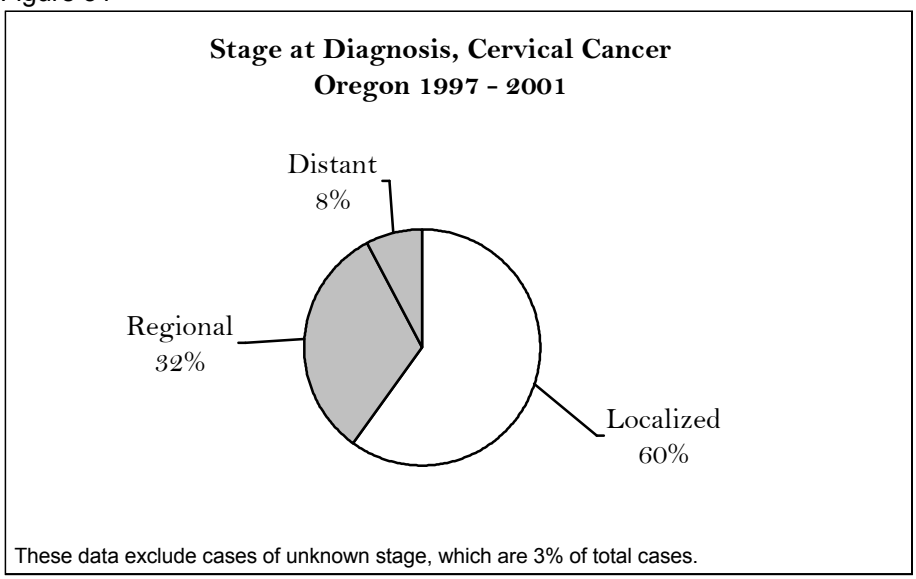
Figure 30

Cervical Cancer Fast Facts Oregon 2001	Female
Cancer Incidence	
All Cases Total	**142**
In situ	Not Reportable
Localized	77
Regional	50
Distant	11
Unstaged	4
Invasive Rates	
Oregon Crude	8.1
Oregon Age-adjusted	8.0
Oregon Current Annual Trend (5-Year)	*-3.4
US Age-adjusted[1]	8.7
US Annual Trend[1]	*-5.6
Cancer Mortality	
Total Deaths	**51**
Mortality Rates	
Oregon Crude	2.9
OregonAge-adjusted	2.7
Oregon Current Annual Trend (5-Year)	-4.0
US Age-adjusted[2]	2.8
US Annual Trend	n/a
Prognosis & Burden[3]	
Prognosis: M/I Ratio	0.29
Burden: YPLL before age 65	447

* Indicates a statistically significant trend
[1] Calculated using 1996 - 2000 SEER 9 Registry Rate
[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

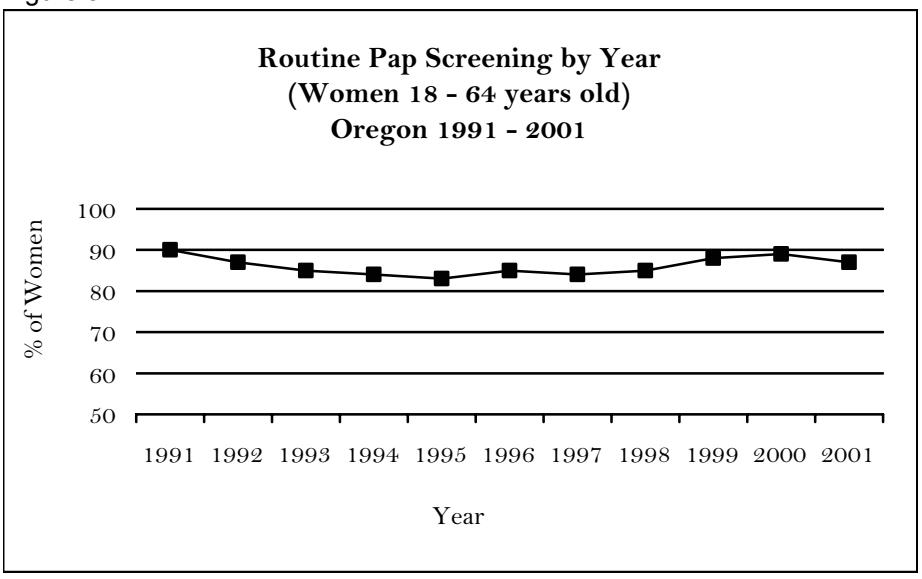
Stage at Diagnosis

Figure 31



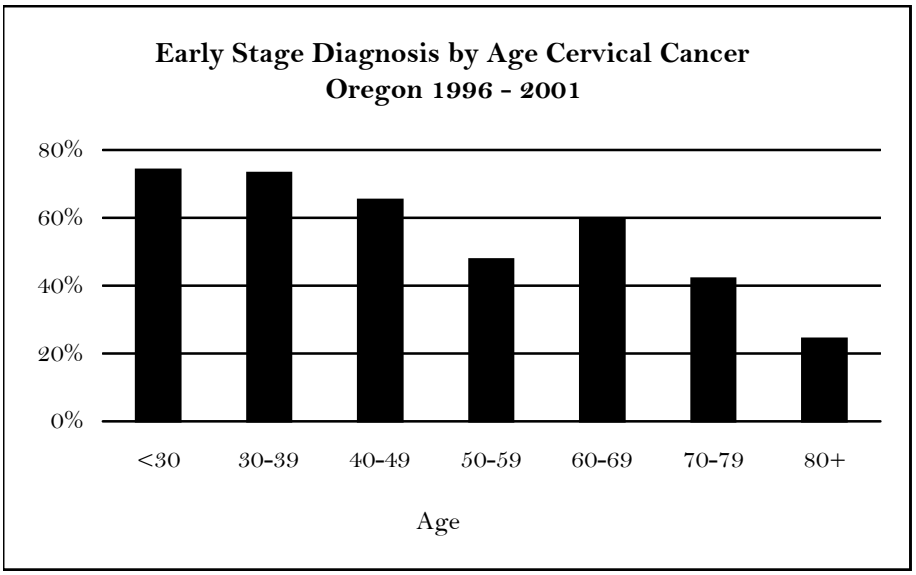
Although OSCaR does not collect information on precancerous conditions or carcinoma *in situ* for cervical cancers, it does collect stage at diagnosis of invasive cervical cancer. The percentage of early stage (localized) diagnoses ranges from 50-60% annually with a current five-year average of 60%. (See Figure 31.)

Figure 32



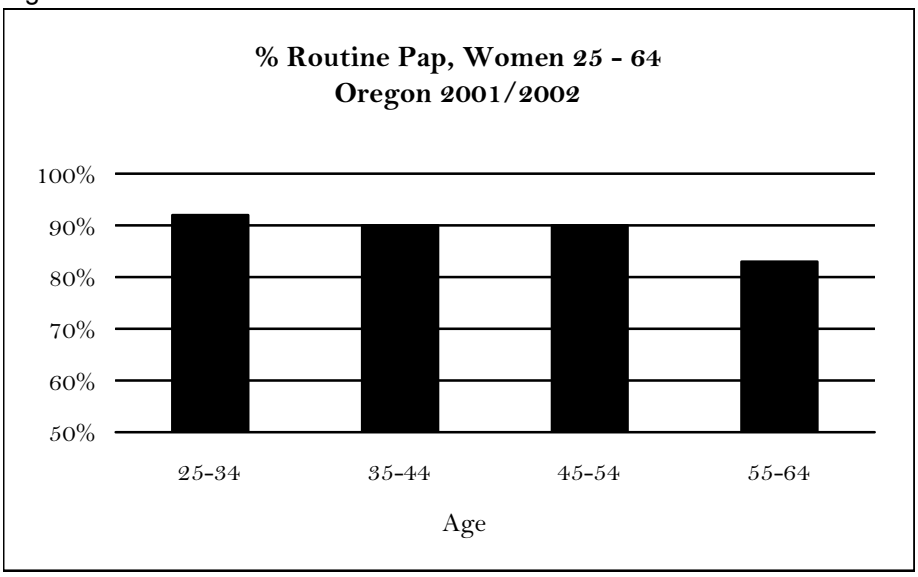
Routine Pap screening among Oregon women remained fairly stable in the last decade. (See Figure 32.)

Figure 33



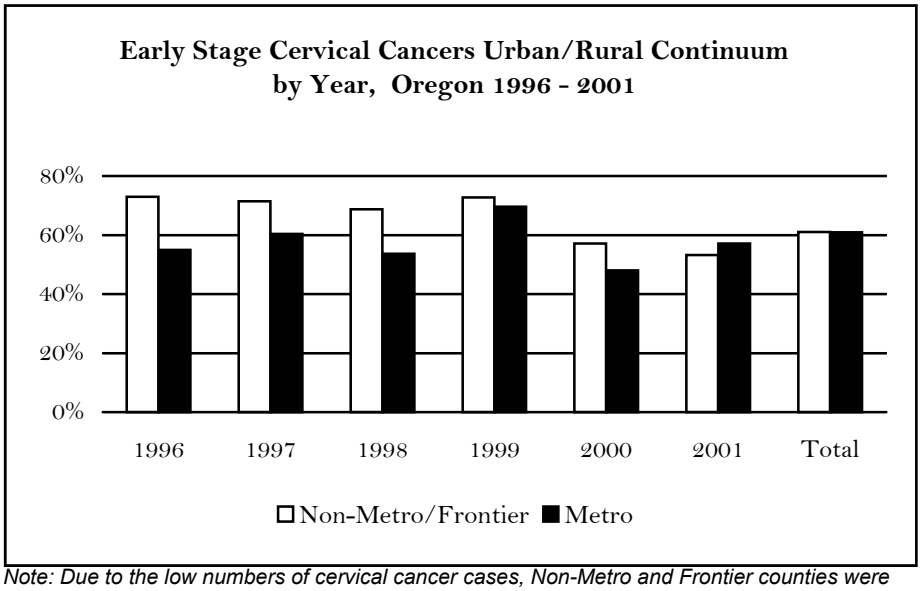
Although the majority of cervical cancers were diagnosed at an early stage, the percentage of early stage cervical cancers diagnosed decreases with increasing age. (See Figure 33.)

Figure 34



A similar trend occurred for screening rates, with the percentage of women receiving routine Pap smears declining as age increases. (See Figure 34.)

Figure 35

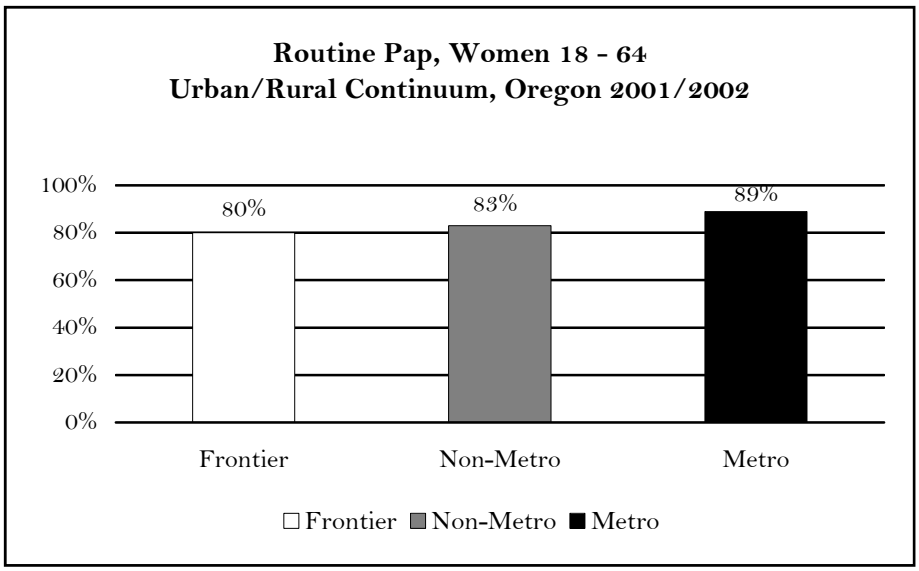


Note: Due to the low numbers of cervical cancer cases, Non-Metro and Frontier counties were merged for stability.

As with breast cancer, place of residence can influence whether or not a women is diagnosed with cervical cancer at an early stage. In this case, less populated counties historically have had higher percentages of early stage cervical cancer. (See Figure 35.)

This disparity has been lessening, and diagnosis year 2001 was the first year to have a greater percentage of early stage diagnoses in metropolitan areas. However, this is not due to an overall improvement in the percentage of early stage diagnoses. Although there has been a 4% increase since 1996 in the percentage of early stage cervical cancer diagnoses for women living in Metro Counties, women in rural areas had a 29% decrease in the percentage of early stage diagnoses.

Figure 36

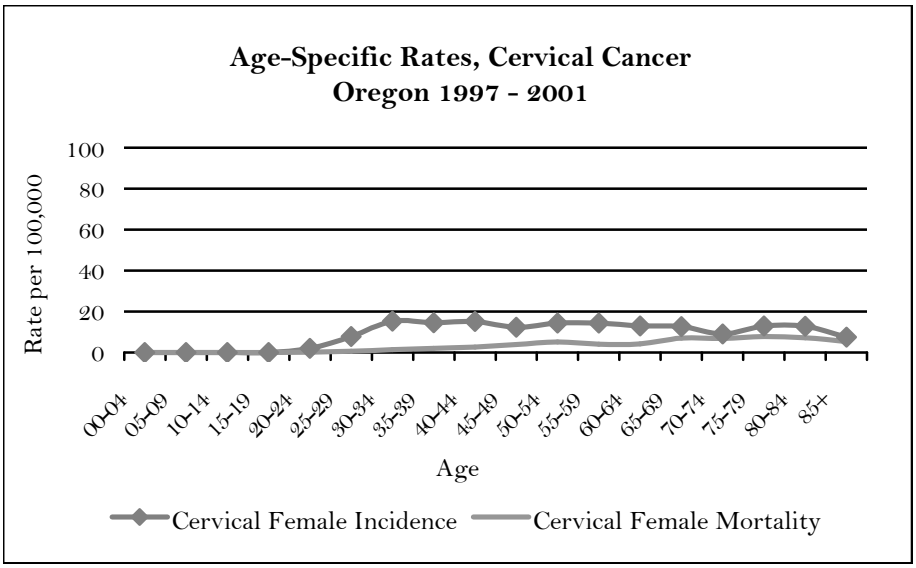


For the combined years 2001/2002, increased routine Pap screening correlated with increased population density. (See Figure 36). Again, please review *Appendix B* for a list of counties and their urban/rural code designations.

Age-Specific Incidence and Mortality

Once sexual activity has begun, the risk of developing cervical cancer does not increase with age. Figure 37 shows the age-specific incidence and mortality rates for cervical cancer in Oregon. Mortality rates do increase after age 30, consistent with the decline in the percentage of early stage as age increases.

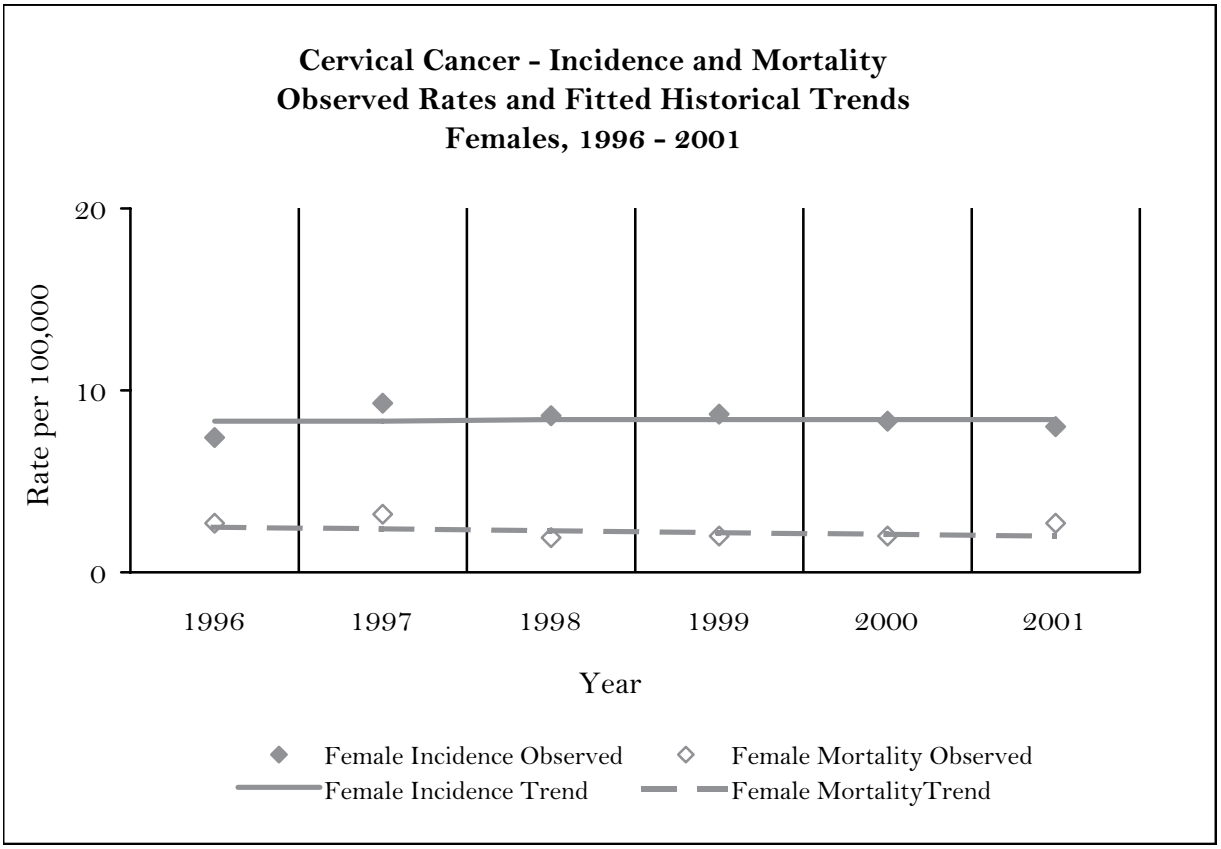
Figure 37



Historical Trends (Combined six-year rates: 1996-2001)

Since 1996, both cervical cancer incidence and mortality rates have steadily declined; mortality has decreased 5% a year while incidence has decreased less than 0.5%. (See Figure 38).

Figure 38



Regional Variation (Combined Six-Year Rates: 1996-2001)

Since cervical cancer incidence does not correlate with age, age-adjusted cervical cancer rates may be less comparable by county. With this in mind, cervical cancer incidence is higher in the northeast portion of Oregon, the area around Crook and Grant counties, and the majority of southern Oregon. (See Figure 39.) Cervical cancer incidence is lower in central Columbia Gorge area, Malheur County area, and the Lane and Deschutes counties region.

Cervical cancer mortality is higher in the north coast area and parts of central and south central Oregon. (See Figure 40.) Mortality is lower in the area around Lane and Deschutes counties.

Since cervical cancer is curable in the early stages, the areas of high mortality should be targeted for screening efforts.

Figure 39 **Cervical Cancer Incidence**
1996 - 2001
Regional Variation

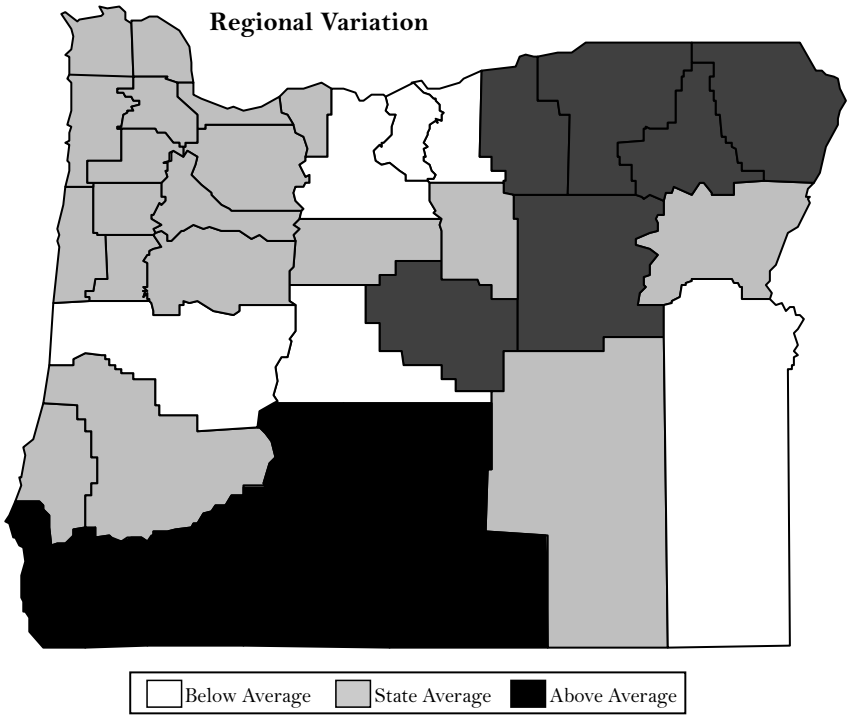


Figure 40 **Cervical Cancer Mortality**
1997 - 2001
Regional Variation