



# Colon Cancer

## Overview

- [What is Colorectal Cancer?](#)

Colorectal (large bowel) cancer is a disease in which malignant (cancer) cells form in the inner lining of the colon or rectum. Together, the colon and rectum make up the large bowel or large intestine. The large intestine is the last segment of the digestive system (the esophagus, stomach, and small intestine are the first three sections). The large bowel's main job is to reabsorb water from the contents of the intestine so that solid waste can be expelled into the toilet. The first several feet of the large intestine is the colon and the last 6 inches is the rectum.

Most colon and rectal cancers originate from benign wart-like growths on the inner lining of the colon or rectum called polyps. Not all polyps have the potential to transform into cancer. Those that do have the potential are called adenomas. It takes more than 10 years in most cases for an adenoma to develop into cancer. This is why some colon cancer prevention tests are effective even if done at 10-year intervals. This 10-year interval is too long, in some cases, such as in persons with ulcerative colitis or Crohn's colitis, and in persons with a strong family history of colorectal cancer or adenomas.

- [How common is Colorectal Cancer?](#)

In the United States, colorectal cancer is the third most common cancer in both men and women, yet it is one of the most preventable types of cancer. The lifetime risk of colorectal cancer for men is 1 in 23 and for women is 1 in 25. An estimated 50,000+ people will die from colorectal cancer this year. It has been estimated that people born around 1990 have twice the risk of colon cancer and four times the risk of rectal cancer than those born around 1950. While the reasons for these trends are complex, experts suggest unhealthy diet and sedentary lifestyle may contribute.

- [Colorectal Cancer Screening Options](#)

### What are the Colorectal Cancer Screening Options?

Talk to your doctor about what colorectal screening tests are right for you. In 2021, the American College of Gastroenterology updated its colorectal cancer screening guideline. Important recommendations from the authors of guideline are summarized here:

#### One-Step Screening Test: Colonoscopy

ACG recommends colorectal cancer screening in average-risk individuals between age 45 and 75 years to reduce pre-cancerous growths called advanced adenomas, reduce colorectal cancer, and reduce death from colorectal cancer.

Colonoscopy is a one-step test that looks for growths called polyps in your entire colon (large intestine) and rectum using a colonoscope. Your doctor can both detect and remove polyps during colonoscopy and prevent colorectal cancer. Colonoscopy is the most commonly performed gastrointestinal procedure in the United States. Colonoscopy with removal of polyps offers long term protection against developing colorectal cancer or dying from it.

#### Two-Step Screening Tests: Stool-Based Tests

These tests detect blood or altered DNA in the stool as a first step. A positive result would lead to the second step of colonoscopy for further examination.

##### FIT Test

Fecal Immunochemical Tests (FIT) detects hidden blood in the stool. The stool FIT test is typically performed on an annual basis. A positive test requires a follow-up colonoscopy.

##### Multitarget Stool DNA (mtsDNA)

Multitarget stool DNA test is a non-invasive screening for colorectal cancer. It looks for abnormal DNA associated with colon cancer or precancerous polyps. This test is more sensitive than the FIT test, but your chance of getting a false positive may increase with advancing age. According to the manufacturer's recommendations, if the mtsDNA test is negative, repeat screening occurs in three years. If the mtsDNA test is positive, the second step of colonoscopy is required. (At this time the only FDA-approved mtsDNA is Cologuard.®)

#### Tests for Individuals Who Cannot or Will Not Have a Colonoscopy or FIT, or Are Not Candidates for Colonoscopy

##### CT Colonography and Colon Capsule

At this time, CT colonography and colon capsule are options for individuals unwilling or unable to undergo colonoscopy or FIT, provided that the tests are locally available and reimbursed by insurers for screening. It is important to note that both tests will still require a follow-up colonoscopy if positive.

Source: [ACG Clinical Guidelines: Colorectal Cancer Screening 2021](#)

## Symptoms

- [What are the symptoms of Colorectal Cancer?](#)

Most early colorectal cancers produce no symptoms. This is why screening for colorectal cancer is so important. Symptoms of colorectal cancer vary depending on the location of the cancer within the colon or rectum, though there may be no symptoms at all. The prognosis tends to be worse in symptomatic as compared to asymptomatic individuals.

The most common presenting symptom of colorectal cancer is rectal bleeding. Cancers arising from the left side of the colon generally cause bleeding, or in their late stages may cause constipation, abdominal pain, and obstructive symptoms.

On the other hand, right-sided colon lesions may produce vague abdominal aching, but are unlikely to present with obstruction or altered bowel habit. Other symptoms such as weakness, weight loss, or anemia resulting from chronic blood loss may accompany cancer of the right side of the colon. You should promptly see your doctor when you experience any of these symptoms.

Remember to promptly see your doctor if you experience any of these symptoms:

- New onset of abdominal pain
- Blood in or on the stool
- A change in stool caliber or shape
- A change in typical bowel habits, constipation, diarrhea
- [Why should you get checked for Colorectal Cancer even if you have no symptoms?](#)

Adenomas can grow for years and transform into cancer without producing any symptoms. By the time symptoms develop, it is often too late to cure the cancer, because it may have spread. Screening identifies cancers earlier and actually results in cancer prevention when it leads to removal of adenomas (pre-cancerous polyps).

## Causes

- [Causes of Colorectal Cancer](#)

The cause of colorectal cancer in most cases is unclear. However, most colorectal cancers develop from polyps, which are abnormal growths in the colon. If polyps grow unnoticed and are not removed, they may become cancerous. Screening tests can find precancerous polyps so they can be removed before they turn into cancer. The development of more than 75-90 percent of colorectal cancer can be avoided through early detection and removal of pre-cancerous polyps.

## Risk Factors

- [Who is at risk for colorectal cancer?](#)

- **Average Risk Individuals.** Current recommendations are to begin screening at age 45 if there are no risk factors other than age for colorectal cancers. A person whose only risk factor is their age is said to be at average risk.
- **Men and women** Men tend to get colorectal cancer at an earlier age than women, but women live longer so they 'catch up' with men and thus the total number of cases in men and women is equal.
- **Anyone with a family history of colorectal cancer.** If a person has a history of two or more first-degree relatives (parent, sibling, or child) with colorectal cancer, or any first-degree relatives diagnosed under age 60, the overall colorectal cancer risk is three to six times higher than that of the general population. For those with one first-degree relative diagnosed with colorectal cancer at age 60 or older, there is an approximate two times greater risk of colon cancer than that observed in the general population. Special screening programs are used for those with a family history of colorectal cancer. A well-documented family history of adenomas is also an important risk factor.
- **Anyone with a personal history of colorectal cancer or adenomas at any age, or cancer of endometrium (uterus) or ovary diagnosed before age 50.** Persons who have had colorectal cancer or adenomas removed are at increased risk of developing additional adenomas or cancers. Women diagnosed with uterine or ovarian cancer before age 50 are at increased risk of colorectal cancer. These groups should be checked by colonoscopy at regular intervals, usually every 3 to 5 years. Woman with a personal history of breast cancer have only a very slight increase in risk of colorectal cancer.

- [Colorectal Cancer screening for African Americans](#)

Colorectal cancer has a disproportionate impact among African Americans who have one of the highest rates of colorectal cancer of any racial/ethnic group in the United States. Compared to whites, incidence rates are 24% higher in African American men and 19% higher in African American women. Stage adjusted CRC mortality is also disproportionately higher in African Americans, with rates being 47% higher in African American men and 34% higher in African American women compared to whites. The reasons for these differences are not entirely clear but disparities in care, such as lower rates of screening, diagnostic follow up, and treatment are postulated.

Based on recent SEER data, modelling studies show similar benefit of CRC screening in African Americans and whites starting at age 45. Special efforts and outreach programs are needed to boost screening among African Americans, in order to reduce the disparities in screening rates and reduce incidence rates. Source: ACG 2021 Clinical Guidelines on Colorectal Cancer Screening

## Prevention

- [What can I do to prevent the development of Colorectal Cancer?](#)

- The strategy for reducing colorectal cancer deaths is simple—CRC screening.
- Average risk individuals should start colorectal cancer screening at age 45 using either colonoscopy or fecal immunochemical test (FIT) as the primary screening modality.
- African Americans should begin colorectal cancer screening at age 45.
- Individuals at higher risk because they have one or two first degree relative with colorectal cancer or advanced colorectal polyps should starting colorectal cancer screening at age 40. If the first degree relative is <60, or there are two or more first degree relatives with colorectal cancer or advanced colorectal polyps at any age, colonoscopy should be used, and screening repeated at five-year intervals. If the first degree relative is age 60 or older, any screening modality can be used and, if normal, follow average risk screening intervals. For individuals with history of only one second degree relative with colorectal cancer or advanced polyp, we suggest using average risk recommendations. If the first degree relative is <60, or there are two or more first degree relatives with colorectal cancer or advanced colorectal polyps at any age, colonoscopy should be used, and screening repeated at five-year intervals. If the first degree relative is age 60 or older, any screening modality can be used and, if normal, follow average risk screening intervals. For individuals with history of only one second degree relative with colorectal cancer or advanced polyp, we suggest using average risk recommendations
- For both average and higher risk individuals, all potential pre-cancerous polyps must be removed.
- Aspirin is not a substitute for colorectal cancer screening and we suggest a narrow category of individuals that may use aspirin, in addition to routine screening, to reduce their risk of colorectal cancer: persons that are age 50-69 with cardiovascular disease risk of at least 10% and willing to take aspirin for at least 10 years.

## Colorectal Cancer Screening Options

- [What are the Colorectal Cancer screening options?](#)

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**Two-Step Screening Tests: Stool-Based Tests**

These tests detect blood or altered DNA in the stool as a first step. A positive result would lead to the second step of colonoscopy for further examination.

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## Treatment Options

Please see National Cancer Institute resource pages:

- [Stages of Colon Cancer](#)
- [Treatment Option Overview](#)
- [Treatment Options for Colon Cancer](#)

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