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## ABOUT COLORECTAL CANCER

Colorectal cancer includes malignant or cancerous tumors of the colon and/or the rectum.

- The colon extends from the end of the small intestine to the rectum. It consists of ascending, transverse and descending segments.
- The sigmoid colon is roughly S-shaped and is the lower portion of the descending colon, leading into the rectum.
- The rectum is part of the digestive system. It makes up the final five inches of the colon.
- Colorectal cancer can affect any of these areas.

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## FACTS ABOUT COLORECTAL CANCER

- This year, about 147,000 Americans will be diagnosed with colorectal cancer.
- The disease affects men and women equally.

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## GENERAL RISK FACTORS FOR COLORECTAL CANCER

The majority of colorectal tumors are found in patients over age 50. However, the disease can happen at any age so it is important to know your family history and the following risk factors.

- Diet high in fat and red meat and low in fruits and vegetables.
- Personal history of colon cancer.
- History of polyps in the colon, ulcerative colitis or Crohn's Disease.

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## SCREENING FOR COLORECTAL CANCER

The American Cancer Society recommends that, beginning at age 50, both men and women be screened for colorectal cancer according to one of the following schedules (see Diagnosing Colorectal Cancer section inside for definitions of these tests):

- Yearly fecal occult blood test.
- Sigmoidoscopy every five years.
- Double-contrast barium enema every five years.
- Colonoscopy every 10 years.

People who have any of the colorectal cancer risk factors should consult with their doctor about earlier, more frequent screening.

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## ABOUT THE RADIATION ONCOLOGY TEAM

Radiation oncologists are the doctors who oversee the care of each patient undergoing radiation treatment. Other members of the radiation oncology team include radiation therapists, radiation oncology nurses, medical physicists, dosimetrists, social workers and nutritionists. To locate a radiation oncologist in your area, visit [www.astro.org/patient](http://www.astro.org/patient).

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## LEARNING ABOUT CLINICAL TRIALS

The radiation oncology team is constantly exploring new ways to treat colorectal cancer through studies called clinical trials. Today's standard radiation therapy treatments are constantly being refined due to the results of trials. For more information, please contact the following organizations:

**National Cancer Institute**  
[www.cancer.gov/clinicaltrials](http://www.cancer.gov/clinicaltrials)

**Radiation Therapy Oncology Group**  
[www.rtog.org](http://www.rtog.org)

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## HELPFUL WEB SITES ON COLORECTAL CANCER

**American Cancer Society**  
[www.cancer.org](http://www.cancer.org)

**Colon Cancer Alliance**  
[www.ccalliance.org](http://www.ccalliance.org)

**Colorectal Cancer Network**  
[www.colorectal-cancer.net](http://www.colorectal-cancer.net)

**Cancer Research and Prevention Foundation**  
[www.preventcancer.org](http://www.preventcancer.org)

**National Colorectal Cancer Research Alliance**  
[www.nccra.org](http://www.nccra.org)

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## ABOUT ASTRO

The American Society for Therapeutic Radiology and Oncology is the largest radiation oncology society in the world. The Society's mission is to advance the practice of radiation oncology by promoting excellence in patient care, promoting research and disseminating research results.



# RADIATION THERAPY for COLORECTAL CANCER

Facts to Help People  
Understand Treatment  
Options



# ASTRO

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## SIGNS OF COLORECTAL CANCER

Often there are no obvious signs of colorectal cancer, but some symptoms can include:

- Change in bowel frequency, such as alternating episodes of diarrhea and constipation.
- Bloody bowel movements or rectal bleeding.
- General abdominal discomfort.
- Unexplained weight loss.
- Chronic fatigue.
- Bloating.
- Unexplained anemia.

## DIAGNOSING COLORECTAL CANCER

Special tests to evaluate the colon and rectum are used to detect and diagnose colorectal cancer.

- A physical exam to assess your overall health, including a digital rectal exam (DRE) to evaluate the rectum for abnormal masses.
- Fecal occult blood test where your stool will be checked for blood.
- A sigmoidoscopy to look inside the rectum and sigmoid colon for polyps or other abnormal areas that may be cancerous using a thin, lighted tube.
- During a double-contrast barium enema, your colon is filled with a fluid containing barium. The barium is then drained out and air is put into the intestine. X-rays of the area are then taken to look for abnormalities.
- A colonoscopy uses a longer lighted tube to look inside the rectum and the entire colon for polyps or other abnormal areas that may be cancerous.

To determine for sure if you have cancer, some tissue will be removed during sigmoidoscopy or colonoscopy and examined under a microscope. This test is called a biopsy. Your doctor may also request a CT or PET scan to see if other body parts are involved.

## TREATING COLORECTAL CANCER

The primary treatment for cancers of the colon and rectum is surgery. For cancers that have not spread, surgery alone may cure your cancer.

- Depending on the location and stage of your cancer, your doctor may recommend chemotherapy and/or radiation therapy either before or after surgery.
- For rectal cancer, radiation is usually given with chemotherapy. It can be given before surgery (called pre-operative or neoadjuvant therapy) or after surgery (called postoperative or adjuvant therapy). Depending on the location and stage of your tumor, preoperative therapy may allow the surgeon to spare your anal sphincter. This would avoid the need for a permanent colostomy and may reduce the chance of the cancer coming back.

## UNDERSTANDING RADIATION THERAPY

Radiation therapy, sometimes called radiotherapy, is the careful use of radiation to safely and effectively treat cancer.

- Cancer doctors called radiation oncologists use radiation therapy to try to cure cancer, to control cancer growth or to relieve symptoms, such as pain.
- Radiation therapy works within cancer cells by damaging their ability to multiply. When these cells die, the body naturally eliminates them.
- Healthy cells are also affected by radiation, but they are able to repair themselves in a way cancer cells cannot.

After a diagnosis of colorectal cancer has been established, it's important to talk about your treatment options with a radiation oncologist.

## EXTERNAL BEAM RADIATION THERAPY

External beam radiation therapy involves a series of daily outpatient treatments to accurately deliver radiation to the area at risk.

- Before beginning treatment, you will be scheduled for a simulation to map out the area being treated. This will involve having X-rays and/or a CT scan. You will also receive tiny tattoo marks on your skin to help the therapists precisely position you for daily treatment.
- Treatment is given once a day, Monday through Friday, for about six weeks.
- Newer technologies like 3-dimensional conformal radiotherapy (3D-CRT) and intensity modulated radiation therapy (IMRT) are being evaluated for use in treating colorectal cancer. Ask your radiation oncologist for more information on these treatments.

## POSSIBLE SIDE EFFECTS

People with colorectal cancer often get chemotherapy while they are receiving radiation. Side effects during treatment result from both the local effects of radiation to the pelvic area and the systemic effects of chemotherapy throughout the body.

- Possible side effects from radiation include more frequent bowel movements, diarrhea, abdominal cramping, pressure or discomfort in the rectal area, urinating more often, burning with urination, skin irritation, nausea and fatigue. These are usually temporary and resolve after your treatment ends.
- Chemotherapy side effects will depend on the specific drug you receive.
- Side effects are not the same for all patients. Ask your doctor what you can expect from your specific treatment.
- Many of these side effects can be well controlled with medications and changes to your diet. Tell your doctor or nurse if you experience any discomfort so it can be treated.