



The Ottawa | L'Hôpital
Hospital | d'Ottawa

Radiation Therapy

Patient Information

The Ottawa Hospital Regional Cancer Centre

If you are currently receiving or have received radiation treatment within the last 2 weeks:

Notify the Radiation Oncologist, Nurse or Radiation Therapist immediately if:

- Temperature above 38°C (100.4°F) or shaking with chills.

Notify the Radiation Oncologist, Nurse or Radiation Therapist within 24 hours if:

- vomiting lasts for more than 24 hours.
- you have difficulty drinking fluids for more than 24 hours.
- you have difficulty taking pills.
- you have difficulty eating for more than 48 hours.
- blood is present in urine or stools.
- diarrhea lasts for more than 24 hours.
- burning feeling when urinating.
- unable to urinate for more than 12 hours.

Notify the Radiation Therapist or Nurse at the next treatment if:

- marks fade.
- skin becomes moist, tender, begins to breakdown or any other changes.

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Introduction

This booklet will help you learn more about radiation therapy. You should also be given an additional information sheet specific to your site of radiation treatment. Please take time to read this information and bring it with you to the first few radiation treatments. We suggest that you use the information to talk to your doctor or health care team. As you are reading, you may want to write down questions to ask at your next visit.

General Information on Radiation

What is radiation therapy?

Radiation therapy, sometimes called radiotherapy, irradiation or x-ray therapy, is the use of various forms of radiation to safely and effectively treat cancer and other diseases. The most common types of radiation used are high energy x-rays, gamma rays, and electrons.

Radiation therapy is given directly to a cancer or to an area of the body after the cancer was removed. During the treatment, some of the normal body tissue in the area is also treated.

What Are the Goals and Benefits of Radiation Therapy?

The goal of radiation is to kill the cancer cells with as little risk as possible to normal cells. Radiation may be used to try to cure cancer, to control the growth of the cancer or to relieve symptoms and improve quality of life (palliative).

Radiation may be used alone, concurrently or adjuvantly with other cancer treatments that include: surgery, chemotherapy, hormone therapy, bone marrow transplant, and biological response modifiers.

How does radiation work?

Radiation destroys cells by disrupting the way they grow and divide. Cancer is a disease where cells grow and divide very quickly. Some normal cells also grow quickly and can be damaged by the radiation treatments. Most normal cells are able to repair themselves but cancer cells are less able to recover from radiation damage. That is why radiation is used to treat many cancers.

To protect normal cells, the radiation oncologist carefully limits the dose of radiation and spreads the treatment out over time. They also shield as much normal tissue as possible while they aim the radiation at the site of the cancer.

How is radiation given?

Radiation is most often given at a distance from the body, like x-rays. This is called external beam radiation. It may also be given internally or very close to the body. Sometimes both types are used.

External Radiation uses machines such as cobalt, linear accelerator, or orthovoltage. These machines are located at the Cancer Centre. Treatment is given 5 days a week from Monday to Friday for several days or weeks.

Brachytherapy (Internal Radiation) uses radioactive sources to give radiation very close to the area needing treatment. These sources can be placed directly into a cancer or body site where a cancer was removed, into a body cavity or on the surface of the skin. There are two dose rates – low dose rate and high dose rate.

Low Dose Rate – radioactive sources are left in place for a specific period of time – usually 1 to 6 days. It requires admission into a hospital.

High Dose Rate – hollow tubes are placed into the area being treated (such as the breast, esophagus, vagina,

or lung). These tubes are attached to a high dose rate radiation machine for a few minutes. The treatment is given 1 to 6 times. It may or may not require admission to hospital.

Where is radiation given?

Radiation treatment may be given at either the Civic or General Campus of The Ottawa Hospital Regional Cancer Centre located at the Civic Campus of The Ottawa Hospital Civic Campus on Carling Avenue and the General Campus of The Ottawa Hospital on Smyth Road.

Is radiation painful?

External radiation treatments are not painful. Most patients do not feel anything during treatment. The side effects resulting from radiation may cause discomfort or pain. If you have discomfort or pain, tell your nurse, doctor or radiation therapist.

The procedure used to insert the radioactive sources or hollow tubes for brachytherapy may cause some discomfort. If needed, you will be given pain medicine.

How long will I receive radiation?

Radiation is usually given 5 days a week from Monday to Friday for many days or weeks. The length of treatment depends on the type of cancer you have, your general health, the dose of radiation to be given, and the goal of treatment. Side effects from treatment may continue to progress for 2 weeks after treatment is completed before it begins to decrease.

What is a clinical trial?

A clinical trial is a research study that tries to find out the best way to treat cancer. These studies may use new ways of giving radiation treatment or test

the effectiveness of combining different radiation and chemotherapy treatments.

Your doctor may ask you to take part in a clinical trial. You will be given written information to help you decide.

Whether you want to be part of the study, or not, is your choice. If you do not want to be in the study, you will still get the best care and treatment we have.

What about other cancer treatments?

When friends and relatives find out that you have cancer, they may suggest foods, vitamins, or drugs that are reported to cure cancer. These reports are not always accurate. The high cure rates are sometimes found to be incorrect, when the treatment is tested.

New proven treatments require careful clinical trials before they are approved. Patients can get these new treatments by joining a clinical trial. If you are thinking about or if you have started to use other treatments, please tell your doctor. Some treatments may interfere with your radiation therapy.

Who's Who in the Radiation Department?

Radiation Oncologist: Radiation oncologists are the doctors who will oversee your radiation therapy treatments. These physicians work with the other members of the radiation therapy team to develop and prescribe your treatment. Your radiation oncologist will monitor your progress and help identify and treat any side effects that may occur due to radiation therapy.

Radiation Therapist: Radiation therapists plan and deliver radiation treatment to cancer patients, as prescribed by the Radiation Oncologist. The radiation therapist will discuss with you throughout the treatment

your general health, the progress and side effects of your treatment. As well, they make some of the devices that may be required for your treatment.

Radiation Therapy Nurse: The radiation therapy nurse, a registered nurse, works with radiation oncologists and radiation therapists to care for you and your family while you are receiving treatment. They will explain the possible side effects you may experience and will describe how you can manage them. They will assess how you are doing throughout treatment and will help you cope with the changes you are experiencing.

Medical Physicist: Medical physicists work directly with radiation oncologists and dosimetrists during treatment planning. They are responsible for developing and directing quality control programs for equipment and procedures. Their responsibility also includes ensuring that radiation levels are safe for patients, the public and the staff at the Cancer Centre.

Dosimetrist: Dosimetrists work with the radiation oncologist and medical physicists to carefully calculate the dose of radiation required during your radiation treatment. Using computers, they develop a number of treatment plans and perform complex calculations needed to make the treatment plan specific to you.

Clerical Staff: The clerical staff sets up your planning, treatment, and follow-up appointments. As well, they will book tests appointments that the doctor has ordered.

What Happens During External Radiation Treatment?

Treatment Planning

Everyone who has radiation treatment will have a planning meeting involving a CT simulation, simulation or both, with the radiation oncologist BEFORE the first

treatment. The CT simulator and simulator are not treatment machines. They are used for planning your radiation treatment. This meeting can take from 30 to 90 minutes.

CT Simulator: The radiation therapist will help position you on the CT simulator bed. It is important that you remain still, allow the therapists to adjust your position as needed and try to breath normally. The radiation therapists will step in and out of the room as needed and will place a few reference marks on your skin. When the CT scan begins you will feel the bed move in and out of the scanner. At the end of the scan, the radiation therapists will reenter the room and place tattoo dots on the reference marks. The images that are obtained from the scan will be used for planning. You will be sent home and in approximately 2 weeks the clerical staff will contact you with an appointment date for your first radiation treatment.

Simulator: The radiation therapist will help position you on the simulator bed. It is important that you remain still, allow the therapists to adjust your position as needed and try to breath normally. The radiation therapists will step in and out of the room as needed and when the simulation process begins you may feel the bed move and see the machine move around you. The radiation oncologist will decide the exact part of the body to treat, the dose of radiation to be given and the number of treatments needed. During this meeting, the part of your body that is going to get radiation will be marked with special ink and tattoo dots. The marks show the exact area to receive the radiation. Do not wash them off or retouch them unless asked to do so.

Special care is given to the planning process. The calculations needed are done with help from the Medical Physicists, Dosimetrists and Radiation Therapists. They

use planning films, CT/MRI/PET scans and special treatment planning computers. While you are on treatment, x-rays or “check” films will be taken to ensure that the prescribed area is receiving radiation.

You might also need to have:

- CT scan (Computerized Tomography) or MRI scan (Magnetic Resonance Imaging). The radiation oncologist uses the scan to plan the best treatment for you. The scan is done at the Ottawa Hospital, usually with a dosimetrist present.
- Mould Room Appointment. If required, the mould room appointment will take place before the CT simulation or simulation appointment. The purpose of the mould room appointment is to make an immobilization device, a piece of equipment to hold you in place during radiation treatment to improve the accuracy of treatment to some areas of the body. The equipment is made just for you. When you go to the planning meeting, ink marks may be put on the immobilization device.

The Treatment

During the time when radiation treatment is given, the skin in the treatment area must be free of clothing. You will be asked to lie still and breathe normally. Most people do not feel anything; however, you may hear some noise from the machine.

Most treatments are booked for 15 minutes. Some treatments may be booked for as much as 45 minutes. The first treatment visit takes a little longer. The actual time the radiation is being given varies from a few seconds to a few minutes depending on the dose and treatment machine. Most of the time is used to make sure

the treatment is given to the exact area, by positioning you in the exact position each day.

You will be alone in the room when the machine is on. During the treatment, the radiation therapist watches you on a closed circuit television monitor and can speak with you through an intercom. The radiation machine turns off after the dose is given but can be stopped earlier if needed.

You will meet with the radiation therapy nurse on your first day of treatment and on your last day of treatment as well as anytime during the course of your treatment as requested or needed. The nurse will tell you what to expect and what the side effects of radiation might be.

While you are having radiation treatment, you will meet with the radiation oncologist or radiation therapy nurse once a week. These weekly meetings are called the "Review or Obs Clinic", which, may be scheduled at the opposite Cancer Centre site. At this visit you are asked how you feel and, if needed, your medicines are re-ordered. Let the radiation treatment staff know if you have any problems or questions.

What Happens During Brachytherapy

Before the Brachytherapy:

You are booked to go to the operating room either in the Special Procedures Unit (SPU) at the Civic Division of the Cancer Centre or in the operating room at the General Campus of the Ottawa Hospital.

In the operating room or SPU, the radiation oncologist inserts the small hollow tubes or needles directly into body tissues or in under the skin, or places an applicator into a body cavity. Some procedures require general or spinal anaesthesia while others are done under local freezing.

The Brachytherapy Treatment

– Low Dose Rate:

Low dose rate brachytherapy is used to treat some types of cancers such as mouth, throat, skin, rectum, vagina, and cervix. It can also be used to treat cancers on arms, legs, face, or other body areas.

The radioactive sources are usually left in place for 1 to 6 days. During this time, you are radioactive and must stay in the hospital in a special room built for brachytherapy. Once the radiation sources are removed, you are no longer radioactive. But, depending on the area of your body that was treated, you may be allowed out of bed but you must not leave the room.

You will need to care for yourself as much as possible. The nurses must limit the amount of time they spend with you in your room but they will check on you often from the doorway. They will give the care you need. Sometimes the nurses will speak to you from the doorway and other times they will stand behind a special shield.

You will be encouraged to do light exercises for your legs and arms. Your nurse will inform you as to what exercises are safe.

Visitors are limited. They can only stay for a total of 20 minutes a day. Children and pregnant women are not allowed to visit.

The Brachytherapy Treatment

– High Dose Rate:

High dose rate brachytherapy is used to treat some types of cancers in the breast, esophagus, lung, and vagina. The small hollow tubes or needles, which were inserted into body tissues or cavities, are attached to a high dose radiation machine located at the Cancer Centre. This

machine sends the radioactive sources to specific spaces within the tubes or needles.

The treatment takes a few minutes. Once the treatment is finished, the radioactive sources go back into the machine and you are not radioactive. Treatment is given 1 to 6 times. You may or may not need to stay in the hospital.

Brachytherapy Side Effects:

Most side effects are caused by the radiation effects on normal body tissues. The side effects you have will depend on the amount of radiation given, the area of the body treated, and previous radiation treatments. Even patients who receive the same dose of radiation to the same area of the body may have different side effects. Most side effects are temporary.

General Side Effects like fatigue, skin reaction, and loss of appetite are explained in the section on General Side Effects.

Specific Side Effects include pain and infection. You may have some pain or discomfort at the implant area. If needed, the doctor will order pain medicine for you. There is a small chance of getting an infection at the implant site. You should notify the radiation oncologist or designated nurse if you have any redness or swelling around the implant, fever or chills, or increased pain or discomfort. If you have an infection, it is likely that you will need to take antibiotics.

What Are the General Side Effects of Radiation?

Radiation treatment destroys cancer cells but may also damage normal cells within the area being treated. These effects on normal cells cause side effects. The side effects depend on the amount of radiation and where the radiation is given. Even patients who receive the same

dose of radiation to the same area of the body may have different side effects. Most side effects occur gradually, usually appearing by the second or third week into treatment, and are temporary but some may continue for weeks or months after your treatment.

The radiation oncologist, radiation therapy nurse, and radiation therapist will tell you about specific side effects that you can expect with your radiation treatment. The following are side effects that are common to radiation treatment given to any part of the body.

Fatigue

Radiation can cause fatigue or feelings of tiredness. During radiation therapy, your body will use up more energy than it normally does. The stress of coping with a serious illness, the trips you have to make for treatment and the effects of radiation on the body all can cause fatigue. It may be mild or more severe, interfering with your daily activities. It is common for fatigue to last for 4–6 weeks after your treatment has been completed after which it will begin to improve.

Helpful Hints for Fatigue

- Plan out your activities. Allow for rest between periods of activity.
- Plan activities that need thinking when you are most rested.
- Identify what is most important to you and set priorities.
- Pace yourself.
- Set goals that you can reach.
- Ask for help.
- Stay physically active and exercise regularly (like walking).

- Manage causes of fatigue such as pain, nausea, anemia, and infections.
- Save your longest sleep for at night.

Loss of Appetite

You may not feel hungry or have an appetite. You should plan to keep your weight the same through the treatment by eating well-balanced meals (unless your doctor has specifically asked you to gain or lose weight).

Helpful Hints to Improve Appetite

- Eat small amounts of food often in the day. Choose foods that are simple to prepare.
- Your family and friends may help by making meals you like and offering healthy snacks.
- You can also ask your radiation oncologist, radiation therapy nurse, or radiation therapist to book a meeting with the dietitian. You can also call the dietitian on your own, to set up a visit.

Skin Reaction

During your treatment, radiation passes through your skin. This may cause your skin to become red, warm, and sensitive – changes similar to a sunburn. Depending on the type of radiation you receive, you may notice a loss of hair or increased dryness in the treated area; your skin may peel or develop blisters. All of these changes are possible and are temporary.

The marks on your skin are needed to give the radiation treatment. Do not wash them off or retouch them unless asked to do so. Notify the radiation therapist or radiation therapy nurse if the marks fade.

In a small number of patients who have had radiation therapy, the skin changes may cause a burning sensation or pain. The burning sensation or pain may begin after

treatments are finished and may last for many months. It should be reported to your oncologist at the next clinic visit.

Helpful Hints to Reduce Skin Reactions

- Shower using luke-warm water instead of bathing.
- Gently pat the treated area dry with a soft towel. Wash areas of the body not getting treatment as usual.
- Do not use soap in the treatment area. If soap washes across the area, rinse it well with water.
- If you are having radiation to the head or scalp, ask your radiation therapy nurse, radiation oncologist, or radiation therapist about using a mild shampoo.
- Restrict your washing; shower every second day or less often.
- Dry cornstarch or Johnson's baby powder lightly dusted in the treatment area helps to keep the skin dry.
- If the treatment area becomes itchy, do not scratch. Place a cool, wet, cotton cloth on the area for 10 minutes.
- Ointments, creams, lotions, or other powders can irritate the skin or may disrupt the treatment. Use only those suggested by the radiation oncologist, radiation oncology nurse, or radiation therapist.
- Cosmetics (make-up, aftershave lotions, perfumes or deodorants) will also irritate the skin and should be avoided in the treatment area.
- Use only an electric razor to shave hair in the treatment area.

- Protect treatment areas from rubbing, pressure or irritation. Loose cotton clothing next to the skin is less irritating. Avoid tight fitting clothing and harsh fabrics such as wool and corduroy. Do not apply tape to the skin within the treatment area.
- Protect the treated area from very hot or cold. Avoid electric heating pads, hot water bottles, ice bags and cold wind. Use a large brimmed hat or protective clothing to avoid sunburns.
- Notify the radiation therapy nurse, radiation oncologist, or radiation therapist if the skin becomes moist, tender, or has blisters.

Hair Loss

Hair loss occurs only on the part of the body being treated. It usually begins around the second week of treatment and continues to thin for 2 to 3 weeks after treatment has ended.

The amount of hair loss depends on the dose of radiation. With low doses of radiation, the hair usually grows back; with high doses, the hair may not grow back. It may take several months for hair to re-grow. Hair growth may not be complete and new hair may be softer.

Skin Changes After Treatment

The effects on the skin will continue to progress until about 2 to 4 weeks after treatment. The skin will then slowly start to repair. After the redness is gone and your skin has healed you may use soap and water to clean in the area; cosmetics may also be used. The treated skin may be darker and appear tanned. The treated skin may be more sensitive to sun exposure after radiotherapy treatment. You should continue to protect your skin from the sun for many weeks, months and years after.

Lifestyle Issues

Should I restrict my activities?

Yes and no; it depends on how you feel. During the first two weeks on radiation treatment, you will probably have little change in your activities from just before treatment (working, caring for family, going to school, and keeping socially active). It is normal to feel tired or low in energy towards the end of treatment. You are encouraged to do light exercise such as walking. Bit by bit most people start to get their energy back 2 to 4 weeks after radiation.

Can I continue to work?

Yes and no; it depends on how you feel and the type of work you do. Some patients continue to work while others need to take the time off. You can talk about the decision to work or not with your doctor, nurse, or social worker.

Some patients find it hard to think and concentrate and are unable to work. Others do not have the physical strength or energy to continue working. As well, it can be hard to know what to say to the people you work with. To get hints on how to talk to them, you can speak with a social worker.

What medicines can I take?

Give your radiation oncologist, nurse or radiation therapist a list of all medicines you are taking. Some medicines may interfere with the cancer treatment. Many skin creams contain a metal base and this will make a skin reaction in the treatment area much worse. Only use creams ordered by your radiation oncologist.

Can I smoke?

No, you should try to stop. Cigarettes, cigars, and smokeless tobacco are very irritating to the mouth and may increase

your chance of infection. In some cancers, smoking decreases the radiation effect and can decrease the chance of cure. Also, you should try to avoid second-hand smoke. Smoking cessation groups are available. Please ask your radiation therapy nurse for more information.

Should I be careful in the sun?

The skin in the radiation treatment area should always be protected from the sun. The chance of a sunburn is highest when on treatment and for several weeks or months after treatment has ended. It may continue to be more sensitive to the sun.

Helpful Hints to Protect Your Skin

- Try to avoid spending time in the sun between the hours of 10 a.m. and 3 p.m. when the sun is hottest.
- Wear protective clothing such as a broad-brimmed hat, a loose-fitting long-sleeved shirt, and long pants when out in the sun.
- Avoid tanning parlours.
- Use sun screens with a Sun Protection Factor (SPF) of 15 or higher.
- Apply and reapply sun screen according to bottle instructions. Check to make sure it has UVA and UVB protection. The Canadian Dermatology Association recommends the following sun screens:

PreSun: 15, 29, Kids 29	Super Sunstop: 15, 25, 40,
Photoplex 15	Kids 33
Ombrelle 15	Paba 21
Shade 45	Oil of Olay 15
Vaseline Intensive Care Sunblock Lotion	15, 25, Kids 25

Sunscreen should not be used in the treated area while on radiation therapy treatment or until the skin in the treated area has healed.

Can I go to the dentist?

It is best to go to the dentist before starting radiation therapy. When you are getting radiation therapy, check with your radiation oncologist or nurse before going to the dentist.

If you are having radiation done to the mouth or throat, your radiation oncologist may arrange for you to have dental work done before starting radiation. Any dental work needed after the radiation to the mouth should be discussed with the radiation oncologist first.

Can I drink alcohol?

No, you should avoid drinking alcohol during radiation to the mouth, throat, lungs, or esophagus. Alcohol is irritating and may make sores in the mouth, throat, and esophagus worse. Support groups and professionals are available to assist you to stop drinking alcohol. For more information, ask your radiation therapy nurse or social worker.

How will it affect my feelings?

You may have many feelings such as fear, worry, anger, uncertainty, and depression. These are normal. Having a good attitude and a positive outlook are important.

Most patients need support and you should ask for help when you need it. You may want to talk things over with family, friends, doctors, nurses, social workers, or a chaplain. Be kind to yourself and treat yourself often.

Helpful Hints to Cope with Your Feelings

- Talk openly with family and friends and ask for their support. Working together can give those close to you the feeling that they are doing something to help.
- Ask questions if you don't understand.

- Try talking to other patients or reading a self-help book to find out about how other patients cope with radiation therapy.
- Contact the support groups at the Cancer Centre or in your community.
- Contact a social worker at the Cancer Centre or hospital to find out about what support they can offer to help you cope with your feelings.
- Learn relaxation exercises such as taking slow deep breaths, meditation, listening to your favourite music, tensing & relaxing muscles, or imaging places or objects that create pleasant feelings.
- Keep a journal or diary to record your thoughts or feelings. You may want to record questions to ask.
- Try watching television, listening to the radio, laughing, playing cards, reading, or crafts.

How will I feel about my partner?

Your feelings of intimacy may change. Some patients feel they do not have enough energy or desire for sexual relations. Other patients feel closer to their partner and have more intimacy. For some patients, they do not think sexuality and intimacy is important in their life. Everyone is different. If you have any questions or concerns, you may want to speak to your radiation therapy nurse, radiation oncologist, radiation therapist or social worker.

If you are having radiation therapy to the pelvis or lower abdomen, you should check with the radiation therapy nurse or radiation oncologist to find out if it is safe to have sexual intercourse.

Do I have to use birth control?

Yes.

Information for Women on Radiation Treatment

Radiation can affect the growth of an unborn baby. While on radiation therapy and for a few months after treatment has ended, you and/or your partner should use birth control measures to avoid pregnancy. There are a few options:

- Oral contraceptives (“the pill”) do prevent pregnancy but are not suggested for women with certain types of cancer, such as breast cancer.
- Barrier methods such as diaphragms and condoms, together with spermicidal gel/foam are other options.
- The rhythm method is not suggested; radiation therapy may cause irregular bleeding that makes it difficult to predict the time of ovulation.

For further information, please ask your radiation oncologist or radiation therapy nurse.

Information for Men on Radiation Treatment

If there is a chance that your testes will get some radiation during the treatment, we suggest you avoid getting your partner pregnant while you are receiving radiation. Radiation to the testes causes sterility in men. Men whose testes may receive radiation and who want to have children in the future, should use sperm banking before radiation treatment begins. Ask your radiation oncologist or designated nurse for additional information as early as on your first visit to the Cancer Centre.

What should I eat?

Eat well-balanced meals based on Canada’s Food Guide. Good nutrition can help lessen some of the side effects and help build new healthy cells.

Helpful Hints for Good Eating

- Choose foods from all four food groups:
 - Milk Products: milk, cheese, ice cream.
 - Meat & Alternatives: meat, poultry, fish, beans, tofu, eggs, cottage cheese, peanut butter, and nuts.
 - Grain Products: bread, cereal, pasta, pita, rice.
 - Vegetables and Fruit: fresh, frozen or canned vegetables or fruit and juice.
- Eat foods that are high in protein such as foods in the milk and meat groups. Protein helps develop new cells for your body, and should be included in each meal along with other foods that provide calories for energy.
- If you do not have much of an appetite or are losing weight, try small meals often in the day and eat at times when you are feeling better. Choose foods that are simple to prepare and easy to chew.
- You can ask your radiation oncologist or radiation therapy nurse to arrange a meeting with the dietitian; or you may contact the dietitian yourself.
- Special high protein recipes and commercial food supplements are available.

After Treatment Ends

Many people wonder what to expect when treatment ends. Most side effects you have (such as fatigue, skin reaction, loss of appetite) will gradually start to lessen 2 to 4 weeks after finishing radiation therapy.

After finishing radiation treatment, you will continue to have regular “check-ups” with the radiation oncologist. The radiation therapy nurse or radiation oncologist will explain how often these will occur.

Family Doctor's Role

Your family doctor continues to have an important role in your health care while you are receiving radiation therapy. You should discuss with your family doctor and your oncologist how they can best support and care for you and your family during your cancer treatment.

While you are having radiation treatments at the Cancer Centre your family doctor can:

- Treat any health problems that DO NOT have to do with your cancer.
- Prescribe medicines for health problems other than your cancer.
- Offer support to you and your family.
- Continue your regular "check-ups".

Information & Support Services

Cancer Information Service is a free information service, in both English and French. It is run by the Canadian Cancer Society. Telephone: 1-888-939-3333.

Care in the Home: You can have a nurse, dietitian, physiotherapist, occupational therapist or speech therapist visit you at home. Ask your nurse or doctor for more information about getting a referral.

Dietitians can give you advice on how to eat the right amount and the right kind of food. You may want to meet with the dietitian if you have loss of appetite, weight gain, weight loss, nausea, vomiting, constipation, diarrhea, or if you need food supplements. Your doctor or nurse can help you get a meeting with a dietitian. You can also call the dietitian on your own, to set up a visit.

Library Services can help you learn more about cancer and cancer treatment. The Ninon Bourque Patient Resource Library has books, tapes, cassettes and access to the internet. It is located on the main floor of

the General Campus of the Cancer Centre. Telephone: 737-7700, extension 70107

Lodge: The Maurice J. Grimes Lodge has rooms for out-of-town patients who come for tests or treatment. It is open from Monday to Friday and is at the Civic Campus of the Cancer Centre. A free shuttle bus runs between the Civic and General, Monday to Friday. Ontario or Quebec Health Insurance pays for your room at the lodge. To find out more about the lodge, ask your nurse. A nurse must meet with you and book the room at the lodge before you can stay at the lodge.

Social Workers can help you and your family cope with cancer and cancer treatments (through counseling), find out about cancer services in your community, and help you sort out money problems. This service is provided free of charge. Your doctor or nurse can help you get a meeting with a social worker. You can also call the social worker on your own, to set up a visit.

Conclusion

We hope this booklet has answered some of your questions about radiation therapy. Please remember that this booklet should not replace the discussions between you and your radiation oncologist, radiation therapy nurse, or radiation therapist. Bring your questions and we will discuss them with you.

Questions to Ask

We suggest that you take a few minutes before your next visit at the Cancer Centre to write down your questions. Please use this page.

Common Terms Defined

Adjuvant Therapy: This is a cancer treatment that comes AFTER your first (or primary) treatment. For example, you may have an operation (surgery), followed by radiation or chemotherapy. The radiation or chemotherapy would be called an adjuvant therapy.

Alopecia: The loss of hair from your head or your body.

Anemia: A decrease in the number of red blood cells. Signs and symptoms include tiredness, pale skin, shortness of breath.

Biological Response Modifiers: Drugs used to change the body's immune response to cancer cells.

Bone Marrow Transplant: Injecting bone marrow into a patient from either a donor or stored marrow from the patient. This helps people to grow new bone cells after very high doses of chemotherapy and/or radiation therapy.

Brachytherapy: Wires, seeds or needles that have a source of radiation inside them. These wires, seeds or needles are put into a cancer tumour, or into a place where a cancer tumour used to be. They are left there for a period of time.

CBC: (Complete Blood Count) A blood test that measures the number of white blood cells, red blood cells and platelets.

Chemotherapy: This is the use of drugs to treat cancer. It is often called chemo, for short.

Clinical Trial: A clinical trial is a research study with cancer patients, to learn about new treatments and to find better ways of giving current treatments.

Cobalt 60: This is one kind of radiation treatment. Cobalt 60 contains high-energy gamma rays. These rays are sent to tumours deep inside the body to destroy cancer cells.

Constipation: Hard bowel movements that are difficult and painful to pass.

Cystitis: Inflammation or swelling of the lining of the bladder.

Diarrhea: Bowel movements that occur frequently and/or are watery.

Hormone Therapy: This is the use of hormones (given as drugs) to treat some kinds of cancer.

Hormones: Some glands in your body produce chemicals called hormones. For example, a man's testes send out a chemical (or hormone) called testosterone. Hormones are in charge of how your body uses food, how you grow and how strong or weak your sex drive is.

Linear Accelerator: This is a machine that is used in radiation treatment. It uses high energy x-rays to treat cancer.

Metastasis: This is when cancer cells in one place (the breast, for example) spread to other parts of the body such as the liver, bones, lungs or brain.

Obs or Review Clinic: The weekly visit with the doctor or nurse while you are receiving radiation.

Oncologist: A physician who specializes in the diagnosis and treatment of cancer.

Orthovoltage: This machine is used in radiation treatment. It treats cancers that are on the surface, or close to the surface of your body.

Palliative Care: The goal of palliative care is to make life as good as it can be for people with cancer, and their families.

Radiation Treatment (or therapy): This is the use of radiation to destroy cancer cells. The most common kinds of radiation used are high energy x-rays, gamma rays and electrons.

Red Blood Cells: The cells in the blood that carry oxygen to different parts of the body.

Simulation (or sim): The initial planning of the radiation treatment that is done on a similar machine to the radiation machine.

Sperm Banking: The collection and storage of sperm to be used at a later date.

Stomatitis: Inflammation of the mucous lining of the mouth.

Surgery: The use of operating procedures to correct deformities, repair injuries, or remove certain diseased tissues.

Acknowledgements

This booklet comes from The Ottawa Hospital Regional Cancer Centre. We want cancer patients and their families to learn about radiation treatment in the way that works best for them. We respect the fact that people have different needs. What works for you, may not work for someone else. We suggest that you talk to your radiation oncologist or health care team to find the treatment and make the choices that are right for you.

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