

## Update on prostate cancer diagnostics

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In the past decade, multiple celebrities have increased public awareness of prostate cancer, leading to a three-fold increase in referrals from primary care. It is currently the most common cancer, and the second most common cause of cancer death in men.

The broad spectrum of prostate cancer ranges from aggressive disease that needs radical treatment in young men, to low-risk tumours requiring no treatment in older men. Diagnosis has advanced considerably and continues to rapidly evolve, with a focus on trying to pick up high-risk, treatable cancer earlier.

## Key signs and symptoms

The majority of prostate cancers are asymptomatic, particularly in the early stages. Men can have lower urinary tract symptoms (LUTS), but these can also be due to benign enlargement of the prostate. In the later stages, back pain, bone pain and haematuria are common.

Controversially, routine screening to check prostate-specific antigen (PSA) levels is not carried out in the UK because the benefits have not been proved to outweigh the risks. Many factors can affect PSA levels, and a normal PSA does not rule out prostate cancer.

Although screening could reduce the chances of dying from prostate cancer, this must be balanced with the risks of overdiagnosis and overtreatment, particularly in older men.

Therefore, GPs should help their patients make informed decisions about PSA testing based on careful consideration of the benefits and limitations.

## When to refer

NICE recommends that a PSA level of 3 ng/ml or higher should prompt an urgent referral to a cancer specialist. GPs should also refer men with PSA within normal range if they have other concerns, such as risk factors or an abnormal digital rectal examination (DRE).

The main risk factors for prostate cancer are age, family history and race, with Black men being at particularly high risk. It is also useful to assess urinary symptoms and consider other things that may affect PSA (for example, recent infection, ejaculation, vigorous exercise or biopsy, and taking finasteride, which can half PSA value).

## Diagnostic dilemma

When deciding whether to move ahead with further investigations, it is important to consider individual patient expectations, comorbidities and life expectancy.

Online predictive tools (for example, the Prostate Cancer Prevention Trial risk calculator) can give a useful estimate of risk and also inform patients about possible harms from over-investigation. Adjuncts to standard PSA testing, such as PSA density measurement (which allows for increased PSA production in larger-volume prostates), may also be helpful.

## MRI and biopsy

It is now standard practice, as recommended by NICE, for patients to have a multi-parametric MRI as first-line investigation for prostate cancer. Lesions are then graded from I (very-low) to V (very-high) risk according to the PIRADS or LIKERT classification scales.



Patients who may benefit from early diagnosis and treatment with a suspicious MRI may be offered a biopsy whilst low risk patients can often avoid this risk and be observed over a period of time. MRI results are used to guide targeted biopsy, which is increasingly performed using a transperineal rather than a transrectal approach to decrease the risk of sepsis.

## Positive outlook

During the COVID-19 pandemic, The Royal Marsden has successfully made adaptations, such as virtual consultations, to its Rapid Access to Prostate Imaging and Diagnosis (RAPID) pathway to minimise delays in diagnosis and treatment.

Ongoing research into better diagnostic tests and risk-stratification tools for aggressive and non-aggressive disease, including the large ReIMAGINE trial, will no doubt lead to ongoing improvements in screening, prevention and overall care for prostate cancer patients of all ages and ethnicities.

