Types of Cancer

Anal Cancer

What is anal cancer?

Cancer develops when cells grow out of control. Anal squamous cell carcinoma, which starts in the cells around the anus, is usually caused by human papillomavirus (HPV). When detected early, treatment is generally effective, and many people can be cured, but more advanced disease is harder to treat.

Who gets anal cancer?

Anal cancer is fairly rare, affecting about 10,000 people each year in the United States, according to the American Cancer Society. However, anal cancer rates have been rising for many years.

Anal cancer is typically diagnosed in older adults, and it is rare among people younger than 35. Women are more twice as likely as men to develop anal cancer, but men who have sex with men and those living with HIV are at greater risk.

What are the risk factors for anal cancer?

The biggest risk factor for anal cancer is HPV, the same virus that can cause cancers of the cervix, vagina, penis and some oral cancers. There are more than 100 types of HPV, but only about a dozen types are considered high-risk, or cancer-causing. HPV is commonly spread through sexual contact, but this can also occur through nonsexual skin-to-skin contact.

Anal cancer and other cancers linked to HPV infection can be prevented with vaccines. A vaccine that protects against nine HPV types is recommended for adolescents at ages 11 or 12, and it is approved for women and men up to age 45.

Other risk factors for anal cancer include anal sex, smoking, a weakened immune system and family history of cancer.

What are the symptoms of anal cancer?

The anus, at the end of the long intestine, is part of the body’s digestive system. In some cases, anal cancer does not cause any signs or symptoms during its earliest stages, but symptoms are more likely to occur as abnormal cell growth—known as dysplasia or neoplasia—progresses. These symptoms may include:

- Pain or a feeling on pressure in the anal area

- Itching in the anal area
- Bleeding from the anus
- Discharge of mucus from the anus
- A lump or swelling near the anus
- A change in bowel habits.

How is anal cancer diagnosed?

Early detection and treatment of anal cancer increases the likelihood of long-term survival. Diagnosis starts with a physical exam and health history, which may include questions about symptoms, sexual behavior and family history. The physical exam may include a digital rectal exam, in which a doctor inserts a finger into the anus to feel for lumps or abnormal tissue. The exam may also include a Pap test and HPV test. In a Pap test, a clinician collects a small sample of cells from the anus to examine in a laboratory for abnormal changes.

If a Pap test shows abnormal cell growth, a detailed examination of the anus and rectum may be done using a lighted magnifying device called an anoscope to look for abnormal cell growth that could progress to cancer. A biopsy, or small tissue sample, may be taken for further laboratory examination. If cancer is more advanced, imaging tests including X-rays, computed tomography (CT), positron emission tomography (PET) or MRI scans may be done to see how much it has spread.

How is anal cancer treated?

Treatment for anal cancer depends on how advanced the cancer is when it is detected and whether it has spread to nearby lymph nodes and other parts of the body.

Precancer treatment: Areas of abnormal cells (dysplasia or neoplasia) may be cut out or destroyed using lasers, electricity, freezing (cryotherapy) or topical medications before they progress to cancer.

Surgery: Some anal tumors can be surgically removed; this is known as resection. In more advanced cases, parts of the rectum and colon may also be removed.

Radiation therapy: Radiation may be used to kill cancer cells that remain after surgery or to shrink tumors that cannot be surgically removed.

Chemotherapy: Traditional chemotherapy works by killing fast-growing cells, including cancer cells. It can also destroy rapidly dividing healthy cells, leading to side effects such as nausea and hair loss.

Chemoradiation: This type of treatment combines chemotherapy and radiation at the same time. This is the main treatment for anal cancer. The procedure may include radiosensitizers, or drugs that make cancer cells more sensitive to radiation.

Targeted therapy: Targeted drugs work against cancers with specific characteristics. For example, they may interfere with signaling pathways that regulate cell growth. Targeted treatment is often better tolerated than chemotherapy, but cancer may develop resistance over time.

Immunotherapy: Immunotherapy helps the immune system fight cancer. For example, some tumors can turn off immune responses against them, and drugs known as checkpoint inhibitors can restore T cells' ability to recognize and destroy cancer cells.

For more information on anal cancer, see the following resources:

American Cancer Society

National Cancer Institute

Last Reviewed: January 28, 2023

© 2026 Smart + Strong All Rights Reserved.