



Reporter's guide to
prostate cancer

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What is the prostate?¹

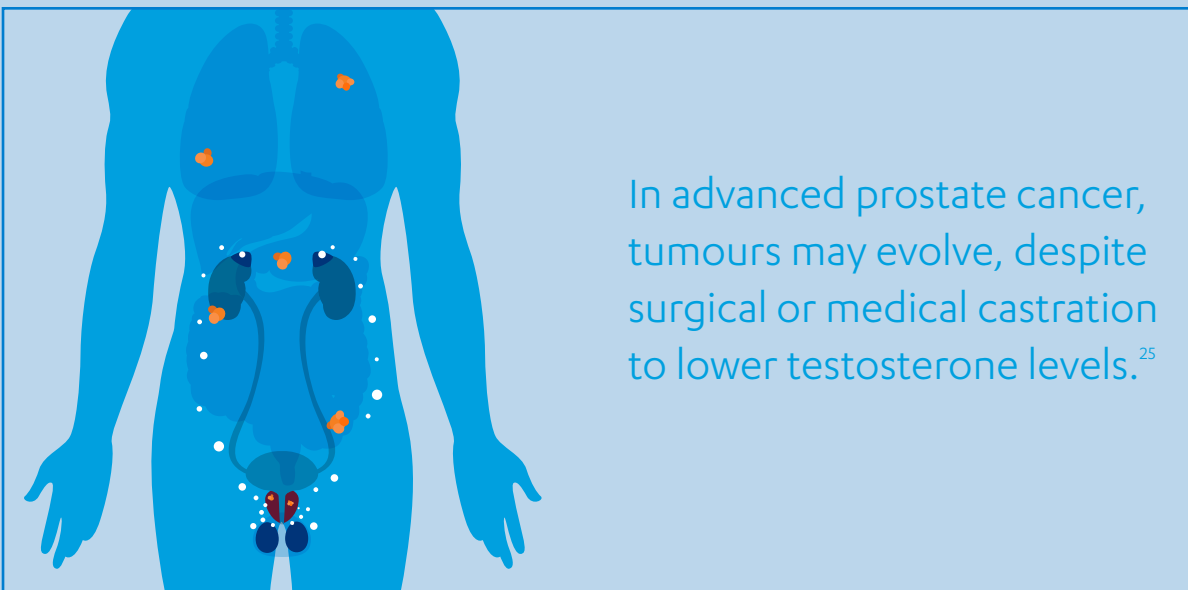
The prostate is a gland located beneath the bladder, wrapped around the urethra (the tube which carries urine from the bladder to the penis). It is only found in men and is responsible for producing part of the seminal fluid.



What is prostate cancer?³

Prostate cancer occurs when cells within the prostate grow and divide at a higher than normal rate. These cells may build up to form a tumour. Compared to other cancers, prostate cancer tends to be slow-growing and may never cause any problems in a man's lifetime.

However, depending on factors including characteristics specific to the patient and the tumour, prostate cancer can grow quickly and spread widely. Cancer that has spread (metastasised) can become aggressive and potentially fatal.



Are there different types / stages of prostate cancer?⁴⁻¹²

The most used staging system is the TNM classification, which separately evaluates and categorises the tumour (T), the lymph nodes (N) and the presence of any secondary cancer or metastases (M).

High-risk metastatic prostate cancer:

High-risk prognostic features of metastatic prostate cancer include:

- Gleason score of greater than or equal to 8
- Presence of three or more bone lesions on bone scan
- Presence of measurable visceral metastasis

Who is at risk of prostate cancer?¹³

Although any man can develop prostate cancer there are certain factors that increase the risk. These include:



Age – 65 years and over



Race – men of African descent



Family history – if a father or brother developed prostate cancer



Genetic (chromosomal) abnormalities – such as an altered or missing gene

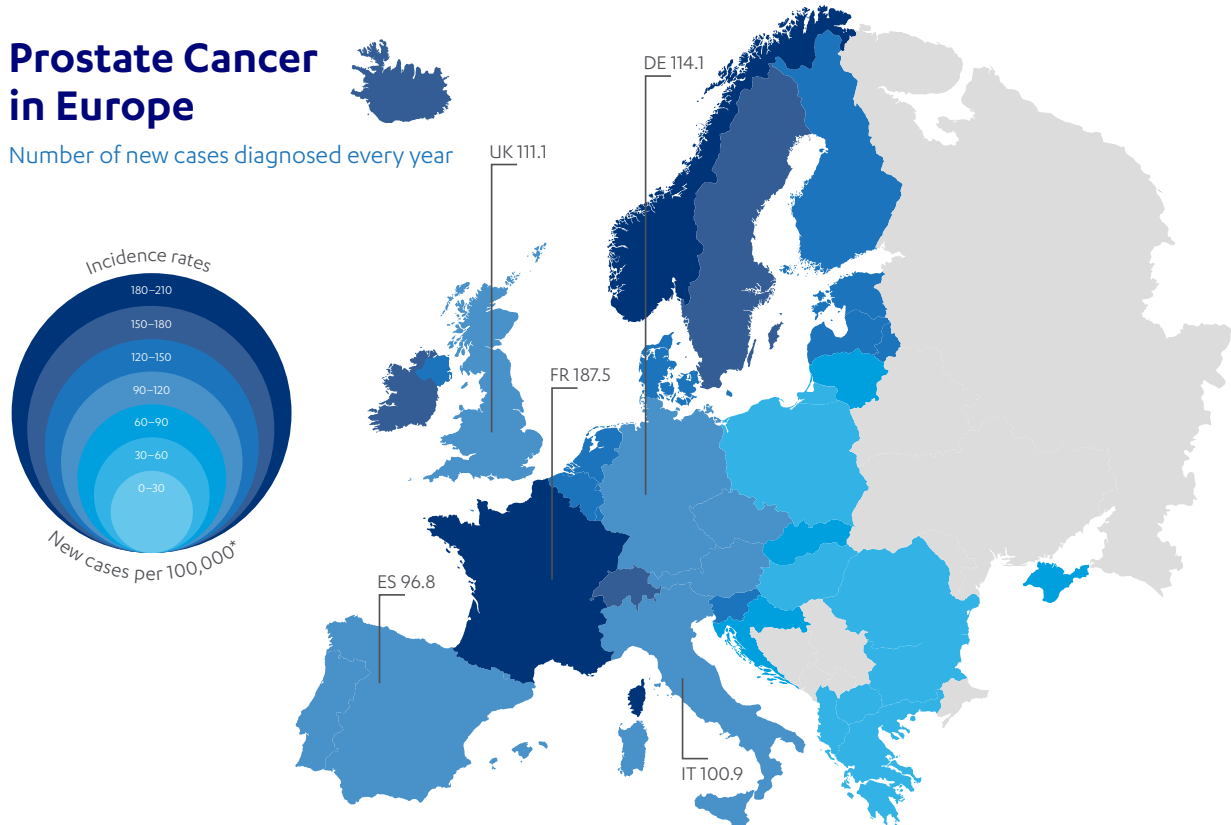
What is the prevalence of prostate cancer?^{5, 14, 15}

Prostate cancer is the most common cancer in men. There are approximately 420,000 new cases in Europe per year and nearly 101,000 men die from the disease every year.

The incidence of prostate cancer is increasing in almost all countries. It varies greatly by country, with the highest incidence of prostate cancer in Europe being in France and Norway. This differentiation between countries is largely due to the use of prostate specific antigen (PSA) testing and an aging population.

Prostate Cancer in Europe

Number of new cases diagnosed every year



* Age-standardised rate

Ferley J, Steliarova-Foucher E, Lortet-Tieulent J, Rosso S, Coebergh JWW, Comber H, Forman D and Bray F. Cancer incidence and mortality patterns in Europe: Estimates for 40 countries in 2012, *European Journal of Cancer* 2013; 49: 1374-1403.

What are the symptoms of prostate cancer?¹⁶

Whilst a man with prostate cancer may not experience any symptoms, the common symptoms for those who do include:

- Urinary problems:

- *Difficulty starting or stopping urinary flow*
- *Being unable to urinate*
- *Frequent urination, particularly at night*
- *A weak flow*
- *Burning or pain whilst urinating*

- Problems having an erection

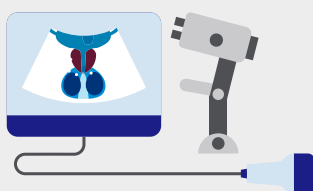
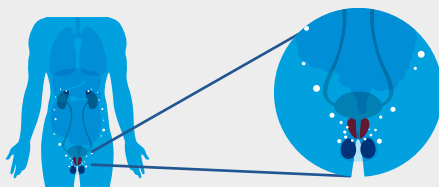
- Blood in the urine or semen

- Regular pain in the lower back or in the upper thighs

Any man experiencing such symptoms should discuss them with his doctor or healthcare professional to allow the symptoms to be diagnosed and treated as necessary.

How is prostate cancer diagnosed?¹⁷

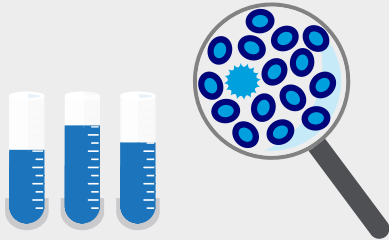
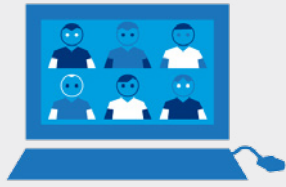
Initially, the following can be carried out to inform the decision for a healthcare professional to carry out a prostate biopsy to diagnose prostate cancer:



Digital rectal examination (DRE): Insertion of a finger into the rectum by a healthcare professional to check for hard or lumpy areas in the prostate.

Prostate-specific antigen (PSA): The measurement of PSA level has revolutionised the diagnosis of prostate cancer. PSA is a protein produced by cells in the prostate and also by prostate cancer cells. The higher the level, the more likely the existence of prostate cancer.

Transrectal ultrasonography: Insertion of a probe, that acts as an ultrasound, into the rectum to check the prostate for abnormal areas.



Scans and x-rays: Used to determine if the cancer has spread to other parts of the body.

To confirm a diagnosis of prostate cancer, the following is carried out:

Prostate biopsy: A biopsy is a definitive way in which to confirm the presence of cancer cells in the prostate. It involves the insertion of needles through the rectum into the prostate to remove small tissue samples. A pathologist will assess the cancer cells and provide a Gleason Score. A higher Gleason Score indicates a more aggressive cancer that is more likely to spread quickly.

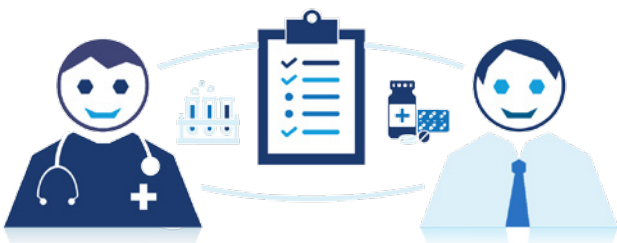
How is prostate cancer treatment decided?^{5, 18, 19}

A treatment plan is based on a number of factors, including: the stage or grade of the tumour, the patient's condition and life expectancy, their age, co-morbidities (additional health risks), preference regarding treatment and the potential side effects of treatments. Clinically, among the most important factors in considering a treatment plan are the combination of PSA level, Gleason Score and staging of prostate cancer.



Specifically, regarding metastatic prostate cancer, challenges that healthcare professionals face when choosing treatments include:

- **How to delay the progression of early metastatic prostate cancer to castration resistance**
- **How to address “high-risk” patients**
- **How to treat a person whose prostate cancer has spread following treatment with hormone therapy (metastatic castration-resistant prostate cancer)**



What treatments are available for prostate cancer patients?^{20, 21}

Prostate cancer treatment options include



How are different stages of prostate cancer treated?^{5, 22, 23, 24}

The following treatment options are available for patients with different stages of the disease:



Despite current treatments available for patients with metastatic prostate cancer, the majority of these patients become castration-resistant within 1–3 years. There is therefore a need for further treatment options to prevent progression to metastatic castration-resistant prostate cancer (mCRPC).

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