



Cervical Cancer

Cervical cancer can arise from abnormal cells located in the cervix. Most cervical cancers are a result of a previous infection with the human papilloma virus (HPV), which is spread through sexual intercourse.

Your doctor may perform a pap smear or a colposcopy to help diagnose your condition. If cancer is detected, your doctor may use body CT, body MRI, chest x-ray or PET scan to help determine whether the cancer has spread. Depending on its extent, surgery, radiation therapy, cryotherapy or chemotherapy may be performed.



What is cervical cancer?

Cervical cancer can arise from abnormal cells located in the cervix, the lower part of the uterus that connects the uterus with the vagina. Most cervical cancers are a result of a previous infection with the human papilloma virus, or HPV. HPV is an infectious virus that is spread through intercourse. HPV can cause pre-cancerous changes in the cells of the cervix, and may result in the development of cervical cancer. While cervical cancer is generally a slow-developing disease, if not detected early, it may spread to other parts of the body such as the lining of the abdomen, liver, bladder or lungs.

Cervical cancer may cause no symptoms or include symptoms such as:

- Vaginal bleeding
- Abnormal periods
- Pelvic pain
- Pain during intercourse
- Abnormal vaginal discharge

There are ways to prevent cervical cancer. For children and young adults, a vaccine against the strains of

HPV, most likely to cause cervical cancer, is now available. Ask your doctor if you or your family member should receive this vaccination. The vaccine is not given as a treatment for someone who already has HPV or already has a diagnosis of cervical cancer.

How is cervical cancer diagnosed and evaluated?

In order to diagnose cervical cancer, your doctor may perform:

- **Pap smear:** This examination is performed by scraping cells from the cervix. The cells are then sent to a lab where they are analyzed in order to detect any abnormalities.
- **Colposcopy:** This examination uses a low-powered microscope to view the cervix so your doctor can locate any abnormalities and biopsy the area. However, a biopsy may be performed without a colposcopy.

If cancer has been detected, your doctor will evaluate its local extent to determine whether surgical removal is a suitable option. Imaging is often useful to determine if the cancer has spread. The following imaging tests may be performed:

- **Body CT scan:** This procedure combines special x-ray equipment with sophisticated computers to produce multiple images or pictures of the inside of the body. For example, a CT scan of the chest is often used to find out whether the cancer has spread to the lungs.
- **Body MRI:** This imaging exam uses a powerful magnetic field, radio frequency pulses and a computer to produce detailed pictures of the body.
- **Chest x-ray:** This exam produces plain x-ray images of the lungs.
- **PET scan:** This nuclear medicine imaging exam uses a small amount of radioactive material to help determine the extent of cervical cancer involvement. PET scans can be superimposed with CT or MRI to produce special views that can lead to more precise or accurate diagnoses.

If cancer is detected, your doctor may also order a cystoscopy (optical examination of the bladder) or proctoscopy (optical examination of the tail end of the bowel) to make sure those organs are not affected by the disease. A cystoscopy uses a special camera at the end of a tube that allows the doctor to see inside the bladder. A proctoscopy uses a special camera at the end of a tube that allows the doctor to see inside the rectum.

How is cervical cancer treated?

Depending on the stage (extent) of cancer, one or more of the following treatments may be performed:

- **Hysterectomy:** This is the surgical removal of the cervix and uterus. Removing the uterus and cervix is often the most common way to cure cervical cancer in its early stages. However, once the uterus is removed, a woman is no longer able to become pregnant.

- **Radiation therapy:** Radiation may be given after surgery or instead of surgery and is the preferred treatment for any but the earliest stages of disease. This involves external beam radiation, which delivers therapy from outside the body. This is often combined with brachytherapy, or internal radiation, which involves placing a radioactive material directly inside or next to the tumor. It also allows a physician to use a higher total dose of radiation to treat a smaller area and in a shorter time than is possible with external beam radiation treatment alone.
- **Chemotherapy:** In most cases, chemotherapy may be used as supplemental treatment, usually combined with radiation. Chemotherapy is often given to improve the results compared to radiation alone, as it may improve the chances of successful treatment and decrease the chance of the tumor returning elsewhere in the body. It may also be used to decrease the disease burden elsewhere in the body if it cannot be removed surgically or to treat disease that has recurred. It is usually given over time and alternated with periods of no treatment.

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