About Vaginal Cancer

Overview and Types

If you have 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.

- What Are the Key Statistics About Vaginal Cancer?
- What’s New in Vaginal Cancer Research and Treatment?

What Is Vaginal Cancer?

The vagina

The vagina is a 3- to 4-inch (7½- to 10-cm) tube. It’s sometimes called the birth canal. The vagina goes from the cervix (the lower part of the uterus) to open up at the vulva (the external female genitals). The vagina is lined by a layer of flat cells called squamous cells. This layer of cells is also called epithelium (or epithelial lining) because it is formed by epithelial cells.

The vaginal wall underneath the epithelium is made up of connective tissue, muscle tissue, lymph vessels, and nerves. 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 sexual intercourse or the birth of a baby. Glands near the opening of the
vagina secrete mucus to keep the vaginal lining moist.

Types of 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?

There are several types of vaginal cancer.

Squamous cell carcinoma
About 70 of every 100 cases of vaginal cancer are *squamous cell carcinomas*. These cancers begin in the squamous cells that make up the epithelial lining of the vagina. These cancers are more common in the upper area of the vagina near the cervix. Squamous cell cancers of the vagina often develop slowly. First, some of the normal cells of the vagina get pre-cancerous changes. Then some of the pre-cancer cells turn into cancer cells. This process can take many years.

The medical term most often used for this pre-cancerous condition is *vaginal intraepithelial neoplasia* (VAIN). “Intraepithelial” means that the abnormal cells are only found in the surface layer of the vaginal skin (epithelium). There are 3 types of VAIN: VAIN1, VAIN2, and VAIN3, with 3 indicating furthest progression toward a true cancer. VAIN is more common in women who have had their uterus removed (hysterectomy) and in those who were previously treated for cervical cancer or pre-cancer.

In the past, the term *dysplasia* was used instead of VAIN. This term is used much less now. When talking about dysplasia, there is also a range of increasing progress toward cancer – first, mild dysplasia; next, moderate dysplasia; and then severe dysplasia.

**Adenocarcinoma**

Cancers that begin in gland cells are called *adenocarcinomas*. About 15 of every 100 cases of vaginal cancer are adenocarcinomas. The usual type of vaginal adenocarcinoma typically develops in women older than 50. One type, called *clear cell adenocarcinoma*, occurs more often in young women who were exposed to diethylstilbestrol (DES) in utero (when they were in their mother’s womb). (See [What are the risk factors for vaginal cancer?](#) for more information on DES and clear cell carcinoma.)

**Melanoma**

Melanomas develop from pigment-producing cells that give skin its color. These cancers usually are found on sun-exposed areas of the skin but can form in the vagina or other internal organs. About 9 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 about melanoma can be found in [Melanoma Skin Cancer](#).

**Sarcoma**

Sarcomas are cancers that begins in the cells of bones, muscles, or connective tissue. Up to 4 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 vaginal sarcomas. *Rhabdomyosarcoma* is the most common type of vaginal sarcoma. 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.

**Other cancers**

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. Also, a cancer that involves both the cervix and vagina is considered a cervical cancer. Likewise, if the cancer involves both the vulva and the vagina, it’s considered a vulvar cancer.

**This document refers only to cancers that start in the vagina, also known as primary vaginal cancers.**

- References
- See all references for Vaginal Cancer

Last Medical Review: June 17, 2014 Last Revised: February 16, 2016

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**What Are the Key Statistics About Vaginal Cancer?**

Vaginal cancer is rare. Only about 1 of every 1,100 women will develop vaginal cancer in her lifetime. The American Cancer Society’s estimates for vaginal cancer in the United States for 2017 are:

- About 4,810 new cases will be diagnosed.
- About 1,240 women will die of this cancer.

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

- References
What’s New in Vaginal Cancer Research and Treatment?

Research is under way to find new ways to prevent and treat cancer of the vagina. There are some promising new developments.

**Oncogenes and tumor suppressor genes**

Scientists are learning more about how certain genes called *oncogenes* and *tumor suppressor genes* control cell growth and how changes in these genes cause normal vaginal cells to become cancerous. The ultimate goal of this research is gene therapy, which replaces the damaged genes in cancer cells with normal genes to stop the abnormal behavior of these cells. For example, scientists have learned that there’s an abnormality of chromosome 3 in many vaginal cancers. Better understanding of how this may play a role in the development of the cancer might lead to better treatment.

**HPV vaccines**

Gardasil, a vaccine against HPV, has been shown to reduce the risk of vaginal cancer. Cervarix, the other HPV vaccine currently available, might also reduce vaginal cancer risk, but this has not been proven.

**Radiation therapy**

Studies are under way to determine the best way to combine external beam therapy and brachytherapy to treat the cancer and limit damage to normal tissue.
Reconstructive surgery

Surgeons are developing new operations for repairing the vagina after radical surgery.

Chemotherapy

Doctors have found that vaginal cancer does respond to certain types of chemotherapy. Clinical trials will be needed to find out if combining chemotherapy with radiation therapy is better than radiation therapy alone.

- References

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