



Laparoscopic surgery for colon and rectal cancer

What is laparoscopic or key-hole surgery?

This operation is carried out using a “telescope” called a laparoscope. A laparoscope is inserted through a small cut into the body. The surgeon will also make several other small cuts in the abdomen through which the surgical instruments are inserted. Many kinds of problems can be treated by keyhole surgery and because the wounds are small and cause less pain it means you get better more quickly so you can leave hospital earlier. It also leaves a smaller scar. Keyhole surgery can be used to treat a number of bowel problems such as cancer, large polyps, diverticulitis, and inflammatory bowel diseases such as Crohn’s disease or ulcerative colitis.

What are the colon and rectum?

The colon and rectum are otherwise called the large bowel. The colon is the large intestine and forms the lower part of your digestive tract. The colon and rectum absorb water and hold the waste until you are ready to expel the contents.

What is laparoscopic colonic and rectal resection?

Using a technique known as minimally invasive laparoscopic colon and rectal surgery the surgeon can cut away the diseased part of the bowel through several small incisions. In most laparoscopic colon resections, surgeons operate through 4 or 5 small openings (each about one centimetre long) while watching an enlarged image of the patient’s internal organs on a television monitor. In some cases, one of the small openings may be lengthened to about 5 centimetres to complete the procedure.

After the diseased part of the bowel has been cut away, the two ends of the bowel are joined back together. Depending on the type of procedure, patients may leave the hospital in a few days and return to normal activities more quickly than patients recovering from open surgery.

Agreeing to treatment

We will ask you to sign a consent form agreeing to accept the treatment that you are being offered. The basis of the agreement is that you have had The Christie’s written description of the proposed treatment and that you have been given an opportunity to discuss any concerns. You are entitled to request a second opinion from another doctor who specialises in treating this cancer. You can ask your own consultant or your GP to refer you. Your consent may be withdrawn at any time before or during this treatment. Should you decide to withdraw your consent then a member of your treating team will discuss the possible consequences with you.

What are the advantages of minimal access (invasive) surgery?

Taking out part of your bowel is a big operation. All bowel operations used to be carried out by making a large opening or cut (incision) to your tummy. It meant a much longer time was needed for the wound to heal and for you to feel well again.

Keyhole surgery is different, and although it takes longer to do, your surgeon is able to perform the same task but through a number of small cuts to your body. It means you will:

- recover more quickly and have a shorter hospital stay - in some cases as little as two days
- have less pain from your wound
- get back to your normal activity more quickly
- have smaller wounds which means less risk of wound complications
- have smaller scars
- have a reduced risk of developing other problems including chest infections and possibly reduced hernias and adhesions (internal scarring) in the long term.

Are there any alternatives to a laparoscopic colon and rectal surgery?

It is possible to have conventional colon and rectal surgery when the surgeon using a single larger incision. However, the recovery time is longer because the procedure is more invasive. Patients usually have a stay in hospital or a week or more and usually 6 weeks of recovery.

Are there any risks?

As with all surgery, there is always a risk. Nationally, there is a 1 in 25 risk of dying within 30 days following key-hole bowel surgery. This is influenced by your age and your overall health at the time you have your surgery.

There is a risk that the join in your bowel might leak (this can happen in 1 in 20 or 1 in 25 people depending on where the join is in the bowel). Sometimes this can be treated by a scan and a tube (drain) placed in your tummy temporarily, however, you may need another operation and a permanent or a temporary colostomy bag.

There is also a risk of a chest infection or a blood clot developing in your leg or lung. That is why it is important after your surgery to sit up in bed to help clear the chest and carry out breathing exercises. You will be given a daily injection to thin the blood and prevent clots from developing.

What happens before the operation?

To make sure everything runs smoothly, it's important for you to get ready for your operation. We will give you information before your operation date about what you need to do. This will tell you about what you must eat and drink before your operation. It's important to follow these instructions otherwise your operation may be delayed or even cancelled. If you have any questions, you can contact your key worker or colorectal nurse who will be able to explain and answer any queries you may have.

Your anaesthetist, the doctor who will give you an anaesthetic or medicine that will keep you asleep during your operation, will also talk to you and describe what your anaesthetic will involve. It is important that you let your anaesthetist know if you have any medical problems, such as allergies.

You may be given an enema or other treatment to clear your bowel and have an injection into the skin of your tummy to 'thin' your blood and reduce the risk of blood clots happening. These injections will continue every day while you are in hospital and are sometimes carried on for four weeks afterwards depending on your circumstances.

The nurse will tell you when to stop eating and drinking as this will depend on the time your operation is planned. Generally if you are having the operation early in the morning you can eat and drink the day before up to about 6pm. If you are having your operation in the afternoon you can eat and drink until 8am on that day. On the day of your operation, you may be given high carbohydrate drinks. This is because your body needs energy to help recover from the operation. You can take medications that your surgeon has told you are allowed to take with a sip of water the morning of the surgery.

Preparation and tests before the procedure

- Drugs such as aspirin, blood thinners, anti-inflammatory medications (arthritis medications) and Vitamin E should be stopped temporarily for several days to a week before surgery. Please tell the nurse specialist at the pre-op assessment clinic if you are taking any of these medications and they will advise you when to stop taking them.
- It is important to stop smoking before the operation.
- Pre-operative preparation includes blood tests, medical assessment, chest x-ray and an ECG depending on your age and medical condition.
- It is recommended that you shower the night before or morning of the operation.
- The rectum and colon must be completely empty before surgery. The usual preparation is to drink a cleansing solution. You may be on several days of clear liquids, laxatives and enemas before the operation.
- Arrange for any help you may need at home.
- At the time of surgery antibiotics by mouth are commonly prescribed.

What does the operation involve?

Because your bowel and other parts of your body are tightly packed under your skin, there is not much room for your surgeon to work inside. To create some space for your surgeon to work, a small amount of carbon dioxide is used to inflate your tummy.

Your surgeon works through small cuts made in your skin and uses a laparoscope, a tiny sophisticated telescope connected to a video camera, to carry out the operation. After the diseased part of the bowel has been cut away, the two ends of the bowel are joined back together. This is called an anastomosis. Sometimes, if your surgeon is worried about the join healing, it might be necessary to divert the waste from your bowel through a small hole in your tummy (abdominal wall) to a stoma bag. This might be temporary or be needed for a much longer time. As surgery will vary from one person to another, your surgeon will explain what laparoscopic surgery will mean to you.

How long does the operation take?

The operation and checking that everything is OK may take between one and a half to six hours.

What complications can occur?

These complications include:

- bleeding
- infection
- a leak where the colon was connected back together
- injury to adjacent organs such as the small intestine, ureter, or bladder
- blood clots to the lungs

It is important for you to recognize the early signs of possible complications. Contact your surgeon if you notice severe abdominal pain, fever, chills, or rectal bleeding.

What happens if the operation cannot be performed or completed by the laparoscopic method?

The laparoscopic method cannot be performed on some patients. This decision is made by your surgeon either before or during the actual operation. Some of the reasons may include:

- obesity
- a history of abdominal surgery causing dense scar tissue
- if the surgeon is unable to see the internal organs
- bleeding problems during the operation
- large tumours

What happens after the operation?

- After your operation, you will be taken to the ward or the critical care unit to recover. You may feel some pain in your shoulders and hear a crackling sound (as the gas used during the operation escapes) from your wound. Both the pain which is caused by a build-up of gas and the crackling noise is short-lived and should not cause any harm.
- Your wound will be covered with a dressing (small bandage or plaster). You will have a needle in one of your veins in your arm or back of hand to allow your nurse to inject you with medicines and extra fluids if you need them. There will also be a thin tube (a catheter) passed into the bladder when you are asleep during the operation to check how much urine you are making.
- You may need to have a blood transfusion and/or blood products after the operation.
- You may also have: a thin tube in your neck to help measure the amount of fluid in your body; a thin tube to drain any fluids that might ooze from your wound. You may also have a stoma bag attached to your tummy. This bag collects any waste from your bowel. You may have a thin tube in your back (called an epidural) or arm (attached to a small pump) that allows your nurse to inject painkillers to relieve pain. Sometimes you may also have a small tube attached to your nose to empty your stomach.
- We encourage you to be out of bed the day after surgery and to walk. This will help reduce the soreness in your muscles.
- You will probably be able to get back to most of your normal activities in one to two weeks' time. These activities include showering, driving, walking up stairs, working and engaging in sexual intercourse.
- Please ensure you are given advice at the time of discharge of what to expect following surgery by the ward staff who will also give you contact information if you need to get advice.
- Call your consultant's secretary and make a follow-up appointment approximately 4 weeks after your operation (see last page for phone numbers).

Your recovery

One of the advantages of laparoscopic surgery is speed of recovery. Within a few hours you will be able to sit up in bed. To reduce the risk of chest infections and blood clots, and to keep your lungs working well, it is important to get moving again as soon as possible.

Getting out of bed and sitting in a chair is a good way to start, and your nursing staff will help. Getting fluids into your body is important and you will be able to start drinking right away. Depending on how you are feeling, you will be able to eat again within 1 to 2 days. After a few days you may feel a build-up of wind inside your bowel or want to go to the toilet as normal. When you go to the toilet, it's normal for you to pass a small amount of blood and mucous (slimy liquid).

After you go home

Your health will be regularly checked in the weeks and months that follow your operation. You will also have regular follow-up appointments at the hospital outpatients department. If you are worried or have any questions, you can talk to your consultant's secretary or GP to arrange an earlier follow-up appointment.

Getting fit again

It is normal to feel weak and tired when you leave hospital. Although your body needs time to recover from the stress of a major operation, it is important to start your day-to-day activities as soon as you can.

Walking – You can begin walking the day after your surgery. This can be as simple as getting around your home or taking longer walks as time goes by.

Climbing – Climbing up and down stairs is fine, but early on it is wise to have someone there to give you confidence.

Lifting – You can begin to lift light objects (less than 10lbs or 5kg) after you leave hospital and gradually increase the amount you lift over the next few days. Always stop lifting anything if it causes any pain or discomfort.

Showers – You can take a shower two days after surgery. Gently wash your wound with soap and water. Be sure to rinse well and dry your wound gently.

Driving – Driving is not allowed for at least two weeks after surgery (or after your first follow-up appointment with your surgeon). Do not drive if you are taking prescription painkillers.

Contact your insurance company to find out when you will be able to get cover after your bowel surgery.

Working – This can vary from one person to another. People with jobs that are not physically demanding (for example office work) can often return to work within three weeks of their operation. Physically demanding jobs may require a longer (4-6 weeks) time resting.

Diet

Normally, you can eat as normal after your surgery, although it is best to avoid any foods that you know have caused you problems in the past. Spicy food or food with large amounts of fibre can cause some cramps. Sometimes, solid food can upset you by causing wind or pain. If this happens, dietary supplements or drinks (which you can get from your GP) can help.

Wound care

After your operation, the cut will be stitched back together by your surgeon. There are different ways of stitching the incision. Depending on the type of cotton used, the stitches (often called sutures) will gradually dissolve in your body and disappear. Sometimes you might see some loose cotton hanging from your wound. You can cut this off using clean scissors. If the cotton used is not the kind that dissolves or metal clips are used, then they will need to be removed after 10 days by your GP if you can travel, or district nurse if not.

If Steri-Strips (small pieces of sticky tape) have been used to hold your incision together, they begin to lift off themselves as the wound heals. After about 10 days, they can be gently peeled off.

Medication

Pain: You may feel some pain after your operation but normally it's not serious and painkillers containing paracetamol or ibuprofen are usually sufficient to stop any pain you have.

Constipation: Having surgery and some medicines can cause you to be constipated. It should not last long and should return to normal after 1 to 2 weeks, but if not, laxatives (medicines that help you go to the toilet more often) can help.

When to contact The Christie

If any of the following occur, contact your surgical team right away (phone no. below).

- If you are always feeling sick or being sick
- If you are losing blood from your bottom
- If your body temperature is higher than 101.5°F or 37.5°C
- If you have any pus coming out of your wound or any increase in redness around the wound
- If you have an increase in pain.

9am to 5pm Monday to Friday

Phone your consultant's secretary 0161 446 3366

Out of hours and at weekends

Phone: Ward 10 at The Christie on 0161 446 3860 or 3862.

We try to ensure that all our information given to patients is accurate, balanced and based on the most up-to-date scientific evidence. If you would like to have details about the sources used please contact **patient.information@christie.nhs.uk**

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For more information about The Christie and our services, please visit **www.christie.nhs.uk** or visit the cancer information centre at Withington, Oldham or Salford.

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