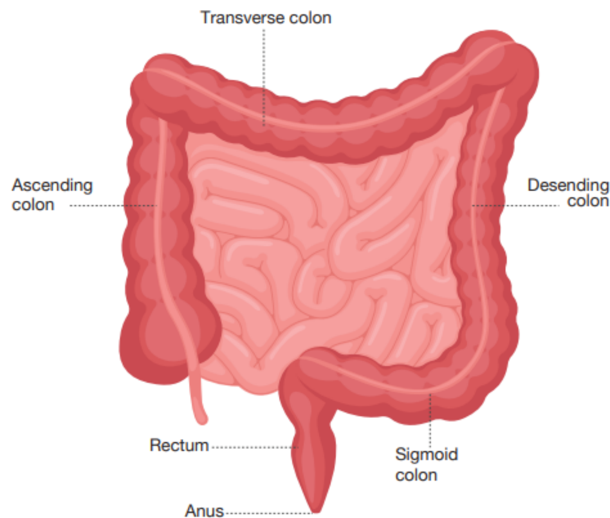
Patient Information
Colon Cancer

What is colon? Where is it located?

The colon is a part of the body's digestive system. The digestive system is made up of the esophagus, stomach, small and large intestine. The main part of the large intestine is called the colon, which is about 150 cm long. This is split into four sections: the ascending, transverse, descending and sigmoid colon. Some water and salts are absorbed into the body from the colon. The colon leads into the rectum (back passage). Major organs lie around the colon including the duodenum, liver, kidney, spleen, and pancreas.



Why have I developed colon cancer?

The development of colon cancer cannot be attributed to any single factor. There are certain risk factors that increase the chance of developing colon cancer. Risk factors include:

· Age – colon cancer is more common in older people (50 years and above)
· A family history of cancer of the colon or rectum
· A personal history of cancer of the colon, rectum, ovary, endometrium or breast
· A history of ulcerative colitis or Crohn's disease (inflammatory conditions of the colon) for more than 8-10 years)
· Obesity
· Lifestyle factors – little exercise, drinking a lot of alcohol
· Certain hereditary conditions such as familial adenomatous polyposis, hereditary nonpolyposis colon cancer (HNPCC, Lynch syndrome)

However, patients may develop these cancers even without any of these risk factors being present.

What are the symptoms of colon cancer?

The presentation of colon cancer depends on the site of the tumour. A doctor should be consulted if any of the following occur:

· A change in bowel habits
· Blood (either bright red or very dark) in the stool
· Diarrhoea, constipation or feeling that the bowel does not empty completely
· Frequent gas pains, bloating, fullness or cramps
· Weight loss for no reason · Feeling very tired
· Vomiting In Western countries, owing to the higher incidence of colorectal cancer, screening strategies are employed.

By this, all patients above the age of 40 years are advised to have a faecal occult blood test every six months. If positive, the patient is sent for a colonoscopy. In India, while a formal screening program does not exist, it is advisable for adults above the age of 40 years, especially those with a family history of bowel cancer, to get themselves tested for faecal occult blood by visiting their family physician

What investigations will I be subjected to?

The best investigation to diagnose colon cancer is colonoscopy with a biopsy of the tumour. A computed tomography (CT) scan of the abdomen and pelvis will help support the diagnosis of the cancer as well as to determine whether the cancer is at an early stage or whether it has spread to the lymph nodes, liver or other organs and if the colon cancer has infiltrated the surrounding organs. Serum CEA (a blood test) is a marker used in colon cancer. It is especially useful if its value is high as this indicates that the patient's cancer may be advanced, thereby adding to other investigations when deciding other treatment options. After curative surgery, its level becomes normal. Thus, it is routinely performed at the follow-up to help detect the recurrence of cancer. Liver function tests, chest X-ray and or CT scan, etc., are other investigations to decide the stage of the disease. If an operation is being planned, some more tests may be necessary to decide the fitness of the patient for general anaesthesia.

Are there different types of colon cancer?

Yes, there are different types of colon cancer depending on the type of cell/tissue from which the cancer is arising. Adenocarcinoma is the most common type of colon cancer. Gastrointestinal stromal tumours (GIST), lymphoma and leiomyoma are some of the less common types of colon cancers. The treatment depends on the type of cancer.

At what stage is the cancer?

Accurate staging of the cancer is based on histopathology and will be possible only after surgery. Colon cancer can be broadly classified into: Early cancer – cancer only within the colon with no spread of the disease outside of it; Locally advanced – when cancer appears large and/or invading other surrounding organs, with enlarged lymph nodes.; Metastatic – when cancer has spread far from the colon, e.g. to the liver, lungs, etc. These patients also usually have some fluid building up in the abdomen.

Now that I have been diagnosed to have colon cancer, how will I be treated?

Different types of treatment are available for patients with colon cancer. Three types of standard treatment are used.

· Surgery
· Chemotherapy
· Targeted therapy

Surgery is the most common treatment for all stages of colon cancer and is an important part of curative treatment. Some patients may be given chemotherapy after surgery to kill any cancer cells that are left. Chemotherapy is a cancer treatment that uses drugs to stop the growth of cancer cells either by killing the cells or stopping them from dividing. Targeted therapy uses drugs or substances to identify and attack specific cancer cells without harming normal cells.

Which kind of surgery is done for colon cancer?

The type of surgery depends on the location of the cancer and its extent. There are curative and palliative colectomies. Curative surgeries are done to remove the entire cancer with a margin of normal tissue around and all the lymph nodes involved (lymphadenectomy). These include: Right hemicolectomy refers to the resection of the ascending colon. Left hemicolectomy refers to the resection of the descending colon. Extended hemicolectomy is when a part of the transverse colon is also resected. Sigmoid colectomy refers to the resection of the sigmoid colon. Total colectomy refers to the resection of the entire colon. Subtotal colectomy refers to the resection of the part of the colon or

resection of the entire colon without complete resection of the rectum. Palliative surgery is done for symptom control and not with the intent for the cure. This is because these surgeries are done in patients with advanced disease who have developed complications of cancer (mentioned above). In an obstructing advanced cancer, only a bypass of the block or an opening in the bowel to allow stool and gas to be expelled (ileostomy or colostomy) may be possible. Sometimes, even if a patient is taken up for emergency surgery due to a complication of cancer, no resection may be possible if the disease is very advanced and the belly will just have to be closed without any further surgical intervention. In some patients with an obstruction who are not fit for surgery, endoscopic stenting of the tumour may be attempted.

Are there any alternatives besides surgery?

Till date, surgery is the only proven curative option for colon cancer.

How do I prepare myself for surgery?

The preparation is generally similar to any major surgery. If you are a smoker it is essential to stop smoking. Alcohol intake should also be restricted or preferably stopped in preparation for surgery and in the weeks after, till advised by your doctor. Breathing exercises using the incentive spirometer and football bladder should be started. Follow the anaesthetist's advice regarding the continuation of medications if you are on any. A high protein diet is preferred to improve nutrition.

How major is the surgery? What are the possible complications?

Colectomies with lymphadenectomy and other colon surgeries are deemed as major surgeries with a risk of complications and a very small risk of death (<2%). This means that if 100 people are operated on, less than two of them have a chance of death within the first 30 days after surgery. The complications of Colectomy (removal of the colon and lymph nodes and joining back (anastomosis) the healthy bowel/intestine) include:

- Leak of the anastomosis
- Bleeding from the anastomosis
- Bladder and ureteral injuries
- Injury to the duodenum
- Wound infections

For how long do I stay in the hospital?

In an uncomplicated case, hospital stay after surgery is 7-10 days for open surgery; though this may be longer when there are complications. Today we perform most colectomies by Laparoscopy or Robotic surgery and the recovery is rapid, with discharge within 2-3 days.

Will I need any further treatment after surgery?

The decision about adjuvant treatment is based on the final histopathology report which will be available approximately 7-10 days following surgery. If any of the lymph nodes are positive and your general condition is good enough, then you may be referred to the medical (GI) oncologist for consideration for chemotherapy.

What will be my survival chances after surgery?

Are there any risks of cancer coming back? Survival depends on the stage of the disease. The average five-year survival for all stages after curative surgery for colorectal cancer is between 40-75% depending on the stage of cancer. As of date, there is no foolproof way of predicting which patients will have a recurrence and which patients will not.

Are there any special precautions I need to take to prevent cancer from coming back?

No, there are no such proven precautions.

How frequently should I follow up after surgery?

After completion of treatment, you will be advised to follow-up once in 3-4 months in the first two years. Then the frequency will be reduced to once in six months for the next 2-3 years. Subsequent follow-up will be once a year. During each follow-up, you will be asked to undergo certain blood tests, especially CEA. You may also be advised to get an ultrasound of the abdomen and colonoscopy done. Colonoscopy can show recurrence of polyps or cancer in the colon. In addition to checking for cancer recurrence, patients who have had colon cancer may have an increased risk of cancer of the prostate, breast and ovary. Therefore, follow-up examinations should include these areas.

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