

How prostate cancer is diagnosed



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**PROSTATE
CANCER UK**

This fact sheet is for anyone who wants to know more about how prostate cancer is diagnosed. Your partner, family or friends might also find it helpful.

We talk about the tests used to diagnose prostate cancer and explain what the results may show.

Each GP surgery or hospital will do things slightly differently, and you might not need all the tests we mention here. Use this fact sheet as a general guide and ask your doctor or nurse for more details about your tests and the support available to you. You can also speak to our Specialist Nurses, in confidence, on **0800 074 8383** or chat to them online if you need any information or support.

Why might I have tests?

You may have tests if you're at higher risk of getting prostate cancer. In the UK, about 1 in 8 men will get prostate cancer at some point in their lives. And you're more likely to get prostate cancer if you're over 50, you're Black, or you have a family history of prostate or breast cancer.

Your GP may suggest having tests if you have symptoms of a possible prostate problem, such as needing to rush to the toilet or needing to urinate (wee) more often than normal. Tests will aim to find out whether you might have prostate cancer, another prostate problem, or another health problem.

Urinary symptoms are usually caused by problems that aren't cancer, such as an enlarged prostate or a urine infection. And most men with early prostate cancer don't have any symptoms. One reason for this is the way the cancer grows. You'll usually only get early symptoms if the cancer grows near the tube you urinate through (the urethra) and presses against it, changing the way you urinate. But because prostate cancer usually starts to grow in a different part of the prostate, early prostate cancer doesn't often press on the urethra and cause symptoms.

Prostate cancer that has spread to other parts of the body can cause pain in the back, hips, pelvis or legs and weight loss. These symptoms are often caused by other problems. But it's a good idea to get any symptoms checked out by your GP. They will want to make sure they find out what's causing any problems so you can get the right treatment if you need it.

Read more about possible symptoms of a prostate problem and your risk of prostate cancer in our booklet,
Know your prostate: A guide to common prostate problems.

What tests are done at the GP surgery?

There is no single test to diagnose prostate cancer. There are a few tests that your GP can do to find out if you might have a prostate problem, including:

- a urine test
- a prostate specific antigen (PSA) blood test
- a digital rectal examination (DRE).

Before you have these tests, your GP will explain what they involve and talk you through the advantages and disadvantages of each test. They can help you understand more about prostate cancer and your own risk of getting it. It's up to you whether you have the tests, so make sure you have all the information you need and give yourself time to think it through. If you're worried about these tests or would like more information, speak to your GP or nurse. Or you can speak to our Specialist Nurses.

Urine Test

Your GP may ask you to provide a urine sample. They will test it using a urine dipstick test to see if you have other health problems like diabetes, kidney problems or an infection. This is usually done at your GP surgery and your sample may be sent to the laboratory for further tests if there are any unusual results. You may need to give more than one sample. If you have an infection, your GP may give you a course of antibiotics.

Prostate specific antigen (PSA) blood test

This is a test that measures the amount of prostate specific antigen (PSA) in your blood. PSA is a protein produced by normal cells in your prostate and also by prostate cancer cells. It's normal to have a small amount of PSA in your blood, and the amount rises slightly as you get older and your prostate gets bigger.

Prostate cancer can raise your PSA level. But other things can raise your PSA level too, such as an enlarged prostate, urine infection, vigorous exercise (exercise that leaves you out of breath) or recent ejaculation. So a raised PSA doesn't necessarily mean you have cancer.

Before having a PSA test, you should not have:

- exercised heavily or ejaculated in the last 48 hours
- had anal sex in the last week
- had a urine infection in the last four to six weeks.

This is because these can give an inaccurate PSA result.

There are advantages and disadvantages to having a PSA test. Your GP will explain these to you and answer any questions. You can also speak to our Specialist Nurses for more information to help you decide whether to have the test.

You have the right to a free PSA test if you're over 50 and you've thought carefully about the advantages and disadvantages. If you're Black or have a family history of prostate cancer, we strongly recommend you speak to your GP about having a PSA test from the age of 45.

Read more in our booklet, **Understanding the PSA blood test: A guide for men concerned about prostate cancer.**

Getting the results

It can take one to two weeks to get your PSA test result. Lots of things can affect your PSA level, so a PSA test alone can't usually tell you whether you have prostate cancer. Your GP will look at your PSA level together with your other test results and your risk of prostate cancer (see page 2).

If your GP thinks your PSA level is higher than it should be for your own situation, they might decide you need to see a specialist at the hospital.

Your GP might decide you don't need to see a specialist if there are other reasons why your PSA level is raised. In this case, they might suggest having another PSA test in the future to see if your PSA level changes.

Your GP might refer you to a specialist if your PSA level is low or normal for your age but you have a higher risk of prostate cancer for other reasons, such as your family history.

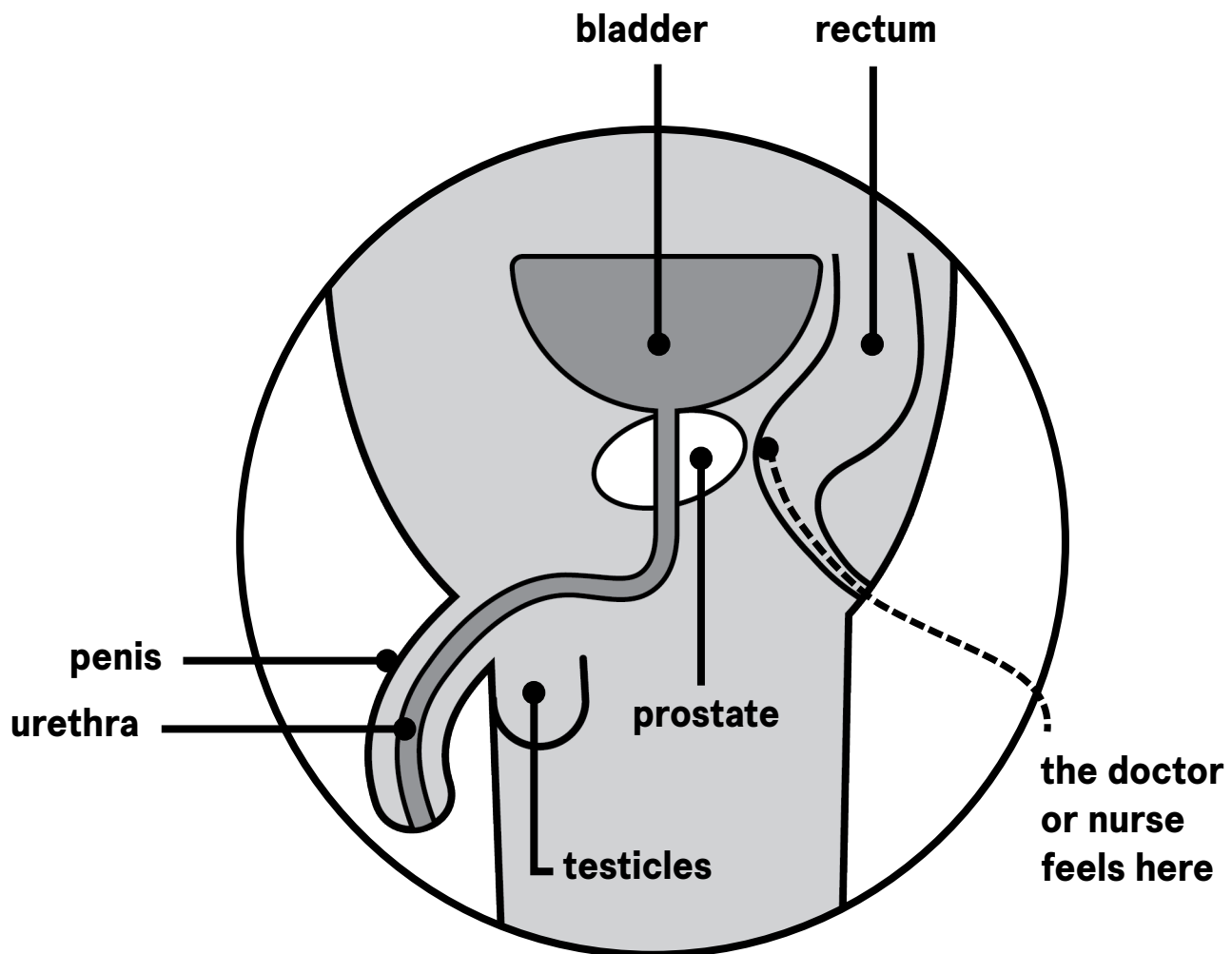
Your GP should discuss all of this with you to help you decide what to do next.

Digital rectal examination (DRE)

If you decide to have a PSA test, your GP may also recommend a digital rectal examination (DRE). But you don't have to have a DRE. You can make the decision to have a PSA test alone. During a DRE, your doctor feels your prostate through the wall of the back passage (rectum). They will ask you to lie on your side on an examination table, with your knees brought up towards your chest. The doctor will slide a finger gently into your back passage. They'll wear gloves and put some gel on their finger to make it more comfortable.

You may find the DRE slightly uncomfortable or embarrassing, but the test isn't usually painful and it doesn't take long. You can ask your GP if you would like to have someone there for support, for example your partner, a friend or a chaperone.

The digital rectal examination



Your prostate may feel:

- **normal** – a normal size for your age with a smooth surface
- **larger than expected for your age** – this could be a sign of an enlarged prostate
- **hard or lumpy** – this could be a sign of prostate cancer.

The DRE is not a completely accurate test. Your GP can't feel the whole prostate. And a man with prostate cancer might have a prostate that feels normal.

Worried about having a DRE?

It's natural to feel worried or embarrassed about having tests, but some men find the idea of having a DRE upsetting. For example, if you've been sexually abused as a child or an adult, you might feel very upset about having this test. There's no right or wrong way to feel about this, and it is your choice whether or not you have tests for prostate cancer.

It might be helpful to talk to a counsellor about your experience, thoughts and fears. Or you could contact a charity for people who've been sexually abused, such as the National Association for People Abused in Childhood (NAPAC) or SurvivorsUK.

If you do decide to have a DRE, explain your situation to your GP as they can talk through the test with you and help to reassure you.

What happens next?

Your GP will talk to you about all your test results and what they might mean. If they think you may have a prostate problem, they may be able to discuss possible treatment options with you. Or, if your GP thinks you may need further tests for prostate cancer, they may refer you to see a specialist at the hospital. If they think you could have prostate cancer, you will usually see the specialist within two weeks.

What tests are done at the hospital?

At the hospital you will see a specialist who will usually be a doctor who specialises in the urinary and male reproductive system (urologist) or a specialist nurse. You may have another PSA test or DRE. The specialist will look at your:

- PSA level
- DRE results
- risk of prostate cancer
- general health.

They might recommend another PSA test at your GP surgery in the future. Or they might recommend an MRI (magnetic resonance imaging) scan and a prostate biopsy.

You might also have a urine flow test and an ultrasound scan of your bladder. These are usually done to check for an enlarged prostate. Read more in our booklet, **Enlarged prostate: A guide to diagnosis and treatment.**

If you have a very high PSA level (for example, in the hundreds or thousands), you may have prostate cancer that has spread outside the prostate. This is known as advanced prostate cancer. If this happens, you might not need a biopsy – you may just have a bone scan or a CT (computerised tomography) scan to see where the cancer has spread to (see page 32). But if you think you might want to join a clinical trial in the future, it's important to talk to your doctor about having a biopsy. Many clinical trials only accept men who have had a biopsy.

Having an MRI scan

An MRI (magnetic resonance imaging) scan uses magnets to create a detailed picture of your prostate and the surrounding tissues. In many hospitals you may have a special type of MRI scan, called a multi-parametric MRI (mpMRI) scan, before having a biopsy. In some hospitals, you may have a biopsy first (see page 15), followed by an MRI scan to see if any cancer found inside the prostate has spread.

What are the advantages and disadvantages of having an MRI scan before a biopsy?

Advantages

- It can give your doctor information about how likely it is that you have cancer in your prostate.
- It's less likely than a biopsy to pick up a slow-growing cancer. This means you are less likely to have a biopsy and treatments that could have life-changing side effects if your cancer is unlikely to cause you any problems in your lifetime. Some side effects include severe infections and long lasting urinary or sexual problems.
- Doing an MRI scan before a biopsy, rather than after, means the images will be clearer.
- It can help your doctor decide if you need a biopsy – if there's nothing unusual on the scans, this means you're unlikely to have prostate cancer that needs to be treated. You may be able to avoid having a biopsy, and its possible side effects.

- If you do need a biopsy, your doctor can use the scan images to decide which parts of the prostate to take samples from.
- If your biopsy finds cancer, you probably won't need another scan to check if it has spread, as the doctor can get this information from your first MRI scan. This means you can start talking about suitable treatments as soon as you get your biopsy results.

Disadvantages

- Being in the MRI machine can be unpleasant if you don't like closed or small spaces (claustrophobia).
- Some men are given an injection of dye during the scan (see below)
 - this can sometimes cause mild side effects.

Why haven't I been offered an MRI scan?

Not all hospitals are able to do mpMRI scans before biopsy, but your doctor may be able to refer you to one that does. An MRI scan may not be possible if you have any metal inside your body (see page 12).

What does an MRI scan involve?

Before the scan, the doctor or nurse will ask questions about your health. As the scan uses magnets, they will ask whether you have any metal in your body such as implants or fragments that could be attracted to the magnet. They will decide if you can't have an MRI scan or there are any changes needed to make sure the MRI is as safe as possible for you. For example, if you have a pacemaker for your heart you may not be able to have an MRI scan. You'll also need to take off any jewellery or metal items. If you use patches on your skin such as for pain medication, you should ask the doctor if this should be removed for the MRI scan.

You will lie very still on a table that will move slowly into the MRI scanner, which is shaped like a doughnut or long tunnel. If you don't like closed or small spaces (claustrophobia), tell your radiographer (the person who takes the images) and they may be able to suggest some ways that could help you feel more comfortable in the scanner.

The radiographer might give you an injection of a dye during the scan. The dye helps them see the prostate and other organs more clearly on the scan. It is usually safe, but can sometimes cause problems if you:

- have kidney problems
- have asthma
- are allergic to the dye or have any other allergies.

Let the radiographer know if you have any of these.

The scan usually takes 30 to 40 minutes. The machine won't touch you but it is very noisy and you might feel warm. The radiographer will leave the room but you'll be able to speak to them through an intercom, and you will wear earplugs or ear defenders. You may also be able to listen to music through headphones.

Getting the results

Your MRI scan images will be looked at by a specialist called a radiologist, who specialises in diagnosing health problems using X-rays and scans. The radiologist will give the images of your prostate a score from 1 to 5. You may hear this called your PI-RADS (Prostate Imaging – Reporting and Data System) score or your Likert score. These scores tell your doctor how likely it is that you have cancer inside your prostate.

PI-RADS and Likert scores have the same values, and your score will be between 1 and 5. The table on page 14 describes what the different scores mean.

PI-RADS or Likert score	What this means
1	It's very unlikely that you have prostate cancer that needs to be treated.
2	It's unlikely that you have prostate cancer that needs to be treated.
3	It isn't possible to tell from the scan whether you have prostate cancer that needs to be treated – you may hear this called a borderline result.
4	It's likely that you have prostate cancer that needs to be treated.
5	It's very likely that you have prostate cancer that needs to be treated.

If your PI-RADS or Likert score is 1 or 2

This means you're unlikely to have prostate cancer that needs to be treated. Your doctor would discuss advantages and disadvantages of having a further biopsy to help make a shared decision with you. This would include talking through your individual risk factors such as age, ethnicity or family history.

Together, you and your doctor may decide that you don't need to have a biopsy. Your doctor may suggest you have regular PSA tests so that any changes in your PSA level are picked up early. You'll also be offered treatment for any urinary symptoms. Or you and your doctor may decide that you should have a prostate biopsy, as it will help to confirm whether there is cancer that needs to be treated.

If your PI-RADS or Likert score is 3 or more

You'll usually be offered a prostate biopsy to find out whether you have cancer.

Having a prostate biopsy

This involves using a thin needle to take small samples of tissue from the prostate. The tissue is then looked at under a microscope to check for cancer.

Your doctor should talk to you about the advantages and disadvantages of having a biopsy. If you have any concerns, discuss them with your doctor or specialist nurse before you decide whether to have a biopsy.

You may not need a biopsy if you've already had an MRI scan and it showed no signs of cancer inside your prostate.

What are the advantages and disadvantages of having a biopsy?

Advantages

- It's the only way to find out for certain if you have cancer inside your prostate.
- It can help find out how aggressive any cancer might be – in other words, how likely it is to spread.
- It can pick up a faster growing cancer at an early stage, when treatment may prevent the cancer from spreading to other parts of the body.
- If you have prostate cancer, it can help your doctor or nurse decide which treatment options may be suitable for you.
- If you have prostate cancer, you'll usually need to have had a biopsy if you want to join a clinical trial in the future. This is because the researchers may need to know what your cancer was like when it was first diagnosed.

Disadvantages

- The biopsy can only show whether there was cancer in the area where the samples were taken, so it's possible that cancer might be missed.
- It can pick up a slow growing or non-aggressive cancer that might not cause any symptoms or problems in your lifetime. You would then decide whether to have treatment or to have your cancer monitored. Having your cancer monitored rather than having treatment might make you worry about your cancer. But having treatments that you may not need could cause side effects that can be hard to live with. The knowledge of having a slow growing or non-aggressive cancer affects everyone differently and there is no right or wrong way to feel.
- A biopsy has side effects and risks, including the risk of getting a serious infection (see page 22).
- If you take medicines to thin your blood, you may need to stop taking them for a while, as the biopsy can cause some bleeding for a couple of weeks.

What does a biopsy involve?

If you decide to have a biopsy, you'll either be given an appointment to come back to the hospital at a later date, or be offered the biopsy straight away.

Before the biopsy you should tell your doctor or nurse if you're taking any medicines, particularly antibiotics or medicines that thin the blood such as warfarin or aspirin.

You may be given some antibiotics to take before your biopsy, either as tablets or an injection, to help prevent infection. You might also be given some antibiotic tablets to take at home after your biopsy. It's important to take them all so that they work properly.

A doctor or nurse will do the biopsy. There are two main types of biopsy:

- a trans-rectal ultrasound (TRUS) guided biopsy, where the needle goes through the wall of the back passage
- a transperineal biopsy, where the needle goes through the skin between the testicles and the back passage (the perineum).

The type of biopsy you will have will depend on your hospital.

What is a TRUS biopsy?

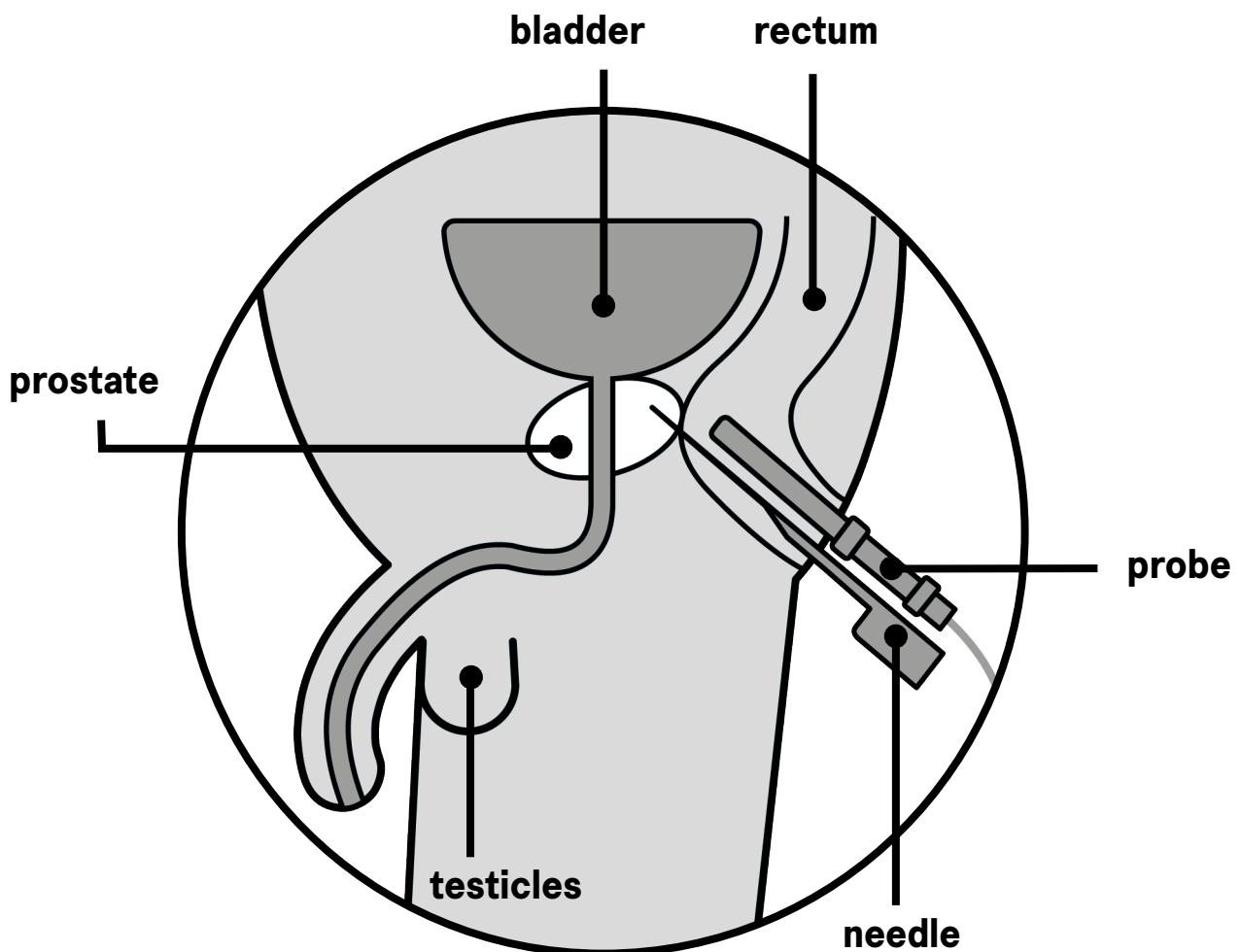
The doctor or nurse uses a thin needle to take small samples of tissue from the prostate through the wall of the back passage (rectum).

You'll lie on your side on an examination table, with your knees brought up towards your chest. The doctor or nurse will put an ultrasound probe into your back passage, using a gel to make it more comfortable. The ultrasound probe scans the prostate and an image appears on a screen. The doctor or nurse uses this image to guide where they take the cells from. If you've had an MRI scan, the doctor or nurse may use the images to decide which areas of the prostate to take biopsy samples from (see page 10).

You will have an injection of local anaesthetic to numb the area around your prostate and reduce any discomfort. The doctor or nurse then puts a needle next to the probe in your back passage and inserts it through the wall of the back passage into the prostate. They usually take 8 to 12 small pieces of tissue from different areas of the prostate.

But, if the doctor or nurse is using the images from your MRI scan to guide the needle, they may take fewer samples.

The trans-rectal ultrasound guided biopsy



The biopsy takes 5 to 10 minutes. After your biopsy, your doctor may ask you to wait until you've urinated before you go home. This is because the biopsy can cause the prostate to swell, so they'll want to make sure you can urinate properly before you leave. You should ask your doctor or nurse if you need to get someone to take you home or if you can drive yourself home.

What is a transperineal biopsy?

This is where the doctor inserts the biopsy needle into the prostate through the skin between the testicles and the back passage (perineum).

A transperineal biopsy can be done under either general anaesthetic or local anaesthetic. If you have a biopsy under general anaesthetic, you will be asleep and won't feel anything.

A general anaesthetic can cause side effects – your doctor or nurse should explain these before you have your biopsy. If you have a biopsy using a local anaesthetic, you are awake during the procedure and the anaesthetic numbs the prostate and the area around it.

The doctor will put an ultrasound probe into your back passage, using a gel to make this easier. An image of the prostate will appear on a screen which will help the doctor to guide the biopsy needle.

There are two main types of transperineal biopsy you may have:

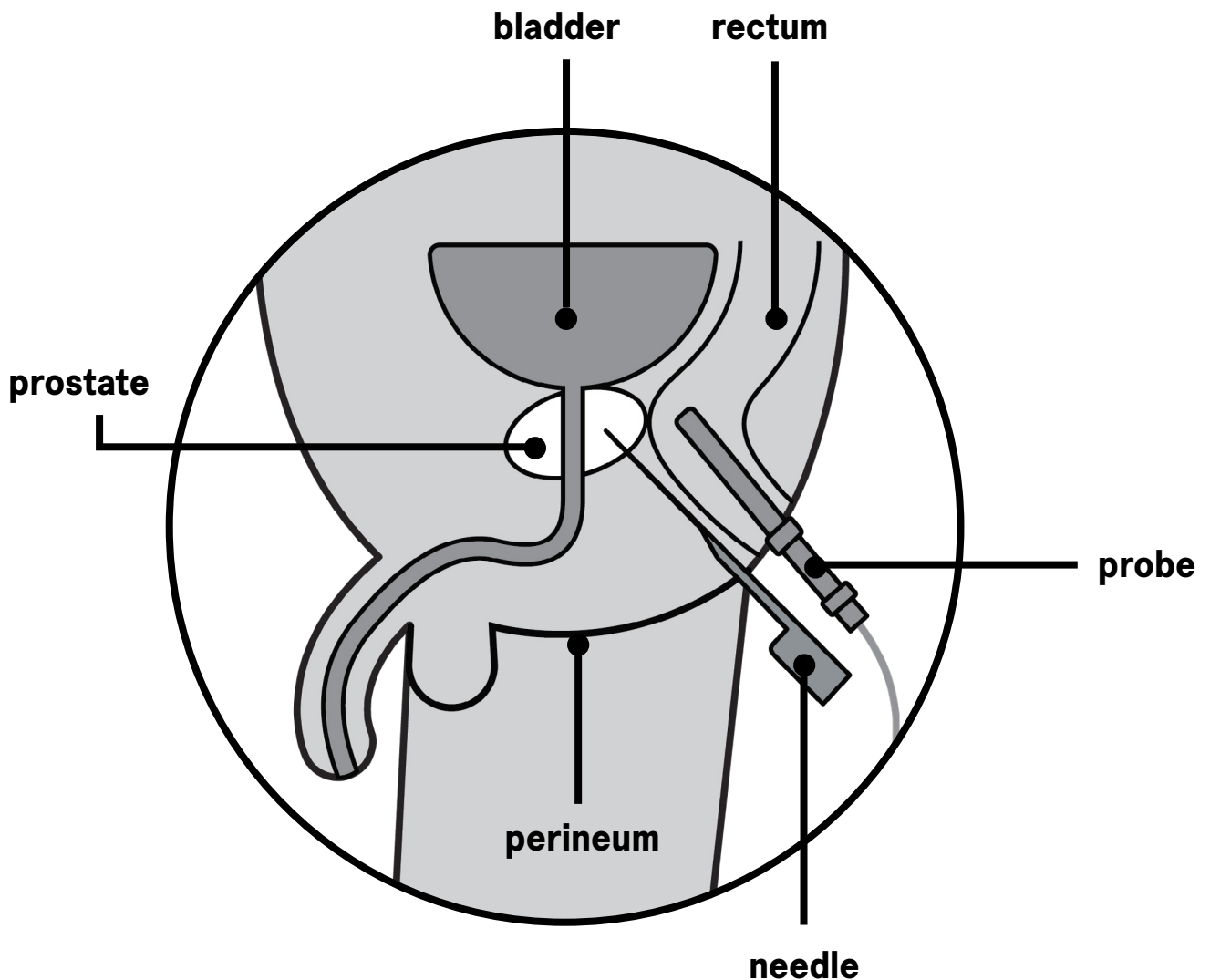
- **A targeted transperineal biopsy**

This is where the doctor may just take a few samples from the area of the prostate that looked unusual on the scan images from your MRI.

- **A template transperineal biopsy**

This is where the doctor places a grid (template) over the area of skin between the testicles and back package. They then insert the needle through holes in the grid, into the prostate. They might take up to 25 or more samples from different areas of the prostate. A template biopsy is sometimes used if a TRUS biopsy hasn't found any cancer, but the doctor still thinks there might be cancer.

The transperineal biopsy



A transperineal biopsy usually takes about 20 to 40 minutes. You will need to wait a few hours to recover from the anaesthetic before going home. You should ask your doctor or nurse if you need to get someone to take you home or if you can drive yourself home. Your doctor may ask you to wait until you've urinated. This is because the biopsy can cause the prostate to swell, so they'll want to make sure you can urinate properly before you leave.

What are the side effects of a biopsy?

Having a biopsy can cause side effects. These will affect each man differently, and you may not get all of the possible side effects.

Pain or discomfort

Some men feel pain or discomfort in their back passage for a few days after a TRUS biopsy. Others feel a dull ache along the underside of their penis or lower abdomen (stomach area). If you have a transperineal biopsy, you may get some bruising and discomfort in the area where the needles went in for a few days afterwards.

If you receive anal sex, wait about two weeks, or until any pain or discomfort has settled, before having sex again. Ask your doctor or nurse at the hospital for further advice.

Some find the biopsy painful, but others have only slight discomfort. Your nurse or doctor may suggest mild pain-relieving drugs, such as paracetamol, to help with any pain. If you have any pain or discomfort that doesn't go away, talk to your nurse or doctor.

Short-term bleeding

It's normal to see a small amount of blood in your urine or bowel movements for about two weeks. You may also notice blood in your semen for a couple of months – it might look red or dark brown. This is normal and should get better by itself. If it takes longer to clear up or gets worse, you should see a doctor straight away.

A small number of men who have a TRUS biopsy may have more serious bleeding in their urine or from their back passage (rectum). This can also happen if you have a transperineal biopsy but it isn't very common. If you have severe bleeding or are passing lots of blood clots, this is not normal. Contact your doctor or nurse at the hospital straight away, or go to the accident and emergency (A&E) department at the hospital.

Infection

Some men get an infection after their biopsy. This is more likely after a TRUS biopsy than after a transperineal biopsy. It's very important to take any antibiotics you might be given, as prescribed, to help prevent this. But you might still get an infection even if you take antibiotics.

Symptoms of a urine infection may include:

- pain or a burning feeling when you urinate
- dark or cloudy urine with a strong smell
- needing to wee more urgently than usual
- needing to urinate more often than usual during the day or night
- a high or very low temperature
- pain in your lower abdomen (stomach area) or in your back.

If you have any of these symptoms, contact your doctor or nurse at the hospital straight away. If you can't get in touch with them, call your GP.

Less than 1 in 100 men (one per cent) who have a TRUS biopsy get a more serious infection that requires going to hospital. If the infection spreads into your blood, it can be very serious. This is called sepsis.

Symptoms of sepsis may include:

- a high temperature (fever)
- chills and shivering
- blue, pale or blotchy skin, lips or tongue
- a fast heartbeat
- fast breathing or difficulty breathing
- confusion or changes in behaviour.

If you have symptoms of sepsis, go to your nearest hospital A&E department straight away.

Acute urine retention

A small number of men find they suddenly and painfully can't urinate after a biopsy – this is called acute urine retention. This happens because the biopsy can cause the prostate to swell, making it difficult to urinate. Acute urine retention may be more likely if you have a template biopsy. This is because more samples of tissue are taken, so there may be more swelling.

Your doctor will make sure you can urinate before you go home after your biopsy. If you can't urinate, you might need to have a catheter for a few days at home – this is a thin tube that's passed into your bladder to drain urine out of the body.

If you develop acute urine retention at home, contact your doctor or nurse at the hospital straight away, or go to your nearest A&E department. You might need a catheter for a few days.

Sexual problems

You can masturbate and have sex after a biopsy. If you have blood in your semen (see page 23), you might want to use a condom until the bleeding stops.

A small number of men have problems getting or keeping an erection (erectile dysfunction) after having a biopsy. This may happen if the nerves that control erections are damaged during the biopsy. It isn't very common and it should get better over time, usually within one to three months. Speak to your doctor or nurse if you're worried about this.



Blood scares me – I used coloured condoms so I didn't have to see the blood in my semen.

A personal experience

What do my biopsy results mean?

The biopsy samples will be looked at under a microscope to check for any cancer cells. Your doctor will be sent a report, called a pathology report, with the results. The results will show whether any cancer was found.

They may also show how many biopsy samples contained cancer and how much cancer was in each sample.

It usually takes up to two weeks to get the results of the biopsy, but it can take longer in some hospitals. Ask your doctor or nurse when you're likely to get your results. You might be sent a copy of the pathology report. And you can ask to see copies of letters between the hospital and your GP. If you have trouble understanding any of the information, ask your doctor or nurse to explain it, or speak to our Specialist Nurses on **0800 074 8383**.

If cancer is found

If cancer is found, this is likely to be a big shock, and you might not remember everything your doctor or nurse tells you. It can help to take a family member, partner or friend with you for support when you get the results. You could also ask them to make some notes during the appointment, or ask your doctor if you can record the appointment using your phone or another recording device. You have the right to record your appointment if you would like to because it's your personal data. But let your doctor or nurse know if and why you are recording them as not everyone is comfortable being recorded.

If you have any questions, or just want to talk things through, call our Specialist Nurses on **0800 074 8383**.

How likely is my prostate cancer to spread?

Your biopsy results will show how aggressive the cancer is – in other words, how likely it is to spread outside the prostate. You might hear this called your Gleason grade, Gleason score, or grade group.

Gleason grade

When prostate cells are seen under the microscope, they have different patterns, depending on how quickly they're likely to grow. The pattern is given a grade from 1 to 5 – this is called the Gleason grade. Grades 1 and 2 aren't included on pathology reports as they are similar to normal cells. If you have prostate cancer, you will have Gleason grades of 3, 4 or 5. The higher the grade, the more likely the cancer is to spread outside the prostate.

Gleason score

There may be more than one grade of cancer in the biopsy samples. Your overall Gleason score is worked out by adding together two Gleason grades:

Gleason score = the most common grade in all the samples + the highest other grade in the samples

For example, if the biopsy samples show that:

- most of the cancer seen is grade 3, and
- the highest grade of any other cancer seen is grade 4, then
- the Gleason score will be 7 (3 + 4).

If your Gleason score is made up of two of the same Gleason grades, such as 3+3, this means that no other Gleason grade was seen in the samples. If you have prostate cancer, your Gleason score will be between 6 (3 + 3) and 10 (5 + 5).

Grade group

Your doctor might also talk about your 'grade group'. This is a newer system for showing how aggressive your prostate cancer is likely to be. Your grade group will be a number between 1 and 5 (see table on page 28).

What does the Gleason score or grade group mean?

The higher your Gleason score or grade group, the more aggressive the cancer and the more likely it is to grow and spread. The table below describes the different Gleason scores and grade groups that can be given after a prostate biopsy. This is just a guide. Your doctor or nurse will talk you through what your results mean.

Grade group	Gleason score	Description
1	6 (3 + 3)	All of the cancer cells found in the biopsy look likely to grow very slowly, if at all.
2	7 (3 + 4)	Most of the cancer cells found in the biopsy look likely to grow very slowly, if at all. There are some cancer cells that look likely to grow at a moderate rate.
3	7 (4 + 3)	Most of the cancer cells found in the biopsy look likely to grow at a moderate rate. There are some cancer cells that look likely to grow slowly.

Grade group	Gleason score	Description
4	8 (3 + 5)	Most of the cancer cells found in the biopsy look likely to grow slowly. There are some cancer cells that look likely to grow quickly.
	8 (4 + 4)	All of the cancer cells found in the biopsy look likely to grow at a moderate rate.
	8 (5 + 3)	Most of the cancer cells found in the biopsy look likely to grow quickly. There are some cancer cells that look likely to grow slowly.
5	9 (4 + 5)	Most of the cancer cells found in the biopsy look likely to grow at a moderate rate. There are some cancer cells that are likely to grow quickly.
	9 (5 + 4)	Most of the cancer cells found in the biopsy look likely to grow quickly. There are some cancer cells that look likely to grow at a moderate rate.
	10 (5 + 5)	All of the cancer cells found in the biopsy look likely to grow quickly.

What type of prostate cancer do I have?

Your doctor will look at your biopsy results to see what type of prostate cancer you have. For most men who are diagnosed, the type of prostate cancer is called adenocarcinoma or acinar adenocarcinoma – you might see this written on your biopsy report. There are other types of prostate cancer that are very rare. If you're told you have a rare type of prostate cancer, read more on our website at **prostatecanceruk.org/rare** or speak to our Specialist Nurses on **0800 074 8383**.

If no cancer is found

If no cancer is found this is likely to be reassuring. However, this means 'no cancer has been found' rather than 'there is no cancer'. Sometimes, there could be some cancer that was missed by the biopsy needle.

Your doctor will look at your other test results and your risk of prostate cancer so that you can discuss what to do next. If they think you may have prostate cancer that hasn't been found, they might suggest having another PSA test, biopsy or an MRI scan (see page 10).

If they think you probably don't have prostate cancer, they may offer to monitor your prostate with regular PSA tests to see if there are any changes in the future.

What else might the biopsy results show?

Sometimes a biopsy may find other changes to your prostate cells, called prostate intraepithelial neoplasia (PIN) or atypical small acinar proliferation (ASAP).

PIN is changes to prostate cells, but is not the same as prostate cancer. ASAP is changes that might be prostate cancer, but it's not clear what they are or if they are cancerous. PIN and ASAP don't cause symptoms and you won't need treatment for them. But you may be more likely to get prostate cancer if you have PIN or ASAP, so you might need regular check-ups. You may also have another biopsy. Read more in our fact sheet, **Prostate biopsy results: PIN and ASAP**.

Scans to see if your cancer has spread

If you're diagnosed with prostate cancer, you might need scans to find out if it has spread outside the prostate and how far it has spread. This is called the stage of your cancer. The results should help you and your doctor decide which treatments might be suitable for you. Your doctor or nurse can tell you what scans you might need to have. You might not need a scan if your PSA is low and your previous results suggest that the cancer is unlikely to have spread.

MRI scan

If you had an MRI scan before your biopsy that showed your cancer hasn't spread outside the prostate, you may not need another MRI scan. But if your doctor thinks your cancer may have spread, or if you didn't have an MRI scan before your biopsy, you may have an MRI scan now. This will show whether the cancer has spread outside the prostate and where it has spread to. It will help your doctor to work out the most suitable treatment options for you.

If you've recently had a biopsy, you may need to wait at least six weeks before you have an MRI scan. This is because the biopsy can cause swelling and bleeding around the prostate, which could affect the scan results. For more information on MRI scans, see page 10.

CT scan

A CT (computerised tomography) scan can show whether the cancer has spread outside the prostate, for example to nearby lymph nodes or bones. Lymph nodes are part of your immune system and are found throughout your body. The lymph nodes near the prostate are a common place for prostate cancer to spread to. The scan results will help your doctor to work out the most suitable treatment options for you.

Your hospital might ask you not to eat or drink for a few hours before the scan. You'll need to take off any jewellery or metal items, as these can affect the images.

At your scan appointment, you'll be given a special dye to help the doctor see the prostate and other organs more clearly on the scan.

It's not radioactive. Most hospitals give you the dye as an injection. But some give the dye as a drink. The dye can give you a warm feeling and you might feel like you need to go to the toilet. Before your scan appointment, tell your doctor if:

- you already know you are allergic to the dye
- you have any other allergies
- you have kidney or thyroid problems
- you have asthma
- you have diabetes
- you are taking any medicines.

The CT scanner is shaped like a large doughnut. You will lie on a table which moves slowly through the hole in the middle of the scanner. The radiographer will leave the room but you'll be able to speak to them through an intercom, and they can see you at all times. You will need to keep still, and you might be asked to hold your breath for short periods. The scan will take up to 20 minutes.

Bone scan

A bone scan can show whether any cancer cells have spread to your bones, which is a common place for prostate cancer to spread to. Tell your doctor or nurse if you have arthritis or have ever had any broken bones or surgery on any bones, as these will also show up on the scan.

You might be asked to drink plenty of fluids before and after the scan. A small amount of dye is injected into a vein in your arm and travels around your body. If there is any cancer in the bones, the dye will collect in these areas and show up on the scan. It takes two to four hours for the dye to travel around your body and collect in your bones so you'll need to wait a while before you have the scan.

You will lie on a table while the scanner moves very slowly down your body taking pictures. This takes around 30 minutes.

The doctor will look at the scan images to see if there is any cancer in your bones. Areas where dye has collected may be cancer – these are sometimes called 'hot spots'. You may need to have X-rays of any 'hot spots' to check if they are cancer. If it's still not clear, you may need an MRI scan or, very occasionally, a bone biopsy.

The dye used for a bone scan is safe but it is radioactive. So you should try to avoid close contact with children and pregnant women for 24 hours after the scan. And make sure you close the lid and flush straight away after using the toilet for 24 hours after the scan.

PET scan

You may be offered a PET (positron emission tomography) scan – either a choline PET or a PSMA PET. The scan will check if cancer has spread to the bones, lymph nodes and other tissues. But it's normally used to see if your cancer has come back after treatment, rather than when you are first diagnosed.

What do my scan results mean?

Your doctor or nurse will tell you how long it will take for the results of all the tests to come back. It's usually around two weeks.

Staging

Your doctor will use your scan results to work out the stage of your cancer – in other words, how far it has spread. This is usually recorded using the TNM (Tumour-Nodes-Metastases) system.

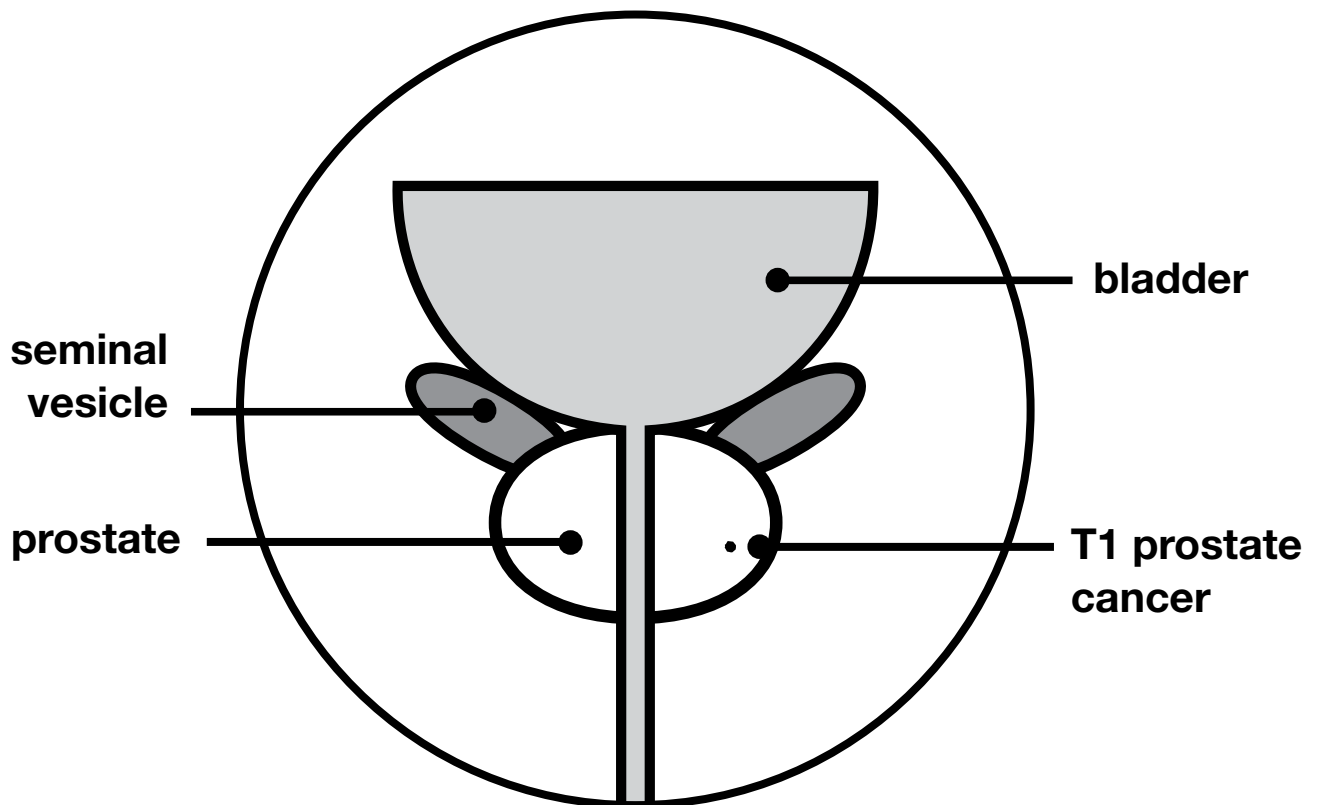
- The T stage shows how far the cancer has spread in and around the prostate.
- The N stage shows whether the cancer has spread to the lymph nodes.
- The M stage shows whether the cancer has spread (metastasised) to other parts of the body.

T stage

The T stage shows how far the cancer has spread in and around the prostate. A DRE or MRI scan is usually used to find out the T stage, and sometimes a CT scan. The following diagrams show the different T stages.

T1 prostate cancer

The cancer can't be felt during a DRE or seen on scans, and can only be seen under a microscope.



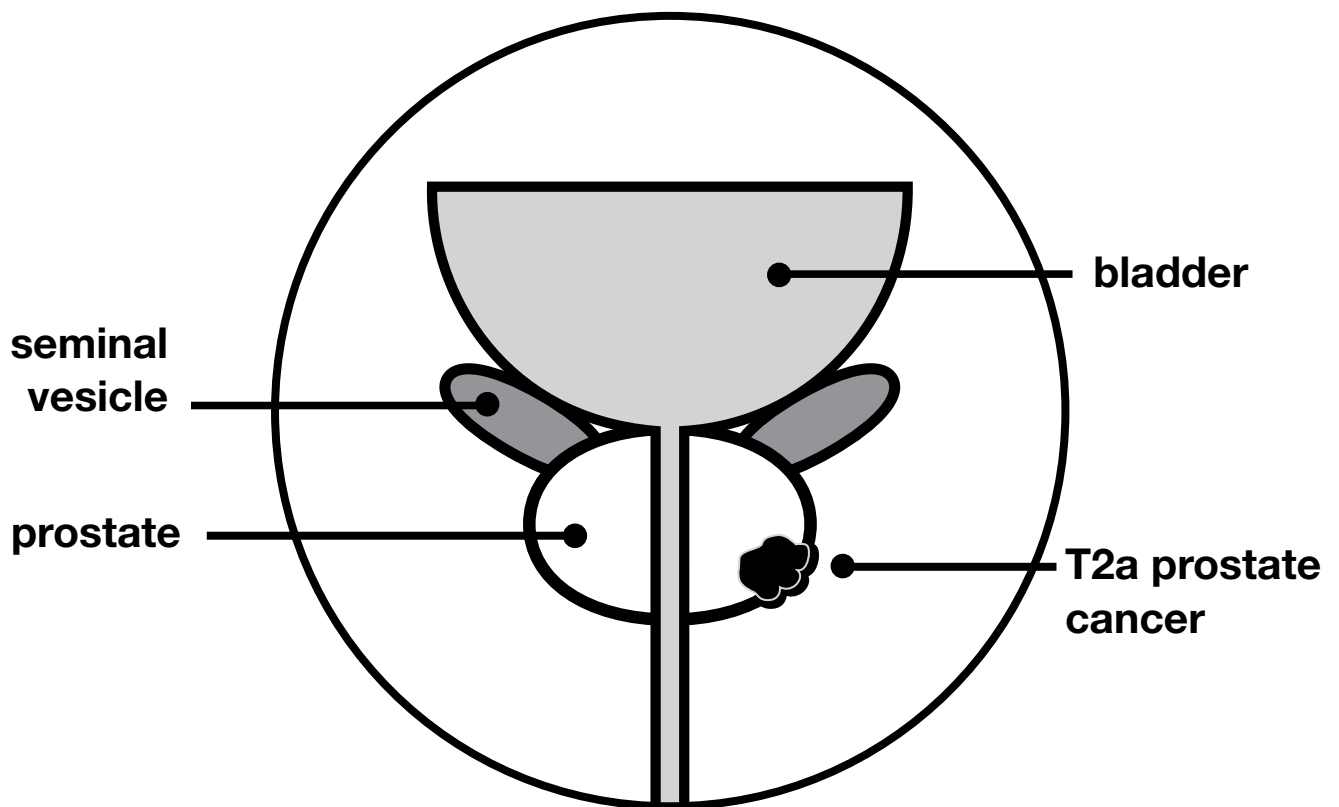
T2 prostate cancer

The cancer can be felt during a DRE or seen on scans, but is still contained inside the prostate.

T2a The cancer is in half of one side (lobe) of the prostate, or less.

T2b The cancer is in more than half of one of the lobes, but not in both lobes of the prostate.

T2c The cancer is in both lobes but is still inside the prostate.

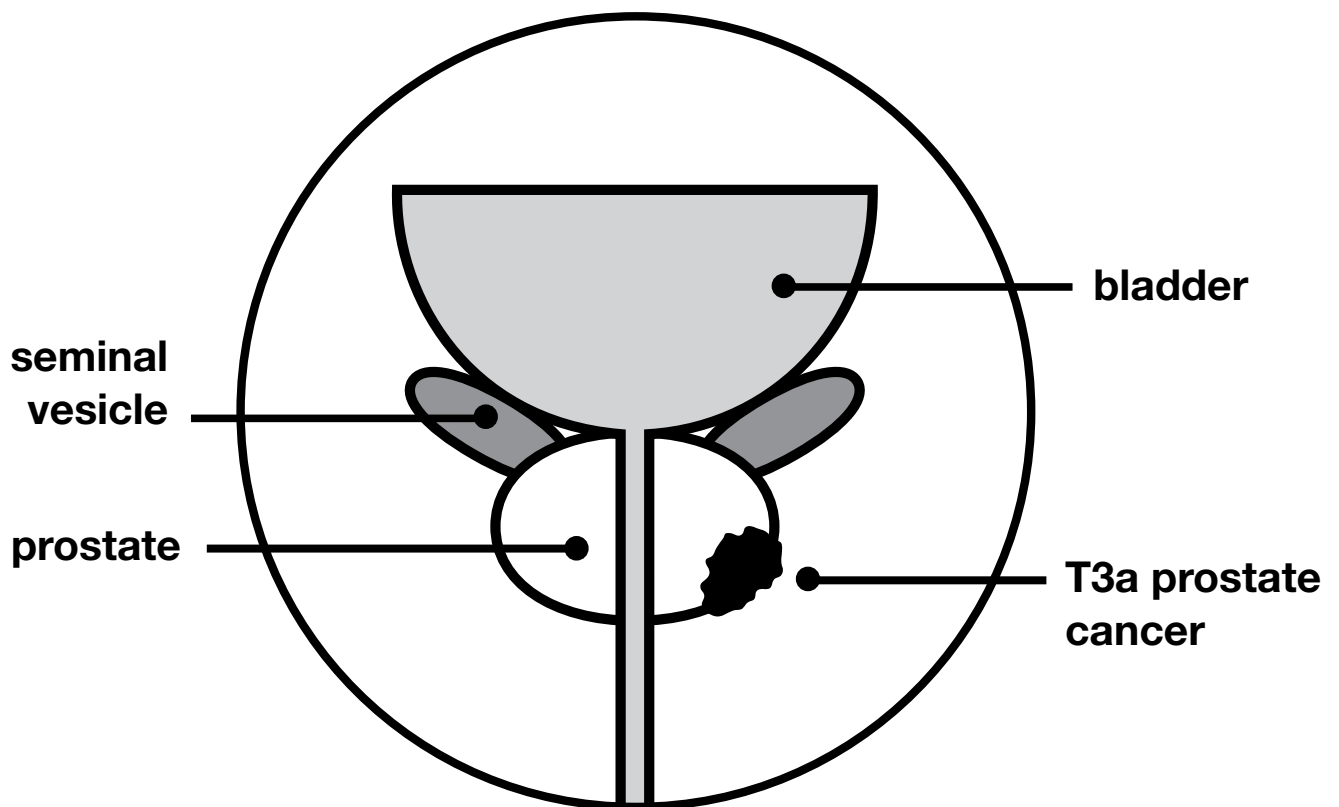


T3 prostate cancer

The cancer can be felt during a DRE or seen breaking through the outer layer (capsule) of the prostate.

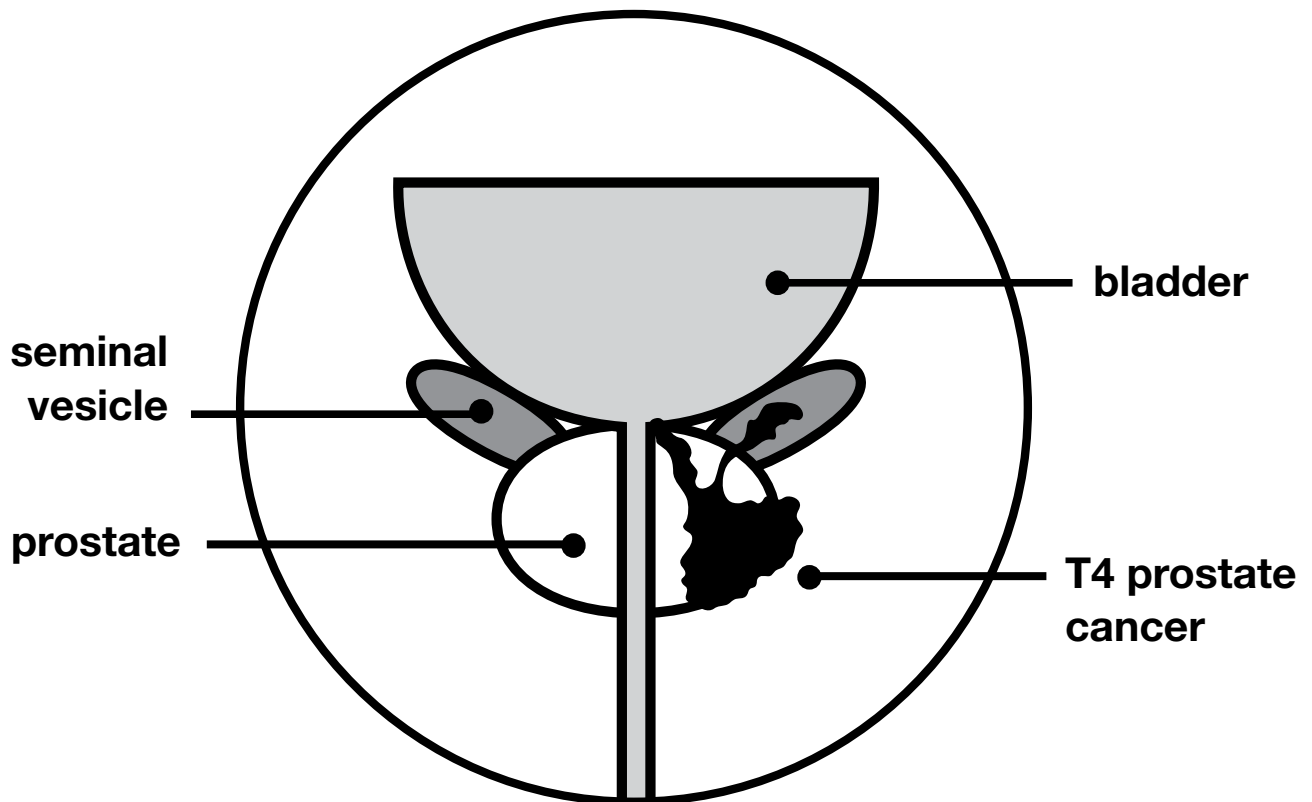
T3a The cancer has broken through the outer layer of the prostate, but has not spread to the seminal vesicles (which produce and store some of the fluid in semen).

T3b The cancer has spread to the seminal vesicles.



T4 prostate cancer

The cancer has spread to nearby organs, such as the bladder, back passage or pelvic wall.



N stage

The N stage shows if the cancer has spread to the lymph nodes near the prostate. Lymph nodes are part of your immune system and are found throughout your body. The lymph nodes near the prostate are a common place for prostate cancer to spread to. An MRI or CT scan is used to find out your N stage.

The possible N stages are:

- NX** The lymph nodes were not looked at, or the scans were unclear.
- N0** No cancer can be seen in the lymph nodes.
- N1** The lymph nodes contain cancer.

If your scans suggest that your cancer has spread to the lymph nodes (N1), you will be diagnosed with either cancer that has spread just outside of the prostate (locally advanced) or cancer that has spread to other parts of the body (advanced prostate cancer). This will depend on the M stage of the cancer (see below).

M stage

The M stage shows whether the cancer has spread (metastasised) to other parts of the body, such as the bones. A bone scan (see page 33) or MRI scan is usually used to find out your M stage. Your doctor may offer you a scan if they think your cancer may have spread. You might not need a scan if the result is unlikely to affect your treatment options.

The possible M stages are:

- MX** The spread of the cancer wasn't looked at, or the scans were unclear.
- M0** The cancer hasn't spread to other parts of the body.
- M1** The cancer has spread to other parts of the body.

If a scan shows your cancer has spread to other parts of your body (M1), you will be diagnosed with advanced prostate cancer.

M1 is split into M1a, M1b and M1c:

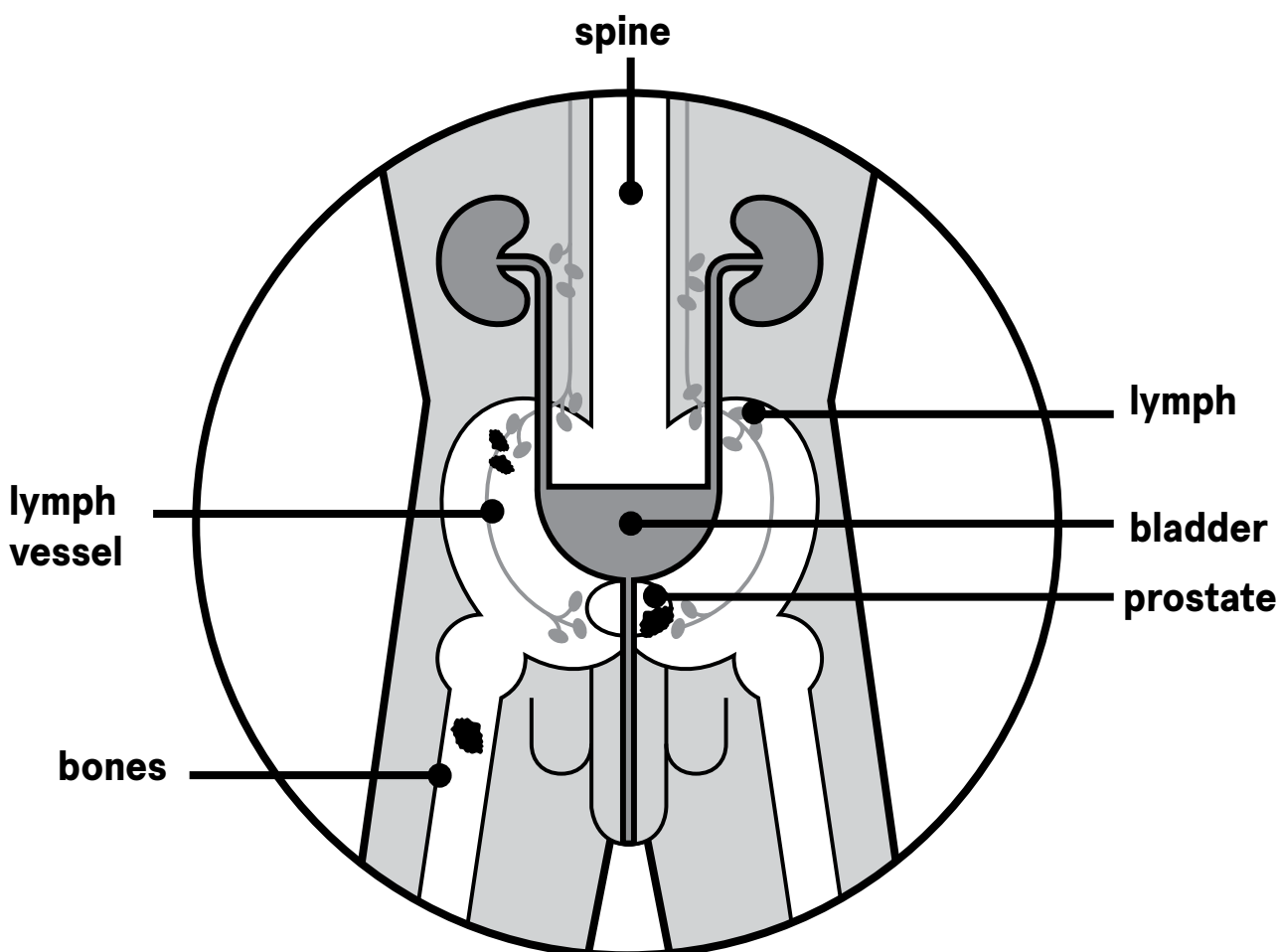
- M1a** The cancer has spread to lymph nodes outside of the pelvis.
- M1b** The cancer has spread to the bone.
- M1c** The cancer has spread to other parts of the body, such as the liver or lungs.

For example, if your cancer is described as T2, N0, M0, it is likely that your cancer:

- is completely contained inside the prostate
- has not spread to your lymph nodes
- has not spread to other parts of your body.

Where can prostate cancer spread to?

Prostate cancer cells can move from the prostate to other parts of the body through the blood stream. Or they can spread to the lymph nodes near the prostate and then travel through the lymph vessels to other parts of your body.



What does my stage mean?

Your TNM stage is used to work out if your cancer is localised, locally advanced or advanced.

Stage	Description	T stage	N stage	M stage
Localised	Cancer that's contained inside the prostate. Sometimes called early prostate cancer.	T1 or T2	N0 or NX	M0 or MX
Locally advanced	Cancer that's started to break out of the prostate, or has spread just outside it.	T1 or T2	N1	M0
		T3 or T4	N0 or N1	M0
Advanced	Cancer that's spread from the prostate to other parts of the body. Also known as metastatic prostate cancer.	Any T stage	Any N stage	M1

Cambridge Prognostic Group (CPG)

If you have localised or locally advanced prostate cancer, your doctor may talk to you about the risk of your cancer spreading outside the prostate. To work out your risk, your doctor will look at your PSA level, your Gleason score (or grade group) and the T stage of your cancer. These three factors will place you in one of five categories that form the Cambridge Prognostic Group (CPG). This system is used to help your doctor decide which treatment options are suitable for you, based on your risk.

The five CPG categories are described below. If you have any questions about your CPG, speak to your doctor or specialist nurse.

CPG 1

- Gleason score 6 (grade group 1), **and**
- PSA less than 10 ng/ml, **and**
- T stage of 1 or 2.

This means your cancer is likely to grow very slowly and very unlikely to spread. Your treatment options may include active surveillance, surgery and radiotherapy.

CPG 2

You will be in this group if you have a T stage of 1 or 2 and **one** of the following:

- Gleason score is $3 + 4 = 7$ (grade group 2), **or**
- PSA 10 to 20 ng/ml.

This means your cancer is likely to grow slowly and unlikely to spread. Your treatment options may include active surveillance, surgery or radiotherapy with hormone therapy.

CPG 3

- Gleason score 3 + 4 = 7 (grade group 2), **and**
- PSA 10 to 20 ng/ml, **and**
- T stage of 1 or 2.

You will also be in this group if you have:

- Gleason 4 + 3 = 7 (grade group 3), **and**
- T stage of 1 or 2.

This means there is a medium (intermediate) risk of your cancer growing and spreading out of your prostate. Your treatment options may include surgery or radiotherapy with hormone therapy. You may also have active surveillance if you don't want treatment straight away or can't have treatment.

CPG 4

You will be in this group if you have only **one** of the following:

- Gleason score 8 (grade group 4), **or**
- PSA more than 20 ng/ml, **or**
- T stage 3.

This means that there is a high risk of your cancer growing quickly and spreading out of your prostate. Treatment options may include surgery or radiotherapy with hormone therapy.

CPG 5

You will be in this group if you have **two or more** of the following:

- Gleason score 8 (grade group 4), **and**
- PSA more than 20 ng/ml, **and**
- T stage 3.

You will also be in this group if you have **one** of the following:

- Gleason score 9 to 10 (grade group 5), **or**
- T stage 4.

This means that there is a high risk of your cancer growing quickly and it's very likely to spread. Treatment options may include surgery and radiotherapy with hormone therapy.

Your doctor will talk all this through with you for your own specific test results.

What happens next?

Your doctor will look at your test results with a team of health professionals. You might hear this called your multi-disciplinary team (MDT). Based on your results, you and your doctor will talk about the next best step for you. Your treatment options will depend on the stage of your cancer.

- If you have localised prostate cancer, you might be able to have your cancer monitored with regular check-ups or have treatment to get rid of the cancer.
- If you have locally advanced prostate cancer, you might have treatment to get rid of the cancer or to keep it under control.
- If you have advanced prostate cancer, treatment will aim to help keep it under control.

Speak to your doctor or nurse about the treatments that may be suitable for you. Ask them about anything that isn't clear. You might find it helps to write down what's said to help you remember it, or you could ask your doctor if you can record your appointment.

A clinical nurse specialist (CNS) may be in the room when you get your test results. Even if a CNS is not present during that appointment, you should be given their name and telephone number so that you can get in touch if you have any questions afterwards. Our Specialist Nurses can also help answer any questions.

If you're not sure you've been offered the right treatment for you, you can ask for a second opinion from a different doctor. You don't have a legal right to a second opinion, but most doctors will be happy for you to have one and will refer you to a different doctor.

You can read more in our fact sheets, **Localised prostate cancer**, **Locally advanced prostate cancer** and **Advanced prostate cancer**, and in our booklet, **Prostate cancer: A guide if you've just been diagnosed**.

Watch our video

You might find it helpful to watch our video, **Understanding your prostate cancer**. It explains what prostate cancer is and what your diagnosis might mean. Watch it online at **prostatecanceruk.org/just-diagnosed-video**

Dealing with prostate cancer

Being diagnosed with prostate cancer can change the way you think and feel about life. It's normal to feel scared, worried, stressed, helpless or angry. Lots of men with prostate cancer get these kinds of thoughts and feelings. But there's no 'right' way to feel and everyone reacts in their own way.

Finding out about things you can do to help yourself can help you to feel more in control. Families can also find this a difficult time and they may need support and information too. They may want to read our booklet, **When you're close to someone with prostate cancer: A guide for partners and family.**

How can I help myself?

- **Look into your treatment options.** Ask your nurse or doctor about any side effects so you know what to expect and how to manage them.
- **Talk to someone.** Share what you're thinking – find someone you can talk to. It could be someone close to you, someone who's been through prostate cancer themselves or someone trained to listen, like a counsellor or your doctor or nurse.
- **Set yourself goals and things to look forward to.** Even if they're just for the next few weeks or months.
- **Look after yourself.** Take time out to look after yourself. When you feel up to it, learn some techniques to manage stress and to relax – like breathing exercises or listening to music. If you're having difficulty sleeping, talk to your doctor or nurse.

- **Eat healthily.** It's good for your general health and can help you stay a healthy weight, which may be important for men with prostate cancer. Read our fact sheet, **Diet and physical activity for men with prostate cancer.**
- **Be as active as you can.** It can also help with some side effects of treatment. Take things at your own pace and don't overdo it. Read more in our fact sheet, **Diet and physical activity for men with prostate cancer.**

Visit prostatecanceruk.org/living for more ideas, or read our booklet, **Living with and after prostate cancer: A guide to physical, emotional and practical issues.** You could also contact Macmillan Cancer Support, Maggie's, Penny Brohn UK or your nearest cancer support centre.

Who else can help?

Your medical team

It may help to speak to someone in your medical team. They can explain your diagnosis, treatment and side effects, listen to your concerns, and put you in touch with other people who can help.

Trained counsellors

Counsellors are trained to listen and can help you find your own ways to deal with things. Many hospitals have counsellors or psychologists who specialise in helping people with cancer – ask your doctor or nurse if this is available. You can also refer yourself for counselling on the NHS website, or you could see a private counsellor. To find out more, visit www.nhs.uk/counselling or contact the British Association for Counselling & Psychotherapy.

Support groups

People affected by prostate cancer get together to share their experiences of living with it. Some groups also hold meetings online. You can ask questions, share worries and know that someone understands what you're going through. Some groups have been set up by health professionals, others by men themselves. Many also welcome partners, friends and relatives. To find your local support group, please visit **www.tackleprostate.org/supportgroups**

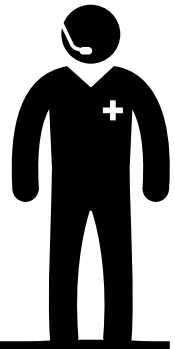
Prostate Cancer UK services

We have a range of services to help you deal with problems caused by prostate cancer or its treatments, including:

- **our Specialist Nurses**, who can help with any questions in confidence
- **our one-to-one peer support service**, where you can speak to someone who understands what you're going through
- **our online community**, a place to ask questions or share experiences
- **our sexual support service**, delivered over the phone by a Specialist Nurse with a particular interest in sexual problems
- **our fatigue support**, speak to our Specialist Nurses about ways to help manage your fatigue.

To find out more about any of our services, visit **prostatecanceruk.org/get-support** or call our Specialist Nurses on **0800 074 8383**.

Questions to ask your doctor or nurse



You may find it helpful to keep a note of any questions you have to take to your next appointment.

What are the advantages and disadvantages of having a PSA test?

What is my PSA level?

Will I have an MRI scan?

Will I need a biopsy? What type of biopsy will I have?

What are the risks and side effects of having a biopsy?

What are my Gleason grades, Gleason score and grade group?
What do they mean?

Will I need a full-body MRI, CT or bone scan?
When will I have these scans?

What is the stage of my cancer? What does this mean?

What is the risk of my cancer spreading?

What CPG risk category am I in?

What treatments are suitable for me?

Who is my key nurse and how do I contact them?

More information

British Association for Counselling & Psychotherapy

www.bacp.co.uk

Telephone: 01455 883 300

Information about counselling and details of therapists in your area.

Cancer Research UK

www.cancerresearchuk.org

Telephone: 0808 800 4040

Information about prostate cancer and clinical trials.

Healthtalk.org

www.healthtalk.org

Watch, listen to or read experiences of men with prostate cancer and other health problems.

Macmillan Cancer Support

www.macmillan.org.uk

Telephone: 0808 808 0000

Practical, financial and emotional support for people with cancer, their family and friends.

Maggie's

www.maggies.org

Telephone: 0300 123 1801

Drop-in centres for cancer information and support, and online support groups.

National Association for People Abused in Childhood (NAPAC)

www.napac.org.uk

Telephone: 0808 801 0331

Information and support for adult survivors of childhood abuse, including physical, sexual and emotional abuse and neglect.

Penny Brohn UK

www.pennybrohn.org.uk

Telephone: 0303 3000 118

Courses and physical, emotional and spiritual support for people with cancer and their loved ones.

SurvivorsUK

www.survivorsuk.org

Telephone: 0203 598 3898

Information and support for men who have experienced sexual abuse.

About us

We're Prostate Cancer UK. We're striving for a world where no man dies from prostate cancer.

We work to give everyone the power to navigate prostate cancer, by providing up-to-date, unbiased and accurate information about prostate diseases. But we're not here to replace your doctor. Always get advice from a healthcare professional to help you make decisions that are right for you.

References to sources of information used in the production of this fact sheet are available at **prostatecanceruk.org**

This publication has been reviewed for accuracy and updated by:

- Our Specialist Nurses
- Our volunteers.

Tell us what you think

If you have any comments about our publications, you can email:
yourfeedback@prostatecanceruk.org

Donate today – help others like you

Every year over 52,000 men get the life-changing news that they have prostate cancer. But thanks to our generous supporters, we're there to help men when they need us most. Whether that's providing unbiased, accurate information that's free to all, just like this fact sheet, or offering a range of other support services like our Specialist Nurses helpline for men and their families.

So, did this fact sheet help you? Do you want more men to get support just like this? Your donation can make this happen:

- £10 could fund a call with one of our Specialist Nurses, who support men and those who love them with free, unbiased, confidential help and information.
- £20 could give 40 men vital information about their prostate and their risk of prostate cancer with our handy Know your prostate: a quick guide.

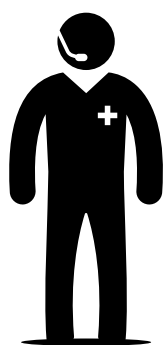
And there are so many other ways to support us too.

From running, rowing and facial hair growing, to volunteering and campaigning for change. Head to **prostatecanceruk.org/get-involved**

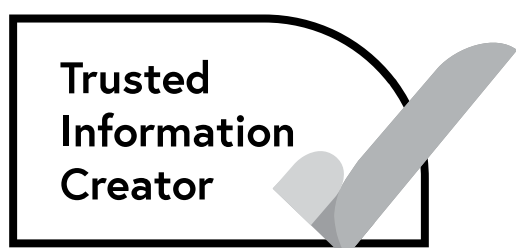
† You can donate up to £10 via SMS and we will receive 100% of your donation. Texts are charged at your standard rate. For full terms and conditions and more information, please visit **prostatecanceruk.org/terms**



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REGULATOR**



**Chat to one of our
Specialist Nurses
0800 074 8383*
prostatecanceruk.org**



Patient Information Forum

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This publication is in Large Print, text size 16.

**Call our Specialist Nurses from Monday to Friday 9am - 5pm,
Wednesday 10am - 5pm**

* Calls are recorded for training purposes only.

Confidentiality is maintained between callers and Prostate Cancer UK.

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