



# RADIATION THERAPY

## SKIN

Electrons/Superficial

Regional Cancer Treatment Service (RCTS)  
Radiation Oncology Department



# **RADIATION THERAPY TO THE SKIN AND SUPERFICIAL TISSUE**

There are 2 different types of external beam radiation used to treat cancers on, and/or close to the skin surface. These are electrons and superficial (low energy) x-rays. The type of radiation therapy that is best for your treatment will be determined by type, size and depth of cancer/skin condition you have.

A course of radiation therapy to the skin is usually 1-4 weeks (5-20 treatments).

## **CANCER AND RADIATION THERAPY**

### **WHAT IS CANCER?**

Cancer is a disease of the body's cells. Healthy cells of the body grow in predictable patterns. As they wear out, they are replaced in an orderly manner by just the right number of new healthy cells. Cancer occurs when abnormal cells in the body multiply at an uncontrollable rate. These cancerous cells grow at such speed that your body cannot properly deal with them and can form a lump or tumor.

There are many different types of cancers. What type of cancer you have depends on the area of the body that the abnormal cells are from. Each type of cancer has its own characteristics.

Metastases occur when some of the cancer cells detach themselves from the tumour and move, via the bloodstream or lymphatic system, to other parts of the body where they begin to form further tumours.

## **WHAT IS RADIATION THERAPY?**

Radiation therapy or radiotherapy is the delivery of x-ray or electron beams to an area of the body. Radiation therapy kills cancer cells but can also damage normal cells in the treatment area. It is therefore important that the radiation therapy is carefully planned to ensure that the area needing treatment receives adequate radiation while minimizing the radiation dose to surrounding areas.

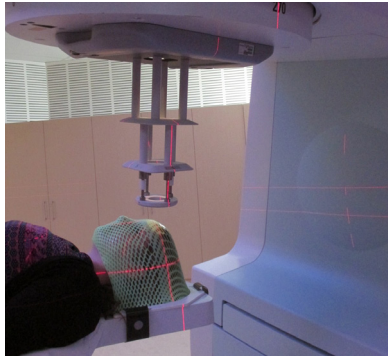
The type of radiation that will be used for your treatment depends on many factors including the type of cancer you have and the size, shape and position of your cancer. The strength and penetration of the radiation beam can be varied to provide the best treatment for each individual.

For some types of cancer, radiation therapy is the only treatment given, but it can be used in conjunction with other forms of treatment such as surgery or chemotherapy.

## **HOW DOES RADIATION THERAPY WORK?**

Radiation therapy works by damaging cancer cells when they divide. Normal cells suffer from radiation damage as well but not to the same extent, and the damage can be repaired more easily. Radiation therapy is used in such a way as to maximize cancer cell damage without producing excessive damage to normal cells. Treatment is usually given once a day over a period of weeks, excluding weekends. By spreading the treatment out over time, greater effect is had on the cancerous cells as they are in a different stage of the cell cycle at each appointment. The break before the next treatment gives normal cells a chance to repair. Each treatment course is designed for the individual and can vary in length from days to weeks.

# ELECTRON RADIATION THERAPY



**Electron Treatment is delivered on a Linear Accelerator**

Information on the planning and treatment of Electrons can be found in your radiation therapy general information booklet.

# SUPERFICIAL RADIATION THERAPY



**Superficial Treatment is delivered on a Superficial Unit**

## PLANNING SUPERFICIAL RADIATION THERAPY

The radiation oncologist will draw some marks on your skin around the area(s) that require treatment. The marks are photographed to record exactly what area(s) are being treated. The radiation therapist will take measurements and sometimes make a customised shield to go around the treatment area to protect the skin/tissue that does not require treatment. DO NOT intentionally wash off any marks that are drawn on your skin; these marks are very important for setting up your treatment.

## DELIVERY OF SUPERFICIAL RADIATION THERAPY

The superficial machine is positioned against the area being treated, often with the applicator pressing firmly onto your skin. The set up needs to be quite firm to ensure no movement occurs, but it should not hurt. It is important to keep still once we have you in the correct position. The radiation therapist will leave the room to switch the machine on. Although you will be alone in the room for short periods, the staff will be monitoring you through a closed circuit TV camera. The machine creates some noise while operating; however, you will not see or feel the radiation. If you want to stop treatment for any reason, raise your hand and the radiation therapist will come into the room. Otherwise, do not move until the radiation therapist tells you the treatment has finished.

# SIDE EFFECTS

Electron and superficial radiation therapy can result in side effects that develop during treatment and continue for a few weeks after treatment finishes. These are known as acute side effects. You can also develop side effects many months to years after treatment; these are known as late side effects.

The side effects and their severity will vary for each person. You will not necessarily experience all the side effects mentioned.

## ACUTE SIDE EFFECTS

These commonly start in the 1st – 2nd week of your treatment and continue for a few weeks after your treatment finishes.

SIDE EFFECTS	CARE
<p><b>SKIN:</b> A skin reaction will occur in the treatment area. It is important to note that a radiation therapy induced skin reaction will only occur in the area being treated.</p>	<ul style="list-style-type: none"><li>• Bathe or shower as you normally would, but be gentle with your skin in the treatment area.</li><li>• Before applying anything to the treatment area, check with your treatment team.</li><li>• Do not use any harsh products such as exfoliants or loofahs in the treatment area.</li></ul>

SIDE EFFECTS	CARE
<p>The severity of skin reaction will depend on the amount of radiation you receive daily and in total.</p> <p>A skin reaction usually occurs gradually. As treatment progresses, the reaction can go through different stages:</p> <ul style="list-style-type: none"> <li>• Your skin may become pink and feel mildly tender or itchy and later become red and sore like sunburn.</li> <li>• Later in your treatment, it may become dry and itchy.</li> <li>• Often towards the end of your treatment, it may start to break down and/or form a scab.</li> <li>• Skin reactions can particularly occur in folds of skin and areas where there is a lot of rubbing.</li> <li>• After treatment is completed, the area will often get worse before it gets better. The skin takes 4 – 6 weeks to heal and will usually be slightly paler and thinner than the surrounding skin. You may return to normal skin care after your reaction has subsided.</li> <li>• Very rarely, skin healing can take several months to occur, particularly if the lower leg is treated. Your radiation oncologist will discuss this with you further if this is thought to be a possibility in your case.</li> </ul>	<ul style="list-style-type: none"> <li>• When drying the skin in the treated area, do not rub your skin with a towel but gently pat it dry.</li> <li>• Do not wear any tight fitting clothes around the treatment area as this can chafe your skin.</li> <li>• Avoid exposing your treatment area to the sun as it is very sensitive during radiation therapy and will burn very easily. You should ensure that the treated area is well protected from the sun. As part of good skin care, you should always ensure all of your skin is adequately protected against the sun.</li> <li>• If you are shaving in/around the area receiving treatment, it is recommended that an electric shaver is used rather than a blade.</li> </ul> <p>If a skin reaction does occur, your treatment team will monitor it and provide further advice on skin care and appropriate ointments to apply to your skin if required. Medication may be prescribed to alleviate discomfort.</p>

## LATE SIDE EFFECTS

These can take many months to years to develop, and you may never develop these side effects. The benefit of receiving radiation therapy, as part of your cancer management, is felt to outweigh the potential long-term risks of this treatment. If you have any concerns in relation to these side effects, please discuss them with your radiation oncologist.

<b>POTENTIAL LATE SIDE EFFECTS INCLUDE</b>
<b>TELANGIECTASIA:</b> This is where thin broken blood vessels become visible on the skin surface. It can occur if you suffer a very severe skin reaction from radiation.
<b>ALTERATION IN SKIN TEXTURE AND COLOUR:</b> After radiation therapy, the skin is often paler in the area that received radiation treatment. The skin may feel firmer. It may look thinner or have a more shiny appearance.
<b>SECOND CANCERS:</b> Radiation can very rarely (approximately 1 in 500 - 1000 patients), cause a second cancer to develop at the site of radiation treatment many years after treatment finishes.



# **FURTHER INFORMATION**

## **CONTRACEPTION**

For women receiving radiation therapy we recommend that you do not get pregnant while receiving radiation therapy as radiation can be damaging to a developing baby. We advise you use contraception during sexual intercourse if there is a chance pregnancy could occur.

## **TRY TO STOP SMOKING**

Smoking during radiation therapy may increase the severity of your radiation reaction. We strongly advise all patients to stop smoking. If you need help giving up smoking, we can put you in touch with support services.

## **AFTER TREATMENT IS FINISHED**

At the end of your radiation therapy course, you will be advised regarding follow-up. If you have any concerns about side effects following treatment, please phone the contact number on your discharge form. If you do not have a contact number, phone the radiation therapy nurses on (06) 350 8438.

## **QUESTIONS AND CONCERNS**

The radiation oncology team are here to help you through your cancer therapy journey. If you have any questions or concerns, please feel free to approach any one of our team members. You will see the radiation therapists at each of your treatment, appointments, and nurses may be seen when necessary. Routinely during your treatment, you will see the radiation oncologist or registrar who will check how you are managing with treatment and its side effects.

## **CONTACT US**

Radiation Oncology reception (06) 350 8430

# NOTES

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# FEEDBACK

We encourage feedback and assurance is given that comments will not adversely affect your current or future care.

You can do this:

- through discussion with MidCentral Health staff providing your care
- by completing “Tell us what you think...” pamphlets available from all services
- by contacting our Customer Relations Co-ordinator, PO Box 2056, Palmerston North 4440, or phone (06) 350 8980
- by contacting a Health and Disability Commissioner Advocate, phone 0800 112 233.