

Prostate cancer - Management

Scenario: Diagnosis of prostate cancer

Overview of the diagnosis of prostate cancer

- Before offering a prostate-specific antigen (PSA) test, ensure that the man has carefully considered its possible [benefits and harms](#).
- Offer PSA [testing](#) to men who request a PSA test and to men in whom prostate cancer is [suspected](#), for example because of such symptoms as unexplained back pain, bone pain, erectile dysfunction, unexplained haematuria, and unexplained weight loss.
- When interpreting a PSA result, use [age-specific thresholds](#) for referring men as having suspected prostate cancer. If the PSA level is slightly above the referral threshold, take into account any [risk factors](#) for high-grade prostate cancer when deciding whether to refer, obtain specialist advice, or repeat the test.
- Offer a [digital rectal examination](#) (DRE) when a man is concerned about prostate cancer or has symptoms of suggestive of prostate cancer or of benign prostatic enlargement.
- [Refer](#) urgently to a urological cancer specialist if prostate cancer is suspected either because the prostate is hard and irregular on DRE, or because the PSA levels are increased more than borderline or are rising.

Basis for recommendation

These recommendations reflect guidelines from the NHS Prostate Cancer Risk Management Programme on prostate-specific antigen testing in asymptomatic men [[Burford et al, 2009](#)], and are in line with guidelines of the National Institute for Health and Clinical Excellence (NICE) on referring suspected cancer in adults and children [[National Collaborating Centre for Primary Care, 2005](#)], guidelines from NICE on the management of lower urinary tract symptoms in men [[National Clinical Guideline Centre, 2010](#)], and guidelines from NICE on the diagnosis and management of prostate cancer [[National Collaborating Centre for Cancer, 2008a](#)].

When should I suspect prostate cancer?

- **Suspect prostate cancer in men who have:**
 - **Any of the following symptoms that are unexplained:**
 - Lower back pain.
 - Bone pain.
 - Erectile dysfunction — prostate cancer is unlikely to present with erectile dysfunction as the only clinical feature; it should be investigated with digital rectal examination (DRE) and a prostate-specific antigen (PSA) test.

- Haematuria — unexplained haematuria is also a sign of other urinary tract cancers and indicates referral to be seen within 2 weeks.
- Weight loss, especially in the elderly.
- **A prostate that is hard and irregular on DRE** — normal DRE does not exclude prostate cancer.
- **PSA levels that are increased or rising** (and urinary tract infection has been excluded).
- Lower urinary tract symptoms (LUTS) are not listed above as a clinical feature that would particularly raise suspicion of prostate cancer, because LUTS are common in older men and are rarely the presenting symptom of prostate cancer. However, locally advanced prostate cancer may cause obstructive LUTS. Therefore a PSA test and DRE should be offered to men with obstructive LUTS — see the section [Investigations](#) in the CKS topic on [LUTS in men, age-related \(prostatism\)](#).

Basis for recommendation

These recommendations reflect guidelines of the National Institute for Health and Clinical Excellence (NICE) on referral for suspected cancer in adults and children [[National Collaborating Centre for Primary Care, 2005](#)].

- NICE's recommendations are based on the expert opinion of the guideline development group.

PSA testing

When should I offer PSA testing for prostate cancer?

- **Before offering prostate-specific antigen (PSA) testing, ensure that the man has carefully considered the [benefits and limitations of PSA tests](#).**
- Offer PSA testing to:
 - Men older than 50 years of age who ask for a PSA test.
 - Men with unexplained [symptoms](#) that could be caused by locally advanced or metastatic prostate cancer.
 - Men with obstructive lower urinary tract symptoms that could be caused by benign prostatic enlargement (which is common) or by locally advanced prostate cancer (which is rare).
- Routine screening for prostate cancer is not national policy, because the benefits have not been shown to clearly outweigh the harms.

Basis for recommendation

These recommendations reflect guidelines from the NHS Prostate Cancer Risk Management Programme on prostate-specific antigen testing in asymptomatic men [[Burford et al, 2009](#)], and are in line with guidelines of the National Institute for Health and Clinical Excellence (NICE) on referring suspected cancer in adults and children [[National Collaborating Centre for Primary Care, 2005](#)], guidelines from NICE on the management of lower urinary tract symptoms in men [[National Clinical Guideline Centre, 2010](#)], and guidelines from NICE on the diagnosis and management of prostate cancer [[National Collaborating Centre for Cancer, 2008a](#)].

What practicalities are involved in PSA testing?

- Offer prostate-specific antigen (PSA) testing to men who have carefully considered the [benefits and limitations of PSA tests](#).
- Advise men who are considering a PSA test about [decision aids](#) and online [sources of information](#).
- Because PSA levels are likely to be increased, the NHS Prostate Cancer Risk Management Programme advises that PSA testing should *not* be done within at least:
 - 6 weeks of a prostate biopsy.
 - 4 weeks of a proven urinary infection — PSA levels can remain increased for many months.
 - 1 week of digital rectal examination (DRE) — however, experts suggest that gentle DRE is unlikely to increase PSA levels significantly.
 - 48 hours of vigorous exercise.
 - 48 hours of ejaculation.
- The specimen should reach the laboratory within 16 hours.

Basis for recommendation

These recommendations reflect guidelines from the NHS Prostate Cancer Risk Management Programme on prostate-specific antigen (PSA) testing in asymptomatic men [[Burford et al, 2009](#)].

Effect of gentle digital rectal examination (DRE) on PSA levels

- Expert reviewers suggested to CKS that gentle DRE is unlikely to have a clinically important effect on PSA levels, and that DRE is not sufficient reason to postpone PSA testing.

What should I advise men about the benefits and harms of PSA testing to screen for prostate cancer?

- **Benefits of prostate-specific antigen (PSA) testing**

- **Early detection** — PSA testing may lead to prostate cancer being detected before symptoms develop.
- **Early treatment** — detecting prostate cancer early before symptoms develop may extend life, or facilitate a complete cure.
- **Harms of PSA testing**
 - **False reassurance** — a false-negative PSA test can provide false reassurance.
 - About 15% of men with a negative PSA test have prostate cancer, although it is not known what proportion of these cancers become clinically evident.
 - **Unnecessary anxiety** — a false-positive PSA test can cause considerable and prolonged anxiety.
 - About 65% of men with a positive PSA test have a negative prostate biopsy.
 - **Unnecessary investigation** — a positive PSA test may lead to invasive and expensive investigations, such as prostate biopsy and imaging. If the PSA test is falsely positive, or the prostate cancer is of no clinical consequence, investigations provide no useful information.
 - **Unnecessary treatment** — a positive PSA test may lead to the treatment of indolent prostate cancers which would not have become clinically evident in the man's lifetime. Adverse effects of treatment are common and serious and include urinary incontinence and sexual dysfunction.

Basis for recommendation

This information reflects guidelines from the NHS Prostate Cancer Risk Management Programme on prostate-specific antigen testing in asymptomatic men [[Burford et al, 2009](#)].

- These guidelines are supported by recent [evidence](#).
 - A systematic review and meta-analysis of randomized controlled trials (RCTs) found that screening for prostate cancer increases the probability of diagnosis, but there is no statistically significant effect on death rates. All trials had methodological limitations. The included studies provided little information about potential harms associated with screening.
 - A subsequently reported RCT found that over 14 years of follow up, the death rate from prostate cancer was 0.50% in men who were screened and 0.90% in men who were not screened, for an absolute risk reduction of 0.40% (95% CI 0.17 to 0.64). To prevent one death from prostate cancer, about 293 men needed to be invited for screening and about 12 to be diagnosed.

How should I interpret PSA results?

- **Prostate-specific antigen (PSA) levels should be interpreted according to age-specific reference limits.**

▪ **The Prostate Cancer Risk Management Programme recommends the following thresholds for referring men for suspected prostate cancer:**

- For men aged:
 - 40–49 years: refer if PSA level is 2.0 nanogram/mL or higher.
 - 50–59 years: refer if PSA level is 3.0 nanogram/mL or higher.
 - 60–69 years: refer if PSA level is 4.0 nanogram/mL or higher.
 - 70 years or older: refer if PSA level is 5.0 nanogram/mL or higher.
 - There are no age-specific reference limits for men older than 80 years of age.
- Local laboratories may have different referral thresholds.

Basis for recommendation

These recommendations reflect guidelines from the NHS Prostate Cancer Risk Management Programme on prostate-specific antigen testing in asymptomatic men [[Burford et al, 2009](#)].

How should I act on PSA results?

- **If the prostate-specific antigen (PSA) level is high:**
- Consider whether to advise the man that there is a substantial chance that the test result is false positive; however bear in mind that the higher the PSA level, the greater the risk of prostate cancer.
 - **If there is an obvious cause for the increased PSA level** (such as recent urinary tract infection, prostatitis, urinary retention, instrumentation, or benign prostatic enlargement), repeat the PSA test in 4–6 weeks.
 - **If there is no obvious cause for the increased PSA level**, refer urgently to a urological cancer specialist.
- **If the PSA level is low or normal, and:**
- **Digital rectal examination (DRE) is abnormal**, refer urgently to a urological cancer specialist.
 - **DRE is normal**, remind the man that there is a small chance (around 15%) that this is a false-negative result and inform him that, if cancer has been missed, it is unlikely to be clinically important. Repeat PSA testing is not routinely indicated.
- **If the PSA level is borderline or slightly above the referral threshold, and:**
- **DRE is abnormal**, refer urgently to a urological cancer specialist.
 - **DRE is normal:**

- Consider other causes of increased PSA levels, such as recent urinary tract infection, prostatitis, urinary retention, instrumentation, or benign prostatic enlargement.
- Repeat the PSA test after 4–6 weeks.
- If on the second test the PSA level has risen substantially, refer urgently.
- If in doubt, consider obtaining specialist advice about referral.
- Have a lower threshold for referral or obtaining specialist advice if the man is of black African or black Caribbean ethnicity — he is at increased risk for a high-grade prostate cancer.
- Have a higher threshold for referral or obtaining specialist advice if the man has had a prostate biopsy that failed to reveal cancer — he has a lower risk of cancer.

Basis for recommendation

These recommendations reflect guidelines from the NHS Prostate Cancer Risk Management Programme on prostate-specific antigen testing in asymptomatic men [[Burford et al, 2009](#)], and guidelines of the National Institute for Health and Clinical Excellence (NICE) on referring men with suspected prostate cancer [[National Collaborating Centre for Primary Care, 2005](#)].

What decision aids are there for men considering a PSA test?

- Computerized decision aids have been developed for men considering having a prostate-specific antigen (PSA) test. They provide background information about the prostate and prostate cancer, information about risk factors for prostate cancer, and information on uncertainties when interpreting PSA results and deciding on treatment.
- **PROSDEx** was developed in the UK and provides UK-specific information. It is organized around a graphical display of the man's preference for or against having a PSA test. The decision aid is available at www.prosdex.com.
- **SWOP** was developed in the Netherlands, but references UK-developed information. It is organized around graphical displays of the man's risk of prostate cancer. The decision aid is available at www.prostatecancer-riskcalculator.com.
- The National Prescribing Centre have a decision aid that is 'intended to assist health professionals in consultations with men who do not have symptoms of prostate cancer, but who are considering whether or not to have a prostate specific antigen (PSA) test'. It provides a graphical aid to interpreting PSA test and biopsy results. The decision aid is available at www.npci.org.uk.

Basis for recommendation

- The National Institute for Health and Clinical Excellence (NICE) recommends that men with prostate cancer should receive information about the benefits and limitations of tests and treatments, but does not recommend specific resources [[National Collaborating Centre for Cancer, 2008a](#)]. The resources listed here have been identified by CKS or suggested by expert reviewers.
- The PROSDEx decision aid is recommended by the NHS Prostate Cancer Risk Management Programme guidance on prostate-specific antigen testing in asymptomatic men [[Burford et al, 2009](#)].

Where can men obtain information about PSA testing?

- **NHS Prostate Cancer Risk Management Programme (PCRMP)**
 - The NHS PCRMP is one of the English NHS Cancer Screening Programmes. It aims to ensure that people make an informed choice when they decide whether or not to have a screening test, such as prostate-specific antigen (PSA) for prostate cancer.
 - The following leaflets can be downloaded and printed:
 - [PSA testing in asymptomatic men \(reference booklet\) \(pdf\)](#)
 - [Advising men about the PSA test for prostate cancer \(summary sheet\) \(pdf\)](#)
 - [PSA testing for prostate cancer \(patient information leaflet\) \(pdf\)](#)
 - [PSA testing for prostate cancer \(patient information leaflet large print\) \(pdf\)](#)
 - [PSA testing in asymptomatic men \(evidence\) \(pdf\)](#)
 - For more information, visit www.cancerscreening.nhs.uk.
- **Cancer Research UK**
 - The Cancer Help section of Cancer Research UK provides information for people with all forms of cancer. It includes symptoms and causes of prostate cancer, tests and treatment, living with prostate cancer, and current research.
 - A leaflet [About prostate cancer - A quick guide \(pdf\)](#) can be downloaded for printing.
 - For more information, visit www.cancerhelp.org.uk.
- **Healthtalkonline**
 - Healthtalkonline provides information about PSA testing and prostate cancer, and people's personal stories.
 - For more information, visit www.healthtalkonline.org.
- **The Prostate Cancer Charity**
 - The Prostate Cancer Charity produce a wide range of publications for health professionals to use when discussing diagnostic tests, treatments, and adverse effects with their patients.

- Publications that can be downloaded for printing include:
- [Know your prostate: a guide to common prostate problems \(pdf\)](#)
- [Understanding the PSA test: A guide for men concerned about prostate cancer \(pdf\)](#)
- [What do you know about prostate cancer? Information for African Caribbean men \(pdf\)](#)
- For more information, visit www.prostate-cancer.org.uk.
- **Macmillan and Cancerbackup**
 - Macmillan Cancer Support and Cancerbackup merged in 2008. They aim to improve the lives of people affected by cancer by providing practical, medical, and financial support.
 - Information on prostate cancer, including how it is diagnosed, treatments that might be given, possible side effects, and how to get further support, can be found at www.macmillan.org.uk.
- **Prostate UK**
 - Prostate UK has a range of publications and leaflets that offer helpful information and advice on prostate diseases and their treatment.
 - For more information on what leaflets are available and how they can be ordered, visit www.prostateuk.org.
- **NHS Choices**
 - NHS Choices is a comprehensive health information service, including prostate cancer.
 - For more information, visit www.nhs.uk.
- **Prostate Link UK**
 - Prostate Link UK provides links to quality-assessed sources of information about the questions men with prostate cancer commonly want to ask.
 - For more information, visit www.prostate-link.org.uk.

Basis for recommendation

- The National Institute for Health and Clinical Excellence (NICE) recommends that men with prostate cancer should receive information about the benefits and limitations of tests and treatments, but does not recommend specific resources [[National Collaborating Centre for Cancer, 2008a](#)]. The resources listed here have been identified by CKS or suggested by expert reviewers.

[When should I offer digital rectal examination to assess the risk of prostate cancer?](#)

- **Offer digital rectal examination (DRE) in men:**

- **With lower urinary tract symptoms** — to assess for benign prostatic enlargement (common) and for prostate cancer (uncommon).
- **With unexplained [symptoms](#) that could be due to advanced prostate cancer** (for example lower back pain, bone pain, weight loss).
- **With concerns about the possibility of prostate cancer, for example increased prostate-specific antigen levels.**
- Explain that the findings on DRE are helpful but cannot definitely confirm or exclude prostate cancer — DRE will not detect early small prostate cancers, and biopsy is required to confirm and stage the diagnosis.

Basis for recommendation

Offering digital rectal examination (DRE) in men with lower urinary tract symptoms

- This recommendation reflects the guideline from the National Institute for Health and Clinical Excellence (NICE) on the management of lower urinary tract symptoms in men [[National Clinical Guideline Centre, 2010](#)].

Offering DRE in men with unexplained symptoms that could be due to advanced prostate cancer or with concerns about the possibility of prostate cancer

- These recommendations reflect NICE guidelines on referring adults and children with suspected cancer [[National Collaborating Centre for Primary Care, 2005](#)].
- NICE based these recommendations on expert opinion.

Awareness of the effect of DRE on prostate-specific antigen levels

- This recommendation is based on information in guidelines from the NHS Prostate Cancer Risk Management Programme on prostate-specific antigen testing in asymptomatic men [[Burford et al, 2009](#)].

When should I refer a man with suspected prostate cancer?

- **Refer the man urgently to a urologist in either of the following circumstances:**
 - **Digital rectal examination (DRE) reveals a hard, irregular prostate (typical of cancer).**
 - Do a prostate-specific antigen (PSA) test, and arrange for the man to take the results with him to the referral consultation.
 - Referral is not necessary if the prostate is smooth and enlarged, and the PSA levels are in the [age-specific reference range](#).

- **The man's PSA levels are increased more than borderline, or his PSA levels are increasing** — see [Acting on PSA results](#).
- Referral (and PSA testing) may not be appropriate if the man has comorbidities that compromise his clinical state or significantly shorten his life expectancy. In this situation, discuss the options with the man and his carers, and consider obtaining advice from a specialist in urological cancer.

Basis for recommendation

These recommendations reflect guidelines of the National Institute for Health and Clinical Excellence (NICE) on referring men with suspected prostate cancer [[National Collaborating Centre for Primary Care, 2005](#)]. They are in line with guidelines from NICE on the diagnosis and management of prostate cancer [[National Collaborating Centre for Cancer, 2008a](#)], guidelines from the NHS Prostate Cancer Risk Management Programme on prostate-specific antigen testing in asymptomatic men [[Burford et al, 2009](#)], and guidelines from NICE on the management of lower urinary tract symptoms in men [[National Clinical Guideline Centre, 2010](#)].

What investigations may be performed in secondary care to confirm and assess suspected prostate cancer?

- In secondary care, a man with suspected prostate cancer may be offered a prostate biopsy to confirm or exclude the diagnosis, and imaging to assess the [TNM](#) stage of the prostate cancer.
- **Prostate biopsy**
 - A biopsy involves taking around 10 specimens (cores) so that the whole prostate is representatively sampled. This is necessary because prostate cancer develops independently in multiple foci distributed randomly throughout the prostate.
 - The aim is to detect harmful cancers, not to detect all cancerous foci. Because the number of cores is limited, around 20% of small cancerous foci will not be detected.
 - Prostate biopsy may not be required if the diagnosis is practically certain on clinical grounds, for example the prostate-specific antigen level is very high and there is evidence of bone metastases.
- **Imaging**
 - Magnetic resonance imaging, computed tomography, radioisotope bone scans, and ultrasonography may be used to assess the prostate gland and determine the extent of locally invasive cancer or presence of distant metastases.
 - No imaging modality is accurate enough for prostate cancer to be confidently excluded.

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) on the diagnosis and management of prostate cancer [[National Collaborating Centre for Cancer, 2008a](#)].

Prostate cancer - Management

Scenario: Treatment options for prostate cancer

What approach to treating prostate cancer is recommended?

- Treatment for prostate cancer will be initiated and managed in secondary care.
- Primary care will be involved in shared care with [follow up and monitoring](#), and early recognition and initial management of the [complications of the condition and adverse effects of its treatment](#).
- Appropriate treatment options depend on the stage of the prostate cancer (localized, locally advanced, metastatic, or relapse), the man's [prognostic risk](#), the presence of lower urinary tract symptoms of bladder outlet obstruction, the risk of adverse effects from treatment, his life expectancy, and personal values.
- **Treatments for localized prostate cancer**
 - Treatment options include:
 - **No active treatment:** [watchful waiting](#), and [active surveillance](#).
 - **Radical treatment:** [radical prostatectomy](#), [external beam radiotherapy](#), [brachytherapy](#).
 - **Focal treatments:** [high intensity focused ultrasound](#) and [cryotherapy](#) are used in clinical trials.
 - **Adjuvant treatment:** [hormonal treatment](#), including androgen blockade and androgen withdrawal — a short course may be given before or during radical radiotherapy.
 - The section on [Treatment options for localized prostate cancer](#) shows the recommended options for men at low, intermediate, and high prognostic risk.
- **Treatments for locally advanced prostate cancer, metastatic prostate cancer, or relapse after radical treatment include:** Neoadjuvant and concurrent luteinizing hormone-releasing hormone agonist or antagonist therapy — see [hormonal treatment](#).
 - Adjuvant [hormonal treatment](#).
 - Radiotherapy: [external beam radiotherapy](#) and [brachytherapy](#).
 - Prostatectomy: [radical prostatectomy](#), [high intensity focused ultrasound](#), and [cryotherapy](#).
 - [Chemotherapy](#) — some centres may not provide some treatments, such as those being researched in clinical trials.

- **New treatments**

- New treatments for prostate cancer are undergoing clinical trials.
- Information about these trials can be found on Cancer Research UK's online [register](#).
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- **Summary of recommended treatment options for localized prostate cancer**

Table 1. Treatment options for localized prostate cancer that are recommended by the National Institute for Health and Clinical Excellence (NICE).

Treatment option	Prognostic risk group*		
	Low	Intermediate	High
No active treatment			
Watchful waiting	Option	Option	Option
Active surveillance	Preferred	Option	Not appropriate
Radical treatment			
Radical prostatectomy	Option	Preferred	Preferred [†]
External-beam radiotherapy	Option	Preferred	Preferred [†]
Brachytherapy	Option	Option	Not appropriate
High-intensity focused ultrasonography	Research option [‡]	Research option [‡]	Research option [‡]
Cryotherapy	Research option [‡]	Research option [‡]	Research option [‡]
Adjuvant treatment with radical radiotherapy for men with Gleason score of 8 or more.			
Hormonal treatment [§]	—	—	Recommended if Gleason score 8–10

* Prognostic risk [grouping](#) depends on prostate specific antigen level, [TNM](#) classification, and [Gleason score](#).

† Only recommended if there is a realistic prospect of long-term disease control.

‡ An option only as part of a clinical trial comparing it with established treatment.

§ Includes androgen withdrawal and androgen blockade.

Adapted from: [[National Collaborating Centre for Cancer, 2008a](#)].

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

Information and support for patients

Where can men obtain information about prostate cancer and its treatment?

- **Cancer Research UK**

- The Cancer Help section of Cancer Research UK provides information for people with all forms of cancer. It includes symptoms and causes of prostate cancer, tests and treatment, living with prostate cancer, and current research.

- A leaflet [About prostate cancer - A quick guide \(pdf\)](#) can be downloaded for printing.
- For more information, visit www.cancerhelp.org.uk.
- **The Prostate Cancer Charity**
 - The Prostate Cancer Charity produce a wide range of publications for health professionals to use when discussing diagnostic tests, treatments, and adverse effects with their patients.
 - Publications that can be downloaded for printing include:
 - [Prostate cancer: a guide for newly diagnosed men \(pdf\)](#)
 - [Active surveillance \(pdf\)](#)
 - [Radical prostatectomy \(pdf\)](#)
 - [External beam radiotherapy \(pdf\)](#)
 - [Brachytherapy \(pdf\)](#)
 - [Hormone therapy \(pdf\)](#)
 - [Cryotherapy \(pdf\)](#)
 - [High intensity focused ultrasound \(pdf\)](#)
 - For more information about prostate cancer and other treatments, visit www.prostate-cancer.org.uk.
- **Macmillan and Cancerbackup**
 - Macmillan Cancer Support and Cancerbackup merged in 2008. They aim to improve the lives of people affected by cancer by providing practical, medical and financial support.
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- **Prostate Link UK**

- Prostate Link UK provides links to quality-assessed sources of information about the questions men with prostate cancer commonly want to ask.
- For more information, visit www.prostate-link.org.uk.

Basis for recommendation

- The National Institute for Health and Clinical Excellence (NICE) recommends that people with prostate cancer should receive information about the benefits and limitations of tests and treatments, but does not recommend specific resources [[National Collaborating Centre for Cancer, 2008a](#)]. The resources listed here have been identified by CKS or suggested by expert reviewers.

What support resources are there for people with prostate cancer?

- **Healthtalkonline**

- Healthtalkonline allows people to share in other people's experiences of health and illness. Their information is based on research led by experts at the University of Oxford.
- For more information, visit www.healthtalkonline.org.

- **Macmillan and Cancerbackup**

- Macmillan Cancer Support and Cancerbackup merged in 2008. They aim to improve the lives of people affected by cancer by providing practical, medical and financial support.
- For more information, visit www.macmillan.org.uk, or telephone their helpline on 0808 808 0121.

- **The Prostate Cancer Charity**

- The Prostate Cancer Charity provides links to volunteers who can provide support over the telephone to men with prostate cancer. Men needing to choose between treatments can be put in touch with support volunteers who have tried the treatments.
- Visit www.prostate-cancer.org.uk, or telephone their helpline on 0800 074 8383.

- **NHS Direct**

- NHS Direct provides advice and information on all health problems, including prostate cancer.
- NHS direct also provides advice for carers of people with cancer.
- Visit www.nhsdirect.nhs.uk, or telephone 0845 46 47.

- **Prostate Link UK**

- Prostate Link UK provides links to quality-assessed sources of information about the questions men with prostate cancer commonly want to ask.
- For more information, visit www.prostate-link.org.uk.

Basis for recommendation

- The National Institute for Health and Clinical Excellence (NICE) recommends that people with prostate cancer should receive information about the benefits and limitations of tests and treatments, but does not recommend specific resources [[National Collaborating Centre for Cancer, 2008a](#)]. The resources listed here have been identified by CKS or suggested by expert reviewers.

Watchful waiting/active surveillance

What is watchful waiting, and when is it an appropriate treatment option for prostate cancer?

- Protocols for watchful waiting include regular clinical assessments and repeat prostate-specific antigen (PSA) testing, but not repeated digital rectal examination or prostate biopsies. Details for [follow up](#) vary with locality.
- Watchful waiting is an option for men with prostate cancer if [radical treatment](#) would not be appropriate, and hormone therapy is not necessary. Watchful waiting is often suitable for older men, or men with significant comorbidities who have a low risk of significant cancer progression during their expected lifespan. It is an option for men in any [prognostic risk](#) group.
- If progressive disease becomes apparent, for example there is bone pain or PSA levels increase rapidly (as indicated in the shared care agreements), the man should be reviewed by the urological cancer service, which will initiate treatment (often [hormonal treatment](#)).

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

What is active surveillance, and when is it an appropriate treatment option for prostate cancer?

- Active surveillance involves frequent serial prostate-specific antigen (PSA) tests, digital rectal examinations, and prostate biopsies — see [Follow up and monitoring](#).

- The difference from [watchful waiting](#) is that repeating the prostate biopsy at intervals depending on age and PSA levels allows the man's [prognostic risk](#) category to be reassessed. The aim of active surveillance is to safely reduce the risk of over treatment, as treatment is offered only when the risk increases.
- If there is evidence of disease progression, the man should be offered [radical treatment](#). His decision should be informed by his preferences, comorbidities, and life expectancy.
- Active surveillance is the preferred option for men with low [prognostic risk](#) who are fit for [radical treatment](#) in the event of disease progression. It is an option for men at intermediate risk, and it is not recommended for men at high risk.

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

Radical treatments

What is radical prostatectomy, and when is it appropriate treatment for prostate cancer?

- With radical prostatectomy, the whole prostate gland and the seminal vesicles are surgically removed. Surgical techniques include the open retropubic or perineal approaches and approaches using newer technologies, such as laparoscopic and robotic-assisted surgery, that are less invasive but less well studied.
- **Risks associated with radical prostatectomy** include urinary incontinence, erectile dysfunction, and incomplete resection of the tumour.
- **Radical prostatectomy is an appropriate option for:**
 - **Localized prostate cancer.** Radical prostatectomy is offered to fitter men without comorbidities. It is not common to offer it to men older than 70 years of age. It is an option for men at low [prognostic risk](#), and is a preferred option for men at intermediate risk and those at high risk who have a realistic chance of gaining long-term control of the disease.
 - **Biochemical relapse after radical radiotherapy.** Radical prostatectomy is an option for men who have biochemical relapse — increasing prostate-specific antigen levels — after radical radiotherapy. However, the risk of incontinence, impotence, and rectal damage is higher than when it is used as primary treatment.
 - **Locally advanced prostate cancer.** Men with [T3](#) cancers are sometimes treated with radical prostatectomy, although clinical or radiological evidence of T3 prostate cancer is usually a contraindication to radical surgery.

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

What is external-beam radiotherapy, and when is it an appropriate treatment for prostate cancer?

- External-beam radiotherapy directs ionizing radiation at the tumour from outside the body, using X-rays, for example.
- **Adverse effects**
 - Adverse effects of external-beam radiotherapy include alteration in urinary and bowel function and erectile dysfunction.
- **External-beam radiotherapy is an appropriate option for:**
 - **Localized cancer of the prostate.**
 - External-beam radiotherapy is the commonest treatment in the UK for men diagnosed with localized prostate cancer. It is given as conformal radiotherapy in daily outpatient treatments over 4–8 weeks. In conformal radiotherapy, the radiation beam is directed to fit the profile of the man's prostate.
 - External-beam radiotherapy is not recommended for men at low [prognostic risk](#), and is a preferred option for men at intermediate risk and those at high risk who have a realistic chance of gaining long-term control of the disease.
 - Men receiving radical radiotherapy for localized prostate cancer who have a [Gleason score](#) of 8 or more will also be treated for at least 2 years with [adjuvant hormonal therapy](#).
 - **Relapse after radical treatment for prostate cancer.**
 - Radiotherapy to the prostate bed is recommended for men who experience biochemical relapse with increasing prostate-specific antigen levels after radical prostatectomy, provided that they do not have metastases.
 - **Locally advanced disease.**
 - External-beam radiotherapy is sometimes combined with [brachytherapy](#) in locally advanced disease.

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

What is brachytherapy, and when is it appropriate treatment for men with prostate cancer?

- Brachytherapy is a type of radiotherapy in which the radioactive source is implanted in the prostate — permanently with low-dose rate radioactive seeds, or temporarily with high-dose rate radioactive wires.
- **Complications**
 - Complications of brachytherapy include alteration of urinary and bowel function and erectile dysfunction.
- **Contraindications**
 - Brachytherapy may not be possible in men with an enlarged prostate, and significant obstructive lower urinary tract symptoms are a relative contraindication.
- Brachytherapy is an appropriate option for:
 - **Localized prostate cancer**
 - Brachytherapy is an option for men at low or intermediate [prognostic risk](#). It is not recommended for those at high risk.
 - **Locally advanced prostate cancer**
 - Brachytherapy can be combined with [external beam radiotherapy](#) to deliver a high-dose boost to the prostate in locally advanced disease.

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[NICE, 2005e](#); [NICE, 2006](#); [National Collaborating Centre for Cancer, 2008a](#)].

What is high-intensity focused ultrasound (HIFU), and when is it used to treat prostate cancer?

- High-intensity focused ultrasonography (HIFU) is used to ablate (destroy) prostate tissue by heating.
- Adverse effects of HIFU include sexual dysfunction, stress incontinence, urethral strictures, and urinary tract infection.
- HIFU is not recommended except as part of a clinical trial in which it is compared with established interventions.
- HIFU may be an appropriate option for:
 - Localized cancer of the prostate.
 - Locally advanced prostate cancer.

- Relapsed prostate cancer after radiotherapy.

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[NICE, 2005b](#); [National Collaborating Centre for Cancer, 2008a](#)].

What is cryotherapy, and when is it used to treat prostate cancer?

- Cryotherapy is used to ablate (destroy) prostate tissue by freezing.
- Adverse effects of cryotherapy most commonly include sexual dysfunction and stress incontinence.
- Cryotherapy is not recommended except as part of a clinical trial in which it is compared with established interventions.
- Cryotherapy may be an appropriate option for:
 - Localized cancer of the prostate.
 - Locally advanced prostate cancer.
 - Relapsed prostate cancer after radical radiotherapy.

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[NICE, 2005c](#); [NICE, 2005d](#); [National Collaborating Centre for Cancer, 2008a](#)].

Adjunctive and palliative treatments

What hormonal treatment are used for prostate cancer, and when are they indicated?

- Two kinds of hormonal treatment are used for prostate cancer.
 - **Androgen withdrawal** with surgery (bilateral orchidectomy) or with gonadotropin-releasing hormone (GnRH) agonists (such as goserelin), or antagonists (such as degarelix). GnRH is also known as 'luteinizing-hormone-releasing hormone' (LHRH).
 - **Androgen blockade** with drugs that bind to and block the hormone receptors of cancer cells, thus preventing androgens from stimulating cancer growth.
- Hormonal treatment may be given at different times.
 - **Neoadjuvant therapy** is given for several months before radical treatment with surgery or radiotherapy.

- **Concurrent therapy** is given at the same time as radiotherapy.
- **Adjuvant therapy** is given after radical treatment with surgery or radiotherapy.
 - Hormonal treatment may be given:
 - Continuously, *or*
 - Intermittently.
 - **The adverse effects of hormonal therapies** reflect their mechanisms of action.
 - Androgen withdrawal commonly causes hot flushes, loss of libido, weight gain, lethargy, cognitive dysfunction, diabetes, and excess cardiovascular events. In the long term, bone mineral density may decrease and pathological fractures become more likely.
 - Androgen blockade is less likely than androgen withdrawal to cause sexual dysfunction or lethargy. The most problematic adverse effects are breast enlargement (gynaecomastia) and breast pain (mastalgia).
 - **Hormone therapy may be used to treat:**
 - **Localised prostate cancer**
 - Adjuvant hormonal therapy is recommended for men receiving radical radiotherapy for localized prostate cancer who have a [Gleason score](#) of 8 or more.
 - **Relapse after radical prostatectomy or radiotherapy for prostate cancer**
 - Hormonal therapy is used for men with symptomatic, progressive, or metastatic disease after either initial surgery or radiotherapy. It is recommended for men with biochemical relapse whose prostate-specific antigen levels have doubled in less than 3 months.
 - **Locally advanced prostate cancer**
 - Neoadjuvant and concurrent LHRH agonist therapy is recommended for 3–6 months in men receiving radical radiotherapy for locally advanced prostate cancer. Degarelix is an LHRH antagonist, which is licensed for treatment of men with advanced hormone-dependent prostate cancer.
 - Adjuvant hormonal therapy is recommended for a minimum of 2 years in men receiving radical radiotherapy for locally advanced prostate cancer who have a Gleason score of 8 or more.
 - **Metastatic prostate cancer**
 - Bilateral orchidectomy and continuous LHRHa therapy are alternatives for men with metastatic prostate cancer. The choice depends on the man's preferences. For example, bilateral orchidectomy is convenient but irreversible, whereas LHRHa therapy may be used intermittently but administration and adherence to recommended schedules may be problematic.

- Androgen blockade monotherapy with bicalutamide may be the preferred option for men who hope to retain sexual function and are willing to accept the risk of reduced life expectancy and the possibility of gynaecomastia (enlarged breasts).

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

- Degarelix is licensed for treatment of men with advanced hormone-dependent prostate cancer, but was not assessed by NICE because it was introduced to the market after the guidance was published.

What is strontium-89 therapy, and when is it used for prostate cancer?

- The radioactive isotope of strontium, Sr-89, is an option for men with hormone-refractory prostate cancer and painful bone metastases.
- Strontium-89 is given intravenously as a single dose or a short course. It may be used as adjunctive treatment together with other therapies.
- Because of its suppressive effects on bone marrow, treatment with strontium-89 is usually limited to one course.

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

What chemotherapy is used for prostate cancer, and when is it offered?

- Chemotherapy is usually given to men with symptomatic progression.
- It may be offered to asymptomatic men with metastatic disease whose prostate-specific antigen level is rapidly increasing. It may also be offered for other indications in clinical trials.
- **Docetaxel**
 - Docetaxel in combination with prednisolone is the only chemotherapy regimen licensed for hormone-resistant metastatic prostate cancer.
 - The adverse effects of this combination can be substantial, and it may not be possible to use docetaxel if the disease has progressed to a stage where it is causing significant symptoms.

- **Mitoxantrone**
 - Men who are unlikely to tolerate docetaxel are usually treated with the combination of mitoxantrone and prednisolone.
- **Corticosteroids**
 - A corticosteroid, such as dexamethasone, is recommended as third-line therapy after androgen withdrawal and anti-androgen therapy for men with hormone-refractory prostate cancer.

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

When are bisphosphonates used in men with prostate cancer?

- Bisphosphonates are recommended as an option for pain relief in men with hormone-refractory prostate cancer when other treatments (including analgesics and palliative radiotherapy) have failed.
- Bisphosphonates are not recommended to prevent bone metastases or to reduce their complications.
- Bisphosphonates are not recommended to be used routinely to prevent osteoporosis in men with prostate cancer receiving androgen withdrawal therapy.

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

Prostate cancer - Management

Scenario: Management of complications of prostate cancer and adverse effects of treatments

Information and support for patients

Where can men obtain information about the complications of prostate cancer and adverse effects of treatment?

- **The Prostate Cancer Charity**
 - The Prostate Cancer Charity produce a wide range of publications for health professionals to use with their patients when discussing the complications of prostate cancer and the adverse effects of treatments.

- Publications that can be downloaded for printing include:
- [Living with hormone therapy: a guide for men with prostate cancer \(pdf\)](#)
- [Recurrent prostate cancer: If your cancer comes back - risk and treatment \(pdf\)](#)
- [Diet and prostate cancer \(pdf\)](#)
- [Sex and prostate cancer \(pdf\)](#)
- [Urinary problems and prostate cancer \(pdf\)](#)
- [Pain and advanced prostate cancer \(pdf\)](#)
- For more information, visit www.prostate-cancer.org.uk.
- **Cancer Research UK**
 - The Cancer Help section of Cancer Research UK provides information for people with all forms of cancer. The section on living with prostate cancer includes information on:
 - [Coping with prostate cancer](#)
 - [Sex life and prostate cancer](#)
 - [Urinary problems](#)
 - [What to ask your doctor about living with prostate cancer](#)
 - For more information, visit www.cancerhelp.org.uk.
- **The Prostate Cancer Charity**
 - The Prostate Cancer Charity produce a wide range of publications for health professionals to use when discussing diagnostic tests, treatments, and adverse effects with their patients.
 - Publications that can be downloaded for printing include:
 - [Living with hormone therapy \(pdf\)](#)
 - [Recurrent prostate cancer: If your cancer comes back — risk and treatment \(pdf\)](#)
 - [Diet and prostate cancer \(pdf\)](#)
 - [Sex and prostate cancer \(pdf\)](#)
 - [Pain and advanced prostate cancer \(pdf\)](#)
 - [Urinary problems \(pdf\)](#)
 - For more information, visit www.prostate-cancer.org.uk.
- **Macmillan and Cancerbackup**

- Macmillan Cancer Support and Cancerbackup merged in 2008. They aim to improve the lives of people affected by cancer by providing practical, medical, and financial support.
- The section on living with prostate cancer includes information on:
 - [Follow up](#)
 - [Side effects](#)
 - [Living with and after cancer](#)
- More information on prostate cancer, including treatments, possible side effects, and how to get further support can be found at www.macmillan.org.uk.
- **NHS Choices**
 - NHS Choices is a comprehensive health information service, including prostate cancer.
 - For more information, visit www.nhs.uk.
- **Prostate Link UK**
 - Prostate Link UK provides links to quality-assessed sources of information about the questions men with prostate cancer commonly want to ask.
 - For more information, visit www.prostate-link.org.uk.

Basis for recommendation

- The National Institute for Health and Clinical Excellence (NICE) recommends that people with prostate cancer should receive information about the benefits and limitations of tests and treatments, but does not recommend specific resources [[National Collaborating Centre for Cancer, 2008a](#)]. The resources listed here have been identified by CKS or suggested by expert reviewers.

What support resources are there for people with prostate cancer?

- See the section [Support for patients](#) in the [Scenario: Treatment options](#).

Basis for recommendation

- The National Institute for Health and Clinical Excellence (NICE) recommends that people with prostate cancer should receive information about the benefits and limitations of tests and treatments, but does not recommend specific resources [[National Collaborating Centre for Cancer, 2008a](#)]. The resources listed here have been identified by CKS or suggested by expert reviewers.

How are men with prostate cancer followed up and monitored?

- **When men with prostate cancer are followed up in primary care, this will be done according to locally agreed protocols.**
 - Primary care follow up may be appropriate for all men with localized prostate cancer, some men with locally advanced prostate cancer, and men who have been stable with no significant treatment complications for at least 2 years after [radical treatment](#).
 - The man (and when appropriate his family and carers) should understand:
 - The purpose of follow up and its arrangements.
 - What adverse effects of treatment to be aware of, and how to report them.
- **For all men being followed up for prostate cancer, review and manage:**
 - Complications of the disease, including pain, lower urinary tract symptoms, and symptoms of spinal cord compression.
 - Adverse effects from treatment, including [sexual dysfunction](#) and [urinary incontinence](#).
 - Adverse effects of androgen withdrawal include change in body shape and weight gain, tiredness, hot flushes, loss of libido, erectile dysfunction, gynaecomastia, and loss of bone density.
 - Quality of life.
- **Follow up with watchful waiting**
 - Prostate-specific antigen (PSA) should be measured at least once a year.
 - Digital rectal examination (DRE) is not recommended on a routine basis while the PSA level remains at baseline values.
- **Follow up with active surveillance**
 - Protocols for active surveillance include PSA testing, DRE, and repeat prostate biopsies. *Some* centres follow the [protocol](#) in the [ProSTART](#) trial:
 - Measure PSA every 3 months for 2 years, then every 6 months.
 - Perform DRE every 3 months for 2 years, then every 6 months.
 - Perform prostate biopsy after years 1, 4, 7, and 10, then every 5 years.
- **Follow up with radical treatment**
 - PSA levels should be measured not earlier than 6 weeks after treatment, then at least every 6 months for 2 years, and then at least once a year.

Basis for recommendation

This information and the recommendations reflect guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

How should I manage adverse effects of hormonal therapies, including orchidectomy, in men with prostate cancer?

▪ **Hot flushes**

- An oral or parenteral synthetic progestogen is recommended as first-line treatment for hot flushes.
- Consider cyproterone acetate 50 mg to 150 mg daily.
- Oral treatment should be given for 2 weeks, and restarted if symptoms recur after effective suppression.
- For prescribing information, see [Cyproterone acetate](#).

▪ **Fatigue**

- Regular exercise improves quality of life and reduces fatigue in men undergoing androgen withdrawal therapy.

▪ **Osteoporosis**

- Advise men that it is important to keep physically active, to quit if they smoke, to avoid excessive alcohol consumption, and to eat a nutritious diet. Information on [osteoporosis](#) for the general public is available from NHS Choices, and includes information on prevention and calcium and vitamin D supplements. There are CKS topics on [Smoking cessation](#) and [Alcohol - problem drinking](#).
- Prevention and management of osteoporosis will be according to local protocols; it may include vitamin D and calcium supplements, and a bisphosphonate or other anti-osteoporosis drug.

▪ **Gynaecomastia**

- To prevent gynaecomastia in men starting long-term bicalutamide monotherapy, radiotherapy may be given to both breast buds within the first month of treatment.
- Tamoxifen taken weekly is an option if radiotherapy did not prevent gynaecomastia.

Basis for recommendation

This information and the recommendations reflect guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

How should I manage palliative care and pain in a man with prostate cancer?

- Healthcare professionals should ensure that palliative care is available when needed and is not limited to the end of life. It should not be restricted to being associated with hospice care.
- The management of cancer pain is discussed in detail in the CKS topic on [Palliative cancer care - pain](#), which includes separate sections on acute severe pain, assessment of pain, managing pain that is not an emergency, and managing bone pain. This also includes sections on suspecting and managing spinal cord compression.
- If the usual stepwise approach to providing pain relief with analgesics is ineffective, obtain specialist advice, as other treatments are available in secondary care, for example bisphosphonates and the radioactive strontium isotope Sr-89 may be used for uncontrolled bone pain.
- For more information on palliative care, including support for carers, see the relevant CKS topics, such as the CKS topic on [Palliative cancer care - general issues](#).

Basis for recommendation

This information and the recommendations reflect guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

How should I manage radiation-induced enteropathy in men with prostate cancer?

- Men who present with symptoms consistent with radiation-induced enteropathy should be referred for investigation and management.
- Symptoms may include diarrhoea, passing blood or mucus with the stool, tenesmus (constantly feeling the need to defecate, even after emptying the bowels), and rectal pain.
- Specialist assessment is likely to involve sigmoidoscopy to ascertain the nature of the radiation injury and exclude such conditions as inflammatory bowel disease and cancer of the large bowel.

Basis for recommendation

This information and the recommendations reflect guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

How should I manage sexual dysfunction in men with prostate cancer?

- Loss of libido and erectile dysfunction are common adverse effects of treatments for prostate cancer.
- Consider prescribing a phosphodiesterase-5 inhibitor, such as sildenafil, tadalafil, or vardenafil — prescribing information is detailed in the CKS topic on [Erectile dysfunction](#).
- Also consider referral to a sexual dysfunction specialist.

Basis for recommendation

This information and the recommendations reflect guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

How should I manage suspected spinal cord compression in men with prostate cancer?

- Suspected spinal cord compression is a medical emergency. It must be diagnosed and treated before there is significant neurological compromise.
- Suspect spinal cord compression if any of the following features are present:
 - Bone pain anywhere in the spine — typically it is severe and unremitting, aggravated by coughing and sneezing, and disturbs sleep.
 - Radicular pain.
 - Weakness in any limb.
 - Difficulty in walking.
 - Sensory loss.
 - Bladder dysfunction, for example urinary retention, urinary hesitancy, or decreased urethral sensation.
 - Bowel dysfunction, for example incontinence or constipation.
- If spinal cord compression is suspected, obtain immediate specialist advice, which is likely to include:
 - Immediate admission for people able to benefit from diagnosis and treatment.
 - Dexamethasone 16 mg orally immediately.
- For more information and prescriptions, see the [Scenario: Spinal cord compression](#) in the CKS topic on [Palliative cancer care - pain](#).

Basis for recommendation

This information reflects guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

The recommendations about management reflect the NICE guideline *Metastatic spinal cord compression* [[National Collaborating Centre for Cancer, 2008b](#)].

How should I manage urinary incontinence or retention in men with prostate cancer?

- **Urinary incontinence**

- Refer the man to the urological cancer service for assessment and management.
- Management options include a urine collection device and pads, medication, and channel transurethral resection of the prostate (TURP).
- **Urinary retention**
 - Acute urinary retention requires drainage as soon as possible. If catheterization is not possible or contraindicated, admit urgently.
 - Contraindications to catheterization in primary care include radical local therapy, such as prostatectomy, radiotherapy, or high-intensity focused ultrasound (HIFU). These men are at high risk of a stricture, which could result in the catheter creating a false passage or failing to pass.
 - Chronic urinary obstruction presents with difficulty in initiating urination, incomplete emptying, and frequent urination. A distended bladder is usually palpable.
 - Refer men with acute or chronic urinary retention to the urological cancer service for assessment and management.
 - Urinary obstruction due to hormone-resistant prostate cancer may be palliatively managed with surgical decompression. As some men in this situation prefer not to be treated, this should be openly discussed when appropriate.
 - For more information on palliative care, including supporting carers, see the relevant CKS topics, such as the CKS topics on [Palliative cancer care - general issues](#) and [Palliative cancer care - pain](#).

Basis for recommendation

This information and the recommendations reflect guidelines from the National Institute for Health and Clinical Excellence (NICE) [[National Collaborating Centre for Cancer, 2008a](#)].

Prescriptions

For information on contraindications, cautions, drug interactions, and adverse effects, see the electronic Medicines Compendium (eMC) (<http://emc.medicines.org.uk>), or the British National Formulary (BNF) (www.bnf.org).

Cyproterone acetate - short term treatment

Age from 30 years onwards

Cyproterone acetate: initiation dose 50mg daily.

Cyproterone 50mg tablets
 Take one tablet daily.
 Supply 14 Tablets.

Age: from 30 years onwards

NHS cost: £6.11

Licensed use: yes

Patient information: This is a starting dose. Consult your doctor if you find this dose insufficient to control your symptoms.

To be taken after food.

Do not drive or operate machinery if the medicine makes you feel tired.