

Robotically Assisted Laparoscopic Cystectomy: Kent and Canterbury Hospital

Information for patients from Urology

This leaflet has been produced to explain Robotically Assisted Radical Cystectomy, as a surgical treatment for bladder cancer (this can also be used for benign conditions). This information supports your consultant and specialist nurse consultations.

What is Robotic Cystectomy?

Cystectomy is the surgical removal of the bladder as a treatment for bladder cancer. This procedure can also be used in the absence of cancer for other urological conditions. As part of the cystectomy operation, in men, the prostate is also removed while in women, the uterus/womb and the ovaries are removed. To do this we now use a surgical robot called the Da Vinci® which enables us to do complex laparoscopic or “keyhole” surgery, as opposed to the traditional open surgery. Following removal of your bladder a stoma is formed, also referred to as an ileal conduit. However your surgeon will discuss with you whether you are suitable for other options, such as reconstruction of an artificial bladder if you prefer, this surgery is done at Guy’s and St Thomas’ Hospital in London.

The robot is controlled by the surgeon at all times and does not work independently. The robot is connected to the patient and very small instruments are inserted through small surgical incisions (keyhole) in the abdominal wall. The surgeon sits at a separate console and carries out the operation without touching the patient. The surgeon has complete control of the robot at all times.



Kent and Canterbury is the first hospital in south east England, outside of London, to offer this advanced treatment option.



What is an ileal conduit?

This surgery uses a piece of bowel to construct a reservoir and stoma for the ureters to be diverted into. The advantage of this operation is that, patients can drain urine directly into a stoma bag without the worry of urine leakage and needing to plan when to visit the toilet next. This operation is suitable for all people who have been advised to have their bladder removed even if you have had previous radiotherapy or previous bowel abnormalities.

The ileal conduit operation usually involves using a section of small bowel approximately 10 to 20 centimetres long. This piece of bowel is used to make the new reservoir that replaces the existing bladder. The tubes from the kidneys (ureters) are then implanted into this new reservoir or pouch. The stoma/pouch is then attached onto the skin surface usually on the right side of the belly-button or umbilicus. The conduit will have a spout through the skin around which a stoma bag is placed to collect the urine that drains.

Synthetic tubes known as stents are left in place within the ileal conduit following your operation. They are usually removed either in hospital or by the hospital at home team who will visit you at home after your procedure.

Is the surgeon able to do the same operation as an open cystectomy with the robot?

Yes. In terms of cancer treatment it is regarded as the same as open surgery and does not compromise cancer control.

What are the advantages of robotic surgery?

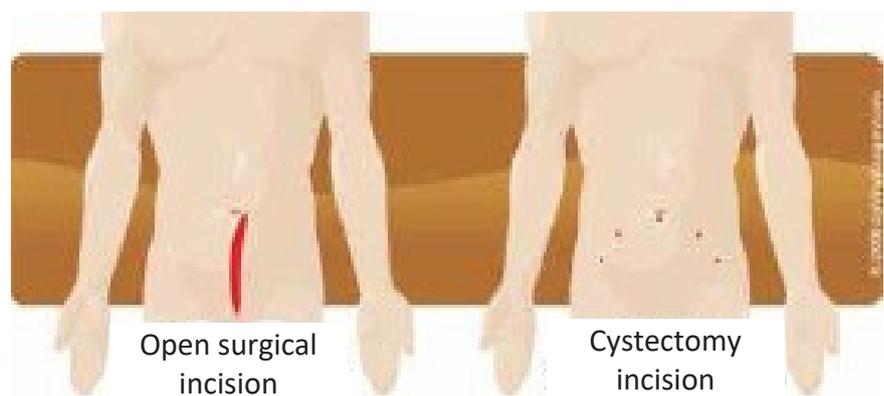
This type of surgery offers many advantages for the surgeon and for the patient.

Patient advantages

- Lower complication rates
- Lower infection rates
- Less pain
- Quicker recovery
- Shorter hospital stay – on average only 4 days compared to 10 for open surgery.
- Less blood loss, therefore, need for a blood transfusion is decreased
- Earlier return to work/normal daily activities
- Improved cosmetic result with much smaller incisions

Surgical advantages

- Highly magnified high definition view of the operation
- Complete 3D view of the bladder and internal anatomy when operating
- Much finer more delicate dissection
- Far more precise surgery
- Eliminates tremor.



Comparisons between incision sites

Are there any alternatives to this treatment?

Yes. These should have been discussed with you by your urologist or oncologist. Depending on your age, type of disease, and other health issues, the only other curative treatment option is radiotherapy. However this type of surgery is only chosen if we feel it is the most appropriate treatment option for you, and you are happy to proceed. Most patients will be offered chemotherapy prior to either surgery or radiotherapy. This would help in shrinking the cancer and make surgery or radiotherapy more effective.

Are there any complications of this surgery?

Yes. All surgery has the potential for complications, however robotic surgery minimises these risks. These should be discussed with you by your surgeon before signing the consent form.

Common/minor risks which may occur within the first 30 days after surgery (70% of complications)

- Bruising in the scrotum or around the wounds
- Constipation – this is important to avoid and you will be given medication for this
- Blood in the urine
- Urinary or wound infection (20%, or one in five patients)
- Facial swelling lasting a few hours
- Shoulder pain lasting 24 to 48 hours
- Bleeding requiring transfusion is approximately 10% (one in 10 patients)
- Small bowel obstruction or Ileus is approximately 20%, with obstruction being rare.

Rare/major complications which may occur within the first 30 days after surgery (30% of complications)

- Damage to structures around the bladder, for example the bowel/rectum/blood vessels (2%, or one in 50 patients)
- Risk of clots in the legs (DVT or deep vein thrombosis), or clots on the lungs (PE or pulmonary embolus), again less than 5%. You will have injections to reduce this problem. Keeping well-hydrated and early mobilisation/walking helps prevent this problem.
- Medical complications such as chest infections or heart attack, again this is rare and is less than 5%.
- Bowel leak, wound breakdown, or bleeding requiring return to theatre is less than 5%.
- Conversion to an open operation – again this is rare at around 1% (less than one in 100 patients).

Long-term complications

- Stoma hernia, prolapse, or scarring needing repeat surgery to repair the stoma can occur in one in 10 patients (around 10 to 15%).
- Leakage around the stoma bag can be an early temporary problem. However the majority of patients will, in time, find an appliance which will suit their requirements and eliminate this problem. You will have a stoma specialist nurse to assist you with this.
- Kidney infections.
 - About 25% of patients (or 25 in 100 patients) may have episodes of kidney infections requiring either antibiotics at home or need hospital admission due to fever and back pain. In this instance antibiotics would be given directly via a 'drip'. These episodes usually resolve after five to seven days.

- Sexual dysfunction.
 - Erections will be affected by this surgery.
 - Males - nerves supplying the erectile tissue are not normally preserved during this surgery, causing loss of erections. In certain circumstances, nerve sparing may be possible. Treatment will involve tablets, or if these don't work then a vacuum pump or injectable treatments. This will be addressed following surgery if this is important to you.
 - Females - vaginal soreness and dryness can cause problems in women particularly during sexual intercourse. This may be improved with creams or lubricants. Part of the vagina is removed, so vaginal shortening and narrowing is usual.

Will I lose my desire/libido after surgery?

No. The operation should not affect libido. It will however affect fertility in men. You will have no ejaculate following the operation and in some men they may notice a small degree of penile shortening.

When can I start sexual relations?

We advise four to six weeks following surgery before sexual relations are resumed, and when you and your partner are happy to do so.

Can the robot breakdown?

Potentially, although this is a very rare scenario (less than 0.5%, or one in 200). If this happens either the operation can be rescheduled or the operation is done as an open operation. Over 2000 robots are being used worldwide and this has only been reported in a handful of cases.

What happens from now?

Once we have decided on robotic surgery you will:

- be referred to a dietician for advice to improve your nutrition status
- be contacted with a date for the operation
- be asked to attend the pre-assessment clinic at Kent and Canterbury Hospital where routine bloods tests and an ECG (heart tracing) are taken, and an assessment of your fitness for surgery is made. You may also be asked to attend an anaesthetist review clinic
- meet the stoma care nurse specialist to discuss the appliance and be assessed for where the stoma will be positioned
- then be admitted to Kent and Canterbury Hospital, the day before surgery, to prepare for surgery the following day.

How long does the operation take?

Between four and six hours. It is done under general anaesthetic, and you will wake up afterwards on the ward. The majority of patients do not need to go to the high dependency unit (HDU) or the intensive care unit (ITU) after the procedure, this is only considered necessary if they have other medical problems.

Will I be in pain?

Robotic surgery is less painful than open surgery, although pain to some degree is expected following major surgery. To negate this, during the operation, the anaesthetist places a drip line (epidural) in your back to give you pain relief for the next 24 to 48 hours. If you feel you still have pain, then please inform the nursing staff so they can give you more pain relief in the form of tablets.

How long will I be in hospital?

The majority of patients will be in hospital for between three and six days. Following your operation you will be having fluids until your bowel starts to work again. You will be encouraged to chew gum as this helps to stimulate your digestive tract. You will also have drip lines in the arm and neck as well as tubes in your tummy and in the stoma. These tubes will be removed before you are discharged.

Following surgery you will also be taught how to administer a small injection that you will need to self-administer for four weeks, to help prevent blood clots forming in the veins in your legs.

How do I prepare for my hospital admission?

- As this is a planned operation, a stoma nurse will visit you either at home or arrange a clinic appointment to discuss the operation with you. A stoma nurse is an experienced professional who specialises in stomas and appliances and will support you through your stay in hospital and once you are discharged. The stoma nurse will assess the most appropriate place for the stoma to be and will mark this area prior to surgery. This is assessed prior to surgery to ensure to avoid any skin creases that occur when sitting and also to avoid any previous surgical scars.
- In the build up to surgery, we recommend that you try and get as fit as you can. Walking is a very low impact and good all round exercise. This is known as pre-habilitation, and this is about being optimally prepared for the procedure. Evidence shows that the more healthy you are before an operation the better the recovery is afterwards. You might need to change your diet before surgery. It is important to eat a balanced, healthy diet. We suggest that on the day before your procedure you take only a light diet. This means you should avoid heavy, stodgy food as well as food high in fibre or roughage. Eat chicken or fish and white foods on this day. On the day of surgery you will not be able to eat or drink. A 'drip' will set up to replace essential nutrients if required. High protein drinks will be prescribed for you to drink the day before surgery.

Will I have help once discharged?

Yes.

- The stoma team will make arrangements to see you at home to ensure you are managing your appliance.
- You will be referred to the community nursing team who will visit you at home to review your progress.
- Before leaving hospital you will be given discharge instructions.
- The specialist nurse team will be in touch to check your progress.

If you feel you may have difficulty managing upon discharge, please raise this with your specialist nurse prior to admission. It is also worthwhile addressing this with the ward staff as they will plan your discharge date with you.

How will I pass urine after the operation?

After the operation the kidneys will produce urine in the normal way. As soon as your kidneys produce urine, it drains down the ureters and through your ileal conduit into the bag directly without being held within your body.

How often will I need to empty by stoma bag?

Once the stoma bag is full, you will need to empty this. The stoma bag will require a change once every one to three days. This depends on the appliance and your personal preference. At night, since you will continue to produce urine, you will be taught how to attach your stoma bag to a larger overnight bag in order to avoid the need to wake up and empty the bag during the night when it is full.

When do I get the results of the bladder?

This takes our pathologists about two weeks to process and examine the specimen. Your bladder cancer specialist nurse will telephone you three weeks following your discharge to see how you are doing at home and during this phone call your results will be given to you if you so wish.

More detail about your results and follow-up plan will be discussed at the time of your routine follow-up six weeks following your operation with your surgeon.

Will I need any other forms of treatment, and what follow-up will I receive?

Most patients do not need any other forms of treatment. Some patients with more advanced disease may be offered chemotherapy if it was not given to you before your operation. Otherwise, you will have routine follow-up appointments after your operation at six weeks, three months, and then every six months for two years, with yearly reviews thereafter. During these visits, blood tests and scans will be organised. The schedule of follow-up investigations will be discussed with you at your six week appointment.

When can I resume normal activities?

It is important that you do not confine yourself to bed and gently move around at home without any lifting or straining for the first four weeks. Energy levels can vary from day to day following your surgery so have regular rest periods in the first four weeks. Thereafter, exercise should be gentle but gradually built up on a daily basis as symptoms allow.

You should take a full and balanced high fibre diet and maintain a good fluid intake especially in the first two weeks at home. Occasional alcohol consumption is permitted but should be restricted in the first two weeks after the operation.

When can I drive?

Driving can be attempted after four to six weeks, if you have no pain, are comfortable, and would be confident to make/perform an emergency stop if required.

When can I return to work?

Again this is variable. You can return to work when you feel able. Some patients are back to work after four weeks, others take six to eight weeks. It is important only to do light duties initially and no heavy lifting for four weeks.

When can I fly?

Short haul six weeks. Long haul 12 weeks.

These are just minimum recommendations and again if you have any concerns please delay your travel. You must also check with your carrier and travel insurance company.

What do we do to improve our service?

We are constantly trying to improve the high quality care we provide. We continually audit and assess our results.

Where can I get further information about the operation?

- da Vinci Surgery www.davincisurgery.com/urology/urology-procedures/cystectomy.html
- Bladder Cancer Web Cafe blcwebcafe.org/roboticsurgery.asp
- North Bristol NHS Trust
www.nbt.nhs.uk/news-media/latest-news/robot-used-create-new-bladder
- NHS Choices www.nhs.uk/Conditions/Cancer-of-the-bladder/Pages/Treatment.aspx
- Cancer Research UK www.cancerresearchuk.org/cancer-info/cancerstats/types/bladder/
- Patient.co.uk www.patient.co.uk/health/Cancer-of-the-Bladder.htm
- Urostomy Association www.urostomyassociation.org.uk/

Useful contact numbers

- Morna Jones
Bladder Cancer Specialist Nurse
Kent and Canterbury Hospital
Telephone: 01227 868666
- Clarke Ward, Kent and Canterbury Hospital
Telephone: 01227 783103
- Stoma Care Nurse Specialists
Queen Elizabeth the Queen Mother Hospital, Margate
Telephone: 01843 225544
- The Bladder and Bowel Foundation (B&B)
Nurse Helpline: 0845 345 0165
- Macmillan Cancer Support
89 Albert Embankment
London SE1 7UQ
Free helpline: 0808 808 00 00 (Monday to Friday 9am to 8pm)
- Urostomy Association (support and information for patients and families with urinary diversions) Helpline: 01889 563191