

Diagnosis

Several diagnostic methods are used for the detection of prostate cancer. One such method is the digital rectal examination (DRE), during which a healthcare professional inserts their hand into the rectum to assess the size of the prostate, its firmness, and its relationship with surrounding tissues. Another method is a blood test called prostate-specific antigen (PSA) test, which measures the level of PSA in the serum. PSA levels are elevated when prostate cancer progresses, so it is a very useful marker for the early diagnosis of prostate cancer. Other tests include transrectal ultrasound (TRUS), which uses an ultrasound probe inserted into the rectum to generate images of the prostate; a biopsy, where a small piece of prostate tissue is taken with a fine needle for examination; bone scans to assess the possibility of bone metastasis, and imaging tests such as CT scans or MRI scans.

Prevention

Some risk factors for prostate cancer, such as age and family history, cannot be prevented. However, other factors can be mitigated through lifestyle modifications. Being overweight or obese increases the risk of prostate cancer, so it is best to maintain an appropriate body weight by making dietary adjustments and exercising regularly. Additionally, food choices can contribute to prevention. Reducing the intake of animal fats and consuming foods rich in fiber, fruits, vegetables, and legumes can help in the prevention of prostate cancer.

People in occupations exposed to hazardous substances should follow workplace safety and health guidelines to minimize exposure. Prostate cancer can also be prevented with the use of androgen deprivation therapy, but it must be prescribed by a doctor. As the number of prostate cancer cases is rising among individuals in their 40s and 50s, regular screenings is recommended to detect and treat the cancer at an early stage.

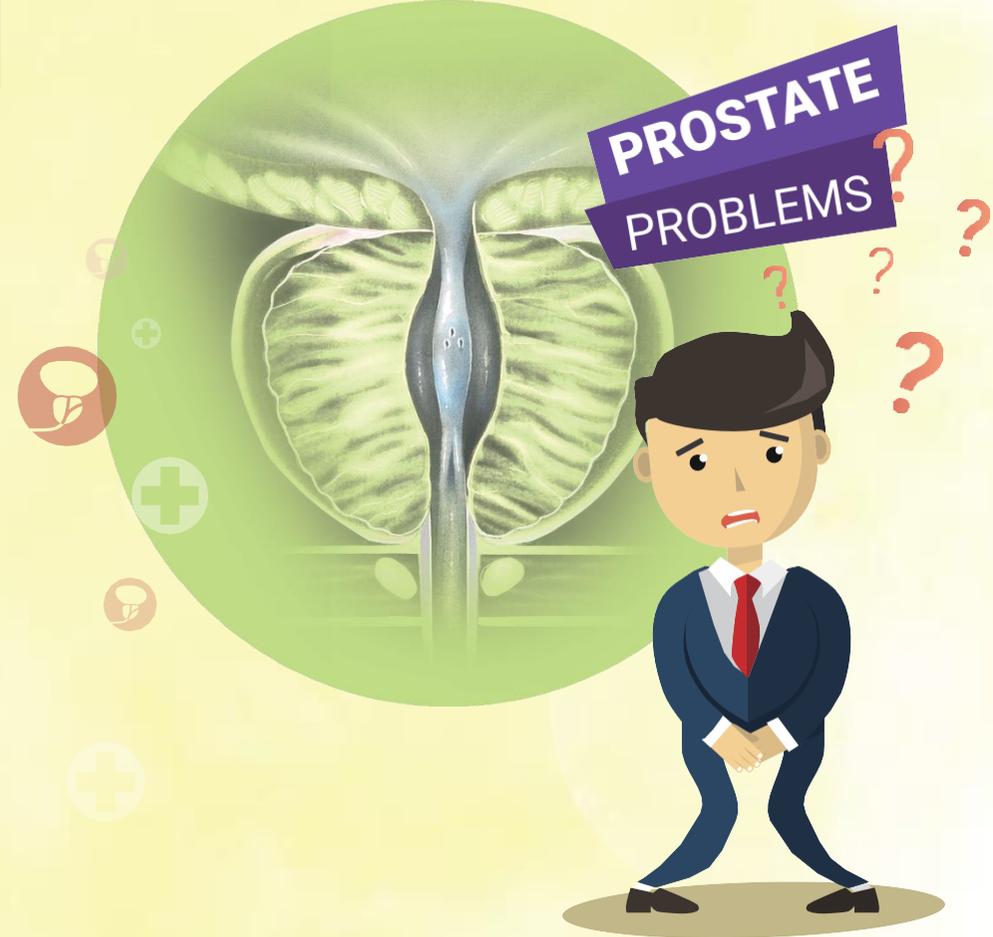
Test information

Code No.	Test Name	Specimen	Method
21438	PSA (Prostate specific Ag)	Serum 0.5 mL	ECLIA
21623	Free PSA/PSA ratio	Serum 0.5 mL	ECLIA
41140	PAP (Prostatic acid phosphatase)	Serum 1.0 mL	CLIA
21430	CEA (Carcinoembryonic Ag)	Serum 0.5 mL	ECLIA

Prostate cancer: A major health precaution for men

PSA test

[Prostate cancer test]



What is prostate cancer?

The prostate is part of the male reproductive organs. It produces and stores a significant portion of the liquid component of semen. Its primary function is to secrete prostatic fluid, which aids in sperm motility and enhances its capacity to fertilize an egg.

Furthermore, prostatic fluid has an alkaline nature, which helps neutralize the acidic environment of the female reproductive tract. This promotes optimal conditions for sperm survival and fertilization. Prostate cancer is a malignant tumor that develops in the prostate gland. Around 95% of prostate cancer cases are adenocarcinoma, affecting prostate cells, while the remaining 5% include transitional cell carcinomas and less common types.



Risk Factors

Like other cancers, prostate cancer occurs when there is a decline in the function of genes that suppress cancerous cellular changes and when genes that induce malignant transformation are activated. This process can be facilitated by factors such as excessive consumption of animal fats and male sex hormones.

Furthermore, prostate cancer is often associated with a family history of the disease and predominantly affects older individuals. It is also linked to genetic predisposition, the influence of male hormones, and dietary habits (particularly increased fat intake with a Westernized diet).

Prostate cancer is...

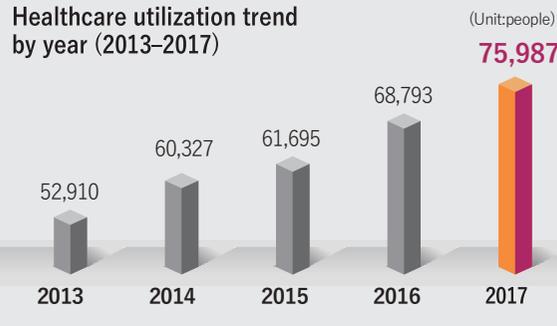
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The number of people receiving medical treatment for prostate cancer **increased by 43.6% over a 4-year period** from 2013 to 2017.

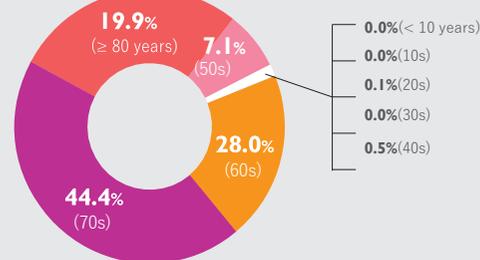
52,910 patients utilized healthcare for prostate cancer in 2013, while 75,987 in 2017.

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People in their 60s to 80s account for 92.3% of patients seeking healthcare for prostate cancer. **Age group distribution among patients utilizing healthcare:** 70s (44.4%) > 60s (28.0%) > 80s (19.9%)



Proportion of patients utilizing healthcare (2017)



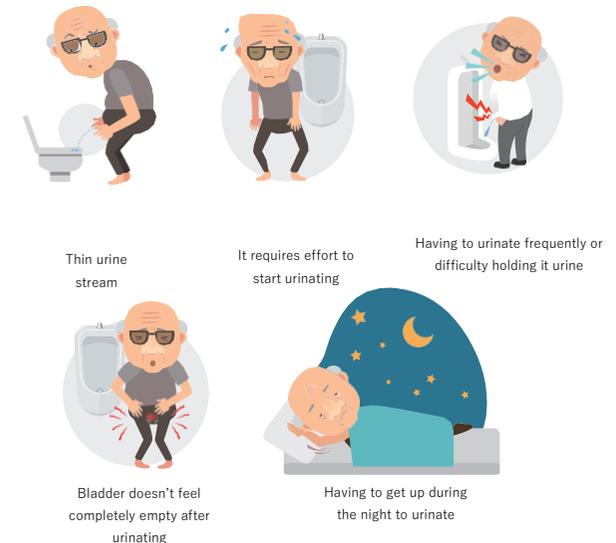
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Symptoms

Prostate cancer tends to have a slower growth rate compared to many other cancers. As a result, there may be no noticeable symptoms in the early stages. However, as the cancer progresses, the patient may develop various urinary symptoms and symptoms caused by metastasis.

The prostate gland wraps around the urethra. When cancer cells grow in the prostate gland, they can exert pressure on the urethra. This may cause difficulty urinating, with narrow urine streams and a feeling of inadequate emptying of the bladder after urinating. Additionally, the patient may feel an urgency to urinate, sometimes being unable to hold back urine and leaking urine. In some cases, acute urinary retention, where urine cannot be passed at all, can occur. There may also be instances of blood in the semen or visible hematuria (blood in the urine).

As prostate cancer advances further, it can cause complications such as hydronephrosis (swelling of the kidneys due to blockage of the ureters, also known as "water kidney," as urine that is not excreted through the ureter or bladder accumulates in the kidney and distends the renal pelvis and calyx), renal failure, bone pain due to bone metastasis, and low back pain or sciatic nerve pain due to spinal metastasis.



[Prostate symptoms]