

Understanding Rectal Cancer

Cancer is the word used to describe the uncontrolled growth and invasion of abnormal cells within the human body.

The **rectum** is end of the gastrointestinal tract and extends from 10 to 15 cm from the anus to the sigmoid colon.

Rectal cancer refers to the uncontrolled growth and invasion of a mass of cells, called a tumor, in the rectum. Rectal cancer may have no symptoms or may cause rectal bleeding and pain, and a change in bowel habits. It is diagnosed with a colonoscopy or barium enema and confirmed by a biopsy.

Once diagnosed, a rectal cancer needs to be clinically staged. Staging refers to describing the extent to which the tumor has invaded. There are three components to staging.

“T” for tumor, refers to the depth to which the tumor has invaded the wall of the rectum.

“N” for nodes, refers to the presence or absence of tumor within the lymph nodes around the rectum.

“M” for metastases, refers to to the spread of cancer beyond the lymph nodes, to organs like the liver, lung, brain, or bone.

Clinical Staging is accomplished with a combined CT-PET Scan and a pelvic MRI scan, and if necessary an ultrasound performed with an endoscope through the rectum. Pathologic staging is done on a specimen that has been surgically removed from the body.

The stage of a rectal cancer helps determined treatment, and helps estimate survival.

IF UNTREATED, RECTAL CANCERS WILL ALMOST ALWAYS INVADE, SPREAD THROUGHOUT THE BODY AND CAUSE PAIN, SUFFERING, BLEEDING, OBSTRUCTION, AND ULTIMATELY DEATH.

Stage I cancers which are confined to wall of the rectum and have no evidence of lymph node spread or metastases are treated by surgery. Estimated five year survival following successful surgery is 90%.

Stage II cancers have invaded through the wall of the colon. Estimated five year survival is about 80%.

Stage III cancers have invaded the lymph nodes. Estimated five year survival is about 50%.

Stage IV cancer refers to cancer that has spread to the liver, lung, bone, brain, or other organ that cannot be removed surgically. In this case the cancer cannot be cured.

Patients with this stage of cancer are treated with chemotherapy and radiation to control the cancer. Surgery is used to relieve blockage, bleeding, or rupture.

Treatment

Stage I cancers are treated with surgery alone.

Both Stage II and Stage III cancers are usually treated with radiation, chemotherapy and surgery. The usual plan is to undergo both radiation and chemotherapy first for six weeks, then rest and recover for another 5-6 weeks. Next, surgery is performed and requires 5-7 days in hospital and 4-6 weeks recovery. Finally, an additional six months of chemotherapy is recommended.

Chemotherapy and Radiation

Radiation and Chemotherapy are directed by a medical oncologist-hematologist, and by a radiation oncologist. Generally, radiation involves external beam approach for a dose of approximately 5400 rads given 5 days a week for 6 weeks. Chemotherapy involves the use of the drugs 5-fluouracil, leucovorin, oxaliplatin, irinotecan, and avastin. It usually requires the placement of an long term intravenous catheter called a mediport, passport, Hickman, Broviac, or Groshong, type catheter. These are place in the arm or chest under local anesthesia. Some chemotherapy is given by a portabl infusion pump continuously over 24 hours. Some is given during weekly visits to the medical oncologists office, and some is given orally.

Surgery

Surgery is performed by a surgeon who specializes in colorectal surgery or surgical oncology. The goal of surgery is to remove the tumor completely, with negative margins, meaning an area of normal tissue surrounding the tumor. Also the goal of surgery is remove the lymph nodes that surround the area of the tumor so these can be examined by the pathologist.

Following removal of the tumor and the lymph nodes, the next goal of surgery is to reconnect the intestine so that stool may pass through the anus. In certain cases, this cannot or should not be done and a colostomy is necessary. A colostomy is an opening in the abdominal wall, usually on the left side of the body through which the remaining colon is brought and connect to a bag designed to collect stool.

When a reconnection is possible, and appropriate, this is called an anastomosis.

Anastomosis may be performed between the remaining colon and the remaining rectum, or between the colon and anus. After connection, a temporary diverting loop ileostomy is created on the right side of the body, to divert stool away from the area of surgery.

This is to decrease the likelihood of leakage of stool from the anastomosis, and to allow the anastomosis to heal.

RISKS

Complications of surgery include

- Leak from the anastomosis, with abscess and fistula requiring additional surgery
- Need for colostomy
- Bleeding, infection, abscess, blockage, stricture,
- Difficulty urinating
- Incontinence to urine or stool
- Difficulty with erection and ejaculation in men
- Difficulty with vaginal lubrication, and pain with sex in women.
- Additional risks are discussion in the handout "Preparation for Abdominal Surgery."

Abdominal Perineal Resection and Myocutaneous Flap Closure

If the cancer involves the anal sphincters (pelvic floor muscles), then these are removed with the rectum. This leaves a large space that needs to be closed. In this case, a plastic surgeon is consulted to help close this defect by moving skin, and muscle from another part of the body, usually the abdominal wall to fill in the defect. This is a myocutaneous flap, and is performed by a plastic surgeon after the tumor is removed.