Radiation Therapy for Bone Metastases

The Ottawa Hospital Cancer Centre
Disclaimer

This is general information developed by The Ottawa Hospital Cancer Centre. It is not intended to replace the advice of a qualified health-care provider. Please consult your health-care provider who will be able to determine the appropriateness of the information for your specific situation.
Your doctor has prescribed radiation therapy to the bone because you have bone metastases. You will be having a short course of radiation aimed at relieving your symptoms. Radiation Therapists will be administering your treatments. You may also see the Radiation Oncology Nurse during your treatment. Your Radiation Oncologist may see you while you are on treatment or at a follow-up appointment after your treatment is finished.

If you have concerns or questions, please discuss them with your Radiation Therapy Team. They are here to help you.

*Please note that the following is a list of acute, or short-term, temporary reactions to your radiation treatment. Please discuss possible long-term effects of your treatment with your radiation oncologist.*

### Smoking

Patients are encouraged to stop smoking or at least not to smoke during treatment. Smoking increases side effects and decreases the effectiveness of your treatment. If you are having difficulties stopping smoking please talk to your health care team.

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**What are Bone Metastases?**

Bone metastases (meh-TAS-tuh-seas) happen when cancer cells break away from the part of the body where the cancer started (primary site) and travel to the bone (secondary site).

When cancer has spread to the bones it is still named after the body part where it started. For example, if breast cancer spreads to the bone, it is called breast cancer with bone metastases. Sometimes bone metastases are discovered before the site of the primary tumour is found.
What can Radiation Therapy do for Bone Metastases?

Pain is improved in the majority of patients. Pain relief does not happen immediately following the radiation treatment. Typically, radiation can relieve pain within 2-4 weeks after treatment. Radiation may also reduce the chance of further bone destruction and can help with bone healing after a fracture.

Possible Side-Effects

The side effects of radiation treatment vary from patient to patient. Side effects of radiation therapy will depend mainly on the amount of radiation you are given and the area of the body being treated.

Common side-effects may happen to anyone being treated for bone metastases. Most side-effects of your treatment are short-lived and can be managed by the information in this booklet.

Site-specific side-effects may happen when radiation passes through specific body parts to reach the bone that is being treated. Site-specific side effects are listed at the end of this booklet.

Common side-effects

You may experience:

• Pain flare
• Skin reaction
• Fatigue
**Pain Flare**

You may develop an increase in pain in the treatment area during or shortly after your radiation treatment is finished. This is called pain flare. Pain flare is temporary (will go away). It usually happens within 48 hours after the first radiation treatment and can last 1-5 days. *Not everyone will experience pain flare.*

If you develop pain flare, you may need to take more of your short-acting pain medication (breakthrough medication) that has been prescribed by your doctor.

Please let any member of your Radiation Therapy Team know if you have problems with pain control.

**Skin Reactions**

You may develop a skin reaction in the area being treated with radiation. This may occur 2-3 weeks after your first treatment. You may experience discomfort, itchiness, tenderness, swelling and reddening. Your radiation therapy team will explain which areas of your skin may be affected. *The treatment area may include areas on your back.* The severity of the reaction is dependent upon your skin type (sensitivity to radiation), the area being treated, the dose and number of treatments prescribed. Use the following guidelines to minimize any skin reaction you may experience.

**Management**

*(Applies to treatment area only)*

The guidelines below are to be used beginning on the first day of your radiation treatment and are to be continued for a minimum of two weeks after finishing all of your radiation treatments or until your skin has healed completely. Further skin care instructions will be provided on your last day of treatment.
Washing instructions

• Wash treated area gently once a day. Use only mild soap containing:
  – Moisturizing agents
  – No scents or perfumes

• Use only lukewarm water when bathing or showering. Avoid long hot soaks in the tub.

• If possible, the shower setting should be adjusted to low pressure.

• Do not use a wash cloth. Instead, use your bare hand to gently wash the treated area.

• Do not scrub the skin in the treatment area.

• Do not remove any non-permanent skin markings.

• Air dry or gently pat skin with a soft cotton towel after bathing. Avoid rubbing skin in the area being treated.

Other General Guidelines

• Hydration: You are advised to apply a moisturizing lotion or cream to the treatment area after bathing and as often as possible throughout the day to moisturize the skin. Start before treatment if possible. The lotion or cream should contain:
  – No scents or perfumes
  – No Lanolin

Discontinue the use of a moisturizer and inform your Radiation Therapy Team if the skin starts to become itchy, dry or begins to break down or open

• Irritants: Avoid any irritants such as perfumes, body sprays, aftershaves etc.

• Scratching: Do not scratch itchy skin within the treatment area.

• Temperatures: Avoid exposing skin in the treatment area to temperature extremes (ice packs, heating pads, hot/cold/wet compresses, hot waxing, saunas and hot tubs, etc.).
• **Bandages:** Avoid Band Aid® type bandages and adhesive tapes on treated skin.

• **Clothing:** Wear soft, breathable, loose fitting clothing and avoid tight fitting or compression garments in the treated area.

• **Sun and wind exposure:** Protect treated area from direct sunlight and wind exposure. Do not use sunscreen on the treatment area during radiation treatments and for 2 weeks after the completion of treatment. Once the skin has healed a sunscreen, with SPF of 30 or higher, should always be applied to the treated area due to permanent sensitivity to the sun.

• **Swimming:** Swimming may be allowed ONLY if the skin in the treatment area is intact. Please discuss with your radiation therapy team whether or not swimming is advisable for you. Remove your wet swimsuit after swimming if it is in contact with the treated area and rinse your skin using the washing instructions mentioned above. Avoid swimming if you start to develop a skin reaction.

Your skin reaction will be monitored by your radiation therapy team. Should your skin become itchy or begin to breakdown, please inform your radiation therapist. Your skin reaction may increase in severity 1-2 weeks following treatments. **You are advised to follow all skin care guidelines listed above for 2 weeks following the end of your radiation treatments or until your skin has healed completely.** You can contact your radiation oncology nurse (613-737-7700 ext. ______) in the first two weeks after treatment if you are concerned with the condition of your skin. Following this two weeks period after the end of treatment, you are to contact your patient designated nurse with any questions related to side effects. Contact information will be provided on your last day of treatment.
Hair Loss in Treatment Area

☐ May apply to me

You may lose hair but only in the treatment field. You will begin to notice hair loss 2-3 weeks after your radiation treatment is finished. Hair will probably grow back. Re-growth of hair happens 3-6 months following the end of treatment, depending on the dose of radiation given. Follow the skin care guidelines below if areas of your head or scalp are treated.

Washing instructions
Wash scalp gently with a gentle baby shampoo containing no scents or perfumes

- Use only lukewarm water. Avoid extreme water temperatures.
- The shower setting should be adjusted to low pressure.
- Do not scrub the scalp.
- Air dry or gently pat hair dry with a soft cotton towel after bathing. You may also use a hair dryer on the cool setting. Avoid rubbing your scalp.

Other General Guidelines
- No moisturizing: Do not apply a moisturizer to the scalp. Ask the nurse or your doctor about using a cream if your scalp becomes dry or itchy.
- Scratching: Do not scratch your scalp if it becomes itchy.
- Hair care products: Avoid the use of hair care or styling products such as gels, hairsprays and mousses. Avoid chemical treatments such as hair colouring, perms and straightening.
- Temperatures: Avoid curling irons and flat irons.
- Sun and wind exposure: Wear a hat, scarf or wig to protect your head from the sun, wind and cold.
- Bandages: Avoid Band Aid® type bandages and adhesive tapes on treated skin
Radiation Induced Fatigue

You may experience some level of fatigue during the course of your treatment. Fatigue is the feeling of being mentally and/or physically tired. You may already be feeling tired as it is one of the most common symptoms associated with cancer. This lack of energy can get in the way of your normal functioning making it harder to concentrate and bringing down your mood. Some patients may feel even more tired in the first two weeks following their radiation treatments. It may take a few weeks to return to how you felt before the treatments.

Management

• **Eating:** Eat a balanced diet and drink plenty of fluids.
• **Set priorities:** Continue with regular daily activities, however, only perform most important tasks if fatigue increases.
• **Rest:** Take short naps during the day if required. Aim to get the majority of your sleep at night.
• **Stay active:** Physical activity and exercise can help to minimize the effects of fatigue. Take a brisk 20-30min walk daily if you are able

Let your Radiation Therapy Team know if you are feeling very fatigued, sleepy, depressed or are having difficulty performing everyday tasks. Your Radiation Therapy Team can direct you to other resources as required.

Site-Specific Side-effects

Because radiation passes through some body parts to reach the bone that is being treated, there are side-effects that are specific to different areas of the body. These are called site-specific side-effects.

Please ask your health care professionals which of the following side effects may apply to your treatment.
Nausea And Vomiting

☐ May apply to me

If the radiation beam passes through the stomach (middle spine) or bowel (lower spine or pelvis) you may develop nausea (a feeling of sickness in the stomach) and/or vomiting (throwing up) during your radiation therapy treatment. This may occur within 1-6 hours after treatment and usually lasts 24-48 hours after treatment. Please advise your Radiation Therapy Team if you experience nausea or vomiting.

Management of nausea

Medication

• If you have anti-nausea medication, take it as directed, usually at least 30 minutes before your meals.

Eating

• Nausea can be made worse by an empty stomach. Eating small amounts of the foods suggested below can help. Try a few crackers as soon as you start feeling nauseated.
• Try eating several small meals (6-7 meals per day) instead of three large meals.
• Eat slowly.
• The smell of certain foods may cause nausea. If possible, stay out of the kitchen and ask someone else to prepare meals or purchase already prepared meals which only require reheating. Try cold foods as they tend to be less smelly than hot foods.
• Avoid fatty foods, fried foods, and spicy foods.
• Avoid very rich and sweet foods.
• Do not try your favourite foods when you are nauseous. Wait until you are feeling better to enjoy those foods.
• Foods which are better tolerated:
  – Soda crackers, toast, cereals, dry plain cookies
  – Cold foods: cheese, cold deli meats, sandwiches, eggs
  – Potatoes, rice, pastas
  – Juice, “flat” soft drinks, bouillon, tea
  – Gelatin desserts, popsicles
• Try resting after your meals. Do not lie down; a sitting position is ideal.

Drinking
• Do not drink and eat at the same time: drink your liquids 30-60 minutes before or after your meals.
• Drink slowly.
If you experience nausea or vomiting, you may be referred to a dietitian to assist you in meeting your nutritional needs.

Management of vomiting
If you experience vomiting please notify your Radiation Therapy Team.

Diarrhea and Cramping
☐ May apply to me

If radiation passes through bowel (pelvis or lower spine) you may experience changes in the frequency or consistency of your bowel movements which may lead to diarrhea and cramping. Diarrhea is most commonly described as loose, frequent, watery bowel movements which may be accompanied by gas and bloating. These symptoms may occur 2-3 weeks after your first treatment. Please notify your Radiation Therapy Team as soon as you notice any changes in your normal bowel habit as early intervention is important. The following is a list of dietary changes you can make as soon as you experience loose bowel movements or an increase in the number of daily bowel movements.
**Management**

**Eating**

- Use less roughage (fiber) in your diet. Avoid fruit and vegetable skins, seeds and membranes, whole grain breads and cereals, nuts and popcorn.
- Note: Oatmeal, peeled apples, pears, potatoes and other foods from the fruit/vegetable group are good sources of certain types of fiber that may help to alleviate diarrhea. A nutritional guidelines booklet containing other suggested foods is available.
- Potassium is an important element to your body and is lost in great quantities when you have diarrhea. Make sure you eat some foods that are high in potassium (but will not worsen diarrhea) such as bananas, apricot or peach nectar, potatoes, tomatoes or vegetable juice.
- Stay away from foods that may encourage gas or cramps such as carbonated drinks, beer, beans, cabbage, broccoli, cauliflower, highly spiced foods, too many sweets and sugarless chewing gum (containing sorbitol and mannitol).
- Try eating several small meals (6-7 meals per day) instead of three large meals.

**Drinking**

- Make sure you drink plenty of fluids, 6-8 glasses (10 oz) per day. Drink fluids between meals instead of with them.
- Minimize or avoid alcohol and caffeinated beverages such as coffee, tea, cola and energy drinks.

If your diarrhea and/or cramping lasts longer than 24 hours and these management strategies do not work, please contact your Radiation Oncology Nurse in the first two weeks after treatment. You are to contact your Patient Designated Nurse with any inquiries related to side effects beginning two weeks post treatment.
**Difficulty Swallowing**

- May apply to me

If radiation passes through the esophagus (food pipe) to reach the spine, you may develop some difficulty swallowing. It may feel like you have a lump in your throat and may affect your ability to eat enough food. If this happens, you should start to feel better 2-3 weeks after treatment is finished.

**Management**

**Drinking**
- Drink plenty of fluids, such as water to keep your throat moist.
- Avoid alcoholic beverages.
- Avoid liquids that are too hot or too cold; room temperature is recommended.
- Avoid liquids that are acidic such as orange or citrus juices.

**Eating**
- Eat soft foods such as yogurt, mashed potatoes, gravies, soups, puddings, gelatin desserts, cooked cereals and eggs.
- Avoid hard or crunchy foods which may further irritate your throat, such as crackers, raw vegetables or potato chips.
- Avoid foods that are too hot or too cold; room temperature is recommended.
- Avoid foods that are acidic such as oranges and grapefruits.
- Avoid spicy foods.

**Humidifier**
- Use a cool-air vaporizer or humidifier in your room to keep the air moist.
Sore Throat

☐ May apply to me

If radiation passes through the throat or mouth to reach the upper spine, you may develop a sore throat and/or mouth. A sore throat should start feeling better 2-3 weeks after treatment is finished.

Management

Follow the same management suggestions under ‘Difficulty Swallowing’.

- **Mouthwash:** Use baking soda mouthwashes regularly (see recipe below). Rinse and gargle (but do not swallow) with baking soda mouthwash as often as possible (6-8 times per day). Do it hourly if you can manage it. This mouthwash helps to clear the thick saliva and is especially helpful before and after meals. You can also try flat club soda for rinsing and gargling. Once you have rinsed your mouth, you can swallow some club soda to clear the back of your throat.

- **Baking Soda Mouthwash Recipe:**
  - 1 level teaspoon of baking soda
  - 1 ½-2 cups of water (2 large glasses or 500 ml)
  - Mix together and store in a clean jar
  - Make a fresh batch everyday

- **Medication:** Your doctor may prescribe pain medications and/or antifungal medications for you. Take these medications as prescribed to help reduce the pain and make eating more comfortable.

- **Talking:** Rest your voice as much as possible

If you have been having difficulty swallowing or experience a sore throat, please notify your Radiation Therapy Team. A dietitian is available to assist you with diet management strategies. Please ask your radiation therapist, nurse or radiation oncologist for a referral if you do not already have one.
**Things to Report Immediately**

A ‘spinal cord compression’ can happen when cancer that has spread to the spine presses on the spinal cord. This can result in pain as well as sudden loss of feeling and function in arms, legs, bowel or bladder. This requires emergency treatment to prevent further damage.

If you feel any of the following, inform your Radiation Therapy Team immediately. If you experience this when the Cancer Centre is closed, proceed to the nearest emergency department.

- Rapid increase in back pain that keeps getting worse.
- Numbness, tingling or loss of feeling in your fingers or toes.
- Weakness in your legs or a change in the way you walk.
- A sudden change in your bowel or bladder habits such as being unable to empty your bladder or loss of bowels or bladder control.

**Other Side-effects**

If you experience side effects other than those listed in this pamphlet, please notify your Radiation Therapy Team and you will be referred to the appropriate health professional.