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About Anal Cancer

Overview and Types

If you've been diagnosed with anal cancer or are worried about it, you likely have a lot of questions. Learning some basics is a good place to start.

- [What Is Anal Cancer?](#)

Research and Statistics

See the latest estimates for new cases of anal cancer and deaths in the US and what research is currently being done.

- [Key Statistics for Anal Cancer](#)
 - [What's New in Anal Cancer Research?](#)
-

What Is Anal Cancer?

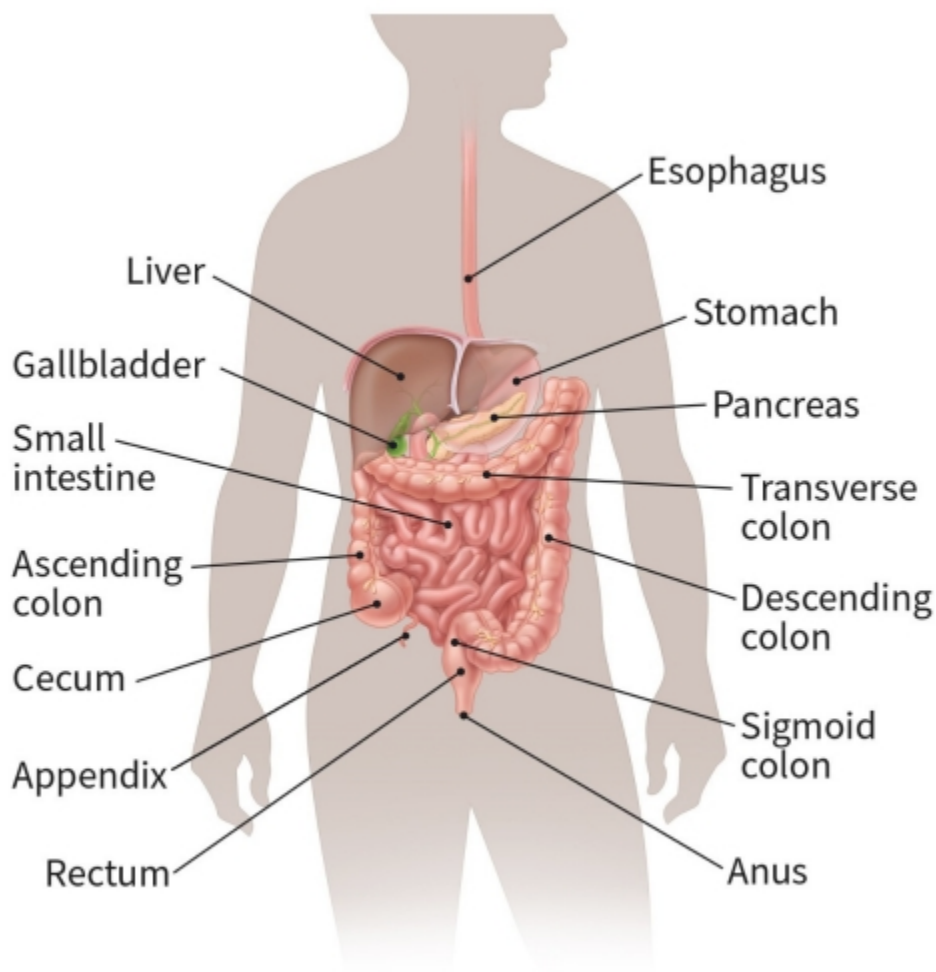
Cancer starts when cells in the body begin to grow out of control. Cells in nearly any part of the body can become cancer, and can spread to other parts of the body. To learn more about how cancers start and spread, see [What Is Cancer?](#)¹

Anal cancer starts in the anus. To understand anal cancer, it helps to know about the anus and how it works.

The anus

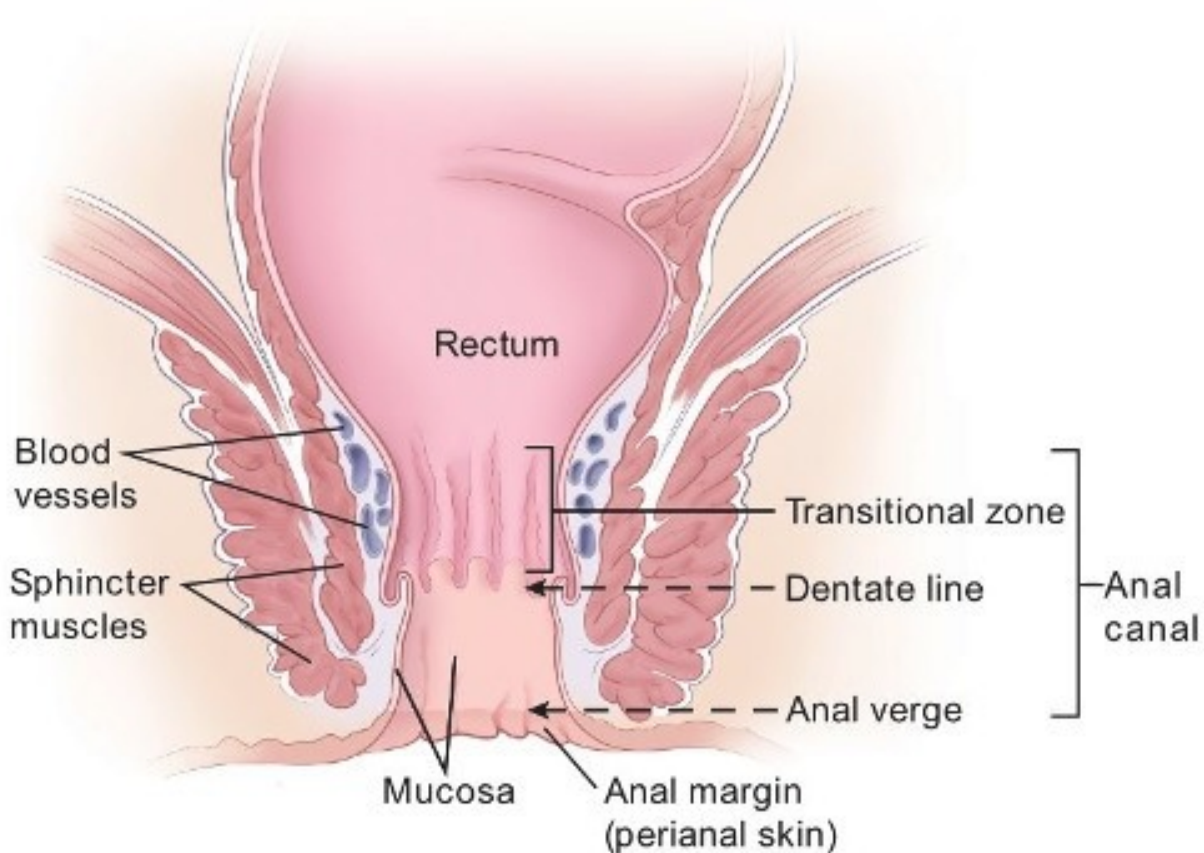
The anus is the opening at the lower end of the intestines. It's where the end of the intestines connect to the outside of the body.

As food is digested, it passes from the stomach to the small intestine. It then moves from the small intestine into the main part of the large intestine (called the *colon*). The colon absorbs water and salt from the digested food. The waste matter that's left after going through the colon is known as *feces* or *stool*. Stool is stored in the last part of the large intestine, called the *rectum*. From there, stool is passed out of the body through the anus as a bowel movement. The anal sphincter (SFINK-ter) muscles control the passing of stool. These are ring-shaped muscles around the anus that keep stool from coming out until they are relaxed during a bowel movement.



The anal opening is connected to the rectum by the *anal canal*. The anal canal is about

1-1/2 inches long. It goes from the rectum to the *anal verge*. This is where the canal connects to the outside skin at the anus.



The inner lining of the anal canal is the *mucosa*. Most anal cancers start from cells in the mucosa.

Glands and ducts (tubes leading from the glands) are found under the mucosa. The glands make mucus, which acts as a lubricating fluid. Anal cancers that start from cells in the glands are called *adenocarcinomas*.

The anal canal changes as it goes from the rectum to the anal verge:

- Cells above the anal canal (in the rectum) and in the part of the anal canal close to the rectum are shaped like tiny columns.
- Most cells near the middle of the anal canal are shaped like cubes and are called *transitional cells*. This area is called the *transitional zone*.
- About midway down the anal canal is the *dentate line*, which is where most of the anal glands empty into the anus.

- Below the dentate line are flat (squamous) cells.
- At the anal verge, the squamous cells of the lower anal canal merge with the skin just outside the anus. This skin around the anal verge (called the *perianal skin* or the *anal margin*) is also made up of squamous cells, but it also contains sweat glands and hair follicles, which are not found in the lining of the lower anal canal.

Anal cancers are often divided into 2 groups, which are sometimes treated differently:

- Cancers of the anal canal (above the anal verge)
- Cancers of the anal margin (below the anal verge)

Sometimes anal cancers extend from one area into the other, so it's hard to know exactly where they started.

The anal canal is surrounded by 2 sphincter muscles that keep the anus closed and prevent stool leakage.

Anal tumors

Many types of tumors can develop in the anus. Not all of these tumors are cancers – some are *benign* (not cancer).

Polyps

Polyps are small, bumpy, or mushroom-like growths that form in the mucosa or just under it. There are many kinds.

- **Inflammatory polyps** start because of irritation from injury or infection.
- **Lymphoid polyps** are caused by an overgrowth of lymph tissue (which is part of the immune system). Lymph tissue under the anal inner lining (mucosa) is normal, but these overgrowths are not.
- **Hypertrophied anal papillae** are benign growths of connective tissue that are covered by squamous cells. They are simply enlarged normal papillae, which are small folds of mucosa found at the dentate line. Hypertrophied anal papillae are also called *fibroepithelial polyps*.

Skin tags

Skin tags are benign growths of connective tissue that are covered by squamous cells. Skin tags are often mistaken for hemorrhoids (swollen veins inside the anus or rectum), but they're not the same.

Anal warts

Anal warts (also called *condylomas*) are growths that form just outside the anus and in the lower anal canal below the dentate line. Sometimes they can be found just above the dentate line. They're caused by infection with [human papilloma virus²](#) (HPV). People who have or had anal warts are more likely to get anal cancer. (See “Potentially pre-cancerous anal conditions” below and [Risk Factors for Anal cancer³](#))

Other benign tumors

In rare cases, benign tumors can grow in other tissues of the anus. These include:

- **Adnexal tumors:** Usually benign growths that start in hair follicles or sweat glands of the skin just outside of the anus. These tumors stay in the perianal skin area and do not grow into the anal region.
- **Leiomyomas:** Benign tumors that develop from smooth muscle cells
- **Granular cell tumors:** Tumors that develop from nerve cells and are composed of cells that contain lots of tiny spots (granules)
- **Hemangiomas:** Tumors that start in the cells lining blood vessels
- **Lipomas:** Benign tumors that start from fat cells
- **Schwannomas:** Tumors that develop from cells that cover nerves

Potentially pre-cancerous anal conditions

Some changes in the anal mucosa are harmless at first, but might later develop into a cancer. These are called *pre-cancerous* conditions. A common term for these potentially pre-cancerous conditions is *dysplasia*. Some warts, for example, contain areas of dysplasia that can develop into cancer.

Dysplasia in cells of the anus is also called *anal intraepithelial neoplasia* (AIN) or *anal squamous intraepithelial lesions* (SILs). Depending on how the cells look, AIN or anal SIL can be divided into 2 groups:

Low-grade AIN (sometimes called AIN1 or low-grade anal SIL)

The cells in low-grade AIN look like normal cells in many ways.

Low-grade AIN often goes away without treatment. It has a low chance of turning into cancer.

High-grade AIN (sometimes called AIN2 or AIN3, or high-grade anal SIL)

The cells in high-grade AIN look much more abnormal.

High-grade AIN is less likely to go away without treatment and, with time, could become cancer. It needs to be watched closely. Some cases of high-grade AIN need to be treated.

Types of anal cancer

Carcinoma in situ

Sometimes abnormal cells on the inner surface layer of the anus look like cancer cells but have not grown into any of the deeper layers. This is known as *carcinoma in situ*, (pronounced in SY-too), or *CIS*. Another name for this is *Bowen disease*.

Some doctors see this as the earliest form of anal cancer. Others consider it the most advanced type of AIN, which is a pre-cancer (see above), but not a true cancer.

Invasive anal cancers

These are the different types of cancer that can start in the anal region:

Squamous cell carcinomas

Most anal cancers in the United States are squamous cell carcinomas. (Nearly 9 out of 10 cases.) These tumors start in the squamous cells that line most of the anal canal and the anal margin.

Squamous cell carcinomas in the anal canal have grown beyond the surface and into the deeper layers of the lining (as opposed to carcinoma in situ which is only in the surface cells).

Cloacogenic carcinomas (also called *basaloid* or *transitional cell carcinomas*) are a type of squamous cell cancer. They develop in the transitional zone, also called the *cloaca*. These cancers look slightly different under a microscope, but they behave and are treated like other squamous cell carcinomas of the anal canal.

Squamous cell carcinomas of the anal margin (perianal skin) are treated much like squamous cell carcinomas of the skin elsewhere. For more on this, see [Skin Cancer: Basal and Squamous Cell](#)⁴.

Adenocarcinomas

A small number of anal cancers are known as *adenocarcinomas*. These start in cells that line the upper part of the anus near the rectum. They can also start in the glands under the anal mucosa that release secretions into the anal canal. Most anal adenocarcinomas are treated the same as rectal carcinomas. For more information, see [Colorectal Cancer](#)⁵.

Adenocarcinomas can also start in apocrine glands (a type of sweat gland of the perianal skin). *Paget's disease* is a type of apocrine gland carcinoma that spreads through the surface layer of the skin. Paget's disease can affect skin anywhere in the body but most often affects skin of the perianal area, [vulva](#)⁶, or [breast](#)⁷. This should not be confused with Paget's disease of the bone, which is not cancer and a different disease.

Basal cell carcinomas

Basal cell carcinomas are a type of skin cancer that can develop in the perianal skin. These tumors are much more common in areas of skin exposed to the sun, such as the face and hands, and account for very few anal cancers. They are often treated with surgery to remove the cancer. For more information, see [Skin Cancer: Basal and Squamous Cell](#)⁸.

Melanomas

These cancers start in cells in the skin or anal lining that make the brown pigment called *melanin*. Only a very small portion of anal cancers are melanomas. Melanomas are far more common on the skin in other parts of the body. If melanomas are found at an early stage (before they have grown deeply into the skin or spread to lymph nodes) they can be removed with surgery, and the outlook for long-term survival is very good. But because anal melanomas are hard to see, most are found at a later stage. If possible, the entire tumor is removed with surgery. If all of the tumor can be removed, a cure is

possible. If the melanoma has spread too far to be removed completely, other treatments may be given. For more on this, see [Melanoma Skin Cancer](#)⁹.

Gastrointestinal stromal tumors (GISTs)

These cancers are much more common in the stomach or small intestine, but rarely they can start in the anal region. When these tumors are found at an early stage, they are removed with surgery. If they have spread beyond the anus, they can be treated with drug therapy. For more information, see [Gastrointestinal Stromal Tumor \(GIST\)](#)¹⁰.

The anal cancer information on our web site focuses mainly on anal squamous cell carcinoma, which is, by far, the most common type of anal cancer.

Hyperlinks

1. www.cancer.org/cancer/cancer-basics/what-is-cancer.html
2. www.cancer.org/cancer/cancer-causes/infectious-agents/hpv.html
3. www.cancer.org/cancer/anal-cancer/causes-risks-prevention/risk-factors.html
4. www.cancer.org/cancer/basal-and-squamous-cell-skin-cancer.html
5. www.cancer.org/cancer/colon-rectal-cancer.html
6. www.cancer.org/cancer/vulvar-cancer/about/what-is-vulvar-cancer.html
7. www.cancer.org/cancer/breast-cancer/understanding-a-breast-cancer-diagnosis/types-of-breast-cancer/paget-disease-of-the-nipple.html
8. www.cancer.org/cancer/basal-and-squamous-cell-skin-cancer.html
9. www.cancer.org/cancer/melanoma-skin-cancer.html
10. www.cancer.org/cancer/gastrointestinal-stromal-tumor.html

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See all references for Anal Cancer (www.cancer.org/cancer/anal-cancer/references.html)

Last Medical Review: November 13, 2017 Last Revised: November 13, 2017

Key Statistics for Anal Cancer

Anal cancer is fairly rare – much less common than cancer of the colon or rectum. The American Cancer Society estimates for anal cancer in the United States for 2019 are:

- About 8,300 new cases (5,530 in women and 2,770 in men)
- About 1,280 deaths (760 in women and 520 in men)

The number of new anal cancer cases has been rising for many years. Anal cancer is rare in people younger than 35 and is found mainly in older adults, with an average age being in the early 60s.

The risk of being diagnosed with anal cancer during one's lifetime is about 1 in 500. The risk is slightly higher in women than in men. The risk is also higher in people with certain [risk factors](#)¹ for anal cancer.

Treatment for anal cancer is often very effective, and many patients with this cancer can be cured. But anal cancer can be a serious condition. For information on survival, see [Survival Rates by Stage of Anal Cancer](#)².

Visit the American Cancer Society's [Cancer Statistics Center](#)³ for more key statistics

Hyperlinks

1. www.cancer.org/cancer/anal-cancer/causes-risks-prevention/risk-factors.html
2. www.cancer.org/cancer/anal-cancer/detection-diagnosis-staging/survival-rates.html
3. <https://cancerstatisticscenter.cancer.org/>

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American Cancer Society. *Cancer Facts & Figures 2019*. Atlanta, Ga: American Cancer Society; 2019.

See all references for Anal Cancer (www.cancer.org/cancer/anal-cancer/references.html)

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What's New in Anal Cancer Research?

Important research into anal cancer is now under way in many hospitals, medical centers, and other institutions around the world. Each year, scientists use [clinical trials](#)¹ to find out more about what causes this disease, how to prevent it, and how to better treat it.

Looking at changes in anal cancer cells

We know that [human papillomavirus](#)² (HPV) is a major [cause of anal cancer](#)³. Researchers are now looking at how HPV affects molecules inside anal cells to cause them to become cancer. Improved understanding of the molecular changes inside anal cancer cells may lead to ways to prevent it and is also expected to help scientists find treatments using drugs that target these changes. Targeted drugs are different from standard chemotherapy drugs. They sometimes work when chemo drugs don't, and they often have different (and less severe) side effects.

Screening for anal cancer

Ongoing research is being done on the value of [screening tests](#)⁴ for anal cancer, especially in people with major risk factors, such as [HIV infection](#)⁵. (Screening is checking for a disease in people who don't have symptoms of it.) The test studied most is anal cytology, sometimes called the *anal Pap test*. This test may help find anal cancer when it's small, before it's causing symptoms and when it's easier to treat. Studies are also looking at whether the anal Pap test can help find anal pre-cancer (called *anal intraepithelial neoplasia*, or AIN), so it can be treated before cancer even develops.

Treatment

Better treatments for anal cancer with fewer side effects and long-term changes in body function are areas of active research. For instance, [photodynamic therapy](#)⁶ is being looked at to see if it can help treat small tumors and pre-cancer changes. Drugs like 5-FU and imiquimod cream are also being used. These treatments are focused on the changed cells in the anus. They don't harm healthy cells in the anus or the rest of the body.

[Immunotherapy](#)⁷ is treatment that boosts the body's immune response against cancer cells. Different kinds of immunotherapy are being study for use against anal cancer. Pembrolizumab (Keytruda[®]) is one example that's already used to treat other types of

cancer. It's now being studied for use in treating anal cancers that have spread to other parts of the body and don't respond to other forms of treatment.

Radiation therapy is a common treatment for anal cancer. Doctors are looking at ways to give external radiation more accurately and effectively to decrease the effects on normal healthy tissues. Other research is being done to learn about the possible benefits of combining external radiation and internal radiation therapy to treat anal cancer.

Combining chemotherapy and radiation is another area of interest. Giving these treatments together might allow people to get lower doses of each one, which could lessen side effects. Different drug combinations, with different forms of radiation are being tested in clinical trials.

[HPV vaccines](#)⁸ are used today to prevent HPV infection, but they don't help treat HPV infections. Doctors are looking at whether these vaccines might be used to help treat high-grade pre-cancers and keep them from becoming cancer. Researchers are also working on new vaccines to treat women and men who already have HPV infections and [HPV-related cancers](#)⁹ like anal cancer or cervical cancer. These vaccines may help the immune system attack pre-cancers and even cancers that contain HPV.

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/clinical-trials.html
2. www.cancer.org/cancer/cancer-causes/infectious-agents/hpv.html
3. www.cancer.org/cancer/anal-cancer/causes-risks-prevention/what-causes.html
4. www.cancer.org/healthy/find-cancer-early/cancer-screening-guidelines.html
5. www.cancer.org/cancer/cancer-causes/infectious-agents/hiv-infection-aids.html
6. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/photodynamic-therapy.html
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[cancer/references.html](#))

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Our team is made up of doctors and oncology certified nurses with deep knowledge of cancer care as well as journalists, editors, and translators with extensive experience in medical writing.

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Anal Cancer Causes, Risk Factors, and Prevention

Risk Factors

A risk factor is anything that affects your chance of getting a disease such as cancer. Learn more about the risk factors for anal cancer.

- [Risk Factors for Anal Cancer](#)
- [What Causes Anal Cancer?](#)

Prevention

There is no way to completely prevent cancer. But there are things you can do that might lower your risk. Learn more.

- [Can Anal Cancer Be Prevented?](#)
-

Risk Factors for Anal Cancer

A risk factor is anything that affects your chance of getting a disease such as cancer. Different cancers have different risk factors. Some risk factors, like smoking or diet, can be changed. Others, like a person's age or family history, can't.

Several factors can affect your risk of anal cancer. But having a risk factor, or even

several risk factors, does not mean that you will get cancer. Many people with risk factors never develop anal cancer, while others with this disease may have few or no known risk factors.

Human papillomavirus (HPV) infection

Most squamous cell anal cancers are linked to infection with the human papillomavirus (HPV), the same virus that causes [cervical cancer](#),¹ as well as many [other kinds of cancer](#)². In fact, women with a history of cervical cancer (or pre-cancer) have an increased risk of anal cancer.

HPV is a group of more than 150 related viruses. They are called papillomaviruses because some of them cause papillomas, which are more commonly known as warts. There are many subtypes of HPV, but the one most likely to cause anal cancer is HPV-16. Other subtypes of HPV can cause warts in the genital and anal areas, but not cancer. The 2 types of HPV that cause most cases of anal and genital warts are HPV-6 and HPV-11. **While anal warts themselves are unlikely to develop into anal cancer, people who have had anal warts are more likely to get anal cancer.** This is because people who are infected with HPV subtypes that cause anal and genital warts are also more likely to be infected HPV subtypes that cause anal cancer.

HPV is passed from one person to another during skin-to-skin contact with an infected area of the body. HPV can be spread during sexual activity – including vaginal, anal, and oral sex – but sex doesn't have to occur for the infection to spread. All that's needed is for there to be skin-to-skin contact with an area of the body infected with HPV. The virus can be spread through genital-to-genital contact, or even hand-to-genital contact. An HPV infection can also spread from one part of the body to another. For example, an HPV infection might start in the genitals and then spread to the anus.

It can be very hard to avoid being exposed to HPV. It might be possible to prevent genital HPV infection by not allowing others to have contact with your anal or genital area, but even then there could be other ways to become infected that aren't yet clear.

Infection with HPV is common, and in most cases the body can clear the infection on its own. But in some people the infection doesn't go away and becomes chronic. Chronic infection, especially with high-risk HPV types, can cause certain cancers over time, including anal cancer.

For more information, see [HPV](#)³ and [HPV Vaccines](#)⁴.

Having certain other cancers

Women who have had cancer of the [cervix](#)⁵, [vagina](#)⁶, or [vulva](#)⁷ are at increased risk of anal cancer. This is probably because these cancers are also caused by infection with HPV.

In men, it would seem likely that having had [penile cancer](#)⁸, which is also linked to HPV infection, would increase the risk of anal cancer, but this link has not been shown in studies.

HIV infection

People infected with the human immunodeficiency virus (HIV), the virus that causes AIDS, are much more likely to get anal cancer than those not infected with this virus. For more information about HIV and AIDS, see [HIV Infection, AIDS, and Cancer](#)⁹.

Sexual activity

Having multiple sex partners increases the risk of infection with HIV and HPV. It also increases the risk of anal cancer.

Receptive anal sex also increases the risk of anal cancer in both men and women. Because of this, men who have sex with men have a high risk of this cancer.

Smoking

Smoking increases the risk of anal cancer. Current smokers are several times more likely to have cancer of the anus compared with people who do not smoke. [Quitting smoking](#)¹⁰ seems to reduce the risk. People who used to smoke but have quit are only slightly more likely to develop this cancer compared with people who never smoked.

Lowered immunity

Higher rates of anal cancer occur among people with reduced immunity, such as people with AIDS or people who have had an organ transplant and must take medicines that suppress their immune system.

Gender and race/ethnicity

Anal cancer is more common in women than men overall, but this varies in racial/ethnic groups and can vary with age. For instance, in African Americans younger than age 60,

it's more common in men than in women, but after age 60 it's more common in women.

Hyperlinks

1. www.cancer.org/cancer/cervical-cancer.html
2. www.cancer.org/cancer/cancer-causes/infectious-agents/hpv/hpv-and-cancer-info.html
3. www.cancer.org/cancer/cancer-causes/infectious-agents/hpv.html
4. www.cancer.org/cancer/cancer-causes/infectious-agents/hpv/hpv-vaccines.html
5. www.cancer.org/cancer/cervical-cancer.html
6. www.cancer.org/cancer/vaginal-cancer.html
7. www.cancer.org/cancer/vulvar-cancer.html
8. www.cancer.org/cancer/penile-cancer.html
9. www.cancer.org/cancer/cancer-causes/infectious-agents/hiv-infection-aids.html
10. www.cancer.org/healthy/stay-away-from-tobacco/guide-quitting-smoking.html

References

See all references for Anal Cancer (www.cancer.org/cancer/anal-cancer/references.html)

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What Causes Anal Cancer?

Researchers have found some [risk factors](#) that increase a person's risk of anal cancer, but the exact cause of anal cancer is not known.

HPV infection

Most anal cancers seem to be linked to infection with the [human papillomavirus¹](#) (HPV). While HPV infection seems to be important in the development of anal cancer, the vast majority of people with HPV infections *do not* get anal cancer.

A great deal of research is now being done to learn how HPV might cause anal cancer. There is good evidence that HPV causes many anal squamous cell carcinomas. But the role of this virus in causing anal adenocarcinomas is less certain.

More than 150 subtypes of HPV have been found. The subtype known as HPV-16 is often found in squamous cell carcinoma and is also found in some anal warts. Another subtype, HPV-18, is found less often. Most anal warts are caused by HPV-6 and HPV-11. Warts containing HPV-6 or HPV-11 are much less likely to become cancerous than those containing HPV-16.

HPV makes proteins (E6 and E7) that can shut down 2 important tumor suppressor proteins in normal cells. These proteins – p53 and Rb – normally work to keep cells from growing out of control. When these proteins are not active, cells are more likely to become cancerous.

Lowered immunity

When the body is less able to fight off infections, viruses like HPV can become more active, which might trigger the development of anal cancer. HIV, the virus that causes AIDS, weakens the body's immune system, as can medicines used to prevent rejection in patients with organ transplants.

Smoking

Most people know that [smoking](#)² is the main cause of lung cancer. But few realize that the cancer-causing chemicals in tobacco smoke can travel from the lungs to the rest of the body, causing other types of cancer. Smoking also seems to make the immune system less effective in fighting HPV infections. Many studies have noted an increased rate of anal cancer in smokers, and the effect of smoking is especially important in people with other risk factors for anal cancer.

It's important to remember that some people with anal cancers do not have any known risk factors and the causes of their cancers are not known.

Hyperlinks

1. www.cancer.org/cancer/cancer-causes/infectious-agents/hpv.html
2. www.cancer.org/cancer/cancer-causes/tobacco-and-cancer/health-risks-of-smoking-tobacco.html

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See all references for Anal Cancer (www.cancer.org/cancer/anal-cancer/references.html)

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Can Anal Cancer Be Prevented?

Since the cause of many cases of anal cancer is unknown, it's not possible to prevent this disease completely. But there are things you can do that might lower your risk of anal cancer.

Infection with [HPV¹](#) increases the risk of anal cancer. HPV infection can be present for years without causing any symptoms, so the absence of visible warts can't be used to tell if someone has HPV. Even when someone doesn't have warts (or any other symptom), he (or she) can still be infected with HPV and pass it on to somebody else.

HPV vaccines

Vaccines are available that protect against certain HPV infections. They protect against infection with HPV subtypes 16 and 18. Some can also protect against infections with other HPV subtypes, including some types that cause anal and genital warts.

These vaccines can only be used to help prevent HPV infection – they do not help treat an existing infection. To work best, the vaccine should be given before a person becomes sexually active.

Condom use

Condoms may provide some protection against HPV (and HIV), but they don't prevent infection completely.

One study found that when condoms are used correctly they can lower the genital HPV infection rate in women – but they must be used every time sex occurs. This study did not look at the effect of condom use on anal HPV infection.

Condoms can't protect completely because they don't cover every possible HPV-infected area of the body, such as skin of the genital or anal area. HPV can still be passed from one person to another by skin to skin contact with an HPV-infected area of the body that is not covered by a condom. Still, condoms may provide some protection against HPV. Male condom use also seems to help genital HPV infections clear (go away) faster in both women and men.

Condom use is also important because it can help protect against AIDS and other sexually transmitted illnesses that can be passed on through some body fluids.

To learn more, see [HPV Vaccines²](#).

Treating HIV

For people infected with [HIV³](#), it's very important to take medicines (known as *highly active antiretroviral therapy*, or *HAART*) to help keep the infection under control and prevent it from progressing to AIDS. This also lowers the risk of long-term HPV infection and anal intraepithelial neoplasia (a kind of anal pre-cancer), which might help lower the risk of anal cancer.

Not smoking

Smoking is a known risk factor for anal cancer. [Stopping smoking⁴](#) greatly reduces the risk of developing anal cancer and many other cancers.

Hyperlinks

1. www.cancer.org/cancer/cancer-causes/infectious-agents/hpv/hpv-and-hpv-testing.html
2. www.cancer.org/cancer/cancer-causes/infectious-agents/hpv/hpv-vaccines.html
3. www.cancer.org/cancer/cancer-causes/infectious-agents/hiv-infection-aids.html
4. www.cancer.org/healthy/stay-away-from-tobacco/guide-quitting-smoking.html

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Anal Cancer Early Detection, Diagnosis, and Staging

Detection and Diagnosis

Finding cancer early often allows for more treatment options. Some early cancers may cause signs and symptoms that can be noticed, but that's not always the case.

- [Can Anal Cancer Be Found Early?](#)
- [Signs and Symptoms of Anal Cancer](#)
- [Tests for Anal Cancer](#)

Staging

After a cancer diagnosis, staging provides important information about the extent of cancer in the body and anticipated response to treatment.

- [Anal Cancer Stages](#)
- [Anal Cancer Survival Rates](#)

Questions to Ask About Anal Cancer

Here are some questions you can ask your cancer care team to help you better understand your cancer diagnosis and treatment options.

- [Questions to Ask Your Doctor About Anal Cancer](#)

Can Anal Cancer Be Found Early?

Many anal cancers can be found early in the course of the disease. Early anal cancers often have [signs and symptoms](#) that lead people to see a doctor. Unfortunately, some anal cancers may not cause symptoms until they reach an advanced stage. Other anal cancers can cause symptoms like those of diseases other than cancer. This may delay their diagnosis.

Anal cancers develop in a part of the digestive tract that your doctor can easily see and reach. A digital rectal exam (DRE) can find some cases of anal cancer early. In this exam, the doctor inserts a gloved, lubricated finger into the anus to feel for unusual lumps or growths. This test is sometimes used to look for prostate cancer in men (because the prostate gland can be felt through the rectum). The rectal exam is also done routinely as part of a pelvic exam on women.

The odds that anal cancer can be found early depend on the location and type of the cancer. Cancers that begin higher up in the anal canal are less likely to cause symptoms and be found early. Anal melanomas tend to spread earlier than other cancers, making it harder to diagnose them early.

Screening in people at high risk

Looking for a disease like cancer in someone with no symptoms is called *screening*. The goal of screening is to find cancer at an early stage, when treatment is likely to be most helpful. Anal cancer is not common in the United States, so screening the general public for anal cancer is not widely recommended at this time.

Still, some people at increased risk for [anal intraepithelial neoplasia](#)¹ (AIN, a potentially pre-cancerous condition) and anal cancer might benefit from screening. This includes men who have sex with men (regardless of HIV status), women who have had [cervical cancer](#)² or [vulvar cancer](#)³, anyone who is HIV-positive, and anyone who has received an organ transplant. Some experts also recommend screening for anyone with a history of anal warts.

For these people, some experts recommend screening with regular DREs and anal cytology testing (also known as an *anal Pap test* or *anal Pap smear* because it is much like a Pap test for cervical cancer). For an anal Pap test, the anal lining is swabbed, and cells that come off on the swab are looked at under the microscope.

The anal Pap test has not been studied enough to know how often it should be done, or

if it actually reduces the risk of anal cancer by catching AIN early. Some experts recommend that the test be done every year in men who have sex with men who are HIV-positive, and every 2 to 3 years if the men are HIV-negative. But there is no widespread agreement on the best screening schedule, or even exactly which groups of people can benefit from screening.

Patients with positive results on an anal Pap test should be referred for a biopsy. If AIN is found on the biopsy, it might need to be treated (especially if it is high-grade).

Hyperlinks

1. www.cancer.org/cancer/anal-cancer/about/what-is-anal-cancer.html
2. www.cancer.org/cancer/cervical-cancer.html
3. www.cancer.org/cancer/vulvar-cancer.html

References

See all references for Anal Cancer (www.cancer.org/cancer/anal-cancer/references.html)

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Signs and Symptoms of Anal Cancer

Sometimes anal cancer causes no symptoms at all. But bleeding is often the first sign of the disease. The bleeding is usually minor. At first, most people assume the bleeding is caused by hemorrhoids (painful, swollen veins in the anus and rectum that may bleed). They are a benign and fairly common cause of rectal bleeding.

Important symptoms of anal cancer include:

- Rectal bleeding
- Rectal itching
- A lump or mass at the anal opening
- Pain or a feeling of fullness in the anal area

- Narrowing of stool or other changes in bowel movements
- Abnormal discharge from the anus
- Swollen lymph nodes in the anal or groin areas

Most often these types of symptoms are more likely to be caused by benign (non-cancer) conditions, like hemorrhoids, anal fissures, or anal warts. Still, if you have any of these symptoms, it's important to have them checked by a doctor so that the cause can be found and treated, if needed.

References

See all references for Anal Cancer (www.cancer.org/cancer/anal-cancer/references.html)

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Tests for Anal Cancer

Some people at high risk for anal cancer are diagnosed by screening tests, such as the digital rectal exam and/or anal Pap test (described in [Can Anal Cancer Be Found Early?](#)). Sometimes a doctor will find anal cancer during a routine physical exam or during a minor procedure, such as removing a hemorrhoid. Treating cancers found this way is often very effective because the tumors are found early in the course of the disease. (This means they're small and haven't spread.) But most often anal cancers are found because of signs or symptoms a person is having.

If anal cancer is suspected, exams and tests will be needed to confirm the diagnosis. If cancer is found, more tests will be done to help determine the extent ([stage](#)) of the cancer.

Medical history and physical exam

If you have [symptoms](#) that might be caused by anal cancer, the doctor will ask about

your medical history to check for possible risk factors and learn more about your symptoms.

Your doctor will also examine you to look for signs of anal cancer or other health problems. For women, this will include a pelvic exam and Pap test. A digital rectal exam will probably be done, too. (This is when the doctor puts a gloved, lubricated finger into your anus and rectum to feel for lumps or other changes).

If problems or changes are found, your doctor might do other exams or tests to help find the cause. If you're being seen by your primary care doctor, you might be referred to a specialist such as a colorectal surgeon, also called a *proctologist* (a doctor specializing in diseases of the colon, rectum, and anus), for more tests and, if needed, treatment.

Endoscopy

[Endoscopy](#)¹ uses a thin tube with a lens or tiny video camera on the end to look inside part of the body. Many types of endoscopy can be used to look for the cause of anal symptoms. They can also be used to get tissue samples from inside the anal canal (described below under Biopsy). Drugs may be used to make you sleepy during these tests.

Anoscopy

For anoscopy the doctor uses a short, hollow tube called an *anoscope*. It's 3 to 4 inches long and about 1 inch in diameter and may have a light on the end of it. The doctor coats the anoscope with a lubricant and then gently pushes it into the anus and rectum. By shining a light into this tube, the doctor has a clear view of the lining of the lower rectum and anus. This exam usually doesn't hurt.

Rigid proctosigmoidoscopy

The rigid proctosigmoidoscope is a lot like an anoscope, except that it's longer (about 10 inches long). It lets the doctor see the rectum and the lower part of the sigmoid colon. You might need to take laxatives or have an enema before this test to make sure your bowels are empty.

Biopsy

If a change or growth is seen during an endoscopic exam, your doctor will need to take out a piece of it to see if it's cancer. This is called a [biopsy](#)². If the growth is in the anal

canal, this can often be done through the scope itself. Drugs may be used to numb the area before the biopsy is taken. Then, a small piece of the tissue is cut out and sent to a lab. If the tumor is very small, your doctor might try to remove the entire tumor during the biopsy.

A doctor called a *pathologist* will look at the tissue sample under a microscope. If cancer is present, the pathologist will send back a report describing the cell type and extent of the cancer.

Anal cancer sometimes spreads to nearby [lymph nodes](#)³ (bean-sized collections of immune system cells). Swollen lymph nodes in the groin can be a sign that cancer has spread. Lymph nodes may also become swollen from an infection. Biopsies may be needed to check for cancer spread to nearby lymph nodes.

There are many [different ways to do a biopsy](#)⁴. A type called fine-needle aspiration (FNA) is often used to check lymph nodes that might have cancer in them. To do this, a small sample of fluid and tissue is taken out of the lymph node using a thin, hollow needle. A pathologist checks this fluid for cancer cells. If cancer is found in a lymph node, surgery may be done to remove the lymph nodes in that area.

Imaging tests

[Imaging tests](#)⁵ use x-rays, magnetic fields, sound waves, or radioactive substances to create pictures of the inside of your body. Imaging tests might be done for a number of reasons both before and after a diagnosis of anal cancer, including:

- To help find cancer
- To learn how far cancer has spread
- To help see if treatment is working
- To look for signs of cancer coming back after treatment

Some of these imaging tests are used more often than others.

Ultrasound

[Ultrasound](#)⁶ uses sound waves to make pictures⁶ of internal organs or masses. This test can be used to see how deep the cancer has grown into the tissues near the anus.

For most ultrasound exams a wand-like transducer is moved around on the skin. But for anal cancer, the transducer is put right into the rectum. This is called a *transrectal* or

endorectal ultrasound. The test can be uncomfortable, but it usually doesn't hurt.

Computed tomography (CT) scan

[CT scans](#)⁷ use x-rays to make detailed cross-sectional images of your body. This is a common test for people with anal cancer. It can be used to help tell if the cancer has spread into the lymph nodes or to other parts of the body, such as the liver, lungs, or other organs.

Instead of taking one picture, like a standard x-ray, a CT scanner takes many pictures as it rotates around you. A computer then combines these into an image of a slice of your body.

CT-guided needle biopsy: CT scans can also be used to guide a biopsy needle right into a change that could be cancer. To do this, you stay on the CT scanning table while the doctor moves a biopsy needle through your skin and toward the tumor. CT scans are repeated until the needle is in the tumor. A biopsy sample is then taken out and sent to a lab to be looked at under a microscope.

Magnetic resonance imaging (MRI)

[MRI scans](#)⁸ use radio waves and strong magnets instead of x-rays. The energy from the radio waves is absorbed by the body and then released in a specific pattern formed by the type of tissue and by certain diseases. A computer translates the pattern into detailed images of parts of the body.

This test is sometimes used to see if nearby lymph nodes are enlarged, which might be a sign the cancer has spread there.

Chest x-ray

A regular [x-ray](#)⁹ might be done to find out if the cancer has spread to the lungs. It isn't needed if a CT scan of the chest is done.

Positron emission tomography (PET) scan

For a [PET scan](#)¹⁰, a form of radioactive sugar (known as *fluorodeoxyglucose* or *FDG*) is injected into your blood. Cancer cells are very active, so they absorb large amounts of the radioactive sugar. After about an hour, you'll be moved onto a table in the PET scanner. A special camera creates pictures of areas where the radioactivity has collected. The picture is not finely detailed like a CT or MRI scan, but it provides helpful

information about your whole body.

Often a PET scan is done in a machine that can do a CT scan at the same time (a PET/CT scan). It lets the doctor compare areas of higher radioactivity on the PET scan with the more detailed image of that area on the CT scan.

Hyperlinks

1. www.cancer.org/treatment/understanding-your-diagnosis/tests/endoscopy.html
2. www.cancer.org/treatment/understanding-your-diagnosis/tests/testing-biopsy-and-cytology-specimens-for-cancer.html
3. www.cancer.org/cancer/cancer-basics/lymph-nodes-and-cancer.html
4. www.cancer.org/treatment/understanding-your-diagnosis/tests/testing-biopsy-and-cytology-specimens-for-cancer/biopsy-types.html
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8. www.cancer.org/treatment/understanding-your-diagnosis/tests/mri-for-cancer.html
9. www.cancer.org/treatment/understanding-your-diagnosis/tests/x-rays-and-other-radiographic-tests.html
10. www.cancer.org/treatment/understanding-your-diagnosis/tests/nuclear-medicine-scans-for-cancer.html

References

See all references for Anal Cancer (www.cancer.org/cancer/anal-cancer/references.html)

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Anal Cancer Stages

After someone is diagnosed with anal cancer, doctors will try to figure out if it has spread, and if so, how far. This process is called *staging*. The stage of a cancer describes how much cancer is in the body. It helps determine how serious the cancer is and [how best to treat it](#)¹. Doctors also use a cancer's stage when talking about survival statistics.

The earliest stage anal cancers are called stage 0, and then range from stages I (1) through IV (4). As a rule, the lower the number, the less the cancer has spread. A higher number, such as stage IV, means cancer has spread more. And within a stage, an earlier letter means a lower stage. Although each person's cancer experience is unique, cancers with similar stages tend to have a similar outlook and are often treated in much the same way.

How is the stage determined?

The staging system most often used for anal cancer is the American Joint Committee on Cancer (AJCC) **TNM** system, which is based on 3 key pieces of information:

- The extent (size) of the **tumor (T)**: What is the size of the cancer? Has the cancer reached nearby structures or organs?
- The spread to nearby lymph **nodes (N)**: Has the cancer spread to nearby lymph nodes?
- The spread (**metastasis**) to distant sites (**M**): Has the cancer spread to distant lymph nodes or distant organs such as the liver or lungs?

Numbers or letters after T, N, and M provide more details about each of these factors. Higher numbers mean the cancer is more advanced. Once a person's T, N, and M categories have been determined, this information is combined in a process called *stage grouping* to assign an overall stage. For more information see [Cancer Staging](#)².

Anal cancer is usually staged based on the [results of a physical exam, biopsy, and imaging tests](#). This is called a *clinical* stage. If surgery is done, the *pathologic* stage (also called the *surgical stage*) is determined by examining tissue removed during an operation. This is also known as *surgical staging*.

The system described below is the most recent AJCC system effective January 2018. It is used for tumors in the anal canal and perianal (formally anal margin) area.

Cancer staging can be complex, so ask your doctor to explain it to you in a way you understand.

AJCC Stage	Stage grouping	Stage description*
0	Tis	The cancer is only in the mucosa (the top layer of cells lining the inside of the anus). It has not started growing into the deeper layers. (Tis). It has not spread to nearby lymph nodes (N0) or distant sites (M0).
	N0	
	M0	
I	T1	The cancer is 2 cm (about 4/5 inch) across or smaller (T1). It has not spread to nearby lymph nodes (N0) or to distant sites (M0).
	N0	
	M0	
IIA	T2	The cancer is more than 2 cm (4/5 inch) but not more than 5 cm (about 2 inches) across (T2). The cancer has not spread to nearby lymph nodes (N0) or to distant sites (M0).
	N0	
	M0	
IIB	T3	The cancer is larger than 5 cm (about 2 inches) across (T3). It has not spread to nearby lymph nodes (N0) or to distant sites (M0).
	N0	
	M0	
IIIA	T1	The cancer is 2 cm (about 4/5 inch) across or smaller (T1) AND it has spread to lymph nodes near the rectum (N1) but not to distant sites (M0).
	N1	
	M0	
	OR	
	T2	The cancer is more than 2 cm (4/5 inch) but not more than 5 cm (about 2 inches) across (T2) AND it has spread to lymph nodes near the rectum. (N1) but not to distant sites (M0).
N1		
IIIB	M0	
	T4	The cancer is any size and is growing into nearby organ(s), such as the vagina, urethra (the tube that carries urine out of the

	N0 M0	bladder), prostate gland, or bladder (T4). It has not spread to nearby lymph nodes (N0) or to distant sites (M0).
IIIC	T3 N1 M0	The cancer is larger than 5 cm (about 2 inches) across (T3) AND it has spread to lymph nodes near the rectum (N1) but not to distant sites (M0).
	OR	
	T4 N1 M0	The cancer is any size and is growing into nearby organ(s), such as the vagina, urethra (the tube that carries urine out of the bladder), prostate gland, or bladder (T4) AND it has spread to lymph nodes near the rectum (N1) but not to distant sites (M0).
IV	Any T Any N M1	The cancer can be any size and may or may not have grown into nearby organs (any T). It may or may not have spread to nearby lymph nodes (any N). It has spread to distant organs such as the liver or lungs (M1).

*The following additional categories are not listed on the table above:

- **TX:** Main tumor cannot be assessed due to lack of information.
- **T0:** No evidence of a primary tumor.
- **NX:** Regional lymph nodes cannot be assessed due to lack of information.

Hyperlinks

1. www.cancer.org/cancer/anal-cancer/treating/by-stage.html
2. www.cancer.org/treatment/understanding-your-diagnosis/staging.html

References

American Joint Committee on Cancer. Anus. In: *AJCC Cancer Staging Manual*. 8th ed. New York, NY: Springer; 2017: 275.

See all references for Anal Cancer (www.cancer.org/cancer/anal-

[cancer/references.html](#))

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Anal Cancer Survival Rates

Survival rates can give you an idea of what percentage of people with the same type and stage of cancer are still alive a certain amount of time (usually 5 years) after they were diagnosed. They can't tell you how long you will live, but they may help give you a better understanding of how likely it is that your treatment will be successful.

Keep in mind that survival rates are estimates and are often based on previous outcomes of large numbers of people who had a specific cancer, but they can't predict what will happen in any particular person's case. These statistics can be confusing and may lead you to have more questions. Talk with your doctor about how these numbers may apply to you, as he or she is familiar with your situation.

What is a 5-year relative survival rate?

A **relative survival rate** compares people with the same type and stage of cancer to people in the overall population. For example, if the **5-year relative survival rate** for a specific stage of anal cancer is 80%, it means that people who have that cancer are, on average, about 80% as likely as people who don't have that cancer to live for at least 5 years after being diagnosed.

Where do these numbers come from?

The American Cancer Society relies on information from the SEER* database, maintained by the National Cancer Institute (NCI), to provide survival statistics for different types of cancer.

The SEER database tracks 5-year relative survival rates for anal cancer in the United States, based on how far the cancer has spread. The SEER database, however, does not group cancers by [AJCC TNM stages](#) (stage 1, stage 2, stage 3, etc.). Instead, it groups cancers into localized, regional, and distant stages:

- **Localized:** There is no sign that the cancer has spread outside of the anal area. This would include AJCC stage I and stage II cancers.
- **Regional:** The cancer has spread outside the anal area to nearby structures or lymph nodes. This would include stage III cancers in the AJCC system.
- **Distant:** The cancer has spread to distant parts of the body, such as the liver or lungs. This would include stage IV cancers.

5-year relative survival rates for anal cancer

(Based on people diagnosed with anal cancer between 2008 and 2014.)

SEER stage	5-year relative survival rate
Localized	82%
Regional	64%
Distant	30%
All SEER stages combined	67%

Understanding the numbers

- **These numbers apply only to the stage of the cancer when it is first diagnosed.** They do not apply later on if the cancer grows, spreads, or comes back after treatment.
- **These numbers don't take everything into account.** Survival rates are grouped based on how far the cancer has spread. But other factors, such as your age and overall health, the [type of anal cancer](#)¹ you have, and how well the cancer responds to treatment, can also affect your outlook.
- **People now being diagnosed with anal cancer may have a better outlook than these numbers show.** Treatments improve over time, and these numbers are based on people who were diagnosed and treated at least five years earlier.

*SEER = Surveillance, Epidemiology, and End Results

Hyperlinks

1. www.cancer.org/cancer/anal-cancer/about/what-is-anal-cancer.html

References

Noone AM, Howlader N, Krapcho M, Miller D, Brest A, Yu M, Ruhl J, Tatalovich Z, Mariotto A, Lewis DR, Chen HS, Feuer EJ, Cronin KA (eds). SEER Cancer Statistics Review, 1975-2015, National Cancer Institute. Bethesda, MD, https://seer.cancer.gov/csr/1975_2015/, based on November 2017 SEER data submission, posted to the SEER web site, April 2018.

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Questions to Ask Your Doctor About Anal Cancer

As you deal with your cancer and the process of treatment, you need to have honest, open discussions with your cancer care team. You should feel free to ask any question that's on your mind, no matter how small it might seem. Among the questions you might want to ask are:

- What [kind](#)¹ of anal cancer do I have?
- Has my cancer spread beyond where it started?
- What is my cancer's [stage](#)? What does this mean?
- Will I need other [tests](#)² before we can decide on treatment?
- Will I need to see other doctors?
- How much experience do you have treating this type of cancer?
- Should I get a [second opinion](#)³? Can you recommend a doctor or cancer center?
- What are my [treatment](#)⁴ choices?
- What treatment would you recommend for me? Why?
- What is the goal of each treatment?
- What are the chances my cancer can be cured with these options?
- What risks or side effects can I expect? How long are they likely to last?
- Will I need to have a colostomy?

- How soon after treatment can I return to my normal activities, such as work, school, exercise, or sex?
- How soon do I need to start treatment?
- What should I do to be ready for treatment?
- How long will treatment last? What will it be like? Where will it be done?
- How soon after treatment starts will we know if it's working?
- What will we do if the treatment doesn't work or if the [cancer comes back](#)⁵?
- What type of follow-up will I need after treatment?
- Where can I find more information and support?

You will no doubt have other questions about your own situation. Be sure and write your questions down so you will remember to ask them during each visit with your cancer care team. Keep in mind, too, that doctors are not the only ones who can provide you with information. Other health care professionals, such as nurses and social workers, may have the answers to some of your questions. You can find more information about communicating with your health care team in [The Doctor-Patient Relationship](#)⁶.

Hyperlinks

1. www.cancer.org/cancer/anal-cancer/about/what-is-anal-cancer.html
2. www.cancer.org/treatment/understanding-your-diagnosis/tests.html
3. www.cancer.org/treatment/finding-and-paying-for-treatment/choosing-your-treatment-team/seeking-a-second-opinion.html
4. www.cancer.org/cancer/anal-cancer/treating.html
5. www.cancer.org/treatment/survivorship-during-and-after-treatment/understanding-recurrence.html
6. www.cancer.org/treatment/understanding-your-diagnosis/talking-about-cancer/the-doctor-patient-relationship.html

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See all references for Anal Cancer (www.cancer.org/cancer/anal-cancer/references.html)

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Treating Anal Cancer

After the cancer is [found](#)¹ and [staged](#)², your cancer care team will talk with you about treatment options. A key goal of treatment is saving the anal sphincter muscles so you have bowel control and there's less impact in your overall quality of life.

Your treatment options depend on many factors. The location, type, and the stage (extent of spread) of the tumor are important. In choosing your treatment plan, you and your cancer care team will also take into account your age, your overall health, and your personal preferences.

How is anal cancer treated?

The 3 main ways to treat anal cancer are:

- [Surgery for Anal Cancer](#)
- [Radiation Therapy for Anal Cancer](#)
- [Chemotherapy for Anal Cancer](#)

Common treatment approaches

Often the best approach combines 2 or more treatments. In the past, surgery was the only way to cure anal cancer, but now most anal cancers are treated with radiation and chemotherapy combined. Surgery is often not needed.

- [Treatment of Anal Cancer, by Stage](#)

Who treats anal cancer?

Based on your treatment options, you might have different types of doctors on your treatment team. These doctors could include:

- A radiation oncologist: a doctor who treats cancer with radiation therapy
- A medical oncologist: a doctor who treats cancer with medicines such as chemotherapy
- A surgical oncologist (oncologic surgeon): a doctor who uses surgery to treat cancer
- A colorectal surgeon (proctologist): a doctor who uses surgery to treat diseases of the colon, rectum, and anus

You might have many other specialists on your treatment team as well, including physician assistants, nurse practitioners, nurses, nutrition specialists, social workers, and other health professionals.

- [Health Professionals Associated With Cancer Care](#)³

Making treatment decisions

It's important to discuss all treatment options, including their goals and possible side effects, with your doctors to help make the decision that best fits your needs. You may feel that you need to make a decision quickly, but it's important to give yourself time to absorb the information you have learned. Ask your cancer care team questions.

If time permits, it is often a good idea to seek a second opinion. A second opinion can give you more information and help you feel more confident about the treatment plan you choose.

- [Questions to Ask Your Doctor About Anal Cancer](#)⁴
- [Seeking a Second Opinion](#)⁵

Thinking about taking part in a clinical trial

Clinical trials are carefully controlled research studies that are done to get a closer look at promising new treatments or procedures. Clinical trials are one way to get state-of-the-art cancer treatment. In some cases they may be the only way to get access to newer treatments. They are also the best way for doctors to learn better methods to treat cancer. Still, they're not right for everyone.

If you would like to learn more about clinical trials that might be right for you, start by asking your doctor if your clinic or hospital conducts clinical trials.

- [Clinical Trials](#)⁶

Considering complementary and alternative methods

You may hear about alternative or complementary methods that your doctor hasn't mentioned to treat your cancer or relieve symptoms. These methods can include vitamins, herbs, and special diets, or other methods such as acupuncture or massage, to name a few.

Complementary methods refer to treatments that are used along with your regular medical care. Alternative treatments are used instead of a doctor's medical treatment. Although some of these methods might be helpful in relieving symptoms or helping you feel better, many have not been proven to work. Some might even be harmful.

Be sure to talk to your cancer care team about any method you are thinking about using. They can help you learn what is known (or not known) about the method, which can help you make an informed decision.

- [Complementary and Alternative Medicine](#)⁷

Help getting through cancer treatment

Your cancer care team will be your first source of information and support, but there are other resources for help when you need it. Hospital- or clinic-based support services are an important part of your care. These might include nursing or social work services, financial aid, nutritional advice, rehab, or spiritual help.

The American Cancer Society also has programs and services – including rides to treatment, lodging, and more – to help you get through treatment. Call our National Cancer Information Center at 1-800-227-2345 and speak with one of our trained specialists.

- [Find Support Programs and Services in Your Area](#)⁸

Choosing to stop treatment or choosing no treatment at all

For some people, when treatments have been tried and are no longer controlling the cancer, it could be time to weigh the benefits and risks of continuing to try new treatments. Whether or not you continue treatment, there are still things you can do to help maintain or improve your quality of life.

Some people, especially if the cancer is advanced, might not want to be treated at all.

There are many reasons you might decide not to get cancer treatment, but it's important to talk to your doctors and you make that decision. Remember that even if you choose not to treat the cancer, you can still get supportive care to help with pain or other symptoms.

- [If Cancer Treatments Stop Working](#)⁹
- [Palliative or Supportive Care](#)¹⁰

The treatment information given here is not official policy of the American Cancer Society and is not intended as medical advice to replace the expertise and judgment of your cancer care team. It is intended to help you and your family make informed decisions, together with your doctor. Your doctor may have reasons for suggesting a treatment plan different from these general treatment options. Don't hesitate to ask him or her questions about your treatment options.

Surgery for Anal Cancer

In most cases, surgery is not the first treatment used for anal cancer. For people who do need surgery, the type of operation depends on the type and location of the tumor.

Local resection

A local resection is an operation that removes only the tumor, plus a small margin (edge) of the normal tissue around the tumor. It's most often used to treat cancers of the anal margin if the tumor is small and has not spread to nearby tissues or [lymph nodes](#)¹.

In most cases, local resection saves the sphincter (SFINK-ter) muscles that keep stool from coming out until they relax during a bowel movement. This allows a person to move their bowels normally after the surgery.

Abdominoperineal resection

An abdominoperineal resection (or APR) is a major operation. The surgeon makes one incision (cut) in the abdomen (belly), and another around the anus to remove the anus and the rectum. The surgeon may also take out some of the nearby groin lymph nodes,

though this (called a *lymph node dissection*) can also be done later.

The anus (and the anal sphincter) is removed, so a new opening needs to be made for stool leave the body. To do this, the end of the colon is attached to a small hole (called a *stoma*) made on the abdomen. A bag to collect stool sticks to the body over the opening. This is called a [colostomy](#)².

In the past, APR was a common treatment for anal cancer, but doctors have found that it can almost always be avoided by using [radiation therapy](#) and [chemotherapy](#) instead. Today, APR is used only if other treatments don't work or if the cancer comes back after treatment.

Possible risks and side effects of surgery

Potential [side effects](#)³ of surgery depend on many things, including the extent of the operation and the person's health before surgery. Most people will have at least some pain after the operation, but it usually can be controlled with medicines. Other problems can include reactions to anesthesia, damage to nearby organs, bleeding, blood clots in the legs, and infection.

APR tends to cause more side effects, many of which are long-lasting changes.

For instance, after an APR, you might develop scar tissue (called *adhesions*) in your belly that can cause organs or tissues to stick together. This might cause pain or problems with food moving through the intestines, which can lead to digestive problems.

People also need a permanent colostomy after an APR. This can take some time to get used to and may mean some lifestyle changes.

For men, an APR may cause erection problems, trouble having an orgasm, or your pleasure at orgasm may become less intense. An APR can also damage the nerves that control ejaculation, leading to "dry" orgasms (orgasms without semen).

APR usually does not cause a loss of sexual function for women, but abdominal adhesions (scar tissue) may sometimes cause pain during sex.

More information on dealing with the sexual impact of cancer and its treatment can be found at [Sex and the Man With Cancer](#)⁴ and [Sex and the Woman With Cancer](#)⁵.

For more general information about cancer surgery, see [Cancer Surgery](#)⁶.

Hyperlinks

1. www.cancer.org/cancer/cancer-basics/lymph-nodes-and-cancer.html
2. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/ostomies/colostomy.html
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Radiation Therapy for Anal Cancer

Radiation therapy uses a beam of high-energy rays (or particles) to kill cancer cells or slow their growth. Radiation therapy can be used:

- As part of the main treatment (along with chemotherapy) for most anal cancers (This is called *chemoradiation*.)
- After surgery if the doctor is concerned that all of the cancer might not have been removed
- To help treat cancer that has come back in the [lymph nodes](#)¹ after initial treatment
- To help control [cancer that has spread](#)² or to relieve symptoms it causes (This may be called [supportive or palliative care](#)³.)

There are 2 main forms of radiation therapy: external beam and internal radiation.

External-beam radiation therapy (EBRT)

The most common way for anal cancer to be treated with radiation is by using a focused beam of radiation that comes from a machine outside the body. This is known as *external-beam radiation therapy*.

Radiation can harm nearby healthy tissues along with the cancer cells. This causes side effects. To reduce the risk of side effects, doctors carefully figure out the exact dose you need and aim the beams as accurately as they can. Before treatment starts, the radiation team will get [PET⁴/CT⁵](#) or [MRI scans⁶](#) of the area to be treated to help figure this out. Radiation therapy is much like getting an x-ray, but the radiation is stronger. The procedure itself doesn't hurt. Each treatment lasts only a few minutes, but the setup time – getting you into place for treatment – usually takes longer. Treatments are usually given 5 days a week for a period of 5 weeks or so.

Newer techniques allow doctors to give higher doses of radiation to the cancer while reducing the radiation to nearby healthy tissues:

Three-dimensional conformal radiation therapy (3D-CRT) uses special computers to precisely map the location of the cancer. Radiation beams are then shaped and aimed at the tumor from several directions. This makes them less likely to damage normal tissues. You will most likely be fitted with a plastic mold like a body cast to keep you in the exact same position each time so that the radiation can be aimed more accurately.

Intensity-modulated radiation therapy (IMRT) is an advanced form of 3-D therapy and the preferred type of EBRT for anal cancer. It uses a computer-driven machine that actually moves around you as it delivers radiation. Along with shaping the beams and aiming them from several angles, the intensity (strength) of the beams can be adjusted. This helps limit the dose reaching normal tissues. IMRT lets doctors deliver an even higher dose to the cancer.

Side effects of external radiation therapy

Side effects vary based on the part of the body treated and the dose of radiation given. Some common short-term side effects include:

- Diarrhea
- Skin changes (like a sunburn) in areas being treated
- Short-term anal irritation and pain (called radiation proctitis)

- Discomfort during bowel movements
- Tiredness
- Nausea
- Low blood cell counts

In women, radiation may irritate the vagina. This can lead to discomfort and discharge.

Most of these side effects get better over time after radiation stops.

Long-term side effects can also occur:

- Damage to anal tissue by radiation may cause scar tissue to form. This can sometimes keep the anal sphincter muscle from working as it should, which could lead to problems with bowel movements.
- Radiation to the pelvis can weaken the bones, increasing the risk of fractures of the pelvis or hip.
- Radiation can damage blood vessels that nourish the lining of the rectum and lead to chronic radiation proctitis (inflammation of the lining of the rectum). This can cause rectal bleeding and pain.
- Radiation can affect fertility (the ability to have children) in both women and men. (For more on this, see [Fertility and Men With Cancer](#)⁷ and [Fertility and Women With Cancer](#)⁸.)
- Radiation can lead to vaginal dryness and even a narrowing or shortening of the vagina (called *vaginal stenosis*), which can make sex painful. A woman can help prevent this problem by stretching the walls of her vagina several times a week. This can be done using a vaginal dilator (a plastic or rubber tube used to stretch out the vagina). (To learn more, see [Sex and the Woman With Cancer](#)⁹.)
- If radiation is given to the lymph nodes in the groin, it can lead to swelling problems in the genitals and legs, called [lymphedema](#)¹⁰. (See [For People at Risk of Lymphedema](#)¹¹.)

Internal radiation (brachytherapy)

Internal radiation is not commonly used to treat anal cancer. When it is used, it's usually given as a radiation boost along with external radiation when a tumor isn't responding to regular chemoradiation (chemo plus external radiation).

Internal radiation involves putting small sources of radioactive materials in or near the tumor. It may also be called *brachytherapy*, *interstitial radiation*, or *intracavitary radiation*. It's used to focus the radiation in the area of the cancer.

The possible side effects are a lot like those seen with external radiation.

More information about radiation therapy

To learn more about how radiation is used to treat cancer, see [Radiation Therapy](#)¹².

To learn about some of the side effects listed here and how to manage them, see [Managing Cancer-related Side Effects](#)¹³.

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1. www.cancer.org/cancer/cancer-basics/lymph-nodes-and-cancer.html
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Chemotherapy for Anal Cancer

Chemotherapy (chemo) uses drugs to treat cancer. Some drugs can be swallowed in pill form, while others need to be injected into a vein or muscle. The drugs enter the bloodstream to reach and destroy the cancer cells throughout the body. This makes chemo a systemic or “whole body” treatment.

To treat anal cancer, chemo can be:

- Combined with [radiation therapy](#) (known as *chemoradiation*) as the first treatment for most anal cancers. This can often cure the cancer without the need for [surgery](#). If the cancer doesn't go away completely after chemoradiation, more chemo might be given.
- Given along with radiation after surgery to try to kill any cancer cells that may have been left behind. This is called *adjuvant therapy*. It's done to lower the chance of the cancer coming back.
- Used if anal cancer has spread to distant parts of the body, such as the liver or lungs. This can help keep the cancer under control or relieve symptoms it's causing.

In most cases, 2 or more drugs are used at the same time because one drug can boost the effect of the other.

- The main drug combination used to treat anal cancer is 5-fluorouracil (5-FU) and mitomycin.
- The combination of 5-FU and cisplatin is also used, especially in people who can't get mitomycin or for advanced anal cancer.

In these treatments, the 5-FU is a liquid given into a vein 24 hours a day for 4 or 5 days. It's put in [a small pump that you can take home with you](#)¹. The other drugs are given more quickly on certain other days in the treatment cycle. And radiation is given 5 days a week for at least 5 weeks. Talk to your treatment team about your treatment plan and how and where you will get chemo.

Side effects of chemo

Chemo drugs attack cells that are dividing quickly, which is why they work against cancer cells. But other cells in the body, like those in the bone marrow (where new blood cells are made), the lining of the mouth and intestines, and the hair follicles, also divide quickly. These cells are also likely to be affected by chemo, too, which can lead to side effects. Side effects depend on the drugs used, the amount taken, and the

length of treatment. Common short-term side effects might include:

- Nausea and vomiting
- Loss of appetite
- Hair loss
- Diarrhea
- Mouth sores

Because chemo can damage the blood-producing cells of the bone marrow, patients may have low blood cell counts. This can result in:

- An increased chance of infection (due to a shortage of white blood cells)
- Bleeding or bruising after minor cuts or injuries (due to a shortage of blood platelets)
- Fatigue or shortness of breath (due to low red blood cell counts)

Along with the risks above, some chemo drugs can cause other, less common side effects. For instance, cisplatin cause nerve damage (called *peripheral neuropathy*). This can lead to numbness, tingling, or pain in the hands and feet.

Most side effects get better over time once treatment stops, but some can last a long time or even be permanent. If you're going to get chemo, be sure to discuss the drugs that will be used and their possible side effects.

If you do have problems, **tell your doctor or nurse about any side effects as soon as you notice them**. Your cancer care team can help you deal with them. For example, drugs can be used to help control nausea and vomiting. Sometimes changing the treatment dosage or how you take your medicines can reduce side effects, too.

More information about chemotherapy

To learn more about how chemotherapy is used to treat cancer, see [Chemotherapy](#)².

To learn about some of the side effects listed here and how to manage them, see [Managing Cancer-related Side Effects](#)³.

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/tubes-and-iv-lines.html

2. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/chemotherapy.html
3. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects.html

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See all references for Anal Cancer (www.cancer.org/cancer/anal-cancer/references.html)

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Treatment of Anal Cancer, by Stage

The type of treatment your cancer care team will recommend depends on the [type](#)¹ of anal cancer, where it is, and how far it has spread (the [stage](#)²).

Most experts agree that treatment in a [clinical trial](#)³ should be considered for anal cancer that has spread beyond the anus or if standard treatment isn't working. This way you can get the best treatment available now and may also get the treatments that are thought to be even better.

Anal tumors affecting the anal margin or the perianal skin (and not the anal canal) are sometimes treated differently from anal canal cancers.

Stage 0

At this stage, the cancer is still only in the inner lining of the anus and has not grown into deeper layers. Anal cancers are seldom found at this early stage.

Stage 0 tumors can often be removed completely by [surgery](#) (local resection). **The goal is to take out all of the cancer as well as edge (margin) of healthy cells around it.** [Radiation therapy](#) and [chemotherapy](#) (chemo) are rarely needed.

Stages I and II

These cancers have grown into the anal wall but have not grown into nearby organs or spread to the [lymph nodes](#)⁴.

[Surgery](#) (local resection) can be used to remove some small tumors (usually less than 1 centimeter or ½ inch) that do not involve the sphincter. In some cases, this may be followed with [chemo](#) and [radiation therapy](#).

The standard treatment for anal cancers that can't be removed without harming the anal sphincter is radiation therapy combined with chemo (called chemoradiation). In chemoradiation, the 2 treatments are given over the same time period. The chemo is usually 5-FU with mitomycin C. The mitomycin is given as a short intravenous (IV) injection, usually at the start of radiation treatment and then again near the end, at around 4 to 6 weeks. The 5-FU is often given by a long IV infusion over 4 to 5 days and repeated in 4 to 6 weeks. In some cases, your doctor may suggest internal radiation along with the external beam radiation.

If the cancer hasn't gone away completely after chemoradiation is done, more treatment might be needed. But it's important to know that it may take months to see the full effects of chemoradiation. Because of this, doctors may watch any remaining cancer for up to 6 months. It may continue to shrink and even go away without more treatment.

If more treatment is needed, sometimes chemo (with or without extra radiation) may be given to try to shrink any remaining cancer. The drugs most often used are 5-FU plus cisplatin. Another option is surgery to remove the remaining cancer. This is most often a major operation called an *abdominoperineal resection* (APR), but sometimes only a local resection is needed.

Stages IIIA, IIIB, and IIIC

These cancers have grown into nearby organs or spread to nearby [lymph nodes](#)⁵, but they have not spread to distant parts of the body.

In most cases, the first treatment will be [radiation therapy](#) combined with [chemo](#) (chemoradiation). In chemoradiation, both treatments are given over the same time period. The chemo is usually 5-FU with mitomycin C. The mitomycin is given as a short intravenous (IV) injection, usually at the start of radiation treatment and then again near the end, at around 4 to 6 weeks. The 5-FU is often given by a long IV infusion over 4 to 5 days and repeated in 4 to 6 weeks. In some cases, your doctor may suggest internal radiation along with the external beam radiation.

If some cancer remains after the chemoradiation, it may be watched closely for up to 6

months because it can take months to see the full effects of treatment. If the cancer grows, more treatment is needed. More chemo may be given. The drugs most often used are 5-FU plus cisplatin. Sometimes more radiation is given as well. (This is called a radiation *boost*.) Another option is surgery to remove the cancer. This is most often a major operation called an *abdominoperineal resection* (APR), but sometimes only a local resection is needed. If the cancer has spread to nearby lymph nodes, they may be removed with [surgery](#) or treated with [radiation therapy](#).

Stage IIIB anal cancer can be hard to treat, so people with this stage might be helped by taking part in a [clinical trial](#)⁶.

Stage IV

In this stage, the [cancer has spread](#)⁷ to distant organs or tissues. Most often, anal cancer first spreads to the lungs, liver, brain, or bones, but it can spread anywhere.

Treatment is very unlikely to cure these cancers. Treatment is aimed at [controlling the disease for as long as possible and relieving symptoms](#)⁸ as much as possible.

Chemotherapy, sometimes along with radiation, is usually the standard treatment. The drugs most often used are 5-FU and cisplatin. Surgery might also be an option in some cases, but before having any surgery it's important that you understand its goal (to prolong life, relieve symptoms, etc.) and the possible risks and side effects.

Because these cancers can be hard to treat, you might also want to think about taking part in a [clinical trial](#)⁹ of newer treatments.

Recurrent anal cancer

Cancer is called *recurrent* when it comes back after treatment. [Recurrence](#)¹⁰ can be local (in or near the same place it started) or distant (spread to organs like the lungs or bone).

If cancer returns in the anus or nearby lymph nodes after treatment, **treatment depends on what treatment you had the first time.** For example, if you had [surgery](#) alone, you may get [radiation therapy](#) and [chemo](#) (chemoradiation). If you first had chemoradiation, then you might be treated with surgery and/or chemo. Treating recurrent anal cancer often requires a major surgery called an *abdominoperineal resection* (APR).

For some people, the cancer will come back in distant sites or organs in the body. The most common sites are the liver and lungs. The main treatment for this is usually

chemo. Most often 5-FU and cisplatin are used. Chemo might not cure the cancer, but it can often help control it and reduce any symptoms it's causing. In rare cases, surgery or radiation therapy might be options to help treat these cancers. But as with chemo, they are unlikely to cure these cancers, so be sure you understand the goal of any treatments offered.

[Clinical trials](#)¹¹ of newer treatments might also be useful for people with recurrent anal cancer.

Treating HIV-infected patients

Most people with [HIV infection](#)¹² can be given the same treatment as others with anal cancer, and they can have a good outcome. People with advanced HIV disease and weakened immune systems might need to have less intensive chemotherapy.

Anal melanoma

Melanoma doesn't respond well to chemotherapy or radiation, so surgery to remove the cancer is the main treatment when possible. Early stage anal melanomas are treated with surgery to remove the tumor and a rim of surrounding normal tissue (local excision). If the tumor is large or has grown into deeper tissues (such as the sphincter muscle) a bigger operation, such as an abdominoperineal resection (APR) may be needed.

If the melanoma has spread to other organs, it's treated like skin melanoma that has spread, often with [immunotherapy](#)¹³ or [targeted therapy](#)¹⁴ drugs. For more information about the treatment of advanced melanoma, see [Melanoma Skin Cancer](#)¹⁵.

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After Anal Cancer Treatment

Living as a Cancer Survivor

For many people, cancer treatment often raises questions about next steps as a survivor.

- [Living as an Anal Cancer Survivor](#)

Cancer Concerns After Treatment

Treatment may remove or destroy the cancer, but it is very common to have questions about cancer coming back or treatment no longer working.

- [Second Cancers After Anal Cancer](#)
-

Living as an Anal Cancer Survivor

For many people with anal cancer, treatment can remove or destroy the cancer. The end of treatment can be both stressful and exciting. You may be relieved to finish treatment, but it's hard not to worry about cancer coming back. This is very common if you've had cancer.

For other people, the cancer might never go away completely. Some people may need to get treatments to try and help keep the cancer in check. Learning to live with cancer that doesn't go away can be difficult and very stressful.

Life after cancer means returning to some familiar things and also making some new choices.

Follow-up care

When treatment ends, your doctors will still want to watch you closely. It's very important to go to all of your follow-up appointments. During these visits, your doctors will ask questions about any problems you may have and will do a physical exam, which will include a rectal exam, an exam of the anus, and an exam to see if any nearby [lymph nodes](#)¹ are enlarged. Blood tests and imaging tests such as [CT scans](#)² may also be ordered.

Almost any cancer treatment can have [side effects](#)³. Some may last for a few weeks to months, but others can last the rest of your life. This is the time for you to talk to your cancer care team about any changes or problems you notice and any questions or concerns you have.

Follow-up doctor visits after treatment may be as often as every 3 months for at least 2 years, and then maybe less often as time goes on.

Close follow-up is very important in the first several months after treatment with chemoradiation, especially if not all of the cancer is gone. Some tumors continue to shrink after treatment, so the doctor will want to watch the cancer closely during this time to see if more treatment might still be needed.

For patients with colostomies

Most people treated for anal cancer don't need extensive surgery (known as an abdominoperineal resection, or APR). But if you do have an APR, you will need to have a permanent colostomy.

If you have a colostomy, follow-up is important. You might feel worried or isolated from normal activities. A wound, ostomy, continence nurse (WOCN) or enterostomal therapist (a health care professional trained to help people with their colostomies) can teach you how to care for your colostomy. You can also ask the American Cancer Society about programs offering information and support in your area. See our [colostomy information](#)⁴ to learn more.

Ask your doctor for a survivorship care plan

Talk with your doctor about developing a survivorship care plan for you. This plan might

include:

- A suggested schedule for follow-up exams and tests
- A schedule for other tests you might need in the future, such as early detection (screening) tests for other types of cancer, or tests to look for long-term health effects from your cancer or its treatment
- A list of possible late- or long-term side effects from your treatment, including what to watch for and when you should contact your doctor
- Diet and physical activity suggestions
- Reminders to keep your appointments with your primary care provider (PCP), who will monitor your general health care

Keeping health insurance and copies of your medical records

Even after treatment, it's very important to keep [health insurance](#)⁵. Tests and doctor visits cost a lot, and even though no one wants to think of their cancer coming back, this could happen.

At some point after your cancer treatment, you might find yourself seeing a new doctor who doesn't know about your medical history. It's important to keep copies of your medical records to give your new doctor the details of your diagnosis and treatment. Learn more in [Keeping Copies of Important Medical Records](#)⁶.

Can I lower my risk of the anal cancer progressing or coming back?

If you have (or have had) anal cancer, you probably want to know if there are things you can do that might lower your risk of the cancer growing or coming back, such as exercising, eating a certain type of diet, or taking nutritional supplements. Unfortunately, it's not yet clear if there are things you can do that will help.

Adopting healthy behaviors such as [not smoking](#)⁷, [eating well](#)⁸, [getting regular physical activity](#)⁹, and [staying at a healthy weight](#)¹⁰ might help, but no one knows for sure. However, we do know that these types of changes can have positive effects on your health that can extend beyond your risk of anal cancer or other cancers.

About dietary supplements

So far, no [dietary supplements](#)¹¹ (including vitamins, minerals, and herbal products) have been shown to clearly help lower the risk of anal cancer progressing or coming

back. This doesn't mean that no supplements will help, but it's important to know that none have been proven to do so.

Dietary supplements are not regulated like medicines in the United States – they do not have to be proven effective (or even safe) before being sold, although there are limits on what they're allowed to claim they can do. If you're thinking about taking any type of nutritional supplement, talk to your health care team. They can help you decide which ones you can use safely while avoiding those that might be harmful.

If the cancer comes back

If the cancer does recur at some point, your treatment options will depend on where the cancer is located, what treatments you've had before, and your health. For more information on how recurrent cancer is treated, see [Treatment of Anal Cancer, by Stage](#)¹².

For more general information on recurrence, you may also want to see [Understanding Recurrence](#)¹³.

Could I get a second cancer after treatment?

People who've had anal cancer can still get other cancers. In fact, anal cancer survivors are at higher risk for getting some other types of cancer. Learn more in [Second Cancers After Anal Cancer](#).

Getting emotional support

Some amount of feeling depressed, anxious, or worried is normal when cancer is a part of your life. Some people are affected more than others. But everyone can benefit from help and support from other people, whether friends and family, religious groups, support groups, professional counselors, or others. Learn more in [Life After Cancer](#)¹⁴.

Hyperlinks

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See all references for Anal Cancer (www.cancer.org/cancer/anal-cancer/references.html)

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Second Cancers After Anal Cancer

Cancer survivors can be affected by a number of health problems, but often their greatest concern is facing cancer again. If a cancer comes back after treatment it is called a “recurrence.” But some cancer survivors may develop a new, unrelated cancer later. This is called a “second cancer.” No matter what type of cancer you have had, it is still possible to get another (new) cancer, even after surviving the first.

Unfortunately, being treated for cancer doesn’t mean you can’t get another cancer. People who have had cancer can still get the same types of cancers that other people get. In fact, certain types of cancer and cancer treatments can be linked to a higher risk

of certain second cancers.

Survivors of anal cancer can still get any type of second cancer, but they have an increased risk of

- [Cancer of the tongue](#)¹
- [Cancer of the tonsil](#)²
- [Vaginal cancer](#)³
- [Vulvar cancer](#)⁴
- [Lung cancer](#)⁵
- [Kaposi sarcoma](#)⁶

Patients diagnosed with anal cancer before age 50 also have an increased risk of [non-Hodgkin lymphoma](#)⁷.

Anal cancer is linked to infection with [human papilloma virus \(HPV\)](#)⁸, and many of these cancers (cancers of the tongue, tonsil, vulva, and vagina) are also linked to HPV infection.

Follow-up after treatment

After completing treatment for anal cancer, you should see your doctor regularly to look for signs that the cancer has come back or spread. Experts do not recommend any additional testing to look for second cancers in patients without symptoms. Let your doctor know about any new symptoms or problems, because they could be caused by the cancer coming back or by a new disease or second cancer.

Survivors of anal cancer should follow the [American Cancer Society guidelines for the early detection of cancer](#)⁹ and [stay away from tobacco products](#)¹⁰. Smoking increases the risk of many cancers and might further increase the risk of many of the second cancers seen after anal cancer.

To help maintain good health, survivors should also:

- Achieve and maintain a healthy weight
- Adopt a physically active lifestyle
- Consume a healthy diet, with an emphasis on plant foods
- Limit consumption of alcohol to no more than 1 drink per day for women or 2 per day for men

These steps may also lower the risk of some cancers.

See [Second Cancers in Adults](#)¹¹ for more information about causes of second cancers.

Hyperlinks

1. www.cancer.org/cancer/oral-cavity-and-oropharyngeal-cancer.html
2. www.cancer.org/cancer/oral-cavity-and-oropharyngeal-cancer.html
3. www.cancer.org/cancer/vaginal-cancer.html
4. www.cancer.org/cancer/vulvar-cancer.html
5. www.cancer.org/cancer/lung-cancer.html
6. www.cancer.org/cancer/kaposi-sarcoma.html
7. www.cancer.org/cancer/non-hodgkin-lymphoma.html
8. www.cancer.org/cancer/cancer-causes/infectious-agents/hpv.html
9. www.cancer.org/healthy/find-cancer-early/cancer-screening-guidelines/american-cancer-society-guidelines-for-the-early-detection-of-cancer.html
10. www.cancer.org/healthy/stay-away-from-tobacco.html
11. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/second-cancers-in-adults.html

References

See all references for Anal Cancer (www.cancer.org/cancer/anal-cancer/references.html)

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