Anal Cancer Screening for People at High Risk

What causes anal cancer?

Each year about 9,440 people in the United States are diagnosed with anal cancer. In the U.S., 80% of anal cancers are of the squamous cell type. This type of anal cancer is often caused by human papilloma virus (HPV). Risk factors for anal cancer include:

- Receptive anal intercourse.
- History of many sexual partners.
- HPV infection, in particular HPV-16.
- Anal warts themselves don't turn into cancer, but people with anal warts are more likely to develop anal cancer. HPV-6 and HPV-11 cause anal warts.
- Having had cervical, vaginal, or vulvar cancer.
- Immunosuppression, especially in those who have HIV. This also includes those that have had organ transplants and take medication to suppress their immune system.
- Smoking.

Do all HPV infections cause anal cancer?

There are over 100 strains of HPV. HPV-16 is the type most likely to cause anal cancer. HPV-6 and HPV-11 can cause anal or genital warts. Millions of people are infected with some type of HPV every year. In most cases, the person’s own immune system is able to fight off the infection. People with suppressed immune systems, such as those with HIV, are at highest risk of not clearing the infection.

Using condoms during anal intercourse does not completely protect against getting HPV. It is possible to get HPV with any genital-to-genital contact. Condoms do reduce the genital area exposed. This can reduce the risk of transmission.

Only a small number of people with HPV will develop cancer, but screening may help to lower this number even more.

Who should have anal cancer screening tests?

Anal cancer screening is not recommended for the general population. However, screening tests may help to find anal cancer early in people at higher risk for anal cancer. Those at high risk who may benefit from screening include:

- Men who have sex with men.
- Women with a history of cervical or vulvar cancer.
- HIV-positive status.
- Anyone who has received an organ transplant.

If you are at higher risk, it may be recommended that you have screening. There are no official guidelines for anal cancer screening, but experts agree screening those at high risk will help prevent anal cancer or detect it early. An anal Pap smear is recommended for men who have sex with men, every 1-2 years for those who are HIV positive and every 2-3 years for HIV negative men. Many experts recommend anal Pap testing for HIV positive women and women with a history of cervical dysplasia as well.

Tests to Screen for Anal Cancer
Digital Anal Rectal Exam
A healthcare provider inserts their gloved finger into the anus. This is done to feel the wall of the anus to detect any lumps, warts or ulcerations.

Anal Cytology
Also known as an anal Pap smear, this test collects cells from the anus to be looked at in a lab. The test is done by:

- Lying on your side with your legs bent.
- A swab (similar to a Q-Tip) is inserted a few inches into the anus. It is rubbed against the side of the bowel where the anus and rectum meet. This gathers cells from that area.
- The swab is either used to make a slide or it is put into a liquid preservative and sent to the lab.
- The pathologist looks at the cells under a microscope, looking for any abnormalities in the cells.

Do not use an enema or insert anything in the rectum for 24 hours before the exam. Lubricants should not be used before the test because they can interfere with the results. The swab must be done before a digital rectal exam.

High Resolution Anoscopy
In anoscopy, a small plastic tube is inserted into the anus. The inside of the anus can be better seen this way. In high resolution anoscopy, a special microscope called a colposcope is used to view the anus through the plastic tube. If an abnormal area is seen, a biopsy (tissue sample) can be taken with these tools.

What can screening tests detect?
Anal cytology can detect abnormal lesions or pre-cancerous lesions in the anus. Results are often reported as:

- High-grade squamous intraepithelial lesions or HSIL. These are moderate to severe abnormalities (dysplasia). These can progress to cancer over time.
- Low-grade squamous intraepithelial lesions or LSIL. These are mild abnormalities (dysplasia). These very rarely turn into cancer.
- Squamous cell cancer. Both HSIL and LSIL describe abnormal areas on the top of the skin in the anus, with HSIL being more abnormal. Once the abnormality spreads below the top layer, it is considered anal cancer.
- Atypical squamous cells of undetermined significance, or ASCUS. These cells appear abnormal, but are not necessarily pre-cancerous and can be a result of another cause, such as infection or inflammation.

What follow-up care do I need after screening?
Follow-up care depends on the result of the tests and the person’s HIV status. For some abnormalities, follow up will be repeat cytology testing a few months later. Some people with HSIL results will need treatment of the abnormal areas. Treatments can include topical medications, cryotherapy (freezing the area), laser therapy, and surgery.

While only a very small number of people with abnormal cytology will develop anal cancer, providers have no way of knowing who will progress to cancer. Close monitoring helps to detect any cancers early when it is most treatable.

Resources for More Information
UCSF Anal Dysplasia Clinic website
Anal Cancer, HIV and Gay/Bisexual Men - National LGBT Cancer Network

Resources for More Information: Anal Cancer

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