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Introduction
You have had a cystoscopy or other examination that has shown that you might have an abnormal area in your bladder. Your consultant has recommended a transurethral resection of your bladder to investigate and treat this abnormality. Bladder abnormalities may be due to infection, inflammation and sometimes tumours (see below).

This leaflet answers some of the questions you might have about this treatment. It explains the benefits, risks and alternatives to the procedure, as well as what you can expect when you come into hospital. If you have any questions please speak to your nurse, who will be happy to help you.

What is a bladder tumour?
A tumour is an abnormal growth of the body’s tissue cells and can be classified as benign (not cancer) or malignant (cancer).

What is bladder cancer?
The bladder is a hollow, muscular, balloon like organ. It is in your lower pelvis and connected to your kidneys by two tubes called ureters. Urine passes down these tubes and is collected and stored in the bladder. Urine is passed out of the bladder through a tube like structure called the urethra. In women this is a short tube which opens up in front of the vagina while in men it is much longer and passes through the prostate and penis.

Most cancers in the bladder start in this membrane layer and are called transitional bladder cancers. Other, rarer, types of bladder cancer are squamous cell cancer and adenocarcinoma. Squamous cell cancer starts from one of the types of cell in the bladder lining. Adenocarcinoma starts from glandular cells which produce mucus.

Some bladder cancers form warty outgrowths or mushroom-like growths on the inside lining of the bladder. These are called papillary cancers. They have a short stem attached to the lining of the bladder. Sometimes they go on to spread into the wall of the bladder.
If a bladder cancer only affects the inner lining of the bladder, it is known as a **superficial cancer**. If it has spread into the muscle wall of the bladder, it is called an **invasive cancer**.

Bladder cancer occurs most commonly in people between 50 and 70 years of age. It is the fourth most common cancer in men and eighth most common in women in the UK. You may also hear your cancer referred to as a neoplasm, growth, polyp or wart. If you are confused please feel free to ask a nurse or doctor to explain things to you.

**What are the symptoms of bladder cancer?**

The most common symptom of bladder cancer is blood in the urine (haematuria). You may also have similar symptoms to having a urine infection, for example pain when you pass urine and the urge to pass urine frequently.

The exact causes of bladder cancer are not known. However, you are more likely to develop bladder cancer if you:
• Have repeated bladder infections, for example cystitis.
• Smoke. Chemicals in tobacco enter the blood stream and are then filtered out by the kidneys. It is thought that these can cause damage to the bladder lining, which can lead to bladder cancer.
• Previously worked in the dye chemical or print industry. Certain chemicals that were used in these industries have been banned as they are now known to cause cancer.
• Have previously had bladder cancer.
• Develop a bladder infection called schistosomiasis, caused by a parasite in certain tropical countries.

What does transurethral resection of a bladder tumour (TURBT) mean?
A transurethral resection of a bladder tumour or TURBT is a surgical treatment for bladder tumours.

The tumour or tumours are cut away from the bladder wall, removed and then sent for examination. From this, your consultant will be able to find out whether the tumour cells are cancerous, and if they are, the grade and stage the cancer has reached (i.e. the severity of the cancer). You may need additional radiological tests (e.g. CT scan) for complete staging information.

This information can then be used to help decide any future treatment.

How can a TURBT help?
A TURBT is the standard treatment for bladder tumours.

Malignant tumours continue to grow unless they are removed. They can invade surrounding tissue and spread to other areas of the body causing further problems.
The aim and benefits of having the operation are:

• To obtain necessary information about your disease (e.g. to see if your tumour is cancerous or not).
• To enable accurate treatment to begin.
• To control the symptoms of your tumour such as the bleeding.

*It is not guaranteed that this operation alone will cure your cancer.*

**What are the risks of TURBT?**

Although serious complications are rare, every surgical procedure has risks. Your doctor or nurse will discuss the specific risks for this procedure with you in more detail before asking you to sign the consent form. It is common to experience discomfort and sensitivity and pass urine frequently a month or so after surgery while the bladder heals. This is normal.

**Risks include:**

• Infection
• Bleeding
• Damage to your bladder lining, such as a tear, which may need further treatment
• Difficulty in passing urine after your operation
• Complications from general/spinal anaesthetic, such as nausea
• Deep vein thrombosis—a blood clot, usually in the large veins in the legs. The stockings you are given will help to prevent this.

**Rare Complications:**

• Delayed bleeding which might require blood transfusion or further surgery to remove blood clots from the bladder.
• Damage to the ureters (drainage tubes from the kidneys) which may require further treatment.
• Injury to the urethra causing delayed scar formation and difficulty in passing urine.

• Perforation of the bladder which may need surgical repair through the abdomen (open surgery) or a temporary catheter.

• Death. It is important to be aware that although extremely rare, death is a potential risk if there are serious complications.

What are the risks of a general anaesthetic?

There are a number of factors that affect the chances of suffering complications from anaesthesia; these may include age, weight, smoking, lifestyle and the general state of your health. Your anaesthetist and/or your surgeon can provide further details.

The following information on risks is provided by the Royal College of Anaesthetists.

Very common (one in 10) and common (one in 100) side effects:
Feeling sick and vomiting after surgery, sore throat, dizziness, blurred vision, headache, itching, aches, pains, backache, pain during injection of drugs, bruising and soreness, confusion or memory loss.

Uncommon (one in 1000) side effects and complications:
Chest infection, bladder problems, muscle pains, slow breathing (depressed respiration), damage to the mouth, an existing medical condition getting worse, awareness (becoming conscious) during operation.

Rare (one in 10,000) or very rare (one in 100,000 or less) complications:
Damage to the eyes, serious allergy to drugs, nerve damage, death.

Death from anaesthesia is very rare, and is usually caused by a combination of four or five complications together. In the UK there are approximately about five deaths for every million anaesthetics.
What will happen if I choose not to have TURBT?
Surgery is usually recommended when it is felt this would be the best option for your particular case.

If you do not have the surgery:
• The tumour may continue to grow.
• The tumour may cause further bleeding and discomfort.
• We cannot fully assess what type of tumour you have. This may result in delays in future treatment.

It is important to understand that if you choose not to have the surgery this could have serious consequences for your health. If you decide not to have a TURBT, the doctor will talk to you about your options.

What alternatives are available?
There is no surgical alternative to TURBT. You may have heard of some medications which can be given into the bladder to control the tumours. However these medications are only given after a TURBT to either prevent the tumour coming back or to slow down its progression. Your surgeon will discuss answer all your questions re the surgery and consequences of not having the treatment.

Asking for your consent
If you decide to go ahead, you will be asked to sign a consent form to confirm that you agree to have the procedure and understand what it involves. It is your right to have a copy of this form.

How should I prepare for TURBT?
Before coming into hospital it is important that you:
• Maintain a good fluid intake
• Maintain your optimal general physical fitness
• Avoid constipation
Please remember to bring all the medicines that you are taking with you when you come into hospital. If you are taking aspirin, warfarin or clopidogrel, you may need to stop taking them for a short period.

**Please do not stop taking any medicine unless told to do so by your doctors. This will also be discussed with you during your pre-operative assessment visit which usually happens approximately two weeks before surgery.**

You will usually come into hospital on the morning of your surgery. Most patients can leave hospital within 48 hours of their procedure. Your consultant or registrar will see you before your operation to discuss the surgery and answer any questions that you may still have. You will not be able to eat or drink anything for six hours before your surgery. This is because you should not have food or drink in your stomach when you are given the anaesthetic. If you do, you are more likely to be sick while you are unconscious, which can lead to complications. The nursing staff will tell you when you will need to stop eating and drinking. You will receive an appointment to come to the pre-assessment clinic a few weeks prior to surgery where this will also be discussed with you. Before the operation you will be asked to put on a gown and some tight-fitting anti-thrombus stockings. These help to prevent blood clots from forming in your legs.

You will then be escorted to theatre by a member of the staff.

**What happens during a TURBT?**

When you are anaesthetised your doctor will place a slim fibre-optic telescope (cystoscope or resectoscope) up your urethra and into your bladder. This is a special tube that allows your doctor to see your bladder lining. The visible tumour(s) will be cut away from the lining of your bladder wall using instruments inserted down the channel of the resectoscope. This can cause some bleeding. Once a tumour has been removed, bleeding is prevented or reduced by using a mild electric current to cauterise (burn) the area where the tumour was.
When you wake up, you may have a tube (catheter) inserted into your bladder to allow your bladder to empty. Irrigating fluid may be needed to wash out blood and debris from the bladder. Occasionally the catheter needs to be kept in for several days if bleeding is persistent. It will be removed when your urine becomes rosé-coloured or clear, before you leave hospital.

Depending on the size of your tumour(s), the operation may take between 15 minutes and an hour. The tumour(s) will then be sent for microscopic examination. Once the operation is over, you will be taken to the recovery room to allow the anaesthetic to wear off. You will be taken back to your ward when you are fully awake and the nurses will encourage you to drink plenty of water. This helps flush your bladder.

**Will I need any further treatment?**

After your operation, usually later that day or the following day, a chemotherapy drug may be inserted through your catheter into your bladder. This is called mitomycin C. The drug coats the lining of your bladder to help destroy any remaining tumour cells. This treatment also helps to prevent the tumours growing back. The drug stays in your bladder for one hour. It is then drained out through the catheter. If your catheter has been removed you will pass out the drug in your urine as normal.

TURBT alone may not cure the tumour or growth. Sometimes further treatment by surgery, radiotherapy or chemotherapy may be needed. Your doctor or nurse will be able to give you more information about these options and mitomycin C.
What should I expect after TURBT?
You will usually be able to go home about 48 hours after your procedure. We advise you:

• Speak to your doctor about how much time you will need off work after your operation. This will depend on your recovery and the type of work that you do. Usually you will need to take about two weeks off, but if your job involves lifting or heavy work, you may need to take three to four weeks off work.

• Do not lift anything heavier than a small shopping bag for the first two weeks.

• Start gentle exercises about a week after your surgery, but please do not do anything too energetic, such as playing contact sports for a month.

• Do not drive until you feel comfortable and are able to perform an emergency stop. Please check with your insurance provider before starting to drive again.

• Avoid constipation.

What if I have problems at home?
Some people experience a mild burning sensation on passing urine after their surgery. This usually settles after a few days.

It is important to continue drinking sufficiently (one and a half litres a day) when you are at home. You should pass urine regularly to keep the bladder empty.

It is not unusual to see blood in your urine from time to time, for up to two weeks after surgery. This may become more obvious 10 to 14 days after surgery. This is because scabs may form during the healing process, detach and pass out in the urine.

If you notice your urine is blood stained, increase your fluid intake until the urine clears.
However, please contact your GP or go to your local Accident and emergency department (A&E) if you:

- Develop a temperature (over 100 °F/38 °C)
- Have pain and persistent burning when you pass urine
- Do not pass urine for eight hours (unless you are asleep)
- Pass large clots of blood or have persistent bleeding
- Develop abdominal pain

Your results

Your results should be available 10 to 14 days later. You will have an appointment in the follow-up clinic, where your doctor will be able to review your results and discuss your future care. Please make sure you have been given this appointment before you leave hospital after your operation.

The results from your TURBT will determine your future follow-up. Your doctor will discuss this with you when you come for your follow-up appointment. If you have bladder cancer and do not need additional treatment, you will still need to have regular cystoscopies to check the cancer does not return. These will be initially at three-monthly intervals and then progressively less often the longer your bladder remains cancer free. About 30 to 50 per cent of bladder tumours do not recur. If you need further treatment, your doctor will discuss this with you at your follow-up appointment.

This treatment decision is made based on the grade (i.e. how quickly the tumour is likely to grow and spread) and stage of your tumour (i.e. how severe the tumour is). In some circumstances, usually when the tumour cells are considered “high grade”, frequently recurring, or at an early stage of invading the bladder lining an additional course
of treatment may be recommended in order to prevent the tumours coming back. This is medication instilled via a catheter directly into the bladder and could either be a form of chemotherapy (mitomycin C) or immunotherapy (BCG). There are separate leaflets for both of these treatments giving more specific information. Your doctor or nurse will give you the appropriate leaflets and explain these choices to you.

Bladder tumours that are invading the muscular lining of the bladder require much more aggressive treatment such as radiotherapy or major surgery, sometimes with prior chemotherapy.

If you need further help or advice, please do not hesitate to contact your Clinical Specialist Nurse/Key Worker.

References
Anaesthetic information provided by the Royal College of Anaesthetists (www.rcoa.ac.uk)
Guys and St. Thomas's patient information leaflet
Pan-Birmingham Cancer Network information leaflet
Cambridge Partnership patient information leaflet
Macmillan Patient Support
Where can I get more information?

**NHS Direct**
Telephone: 0845 46 47
Website: www.nhsdirect.nhs.uk

**Patient UK**
Website: www.patient.co.uk

**Macmillan Cancer Support**
Provides information and support to anyone affected by cancer.
Telephone: 0808 808 0000
Website: www.macmillan.org.uk

**Cancer Research UK**
Their website provides facts about cancer including treatment choices.
Website: www.cancerhelp.org.uk

Please also see our UCLH Surgery video information by going to: www.uclh.nhs.uk/PandV/Pages/HavingsurgeryatUCLH-vids.aspx

UCLH cannot accept responsibility for information provided by other organisations.
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