



**KANAKIA**  
Health Care

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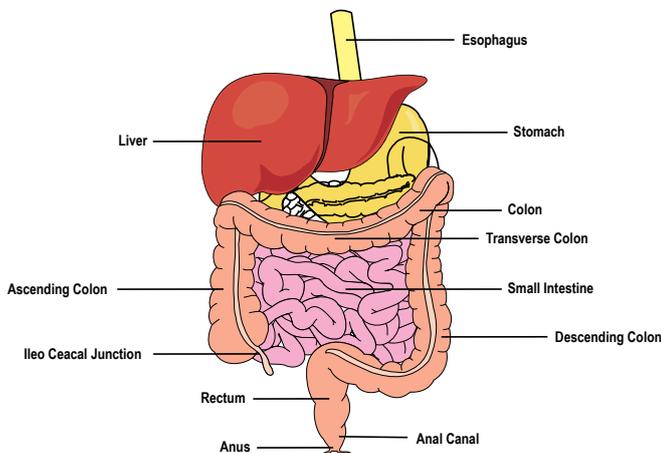
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# Colorectal Cancer

## What is the colon?

The colon and rectum are a part of the large intestine. It is a continuation of the small intestine and is the last part of the digestive system. It begins at the ileo-caecal junction and ends with the rectum and anal canal. It measures about a meter in length. The function of the large intestine is to absorb water from the feces and to throw out the unwanted matter after digestion. The caecum, appendix and anal canal are also the parts of the large intestine in addition to the colon and rectum. The colon can further be divided into the ascending, transverse and descending colon.



## What is colorectal cancer?

Cancer that begins in the colon or rectum is called colorectal cancer. To keep the colon healthy and normal, cells grow, divide and produce more cells. However when the colon cells keep dividing and growing even when not required, they form a mass of extra cells or tumor. Most tumors in the colon begin with a benign mass on the inner wall called a polyp. Adenoma is a specific type of polyp that can become cancerous.

## What are the symptoms of colorectal cancer?

There are generally no symptoms in the beginning. Over time the following symptoms can occur:

- Rectal bleeding
- Passage of blood in stool
- A change in bowel habits or change in consistency of stools (thin like a pencil)
- Feeling of incomplete evacuation
- Abdominal discomfort – cramps, pain, gas
- Weakness or fatigue
- Unexplained weight loss

## What are the risk factors for colorectal cancer?

The risk of colorectal cancer increases with age. Most cases occur in people  $\geq 50$  years of age. Other risk factors include:

- Personal or family history of colorectal cancer or colorectal polyps
- Inflammatory bowel disease – Crohn's disease and ulcerative colitis
- Genetic syndromes - familial adenomatous polyposis (FAP) and hereditary nonpolyposis colorectal cancer (HNPCC), also known as Lynch syndrome
- Sedentary lifestyle
- Low-fiber, high-fat diet
- Diabetes
- Obesity
- Smoking
- Alcohol
- Radiation therapy for cancer

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# Colorectal Cancer

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## How can risk factors be reduced to prevent colorectal cancer?

- Do not smoke
- Eat high-fiber, low-fat diet
- Increase calcium intake
- Eat less charcoal-broiled foods
- Avoid salt-cured foods
- Regular exercise
- Maintain weight in normal range
- Limit alcohol intake

## What are the screening options for colorectal cancer?

Screening tests are done in healthy people to look for early signs of colorectal cancer, as earliest stage gives greatest chance for cure. Screening is generally started at age 50 years. People with increased risk may start screening at earlier age.

The screening options are:

- Colonoscopy/sigmoidoscopy
- Fecal immunochemical test (FIT)
- Fecal occult blood test (FOBT)
- Stool DNA
- CT colonography
- Digital rectal examination

## How is colorectal cancer diagnosed?

Frequently colorectal cancer is suspected based on the symptoms. Following this various tests are carried out.

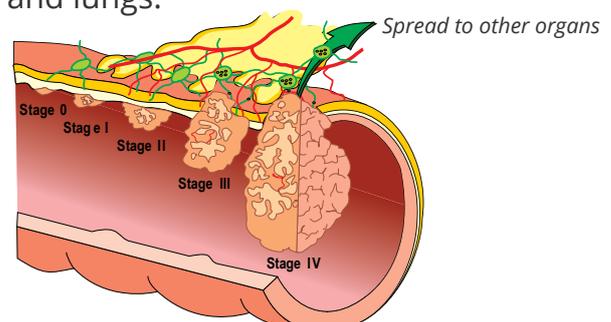
- Blood tests, show anemia if there is bleeding, and an elevated CEA or carcino embryonic antigen

- Stool tests
- Colonoscopy, examines the entire colon with the help of a colonoscope
- Biopsy, a small bit of the tissue of the affected area is removed for examination in the microscope. This is done at the time of the colonoscopy.
- Computerized Tomography (CT) scan and MRI

## What is staging?

After the cancer is diagnosed, other tests are required in order to find out the extent of the cancer and any spread of the cancer. This is called staging. The stage of the cancer is described by the TNM system. T is the tumor, N are the lymph nodes and M is for metastasis. The TNM staging is useful in planning the treatment.

- **Stage I:** The cancer has involved the innermost layers of the bowel wall but through the wall
- **Stage II:** The bowel wall has been invaded, but the cancer has not yet spread to the lymph nodes.
- **Stage III:** When the cancer spreads to nearby lymph nodes but not to other parts of the body.
- **Stage IV:** The cancer has spread to the other organs of the body especially liver and lungs.



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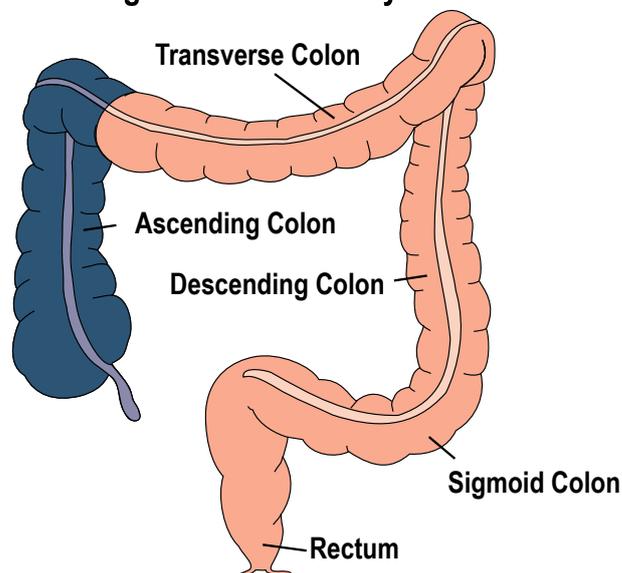
## What is the treatment of colorectal cancer?

The treatment depends on the stage of the colon cancer and involves the following:

- **Chemotherapy** – Chemotherapy may not be required for all stages of colon cancer. Stage II, Stage III and Stage IV disease requires chemotherapy. These medicines kill cancer cells. They can be given in the veins or may have to be taken orally. There are numerous side effects of chemotherapy which may require support in the form of blood and platelets or growth factors, and antibiotics for infections. Nausea, vomiting and loss of appetite can be treated by very good medicines that are now available.
- **Targeted drug therapy** – may be useful in advanced cases.
- **Radiotherapy** – may be required in some cases.
- **Surgery** – The mainstay of colon cancer treatment is surgery.
  - In early stage - Removing polyps during colonoscopy, endoscopic mucosal resection, minimally invasive surgery (laparoscopy)
  - In invasive advanced stage - The diseased part of the colon is removed, along with a portion of the healthy colon on either side of the cancer as well as the nearby lymph nodes. The two ends of the bowel are sewn together and this is called an anastomosis. At times the reconnection may not be possible and the colon is opened onto the abdominal wall. This

is called colostomy. It may be temporary or permanent. The stools are collected in a bag called the colostomy bag. The types of colon cancer surgeries are shown below:

### Right Hemicolectomy



### Transverse Resection

