

When you return to begin your treatments, you will meet the radiation therapists who deliver your daily treatments. Treatments are scheduled Monday through Friday. The exact number of treatments will be determined by your physician and is designed to best meet your specific treatment needs.

Radiation therapy is closed for certain holidays, and you will be notified if a holiday occurs during your course of treatment. Due to the number of patients under treatment and emergency hospital patients, there can be delays in the time of your daily treatment. We appreciate your patience.

Side Effects

At your initial consultation, your radiation physician reviewed the anticipated results and side effects of the radiation plan determined to best fit your needs. This handout is to acquaint you with some of the most common side effects that can occur because of your treatment. It will also explain some of the things that can be done to help manage these side effects.

It is important to remember that most people do not experience all of the side effects mentioned here. Please keep us informed of your particular needs so that appropriate recommendations can be provided for you.

Diarrhea

If there are significant volumes of small bowel in your treatment field, patients can experience a temporary decrease in absorptive capacity. Diarrhea can occur as a result of malabsorption of fat, carbohydrate, and protein. Radiation also increases the motility of bowel, thereby forcing the small intestine to pass contents at a rapid rate. General principles about radiation-induced diarrhea include the following:

- Diarrhea may begin as early as the third week of treatment.
- Symptoms may occur earlier and be more significant if you are receiving chemotherapy.
- Our clinical staff will recommend dietary modifications to help control your symptoms (low fiber, low residue, low lactose). We may suggest bulking agents to bulk the

stools and absorb excess fluid within the bowel.

- Patients may experience local irritation from frequent bowel movements. We recommend that you pat dry when wiping and use sitz baths to help with comfort.
- Please record the number and consistency of bowel movements per day so that we can better instruct you on management.
- Our clinical staff will instruct you on medications appropriate for your situation.

Bladder Irritation

Radiation therapy to the pelvis may result in irritation to the lining of the bladder.

- Common symptoms include pain with urination, urgency, hesitancy, increased nighttime urination, and an increase in urinary frequency.
- Bladder capacity may be reduced slightly because of bladder irritability.
- We do recommend that you maintain adequate fluid intake (at least 1 liter or 4 8oz glasses of water per day); this may decrease symptoms by diluting the urine.
- It is recommended that you avoid caffeine (coffee, tea, colas) and alcohol.
- Limiting fluid intake in the evening may decrease the need for nighttime urination.
- Our clinical staff can provide you with a list of foods that generally result in increased bladder irritation.
- Our clinical staff will make specific medication recommendations for control of your symptoms during treatment.

- Bladder symptoms mimic those of a bladder infection. Please report any fever or blood in the urine. Our clinical staff may order a urine analysis/culture if needed.
- Most acute symptoms resolve 2 to 6 weeks after completing your treatments.

Proctitis/Anal Pain

During radiation treatment, you may experience symptoms of inflammation in the low rectum or anal area. This is especially common in patients with known hemorrhoids who experience significant diarrhea.

Common symptoms of inflammation in the rectum include:

- a persistent sensation of feeling like moving your bowels
- burning pain or mild bleeding with bowel movements
- passage of mucus

Interventions that patients have reported helpful in reducing their symptoms during treatment include:

- sitz baths (bathtub soaks in soothing warm water; the water temperature should be comfortable to touch)
- use of your regular hemorrhoid medications
- keeping stools soft to avoid further irritation
- cleansing with medicated wipes (baby wipes) after bowel movements.

Please inform our clinical staff of any rectal symptoms you are experiencing so appropriate recommendations may be made for your situation.

Nausea

With pelvic radiation, it is unusual for nausea to occur because the stomach is outside of the treatment area. If this should occur, please notify our clinical staff so medications can be prescribed for you.

Nutrition

Maintaining your weight is a very important part of your treatment program. Eating well helps maintain your strength and energy and provides building blocks for repair of normal tissues. You will feel better and, thus, be more able to cope with your therapy and possible side effects. If you are having difficulty eating, please inform our clinical staff so appropriate recommendations may be provided for you.

Skin Reactions

Because radiation beams must penetrate the skin to reach the target area, most patients will experience some degree of skin irritation. This can affect the skin, hair follicles, and moisturizing glands. The degree of skin reaction is influenced by a number of factors:

- Reactions are worse in skin folds/friction areas, such as the groin region, and perineal regions.
- Skin reactions are increased with prior or concurrent use of chemotherapy agents.
- Acute skin reactions generally begin 2 to 3 weeks after the initiation of radiation.
- It is unusual for patients to require a treatment break for skin reactions unless treatment is given for an anal cancer.
- Skin reactions generally resolve within approximately 2 to 4 weeks after completion of treatment.
- Late effects in the skin can include atrophy, pigment changes, thinning, and changes in the appearance of superficial blood vessels.

Remember that hair loss only occurs if the hair is within the treatment field. Likewise, the sweat glands within the path of the beam may become less active, and you may notice the area becomes chronically drier.

Our clinical staff will direct you on recommendations to manage the particular symptoms you experience. Some of the common recommendations include the following:

- Cornstarch can be applied to intact skin, especially skin folds, to decrease excess moisture and itching. This is discouraged if areas of moist blistering are present.
- Various moisturizing lotions or gels can be applied for soothing and dryness. Our clinical staff will direct you on the products best-suited for your situation.
- 1% hydrocortisone cream can be applied to areas of irritated, itching skin during treatment.

It is recommended that patients follow certain skin care guidelines during treatment:

- Avoid friction (i.e., skin surfaces rubbing together, clothing rubbing against skin).
- Avoid temperature extremes (i.e., heating pads, ice packs).
- Avoid irritants (i.e., deodorants, soaps, lotions, perfumes other than those recommended by our clinical staff).
- Avoid exposure of the treated region to the sun.
- Wash your skin gently with a mild soap and lukewarm water.
- Use an electric razor if shaving is needed in the treatment area.
- Maintain good nutrition intake to promote rapid tissue healing.
- Report any signs or symptoms of skin breakdown, such as rash or blisters.

After you complete treatment, you may find that you have chronically dry skin in the treatment region. If this is noted, we recommend the regular use of a moisturizing agent, such as Aquaphor or Eucerin cream. The frequency of application depends upon the degree of dryness you experience.

Fatigue

Fatigue is a common experience in patients with cancer. It is believed that this results from a combination of factors, including: 1) your body's effort to reserve energy for healing; 2) your body's effort to process the waste products from the cancer cells killed from treatment; 3) anemia related to cancer treatments; 4) the act of going to radiation treatments 5 times a week.

Fatigue may occur around the second or third week of radiation and can persist up to 3 months after the completion of treatment.

Strategies you can use to reduce energy expenditure:

- Planning/scheduling activities (e.g., spreading chores over the course of the week; planning to take a nap in the afternoon).
- Decreasing non-essential activities, such as cleaning, cooking, or socializing.
- Increasing dependence on others (allowing family members or friends to assist in housework, childcare, and shopping).

Other activities that patients have reported helpful in reducing their fatigue during treatment include:

- Walking/light exercise
- Distractions (gardening, listening to music)
- Balancing pleasurable activities with work activities

Hair Loss

Pelvic radiation may cause hair loss within the area of treatment only. Regrowth of this hair may occur within 3 to 6 months following completion of your therapy.

Fertility and Sexuality

Sexuality is an important part of our everyday life. Feelings about sexuality affect our zest for life, our self-image, and our relationships with others. The most common side effect from cancer treatment is associated with a change in body image, and sometimes a lack of confidence that we are still attractive. We encourage you to communicate your feelings to your partner. Our clinical staff is available to provide information and support.

If you or your sexual partner are premenopausal, it is important to use birth control throughout treatment. As a long-term side effect of your treatment, your fertility may be affected. Please talk with your radiation physician about fertility concerns you might have.

Blood Counts

If you are receiving chemotherapy during your radiation treatments, your medical oncologist will be checking your blood counts periodically during your treatment.

NOTE: Please inform our clinical staff if your chemotherapy is being held due to low blood counts.

While Receiving Radiation

You will have scheduled visits with our clinical staff at least one time per week during treatment. We will be assessing your progress and making recommendations to you on changes in your care program as needed. Our clinical staff will be available at any time if you have questions or concerns that need to be addressed between these scheduled weekly visits.