Anal Cancer Treatment

Anal cancer overview

Anal cancer is a cancer that begins in the anus (http://www.radiologyinfo.org) , the opening at the end of the gastrointestinal (http://www.radiologyinfo.org) tract through which stool, or solid waste, leaves the body. The anus begins at the bottom of the rectum (http://www.radiologyinfo.org) , which is the last part of the large intestine (http://www.radiologyinfo.org) (also called the colon (http://www.radiologyinfo.org)).

Anal cancer usually affects adults over age 60 and women more often than men.

What are my treatment options?

Treatment options overview

Anal cancer is highly treatable when found early. Treatment options depend on the:

- type of cancer cell present
- stage of the cancer
- tumor location
- patient's human immunodeficiency virus (HIV) (http://www.radiologyinfo.org) status
- recurrence of the cancer following treatment
- patient's preference and overall health

There are three types of standard treatment for anal cancer:

- **Radiation therapy**—a cancer treatment that uses high-energy x-rays or other types of radiation to kill cancer cells. The type of radiation therapy used to treat anal cancer is:
  - external beam therapy (https://www.radiologyinfo.org/en/info/ebt) , in which high-energy x-ray beams generated by a machine are directed at the tumor from outside the body (usually by a linear accelerator) and targeted at the tumor site. These x-rays can destroy the cancer cells and careful treatment planning allows the surrounding normal tissues to be spared. No radioactive sources are placed inside the patient's body.
- **Chemotherapy**—a cancer treatment that uses chemical substances or drugs to kill cancer cells or stop them from dividing.
- **Surgery**—surgical treatments for anal cancer include:
  - local resection, in which a small tumor in the lower part of the anus and some of the healthy tissue surrounding it are surgically removed.
  - abdominoperineal resection (http://www.radiologyinfo.org) , in which cancer cells in the anus, rectum and part of the large intestine are removed through an incision made in the abdomen. Lymph nodes that contain cancer may also be removed.

How can I choose from among the options?

The team of physicians responsible for your care will provide you with information specific to your care. Your physicians will recommend the appropriate treatment and discuss your options with you. Patients undergo a specific therapy because a cancer specialist, after analyzing all available data and the condition of the patient, has recommended it as the best way to treat the cancer.

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Generally, however, the majority of patients treated for anal cancer will be recommended a combination of radiation therapy and chemotherapy administered at the same time.

If you are to undergo radiation therapy, a radiation oncologist will determine how much radiation is needed, to which areas of the body it should be delivered, and how many doses of radiation will be necessary.

If I receive radiation therapy, will surgery still be required?

The team of physicians responsible for your care will decide whether surgery would be recommended after completion of a course of radiation therapy. If surgery is recommended, the procedure performed is typically an abdominoperineal resection. Surgery is often recommended if your cancer does not completely respond to radiation therapy or if the cancer recurs in the anal canal after an initial period of treatment response.

How effective is modern radiation treatment of anal cancer?

Anal cancer is generally responsive to radiation therapy. Chemotherapy further improves upon the efficacy of radiation therapy. Recent improvements in radiation therapy also allow for improved sparing of normal tissues. Ultimately, however, the effectiveness of treatment is dependent on the stage of the cancer and your cancer's specific response to treatment.

What happens during radiation therapy?

Radiation therapy uses high energy x-rays (photons) or a stream of particles. When radiation is used at high doses—much higher than the amount used to obtain x-ray images—it can destroy abnormal cells that cause cancer. It does this by damaging the cell's DNA (http://www.radiologyinfo.org) , which eventually causes the cell to die.

Because of the importance of treating the cancer but sparing healthy tissue, you will visit the medical center before actual therapy for treatment planning (http://www.radiologyinfo.org) and simulation (http://www.radiologyinfo.org) . Correct patient positions for radiation exposure are determined for accurate, effective therapeutic results. Your skin may be marked with permanent ink. Custom-made lead shields may be constructed to protect your healthy organs from the radiation, or the radiation fields may be shaped for your situation with special blocks inside the radiation machine. CT or MRI scans may be used to better represent the tumor and the sensitive normal tissues for treatment planning.

External beam therapy (EBT) with high energy x-rays is often delivered from a machine called a linear accelerator (https://www.radiologyinfo.org/en/info/linac) . Patients undergo EBT during a series of outpatient treatments over several weeks. The patient's diagnosis determines the total duration of treatment. Each treatment session lasts less than an hour, most of which is spent positioning the patient.

What are possible side effects of radiation therapy?

Side effects of radiation treatment include problems that occur as a result of the treatment itself as well as from radiation damage to healthy cells in the treatment area.

The number and severity of side effects you may experience will depend on the type of radiation and dosage you receive and the part of your body being treated. You should talk to your doctor and nurse about any side effects you experience so they can help you manage them.

Radiation therapy can cause early and late side effects. Early side effects occur during or immediately after treatment and are typically gone within a few weeks. Common early side effects of radiation therapy include tiredness or fatigue and skin problems. Skin in the treatment area may become more sensitive, red, irritated, or swollen. Other skin changes include dryness, itching, peeling and blistering.

Depending on the area being treated, other early side effects may include:

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- temporary anal irritation and pain
- discomfort during bowel movements
- fatigue
- diarrhea
- nausea and vomiting
- in women, irritation to the vagina, including discomfort and drainage.

Late side effects, which are rare, occur months or years following treatment and are often permanent. They include:

- damage to anal tissue and the formation of scar tissue
- changes to the anal sphincter
- risk of fractures in the pelvis or hip
- damage to the blood vessels in the lining of the rectum, causing inflammation, rectal bleeding and pain
- infertility
- vaginal dryness and the formation of scar tissue in the vagina
- abnormal swelling in the legs, called lymphedema.

There is a slight risk of developing cancer from radiation therapy. Following radiation treatment for cancer, you should be checked on a regular basis by your radiation oncologist for recurring and new cancers.

What kind of treatment follow-up should I expect?

After your treatment has ended, your physician will want to watch you closely for a recurrence of cancer and to monitor your treatment-related side effects. Follow-up appointments, which may be scheduled every three months for two years, may include:

- a physical examination, including a rectal exam, and questions about any problems or symptoms you are experiencing
- blood tests
- imaging tests, such as x-rays (http://www.radiologyinfo.org) or a computed tomography (CT) scan

Are there any new developments in treating my disease?

New treatments for anal cancer are being studied, including:

- radiosensitizing agents, chemotherapy and other drugs that make cancer cells more sensitive to radiation therapy, thus increasing its effect. The use of radiosensitizing agents may allow patients to receive lower doses of radiation and chemotherapy or lessen treatment side effects
- combinations of external beam radiation and brachytherapy
- the addition of monoclonal antibody therapy (http://www.radiologyinfo.org) to chemotherapy
- the use of human papilloma virus (HPV) (http://www.radiologyinfo.org) vaccines to help the body's immune system attack pre-cancers and HPV-cancers

Additional research is focused on learning how HPV, a major factor in the development of anal cancer, causes anal cells to become cancerous. Scientists are also studying the value of screening tests for anal cancer, especially in people who are at risk for the disease.

Clinical Trials

For information and resources about clinical trials and to learn about current clinical trials being conducted, visit:

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- Clinical Trials (https://www.cancer.gov/pediatric-adult-rare-tumor/participate/featured-clinical-trials) - from the National Cancer Institute's Web site:

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