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Cervical Cancer Early Detection, Diagnosis, and Staging

Know the signs and symptoms of cervical cancer. Find out how cervical cancer is tested for, diagnosed, and staged.

Finding Cervical Cancer Early

Catching cancer early often allows for more treatment options. Some early cancers may

Can Cervical Cancer Be Found Early?

The best way to find cervical cancer early is to have regular screening tests. The tests for cervical cancer screening are the HPV test and the Pap test. These tests can be done alone or at the same time (called a co-test). Regular screening has been shown to prevent cervical cancers and save lives. *The most important thing to remember is to get screened regularly, no matter which test you get.*

Early detection greatly improves the chances of successful treatment of pre-cancers and cancer. Being aware of anysigns and symptoms of cervical cancer can also help avoid delays in diagnosis.

For more information about using the HPV test and the Pap test to find cervical cancer early, see The American Cancer Society Guidelines for the Prevention and Early Detection of Cervical Cancer.

References

Cheung LC, Egemen D, Chen X, et al. 2019 ASCCP Risk-Based Management Consensus Guidelines: Methods for Risk Estimation, Recommended Management, and Validation. *J Low Genit Tract Dis.* 2020;24(2):90-101. doi:10.1097/LGT.0000000000000528.

Cuzick J, Myers O, Hunt WC, et al. A population-based evaluation of cervical screening in the United States: 2008-2011. *Cancer Epidemiol Biomarkers Prev.* 2014;23:765-73.

Egemen D, Cheung LC, Chen X, et al. Risk Estimates Supporting the 2019 ASCCP Risk-Based Management Consensus Guidelines. *J Low Genit Tract Dis.* 2020;24(2):132-143. doi:10.1097/LGT.000000000000529.

Eifel P, Klopp AH, Berek JS, and Konstantinopoulos A. Chapter 74: Cancer of the Cervix, Vagina, and Vulva. In: DeVita VT, Lawrence TS, Rosenberg SA, eds. *DeVita, Hellman, and Rosenberg's Cancer: Principles and Practice of Oncology*. 11th ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2019.

Fontham, ETH, Wolf, AMD, Church, TR, et al. Cervical Cancer Screening for Individuals

screening as recommended by their health care team.

- Cervical cancer testing (screening) should begin at age 25.
- Those aged 25 to 65 should have a primary HPV test* every 5 years. If primary HPV testing is not available, screening may be done with either a co-test that combines an HPV test with a Papanicolaou (Pap) test every 5 years or a Pap test alone every 3 years. (*A primary HPV test is an HPV test that is done by itself for screening. The US Food and Drug Administration has approved certain tests to be primary HPV tests.) The most important thing to remember is to get screened regularly, no matter which test you get.
- Those over age 65 who have had regular screening in the past 10 years with normal results and no history of CIN2 or more serious diagnosis within the past 25 years should stop cervical cancer screening. Once stopped, it should not be started again.
- People who have had a total hysterectomy (removal of the uterus and cervix) should stop screening (such as Pap tests and HPV tests), unless the hysterectomy was done as a treatment for cervical cancer or serious pre-cancer. People who have had a hysterectomy without removal of the cervix (called a supra-cervical hysterectomy) should continue cervical cancer screening according to the guidelines above.
- People who have been vaccinated against HPV should still follow these guidelines for their age groups.

Some people believe that they can stop cervical cancer screening once they have stopped having children. This is not true. They should continue to follow American Cancer Society guidelines.

Considerations for Other Patient Populations

If you have a history of a serious pre-cancer, you should continue to have testing for at least 25 years after that condition was found, even if the testing goes past age 65.

Those who are at high risk of cervical cancer because of a suppressed immune system (for example from HIV infection, organ transplant, or long-term steroid use) or because they were exposed to DES in utero may need to be screened more often. They should

follow the recommendations of their health care team.

Importance of being screened for cervical cancer

Cervical cancer was once one of the most common causes of cancer death for American women. The cervical cancer death rate dropped significantly with the increased use of the Pap test for screening. But the death rate has not changed much over the last 10 years.

In recent years, the HPV test has been approved as another screening test for cervical cancer. The HPV test looks for infection by high-risk types of HPV that are more likely to cause pre-cancers and cancers of the cervix. The HPV test can be used alone (primary HPV test) or at the same time as the Pap test (called a co-test).

Screening tests offer the best chance to have cervical cancer found early when treatment can be most successful. Screening can also actually prevent most cervical cancers by finding abnormal cervical cell changes (pre-cancers) so that they can be treated before they have a chance to turn into a cervical cancer.

Despite the benefits of cervical cancer screening, not all American women get screened. Most cervical cancers are found in women who have never had a Pap test or who have not had one recently. Women without health insurance and women who have recently immigrated are less likely to have cervical cancer screening.

References

American Cancer Society. *Cancer Facts & Figures 2019*. Atlanta, Ga: American Cancer Society; 2019.

American Cancer Society. *Cancer Prevention & Early Detection Facts & Figures 2019-2020*. Atlanta, Ga: American Cancer Society; 2019.

Fontham, ETH, Wolf, AMD, Church, TR, et al. Cervical Cancer Screening for Individuals at Average Risk: 2020 Guideline Update from the American Cancer Society. CA Cancer J Clin. 2020. https://doi.org/10.3322/caac.21628.

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Cervical Cancer Prevention and Screening: Financial Issues

- Federal law
- Self-insured plans
- Medicaid
- Medicare
- National Breast and Cervical Cancer Early Detection Program
- HPV vaccine costs

Financial issues can play an important role in whether or not women are screened for cervical cancer. Women with lower incomes and those without health insurance are less likely to be screened.

Many states ensure that private insurance companies, Medicaid, and public employee health plans pay for regular screening tests.

Other programs are also available to help provide financial assistance for women with lower incomes and those without insurance.

It's important to know that insurance coverage may or may not conform to American Cancer Society cancer screening guidelines.

Federal law

Coverage of cervical cancer screening tests is mandated by the Affordable Care Act (ACA)¹, but that doesn't apply to health plans that were in place before it was passed. You can find out the date your insurance plan started by contacting your health insurance plan administrator. If your plan started on or after September 23, 2010, it's required to cover the recommended cervical cancer screening tests. If your plan started before September 23, 2010, it may still have coverage requirements mandated by your state, but each state is different.

Self-insured plans

Though the program is administered within each state, the Centers for Disease Control and Prevention (CDC) provides support to each state program.

Each state's Department of Health will have information on how to contact the nearest program participant. For more information on this program, you can also contact the CDC at 1-800-CDC-INFO (1-800-232-4636) or on the web at www.cdc.gov/cancer/nbccedp².

If cervical cancer is detected during screening in this program, most states can now extend Medicaid benefits to these women to cover the costs of treatment.

To learn more about this program, see <u>National Breast and Cervical Cancer Early</u> <u>Detection Program</u>³.

HPV vaccine costs

Insurance plans cover the cost of the HPV vaccine in accordance with the federal Advisory Committee on Immunization Practices (ACIP) recommendations. The HPV vaccine is also included in the federal Vaccine for Children (VFC) entitlement program, which covers vaccine costs for children and teens who don't have insurance or who are underinsured.

Hyperlinks

- 1. <u>www.cancer.org/cancer/financial-insurance-matters/health-insurance-laws/the-health-care-law.html</u>
- 2. www.cdc.gov/cancer/nbccedp/
- 3. <u>www.cancer.org/cancer/financial-insurance-matters/understanding-health-insurance/government-funded-programs/nbccedp.html</u>

References

CDC.gov. About VFC - The VFC Program: At a Glance. Accessed at https://www.cdc.gov/vaccines/programs/vfc/about/index.html on July 21, 2020.

HealthCare.gov. Preventive care benefits for women. Accessed at https://www.healthcare.gov/preventive-care-women/ on July 21, 2020.

Medicare.gov. Cervical & vaginal cancer screenings. Accessed at https://www.medicare.gov/coverage/cervical-vaginal-cancer-screenings on July 21, 2020.

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Screening Tests for Cervical Cancer

The best way to find cervical cancer early is to have regular screening tests. Regular screening has been shown to prevent cervical cancers and save lives. Early detection greatly improves the chances of successful treatment and can prevent any early cervical cell changes from becoming cancer. Being alert to any signs and symptoms of cervical cancer can also help avoid unnecessary delays in diagnosis.

The tests for cervical cancer screening are the **HPV test** and the **Pap test**. These tests can be done alone or at the same time (called a **co-test**) and are done during a pelvic exam.

The most important thing to remember is to get screened regularly, no matter which test you get.

The HPV Test

Doctors can now test for the HPV (high-risk or carcinogenic types) that are most likely to cause cervical cancer by looking for pieces of their DNA in cervical cells. The test can be done by itself or at the same time as the Pap test, with the same swab or a second swab.

The Pap (Papanicolaou) Test

The Pap test is a procedure used to collect cells from the cervix so that they can be looked at in the lab to find cancer and pre-cancer.

When Cervical Screening Test Results are Abnormal

The first step in finding cervical cancer is often an abnormal HPV or Pap test result. This will lead to further tests, which can diagnose cervical cancer.

Testing¹.

Hyperlinks

1. www.cancer.org/cancer/risk-prevention/hpv/hpv-and-hpv-testing.html

References

Eifel P, Klopp AH, Berek JS, and Konstantin0Rpoun.

The Pap (Papanicolaou) Test

- How is a Pap test done?
- How Pap test results are reported

A Pap test is sometimes called a Pap smear. It can be done along with a HPV test during a pelvic exam as part of cervical cancer screeningfor people with no symptoms. Or, it can be done as a follow-up test for an abnormal (positive) HPV test or if someone has symptoms that are suspicious for cervical cancer.

What does a Pap smear test for?

A Pap test is a procedure used to collect cells from the cervix (lower part of the uterus) so they can be looked at closely in a lab under a microscope. It tests for changes in cells that might be pre-cancers or cancer.

How is a Pap test done?

The health care professional first places a speculum inside the vagina. The speculum is a metal or plastic instrument that keeps the vagina open so that the cervix can be seen clearly. Next, using a small spatula or brush, a sample of cells and mucus is lightly scraped from the exocervix (see illustration in What is Cervical Cancer?
). A small brush or a cotton-tipped swab is then inserted into the opening of the cervix to take a sample from the endocervix. If your cervix has been removed (because you had a trachelectomy or hysterectomy) as a part of the treatment for a cervical cancer or precancer, the cells from the upper part of the vagina (known as the **vaginal cuff**) will be sampled. The samples are then looked at in the lab.

Although the Pap test has been more successful than any other screening test in preventing a cancer, it's not perfect. One of the limitations of the Pap test is that the results need to be examined by the human eye, so an accurate analysis of the hundreds of thousands of cells in each sample is not always possible. Engineers, scientists, and doctors are working together to improve this test. Because some abnormalities may be missed (even when samples are looked at in the best labs), it's best to have this test regularly as recommended by the American Cancer Society guidelines .

Making your Pap tests more accurate

You can do several things to make your Pap test as accurate as possible. It's important to ask your doctor or nurse how you need to prepare for the Pap test, including:

- Trying not to schedule an appointment for a time during your menstrual period. The best time is at least 5 days after your period stops.
- Not using tampons, birth-control foams or jellies, other vaginal creams, moisturizers, or lubricants, or vaginal medicines for up to 7 days before the Pap test.
- Not using a douche for 2 to 3 days before the Pap test.
- Not having vaginal sex for 2 days before the Pap test.

Pelvic exam vs. a Pap test

Many people confuse pelvic exams with Pap tests. The pelvic exam is part of a woman's routine health care. During a pelvic exam, the doctor looks at and feels the reproductive organs, including the uterus and the ovaries and may do tests for sexually transmitted disease. Pelvic exams may help find other types of cancers and reproductive problems. A Pap test can be done during a pelvic exam, but sometimes a pelvic exam is done without a Pap test. A Pap test is needed to find early cervical cancer or pre-cancers so ask your doctor if you had a Pap test with your pelvic exam.

How Pap test results are reported

The most widely used system for describing Pap test results is the Bethesda System (TBS). There are 3 main categories, some of which have sub-categories:

- Negative for intraepithelial lesion or malignancy
- Epithelial cell abnormalities
- Other malignant neoplasms.

You may need further testing if your Pap test showed any of the abnormalities below. See Work-up of Abnormal Pap Test Results.

Negative for intraepithelial lesion or malignancy

This category means that no signs of cancer, pre-cancer, or other significant abnormalities were found. There may be findings that are unrelated to cervical cancer, such as signs of infection with yeast, herpes, or *Trichomonas vaginalis* (a type of sexually transmitted disease), for example. Specimens from some women may also show "reactive cellular changes", which is the way cervical cells appear when infection or other inflammation is around.

Epithelial cell abnormalities

This means that the cells lining the cervix or vagina show changes that might be cancer or a pre-cancer. This category is divided into several groups for squamous cells and glandular cells.

Squamous cell abnormalities

Atypical squamous cells (ASCs) This category includes two types of abnormalities:

- Atypical squamous cells of uncertain significance (ASC-US) is used to describe
 when there are cells that look abnormal, but it is not possible to tell if this is caused
 by infection, irritation, or a pre-cancer. Most of the time, cells labeled ASC-US are
 not pre-cancer, but more testing, like an HPV test, is needed to be sure.
- Atypical squamous cells where high-grade squamous intraepithelial lesion (HSIL)
 can't be excluded (ASC-H)is used to describe when the cells look abnormal but are
 more concerning for a possible pre-cancer that needs more testing and may need
 treatment.

Squamous intraepithelial lesions (SILs) These abnormalities are divided into two categories:

- In low-grade SIL (LSIL) the cells look mildly abnormal. This might also be called mild dysplasia or cervical intraepithelial neoplasia grade 1 (CIN1).
- In high-grade SIL (HSIL) the cells look severely abnormal and are less likely than
 the cells in LSIL to go away without treatment. They are also more likely to
 eventually develop into cancer if they are not treated. This might also be called
 moderate to severe dysplasia or cervical intraepithelial neoplasia grade 2 or 3
 (CIN2 and/or CIN3).

Further tests are needed if SIL is seen on a Pap test. If treatment is needed, it can cure most SILs and prevent invasive cancer from forming.

Squamous cell carcinoma: This result means that the woman is likely to have an invasive cancer. Further testing will be done to be sure of the diagnosis before treatment can be planned.

Glandular cell abnormalities

Atypical glandular cells: When the glandular cells do not look normal, but they have concerning features that could be cancerous, the term used is atypical glandular cells (AGC). In this case, the patient should have more testing done.

Adenocarcinoma: Cancers of the glandular cells are called adenocarcinomas. In some cases, the doctor examining the cells can tell whether the adenocarcinoma started in the endocervix, in the uterus (endometrium), or elsewhere in the body.

Other malignant neoplasms

This category is for other types of cancer that hardly ever affect the cervix, such as malignant melanoma, sarcomas, and lymphoma.

Hyperlinks

1. www.cancer.org/cancer/types/cervical-cancer/about/what-is-cervical-cancer.html

References

Eifel P, Klopp AH, Berek JS, and Konstantinopoulos A. Chapter 74: Cancer of the Cervix, Vagina, and Vulva. In: DeVita VT, Lawrence TS, Rosenberg SA, eds. *DeVita, Hellman, and Rosenberg's Cancer: Principles and Practice of Oncology.* 11th ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2019.

Jhungran A, Russell AH, Seiden MV, Duska LR, Goodman A, Lee S, et al. Chapter 84: Cancers of the Cervix, Vulva, and Vagina. In: Niederhuber JE, Armitage JO, Doroshow JH, Kastan MB, Tepper JE, eds. *Abeloff's Clinical Oncology*. 6th ed. Philadelphia, Pa: Elsevier; 2020.

National Cancer Institute. Physician Data Query (PDQ). Cervical Cancer Treatment – Health Professional Version. 2019. https://www.cancer.gov/types/cervical/hp/cervical-treatment-pdq. Updated February 6, 2019. Accessed on October 30, 2019.

National Cancer Institute. Understanding Cervical Changes: Next Steps After an Abnormal Screening Test. 2019. https://www.cancer.gov/types/cervical/understanding-cervical-changes#ui-id-2. Updated October 8, 2019. Accessed on November 1, 2019.

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When Cervical Screening Test Results are Abnormal

- What other tests will I need?
- Tests for people with symptoms of cervical cancer or abnormal screening test results

Finding cervical cancer often starts with an abnormal HPV (human papillomavirus) or Pap test result. This will lead to further tests, which can diagnose cervical cancer or precancer.

Cervical cancer may also be suspected if you have <u>symptoms</u> like abnormal vaginal bleeding or pain during sex. Your primary doctor or gynecologist often can do the tests needed to diagnose pre-cancers and cancers and may also be able to treat a precancer.

If there is a diagnosis of invasive cancer, your doctor should refer you to a gynecologic oncologist, a doctor who specializes in cancers of women's reproductive systems.

What other tests will I need?

Your current screening test results along with your past test results, determine your risk of developing cervical cancer. Your doctor will use them to figure out your next test or treatment. It could be a follow-up screening test in a year, a colposcopy, or one of the other procedures discussed below to treat any pre-cancers that might be found.

Because there are many different follow-up or treatment options depending on your specific risk of developing cervical cancer, it is best to talk to your healthcare provider about your screening results in more detail, to fully understand your risk of cervical cancer and what follow-up plan is best for you.

The Pap test and HPV test are screening tests, not diagnostic tests. They cannot tell for certain if you have cervical cancer. An abnormal Pap test or HPV test result may mean more testing is needed to see if a cancer or a pre-cancer is present. The tests that are used include colposcopy (with biopsy), endocervical scraping and cone biopsies.

Tests for people with symptoms of cervical cancer or abnormal screening test results

method must be used to check that area for cancer.

A narrow instrument (either a curette or brush) is inserted into the endocervical canal

Philadelphia, Pa: Lippincott Williams & Wilkins; 2019.

Fontham, ETH, Wolf, AMD, Church, TR, et al. Cervical Cancer Screening for Individuals at Average Risk: 2020 Guideline Update from the American Cancer Society. CA Cancer J Clin. 2020. https://doi.org/10.3322/caac.21628.

Jhungran A, Russell AH, Seiden MV, Duska LR, Goodman A, Lee S, et al. Chapter 84: Cancers of the Cervix, Vulva, and Vagina. In: Niederhuber JE, Armitage JO, Doroshow JH, Kastan MB, Tepper JE, eds. *Abeloff's Clinical Oncology*. 6th ed. Philadelphia, Pa: Elsevier; 2020.

National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology: Cervical Cancer. Version 4.2019. Accessed at https://www.nccn.org/professionals/physician_gls/pdf/cervical.pdf on October 31, 2019.

Perkins RB, Guido RS, Castle PE, et al. 2019 ASCCP Risk-Based Management Consensus Guidelines for Abnormal Cervical Cancer Screening Tests and Cancer Precursors. *J Low Genit Tract Dis.* 2020;24(2):102-131. doi:10.1097/LGT.0000000000000525.

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Signs and Symptoms of Cervical Cancer

Women with early cervical cancers and pre-cancers usually have no symptoms. Symptoms often do not begin until the cancer becomes larger and grows into nearby tissue. When this happens, the most common symptoms are:

- Abnormal vaginal bleeding, such as bleeding after vaginal sex, bleeding after menopause, bleeding and spotting between periods, or having (menstrual) periods that are longer or heavier than usual. Bleeding after douching may also occur.
- An unusual discharge from the vagina the discharge may contain some blood and may occur between your periods or after menopause.
- Pain during sex
- Pain in the pelvic region

Signs and symptoms seen with more advanced disease can include:

- Swelling of the legs
- Problems urinating or having a bowel movement
- Blood in the urine

These signs and symptoms can also be caused by conditions other than cervical cancer. Still, if you have any of these symptoms, see a health care professional right away. Ignoring symptoms may allow the cancer to grow to a more advanced stage and lower your chance for successful treatment.

For the best chances for treatment to be successful, don't wait for symptoms to appear. Have regular screening tests for cervical cancer.

References

Eifel P, Klopp AH, Berek JS, and Konstantinopoulos A. Chapter 74: Cancer of the Cervix, Vagina, and Vulva. In: DeVita VT, Lawrence TS, Rosenberg SA, eds. *DeVita, Hellman, and Rosenberg's Cancer: Principles and Practice of Oncology.* 11th ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2019.

Jhungran A, Russell AH, Seiden MV, Duska LR, Goodman A, Lee S, et al. Chapter 84: Cancers of the Cervix, Vulva, and Vagina. In: Niederhuber JE, Armitage JO, Doroshow JH, Kastan MB, Tepper JE, eds. *Abeloff's Clinical Oncology*. 6th ed. Philadelphia, Pa: Elsevier; 2020.

National Cancer Institute. Physician Data Query (PDQ). Cervical Cancer Treatment – Health Professional Version. 2019. https://www.cancer.gov/types/cervical/hp/cervical-treatment-pdq. Updated February 6, 2019. Accessed on October 28, 2019.

National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology: Cervical Cancer. Version 4.2019. Accessed at https://www.nccn.org/professionals/physician_gls/pdf/cervical.pdf on October 28, 2019.

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Tests for Cervical Cancer

Finding cervical cancer often starts with an abnormal HPV (human papillomavirus) or Pap test result. This will lead to further tests which can diagnose cervical cancer or precancer. The Pap test and HPV test are screening tests, not diagnostic tests. They cannot tell for certain if you have cervical cancer. An abnormal Pap test or HPV test result may mean more testing is needed to see if a cancer or a pre-cancer is present.

- Understanding abnormal cervical screening test results
- Tests for people with symptoms of cervical cancer or abnormal cervical screening test results
- Other tests when cervical cancer is diagnosed

Cervical cancer may also be suspected if you have symptoms like abnormal vaginal bleeding or pain during sex. Your primary doctor or gynecologist often can do the tests needed to diagnose pre-cancers and cancers. If you are diagnosed with invasive cancer, your doctor will probably refer you to a gynecologic oncologist, a doctor who specializes in cancers of women's reproductive systems.

Understanding abnormal cervical screening test results

Your current screening test results along with your past test results, determine your risk of developing cervical cancer. Your doctor will use them to figure out your next test or treatment. It could be a follow-up screening test in a year, a colposcopy, or one of the other procedures discussed below to treat any pre-cancers that might be found.

Because there are many different follow-up or treatment options depending on your specific risk of developing cervical cancer, it is best to talk to your health care provider about your screening results in more detail, to fully understand your cervical cancer risk

exam and maybe a Pap test if one has not already been done. In addition, your lymph nodes will be felt to see if the cancer has spread (metastasis).

Colposcopy

If you have certain symptoms that could mean cancer, if your Pap test result shows abnormal cells, or if your HPV test is positive, you will most likely need to have a procedure called a **colposcopy**. You will lie on the exam table as you do with a pelvic exam. The doctor will put a speculum in the vagina to help keep it open while examining the cervix with a colposcope. The colposcope is an instrument that stays outside the body and has magnifying lenses. It lets the doctor clearly see the surface of the cervix up close. Colposcopy itself is usually no more uncomfortable than any other speculum exam. It can be done safely even if you are pregnant. Like the Pap test, it is better not to do it during your menstrual period.

The doctor will put a weak solution of acetic acid (similar to vinegar) on your cervix to make any abnormal areas easier to see. If an abnormal area is seen, a small piece of tissue will be removed (biopsy) and sent to a lab to be looked at carefully. A biopsy is the best way to tell for certain if an abnormal area is a pre-cancer, an invasive cancer, or neither.

Types of cervical biopsies

Several types of biopsies can be used to diagnose cervical pre-cancers and cancers. If the biopsy can completely remove all of the abnormal tissue, it might be the only treatment needed.

Colposcopic biopsy

(the part of the cervix closest to the uterus). The curette or brush is used to scrape the inside of the canal to remove some of the tissue, which is then sent to the lab to be checked. During or after this procedure, patients may feel a cramping pain, and they may also have some light bleeding.

Cone biopsy

In this procedure, also known as **conization**, the doctor removes a cone-shaped piece of tissue from the cervix. The base of the cone is formed by the exocervix (outer part of the cervix), and the point or apex of the cone is from the endocervical canal. The tissue removed in the cone includes the transformation zone (the border between the exocervix and endocervix, where cervical pre-cancers and cancers are most likely to start). A cone biopsy can also be used as a treatment to completely remove many pre-cancers and some very early cancers.

The methods commonly used for cone biopsies are the loop electrosurgical excision procedure (LEEP), also called the large loop excision of the transformation zone (LLETZ), and the cold knife cone biopsy.

- Loop electrosurgical procedure (LEEP, LLETZ): In this method, the tissue is removed with a thin wire loop that is heated by electricity and acts as a small knife.
 A local anesthetic is used for this procedure, and it can be done in your doctor's office.
- Cold knife cone biopsy: This is done in a hospital. A surgical scalpel or a laser is
 used to remove the tissue instead of a heated wire. You will receive anesthesia
 during the operation (either a general anesthesia, where you are asleep, or a spinal
 or epidural anesthesia, where an injection into the area around the spinal cord
 makes you numb below the waist).

Possible complications of cone biopsies include bleeding, infection and narrowing of the cervix.

Having had any type of cone biopsy will not prevent most women from getting pregnant, but if a large amount of tissue has been removed, women may have a higher risk of giving birth prematurely.

Other tests when cervical cancer is diagnosed

If a biopsy shows that cancer cells are present, your doctor may order certain tests to see if and how far the cancer has spread. Many of the tests described below are not

necessary for every patient. Decisions about using these tests are based on the results of the physical exam and biopsy.

Cystoscopy, proctoscopy, and examination under anesthesia

These are most often done when the tumors are large. They are not necessary if the cancer is caught early.

In a cystoscopy, a slender tube with a lens and a light is placed into the bladder through the urethra. This lets the doctor check your bladder and urethra to see if cancer is growing into these areas. Biopsy samples can be removed during cystoscopy for testing in the lab. Cystoscopy can be done under a local anesthetic, but some patients may need general anesthesia. Your doctor will let you know what to expect before and after the procedure.

Proctoscopy is a visual inspection of the rectum through a lighted tube to look for spread of cervical cancer into your rectum.

Your doctor may also do a pelvic exam while you are under anesthesia to find out if the cancer has spread beyond the cervix.

Imaging studies

If your doctor finds that you have cervical cancer, certain <u>imaging studies</u>¹ may be done. These tests can show if and where the cancer has spread, which will help you and your doctor decide on a treatment plan.

- Chest x-ray: Your chest may be x-rayed to see if cancer has spread to your lungs.
- Computed tomography (CT): CT scans are usually done if the tumor is larger or if there is concern about cancer spread. For more information, see <u>CT Scan for</u> <u>Cancer²</u>.
- Magnetic resonance imaging (MRI): MRI scans look at the soft tissue parts of the body sometimes better than other imaging tests, like a CT scan. Your doctor will decide which imaging test is best to use in your situation. For more information, see MRI for Cancer³.

Positron emission tomography/ computed tomography (PET/CT) scan: For a PET scan, a slightly radioactive form of sugar (known as FDG) is injected into the

doctor compare areas of higher radioactivity on the PET scan with a more detailed picture on the CT scan. This is the type of PET scan most often used in patients with cervical cancer. This test can help see if the cancer has spread to lymph nodes. PET scans can also be useful if your doctor thinks the cancer has spread but doesn't know where.

• Intravenous urography: Intravenous urography (also known as intravenous pyelogram, or IVP) is an x-ray of the urinary system taken after a special dye is injected into a vein. This test can find abnormal areas in the urinary tract, caused by the spread of cervical cancer. The most common finding is that the cancer has blocked the ureters (tubes that connect the kidneys to the bladder). IVP is rarely used for patients with cervical cancer because CT and MRI are also good at finding abnormal areas in the urinary tract, as well as others not seen with an IVP.

Hyperlinks

- 1. <u>www.cancer.org/cancer/diagnosis-staging/tests/imaging-tests/imaging-radiology-tests-for-cancer.html</u>
- 2. <u>www.cancer.org/cancer/diagnosis-staging/tests/imaging-tests/ct-scan-for-cancer.html</u>
- 3. www.cancer.org/cancer/diagnosis-staging/tests/imaging-tests/mri-for-cancer.html

References

Eifel P, Klopp AH, Berek JS, and Konstantinopoulos A. Chapter 74: Cancer of the Cervix, Vagina, and Vulva. In: DeVita VT, Lawrence TS, Rosenberg SA, eds. *DeVita, Hellman, and Rosenberg's Cancer: Principles and Practice of Oncology*. 11th ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2019.

Fontham, ETH, Wolf, AMD, Church, TR, et al. Cervical Cancer Screening for Individuals at Average Risk: 2020 Guideline Update from the American Cancer Society. *CA Cancer J Clin.* 2020. https://doi.org/10.3322/caac.21628.

Jhungran A, Russell AH, Seiden MV, Duska LR, Goodman A, Lee S, et al. Chapter 84: Cancers of the Cervix, Vulva, and Vagina. In: Niederhuber JE, Armitage JO, Doroshow JH, Kastan MB, Tepper JE, eds. *Abeloff's Clinical Oncology*. 6th ed. Philadelphia, Pa:

Elsevier; 2020.

National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology: Cervical Cancer. Version 3.2024. Accessed at https://www.nccn.org/ on June 8, 2024.

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Cervical Cancer Stages

After someone is diagnosed with cervical cancer, doctors will try to figure out if it has spread, and if so, how far. This process is called **staging**. The stage of a cancer describes the extent of the cancer in the body. It helps determine how serious the cancer is and how best to treat it¹. The stage is one of the most important factors in deciding how to treat the cancer and determining how successful treatment might be.

To determine the cancer's stage after a cervical cancer diagnosis, doctors try to answer these questions:

- How far has the cancer grown into the cervix?
- Has the cancer reached nearby structures?
- Has the cancer spread to the nearby lymph nodes or to distant organs?

Information from exams and tests is used to determine the size of the tumor, how deeply the tumor has invaded tissues in and around the cervix, and its spread to distant places (metastasis). For more information see Cancer Staging².

The FIGO (International Federation of Gynecology and Obstetrics) staging system is used most often for cancers of the female reproductive organs, including cervical cancer. For cervical cancer, the clinical stage is used and is based on the results of the doctor's physical exam, biopsies, imaging tests, and a few other tests that are done in some cases, such as cystoscopy and proctoscopy. It is not based on what is found during surgery. If surgery is done, a pathologic stage can be determined from the findings at surgery, but it does not change your clinical stage. Your treatment plan is

		This includes stage I cancer that has spread deeper than 5 mm (about 1/5 inch) but is still limited to the cervix.				
	IB	It has not spread to nearby lymph nodes.				
		It has not spread to distant sites.				
		The cancer is deeper than 5 mm (about 1/5-inch) but not more than 2 cm (about 4/5-inch) in size.				
	IB1	It has not spread to nearby lymph nodes.				
		It has not spread to distant sites.				
		The cancer is at least 2 cm in size but not larger than 4 cm.				
	IB2	It has not spread to nearby lymph nodes.				
		It has not spread to distant sites.				
		The cancer is at least 4 cm in size and limited to the cervix.				
	IB3	It has not spread to nearby lymph nodes.				
		It has not spread to distant sites.				
		The cancer has grown beyond the cervix and uterus, but hasn't spread to the walls of the pelvis or the lower part of the vagina.				
II		It has not spread to nearby lymph nodes.				
		It has not spread to distant sites.				
		The cancer has grown beyond the cervix and uterus but has not spread into the tissues next to the cervix (called the parametria).				
	IIA	It has not spread to nearby lymph nodes.				
		It has not spread to distant sites.				
		The cancer is not larger than 4 cm (about 1 3/5 inches).				
	IIA1	It not has not spread to nearby lymph nodes.				
		It has not spread to distant sites.				
	IIA2	The cancer is 4 cm or larger.				

		It has not spread to nearby lymph nodes.
		it has not spread to hearby lymph hodes.
		It has not spread to distant sites.
		The cancer has grown beyond the cervix and uterus and has spread into the tissues next to the cervix (the parametria).
	IIB	It has not spread to nearby lymph nodes.
		It has not spread to distant sites.
III		The cancer has spread to the lower part of the vagina or the walls of the pelvis. The cancer may be blocking the ureters (tubes that carry urine from the kidneys to the bladder).
		It might or might not have not spread to nearby lymph nodes.
		It has not spread to distant sites.
		The cancer has spread to the lower part of the vagina but not the walls of the pelvis.
	IIIA	It has not spread to nearby lymph nodes.
		It has not spread to distant sites.
		The cancer has grown into the walls of the pelvis and/or is blocking one or both ureters causing kidney problems (called hydronephrosis).
	IIIB	It has not spread to nearby lymph nodes.
		It has not spread to distant sites.
		The cancer can be any size.
	IIIC	Imaging tests or a biopsy show the cancer has spread to nearby pelvic lymph nodes (IIIC1) or para-aortic lymph nodes (IIIC2).
		It has not spread to distant sites.
IV		The cancer has grown into the bladder23 T179.03 Tm /F2 0073 gs (The

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IVB	The cancer has spread to distant organs outside the pelvic area, such as distant lymph nodes, lungs or bones.
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Hyperlinks

- 1. www.cancer.org/cancer/types/cervical-cancer/treating.html
- 2. www.cancer.org/cancer/diagnosis-staging/staging.html

References

Bhatla N, Aoki D, Sharma DN, and Sankaranarayanan R. FIGO Cancer Report 2018. Cancer of the cervix uteri. *Int J Gynecol Obstet. 2018*; 143 (Suppl):22-36.

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Survival Rates for Cervical Cancer

- What is a 5-year relative survival rate?
- Where do these numbers come from?
- 5-year relative survival rates for cervical cancer

Survival rates can give you an idea of what percentage of people with the same type and stage of cancer are still alive a certain amount of time (usually 5 years) after they were diagnosed. They can't tell you how long you will live, but they may help give you a better understanding of how likely it is that your treatment will be successful.

Keep in mind that survival rates are estimates and are often based on previous outcomes of large numbers of people who had a specific cancer, but they can't predict what will happen in any particular person's case. These statistics can be confusing and may lead you to have more questions. Ask your doctor how these numbers might apply to you.

What is a 5-year relative survival rate?

A **relative survival rate** compares women with the same type and stage of cervical cancer to women in the overall population. For example, if the **5-year relative survival rate** for a specific stage of cervical cancer is 90%, it means that women who have that cancer are, on average, about 90% as likely as women who don't have that cancer to live for at least 5 years after being diagnosed.

Where do these numbers come from?

The American Cancer Society relies on information from the Surveillance, Epidemiology, and End Results (SEER) database, maintained by the National Cancer Institute (NCI), to provide survival statistics for different types of cancer.

The SEER database tracks 5-year relative survival rates for cervical cancer in the United States, based on how far the cancer has spread. The SEER database, however, does not group cancers by FIGO stages (stage 1, stage 2, stage 3, etc.). Instead, it groups cancers into localized, regional, and distant stages:

- Localized: There is no sign that the cancer has spread outside of the cervix or uterus.
- Regional: The cancer has spread beyond the cervix and uterus to nearby lymph nodes.
- **Distant:** The cancer has spread to nearby organs (like the bladder or rectum) or distant parts of the body such as the lungs or bones.

5-year relative survival rates for cervical cancer

Based on women diagnosed with cervical cancer between 2013 and 2019.

SEER* Stage	5-year Relative Survival Rate
Localized	91%
Regional	60%
Distant	19%
All SEER stages combined	67%

*SEER= Surveillance, Epidemiology, and End Results

Understanding the numbers

- Women now being diagnosed with cervical cancer may have a better outlook than these numbers show. Treatments improve over time, and these numbers are based on women who were diagnosed and treated at least five years earlier.
- These numbers apply only to the stage of the cancer when it is first diagnosed. They do not apply later on if the cancer grows, spreads, or comes back after treatment.
- These numbers don't take everything into account. Survival rates are grouped based on how far the cancer has spread, but your age, overall health, how well the cancer responds to treatment, and other factors will also affect your outlook.

References

American Cancer Society. Cancer Facts & Figures 2024. Atlanta: American Cancer Society; 2024.

Questions to Ask About Cervical Cancer

After treatment

It is important for you to have frank, open discussions with your cancer care team. They want to answer all of your questions, to help you make informed treatment and life decisions. Here are some questions to consider.

When you're told you have cervical cancer

What type1