



GENERAL COLORECTAL CANCER INFORMATION

What is colorectal cancer?

Colorectal cancer is cancer that develops in the colon or the rectum. The colon and rectum are parts of the digestive system, which is also called the gastrointestinal, or GI, tract. The digestive system processes food for energy and rids the body of solid waste. Colorectal cancer usually develops slowly over a period of many years. Before a true cancer develops, it usually begins as a non-cancerous polyp which may eventually change into cancer. A polyp is a growth of tissue that develops on the lining of the colon or rectum. Certain kinds of polyps, called adenomas, are most likely to become cancerous.

The extent to which a colorectal cancer has spread is described as its stage. The process of staging involves performing exams and tests to learn the extent of the cancer within the body, especially whether the disease has spread from the original site to other parts of the body. It is important to know the stage of the disease to plan the best treatment.

Who gets colorectal cancer?

Anyone can get colorectal cancer. Colon cancer is the third most commonly diagnosed cancer and the third leading cause of cancer-related death in both men and women in the United States. More than 145,000 people are diagnosed each year and approximately 50,000 die. When men and women are considered separately, colorectal cancer is the third most common cause of cancer death in either sex. The good news is that this number has decreased. In 2005, approximately 56,000 people died from colorectal cancer.

What are the known risk factors for colorectal cancer?

- *Age:* Although colorectal cancer can strike at any age, 91 percent of new cases and 94 percent of deaths occur in individuals older than 50. The incidence rate of colorectal cancer is more than 50 times higher in people aged 60 to 79 than in those younger than 40.
- *Gender:* Excluding skin cancers, colorectal cancer is the third most common cancer diagnosed in men and in women in the United States. The American Cancer Society estimates that about 146,970 new cases of colorectal cancer (75,590 men and 71,380 women) will be diagnosed in 2009.

Colorectal cancer is the second-leading cause of cancer-related deaths in the United States and is expected to cause about 49,920 deaths (25,240 men and 24,680 women) during 2009.

- *Ethnic background and Race:* Colorectal cancer incidence and mortality rates are currently highest in African-American men and women. Jews of Eastern European descent currently also have a higher rate of colon cancer than Caucasian men and women. However, because of disproportionate screening, minorities, particularly African-Americans and Hispanics, are more likely to be diagnosed with colorectal cancer in advanced stages. As a result, death rates are higher for these populations.
- *Diet:* A diet made up mostly of foods that are high in fat, especially from animal sources, can increase the risk of colorectal cancer. Eating a varied diet, choosing most foods from plant sources and limiting the intake of foods high in saturated fat will help protect people from developing colorectal cancer.
- *Exercise:* People who are not active have a higher risk of colorectal cancer. Engaging in at least moderate activity for 30 minutes or more on five or more days per week will reduce colorectal cancer risk.
- *Smoking and Alcohol:* Recent studies show that smokers are 30% to 40% more likely than nonsmokers to die of colorectal cancer. Moderate to heavy use of alcohol, or four or more drinks per week, has also been linked to colorectal cancer.
- *Personal history of bowel disease:* A personal history of colon cancer or intestinal polyps and diseases such as inflammatory bowel disease -- ulcerative colitis or Crohn's Disease -- increase a person's risk of developing colorectal cancer.
- *Family history/genetic factors:* Persons who have a specific inherited genetic syndrome, such as familial adenomatous polyposis (FAP) or hereditary non-polyposis colon cancer (HNPCC), are at increased risk for developing colorectal cancer. People with a strong family history of colorectal cancer are also at increased risk for developing colorectal cancer. Family history is defined as cancer or polyps in a parent, brother or sister younger than 60 or two parents or siblings of any age. However, it is important to remember that 85% of cases occur in people with no family history of colorectal cancer.

What are the symptoms of colorectal cancer?

Although the following symptoms could be caused by many conditions, these are some of the symptoms which might indicate colorectal cancer:

- Blood in your stools
- Narrower than normal stools

- Unexplained abdominal pain
- Unexplained change in bowel habits
- Unexplained anemia
- Unexplained weight loss

If you experience any of these symptoms for more than a few days, talk with a certified gastroenterologist about them. Colorectal cancer can be present in people without symptoms, a known family history or any predisposing conditions, such as inflammatory bowel disease. Regular screening will help identify precancerous polyps and colorectal cancers earlier. Visit www.screen4coloncancer.com or www.asge.org and click on “Find a Doctor” to locate a qualified gastroenterologist in your area.

Why is screening for colorectal cancer important?

Colorectal cancer screening saves lives in two important ways:

1. By finding and removing polyps before they become cancerous
2. By detecting the cancer early when it is most treatable

Starting at the age of 50, all men and women should be routinely screened for colorectal cancer. People with a high risk for colon cancer and those with family history should talk with their doctor about being screened at an earlier age.

What are the screening tests for colorectal cancer?

Screening is recommended for individuals beginning at the age of 50 whether or not they have signs or symptoms of colon cancer. If symptoms exist, then diagnostic workups are done rather than screening. Listed below are the available screening tests for detecting colorectal cancer and some comments on the pros and cons for each:

STOOL BLOOD TEST (FECAL OCCULT BLOOD TEST--FOBT)

This test is used to find small amounts of hidden (occult) blood in the stool. A sample of stool is tested for traces of blood. People having this test will receive a kit with instructions that explain how to take stool samples at home. The kit is then sent to a lab for testing. If the test is positive, further tests will be done to pinpoint the exact cause of the bleeding. A rectal exam in the doctor’s office may examine for occult blood, but this is NOT considered adequate for colorectal cancer screening. The test should only be done with a take-home kit.

A newer kind of stool blood test is known as FIT (fecal immunochemical test). It is like the FOBT, perhaps even easier to do, and it gives fewer false positive results.

PROS

- Simple
- Cost-effective

- Done at home

CONS

- Must be done yearly
- Least effective means of detecting cancer
- Viewed as unsanitary by some
- Patient must retrieve samples of stool from the toilet bowl
- All positive results **MUST BE EVALUATED WITH A COLONOSCOPY**

FLEXIBLE SIGMOIDOSCOPY (FLEX-SIG)

A sigmoidoscope is a slender, lighted tube about the thickness of a finger. It is placed into the lower part of the colon through the rectum. This allows the physician to look at the inside of the rectum and lower part of the colon for cancer or polyps. This exam only evaluates about one third of the colon. The test is often done without any sedation, so it can be uncomfortable, but it should not be painful. Before the test, you will need to take an enema or other prep to clean out the lower colon.

PROS

- Quick – usually a one to five minute exam
- Does not require a vigorous bowel prep
- Does not require sedation

CONS

- Can only examine the lower third of the colon. The other two-thirds of the colon are not examined
- If polyps are found, the patient **MUST RETURN FOR A FULL COLONOSCOPY**

COLONOSCOPY

Colonoscopy allows for a complete evaluation of the colon and removal of potentially precancerous polyps. It is the only colorectal cancer screening tool that is both diagnostic and therapeutic. A complete bowel cleansing is required before the exam. The procedure uses a colonoscope, a tube with a light and video camera on the end, which allows the doctor to see the entire colon. If a polyp is found, the doctor can remove it immediately. The polyp is usually removed with small biopsy forceps or loop of wire (snare) that is advanced within a channel in the colonoscope. The polyp is then sent to the pathology lab for analysis. If anything else looks abnormal, a biopsy might be done. To do this, biopsy forceps are placed in the colonoscope and a small piece of tissue is removed. The tissue is sent to the lab for evaluation. This test is generally done with sedation and is well-tolerated. You will be given medicine that is injected through a vein to make you feel relaxed and sleepy.

PROS

- Examines the entire colon, making it the most thorough method for evaluating the colon and rectum

- High detection rate for polyps, including small polyps, and ability to remove them immediately during the procedure
- Done with intravenous sedation to assure comfort during the exam
- **Given the “Gold Standard” rating above all other screening options by: American Society for Gastrointestinal Endoscopy (ASGE), American Gastroenterological Association (AGA), American College of Gastroenterology (ACG), the American Cancer Society (ACS) and the American College of Obstetricians and Gynecologists (ACOG).**

CONS

- Requires a complete bowel prep the night before to cleanse the colon
- Unexpected events or complications are rare, but do occur and may include:
 - Missing a lesion
 - Making a tear in the lining of the colon, which is called perforation
 - Bleeding
 - A bad reaction to the medication used for sedation

BARIUM ENEMA WITH AIR CONTRAST

A chalky substance, which shows up on X-ray, is given as an enema. Air is then pumped into the colon causing it to expand. This allows X-ray films to take pictures of the colon. Laxatives must be used the night before the exam to clean the colon.

PROS

- Done without sedation
- Very low risk

CONS

- Uses X-ray radiation
- Can miss larger polyps and growths (over 50 percent polyps ≥ 1 cm, and 15 percent of cancers)
- If polyps are found, the patient **MUST BE FOLLOWED UP WITH A COLONOSCOPY**

CT COLONOGRAPHY (also referred to as virtual colonoscopy)

A small tube is placed in the rectum and air is pumped into the colon to inflate the bowel. Then a special CT scan is used to image the colon. Recent studies show that it is effective in identifying medium to large polyps, but is ineffective in identifying small polyps. CT colonography may be best for low-risk patients who cannot undergo or who failed a conventional colonoscopy. The same bowel prep as conventional colonoscopy is required and it does not use sedation.

PROS

- Examines the entire colon
- High detection rate for medium to large polyps
- Low risk

CONS

- Air distention of the bowel can be uncomfortable
- Ineffective in detection of small polyps
- Uses X-ray radiation
- If polyps or other abnormalities are found, A COLONOSCOPY MUST BE PERFORMED
- Is not covered by Medicare as an initial screening test
- Is not recommended by ASGE screening guidelines or the U.S. Preventive Services Task Force (USPSTF) recommendations

Where should you go to get screened?

A board certified gastroenterologist is the person most capable of proper screening for colorectal cancer. A gastroenterologist is a physician with dedicated training and unique experience in the management of diseases of the gastrointestinal (GI) tract. A gastroenterologist must first complete a three-year internal medicine residency before becoming eligible for additional specialized training (fellowship) in gastroenterology. The fellowship is generally three years long. It is an intense, rigorous program where future gastroenterologists learn directly from nationally recognized GI experts and develop a detailed understanding of GI diseases. By the time gastroenterologists have completed their training, they have had five- to six-years of additional specialized education beyond medical school.

Furthermore, gastroenterologists receive dedicated training in endoscopy by expert instructors. Endoscopy is the use of narrow, flexible lighted tubes with built-in video cameras used to visualize the inside of the intestinal tract. This specialized training includes detailed and intensive study of how and when to perform endoscopy, optimal methods to complete these tests safely and effectively and use of sedating medications to ensure the comfort and safety of patients. These gastroenterologists specializing in endoscopy learn how to accurately interpret the findings and biopsy results of their studies. The most critical emphasis during this exhaustive training is attention to detail and incorporation of their comprehensive knowledge of the entire GI tract to provide the highest quality endoscopy, such as colonoscopy and consultative services.

The final result is a highly trained specialist with a unique combination of broad scientific knowledge, general internal medicine training, superior endoscopic skills and experience and the ability to integrate these elements to provide optimal health care for patients.

ASGE carefully scrutinizes the education experience of endoscopists throughout the world to ensure that they receive the highest quality training prior to being board certified. All 10,000 ASGE physician members worldwide specialize in GI endoscopy, including colonoscopy and other procedures related to maintaining your gastrointestinal health. Visit www.screen4coloncancer.com or www.asge.org and click on “Find a

Doctor” to locate an expertly trained GI endoscopist in your area to perform your colonoscopy.

Who should be screened?

Colorectal cancer screening should be a part of routine healthcare for people 50 years of age and over. People at higher risk for colorectal cancer should be screened earlier. High-risk patients should discuss colorectal cancer screening with their certified gastroenterologist to determine the right plan for them.

If there is any reason to suspect colorectal cancer, the gastroenterologist will ask you questions about your symptoms and risk factors (take a medical history) and do a physical exam. Then you will need to have further tests to find out if the disease is really present, and if so, to see how far it has spread. Some of these tests are the same ones that are used for screening people who do not have symptoms.

The bottom line is: screening saves lives. Colorectal cancers almost always develop from precancerous polyps (abnormal growths) in the colon or rectum. Screening tests can find polyps, so that they can be removed before they turn into cancer. Even if a screening test finds an early colorectal cancer, early detection allows planning for the best treatment and a good chance for a full recovery. Having regular screening tests beginning at age 50 could save your life.

How many people are being screened for colorectal cancer?

Unfortunately, screening rates are low. In a survey of Americans over 50 conducted by the Centers for Disease Control, only 41 percent reported having had either an FOBT (the take-home stool card test) or a partial colon exam (by sigmoidoscopy) within the time intervals recommended by major professional groups such as ASGE. This number falls far short of the 86 percent of women who were screened for breast cancer. The American Cancer Society has a goal for 75 percent of adults aged 50 and over to get screened by 2015.

Some reasons for low colorectal cancer screening rates include:

- Lack of public awareness about colorectal cancer and the benefits of regular screening
- Inconsistent promotion of screening by medical care providers
- Uncertainty among healthcare providers and consumers about insurance benefits
- Characteristics of the screening procedures (e.g., imperfect tests, negative attitudes towards the screening procedures)

- Absence of social support for openly discussing and doing something about bowel diseases.

How is colorectal cancer treated?

Treatment for colorectal cancer is most effective when the cancer is found early. Colorectal cancer treatment may include surgery, radiation, chemotherapy or any combination of these. Surgery is the first line of defense against colorectal cancer. Some patients may have radiation and/or chemotherapy prior to surgery. Others might have one or both afterwards, and some will not have either.

What does Medicare cover?

Not long ago, Medicare started paying for colonoscopy for people 65 and older. In the past, Medicare only covered the exam for people 65 and older at high risk. The American Cancer Society led the efforts to expand coverage of this test. People eligible for Medicare now have more choices for screening tests.

For people eligible for Medicare, this is what is covered:

- **Stool blood test** (FOBT or FIT) each year for those 50 and over
- **Flexible sigmoidoscopy** (flex-sig) every four years for those 50 and over at average risk
- **Colonoscopy** every two years for those at high risk
- **Colonoscopy** once every 10 years for those 65 and over at average risk
- **Barium enema with air contrast** instead if a doctor believes that it is as good as or better than flex-sig or colonoscopy
- ***Virtual colonoscopy is not covered by Medicare as an initial screening test***

The ASGE recommends talking to your doctor about screening options. If you are looking for a qualified physician in your area, please log on to www.screen4coloncancer.com or www.asge.org and click on “Find a Doctor.”

Colorectal Cancer Survival Rates

Nine out of 10 people with colorectal cancer found and treated at an early stage, before it has spread, live at least five years. Once the cancer has spread to nearby organs or lymph nodes, the five-year survival rate goes down. The five-year survival rate is the percentage of patients who are alive five years after diagnosis (leaving out those who die of other causes). Of course, patients might live more than five years after diagnosis.

Colon cancer survival rates

The following colon cancer survival rates are based on the American Joint Committee on Cancer’s staging system, which divides stages II and III into sub-stages. Check with your GI doctor to find out the exact stage of your disease.

Stage Survival Rate

- Stage I: 93%
- Stage IIA: 85%
- Stage IIB: 72%
- Stage IIIA: 83%
- Stage IIIB: 64%
- Stage IIIC: 44%
- Stage IV: 8%

These numbers provide an overall picture, but keep in mind that every person's situation is unique, and the statistics cannot predict exactly what will happen in your case. Talk with your cancer care team if you have questions about how long you might survive your cancer. They know your situation best.

What is being done to find better ways to treat colorectal cancer?

Scientists are looking for ways to prevent colon cancer, as well as ways to improve early detection treatments. Researchers have found natural substances in the body that promote cell growth. These are known as growth factors. Some cancer cells grow especially fast because they respond more to growth factors than normal cells do. New drugs that can spot these types of cells are now being tested in clinical trials. The drugs might prevent cancer cells from growing so quickly. Another drug that interferes with the formation of blood vessels that nourish the tumors has also been FDA-approved.

Chemoprevention is the use of natural or man-made chemicals to lower a person's risk of getting cancer. Researchers are testing whether substances such as fiber, minerals, vitamins or drugs can lower colorectal cancer risk.

Studies of vitamin supplements and colorectal cancer risk have given conflicting results. Some studies have found that people who take multivitamins with folic acid (folate) have a lower colorectal cancer risk. Recent studies have found that people who took vitamin D supplements had a lower rate of colorectal cancer. Also, eating extra amounts of low-fat dairy products or using calcium supplements may reduce the formation of colorectal adenomatous polyps. Most experts say that people should not take large doses of vitamins or minerals unless they are part of a study or are under the care of a board certified gastroenterologist.

It appears that a diet high in fruits and vegetables may lower colorectal cancer risk as well as the risk of several other diseases. This has not been completely proven by all studies. Nearly all experts agree that it is better to eat more fruits and vegetables rather than to add fiber supplements to the diet.

Scientists are learning more about some of the changes in DNA that cause cells of the

colon and rectum to become cancerous. Understanding how these genes work should lead to new drugs and treatments to correct these problems. Early phases of gene therapy trials are already going on throughout North America.

Studies are going on to look at how well current colorectal cancer screening methods work and to explore new ways to inform the public about the importance of using these methods. **Fewer than half of Americans over 50 have any colorectal cancer testing at all. If everyone were tested, tens of thousands of lives could be saved each year.** Meanwhile, new tests are also being developed.

Treatments that boost a person's immune system to fight colorectal cancer better are being tested in clinical trials. Also, many trials are going on to test new combinations of chemotherapy drugs and to test the best ways to combine chemotherapy with radiations therapy or immunotherapy.

CRC Key Statistics:

Excluding skin cancers, colorectal cancer is the third most common cancer diagnosed in men and in women in the United States. Colorectal cancer is the third-leading cause of cancer-related deaths in both men and women in the United States and is expected to cause about 49,920 deaths (25,240 men and 24,680 women) during 2009. The good news is that this number has decreased. In 2005, approximately 56,000 people died from colorectal cancer.

The death rate from colorectal cancer has been dropping for the past 15 years. There are several likely reasons for this. One reason is probably because polyps are being found by screening before they can develop into cancers. Also, colorectal cancer is being found earlier when it is easier to cure, and treatments have improved. Because of this, there are approximately one million survivors of colorectal cancer in the United States, and this number continues to grow.

The five-year relative survival rate for people whose colorectal cancer is treated in an early stage, before it has spread, is greater than 90 percent. But, only 39 percent of colorectal cancers are found at that early stage. Once the cancer has spread to nearby organs or lymph nodes, the five-year relative survival rate goes down.