

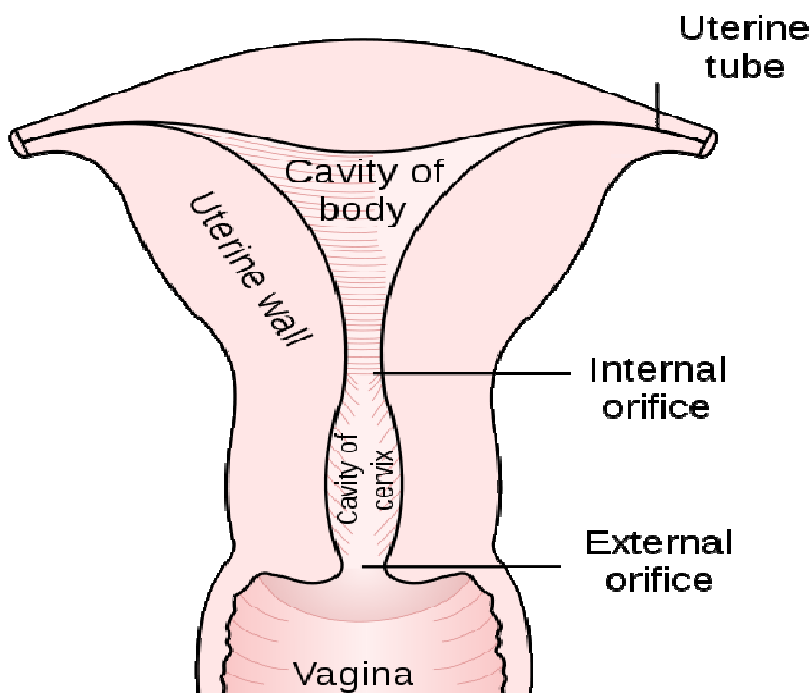
CERVICAL CANCER

Worldwide, cervical cancer is twelfth most common and the fifth most deadly cancer in women. It affects about 16 per 100,000 women per year and kills about 9 per 100,000 per year. Cervical cancer kills 270,000 women each year –mainly women in the developing world in the prime of their productive life.

Approximately 80% of cervical cancers occur in developing countries. Worldwide, in 2008, it was estimated that there were 473,000 cases of cervical cancer, and 253,500 deaths per year. Yet cervical cancer is preventable by screening asymptomatic women for precancerous cervical lesions and treating the lesions before they progress to invasive disease.

The cervix is the narrow portion of the uterus where it joins with the top of the vagina. It is the lower, narrow end of the uterus also known as the womb. The uterus is where a baby grows when a woman is pregnant. The cervix connects to the upper part of the uterus to the vagina (the birth canal).

When Cancer starts in the cervix, it is called cervical cancer. All women are at risk for cervical cancer and it occurs mostly in women over 30 years of age. Most cervical cancers are squamous cell carcinomas, arising in the squamous (flattened) epithelial cells that line the cervix. Adenocarcinoma, arising in glandular epithelial cells is the second most common type. Very rarely, cancer can arise in other types of cells in the cervix.



Signs and Symptoms

Early on, cervical cancer may not cause signs and symptoms. Advanced cervical cancer may cause bleeding or discharge from the vagina that is not normal such as bleeding after sex.

Also, moderate pain during sexual intercourse and vaginal discharge are symptoms of cervical cancer. In advanced disease, metastases may be present in the abdomen, lungs or elsewhere.

Symptoms of advanced cervical cancer may include: loss of appetite, weight loss, fatigue, pelvic pain, back pain, leg pain, single swollen leg, heavy bleeding from the vagina, leaking of urine or feces from the vagina and bone fractures.

Risk Factors.

Almost all cervical cancers are caused by human papillomavirus (HPV) a common virus that can be passed from one person to another through sex. There are many types of HPV; some HPV types can cause changes on a woman's cervix that can lead to cervical cancer over time, while others can cause genital warts.

HPV: It is common that most people at some time in their lives and can show no symptoms for most women HPV will go away on its own, however, if it does not, there is chance that overtime, it may cause cervical cancer.

Other risk factors include;

Smoking, HIV, Using Birth control Pill for over five years and mothers of three or more births.

Screen test

Cervical cancer is the easiest female cancer to prevent with regular screening and follow up. Two screening test can help prevent cervical cancer or find it early.

1. Visual Inspection with Acetic Acid (VIA)

This is the visual Inspection of the cervix using acetic acid in Lugo's Iodine to highlight precancerous lesions so they can be viewed with the "naked eye". This procedure shifts the identification of precancerous cells from lab to the clinic. It has the advantages of reducing human labour, requires very little equipment and provides women with immediate test result.

2. Pap test or Pap smear (Cervical cytology)

This looks out for precancerous cells changes on the cervix that can be cervical cancer if they are not treated appropriately.

3. HPV tests:

This looks out for the virus (Human Papillomavirus) that cause these cell changes.

The Pap test is recommended for all women and can be done in a doctor's office or clinic. During the Pap test, the doctor will use a plastic or metal instrument called a speculum to widen the vagina. This helps the doctor examine the vagina and the cervix, collect a few cells and mucus from the cervix and the area around it. The cells are then placed on a slide or in a bottle of liquid and sent to a lab, the lab will then check to be sure that cells are normal.

The cells collected can also be used to look out for HPV.

During a pap test, the doctor may also perform a pelvic examination, checking the uterus ovaries and other organs.

When to get screened;

Regular Pap smear should start from age 21 or within three years of the first time you have sex, whichever happens first.

The Pap test screens for cervical cancer alone. If you are 30years old or older and your screening tests are normal, there is reduced risk of getting cervical cancer in the next few years.

-hysterectomy and people older than 65yrs who have test negative in the past are relieved of these test.

Treatment

There are three major types of treatment which are;

1. Surgery
2. Radiation
3. Chemotherapy

1. **SURGERY:** Micro invasive cancer (stage IA) is usually treated by hysterectomy (removal of the whole uterus including part of the vagina). For stage IA2, the lymph nodes are removed as well. An alternative for patients who desire to remain fertile is a local surgical procedure such as a loop electrical excision procedure (LEEP) or cone biopsy.

It is generally recommended to wait at least one year before attempting to become pregnant after surgery.

2. **RADIATION:** Radiation therapy is given as external beam radiotherapy to the pelvis and brachytherapy (internal radiation). Patients treated with surgery who have high risk features found on pathologic examination are given radiation therapy with or without chemotherapy in order to reduce the risk of relapse. Larger early stage tumors and advanced stage of tumors may be treated with radiation therapy.
3. **CHEMOTHERAPY:** The use of a combination of two chemotherapy drugs, hycamtin and cisplatin is used to treat women with late-stage (IVB) cervical cancer treatment, though combination treatment has significant risk of neutropenia, anemia, and thrombocytopenia side effects.

Prevention

A. Primary Prevention

Vaccination

New vaccines are available to prevent infection by the HPV types most associated with cervical cancer deaths worldwide. These prophylactic vaccines represents life- saving drug in particularly for girls who have not yet been exposed to the virus through sexual activities.

HPV vaccines are targeted at girls and women of age 9 to 26 because the vaccine only works if given before infection occurs; therefore, public health workers are targeting girls before they begin having sex. The vaccines have been shown to be effective for at least 4 to 6 years, and it is believed they will be effective for longer however the duration of effectiveness and whether a booster will be needed is unknown. Since the vaccines only cover some of the cancer causing ("high-risk") types of HPV, women should seek regular Pap smear screening, even after vaccination.

Condoms

Condoms offer some protection against cervical cancer. Evidence on whether condoms protect against HPV infection is mixed, but they may protect against genital warts and the precursors to cervical cancer. They also provide protection against other STDs, such as HIV and Chlamydia, which are associated with greater risks of developing cervical cancer.

Condoms may also be useful in treating potentially precancerous changes in the cervix. Exposure to semen appears to increase the risk of precancerous changes and use of condoms helps to cause these changes to regress and helps clear HPV. One study suggests that prostaglandin in semen may fuel the growth of cervical and uterine tumors and that affected women may benefit from the use of condoms.

Smoking avoidance

Carcinogens from tobacco increase the risk for many cancer types, including cervical cancer, and women who smoke have about double the chance of a nonsmoker to develop cervical cancer.

Nutrition

Fruits and vegetables: Higher levels of vegetable consumption were associated with a 54% decrease risk of HPV persistence.

Vitamin A, Vitamin C, Vitamin E, Folic acid and Carotenoids are useful nutrients if present in the body

B. Secondary Prevention

Awareness & Screening

Constraints

Papanicolaou (PAP) testing has resulted in dramatically lowered cervical cancer rates when the test is repeated every few years, but most developing countries lack the resources infrastructure and trainees personnel needed to implement such programs.

Effective screening programs require high coverage of women at risk, quality screening tests and effective follow-up and treatment. These are often challenging to achieve since pap tests require a doctor nurse to collect a cervical cell sample, a cytotechnician to process and interpret sample and a pathologist to confirm positive result.

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