St Helens and Knowsley Teaching Hospitals NHS Trust

Patient information and consent to anterior resection

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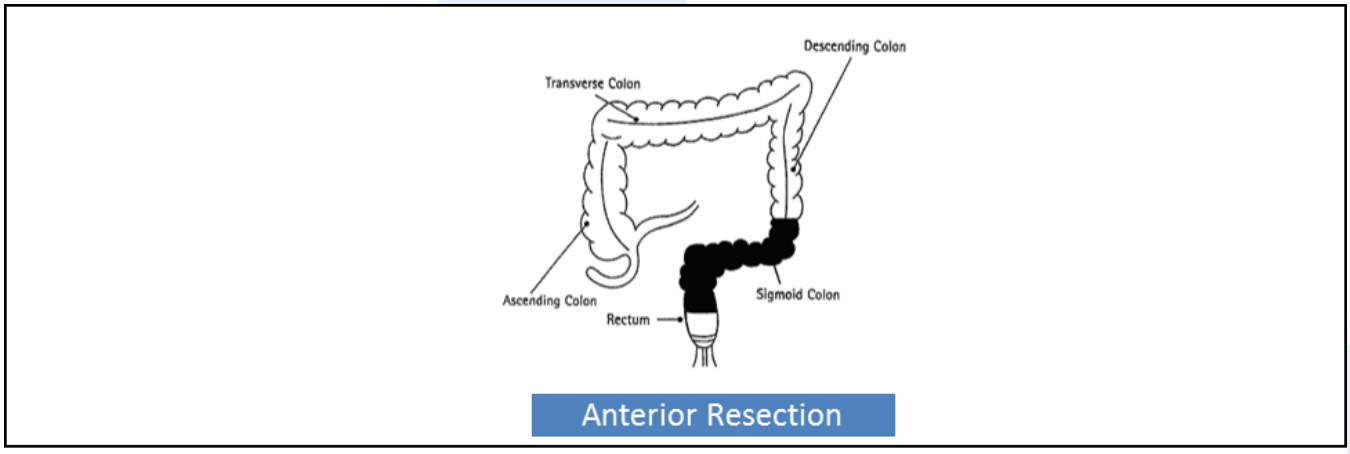
About anterior resection

You have been recommended to have an 'anterior resection' as the surgical treatment for your disease which involves removing some or all of the rectum and adjacent sigmoid colon. This operation is for cancers of the rectum and some cancers of the sigmoid colon. This same operation is also performed for some non-cancerous bowel conditions. It will be performed under general anaesthetic.

The rectum is the lowest 15cms of the bowel. It is the place where the stool is normally stored prior to going to the lavatory so that its removal does alter bowel function afterwards. You would tend to have a more frequent, urgent and looser stool after surgery.

When an anterior resection is performed it is usually possible to join the two ends of the remaining bowel together afterwards. However, the more rectum that is removed, the greater is the possibility that you would need a temporary bag (stoma) to protect the join of the bowel. An ileostomy is the commonest temporary stoma used. This will be in place for a number of months and is reversed after an X-ray examination to check that the bowel join is healthy. If you need chemotherapy after your surgery the stoma will not be closed until after that has finished. There is also a chance of permanent bag (a colostomy). If there is a likelihood of a stoma you will be counselled by your surgeon and stoma nurses before surgery.

You may have been advised to have radiotherapy or chemoradiotherapy prior to your operation.



Shaded areas indicate approximate section of bowel to be removed

Intended benefits

The aim of the surgery is to remove the cancer – completely if possible. For most patients this will provide a cure or significant improvement of their bowel problems. For cancer operations, surgery gives the best chance of cure, and the treatment may need to be combined with chemotherapy and/or radiotherapy. Even in cancer surgery, where certainty of cure is difficult to guarantee, the benefits should be long lasting.

Who will perform my procedure?

Your surgery will be performed by a surgeon with particular skills and training in bowel surgery. This is usually a consultant surgeon or senior specialist registrar, often under consultant supervision.

Before your admission

You will need to attend the pre-assessment clinic, which is usually run by specialist nurses. At this clinic, we will ask for details of your medical history and carry out any necessary clinical examinations and investigations. Please ask us any questions about the procedure, and feel free to discuss any concerns you might have at any time.

We will ask if you take any tablets or use any other types of medication either prescribed by a doctor or bought over the counter in a pharmacy.

Please bring any packaging with you. You may have a blood test and ECG performed, and also swabs for MRSA.

Your operation will require a general anaesthetic. We explain about the different types of anaesthesia and post-operative pain relief at the end of this leaflet. You will see an anaesthetist before your procedure to discuss the best options for you.

Most people who have this type of procedure will need to stay in hospital for three to six days after the operation. Those patients with medical problems or special needs may need to stay in hospital longer.

You will be asked to attend Bowel School where you are given information regarding your recovery. You will meet members of the team who are vital in your recovery. You may also be given carbohydrate drinks to optimise your health state whilst in theatre, this will be discussed with you at Bowel School.

Day of surgery admission

Most patients are admitted on the day of surgery. If you need to have a completely empty bowel you should take the ‘bowel prep’ (given to you at Bowel School) at home the previous day. Many patients simply need an enema on the ward when admitted to clear the lower bowel prior to surgery.

Hair removal before an operation

If you need hair removal from the surgical site this will be done using an electric hair clipper with a single-use disposable head, after you have been anaesthetised. Please do not shave the hair yourself or use a razor to remove hair, as this can increase the risk of infection. Your healthcare team will be happy to discuss this with you.

It may be necessary during the procedure to shave other areas of your body if appropriate to allow equipment/machines, for example diathermy machines (used to seal blood vessels), to stick to your skin to achieve the best and safest performance.

During the procedure

Before your procedure, we will give you the necessary anaesthetic – see below for more details. Your anaesthetist will also discuss post-operative pain relief with you and if you are having an epidural this may be put in before you are anaesthetised. You will need to have catheter inserted into your bladder once you are asleep so we can measure urine output. This will be removed within the first few days after the operation.

Surgery for rectal and sigmoid cancer can be performed by a standard 'open' operation with an incision in the abdomen or by laparoscopic 'keyhole' surgery. Keyhole surgery still requires an incision through which the tumour is removed. The choice of method depends on a number of factors including the size and position of the cancer, your build and coexisting medical conditions, any previous operations on your abdomen, and surgery preference. Please feel free to discuss with your surgeon if you need clarification.

With keyhole surgery it is sometimes not possible to complete the procedure using this technique; there would be a need to convert to an open operation in this case. At the start of the operation we take the opportunity to look inside your tummy at the rectum and other parts of the abdomen – for example the liver, stomach, small intestine or ovaries.

The rectum and colon above it are then mobilised (freed up from their surrounding attachments) so that the rectum can be safely removed, along with some of the mesorectum (fatty tissue that carries the blood vessels and lymph drainage to the bowel). Often the adjacent part of the colon is removed as well as to enable better clearance of the disease. In most cases the remaining bowel ends can be joined up again using special stapling instruments or sutures (stitches). If a stoma (where the bowel is brought out to the skin) is needed then this will have been discussed in advance. At the end of the operation the abdominal wall is stitched together and then the skin closed, usually with absorbable sutures (so there is no need for stitches to be removed after the procedure).

After the procedure

Once your surgery is complete you will usually be transferred to the recovery ward where you will be looked after by specialist trained nurses, under the direction of your anaesthetist. The nurses will monitor you closely until the effects of any general anaesthetic have adequately worn off and you are conscious. They will monitor your heart rate, blood pressure and oxygen levels too. You may be given oxygen via facemask, fluids via your drip and appropriate pain relief until you are comfortable enough to return to your ward. You will also have a tube (catheter) in your bladder to drain away urine – this enables careful measurement and avoids the need for you to get out of bed to urinate.

After certain major operations you may be transferred to the intensive care unit (ICU/ITU), high dependency unit (HDU). These are areas where you will be monitored much more closely because of the nature of your operation or because of certain pre-existing health problems that you may have. If your surgeon or anaesthetist believes you should go to one of these areas after your operation, they will tell you and explain to you what you should expect.

Enhanced recovery

Where possible we make use of 'enhanced recovery' principles to minimise the impact of surgery on the body and enable a rapid return to normal activity. There are many aspects to this process which includes preoperative (before), intraoperative (during) and postoperative (after) procedures.

We aim to minimise pain; perform careful surgery; avoid unnecessary drips, tubes and drains; enable you to eat and drink straight after your operation; encourage early mobilisation to stimulate recovery and allow you to go home soon and safely. We want you to be involved with this and need your help to improve your recovery.

Eating and drinking. It is safe drink and even eat after surgery providing you feel the desire to do so. You should not eat or drink if it makes you feel sick or bloated.

Getting about after the procedure. We will help you to become mobile as soon as possible after the procedure. This helps improve your recovery and reduces the risk of certain complications. You will have daily injections which reduce your chance of blood clotting in your legs (DVT). Typically, you will be helped into a chair the following day. If you have any mobility problems, we can arrange nursing or physiotherapy help.

Leaving hospital. Most people who have this type of procedure will need to stay in hospital for about a week. Sometimes complications arise and these will delay discharge. When you go home we would expect you to be mobile, comfortable and able to eat safely. The actual time that you stay in hospital will depend on your general health, how quickly you recover from the procedure and your doctors opinion.

Resuming normal activities including work. Most people who have had this procedure can get back to normal activities within six weeks. Initially you will feel more tired than usual but this should not stop you from doing anything, because activity is beneficial. For driving you need to feel safe and to be able to brake in an emergency – this often takes two to four weeks. When going back to work see if you can start half days or work a bit from home until your energy levels are improved.

Special measures after the procedure. Sometimes people feel sick after an operation, especially after a general anaesthetic, and might vomit. If you feel sick, please tell a nurse and you will be offered medicine to make you more comfortable.

Pain control. This is usually with either an epidural or patient-controlled analgesia (see below for details).

Check-up and results. Before you leave hospital, we will give you details of when you need to return to see us, for example outpatient clinics or for the results of your surgery. At this time, we can check your progress and discuss with you any further treatment we recommend.

Significant, unavoidable or frequently occurring risks of this procedure

Surgery to remove part of the bowel is a major operation and there are certain risks known to be associated with it. These include the risks of surgery in general, the risks particularly associated with bowel surgery and the risks of anaesthetic described in more detail over the page. The general risks of surgery include problems with the wound (for example, infection), breathing (for example, chest infection), heart (for example, abnormal rhythm or occasionally a heart attack), blood clots (for example, in the legs or occasionally in the lung) or kidney function (for example, kidney failure). Those specifically related to anterior resection include problems with the seal where the bowel has been joined ('anastomotic leak'), a transient blockage of the bowel, bleeding or infection in the abdominal cavity. Rarely, further surgery is required to put right such complications. If there is a leak from the bowel join (anastomotic leak) then surgery is often requires and this usually requires a stoma to be created; this is a serious complication but the risk is low, of the order of 5-7%.

Sometimes during the operation it becomes apparent that the disease is more complicated than was anticipated: the type of surgery may need to be altered to achieve the desired result. This may mean removing more bowel or part of a nearby organ (for example, small intestine, bladder or ovary). The consent form you sign will include this possibility. If there is any part of you which specifically do **not** wish to be removed then this must be written clearly on the consent form before signing. As explained earlier there may be a need for a stoma and this is usually predictable in advance. Rarely however, we may decide during the operation that a stoma is required and there is a remote risk this could be permanent.

In men there is a risk of impotence (failure to achieve an erection) in this kind of surgery. There is also a chance of retrograde ejaculation (semen going into the bladder instead of out of the penis during ejaculation). Obviously every effort is made to minimise this risk but you need to be aware of it. These risks are greater when radiotherapy and surgery are combined.

In women, there is a risk of discomfort or dryness during sexual intercourse, and some women no longer experience sexual orgasm. Again, this risk is greater when radiotherapy and surgery are combined.

Most people will not experience any serious complications from their surgery. The risks increase for the elderly or overweight and for those who already have heart, chest or other medical conditions such as diabetes or kidney failure. There is a very small risk of death. You will be cared for by a skilled team of doctors, nurses and other health care workers who are involved in this type of surgery on a daily basis. Any problems that arise can be rapidly assessed and appropriate action taken.

Alternative procedures that are available

For most conditions where anterior resection is advised, the only alternative to surgery is medical treatment with drugs. Where there is a cancer of the bowel, drug treatment alone will not cure the disease. Occasionally it is possible to remove a rectal cancer from within the back passage without the need for major surgery; this form of surgery is only suitable for a small minority of patients. This option (trans-anal resection) will be discussed if appropriate.

If you were to decide against surgery then your cancer would progress, though usually quite slowly over months. This could result in bleeding, the development of a blockage in the bowel and eventually spread of cancer to other parts of the body.

Anaesthesia

Anaesthesia means 'loss of sensation'. There are three types of anaesthesia: general, regional and local. **The type of anaesthesia chosen by your anaesthetist depends on the nature of your surgery as well as your health and fitness.** Sometimes different types of anaesthesia are used together.

Before your operation

Before your operation you will meet an anaesthetist who will discuss with you the most appropriate type of anaesthetic for your operation, and pain relief after your surgery. To inform this decision, he/she will need to know about:

- Your general health' including previous and current health problems
- Whether you or anyone in your family has had problems with anaesthetics
- Any medicines or drugs you use
- Whether you smoke
- Whether you have had any abnormal reactions to any drugs or have any other allergies
- Your teeth, whether you wear dentures, or have caps or crowns.
- Your anaesthetist may need to listen to your heart and lungs, ask you to open your mouth and move your neck and will review your results.

Moving to the operating room or theatre

You will usually change into a gown before your operation and we will take you to the operating suite. When you arrive in the theatre or anaesthetic room and **before starting your anaesthesia, the medical team will perform a check of your name, personal details and confirm the operation you are expecting.**

Once that is complete, monitoring devices may be attached to you, such as blood pressure cuff, heart monitor (ECG) and a monitor to check your oxygen levels (a pulse oximeter). An intravenous line (drip) may be inserted. If a regional anaesthetic is going to be performed, this may be performed at this stage. If you are to have a general anaesthetic, you may be asked to breathe oxygen through a face mask.

General anaesthesia

During general anaesthesia you are put into a state of unconsciousness and you will be unaware of anything during the time of the operation. Your anaesthetist achieves this by giving you a combination of drugs.

While you are unconscious and unaware your anaesthetist remains with you at all times. He or she monitors your condition and administers the right amount of anaesthetic drugs to maintain the correct level of unconsciousness for the period of the surgery. Your anaesthetist will be monitoring such factors as heart rate, blood pressure, heart rhythm, body temperature and breathing. He or she will also constantly watch your need for fluid or blood replacement.

Regional anaesthesia

Regional anaesthesia includes epidurals, spinals, caudals or local anaesthetic blocks of the nerves to the limbs or other areas of the body. Local anaesthetic is injected near to nerves, numbing the relevant area and possibly making the affected part of the body difficult or impossible to move for a period of time. Regional anaesthesia may be performed as the sole anaesthetic for your operation, with or without sedation, or with a general anaesthetic. Regional anaesthesia may also be used to provide pain relief after your surgery for hours or even days. Your anaesthetist will discuss the procedure, benefits and risks with you and, if you are to have a general anaesthetic as well, whether the regional anaesthesia will be performed before you are given the general anaesthetic.

Local anaesthesiaa

In local anaesthesia drug is injected into the skin and tissues at the site of the operation. This area of numbness will be restricted and some sensation of pressure may be present, but there should be no pain. Local anaesthesia is used for minor operations such as stitching a cut, but may also be injected around the surgical site to help with pain relief. Usually a local anaesthesia will be given by the doctor doing the operation.

Sedation

Sedation is the use of small amounts of anaesthetic or similar drugs to produce a ‘sleepy-like’ state. Sedation may be used as well as a local or regional anaesthetic. The anaesthesia prevents you from feeling pain and the sedation makes you drowsy. Sedation also makes you physically and mentally relaxed during an investigation or procedure which may be unpleasant or painful (such as an endoscopy) but where your co-operation is needed. You may remember a little about what happened but often you will remember nothing. Sedation may be used by other professionals as well as anaesthetists.

What will I feel like afterwards?

How you will feel depends on the type of anaesthetic and operation you have had, how much pain relieving medicine you will need and your general health.

Most people will feel fine after their operation. Some people may feel dizzy, sick or have general aches and pains. Others may experience some blurred vision, drowsiness, a sore throat, headache or breathing difficulties.

You may have fewer of these effects after local or regional anaesthesia. When the effects of the anaesthesia wear off you may need pain relieving medicines.

What are the risks of general or regional anaesthesia?

In modern anaesthesia, serious problems are uncommon. Risks cannot be removed completely, but modern equipment, training and drugs have made it a much safer procedure in recent years. The risk to you as an individual will depend on whether you have any other illness, personal factor (such as smoking or being overweight) or surgery which is complicated, long or performed in an emergency.

Very common (1 in 10 people) and common side effects (1 in 100 people)

- Feeling sick and vomiting after surgery
- Sore throat
- Dizziness, blurred vision
- Headache
- Bladder problems
- Damage to lips or tongue (usually minor)
- Itching
- Aches, pains and backache
- Pain during injection of drugs
- Bruising and soreness
- Confusion or memory loss

Uncommon side effects and complications (1 in 1000 people)

- Chest infection
- Muscle pain
- Slow breathing (depressed respiration)
- Damage to teeth
- An existing medical condition getting worse
- Awareness (becoming conscious during your operation)

Rare (1 in 10,000 people) and very rare (1 in 100,000 people complications

- Damage to the eyes
- Heart attack or stoke
- Serious allergy to drugs
- Nerve damage
- Death
- Equipment failure

Deaths caused by anaesthesia are very rare. There are probably about five deaths for every million anaesthetics in the UK. For more information about anaesthesia, please visit the Royal College of Anaesthetists' website: www.rcoa.ac.uk

Pain relief

Pain relief (analgesia) after major bowel surgery may be provided by regional analgesia, either by an epidural, caudal or spinal injection (depending upon your particular operation), or by strong pain killers such as morphine, usually administered into the vein by a patient controlled analgesia system. The latter is a system whereby you control the administration of pain killer into your intravenous drip by pressing a button. Local anaesthetic injections around nerves which supply the abdominal wall may also be used e.g. TAP blocks.

Your anaesthetist will discuss pain relief with you prior to surgery, along with the risks and benefits of the techniques.

The risks of the epidural and spinal pain relief are similar to the risks of regional anaesthesia, as listed above.

Other analgesics may also be administered as injections, tablets or suppositories (if appropriate), particularly after a day or two, when the pain will be decreased and the epidural or patient controlled analgesia are stopped.

This hospital has an 'Acute pain team', who are a team of a nurse and anaesthetists who specialise in pain relief after surgery. One of the team may visit you after your surgery to help and advise the ward team with the management of any pain you may have.

Information and support

We might give you some additional patient information before or after the procedure, for example, leaflets that explain what to do after the procedure and what problems to look out for. If you have any questions or anxieties, please feel free to ask a member of staff including the doctor or ward staff. If you have any further questions please contact one of the colorectal specialist nurses.

Important things you need to know

Patient choice is an important part of your care. You have the right to change your mind at any time, even after you have given consent and the procedure has started (as long as it is safe and practical to do so). If you are having an anaesthetic you will have the opportunity to discuss this with the anaesthetist, unless the urgency of your treatment prevents this.

We will also only carry out the procedure on your consent form unless, in the opinion of the responsible health professional, a further procedure is needed in order to save your life or prevent serious harm to your health.

However, there may be procedures you do not wish us to carry out and these can be recorded on the consent form. We are unable to guarantee that a particular person will perform the procedure. However the person undertaking the procedure will have the relevant experience. All information we hold about you is stored according to the Data Protection Act 1998.

Privacy & Dignity

Same sex bays and bathrooms are offered in all wards except critical care and theatre recovery areas where the use of high-tech equipment and /or specialist one to one care is required.

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