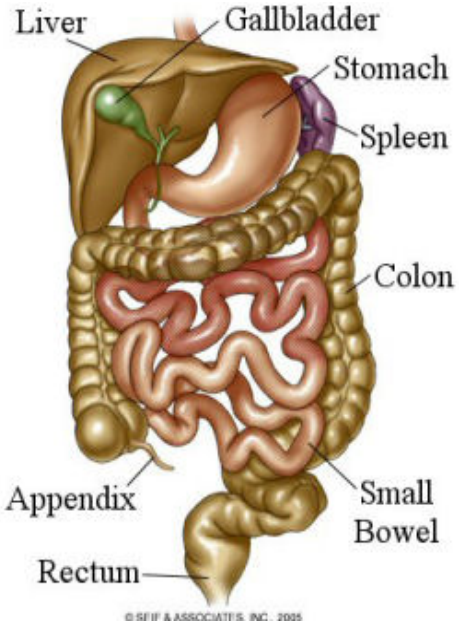
Colorectal Cancer, Cancer of the Colon

The colon is the large bowel and is the storage part of the bowel for undigested food. The large bowel is also called the intestine or gut. Cancer is a growth that is not supposed to be there.



RISKS

Risks for cancer of the colon include:

- **Age.** More than 90 percent of people with this disease are diagnosed after age 50.
- **Polyps.** Growths on the inner wall of the colon or rectum may become cancerous.
- **Family history.** Some cancers of the colon are inherited or run in families. These include:
  - **Hereditary nonpolyposis colon cancer (HNPCC)** is the most common type of inherited (*genetic*) colorectal cancer. It accounts for about 2 percent of all colorectal cancer cases. It is caused by genetic changes. About 75% of people with an altered HNPCC gene develop colon cancer, and the average age at diagnosis of colon cancer is 44.
  - **Familial adenomatous polyposis (FAP)** is a rare inherited condition in which hundreds of polyps form in the colon and rectum. It is caused by a change in a specific gene called APC. Unless FAP is treated, it usually leads to colorectal cancer by age 40. FAP accounts for less than 1 percent of all colorectal cancer cases.
  - **Family members of people who have HNPCC or FAP** can have genetic testing to check for specific genetic changes. For those who have changes in their genes, health care providers may suggest ways to try to reduce the risk of colorectal cancer or to improve the detection of this disease. For adults with FAP, the doctor may recommend an operation to remove all or part of the colon and rectum.
- **Personal history of colorectal cancer**. A person who has already had colorectal cancer may develop colorectal cancer a second time. Also, women with a history of cancer of the ovary, uterus (*endometrium*), or breast are at a somewhat higher risk of developing colorectal cancer.
- **Ulcerative colitis or Crohn's disease**. A person who has had a condition that causes inflammation of the colon (such as ulcerative colitis or Crohn's disease) for many years is at increased risk of developing colorectal cancer.
- **Diet**. Studies suggest that diets high in fat (especially animal fat) and low in calcium, folate, and fiber may increase the risk of colorectal cancer. Also, some studies suggest that people who eat a diet very low in fruits and vegetables may have a higher risk of colorectal cancer. More research is needed to better understand how diet affects the risk of colorectal cancer.
- **Cigarette smoking**. A person who smokes cigarettes may be at increased risk of developing polyps and colorectal cancer.

SYMPTOMS WHEN CANCER OF THE COLON IS PRESENT INCLUDE:

- Changes in bowel habits.
- Diarrhea, constipation, or feeling that the bowel does not empty completely.
- Blood (either bright red or very dark) in the stool.
- Stools that are narrower than usual.
- General discomfort in your belly (*abdomen*): frequent gas pains, bloating, fullness, and/or cramps.
- Weight loss with no known reason.
- Constant tiredness.
- Nausea and vomiting.

Other health problems can cause the same symptoms, and often these symptoms are not due to cancer. Anyone with these symptoms should see a doctor so that any problem can be diagnosed and treated as early as possible.

Usually, early cancer does not cause pain. It is important not to wait to feel pain before seeing a doctor.

DIAGNOSIS

If you have any signs or symptoms of colorectal cancer, the doctor must determine whether they are due to cancer or some other cause. The doctor will ask about personal and family medical history and may do a physical exam. You may have one or more tests to screen for cancer.

If the physical exam and test results do not suggest cancer, the doctor may decide that no further tests are needed and no treatment is necessary. Your caregiver may recommend a schedule for checkups.

If X-rays show an abnormal area (such as a *polyp*), a piece of tissue is taken (*biopsy*) to check for cancer cells. Often, the abnormal tissue can be removed during a test that examines the colon. These tests include:

- **Sigmoidoscopy.** With this test, the caregiver can see inside your large intestine. A thin flexible tube is placed into your rectum. The device is called a sigmoidoscope. This device has a light and a tiny video camera in it. The caregiver uses the sigmoidoscope to look at the last third of your large intestine.
- **Colonoscopy.** This test is like sigmoidoscopy, but the caregiver looks at all of the large intestine. It usually requires sedation.

If a biopsy was taken, a specialist in examining tissues (*pathologist*) checks the tissue for cancer cells using a microscope.

If the biopsy shows that cancer is present, the doctor needs to know the extent (*stage*) of the disease to plan the best treatment. The stage is based on whether the tumor has invaded nearby tissues, whether the cancer has spread, and if so, to what parts of the body. Staging may involve some of the following tests and procedures:

- **Blood tests.** The doctor checks for carcinoembryonic antigen (CEA) and other substances in the blood. Some people who have colorectal cancer have a high CEA level.
- **Sigmoidoscopy.**
- **Colonoscopy.**
- **Endorectal ultrasound.** An ultrasound probe is inserted into the rectum. The probe sends out sound waves that people cannot hear. The waves bounce off the rectum and nearby tissues, and a computer uses the echoes to create a picture. The picture shows how deep a rectal tumor has grown or whether the cancer has spread to lymph nodes or other nearby tissues.
- **Chest X-ray.** X-rays of the chest can show whether cancer has spread to the lungs.
- **CT scan**. This is a X-ray machine linked to a computer takes pictures of areas inside the body. The patient may receive an injection of dye. Tumors in the liver, lungs, or elsewhere in the body show up on the CT scan.

The doctor also may use other tests (such as MRI) to see whether the cancer has spread. Sometimes staging is not complete until the patient has surgery to remove the tumor. (Surgery for colorectal cancer is described in the "Treatment" section.)

DOCTORS DESCRIBE COLORECTAL CANCER BY THE FOLLOWING STAGES:

- **Stage 0**. The cancer is found only in the innermost lining of the colon or rectum. Another name for Stage 0 colorectal cancer is Carcinoma in situ.
- **Stage I**. The cancer has grown into the inner wall of the colon or rectum. The tumor has not reached the outer wall of the colon or extended outside the colon. Another name for Stage I colorectal cancer is Dukes' A.
- **Stage II**. The tumor extends more deeply into or through the wall of the colon or rectum. It may have invaded nearby tissue, but cancer cells have not spread to the lymph nodes. Another name for Stage II colorectal cancer is Dukes' B.

- **Stage III**. The cancer has spread to nearby lymph nodes but not to other parts of the body. Another name for Stage III colorectal cancer is Dukes' C.
- **Stage IV**. The cancer has spread to other parts of the body, such as the liver or lungs. Another name for Stage IV colorectal cancer is Dukes' D.
- **Recurrent cancer**. This is cancer that has been treated and has returned after a period of time when the cancer could not be detected. The disease may return in the colon, rectum or in another part of the body.

Once you know the diagnosis and the stage of cancer of the colon, your caregiver can advise you and help you decide what the best course of treatment will be.

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