

Cervical cancer: What it is, symptoms and treatment

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Cervical cancer is a diagnosis no woman wants to receive, and navigating the disease can be challenging.

A type of cancer that starts in the cells of the cervix, this cancer usually develops slowly. The cervix is the lower, narrow end of the uterus that connects to the vagina.

Before cancer appears in the cervix, the cells of the cervix go through changes known as dysplasia, which happens when abnormal cells appear in the cervical tissue. If not removed, the abnormal cells may become cancer cells that grow and spread into the cervix and surrounding areas. Cervical cancers are named after the type of cell where the cancer started. The two main types are:

- Squamous cell carcinoma: Most cervical cancers are squamous cell carcinomas. These cancers develop from cells lining the outer part of the cervix.
- Cervical adenocarcinoma: These cancers begin in the glandular cells that line the cervical canal.

Cervical cancer risk factors

Almost all cervical cancers are caused by human papillomavirus (HPV). HPV is a common virus that is spread by sexual intercourse or skin-to-skin contact and can be categorized as "non-oncogenic" (wart-causing) or "oncogenic" (cancer-causing). Most people who become infected with HPV do not know they have it. Usually, the body's [immune system](#) gets rid of the HPV infection naturally, but when the immune system can't get rid of an oncogenic type, it can turn normal cells into abnormal cells and then cancer.

People ages 9 to 45 can get the HPV vaccine to protect themselves against HPVs that cause genital warts and cancer. It's recommended that

children get the vaccine at age 11 or 12, so they're fully protected years before they become sexually active. It is given in a series of shots.

Other risk factors for cervical cancer include:

- Having a weakened immune system due to immune disorders or use of immunosuppressive medications, including after organ transplant
- Being economically disadvantaged
- Smoking
- Exposure to diethylstilbestrol (DES)—People whose mothers were given this drug during pregnancy to prevent miscarriage have an increased risk of developing a rare type of cancer of the cervix or vagina (clear cell carcinoma)
- People younger than 20 rarely develop cervical cancer. The risk begins to increase between the late teens and mid 30s

Cervical cancer symptoms

- Increased vaginal discharge that has a strong odor
- Vaginal bleeding after sex, between periods or after menopause
- Painful urination or blood in the urine
- Pain during sexual intercourse
- Pelvic and/or back pain

Cervical cancer treatments

The treatment of cervical cancer varies based on several factors, including the stage of cancer, how far it has spread, possible side effects and the patient's overall health, which are all weighed with every patient at [Duke Cancer Center](#). The National Comprehensive Cancer Network (NCCN) guidelines were developed by doctors using the latest research

and include recommendations for treatment. Common methods are:

- **Surgery:** This is often the main treatment for early-stage cervical cancer. It involves the removal of a portion or all of the cervix and some surrounding healthy tissue. For cancer that has not spread beyond the cervix, these procedures are often used:
 - Cone biopsy—The procedure involves removing a cone-shaped section of the cervix. It is a recommended treatment option for small cervical cancers.
 - Trachelectomy—This is surgery to remove the cervix. Patients who want to preserve their fertility consider this option because the uterus and ovaries are left intact. Sometimes additional tissue is removed with the cervix including part of the vagina, along with the parametrium (the connective tissue that surrounds the cervix). This is called a radical trachelectomy.
 - Hysterectomy—Surgery is conducted to remove the uterus and cervix. In certain hysterectomy cases, part of the vagina, along with the parametrium are removed with the uterus and cervix. This is called a radical hysterectomy.
 - Lymph nodes—Lymph nodes are sometimes removed when the other procedures above are performed. Lymph nodes removed may include pelvic lymph nodes with or without para-aortic (lymph nodes by the aorta) lymph nodes. Your doctor may also talk to you about sentinel lymph node biopsy. For sentinel lymph node biopsy, a special dye is injected into the cervix and helps the surgeon find the first few lymph nodes where a cancer can spread.
- **Radiation therapy:** This uses high-energy waves to kill cancer cells. It is recommended for most locally advanced cervical cancers. These cancers have spread past the [cervix](#) but have not

reached the liver, lungs or bones. The main types of radiation therapy are:

- External beam radiation therapy (EBRT)—During this treatment a machine aims radiation at the cancer site in small doses. The radiation passes through the skin to reach the tumor and nearby [lymph nodes](#).
- Chemoradiation—This occurs when EBRT and chemotherapy are given at the same time.
- Internal radiation therapy (brachytherapy)—The procedure involves treatment with radioactive material placed inside the body. A high dose of radiation is targeted at the tumor, while limiting the amount delivered to surrounding healthy tissue.
- **Chemotherapy:** This is the most commonly used systemic therapy for cervical cancer. It is an option for patients with advanced, recurrent or metastatic cervical cancer. A drug is given intravenously and travels through the bloodstream to stop the growth of cancer cells by killing the cells, or by stopping them from dividing.
- **Immunotherapy:** This is the use of medicines to boost a person's own immune system to recognize and destroy [cancer cells](#) more effectively. Immunotherapy typically works to block specific proteins on the cancer cell to keep it from growing.
- **Anti-angiogenic therapy:** This prevents the growth of new blood vessels that bring oxygen and nutrients to the cancer.

Living with cervical cancer

There are palliative care methods available to help manage everyday pain while living with cervical cancer. Palliative care focuses on improving how you feel during treatment by managing symptoms, and supporting patients and their families with other non-medical needs. This can include medication, nutritional changes, relaxation techniques and

other therapies. Many patients also benefit from talking with a social worker, counselor or spiritual advisor and by participating in support groups.

In 2018, the World Health Organization (WHO) announced a call for action to eliminate cervical cancer worldwide. Nearly 90% of deaths that year occurred in low- and [middle-income countries](#) because access to [public health services](#) was limited, and vaccination, screening and treatment for the disease was not widely implemented. That's why in 2020, the WHO adopted the global strategy for cervical elimination. To eliminate [cervical cancer](#) within the next century, all countries need to reach the following targets by 2030:

- Vaccination: 90% of girls fully vaccinated with the HPV vaccine by the age of 15
- Screening: 70% of women screened using a high-performance test by the age of 35, and again by the age of 45
- Treatment: 90% of women with pre-cancer treated and 90% of women with invasive cancer managed

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