

Muscle-invasive bladder cancer

A short guide to MIBC

This guide has been written as a short introduction to muscle-invasive bladder cancer – MIBC (sometimes referred to as invasive bladder cancer). It is intended to give you more information following a suspected diagnosis and help you understand the basics of bladder cancer, how it is tested and graded, the main treatment options and where you can find more support.

If you have any questions during your treatment, make a note and take them to your appointment or contact your medical team. Throughout this leaflet we have suggested examples of things you might want to know.

There is a lot more information about bladder cancer and where to find support on our website;

visit www.actionbladdercanceruk.org

About bladder cancer

Bladder cancer is quite common, with about 10,000 people being diagnosed each year in the UK.

- It is one of the ten most common cancers in the UK
- It is more common in men, but it tends to be diagnosed at a more advanced stage in women, which can affect the likelihood of successful treatment
- About one-third of people diagnosed with bladder cancer have the muscle-invasive type
- Today, there are probably more than 60,000 people living with bladder cancer in the UK
- Although bladder cancer is more common in older people, younger people can get it
- Smoking is a factor in some people's bladder cancer, but the cause of the cancer isn't always clear

What is bladder cancer?

Your body has a huge number of cells, over 200 different types. They all work together to provide the structure of the body, its organs and tissues and a multitude of different functions. Cells regularly divide and make new cells, to enable the body to heal, repair and grow. If a cell becomes abnormal and starts to grow and divide in an uncontrolled way, a lump or tumour can develop. If this has the potential to grow into or spread to other areas of the body, then it is cancer. (The alternative type of tumour is a benign one; benign tumours cannot spread.)

Bladder cancer is an abnormal growth (tumour) that forms in the lining of the bladder. In some people, the tumour has grown further into the outer layers of the bladder. When this happens, the cancer is said to be more advanced and it is harder to treat.

Cancers are named after the primary site (where the cancer originally starts), even when they have spread to other parts of the body.

Anatomy of the bladder

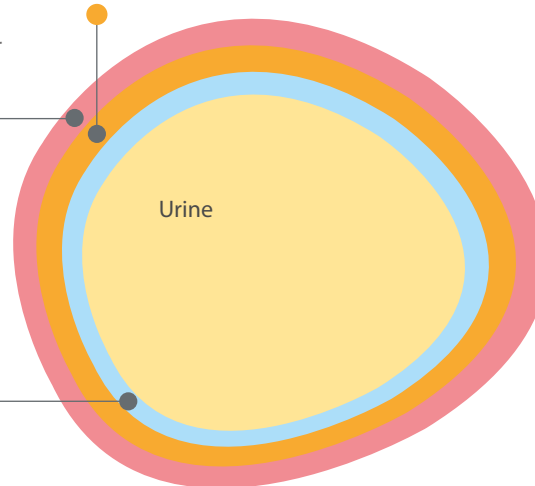
The bladder is a hollow muscular organ that stores urine before it leaves the body. The kidneys filter the waste products from the body. Urine passes down two tubes (the ureters) into the bladder. It stays here until the person is ready to urinate, when the bladder's muscular layer contracts to expel the urine. The bladder can expand to store about 500 ml of urine.

The bladder has three main layers, described below.

Outer muscle layer (muscularis propria), the outermost layer of thick muscle tissue. It relaxes and contracts to allow the bladder to fill and then empty.

Inner layer (urothelium or transitional epithelium), the innermost layer of the bladder wall. Most bladder cancers start to develop in this layer.

Connective tissue (lamina propria), the thin layer between the inner lining of the bladder (urothelium) and outer muscle wall (muscularis propria).



Non-muscle-invasive bladder cancer (NMIBC) is when a cancerous tumour occurs in the inner layer of cells lining the bladder (the urothelium) and the thin middle layer (lamina propria), but has not grown into the deeper muscle layers of the bladder.

Muscle-invasive bladder cancer (MIBC) is when the cancer grows more deeply into the muscle walls of the bladder. These types of tumour are more difficult to treat and are more likely to spread.

Advanced or metastatic bladder cancer is when the cancer has spread outside the bladder to other parts of the body.

Confirming a diagnosis

When you are referred to hospital by your GP to see if you have bladder cancer, you will have various tests and/or scans. These tests may include:

Scans of your urinary tract to help the urologist detect any abnormal areas or growths and to assess the size and position of these areas.

The scan will be one of the following:

- **Ultrasound** – this is the most common scan which uses soundwaves to build up images
- **MRI** – magnetic resonance imaging is a type of scan that uses strong magnetic fields and radio waves to produce detailed images
- **CT** – computed tomography is an imaging procedure that uses special x-ray equipment to create detailed images

Some patients who have an ultrasound first may be referred for a CT scan, depending on ultrasound results.

Flexible cystoscopy or rigid cystoscopy

This involves examining the inside of the bladder with a very narrow fibre-optic tube with a camera and a light at the end (a cystoscope), inserted through the urethra (which is the tube that carries urine from the bladder to the body's exit). It is done using local anaesthetic gel to make things more comfortable and only takes a few minutes. You may be asked to drink lots of fluid before and provide a urine sample. There's a small risk of urinary infection (happens in fewer than one person in 100), but the infection is treatable with antibiotics.

The results of flexible cystoscopy are instant, with the urologist or nurse being able to see anything unusual or any growths that require further investigation, and their size. You may be able to see this yourself on a screen. Sometimes a rigid cystoscopy is carried out under a general or spinal anaesthetic. Further cystoscopies are usually necessary throughout any course of treatment, and afterwards, to monitor the bladder.

The urologist may also take tissue samples (biopsies) from the bladder and may, possibly, remove the growths. However, removal of any growth is more likely to be done, or completed, during a TURBT procedure (see following text). Any tissue samples are then checked to see whether they contain cancer cells and if so, what kind of cells they are. Further flexible or rigid cystoscopies will be necessary throughout your treatment if you do not have surgery to remove your bladder.

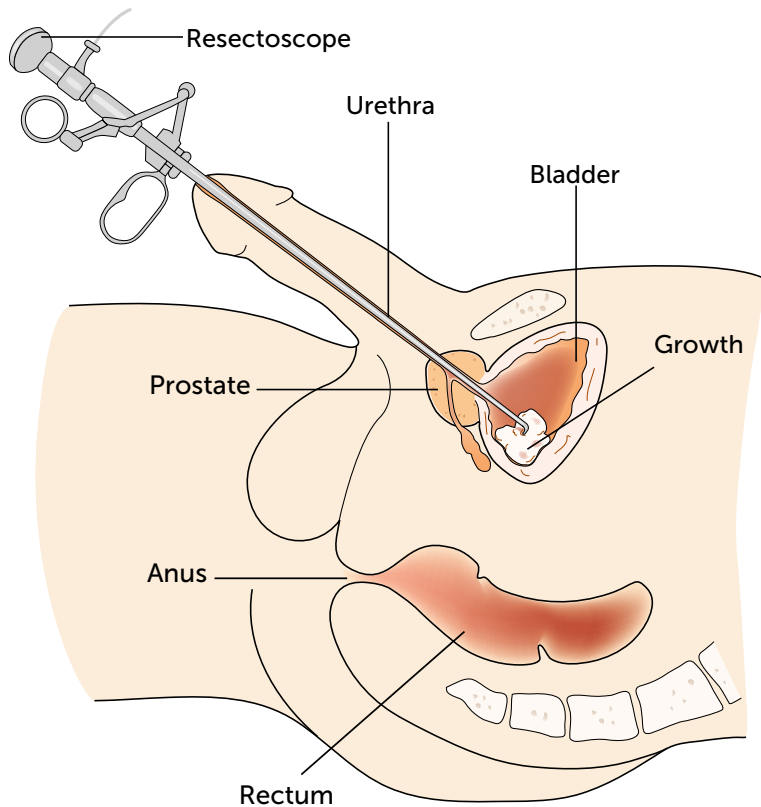
Next steps after tests and scans

If a growth or abnormal area is seen on an ultrasound scan or flexible cystoscopy, this will be explained to you. A specialist nurse is usually available to offer support and information at this time. Arrangements will be made for you to go to hospital within a few weeks for a procedure under general anaesthetic to usually remove, or take a biopsy of, the growth and to determine whether or not it is a cancerous. That procedure is called a transurethral resection of a bladder tumour (often referred to by its initials as a TURBT).

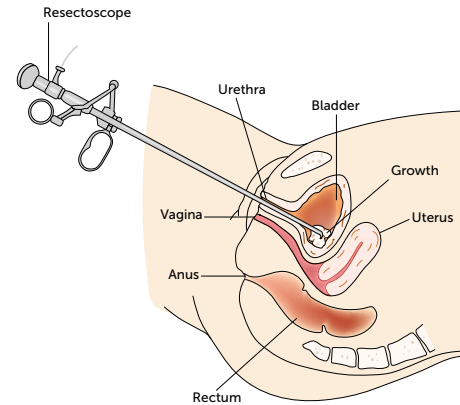
The actual diagnosis of bladder cancer can only be done following a TURBT, when the bladder samples removed during the TURBT have been examined in a lab.

TURBT (transurethral resection of bladder tumour)

If an abnormal area or growth is seen, you will usually have a procedure called a TURBT – a transurethral resection of a bladder tumour. As well as being the process to get a confirmed diagnosis by investigating the type of growth in your bladder, a TURBT is also the first part of the treatment for muscle-invasive bladder cancer (MIBC). The abnormal area or growth within the bladder is removed during the procedure. The bladder itself is not removed in a TURBT.



TURBT procedure male



TURBT procedure female



The abnormal area or growth is removed in pieces using a resectoscope

You may only need a TURBT once, or it may need to be repeated. It will usually mean a hospital inpatient admission (particularly for a first TURBT), but may occasionally only need you to come in for a day. You will have an anaesthetic and the inside of your bladder will be given a detailed telescopic examination through the urethra (no surgical incision is needed).

During the TURBT, any abnormal areas or growths which can be seen will be removed, the area sealed and the bladder washed out. You will usually be given a chemotherapy drug called mitomycin directly into your bladder either at the same time or within 24 hours. This aims to destroy any remaining cancer cells that might be present if you do have bladder cancer, and reduces the chances of the cancer cells regrowing.

Samples of the abnormal area or growth that has been removed will be sent to the laboratory for tests. If the abnormal area or growth is found to be cancerous, it will be classified according to how aggressive it appears, according to:

- How far it has grown into the bladder wall
- If it is present only in the inner lining or has grown into the muscle wall
- How likely it is to spread
- Whether it has already spread to other parts of the body (this is a very rare finding at TURBT and would be confirmed by more tests)

If cancer is confirmed, your bladder cancer will then be described using letters and numbers – this is known as staging and grading.

Cancer type

By looking at the pattern of cells under a microscope (called histology) and doing some tests, it's possible to tell the type of bladder cancer, which helps doctors predict how it will develop. Urothelial cancer is the most common type of bladder cancer, accounting for almost nine out of ten cases. This cancer develops from cells in the urothelium. Other types include squamous cell carcinoma, adenocarcinoma, micropapillary carcinoma, small-cell neuroendocrine bladder cancer, sarcomatoid bladder cancer and lymphoepithelial-like bladder cancer.

Genetic profiling of the cancer can tell doctors which gene is faulty and has caused the cancer. This can be important for people having medical therapy, as some medications are effective only for people with certain genetic faults. Although the techniques involved are new, they're likely to become an important part of diagnosis in the future.



What is muscle-invasive bladder cancer?

Muscle-invasive bladder cancers are larger than non-muscle-invasive bladder cancers, and tend to be more aggressive. As the name implies, a muscle-invasive cancer has already spread from the inner lining of the bladder and grown into, and sometimes beyond, the muscle layer of the bladder. Diagnosis is based on how the samples of the area removed during TURBT look under the microscope and/or what was found on the scan as some people will have an early scan that is so clear re MIBC that they do not actually have a TURBT. The grading and staging section explains how muscle-invasive bladder cancers are described. This information is essential when deciding on the best treatment.

Muscle-invasive bladder cancer needs to be treated promptly, as there's a high risk of it spreading to other parts of the body.

Staging

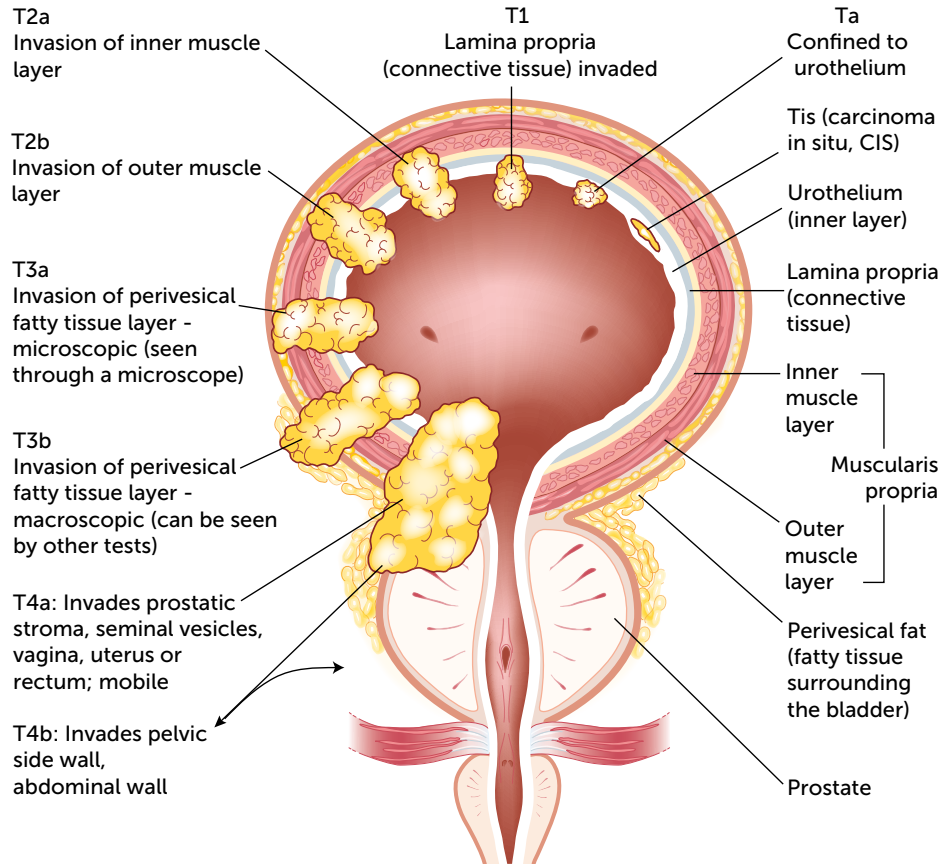
Staging assesses how far the cancer has spread within the bladder and whether it has spread to the lymph nodes or elsewhere in the body.

Muscle-invasive bladder cancers fall into one of three stages: T2, T3 or T4. These stages are divided into a and b, to provide more information about the tumour.

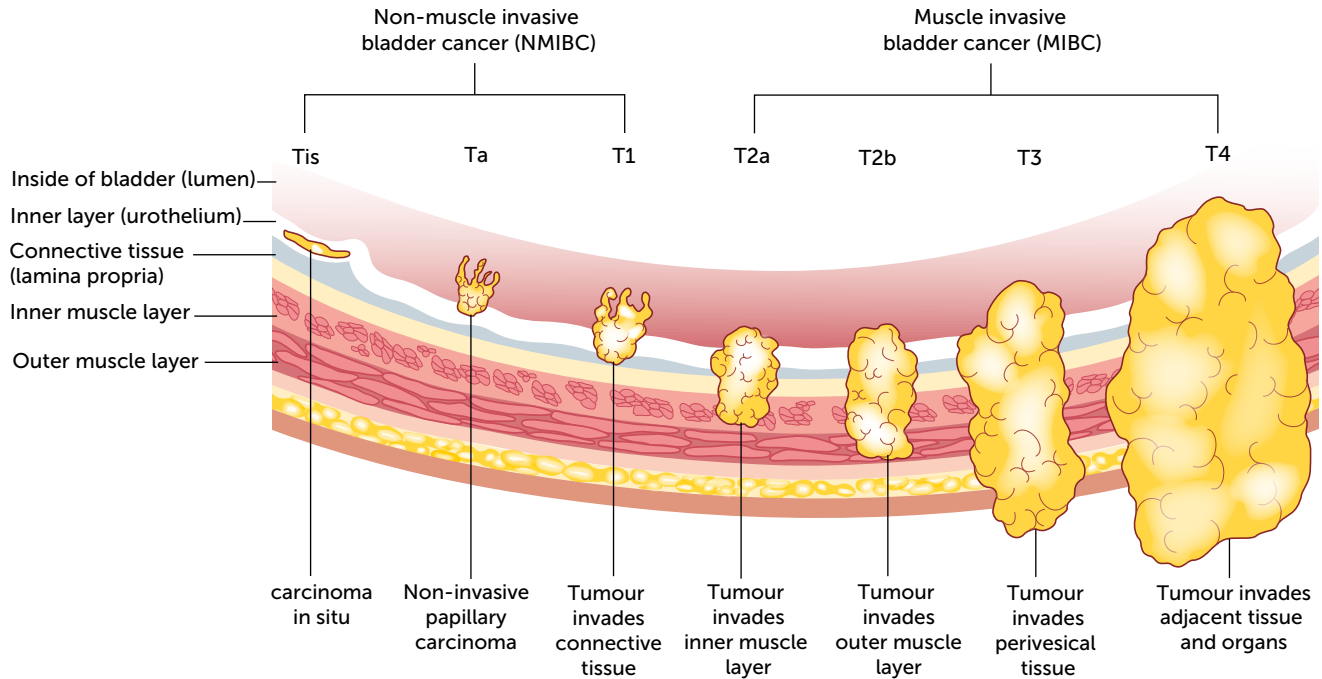
Cancers are staged using a TNM system – T for tumour, N for (lymph) nodes and M for metastasis (when cancer spreads to a place in the body away from the primary site).

Ta, CIS, T1	These are cancers that are confined to the inner layers of the bladder. These are non-muscle-invasive bladder cancers. There is more information on these cancers at www.actionbladdercanceruk.org	T4a	The tumour has spread to nearby organs (prostate and seminal vesicles in a man; uterus and vagina in a woman)
T2a	The tumour has grown into the outer muscle layer (muscularis propria)	T4b	The tumour has spread to the pelvic wall (the muscles and ligaments that line the pelvic area) or the abdominal wall (the muscles and tissues that line the front of the abdominal area)
T2b	The tumour has reached the outer half of the muscularis propria		
T3a	The tumour has grown into the layer of fat that surrounds the muscularis propria and cells in the area can be seen with a microscope	N1, N2, N3	Used to show if the cancer has spread to lymph nodes (sometimes called the glands) in the body. If it hasn't spread to the lymph nodes, the stage is N0
T3b	The tumour has grown into the layer of fat that surrounds the muscularis propria and can be seen on an image or felt by the doctor	M1	Used to show if the cancer has spread to other parts of the body. If it hasn't spread, the stage is M0.

Staging system used for MIBC



Bladder wall cross section showing stages of bladder cancer



Grading

Grading assesses how aggressive the cancer is by looking at the cells under a microscope. Grades are scored from 1 to 3 and can be written as G1, G2 or G3.

Grade 1 (low) is the least aggressive meaning that the tumour is less likely to spread and is slower growing.

Grade 2 (moderate) is moderately aggressive.

Grade 3 (high) is the most aggressive, faster growing and most likely to grow and spread.

Virtually all muscle-invasive bladder cancers are high-grade G3 tumours (occasionally a person has high-grade G2). Grading plays less of a role in guiding treatment than it does for non-muscle-invasive bladder cancers. The treatment options for MIBC depend more on the TNM stage (described on page 11).

Treatments and care plan

Your care team, called a multidisciplinary team (or MDT), will be looking after you and will talk

Questions

- How far has my cancer grown?
- How will this affect the treatments available?
- What is the time scale for treatment?
- What will happen next?



to you about the type of cancer you have, and how it could affect treatment decisions. They will discuss your treatment and care plan, what the treatment should achieve and the possible effects of treatment.

Patient care plan

Every patient should have a care plan which should be worked out with the patient, their partner/family/carer and their hospital and care team. This plan will include a summary plus details of test results, treatment plans and progress. It should identify and address each patient's needs,

empower the patient and improve their quality of life whilst living with cancer. Certain things should happen at key points in a treatment pathway and these should be shown on your care plan.

A care plan should also include a HNA (holistic needs assessment) which looks at all a patient's needs. Other useful information it can show is details of any local bladder cancer support groups or well-being events.

Treatment options and decisions

All the options are going to be quite radical, and decisions will depend on:

- the stage of cancer
- the type of cancer
- your general health and fitness

You will decide which treatment you receive. Your specialist will talk to you about the benefits and risks of each treatment option. It is important you ask any questions you have and make sure you understand what they are saying to you – ask them to repeat their recommendations if you are not sure. You may need to talk to more than one

of the specialists in your care team (for example, your urologist or oncologist), depending on the treatment options. Discussions should include:

- your outlook with and without the treatment
- the evidence for how effective the treatment is
- the benefits and risks

When you have decided on the treatment, you may find it helpful to talk to people who have had it. Ask your nurse specialist if there's a bladder cancer group in the area. If not, ask whether she could put you in touch with someone you could talk to. ABC UK can also help you find your nearest support group or put you in touch with another patient who has experienced the same treatment – see <http://actionbladdercanceruk.org/patient-support/>

The usual options for MIBC are:

- Surgery to remove all or part of the bladder. The procedure is called a cystectomy, and it is usually combined with chemotherapy before or after.
- Radiotherapy combined with chemotherapy, which is sometimes called chemoradiation.

Questions

You might find it helpful to write down a pros and cons list, you can ask for help from your care team. Everyone can forget to ask questions during a hospital appointment, keep a running list and take it with you to check. If you think of a question afterwards, you can contact your CNS or another member of your care team to ask it.

- What is my outlook with and without the treatment?
- Can you explain the process for each option?
- When and where would I have the treatment?
- Would I have chemotherapy with the main treatment?
- How effective is treatment?
- What are the benefits of each treatment option?
- What are the risks of each option?
- What would happen if my cancer was found to be more advanced during surgery?
- What is involved?
- How long will I be in hospital?
- Will I need someone with me at home after treatment?
- How long would it take me to recover?
- What unwanted effects might I have immediately and in the long term?
- Will the treatments affect my sex life?
- Will the treatments affect my ability to have children (if appropriate)
- What follow-up appointments will I have?
- Does the hospital make these appointments?
- Might I need more treatment?
- What are the contact details for my CNS - phone number, email?



Chemotherapy is treatment with medication that aims to stop cancer cells growing and dividing. Chemotherapy medication usually targets a signal that is quite specific to the cancer cells. But unwanted effects can happen if the medication affects some types of normal cell that make a similar signal.

You may hear the words 'adjuvant' and 'neoadjuvant' in connection with chemotherapy. Adjuvant therapy is treatment given **after** the main treatment, with the aim of destroying any cancer cells that remain. Neoadjuvant treatment is given **before** the main treatment, and it aims to reduce the size of the cancer, destroy any cancer cells that may be preparing to grow in different parts of the body or make the main treatment more likely to be effective.

Radiotherapy uses radiation to damage cancer cells in an area. There are different ways of directing the radiation to the cancer. The aim is to focus on the cancerous area and to minimise the effects on nearby normal tissue.



Cancer that has not grown too far into the muscle

If the cancer has been found before it has grown too far into the muscle layer (if it is stage 2a), you might not need a cystectomy – you may have a second TURBT (see page 6-7).

Chemotherapy before the main treatment

People diagnosed with muscle-invasive bladder cancer will be offered chemotherapy before the main treatment of bladder removal or radiotherapy, depending on their general health and fitness (for example, if you have kidney problems, the treatment wouldn't be suitable). Treatment will involve having the medication put straight into your blood sometimes through what's called a central line. This is a long thin tube that is inserted into a vein in the chest – you would usually have a local anaesthetic.

Your care team will explain the arrangements and how often you will need to go to hospital. You will also need regular blood tests.

Chemotherapy often makes people feel worse than they did. Your care team will tell you about the possible unwanted effects of treatment, which could include:

- being more likely to pick up infections, which would be more serious than usual
- developing a high temperature
- losing your appetite, feeling sick, being sick, having diarrhoea
- feeling out of breath and/or weak
- having bruises, nosebleeds and bleeding gums
- feeling extremely tired
- developing kidney problems

When you're discussing this type of chemotherapy, you need to weigh these effects against the likelihood that chemotherapy will improve the chances of a successful treatment. You should be given the opportunity to talk to a cancer specialist (an oncologist) who treats people with bladder cancer before you make your decision. If you have chemotherapy before your main treatment, you will need to wait till the chemotherapy drugs have passed through your body before you can have the surgery or radiotherapy.

Surgery to remove the bladder

A radical cystectomy is major surgery that aims to remove the cancer by taking out the bladder and possibly some of the nearby lymph nodes. Some people may be able to have only part of their bladder removed, but this is quite rare. Most people with muscle-invasive bladder cancer have surgery after their diagnosis.

If you opt for surgery, your care team will discuss what is involved and the options for replacing the bladder's function. When you have your whole bladder removed (in a radical cystectomy), the nearby lymph nodes are also removed. Women may need to have their uterus (womb) and ovaries taken out. Men have their prostate gland removed, too.

The surgeon will also create a new way for urine to leave your body. There are different options, but they may not all be suitable for you. If you do have different options, talk to your medical team about the pros and cons of each one.

The three main ways of urine removal after a radical cystectomy are:

- to have an opening (a stoma) made in your abdomen so that urine can freely drain into a bag that lies flat against your abdomen – the procedure is called a urostomy, ileal conduit or urinary diversion
- to have a new bladder (or neobladder) made and connected to your body's urinary system so that you pass urine in much the same way as before
- to have a new bladder made and a channel constructed to link the bladder to the surface of the abdomen – urine doesn't freely drain but is removed by inserting a thin tube (catheter) into the bladder through the channel; this is called a continent urinary diversion or Mitrofanoff.

There are separate ABC UK information sheets on cystectomy and the types of urinary diversions. There is also more information on surgery (cystectomy) and the options for bladder replacement at **www.actionbladdercanceruk.org**.

Chemotherapy after surgery

If you didn't have chemotherapy before surgery, you may be offered it afterwards. This would be the case if your cancer was found to be more advanced during surgery than was originally thought. See page 18 for the possible unwanted effects, and talk to a specialist about the pros and cons.

Radiotherapy and chemoradiation

Surgery is not suitable for everyone, and some people opt not to have it. The alternative treatment is radiotherapy. Nowadays, radiotherapy is usually given at the same time as chemotherapy as this is more likely to be effective than radiotherapy on its own. Having the two combined is called chemoradiation.

Chemoradiotherapy can be equivalent to cystectomy in terms of effectiveness, for some people. Again, talk to your specialist about the pros and cons.

Having radiotherapy

You will need to go to the hospital's radiotherapy unit to have your radiotherapy. It's an intensive treatment, and you'll normally have to go during the week for up to 7 weeks. Your care team will explain the arrangements.

When you have the treatment, you will need to lie still and the machine will move around you to deliver the radiation. Each treatment can last up to 30 minutes. The radiographer will tell you what to do and will reassure you if you find it daunting.

You won't be radioactive afterwards and can be with your friends and family as normal.



Unwanted effects

Radiotherapy can make you feel unwell. This tends to start a few days after the first session and continues until a couple of weeks after the treatment has finished. Radiotherapy can also affect a person's fertility – if this is an issue for you, talk to your care team.

The unwanted effects of radiotherapy include:

- skin changes – skin may become red and sore, darker or dark and itchy
- extreme tiredness
- problems with urination – you may feel like you need to pass urine frequently and/or it may be painful to urinate
- feeling sick
- diarrhoea and wind, as the bowel can become inflamed by the radiotherapy
- a lowered sex drive, problems with erections and/or ejaculation in men, effects on the vagina causing pain in women.

Not everyone experiences all of these – it varies from person to person. Talk to your doctor, nurse specialist or radiographer as they will be able to give you some advice and may be able to prescribe something to help. If you are having problems with urination or diarrhoea, make sure you drink lots of water.

Having chemotherapy with radiotherapy

If you are having chemoradiation, you will have the chemotherapy during some of the weeks in which you have radiotherapy. Your clinical team will explain the schedule, how the treatments will be given and the possible unwanted effects.

Follow-up and monitoring

After your treatment has finished, your care team will organise regular check-ups to see how you are and to check for signs that the cancer has returned (called recurrence). If your cancer does come back, your clinical team will talk about your options for further treatment.

After surgery

If you've had your bladder removed, you should usually have the following appointments (you may have more appointments than these, depending on your hospital's procedures).

- CT imaging of your abdomen, pelvis and chest at 6, 12 and 24 months after the surgery.
- Imaging to check your kidneys and a blood test to check your kidney function at least every year.
- A blood test to check the chemical balance of your blood, and your levels of B12 and folate.
- For men whose urethra was not removed at the same time as the bladder (the urethra normally carries urine to the tip of the penis), a check for signs of recurrence (either from a sample washed from the urethra or an internal examination – this should be done every year for 5 years. (Women do not have this check as their urethra will have been removed during surgery.)

After radiotherapy

If you've had radiotherapy to destroy the cancer, you should usually have the following appointments (you may have more appointments than these, depending on your hospital's procedures).

- rigid cystoscopy (see page 5) 3 months after the end of your radiotherapy, then either rigid or flexible cystoscopy:
 - every 3 months for the first 2 years then
 - every 6 months for the next 2 years then
 - every year afterwards, depending on the view of your doctor and your preference
- Imaging of the kidney area every year for 5 years.
- Imaging of your abdomen, pelvis and chest with CT at 6, 12 and 24 months after radiotherapy has ended

Newer types of treatment

In recent times, better understanding of cancers has led to the development of new treatments. If you have MIBC you may be suitable to take part in a clinical trial of one of these new treatments. In bladder cancer, immunotherapies are being investigated and, in some instances, are being used

for particular groups of people (usually those whose cancer is too advanced for it to be completely removed or destroyed by surgery or radiotherapy).

The body's immune system is very complex. One aspect involves different types of immune cell recognising signals that another cell is unusual or is under attack from, say, a virus. Immune cells dock with the signalling cell, and this activates various pathways of events that end up destroying and disposing of the cell with the unusual signal.

Cells that develop into a recognisable cancer have signals or markers that are unusual, but these are silenced or masked so they are not recognised by the immune system. The new immunotherapies 'un-mask' the markers or ramp up the immune response so that the body recognises and destroys the cancer cells. This is a huge area of research for cancers at present. Most of the clinical trials of these medications involve people with advanced cancer, but it is possible that there will be trials you could join. If this is the case, your care team will discuss what is involved with you. Be clear about how the trial is designed and what the potential benefits and risks are with the new treatment and be clear about what the commitment is before you agree to join.



Biomarkers

There is a lot of research into the detection of early signals or markers that cancer has returned (markers of specific cells or processes in the body are called biomarkers). As a consequence, your care team may also test for biomarkers of bladder cancer recurrence.

Questions

- What are my results?
- What do they mean?
- When is my next appointment and what will it involve?



Bladder cancer patient support groups

From your first diagnosis and throughout your treatment journey, getting the right kind of support can make a big difference. Many bladder cancer patients and their families/friends find it helpful to attend a bladder cancer support group. It can give you an opportunity to talk, ask questions and listen to other people who have gone (or are going through) the same thing as you are. You can search on the ABC UK website for a group near you at www.actionbladdercanceruk.org/patient-support

Not every region of the UK has an active group which is why ABC UK is working to help set up new groups. If there isn't a group within easy travelling distance of where you live and you would like to see one set up, please get in touch with us at info@actionbladdercanceruk.org

Your CNS (clinical nurse specialist) can also contact us to ask for advice and assistance in setting up a new group at their hospital.

Questions

- What support is available if I want to alter my diet, stop smoking or take more exercise (it's important to be as healthy as possible before, during and after treatment)?
- What other kind of support is available?
- Is my GP going to be involved?
- Who can I talk to if I have questions or I am worried?
- What support is there for family or carers?
- What are they entitled to or who can they talk to?
- Is there a Patient Support Group for bladder cancer patients at my hospital or close by? If not, why not?



Living with bladder cancer

Adjusting to life with, and beyond bladder cancer, can sometimes be difficult and often something of an emotional rollercoaster. During this time, many people find that there can be all sorts of practical issues that they need help or advice on.

There is a list of organisations who offer advice on various issues on our website

www.actionbladdercanceruk.org/living-with-bladder-cancer

Other useful websites

Cancer Research UK

www.cancerresearchuk.org

Macmillan

www.macmillan.org.uk

NHS

www.nhs.uk/conditions/bladder-cancer/

NICE guidance on diagnosis and management of bladder cancer (information for the public – starts at this link, but click on Next button which is in the bottom right corner)

www.nice.org.uk/guidance/ng2/ifp/chapter/About-this-information

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Key people

The following are some key people you might meet during your treatment:

Care team: The team of healthcare professionals who will manage your healthcare (also see MDT)

CNS (clinical nurse specialist): A nurse who is an expert within a certain field e.g. cancer, urology, bladder cancer, palliative care. A key person during bladder cancer treatment and often your main contact for information and support

Continence nurse or advisor: A nurse with special training in bladder and bowel issues who can help and advise those who have incontinence

Key worker: Your designated point of contact from your care team

MDT (multidisciplinary team): A specialist team with different skills and experience. The team might include urologists, oncologists, radiologists, pathologists and specialist nurses

Oncologist: A doctor specialising in the treatment of cancer

Pathologist: A doctor who specialises in examining tissue samples for example to study the nature and causes of a disease

Radiographer: A healthcare professional who specialises in imaging the body (a diagnostic radiographer) or delivering treatments involving x-rays or other forms of radiation (a therapeutic radiographer)

Radiologist: A doctor who specialises in carrying out and examining scans of the body

Specialist urology multidisciplinary team: A specialist team with different skills and experience who manage more complicated types of bladder cancer

Urologist: A doctor who specialises in diagnosing and treating problems in the male and female urinary tract and male reproductive organs

Urology multidisciplinary team: A specialist team with different skills and experience who specialise in problems in the urinary tract

Action Bladder Cancer UK (ABC UK)

ABC UK is a national charity. We work to support bladder cancer patients and their families, improve diagnosis and outcomes for bladder cancer patients and improve and support research into bladder cancer.

ABC UK has been working since 2009 to get bladder cancer recognised as a common cancer with the awareness, new treatments and research investment it merits and those with bladder cancer deserve. We want bladder cancer patients to have a voice and the support they and their families need. Our trustees are drawn from the UK's leading medical and research specialists and bladder cancer patients.

There is a lot more information about bladder cancer, support groups and our work on our website.

W: www.actionbladdercanceruk.org

Or contact us:

E: info@actionbladdercanceruk.org

T: **0300 302 0085**

Registered charity no: 1164374

