Vulvar Cancer Early Detection, Diagnosis, and Staging

Detection and Diagnosis

Catching cancer early often allows for more treatment options. Some early cancers may have signs and symptoms that can be noticed, but that is not always the case.

- Can Vulvar Cancer Be Found Early?
- Signs and Symptoms of Vulvar Cancers and Pre-Cancers
- How Is Vulvar Cancer Diagnosed?

Stages and Outlook (Prognosis)

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

- How Is Vulvar Cancer Staged?
- Survival by Stage of Vulvar Cancer

Questions to Ask About Vulvar Cancer

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

- What Should You Ask Your Doctor About Vulvar Cancer?

Can Vulvar Cancer Be Found Early?

Having pelvic exams and knowing any signs and symptoms of vulvar cancer greatly improve the chances of early detection and successful treatment. If you have any of the
problems discussed in Signs and Symptoms of Vulvar Cancers and Pre-Cancers, you should see a doctor. If the doctor finds anything abnormal during a pelvic examination, you may need more tests to figure out what is wrong. This may mean referral to a gynecologist (specialist in problems of the female genital system).

Knowing what to look for can sometimes help with early detection, but it is even better not to wait until you notice symptoms. Get regular well-women exams.

There is no standard screening for this disease.

- References
See all references for Vulvar Cancer

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**Signs and Symptoms of Vulvar Cancers and Pre-Cancers**

Symptoms depend on whether it is a cancer or pre-cancer and what kind of cancer it is.

**Vulvar intraepithelial neoplasia**

Most women with vulvar intraepithelial neoplasia (VIN) have no symptoms at all. When a woman with VIN does have a symptom, it is most often itching that does not go away or get better. An area of VIN may look different than normal vulvar skin. It is often thicker and lighter than the normal skin around it. However, an area of VIN can also appear red, pink, or darker than the surrounding skin.

Because these changes are often caused by other conditions that are not pre-cancerous, some women don't realize that they might have a serious condition. Some try to treat the problem themselves with over-the-counter remedies. Sometimes doctors might not even recognize the condition at first.
Invasive squamous cell cancer of the vulva

Almost all women with invasive vulvar cancers will have symptoms. These can include:

- An area on the vulva that looks different from normal – it could be lighter or darker than the normal skin around it, or look red or pink.
- A bump or lump, which could be red, pink, or white and could have a wart-like or raw surface or feel rough or thick
- Thickening of the skin of the vulva
- Itching
- Pain or burning
- Bleeding or discharge not related to the normal menstrual period
- Open sore (especially if it lasts for a month or more)

Verrucous carcinoma, a subtype of invasive squamous cell vulvar cancer, appears as cauliflower-like growths similar to genital warts.

These symptoms are more often caused by other, non-cancerous conditions. Still, if you have these symptoms, you should have them checked by a doctor or nurse.

Vulvar melanoma

Patients with vulvar, melanoma can have many of the same symptoms as other vulvar cancers, such as:

- A lump
- Itching
- Pain
- Bleeding or discharge

Most vulvar melanomas are black or dark brown, but they can be white, pink, red, or other colors. They can be found throughout the vulva, but most are in the area around the clitoris or on the labia majora or minora.

Vulvar melanomas can sometimes start in a mole, so a change in a mole that has been present for years can also indicate melanoma. The *ABCDE* rule can be used to help tell a normal mole from one that could be melanoma.

**Asymmetry:** One-half of the mole does not match the other.

**Border irregularity:** The edges of the mole are ragged or notched.
**Color:** The color over the mole is not the same. There may be differing shades of tan, brown, or black and sometimes patches of red, blue, or white.

**Diameter:** The mole is wider than 6 mm (about 1/4 inch).

**Evolving:** The mole is changing in size, shape, or color.

The most important sign of melanoma is a change in size, shape, or color of a mole. Still, not all melanomas fit the ABCDE rule.

If you have a mole that has changed, ask your doctor to check it out.

**Bartholin gland cancer**

A distinct mass (lump) on either side of the opening to the vagina can be the sign of a Bartholin gland carcinoma. More often, however, a lump in this area is from a Bartholin gland cyst, which is much more common (and is not a cancer).

**Paget disease**

Soreness and a red, scaly area are symptoms of Paget disease of the vulva.

- [References](#)
- [See all references for Vulvar Cancer](#)

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**How Is Vulvar Cancer Diagnosed?**

**Medical history and physical exam**

The first step is for the doctor to take your complete medical history to check for risk factors and symptoms. Then your doctor will give you a complete physical exam,
including a pelvic exam. He or she will feel your uterus, ovaries, cervix, and vagina for anything irregular. Your doctor will also use a speculum to look at your vagina and cervix and may do a Pap test.

**Biopsy**

Certain signs and symptoms might strongly suggest vulvar cancer, but many of them can be caused by conditions that aren't cancer. The only way to be certain that cancer is present is to do a biopsy. In this procedure, a small piece of tissue from the suspicious area is removed and examined under the microscope. A pathologist (a doctor specializing in diagnosing diseases by laboratory tests) will look at the tissue sample under a microscope to see if cancer or a pre-cancerous condition is present and, if so, what type it is.

Rarely, the doctor will paint the vulva with a dye (toluidine blue) to find all areas of abnormal vulvar skin and to select the best areas to biopsy. This dye causes skin with certain diseases -- including vulvar intraepithelial neoplasia (VIN) and vulvar cancer -- to turn blue.

The doctor might use a colposcope (an instrument with binocular magnifying lenses that stays outside the body) or a hand-held magnifying lens to select areas to biopsy. The vulva is treated with a dilute solution of acetic acid (like vinegar) that causes areas of VIN and cancer to turn white, making them easier to see through the colposcope. Examining the vulva with magnification is called *vulvoscopy*.

Once the abnormal areas are found, a numbing medicine (local anesthetic) is injected into the skin so you won’t feel pain. If the abnormal area is small, it may be completely removed (called an *excisional biopsy*) with a scalpel. Sometimes stitches are needed.

If the abnormal area is larger, a *punch biopsy* is used to take a small sample. The instrument used looks like a tiny apple corer and removes a small, cylindrical piece of skin 4 mm (about 1/6 inch) across. No stitches are usually needed after the punch biopsy. Depending on the results of the punch biopsy, additional surgery may be necessary.

To learn more about biopsies, see [Testing Biopsy and Cytology Specimens for Cancer](#).

**Further testing**

If you have cancer, tests will be done to see how far it has spread. The results of your
physical examination and certain diagnostic tests will be used to determine the size of the tumor, how deeply it has grown into tissues at the site where it originated, if it has grown into nearby organs, and if it has metastasized (spread to lymph nodes or distant organs). This is called staging. The stage of your cancer is the most important factor in selecting the right treatment plan. (See How is vulvar cancer staged? for more details)

If your biopsy shows that you have vulvar cancer, your health care professional will refer you to a gynecologic oncologist, a specialist in female reproductive system cancers. The specialist will also look at your complete personal and family medical history to learn about related risk factors and symptoms of vulvar cancer.

The doctor will perform a complete physical examination to evaluate your general state of health, paying special attention to the lymph nodes, particularly those in your groin region, to check for signs of cancer spread. Depending on the biopsy results, several more tests may be done to determine if the vulvar cancer has spread to other areas.

**Cystoscopy**

This examination uses a lighted tube to check the inside surface of the bladder. Some advanced cases of vulvar cancer can spread to the bladder, so any suspicious areas noted by this exam are removed for biopsy. This procedure can be done using a local anesthetic, but some patients may need general anesthesia. Your doctor will let you know what to expect before and after the procedure. This procedure was used more often in the past, but is no longer a standard part of the work-up of a woman with vulvar cancer.

**Proctoscopy**

This is a visual inspection of the rectum using a lighted tube. Some advanced cases of vulvar cancer can spread to the rectum. Any suspicious areas are biopsied. Proctoscopy was used more often in the past, but is no longer a standard part of the work-up of a woman with vulvar cancer.

**Examination of the pelvis under anesthesia**

Putting the patient under anesthesia permits a physician to do a more thorough exam that can better evaluate how much the cancer has spread to internal organs of the pelvis.

**Imaging tests**
Chest x-ray

A plain x-ray of your chest might be done to check for other health problems that might make certain treatments difficult to tolerate. This x-ray can be done in any outpatient setting.

Computed tomography (CT)

The computed tomography (CT) scan is an x-ray test that produces detailed cross-sectional images of your body. 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 pictures into an image of a slice of your body. For vulvar cancer, a CT scan can help find enlarged lymph nodes that might contain areas of cancer spread. It can also be helpful to see if the cancer has spread to other organs.

A CT scanner has been described as a large donut, with a narrow table in the middle opening. You will need to lie still on the table while the scan is being done. CT scans take longer than regular x-rays, and you might feel a bit confined by the ring while the pictures are being taken.

Before the test, you may be asked to drink 1 to 2 pints of a liquid called oral contrast. This helps outline the intestine so that certain areas are not mistaken for tumors. You may also receive an IV line through which a different kind of contrast dye (IV contrast) is injected. This helps better outline structures such as blood vessels in your body.

The injection can cause some flushing (redness and warm feeling). A few people are allergic to the dye and get hives, or rarely, have more serious reactions like trouble breathing and low blood pressure. Be sure to tell the doctor if you have ever had a reaction to any contrast material used for x-rays.

CT scans are not often needed in vulvar cancer patients. They might be done in patients with large tumors or enlarged lymph nodes. They can also be helpful in deciding whether to do a sentinel lymph node procedure to check groin lymph nodes for cancer spread (this procedure is discussed in more detail in Surgery for Vulvar Cancer).

Magnetic resonance imaging (MRI)

Magnetic resonance imaging (MRI) scans use radio waves and strong magnets instead of x-rays to make images of the body. 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 a very detailed image of parts of
the body. Like a CT scanner, this produces cross sectional slices of the body. An MRI can also produce slices that are parallel with the length of your body. As with a CT scan, a contrast material might be used, but it is not needed as often.

MRI scans are more uncomfortable than CT scans. They take longer -- often up to an hour. You have to be placed inside tube-like equipment, which is confining and can upset people with claustrophobia (a fear of close spaces). If you have trouble with close spaces, let your doctor know before the MRI scan. Sometimes medicine can be given just before the scan to reduce anxiety. Another option is to use a special "open" MRI machine that is less confining and more comfortable for such people, the drawback being that the images from these machines are not as good. The machine also makes a buzzing or clanging noise that some people find disturbing. Some places will provide headphones with music to block this sound.

MRI images are particularly useful in examining pelvic tumors. They may often detect enlarged lymph nodes in the groin. They are also helpful in detecting cancer that has spread to the brain or spinal cord. However, they are rarely used in patients with early vulvar cancer.

**Positron emission tomography (PET)**

Positron emission tomography (PET) uses glucose (a form of sugar) that contains a low-level radioactive atom. Because cancer cells use glucose at a higher rate than normal cells, they absorb more of the radioactive sugar. The areas of radioactivity are detected with this test. You will be injected with the special glucose, and then about an hour later you will be moved onto a table in the PET scanner. You lie on the table for about 30 minutes while a special camera creates a picture of areas of radioactivity in the body. The picture is not finely detailed like a CT or MRI scan, but it provides helpful information about your body.

This test can be helpful for spotting collections of cancer cells, and seeing if the cancer has spread to lymph nodes. PET scans are also useful when your doctor thinks the cancer has spread, but doesn’t know where (although they aren't useful for finding cancer spread in the brain). PET scans can be used instead of several different x-rays because they scan your whole body. Often, a machine that combines a PET scanner and a CT scanner (called a PET/CT) is used, which gives more information about areas of cancer and cancer spread.

For more information about scans and x-rays, see [Imaging (Radiology) Tests](#).

- References
How Is Vulvar Cancer Staged?

The FIGO/AJCC system for staging vulvar cancer

The systems used for staging most types of vulvar cancer -- the FIGO (International Federation of Gynecology and Obstetrics) system and the American Joint Committee on Cancer TNM staging system -- are very similar. They both classify vulvar cancer on the basis of: the extent of the tumor (T), whether the cancer has spread to lymph nodes (N) and whether it has spread to distant sites (M). The system described below is the most recent AJCC system, which went into effect January 2010. Any differences between the AJCC system and the FIGO system are explained in the text.

These systems are not used to stage vulvar melanoma, which is staged like melanoma of the skin. Information about melanoma staging can be found in Melanoma Skin Cancer.

Tumor extent (T)

Tis: The cancer is not growing into the underlying tissues. This stage, also known as carcinoma in situ, is not included in the FIGO system.

T1: The cancer is growing only in the vulva or perineum

- T1a: The cancer has grown no more than 1 mm into underlying tissue (stroma) and is 2 cm or smaller in size. (about 0.8 inches).
- T1b: The cancer is either more than 2 cm or it has grown more than 1 mm into underlying tissue (stroma).

T2: The tumor can be any size. The cancer is growing into the anus or the lower third of the vagina or urethra (the tube that drains urine from the bladder). (This is called stage 2/3 in the FIGO system)
**T3:** The tumor can be any size. The cancer is growing into the upper urethra, bladder or rectum or into the pubic bone. (This is called stage 4 in the FIGO system)

**Lymph node spread of cancer (N)**

**N0:** No lymph node spread

**N1:** The cancer has spread to 1 or 2 lymph nodes in the groin with the following features:

- **N1a:** The cancer has spread to 1 or 2 lymph nodes and the areas of cancer spread are both less than 5 mm (about 1/5th of an inch) in size
- **N1b:** The cancer has spread to one lymph node and the area of cancer spread is 5 mm or greater

**N2:** The cancer has spread to groin lymph nodes with the following features:

- **N2a:** The cancer has spread to 3 or more lymph nodes, but each area of spread is less than 5 mm
- **N2b:** The cancer has spread to 2 or more lymph nodes with each area of spread 5 mm or greater
- **N2c:** The cancer has spread to lymph nodes and has started growing through the outer covering of at least one of the lymph nodes (called extracapsular spread)

**N3:** The cancer has spread to the lymph nodes causing open sores (*ulceration*) or causing the lymph node to be stuck (*fixed*) to the tissue below it.

**Distant spread of cancer (M)**

**M0:** No distant spread

**M1:** The cancer has spread to distant sites (includes spread to pelvic lymph nodes)

**Stage grouping**

The grouping of T, N, and M determines the stage:

**Stage 0 (Tis, N0, M0):** This is a very early cancer found on the surface of the skin of the vulva only. It is also known as *carcinoma in situ* and as *Bowen disease*. This stage is not included in the FIGO system.
Stage I (T1, N0, M0): The cancer is in the vulva or the perineum (the space between the rectum and the vagina) or both. The tumor has not spread to lymph nodes or distant sites.

Stage IA (T1a, N0, M0): These are stage I cancers with tumors that are 2 cm or less that have grown into the underlying tissue no deeper than 1 mm (about 1/25 inch).

Stage IB (T1b, N0, M0): These are stage I cancers that have invaded deeper than 1 mm and/or are larger than 2 cm.

Stage II (T2, N0, M0): The cancer has grown outside the vulva or perineum to the anus or lower third of the vagina or urethra (T2). It has not spread to lymph nodes (N0) or distant sites (M0). In FIGO, this grouping is T2/T3, N0, M0, but it is still stage II.

Stage IIIA (T1 or T2, N1a or N1b, M0): Cancer is in the vulva or perineum or both (T1) and may be growing into the anus, lower vagina, or lower urethra (T2). Either it has spread to a single nearby lymph node with the area of cancer spread 5 mm or greater in size (N1a); OR it has spread to 1 or 2 nearby lymph nodes with both areas of cancer spread less than 5 mm in size (N1b). It has not spread to distant sites (M0). In FIGO, this stage is also IIIA, but it is split into IIIAi and IIIAii

- **Stage IIIAi (T1 or T2, N1a, M0)**: The cancer is in the vulva or perineum and may be any size and growing into the anus, lower vagina, or lower urethra (T1 or T2). It has spread to a single lymph node with the area of spread 5 mm or greater in size (N1a). It has not spread to distant sites (M0).

- **Stage IIIAii (T1 or T2, N1b, M0)**: The cancer is in the vulva or perineum and may be any size and growing into the anus, lower vagina, or lower urethra (T1 or T2). It has spread to 1 or 2 lymph nodes with the areas of cancer spread less than 5 mm in size (N1b). It has not spread to distant sites (M0).

Stage IIIB (T1 or T2, N2a or N2b, M0): Cancer is in the vulva or perineum or both (T1) and may be growing into the anus, lower vagina, or lower urethra (T2). Either, the cancer has spread to 3 or more nearby lymph nodes, with all areas of cancer spread less than 5 mm in size (N2a); OR the cancer has spread to 2 or more lymph nodes with each area of spread 5 mm or greater in size (N2b). The cancer has not spread to distant sites (M0). In FIGO, this stage is also IIIB, but it is split into IIIBi and IIIBii.

- **Stage IIIBi (T1 or T2, N2a, M0)**: The cancer is in the vulva or perineum and may be any size and growing into the anus, lower vagina, or lower urethra (T1 or T2). The cancer has spread to 3 or more nearby lymph nodes, with all areas of cancer spread less than 5 mm in size (N2a). It has not spread to distant sites (M0).
- **Stage IIIBii (T1 or T2, N2b, M0):** The cancer is in the vulva or perineum and may be any size and growing into the anus, lower vagina, or lower urethra (T1 or T2). The cancer has spread to 2 or more lymph nodes with each area of spread 5 mm or greater in size (N2b). It has not spread to distant sites (M0).

**Stage IIIC (T1 or T2, N2c, M0):** Cancer is in the vulva or perineum or both (T1) and may be growing into the anus, lower vagina, or lower urethra (T2). The cancer has spread to nearby lymph nodes and has started growing through the outer covering of at least one of the lymph nodes (called extracapsular spread; N2c). The cancer has not spread to distant sites (M0). In FIGO, this stage is also called IIIC.

**Stage IVA:** Either of the following:

**T1 or T2, N3, M0:** Cancer is in the vulva or perineum or both (T1) and may be growing into the anus, vagina, or lower urethra (T2). Cancer spread to nearby lymph nodes has caused them to be stuck (fixed) to the underlying tissue or caused open sores (ulceration) (N3). It has not spread to distant sites. In FIGO, this stage is also called IVA.

**OR**

**T3, any N, M0:** The cancer has spread beyond nearby tissues to the bladder, rectum, pelvic bone, or upper part of the urethra (T3). It may or may not have spread to nearby lymph nodes (any N). It has not spread to distant sites (M0). In FIGO, this stage is also IVA.

**Stage IVB (any T, any N, M1):** Cancer has spread to distant organs or lymph nodes (M1). This is the most advanced stage of cancer. In FIGO, this stage is also IVB.

- **References**

See all references for Vulvar Cancer

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**Survival by Stage of Vulvar Cancer**
The 5-year survival rate refers to the percentage of patients who live at least 5 years after their cancer is diagnosed. Five-year survival rates are used to produce a standard way of discussing prognosis. Of course, many people live much longer than 5 years.

Relative survival rates assume that people will die of other causes and compare the observed survival with that expected for people without vulvar cancer. This is a more accurate way to describe the outlook for patients with a particular type and stage of cancer.

Keep in mind that 5-year survival rates are based on patients diagnosed and initially treated more than 5 years ago. Improvements in treatment often result in a more favorable outlook for women more recently diagnosed with vulvar cancer.

Survival rates are often based on previous outcomes of large numbers of people who had the disease, but they cannot predict what will happen in any particular person's case. Many other factors may affect a person's outlook, such as the type of vulvar cancer, the patient’s age and general health, the treatment received, and how well the cancer responds to treatment. Your doctor can tell you how the numbers below may apply to you and your particular situation.

The numbers below come from the National Cancer Institute’s SEER program. SEER does not list survival rates by FIGO (or AJCC) stage. Instead, it divides patients into 3 summary stages:

- Local: The cancer is only in the vulva, without spread to lymph nodes or nearby tissues. This is like stages I and II.
- Regional: The cancer has spread to nearby lymph nodes or tissues, but hasn’t spread to distant organs. This is like stages III and IVA.
- Distant: The cancer has spread to distant organs or tissues. This is like stage IVB.

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<th>Stage</th>
<th>Relative 5-Year Survival Rate</th>
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<td>Local</td>
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<tr>
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<td>54%</td>
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<tr>
<td>Distant</td>
<td>16%</td>
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References

See all references for Vulvar Cancer

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What Should You Ask Your Doctor About Vulvar Cancer?

It is important for you to have honest, open discussions with your cancer care team. They want to answer all of your questions, no matter how trivial you might think they are. Here are some questions to consider:

- What type of vulvar cancer do I have?
- Has my cancer spread beyond the vulva?
- What is the stage of my cancer and what does that mean?
- What treatments are appropriate for me? What do you recommend? Why?
- What should I do to be ready for treatment?
- What risks or side effects should I expect?
- Can anything be done to minimize my risks?
- Will I be able to have children after my treatment?
- Will I be able to enjoy normal sexual relations?
- What are the chances my cancer will recur (come back) with the treatments we have discussed?
- Should I follow a special diet?
- What is my expected prognosis, based on my cancer as you view it?
- What do I tell my children, husband, parents, and other family members?

In addition to these sample questions, be sure to write down some questions of your own. For instance, you might want specific information about anticipated recovery times so that you can plan your work schedule. Or you may want to ask about second opinions or about clinical trials for which you may qualify.

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.

- References
  See all references for Vulvar Cancer

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