

Colon Cancer

Colon Adenocarcinoma

Definition of Terms

Colon: The section of the large intestine leading to the rectum.

Adenocarcinoma: A type of cancerous, or malignant, tumor originating in a glandular (tubular) structure.

Polyp: A benign tumor found in the colon. Polyps can become cancerous if undetected or ignored.

Malignant: Cancerous and capable of spreading.

Invasive, Infiltrating: Capable of spreading to other parts of the body.

Pathologist: A physician who examines tissues and fluids to diagnose disease in order to assist in making treatment decisions.

Lymphatic: Relating to lymph glands (lymph nodes).

What is Colon Adenocarcinoma?

Colon Adenocarcinoma is the most common type of gastrointestinal cancer, with about 150,000 cases each year in the United States. This type of cancer begins in the cells of glandular structures in the inner layer of the colon and spreads first into the wall of the colon and potentially into the lymphatic system and other organs. Colon Adenocarcinoma can be treated, with 50 percent of patients surviving for at least five years. Early-stage colon cancers have survival rates of 70 to 90 percent.

Who is most likely to have Colon Adenocarcinoma?

Colon cancer stems from colon polyps that turn cancerous, and individuals who develop polyps are at the highest risk of colon cancer. For this reason, individuals with a family history of *adenomatous polyposis* or *Gardner's syndrome* – both marked by the growth of multiple colon and rectal polyps – are at high risk. Individuals age 50 or older who are not screened regularly for polyps are at higher risk, as well, since polyps grow in 30 percent of individuals past the age of 50. Colon cancer also is associated with a diet high in fat and beef and low in fiber. Other risk factors include a personal history of previous cancer or inflammatory bowel disease.

What characterizes Colon Adenocarcinoma?

Colon Adenocarcinoma progresses slowly and may not present symptoms for up to five years. As the cancer grows, symptoms become more likely and can include

rectal bleeding, fatigue, shortness of breath, angina, changes in bowel habits, abdominal discomfort, anemia or bowel obstruction.

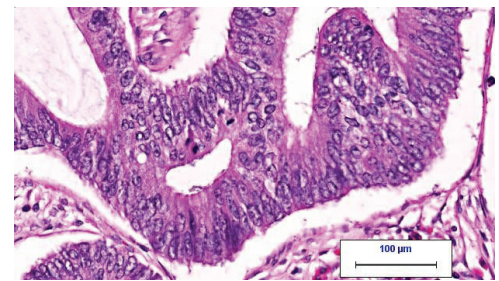
What tests can help identify Colon Adenocarcinoma?

Because most colon adenocarcinomas do not present symptoms, most are found through regular physical examinations.

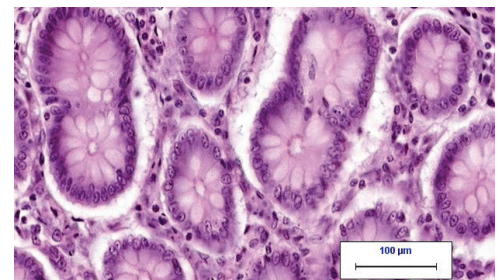
About 5 to 10 percent of colon cancers are initially discovered during a *digital rectal exam (DRE)*, in which a primary care physician inserts a lubricated, gloved finger into the patient's rectum. A *blood test* also can show the possibility of colon cancer, as can various tests that examine the colon. These tests include *colonoscopy*, *flexible sigmoidoscopy*, or *double-contrast barium enema*.

How does a pathologist diagnose Colon Adenocarcinoma?

Once the possibility of colon cancer is found, each polyp is removed through colonoscopy or flexible sigmoidoscopy. In some cases, when the tumor is advanced, the polyps may be removed as part of surgery. In any case, it is the pathologist who closely examines the polyp's cells



Colon Adenocarcinoma progresses slowly and may not show symptoms for up to five years.



A normal colon.



Advancing Excellence

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Colon Adenocarcinoma is treated with surgery, chemotherapy, or radiation therapy or with a combination of two or three of these treatments. It's important to learn as much as you can about your treatment options and to make the decision that's right for you.

For more information, go to: www.cancer.gov (National Cancer Institute) or www.cancer.org (American Cancer Society). Type the keywords: **colon adenocarcinoma** or **colon cancer** into the search box.

-- called a **biopsy sample** -- under a laboratory microscope to determine the specific diagnosis.

What else does the pathologist look for?

The pathologist notes the size of the tumor, how close the cancer is to the edge of the removed tissue, and whether or not the tumor invaded blood or lymphatic vessels. These factors determine the likelihood of the cancer remaining in or returning to the affected area. In some situations, a primary care physician or specialist may order imaging tests including a **chest x-ray** or **CT scan** to see if the tumor has spread to the lungs, lymph nodes, liver, or ovaries.

With all necessary tests completed, the pathologist determines the cancer's **stage**. Stage 1 Colon Adenocarcinomas are small and confined to the colon, and stage 4 tumors have spread beyond areas near the colon. Stages between 2 and 3 describe conditions in between these two extremes.

How do doctors determine what surgery or treatment will be necessary?

The pathologist consults with your primary care physician or specialist after reviewing the test results and determining the stage of the cancer. Together, using their combined experience and knowledge, they determine treatment options most appropriate for your condition.

What kinds of treatments are available for Colon Adenocarcinoma?

Colon Adenocarcinoma is treated with surgery, chemotherapy or radiation therapy or with a combination of two or three of these treatments. It's important to learn as much as you can about your treatment options and to make the decision that's right for you.

The most common treatment for Colon Adenocarcinoma is **surgery**, which can remove the

cancerous tumor from the body. Surgery is generally recommended for 90 percent of colon cancer patients. A **radical bowel resection** -- also known as a partial colectomy or hemicolectomy -- is the type of surgery performed on most patients. During this procedure, a surgeon removes the section of the colon containing the tumor, as well as nearby lymph nodes. The healthy sections of the colon are either reconnected (called **end-to-end anastomosis**), or the surgeon creates a temporary or permanent **colostomy** (an opening in the abdomen where stool passes through a stoma). About 15 percent of colon cancer patients require a permanent colostomy.

Surgery is performed either through a large abdominal incision (**open surgery**) or several small incisions (**laparoscopic surgery**). If appropriate for the case, laparoscopic surgery can result in a shorter hospital stay and faster recovery time. If the tumor has spread, other surgical procedures including a **partial hepatectomy** (removal of a part of the liver) or **oophorectomy** (removal of the ovaries) may be performed.

If the cancer has spread beyond the colon -- or if there is a chance that it has -- **chemotherapy** will likely be recommended. This treatment delivers drugs throughout the body, slows the cancer's progression and reduces pain. Chemotherapy can be used before and after surgery and can be combined with immunotherapy or radiation therapy.

Radiation therapy -- pinpointed high-energy beams -- can be used to shrink tumors or to destroy cancer cells that remain after surgery. This treatment is also used to relieve the symptoms of advanced colon cancer.

Clinical trials of new treatments for Colon Adenocarcinoma may be found at www.cancer.gov/clinicaltrials. These treatments are highly experimental in nature but may be the best option for advanced cancers.

What kinds of questions should I ask my doctors?

Ask any question you want. There are no questions you should be reluctant to ask. Here are a few to consider:

- *Please describe the type of cancer I have and what treatment options are available.*
- *What stage is the cancer in?*
- *What are the chances for full remission?*
- *What treatment options do you recommend? Why do you believe these are the best treatments?*
- *What are the pros and cons of these treatment options?*
- *What are the side effects?*
- *Should I receive a second opinion?*
- *Is your medical team experienced in treating the type of cancer I have?*
- *Can you provide me with information about the physicians and others on the medical team?*