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Examining the Challenging and Strategies for Improving Prostate Cancer Screening in Nigeria

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Abstract

Background: Prostate cancer has been described as the leading cause of cancer-related deaths among men aged 40 years and above, especially in developing countries including Nigeria. By 2030, the global burden of prostate cancer which is currently the fifth leading cause of death worldwide is expected to hit 1.7 million new cases and 499,000 new deaths. Although the precise causes of prostate cancer are unknown, age, race, family history, lifestyle, and genetic variations are considered to be important risk factors. Digital rectal examination and prostate specific antigen screening are two methods of routinely screening for prostate cancer that can help discover the disease early and optimize incidence, minimize prevalence, and lower the death rate. According to studies, men from Nigeria are less likely to undergo screening because of a variety of issues, including fatalistic views, a lack of awareness of prostate cancer and its risk factors, false assumptions about the process, and a lack of support from the service provider. **Objectives;** The purpose of this review is to examine challenges and strategies to improve prostate cancer screening and offer suggestions for enhancing them in Nigeria. **Method;** The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Review (PRISMA-ScR) standards were followed in the conduct of this review. Using search keywords like prostate cancer, risk factors, screening, and preventative approaches, scholarly papers published in electronic databases including PubMed, Scopus, and Google Scholar from 2018-2024 were obtained for this review **Conclusion;** This analysis suggests that institutional frameworks and policy guidelines be established and maintained in order to develop programs that educate Nigerian men about prostate cancer and the advantages of early screening.

Keywords

challenges, strategies, digital rectal examination, prostate cancer, prostate specific antigen, screening.

Introduction

Prostate cancer (PC) is the most common cancer among men in the USA, with 268,490 new cases estimated for 2022 [1]. Despite advances in disease detection and treatment, PC is the second leading cause of cancer deaths in men, and the last decade has witnessed an increase in the number of advanced-stage diagnoses [2]. The diagnosis, risk stratification, and treatment of PC are characterized by controversies and uncertainty, posing significant challenges to individual clinicians attempting to navigate complex pathways of care. The inherent biologic heterogeneity of PC drives many of the challenges associated with managing the disease [1]. Prostate cancer has been described as a model example of cancer heterogeneity, and it is characterized by widely varying clinical presentation (indolent tumours to aggressive metastatic disease) and outcomes, multimodality, and genetic/phenotypic heterogeneity (interpatient, intertumoral, and intratumoral) [2, 3]. Because of clinical heterogeneity, clinicians must be sensitive to the risks of both under treatment and overtreatment in any individual patient. Essentially, treatment decision-making is not “one size fits all.” This has resulted in numerous controversies for managing the PC patient journey. For example, debate continues over whether the benefits of early detection with routine PC screening outweigh the risks of over-detection and overtreatment [1, 3].

Overview of Prostate Cancer in Nigeria

Nigeria is in the West African sub region. Currently, the western region of Africa has the fourth highest risk for PC mortality in the world [4]. The estimated population of Nigeria in 2020 by the World Bank is 206,139,587 million people occupying a total surface area of approximately 923,768 square kilometres [5]. Close to 31% of the population in 2012 were youths aged 15–35 years [6]. In Nigeria, high mortality from PC persists with approximately 80% of Nigerian patients being incurable at diagnosis [4]. Contributory factors to this include inadequate population awareness, poor health-seeking behaviour, low levels of literacy and empowerment in addition to a poor health system leading to low uptake of screening services, and poor access to treatment [7].

The GLOBOCAN 2020 estimates show that the burden of cancer is rising and is projected to rise much faster in developing countries [4]. The total number of new cases in Nigeria in 2020 was 124,815, of which 51,398 occurred in males with prostate cancer as the commonest at 29.8% and 73,417 occurred in females with breast cancer being the commonest at 38.7%, followed by cancer of the cervix at 16.4% [8]. Excluding non-melanoma skin cancer, the top five most frequent cancers in males were prostate, colorectal, non-Hodgkin lymphoma, liver, and leukemia. In females, the top five were breast, cervical, non-Hodgkin lymphoma, ovarian, and colorectal. There were an estimated 78,889 cancer deaths with 34,200 in males and 44,699 in females [4].

Despite the rising burden of cancers in Africa, the availability of cancer screening and treatment services is limited [4]. Recognition of the implications of this situation has led to global efforts to implement cancer control plans at national and state levels, aiming to decrease cancer incidence, morbidity, and death rates and to enhance the quality of life of people living with cancer. These cancer control plans target a delineated population through the systematic implementation of evidence-based interventions for prevention, early detection, diagnosis, treatment, and palliative care [4].

The impact of cancer screening and specific interventions can be evaluated, and information from the registries can inform the formulation of policies and strategies for control and management of cancers [9,10] Nigeria has developed a national system of cancer registries that consists of 13 population-based and 20 hospital-based cancer registries [4]. The purpose of this review is to examine challenges and strategies to improve prostate cancer screening and offer suggestions for enhancing them in Nigeria.

Anatomy of the Prostate

The prostate is a gland of the male reproductive system. It is located in front of the rectum and just below the bladder, the organ that stores urine. It is about the size of a chestnut and somewhat conical in shape, and consists of a base, an apex, an anterior, a posterior and two lateral surfaces.

The main purpose of the prostate is to produce fluid for semen, which transports sperm during the male orgasm [11].

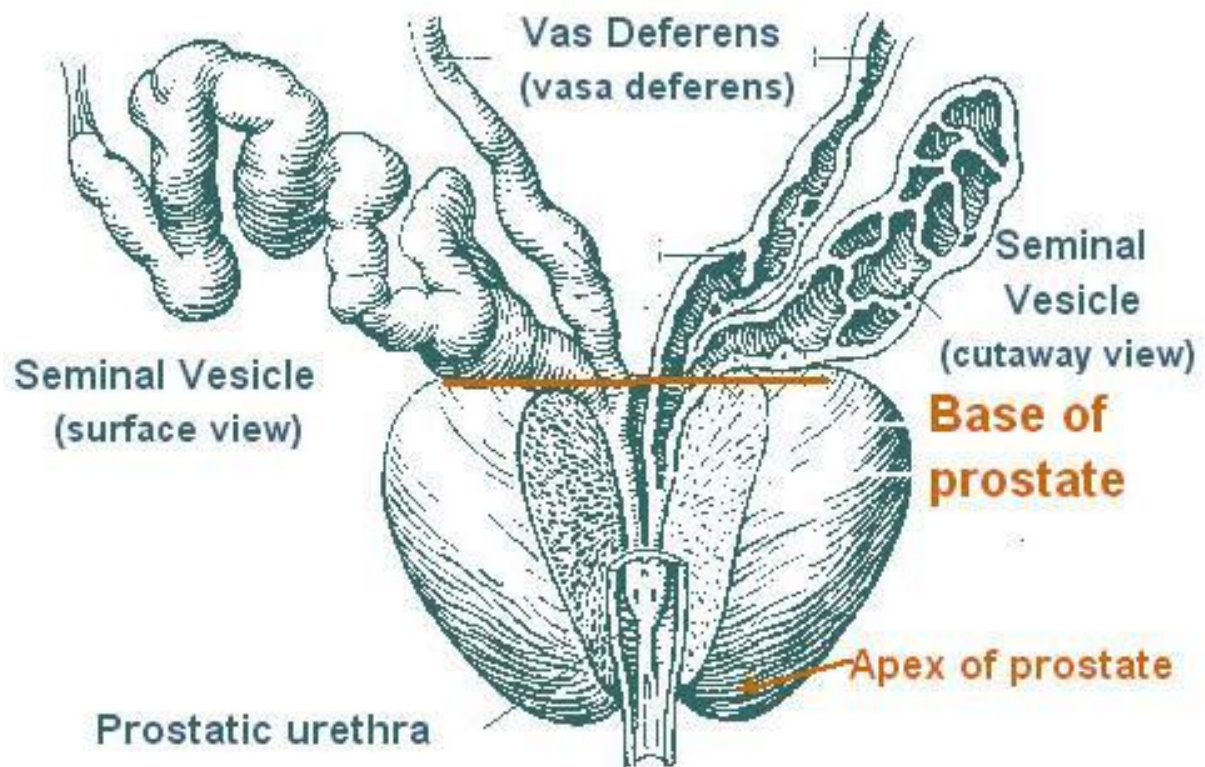


Figure 1

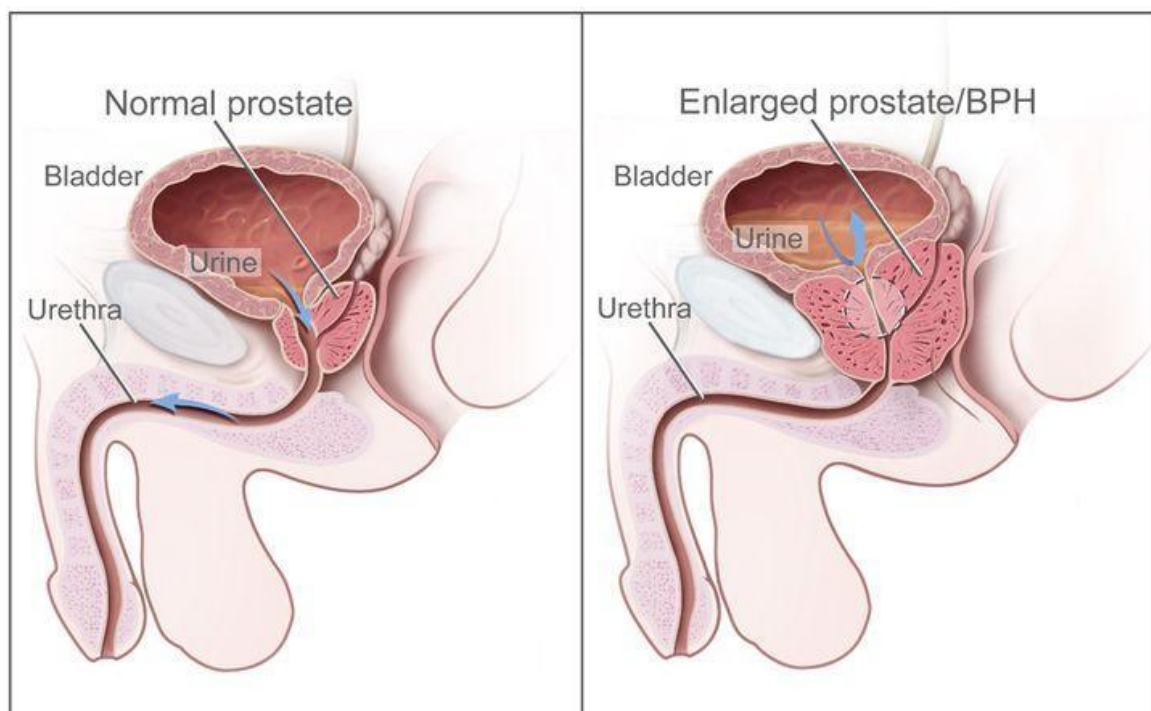


Figure 2

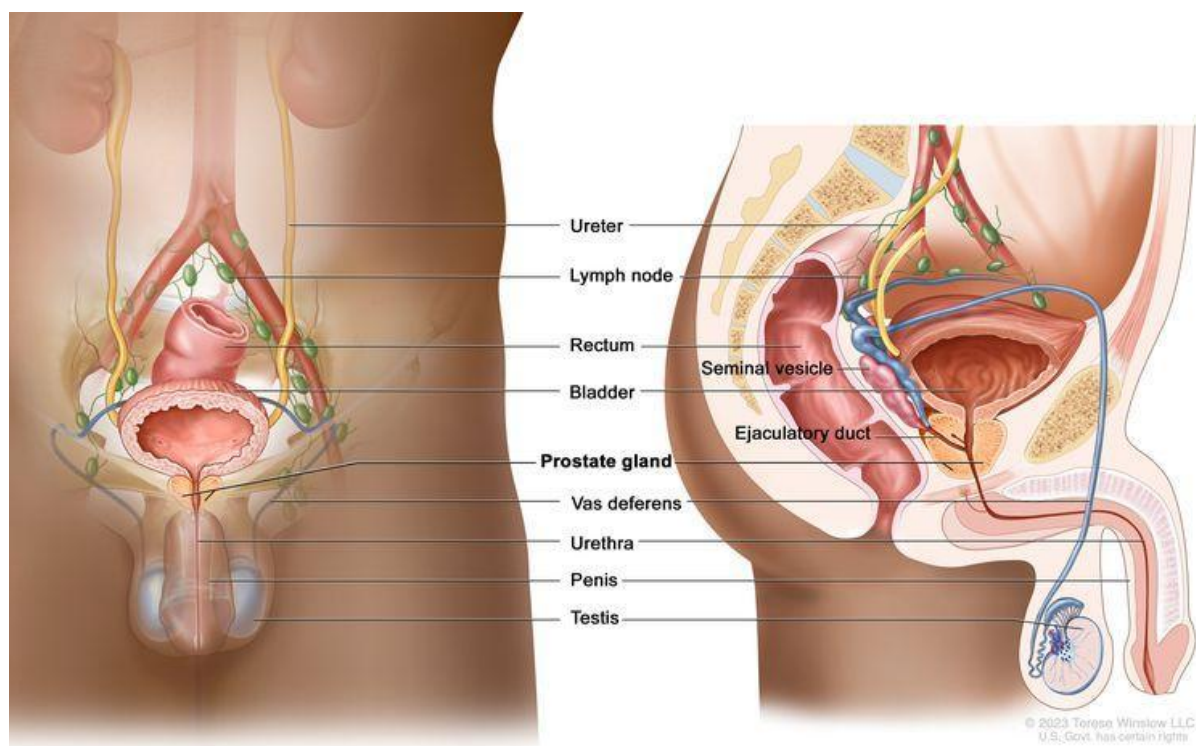


Figure 3

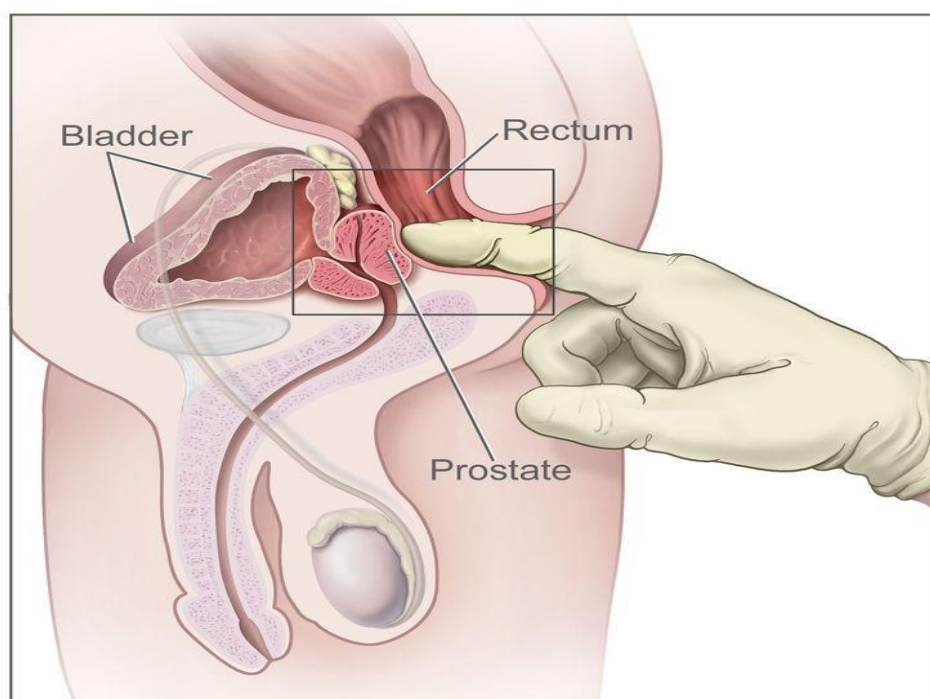


Figure 4

The AJCC TNM staging system

A staging system is a standard way for the cancer care team to describe how far a cancer has spread. The most widely used staging system for prostate cancer is the AJCC (American Joint Committee on Cancer) TNM system, which was most recently updated in 2018 [12].

The TNM system for prostate cancer is based on 5 key pieces of information:

- The extent of the main (primary) tumor (T category)*
- Whether the cancer has spread to nearby lymph nodes (N category)

- Whether the cancer has spread (metastasized) to other parts of the body (M category)
- The PSA level at the time of diagnosis
- The Grade Group (based on the Gleason score), which is a measure of how likely the cancer is to grow and spread quickly. This is determined by the results of the prostate biopsy (or surgery) [12].

Risk Factors

All men are at risk for prostate cancer. Out of every 100 American men, about 13 will get prostate cancer during their lifetime, and about 2 to 3 men will die from prostate cancer.

The most common risk factor is age. The older a man is, the greater the chance of getting prostate cancer. [13]. Some men are at increased risk for prostate cancer. You are at increased risk for getting or dying from prostate cancer if you are African American or have a family history of prostate cancer [13].

Family history (genetic risk factors)

For some men, genetic factors may put them at higher risk of prostate cancer. You may have an increased risk of getting a type of prostate cancer caused by genetic changes that are inherited if:

A first-degree relative (father, son, or brother) who had prostate cancer, including relatives in three generations or from maternal side of the family

Symptoms

Most men are unaware they have prostate cancer since it typically progresses slowly and they never experience any symptoms. In other men, however, prostate cancer can be fast growing and need treatment to prevent or delay spread outside of the gland [14]. Prostate cancer may cause no signs or symptoms in its early stages.

Prostate cancer that's more advanced may cause signs and symptoms such as: trouble urinating, decreased force in the stream of urine, blood in the urine, blood in the semen, bone pain, losing weight without trying, Erectile dysfunction.

Although the exact causes of prostate cancer are unknown, it is thought that aging, family history, lifestyle (such as diet high in testosterone levels), environment, genome changes (such as changes in BRCA type 1 and 2, RB1, WT1, and other genes), and race (being black, for example) are among the significant risk factors [15]. As long as there is no local progression or metastasis to other parts of the body, prostate cancer typically doesn't cause any symptoms, and by the time symptoms do appear, the disease has typically already progressed to its final stages [16]. This is a significant barrier in the battle against the illness. Research indicates that a critical component in determining the prognosis of cancer, particularly prostate cancer, is early identification. Therefore, early disease detection through screening, which is the study's main objective, can reduce the mortality rate of the condition in asymptomatic men and provide an opportunity for the use of efficient and affordable treatment options [14, 15]. Negative beliefs, anxieties, socioeconomic status, lack of access to quality healthcare, including inadequate education, and anxiety have all been mentioned as screening hurdles. The health and lives of the men are affected by these circumstances, as are the children, families, communities, and the nation at large. The specific goal of this review is to look into obstacles to prostate cancer screening and offer suggestions for how to make them better in Nigeria.

Screening for prostate cancer

Screening is looking for cancer before a person has any symptoms. This can help find cancer at an early stage. When abnormal tissue or cancer is found early, it may be easier to treat. By the time symptoms appear, cancer may have begun to spread [17]. Screening is the presumptive detection of unidentified diseases or defects through tests, examinations, or other procedures that can be applied rapidly [14]. Cancer screening implies searching for any cancer before the development of symptoms. The main reason for screening for cancer is to figure out if there is an abnormal growth, and if its growth may have a high risk of spreading if not handled effectively [18]. The American Cancer Society (ACS) recommends that men should make an informed decision with their health care providers about whether to be screened for prostate cancer. Screening options for prostate cancer include a digital rectal exam (DRE) and the

assessment of prostate-specific antigen (PSA) levels [14]. Prostate specific antigen (PSA) test which is the most commonly used screening method is a blood test that measures the level of PSA in the blood. PSA is a protein that is produced by cells in the prostate gland. It is mostly found in semen, although it is also present in the blood in trace amounts. Nanogram per millilitre of blood (ng/ml) is the general method for measuring the PSA level. There is no particular level of PSA that is stated to be normal. The reading differs for different men and the level usually increases as one gets older. In most cases, most men have a PSA level of less than 3ng/ml. The level of PSA can be higher in men with prostate cancer; they can also increase due to some other factors such as age and race [18]. The chance of having prostate cancer goes up as the PSA level goes up, but there is no set cutoff point that can tell for sure if a man does or doesn't have prostate cancer [19].

Many doctors use a PSA cut off point of 4 ng/mL or higher when deciding if a man might need further testing, while others might recommend it starting at a lower level, such as 2.5 or 3. And some doctors might use age-specific cutoffs [19].

“Special types of PSA tests,” below).

1. Most men without prostate cancer have PSA levels under 4 ng/mL of blood.
When prostate cancer develops, the PSA level often goes above 4. Still, a level below 4 is not a guarantee that a man doesn't have cancer. About 15% of men with a PSA below 4 will have prostate cancer if a biopsy is done
2. Men with a PSA level between 4 and 10 (often called the “borderline range”) have about a 1 in 4 chance of having prostate cancer. If the PSA is more than 10, the chance of having prostate cancer is over 50%.
If your PSA level is high, you might need further tests to look for prostate cancer (see “If screening test results aren't normal,” below) [19].

Other factors that might affect PSA levels

One reason it's hard to use a set cutoff point with the screening PSA test is that factors other than cancer can also affect PSA levels.

Factors that might **raise PSA levels** include:

Older age: PSA levels normally go up slowly as you get older, even if you're prostate is normal.

Having an enlarged prostate: Conditions such as benign prostatic hyperplasia (BPH), a non-cancerous enlargement of the prostate that affects many men as they grow older, can raise PSA levels.

Prostatitis: This is an infection or inflammation of the prostate gland, which can raise PSA levels.

Ejaculation: This can make the PSA go up for a short time. This is why some doctors suggest that men abstain from ejaculation for a day or two before testing.

Riding a bicycle: Some studies have suggested that cycling may raise PSA levels

For a short time (possibly because the seat puts pressure on the prostate), although not all studies have found this

Certain urologic procedures: Some procedures done in a doctor's office that affect the prostate, such as a prostate biopsy or cystoscopy, can raise PSA levels for a short time. Some studies have suggested that a digital rectal exam (DRE) might raise PSA levels slightly, although other studies have not found this. Still, if both a PSA test and a DRE are being done during a doctor visit, some doctors advise having the blood drawn for the PSA before having the DRE, just in case.

Certain medicines: Taking male hormones like testosterone (or other medicines that raise testosterone levels) may cause a rise in PSA

Some things might **lower PSA levels** (even if a man has prostate cancer):

5-alpha reductase inhibitors: Certain drugs used to treat BPH or urinary symptoms, such as finasteride (Proscar or Propecia) or dutasteride (Avodart), can lower PSA levels. These drugs can also affect prostate cancer risk they can lower PSA levels, the doctor might need to adjust for this.

Herbal mixtures: Some mixtures that are sold as dietary supplements might mask a high PSA level. This is why it's important to let your doctor know if you are taking any type of supplement, even ones that are not necessarily meant for prostate health. Saw palmetto (an herb used by some men to treat BPH) does not seem to affect PSA.

Certain other medicines: Some research has suggested that long-term use of certain medicines, such as aspirin, statins (cholesterol-lowering drugs), and thiazide diuretics (such as hydrochlorothiazide) might lower PSA levels. More research is needed to confirm these findings. It's important to talk to your doctor about anything you're taking that might affect your PSA level, as it might affect the accuracy of your test result [19].

Laboratory Diagnosis

If prostate cancer screening detects an abnormality, there will be recommendation, for further tests to determine whether you have prostate cancer such as:

Ultrasound; During a transrectal ultrasound, a small probe, about the size and shape of a cigar, is inserted into your rectum. The probe uses sound waves to create a picture of your prostate gland.

Magnetic resonance imaging (MRI); in some situations, your doctor may recommend an MRI scan of the prostate to create a more detailed picture. MRI images may help your doctor plan a procedure to remove prostate tissue samples.

Collecting a sample of prostate tissue; To determine whether there are cancer cells in the prostate, your doctor may recommend a procedure to collect a sample of cells from your prostate (prostate biopsy). Prostate biopsy is often done using a thin needle that's inserted into the prostate to collect tissue. The tissue sample is analyzed in a lab to determine whether cancer cells are present.

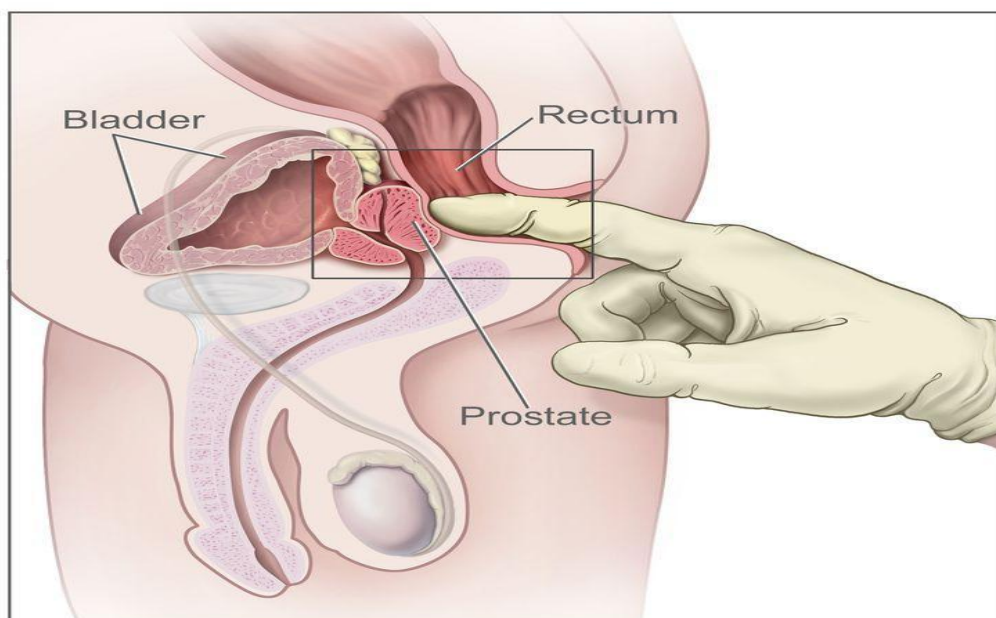


FIGURE 5 digital rectal exams (DRE). The doctor inserts a gloved, lubricated finger into the rectum and feels the rectum, anus, and prostate (in males) to check for anything abnormal [21].

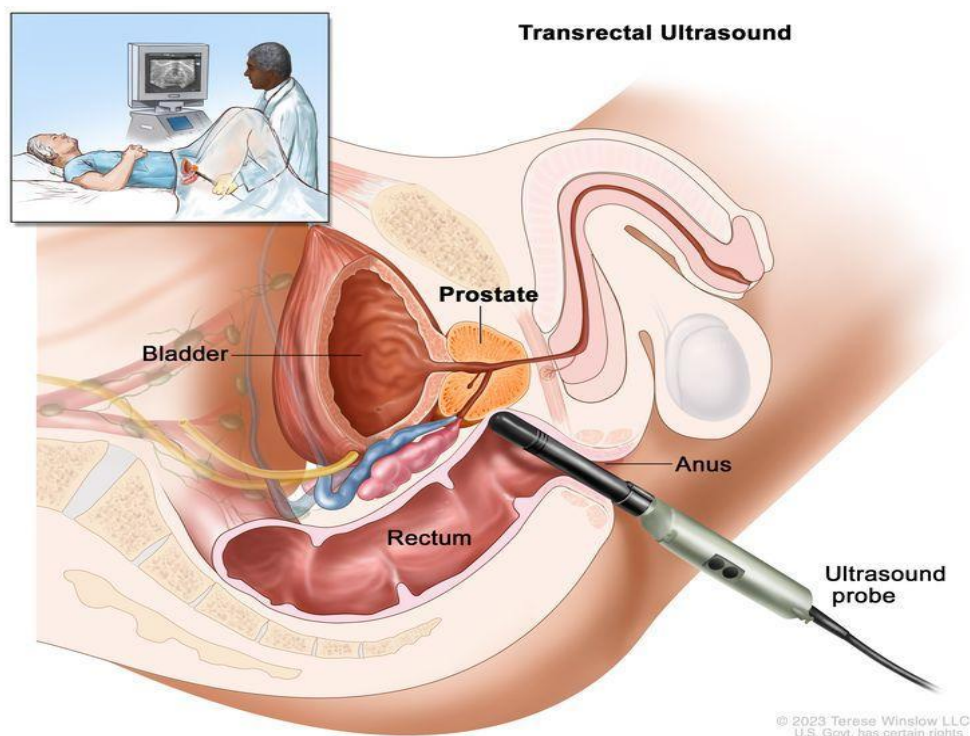


Figure 6 Transrectal ultra sound. An ultrasound probe is inserted into the rectum to check the prostate. The probe bounces sound waves off body tissues to make echoes that form a sonogram (computer picture) of the prostate [21].

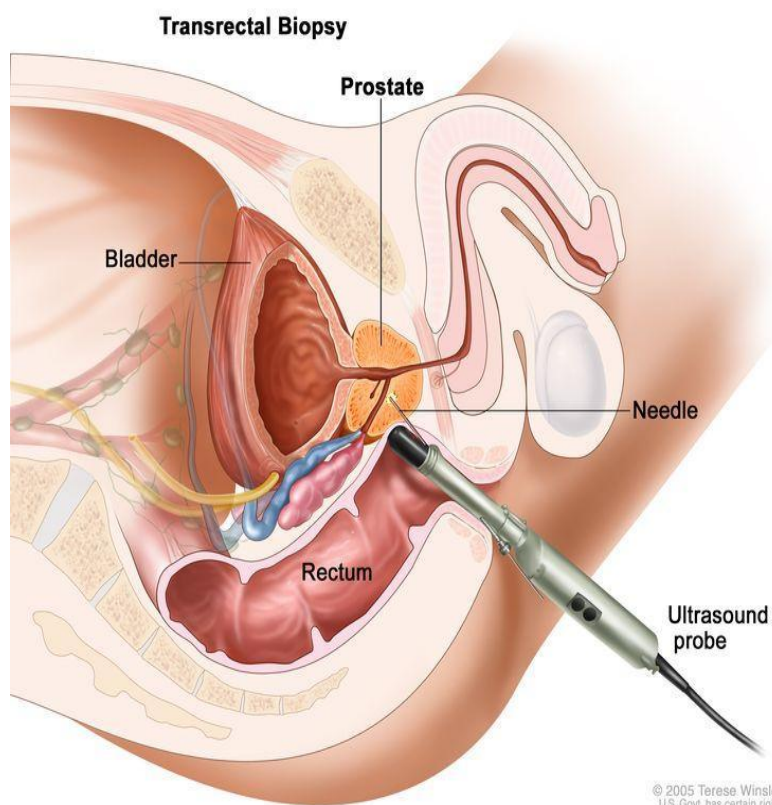


Figure 7 Transrectal biopsy; An ultrasound probe is inserted into the rectum to show where the tumor is. Then a needle is inserted through the rectum into the prostate to remove tissue from the prostate [21].

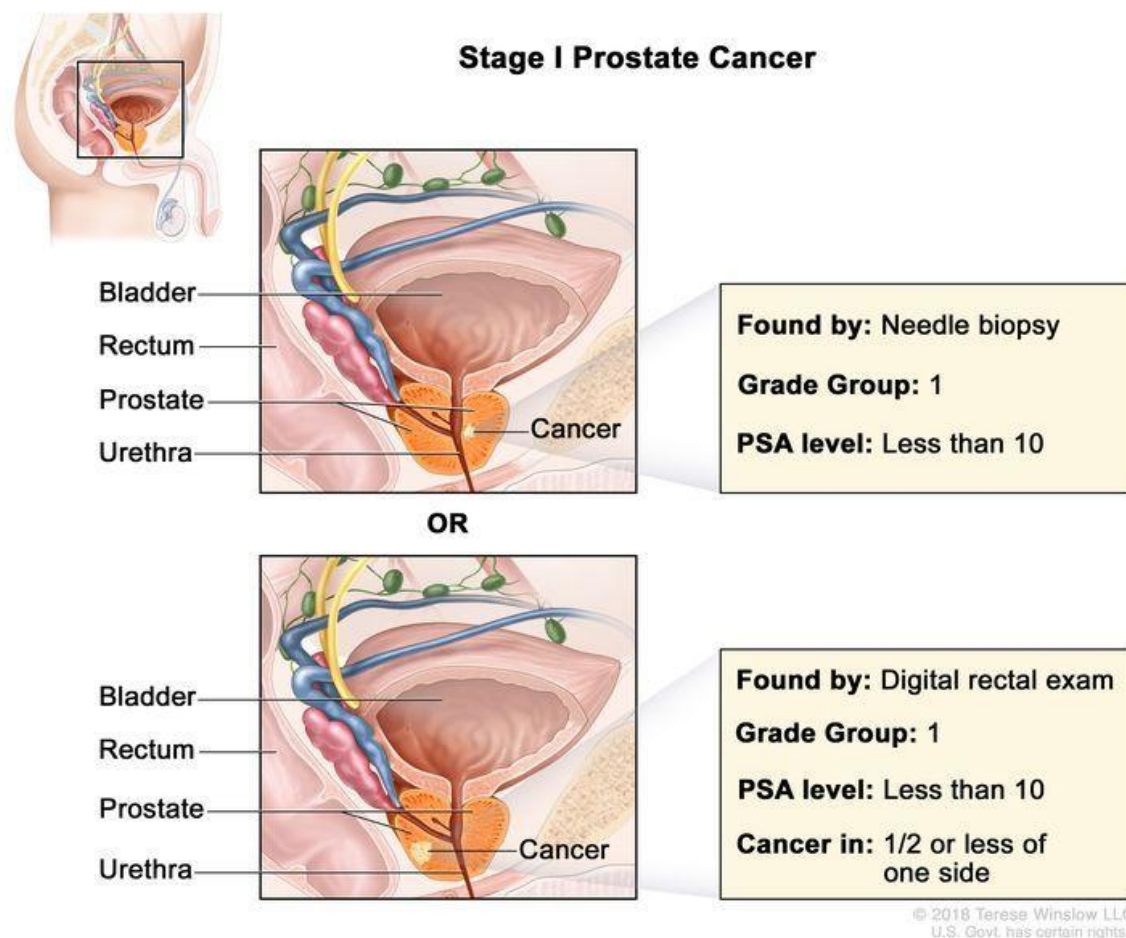


Figure 8

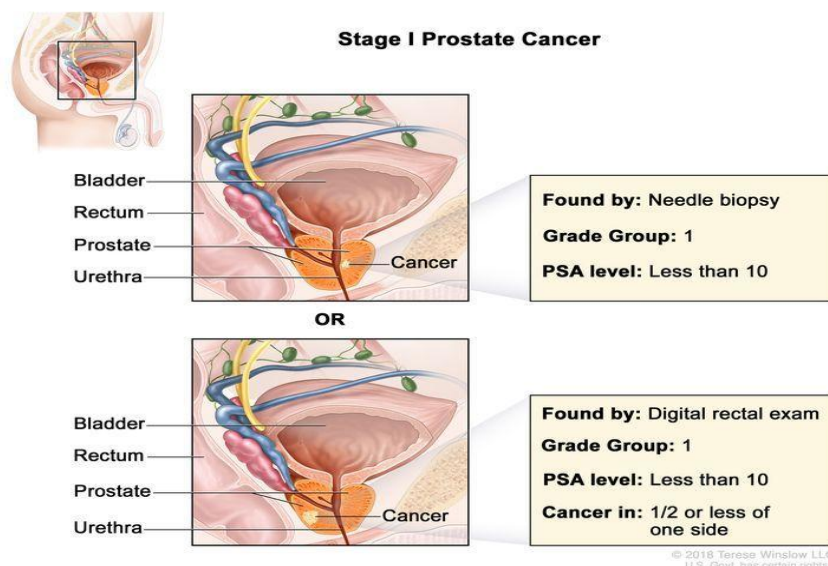


Figure 8

Figure 8 Stage I prostate cancer. Cancer is found in the prostate only. The cancer is not felt during a digital rectal exam and is found by needle biopsy done for high prostate-specific antigen (PSA) level or in a sample of tissue removed during surgery for other reasons. The PSA level is less than 10 and the Grade Group is 1; OR the cancer is felt during a digital rectal exam and is found in one-half or less of one side of the prostate. The PSA level is less than 10 and the Grade Group is 1. [21].

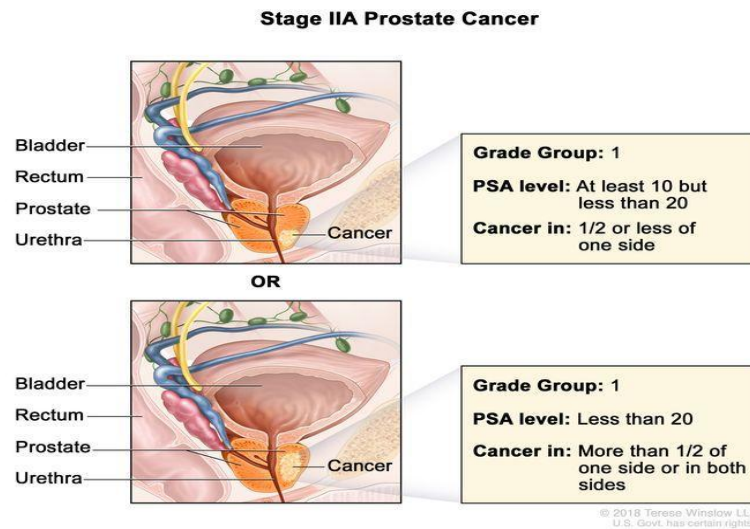


Figure 9 Stage IIA prostate cancer. Cancer is found in the prostate only. Cancer is found in one-half or less of one side of the prostate. The prostate-specific antigen (PSA) level is at least 10 but less than 20 and the Grade Group is 1; OR cancer is found in more than one-half of one side of the prostate or in both sides of the prostate. The PSA level is less than 20 and the Grade Group is 1. [21].

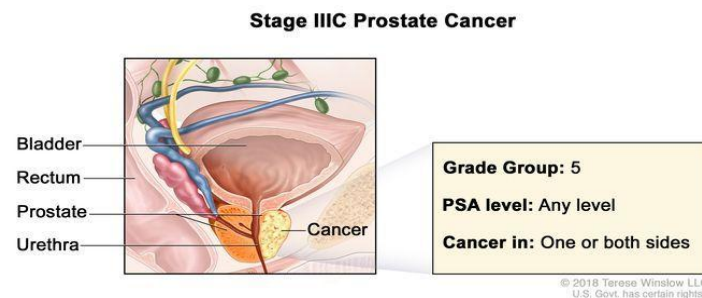


Figure 10 Stage IIIC prostate cancer. Cancer is found in one or both sides of the prostate and may have spread to the seminal vesicles or to nearby tissue or organs, such as the rectum, bladder, or pelvic wall. The prostate-specific antigen can be any level and the Grade Group is 5 [21].

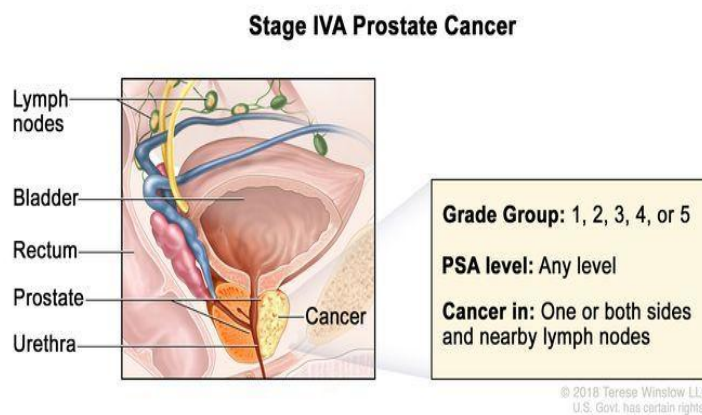


Figure 11 Stage IVA prostate cancer. Cancer is found in one or both sides of the prostate and may have spread to the seminal vesicles or to nearby tissue or organs, such as the rectum, bladder, or pelvic wall. Cancer has spread to nearby lymph nodes. The prostate-specific antigen can be any level and the Grade Group is 1, 2, 3, 4, or 5. [21].

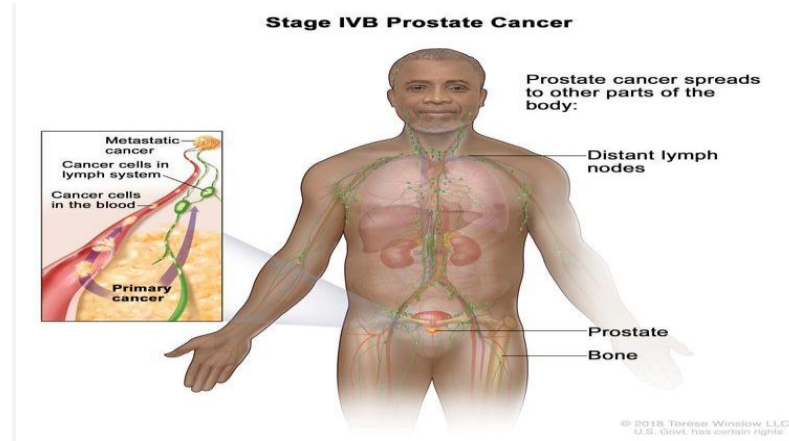


Figure 12

Figure 12 Stage IVB prostate cancer. Cancer has spread to other parts of the body, such as the bones or distant lymph nodes. [21].

Determining whether prostate cancer is aggressive

When a biopsy confirms the presence of cancer, the next step is to determine the level of aggressiveness (grade) of the cancer cells. A doctor in a lab examines a sample of your cancer cells to determine how much cancer cells differ from the healthy cells. A higher grade indicates a more aggressive cancer that is more likely to spread quickly [20].

Techniques used to determine the aggressiveness of the cancer include:

Gleason score; The most common scale used to evaluate the grade of prostate cancer cells is called a Gleason score. Gleason scoring combines two numbers and can range from 2 (nonaggressive cancer) to 10 (very aggressive cancer), though the lower part of the range isn't used as often.

Most Gleason scores used to assess prostate biopsy samples range from 6 to 10. A score of 6 indicates a low-grade prostate cancer. A score of 7 indicates a medium-grade prostate cancer. Scores from 8 to 10 indicate high-grade cancers [20].

Genomic testing; Genomic testing analyzes your prostate cancer cells to determine which gene mutations are present. This type of test can give you more information about your prognosis. But it's not clear who might benefit most from this information, so the tests aren't widely used. Genomic tests aren't necessary for every person with prostate cancer, but they might provide more information for making treatment decisions in certain situations [20].

Determining whether the cancer has spread

Once a prostate cancer diagnosis has been made, doctor works is to determine the extent (stage) of the cancer. If your doctor suspects that the cancer may have spread beyond your prostate, one or more of the following imaging tests may be recommended:

- i. Bone scan.
- ii. Ultrasound.
- iii. Computerized tomography (CT) scans.
- iv. Magnetic resonance imaging (MRI).
- v. Positron emission tomography (PET) scan.

Not every person should have every test. Doctor will help determine which tests are best for your individual situation. Doctor uses the information from these tests to assign your cancer a stage. Prostate cancer stages are indicated by Roman numerals ranging from I to IV. The lowest stages indicate the cancer is confined to the prostate. By stage IV, the cancer has grown beyond the prostate and may have spread to other areas of the body [20].

Treatment of Prostate Cancer

Prostate cancer treatment options depend on several factors, such as how fast cancer is growing, whether it has spread and overall health, as well as the potential benefits or side effects of the treatment.

Immediate treatment may not be necessary

Low-grade prostate cancer may not need treatment right away. For some, treatment may never be needed. Instead, doctors sometimes recommend active surveillance.

In active surveillance, regular follow-up blood tests, rectal exams and prostate biopsies may be performed to monitor progression of your cancer. If tests show your cancer is progressing, you may opt for a prostate cancer treatment such as surgery or radiation.

Active surveillance may be an option for cancer that isn't causing symptoms, is expected to grow very slowly and is confined to a small area of the prostate. Active surveillance may also be considered for someone who has another serious health condition or who is of an advanced age that makes cancer treatment more difficult.

Surgery to remove the prostate

Surgery for prostate cancer involves removing the prostate gland (radical prostatectomy), some surrounding tissue and a few lymph nodes.

Surgery is an option for treating cancer that's confined to the prostate. It's sometimes used to treat advanced prostate cancer in combination with other treatments.

To access the prostate, surgeons may use a technique that involves:

Making several small incisions in your abdomen; During robot-assisted laparoscopic prostatectomy, surgical instruments are attached to a mechanical device (robot) and inserted through several small incisions in your abdomen. The surgeon sits at a console and uses hand controls to guide the robot to move the instruments. Most prostate cancer operations are done using this technique.

Making one long incision in your abdomen; During retropubic surgery, the surgeon makes one long incision in your lower abdomen to access and remove the prostate gland. This approach is much less common, but may be necessary in certain situations.

Radiation therapy

Radiation therapy uses high-powered energy to kill cancer cells. Prostate cancer radiation therapy treatments may involve:

Radiation that comes from outside of your body (external beam radiation); During external beam radiation therapy, the patient lies on a table while a machine moves around his body, directing high-powered energy beams, such as X-rays or protons, to your prostate cancer. Typically, patient undergoes external beam radiation treatments five days a week for several weeks. Some medical centres offer a shorter course of radiation therapy that uses higher doses of radiation spread over fewer days.

External beam radiation is an option for treating cancer that's confined to the prostate. It can also be used after surgery to kill any cancer cells that might remain if there's a risk that the cancer could spread or come back. For prostate cancer that spreads to other areas of the body, such as the bones, radiation therapy can help slow the cancer's growth and relieve symptoms, such as pain.

Radiation placed inside your body (brachytherapy). Brachytherapy involves placing radioactive sources in your prostate tissue. Most often, the radiation is contained in rice-sized radioactive seeds that are inserted into your prostate tissue. The seeds deliver a low dose of radiation over a long period of time. Brachytherapy is one option for treating cancer that hasn't spread beyond the prostate.

In some situations, doctors may recommend both types of radiation therapy.

Freezing or heating prostate tissue

Ablative therapies destroy prostate tissue with cold or heat. Options may include:

Freezing prostate tissue; Cryoablation or cryotherapy for prostate cancer involves using a very cold gas to freeze the prostate tissue. The tissue is allowed to thaw and the procedure repeats. The cycles of freezing and thawing kill the cancer cells and some surrounding healthy tissue.

Heating prostate tissue; High-intensity focused ultrasound (HIFU) treatment uses concentrated ultrasound energy to heat the prostate tissue and cause it to die.

These treatments may be considered for treating very small prostate cancers when surgery isn't possible. They may also be used to treat advanced prostate cancers if other treatments, such as radiation therapy, haven't helped.

Researchers are studying whether cryotherapy or HIFU to treat one part of the prostate might be an option for cancer that's confined to the prostate. Referred to as "focal therapy," this strategy identifies the area of the prostate that contains the most aggressive cancer cells and treats that area only. Studies have found that focal therapy reduces the risk of side effects. But it's not clear whether it offers the same survival benefits as treatment to the entire prostate.

Hormone therapy

Hormone therapy is treatment to stop your body from producing the male hormone testosterone. Prostate cancer cells rely on testosterone to help them grow. Cutting off the supply of testosterone may cause cancer cells to die or to grow more slowly. Hormone therapy options include:

Medications that stop your body from producing testosterone; Certain medications — known as luteinizing hormone-releasing hormone (LHRH) or gonadotropin-releasing hormone (GnRH) agonists and antagonists — prevent your body's cells from receiving messages to make testosterone. As a result, your testicles stop producing testosterone.

Medications that block testosterone from reaching cancer cells; These medications, known as anti-androgens, usually are given in conjunction with LHRH agonists. That's because LHRH agonists can cause a temporary increase in testosterone before testosterone levels decrease.

Surgery to remove the testicles (orchiectomy); Removing your testicles reduces testosterone levels in your body quickly and significantly. But unlike medication options, surgery to remove the testicles is permanent and irreversible.

Hormone therapy is often used to treat advanced prostate cancer to shrink the cancer and slow its growth.

Hormone therapy is sometimes used before radiation therapy to treat cancer that hasn't spread beyond the prostate. It helps shrink the cancer and increases the effectiveness of radiation therapy.

Chemotherapy

Chemotherapy uses drugs to kill rapidly growing cells, including cancer cells. Chemotherapy can be administered through a vein in your arm, in pill form or both.

Chemotherapy may be a treatment option for treating prostate cancer that has spread to other areas of the body. Chemotherapy may also be an option for cancers that don't respond to hormone therapy.

Immunotherapy

Immunotherapy uses your immune system to fight cancer. The body's disease-fighting immune system may not attack your cancer because the cancer cells produce proteins that help them hide from the immune system cells. Immunotherapy works by interfering with that process.

Prostate cancer immunotherapy can involve:

Engineering your cells to fight cancer; Sipuleucel-T (Provenge) treatment takes some of your own immune cells, genetically engineers them in a laboratory to fight prostate cancer and then injects the cells back into the body through a vein. It's an option for treating advanced prostate cancer that no longer responds to hormone therapy.

Helping your immune system cells identify cancer cells; Immunotherapy drugs that help the immune system cells identify and attack the cancer cells are an option for treating advanced prostate cancers that no longer respond to hormone therapy.

Targeted drug therapy

Targeted drug treatments focus on specific abnormalities present within cancer cells. By blocking these abnormalities, targeted drug treatments can cause cancer cells to die. Targeted therapy drugs may be recommended to treat advanced or recurrent prostate cancer if hormone therapy isn't working.

Some targeted therapies only work in people whose cancer cells have certain genetic mutations. The cancer cells may be tested in a laboratory to see if these drugs might help the patient.

Alternative medicine

No complementary or alternative treatments will cure prostate cancer. However, complementary and alternative prostate cancer treatments may help the patient cope with the side effects of cancer and its treatment.

Nearly everyone diagnosed with cancer experiences some distress at some point. If distressed, the patient may feel sad, angry or anxious. Patient may experience difficulty sleeping or find constantly thinking about cancer situation.

Several complementary medicine techniques may help you cope with your distress, including:

- Art therapy
- Dance or movement therapy
- Exercise
- Meditation
- Music therapy
- Relaxation techniques
- Spirituality

Challenges of Prostate Cancer Screening

Challenges of prostate cancer screening refer to the negative effects of health-promoting behaviour [14]. Challenges are elements that prevent someone from engaging in behaviors as a result of their beliefs about illness and disease. The methods through which challenges hinder prostate cancer screening have been studied by various researchers. According to Oranusi in a cross-sectional study conducted on 652 men aged 20–69 noted that the absence of a national cancer center, credibility of health promotion campaigns, fear of being diagnosed with cancer, and no national policies on prostate cancer screening is associated with barriers to screening [14]. Prostate Cancer Antigen screening hurdles include fatalistic beliefs, lack of knowledge about prostate cancer and risk factors, fear of screening being uncomfortable and family influence. Investigation on how 130 Nigerian male workers aged 40-65 years regarded prostate cancer screening and discovered that a low level of knowledge about prostate cancer, misconception towards prostate cancer screening, and no encouragement from the service provider are the perceived barriers [22]. Lack of knowledge about cancer of the prostate, lack of knowledge about prostate-specific antigen screening, cost of screening and no health insurance cover as significant barriers to screening among 300 men aged 40–84 years from Sokoto, Nigeria [23]. Identified challenges in different study review limited knowledge about prostate cancer and lack of awareness of screening tests [24]. Most of the research showed that Nigerian men's lack of awareness prevents them from doing prostate cancer screenings. The ignorance of prostate cancer can take many forms: it can include ignorance about the disease itself, ignorance of current screening programs and techniques, and ignorance of the presence of prostate cancer screening facilities.

Recommendation

The results of this review indicate that men in Nigeria are not well-informed about prostate cancer. Information leaflets about the common disease and the benefits of early screening should be created and distributed to both the country's rural and urban areas. They should be brief and available in multiple languages.

The media authority should make sure that the right information about prostate cancer, risk factors, screening and treatment are being shared so as to remove the false believe among Nigerian men and help them with necessary information to seek for help when there is need to. Health workers should organize seminars and workshops to enlighten most people about the prostate cancer and the benefits of early screening [14, 23]. Intervention measures aiming at increasing knowledge about prostate cancer and screening services need to be scaled up alongside ensuring that screening services are freely available for easy access among individual both in rural and urban area [25]. The major factor in the changing prevalence of prostate cancer is the effect of screening. Nigeria screening program is underdeveloped which has led to the low outcome of screening process [14]. It is necessary for the Nigerian government to promote prostate awareness and screening in order to lower the country's mortality rate and boost economic growth. Appropriate resources should be directed toward the health sector in order to improve the effectiveness of the screening program in Nigeria. Additionally, the cost of screening should be lowered in order to make it more affordable for those with low incomes.

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