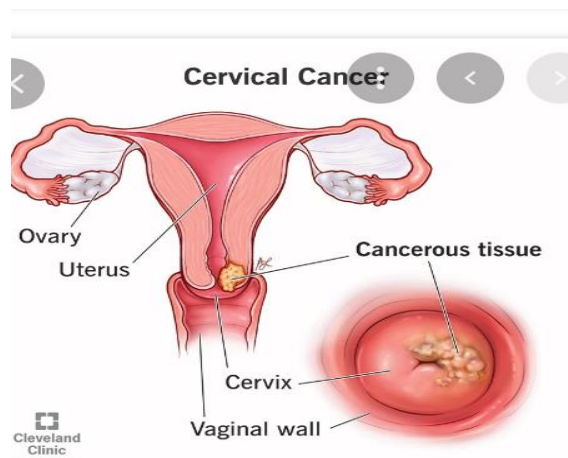




Prof. Ibgingira Charles (F.C.S)

URGENT CERVICAL CANCER AWARENESS

In Uganda the incidence rate for cervical cancer is 45.6 per 100,000 women (9), which is one of the world's highest age-adjusted cervical cancer incidence rate. Cervical cancer is the leading cancer affecting women in Uganda [3] with an annual incidence of 6,413 cases and annual mortality of 4,301 deaths [3]. Cervical cancer is the uncontrolled growth of cells on the cervix, the lowest and outermost part of the uterus. It is unique because it can take 10 to 20 years for invasive cancer to develop after mild dysplasia (abnormal growth and changes in cells) is identified. This slow progression from early lesions on the cervix to real cancer provides the basis for early screening, detection, and treatment. Cervical cancer is responsible for up to 40 % of all cancers reported in Uganda, 4 out every 10 women with cancer, have cancer of the cervix.(2)



DID YOU KNOW THAT;



Cervical cancer is caused by infection with the human Papilloma virus (HPV). HPV is one of the most common sexually transmitted infections (STIs). Most infections resolve spontaneously within one to two years, but some persist, becoming chronic, which drives the cells of the cervix to grow abnormally, resulting in early precancerous lesions. Studies done at Mulago hospital some years back showed that (72%)the majority of patients diagnosed had advanced stage III/IV disease classified as late stage disease (incurable disease). Most of these patients were between 41-50 years (40%). Noteworthy is the fact that 20% of patients seen were between 31-40years. There were also a number of patients above 70 years, which is not typical.

By the time of diagnosis, more than 80 percent of patients had advanced disease,(incurable/inoperable disease) which is associated with increased morbidity and low five-year survival rates on palliative treatment (6).

The HIV/AIDS pandemic worsened the picture of the cervical cancer. Women with HIV /AIDS infection have an increased incidence of cervical intraepithelial neoplasia (CIN), the precursor lesion for Intra epithelial cervical cancer (ICC), probably due to HIV-associated immunosuppression.

Therefore it is very important that women in the age range 30-75years and above to, routinely screen for signs of cervical cancer to catch any cancers early when they can be treated and fully cured by Surgery and radiotherapy, and avoid diagnosis at late /Advanced Stages which cannot at all be cured.

What are the predisposing factors?

Infection with the Human Papilloma Virus (HPV) increases the risk of developing cervical cancer.

Risk of acquiring HPV infection is highest soon after sexual activity begins, and in some cases, it has a second peak amongst women at menopause.

HPV is sexually transmitted; but, penetrative sex is not the only mode of transmission, Skin-to-skin genital contact is a well-recognized mode of HPV transmission.

- 1) Sexual intercourse without condom use increases the risk of becoming infected with HPV. • Persistent infection with HPV types 16 and 18, which causes the majority of cervical cancer cases increases the risk of disease development.
- 2) HIV-infected individuals are at higher risk of HPV infection, and persistence of the infection, even when they are on antiretroviral therapy (11)
- 3) The risk of HPV exposure appears to increase with the number of lifetime sexual partners of women or men (12).

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- 4) Early Age at first sexual contact has been found to be a strong, consistent risk factor for HPV infection worldwide and Initiation of sexual activity at a young age is a risk factor for HPV infection.(9,10)
 - 5) Other Factors that are high risk to development of cervical cancer after infection with HPV include immune suppression,
 - multi-parity,
 - early age at first delivery,
 - early age at first sex
 - cigarette smoking,
 - long-term use of hormonal contraceptives,
 - And co-infection with Chlamydia trachomatis or herpes simplex virus.

Prevention of HPV infection and cervical cancer;

There are three levels of Prevention of cervical Cancer;

1) Primary prevention;

Here there is no cancer yet, you from the start prevent acquiring it.

Primary prevention of cervical cancer involves prevention of being infected with HPV. This can be achieved through;

Social mechanisms such as behavior change, or through biological mechanisms such as

- Vaccination against HPV viruses for ages 9 and 45. For preventing infection from HPV16, HPV18, and 5 other types of HPV linked with cancer..
- Abstinence from sex and condom use is likely to reduce transmission of HPV.
- Don't start having sex when too young
- Limit the number of sexual partners

- Avoiding sexual intercourse with people who have had many partners

- Avoiding sexual intercourse with people who are infected with genital warts or who show other symptom of STIs

- Adopt a healthy life style, with strong immunity
- Regular cervical checks for signs of cancer
- Quit smoking tobacco(7)

2) Secondary prevention, (cervical cancer Screening)



Several methods are available for early detection of forms of cervical pre-cancer during screening including; and one must one must first rule out any symptoms and signs;

What are the symptoms and signs of cervical cancer???

Any of the following could be symptoms or signs of cervical cancer:

- Blood spots or light bleeding between or following periods
- Menstrual bleeding that is longer and heavier than usual
- Contact Bleeding after intercourse, douching, or a pelvic examination vaginal wash
- Increased vaginal discharge
- Pain during sexual intercourse
- Bleeding after menopause
- Offensive persistent smell
- Unexplained, persistent pelvic and/or back pain

Any of these symptoms should be reported to the nearest Doctor. Even if they appear to be symptoms of other, less serious conditions. The earlier precancerous cells or cancer in the cervix is found and treated, the better the chance that the cancer can be prevented or cured.

How is cervical cancer diagnosed??

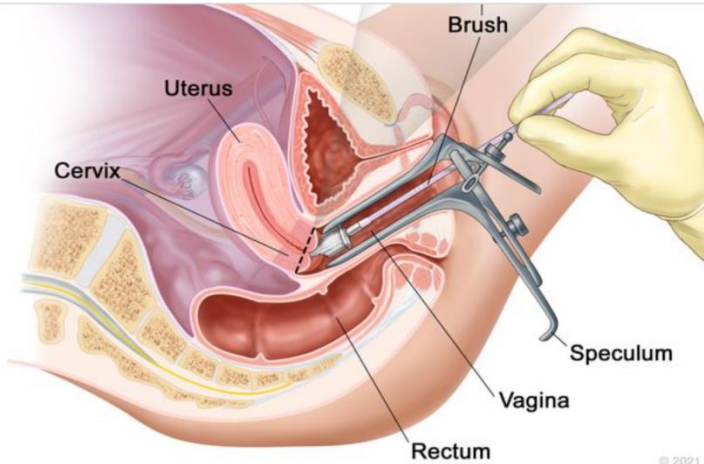
There are several tests used for diagnosing cervical cancer. But not all tests may be used for every patient. Some of these tests may be helpful for diagnosis and planning the treatment of your cancer. The doctor may consider the following factors when choosing a diagnostic test (7)

- The type of cancer suspected
- Your signs and symptoms
- Your age and general health

- The results of earlier medical tests.

These tests and methods may be used to diagnose cervical cancer:

- **Bimanual pelvic examination and sterile speculum examination.** In this examination, the doctor will check for any unusual changes in the patient's cervix, uterus, vagina, ovaries, and other nearby organs. The doctor will look inside the vagina to visualize the cervix. A Pap test is often done at the same time. Some of the nearby organs are not visible during this exam, so the doctor will insert 2 fingers of 1 hand inside the vagina while the other hand gently presses on the lower abdomen to feel the uterus and ovaries. This exam typically takes a few minutes and is done in an examination room at the doctor's office.
 - direct visual inspection of the cervix aided by chemicals like 5 percent acetic acid and iodine (visual inspection with acetic acid [VIA] and visual inspection with Lugol's iodine [VILI]), which cause recognizable color changes.
- Cytology (conventional Pap smears, liquid-based cytology) and During a Pap smear test, the doctor gently scrapes the outside and inside of the cervix, taking samples of cells for testing. Improved Pap test methods have made it easier for doctors to find cancerous cells. The liquid-based cytology test, Thin Prep or Sure Path, transfers a thin layer of cells onto a slide after removing blood or mucus from the sample. The sample is preserved so other tests can be done at the same time, such as the human papillomavirus (HPV) test ,
- **PAP SMEAR COLLECTION.**



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Pap test. A speculum is inserted into the vagina to widen it. Then, a brush is inserted into the vagina to collect cells from the cervix. The cells are checked under a microscope for signs of disease.

- Computer screening, often called AutoPap or Focal Point, uses a computer to scan the sample for abnormal cells. If a person with a positive HPV test does not show signs of cervical cancer with further testing, the patient have a follow-up HPV test 1 year later.
- **Colposcopy.** To check the cervix for abnormal areas. And to help guide a biopsy of the cervix .a special instrument called a colposcope is used. It magnifies the cells of the cervix and vagina, and the examination is similar to a speculum examination. It can be done in the doctor's office and has no side effects. And test can be done during pregnancy if there is suspicion, all women who receive an abnormal or positive result from cervical cancer screening tests should receive a colposcopy.
- **Biopsy.** Is the removal of a small amount of tissue from the cervix for examination under a microscope .Other tests can suggest that cancer is present, but only histological examination of a biopsy can make a definite diagnosis of the cancer.

There are several types of biopsies. Most are usually done in the doctor's office, sometimes using a local anesthetic to numb the area. One common biopsy method uses an instrument to pinch off small pieces of cervical tissue. Other types of biopsies include:

- **Endocervical curettage (ECC).** If the doctor wants to check an area inside the opening of the cervix that cannot be seen during a colposcopy, they will use ECC. During this procedure, the doctor uses a small, spoon-shaped instrument called a curette to scrape a small amount of tissue from inside the cervical opening.
 - **Loop electrosurgical excision procedure (LEEP).** LEEP uses an electrical current passed through a thin wire hook. The hook removes tissue for histological examination. However, a LEEP may also be used to remove a precancer or an early-stage cervical cancer.(7)
 - **Conization (a cone biopsy).** This type of biopsy removes a cone-shaped piece of tissue from the cervix. Conization may be done as treatment to remove a precancer or an early-stage cancer. If the biopsy shows that cervical cancer is present, the doctor will recommend immediate surgery to be done or refer you. The doctor may suggest additional tests to see if the cancer has spread beyond the cervix.
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- **Pelvic examination under anesthesia.** This may be necessary for treatment planning, the specialist may re-examine the pelvic area while the patient is under anesthesia to see if the cancer has spread to any organs near the cervix, including the uterus, vagina, bladder, or rectum.(7)
 - **Pelvic X-ray.** Will help to visualize the neighboring structures of the uterus to give a picture in case they are affected, and an intravenous urography may be used to view if the cancer has involved the kidneys and bladder.
 - **Computed tomography (CT or CAT) scan.** Can be used to measure the tumor's size. Sometimes, a special dye /contrast medium is given before the scan to provide better detail on the image
 - **Magnetic resonance imaging (MRI);** can be used to measure the tumor's size. A special dye /contrast medium is given before the scan to create a clearer picture.
 - **Positron emission tomography (PET) or PET-CT scan.** Can create pictures of organs and tissues inside the body. A small amount of a radioactive sugar substance is injected into the patient's body the cancer cells absorb more of the radioactive substance. However, the amount of radiation in the substance is too low to be harmful. A scanner then detects this substance to produce images of the inside of the body. .(7)

- **Biomarker testing of the tumor**, are used to identify specific genes, proteins, and other factors unique to the cervical cancer tumor. Results of these tests can help determine your personalized treatment options.
- HPV DNA PCR testing,

3) Tertiary Prevention

Methods available for the treatment of cervical cancer in Uganda include depend on several factors, including the type and stage of cancer, possible side effects of some treatment options, and the patient's preferences and overall health.

- Surgery, Early-stage disease is treated by surgery and followed by radiotherapy.
- Radiotherapy; Using Radiation, Radiation therapy is the use of high-energy x-rays or other particles to destroy cancer cells. Radiation therapy may be given alone, before surgery, or instead of surgery to shrink the tumor or after surgery to destroy any possible remaining tumour cells not seen.

The types of medications used for cervical cancer include:

- Chemotherapy using Cancer Drugs
- Targeted therapy; is a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. This type of treatment blocks the growth and spread of cancer cells and limits damage to healthy cells.(7)
 - Immunotherapy; Immunotherapy uses the body's natural defenses to fight cancer by improving your immune system's ability to attack cancer cells. .(ASCO)
 - And palliative care; untreatable cervical cancer, or treatment has failed, she qualifies to receive palliative care. This care helps to avoid unnecessary suffering and improve the quality of life of palliative care Ideally,

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