CANCER
IN
WESTERN COLORADO

1996-1998

ACKNOWLEDGMENTS

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EXECUTIVE SUMMARY

This report, *Cancer in Western Colorado: 1996-1998*, was written by the Colorado Comprehensive Cancer Prevention and Control Program to develop and evaluate cancer prevention and intervention strategies in Western Colorado. It is the second of a series of reports covering different regions of Colorado utilizing county-specific cancer data. The first report, *Cancer in Eastern Colorado: 1995-1997*, was published in 1999. Both reports are available on the internet: www.cdphe.state.co.us/pp/ccpc/ccpchom.asp. *Cancer in Western Colorado: 1996-1998* incorporates data from three sources with the Colorado Department of Public Health and Environment: cancer-related behavior data from the 1999 Colorado Behavior Risk Factor Surveillance System (BRFSS) survey, cancer incidence and stage data from the Colorado Central Cancer Registry, and cancer mortality data from the Health Statistics Section.

It is widely held that most kinds of cancers can be prevented and/or detected at an early stage. Studies suggest that 75-80 percent of cancer deaths are attributable to health behaviors, including diet, smoking, excessive alcohol intake, and reproductive and sexual history. A change of lifestyle and/or a cancer-related checkup is recommended to reduce the chance of getting cancer. Detailed risk factors and prevention information for each cancer are described in the report. The following is a summary of the major findings of the report.

▶ **Behavioral Risk Factor Surveillance System survey findings:**

- Respondents in Mesa County, PMR9, PMR10, and Northwest Colorado[1] reported similar overweight percentages as respondents statewide. Respondents in the Rural Resort area reported a statistically lower overweight percentage than the state average.

- A similar percent of residents statewide and from Mesa County, PMR9, PMR10, and Northwest Colorado reported being current smokers. Respondents from the Rural Resort

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[1] The Planning and Management Region (PMR) 9 includes: Archuleta, Dolores, La Plata, Montezuma, and San Juan counties. The PMR10 includes: Delta, Gunnison, Hinsdale, Montrose, Ouray, and San Miguel counties. The Northwestern Colorado region includes: Moffat, Rio Blanco, Routt, Jackson, and Grand counties. The Rural Resort area includes: Summit, Pitkin, Lake, Garfield, and Eagle counties.

area reported statistically less current smoking than the state average. Smoking prevalence decreased with increasing age across all regions.

- The reported percent of residents using smokeless tobacco for the four Western Colorado regions (the Rural Resort area was excluded because the smokeless tobacco questions was not asked for this region) was at least 46 percent higher than the state average. Males reported higher percentages than females across the regions.

- Residents from the Rural Resort area reported statistically higher percent of chronic drinking than the state average. Other regions reported similar or slightly higher percentages. Males were more likely to report chronic drinking than females across the regions.

- Women age 50 and over in all Western Colorado regions were as likely to receive a mammogram and clinical breast exam as women statewide. Women in all Western Colorado regions were also as likely to receive Pap tests in the past three years as women statewide.

- Over half of the respondents aged 50 and over from the Mesa County, PMR9, and PMR10 reported ever having a blood stool test, compared to the state percentage of 45.8 percent. Similar percentages of respondents reported having had a blood stool test in the past year. Residents from Western Colorado were as likely as residents statewide to have ever had a sigmoidoscopy, and to have had a sigmoidoscopy in the past year. Generally, females did better in getting a blood stool test than males, while males did better in having a sigmoidoscopy.

- Respondents from the Western Colorado regions did better in using sun block, wearing hats, and protective clothing when being out for an hour on a sunny summer day than respondents statewide.

▶ **Cancer data comparisons between Western Colorado and the state by selected cancer sites:**

- **All Cancers Combined:** All cancers combined incidence rates for both male and female were similar to state rates. The Northwest Colorado male all cancers combined incidence rate was lower than the state rate. In the Rural Resort area the male all cancers combined incidence rate for Garfield County was higher than the state rate, and the Eagle County

all cancers combined incidence rate was lower than the state rate. The Mesa County male all cancers combined incidence rate was also higher than the state rate. The San Miguel County female all cancers combined incidence rate was lower than the state rate. The early detection percentages for Western Colorado and its five regions were generally close to or higher than those of the state. Male and female all cancers combined mortality rates for Western Colorado and its five regions were similar to state rates. The male all cancers combined mortality rate for Pitkin County was lower than the state rate.

- **Colon and Rectal Cancer:** The male colorectal cancer incidence rate for the Northwest Colorado region was lower than the state rate. The Mesa County male rate was 18 percent higher than the state rate, though not statistically significant. The early detection percentages for Western Colorado and its five regions were similar to or better than the state percentage, except for the Northwest Colorado region, which had a worse early detection percentage. The Rural Resort area male colorectal cancer mortality rate was statistically lower than the state rate.

- **Lung Cancer:** Male and female lung cancer incidence rates for Western Colorado and its five regions were mostly similar to state rates. However, the Mesa County male and female lung cancer incidence rates were higher than state rates. The male lung cancer mortality rate for the Rural Resort area was statistically lower than the state rate.

- **Melanoma:** The Northwest Colorado female melanoma incidence rate was statistically higher than the state rate. The early detection percentages for Western Colorado and its five regions were similar to the state percentage.

- **Female Breast Cancer:** The breast cancer incidence rates for Western Colorado and its five regions were similar to the state rate. However, the incidence rate for Pitkin County in the Rural Resort area and the incidence rate for Montezuma County in PMR9 were statistically lower than the state rate. Early detection percentages for breast cancer in Western Colorado regions were similar to the state percentage. Cancer mortality rates were also similar to the state rate.

- **Invasive Cervical Cancer:** The cervical cancer incidence and mortality rates for Western Colorado and its five regions were similar to the state rate.

- **Prostate Cancer:** The prostate cancer incidence rate for the Northwest Colorado region was statistically lower than the state rate. Generally, Western Colorado regions had

better early detection percentages than the state average. The mortality rate for the Rural Resort area was more than 50 percent higher than the state rate.

Though the report does not find large differences in cancer rates and cancer-related behaviors between Western Colorado and the state, improvements can still be made. As discussed in the report, Western Colorado residents (except for the Rural Resort residents) had a higher percentage of smokeless tobacco use, and the Rural Resort residents had a higher percentage of chronic drinking. Efforts can also be made to improve cancer screening practices, such as the use of mammograms, Pap tests, blood stool tests, and sigmoidoscopy. A healthy lifestyle is the primary key to a healthy life.

Introduction

Introduction

Cancer is the second leading cause of death in Colorado, according to *Colorado Vital Statistics (1998)* published by the Health Statistics Section of the Colorado Department of Public Health and Environment. Colorado had seen a substantial increase in cancer mortality rates during the 1940 to 1990 period. However, since 1990 some progress has been made in reducing cancer mortality rates.   Cancer mortality rates in Colorado have been stable over the past ten years.

Although cancer cells can be lethal, most types of cancers can be prevented or detected at an early stage by:

- Changing personal lifestyles, such as stopping smoking, improving dietary habits, and increasing physical activity;
- Using early detection methods, such as mammography, Pap tests, prostate-specific-antigen (PSA) and sigmoidoscopy;
- Implementing comprehensive health education programs.

A number of public agencies and private organizations have made great efforts to reduce cancer incidence and mortality in Colorado. The Colorado Comprehensive Cancer Prevention and Control Program is a project funded by the Centers for Disease Control and Prevention (CDC) to coordinate this effort. The goal of this program is to reduce cancer risk factors and improve preventive behaviors by collaborating with public and private agencies to set priorities for interventions, conduct public awareness campaigns, establish cancer prevention and control policies, and to support community-based projects.

One of the program's activities is to produce a series of reports on specific regional cancer data. This report, *Cancer in Western Colorado: 1996-1998,* is the second of this series. The first report, *Cancer in Eastern Colorado: 1995-1997*, was published in September 1999. Both reports are available on the internet at: www.cdphe.state.co.us/pp/ccpc/ccpchom.asp . Included in this western Colorado cancer report are the following regions comprising 22 Colorado counties (see map on page ix):

- Northwest Colorado: Moffat, Rio Blanco, Routt, Jackson, and Grand;
- Rural Resort: Summit, Pitkin, Lake, Garfield, and Eagle;
- Mesa County;

- Planning and Management Region (PMR) 9: Archuleta, Dolores, La Plata, Montezuma, and San Juan;
- PMR10: Delta, Gunnison, Hinsdale, Montrose, Ouray, and San Miguel.

This report is organized as follows. Section II describes data and data sources and defines terminology used in this report. Section III summarizes the findings of the 1999 Behavioral Risk Factor Surveillance System (BRFSS) survey in Western Colorado. Section IV discusses and compares cancer incidence and mortality rates in Western Colorado and the state. Section V, the Appendix, displays detailed county-specific incidence, staging, and mortality data.

Section II

Data and Definitions

Data and Definitions

Data Sources

Data used for this report came from several sources of the Colorado Department of Public Health and Environment (CDPHE). The cancer incidence and staging data were provided by the Colorado Central Cancer Registry (CCCR), which collects data on all cancers diagnosed in Colorado. The cancer mortality data were provided by the CDPHE Health Statistics Section, which compiles and analyzes data from birth and death records. The behavioral risk factor data were provided by the CDPHE Survey Research Unit, which conducts health-related surveys.

Data Limitations

The over-sampled BRFSS survey for Northwest Colorado, Mesa County, PMR9, and PMR10 was conducted in 1999, while the over-sampled survey for the Rural Resort region was done in 1998. Some questions asked in 1999 were not included in the 1998 survey. Therefore, some of the data were not available for the Rural Resort area.

It is also important to note that rates for a limited time period are not always reflective of true incidence or mortality rates when county rates based on small numbers of cases are compared with state rates, because in this case one number can change the rate significantly. In this report, when county rates were found to be much higher than the state rates, the county rates were also compared with the rates of previous years. Rate differences that were not consistent over more than one time period may be due to normal fluctuations over time in counties with a small population.

Since the *all cancers combined* incidence and mortality rates were much higher than individual cancer incidence and mortality rates, the *all cancers combined* rates were displayed graphically on a larger scale in the bar chart than the scale used for individual cancer rates. Individual cancer incidence and mortality rates were displayed on different scales. It is important to note the differences in scales when comparing rates of different cancer sites.

To assure the confidentiality of individuals, this report does not present data with less than three events in each category. However, in some regional tables with multi-county

displays, when a small number could be inferred by subtraction, additional suppression was required to protect confidentiality.

Definitions

The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing statewide telephone survey designed to monitor the prevalence of health behaviors and preventive health practices associated with the leading causes of death in Colorado. Each year, approximately 1,800 Colorado residents aged 18 and older are surveyed. While the Colorado BRFSS provides reliable estimates of cancer-related risk factors and behaviors for the state as a whole, estimates are not routinely available for less populated areas. In order to achieve reliable estimates for less populated areas, those areas need to be over-sampled. In 1999, the BRFSS survey over-sampled (1) 600 individuals for a total of 688 people in Southwest Colorado (315 respondents from PMR9 and 373 respondents from PMR10), (2) 400 individuals for a total of 437 people in Northwest Colorado, and (3) 200 individuals for a total of 306 people in Mesa County. The Rural Resort area was surveyed in 1998, during which time 573 individuals were interviewed. Section III of this report is based on these 1998 and 1999 surveys.

Cancer Incidence Rates are a measure of the number of new cancer cases diagnosed over a defined time period divided by a specified population. Age-adjusted incidence rates are used in this report in order to compare rates of different populations. Any observed differences in age-adjusted rates will not be due to different ages of the populations being compared. The incidence rates in this report were adjusted to the 1970 U.S. standard population.

Cancer Mortality Rates are a measure of the number of deaths due to cancer over a defined period divided by a specified population. The mortality rates in this report were age-adjusted to the 1970 U.S. standard population.

Cumulative Risk is an estimate of the chances of an individual being diagnosed with cancer by a certain age based on age-specific rates within a certain time period. This can be expressed as a percentage or probability, e.g. for men the cumulative risk to age 85 for all cancers combined is about 52 percent or 1 in 2.

Stage of Cancer is typically defined by size and containment or spread of the tumor. Initially, the cancerous cells do not invade surrounding tissues. This very early condition is

called the in-situ stage. Next, the cancer cells infiltrate the organ where they originated. This is the localized stage. The regional stage is when cancer cells have spread to adjacent tissues or to nearby lymph nodes. Eventually, cancer cells may become dispersed throughout the body usually by invasion of the circulatory system. This level of cancer spread is called the distant stage.

Early Detection of Cancer is defined in this report as the percent of cases diagnosed at in-situ and localized stages, excluding unknown staged cases. Mathematically, the early detection percentage is the number of in-situ cases plus the number of localized cases divided by the total number of staged cancer cases, times 100.

The stage of cancer at the time of diagnosis is a very important factor in determining the effectiveness of treatment and the potential for cure. Usually, at the in-situ stage, cancer is highly curable. Some cancer cells, such as lung and melanoma, spread more rapidly than others. Hence, the potential to be life-threatening is greater. For these cancers, the best prevention is to avoid risk factors that may cause the disease.

Statistical Significance in this report was evaluated using a Z-test (alpha=0.05) for testing differences between the state incidence and mortality rates and regional incidence and mortality rates (county-specific data, Planning and Management Region-specific data, and Western Colorado-specific data). Only rates based on six or more cases were tested. A statistically significant result means that there is likely a real difference in rates between the two populations, a difference that cannot be explained by chance alone. All statistically significant results are discussed in this report. Some higher or lower county rates, though not statistically significant, may be discussed if they are more than 20 percent different from the state rate.

There were 322 separate tests of statistical significance on incidence and mortality rates in this report. Using a significance level of 0.05 to evaluate the 322 tests, 5 percent of these tests (about 16) would be expected to be either higher or lower than the state rate simply due to random variation. In fact, 14 of these tests exceeded statistical limits (2 were higher and 12 were lower than the state rate).

Additionally, 219 tests of statistical significance on risk factor data were performed. Twenty-five of these tests were statistically significant, of which 12 were higher and 13 were

lower than the state data. The parameters used for testing the Rural Resort data were the remainder of the state data and the Rural Resort data, whereas, the parameters for testing other regional data were the state data and data of each region.

Cancer-Related Behaviors

Cancer-Related Behaviors

Western Colorado comprises 22 counties on the west side of the state. The number of respondents from the statewide Colorado BRFSS is too small to produce reliable estimates of health-related behaviors in less populated areas. So, in 1999, an additional 600 respondents were added for a total of 688 respondents from PMR9 and PMR10; an additional 400 individuals were added for a total of 437 respondents from the Northwest region of Colorado; and an additional 200 people were added for a total of 306 respondents from Mesa County. In the 1998 survey in the Rural Resort area, 573 individuals were interviewed. This section summarizes the selected findings of the 1998 and 1999 survey. Detailed BRFSS data are listed in tables at the end of the section.

Population by Age Group: The peak age group in the five regions and the state was 35-44. The 55-64 age group represents the smallest percentage of population in the regions. Mesa County and PMR10 had higher proportions of the adult population aged 65 and over than the rest of the regions (see Table 3.1).

Overweight: Being overweight is considered a risk factor for heart disease, diabetes, and some cancers, such as breast, kidney, and endometrial cancer. Overweight is defined as a body mass index (BMI=weight in kilograms/height in meters^2) of 27.3 or higher for females and 27.8 or higher for males. A comparison of Western Colorado regions with the state data shows that Western Colorado regions, except for the Rural Resort area, had similar overweight percentages as the state. The Rural Resort area had a lower overweight percentage. The difference between the Rural Resort area and the state was statistically significant, and remained so after adjusting for the differences in the age distribution. Northwest Colorado reported the highest percentage for men being overweight, and PMR9 and Rural Resort reported the lowest percentages for men being overweight. Rural Resort women were least likely to report being overweight, while women in PMR9 reported the highest percentage of being overweight. People aged 55 and over were more likely to report being overweight than people of other age groups (see Tables 3.2 and 3.3).

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Current Smoker: Cigarette smoking is causally associated with heart disease and lung cancer, and has been linked to pancreatic, cervical, kidney, and bladder cancer. Current smokers were identified as those respondents who had smoked at least 100 cigarettes in their lives and were currently smoking. The 1999 BRFSS survey found that the prevalence of current smoking among people in Western Colorado regions was similar to the state prevalence as a whole (22.4 percent). In the 1998 BRFSS survey, 16.2 percent of respondents from the Rural Resort area reported being current smokers, which was statistically lower than the percentage of the remainder of the state. In PMR9 and Northwest Colorado, smoking prevalence was somewhat higher for the 55 and over age group than the rest of the regions and the state as a whole for the same age group. Men smoke more than women in Western Colorado regions but men and women smoke about equally often statewide. Younger people reported current smoking more often than older people (see Tables 3.2 and 3.3).

**Current User of Smokeless Tobacco*:* In 1986, the U.S. Surgeon General concluded that the use of smokeless tobacco can cause cancer and a number of non-cancerous oral conditions and can lead to nicotine addiction and dependence (Cancer Facts & Figures 2000, ACS). A current user of smokeless tobacco is one who is presently using any smokeless tobacco products such as chewing and stuffing tobacco. More people in Western Colorado than those in all of Colorado reported having used smokeless tobacco (the Rural Resort area was excluded because the questions on smokeless tobacco were not asked in the 1998 survey). Males aged 18-34 in Mesa County, PMR9, and PMR10 showed a higher prevalence of using smokeless tobacco. Generally, the prevalence of using smokeless tobacco decreased with increasing age in all regions (see Table 3.3).

Chronic Drinking: Frequent alcohol use is a major cause of both social and medical problems. Heavy alcohol use is a cause of oral, liver, breast, and rectal cancer. The 1999 BRFSS survey showed PMR10 and Northwest Colorado respondents reported slightly higher chronic drinking (60 or more alcoholic drinks in the last month) than respondents throughout the state. Rural Resort respondents reported a statistically higher chronic drinking prevalence in the 1998 BRFSS survey. Generally, younger people reported more chronic drinking than did older people, with the exception of the Northwest region. Men drank more often than women across

the regions. Women in PMR10 reported the lowest percentage (0.2 percent) of chronic drinking, which was statistically lower than the state percentage (see Tables 3.2 and 3.3).

Mammogram Screening and Pap Test: Regular cancer screening is recommended as the major prevention method for certain cancers. The BRFSS survey on women's cancer screening showed that women aged 40 and over in Western Colorado were as likely as women statewide to have ever had a mammogram and a clinical breast exam.   Women aged 50 and over in Western Colorado were also as likely as women statewide to have had both a mammogram and a clinical exam in the prior two years.

Women in the Western Colorado regions were as likely as women statewide to have ever had a Pap test. Women in the Western Colorado regions were also as likely as women statewide to have had a Pap test in the past three years. However, in all the regions the proportion of women who received Pap tests in the past three years decreased with increased age, with women aged 55 and over reporting the lowest percentage (see Tables 3.2 and 3.3).

Colorectal Cancer Screening: Colorectal cancer screening questions were not asked in the 1998 Rural Resort survey. The American Cancer Society recommends that individuals aged 50 and over have a yearly blood stool test and sigmoidoscopy every 5 years. Generally, western Coloradans aged 50 and over did better in getting blood stool tests than the state as a whole. More than half of the people in Mesa County, PMR9, and PMR10 reported ever having had a blood stool test. Women statewide were more likely to have had blood stool tests than men statewide. Men in PMR10 were more likely to have had a blood stool test than men statewide. This difference was statistically significant. The 1999 survey showed that about 22 percent of people statewide had a blood stool test in the past year. Women statewide and women in Western Colorado regions, except for PMR10, did better than men in getting blood stool tests in the past year.

Individuals in the Western Colorado regions reported a similar percentage of ever having a sigmoidoscopy as individuals statewide (43.7 percent). Men were more likely to report ever having had a sigmoidoscopy than women statewide. Thirty-one percent of the respondents aged 50 and older in Colorado reported having had a sigmoidoscopy in the past five years. Individuals in PMR9 and PMR10 reported a slightly lower percentage having sigmoidoscopy in

the past five years: 26.8 percent and 26.2 percent, respectively. Northwest Colorado had a slightly better percentage (34 percent) and Mesa County had a similar percentage (31.4 percent) (see Table 3.3).

Sun Protection: The principal cause of skin cancer is overexposure to sunlight, especially when it results in sunburn and blistering. Melanoma, the most serious type of skin cancer, is one of the fastest growing major cancers in Colorado. The American Cancer Society recommends that when outdoors, individuals use a sunscreen SPF 15 or higher and cover with a hat and long-sleeved shirt and long pants. The 1999 survey showed that over 33.1 percent of respondents in the state reported that they always or nearly always used SPF 15 or higher sunscreen when being out for more than an hour on a sunny summer day. Individuals in Western Colorado regions reported similar percentages. Respondents in the 35-54 age group in PMR10 and respondents in the 55 and over age group in the Northwestern Colorado region reported statistically higher percentages of using sun screen SPF 15 or higher than the state average. Females were more likely to use sunscreen than males.

All Western Colorado regions but Mesa County reported higher percentages of always or nearly always wearing both hats and protective clothing when being out on a sunny summer day for more than an hour than the state average percentage, with the PMR9 percentage statistically better than the state percentage. People aged 55 and over were more likely to cover themselves with hats and protective clothing than younger people. A higher percentage of men than women wore hats across all regions.

Table 3.1   Age Group by Region: Colorado, 1998

	18-24	25-34	35-44	45-54	55-64	65+
Mesa	15.4	16.2	21.6	17.5	10.8	18.5
PMR9	14.9	18.0	23.6	19.3	10.8	13.4
PMR10	13.7	16.7	21.6	18.2	11.3	18.4
NW Colorado	12.4	17.8	27.5	21.7	10.2	10.3
Rural Resort	10.0	21.1	30.6	21.2	8.9	8.2
State	11.9	19.7	23.8	18.3	11.3	14.9

Table 3.2   Cancer-Related Behaviors in the Rural Resort Area by Gender and Age Group: Colorado BRFSS, 1998

	Total	18-24	25-39	40-49	50-64	65+
Percent having mamogram and clinical breast exam in past 2 year, 50 and older						
Rural Resort	74.2	--	--	--	**	**
Remainder of state	69.8	--	--	--	**	**
Percent having pap test in past 3 years						
Rural Resort	90.9	**	94.1	95.4	**	**
Remainder of state	86.6	**	88.5	93.6	**	**

Table 3.2 continued.

	Total	18-24	25-34	35-44	45-54	55-64	65+	Male	Female
Percent current smoker									
Rural Resort	**16.2**	**	23.2	**13.3**	**11.3**	**7.1**	**	**18.7**	**13.6**
Remainder of state	22.7	**	29.3	22.5	22.4	18.6	**	25.9	19.5
Percent chronic drinking									
Rural Resort	**6.5**	**	**12.9**	2.7	7.9	6.2	**	**11.0**	1.6
Remainder of state	2.5	**	2.1	2.5	1.5	2.9		4.6	0.6
Percent overweight									
Rural Resort	**16.1**	**	**13.0**	18.7	**13.4**	**19.5**	**	**14.0**	**18.3**
Remainder of state	27.6	**	22.7	25.8	32.0	38.0	**	28.7	26.6

Bold=difference between rural resort area and remainder of the state is significant at p<.05.

** unable to estimate due to small number of respondents in this category.

Table 3.3 Cancer-Related Behaviors by Region, Gender, and Age Group: Colorado BRFSS, 1999

	Total	18-34	35-54	55+	Male	Female
Percent overweight						
Mesa	27.5	17.1	32.1	32.6	30.4	24.8
PMR9	24.0	23.6	19.5	32.5	18.0	29.7
PMR10	26.2	18.7	29.2	31.2	26.3	26.9
NW	29.7	18.1	37.0	29.5	34.0	25.2
State	26.0	18.9	28.2	31.0	26.7	25.3
Percent current smoker						
Mesa	24.4	29.9	29.1	12.3	28.3	20.8
PMR9	23.6	27.9	23.3	18.4	24.8	22.5
PMR10	23.0	26.6	29.2	11.0	24.2	21.7
NW	24.7	25.3	25.4	22.1	27.8	21.4
State	22.4	26.1	26.3	11.8	22.7	22.2
Percent current use of smokeless tobacco						
Mesa	6.2	7.8	6.7	3.8	12.9	0.0
PMR9	6.6	11.3	5.0	2.9	13.5	0.0
PMR10	6.1	12.9	5.0	0.6	12.1	0.2
NW	5.1	3.4	7.0	3.2	9.3	0.7
State	3.5	6.0	3.2	0.6	6.7	0.2
Percent at risk chronic drinking						
Mesa	3.5	6.9	1.7	2.2	4.8	2.3
PMR9	3.5	3.8	2.5	4.7	4.8	2.2
PMR10	5.0	8.1	3.8	3.5	10.0	**0.2**
NW	6.8	3.6	8.5	7.2	10.5	2.8
State	4.4	7.1	3.8	2.2	7.2	1.8
Percent having mammogram and clinical breast exam, ever, 40 and over						
Mesa	88.3	--	--	--	--	--
PMR9	85.6	--	--	--	--	--
PMR10	73.4	--	--	--	--	--
NW	77.7	--	--	--	--	--
State	79.4	--	--	--	--	--
Percent having mammogram and clinical breast exam in past 2 years, 50 and over						
Mesa	67.1	--	--	--	--	--
PMR9	71.2	--	--	--	--	--
PMR10	60.6	--	--	--	--	--
NW	62.7	--	--	--	--	--
State	65.7	--	--	--	--	--

Bold= difference betwee western Colorado regions and the state is significant at p<=.05.
** unable to estimate due to small number of respondents in this category.

Table 3.3 continued.

	Total	18-34	35-54	55+	Male	Female
Percent having pap test, ever						
Mesa	98.3	**	**100.0**	92.0	--	--
PMR9	96.1	**	98.5	91.3	--	--
PMR10	93.6	**	96.9	91.5	--	--
NW	96.6	95.0	97.8	95.8	--	--
State	96.2	93.9	98.9	94.8	--	--
Percent having pap test in past 3 years						
Mesa	89.8	**	100.0	76.0	--	--
PMR9	84.4	**	82.4	73.4	--	--
PMR10	82.1	**	90.8	67.8	--	--
NW	84.2	85.0	84.9	79.2	--	--
State	87.4	89.2	88.4	81.3	--	--
Percent having blood stool test ever, 50 and older						
Mesa	51.2	--	--	--	41.3	60.4
PMR9	50.5	--	--	--	48.6	52.1
PMR10	51.9	--	--	--	**56.7**	48.0
NW	41.5	--	--	--	38.8	44.2
State	45.8	--	--	--	36.7	53.7
Percent having blood stool test in the past year, 50 and older						
Mesa	20.7	--	--	--	17.2	23.8
PMR9	30.3	--	--	--	29.5	31.0
PMR10	23.2	--	--	--	26.5	20.6
NW	23.3	--	--	--	21.5	25.2
State	21.8	--	--	--	14.9	28.0
Percent having sigmoidoscopy ever, 50 and older						
Mesa	47.9	--	--	--	41.8	53.0
PMR9	39.1	--	--	--	38.6	39.4
PMR10	42.8	--	--	--	57.4	33.3
NW	42.3	--	--	--	52.9	32.4
State	43.7	--	--	--	46.6	41.0
Percent having sigmoidoscopy in past 5 years, 50 and older						
Mesa	31.4	--	--	--	26.0	36.3
PMR9	26.8	--	--	--	28.5	25.5
PMR10	26.2	--	--	--	37.6	17.4
NW	34.0	--	--	--	40.8	27.0
State	31.0	--	--	--	35.5	27.2

Bold=difference between western Colorado regions and the state is significant at p<.05.
** unable to estimate due to small number of respondents in this category.

Table 3.3 continued.

	Total	18-34	35-54	55+	Male	Female
Percent always/nearly always using sun block 15 SPF or higher when out for more than an hour on a sunny summer day						
Mesa	30.6	24.5	38.3	28.2	22.4	37.9
PMR9	40.8	29.6	47.5	37.9	31.3	48.8
PMR10	39.0	30.8	**50.7**	31.6	26.7	48.4
NW	38.4	30.2	40.5	**43.4**	31.2	44.8
State	33.1	29.6	37.2	29.9	25.3	39.5
Percent always/nearly always wearing a hat when out for more than an hour on a sunny summer day						
Mesa	32.3	27.8	29.4	41.0	45.1	20.2
PMR9	**41.8**	27.9	39.0	**66.1**	47.7	**36.0**
PMR10	**41.5**	**30.9**	46.2	46.2	52.7	**30.4**
NW	**39.9**	26.9	41.7	54.7	51.6	27.3
State	31.0	18.0	32.1	45.9	42.1	20.1
Percent always/nearly always wearing protective clothing when out more than an hour on a sunny summer day						
Mesa	12.4	4.6	7.6	27.6	13.9	11.0
PMR9	21.7	5.7	16.9	**52.7**	23.3	20.1
PMR10	20.3	12.3	13.4	38.0	21.4	19.2
NW	19.3	5.0	18.4	42.7	23.8	14.4
State	15.7	7.4	12.4	31.9	18.7	12.8
Percent always/nearly always wearing hat and protective clothing when out for more than an hour on a sunny summer day						
Mesa	8.5	1.4	6.5	18.9	9.8	7.2
PMR9	**17.1**	4.4	10.7	**46.5**	19.7	**14.5**
PMR10	14.1	9.2	10.9	23.4	15.7	12.5
NW	13.3	2.8	13.0	29.5	17.8	8.5
State	9.9	4.0	8.1	20.4	13.4	6.5

Bold=difference between western Colorado regions and the state is significant at p<.05.
** unable to estimate due to small number of respondents in this category.

Selected Findings by Cancer Site

Selected Findings by Cancer Site

All Cancers Combined

According to the Cancer Registry Annual Report, the cumulative risk of being diagnosed with cancer before age 85 in Colorado is 1 in 2 for men, and 1 in 3 for women.

Risk Factors: Factors contributing to cancer can be classified into three major groups: genetic, environmental, and behavioral (Colorado Cancer Prevention and Control Plan Advisory Committee, 1996). This report focuses mainly on behavioral factors. Studies suggest that 75-80 percent of cancer deaths are attributable to health behaviors, including diet, smoking, excessive alcohol intake, and reproductive and sexual history (National Cancer Advisory Board, 1994). Behaviors that contribute to late diagnosis of cancer, and thus a poorer prognosis, include delay in seeking medical care when cancer signs are present, and not participating in recommended screening procedures.

Prevention: The American Cancer Society recommends a cancer-related checkup every three years for people aged 20-40 and every year for people aged 40 and over. A change of life style, such as quitting smoking, healthier food intake, and participating in more physical activity, may reduce one's chance of getting cancer.

Incidence: During the period of 1996 and 1997, 15,038 male and 14,660 female cancer cases were diagnosed in Colorado. Comparable statistics for Western Colorado were 1,729 male cases and 1,576 female cases. Both male and female cancer incidence rates in Western Colorado were about the same as the overall Colorado state rates for men and women.

In the Northwestern Colorado region, the male cancer incidence rate was 21 percent lower than the state rate, which was statistically significant, and the female cancer rate in this region was slightly higher. Within the region, the Grand County male cancer incidence rate was 35 percent lower than the state rate, which was also statistically significant, and the female cancer rate in the county was 12 percent higher than the state rate. The male cancer incidence rates for Rio Blanco and Routt Counties were 31 percent and 25 percent lower, respectively, than the state rate. The female cancer incidence rates for Routt and Jackson Counties were 25 percent and 41 percent higher, respectively. The Moffat County female cancer incidence rate was 26 percent lower than the state rate.

Figure 4.1   All Cancers Combined – Average Age-Adjusted Incidence Rate

per 100,000 by Region* and Sex, 1996-1997

*see Table 5.1 for county data.   ☐ Male ■ Female
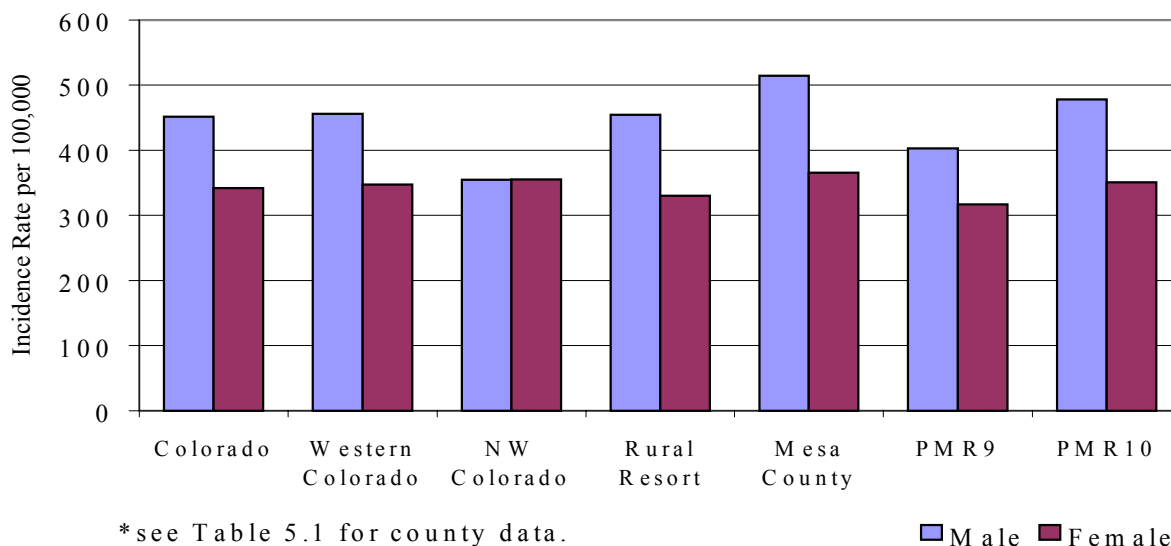
The male and female cancer incidence rates in the Rural Resort area were about the same as the state rates. Within the region, Garfield County exhibited a statistically 24 percent higher male cancer incidence rate than the state rate, while Eagle County's male cancer incidence rate was statistically 44 percent lower than the state rate. The female cancer incidence rate for Pitkin County was 30 percent lower than the state rate, which was also a statistically significant finding.

The Mesa County male cancer incidence rate was statistically 14 percent higher than the state rate, mostly due to higher rates of lung, colorectal, and prostate cancer. The male cancer incidence rate for Mesa County in the previous 1995-1996 period was also statistically higher. The female cancer incidence rate in this county was 7 percent higher, because of higher lung and breast cancer rates.

PMR9 male and female cancer incidence rates were 11 percent and 7 percent lower than the state rate. Within the region, La Plata County showed a statistically lower male cancer incidence rate (22 percent) than the state rate. The Dolores County male cancer incidence rate was 24 percent lower, and the female cancer incidence rate was 13 percent higher than the state rates, although neither was statistically significant.

The PMR10 male cancer incidence rate was 6 percent higher than the state rate, and the female cancer incidence rate was similar to the state rate. Within the region, the Gunnison County male cancer incidence rate was 20 percent higher, and the Ouray County male cancer

rate was 42 percent higher than the state rate. The San Miguel County male cancer incidence rate was 40 percent lower than the state rate, and the female cancer incidence rate was 47 percent lower, which was statistically significant.

Early Detection: Early detection leads to better survival. In Colorado, during the 1996-1997 time period, 56.8 percent of cancer cases were detected early. Early detection percentages for Western Colorado and the five regions were generally close to or higher than that of the state, with the exception of the following counties: Rio Blanco (35.9 percent), Lake (42.9 percent), Dolores (50.0 percent), and Montezuma (50.6 percent).

Figure 4.2   All Cancers Combined – Percent of "Early" Detection by Region*, 1996-1997
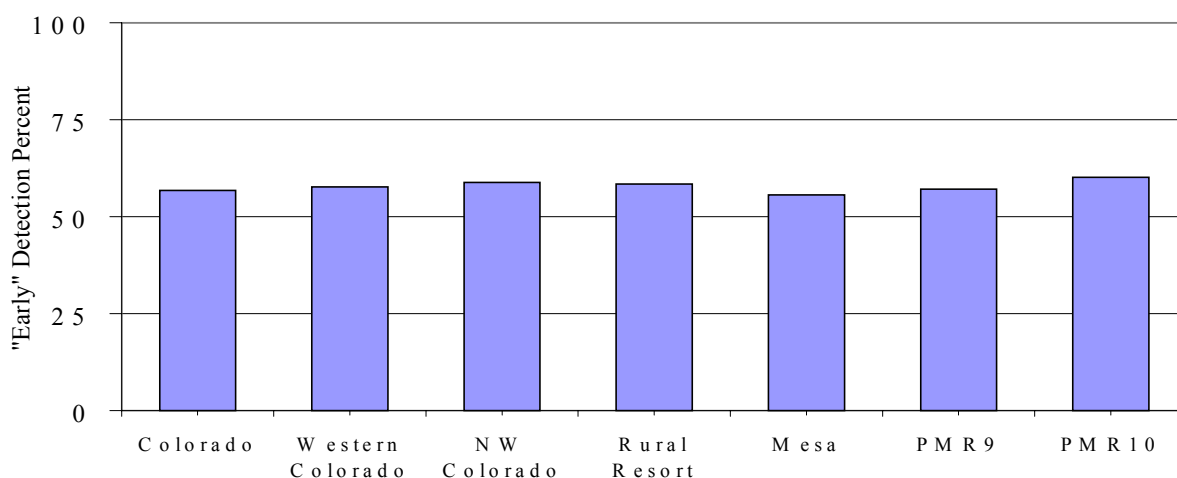
*see Table 5.2 for county data.

Mortality: During the 1997-1998 period there were 5,920 male cancer deaths and 5,516 female cancer deaths in Colorado and 686 male cancer deaths and 601 female cancer deaths in Western Colorado. The male cancer mortality rate was 2 percent lower than the state rate, and the female cancer mortality rate was about the same as the state rate.

The Northwest Region male cancer mortality rate was 9 percent lower than the state rate, with both Grand County and Moffat County having cancer mortality rates more than 20 percent lower. The female cancer mortality rate of the region was similar to the state rate. The Rio Blanco County female cancer mortality rate was 44 percent lower, while the Jackson County

female cancer mortality rate was 71 percent higher than the state rate. However, rates of both counties were based on a small number of cases.

Figure 4.3   All Cancers Combined – Average Annual Age-Adjusted Mortality Rate per 100,000 by Region* and Sex, 1997-1998

*see Table 5.3 for county data.
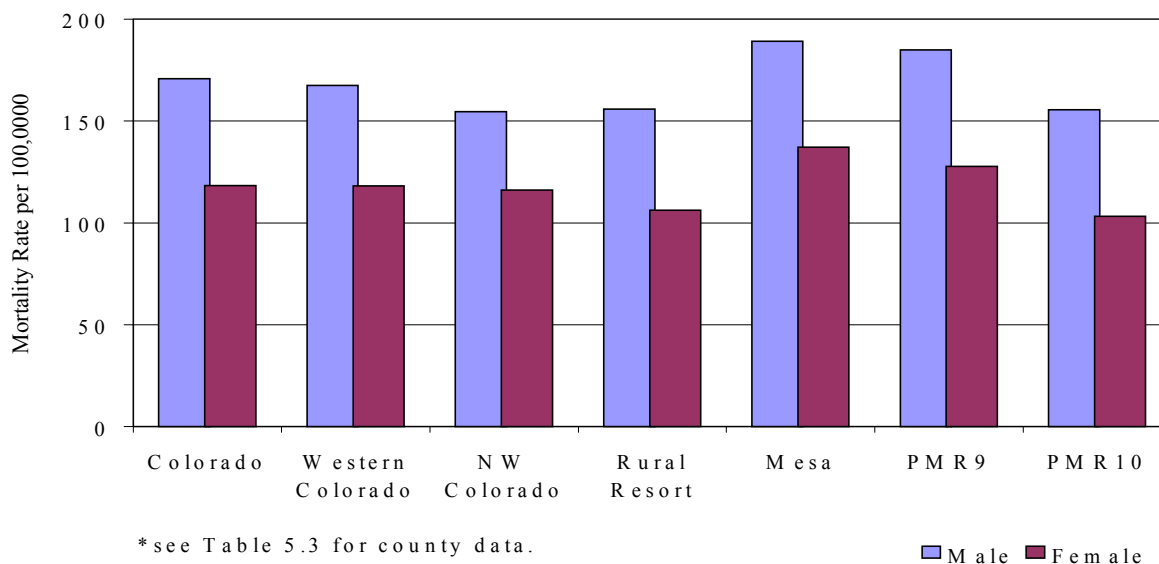
Male and female cancer mortality rates for the Rural Resort area were 9 percent and 10 percent lower than state rates. Within the region, Eagle County had male and female cancer mortality rates 39 percent and 29 percent lower, respectively, than state rates. Summit County male and female cancer mortality rates were 28 percent and 42 percent lower. Pitkin County male and female cancer mortality rates were 47 percent and 45 percent lower, respectively, than state rates; the male rate was statistically significant. The Lake County male cancer mortality rate was 32 percent higher than the state rate.

Mesa County male and female cancer mortality rates were 11 percent and 16 percent higher than state rates, although neither were statistically significant. Much of this elevation was due to higher lung cancer mortality rates.

PMR9 male and female cancer mortality rates were both 8 percent higher than state rates. Within the region, the Montezuma County male cancer death rate was 22 percent higher than the state rate, again mostly due to a higher lung cancer death rate. The Dolores County female

cancer death rate was 29 percent higher than the state rate, but this rate was based on a small number of cases.

PMR10 male and female cancer mortality rates were 9 percent and 13 percent lower than state rates. Within the region, the Delta County male cancer death rate was 21 percent lower. Male and female cancer death rates for Ouray County were 22 percent and 68 percent higher; the male elevation was due mostly to a higher prostate cancer death rate and the female elevation was due mostly to a higher lung cancer death rate. The Gunnison County female cancer death rate was statistically 62 percent lower than the state rate.

Colon and Rectal Cancer

The cumulative risk for Colorado men to be diagnosed with colon and rectal cancer before age 85 is 1 in 13, and the risk for Colorado women is 1 in 18. Colon and rectal cancer ranked third among the most commonly diagnosed cancers in Colorado men during the 1993-1997 time period, and second among Colorado women.

Risk Factors: Risk factors for colorectal cancer include a personal or family history of cancer or adenomas (a type of polyp) of the colon or rectum, a personal history of endometrial, ovarian, or breast cancer, and a personal history of longstanding ulcerative colitis. Additionally, characteristics of the average American diet (high fat and/or low fruit and vegetable consumption) is also associated with increased risk (Guide to Clinical Preventive Services).

Prevention: The American Cancer Society recommends that individuals over 50 years old have a yearly fecal occult blood test (FOBT), plus flexible sigmoidoscopy and digital rectal examination every five years, or colonoscopy and digital rectal examination every 10 years, or double-contrast barium enema and digital rectal examination every five to 10 years. The U.S. Preventive Services Task Force recommends screening for all persons aged 50 and older with annual FOBT and/or flexible sigmoidoscopy (time interval between exams unspecified). The Colorado Clinical Guidelines Collaborative suggests that persons with a higher than average risk for colorectal cancer, based on a family history, should have more intensive screening. Consumption of a low meat, combined with a high fruit and vegetable diet, may decrease the risk of developing colorectal cancer. Some studies suggest that regular exercise can also decrease one's risk for developing colorectal cancer (Pate RR, et al.).

Incidence: During the period of 1996-1997, 1,537 males and 1,491 females in Colorado were diagnosed with colon and rectal cancer. Comparable statistics for Western Colorado were 169 males and 164 females in the same time period. The male colorectal cancer incidence rate

for Western Colorado was 5 percent lower than the state rate, while the female colorectal cancer incidence rate for Western Colorado was 4 percent higher than the state rate.

Figure 4.4   Colon and Rectal Cancer – Average Annual Age-Adjusted Incidence Rate per 100,000 by Region* and Sex, 1996-1997
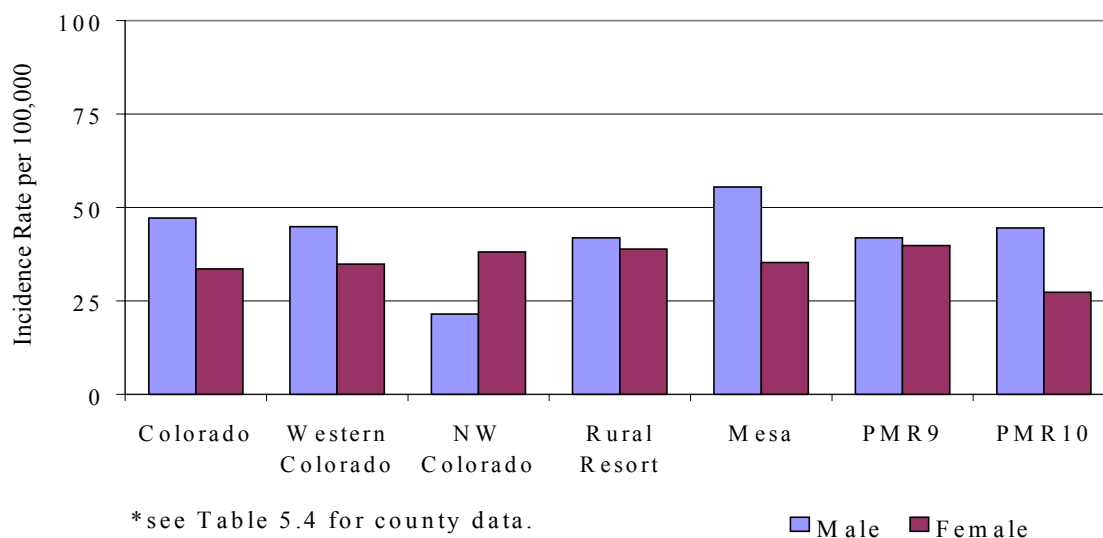
The Northwest Colorado male colorectal cancer incidence rate was statistically 54 percent lower than the state rate, and the female rate was 13 percent higher. Within the region, Moffat County and Rio Blanco County female colorectal cancer incidence rates were 23 percent and 110 percent higher than the state rate, while the Routt County female colorectal cancer incidence rate was 35 percent lower, although all three rates were based on small numbers of cases.

The Rural Resort area male colorectal cancer incidence rate was 11 percent lower than the state rate, while the female rate for the region was 16 percent higher. Garfield County male and female colorectal cancer incidence rates were 29 percent and 21 percent higher, respectively, than state rates, but within expected statistical variation. Summit County exhibited higher colorectal cancer incidence rates (29 percent for male and 175 percent for female) than the state rates. Eagle County male and female colorectal cancer incidence rates were both lower than state rates (54 percent for male and 24 percent for female). However, both Summit and Eagle Counties' rates were based on small numbers of cases.

The Mesa County male colorectal cancer incidence rate was 18 percent higher than the state rate, and the county's female incidence rate was 5 percent higher.

The PMR9 male colorectal cancer incidence rate was 11 percent lower and the female rate was 18 percent higher than the state rate. Within the region, Montezuma County male and female rates were 50 percent and 46 percent higher than state rates, although neither difference was statistically significant. The male colorectal cancer incidence rate for La Plata County was 41 percent lower than the state rate.

The PMR10 male colorectal cancer incidence rate was 6 percent lower and the female rate was 19 percent lower than the state rate. Within the region, Delta County had a male colorectal cancer incidence rate 16 percent below the state rate and a female rate 26 percent below the state rate. The Gunnison County male colorectal cancer incidence rate was 41 percent higher than the state rate, but this rate was based on a small number of cases.

Early Detection: During the 1996-1997 period, 41.3 percent of colorectal cancers statewide and 44.6 percent in Western Colorado were detected early. The regions in Western Colorado generally had better early detection percentages than the state with the exception of Northwest Colorado, in which 27.3 percent of colorectal cancers were diagnosed early.

Figure 4.5   Colon and Rectal Cancer – Percent of "Early" Detection by Region*, 1996-1997
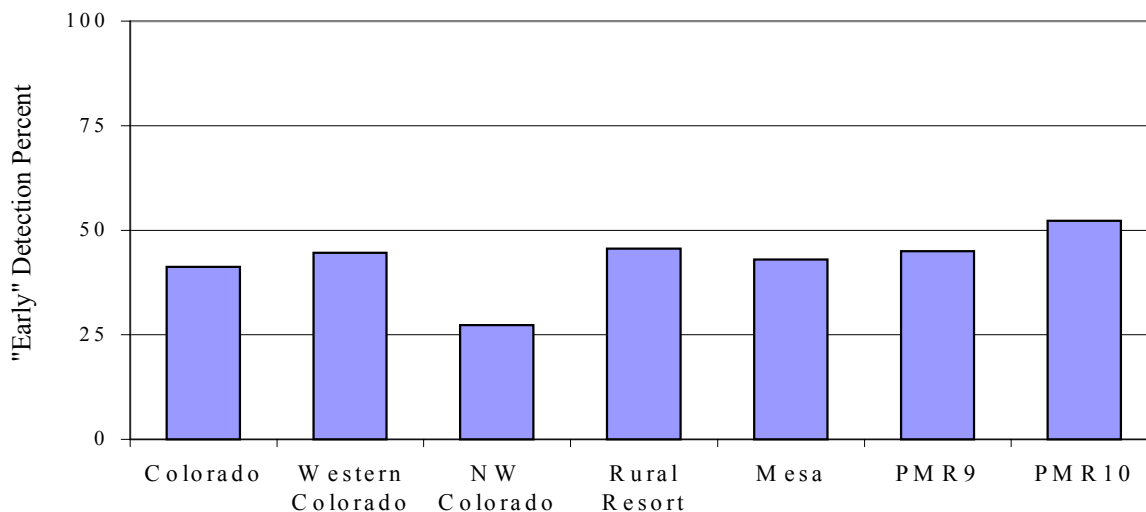
*see Table 5.5 for county data.

Mortality: During the 1997-1998 period, Colorado had 619 males and 589 females die of colorectal cancer. Western Colorado had 58 male and 67 female colorectal cancer deaths in the same period. The Colorado colorectal cancer mortality rate was 17.8 for males and 11.9 for females. The Western Colorado colorectal cancer mortality rate was 14.1 for males, which was 21 percent lower than the state rate, and 12.7 for females, which was 7 percent above the state rate.

Figure 4.6   Colon and Rectal Cancer – Average Annual Age-Adjusted Mortality Rate per 100,000 by Region* and Sex, 1997-1998

*see Table 5.6 for county data.
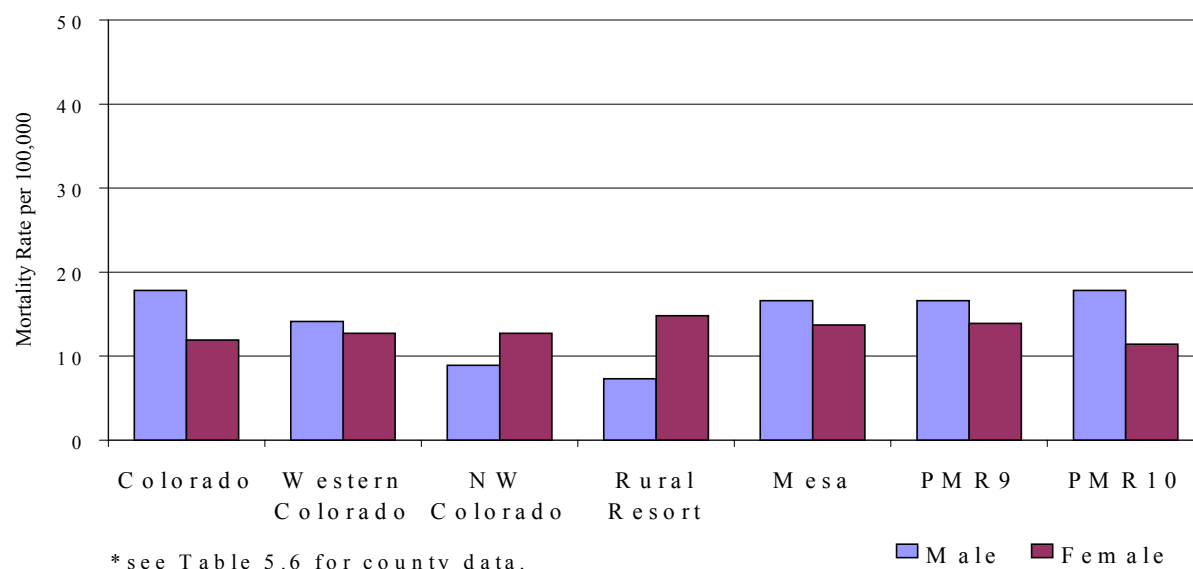
The Northwest Colorado male colorectal cancer mortality rate was 50 percent lower than the state rate, and the female rate was 7 percent higher, although both rates were based on a small number of cases. The Moffat County female colorectal cancer mortality rate was more than double the state rate. Again, the rate was based on a small number of cases.

The Rural Resort area male colorectal cancer mortality rate was 59 percent lower than the state rate, which was a statistically significant difference. The female rate was 24 percent higher than the state rate. The Garfield County female colorectal cancer mortality rate was 30 percent higher than the state rate.

The Mesa County male colorectal cancer mortality rate was 7 percent lower than the state rate, and the female rate was 15 percent higher.

The PMR9 male colorectal cancer mortality rate was 7 percent below the state rate, while the female rate was 17 percent above the state rate. Within the region, La Plata County had a male colorectal cancer incidence rate 38 percent lower than the state rate, and a female rate 28 percent higher than the state rate. The Montezuma County male colorectal cancer mortality rate was 35 percent higher than the state rate, and the female rate was 13 percent higher. However, all the county rates in this region were based on small numbers of cases.

The PMR10 male colorectal cancer mortality rate was the same as the state rate, and the female rate was 4 percent lower. The Delta County male colorectal cancer mortality rate, which was based on a small number of cases, was 28 percent lower than the state rate, while its female rate was 45 percent higher. Montrose County had a male colorectal cancer mortality rate that was 34 percent higher than the state rate, and a female rate that was 13 percent below the state rate.

Lung Cancer

The cumulative risk of Colorado men being diagnosed with lung cancer before age 85 is 1 in 10, and the risk for Colorado women is 1 in 17. Lung cancer ranks second among the most commonly diagnosed cancers in Colorado men during the 1993-1997 time period, and third among Colorado women.

Risk Factors: The Colorado Cancer Prevention and Control Plan states that cigarette smoking is the predominant risk factor for lung cancer. Approximately 90 percent of lung cancer cases in men and 80 percent of cases in women are attributable to cigarette smoking. Individuals who smoke more than two packs a day have lung cancer mortality rates 15 to 25 times greater than those individuals who have never smoked. Passive exposure to cigarette smoke increases the risk for nonsmokers. Other risk factors thought to be important in the development of lung cancer include exposure to industrial substances such as arsenic, certain organic chemicals and asbestos (especially for persons who smoke), and radiation exposure from occupational, medical, and environmental sources. Residential radon exposure may increase risk, especially in cigarette smokers.

Prevention: Lung cancer is largely preventable. An estimated 85 percent of all lung cancers in Colorado could be prevented if cigarette smoking were eliminated (Colorado Cancer Prevention and Control Plan Advisory Committee). Because symptoms often do not appear until

the disease is in advanced stages, early detection of lung cancer is difficult. Precancerous cellular changes in bronchial tissues often return to normal in smokers who stop smoking. Chest x-rays, analysis of cell types in sputum, and fiber-optic examination of the bronchial passages assist diagnosis, but have not been shown to be useful as widespread screening procedures to detect early stage disease.

Incidence: Lung cancer incidence during 1996-1997 in Colorado was 1,954 for men and 1,546 for women, and in Western Colorado the incidence was 235 for men and 173 for women. The male lung cancer incidence rate for Western Colorado was 4 percent higher than the state rate, and the female lung cancer incidence rate was 5 percent higher.

Figure 4.7   Lung Cancer – Average Annual Age-Adjusted Incidence Rate
per 100,000 by Region* and Sex, 1996-1997

*see Table 5.7 for county data.
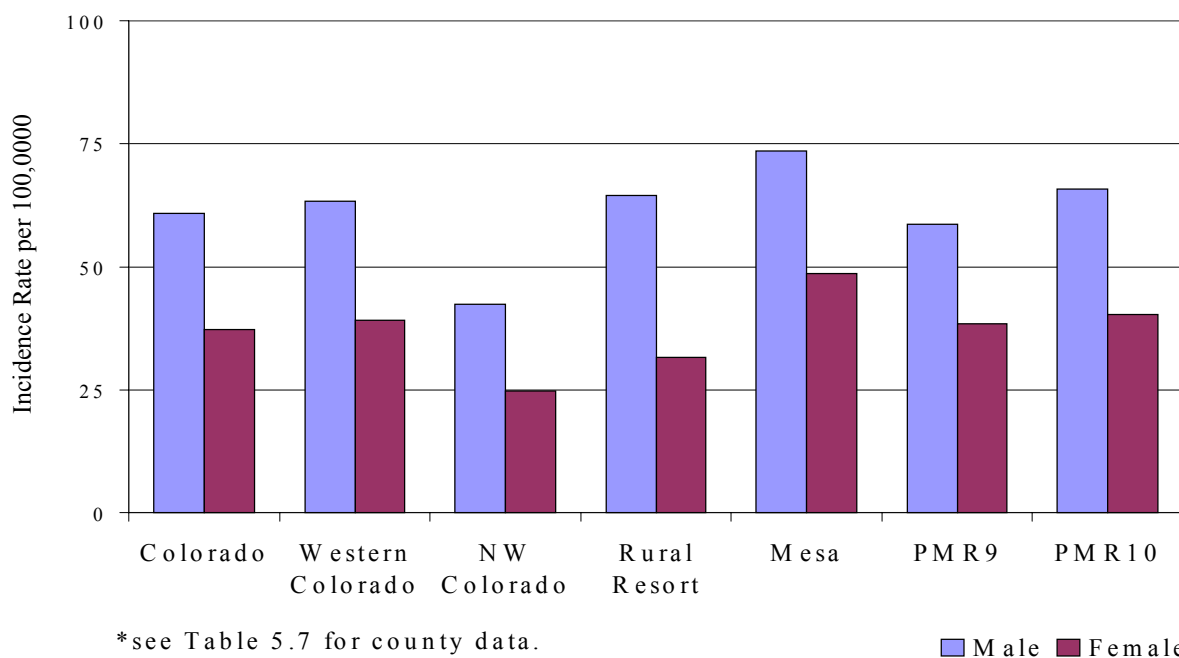
The Northwest Colorado male lung cancer incidence rate was 30 percent lower than the state rate, and the female rate was 34 percent lower than the state rate.

The Rural Resort male lung cancer incidence rate was 6 percent higher than the state rate, while the female rate for this region was 15 percent lower. The male lung cancer incidence rates for Garfield County and Lake County were higher than the state rate, 37 percent and 34 percent,

respectively. The male lung cancer incidence rate for Eagle County was 65 percent lower than the state rate, although the rate was based on a small number of cases.

Mesa County male and female lung cancer incidence rates were 21 percent and 30 percent higher than state rates.

PMR9 male and female lung cancer incidence rates were about the same as state rates. Within the region, Montezuma County male and female rates were 54 percent and 20 percent higher than state rates. The La Plata County male lung cancer incidence rate was 34 percent lower than the state rate. The Dolores County female lung cancer incidence rate was 255 percent higher, but based on a very small number of cases.

PMR10 male and female lung cancer incidence rates were 8 percent higher than state rates. Male lung cancer incidence rates for Gunnison County and Montrose County and the female rate for Delta County were about 30 percent higher than state rates.

Early Detection: Because symptoms often do not appear until the disease is in an advanced stage, early detection of lung cancer is very difficult. In 1996-1997, only 19.3 percent of cases were detected early in Colorado, 15 percent in Western Colorado. Northwest Colorado and the Rural Resort area had slightly higher early detection percentages (20 percent and 22.8 percent) than the state. The early detection percentages for Mesa County, PMR9, and PMR10 were lower.

Figure 4.8   Lung Cancer – Percent of "Early" Detection by Region*, 1996-1997
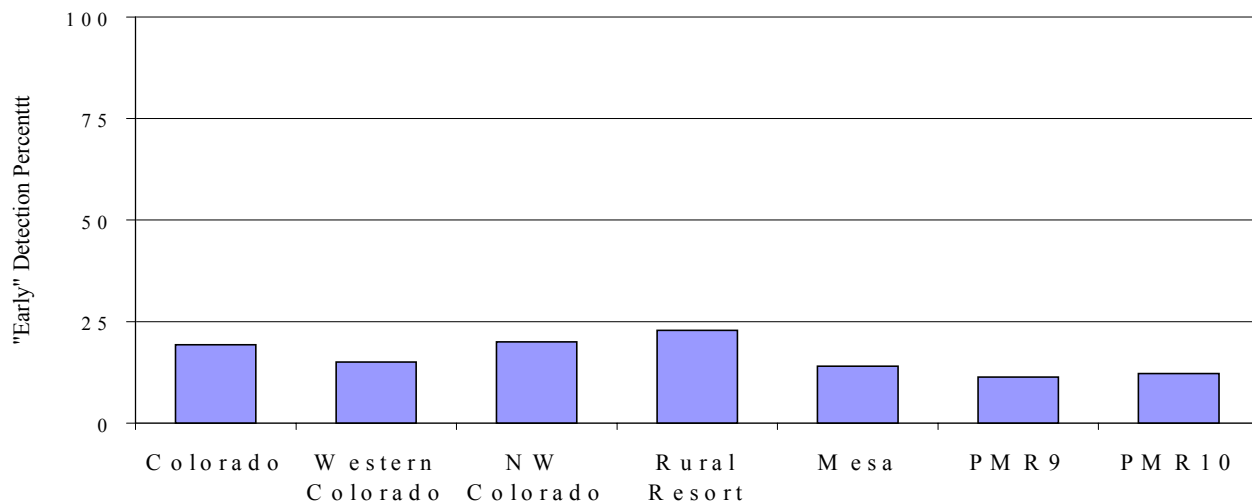
* s e e T a b l e 5 . 8 f o r c o u n t y d a t a .

Mortality: Lung cancer is the leading cause of cancer death in Colorado for both men and women.   During the 1997-98 time period, 1,545 men and 1,188 women died of lung cancer in Colorado, and 199 men and 139 women died of lung cancer in Western Colorado. Lung cancer mortality rates for Western Colorado for men and women were 9 percent and 6 percent higher than state rates.

Figure 4.9   Lung Cancer – Average Annual Age-Adjusted Mortality Rate
per 100,000 by Region* and Sex, 1997-1998

*see Table 5.9 for county data.
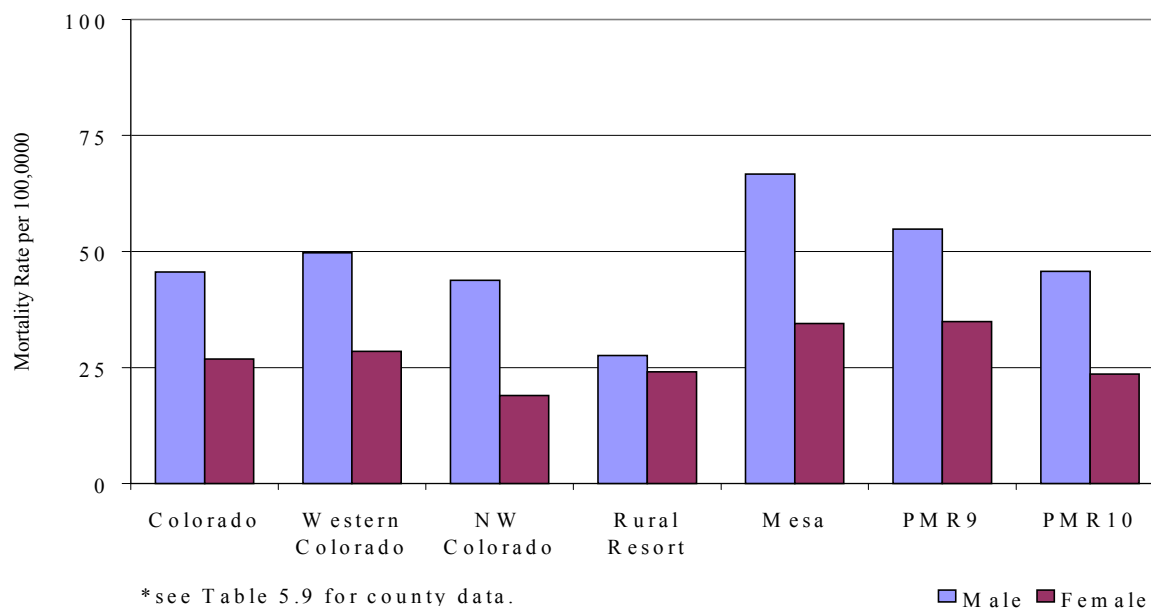
The Northwest Region male lung cancer mortality rate was 4 percent below the state rate, while its female rate was 29 percent lower.

The Rural Resort area male lung cancer mortality rate was 39 percent lower than the state rate, which was statistically significant, and its female rate was 10 percent lower. Male lung cancer mortality rates for Eagle and Garfield Counties were 32 percent or more lower than the state rate, but Eagle County's rate was based on a small number of cases. The female lung cancer mortality rate for Garfield County was 34 percent higher than the state rate, and the Lake

County's female rate was more than double the state rate, but again, this rate was based on a small number of cases.

Mesa County male and female lung cancer mortality rates were 46 percent and 29 percent higher than state rates.

PMR9 male and female lung cancer mortality rates were 20 percent and 30 percent higher than state rates. All the counties in this region with three or more deaths had higher male and female lung cancer mortality rates than state rates.

The PMR10 male lung cancer mortality rate was about the same as the state rate, but the female rate was 12 percent lower. The Montrose County male lung cancer mortality rate was 32 percent higher than the state rate, and its female rate was 35 percent lower. The higher male lung cancer mortality rate in Montrose County was likely due to its higher incidence rate during 1996-1997. The Ouray County female lung cancer mortality rate was 203 percent higher than the state rate, but this rate was based on a small number of cases.

Melanoma

Melanoma is the most deadly type of skin cancer. Other types of skin cancer, basal or squamous cell cancers, are highly curable. Although representing only less than 5 percent of all skin cancers, melanoma accounts for the majority of deaths caused by skin cancer. Melanoma is one of the fastest growing major cancers in Colorado. The cumulative risk of being diagnosed with melanoma before age 85 is 1 in 39 for men and 1 in 65 for women. Melanoma ranked fifth among the most commonly diagnosed cancers in Colorado men and women combined during the 1993-1997 time period.

Risk Factors: Excessive exposure to ultraviolet radiation (including natural sunlight and tanning booths) is the major risk factor for all skin cancers (U.S. Preventive Services Task Force, American Academy of Dermatology, Colorado Cancer Prevention and Control Plan Advisory Committee). Severe sunburn in childhood, fair complexion, and occupational exposure to coal tar, pitch, creosote, arsenic compounds, or radium are also considered risk factors for skin cancer.

Prevention: The U.S. Preventive Services Task Force recommends that the primary prevention of skin cancer involves limiting sun exposure, avoiding tanning facilities, wearing protective clothing, and applying sunscreen preparations. The American Cancer Society recommends a monthly skin self-examination for all adults and a physician skin examination every three years in persons 20-39 years old and annually in persons 40 years and older.

Early detection of melanoma is critical. Over 90 percent of melanomas that arise in the skin can be recognized with the naked eye. Melanomas often start as small, mole-like growths that increase in size, change color, become ulcerated, and bleed easily. Skin changes described in the "ABCD" rule require further diagnostic evaluation:

- A is for Asymmetry - one-half of the mole does not match the other.
- B is for Border - the edges are ragged, notched, or blurred.
- C is for Color - the pigmentation is not uniform.
- D is for Diameter - greater than 6 millimeters.

Any sudden or progressive increase in the size of a mole is also a cause for concern.

Incidence: During the 1996-1997 time period, 806 Colorado men and 664 Colorado women were diagnosed with melanoma. The comparable statistics for Western Colorado were 83 men and 78 women. The male melanoma incidence rate in Western Colorado was 8 percent lower than the state rate, while the female incidence rate was 9 percent higher.

**Figure 4.10   Melanoma – Average Annual Age-Adjusted Incidence Rate
per 100,000 by Region* and Sex, 1996-1997**

* see Table 5.10 for county data.
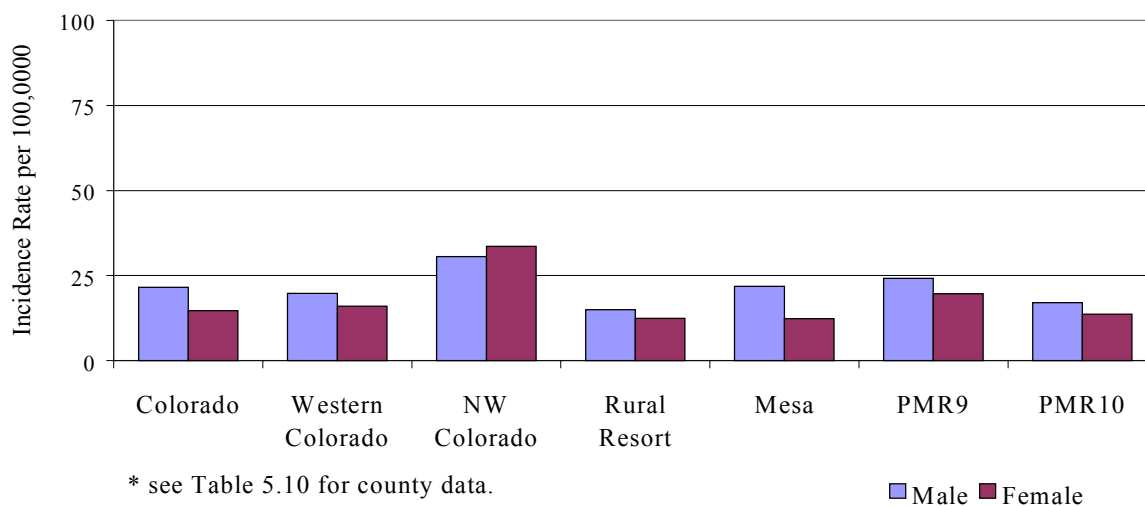
The Northwest Colorado male melanoma incidence rate was 42 percent higher, and the female rate was statistically 129 percent higher than state rates. In this region, Routt County rates for both males and females were more than double state rates. The Grand County

female rate was 162 percent higher than the state rate, but the rate was based on a small number of cases.

Rural Resort area male and female melanoma incidence rates were both lower than the state rates.

The Mesa County male melanoma incidence rate was about the same as the state rate, and its female incidence rate was 16 percent lower.

The PMR9 male melanoma incidence rate was 13 percent higher, and the female rate was 34 percent higher than state rates. The La Plata County female melanoma incidence rate was 40 percent higher than the state rate, and the male rate for this county was 25 percent lower, but this rate was based on a small number of cases. The Montezuma County male melanoma incidence rate was 73 percent higher than the state rate.

The PMR10 male melanoma incidence rate was 21 percent lower than the state rate, and the female rate was 7 percent lower. The Gunnison County female melanoma incidence rate was 110 percent higher than the state rate. Montrose County male and female melanoma incidence rates were at least 20 percent lower than state rates. However, all the rates were based on a small number of cases.

Early Detection: During the 1996-1997 time period, 95.5 percent of melanoma cases were detected early in Colorado, and a similar percentage were detected early in Western Colorado. All the regions in Western Colorado had early detection percentages greater than 91 percent.

Figure 4.11   **Melanoma – Percent of "Early" Detection by Region*, 1996-1997**
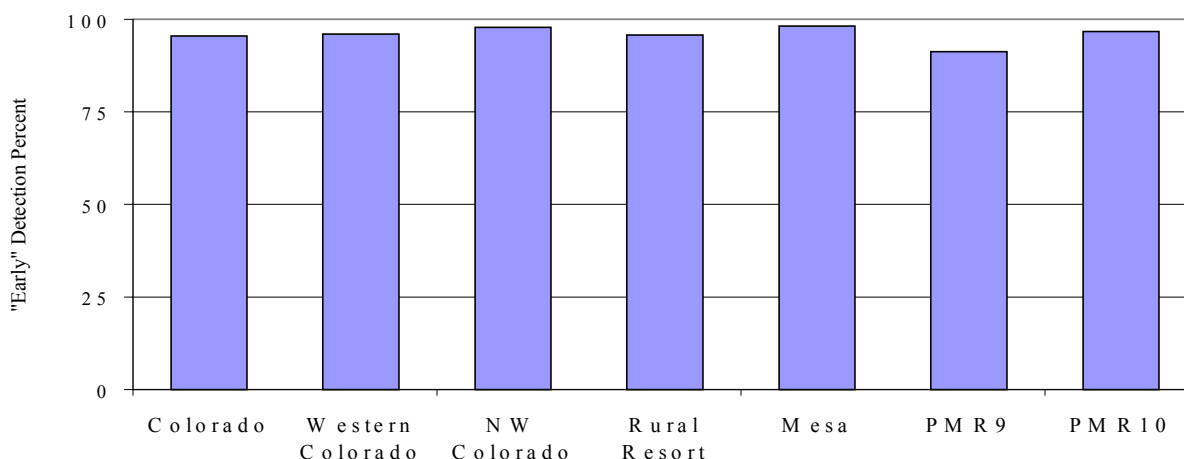
*see Table 5.11 for county data.

Mortality: Male and female melanoma mortality rates in Western Colorado were 37 percent and 6 percent higher than state rates during the 1997-1998 time period.   Melanoma mortality rates for Western Colorado regions were generally higher than state rates, but the regional rates were based on small numbers of cases (see Table 5.12 for county data).

Female Breast Cancer

The cumulative risk for Colorado women being diagnosed with breast cancer before age 85 is 1 in 7.   Breast cancer ranked first among the most commonly diagnosed cancers in Colorado women during the 1993-1997 time period.

Risk Factors: Breast cancer risk rises with age. A personal or family history of breast cancer is the most established risk factor. Increased risk for breast cancer has been associated with first full-term pregnancy after age 30, and also with early menarche and late menopause (the Colorado Cancer Prevention and Control Plan Advisory Committee, U.S. Preventive Service Task Force, the American Cancer Society). Obesity, heavy alcohol use, high-fat diets, and estrogen replacement therapy have been suggested as possible risk factors for breast cancer (Clinical Oncology). Despite the large number of known and potential risk factors, few are strongly associated with the development of breast cancer, and no single factor or combination of factors can predict the occurrence of breast cancer in any one individual. The key to reducing breast cancer mortality is early detection through screening (the American Cancer Society).

Prevention: The American College of Radiology, the American Medical Association, and the American College of Obstetricians and Gynecologists recommend that women aged 40 and over have a screening mammogram every one to two years and an annual clinical physical exam. The American Cancer Society recommends that women aged 20-39 do a breast self-exam each month and have a clinical breast exam by a health care professional every three years; and that women aged 40 and over do a breast self-exam each month and have a mammogram and a clinical breast exam every year.

Incidence: Female breast cancer incidence for Colorado during the 1996-1997 time period was 4,835 and 530 for Western Colorado. The female breast cancer incidence rate for Western Colorado was 5 percent higher than the state rate.

The Northwest Colorado female breast cancer incidence rate was 4 percent higher than the state rate. Within the region, Routt County and Rio Blanco County female breast cancer incidence rates were over 20 percent higher, and Grand and Moffat Counties had rates 24 percent lower than the state rate. None of the county rates were statistically different from the state rates.

The Rural Resort area female breast cancer incidence rate was 4 percent lower than the state rate. Within the region, Pitkin County's rate was 42 percent lower, which was statistically significant. Both Eagle and Summit Counties' rates were over 24 percent higher than the state rate.

Figure 4.12   Female Breast Cancer – Average Annual Age-Adjusted Incidence Rate per 100,000 by Region*, 1996-1997
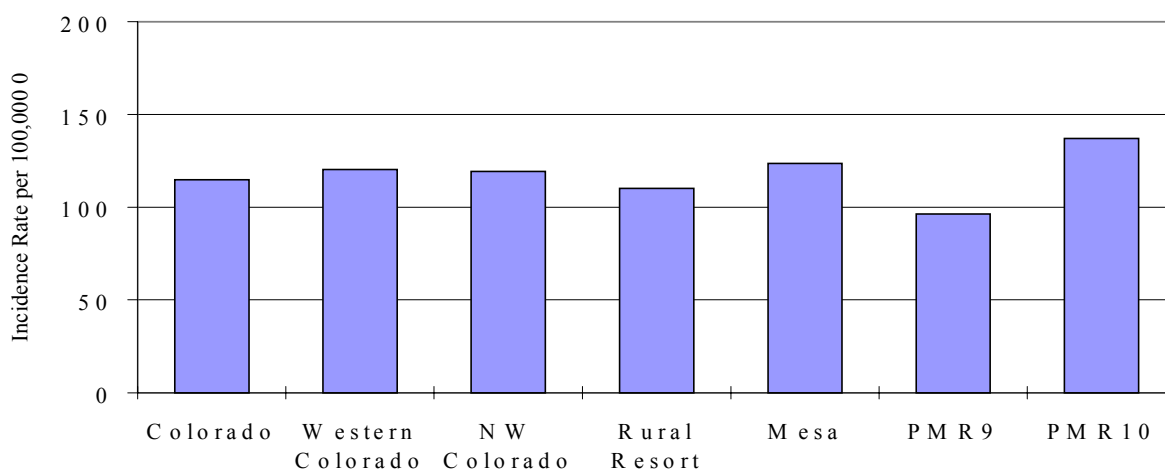
*see Table 5.13 for county data.

The Mesa County female breast cancer incidence rate was 8 percent higher than the state rate.

The PMR9 female breast cancer incidence rate was 16 percent lower than the state rate. Montezuma County had a rate that was statistically 45 percent lower than the state rate.

The PMR10 female breast cancer incidence rate was 19 percent higher than the state rate. Delta County had a rate 46 percent higher than the state rate. Montrose County posted a 21 percent higher rate than the state rate. The Gunnison County rate was 43 percent lower than the state rate.

Early Detection: In Colorado during the 1996-1997 time period, 71.5 percent of female breast cancers were detected early. In Western Colorado, 69.3 percent of female breast cancer cases were detected early. Early detection percentages within the individual regions in Western Colorado were generally worse than the state percentage, except for PMR10 which had an early

detection rate of 75.9 percent. Six counties in Western Colorado had better early detection percentages than the state: Pitkin (72.7 percent), La Plata (75.9 percent), Gunnison (87.5 percent), Ouray (100 percent), and San Miguel (100 percent). The San Miguel percentage was based on a small number of cases.

Figure 4.13   Female Breast Cancer – Percent of "Early" Detection by Region*, 1996-1997
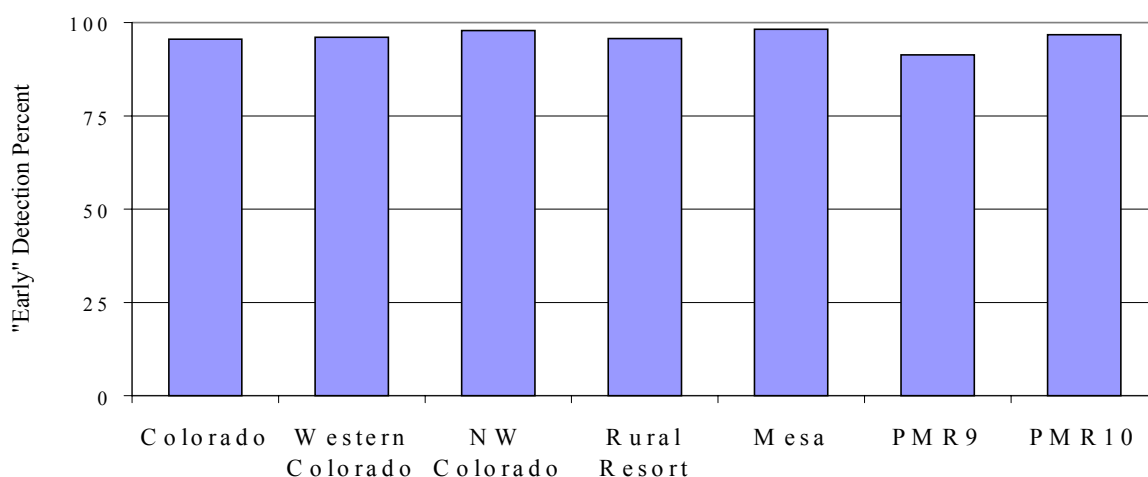
*see Table 5.14 for county data.

Mortality: During the 1997-1998 time period, 903 Colorado women died of breast cancer. The number was 103 for Western Colorado women in the same time period. The female breast cancer mortality rate in Western Colorado was about the same as the state rate.

The Northwest Colorado female breast cancer mortality rate was 11 percent higher than the state rate. Within the region, Routt County had a rate which was 90 percent higher, and Grand County's rate was 35 percent higher than the state rate. However, the rates for both counties were based on a small number of cases.

The Rural Resort female breast cancer mortality rate was 38 percent lower than the state rate.

The Mesa County breast cancer mortality rate was 25 percent higher than the state rate.

**Figure 4.14   Female Breast Cancer – Average Annual Age-Adjusted Mortality Rate
per 100,000 by Region*, 1997-1998**
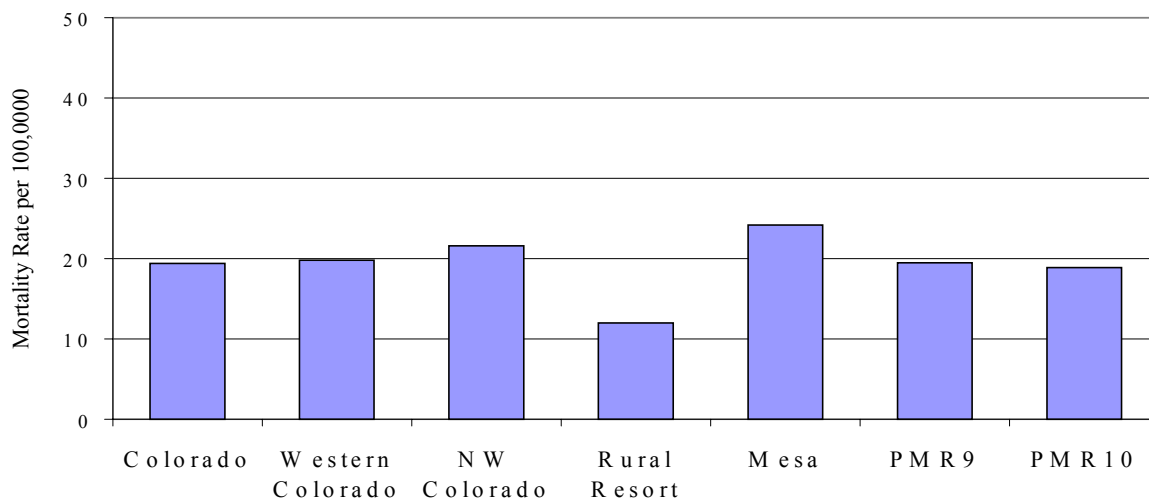
*see Table 5.15 for county data.

The PMR9 female breast cancer mortality rate was the same as the state rate. Within the region, Archuleta County posted a rate 51 percent higher than the state rate, and Montezuma County had a rate 41 percent lower than the state. However, both counties' rates were based on a small number of cases.

The PMR10 breast cancer mortality rate was similar to the state rate. Delta County had a rate that was 29 percent higher than the state rate.

Invasive Cervical Cancer

The cumulative risk of Colorado women being diagnosed with invasive cervical cancer before age 85 is 1 in 118. Invasive cervical cancer ranked ninth among the most commonly diagnosed cancers in Colorado women during the 1993-1997 time period.

Risk Factors: Multiple sex partners, younger age at first intercourse, a higher number of pregnancies, certain sexually transmitted diseases such as human papilloma virus, and maternal use of diethylstilbestrol during pregnancy raise the risk for cervical cancer. Smoking and long-term use of oral contraceptives may also increase the risk (Colorado Cancer Prevention and Control Plan Advisory Committee).

Prevention: The American Cancer Society and the National Cancer Institute recommend pelvic exams every one to three years for women aged 18 to 40 and for sexually active women younger than age 18. Annual exams are recommended for women after age 40. Women should have Papanicolaou tests (Pap) at least every one to three years after three negative annual tests. The U.S. Preventive Services Task Force recommends that Pap tests should begin with the onset of sexual activity and should be repeated every one to two years at the physician's discretion. Because cervical cancer has been linked to sexually transmitted infections, use of barrier methods of contraception and involvement with fewer sex partners may decrease the risk of developing cervical cancer.

Incidence: Over 80 percent of cervical cancers are detected at the in-situ or pre-invasive stage, when the cancer is very curable. In Colorado there were 338 invasive cervical cases diagnosed during the 1996-97 time period, of which 33 cases were found in Western Colorado. The cervical cancer incidence rate in Western Colorado was similar to the state rate, so were the Rural Resort and the PMR10 rates. The Northwest Colorado rate was 74 percent higher than the state rate; incidence rates for Mesa County and PMR9 were both 24 percent lower.

Figure 4.15   Invasive Cervical Cancer – Average Annual Age-Adjusted Incidence Rate per 100,000 by Region*, 1996-1997
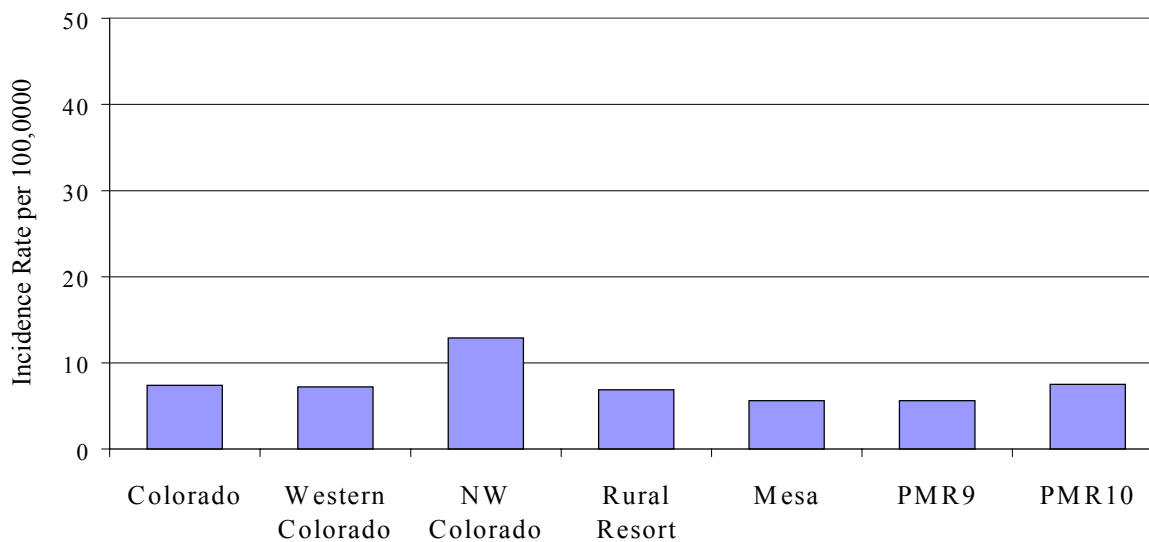
*see Table 5.16 for county data.

Early Detection: Early detection percentages were not calculated for cervical cancer because in-situ cervical cancer is not reportable to the Colorado Central Cancer Registry. However, Rural Resort and Mesa County had higher percentages of distant stage cases than statewide (see Table 5.17 for county data).

Mortality: The invasive cervical cancer mortality rate in Western Colorado was similar to the state rate. There were too few cervical cancer deaths in Western Colorado to report data by region (see Table 5.18 for county data).

Prostate Cancer

The cumulative risk of Colorado men being diagnosed with prostate cancer before age 85 is 1 in 4. Prostate cancer ranked first among the most commonly diagnosed cancers in Colorado men during the 1993-1997 time period.

Risk Factors: Incidence increases with age (especially after age 60). Both familial and environmental factors may contribute to increased risk for prostate cancer. Studies suggest that a family history of prostate cancer in a first-degree relative doubles one's risk. Suspected environmental risk factors include occupational exposure to cadmium, work in rubber manufacturing, and farming. Epidemiologic evidence also suggests that a diet high in fat, particularly animal or saturated fat, increases the risk of prostate cancer (the American Cancer Society).

Prevention: The American Cancer Society recommends that men age 50 and older who have at least a 10-year life expectancy should talk with their health care professional about having a digital rectal exam of the prostate gland and a prostate-specific antigen (PSA) blood test every year. Men who are at high risk for prostate cancer (black men or men who have a history of prostate cancer in close family members) should consider beginning these tests at an earlier age. The PSA test measures PSA levels in the blood and is used to help detect prostate cancer earlier.

Incidence: According to the Cancer Registry Annual Report, prostate cancer incidence rose sharply in Colorado from the late 1980's to 1992, with a similarly sharp drop in rates through 1997. This phenomenon has been attributed to changes in PSA screening rates. As the PSA test was widely adopted in the late 1980's, more prostate cancer cases were diagnosed at an earlier stage than they otherwise would have been. Once this pool of cases was detected, the incidence rate decreased to its earlier level.

During the 1996-1997 time period, 4,498 new cases were detected in Colorado, and 524

in Western Colorado. The prostate cancer incidence rate in Western Colorado was similar to the state rate.

The prostate cancer incidence rate for Northwest Colorado was statistically 31 percent lower than the state rate; the Rio Blanco County prostate cancer incidence rate was 54 percent lower. Other counties in this region, with the exception of Jackson County whose rate was not displayed due to less than three cases, all had lower incidence rates than the state.

Figure 4.16   Prostate Cancer – Average Annual Age-Adjusted Incidence Rate
per 100,000 by Region*, 1996-1997
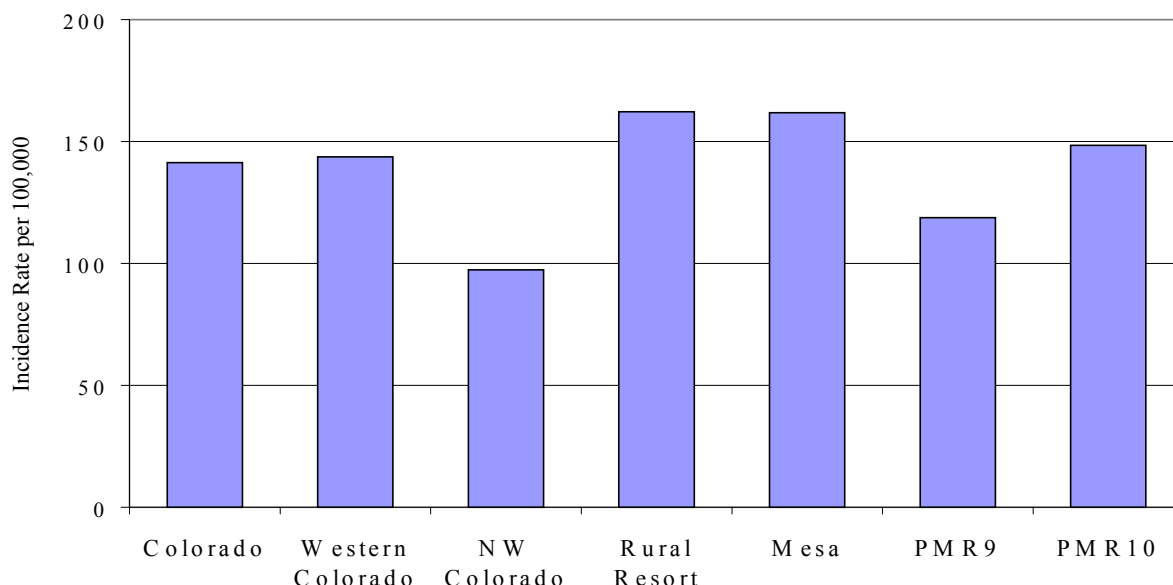
*see Table 5.19 for county data.

The prostate cancer incidence rate for the Rural Resort area was 15 percent higher than the state rate. All the counties in this region had higher incidence rates, except for Eagle County, whose rate was 36 percent lower.

Mesa County posted a 15 percent higher prostate cancer incidence rate compared with the state rate.

The PMR9 prostate cancer incidence rate was 16 percent lower than the state rate. With the exception of Archuleta County, whose rate was 45 percent above the state rate, all counties in

this region posted rates more than 20 percent lower than the state rate.

The PMR10 incidence rate was 5 percent higher than the state rate. The Ouray County rate was more than double the state rate. The rates for Gunnison County and Delta County were 22 percent and 18 percent higher than the state rate. The rates for San Miguel and Montrose Counties were 22 percent and 16 percent lower than the state rate.

Early Detection: In Colorado during the 1996-1997 time period, 81.1 percent of prostate cancers were detected at early stages, and 82.3 percent of the cancers were detected early in Western Colorado. Every region in Western Colorado, except the Northwest Colorado region, had an early detection percentage that was close to the state percentage or better. Early detection percentages for most of the counties in Western Colorado were as high or higher than for the state. Three counties had early detection percentages that were less than 70 percent. These counties were: Routt, Lake, and Rio Blanco.

Figure 4.17   Prostate Cancer – Percent of "Early" Detection by Region*, 1996-1997
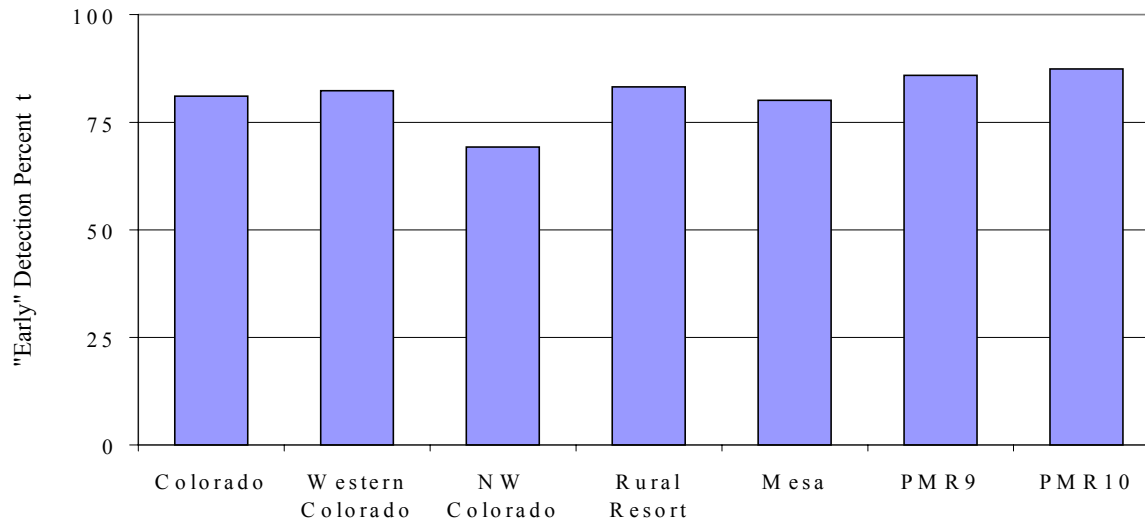
*see Table 5.20 for county data.

Mortality: The Western Colorado prostate cancer mortality rate was similar to the overall state rate during the 1997-1998 time period. More than half of the counties had less than

three deaths in the two years. Six counties had rates that were at least 55 percent higher than the state rate, but these elevations were based on a small number of cases. Northwest Colorado, Rural Resort, and PMR9 all had at least 20 percent higher rates than the state, while the Mesa County rate was 24 percent lower and the PMR10 rate was 15 percent lower.

Figure 4.18   Prostate Cancer – Average Annual Age-Adjusted Mortality Rate per 100,000 by Region*, 1997-1998
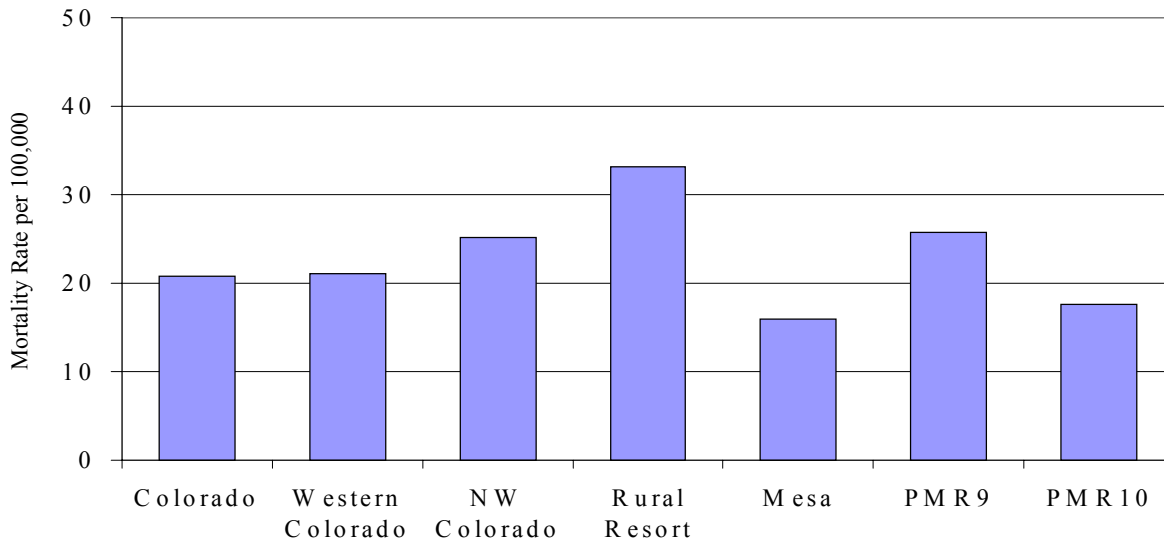
*see Table 5.21 for county data.

Section V

Appendix
Incidence, Staging, and Mortality Data by County

Table 5.1   All Cancers Combined -- Number of Diagnosed Cancers and Average Annual Age-Adjusted Incidence Rates per 100,000 by Sex and Place, 1996-1997

Place	Male		Female	
	N	Rate	N	Rate
Colorado	15038	451.5	14660	341.9
Western Colorado	1729	455.6	1576	347.4
NW Colorado	133	**354.6** Low	159	355.0
Grand	24	**294.3** Low	35	381.6
Jackson	*	*	8	482.2
Moffat	49	497.4	32	252.0
Rio Blanco	20	311.7	28	349.3
Routt	38	339.3	56	425.8
Rural Resort	333	454.5	298	330.4
Eagle	43	**252.2** Low	61	302.0
Lake	29	450.3	26	314.3
Garfield	184	**561.7** High	135	344.6
Pitkin	36	337.9	32	**237.7** Low
Summit	41	463.5	44	405.7
Mesa	581	**514.6** High	520	365.2
PMR9	268	402.8	255	316.7
Archuleta	34	417.4	26	305.3
Dolores	7	344.4	8	386.9
La Plata	120	**352.6** Low	136	320.4
Montezuma	105	482.4	85	317.7
San Juan	*	*	*	*
PMR10	414	478.0	344	350.8
Delta	176	512.6	149	382.2
Gunnison	49	544.0	31	324.4
Hinsdale	*	*	3	373.1
Montrose	150	435.1	138	342.7
Ouray	25	641.0	14	347.3
San Miguel	13	272.9	9	**181.8** Low

* Data not displayed due to the small number of events in the category.

Bold = difference between region or county and state is significant at p<=.05.

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**Table 5.2   All Cancers Combined -- Stage of Disease at Diagnosis
by Place, 1996-1997**

	In-Situ %	Local %	Regional %	Distant %	Unknown %	Cases N	% "Early" Detection
Colorado	7.2	43.0	18.2	20.1	11.6	31809	56.8
Western Colorado	7.8	42.3	17.5	19.4	13.0	3537	57.7
NW Colorado	12.2	39.5	18.5	17.6	12.2	329	58.8
Grand	11.6	43.5	17.4	20.3	7.2	69	59.4
Jackson	9.1	54.5	0.0	36.4	0.0	11	63.6
Moffat	13.6	46.6	13.6	15.9	10.2	88	67.1
Rio Blanco	2.1	27.1	35.4	16.7	18.8	48	35.9
Routt	15.9	35.4	17.7	15.9	15.0	113	60.4
Rural Resort	8.1	43.4	19.0	17.6	11.9	680	58.4
Eagle	9.6	45.6	21.1	14.9	8.8	114	60.6
Garfield	6.2	44.5	17.2	18.4	13.6	337	58.8
Lake	5.3	31.6	22.8	26.3	14.0	57	42.9
Pitkin	19.5	40.2	14.6	14.6	11.0	82	67.1
Summit	4.4	46.7	24.4	15.6	8.9	90	56.1
Mesa	6.8	42.3	16.8	22.5	11.7	1170	55.6
PMR9	9.4	39.1	19.7	16.8	15.0	573	57.1
Archuleta	7.7	36.9	20.0	18.5	16.9	65	53.7
Dolores	0.0	40.0	20.0	20.0	20.0	15	50.0
La Plata	10.2	45.1	18.3	15.1	11.3	284	62.3
Montezuma	9.7	31.4	21.7	18.4	18.8	207	50.6
San Juan	*	*	*	*	*	*	*
PMR10	6.2	45.0	15.2	18.9	14.8	785	60.1
Delta	5.7	44.6	17.1	18.0	14.7	334	58.9
Gunnison	2.5	45.7	17.3	18.5	16.0	81	57.4
Hinsdale	0.0	75.0	25.0	0.0	0.0	4	75.0
Montrose	6.7	45.7	14.0	20.0	13.7	300	60.6
Ouray	9.8	41.5	7.3	17.1	24.4	41	67.7
San Miguel	16.0	40.0	8.0	24.0	12.0	25	63.6

* Data not displayed due to the small number of events in the category.

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Table 5.3 All Cancers Combined -- Number of Deaths and Average Annual Age-Adjusted Mortality Rates per 100,000 by Sex and Place, 1997-1998

Place	Male		Female	
	N	Rate	N	Rate
Colorado	5920	170.8	5516	118.3
Western Colorado	686	167.6	601	118.2
NW Colorado	59	154.6	50	116.1
Grand	11	130.6	12	130.5
Jackson	3	140.5	4	202.1
Moffat	14	132.0	15	118.6
Rio Blanco	11	185.8	5	66.3
Routt	20	197.4	14	120.0
Rural Resort	100	155.9	88	106.2
Eagle	12	104.6	14	84.1
Garfield	61	185.5	54	131.3
Lake	11	224.8	7	136.4
Pitkin	9	**91.1** Low	7	64.5
Summit	7	123.7	6	68.1
Mesa	244	189.3	220	137.2
PMR9	128	184.9	114	127.7
Archuleta	12	151.1	11	115.1
Dolores	*	*	4	152.3
La Plata	62	186.7	62	134.3
Montezuma	50	208.1	36	117.1
San Juan	*	*	*	*
PMR10	155	155.6	129	103.2
Delta	59	135.7	63	123.2
Gunnison	16	169.5	5	45.0
Hinsdale	*	*	*	*
Montrose	73	181.8	52	95.7
Ouray	7	209.1	8	198.3
San Miguel	*	*	*	*

* Data not displayed due to the small number of evernts in the category.

Bold = Difference between region or county and state is significant at p<=.05.

Table 5.4   Colon and Rectal Cancer -- Number of Diagnosed Cancers and Average Annual Age-Adjusted Incidence Rates per 100,000 by Sex and Place, 1996-1997

Place	Male		Female	
	N	Rate	N	Rate
Colorado	1537	47.2	1491	33.6
Western Colorado	169	44.9	164	34.9
NW Colorado	8	**21.5** Low	16	38.1
Grand	*	*	*	*
Jackson	*	*	*	*
Moffat	4	41.1	5	41.3
Rio Blanco	3	51.7	6	70.7
Routt	*	*	3	22.0
Rural Resort	31	41.9	31	38.9
Eagle	4	21.6	4	25.6
Lake	*	*	*	*
Garfield	20	60.7	18	40.5
Pitkin	*	*	4	41.5
Summit	3	61.1	5	92.5
Mesa	63	55.5	54	35.3
PMR9	28	41.9	33	39.8
Archuleta	*	*	4	49.8
Dolores	*	*	*	*
La Plata	9	27.9	15	34.3
Montezuma	16	70.9	14	48.9
San Juan	*	*	*	*
PMR10	39	44.5	30	27.3
Delta	14	39.6	13	25.0
Gunnison	6	66.7	*	*
Hinsdale	*	*	*	*
Montrose	17	47.6	15	33.4
Ouray	*	*	*	*
San Miguel	*	*	*	*

* Data not displayed due to small number of events in the category.

Bold = difference between region or county and state is significant at p<=.05.

**Table 5.5   Colon and Rectal Cancer -- Stage of Disease at Diagnosis
by Place, 1996-1997**

	In-Situ %	Local %	Regional %	Distant %	Unknown %	Cases N	% "Early" Detection
Colorado	5.5	32.8	35.4	19.2	7.1	3218	41.3
Western Colorado	5.7	35.4	32.9	18.1	7.9	353	44.6
NW Colorado	0.0	25.0	33.3	33.3	8.3	24	27.3
Grand	*	*	*	*	*	*	*
Jackson	*	*	*	*	*	*	*
Moffat	0.0	33.3	22.2	33.3	11.1	9	37.5
Rio Blanco	0.0	22.2	55.6	11.1	11.1	9	25.0
Routt	0.0	25.0	25.0	50.0	0.0	4	25.0
Rural Resort	4.6	35.4	36.9	10.8	12.3	65	45.6
Eagle	0.0	25.0	62.5	0.0	12.5	8	28.6
Garfield	2.6	38.5	38.5	12.8	7.7	39	44.4
Lake	*	*	*	*	*	*	*
Pitkin	25.0	37.5	25.0	0.0	12.5	8	71.4
Summit	0.0	37.5	25.0	12.5	25.0	8	50.0
Mesa	9.3	31.0	32.6	20.9	6.2	129	43.0
PMR9	4.7	37.5	31.2	20.3	6.2	64	45.0
Archuleta	0.0	33.3	33.3	33.3	0.0	6	33.3
Dolores	*	*	*	*	*	*	*
La Plata	11.1	48.1	22.2	11.1	7.4	27	64.0
Montezuma	0.0	30.0	40.0	23.3	6.7	30	32.1
San Juan	*	*	*	*	*	*	*
PMR10	2.8	45.1	31.0	12.7	8.5	71	52.3
Delta	6.9	41.4	20.7	17.2	13.8	29	56.0
Gunnison	0.0	37.5	50.0	12.5	0.0	8	37.5
Hinsdale	*	*	*	*	*	*	*
Montrose	0.0	50.0	34.4	9.4	6.3	32	53.3
Ouray	*	*	*	*	*	*	*
San Miguel	*	*	*	*	*	*	*

* Data not displayed due to the small number of events in the category.

Table 5.6   Colon and Rectal Cancer -- Number of Deaths and Average Annual Age-Adjusted Mortality Rates per 100,000 by Sex and Place, 1997-1998

Place	Male		Female	
	N	Rate	N	Rate
Colorado	619	17.8	589	11.9
Western Colorado	58	14.1	67	12.7
NW Colorado	4	8.9	6	12.7
Grand	*	*	*	*
Jackson	*	*	*	*
Moffat	*	*	4	25.1
Rio Blanco	*	*	*	*
Routt	*	*	*	*
Rural Resort	4	7.3	11	14.8
Eagle	*	*	*	*
Garfield	*	*	7	15.5
Lake	*	*	*	*
Pitkin	*	*	*	*
Summit	*	*	*	*
Mesa	21	16.6	23	13.7
PMR9	12	16.6	12	13.9
Archuleta	*	*	*	*
Dolores	*	*	*	*
La Plata	4	10.9	7	15.2
Montezuma	6	24.0	4	13.5
San Juan	*	*	*	*
PMR10	17	17.8	15	11.4
Delta	6	12.8	9	17.3
Gunnison			*	*
Hinsdale	*	*	*	*
Montrose	9	23.9	6	10.3
Ouray	*	*	*	*
San Miguel	*	*	*	*

* Data not displayed due to the small number of evernts in the category.

Bold = Difference between region or county and state is significant at p<=.05.

Table 5.7   Lung Cancer -- Number of Diagnosed Cancers and Average Annual Age-Adjusted Incidence Rates per 100,000 by Sex and Place, 1996-1997

Place	Male		Female	
	N	Rate	N	Rate
Colorado	1954	60.8	1546	37.3
Western Colorado	235	63.3	173	39.2
NW Colorado	14	42.4	9	24.7
Grand	3	45.1	*	*
Jackson	*	*	*	*
Moffat	5	51.0	3	28.1
Rio Blanco	*	*	*	*
Routt	4	42.5	4	44.5
Rural Resort	41	64.5	22	31.6
Eagle	3	21.3	4	33.2
Lake	5	81.7	*	*
Garfield	26	83.5	15	41.3
Pitkin	*	*	*	*
Summit	6	64.2	*	*
Mesa	86	73.6	73	48.5
PMR9	38	58.6	29	38.4
Archuleta	4	54.9	*	*
Dolores	*	*	3	132.4
La Plata	13	39.9	13	32.5
Montezúma	20	93.7	11	44.9
San Juan	*	*	*	*
PMR10	56	65.8	40	40.3
Delta	20	58.3	21	49.6
Gunnison	7	77.4	*	*
Hinsdale	*	*	*	*
Montrose	27	78.2	14	34.2
Ouray	*	*	3	82.6
San Miguel	*	*	*	*

* Data not displayed due to small number of events in the category.

Bold = difference between region or county and state is significant at p<=.05.

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**Table 5.8   Lung Cancer -- Stage of Disease at Diagnosis
by Place, 1996-1997**

	In-Situ %	Local %	Regional %	Distant %	Unknown %	Cases N	% "Early" Detection
Colorado	0.1	16.8	19.3	51.0	12.8	3502	19.3
Western Colorado	0.2	12.0	16.4	52.8	18.6	409	15.0
NW Colorado	0.0	17.4	21.7	47.8	13.0	23	20.0
Grand	0.0	0.0	0.0	100.0	0.0	3	0.0
Jackson	*	*	*	*	*	*	*
Moffat	0.0	25.0	25.0	50.0	0.0	8	25.0
Rio Blanco	*	*	*	*	*	*	*
Routt	0.0	12.5	37.5	25.0	25.0	8	16.7
Rural Resort	0.0	20.6	7.9	61.9	9.5	63	22.8
Eagle	0.0	14.3	0.0	71.4	14.3	7	16.7
Garfield	0.0	24.4	4.9	61.0	9.8	41	27.0
Lake	0.0	0.0	14.3	71.4	14.3	7	0.0
Pitkin	*	*	*	*	*	*	*
Summit	0.0	16.7	16.7	66.7	0.0	6	16.7
Mesa	0.6	10.6	15.6	53.8	19.4	160	14.0
PMR9	0.0	9.0	19.4	50.7	20.9	67	11.3
Archuleta	0.0	0.0	16.7	83.3	0.0	6	0.0
Dolores	0.0	0.0	25.0	50.0	25.0	4	0.0
La Plata	0.0	19.2	19.2	34.6	26.9	26	26.3
Montezuma	0.0	3.2	19.4	58.1	19.4	31	4.0
San Juan	*	*	*	*	*	*	*
PMR10	0.0	9.4	19.8	47.9	22.9	96	12.2
Delta	0.0	12.2	22.0	51.2	14.6	41	14.3
Gunnison	0.0	12.5	50.0	37.5	0.0	8	12.5
Hinsdale	*	*	*	*	*	*	*
Montrose	0.0	7.3	14.6	43.9	34.1	41	11.1
Ouray	0.0	0.0	0.0	50.0	50.0	4	0.0
San Miguel	*	*	*	*	*	*	*

* Data not displayed due to the small number of events in the category.

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**Table 5.9   Lung Cancer -- Number of Deaths and Average Annual
Age-Adjusted Mortality Rates per 100,000 by Sex and Place, 1997-1998**

Place	Male		Female	
	N	Rate	N	Rate
Colorado	1545	45.6	1188	26.8
Western Colorado	199	49.7	139	28.5
NW Colorado	15	43.8	8	19.0
Grand	*	*	3	33.6
Jackson	*	*	*	*
Moffat	4	37.8	3	21.8
Rio Blanco	3	50.5	*	*
Routt	5	54.6	*	*
Rural Resort	18	**27.6** Low	20	24.1
Eagle	3	20.4	*	*
Garfield	10	30.7	13	35.9
Lake	*	*	3	60.9
Pitkin	*	*	*	*
Summit	*	*	*	*
Mesa	86	66.7	53	34.5
PMR9	37	54.8	31	34.9
Archuleta	*	*	3	28.2
Dolores	*	*	*	*
La Plata	16	49.7	17	36.9
Montezuma	17	73.8	9	29.6
San Juan	*	*	*	*
PMR10	43	45.7	27	23.6
Delta	16	41.7	13	25.1
Gunnison	4	41.3	*	*
Hinsdale	*	*	*	*
Montrose	23	60.2	9	17.5
Ouray	*	*	3	81.4
San Miguel	*	*	*	*

* Data not displayed due to the small number of evernts in the category.

Bold = Difference between region or county and state is significant at p<=.05.

Table 5.10   Melanoma -- Number of Diagnosed Cancers and Average Annual Age-Adjusted Incidence Rates per 100,000 by Sex and Place, 1996-1997

Place	Male		Female	
	N	Rate	N	Rate
Colorado	806	21.5	664	14.7
Western Colorado	83	19.8	78	16.0
NW Colorado	12	30.6	18	**33.6** High
Grand	*	*	5	38.6
Jackson	*	*	*	*
Moffat	*	*	*	*
Rio Blanco	*	*	3	29.5
Routt	9	86.1	8	53.0
Rural Resort	15	15.0	13	12.4
Eagle	3	12.0	*	*
Lake	3	47.6	*	*
Garfield	7	16.3	5	13.1
Pitkin	*	*	*	*
Summit	*	*	3	13.6
Mesa	25	21.8	18	12.3
PMR9	16	24.2	17	19.7
Archuleta	*	*	3	31.9
Dolores	*	*	*	*
La Plata	5	16.1	10	20.6
Montezuma	8	37.3	4	16.0
San Juan	*	*	*	*
PMR10	15	17.0	12	13.6
Delta	6	18.3	5	14.0
Gunnison	4	24.2	3	30.8
Hinsdale	*	*	*	*
Montrose	5	14.2	3	11.8
Ouray	*	*	*	*
San Miguel	*	*	*	*

* Data not displayed due to small number of events in the category.

Bold = difference between region or county and state is significant at p<=.05.

Table 5.11 Melanoma -- Stage of Disease at Diagnosis by Place, 1996-1997

	In-Situ %	Local %	Regional %	Distant %	Unknown %	Cases N	% "Early" Detection
Colorado	27.3	64.1	1.9	2.5	4.2	2030	95.5
Western Colorado	33.2	55.6	0.8	2.9	7.5	241	96.0
NW Colorado	42.3	44.2		1.9	11.5	52	97.8
Grand	25.0	75.0	0.0	0.0	0.0	8	100.0
Jackson	*	*	*	*	*	*	*
Moffat	66.7	33.3	0.0	0.0	0.0	9	100.0
Rio Blanco	0.0	75.0	0.0	0.0	25.0	4	100.0
Routt	43.3	36.7	0.0	3.3	16.7	30	96.0
Rural Resort	46.2	40.4	1.9	1.9	9.6	52	95.7
Eagle	55.6	44.4	0.0	0.0	0.0	9	100.0
Garfield	42.9	38.1	0.0	0.0	19.0	21	100.0
Lake	0.0	60.0	0.0	20.0	20.0	5	75.0
Pitkin	81.8	18.2	0.0	0.0	0.0	11	100.0
Summit	16.7	66.7	16.7	0.0	0.0	6	83.3
Mesa	24.6	68.4	0.0	1.8	5.3	57	98.2
PMR9	31.2	56.2	2.1	6.2	4.2	48	91.3
Archuleta	44.4	33.3	0.0	11.1	11.1	9	87.5
Dolores	*	*	*	*	*	*	*
La Plata	28.6	66.7	4.8	0.0	0.0	21	95.2
Montezuma	29.4	52.9	0.0	11.8	5.9	17	87.5
San Juan	*	*	*	*	*	*	*
PMR10	15.6	75.0	0.0	3.1	6.2	32	96.7
Delta	21.4	71.4	0.0	7.1	0.0	14	92.9
Gunnison	0.0	100.0	0.0	0.0	0.0	7	100.0
Hinsdale	*	*	*	*	*	*	*
Montrose	11.1	66.7	0.0	0.0	22.2	9	100.0
Ouray	*	*	*	*	*	*	*
San Miguel	*	*	*	*	*	*	*

* Data not displayed due to the small number of events in the category.

**Table 5.12   Melanoma -- Number of Deaths and Average Annual
Age-Adjusted Mortality Rates per 100,000 by Sex and Place, 1997-1998**

Place	Male		Female	
	N	Rate	N	Rate
Colorado	145	3.8	79	1.7
Western Colorado	23	5.2	9	1.8
NW Colorado	4	9.8	*	*
Grand	*	*	*	*
Jackson	*	*	*	*
Moffat	*	*	*	*
Rio Blanco	*	*	*	*
Routt	3	34.7	*	*
Rural Resort	4	6.2	*	*
Eagle	*	*	*	*
Garfield	*	*	*	*
Lake	*	*	*	*
Pitkin	*	*	*	*
Summit	*	*	*	*
Mesa	5	3.7	3	2.3
PMR9	7	9.5	*	*
Archuleta	*	*	*	*
Dolores	*	*	*	*
La Plata	3	7.0	*	*
Montezuma	4	16.6	*	*
San Juan	*	*	*	*
PMR10	3	3.2	3	2.8
Delta	*	*	*	*
Gunnison	*	*	*	*
Hinsdale	*	*	*	*
Montrose	*	*	*	*
Ouray	*	*	*	*
San Miguel	*	*	*	*

* Data not displayed due to the small number of evernts in the category.

Bold = Difference between region or county and state is significant at p<=.05.

Table 5.13 Female Breast Cancer -- Number of Diagnosed Cancers and Average Annual Age-Adjusted Incidence Rates per 100,000 by Place, 1996-1997

Place	Female	
	N	**Rate**
Colorado	4835	114.8
Western Colorado	530	120.3
NW Colorado	54	119.2
Grand	8	87.0
Jackson	*	*
Moffat	11	87.5
Rio Blanco	12	163.5
Routt	21	137.8
Rural Resort	105	110.1
Eagle	29	142.2
Lake	9	99.2
Garfield	41	104.7
Pitkin	11	**66.2** Low
Summit	15	147.2
Mesa	168	123.5
PMR9	75	96.3
Archuleta	11	135.5
Dolores	*	*
La Plata	46	112.6
Montezuma	16	**63.0** Low
San Juan	*	*
PMR10	128	137.0
Delta	60	168.0
Gunnison	7	65.1
Hinsdale	*	*
Montrose	53	138.9
Ouray	5	122.6
San Miguel	*	*

* Data not displayed due to small number of events in the category.

Bold = difference between region or county and state is significant at p<=.05.

Table 5.14   Female Breast Cancer -- Stage of Disease at Diagnosis
by Place, 1996-1997

	In-Situ %	Local %	Regional %	Distant %	Unknown %	Cases N	% "Early" Detection
Colorado	15.3	53.3	24.0	3.3	4.1	5708	71.5
Western Colorado	12.7	52.9	25.4	3.6	5.4	607	69.3
NW Colorado	12.9	40.3	32.3	1.6	12.9	62	61.1
Grand	33.3	25.0	41.7	0.0	0.0	12	58.3
Jackson	*	*	*	*	*	*	*
Moffat	8.3	50.0	25.0	0.0	16.7	12	70.0
Rio Blanco	0.0	41.7	41.7	0.0	16.7	12	50.0
Routt	12.5	37.5	29.2	4.2	16.7	24	60.0
Rural Resort	10.3	47.9	32.5	0.9	8.5	117	63.6
Eagle	6.5	51.6	29.0	3.2	9.7	31	64.3
Garfield	8.9	55.6	28.9	0.0	6.7	45	69.0
Lake	10.0	10.0	60.0	0.0	20.0	10	25.0
Pitkin	15.4	46.2	23.1	0.0	15.4	13	72.7
Summit	16.7	44.4	38.9	0.0	0.0	18	61.1
Mesa	12.0	56.0	23.0	6.8	2.1	191	69.5
PMR9	19.4	45.2	23.7	3.2	8.6	93	70.6
Archuleta	8.3	33.3	33.3	8.3	16.7	12	50.0
Dolores	*	*	*	*	*	*	*
La Plata	19.3	52.6	19.3	3.5	5.3	57	75.9
Montezuma	27.3	31.8	27.3	0.0	13.6	22	68.4
San Juan	*	*	*	*	*	*	*
PMR10	11.1	63.2	20.8	2.8	2.1	144	75.9
Delta	3.2	64.5	29.0	3.2	0.0	62	67.7
Gunnison	12.5	75.0	12.5	0.0	0.0	8	87.5
Hinsdale	*	*	*	*	*	*	*
Montrose	14.5	59.7	17.7	3.2	4.8	62	78.0
Ouray	28.6	71.4	0.0	0.0	0.0	7	100.0
San Miguel	66.7	33.3	0.0	0.0	0.0	3	100.0

* Data not displayed due to the small number of events in the category.

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Table 5.15   Female Breast Cancer -- Number of Deaths and Average Annual Age-Adjusted Mortality Rates per 100,000 by Place, 1997-1998

Place	Female	
	N	**Rate**
Colorado	903	19.4
Western Colorado	103	19.8
NW Colorado	11	21.6
Grand	3	26.2
Jackson	*	*
Moffat	*	*
Rio Blanco	*	*
Routt	5	36.9
Rural Resort	12	12.0
Eagle	6	26.5
Garfield	4	10.6
Lake	*	*
Pitkin	*	*
Summit	*	*
Mesa	39	24.2
PMR9	17	19.5
Archuleta	3	29.4
Dolores	*	*
La-Plata	10	21.8
Móntezuma	3	11.5
San Juan	*	*
PMR10	24	18.9
Delta	10	25.0
Gunnison	*	*
Hinsdale	*	*
Montrose	12	20.6
Ouray	*	*
San Miguel	*	*

* Data not displayed due to the small number of evernts in the category.
Bold = Difference between region or county and state is significant at p<=.05.

Table 5.16   Invasive Cervical Cancer -- Number of Diagnosed Cancers and Average Annual Age-Adjusted Incidence Rates per 100,000 by Place, 1996-1997

Place	Female	
	N	Rate
Colorado	338	7.4
Western Colorado	33	7.2
NW Colorado	7	12.9
Grand	3	23.3
Jackson	*	*
Moffat	*	*
Rio Blanco	*	*
Routt	*	*
Rural Resort	8	6.9
Eagle	*	*
Lake	*	*
Garfield	3	7.4
Pitkin	*	*
Summit	*	*
Mesa	7	5.6
PMR9	5	5.6
Archuleta	*	*
Dolores	*	*
La Plata	3	6.2
Montezuma	*	*
San Juan	*	*
PMR10	6	7.5
Delta	3	9.4
Gunnison	*	*
Hinsdale	*	*
Montrose	*	*
Ouray	*	*
San Miguel	*	*

* Data not displayed due to small number of events in the category.
Bold = difference between region or county and state is significant at p<=.05.

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Table 5.17   Invasive[1] Cervical Cancer -- Stage of Disease at Diagnosis
by Place, 1996-1997

	Local %	Regional %	Distant %	Unknown %	Cases N
Colorado	57.4	32.2	7.4	3.0	338
Western Colorado	51.5	39.4	6.1	3.0	33
NW Colorado	85.7	14.3	0.0	0.0	7
Grand	100.0	0.0	0.0	0.0	3
Jackson	*	*	*	*	*
Moffat	*	*	*	*	*
Rio Blanco	*	*	*	*	*
Routt	*	*	*	*	*
Rural Resort	25.0	62.5	12.5	0.0	8
Eagle	*	*	*	*	*
Garfield	33.3	66.7	0.0	0.0	3
Lake	*	*	*	*	*
Pitkin	*	*	*	*	*
Summit	*	*	*	*	*
Mesa	57.1	14.3	14.3	14.3	7
PMR9	20.0	80.0	0.0	0.0	5
Archuleta	*	*	*	*	*
Dolores	*	*	*	*	*
La Plata	33.3	66.7	0.0	0.0	3
Montezuma	*	*	*	*	*
San Juan	*	*	*	*	*
PMR10	66.7	33.3	0.0	0.0	6
Delta	66.7	33.3	0.0	0.0	3
Gunnison	*	*	*	*	*
Hinsdale	*	*	*	*	*
Montrose	*	*	*	*	*
Ouray	*	*	*	*	*
San Miguel	*	*	*	*	*

* Data not displayed due to the small number of events in the category.

[1] Invasive cases only; in-situ stage not reportable to Colorado Central Cancer Registry.

**Table 5.18   Cervical Cancer -- Number of Deaths and Average
Age-Adjusted Mortality Rates per 100,000 by Place, 1997-1998**

Place	Female	
	N	Rate
Colorado	85	1.8
Western Colorado	8	1.7
NW Colorado	*	*
Grand	*	*
Jackson	*	*
Moffat	*	*
Rio Blanco	*	*
Routt	*	*
Rural Resort	3	3.2
Eagle	*	*
Garfield	*	*
Lake	*	*
Pitkin	*	*
Summit	*	*
Mesa	*	*
PMR9	*	*
Archuleta	*	*
Dolores	*	*
La-Plata	*	*
Montezuma	*	*
San Juan	*	*
PMR10	*	*
Delta	*	*
Gunnison	*	*
Hinsdale	*	*
Montrose	*	*
Ouray	*	*
San Miguel	*	*

* Data not displayed due to the small number of evernts in the category.
Bold = Difference between region or county and state is significant at p<=.05.

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Table 5.19   Prostate Cancer -- Number of Diagnosed Cancers and Average Annual Age-Adjusted Incidence Rates per 100,000 by Place, 1996-1997

Place	Male	
	N	Rate
Colorado	4498	141.3
Western Colorado	524	143.7
NW Colorado	34	**97.3** Low
Grand	10	134.2
Jackson	*	*
Moffat	9	93.2
Rio Blanco	4	64.6
Routt	10	92.5
Rural Resort	108	162.2
Eagle	12	90.2
Lake	11	180.3
Garfield	57	186.4
Pitkin	14	154.6
Summit	14	155.3
Mesa	178	161.8
PMR9	78	118.8
Archuleta	17	205.0
Dolores	2	101.3
La Plata	37	111.0
Montezuma	22	102.3
San Juan	*	*
PMR10	126	148.4
Delta	56	167.4
Gunnison	13	172.8
Hinsdale	*	*
Montrose	40	118.5
Ouray	11	289.9
San Miguel	5	109.7

* Data not displayed due to small number of events in the category.
Bold = difference between region or county and state is significant at p<=.05.

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**Table 5.20   Prostate Cancer -- Stage of Disease at Diagnosis
by Place, 1996-1997**

	In-Situ %	Local %	Regional %	Distant %	Unknown %	Cases N	% "Early" Detection
Colorado	0.0	66.3	10.2	5.3	18.2	4499	81.1
Western Colorado	0.0	67.7	9.7	4.6	17.6	524	82.3
NW Colorado	0.0	52.9	11.8	11.8	23.5	34	69.2
Grand	0.0	70.0	10.0	10.0	10.0	10	77.8
Jackson	*	*	*	*	*	*	*
Moffat	0.0	66.7	0.0	0.0	33.3	9	100.0
Rio Blanco	0.0	50.0	25.0	0.0	25.0	4	66.7
Routt	0.0	20.0	20.0	30.0	30.0	10	28.6
Rural Resort	0.0	68.5	9.3	4.6	17.6	108	83.2
Eagle	0.0	83.3	8.3	0.0	8.3	12	90.9
Garfield	0.0	73.7	7.0	3.5	15.8	57	87.5
Lake	0.0	45.5	9.1	27.3	18.2	11	55.6
Pitkin	0.0	64.3	7.1	0.0	28.6	14	90.0
Summit	0.0	57.1	21.4	0.0	21.4	14	72.7
Mesa	0.0	70.2	12.9	4.5	12.4	178	80.1
PMR9	0.0	70.5	6.4	5.1	17.9	78	85.9
Archuleta	0.0	70.6	5.9	11.8	11.8	17	80.0
Dolores	*	*	*	*	*	*	*
La Plata	0.0	83.8	8.1	2.7	5.4	37	88.6
Montezuma	0.0	54.5	4.5	4.5	36.4	22	85.7
San Juan	*	*	*	*	*	*	*
PMR10	0.0	65.9	7.1	2.4	24.6	126	87.4
Delta	0.0	64.3	7.1	3.6	25.0	56	85.7
Gunnison	0.0	38.5	15.4	0.0	46.2	13	71.4
Hinsdale	*	*	*	*	*	*	*
Montrose	0.0	80.0	7.5	2.5	10.0	40	88.9
Ouray	0.0	54.5	0.0	0.0	45.5	11	100.0
San Miguel	0.0	60.0	0.0	0.0	40.0	5	100.0

* Data not displayed due to the small number of events in the category.

Table 5.21   Prostate Cancer -- Number of and Average Annual
Age-Adjusted Mortality Rates per 100,000 by Place, 1997-1998

Place	Male	
	N	Rate
Colorado	697	20.8
Western Colorado	87	21.1
NW Colorado	9	25.1
Grand	*	*
Jackson	*	*
Moffat	4	39.5
Rio Blanco	*	*
Routt	4	40.8
Rural Resort	19	33.2
Eagle	3	45.5
Garfield	12	37.0
Lake	*	*
Pitkin	*	*
Summit	*	*
Mesa	21	15.9
PMR9	17	25.7
Archuleta	*	*
Dolores	*	*
La-Plata	10	32.3
Móntezuma	6	24.2
San Juan	*	*
PMR10	21	17.6
Delta	9	14.0
Gunnison	*	*
Hinsdale	*	*
Montrose	8	16.8
Ouray	4	118.9
San Miguel	*	*

* Data not displayed due to the small number of evernts in the category.
Bold = Difference between region or county and state is significant at p<=.05.

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