key points

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In 2017, 48,600 men were diagnosed with prostate cancer in the UK and it remains the most common male cancer. Men born after 1960 now have a 1 in 6 estimated lifetime risk of being diagnosed with prostate cancer. Common symptoms that lead men to present to their GP which should stimulate a discussion about prostate cancer risk are: problems with urination; blood in the urine or semen; erectile dysfunction; pain in the hips, back, or bones; weakness or numbness in the lower limbs or loss of bladder control.

Factors known to be associated with an increased risk are: age; ethnicity; family history with a first-degree relative affected; genetics such as BRCA2 mutations; and obesity. Most men with prostate cancer are diagnosed over the age of 50 years. Black African men have a lifetime risk of 1 in 4 of developing the disease. Prostate cancer risk is 2.1-2.4 times higher in men whose father has/had the disease and 2.9-3.3 times higher in men whose brother has/had the disease. The risk of advanced prostate cancer increases by 9% for every 5-unit increment in BMI.

NICE recommends that men over 50 years old who request a PSA should be fully counselled about the test beforehand. The test should also be offered to men with LUTS or an abnormal DRE. A prostate that feels malignant on DRE should trigger a fast-track referral to secondary care even if the PSA is normal. Men with PSA values above the age-specific reference range should also be referred to urology urgently, via a suspected cancer pathway referral. Men referred to urology with suspected prostate cancer who would be eligible for curative treatment will routinely be offered a multiparametric magnetic resonance imaging (MP-MRI) scan of their prostate. This technique is able to identify abnormal areas in the prostate, consistent with significant prostate cancer which merit further investigation, better than untargeted prostate biopsies alone. PSA and MRI abnormalities alone are not enough to confirm a diagnosis of prostate cancer. A tissue diagnosis is usually mandated for curative treatment options to be considered.

Localised prostate cancer treatment options include: active surveillance, radiotherapy by external beam radiation which is more effective when given in combination with androgen deprivation therapy, brachytherapy, and radical prostatectomy which is now most commonly carried out using a robot-assisted approach in the UK.

The primary aims of follow-up are to identify and treat side effects of therapy and to monitor response to treatment. PSA is used to monitor patients after active treatment. Following radical prostatectomy successful treatment should result in a PSA which is either undetectable or < 0.1 ng/ml. A PSA rise to > 0.2 ng/ml is considered indicative of recurrent disease and should trigger an urgent referral. After radiotherapy, successful treatment should result in the PSA being very low. A rise of 2 ng/ml or more above the lowest value after treatment should trigger an urgent referral.