



## ANAL CANCER

### Summary

Anal cancer is one of the most common HIV-associated cancers in gay men. Other people with HIV, including women, are also at increased risk for anal cancer. You can reduce the risk of developing anal cancer by practising safer sex—especially by avoiding unprotected receptive anal intercourse (bottoming). However, condoms are not completely effective in blocking the transmission of HPV (human papillomavirus)—a virus that can cause anal cancer. Quitting smoking, and getting regular Pap smears and anal exams may also help reduce the risk. Anal cancer is usually treated with radiation and chemotherapy or with surgery.

### What is anal cancer?

Anal cancer develops slowly over a period of years. It starts as a pre-cancerous condition called anal dysplasia. The lining of the anal canal has pink tissue called mucosa, similar to the inside of your cheek. In anal dysplasia there are abnormal cellular changes in the anal mucosa. Anal dysplasia can progress from low-grade changes to high-grade changes. Anal cancer develops when high-grade changes travel into deeper tissue layers. Anal cancer can spread to surrounding tissues and lymph glands.

The anus extends from the anal opening to about 4 cm inside the body to join the rectum. The portion inside the body is called the anal canal. Anal cancer occurs mainly in two places: in the "junction," where the anal canal meets the rectum; and in the peri-anal skin, just outside of the anal opening.

### What causes anal cancer?

There are a number of different types of cancers in the anal canal, but the main type associated with HIV is squamous cell cancer. This type of anal cancer is linked to the human papillomavirus (HPV). HPV is a common virus with at least 70 strains, many of which can be transmitted sexually. HPV causes very similar problems in men and women. Some strains cause warts, including genital warts. These strains do not cause cancer. Other strains are more commonly linked with anal and cervical cancer.

Our cells make certain proteins that help prevent cancer. HPV can shut off these proteins, allowing cancers to develop. HIV seems to interact with HPV to make cancers more likely. Anal cancer can occur at any stage of HIV disease (or even in the absence of HIV infection), although abnormal, pre-cancerous growths (dysplasia) are more likely at lower CD4+ cell counts.



## Who Gets Anal Cancer?

Overall, anal cancer is very uncommon. In the general population, anal cancer actually occurs much more commonly in women. However, gay men who have had anal receptive intercourse ("bottoming") are at highest risk for getting anal HPV infection and anal cancer. The risk increases with HIV infection. Other people at risk for HIV, such as injection drug users, have a higher risk of anal cancer but not as high as that of gay men who bottom. Women who have anal intercourse and women who have had cervical cancer are also at increased risk.

Having multiple sex partners increases the likelihood of getting anal HPV. Cigarette smoking is a definite risk factor for anal (and cervical) cancer.

## Prevention

Practising safer sex, including non-penetrative sex, helps reduce the risk of HPV transmission. Condoms do not completely block HPV infection because the virus may be present on skin not covered by the condom. Stopping cigarette smoking can help reduce the risk of anal cancer. Treating HIV with antiretroviral therapy has not been shown to reduce the risk of anal cancer.

## Symptoms

Unfortunately, there are often no specific symptoms of anal cancer until it is quite advanced. In advanced anal cancer, there may be anal pain, anal bleeding and discomfort. However, these symptoms are not specific to anal cancer; they are also commonly associated with other conditions. When anal cancer has spread, there may be lumps in the groin where the cancer has reached the lymph glands.

## Diagnosis

Regular medical check-ups with anal examinations by your doctor will help detect early cancers. Anal Pap smears can help detect

pre-cancerous changes. If you have ongoing problems with anal pain, bleeding or other discomfort, you should have an anal canal examination.

An anal canal examination can take several forms. A digital exam is when the doctor places a gloved finger in the anal canal to feel for lumps. Anoscopy is a visual examination of the anal canal mucosa using an anoscope with a bright light. Lastly, there is a special kind of anoscopy called high-resolution anoscopy (HRA), which uses a magnifier to provide more detailed images of the mucosa. HRA is not widely available.

Pre-cancer can be diagnosed in the anal canal with a Pap smear similar to that used to detect cervical cancer in women. Cells collected from a swab inserted in the anus are examined under a microscope for pre-cancerous or cancerous changes. In people at high risk for anal cancer, the anal Pap smear and HRA should be done yearly where facilities exist.

Other examinations for the rectum and colon, such as sigmoidoscopy and colonoscopy, do not adequately examine the anal canal. Do not assume you've been screened for anal cancer if you have had a colonoscopy.

If a lesion or other abnormality is seen in the anal canal, your doctor may refer you to an ano-rectal specialist. As part of the investigation, the specialist may cut out a piece of tissue from your anal canal (anal biopsy). Looking at the tissue under the microscope, pathologists can confirm or rule out a diagnosis of cancer. If the cancer has spread outside of the anus, it can be detected by a CT scan (computed tomography scan) or an MRI (magnetic resonance imaging).

Some anal cancers occur just outside of the anal canal. These can be visible by spreading the cheeks. A biopsy of the peri-anal skin will confirm the diagnosis.

For more information about testing for anal cancer, see CATIE's *In-depth Fact Sheet on Anal Dysplasia*.



## Treatment

Treatment of any pre-cancerous areas can be done either by laser therapy, the use of acid that is applied to the abnormal area, or surgical removal of part of the lining of the anal canal.

If cancer is present, treatment usually involves a combination of radiation and chemotherapy. Surgical removal of the tumour may also be done when possible. If the cancer has already spread more deeply into the tissues, removal may impair the function of the anus (which is to help regulate the passage of your stools). In this case, the anus and part of the rectum are removed and stool is diverted to a bag attached to the body (this procedure is called a colostomy). Early diagnosis and treatment is important, because people with advanced forms of anal cancer are at increased risk if the cancer spreads to other areas of the body.

## Credits

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Author(s): Dr. Irving Salit

Design: Renata Lipovitch

## Disclaimer

**Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV-related illness and the treatments in question.**

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## Contact CATIE

**by telephone**

1.800.263.1638

416.203.7122

**by fax**

416.203.8284

**by e-mail**

info@catie.ca

**on the Web**

<http://www.catie.ca>

**by mail**

505-555 Richmond Street West

Box 1104

Toronto, Ontario

M5V 3B1

Canada



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