PROSTATE CANCER

PROSTATE CANCER AND SURGERY

This beautifully designed magazine has been created to give you all the essential information about Prostate cancer in an easy-to-understand manner. We aim to empower you throughout your cancer journey, enabling you to make informed choices, anticipate treatment and lifestyle changes, and ultimately achieve the best possible outcome.

LET'S START THE JOURNEY.
LET'S BRING IT ON!

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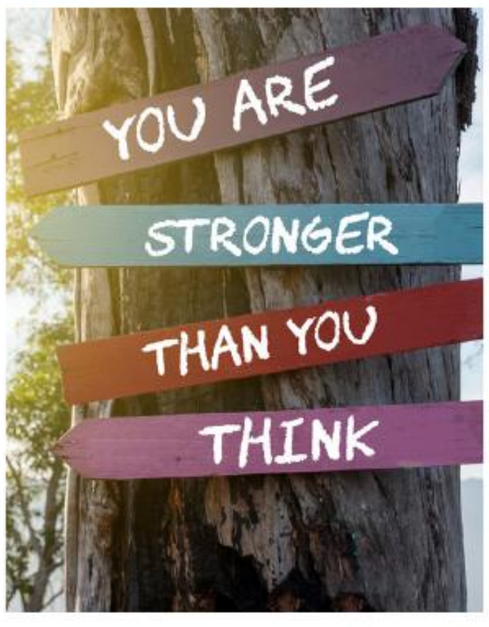

BITO HEALTH

INTRODUCTION

PROSTATE CANCER is the most common cancer among men, aside from non-melanoma skin cancer. Annually, there are approximately 248,530 new cases of prostate cancer diagnosed in the U.S. Incidence rates vary by race, with the highest rates among Black males (183 per 100,000), followed by White males (110 per 100,000) and the lowest among Asian American and Pacific Islander males (60 per 100,000). Prostate cancer is rare in men under 50 years old, with the highest incidence occurring between ages 65 and 74. Regular screening is recommended for men ages 55-69. Men with a family history of prostate cancer or African American men may consider starting screening earlier, around age 45. The 5-year relative survival rate for localized prostate cancer is nearly 100%. Survival rates for distant-stage prostate cancer have improved over the years but vary by race.

WHERE IS THE PROSTATE

The prostate is a small male gland located below the bladder and in front of the rectum. It surrounds the urethra, the tube that carries urine and semen out of the body. By surrounding the urethra, the prostate can influence the flow of urine. It also produces fluid that forms a component of semen, which helps nourish and transport sperm. The muscles of the prostate help push semen through the urethra during ejaculation.

WHAT IS PROSTATE CANCER ?

PROSTATE CANCER originates in the prostate gland. The most common type is adenocarcinoma, which develops from glandular cells producing prostate fluid. **OTHERS INCLUDE:**

HISTOLOGICAL TYPE OF PROSTATE CANCER

1. Glandular (majority)
2. Squamous
3. Neuroendocrine
4.

RISK FACTORS FOR PROSTATE CANCER

Prostate cancer risk factors can be broadly categorized into non-modifiable and modifiable factors.

NON-MODIFIABLE RISK FACTORS:

1.AGE: The risk of prostate cancer increases significantly with age. It is rare in men under 40 but becomes more common after age 50.

2.RACE/ETHNICITY: African American men and Caribbean men of African ancestry have a higher risk of developing prostate cancer. They tend to develop the disease at a younger age and have more aggressive forms.

3.FAMILY HISTORY: Having a father or brother with prostate cancer more than doubles a man's risk of developing this disease. The risk is higher if multiple family members are affected or if they were diagnosed at a young age.

4.GENETIC FACTORS: There is a slightly increased risk associated with certain inherited gene mutations, such as BRCA1, BRCA2, Lynch Syndrome

MODIFIABLE RISK FACTORS:

1.DIET: A diet high in red meat and high-fat dairy products and low in fruits and vegetables may increase the risk of prostate cancer.
2.OBESITY: Obese men diagnosed with prostate cancer may be more likely to have advanced disease that is more difficult to treat.
3.SMOKING: Smoking has been linked to a higher risk of dying from prostate cancer.

OTHER FACTORS:

1.HORMONES: High levels of testosterone may increase the risk of prostate cancer.
2.INFLAMMATION OF THE PROSTATE: Chronic inflammation of the prostate (prostatitis) may be linked to an increased risk.

SYMPTOMS OF PROSTATE CANCER?

PROSTATE CANCER often doesn't display symptoms in its early stages. However, as the cancer progresses, it can block the flow of urine from the bladder, causing various urinary symptoms. It's important to note that other non-cancerous conditions, such as Benign Prostate Hypertrophy (BPH), can also lead to similar bladder outflow obstruction and mimic comparable urinary symptoms, which includes the following.

URINARY SYMPTOMS

1. **Urinary Hesitancy:** Difficulty initiating the flow of urine.
2. **Poor Urinary Flow:** Decrease in the force of the urine stream.
3. **Urinary Frequency:** Need to urinate more often than usual, especially noticeable at night.
4. **Incomplete Bladder Emptying:** Feeling that the bladder is not fully emptied and needing to urinate again.
5. **Painful Urination**.

The following symptoms are uncommon but can be resulting from prostate cancer

OTHER SYMPTOMS

1. **Blood in the urine or semen.**
2. **Painful ejaculation.**
3. **Erectile dysfunction.**

ADVANCED SYMPTOMS

1. **Fatigue.**
2. **Bone pain:**
3. **Unintentional weight loss.**

PROSTATE CANCER SCREENING

FIVE THINGS YOU NEED TO KNOW ABOUT PROSTATE CANCER SCREENING

Screening for prostate cancer remains one of the most controversial topics in men's health. Population screening for prostate cancer aims to detect cancer early, before symptoms appear, to diagnose cancer at an early stage, improve outcomes, reduce cancer-related mortality, and maintain quality of life. However, potential drawbacks include false positive results leading to unnecessary interventions and overdiagnosis, which could result in significant complications.

WHAT IS THE BEST WAY TO SCREEN ?

Prostate-specific antigen (PSA) is a protein produced by both normal and malignant cells of the prostate gland. It is a test for prostate cancer. It can also be elevated in non-cancerous conditions, such as benign prostatic hyperplasia (BPH) and prostatitis. Current standards for defining PSA thresholds are not universally agreed upon. Higher levels indicate a greater likelihood of prostate cancer.

WHO SHOULD BE SCREENED?

Despite the potential drawbacks of screening for prostate cancer, certain well-informed asymptomatic men may benefit more from PSA screening.

a.Men > 50 years of age;
b.Men from 45 years of age and a family history of prostate cancer; ·
c.Men of African descent from 45 years of age;
d.Men carrying breast cancer gene 2 (BRCA2) mutations from 40 years of age

HOW OFTEN DO WE NEED TO SCREEN?

Getting tested every two to three years is usually enough for most men. However, the timing may change depending on the initial PSA test results and individual health factors. If the PSA level is below 2.5 ng/mL, retesting every two years may be sufficient. Annual testing is recommended if the PSA level is 2.5 ng/mL or higher.

WHAT IS THE NEXT STEP, IF THE PSA IS HIGH?

If your PSA test results are high, the next steps typically involve further evaluation to determine the cause. These steps may include:

1. Repeating the PSA test after a few weeks to confirm the results.
2. Consulting with a Specialist, such as a urologist, for detailed evaluation and discussion about further tests or treatments. These may involve a digital rectal exam (DRE) to check for abnormalities, radiologic tests like prostate ultrasound or MRI for clearer pictures, and prostate biopsy if abnormalities are found.

WHAT IS THE POTENTIAL HARM TO YOU?

PSA screening for prostate cancer has potential drawbacks, similar to any screening process. These drawbacks include false positives from other conditions (which can lead to unnecessary biopsies and treatment), side effects of treatment, overdiagnosis of slow-growing cancers (resulting in the treatment of cancers that may not have caused problems in a patient's lifetime), potential false negatives (which may give a false sense of security), and significant psychological impact.

STAGING OF PROSTATE CANCER

Newly diagnosed prostate cancer patients are assigned a clinical prognostic stage group using information from the PSA, prostate biopsy, digital rectal examination (DRE), and, in some cases, imaging studies, such as MRI

The TNM (AJCC, American Joint Committee on Cancer) system is widely used for staging prostate cancer. In this system, lower numbers indicate that the cancer has spread less. The letters T, N, and M are followed by numbers or letters that provide additional details about each factor. Higher numbers signify that the cancer is more advanced. These TNM categories are then combined to determine an overall stage, which ranges from stage 0 (carcinoma in situ) to stage IV (metastatic cancer).

TNM STAGING SYSTEM (T stands for Tumor, N stands for Node, M stands for Metastatic)

The “T-stage” refers to the extent of the primary tumor: How large is the primary tumor ?
The “N-stage” refers to the spread to nearby lymph nodes: Has the cancer spread to nearby lymph nodes? If so, how many of the lymph nodes have cancer?
The “M-stage” refers to the spread (metastasized) to distant sites: Has the cancer spread to distant lymph nodes or distant organs such such as the bone, liver or lung ?

CLINICAL TNM STAGE:

The clinical staging of prostate cancer forms the basis for initial decisions regarding the extent of evaluation and treatment options. Prostate cancer TNM staging AJCC UICC 8th edition

CLINICAL T STAGE

PRIMARY TUMOR (T)

Clinical T (cT)

T category	T criteria
TX	Primary tumor cannot be assessed
T0	No evidence of primary tumor
T1	Clinically inapparent tumor that is not palpable
T1A	Tumor incidental histologic finding in 5% or less of tissue resected
T1B	Tumor incidental histologic finding in more than 5% of tissue resected
T1C	Tumor identified by needle biopsy found in one or both sides, but not palpable
T2	Tumor is palpable and confined within prostate
T2A	Tumor involves one-half of one side or less
T2B	Tumor involves more than one-half of one side but not both sides
T2C	Tumor involves both sides
T3	Extraprostatic tumor that is not fixed or does not invade adjacent structures
T3A	Extraprostatic extension (unilateral or bilateral)
T3B	Tumor invades seminal vesicle(s)
T4	Tumor is fixed or invades adjacent structures other than seminal vesicles such as external sphincter, rectum, bladder, levator muscles, and/or pelvic wal

CLINICAL N STAGE

Regional lymph nodes (N)

N category	N criteria
NX	Regional nodes were not assessed
N0	No positive regional nodes
N1	Metastases in regional node(s

CLINICAL M STAGE

Distant metastasis (M)

M category	M criteria
M0	No distant metastasis
M1	Distant metastasis
M1a	Nonregional lymph node(s)
M1b	Bone(s)
M1c	Other site(s) with or without bone disease

NOTE: When more than one site of metastasis is present, the most advanced category is used. M1c is most advanced

AJCC

Prostate cancer TNM prognostic stage groups AJCC UICC 8th edition

Stage	T-Stage	N-Stage	M-Stage.	PSA level.	ISUP Grade Group
I					
I	cT1a-c,cT2a	N0	M0	<10	1
I	pT2	N0	M0	<10	1
II					
IIA	cT1a-c cT2a,pT	N0	M0	≥10 <20	1
IIA	cT2b-c	N0	M0	<20	1
IIB	T1-2	N0	M0	<20	2
IIC	T1-2	N0	M0	<20	3
IIC	T1-2	N0	M0	<20	4
III					
IIIA	T1-2	N0	M0	≥20	1-4
IIIB	T3-4	N0	M0	Any	1-4
IIIC	Any T	N0	M0	Any	5
IV					
IVA	Any T	N1	M0	Any	Any
IVB	Any T	Any N	M1	Any	Any

NOTE: When either PSA or Grade Group is not available, grouping should be determined by T category and/or either PSA or Grade Group as available.

TNM: tumor, node, metastasis; AJCC: American Joint Committee on Cancer; UICC: Union for International Cancer Control; PSA: prostate-specific antigen.