



CERVICAL CANCER SCREENING

What is cervical cancer?

Cervical cancer is a type of cancer that begins in the cervix, the lower part of the uterus.

Most cervical cancers are caused by the sexually transmitted infection of the human papillomavirus virus (HPV).

In most cases, the body's immune system is able to eradicate the virus. However, in some women, the virus may persist and cause abnormal changes to the cells of the cervix. These abnormal changes can develop into invasive cervical cancer.

Symptoms of invasive cervical cancer include vaginal bleeding between periods, after sex, or after menopause, pelvic pain, pain during sex, and an abnormal vaginal discharge. If left untreated, the cancer can spread to nearby organs and tissues, such as the uterus, bladder, rectum, and lymph nodes, and can also spread to other parts of the body, such as the lungs, liver, and bones.

Prevalence

Cervical cancer is considered one of the most common cancers in women. According to the American Cancer Society, nearly 14,000 new cases of invasive cervical cancer will be diagnosed and more than 4,000 women will die from cervical cancer this year. Overall, cervical cancer incidence and mortality rates have decreased significantly over the past few decades due to increased awareness and screenings.

Risk Factors

Common risk factors for cervical cancer:

1. **Human papillomavirus (HPV) infection:** This is the most significant risk factor for cervical cancer. HPV is a common sexually transmitted infection that can cause abnormal changes in the cells of the cervix, which can lead to cancer.
2. **Sexual activity:** Women who become sexually active at a young age and those who have had multiple sexual partners are at a higher risk for cervical cancer. It's important to note, the use of condoms reduces the transmission of HPV by 70%.
3. **Smoking:** Women who smoke cigarettes are at a higher risk for cervical cancer than non-smokers.
4. **Weak immune system:** Women with weakened immune systems, such as those with HIV or who have had an organ transplant, are at a higher risk for cervical cancer.
5. **Vaginal microbiome:** Similar to the GI tract, the vagina is known to host many microorganisms. This is known as the vaginal microbiome. Recent studies have found that an imbalance or preference for certain bacterial strains are associated with persistent or more complicated HPV infections.
6. **Family history:** Women with a family history of cervical cancer are at a slightly higher risk of developing the disease.
7. **Lack of cervical cancer screenings:** Women who do not receive regular cervical cancer screenings are at a higher risk for the disease.



CERVICAL CANCER SCREENING

Screenings

Having one or more of the above risk factors does not guarantee that a woman will develop cervical cancer. Many women with no known risk factors develop cervical cancer, and some women with several risk factors never develop the disease.

All women should receive regular cervical cancer screenings, as recommended by their healthcare provider, to detect early-stage cervical cancer.

Regular cervical cancer screenings, such as Pap tests or HPV tests, can detect abnormal changes in the cervix before they become cancerous, allowing for early treatment and better outcomes.

Here are the current guidelines for cervical cancer screenings as recommended by major organizations in the United States including the American Cancer Society:

1. Women should begin cervical cancer screening at **age 25**.
2. If results are normal, between ages 25 and 65, women should have a primary HPV test **every five years**.
3. **Women over age 65** who have had regular screenings with normal results in the past should not continue screening.
4. **Women who have had a hysterectomy with removal of the cervix and have no history of cervical cancer or pre-cancer** should not continue screening.
5. **Women with a history of cervical cancer, pre-cancer, or certain medical conditions** may need more frequent or different types of screening.

Women should talk with their healthcare provider about their individual risk factors, and follow the appropriate screening recommendations for their age and health history. Women who experience any unusual symptoms, such as vaginal bleeding or pelvic pain, should contact their healthcare provider right away.

Prevention

The following are general prevention measures that can help reduce your risk of cervical cancer.

- **Lifestyle Habits:**
 - Eat a healthy diet consisting of whole foods, and limit processed and packaged foods.
 - Prioritize your sleep. Aim for 7-8 hours of quality sleep nightly.
 - Reduce stress through consistent stress management practices like yoga, meditation, or journaling.
 - Get regular exercise and movement throughout the day. Aim for a minimum of 10,000 steps per day and/or consider a formal exercise program.
- **Safe and Smart sex:** Be mindful of sexually transmitted infections. Use barrier methods of protection, such as condoms, internal condoms, dental dams, or latex/nitrile gloves when you engage in any sexual act.
- **Vaccination:** Because HPV is transmitted between both males and females, both can carry and pass the infection. The HPV vaccine is now approved for all people from ages 9-45. The vaccine has demonstrated that it can offer protection against high risk strains that cause the majority of HPV-associated cancers and genital warts. Please discuss the risks, benefits, and eligibility of therapy with your trusted health provider.

References

1. Cervical Cancer Statistics | Key Facts About Cervical Cancer. (n.d.). Cervical Cancer Statistics | Key Facts About Cervical Cancer. <https://www.cancer.org/cancer/cervical-cancer/about/key-statistics.html>
2. McGraw, S. L., & Ferrante, J. M. (2014). Update on prevention and screening of cervical cancer. *World journal of clinical oncology*, 5(4).
3. Chen G. Y. (2018). The Role of the Gut Microbiome in Colorectal Cancer. *Clinics in colon and rectal surgery*, 31(3), 192-198.
3. New ACS Cervical Cancer Screening Guideline. (2020, September 18). National Cancer Institute. <https://www.cancer.gov/news-events/cancer-currents-blog/2020/cervical-cancer-screening-hpv-test-guideline>
4. Yang, Z., Zhang, Y., Stubbe-Espejel, A., Zhao, Y., Liu, M., Li, J., Zhao, Y., Tong, G., Liu, N., Qi, L., Hutchins, A., Lin, S., & Li, Y. (2022). Vaginal microbiota and personal risk factors associated with HPV status conversion-A new approach to reduce the risk of cervical cancer?. *PLoS one*, 17(8), e0270521. <https://doi.org/10.1371/journal.pone.0270521>