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 (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 or vulvar cancer, 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


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 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. 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 (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. 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 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 uses sound waves to make pictures 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 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 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 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, 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](http://www.cancer.org/treatment/understanding-your-diagnosis/tests/endoscopy.html)
5. [www.cancer.org/treatment/understanding-your-diagnosis/tests.html](http://www.cancer.org/treatment/understanding-your-diagnosis/tests.html)
8. [www.cancer.org/treatment/understanding-your-diagnosis/tests/mri-for-cancer.html](http://www.cancer.org/treatment/understanding-your-diagnosis/tests/mri-for-cancer.html)

**References**

See all references for Anal Cancer ([www.cancer.org/cancer/anal-cancer/references.html](http://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) \textit{TNM} system, which is based on 3 key pieces of information:

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

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

Anal cancer is usually staged based on the \textit{results of a physical exam, biopsy, and imaging tests}. This is called a \textit{clinical} stage. If surgery is done, the \textit{pathologic} stage (also called the \textit{surgical stage}) is determined by examining tissue removed during an operation. This is also known as \textit{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.
<table>
<thead>
<tr>
<th>AJCC Stage</th>
<th>Stage grouping</th>
<th>Stage description*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Tis N0 M0</td>
<td>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).</td>
</tr>
<tr>
<td>I</td>
<td>T1 N0 M0</td>
<td>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).</td>
</tr>
<tr>
<td>IIA</td>
<td>T2 N0 M0</td>
<td>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).</td>
</tr>
<tr>
<td>IIB</td>
<td>T3 N0 M0</td>
<td>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).</td>
</tr>
<tr>
<td>IIIA</td>
<td>T1 N1 M0</td>
<td>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).</td>
</tr>
<tr>
<td></td>
<td>OR T2 N1 M0</td>
<td>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).</td>
</tr>
<tr>
<td>IIIIB</td>
<td>T4</td>
<td>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</td>
</tr>
<tr>
<td>Stage</td>
<td>T Classification</td>
<td>N Classification</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>IIA</td>
<td>T2</td>
<td>N0</td>
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<td>IIIB</td>
<td>T3</td>
<td>N2</td>
</tr>
<tr>
<td>IIIC</td>
<td>T4</td>
<td>N1</td>
</tr>
<tr>
<td>IV</td>
<td>Any T</td>
<td>Any N</td>
</tr>
</tbody>
</table>

*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**

2. [www.cancer.org/treatment/understanding-your-diagnosis/staging.html](http://www.cancer.org/treatment/understanding-your-diagnosis/staging.html)

**References**


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.)

<table>
<thead>
<tr>
<th>SEER stage</th>
<th>5-year relative survival rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized</td>
<td>82%</td>
</tr>
<tr>
<td>Regional</td>
<td>64%</td>
</tr>
<tr>
<td>Distant</td>
<td>30%</td>
</tr>
<tr>
<td>All SEER stages combined</td>
<td>67%</td>
</tr>
</tbody>
</table>

#### 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 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**
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 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 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? Can you recommend a doctor or cancer center?
- What are my treatment 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**

2. [www.cancer.org/treatment/understanding-your-diagnosis/tests.html](http://www.cancer.org/treatment/understanding-your-diagnosis/tests.html)

**References**

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