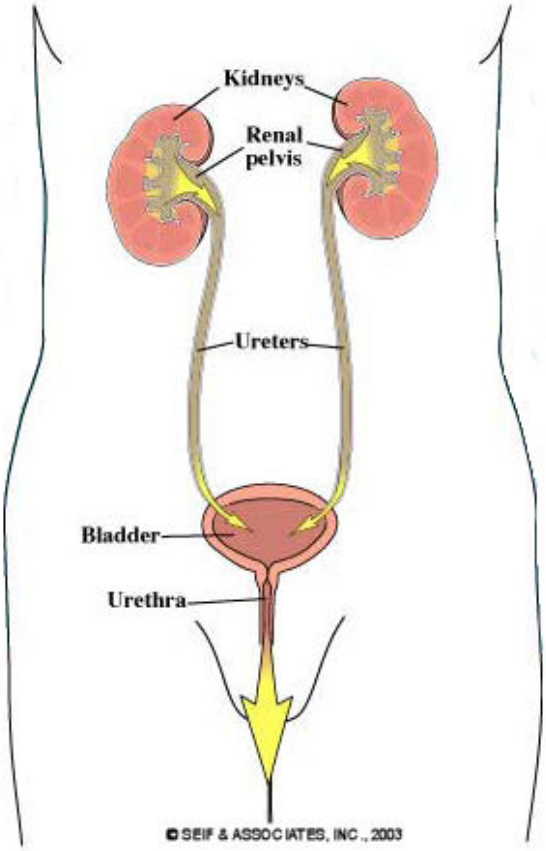
Cystectomy or Partial Cystectomy

Cystectomy is the surgical removal of all or part of the bladder. It is used to treat bladder cancer that has spread into the bladder wall. It is also used to treat cancer that has come back following the first surgical treatment. This is surgery which is performed after you and your caregiver have discussed your options and decided that this treatment is the best possible means of success for you. Surgery in early stages offers the best hope for cure. The procedures offer many people a long and satisfying life.



BEFORE THE SURGERY

Staging of bladder cancer (figuring out the level of the disease) is done prior to any decisions. You and your caregiver will have the best information so you will make the best possible decisions. Read everything you can to be informed. An informed patient:

- Can better take care of themselves following surgery.
- Will know what to expect.
- Will handle any problems more easily.

Testing before surgery may include:

- Laboratory (blood) work.
- X-rays.
- Colonoscopy (physically looking into your colon).

Nearby lymph nodes may be removed during a cystectomy. These lymph nodes can be tested for cancer. This provides information about the stage of the cancer. If all of these tests point to surgery as the best option, you and your caregiver will decide which type of surgical procedure will work best for you.

What to think about prior to surgery:

- You may donate your own blood to use during surgery. This is the safest type of transfusion when you have time to plan for your surgery. If you do this, start the donations several weeks before the surgery. This will give you time to donate enough blood and rebuild your blood volume before surgery.
- It is important to drink a lot of clear liquids during the 2 days before surgery to avoid dehydration. This also improves your blood volume. Do this only if there are no fluid restrictions.
- In the past, a cystectomy done on men usually removed the nerves that control erections. Now nerve-sparing procedures may be used to avoid damaging the nerves than run alongside the prostate.
- In the past, a woman's vagina and urethra were removed along with the bladder in a radical cystectomy, making sexual intercourse impossible. Surgeons now are able in many cases, to spare or repair the vagina and urethra.

Cystectomy usually requires a hospital stay of 3 to 7 days. The discomfort following surgery is easily treated with medicine. Complete recovery usually takes a couple months.

PROCEDURE

There are two types of cystectomy:

- **Segmental or partial cystectomy** is the removal of part of the bladder. It is used to treat grade I (early) cancer that has invaded the bladder wall in just 1 area. This allows you to continue a relatively unchanged way of going to the bathroom. This may be a better choice, in some cases, than chemotherapy and radiation treatment.

- **Radical cystectomy.** With radical surgery, your surgeon will create new pathways for you to get rid of your urine. **Radical cystectomy** is the removal of:
  - The entire bladder.
  - Nearby lymph nodes.
  - Part of the urethra.
  - Nearby organs that may contain cancer cells.
  - The prostate, the seminal vesicles and part of the vas deferens in men.
  - The cervix, the uterus, the ovaries, the fallopian tubes and part of the vagina in women.

Procedures for making a new urination pathway after bladder surgery:
With a radical cystectomy, your surgeon will make a new pathway *(urinary diversion)* for urine to pass from your body.

- **Ileal conduit.** A small section of your *small intestine* (bowel) is removed. The remaining bowel is joined together again to allow normal bowel function. The removed section of bowel is used to connect your *ureters* (the tubes that normally take the urine from the kidneys to the bladder) to an opening (*stoma*) through your abdomen. The urine passes from the ureters through the ileal conduit and out the stoma into a bag that is attached to your skin (*urostomy*). You will need to be empty the urostomy bag regularly using a drain on the bottom of the bag. A larger bag can be worn overnight. You should learn how to care for your urostomy.
- **Cutaneous ureterostomy.** The surgeon connects the ends of the 2 ureters (which normally attach to the bladder) to 2 different stomas in the abdomen. The urine passes through the 2 ureters and out the 2 stomas into 2 bags. This is often done in children as a temporary surgery. This surgery is rarely performed on adults.
- **Bladder substitute (orthotopic diversion or neobladder).** If some of the urethra (tube that normally drains the urine out of the body from the bladder) remains, a part of the bowel can be removed. The remaining bowel is joined together again to allow normal bowel function. The removed bowel section is used to make a pouch *(reservoir)* that connects the ureters to the remaining urethra. It may be possible to empty the bladder normally, but you may have to learn to use a small tube *(catheter)* to drain the urine several times a day.
- **Continent cutaneous reservoir.** The surgeon removes part of your bowel to make a reservoir. The remaining bowel is joined together again to allow normal bowel function. The removed bowel section is used to connect the ureters to a stoma through the abdomen. The urine is drained through the stoma using a catheter.

Things to consider before the procedure:

- In women, radical cystectomies usually involve the removal of the whole bladder, the urethra, the lower end of the ureters, the front wall of the vagina, the womb (*uterus*), fallopian tubes and ovaries. In younger women, the ovaries may be preserved. As a result, the vagina will be shorter and narrower following the operation.
- In men, radical cystectomies usually involve the removal of the whole of the bladder, the prostate gland, the lower ends of the ureters and sometimes the urethra.
- It is sometimes impossible to avoid damage to the nerves in the pelvis. This may cause men to be unable to achieve an erection. In some men, the inability to obtain an erection can be helped by an injection or an operation. Sexual feeling and orgasm (climax) may be impossible for both male and female patents.
- The major disadvantage of partial cystectomy over radical cystectomy is the issue of cancer recurrence in the bladder. This implies a risk of disease progression, metastasis, and death from cancer.
- A cystectomy is an extensive surgery resulting in the removal of most of the organs in the pelvis. This is done to keep the risk of cancer recurrence as low as possible. Treatment following cystectomy may include radiation therapy, chemotherapy and biological therapy. Follow-up for partial cystectomy includes cystoscopy and urinary exams every 3 months for at least 2 years, with regular CT scans of the pelvis and abdomen.

- It may be helpful to have a partner and/or family member listen to the surgeon with you. Many people struggle with having a bag hanging on their skin to collect urine. Most people adapt quickly and usually do well.
- A Wound, Ostomy and Continence (WOC) nurse may see you before the surgery to explain the surgery. After the surgery, the WOC nurse may teach you to care for the urinary diversion and/or coordinate care with your surgeon and other caregivers.
- A WOC nurse may be able to introduce you to someone who has already had your surgery or may be able to give you information on support groups in your area.

COMPLICATIONS AFTER A RADICAL CYSTECTOMY MAY INCLUDE:

- Infection.
- Bowel obstruction.
- Erection problems (in men).
- Fistula formation.
- Rectal injury.
- Urine leak.

Sometimes additional surgery may be needed to correct some of these complications.

SEEK MEDICAL CARE IF:

- There is redness, swelling or increasing pain in the wound.
- There is pus coming from the wound.
- There is drainage from a wound, lasting longer than 1 day.
- You or your child has an oral temperature above 102º F (38.9º C).
- Your baby is older than 3 months with a rectal temperature of 100.5º F (38.1° C) or higher for more than 1 day.
- There is a foul smell coming from the wound or dressing.
- A *suture* (stitch) breaks open or the edges of the wound are not staying together after sutures have been removed.
- You notice increasing pain in the shoulders (shoulder strap areas).
- You develop dizzy episodes or fainting while standing.
- You develop persistent nausea or vomiting.
- You have problems with your stoma care or questions about how to care for the urinary diversion.

SEEK IMMEDIATE MEDICAL CARE IF:

- You develop a rash.
- You have difficulty breathing
- You or your child has an oral temperature above 102º F (38.9º C), not controlled by medicine.
- Your baby is older than 3 months with a rectal temperature of 102º F (38.9º C) or higher.
- **Your baby is 3 months old or younger with a rectal temperature of 100.4º F (38º C) or higher.**

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