



INFORMATION AND INSTRUCTIONS FOR PATIENTS RECEIVING RADIATION THERAPY TO THE ABDOMEN

Your doctors have recommended radiation treatments to the abdominal area. The number and exact locations of these treatments will be determined by your radiation oncologist. This hand out will acquaint you with some the side effects associated with treatment to the abdominal area. Normal tissues included in your treatment fields may be affected by the radiation and therefore undergo some temporary or permanent changes. Some of the information that follows describes how to manage and cope with many side effects that may occur.

The chance that radiation therapy will be effective in treating your tumor depends on a number of factors. Probably the most important two factors are the kind of tumor that you have and the stage, or amount of disease. As with any type of medical treatment, radiation therapy does not always work and there is a chance that these treatments may not help you. Your doctor will discuss these possibilities with you, but, if you have further questions do not hesitate to ask your doctors or nurses.

Again, side effects listed below do not occur in all patients. These are changes that MIGHT happen during radiation therapy and may range from mild to severe. Because each case is unique, there may be some additional short or long-term effects that your doctor will discuss with you. Whenever you have questions or concerns, please bring them up to your physician, radiation therapist or nurse.

APPETITE CHANGES

☺ Explanation:

Sometimes appetite changes occur during radiation therapy or they may already be present due to the disease itself and/or other treatments. Nutrition, however, is an important part of your therapy and we recommend you maintain your present weight.

☹ Characteristics:

- You may notice that you never feel hungry.
- You may become full quickly after only a small amount of food.
- You may notice foods tasting or smelling different, flat or unpleasant.
- You may feel nauseated and/or vomit.

☺ Solutions/Resources:

The staff will have suggestions and handouts to help you maintain the best possible nutritional status or to help with symptoms.

FATIGUE

☺ Explanation:

Some patients develop a decrease in energy levels or actual fatigue from their radiation treatments. This varies from patient to patient. Your body is using energy to fight cancer cells and/or to repair normal cells and tissues. Causes of fatigue are varied and can be due to your cancer, blood counts, nutrition and prior or current treatments.

☹ Characteristics:

- You may experience fatigue that builds up towards the 2nd week of treatment and then stabilizes.
- This fatigue may persist for several weeks after you have finished your radiation treatments.

☺ Solutions/Resources:

- Be sure to get adequate rest, balance your activities and try to exercise regularly.
- Eat a balanced and nutritious diet.
- Take naps, as necessary.
- Try to maintain a positive attitude towards your therapy.
- Do not expect immediate resolution of your fatigue when treatment stops. It may take weeks or months to return to “your old self.”

SKIN CHANGES

☺ Explanation:

The skin affected by your treatment field may become reddened, itchy or tender after several weeks of treatment. At the end of treatment, your skin may appear tanned and there could be some peeling. The area may feel firmer or fuller than surrounding skin due to temporary fluid accumulation. This fluid accumulation will most likely resolve without any treatment after a few months. Over time, the tissues under the skin may become more firm (fibrosis). The skin in the involved area will be more sensitive to sun exposure and should be protected.

☺ Solutions/Resources:

- Avoid lotions or creams to the skin over the treatment field unless approved by the staff.
- The nurse may give samples or suggest preparations you can use. Currently, we are recommending AQUAPHOR ointment.
- Use mild soaps (e.g., Eucerin, Liquid Olay soap, or Dove) if any. Wash gently and pat dry.
- DO NOT remove marks made on your body by the physician or radiation therapist, unless specifically told to do so.
- Always protect against sunburn. Use products with at least a SPF of 15, or greater.
- Small, blue tattoos (the size of a freckle) will be placed to locate your treatment area once your treatments are underway.
- These tattoos are small permanent records on your skin as to where you received radiation treatments.
- Do not shave in the treated areas, unless you use an electric razor.
- Do not use hot water bottles or heating pads in the treated area.
- Do not wear tight fitting apparel that may rub or irritate the treated area.

HAIR LOSS

☺ Explanation:

Hair loss related to your radiation treatments occurs only in the areas within the treatment fields. For abdominal radiation, this can be pubic hair, buttock hair, and hair on the chest and back. Hair loss generally begins 2-3 weeks into your treatment course and re-growth usuallys 3-6 months following the completion of your radiation treatments. Occasionally, the hair does not grow back.

HEARTBURN

☺ Explanation:

Occasionally, radiaton treatments that include the upper abdomen will cause heartburn due to irritation of the lower portion of the esophagus or swallowing tube.

☹ Characteristics:

- You may experience a sensation of a “lump” when swallowing.
- You may experience pain when swallowing.
- You may experience reflux and a bad taste in your mouth.
- You may experience nausea and/or vomiting.
- You may experience food “sticking” or not passing.

☺ Solutions/Resources:

- Change your diet by eliminating acid and spicy foods.
- Include softer, more bland items.
- Drink more liquids.
- Eat more slowly, chewing all foods thoroughly.
- Try antacids such as Mylanta, Maalox or Tums.
- Try aloe vera juice; ask your nurse or physician.
- Medications may be prescribed to promote healing or ease discomfort.

☹ Report to the Physician or Nurse:

- Discomfort not relieved by diet or antacids.
- Inability to get food and fluids down.

GAS FORMATION☺ Explanation:

It is possible that radiation directed to the abdominal area can cause gas formation. This gas formation may cause cramping that may precede the development of diarrhea in some patients.

☹ Characteristics:

- You may experience increased burping or flatulence.
- You may have a feeling of fullness in the stomach or bloating.

☺ Solutions/Resources:

- The staff has suggestions and handouts for diet measures that will explain about avoiding gas forming foods, eating smaller meals more often.
- Wearing loose, non-constricting clothing will help with discomfort due to gas formation.

NAUSEA☺ Explanation:

You may experience some nausea depending on the size and location of your treatment field, as well as dose of radiation you are receiving.

☹ Characteristics:

- Nausea might tend to occur 2-6 hours following your treatment. Usually, it will last only for a short time.

☺ Solutions/Resources:

- Handouts are available for diet suggestions to address nausea.
- Medications may be prescribed that will help.

☹ Report to the Physician or Nurse:

- Severe nausea and/or vomiting and abdominal pain that prevents you from keeping food and especially liquids down.

BOWEL CHANGES

☺ Explanation:

Radiation treatments directed toward the abdominal area can cause some irritation to the bowels. If you are going to experience bowel changes from your radiation treatments, it usually begins after your second week of treatment, although it can occasionally occur later or earlier in your treatment course.

If you are already on bowel stimulants or laxatives for constipation, tell a staff member. They may discontinue those medications if you develop loose stools or diarrhea. If you continue to have problems with your bowels in the months following your radiation treatments, please inform the staff.

☹ Characteristics:

- You may experience increased frequency of bowel movements and looseness of bowel movements (diarrhea).

☺ Solutions/Resources:

- The staff can provide you with handouts explaining a ***Low Residue Diet***. This diet will eliminate high fiber and fatty foods.
- For actual diarrhea, medication can be prescribed for relief. Imodium is the most common drug prescribed for diarrhea. You will have to adjust the amount of your medication to your individual needs. Most patients take 2 tablets per day, one in the morning and one at night. Extra tablets are to be taken as needed. Do not take more than 8 tablets per day without your physician's permission.
- The two most effective things that can be done to relieve diarrhea are taking the medication and following the ***Low Residue Diet***.

- Be sure to check with the physician or nurse before using any bowel stimulants or laxatives.
- For anal irritation due to diarrhea or loose stool, using alcohol free baby wipes instead of toilet paper is suggested.

⊖ Report to Physicain or Nurse:

- Passing more than 4-5 loose stools per day.
- Watery, diarrhea stools.

FERTILITY

Both chemotherapy and radiation therapy can potentially affect fertility. If you are getting chemotherapy, you should talk to your medical oncology doctor (chemotherapy doctor) about any potential impact on fertility and their recommendations.

As for radiation therapy, we generally recommend that while on radiation therapy, patients should take appropriate steps for birth control. This is true for both men and women, as both sperm and eggs can be affected by radiation therapy. Therefore, it is very important that you take measures to prevent starting a pregnancy.

As for long-term fertility issues, this varies dramatically depending on the type of radiation therapy. With many treatments, there is no long-term impact to fertility from radiation therapy. However, for patients that receive radiation therapy to the pelvis or upper thighs, there can be impact on fertility. If that is the case, your radiation oncologist will talk to you about infertility risks, and give you information. If you are a male patient, sperm banking can be discussed if you wish to preserve fertility. For female patients that wish to preserve fertility, information will be given on oocyte, egg or ovarian tissue banking prior to treatment.

On a long-term basis, even though there may be some impact on fertility, you cannot assume that you are permanently sterile. Therefore, it is generally recommended that if you do not wish to have a pregnancy in the future, that you use birth control.

If you have questions regarding this, do not hesitate to talk to your physicians.

LONG-TERM SIDE EFFECTS/PERMANENT COMPLICATIONS

☺ Explanation:

Any type of cancer treatment can result in complications that occur weeks, months or years following completion of treatment. Generally, late complications occur in less than 10% of patients receiving stand treatments.

As with most short-term side effects, many long-term effects affect body structures included in or adjacent to the radiation treatment fields. Organs that are treated with abdominal fields include the liver, kidney, spleen and spinal cord. The gastrointestinal tract may also be affected and includes esophagus, stomach, small and large intestine. Lower down in the pelvis, bladder, reproductive organs and rectum may be affected. Skin, skin color changes and connecting tissues may be affected. Lymphedema or permanently swollen extremity can occur. General effects of suppression of the immune system, endocrine system, arthritis, psychosocial complications and fertility problems may occur.

Any organ or tissues that is in the treatment area will be affected to a varying degree. The number of treatments, dose per day, total dose and technique are calculated to try and reduce the risk of long-term damage. Your cancer may require treatment that may permanently affect tissues or organs. Your physician will discuss this with you.

Radiation therapy has been reported to increase the occurrence of new cancer. This is very unlikely and if it happens, it is usually after many years.

The possibility that long-term consequences may occur following cancer treatment is a major reason that regular, life-long medical follow-up is essential. Your physician will discuss any problems that may be associated with your particular cancer or type of treatment

- ❖ If there is **any** possibility that you are pregnant, it is important to inform your physician, nurse or radiation therapist immediately. If you or your spouse are considering pregnancy in the next year, please discuss this with your physician as soon as possible.

FERTILITY

Both chemotherapy and radiation therapy can potentially affect fertility. If you are getting chemotherapy, you should talk to your medical oncology doctor (chemotherapy doctor) about any potential impact on fertility and their recommendations.

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On a long-term basis, even though there may be some impact on fertility, you cannot assume that you are sterile in the future. Therefore, it is generally recommended that if you do not to have a pregnancy in the future, that you apply any necessary birth control measures.

If you have questions regarding this, do not hesitate to talk to your physicians.