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About Vaginal Cancer

Overview and Types

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

- [What Is Vaginal Cancer?](#)

Research and Statistics

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

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

What Is Vaginal 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 areas of the body. To learn more about how cancers start and spread, see [What Is Cancer?](#)¹

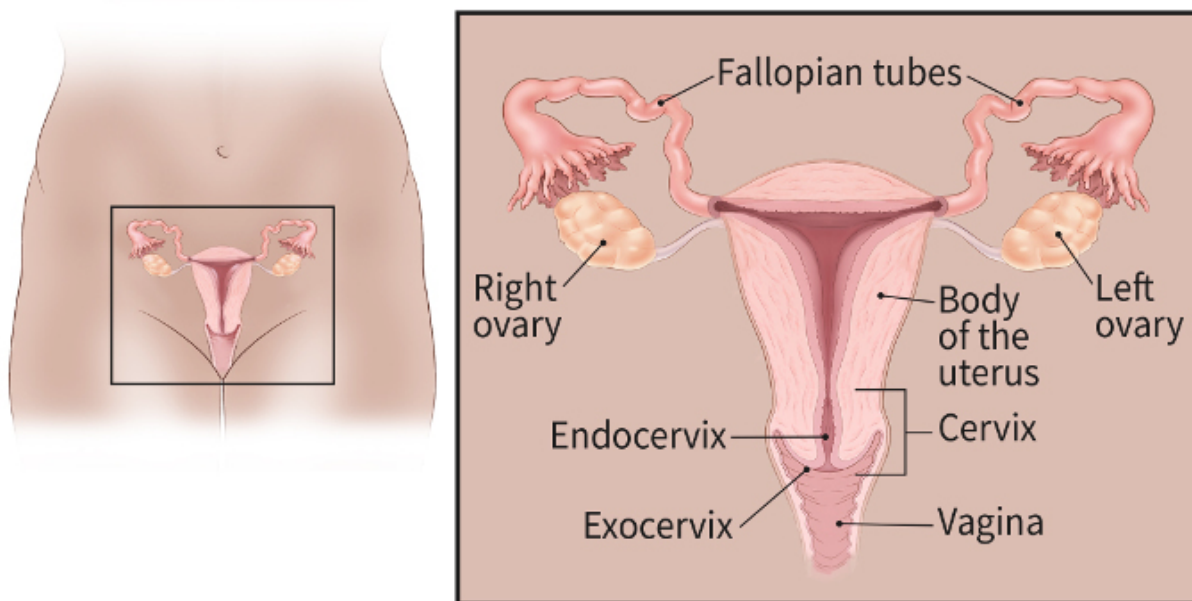
Vaginal Cancer starts in the vagina. There are many different types of vaginal cancer, but the most common is called squamous cell carcinoma. It starts in the lining of the vagina.

The vagina

The vagina starts at the cervix (the lower part of the uterus) and opens at the vulva (the external female genitals). The vagina is usually collapsed with its walls touching each other. The vaginal walls have many folds that help the vagina open and expand during sex or the birth of a baby.

Several different types of cells and tissues are found in the vagina:

- The lining of the vagina has a layer of flat cells called *squamous* cells. This layer of cells is also called *epithelium* or *epithelial lining* because squamous cells are a type of epithelial cell.
- The vaginal wall underneath the epithelium is made up of connective tissue, muscle, lymph vessels, and nerves.
- Glands near the opening of the vagina make mucus to keep the vaginal lining moist.



Female reproductive organs

VAIN (vaginal pre-cancer)

A pre-cancer is a condition where some cells look abnormal. These cell changes are not cancer, but could become cancer over time. *Vaginal intraepithelial neoplasia* or *VAIN* means that the changed cells are only found in the innermost surface layer of the

vagina.

VAIN is more common in women who have had their uterus removed (hysterectomy) and in those who were treated for cervical cancer or pre-cancer in the past.

There are 3 types of VAIN: VAIN1, VAIN2, and VAIN3. VAIN3 is the closest to a true cancer. In the past, the term *dysplasia* was used instead of VAIN. The types of dysplasia were referred to as mild, moderate, and severe, based on how close it was to a true cancer. This term is used much less now.

Low-grade VAIN (VAIN1) will sometimes go away on its own, but VAIN can sometimes lead to cancer if not treated. Higher-grade VAIN (VAIN2 or VAIN3) is usually treated right away.

Types of vaginal cancer

Though it's [quite rare](#), there are many types of vaginal cancer. Each type forms from a different type of cell in the vagina.

Squamous cell carcinoma

Nearly 9 out of 10 cases of vaginal cancer are *squamous cell carcinomas*. These cancers start in the squamous cells that make up the epithelial lining of the vagina. They're most common in the upper part of the vagina near the cervix. If not treated, they can grow deeper into and, over time, through the vaginal wall and spread to nearby tissues. They can also spread to other parts of the body, most often the lungs, but also the liver and bones.

Squamous cell cancers of the vagina often develop slowly. First, some of the normal cells of the vagina get pre-cancerous changes (VAIN). Then some of the pre-cancer cells turn into cancer cells. This process can take many years.

Adenocarcinoma

Cancers that start in gland cells are called *adenocarcinomas*. About 1 out of 10 cases of vaginal cancer are adenocarcinomas.

The most common type of vaginal adenocarcinoma is found in women older than 50. Another type, called *clear cell adenocarcinoma*, is more common in young women who were exposed to diethylstilbestrol (DES) in utero (when they were in their mother's womb). See [Risk Factors for Vaginal Cancer](#)² for more information on DES and clear

cell carcinoma.

Very rare vaginal cancers

Melanoma

Melanomas start in pigment-producing cells that give skin its color. These cancers usually are found on sun-exposed parts of the skin, but they can also form in the vagina or other internal organs. Fewer than 3 of every 100 cases of vaginal cancer are melanomas.

Melanoma tends to affect the lower or outer portion of the vagina. The tumors vary greatly in size, color, and growth pattern. More information on this can be found in [Melanoma Skin Cancer](#)³.

Sarcoma

Sarcomas are cancers that start in the cells of bones, muscles, or connective tissue. Fewer than 3 out of every 100 cases of vaginal cancer are sarcomas. These cancers form deep in the wall of the vagina, not on its surface.

There are several types of sarcomas. [Rhabdomyosarcoma](#)⁴ is the most common type of sarcoma that affects the vagina. It's most often found in children and is rare in adults. A sarcoma called *leiomyosarcoma* is seen more often in adults. It tends to occur in women older than 50.

Cancers that spread to the vagina

Cancers that start in the vagina are much less common than cancers that start in other organs (such as the cervix, uterus, rectum, or bladder) and then spread to the vagina. These cancers are named after the place where they started.

If a cancer involves both the cervix and vagina, it is considered a [cervical cancer](#)⁵. Likewise, if the cancer involves both the vulva and the vagina, it's considered a [vulvar cancer](#)⁶.

Hyperlinks

1. www.cancer.org/treatment/understanding-your-diagnosis/what-is-cancer.html
2. www.cancer.org/cancer/vaginal-cancer/causes-risks-prevention/risk-factors.html

3. www.cancer.org/cancer/melanoma-skin-cancer.html
4. www.cancer.org/cancer/rhabdomyosarcoma.html
5. www.cancer.org/cancer/cervical-cancer.html
6. www.cancer.org/cancer/vulvar-cancer.html

References

American Society of Clinical Oncology. Vaginal Cancer: Introduction. 08/2017. Accessed at www.cancer.net/cancer-types/vaginal-cancer/introduction on March 5, 2018.

Ishida H, Nagai T, Sato S, et al. Concomitant sentinel lymph node biopsy leading to abbreviated systematic lymphadenectomy in a patient with primary malignant melanoma of the vagina. *Springerplus*. 2015;4:102.

Marcos-Figueiredo P, Moreira DSDC, Morim MG, Pereira JL, Salgado LS. When an Unexpected Diagnosis Occurs: a Vaginal Premenopausal Sarcoma. *Rev Bras Ginecol Obstet*. 2018;40(1):47-52.

National Cancer Institute. Vaginal Cancer Treatment (PDQ®)—Health Professional Version. February 6, 2018. Accessed at www.cancer.gov/types/vaginal/hp/vaginal-treatment-pdq on March 5, 2018.

Saito T, Tabata T, Ikushima H, et al. Japan Society of Gynecologic Oncology guidelines 2015 for the treatment of vulvar cancer and vaginal cancer. *Int J Clin Oncol*. 2017 Nov 20.

Society of Gynecologic Oncology. What is Vaginal Cancer? Accessed at www.sgo.org/vaginal-cancer-general-information/ on March 5, 2018.

See all references for Vaginal Cancer (www.cancer.org/cancer/vaginal-cancer/references.html)

Last Revised: March 19, 2018

Key Statistics for Vaginal Cancer

Vaginal cancer is rare. It accounts for 1% to 2% of cancers in the female genital tract, and a very small portion of cancers overall.

Vaginal cancer occurs mainly in older women. The average age at the time of diagnosis is 67.

For survival statistics related to vaginal cancer, see [Survival Rates for Vaginal Cancer](#)¹.

Visit the American Cancer Society's [Cancer Statistics Center](#)² for more key statistics.

Hyperlinks

1. www.cancer.org/cancer/vaginal-cancer/detection-diagnosis-staging/survival-rates.html
2. cancerstatisticscenter.cancer.org/

References

Howlader N, Noone AM, 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, 1975-2017, National Cancer Institute. Bethesda, MD, https://seer.cancer.gov/csr/1975_2017/, based on November 2019 SEER data submission, posted to the SEER web site, April 2020.

Jhingran A, Russell AH, Seiden MV, et al. Chapter 84: Cancers of the Cervix, Vulva, and Vagina. In: Neiderhuber JE, Armitage JO, Doroshow JH, Kastan MB, Tepper JE, eds. *Abeloff's Clinical Oncology*. 6th ed. Philadelphia, PA. Elsevier; 2020.

See all references for Vaginal Cancer (www.cancer.org/cancer/vaginal-cancer/references.html)

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What's New in Vaginal Cancer Research?

Because vaginal cancer is rare, it's been hard to study it well. Most experts agree that treatment in a [clinical trial](#)¹ should be considered for any [type](#) or [stage](#)² of vaginal cancer. This way women can get the best treatment available now and may also get the treatments that are thought to be even better. Many of the new and promising treatments discussed here are only available in clinical trials.

Gene changes

Scientists are learning more about how certain [genes](#)³ called *oncogenes* and *tumor suppressor genes* control cell growth and how changes in these genes cause normal vaginal cells to become cancer. They're also studying how the gene changes caused by [HPV](#)⁴ might be used to target treatment on the cancer cells.

Radiation therapy

Studies are under way to determine the best way to use [external beam therapy](#)⁵ and [brachytherapy](#)⁶ to treat vaginal cancer and limit damage to normal tissue. Doctors are also looking for ways to use more focused radiation along with other treatments, like [immunotherapy](#)⁷, to treat advanced vaginal cancers.

Reconstructive surgery

Surgeons are looking for new and better ways to repair the vagina after [radical surgery](#)⁸.

Chemotherapy

Many clinical trials are looking for better drugs to treat vaginal cancer, as well as if combining [chemotherapy](#)⁹ with radiation therapy is better than radiation therapy alone.

Side effect management

The vaginal walls can become stiff and tight after [radiation](#)¹⁰. Researchers are looking for ways to prevent this, limit it, and better treat it.

Removing [lymph nodes](#)¹¹ near the cancer can lead to a life-long problem of swelling in the legs called [lymphedema](#)¹². Studies are being done to see if sentinel lymph node mapping (a process used to identify lymph nodes with cancer) might work for women with vaginal cancer.

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/clinical-trials.html
2. www.cancer.org/cancer/vaginal-cancer/detection-diagnosis-staging/staging.html
3. www.cancer.org/cancer/cancer-causes/genetics/genes-and-cancer.html
4. www.cancer.org/cancer/cancer-causes/infectious-agents/hpv.html
5. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation/external-beam-radiation-therapy.html
6. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation/internal-radiation-therapy-brachytherapy.html
7. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/immunotherapy.html
8. www.cancer.org/cancer/vaginal-cancer/treating/surgery.html
9. www.cancer.org/cancer/vaginal-cancer/treating/chemotherapy.html
10. www.cancer.org/cancer/vaginal-cancer/treating/radiation-therapy.html
11. www.cancer.org/treatment/understanding-your-diagnosis/lymph-nodes-and-cancer.html
12. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/lymphedema.html

References

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