Rectal Cancer Guide

The Rectum

The organs in the body that help digest food are part of the digestive system, also called the gastrointestinal (GI) tract. The small intestine and large intestine (colon) are part of the GI tract. See Figure 1. The rectum is the last 8 inches of the colon. The rectum stores stool until it leaves the body through the anus (opening to outside of the body). The anal sphincter muscles are located around the anus and help control the flow of bowel movements.

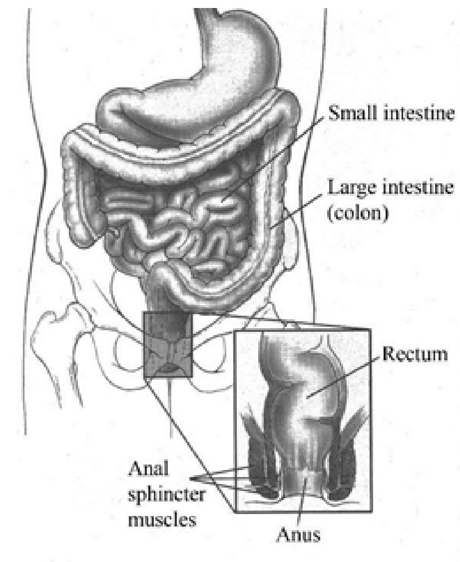

Figure 1
The rectum and anus
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Rectal Cancer

Cancer that begins in the rectum is called rectal cancer. Rectal cancer can cause two types of cancers: local disease and distant disease. Each is treated differently.

Local Disease

- Some rectal cancers do not grow beyond the inside of the rectum.
- Other rectal cancers can grow through the wall of the rectum and invade other important organs nearby.
- May cause rectal bleeding, changes in bowel movements and a blockage.

Distant Disease

- Cancer can spread from the rectum through the bloodstream and lymph nodes to other organs or parts of the body.
- The lungs and liver are the most common organs for distant spread of rectal cancer.
- When cancer spreads beyond the original site, it is called a metastasis.

Diagnosis

Your doctor will have you undergo tests and exams to help find where cancer is in your body. This process is called staging. After staging is complete, your doctor will talk with you about a treatment plan for you.

The stage of cancer depends on 3 major factors:

- How far the cancer has grown into the rectal wall
- Whether the lymph nodes near the rectum are involved
- Whether the cancer has metastasized (spread to other organs)

Tests that are performed to help stage or diagnose rectal cancer include:

- Colonoscopy – Checks the rectum and entire colon using a scope (flexible, lighted tube).
- Sigmoidoscopy – Checks the rectum and part or all of the colon using a scope.
- Proctoscopy – Checks the rectum and part of the colon. This allows the doctor to estimate the distance of the tumor from the anus.
- Rectal biopsy – Removing a small tissue sample from the rectum. The tissue will be used to make a diagnosis.
- Endoscopic ultrasound – Uses sound waves to make pictures of the wall of the rectum. May show if the cancer has grown beyond the inside of the rectum and if lymph nodes are involved.
- Rectal or pelvic magnetic resonance imaging (MRI) – Creates images of the rectum to see if the tumor is near surrounding organs.
- Computed tomography scan (CT scan) – Takes multiple detailed pictures of organs, including the lungs, liver, kidneys, lymph nodes and bones.
- Chest x-ray – Produces an image of the chest.
- Blood tests – Checks how organs are working.

Treatment

Your personal wishes and general health are important when deciding on and planning treatment. Treating rectal cancer can involve surgery, chemotherapy (chemo) and radiation treatment. These are explained on pages 2 to 6.

Possible treatment plans:

- Surgery alone
- Chemo and radiation treatment before surgery
- Chemo before surgery
- Chemo after surgery

Treatment goals:

- Remove the tumor and surrounding lymph nodes
- Leave a margin of healthy tissue
- Maintain or regain normal function of the rectum, if possible
- Reduce the risk of the cancer returning

Surgery

Surgery is the main and most common treatment for rectal cancer. Generally, the surgeon removes the tumor along with part of the healthy colon and rectum and nearby lymph nodes. The surgeon will try to keep the anus and sphincter muscles, if possible, so that the bowel can function after surgery. Surgery type is based on the size and location of the tumor and whether the tumor has spread to surrounding organs.

Types of Surgery

Local Excision

- Generally done for early stage cancer
- Done if the tumor is in the mid to lower portion of the rectum
- Surgery done through the anus
- Removes tumor along with some healthy tissue (Figure 2)
- Does not remove lymph nodes

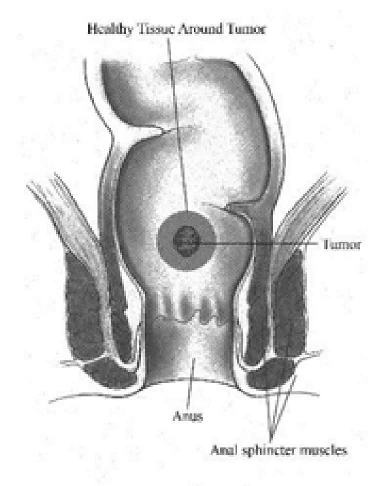

Figure 2 Local Excision
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Low Anterior Resection (LAR) and Proctectomy

- Removes the tumor, a larger area of healthy tissue and surrounding lymph nodes
- (Figure 3)
- Connects the ends of the colon and rectum with sutures (stitches) or staples, which is called an anastomosis (Figure 4)
- Proctectomy surgery removes entire rectum down to the level of the anal canal. The remaining end of the colon is sutured or stapled to the anal canal.
- Patient will likely have a temporary ostomy. This is an opening in the abdomen where a bag is attached to collect body waste (stool).

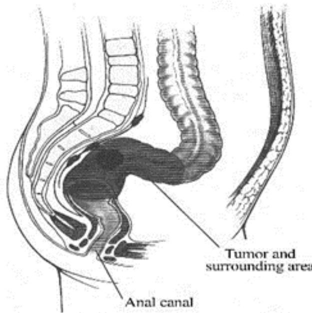

Figure 3
Low Anterior Resection (LAR)
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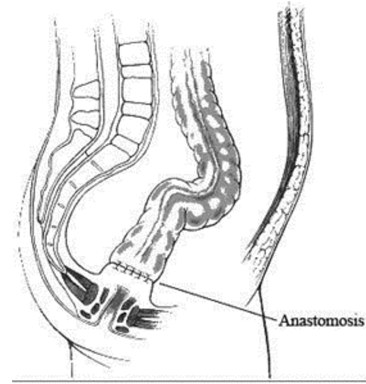

Figure 4
Proctectomy
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Abdominal-Perineal Resection (APR)

- Done if tumor is very low in the rectum, near or involves the anus or sphincter muscles
- Lymph nodes, rectum, anus and sphincter muscles are removed (Figure 5)
- The patient will have a permanent colostomy (Figure 6)

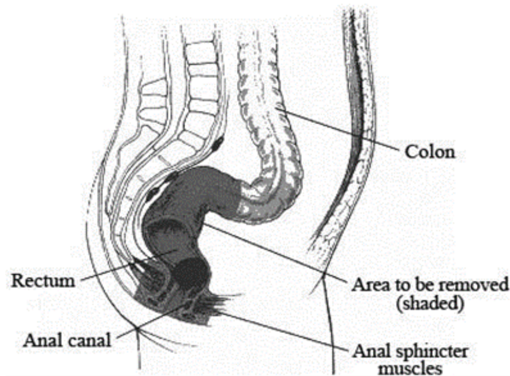

Figure 5
Abdominal-Perineal Resection (APR)
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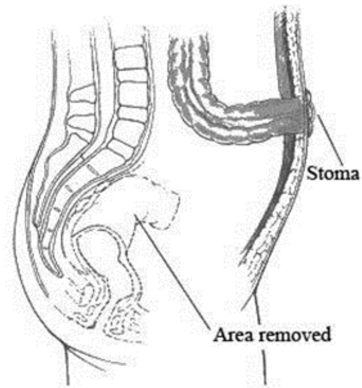

Figure 6
Colostomy and Stoma
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Ostomy/Stoma after Rectal Surgery

- Patients may need a temporary or permanent ostomy depending on their type of rectal surgery.
- The surgery involves bringing a segment of the intestine up to the abdominal wall and making an opening (stoma) to the outside of the body (Figure 6).
- Stool leaves the body through the stoma.
- The stoma does not change or limit the patient's physical activity.
- A wound ostomy continence (WOC) nurse visits with patients before and after surgery.

Types of Ostomies

Ileostomy

An ileostomy is made from the last portion of the small intestine. Stool will become loose and watery and leave the body through the stoma. The liquid stool can irritate skin around the stoma. It is important to maintain good skin care. Tell your WOC nurse if you see any redness, burning or skin problems around the stoma. Diarrhea can cause you to lose too much fluid (dehydration). Ask your care team about how much water to drink daily. You may need to take fiber or Imodium® to help control stool output and prevent dehydration while you have an ileostomy. Your care team will give you information on how to do this.

An ileostomy can be reversed usually within 2 to 3 months (if no chemo is given after surgery). This allows time for the colon or rectum to heal after surgery. Afterwards, bowel movements can leave the body through the anus. Use ointment to protect the external skin around your anus until your bowels are functioning normally.

Colostomy

A colostomy is made from the colon (large intestine). There is generally less skin irritation around the stoma because solid stool leaves the body through this type of ostomy. A colostomy can be temporary or permanent. The timing of reversing the colostomy depends on the patient's treatment plan. The colostomy may be permanent if the cancer is located very low in the rectum.

Radiation Treatment and Chemotherapy

Your doctor may advise you to have radiation treatment and/or chemo before or after surgery:

- Neoadjuvant (also called preoperative) therapy is treatment given before surgery.
- Adjuvant therapy is treatment given after surgery.

The main goal of preoperative and adjuvant therapy is to reduce the risk of the cancer coming back or spreading to another organ. Shrinking the tumor is another goal of this therapy. Sometimes, surgeons may be able to completely remove smaller tumors and preserve the anal sphincter muscles.

Radiation Treatment

Radiation treatment uses high-energy x-rays to kill cancer cells. During daily outpatient visits, Monday through Friday, patients receive a prescribed amount of radiation that is directed to the tumor and nearby lymph nodes.

Side effects are very specific to the treatment area. Patients may have diarrhea due to changes in the mucous lining of the small and large intestine from the treatment. Diarrhea is temporary and clears up after treatment is complete.

Chemotherapy (Chemo)

Chemo helps kill cancer cells in the body. Chemo involves taking medicine either intravenously (through a vein) or by mouth. It may be given with radiation. Chemo is used alone to decrease the risk of the rectal cancer spreading to other organs. It is also given after surgery to reduce the risk of the cancer returning. Because chemo affects cancer cells as well as healthy ones, its side effects are more general.

Treatment Summary

Stage of Rectal Cancer	Tumor Characteristics	Treatment Plan
Early Stage	• Tumor does not grow through rectal wall • No involved lymph nodes	Surgery alone – with or without a stoma
Locally Advanced	• Tumor has grown through rectal wall • Rectal lymph nodes are involved • Tumor invades a nearby organ, such as: – Vagina (in women) – Prostate (in men) – Bladder – Bone	• Radiation with chemo before surgery • Surgery with temporary or permanent stoma • Chemo after surgery • Reversal of temporary stoma

Metastatic	Tumor has spread to other organs in the body	• Resectable cancer: surgery may be an option. Treatment usually begins with chemo followed by radiation with chemo, followed by surgery, and then followed by chemotherapy. • Unresectable cancer: surgery is not an option. Treatment generally includes chemo and possible radiation to treat the primary rectal tumor.

Clinical Trials

During your treatment, your doctor may suggest that you take part in a clinical trial for a new treatment. Generally, this occurs when your cancer is an advanced stage and the cancer has grown while on standard chemo treatments. Clinical trials are research studies in which patients help doctors find ways to improve cancer care. If a clinical trial is an option for you, your medical team will discuss this with you.

Bowel Function After Treatment

- Your care team will help you learn how to manage bowel function.
- Your doctor may prescribe medicinal fiber that will help slow frequent stools.
- You may need to learn how to take anti-diarrhea medicine at home until your bowel function improves. Over time your bowel function will improve, but it may never be the same as before surgery, radiation and chemo.
- A bowel management program may help you. More information is available about this.
- Sphincter strengthening exercises, such as Kegels, can help increase the function of the anal canal. Improved sphincter tone increases your ability to control stools and prevent leakage or incontinence.

Sexuality After Cancer Treatment

*Sexuality involves both physical and emotional components.
Surgery and radiation can cause physical changes that can affect sexual function and the ability to conceive children (fertility) after treatment. Cancer treatment, such as surgery, chemo, radiation or a combination of therapies, can also affect your body image and the way you see yourself sexually. Your doctor can answer questions about how surgery or radiation may affect

your physical ability to have intercourse and also about fertility after treatment. Feel free to discuss concerns with your doctor or WOC nurse.

Living With Rectal Cancer

Your care team will work together to meet your needs. This team is available to answer questions you may have about your health during and after treatment.

As a part of your follow-up care, you will return to the clinic regularly to have physical exams and tests, such as blood work and imaging. It is important to keep these follow-up appointments as part of your overall treatment and surveillance.

Resources

Baptist MD Anderson Cancer Center Web page
www.baptistmdanderson.com
This site provides information on treatment, research, clinical trials, prevention, screening guidelines, community resources and more.

United Ostomy Associations of America, Inc.
800-826-0826
www.uoaa.org
The United Ostomy Associations of America, Inc. (UOAA) is an association of affiliated, non-profit support groups committed to improving the quality of life of people who have or will have an intestinal or urinary diversion. Call the toll-free number to locate the nearest support group.