



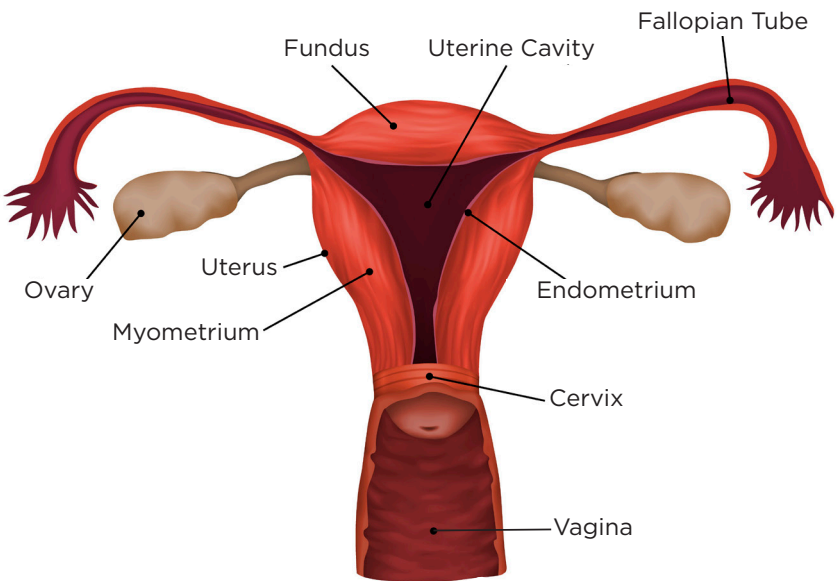
## **Cervical Cancer**

**SANFORD**<sup>®</sup>  
CANCER CENTER

# Cervical Cancer Is a Disease in Which Malignant (Cancer) Cells Form In the Tissues of the Cervix

The cervix is the lower, narrow end of the uterus (the hollow, pear-shaped organ where a fetus grows). The cervix leads from the uterus to the vagina (birth canal).

Cervical cancer usually develops slowly over time. Before cancer appears in the cervix, the cells of the cervix go through changes known as dysplasia, in which abnormal cells begin to appear in the cervical tissue. Over time, the abnormal cells may become cancer cells and start to grow and spread more deeply into the cervix and to surrounding areas.



## Human Papillomavirus (HPV) Infection Is the Major Risk Factor for Cervical Cancer

Anything that increases your chance of getting a disease is called a risk factor. Having a risk factor does not mean that you will get cancer; not having risk factors does not mean that you will not get cancer. Risk factors for cervical cancer include the following:

- Being infected with human papillomavirus (HPV). This is the most important risk factor for cervical cancer
- Being exposed to the drug DES (diethylstilbestrol) while in the mother's womb

In women who are infected with HPV, the following risk factors add to the increased risk of cervical cancer:

- Giving birth to many children
- Smoking cigarettes
- Using oral contraceptives (“the Pill”) for a long time

There are also risk factors that increase the risk of HPV infection:

- Having a weakened immune system caused by immunosuppression. Immunosuppression weakens the body's ability to fight infections and other diseases. The body's ability to fight HPV infection may be lowered by long-term immunosuppression from:
  - Being infected with human immunodeficiency virus (HIV)
  - Taking medicine to help prevent organ rejection after a transplant
- Being sexually active at a young age
- Having many sexual partners

## **There Are Usually No Signs or Symptoms of Early Cervical Cancer but It Can Be Detected Early With Regular Check-UPS**

Early cervical cancer may not cause signs or symptoms. Women should have regular check-ups, including tests to check for human papillomavirus (HPV) or abnormal cells in the cervix. The prognosis (chance of recovery) is better when the cancer is found early.

## **Signs and Symptoms of Cervical Cancer Include Vaginal Bleeding and Pelvic Pain**

These and other signs and symptoms may be caused by cervical cancer or by other conditions:

- Vaginal bleeding (including bleeding after sexual intercourse)
- Unusual vaginal discharge
- Pelvic pain
- Pain during sexual intercourse

## **Cervical Cancer Is Diagnosed With Some of the Following**

**Physical exam and history**

**Pelvic exam:** An exam of the vagina, cervix, uterus, fallopian tubes, ovaries, and rectum.

**Pap test:** A procedure to collect cells from the surface of the cervix and vagina. This procedure is also called a Pap smear.

**Human papillomavirus (HPV) test:** Cells collected during a Pap test from the cervix to find out if an HPV infection is present which can be linked to cervical cancer.

**Endocervical curettage:** A procedure to collect cells or tissue from the cervical canal using a curette (spoon-shaped instrument). Tissue samples are taken and checked under a microscope for signs of cancer. This procedure is sometimes done at the same time as a colposcopy.

**Colposcopy:** A procedure in which a colposcope (a lighted, magnifying instrument) is used to check the vagina and cervix for abnormal areas. Tissue samples may be taken and sent to the lab for signs of cancer.

**Biopsy:** A tissue sample will be taken and viewed under a microscope by a pathologist to check for signs of cancer. A biopsy showing the type of cancer is required before treatment decisions are made.

**Cold-knife conization:** A surgical procedure that uses a scalpel (sharp knife) to remove abnormal tissue or cancer.

**Loop electrosurgical excision procedure (LEEP):** A surgical procedure that uses electrical current passed through a thin wire loop as a knife to remove abnormal tissue or cancer.

## **After Cervical Cancer Has Been Diagnosed, Tests May Be Done to Find Out if Cancer Cells Have Spread Within the Cervix or to Other Parts of the Body**

Diagnostic testing is used to find out if cancer has spread within the cervix or to other parts of the body. The information gathered determines the stage of the disease. It is important to know the stage in order to plan treatment.

The following tests and procedures may be used in the staging process:

**CT scan (CAT scan):** A procedure that makes a series of detailed pictures of areas inside the body, taken from different angles. The pictures are made by a computer linked to an x-ray machine. A dye may be injected into a vein or swallowed to help the organs or tissues show up more clearly. This procedure is also called computed tomography, computerized tomography, or computerized axial tomography.

**PET scan (positron emission tomography scan):** A procedure to find cancer cells in the body. A small amount of radioactive glucose (sugar) is injected into a vein. The PET scanner rotates around the body and makes a picture of where glucose is being used in the body. Cancer cells show up brighter in the picture because they are more active and take up more glucose than normal cells do.

**MRI (magnetic resonance imaging):** A procedure that uses a magnet, radio waves, and a computer to make a series of detailed pictures of areas inside the body. This procedure is also called nuclear magnetic resonance imaging (NMRI).

**Cystoscopy:** A procedure to look inside the bladder and urethra to check for areas that are not normal. A cystoscope is inserted through the urethra into the bladder. A cystoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue samples, which are checked under a microscope for signs of cancer.

### **Certain Factors Affect Prognosis (Chance of Recovery) and Treatment Options**

The prognosis (chance of recovery) depends on the following:

- The stage of the cancer (how far the cancer has spread)
- The type of cervical cancer
- Your age and general health
- Whether the cancer has just been diagnosed or has recurred (come back)

Treatment options depend on the following:

- The stage of the cancer
- The type of cervical cancer
- Your desire to have children
- Your age

### **There Are Three Ways That Cancer Spreads in the Body**

Cancer can spread through tissue, the lymph system, and the blood:

- **Tissue:** The cancer spreads from where it began by growing into nearby areas.

- **Lymph system:** The cancer spreads from where it began by getting into the lymph system. The cancer travels through the lymph vessels to other parts of the body.
- **Blood:** The cancer spreads from where it began by getting into the blood. The cancer travels through the blood vessels to other parts of the body.

When cancer spreads to another part of the body, it is called metastasis. Cancer cells break away from where they began (the primary tumor) and travel through the lymph system or blood.

The metastatic tumor is the same type of cancer as the primary tumor. For example, if cervical cancer spreads to the lung, the cancer cells in the lung are actually cervical cancer cells. The disease is metastatic cervical cancer, not lung cancer.

## The Following Stages Are Used for Cervical Cancer

### **Carcinoma in Situ (Stage 0)**

In carcinoma in situ (stage 0), cells that are not normal are found in the innermost lining of the cervix. These cells may become cancer and spread into nearby normal tissue.

### **Stage I**

In stage I, cancer is found in the cervix only. Stage I is divided into stages IA and IB, based on the amount of cancer that is found.

### **Stage II (2)**

In stage II, cancer has spread beyond the uterus but not onto the pelvic wall (the tissues that line the part of the body between the hips) or to the lower third of the vagina. Stage II is divided into stages IIA and IIB, based on how far the cancer has spread.

### **Stage III (3)**

In stage III, cancer has spread to the lower third of the vagina, and/or onto the pelvic wall, and/or has caused kidney problems. Stage III is divided into stages IIIA and IIIB, based on how far the cancer has spread.

## **Stage IV (4)**

In stage IV, cancer has spread beyond the pelvis, or can be seen in the lining of the bladder and/or rectum, or has spread to other parts of the body. Stage IV is divided into stages IVA and IVB, based on where the cancer has spread.

- **Stage IVA:** Cancer has spread to nearby organs, such as the bladder or rectum.
- **Stage IVB:** Cancer has spread to other parts of the body, such as the liver, lungs, bones, or distant lymph nodes.

## **Recurrent Cervical Cancer**

Recurrent cervical cancer is cancer that has recurred (come back) after it has been treated. The cancer may come back in the cervix or in other parts of the body.

## **There Are Different Types of Treatment for Those With Cervical Cancer**

Different types of treatment including clinical trials may be available for those with cervical cancer. Your treatment will be based on expert guidelines and may be discussed by a specialized team.

## **Types of Standard Treatment Are Used**

### **Surgery**

Surgery (removing the cancer in an operation) is sometimes used to treat cervical cancer.

### **Radiation Therapy**

Radiation therapy is a cancer treatment that uses high-energy x-rays or other types of radiation to kill cancer cells or keep them from growing. There are two types of radiation therapy:

- External radiation therapy uses a machine outside the body to send radiation toward the cancer. Certain ways of giving radiation therapy can help keep radiation from damaging nearby healthy tissue. This type of radiation therapy includes the following:



- Intensity-modulated radiation therapy (IMRT): IMRT is a type of 3-dimensional (3-D) radiation therapy that uses a computer to make pictures of the size and shape of the tumor. Thin beams of radiation of different intensities (strengths) are aimed at the tumor from many angles.
- Internal radiation therapy uses a radioactive substance sealed in needles, seeds, wires, or catheters that are placed directly into or near the cancer.

The way radiation therapy is given depends on the type and stage of the cancer being treated. Radiation may also be used to relieve symptoms and improve quality of life.

## **Chemotherapy**

Chemotherapy is a cancer treatment that uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping them from dividing. The way the chemotherapy is given depends on the type and stage of the cancer being treated. Chemotherapy may be given with radiation at a low dose. When this is part of the treatment plan, it is called chemo sensitization (enhancer).

## **Targeted Therapy**

Targeted therapy is a type of treatment that uses drugs or other substances to identify and attack specific cancer cells without harming normal cells.

## **Treatment for Cervical Cancer During Pregnancy**

Treatment for cervical cancer during pregnancy depends on the stage of the cancer, if the cancer is slow growing or fast growing, and how long you have been pregnant.

A biopsy and imaging tests may be done to determine the stage of the disease.

## **Follow-up Tests May Be Needed**

After treatment is completed, you will need regular check-ups. Your doctor will advise you based on current guidelines.

## Support

Support is available for coping with changes that may have happened as a result of cancer treatment. Your healthcare team can offer ideas as well as a plan of care for long-term follow-up.

## Clinical Trials

Clinical trials are done to find out if new cancer treatments are safe and effective or better than the standard treatment.

People who take part in a clinical trial may receive:

- The standard treatment alone or
- The standard treatment plus the new treatment being studied

Taking part in a clinical trial helps improve the way cancer will be treated in the future. Even when clinical trials do not lead to effective new treatments, they often answer important questions and help move research forward.

Some clinical trials only include people who have not yet received treatment. Other trials test treatments for those whose cancer has not gotten better. There are also clinical trials that test new ways to stop cancer from coming back or reduce the side effects of cancer treatment.

Many of today's standard treatments for cancer are based on earlier clinical trials. **Ask if there is a clinical trial right for you.**

## **Learn More About Cervical Cancer**

**American Cancer Society**

<https://www.cancer.org/>

**National Cancer Institute**

<https://www.cancer.gov/>

**National Comprehensive Cancer Network Guidelines for Patients**

<https://www.nccn.org/patients/guidelines/cancers.aspx>

**MedlinePlus**

<https://medlineplus.gov/>

## **Common Questions**

What does the pathology report say?

What is the stage of my cancer?

What are my goals for treatment?

What are my treatment choices?

What kind of support services are available for me about finances, emotions, spiritual questions, etc.?

My Health Care Team	Contact Information
Surgeon:	
Medical Oncologist:	
Radiation Oncologist:	
Primary Care Doctor:	
Navigator:	
Nurse:	
Dietitian/Nutritionist:	
Other:	
Other:	
Other:	





[https://www.cancer.gov/types/cervical/patient/cervical-treatment-pdq#section/\\_117](https://www.cancer.gov/types/cervical/patient/cervical-treatment-pdq#section/_117)

Adapted with permission “Cervical Cancer Treatment (PDQ®)–Patient Version was originally published by the National Cancer Institute.” Updated: March 28, 2018. Retrieved September 4, 2018.

**SANFORD**<sup>®</sup>  
CANCER CENTER