What Is Colon and Rectum Cancer?

Most cancers are named after the part of the body where the cancer originates. The colon is part of the digestive tract, where food is processed to create energy. The colon has four sections: the ascending colon, the transverse colon, the descending colon, and the sigmoid colon. Colon cancer can start in any of these four sections, or where the colon ends in the rectum. Because the colon and rectum tissues are so closely related, colon and rectum cancers will hereafter be referred to as colorectal cancers.

Over 95 percent of colorectal cancers are adenocarcinomas. These are cancers of the cells that line the inside of the colon and rectum. Before a cancer develops, there are often earlier changes in the lining of the colon or rectum. One type of change is a growth of a tissue called a polyp. Removing a polyp, which can be done during a screening procedure, may prevent it from becoming cancerous.

Colorectal cancer is the third most common cancer in Utah, yet colorectal cancer has remained a little-discussed disease. Recent reports of notable public figures being treated for colorectal cancer have provoked discussion about this cancer, and may help the public to understand its threat. The more people talk about it, the more likely they are to seek information about early detection and to adopt behaviors that reduce the risk of colorectal cancer.

ACS 2015 Challenges

The American Cancer Society has set ambitious challenge goals for the year 2015:

■ To reduce the rate of cancer deaths by 50 percent.
■ To reduce the rate of cancer cases by 25 percent.
■ To improve the quality of life for all cancer survivors.
Colon and Rectum Cancer

Colorectal cancer is the third most common cancer among men and women in Utah, and it is the second most common cause of cancer-related death for Utah, eclipsed only by lung cancer. In the U.S., incidence rates for both invasive and in situ (early stage tumors that have not extended through the first layer of cells) colorectal cancer have increased since 1997.

In the U.S., death from colorectal cancer in the United States has declined steadily among women since about 1950, and among men since around 1985, although Utah appears to have a slight increase in mortality rates, as seen in the graph below. The reasons for these decreases are not well understood. Increased polyp removal, advances in treatment protocols (such as increased use of new surgical techniques and adjuvant therapies), and other behaviors, including daily use of aspirin or estrogen replacement therapy, along with changes in dietary practices, may be contributing factors.

Risk

The risk of developing colorectal cancer increases with age. The rate of colorectal cancer is six times higher among persons 65 years of age and older than among persons aged 40-64 years. Almost 75 percent of newly diagnosed colorectal cancers occur in persons aged 65 and older, but this disease can occur at much younger ages as well. Men are more likely to develop colorectal cancer than women.

Other risk factors include a personal history of intestinal adenomatous polyps or inflammatory bowel disease. Familial risk factors include inherited familial adenomatous polyposis (FAP) and hereditary nonpolyposis colon cancer (HNPCC), which result in an increased risk due to alterations of cancer susceptibility genes. Smoking, physical inactivity and diets high in fat/low in fiber may also increase risk.

Some behaviors may reduce the risk of developing colorectal cancer, such as a diet high in fruits and vegetables, physical activity, hormone replacement therapy in postmenopausal women, and aspirin use.
Stage of Diagnosis and Survival

Staging is the process of describing the extent of the disease or the spread of the cancer from the site of origin. Staging is essential in determining the choice of therapy and assessing prognosis. A cancer’s stage is based on information about the primary tumor’s size and location in the body and whether or not it has spread to other areas of the body.

If cancer cells are present only in the layer of cells where they originally developed and have not spread to any other parts of that organ or elsewhere in the body, then the cancer is in situ. If cancer cells have spread beyond the original layer of tissue, then the cancer is considered to be invasive.

Five-year relative survival rates are commonly used to monitor the progress in early detection and treatment of cancer. Generally, survival has an inverse relationship with the stage of colorectal cancer at the time of detection—the more advanced the stage, the lower the survival rate.

Nationally, when colorectal cancer is diagnosed at an early, localized stage, the five-year survival rate is 90 percent. Unfortunately, only 37 percent of cases are diagnosed at the local stage. Declines in the proportion of colorectal cancers diagnosed in late stages may reflect an increase in screening practices. The American Cancer Society recommends that both men and women begin routine colorectal cancer screening at age 50. For more information about the colorectal screening recommendations and screening utilization rates, see page 6.

The same methods used to screen for colorectal cancers can also be used to remove polyps (adenomas), preventing the growths from becoming cancerous in many cases.

Public Policy

The American Cancer Society is taking the lead to address barriers to colorectal cancer screening for patients at average risk.

Utah law does not mandate health plans to cover colorectal cancer screening, nor does Utah have a law to mandate health plans to cover routine costs associated with participation in clinical trials. The American Cancer Society is working in the public policy arena to address these barriers to access.

To learn more about ACS legislative priorities, please call 1-800-ACS-2345 or visit us online at www.cancer.org.

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Five Year Relative Survival by Stage at Diagnosis, by Gender, Utah, 1992-1997
Source: Utah Central Cancer Registry

<table>
<thead>
<tr>
<th>Stage</th>
<th>Utah</th>
<th>US (SEER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All stages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Percent of Colon and Rectum Cancers Diagnosed at Late Stage*, Utah, 1990-1998
Source: Utah Central Cancer Registry

*Late Stage defined as regional and distant, as a percent of all invasive colon & rectum cancer diagnoses, excluding unknowns (SEER summary stage definitions, see page 11).
Local New Cases, Deaths, and Late Stage Diagnoses

The following table demonstrates incidence rates (number of new cases), mortality rates (number of deaths), and percent of cases diagnosed as late stage* for Utah Local Health Districts, average 1995-1999. See page 9 for more information about the Local Health Districts.

Incidence rates describe the number of new cases of colorectal cancer that occur within a defined population and are commonly expressed per standard unit of population. In this instance the rates are expressed per 100,000 persons per year. Incidence rates are used for comparisons between states, counties, or other aggregates. Mortality rates describe the number of colorectal cancer deaths that occur within a defined population at risk of dying during a specified time period. Incidence rates in this document refer specifically to invasive cancers only. The percent of cases diagnosed at late stage is important, as these individuals are beginning treatment when the cancer is more developed and more difficult to treat. The percent of cases diagnosed at a late stage directly corresponds with the level of screening behavior in the general public.

Average Annual Colon and Rectum Cancer Incidence Rates**, Mortality Rates‡, and Percent of Cases Diagnosed at Late Stage by Utah Health District, 1995-99
Source: Utah Cancer Registry and the Office of Vital Records & Statistics, Utah Department of Health

<table>
<thead>
<tr>
<th>Health District</th>
<th>Incidence Rates (New Cases)</th>
<th>Mortality Rates (Deaths)</th>
<th>% New Cases Diagnosed With Late Stage Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bear River</td>
<td>46.5</td>
<td>19.6</td>
<td>54.8 %</td>
</tr>
<tr>
<td>Weber, Morgan</td>
<td>40.2</td>
<td>16.1</td>
<td>51.3 %</td>
</tr>
<tr>
<td>Davis</td>
<td>40.2</td>
<td>13.9</td>
<td>56.7 %</td>
</tr>
<tr>
<td>Tooele</td>
<td>44.5</td>
<td>24.8</td>
<td>56.4 %</td>
</tr>
<tr>
<td>Summit</td>
<td>26.7</td>
<td>14.0</td>
<td>55.0 %</td>
</tr>
<tr>
<td>Salt Lake</td>
<td>43.9</td>
<td>17.7</td>
<td>54.8 %</td>
</tr>
<tr>
<td>Wasatch</td>
<td>52.2</td>
<td>19.4</td>
<td>65.2 %</td>
</tr>
<tr>
<td>Utah</td>
<td>44.3</td>
<td>16.5</td>
<td>60.0 %</td>
</tr>
<tr>
<td>Tri-County</td>
<td>41.7</td>
<td>17.9</td>
<td>60.3 %</td>
</tr>
<tr>
<td>Central</td>
<td>44.5</td>
<td>18.7</td>
<td>58.8 %</td>
</tr>
<tr>
<td>Southeastern</td>
<td>42.2</td>
<td>20.6</td>
<td>65.2 %</td>
</tr>
<tr>
<td>Southwestern</td>
<td>46.9</td>
<td>17.3</td>
<td>50.6 %</td>
</tr>
</tbody>
</table>

* Late stage defined as regional and distant, as a percent of all invasive colon & rectum cancer diagnoses, excluding unknowns (SEER summary stage definitions, see p. 11).
**Average annual age-adjusted incidence rates per 100,000 population (2000 US standard).
‡Average annual age-adjusted mortality rates per 100,000 population (2000 U.S. standard).
Guidelines for Prevention and Early Detection of Colon and Rectum Cancer

Health Promotion Guidelines

1. Stay within healthy weight range.

2. Be physically active—at least moderately active for 30 minutes or more on most days of the week.

3. Eat five or more servings of fruits and vegetables a day, and eat foods from other plant sources, such as breads, cereals, grain products, rice, pasta, or beans several times a day.

4. Limit your intake of high-fat foods, particularly from animal sources.

5. Limit consumption of alcoholic beverages, if you drink at all.

6. Don’t smoke!

American Cancer Society Guidelines for the Cancer-Related Checkup

A cancer-related checkup is recommended every three years for people ages 20 to 40 years old and every year for people ages 40 and older. This exam should include health counseling and, depending on a person’s age, might include examinations for cancers of the thyroid, oral cavity, skin, lymph nodes, testes, and ovaries as well as for some non-malignant diseases. Special tests for colorectal cancer are recommended as outlined below. Persons with family or personal histories of cancer should discuss appropriate screening guidelines with their physicians.

American Cancer Society Screening Guidelines For Adults 50 or Older at Average Risk

<table>
<thead>
<tr>
<th>Test or Procedure</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fecal Occult Blood Test (FOBT)</td>
<td>Every year</td>
</tr>
<tr>
<td>Flexible Sigmoidoscopy</td>
<td>Every 5 years</td>
</tr>
<tr>
<td>-OR- Double Contrast Barium Enema</td>
<td>Every 5 years</td>
</tr>
<tr>
<td>-OR- Colonoscopy</td>
<td>Every 10 years</td>
</tr>
</tbody>
</table>
Lifestyles

Being overweight or obese can increase the risk of cancer of the colon (less so for rectal cancer). Risk increases progressively with increasing body fat. Those who are obese are at about twice the risk for colorectal cancer than those who have normal weight. The reasons for this association between body weight and colorectal cancer are not fully understood, but they may be related to the same adverse metabolic effects of obesity that also increase the risk of diabetes and heart disease.

Physical activity may reduce colon cancer risk (less so for rectal cancer). The benefits of physical activity are not limited only to weight control and improved overall health. The relationship between increased physical activity may be related to improved bowel function and to the beneficial effects of physical activity on metabolism.

Food choices can affect colorectal cancer risk. Studies have shown that those who eat more fruits, vegetables, and whole grains in their diet are at reduced risk, while those who eat more red meat and high fat foods are at increased risk.

Cigarette smoking could increase the risk of colorectal cancer, whereas the use of estrogen replacement therapy after menopause, or the use of non-steroid anti-inflammatory drugs could reduce risk. Avoiding smoking is a sound idea for many reasons, of course, but the decision to take estrogen or aspirin-like medications is complex because these types of medications present risks as well as possible benefits.

In summary, one’s risk of getting colorectal cancer can be reduced by weight control, regular physical activity, and by choosing a diet high in fruits and vegetables but low in red meats and fats. Even though all these lifestyle factors can reduce an individual’s risk of getting colorectal cancer, it is still important for everyone to be screened for colorectal cancer following ACS guidelines. The identification and removal of colorectal polyps is the single most effective strategy to prevent colorectal cancer.
Lifestyles

Percent of Adults (18+) Who Engage in Regular Physical Activity,* by Age, Utah, 1991-2000
Source: Utah BRFSS

Source: Utah BRFSS

Source: Utah BRFSS

Percent of Adults (18+) Who Are Overweight* or Obese,** by Gender, Utah, 1991-2000
Source: Utah BRFSS

*Regular physical activity is defined as 5+ times/week, 30+ minutes/session, regardless of intensity.
**Data are unavailable for '93, '95, '97.

*Current smokers are defined as people who ever smoked 100 cigarettes and who now report smoking every day or some days.
Demographics

Utah Local Health Districts

At the local level, public health services in Utah are organized into 12 health districts with 55 service delivery sites. Six of the 12 local health departments are single county and six are multi-county districts. Utah’s 29 counties are combined into the following 12 Local Health Districts.

1. Bear River District: Box Elder, Cache, Rich
2. Central Utah District: Juab, Millard, Piute, Sanpete, Sevier, Wayne
3. Davis County District: Davis
4. Salt Lake County District: Salt Lake
5. Southeastern Utah District: Carbon, Emery, Grand, San Juan
7. Summit County District: Summit
8. Tooele County District: Tooele
9. Tri-County District: Daggett, Duchesne, Uintah
10. Utah County District: Utah
11. Wasatch County District: Wasatch

Total Population by Age, Utah and United States, 2000

Source: United States Census

Total Population by Race/Ethnicity, Education Level, and Household Income, Utah and United States, 2000

Source: United States Census
Underserved Populations

Despite recent progress in the fight against cancer, many Americans continue to suffer an unequal burden of cancer. Underserved populations, as a result of being uninsured or underinsured, or unaware of available screening and treatment resources, have inadequate access to high quality cancer prevention, screening, treatment, and rehabilitation. These Americans include many racial and cultural groups who share certain characteristics, such as low levels of income and education, or who live in geographically isolated areas. Other individuals experience barriers to health care because of illiteracy, or differing cultural beliefs, practices, and languages.

Poverty
Poverty is a reality for 32 million Americans and is a major factor associated with an increased risk of developing and dying from cancer. Poverty is also associated with higher rates of unemployment, lower education levels, inadequate living conditions, poor nutrition, and decreased access to quality health care.

Twelve percent of Utah residents are below 100 percent of poverty level, compared with the national average of 13 percent.

Median household income in Utah in 1997-1998 averaged $38,884, which is slightly above the national average of $37,005.

Race and Ethnicity
In Utah, 11.6 percent of the population are minorities, in contrast to the United States as a whole, in which minorities comprise 28.7 percent of the total population.

Health Care Access
Fifteen percent of Utah citizens do not have access to primary care providers. Forty-one percent of counties in Utah have been designated as medically underserved areas. Additionally, 93.1 percent of Utah counties have been identified as having a health professional shortage.

Health Insurance
There are also a number of residents that do not have health insurance. In 1999, 14.2 percent of Utah residents did not have health insurance, which is lower than the national average of 16.3 percent.

Addressing Cancer in the Underserved
The American Cancer Society has engaged in a full-scale initiative to eliminate health disparities among racial and ethnic minorities and other underserved groups to improve health status and reduce numbers of new cancer cases and deaths.

The American Cancer Society is working diligently to understand the needs of underserved populations by conducting community assessments, sponsoring research, and funding demonstration projects. The ACS is taking action by conducting health education and outreach, and advocating for changes in coverage for screening and treatment, as well as changes in public policy at all levels of government responsible for addressing the inequalities in health care delivery and financing. The American Cancer Society is committed to providing local leadership in cancer prevention and control to break down the barriers to access and optimum health care.

Percent of Adults (18+) with Health Care Coverage, by Age, Utah, 1991-2000

[Graph showing health care coverage by age group from 1991 to 2000.]

Data Sources

Cancer incidence and mortality data are based on cases reported to each state’s central cancer registry (CCR) and the underlying cause of death reported by each state’s Office of Vital Statistics. U.S. mortality rates are from the Bureau of Vital Statistics. CCRs are legally mandated, statewide, population-based cancer information centers. Analyses were performed by the registries. All rates are age-adjusted to the 2000 U.S. standard population. More detailed information on the status of cancer in each state is available from the state’s CCR.

Survival trends for adults, children, and U.S. incidence rates are from the Surveillance, Epidemiology, and End Results (SEER) program. More detailed information can be found in (SEER Cancer Statistics Review, 1973-1997,) available from SEER and on its website at www-seer.cancer.gov. Survival rates are from cancer incidence data collected on about 10 percent of the U.S. population.

Risk factor data have been drawn from each state’s Behavioral Risk Factor Surveillance System (BRFSS) and Youth Risk Behavior Survey (YRBS), both of which are conducted as collaborations between the Centers for Disease Control and Prevention and state departments of health or education.

Definitions and Abbreviations

SEER summary stage definitions- Stage of disease information is obtained from extent of disease information. The historical stage presented has four levels. An invasive neoplasm confined entirely to the organ of origin is said to be localized. An invasive neoplasm that has extended beyond the limits of the organ of origin is said to be regional. An invasive neoplasm that has spread to parts of the body remote from the primary tumor either by direct extension or by discontinuous metastasis is said to be distant. In addition, when information is not sufficient to assign a stage, an invasive neoplasm is said to be unstaged.

Unavailable data- For states that did not have overall response rates of 40 percent or more on youth risk behavior surveys, the data are not eligible for publication in the MMWR (Morbidity and Mortality Weekly Report), and, as such, are unavailable.

Relative Survival Rate: The relative survival rate is the survival rate observed for a group of cancer patients compared to the survival rate of persons in the general population who are similar to the patient group with respect to age, gender, race, and calendar year of observation. Relative survival adjusts for normal life expectancy (factors such as dying from accidents or other diseases). Five-year relative survival rates include persons who are still living five years after diagnosis, whether in treatment, remission, or disease-free.

ACS  American Cancer Society
BMI  Body Mass Index, Weight in Kg/Height in m²
BRFSS  Behavioral Risk Factor Surveillance System
CCR  Central Cancer Registry
CDC  Centers for Disease Control and Prevention
C&R  Colon and Rectum
MMWR  Morbidity and Mortality Weekly Report
NCI  National Cancer Institute

RMD  Rocky Mountain Division
SEER  NCI Surveillance, Epidemiology, and End Results Program
YRBS  Youth Risk Behavior Survey

Agencies Contributing Data

Utah Cancer Registry
546 Chipeta Way, Suite 410
Salt Lake City, UT 84108
801-581-8407

Office of Vital Records and Statistics
Utah Department of Health
288 North 1460 West
P.O. Box 141012
Salt Lake City, UT 84114-1012

BRFSS
Utah Department of Health
Office of Public Health Assessment
288 North 1460 West
P.O. Box 142101
Salt Lake City, UT 84114-2101
801-538-6108

YRBS
Utah Office of Education
250 East 500 South
Salt Lake City, UT 84111
801-538-7606

Acknowledgements

The data for portions of this report have been provided through the cooperation of local agencies, all of which are listed on this page. These agencies are the primary contributors of cancer-related data specific to Utah, and this publication would not have been possible without their assistance. This publication is designed to provide an overview in Utah and in no way replaces the relevance or need for reports of the individual organizations.

Report compiled and produced for the American Cancer Society’s Rocky Mountain Division, by the following staff: Alacey Berumen, MNM Regional Planner, Robert Grosboll, MPH Cancer Specialist, Joe McManis, Communications Coordinator, Lisa Emery MSPH.
Utah Offices and Units

ROCKY MOUNTAIN DIVISION
2255 S. Oneida St.
Denver, CO  80224
303-758-2030

Central
819 Palisade Rd., Box 650099
Sterling, UT  84665
435-835-6351

UTAH

Greater Salt Lake
941 East 3300 South
Salt Lake City, UT  84106
801-483-1500

Central
286 South 600 East, Suite A
Provo, UT  84606
801-373-5886

Northern
2404 Washington Blvd., #218
Ogden, UT  84401
801-393-8657

Southern
592 North Mall Dr.
St. George, UT  84770
435-674-9707

American Cancer Society Mission:
The American Cancer Society is the nationwide, community-based, voluntary health organization dedicated to eliminating cancer as a major health problem by preventing cancer, saving lives from cancer, and diminishing suffering from cancer through research, education, advocacy, and service.

Cancer Information:  800-ACS-2345   www.cancer.org