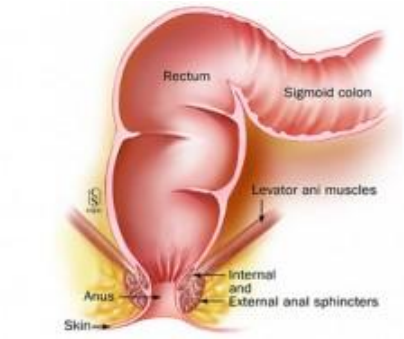
INFORMATION ON RECTAL CANCER AND TREATMENTS:

What is Rectum?

Large bowel is made of colon and rectum. The rectum is the final straight portion of the large intestine. It terminates in the anus. The human rectum is about 12 cm long. At its commencement its caliber is similar to that of the sigmoid colon, but near its termination it is dilated, forming the rectal ampulla. Rectum stores our waste. Tumors of this portion of colon are relatively common.

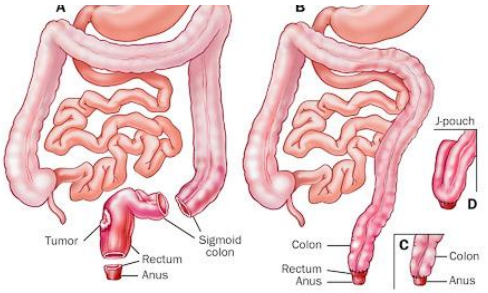


The Procedure:

A number of different surgical procedures are available to treat tumours of the back passage, the choice depending on where the tumour is and how deep it has spread:

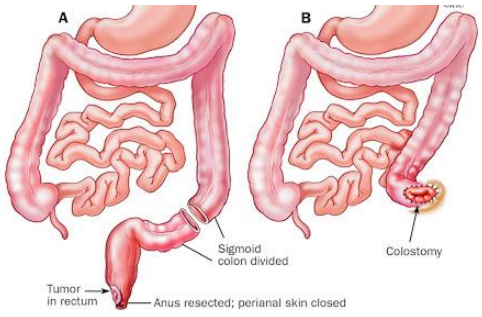
Anterior Resection or Low Anterior Resection: Used for most tumours of the back passage, except when the tumour is very close to the anal muscles (sphincter) those control the anus. The bowel and the back passage are joined together so that the patient can pass motion though the back passage. These surgeries can only be performed when there is enough length of normal bowel is left in-order join it back.

Artist's depiction of anterior resection



Abdomino-Perineal Resection: This is done when the tumour is in the lowest part of the back passage. The back passage and the opening to the back passage are removed and the area is stitched up and will remain permanently closed. This means an operation to remove the rectum and anus with creation of a **permanent colostomy** (a bag on the abdominal wall). Two surgeons may work simultaneously or one operator may work alone. The attachments of the lower bowel are cut and the bowel in the pelvis is freed, while protecting other near by structures, especially the ureters (tubes from the kidneys to the bladder). The surgeon cuts around the anus and frees the lower back passage, working upwards to meet the abdominal operation. When the bowel is free, it is clamped at a suitable place and cut and the specimen is sent for detailed examination. Additional organs like uterus or portion of vagina may have to be ressected in order to completely remove the tumor (in females only). The surgeon brings the cut end of the bowel out onto the abdominal wall through a separate cut to make a colostomy and stitches this into place. Tube drains maybe left in the operation site and the abdominal wound is

Artists depiction of abdomino-perineal resection

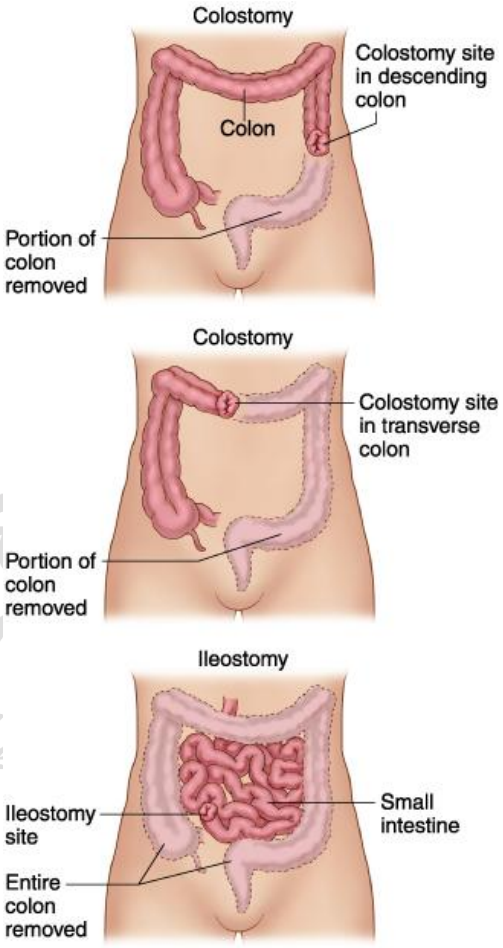


closed. Any bleeding points in the pelvis are sealed and the perineal wound is closed, using one or more soft drains to reduce fluid collections. If the pelvic tissues cannot be satisfactorily closed, the area may be packed and the perineal defect will then gradually close spontaneously.

Surgery is the main treatment for tumours of the bowel. Usually, the tumour and a length of normal bowel on either side of the tumour (as well as nearby lymph nodes) are removed. The healthy parts of the bowel are then **stitched or stapled together (anastomosis).**

Stoma:

If the bowel cannot be put back together or if the anastomosis is to be protected, an opening will be made on the outside of the body for waste to pass out of the body. This is called a stoma. A stoma is made to allow waste to pass through an opening in the abdominal wall. The waste collects in a disposable bag which is stuck over the opening.



Temporary Stoma: Sometimes, a **temporary ileostomy/colostomy** is needed until the joined bowel has healed, and then it can be put back. The reversal of stoma is done by further surgery. Ileostomy is placed on lower left abdomen (belly), whereas colostomy would be on left side or upper right abdomen.

Permanent Stoma: However, in case of **Abdomino-Perineal Resection, the colostomy is permanent**, which means it can never be put back, and there will always be an opening on the skin for bowel waste to pass through.

General Preparations:

Before surgery, the bowel must be prepared. You will be on a clear fluid diet and given a medicated drink to help clean the large bowel. This can cause diarrhoea and cramps, and may be tiring. The medicated drink will completely empty your bowel. You will then fast for at least 6-8 hours before your surgery. If you are having a colostomy, the surgeon or a stoma nurse will discuss with you the best site for your colostomy and will mark the area with a marker pen. It is usually placed below your belt line, away from any other scars you may have and at least 8 - 10 cm away from your wound, depending on your size and shape.

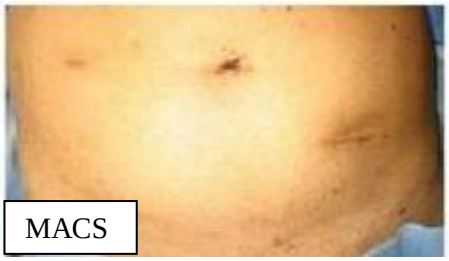
Once inside operating room**, under a general anesthesia** a urinary catheter is placed in the bladder and you would be positioned for access to the chest, abdomen and pelvis. A thin flexible tube would be passed through your nose into stomach (nasogastric tube) to clear the contents in the stomach. This tube will be maintained for few days after surgery. To prevent complications such as infection, you will be given antibiotics at the time of your operation. To

stop a blood clotting in your legs from happening a small injection of a drug known as anticoagulant will be given daily after the operation.

Approaches to Surgery:

Minimal Access Cancer Surgery (MACS): One or more tubes are put into the abdomen and instruments passed down the tube to examine the inside of the abdomen and pelvis using a camera and video monitor. Sometimes, bands of fibrous tissue grow around the bowel or other organs. If so, the doctor may need to cut these. The surgeon looks for any signs that make the **procedure not viable (inoperability)** like spread of disease to liver or other sites. If operable, proceeds with one of the above mentioned procedures. The surgeon may **convert to open procedure** if the surgeon perceives that proceeding with laparoscopy may not feasible.


OPEN


MACS

Open: The surgeon opens the abdomen and examines the extent of the disease. The surgeon looks for any signs that make the **procedure not viable (inoperability)** like spread of disease to liver or other sites. If operable, proceeds with one of the above mentioned procedures.

After the procedure:
After the operation the nursing staff will closely watch you until you have recovered from the anaesthetic. You may even be cared for in the intensive care unit immediately following your surgery. The recovery period after colon surgery varies. It usually involves a stay in the hospital from 3-10 days in uncomplicated cases. On return from your surgery you will have a catheter (plastic tube) in the bladder to measure and drain your urine. After surgery you will be given intravenous fluids (a drip) through which antibiotics may be given. The drip will remain in place until you are able to drink enough fluids.

Diet: During the first few days of recovery, you will not be able to eat until the bowel has begun to work again. You know the bowel has started to work again when you pass wind and/ or have a bowel movement. You will then begin to take liquids by mouth and then solid food.

Ileostomy or Colostomy (Stoma): If you have a stoma, the stoma drains bowel waste from the bowel into the stoma bag. Most stoma waste is softer and more liquid than normally passed bowel waste. The thickness of the bowel waste depends on where the stoma is. You will be taught how to clean around the stoma and change the stoma bag. The stoma bag sticks to the skin around the stoma with special glue, and can be thrown away when dirty. This bag does not show under clothing, and most people learn to take care of these bags themselves.
Wound: Your wound will have stitches and/ or staples and is usually covered with a dressing, which may be adhesive plaster or a spray on plastic covering. **You can bath normally and wash your wound.**

Drain: You may also have a small tube that drains into a bag or a bottle from near your wound. This is called a drain. The wound drain removes fluid from your wound and helps in the healing process. It is taken out when the drainage has dried up.

Your lungs and blood supply: It is likely that on your return from surgery you will be wearing elastic (anti-embolism) stockings. These are tight fitting stockings that are used to reduce the risk of blood clots forming in your legs. It is very important after surgery that you start moving as soon as possible. This helps to prevent blood clots forming in your legs and possibly going to your lungs. This can be fatal. Also, you need to do your deep breathing exercises. Take ten deep breaths every hour to prevent secretions in the lungs from collecting. If this happens, you may develop a chest infection. At all costs, avoid smoking after surgery as this increases your risk of chest infection. Coughing is painful after abdominal surgery.

Exercise: Expect to feel tired for some time after surgery. You need to take things easy and gradually return to normal duties, as you feel able to. This process will be **quicker when the surgery is performed using MACS.** After open surgery it usually takes at least 6 months to get over the operation. You should not drive during the first 2-3 weeks. Do not lift heavy weights for at least six weeks after open surgery. This is to prevent a rupture where the cuts were made and allow healing to take place inside.

Further treatment: There may be need for further treatment in the form of radiation therapy and chemotherapy or their combination. This will be decided based on the results of final microscopy. If you have already received any of the above, you may be placed on follow-up.