

# UNDERSTANDING CANCER

## What we know about cervical cancer

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### Did you know?

The cervix is the narrow passage in the lower part of the uterus, or womb. The uterus is found in the lower part of a woman's body below the stomach, and it holds and nourishes the growing baby during pregnancy. Cervical cancer is a type of cancer that starts in the cells of the cervix.

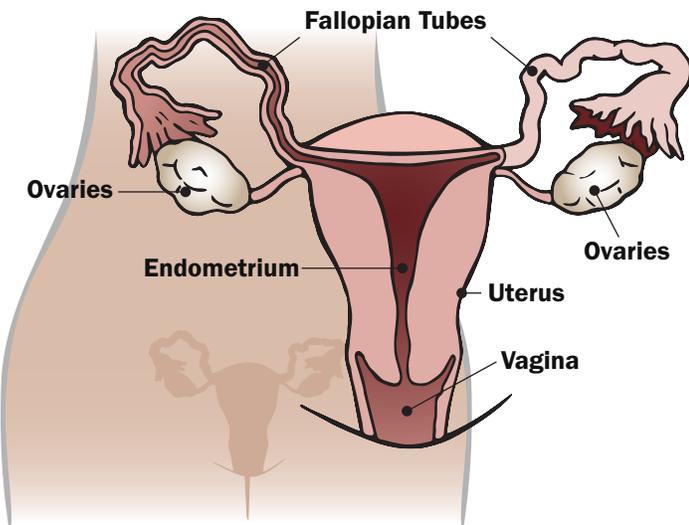


Figure 1: The uterus and cervix

Cervical cancer begins with changes to cells in the cervix that may develop into cancer. These are called precancerous cells, or dysplasia. Not all precancerous cells become cancer, and if they do it usually takes several years. A simple cancer screening test called a Pap test can detect the precancerous cells that can be treated to prevent cancer from developing.

The number of new cases of cervical cancer, called the incidence, has not changed much over the last 10 years, but the number of deaths have decreased. This is due to the Pap test. Death rates went down almost 10 percent between 2005 and 2014.

### Cervical Cancer Statistics

Estimated number of new cases in 2018:

■ **U.S. : 13,240**    ■ **Virginia: 280**

Estimated number of deaths in 2017:

■ **U.S.: 4,170**    ■ **Virginia: 80**

### Five-year Survival Rate

The five-year survival rate tells what percent of women live at least five years after the cancer is found. The five-year survival rate for women in the U.S. diagnosed with cervical cancer is 67.1 percent, or in other words, 67 out of 100 women diagnosed with cervical cancer will live at least five years.

The five-year survival rate increases to 91.5 percent for women diagnosed with cervical cancer that is found

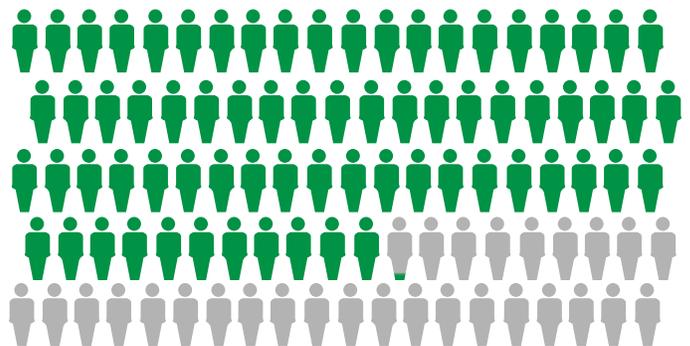


Figure 2: The overall five-year cervical cancer survival rate is 67.1 percent.

before it has spread. If the cancer has spread to nearby tissues or lymph nodes (structures that are part of the body's disease-fighting system), the five-year survival rate falls to 57 percent. If it spreads distant organs, the five-year survival rate drops to 17 percent.

# Risk Factors for Cervical Cancer

**Human papillomavirus (HPV):** HPV is a virus. Infection with HPV is the most important risk factor for getting cervical cancer. Almost all cases of cervical cancer are related to HPV. There are 200 HPV-related viruses, but only two high-risk types, HPV 16 and 18, are responsible for most HPV-caused cancers. Anyone who is sexually active can get HPV. Most HPV infections go away within one to two years and do not cause cervical cancer. Infections that do not go away and are caused by high-risk HPV types may become cancer. There is no treatment for HPV infection once it is established; however, the FDA has approved a vaccine (Gardasil 9) that helps prevent infection by nine types of HPV, including 16 and 18.

There are other things that increase risk for getting cervical cancer. These are listed in Table 1.

**Table 1: Risk factors for cervical cancer**

<b>Factors that can't be changed:</b>
Age – People in their late teens to mid-30s are at higher risk for cervical cancer
Women who have a family member who had cervical cancer are at greater risk.
<b>Factors that can be changed:</b>
Smoking
Infection with the Herpes virus
Long-term use of oral contraceptives (the pill)
Three or more full-term pregnancies
Having a first full-term pregnancy before the age of 17
Being overweight

## Preventing Cervical Cancer

Women can take several steps to decrease their risk of getting cervical cancer.

### **Get the recommended screenings for cervical cancer**

Cervical cancer can often be prevented by detecting and removing precancerous cells through regular screenings (Pap test).

### **Reduce exposure to HPV infection**

Delaying having sex for the first time until the late teens or older, limiting the number of sex partners, avoiding sex with people who have many partners, and regular condom use all can reduce exposure to HPV infection.

### **Consider getting the HPV vaccine**

Parents should talk to their child's healthcare provider about the HPV vaccine. It is recommended that both girls and boys age 11 or 12 get the vaccination series. Although vaccination at older ages is less effective in lowering the risk of cancer, the vaccine is also recommended for anyone ages 13 to 26 who was not vaccinated earlier or who did not complete the series.

### **Don't smoke tobacco**

Smoking increases the risk of cervical cancer and may decrease a woman's ability to get rid of an HPV infection. If you don't smoke, don't start. If you do, seek assistance from your healthcare provider to quit.

### **Maintain a healthy body weight**

Being overweight increases the risk for development of adenocarcinoma of the cervix, which is a type of cervical cancer. The reasons for this are not fully understood, but maintaining an appropriate weight provides multiple health benefits.

### **Discuss oral contraceptive use with your healthcare provider**

Because long term oral contraceptive use is associated with increased risk of cervical cancer, discuss whether the benefits outweigh the potential risks with your doctor.

## Types of Cervical Cancer

 **Squamous cell carcinoma:** Squamous cells are thin, flat cells that are on the surface of a tissue. This is the most common type of cervical cancer. Nine out of 10 new cervical cancer cases are squamous cell.

 **Adenocarcinoma:** This type of cervical cancer develops in the mucus-producing cells of the cervix. They make up most of the other cervical cancers. Other types of cervical cancer (melanomas, sarcomas, and lymphomas) occur only rarely.

## Symptoms of Cervical Cancer

There are generally no symptoms of precancerous cervical cell changes, but many women experience symptoms with early stage cervical cancer.

**Table 2: Common symptoms of cervical cancer**

Common Symptoms of Cervical Cancer	
Blood spots or light bleeding between periods	Vaginal bleeding after having sex or douching
Increased vaginal discharge	Longer or heavier bleeding during periods
Pain during sex	Vaginal bleeding after menopause
Unexplained pelvic or back pain that won't go away	

Note: Other conditions may also cause these symptoms. Talk with your healthcare provider.

## Early Detection and Screening

### U.S. Preventive Services Task Force Cervical Cancer Screening Guidelines\*

- Women ages 21 to 65 years: Screening Pap test every 3 years
- Women ages 30 to 65 years: Option to be screened with a combination of the Pap test and HPV testing every 5 years
- Women younger than 30: Recommend against HPV screening, either alone or in combination with Pap test
- Women younger than 21 years: Recommend against screening for cervical cancer
- Women older than 65 years: Recommend against screening if they have adequate prior screening and not at high risk
- Women with a hysterectomy: Recommend against screening if cervix was removed, and there is no history of precancerous lesions or cervical cancer

*\*Recommendations apply to women with a cervix at average risk with no history of precancerous lesions or cancer.*

Figure 3: U.S. Preventive Services Task Force Cervical Cancer Screening Guidelines

## Diagnosis

If the results of a cervical screening test (Pap test) show abnormal cells, or if there are cervical cancer symptoms, one or more of the following tests may be conducted:

- **Colposcopy.** This procedure uses an instrument called a colposcope to view the cervix and vagina for signs of disease.
- **Biopsy.** This procedure removes a small section of abnormal cervical tissue to look for precancerous or cancerous cells.

If a biopsy shows that cancer is present, further tests are done to see how far the cancer has spread and to determine to what stage the cancer has progressed.

## Treatment

Treatment of cervical cancer depends on the type and stage of cancer, possible side effects, and the woman's overall health and preferences. The most common treatment options include:

**Surgery:** Hysterectomy is a surgical procedure that removes a woman's reproductive organs. It can be either simple, which involves removing the uterus and cervix, or radical, which removes the uterus, cervix, upper vagina, and possibly the pelvic lymph nodes. More extensive surgery may be necessary if the cancer has spread to other organs.

**Radiation:** Radiation uses high-energy particles to destroy cancer cells. Radiation may be from external-beam radiation that consists of a certain number of treatments given over a set period of time, or internal radiation that uses radioactive implants placed in or near the cancer tissue.

**Chemotherapy:** Chemotherapy uses drugs to destroy cancer cells. All drugs used to treat cervical cancer are given through injection into the blood (intravenous). A chemotherapy regimen may use one or a combination of drugs and consists of a specific number of cycles given over a period of time.

Treatment for cervical cancer may involve one or a combination of these treatment options.

## Glossary of Terms

**DES: Diethylstilbestrol** – synthetic estrogen given to mothers at risk for miscarriage between 1940 and 1970. Increases risk for cervical cancer in daughters of these women.

**Endocervical:** Cells located near the mouth and in the canal of the cervix leading into the uterus.

**HPV:** Abbreviation for human papillomavirus, which is a group of more than 200 related viruses. About a dozen types of HPV are called “high risk” because they are linked to cancers, including cervical cancer.

**Pap test:** Abbreviation for Papanicolaou test. A method for screening for precancerous and cancerous cells in the cervix.

## Information Resources

American Cancer Society <https://www.cancer.org/cancer/cervical-cancer.html>.

American Society of Clinical Oncology <https://www.cancer.net/cancer-types/cervical-cancer/introduction>

U.S. Preventive Services Task Force  
<https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/cervical-cancer-screening2>.

National Cancer Institute <https://www.cancer.gov/about-cancer/causes-prevention/risk/infectious-agents/hpv-fact-sheet>

Surveillance, Epidemiology, and End Results Program  
<https://www.seer.cancer.gov>

Centers for Disease Control and Prevention  
<https://www.cdc.gov/cancer/cervical/index.htm>

## Resources

American Cancer Society. 2018. “Cancer Statistics Center.” [https://cancerstatisticscenter.cancer.org/?\\_ga=2.239872832.2109983021.1521215247-478595664.1521215247#!/](https://cancerstatisticscenter.cancer.org/?_ga=2.239872832.2109983021.1521215247-478595664.1521215247#!/).

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National Institutes of Health National Cancer Institute. 2015. “HPV and Cancer.” Accessed December 2, 2018. <https://www.cancer.gov/about-cancer/causes-prevention/risk/infectious-agents/hpv-fact-sheet>.

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U.S. Preventive Services Task Force. 2012. “Final Recommendation Statement, Cervical Cancer: Screening.” <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/cervical-cancer-screening2>.