Anal Cancer



Anal cancer, also known as anal carcinoma, is cancer of the anus. To help diagnose this condition, your doctor will perform a digital rectal exam and anoscopy. Your doctor may also order an MRI, CT, PET/CT, or an endoanal ultrasound.

Depending on the size, location, and extent of the cancer, treatments may include surgery, radiation therapy and chemotherapy.

What is anal cancer?

Anal cancer is a cancer that begins in the anus (http://www.radiologyinfo.org) , the opening at the end of the gastrointestinal tract (http://www.radiologyinfo.org) . 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. It affects women more often than men.

Anal cancer symptoms may include changes in bowel habits and changes in and around the anal area, including:

- bleeding and itching
- pain or pressure
- unusual discharge
- a lump or mass
- fecal incontinence
- fistulae.

Some patients with anal cancers do not experience any symptoms. Some non-cancerous conditions, such as hemorrhoids and fissures (http://www.radiologyinfo.org) , may cause similar symptoms.

How is anal cancer diagnosed and evaluated?

To diagnose the cause of symptoms, your doctor may perform:

Digital Rectal Exam (DRE): (http://www.radiologyinfo.org) This test examines the lower rectum and the prostate gland (http://www.radiologyinfo.org) in males to check for abnormalities in size, shape, or texture. The term "digital" refers to the doctor's use of a gloved, lubricated finger to perform the exam. A DRE examines the anal lesion or abnormality and adjacent lymph nodes. In women, the doctor may also perform a vaginal exam to determine the site and size of the lesion, involvement of the vagina, and presence of a fistula (http://www.radiologyinfo.org) .

Anoscopy: This procedure uses a special camera at the end of a tube that allows the doctor to see inside the anus and rectum. It also allows them to perform a biopsy of the anal lesion and determine anatomical relations to surrounding structures for accurate clinical staging. If the area is painful, this exam may use anesthesia or sedation.

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Magnetic Resonance Imaging (MRI) of the Pelvis: (https://www.radiologyinfo.org/en/info/mri-abdomen-pelvis) MRI uses a magnetic field and radiofrequency pulses to produce detailed pictures of the internal organs. It helps determine tumor size, lymph node involvement, and invasion of adjacent organs. MRI does not use radiation.

Endoanal ultrasound: This imaging procedure uses high frequency sound waves generated from a device inserted into the anus and rectum. The sound waves produce images that help evaluate the structure of the sphincter and the thickness of the muscles surrounding the anal canal. Doctors also use this test to identify a tear in the sphincter muscles and to evaluate a tumor's size and the depth of invasion.

Computed Tomography (CT) of the Abdomen and Pelvis: (https://www.radiologyinfo.org/en/info/abdominct) CT uses x-rays to determine the amount of cancer spread and to create pictures of the chest, abdomen, and pelvis.

PET/CT: (https://www.radiologyinfo.org/en/info/pet) Positron emission tomography (PET) is a type of nuclear medicine scan that uses a small amount of radioactive material to image body functions. A PET/CT exam combines images from PET and CT scans to detect cancer and determine the amount of cancer spread.

How is anal cancer treated?

Anal cancer is curable 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.

The primary goal of treatment is to cure the disease and preserve anal function with the best possible quality of life. Treatments differ depending on whether the tumor involves the anal canal or anal margin.

Anal canal

There are two types of standard treatment for anal cancer of the anal canal: radiation therapy and chemotherapy.

Radiation therapy (https://www.radiologyinfo.org/en/info/intro_onco) uses high-energy x-rays or other types of radiation to kill cancer cells.

Two types of radiation therapy are used to treat anal cancer:

- *external beam therapy (https://www.radiologyinfo.org/en/info/ebt)* generates high-energy x-ray beams by a machine and directs them at the tumor from outside the body.
- internal radiation (http://www.radiologyinfo.org) , also called brachytherapy (https://www.radiologyinfo.org/en/info/brachy) , places radioactive material (http://www.radiologyinfo.org) directly into or near to the tumor.

Chemotherapy (http://www.radiologyinfo.org) uses chemical substances or drugs to kill cancer cells or stop them from dividing. Patients receive chemotherapy over time, alternating with periods of no treatment. Side effects, such as abnormal blood-cell counts, fatigue, diarrhea, mouth sores, and a compromised immune system may occur.

Surgery is typically not an initial standard treatment because it would result in removal of the anal sphincter and a permanent colostomy. A colostomy attaches the end of the intestine to an opening on the surface of the abdomen. A disposable bag attached to this opening outside the body collects body waste.

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Your doctor may perform an abdominoperineal resection if the tumor does not respond to chemoradiation therapy or if the anal sphincter does not work well. This surgical procedure removes the anus, rectum, and part of the large intestine through an incision made in the abdomen. It may also remove lymph nodes that contain cancer.

Anal margin

Standard treatment for cancer of the anal margin may be a local resection if the tumor is small, does not involve lymph nodes or have distant spread. Chemoradiation may be used as a supplemental treatment if the tumor is close to or involves the surgical margin.

Chemoradiation therapy is a standard treatment for all other types of tumors involving the anal margin. *See the Anal Cancer Treatment page (https://www.radiologyinfo.org/en/info/anal-cancer-therapy) for more information.*

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