

What Do You Know About Prostate Cancer?

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What is prostate cancer?

Cancer is a disease in which cells in the body grows out of control. It is the second leading cause of death worldwide, killed close to 8.8 million people in 2015, and is expected to kill more people in the future if the trend continues[1]. Cancer in the prostate is called prostate cancer.

The prostate is a part of the male reproductive system. It is found below the bladder and before the rectum. The prostate has the size of a 'walnut' and produces fluid for semen production in men[2].

There are different types of prostate cancers, but the many are classified under '**adenocarcinomas**'; these group of prostate cancers develop in the prostate gland and can affect semen production. Other types of prostate cancers are **Sarcomas**, small cell carcinomas, neuroendocrine tumor, transitional cell carcinomas' and among others[3].

Facts about prostate cancer

- Prostate cancer is the second most common cause of death from cancer among White, African Americans, American Indians and Hispanic men [4].
- Estimations indicate that by 2030, 1.7 million new cases of prostate cancer will be recorded coupled with 499,000 new death, if the trend is not interrupted [4].
- Prostate cancer has become the most commonly diagnosed cancer in many Sub-Saharan African countries [5-6].
- For instance, in 2016 alone, prostate cancer accounted for 1.24% of total deaths among men in Sub-Saharan Africa [5].
- Despite the increasing trend of prostate cancer in the region, there is a paucity of data on the disease.
- Also, prostate cancer awareness is low in the region coupled with low knowledge of the disease [7].

Risk factors

Research has not identified any specific cause of prostate cancer [3].

The risk factors for prostate cancer include: race, age, country, family history and gene changes [3].

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- Evidence shows that black men of African descent have the highest prostate cancer incidence rates in the world [8].
- Prostate cancer is more prevalent among men of age 50 and above, and the mean age is 72.
- More than 80% of prostate cancer cases is diagnosed in men of over 65 years, but less in men below 50 years [7].
- Men with high blood levels of omega-3 fatty acids stands a greater chance of developing prostate cancer [3].
- The risk of dying of it is very high in countries like Trinidad and Tobago (53.6 deaths per 100000), Cuba (22.6 per 100000), but low in countries like Uzbekistan (1.6 per 100000), Korea (3.9 per 100000) and Tajikistan (2.05 per 100000) [4].
- A certain type of mitochondria DNA which is inherited from mothers is believed to be a risk factor of prostate cancer [3].
- Men who have a brother or a father with prostate cancer have a double chance of developing the disease. However, the risk is higher among men with many relatives having it, especially brothers than men with fathers suffering from the condition [3].
- Research has not found significant association between diet, obesity, smoking, chemical exposure, inflammation of the prostate, sexually transmitted infection and vasectomy and prostate cancer [3].

Signs and symptoms

Studies have shown that prostate cancer can have asymptomatic symptoms [4,9]. In other words, a person can have it without exhibiting any signs and symptoms.

The American Cancer Society highlights the following as symptoms of prostate cancer [3]:

- pain in the lower back, hips or upper thighs,
- pain and burning when urinating,
- blood in the urine or semen, and
- difficulty or increased in frequency of urinating
- frequent urination, especially in the night,
- urinary retention,
- weak urinary stream,
- pain during ejaculation,
- difficulty in postponing urine,
- abdominal pains,
- burning sensations after urination

Effects

Cancer in the prostate can affect [3]:

- urine flow
- sexual performance
- procreation

Prevention

Adopting certain health behaviors can reduce the risk of developing prostate cancer. Some of the practices include the habitual eating of vegetables and fruits, being physically active and maintaining a healthy body weight.

- According to the American Cancer Society, a substances in tomatoes called 'cycopenes' and 'isoflavones' in soya beans can help prevent prostate cancer [3].
- Studies have also found that diets rich in vegetables and fruits help prevent prostate cancer [10].
- Men with high levels of vitamin D stands a lower risk of developing cancer in the prostate.
- Also, men who take aspirin daily for a long time have a lower risk of getting and dying of prostate cancer.
- Studies have found that men who take pomegranate juice or extract after surgery delays their PSA level from doubling [3].
- Other studies have found that daily intake of Flaxseed supplement slows the rate at which prostate cancer cell grow [4].

Early detection

- Prostate cancer has unknown primary preventive measures, therefore secondary prevention like screening is essential for early detection.
- Detecting prostate cancer at the early stage is essential for its treatment and management [3].
- The American Cancer Society recommends that starting from age 50, men at average risk should discuss testing with their health providers, men at high risk like Blacks should discuss testing with providers at age 45 and men at higher risk at age 40.
- Prostate cancer can be detected at its early stage through screening [1].
- Some of the screening tests include; the Prostate-specific antigen (PSA), the Phi (a combination of PSA and proPSA)

and the 4Kscore test, which is a multiple test comprising of total PSA, free PSA, intact PSA and human kallikrein 2(nK2) coupled with other factors, which help determine a man's likelihood of getting PC.

- The Progenesa, which looks at the level of prostate cancer antigen 3(PCA3) in the urine after a digital rectal exam.
- Prostate cancer can also be detected with the ultrasound scan. The prostate 'biopsies' uses transrectal ultrasound to create an image of the prostate using sound waves.
- The Color Doppler ultrasound is a more current test used to detect blood flow in the prostate gland, and is more accurate in determining the part of the gland being sampled [3].

Treatment

- Quite a number of treatment methods for prostate cancer have been discovered.
- Key among them is surgery. Through surgery, medical practitioners completely remove all the cancer from the prostate gland, while lowering risk of side effects and complications [3].
- Radiation therapy is also a treatment technique for prostate cancer [3].
- Hormone therapy like abiraterone and enzalutamide are used in prostate cancer treatment.
- Other methods include: chemotherapy (i.e. docetaxel, cabazitaxel) and Immunotherapy. The later involves the use of vaccines (i.e. sipukucel-T, prostvac) to boost the immune system to fight cancer cells [3].

References:

1. World Health Organization. Cancer. 2017.
2. Center for Disease Control and Prevention. Prostate Cancer. 2017.
3. American Cancer Society. Cancer Facts & Figures 2017. 2018.
4. Center MM, Jemal A, Lortet-Tieulent J, et al. International variation in prostate cancer incidence and mortality rates. *European urology*. 2012; 61: 1079-92.
5. Jemal A, Bray F, Forman D, et al. Cancer burden in Africa and opportunities for prevention. *Cancer*. 2012; 118: 4372-84.
6. Parkin D, Ferlay J, Hamdi-Cherif M, et al. Cancer in Africa. *Epidemiology and prevention*. 2003; 4: 268-76.
7. Jandorf L, Chang MS, Smith K, Florio A and Hall SJ. Community-based free prostate cancer screening program. *Progress in community health partnerships: research, education, and action*. 2007; 1: 215.
8. Yarney J, Vanderpuye V and Mensah J. Clinicopathologic features and determinants of Gleason score of prostate cancer in Ghanaian men. *Urologic Oncology: Seminars and Original Investigations*. Elsevier, 2013, p. 325-30.
9. Magoha G. Management and survival in advanced prostate cancer in Nairobi. *East African medical journal*. 2000; 77.
10. Anderson B, Marshall-Lucette S and Webb P. African and Afro-Caribbean men's experiences of prostate cancer. *British Journal of Nursing*. 2013; 22: 1296-307.

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