How prostate cancer is diagnosed

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This fact sheet is for men who want 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.

**Why might I have tests?**

Tests will aim to find out whether you might have prostate cancer or another prostate problem. Your GP might suggest having tests if you have symptoms of a prostate problem. Prostate problems can cause urinary symptoms, such as needing to rush to the toilet or needing to go more often than normal.

Urinary symptoms are usually caused by problems that aren’t cancer, such as an enlarged prostate or a urine infection.

Most men with early prostate cancer don’t have any symptoms. Prostate cancer that has spread to other parts of the body can cause weight loss and pain in the back, hips or pelvis. But these symptoms are often caused by other problems.
It’s a good idea to get any symptoms checked out by your GP. They will want to make sure you get the right diagnosis so you can get the right treatment.

You may also 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 aged 50 or over, you’re Black, or your father or brother has had 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.*

**How is prostate cancer diagnosed?**

There is no single test to diagnose prostate cancer. There are a few tests that your GP can do to find out if you have a prostate problem. The main tests include:
- a urine test to rule out a urine infection
- a prostate specific antigen (PSA) blood test
- a digital rectal examination (DRE).

Before you have these tests, your GP should explain what they involve and talk you through the advantages and disadvantages. 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’ve got all the information you need, and give yourself time to think it through.
After you’ve had the tests, your GP will talk through the results with you. If they think you may have a prostate problem, they’ll make an appointment for you to see a specialist at a hospital.

You might have further tests at the hospital. These may include:
- another PSA test
- another DRE
- a prostate biopsy
- an MRI (magnetic resonance imaging) scan
- a CT (computerised tomography) scan
- a bone scan – with or without X-rays
- an ultrasound scan
- a urine flow test.

You can read more about all these tests in this fact sheet. If you’re worried about these tests or would like more information, speak to your doctor or nurse. Or you can speak to our Specialist Nurses on 0800 074 8383.

What tests are done at the GP surgery?

Prostate specific antigen (PSA) test

This is a blood 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 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 – including a urine infection, an enlarged prostate, ejaculating recently or vigorous exercise, especially cycling. So a raised PSA doesn’t necessarily mean you have prostate cancer.

There are advantages and disadvantages to having a PSA test. Your GP should explain these to you and discuss any questions you may have before you decide whether to have it.

You have the right to a PSA test if you’re over 50 and you’ve talked through the advantages and disadvantages with your GP or practice nurse. If you’re over 45 and have a higher risk of prostate cancer, for example if you’re Black or you have a family history of it, you might want to talk to your GP about having a PSA test.

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

**Getting the results**

It can take one to two weeks to get the PSA test results.

Your GP will look at your PSA test result together with your other test results and your risk of prostate cancer (see page 3). They might decide you need to see a specialist at the hospital. Or they might suggest having another PSA test in the future to see if your PSA level changes.
Digital rectal examination (DRE)

This is where your doctor or nurse 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 or nurse 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. 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 and lumpy** – this could be a sign of prostate cancer.
The digital rectal examination

The diagram above shows that the GP will feel the prostate through the wall of the rectum (back passage) when they do a digital rectal examination (DRE).

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

If you have a DRE, your doctor or nurse might suggest waiting a week before having a PSA test. This is because having a DRE just before a PSA test could slightly raise your PSA level.
When I had the DRE I thought, ‘For a few seconds of discomfort, I can live with it’. Yeah it’s uncomfortable, but it could save your life.

Personal experience

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’ll make an appointment for 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.

I found it very helpful talking to an experienced Prostate Cancer UK nurse over the phone.

Personal experience

What tests are done at the hospital?

At the hospital you will see a specialist, who will usually be a urologist or 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 a prostate biopsy. 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. So you might not need a biopsy. Instead, you may have a scan to show if there is cancer and see how far it has spread.

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.*

**Having a prostate biopsy**

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

In some hospitals you might have an MRI (magnetic resonance imaging) scan before a biopsy. This can help your doctor see if there is any cancer in your prostate and where it might be.

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 before you decide whether to have a biopsy.
What are the advantages and disadvantages of having a biopsy?

Advantages
• It’s the most accurate way of finding out whether you have prostate cancer.
• 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.

Disadvantages
• The biopsy can only show whether there was cancer in the samples taken, so it’s possible that cancer might be missed.
• It can pick up a slow growing or nonaggressive cancer that might not cause any symptoms or problems in your lifetime.
• You’d then have to decide whether to have treatment or whether to have your cancer monitored. Treatment can cause side effects that can be hard to live with. But having your cancer monitored rather than having treatment might make you worry about your cancer.
• A biopsy has side effects and risks, including the risk of getting a serious infection (see page 15).
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 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.

You’ll be given some antibiotics to take before your biopsy, either as tablets or an injection, to help prevent infection. You will 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, nurse or radiologist will do the biopsy. A radiologist is someone who specialises in diagnosing and treating health problems using X-rays and scans. 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 template (transperineal) biopsy, where the needle goes through the skin between the testicles and the back passage.
What is a TRUS biopsy?

This is the most common type of biopsy in the UK. The doctor or nurse uses a thin needle to take small samples of tissue from the prostate. 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 (rectum), 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.

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 take 10 to 12 small pieces of tissue from different areas of the prostate.
The trans-rectal ultrasound guided biopsy

The diagram above shows that the doctor will put an ultrasound probe and needle into your back passage to take a biopsy.

The biopsy takes 10 to 15 minutes. After your biopsy, your doctor may ask you to wait until you’ve urinated before you go home.

It can take up to two weeks to get the results of the biopsy. Ask your doctor or nurse when you’re likely to get your results.
What are the side effects of a TRUS 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 will feel pain or discomfort in their back passage (rectum) for a few days or weeks afterwards. Each man is different and while some find the biopsy painful, others have only slight discomfort. Your nurse or doctor may suggest taking mild pain-relieving drugs, such as paracetamol, to help with any pain.

If you have any pain or discomfort after the biopsy that doesn’t go away, talk to your nurse or doctor.

If you are a man who has sex with men, wait until any pain or discomfort from your biopsy has settled before receiving anal sex. Ask your doctor or nurse at the hospital for further advice.

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 (fewer than 1 in 100) may have more serious bleeding in their urine or from their back passage (rectum). 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. It’s very important to take all of the antibiotics you’re 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 urinate more often than usual
- pain in your lower abdomen (stomach area).

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, contact your GP.

Around 3 in 100 men (three per cent) get a more serious infection that requires going to hospital. If the infection spreads into the blood stream, it can be very serious. This is called sepsis.

Symptoms of sepsis may include:
- a high temperature (fever)
- chills and shivering
- a fast heartbeat
- fast 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 (fewer than 1 in 50) find they suddenly and painfully can’t urinate after a biopsy – this is called acute urine retention. This happens because the biopsy can sometimes cause the prostate to swell, which can make it difficult to urinate.

If this happens when you’re 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 – this is a thin tube that’s passed into your bladder to drain urine out of the body.

**Sexual problems**
You can masturbate and have sex after a biopsy. If you have blood in your semen (see page 14), 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 isn’t very common and it should get better over time, usually within two months. Speak to your doctor or nurse if you’re worried about this.

**What is a template (transperineal) biopsy?**
This is where the doctor or nurse inserts the biopsy needle into the prostate through the skin between the testicles and the back passage (perineum). The needle is inserted through a grid (template).
It takes more tissue samples from more areas of the prostate than a TRUS biopsy. The number of samples taken will vary but can be around 30 to 50 from different areas of the prostate. This could mean that there is more chance of finding prostate cancer cells, if you have any.

You might have a template biopsy if other health problems mean you can’t have a TRUS biopsy. You may also have a template biopsy if no cancer was found with a TRUS biopsy but your doctor still thinks there might be cancer. In some hospitals you will be offered a template biopsy rather than a TRUS biopsy.

This biopsy is normally done under general anaesthetic, so you will be asleep and won’t feel anything. If you aren’t able to have a general anaesthetic for health reasons, you may be able to have a spinal (epidural) anaesthetic so that you can’t feel anything in your lower body.

The doctor or nurse 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. The doctor or nurse will place a grid (template) over the area of skin between the testicles and the back passage. They will insert the needle through the holes in the grid, into the prostate.

The template biopsy will take about 20 to 40 minutes. You will need to wait a few hours to recover from the anaesthetic before going home. And you will need to get someone to take you home.
**What are the side effects of a template biopsy?**

The side effects of a transperineal biopsy are similar to those of a TRUS biopsy (see page 14). But you’re less likely to get a serious infection after a template biopsy – this is because the needles go through the skin, rather than the back passage.

You’re more likely to have difficulty urinating (urine retention) after a template biopsy than after a TRUS biopsy. This is because more samples of tissue are taken, so there may be more swelling. Your doctor will make sure you’re able to urinate before you go home. If you can’t urinate, you might need to have a catheter for a few days at home.

You may also have some bruising and discomfort in the area where the needle was inserted for a few days afterwards.

You might have some side effects from the anaesthetic. Your doctor or nurse will explain the possible side effects before you have your biopsy.

**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.
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 to explain it or speak to our Specialist Nurses on 0800 074 8383.

I asked to see the letters from the hospital to my GP. It helped me remember the different tests and discussions that I’d had.

Personal experience

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.

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 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 are not cancer, and grades 3, 4 and 5 are cancer. If you have cancer, 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. An overall Gleason score is worked out by adding together two Gleason grades.

The first is the most common grade in all the samples. The second is the highest grade of what’s left. When these two grades are added together, the total is called the Gleason score.

\[
\text{Gleason score} = \text{the most common grade} + \text{the highest other grade in the samples}
\]

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 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 new 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 below).

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 outside the prostate. 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.

<table>
<thead>
<tr>
<th>Gleason score</th>
<th>Description</th>
<th>Grade group</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 (3 + 3)</td>
<td>All of the cancer cells found in the biopsy look likely to grow slowly.</td>
<td>1</td>
</tr>
<tr>
<td>7 (3 + 4)</td>
<td>Most of the cancer cells found in the biopsy look likely to grow slowly. There are some cancer cells that look likely to grow at a moderate rate.</td>
<td>2</td>
</tr>
<tr>
<td>7 (4 + 3)</td>
<td>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.</td>
<td>3</td>
</tr>
<tr>
<td>Gleason score</td>
<td>Description</td>
<td>Grade group</td>
</tr>
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</tr>
<tr>
<td>8 (3 + 5)</td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>8 (4 + 4)</td>
<td>All of the cancer cells found in the biopsy look likely to grow at a moderate rate.</td>
<td>4</td>
</tr>
<tr>
<td>8 (5 + 3)</td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>9 (4 + 5)</td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>9 (5 + 4)</td>
<td>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.</td>
<td>5</td>
</tr>
<tr>
<td>10 (5 + 5)</td>
<td>All of the cancer cells found in the biopsy look likely to grow quickly.</td>
<td></td>
</tr>
</tbody>
</table>
I was shocked when I was diagnosed and couldn’t remember what the doctor said. Having a friend at the appointment was invaluable.

**Personal experience**

**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 your doctor thinks you may have prostate cancer that hasn’t been found, they might suggest having another biopsy (see page 9) or an MRI scan (see page 25).
If your doctor thinks 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 that are not cancerous. 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. Read more in our fact sheet, *Prostate biopsy results: PIN and ASAP*.

**Having an MRI, CT or bone scan**

If you’re diagnosed with prostate cancer, you might need scans to find out whether the cancer has spread outside the prostate and where it has spread to. 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 CT or bone scan if your PSA is low and your biopsy results suggest that the cancer is unlikely to have spread.
The doctor sat me down and said the biopsy results showed I did have prostate cancer. He had booked me an MRI scan to get a clearer picture.

Personal experience

MRI scan

An MRI (magnetic resonance imaging) scan creates a detailed picture of your prostate and the surrounding tissues.

In some hospitals you might have an MRI scan before your biopsy. If you’ve already had a biopsy, you may need to wait four to six weeks before you have an MRI scan. This is because the biopsy can affect the scan results.

You might have an MRI scan to find out if the cancer has spread. This will help your doctor to work out the most suitable treatment options for you.

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 implants that could be attracted to the magnet. 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.
You will lie very still on a table, which will move slowly into the scanner. MRI scanners are shaped like a doughnut or a long tunnel. If you don’t like closed or small spaces (claustrophobia), tell your radiographer (the person who takes the images).

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. Let them know if you know you’re allergic to the dye or have any other allergies.

The scan 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 might be able to listen to music through headphones.

**CT scan**

A CT (computerised tomography) scan can show whether the cancer has spread outside the prostate, for instance to the lymph nodes or nearby 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 let your doctor know if you already know you are allergic to the dye, you have any other allergies or you are taking the drug metformin for diabetes.

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 10 to 30 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 to the 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 radioactive 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 results of the scan to see whether there is any cancer in your bones. Areas where the 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 definitely cancer. If it’s still not clear, you may need an MRI scan. Occasionally, some men have a bone biopsy, but this isn’t very common.

The dye used for a bone scan is safe but it is radioactive. So you may be asked to avoid close contact with children and pregnant women for up to 24 hours after the scan.

**PET scan**

At some hospitals, you may be offered a PET (positron emission tomography) scan. This shows how well different parts of your body are working. It can be used to check if cancer has spread outside the prostate. It is 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 diagrams on the next pages 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.

The diagram above shows T1 stage prostate cancer. It shows that the cancer is very small, and the cancer is contained in the prostate.
T2 prostate cancer
The cancer can be felt during a DRE or seen on scans, but is still contained inside the prostate.

The diagram above shows T2 stage prostate cancer. It shows that the cancer is pressing on the edge of the prostate gland.
**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.

The diagram above shows T3a stage prostate cancer. It shows that the cancer is just breaking through the capsule of the prostate.
**T4 prostate cancer**
The cancer has spread to nearby organs, such as the bladder, back passage, pelvic wall or lymph nodes.

The diagram above shows T4 stage prostate cancer. The cancer is shown spreading out of the prostate gland into the seminal vesicles and neck of the bladder.

**N stage**
The N stage shows whether 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 locally advanced or advanced prostate cancer. This will depend on whether the cancer has spread to other parts of the body (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 is usually used to find out your M stage (see page 27). Your doctor may offer you a bone scan if they think your cancer may have spread. You might not need a bone 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 you have a bone scan and it shows your cancer has spread to other parts of your body (M1), you will be diagnosed with advanced prostate cancer.
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.

The diagram above shows that cancer can spread from the prostate to your lymph nodes, lymph vessels, and bones.
What does my stage mean?

Your TNM stage is used to work out if your cancer is localised, locally advanced or advanced (see table below).

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>T stage</th>
<th>N stage</th>
<th>M stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localised</td>
<td>Cancer that’s contained inside the prostate.</td>
<td>T1 or T2</td>
<td>N0 or NX</td>
<td>M0 or MX</td>
</tr>
<tr>
<td>Locally advanced</td>
<td>Cancer that’s started to break out of the prostate, or has spread to the area just outside it.</td>
<td>T1 or T2</td>
<td>N1</td>
<td>M0</td>
</tr>
<tr>
<td>T3 or T4</td>
<td>T0 or N0 or N1</td>
<td></td>
<td>M0</td>
<td></td>
</tr>
<tr>
<td>Advanced</td>
<td>Cancer that’s spread from the prostate to other parts of the body. Also known as metastatic prostate cancer.</td>
<td>Any T stage</td>
<td>Any N stage</td>
<td>M1</td>
</tr>
</tbody>
</table>

Other tests

Researchers are looking at other tests that might help to diagnose prostate cancer. These tests aren’t widely available and we need more research to find out how useful they are.
Free and total PSA test
This blood test measures the amount of two different types of PSA. It can help tell whether you have a high PSA level because of prostate cancer, or because of an enlarged prostate. But doctors don’t yet agree on what levels of the two different types of PSA show that a man has prostate cancer, so it’s not used that often. The test is only suitable if you have a PSA level between 4 and 10 ng/ml.

PCA3 test
This urine test measures the activity of a gene called PCA3, which is unusually active in prostate cancer cells. Your doctor or nurse will use a finger to massage your prostate through the wall of the back passage. They will then ask you to give a urine sample. Cells from the prostate pass into the urine where they can be looked at with a special test that looks at your genes. This test might be useful for monitoring men who’ve already had a biopsy, or it might help specialists decide which men should have a biopsy. At the moment the PCA3 test is only available in a few private hospitals and clinics, as we still need more research about how well it works.

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. You can also speak to our Specialist Nurses on 0800 074 8383 about your test results or treatment options.

If you’re unsure about your test results or the treatments offered to 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.

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
Personal experience

Dealing with prostate cancer

Some men say having tests for prostate cancer or being diagnosed with prostate cancer changes the way they think and feel about life. You might feel scared, worried, stressed, helpless or even angry.

At times, lots of men get these kinds of thoughts and feelings. But there’s no ‘right’ way that you’re supposed to feel and everyone reacts in their own way.

There are things you can do to help yourself and people who can help. Families can also find this a difficult time and they may need support too. This section might also be helpful for them.

How can I help myself?

Everyone has their own way of dealing with having tests or being diagnosed with prostate cancer, but you may find some of the following suggestions helpful.
Talk to someone
Share what you’re thinking – find someone you can talk to. It could be someone close or someone trained to listen, like a counsellor or your doctor or nurse. Your GP, nurse or other health professionals involved in your care should be able to answer any questions or concerns you might have.

Look into your treatment options
If you’ve been diagnosed with prostate cancer, find out about the different treatments that are available to you. Bring a list of questions to your doctor or nurse. And ask about any side effects so you know what to expect and how to manage them. This will help you decide what’s right for you.

Set yourself some goals
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.

Eat a healthy, balanced diet
Eating well is good for your general health. There is some evidence that certain foods may help slow down the growth of prostate cancer or lower the risk of it coming back after treatment. For more information, read our fact sheet, Diet and physical activity for men with prostate cancer.
Be as active as you can
Keeping active can improve your physical strength and fitness, and can lift your mood. Some research suggests that physical activity may help slow down the growth of prostate cancer. It can also help you stay a healthy weight, which may help to lower your risk of advanced prostate cancer. Even a small amount of physical activity can help. Take things at your own pace. For more information, read our fact sheet, Diet and physical activity for men with prostate cancer.

Get more ideas about how to look after yourself from Macmillan Cancer Support, Maggie’s Centres, Penny Brohn Cancer Care or your nearest cancer support centre. You can also find more ideas in our booklet, Living with and after prostate cancer: a guide to physical, emotional and practical issues.

Who else can help?
Your medical team
It may be useful to speak to your nurse, doctor, GP or someone else in your medical team. They can explain your tests, diagnosis, treatment and side effects, listen to your concerns, and put you in touch with other people who can help.

Our Specialist Nurses
Our Specialist Nurses can answer your questions and explain your tests, diagnosis and treatment options. They’ve got time to listen, in confidence, to any concerns you or those close to you have.
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 at the hospital if this is available. Your GP may also be able to refer you to a counsellor, or you can see a private counsellor. To find out more, contact the British Association for Counselling & Psychotherapy.

Our one-to-one support service
Our one-to-one support service is a chance to speak to someone who’s been there and understands what you’re going through. They can share their experiences and listen to yours. You can discuss whatever’s important to you. Our Specialist Nurses will try to match you with someone with similar experiences.

Our online community
Our free online community is a place to talk about whatever’s on your mind – your questions, your ups and your downs. Anyone can ask a question or share an experience.

Local support groups
At local support groups, men get together to share their experiences of living with prostate cancer. You can ask questions, share worries and know that someone understands what you’re going through. Some groups have been set up by local health professionals, others by men themselves. Many also welcome partners, friends and relatives.
To find out more about any of the above, visit prostatecanceruk.org/get-support or call our Specialist Nurses on 0800 074 8383.
Questions to ask your doctor or nurse

This is a page that you can fill in yourself. You can use this section with your doctor or nurse to record your test results and next appointments.

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

What is my PSA level?

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

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

Will I need an MRI, CT or bone scan? When will I have these scans?

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

What treatments are suitable for me?
Notes
Use this page to write your own notes.
More information

British Association for Counselling & Psychotherapy
www.itsgoodtotalk.org.uk
Telephone: 01455 883300
Information about counselling and details of therapists in your area.

Cancer Research UK
www.cancerresearchuk.org
Telephone: 0808 800 4040
Patient information from Cancer Research UK.

Healthtalk.org
www.healthtalk.org
Watch, listen to and read personal experiences of men with prostate cancer and other health problems.

Macmillan Cancer Support
www.macmillan.org.uk
Telephone: 0808 808 00 00
Practical, financial and emotional support for people with cancer, their family and friends.
Maggie’s Centres
www.maggiescentres.org
Telephone: 0300 123 1801
Drop-in centres for cancer information and support. Includes an online support group.

Penny Brohn Cancer Care
www.pennybrohncancercare.org
Telephone: 0845 123 23 10
Runs courses and offers physical, emotional and spiritual support for people with cancer and those close to them.
About us

Prostate Cancer UK fights to help more men survive prostate cancer and enjoy a better life.

This fact sheet is part of the Tool Kit. You can order more Tool Kit fact sheets, including an A-Z of medical words, which explains some of the words and phrases used in this fact sheet.

Download and order our free publications from our website at prostatecanceruk.org/publications or call us on 0800 074 8383.

At Prostate Cancer UK, we take great care to provide up-to-date, unbiased and accurate facts about prostate cancer. We hope these will add to the medical advice you have had and help you to make decisions. Our services are not intended to replace advice from your doctor.

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

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- Deborah Victor, Uro-Oncology Clinical Nurse Specialist, Royal Cornwall Hospitals NHS Trust
- Our Specialist Nurses
- Our Volunteers.
Donate today – help others like you

Did you find this information useful? Would you like to help others in your situation access the facts they need? Every year, 40,000 men face a prostate cancer diagnosis. Thanks to our generous supporters, we offer information free to all who need it. If you would like to help us continue this service, please consider making a donation. Your gift could fund the following services:

• £10 could buy a Tool Kit – a set of fact sheets, tailored to the needs of each man with vital information on diagnosis, treatment and lifestyle.

• £25 could give a man diagnosed with prostate cancer unlimited time to talk over treatment options with one of our Specialist Nurses.

To make a donation of any amount, please call us on 0800 082 1616, visit prostatecanceruk.org/donations or text PROSTATE to 70004†. There are many other ways to support us. For more details please visit 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