

Cervical Cancer

What is cervical cancer?

Cervical cancer develops when cells grow out of control in the uterine cervix. The cervix is the lower part of the uterus (womb), connecting the uterus to the vagina. The most common type of cervical cancer is squamous cell carcinoma. Almost all cases of cervical cancer are caused by human papillomavirus (HPV).

Women with HIV, especially those with advanced immune suppression, are more likely to develop invasive cervical cancer, and it is considered an AIDS-defining illness.

When detected early, treatment is generally effective, and many people can be cured, but more advanced disease is harder to treat.

Who gets cervical cancer?

Cervical cancer is the one of the most common malignancies in women worldwide, and it is a leading cause of cancer-related death for women in developing countries. In the United States, however, cervical cancer is relatively uncommon thanks to routine screening with HPV tests and Pap smears, which can detect abnormal precancerous cells and allow for early treatment. Wider use of the HPV vaccine has also contributed to the decline. Cervical cancer is typically diagnosed in middle-aged women, and it is seldom seen in women younger than age 20.

What are the risk factors for cervical cancer?

The main cause of cervical cancer is HPV infection. There are more than 100 types of HPV, but only about a dozen types are considered high-risk, or cancer-causing. Two types in particular, 16 and 18, are responsible for about a majority of all cervical cancers. HPV is commonly spread through sexual contact, but this can also occur through nonsexual skin-to-skin contact. People with HIV are more likely to carry multiple types of HIV and less likely to clear the infection.

Cervical cancer and other cancers linked to HPV infection can be prevented with vaccines. A vaccine that protects against nine HPV types is recommended for adolescents at ages 11 or 12, and it is [approved for women and men up to age 45](#). Regular HPV screening and Pap tests can detect abnormal changes in cervical cells, allowing for treatment that prevents progression to invasive cancer.

Other risk factors for cervical cancer include immune suppression, smoking, having chlamydia (a sexually transmitted infection), giving birth multiple times, long-term oral contraceptive use and a family history of cervical cancer.

What are the symptoms of cervical cancer?

Cervical cancer often does not cause any signs or symptoms during its early stages. Many women with cervical disease do not develop symptoms until later stages, after the cancer grows into surrounding tissues and organs, a process known as metastasis.

Symptoms that might suggest cervical cancer but could also be due to other health conditions should be checked out by a health care provider, including:

- Increased vaginal discharge
- A change in the color or odor of vaginal discharge
- Vaginal bleeding between periods
- Vaginal bleeding after menopause
- Pain during sexual intercourse
- Bleeding after sex
- Difficulty urinating or loss of bladder control

Other symptoms that may occur with more advanced cervical cancer include:

- Blood in the urine or stool
- Constipation
- Leaking of urine or feces from the vagina
- Swelling in the legs
- Low red blood cell count (anemia)
- Loss of appetite and weight loss

How is cervical cancer diagnosed?

Early detection and treatment of cervical cancer increases the likelihood of long-term survival. Routine cervical screening involves Pap smears and testing for HPV. In a Pap test, a clinician collects a small sample of cells from the cervix to examine in a laboratory for abnormal changes.

If a Pap test shows abnormal cell growth, a detailed examination of the cervix may be done using a lighted magnifying device called a colposcope to look for abnormal tissue—known as dysplasia or neoplasia—that could progress to invasive cancer. In some cases, precancerous tissue can be

removed or destroyed before cancer develops. A biopsy, or small tissue sample, may be taken for further laboratory examination. If cancer is more advanced, imaging tests including X-rays, computed tomography (CT), positron emission tomography (PET) or MRI scans may be done to see how much it has spread.

How is cervical cancer treated?

Treatment for cervical cancer depends on how advanced the cancer is when it is detected and whether it has spread to nearby lymph nodes and other parts of the body.

Precancer treatment: Areas of abnormal cells (dysplasia or neoplasia) may be cut out or destroyed using lasers, electricity, freezing (cryotherapy) or topical medications before they progress to cancer.

Surgery: A hysterectomy, or removal of the uterus, may be an option for early-stage cervical cancer that has not spread. A radical hysterectomy, or removal of the uterus, part of the vagina and local lymph nodes, may be done in more advanced cases. After a hysterectomy a woman cannot become pregnant.

Radiation therapy: Radiation may be used to kill cancer cells that remain after surgery or to shrink tumors that cannot be surgically removed.

Chemotherapy: Traditional chemotherapy works by killing fast-growing cells, including cancer cells. It can also destroy rapidly dividing healthy cells, leading to side effects such as nausea and hair loss.

Targeted therapy: Targeted drugs work against cancers with specific characteristics. For example, they may interfere with signaling pathways that regulate cell growth. Targeted treatment is often better tolerated than chemotherapy, but cancer may develop resistance over time.

Immunotherapy: Immunotherapy helps the immune system fight cancer. For example, some tumors can turn off immune responses against them, and drugs known as checkpoint inhibitors can restore T cells' ability to recognize and destroy cancer cells.

For more information on cervical cancer, visit:

[American Cancer Society](#)

[National Cancer Institute](#)

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