REPRODUCTIVE TRACT CANCERS

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CANCER

- **Cancer is a class of diseases characterized by out-of-control cell growth**
- **Cancer harms the body when damaged cells divide uncontrollably to form lumps or masses of tissue called tumors (except in the case of leukemia where cancer prohibits normal blood function by abnormal cell division in the blood stream).**
- **a cancerous cell manages to move throughout the body using the blood or lymph systems, destroying healthy tissue in a process called invasion**

PREDISPOSING FACTORS TO CANCER

- **Carcinogens are a class of substances that are directly responsible for damaging DNA, promoting or aiding cancer. Tobacco, asbestos, arsenic, radiation such as gamma and x-rays, the sun, and compounds in car exhaust fumes are all examples of carcinogens**
- **Cancer can be the result of a genetic predisposition that is inherited from family members. It is possible to be born with certain genetic mutations or a fault in a gene that makes one statistically more likely to develop cancer later in life.**
- **Several viruses have also been linked to cancer such as: human papillomavirus (a cause of cervical cancer), hepatitis B and C (causes of liver cancer), and Epstein-Barr virus (a cause of some childhood cancers). Human immunodeficiency virus (HIV) - and anything else that suppresses or weakens the immune system - inhibits the body's ability to fight infections and increases the chance of developing cancer.**

Symptoms of Cancers

- **Cancer symptoms are quite varied and depend on where the cancer is located, where it has spread, and how big the tumor is. Some cancers can be felt or seen through the skin - a lump on the breast or testicle can be an indicator of cancer in those locations. Skin cancer (melanoma) is often noted by a change in a wart or mole on the skin. Some oral cancers present white patches inside the mouth or white spots on the tongue.**
- **Other cancers have symptoms that are less physically apparent. Some brain tumors tend to present symptoms early in the disease as they affect important cognitive functions. Pancreas cancers are usually too small to cause symptoms until they cause pain by pushing against nearby nerves or interfere with liver function to cause a yellowing of the skin and eyes called jaundice. Symptoms also can be created as a tumor grows and pushes against organs and blood vessels. For example, colon cancers lead to symptoms such as constipation, diarrhea, and changes in stool size. Bladder or prostate cancers cause changes in bladder function such as more frequent or infrequent urination.**

Symptoms of cancers cont...

- **As cancer cells use the body's energy and interfere with normal hormone function, it is possible to present symptoms such as fever, fatigue, excessive sweating, anemia, and unexplained weight loss. However, these symptoms are common in several other maladies as well. For example, coughing and hoarseness can point to lung or throat cancer as well as several other conditions.**
- **When cancer spreads, or metastasizes, additional symptoms can present themselves in the newly affected area. Swollen or enlarged lymph nodes are common and likely to be present early. If cancer spreads to the brain, patients may experience vertigo, headaches, or seizures. Spreading to the lungs may cause coughing and shortness of breath. In addition, the liver may become enlarged and cause jaundice and bones can become painful, brittle, and break easily. Symptoms of metastasis ultimately depend on the location to which the cancer has spread.**

Diagnosis of Cancers

- **Early detection of cancer can greatly improve the odds of successful treatment and survival. Physicians use information from symptoms and several other procedures to diagnose cancer. Imaging techniques such as X-rays, CT scans, MRI scans, PET scans, and ultrasound scans are used regularly in order to detect where a tumor is located and what organs may be affected by it. Doctors may also conduct an endoscopy, which is a procedure that uses a thin tube with a camera and light at one end, to look for abnormalities inside the body.**
- **Extracting cancer cells and looking at them under a microscope is the only absolute way to diagnose cancer. This procedure is called a biopsy**
- **Physicians will analyze your body's sugars, fats, proteins, and DNA at the molecular level. For example, cancerous prostate cells release a higher level of a chemical called PSA (prostate-specific antigen) into the bloodstream that can be detected by a blood test**

Treatment of Cancer

- **Cancer treatment depends on the type of cancer, the stage of the cancer (how much it has spread), age, health status, and additional personal characteristics.**
- **There is no single treatment for cancer, and patients often receive a combination of therapies and palliative care. Treatments usually fall into one of the following categories**: ***surgery, radiation, chemotherapy, immunotherapy, hormone therapy, or gene therapy.***

PREVENTION OF CANCER

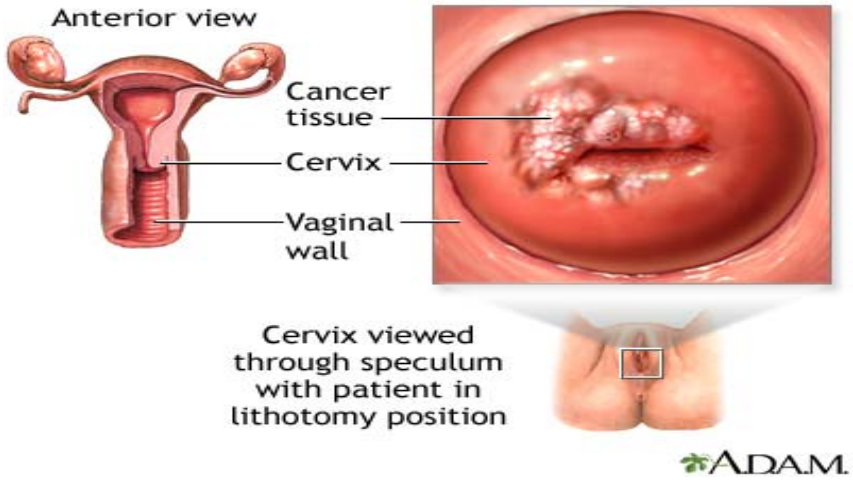
- **Cancers that are closely linked to certain *behaviors* are the easiest to prevent. For example, choosing not to smoke tobacco or drink alcohol significantly lower the risk of several types of cancer - most notably lung, throat, mouth, and liver cancer. Even if you are a current tobacco user, quitting can still greatly reduce your chances of getting cancer.**
- **Skin cancer can be prevented by staying in the *shade*, protecting yourself with a hat and shirt when in the sun, and using sunscreen.**
- ***Diet* is also an important part of cancer prevention since what we eat has been linked to the disease. Physicians recommend diets that are low in fat and rich in fresh fruits and vegetables and whole grains.**
- **Certain *vaccinations* have been associated with the prevention of some cancers. For example, many women receive a vaccination for the human papillomavirus because of the virus's relationship with cervical cancer. Hepatitis B vaccines prevent the hepatitis B virus, which can cause liver cancer.**

Prevention of Cancer continue..

- **Some cancer prevention is based on systematic screening in order to detect small irregularities or tumors as early as possible even if there are no clear symptoms present. Breast self-examination, mammograms, testicular self-examination, and Pap smears are common screening methods for various cancers.**
- **Researchers from Northwestern University Feinberg School of Medicine in Chicago reported in the journal *Circulation* that the 7 steps recommended for protection against heart disease can also reduce the risk of developing cancer,. *They include being physically active, eating a healthy diet, controlling cholesterol, managing blood pressure, reducing blood sugar and not smoking.***

CANCER OF THE CERVIX

- Cervical cancer is cancer that starts in the cervix, the lower part of the uterus (womb) that opens at the top of the vagina.
- Cervical cancers start in the cells on the surface of the cervix.
- Cervical cancer usually develops very slowly. It starts as a precancerous condition called dysplasia.



Ca Cervix

- Worldwide, cervical cancer is the third most common type of cancer in women
- In Kenya, it is the most common Gynecology Cancer, 2,500 women get it annually, 1,700 die yearly
- The precancerous condition can be detected by a Pap smear and is 100% treatable.
- It can take years for precancerous changes to turn into cervical cancer.
- Most women who are diagnosed with cervical cancer today have not had regular Pap smears or they have not followed up on abnormal Pap smear results.

Ca Cervix

- Almost all cervical cancers are caused by HPV (human papilloma virus).
- HPV is a common virus that is spread through sexual intercourse.
- There are many different types of HPV. Some strains lead to cervical cancer. (Other strains may cause genital warts, while others do not cause any problems at all.)
- A woman's sexual habits and patterns can increase her risk for cervical cancer. Risky sexual practices include having sex at an early age, having multiple sexual partners, and having multiple partners or partners who participate in high-risk sexual activities.

Ca Cervix

Other Risk factors for cervical cancer include:

- Not getting the HPV vaccine
- Poor economic status
- Women whose mothers took the drug DES (diethylstilbestrol) during pregnancy in the early 1960s to prevent miscarriage
- Weakened immune system ie HIV Infection

Ca Cervix

Symptoms

- Most of the time, early cervical cancer has no symptoms.
- Abnormal vaginal bleeding between periods, after intercourse, or after menopause
- Continuous vaginal discharge, which may be pale, watery, pink, brown, bloody, or foul-smelling
- Periods become heavier and last longer than usual

Advance cancer symptoms

- Back pain, Bone pain or fractures,, Fatigue,Leaking of urine or feces from the vagina, Leg pain, Loss of appetite,Pelvic pain, Single swollen leg, Weight loss

Ca Cervix

Signs and Tests

- Precancerous changes of the cervix and cervical cancer cannot be seen with the naked eye. Special tests and tools are needed to spot such conditions.
- Pap smears screen for precancers and cancer, but do not make a final diagnosis.
- If abnormal changes are found, the cervix is usually examined under magnification. This is called colposcopy. Pieces of tissue are surgically removed (biopsied) during this procedure and sent to a laboratory for examination.
- Cone biopsy may also be done.

Ca Cervix

Treatment

1. Early cancer

- Loop electrosurgical excision procedure (LEEP) -- uses electricity to remove abnormal tissue
- Cryotherapy -- freezes abnormal cells
- Laser therapy -- uses light to burn abnormal tissue

2. Advance Ca Cervix

- Radical Hysterectomy

3. Very Advance Cancer-

- Radiation-external and Internal

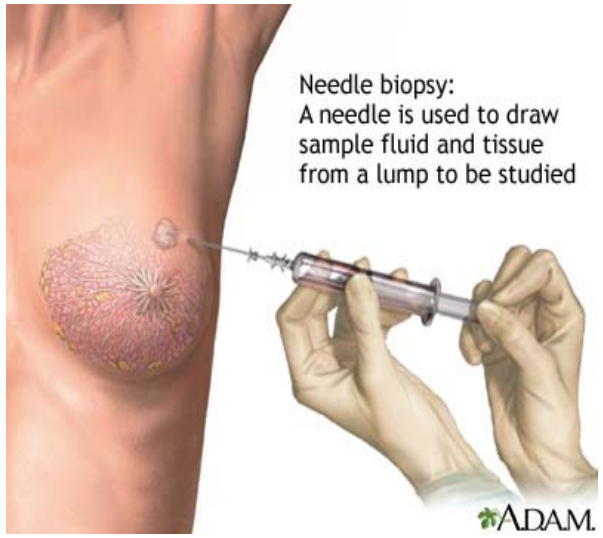
Ca Cervix

Prevention

- HPV Vaccine
- Practicing safe sex (**using condoms)** also reduces your risk of HPV and other sexually transmitted diseases. HPV infection causes genital warts. These may be barely visible or several inches wide. If a woman sees warts on her partner's genitals, she should avoid intercourse with that person.
- To further reduce the risk of cervical cancer, women should **limit their number of sexual partners and avoid partners who participate in high-risk sexual activities.**
- **Getting regular** Pap smears can help detect precancerous changes, which can be treated before they turn into cervical cancer. Pap smears effectively spot such changes, but they must be done regularly. Annual pelvic examinations, including a pap smear, should start when a woman becomes sexually active, or by the age of 20 in a nonsexually active woman.
- If you **smoke, quit**. Cigarette smoking is associated with an increased risk of cervical cancer.

CANCER OF THE BREAST

- Breast cancer is a cancer that starts in the tissues of the breast. There are two main types of breast cancer:
- Ductal carcinoma starts in the tubes (ducts) that move milk from the breast to the nipple. Most breast cancers are of this type.
- Lobular carcinoma starts in the parts of the breast, called lobules, that produce milk.



Ca Breast

- Many breast cancers are sensitive to the **hormone estrogen**. This means that estrogen causes the breast cancer tumor to grow. Such cancers have estrogen receptors on the surface of their cells. They are called estrogen receptor-positive cancer or ER-positive cancer.
- Some women have what is called HER2-positive breast cancer. HER2 **refers to a gene that helps cells grow**, divide, and repair themselves. When cells (including cancer cells) have too many copies of this gene, they grow faster. Historically, women with HER2-positive breast cancer have a more aggressive disease and a higher risk that the disease will return (recur) than women who do not have this type.

Ca Breast

Risk Factors

- **Age and gender** -- Your risk of developing breast cancer increases as you get older. Most advanced breast cancer cases are found in women over age 50. Women are 100 times more likely to get breast cancer than men.
- **Family history of breast cancer** -- You may also have a higher risk for breast cancer if you have a **close relative who has had breast, uterine, ovarian, or colon cancer**. **About 20 - 30% of women with breast cancer have a family history of the disease.**
- **Genes** -- Some people have genes that make them more likely to develop breast cancer. The most common gene defects are found in the BRCA1 and BRCA2 genes. These genes normally produce proteins that protect you from cancer. If a parent passes you a defective gene, you have an increased risk for breast cancer. Women with one of these defects have up to an 80% chance of getting breast cancer sometime during their life.
- **Menstrual cycle** -- Women who got their periods early (before age 12) or went through menopause late (after age 55) have an increased risk for breast cancer.

Ca Breast

Other Risk Factors

- **Alcohol use** -- Drinking more than 1 - 2 glasses of alcohol a day may increase your risk for breast cancer.
- **Childbirth** -- Women who have never had children or who had them only after age 30 have an increased risk for breast cancer. Being pregnant more than once or becoming pregnant at an early age reduces your risk of breast cancer.
- **DES** -- Women who took diethylstilbestrol (DES) to prevent miscarriage may have an increased risk of breast cancer after age 40. This drug was given to the women in the 1940s - 1960s.
- **Hormone replacement therapy (HRT)** -- You have a higher risk for breast cancer if you have received hormone replacement therapy with estrogen for several years or more. **Obesity** -- Obesity has been linked to breast cancer, although this link is controversial. The theory is that obese women produce more estrogen, which can fuel the development of breast cancer.
- **Radiation** -- If you received radiation therapy as a child or young adult to treat cancer of the chest area, you have a much higher risk for developing breast cancer. The younger you started such radiation and the higher the dose, the higher your risk -- especially if the radiation was given during breast development.

Note; Breast implants, using antiperspirants, and wearing underwire bras do not raise your risk for breast cancer. There is no evidence of a direct link between breast cancer and pesticides.

Ca Breast

Symptoms

- Early breast cancer usually does not cause symptoms. This is why regular breast exams are important. As the cancer grows, symptoms may include:
- Breast lump or lump in the armpit that is hard, has uneven edges, and usually does not hurt
- Change in the size, shape, or feel of the breast or nipple -- for example, you may have redness, dimpling, or puckering that looks like the skin of an orange
- Fluid coming from the nipple -- may be bloody, clear to yellow, green, and look like pus
- Men can get breast cancer, too. Symptoms include breast lump and breast pain and tenderness.

Ca Breast

Symptoms of advanced breast cancer may include:

- Bone pain
- Breast pain or discomfort
- Skin ulcers
- Swelling of one arm (next to the breast with cancer)
- Weight loss

Ca Breast

Tests

- Breast MRI to help better identify the breast lump or evaluate an abnormal change on a mammogram
- Breast ultrasound to show whether the lump is solid or fluid-filled
- Breast biopsy, using methods such as needle aspiration, ultrasound-guided, stereotactic, or open
- CT scan to see if the cancer has spread
- Mammography to screen for breast cancer or help identify the breast lump
- PET scan
- Sentinal lymph node biopsy to see if the cancer has spread

Ca Breast

Treatment

- Chemotherapy medicines to kill cancer cells
- Radiation therapy to destroy cancerous tissue
- Surgery to remove cancerous tissue -- a lumpectomy removes the breast lump; mastectomy removes all or part of the breast and possible nearby structures
- Hormonal therapy is prescribed to women with ER-positive breast cancer to block certain hormones that fuel cancer growth.- Tamoxifen(blocks eostrogen effect) , Exemestane(Aromasin)

Ca Breast

- Prevention
- Tamoxifen is approved for breast cancer prevention in women aged 35 and older who are at high risk.
- Women at very high risk for breast cancer may consider preventive (prophylactic) mastectomy. This is the surgical removal of the breasts before breast cancer is ever diagnosed. Possible candidates include:

a) Women who have already had one breast removed due to cancer

b) Women with a strong family history of breast cancer

c) Women with genes or genetic mutations that raise their risk of breast cancer (such as BRCA1 or BRCA2)

- Many risk factors, such as your genes and family history, cannot be controlled. However, eating a healthy diet and making a few lifestyle changes may reduce your overall chance of getting cancer.

Ca Breast

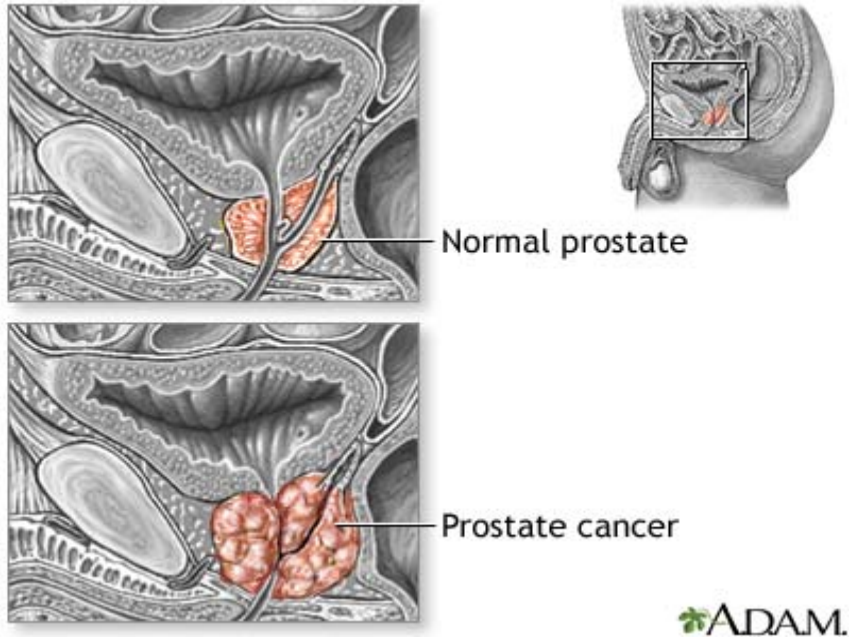
- Prevention

The American Cancer Society's dietary guidelines for cancer prevention recommend that people:

- Choose foods and portion sizes that promote a healthy weight
- Choose whole grains instead of refined grain products
- Eat 5 or more servings of fruits and vegetables each day
- Limit processed and red meat in the diet

CANCER OF THE PROSTATE

- Prostate cancer is cancer that starts in the prostate gland. The prostate is a small, walnut-sized structure that makes up part of a man's reproductive system. It wraps around the urethra, the tube that carries urine out of the body.



Ca Prostate

- Prostate cancer is the most common cause of death from cancer in men over age 75. Prostate cancer is rarely found in men younger than 40.

People who are at higher risk include:

- African men, who are also likely to develop cancer at a very early age
- Men who are older than 60
- Men who have a father or brother with prostate cancer

Other people at risk include:

- Men who have been around agent orange
- Men who use too much alcohol
- Farmers
- Men who eat a diet high in fat, especially animal fat
- Tire plant workers
- Painters
- Men who have been around cadmium
- Prostate cancer is less common in people who do not eat meat (vegetarians).

Ca Prostate

- A common problem in almost all men as they grow older is an enlarged prostate. This is called benign prostatic hyperplasia, or BPH. It does not raise your risk of prostate cancer. However, it can increase your PSA blood test results.
- The PSA blood test is often done to screen men for prostate cancer. Because of PSA testing, most prostate cancers are now found before they cause any symptoms.

Ca Prostate

Symptoms

- The symptoms listed below can occur with prostate cancer, usually at a late stage. These symptoms can also be caused by other prostate problems:
- Delayed or slowed start of urinary stream
- Dribbling or leakage of urine, most often after urinating
- Slow urinary stream
- Straining when urinating, or not being able to empty out all of the urine
- Blood in the urine or semen
- Bone pain or tenderness, most often in the lower back and pelvic bones (only when the cancer has spread)

Ca Prostate

Signs and Tests

- A biopsy is needed to tell if you have prostate cancer. A sample of tissue is removed from the prostate and sent to a lab.

A prostate biopsy may be recommended if:

- You have high PSA level
- A rectal exam shows a large prostate or a hard, uneven surface

Ca Prostate

Treatment

For early-stage prostate cancer, this may include:

- Surgery (radical prostatectomy)
- Radiation therapy, including brachytherapy and proton therapy
- If you are older, your doctor may recommend simply monitoring the cancer with PSA tests and biopsies.

If the prostate cancer has spread, treatment may include:

- Hormone therapy (medicines to reduce testosterone levels)
- Surgery
- Chemotherapy

Surgery, radiation therapy, and hormone therapy can affect your sexual desire or performance. Problems with urine control are common after surgery and radiation therapy. After treatment for prostate cancer, you will be closely watched to make sure the cancer does not spread. This involves routine doctor check-ups, including PSA blood tests (usually every 3 months to 1 year).

Ca Prostate

Prevention

- You may lower your risk of prostate cancer by eating a diet that is:
- High in omega-3 fatty acids
- Low-fat
- Similar to the traditional Japanese diet
- Vegetarian

Well woman Check Up

- Breast- Palpations, U/S, Mammogram,
- Cervical cancer Screening
- U/S- Fibroids, Ovarian tumors, Adenomyosis
- Pelvic exam
- HIV status
- TBC, LFTS, U/E/Creat, Fasting Blood sugar
- Others BMI, ECG, Lipid Profile, BP
- CA125 if indicated

Male Reproductive Health

- Erectile Dysfunction-
- Sperm count and Quality, infertility issues
- Life style –Nutrition, weight, alcohol
- Prostate cancer screening ie PSA
- Benign Prostatic Hyperplasia
- Andropause Vs Menopause

Well man Check up

- Lipid profile
- PSA
- TBC
- Fasting Blood Sugar
- LFTS
- U/E/Creat
- BMI, BP
- ECG
- HIV test
- Others as per indication

THANK YOU

ASANTE SANA