

# Colon Cancer

Cancer of the colon has become quite common in our society. Each year, about 155,000 Americans are diagnosed as having colon cancer. For unknown reasons, residents of urban areas of Northern United States have an especially high risk. In fact, about one in 17 (six percent) will develop cancer of the colon in their lifetime. Only lung cancer takes a greater toll.

Colon cancer is a malignant growth that occurs on the inner wall of the colon or rectum. Unfortunately, when colon cancer develops, there may be few, if any, warning symptoms. In some cases, patients in our practice have had no warning signals or symptoms at all. The cancer can be in your colon for years before you notice any symptoms such as a change in bowel habits, rectal bleeding, abdominal pain, thin stools or unexplained weight loss.

## Causes of Colon Cancer

The causes are not fully understood. In most cases, colon cancer is triggered by a complex interaction of several different factors. But, regardless of the cause, we have learned that cancer of the colon first develops as a small non-cancerous growth, or [polyp](#). Some people develop these little “mushroom-like” growths on the inner surface of the intestinal wall. These polyps can occur anywhere in the colon. There are no symptoms. As time goes on, these small polyps may become larger and larger. Eventually, an uncontrolled growth of malignant cells may occur within a polyp. Left untreated, this cancer can penetrate surrounding tissues and spread to other organs.

Certain factors may increase your risk of developing colon cancer. Your chance of developing colon cancer increases with age. Although young adults are occasionally affected, most colon cancer occurs in people after the age of 40. Contrary to some popular beliefs, both men and women are equally affected. Recently, scientists have identified a specific genetic mutation that may contribute to the risk of colon cancer; so heredity is an important risk factor. Other factors such as insufficient fiber (roughage) in our diet may play a role in the formation of colon polyps and subsequent colon cancer.

## Diagnosis of Colon Cancer

Colon cancer can be detected by a variety of tests, including sigmoidoscopy, colonoscopy, or radiologic tests like CT scan or barium enema. Of these, colonoscopy is the most accurate diagnostic test for colon cancer. All individuals age 50 and over should have a screening test for colon cancer. Some individuals may be at increased risk of colon cancer and they should be screened at an earlier age, including those with a family history of cancer of the colon, rectum, breast or of the female organs, those who have a history of ulcerative colitis (ulcers in the lining of the large intestines), or those with familial polyposis. When colon cancer is found, your prognosis (chance of recovery) and choice of treatment depend on the stage of your cancer (whether it is confined to the inner lining of your colon or if it has spread to other places) and your general state of health.

# Stages of Colon Cancer

Colon cancer stage is determined at the time of surgery. Your doctor needs to know the stage of your disease to plan treatment. The Dukes system, developed many years ago, is widely used to classify colon cancer into several stages:

**Pre-Cancerous Polyp** – Small polyps are not usually cancerous, but will often become malignant as they grow larger over time. In most cases, polyps cause no warning symptoms. Occasionally, a small cluster of cancer cells are found in the top lining of a removed polyp (carcinoma-in-situ). No further treatment is usually needed.

**Stage A Colon Cancer** – This early cancer is localized to the inner smooth lining of the colon and has not spread through the muscular wall or outside the colon.

**Stage B1 Colon Cancer** – Cancer cells have invaded the muscular wall but have not broken through.

**Stage B2 Colon Cancer** – Cancer cells have invaded the muscular wall and has broken through, but they have not yet gone into the lymph nodes.

**Stage C1 Colon Cancer** – Cancer cells have broken through the outer protective covering and spread to nearby lymph nodes, but have not yet spread to other parts of the body. One to four lymph nodes are involved.

**Stage C2 Colon Cancer** – Cancer cells have broken through the outer protective covering and spread to nearby lymph nodes, but have not yet spread to other parts of the body. Five or more lymph nodes are involved.

**Stage D Colon Cancer** – Cancer has spread to other parts of the body. Most often the liver is involved.

**Recurrent Colon Cancer** – Recurrent disease means that the cancer has come back (recurred) after it has been treated. It may come back in the colon or in another part of the body. Recurrent cancer of the colon is often found in the liver and/or lungs.

## Average Five Year Survival

- Stage A – 95 percent
- Stage B1 – 80 percent
- Stage B2 – 60 percent
- Stage C1 – 60 percent
- Stage C2 – 30 percent
- Stage D – less than 5 percent

## Treatments for Colon Cancer

There are treatments for all patients with cancer of the colon. The primary goal of therapy is to cure. If cure is not possible, treatment is often still possible to achieve long term control of the

illness and to manage the symptoms associated with cancer. Three kinds of treatments are available:

- **Surgery** – taking out the cancer.
- **Radiation therapy** – using high-energy x-rays to kill cancer cells.
- **Chemotherapy** – using special drugs to kill cancer cells.

Your doctors will decide which of these three treatments is best in your particular case.

## **Surgery**

Surgery is the most common treatment for all stages of cancer of the colon. Surgery is an operation. The goal of surgery is to remove the part of the colon affected by cancer. Most patients express a fear that they will have to “wear a bag” (colostomy) after colon cancer surgery. In fact, most patients do not need a colostomy pouch after surgery. Of course, surgery requires hospitalization and general anesthesia.

After making an abdominal incision, the surgeon takes out the cancer and a small amount of healthy tissue around it. The healthy parts of the colon are then sewn together (anastomosis) with stitches or metal staples. The surgeon may also take out lymph nodes near the intestine and look at them under the microscope to see if they contain cancer. Sometimes the colon cannot be sewn back together. Then, the surgeon makes an opening (stoma) on the outside of the abdomen for waste to pass out of the body, a colostomy. Sometimes, a colostomy is only needed until the colon has healed, and then it can be reversed. However, in about 15 percent of cases the cancer is located very close to the end of the rectum. In this case, the surgeon must take out the entire rectum to remove all of the cancer. Then, the colostomy is permanent. If you have a colostomy, you will need to wear a special bag to collect body wastes. This special bag, which sticks to the skin around the stoma with a special glue, can be thrown away after it is used. This bag does not show under clothing, and most people take care of these bags themselves.

## **Radiation Therapy**

Radiation therapy uses high-energy x-rays to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body (external radiation therapy) or from putting materials that contain radiation through thin plastic tubes (internal radiation therapy) in the intestine area for a short time.

Radiation can be used alone or in addition to surgery and/or chemotherapy. To protect healthy cells, special lead shields are often used. The person who gets radiation treatment is not radioactive during or after treatment and poses no risk to others. Although radiation treatment is painless, it can cause side effects such as tiredness, diarrhea, skin rash, and nausea.

## **Chemotherapy**

Chemotherapy uses special drugs to kill cancer cells. Chemotherapy may be taken by pill or it may be put into the body by a needle in a vein. Chemotherapy is called a systemic treatment

because the drug enters the bloodstream, travels through the body and can kill cancer cells outside the colon. If your doctor removes all the cancer that can be seen at the time of the operation, you may still be given chemotherapy after surgery to kill any cancer cells that may be left behind. Chemotherapy given after an operation to a person who has no remaining visible cancer cells is called preventative or adjuvant chemotherapy.

## Treatment by Stage

Treatments for cancer of the colon depend on the stage of your disease, your age, and your general health. Your doctor will recommend treatment that is considered standard based on its effectiveness in a number of past cases similar to yours, but each case is different.

Not all patients are cured with standard therapy and some standard treatments may have more side effects than others. For these reasons, you should discuss the details with your doctor. If surgery alone is not sufficient, your physician may refer you for a consult with a cancer specialist (oncologist).

**Pre-Cancerous Polyp** – If found early, most colon polyps can be removed by outpatient colonoscopy without the need for major surgery. With mild sedation, the procedure is usually painless. Most patients are back to work in a few days. Occasionally, a few cancer cells are found in the tip of the polyp after removal. If there is no involvement of the polyp's stem, colonoscopic removal of polyp is usually felt to be sufficient. However, larger polyps and those with invasive cancer, require an open surgical procedure.

**Stage A Colon Cancer** – Treatment is usually surgery to remove the cancer. About 90 percent of patients with colon cancers discovered at this early stage can be cured by surgery alone.

**Stage B1-2 Colon Cancer** – Treatment is usually surgery to remove the cancer. If your tumor has spread to nearby tissue, you may also receive adjuvant chemotherapy or radiation therapy following surgery.

**Stage C1-2 Colon Cancer** – Treatment is usually surgery to remove the cancer often followed by chemotherapy. Radiation therapy is sometimes also used. Clinical trials are evaluating new combinations of chemotherapy drugs and radiation therapy.

**Stage D Colon Cancer** – Your treatment may be surgery to remove the cancer or to make the colon go around the cancer so that it can still work. In some cases surgery is performed to remove parts of other organs such as the liver, lungs, and ovaries, where the cancer may have spread. Chemotherapy and radiation therapy may be used to help relieve symptoms and prolong survival.

**Recurrent Colon Cancer** – If, after initial treatment, the cancer has come back (recurred) in only one part of the body, treatment may consist of another operation to take out the cancer. If the cancer has spread to several parts of the body, your doctor may give you either chemotherapy or radiation therapy. You may also choose to participate in a clinical trial testing new treatment programs.

After colon cancer surgery, healing takes about four to six weeks. In the first few weeks you must limit your physical activity. Since the body uses much energy to heal itself, you can expect to tire easily. But don't be afraid to be active when you feel up to it – a proper amount of activity actually hastens healing. Don't lift anything heavy or strain yourself for at least six weeks. Then, you will be able to resume your normal activity and return to work. Once you have recovered from surgery, chemotherapy may begin if indicated.

“Chemo” is prescribed by your oncologist and is frequently administered in the office. Each case is different, but on average treatments are given over six to 12 months. This varies with each case and the patient's tolerance to treatment. Usually done as an outpatient procedure, each visit takes about two to three hours. As with any potent therapy, side effects can be expected. Chemotherapy works mainly on rapidly dividing cancer cells. But healthy cells, especially those that divide rapidly, can be harmed as well. This may cause unwanted side effects which are unpleasant but don't last forever. Most side effects are mild and can be limited with your doctor's help. They will go away gradually after treatment is stopped. Your oncologist will work closely with your family doctor in planning your treatment plan, administering the “chemo,” and following your response to treatment.

## **Cancer Surveillance**

Colon cancer can return at or near the site of original surgery and it can spread to organs in other parts of the body. After initial therapy, a program of regular follow-up visits allows your doctors to evaluate your response to treatment and may help detect early recurrence of cancer. Patients treated for colon cancer also have a high risk of developing new colon polyps which could lead to another cancer in the colon. It is important for patients to be followed carefully, so that if these problems occur, they can be found and treated as early as possible.

A surveillance program usually includes physical examinations, blood tests and colonoscopy examinations. X-rays may be requested. These exams are done most frequently in the first five years after surgery when the risk of recurrent colon cancer is the highest. Because this disease is often hereditary, it is also recommended that your blood relatives (brothers, sisters, and children) over the age of 40 consult with a physician about a program of periodic colon examinations. This may be lifesaving if a colon polyp is discovered and removed before cancer develops.

Learn more at [AmericanCancerSociety.org](http://AmericanCancerSociety.org) and [StopColonCancerNow.com](http://StopColonCancerNow.com)