

## C. COLORECTAL CANCERS

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Although a family history of colorectal cancer is a risk factor, three-quarters of colorectal cancers occur in individuals with no known risk factors other than age. Eating a low-fat/high-fiber diet and not smoking may help prevent colorectal cancer. Routine screening can also reduce both morbidity and mortality of colorectal cancer through early diagnosis and removal of precancerous polyps.

Colorectal cancer is the 3<sup>rd</sup> most common cancer among all Oregonians combined and the 2<sup>nd</sup> most common cause of cancer-related death. The 2002 Oregon colorectal cancer mortality rate of 17.8 was 28% above the Healthy People 2010 target of 13.9 per 100,000 persons. Reducing colorectal cancer incidence and mortality through screening has been identified as a priority by the Oregon Partnership for Cancer Control.

ROUTINE SCREENING  
CAN REDUCE  
BOTH MORBIDITY  
AND MORTALITY  
OF COLORECTAL  
CANCER THROUGH  
EARLY DIAGNOSIS  
AND REMOVAL OF  
PRECANCEROUS  
POLYPS.

COLORECTAL CANCERS FAST FACTS OVERVIEW

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A brief overview of Oregon's colorectal cancer data shows the following: (See Figure VII-C-1.)

1. In 2002, 1,799 new cases of colorectal cancer were diagnosed in Oregon, of which 1,720 were invasive. There were 665 Oregonians who died of colorectal cancer.
2. Current five-year trends show that age-adjusted colorectal cancer incidence rates have decreased 2% a year for women and 3% a year for men, similar to the decline seen nationally. Age-adjusted colorectal cancer mortality rates among Oregon men have remained fairly flat while the colorectal cancer mortality rate for men has been increasing by 2% a year nationally. Oregon women have a higher rate of decline for colorectal cancer mortality than the national average, 4% a year for Oregon women and 2% for women nationally.
3. Oregon's 2002 colorectal cancer incidence rate was 10% lower than the 1997-2001 national aggregate rate. Oregon's 2002 mortality rate was 9% lower than the 2002 national mortality rate.
4. Of the 43 states with central registries meeting national data quality standards in 2001, Oregon ranked low in colorectal cancer incidence; 32<sup>nd</sup> for men and 36<sup>th</sup> for women. Among all 50 states, Oregon also ranked low in colorectal cancer mortality; 35<sup>th</sup> for men and 45<sup>th</sup> for women in 2002.
5. Colorectal cancer is the 3<sup>rd</sup> most common cancer among Oregon men regardless of race or ethnicity. Colorectal cancer is also the 3<sup>rd</sup> most common cancer for American Indian/Alaska Native women and White women in Oregon. It is the 2<sup>nd</sup> most common cancer for African American Women and Asian/Pacific Islander women, and the 4<sup>th</sup> most common cancer site among Hispanic women. Colorectal cancer is the 3<sup>rd</sup> leading cause of cancer mortality among women regardless of race or ethnicity. However, it is the 2<sup>nd</sup> leading cause of cancer mortality among American Indian/Alaskan Native men. Colorectal cancer is not in the top five mortality sites for Hispanic men.
6. In 2002, 42% of colorectal cancer cases were diagnosed in the early, more treatable stages (*in situ* or localized). Early stage diagnoses have increased 20% since 1996, when 35% were diagnosed in the early stages.
7. During 1998-2002, Oregon's M/I ratio for colorectal cancer was 0.38, suggesting a fair prognosis for this disease. Colorectal cancer was responsible for 1,684 YPLL each year.

## COLORECTAL CANCERS FAST FACTS

FIGURE VII-C-1

<b>Colorectal Cancers Fast Facts</b>				
<b>Oregon 2002</b>				
	<b>All Sexes<sup>1</sup></b>	<b>Male</b>	<b>Female</b>	
<b>Cancer Incidence</b>				
<b>All Cases Total</b>	<b>1,799</b>	<b>890</b>	<b>909</b>	
In situ	79	48	31	
Localized	641	314	327	
Regional	686	323	363	
Distant	307	166	141	
Unstaged	86	39	47	
<b>Invasive Rates</b>				
Oregon Crude	48.9	48.2	49.5	
Oregon Age-adjusted	46.5	51.8	42.6	
Oregon Current Annual Trend (5-Year)	-2.6	-2.8	-2.1	
US SEER Age-adjusted <sup>2</sup>	51.8	60.5	44.8	
US SEER Annual Trend <sup>2a</sup>	*-2.2	*-2.9	-1.9	
<b>Cancer Mortality</b>				
<b>Total Deaths</b>	<b>665</b>	<b>354</b>	<b>311</b>	
<b>Mortality Rates</b>				
Oregon Crude	18.9	20.3	17.5	
Oregon Age-adjusted	17.8	22.4	14.4	
Oregon Current Annual Trend (5-Year)	-1.9	-0.1	*-3.6	
US Age-adjusted <sup>3</sup>	19.6	23.7	16.6	
US Annual Trend <sup>4</sup>	n/a	*2.0	*-1.8	
<b>Prognosis and Burden<sup>5</sup></b>				
Prognosis: M/I Ratio	0.38	0.39	0.37	
Burden: YPLL before age 65	1,684	996	688	

\* Indicates a statistically significant trend  
M/I = Mortality-to-Incidence Ratio  
YPLL = Years of Potential Life Lost  
<sup>1</sup> All Sexes counts may exceed male/female combined due to additional sex coding  
<sup>2</sup> Year 2001, SEER 9 Registry data, SEERSTAT 5.2.2  
<sup>2a</sup> Years 1997-2001, SEER 9 Registry data, SEERSTAT 5.2.2  
<sup>3</sup> 2002 mortality rate calculated from CDC Wonder: <http://wonder.cdc.gov>  
<sup>4</sup> Annual Report to the Nation on the Status of Cancer, most current trend of 3 years or more.  
<sup>5</sup> Calculations based on combined years 1998-2002

STAGE AT DIAGNOSIS

Because prognosis is strongly influenced by stage at diagnosis, detecting colorectal cancer early can decrease mortality. Early detection can also reduce incidence by identifying precancerous polyps, which could then be removed before developing into cancerous tumors. In 2002, nearly 42% of cancers were detected in the early stages (*in situ* or localized). (See Figure VII-C-2.)

Men generally have a higher percentage of colorectal cancers diagnosed at an early stage than women. (See Figure VII-C-3.)

As seen with other cancers, where an individual resides can influence the stage at diagnosis of colorectal cancer. There is a modest correlation between the percentage of colorectal cancers diagnosed at an early stage (*in situ* or localized) and population density. (See Figure VII-C-4.) Frontier counties generally have a lower percentage of colorectal cancers diagnosed at an early stage, while Urban and Rural counties have a similar, slightly higher percentage.

FIGURE VII-C-2

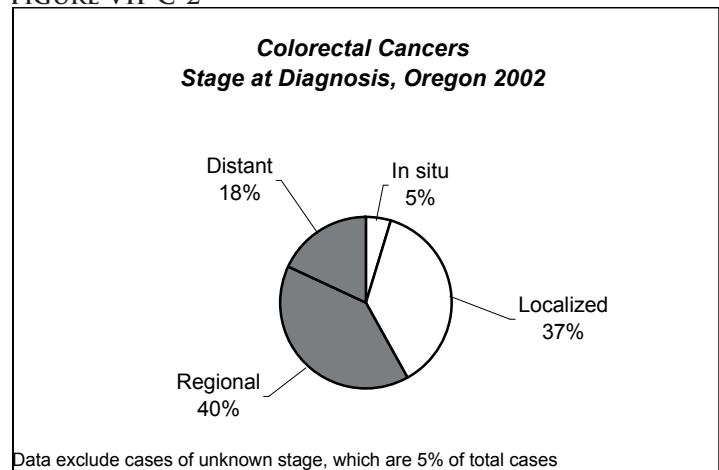


FIGURE VII-C-3

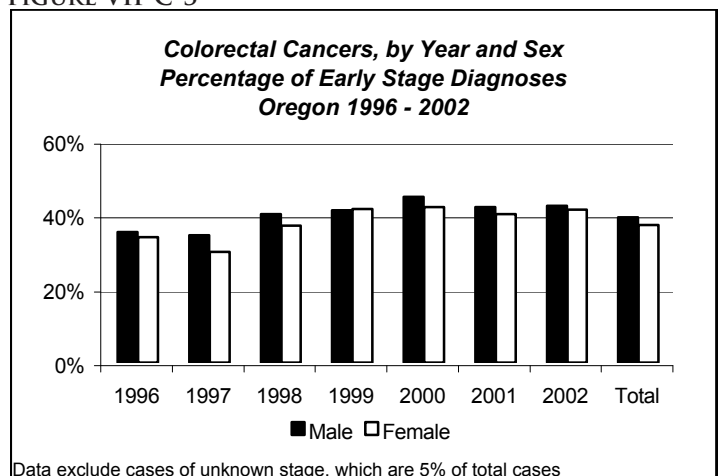
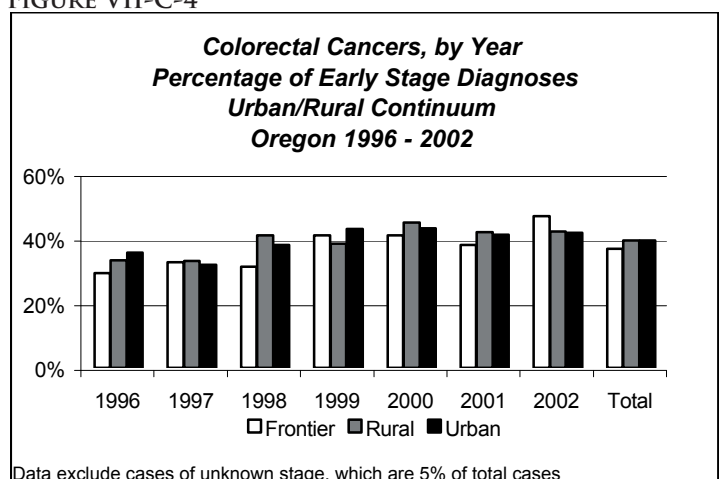


FIGURE VII-C-4



ROUTINE SCREENING

The US Preventive Services Task Force (USPSTF) recommends colorectal cancer screening, for persons age 50 and over, by one of four methods: fecal occult blood test (FOBT), sigmoidoscopy, colonoscopy, or double-contrast barium enema. Although the USPSTF does not recommend a particular screening frequency, many organizations recommend annual FOBT, sigmoidoscopy or barium enema every five years, or colonoscopy every ten years. The American Cancer Society (ACS) preferred method is an annual FOBT and a sigmoidoscopy every five years. In 2002, however, only 48% of Oregonians aged 50 or older reported receiving either FOBT or endoscopy (sigmoidoscopy or colonoscopy) within the recommended time periods and only 11% reported receiving the ACS preferred method.

The percentage of Oregonians who report having ever received FOBT has been consistently higher for women than men since 1997. (See Figure VII-C-5.) Historically, men reported higher rates of ever receiving endoscopy, but, since 2001, women have reported higher endoscopy screening. According to the 2004 National Healthcare Quality Report, Oregon was considered “Above Average” for endoscopy and FOBT screening in 2000, but the rating fell to “Average” in 2001.

While the percentage of Oregonians ever receiving endoscopy has been increasing for both men and women, the greatest increase has been reported by women (8% increase among men and 23% increase among women). Reported screening rates were higher among women in 2002 than men (13% of

women and 10% of men received ACS preferred screening; 49% of women and 47% of men received either test within the recommended time periods).

Although county-level data for colorectal cancer screening should be interpreted cautiously due to sampling issues, data consistently suggest that screening rates are lower in Frontier (extremely rural with less than 6 persons per square mile) counties and similar in Urban and Rural counties. (See Figure VII-C-6.)

FIGURE VII-C-5

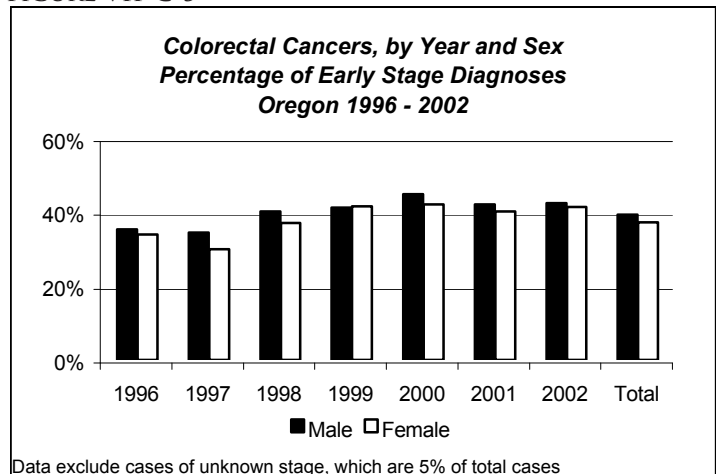
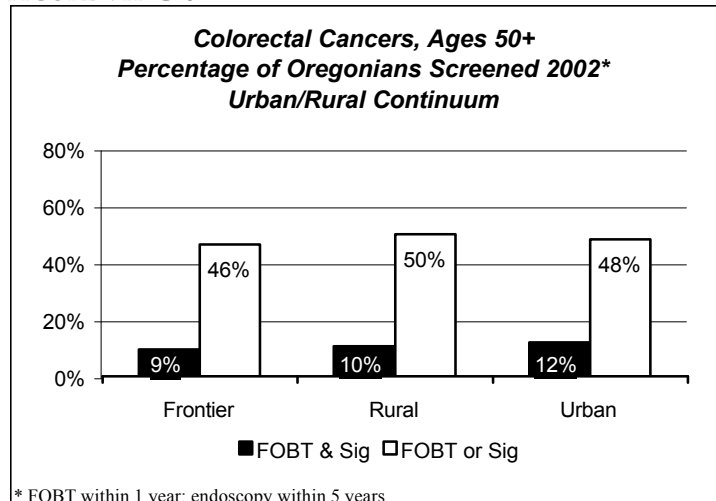


FIGURE VII-C-6



RACE AND ETHNICITY

Although race and ethnicity data need to be interpreted cautiously due to reporting issues (please see the *What's New in 2002?* and the *Technical Section* for additional details), colorectal cancer is among the top 5 cancers for all Oregonians regardless of race or ethnicity. African Americans (AA) have the highest colorectal cancer incidence followed by American Indians/Alaskan Natives (AI/AN). (See Figure VII-C-7.) AI/AN rank higher for colorectal cancer incidence in Oregon than nationally. This may be partially explained by the efforts of the Oregon Registry to improve reporting for this group. Asian/Pacific Islanders (A/PI) have the lowest colorectal cancer incidence and Hispanics have lower colorectal cancer incidence than Non-Hispanics. Mortality due to colorectal cancer follows the incidence patterns by race and ethnicity. As with incidence, AI/AN rank higher for colorectal cancer mortality in Oregon than nationally.

Although AA have the highest colorectal cancer incidence, the mortality to incidence (M/I) ratios for AI/AN and Whites are higher. Non-Hispanics have a higher M/I ratio than Hispanics. Higher M/I ratios mean poorer prognosis. (See Figure VII-C-8.)

Some of the differences in prognosis may be explained by differences in stage at diagnosis by race and ethnicity. Among the four race categories, A/PI have the lowest percentage of colorectal cancer diagnosed at an early stage and Whites have the highest percentage. (See Figure VII-C-9.)

FIGURE VII-C-7

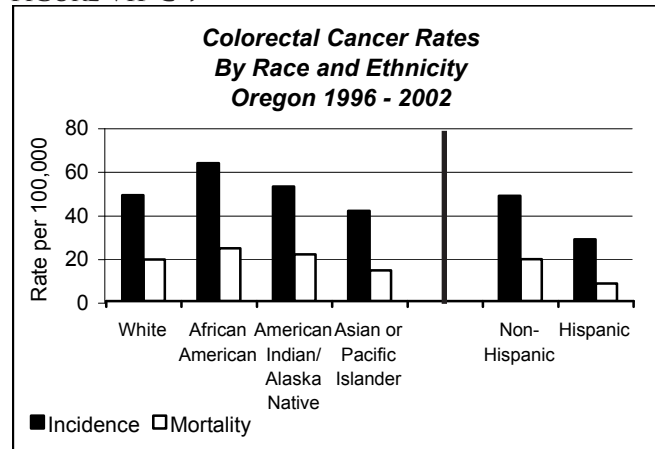
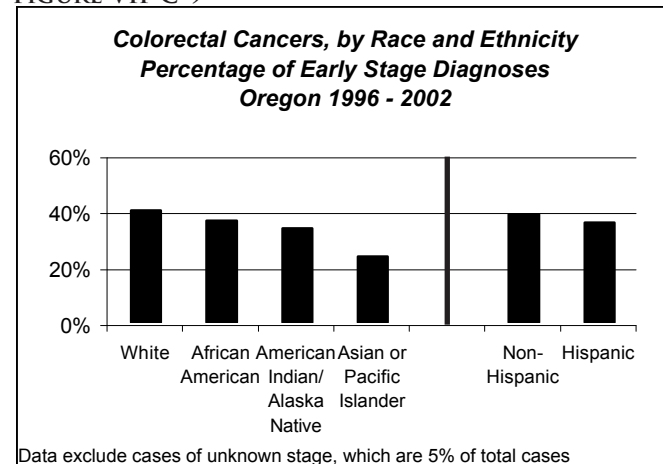


FIGURE VII-C-8

**Colorectal Cancers M/I Ratios, by Race and Ethnicity Oregon 1996 - 2002**

Race and Ethnicity	M/I Ratio
American Indian/Alaskan Native	0.41
White	0.39
African American	0.38
Non-Hispanic	0.40
Hispanic	0.29

FIGURE VII-C-9



Surprisingly, the M/I ratio for Hispanics is lower than for Non-Hispanics, yet Hispanics have a lower percentage of colorectal cancers diagnosed at an early stage. This pattern is also seen with A/PI who have a good prognosis but a low percentage of colorectal cancers diagnosed at an early stage. These differences may represent incompatibility between how the cancer Registry system and Center for Health Statistics system report race and ethnicity. This divergence could also result if these groups are more likely to leave Oregon after a diagnosis of lung cancer than are other race or ethnic populations.

There are also differences by race in the percentage of cases that were unstaged at diagnosis. Generally, a colorectal cancer is not staged at diagnosis because

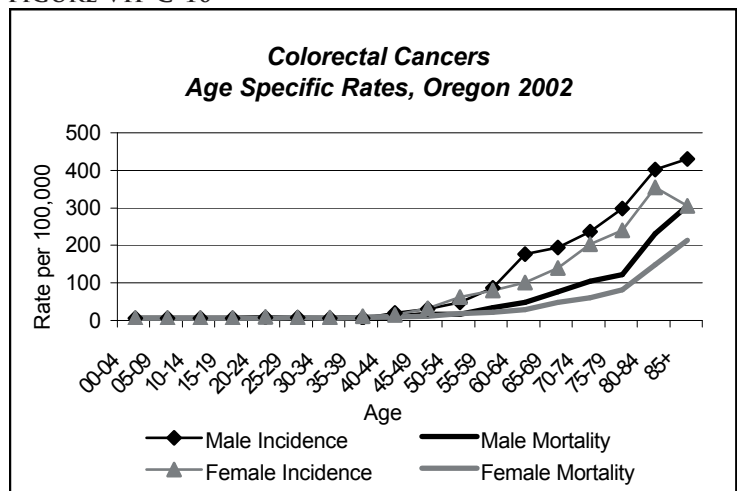
of an extremely poor prognosis, or because comorbidities (or advanced age) contraindicate surgery and/or treatment. However, some unstaged colorectal cancer cases may be early stage cases among patients that refuse clinical treatment for ideological or other reasons. All cases that are identified by a death certificate only are reported as unstaged at diagnosis cases. These cases may represent patients who had difficulty gaining access to health care or were only in the health care system near the end of their life.

A/PI have the lowest percentage of unstaged cases (3%) and AA (9%) and AI/AN have the highest percentage (7%). These stage-at-diagnosis differences may reflect differences in treatment options, patient treatment choices, disease severity, or may indicate unequal access to health care among these groups.

### AGE-SPECIFIC INCIDENCE AND MORTALITY

As with other types of cancer, the risk of developing colorectal cancer increases with age. Figure VII-C-10 shows the age-specific incidence and mortality rates. Colorectal cancer incidence rates begin to increase sharply after age 50 for both men and women. Oregon's age-specific incidence and mortality rates are greater among males than females at nearly every age.

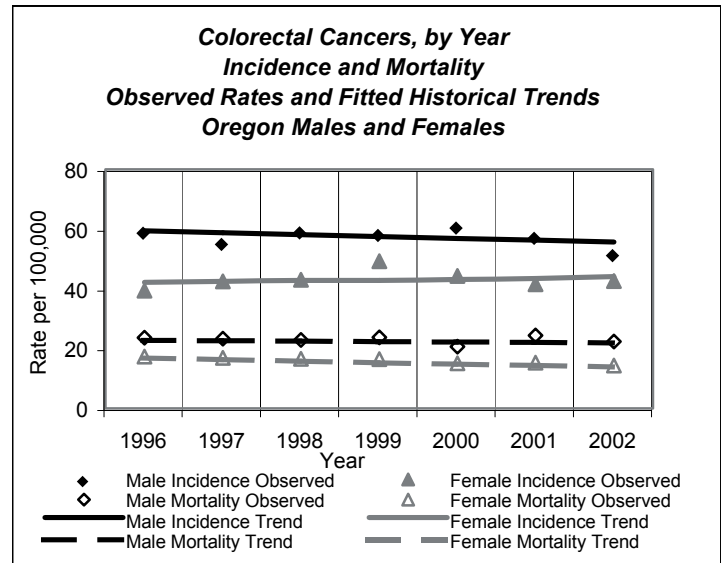
FIGURE VII-C-10



HISTORICAL TRENDS (1996-2002)

Colorectal cancer incidence in Oregon has been fairly flat for men with a slight decrease of 1% a year over the past seven years. In contrast, incidence for women has increased about 1% annually. Colorectal cancer mortality has been decreasing for both men and women since 1996. Mortality trends for men mirror incidence with a nominal decrease of 1% a year. Mortality for women, however, is decreasing over 3% annually. This divergence between incidence and mortality among women may be the result of increased screening among Oregon women in recent years. (See Figure VII-C-11.)

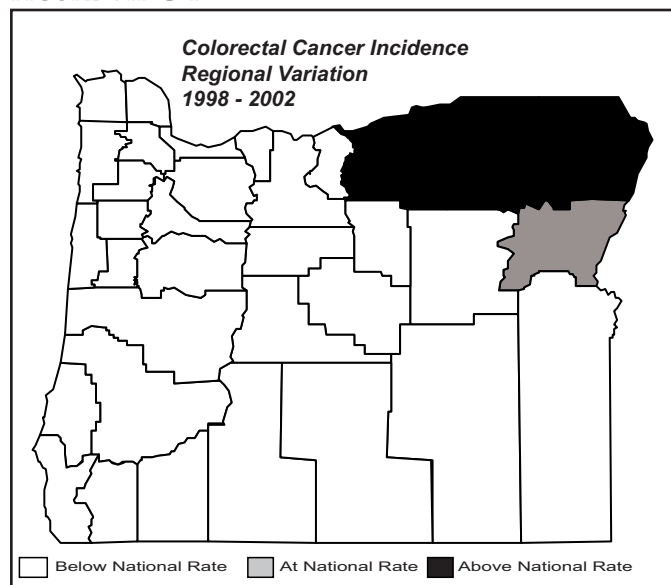
FIGURE VII-C-11



REGIONAL VARIATION (COMBINED FIVE-YEAR RATES: 1996-2002)

With the exception of the Northeast portion of the state, the majority of Oregon has lower colorectal cancer incidence rates than the nation. (See Figure VII-C-12.)

FIGURE VII-C-12



Mortality rates for colorectal cancer are also higher than the nation in Northeast Oregon. The western portion of the state has lower colorectal cancer mortality rates and the majority of the eastern part of the state has colorectal cancer mortality rates similar to those seen nationally. (See Figure VII-C-13.)

The high incidence and high mortality seen in Northeast Oregon may be of epidemiologic importance in determining the risk factors for colorectal cancer. This area may also benefit from additional colorectal cancer screening.

FIGURE VII-C-13

