THE UROLOGY INSTITUTE™

Primary Care Urology Series™

Practical Guide to Prostate Cancer

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30-second overview Early prostate cancer is usually asymptomatic. Offer informed, risk-adapted PSA testing to men likely to benefit; start at 50 years for most men, 45 years for black African men and men with a first-degree family history of prostate or breast cancer, and 40 years for selected pathogenic germline variants. Repeat a modestly raised PSA under standardised conditions before referral when clinically safe. Refer persistent age-adjusted PSA elevation or an abnormal DRE. Do not prescribe antibiotics merely to lower an asymptomatic PSA. MRI should precede biopsy in suspected organ-confined disease, but it is not a primary-care screening test.

Why this matters in South Africa

Prostate cancer was the leading histologically diagnosed cancer in South African men in 2024: 10,769 observed cases, 25.18% of male cancers, and a cumulative risk to age 74 of approximately 1 in 17. In the 2024 KwaZulu-Natal population-based registry it was also the most common male cancer.[1,2]

Black South African men are more likely to present with higher-grade or more advanced disease, while public-sector access to MRI, biopsy and specialist care remains uneven.[3] Primary care therefore has two linked tasks: offer screening to the right asymptomatic men, and recognise symptomatic or advanced disease early without delaying referral.

Specialist insight Do not wait for lower urinary tract symptoms before discussing screening. Early prostate cancer is commonly silent, while urinary frequency and a weak stream are more often caused by benign prostatic enlargement.

Who should be offered PSA testing?

Screening means PSA testing in an asymptomatic man. Diagnostic testing is different: a symptomatic patient or a man with an abnormal examination requires clinical investigation regardless of the screening schedule. The 2024 South African guideline supports shared decision-making in asymptomatic men with a life expectancy greater than 10 years; the 2026 EAU guideline uses a more conservative threshold of at least 15 years.[3,4]

Patient group	When to begin discussion/testing
Most men	From age 50
Black African men	From age 45
First-degree family history of prostate and/or breast cancer	From age 45; clarify age at diagnosis and number of affected relatives
Pathogenic BRCA2, BRCA1, HOXB13, ATM or CHEK2 variant	From age 40, or 10 years before the youngest family diagnosis if that occurred before 40
Age >70 or life expectancy <10 years	Do not screen routinely; consider exceptional testing only after individualised discussion in a very healthy man

Screening intervals should be individualised according to baseline PSA, ancestry, family history, age, health status and patient preference. Do not automatically repeat PSA annually in every man with a low baseline value.

Specialist insight The decision to test should be made before the blood is drawn. Explain that PSA can lead to repeat testing, MRI and biopsy, but may also identify clinically significant cancer while it is still curable.

Assessment

History

- Clarify whether the patient is asymptomatic, has lower urinary tract symptoms, or has possible advanced-disease symptoms.
- Record previous PSA values and dates; avoid interpreting “velocity” from short-interval fluctuation alone.
- Ask about first-degree prostate cancer and breast, ovarian or pancreatic cancer on both sides of the family, particularly young diagnoses or multiple affected relatives.
- Record black African ancestry, known germline variants, comorbidity, functional status and realistic life expectancy.
- Identify transient PSA confounders: bacterial prostatitis, acute urinary retention, recent urethral instrumentation or TURP, ejaculation and vigorous cycling.
- Check finasteride or dutasteride use and duration; after 6-12 months these drugs commonly lower PSA by about 50%.
- Ask about haematuria, weight loss, progressive bone pain, lower-limb weakness or sensory change, and new bladder or bowel dysfunction.

Examination

Assess general condition, performance status, lymphadenopathy, pallor, spinal tenderness and neurological findings when advanced disease is possible. Examine the abdomen for a palpable bladder or renal obstruction. DRE remains useful in symptomatic men and when cancer is suspected: document size, asymmetry, nodularity, induration, fixation and tenderness.

Routine DRE adds little to PSA alone as a screening test in an asymptomatic primary-care population; however, an abnormal DRE warrants referral even when PSA is not markedly raised.[3]

Specialist insight A “normal PSA” does not override a hard, nodular or asymmetric prostate. Conversely, a smooth enlarged gland does not explain away a persistently elevated PSA.

Important differential diagnoses

Finding	Important alternatives to prostate cancer
Raised PSA	Benign prostatic enlargement; bacterial prostatitis or UTI; acute urinary retention; recent catheterisation, cystoscopy, biopsy or TURP; recent ejaculation; laboratory or biological variation.
Abnormal DRE	Benign nodular enlargement; prostatitis; prostatic calculi; previous surgery or radiotherapy-related change.
Lower urinary tract symptoms	Benign prostatic obstruction; overactive bladder; urethral stricture; UTI; diabetes; medicines; neurological bladder dysfunction.
Bone pain or weight loss	Other malignancy; musculoskeletal disease; metabolic or haematological disease. Investigate urgently when accompanied by a markedly raised PSA or suspicious DRE.

These alternatives may coexist with prostate cancer. A plausible benign explanation should prompt appropriate evaluation, not automatic reassurance or prolonged serial testing.

Investigations in primary care

Investigation	Practical use
Total PSA	First-line screening test and part of the diagnostic assessment. Use the same laboratory where feasible and interpret against the laboratory’s age-adjusted range and the clinical context.
Repeat total PSA	For an asymptomatic man with a raised PSA below 10 ng/mL and normal DRE, repeat before escalation when safe; the SA evidence used an approximately 8-week interval. Standardise conditions.

Investigation	Practical use
Free/total PSA	Optional aid when total PSA is below 10 ng/mL and DRE is normal. A lower ratio increases suspicion, but it does not diagnose cancer.
Urinalysis ± urine culture	For dysuria, pyuria, fever or suspected bacterial infection. Treat documented infection clinically, then defer PSA 6-8 weeks after resolution.
Creatinine/eGFR, FBC, ALP, calcium	When retention, renal impairment, anaemia, bone pain or advanced disease is suspected. Abnormal results must not delay referral.
Prostate MRI	Not an initial screening test. Usually arranged in the specialist pathway before biopsy for suspected organ-confined disease.
Bone scan/CT/PSMA PET-CT	Not routine primary-care screening investigations; staging depends on confirmed or strongly suspected disease and risk category.

PSA preparation If clinically safe, repeat a modest elevation after ejaculation and vigorous cycling have been avoided for at least 48 hours. Defer PSA for 6-8 weeks after bacterial prostatitis and for about 6 weeks after acute retention, urethral instrumentation or TURP. Do not defer when advanced cancer is suspected.

Clinical warning Do not give empirical antibiotics to an asymptomatic man simply to lower PSA. This does not reliably exclude cancer and contributes to antimicrobial resistance and biopsy-related infection risk.

For a man established on finasteride or dutasteride for 6-12 months, the measured PSA is commonly doubled as a rough correction, but the pretreatment baseline and any rise from the post-treatment nadir are important. If the trend is concerning, refer rather than relying on the correction alone.

What should primary care treat?

Primary care does not treat presumed prostate cancer. Treat concurrent conditions on their own merits—such as culture-supported bacterial UTI/prostatitis, pain, constipation or acute retention—while arranging appropriate referral. Catheterise acute retention when indicated and check renal function. Suspected metastatic spinal cord compression is an emergency: arrange immediate hospital assessment and spinal imaging according to the local pathway; do not wait for an outpatient urology appointment.

Decision tree: PSA testing and referral

1. Identify the pathway: asymptomatic screening candidate OR symptomatic/abnormal examination.
2. If screening: confirm shared decision-making, appropriate starting age and >10-year life expectancy; obtain total PSA.
3. If PSA is within the age-adjusted range and DRE is not indicated/normal: agree a risk-adapted follow-up interval.
4. If PSA is raised but <10 ng/mL, the man is asymptomatic and DRE is normal: check confounders; repeat under standardised conditions when clinically safe; consider free/total PSA.
5. Refer if PSA remains above the age-adjusted range, DRE is abnormal, the PSA trend is concerning, or symptoms suggest cancer.
6. Expedite referral for PSA ≥10 ng/mL, a clearly malignant DRE, systemic/bone symptoms, or suspected locally advanced disease.
7. Send urgently to hospital for neurological deficit/possible cord compression, acute kidney injury from obstruction, sepsis, or uncontrolled pain.

Referral checklist

Priority	Indications
Routine	Persistent age-adjusted PSA elevation after an appropriate repeat; concerning serial rise; abnormal free/total PSA supporting increased risk; strong family/genetic risk requiring specialist risk assessment.

Priority	Indications
Expedited	PSA ≥10 ng/mL without a clear transient cause; suspicious DRE; haematuria, weight loss, progressive bone pain or obstructive symptoms with cancer concern; PSA elevation despite 5-alpha-reductase suppression; PSA >20 ng/mL or a combination strongly suggesting advanced disease.
Urgent / emergency	New lower-limb weakness, saddle sensory change or bladder/bowel dysfunction; suspected metastatic spinal cord compression; obstructive acute kidney injury; urosepsis/retention requiring acute care; uncontrolled severe pain or pathological fracture.

Include: current and previous PSA results with dates; DRE findings; urinary symptoms; urinalysis/culture; renal function and relevant FBC/ALP/calcium; medications (especially anticoagulants and 5-alpha-reductase inhibitors); family history; ancestry; comorbidity and performance status; and any available imaging.

Common pitfalls

- Reassuring a patient because he has no urinary symptoms.
- Calling a raised PSA “prostate cancer” before histological diagnosis.
- Using a single universal PSA cut-off without considering age, trend, drugs and clinical context.
- Repeating PSA during prostatitis, retention or soon after instrumentation.
- Using antibiotics or alpha-blockers solely to lower an asymptomatic PSA.
- Forgetting that finasteride/dutasteride suppress PSA and that a rise from nadir can be important.
- Ordering MRI as a general screening test, or allowing imaging to delay referral for obvious advanced disease.
- Assuming an abnormal DRE is irrelevant because PSA is “normal”.

What happens after referral?

The urologist reassesses the PSA context, DRE, life expectancy and patient preferences. For suspected organ-confined cancer, the EAU recommends multiparametric MRI before biopsy. MRI and clinical variables—particularly PSA density and family history—help determine whether biopsy is needed. A suspicious MRI is sampled using targeted and perilesional cores; the 2026 EAU guideline prefers the transperineal route because of lower infectious risk and better antibiotic stewardship.[4]

If cancer is confirmed, grading uses ISUP Grade Group, followed by clinical risk stratification and staging when indicated. Management may include active surveillance, radical prostatectomy, external-beam radiotherapy, brachytherapy, androgen-deprivation therapy, systemic therapy or watchful waiting. Choice depends on disease risk, stage, health status, urinary and sexual function, resources and informed patient preference. A diagnosis does not automatically mean surgery: active surveillance is standard for appropriately selected low-risk disease.

Specialist insight The most useful referral is not the one with the most tests; it is the one with a verified PSA history, drug and infection context, a clear DRE description, renal function where relevant, and an explicit urgency signal.

Clinical pearls

- Early prostate cancer is usually asymptomatic.
- PSA is prostate-specific, not cancer-specific.
- Screening should be informed and risk-adapted, not opportunistic testing without discussion.
- Start earlier in black African men, men with significant family history and selected germline variants.
- A modestly raised PSA often merits one properly timed repeat—not serial delay.
- DRE is most valuable in symptomatic or clinically suspicious patients.
- Do not use antibiotics to “treat the PSA” in an asymptomatic man.
- MRI refines biopsy selection; it is not a screening replacement for PSA.
- Transperineal biopsy is preferred by the EAU when feasible.
- Neurological symptoms with suspected prostate cancer are an emergency.

Key take-home messages

- Offer PSA testing from 50 years for most well-informed men likely to benefit.
- Begin from 45 years in black African men and men with a first-degree family history of prostate and/or breast cancer.
- Begin from 40 years for selected pathogenic germline variants, with genetic counselling pathways where appropriate.
- Do not screen routinely when age, comorbidity or preference makes meaningful benefit unlikely.
- Check transient PSA confounders and 5-alpha-reductase inhibitor use.
- Repeat an asymptomatic PSA below 10 ng/mL with normal DRE under standardised conditions when clinically safe.
- Refer persistent age-adjusted elevation or any suspicious DRE.
- Do not prescribe empirical antibiotics solely for an elevated PSA.
- Escalate quickly when PSA, examination or systemic features suggest advanced disease.
- Treat possible cord compression, obstructive renal failure and sepsis as emergencies.

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