



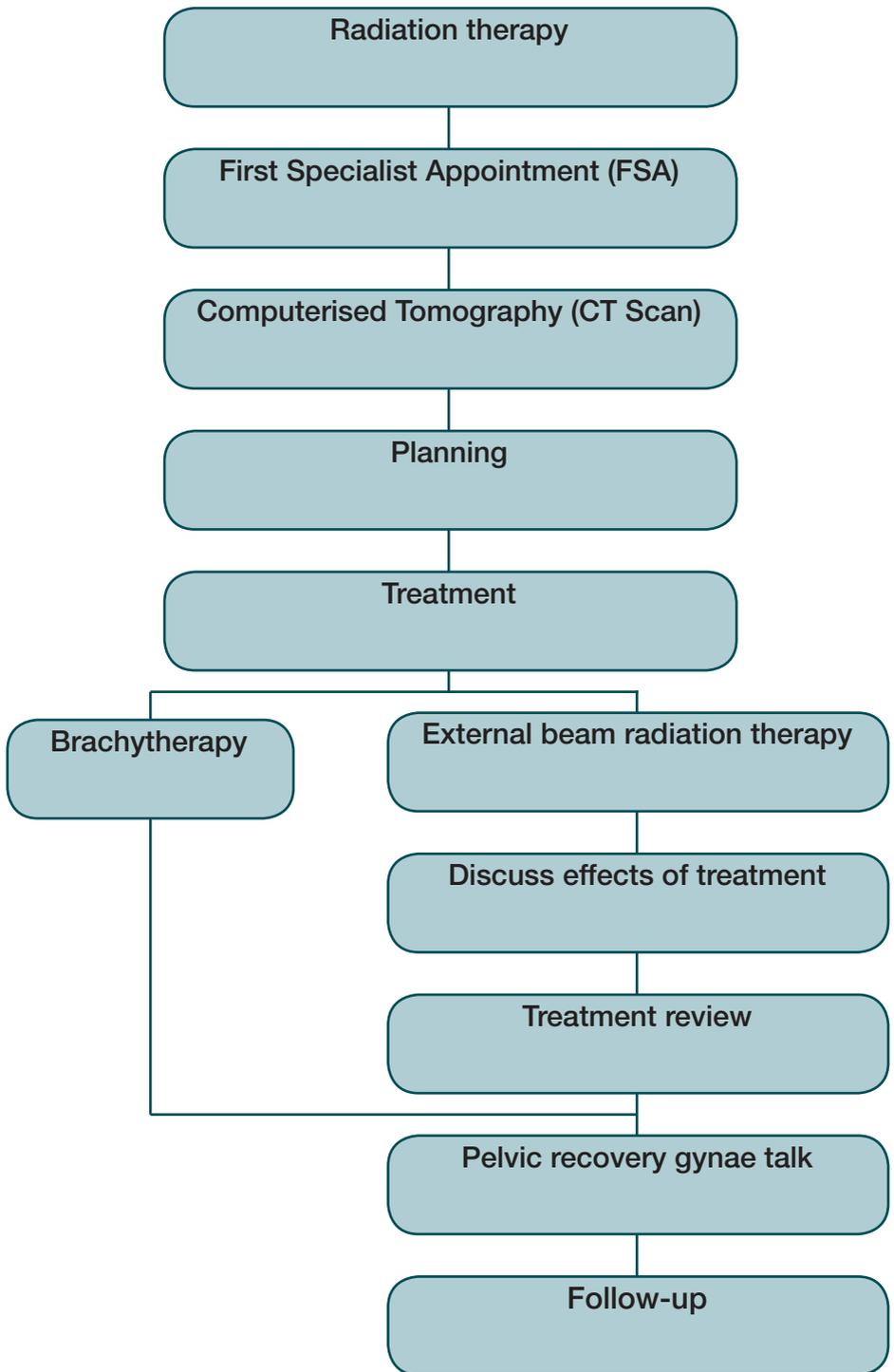
**Information for female patients receiving
External Beam Radiation Therapy/
Brachytherapy to the pelvis**



Waikato Regional Cancer Centre



Welcome to Waikato Regional Cancer Centre. The aim of this booklet is to provide information on the Radiation Therapy treatment procedure and to explain the journey from your first meeting with the Radiation Oncologist to the completion of your treatment.



What is radiation therapy?

Radiation therapy is the use of high energy x-rays to damage the DNA (genetic code) in the cancer cells. Radiation therapy is planned to treat as little of the normal cells in the body as possible. Special care is taken to limit this by the use of advanced planning techniques and treatment delivery methods.

Radiation therapy is delivered in small treatments called fractions. This allows the normal cells to recover between each daily treatment. Treatment fractions vary depending on an individual needs. This can depend on the type of cancer, staging and intent of the treatment. Fractions can be delivered five days a week up to seven weeks.

First specialist appointment (FSA)

Your consultant (Radiation Oncologist or Registrar) will explain the radiation therapy procedure to you. Your diagnosis, treatment options and potential side effects of treatment will be discussed. If you consent to having radiation therapy treatment, a signature will be obtained at this stage. For the potential side effects please refer to section 'Effects of Treatment' on page six in this brochure.

Computerised Tomography (CT scan)



A CT scan is performed in order to deliver the treatment accurately and at the correct dose. We need to be able to locate the position of the tumour in relation to the surrounding normal tissue in the body. You will be set up in a comfortable position that will be reproduced when you come for your treatment. This could include a vac bag being made for you (similar to a bean bag).

Sometimes a contrast agent will be required for pelvis image purposes. If this is needed it will be explained in greater detail at your appointment.

At the CT scan small permanent tattoo marks will be given, photos taken of your position and measurements recorded to assist in the daily set-up for treatment.

Please inform a member of staff if there is any possibility that you could be pregnant.

Planning

Using the information obtained from the CT scan an individual plan is produced. A 'target volume' is determined on the computer planning system. We calculate the best method and beam arrangement for the dose of radiation to be delivered to the 'target volume', while at the same time avoiding as much normal tissue as possible. Time is required for the planning calculations and checks to be done. Treatment is started as soon as possible following the completion of this process.

Treatment - External Radiation Therapy



At treatment you will be set-up in the same position you were in at your planning CT scan. Your daily treatment requires specific positioning, so it is important to relax and allow the radiation therapists to move you as necessary. Once you are positioned correctly you will be required to keep still until the treatment is completed.

The radiation therapists must leave the room during treatment; however, they will monitor you on cameras from outside the room. There is also an intercom system if you were to need assistance you can call out.

On your first day, imaging devices will be used to ensure you are in the right position before the treatment can be delivered. The direction of the beam is set by moving the machine and the couch, on which you will be resting, to the correct position. At times during your treatment we will take images, occasionally adjustments to the bed will be made before continuing with the treatment.

Treatment is usually given once a day. The time you spend in the department can vary for each individual depending on the area been treated and the treatment preparation that you may be required to undertake. Depending on your beam arrangement you will spend approximately 20 minutes in the treatment room but the actual prescribed daily dose of radiation is only a few minutes. During treatment you will not see or feel anything. You will just hear a buzzing sound and that will let you know that the machine is on.

Waikato Regional Cancer Centre is a teaching hospital and at times we have students in our department. If you don't wish to have these students involved with your treatment please advise a member of staff.

Treatment - Brachytherapy *(If applicable)*

What is Brachytherapy?

Brachytherapy is a form of radiation treatment that is given inside the body. This type of radiation requires a device to be inserted into the body. This is attached to a machine that stores a small radioactive seed which is sent through the device and delivers the radiation. In gynaecological cancers brachytherapy can happen either by Vault Brachytherapy or Manchester Suite Brachytherapy, but this depends on the type of cancer that you have.

Vault Brachytherapy

Vault Brachytherapy can be given in combination with either external beam radiation or on its own. You will not need an anaesthetic for this procedure. You will generally have three Vault Brachytherapy treatments. At your appointment you will be positioned with your legs raised into stirrups, and the doctor will insert a thin hollow tube known as an applicator into the vagina (see diagrams on the following page).

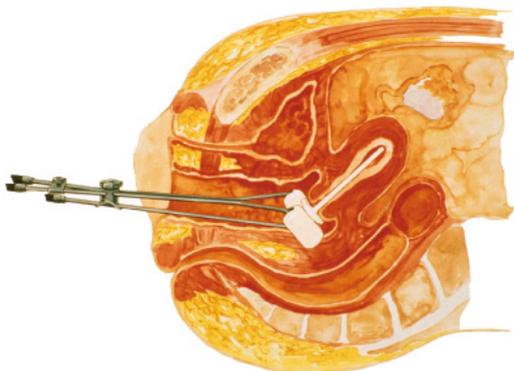


Lithotomy



Manchester Suite Brachytherapy

This procedure will happen towards the end of your external beam radiation and be repeated once a week for a total of three treatments. With this procedure you will be given a spinal anaesthetic which is an injection into your back that causes your lower body to become numb, this is done by the anaesthetist. A catheter is inserted into your bladder to drain any urine. The radiation oncologist inserts the Manchester Suite applicator into the cervix (this is the device needed to deliver the radiation, see the diagram below). You will then have a CT planning scan so that the team are able to plan your treatment. While this is happening you will remain lying flat and the nurse will continue to monitor you, to ensure that you are comfortable. Once the planning has been completed, the applicator will be attached to the machine ready for treatment. Once treatment is complete the applicator will then be removed. When the feeling has returned to your lower body and you are able to mobilise, the catheter will be removed and you will be discharged once you have passed urine.



Effects of treatment

After your first treatment a radiation therapist will discuss your treatment plan, including potential side effects, skin care and how long you will be in the department for each day. This is a chance for you to ask any questions. It might be a good idea to write these down in the back of this book.

Radiotherapy is a localised treatment, so most side effects vary depending on the body site being treated. Everyone is affected differently by radiation therapy and the severity of side effects varies from person to person. If you experience any of the following side effects please notify a member of staff.

Potential side effects include but are not limited to:

Early side effects (can occur days to weeks starting radiation therapy treatment)	Late side effects (may occur months or years after radiation therapy treatment)
<ul style="list-style-type: none">• Fatigue (tiredness)• Skin changes (redness, dry, itchy, blister)• Nausea• Diarrhoea and flatulence• Haematochezia (passing blood with bowel motion)• Dysuria (burning when passing urine)• Vagina reactions (pink, inflamed, tender, dry, bleeding)• Adhesions (vaginal fibrosis)	<ul style="list-style-type: none">• Premature menopause (hot flushes, vaginal dryness)• Bowel changes (urgency, frequency, increase flatulence, haematochezia)• Rare permanent colostomy• Bladder changes (scar tissue, telangiectasia, incontinence)• Lymphoedema (permanent swelling and fluid retention of the legs/vulvar area)• Sacral plexopathy (pelvic nerve damage, tingling, altered sensation)• Bone weakness (pelvis, hip)• Decrease in sexual function• May cause fertility issues

There is an extremely small risk of developing a second cancer many years after radiation therapy treatment.

The peak of any reactions/side effects you may experience will occur approximately 7-14 days after the completion of your radiation treatment. This is due to the cumulative nature of the treatment.

It is perfectly normal to feel emotional about the journey you are going through. Everyone deals with the situation differently. You may find it helpful to talk to family and friends about how you are feeling or if you would like outside professional and psychosocial support please mention this to a radiation therapist.

Treatment review

You will see your oncologist or register in a regular review clinic while you are on treatment. Clinic days and times are specific for each oncologist. We try our best to coordinate these times with your treatment time but it is not always possible. If you have any concerns before these appointment times please speak to the radiation therapists and where necessary they can organise for a nurse or oncologist to see you.

Pelvic recovery talk

Dilator use

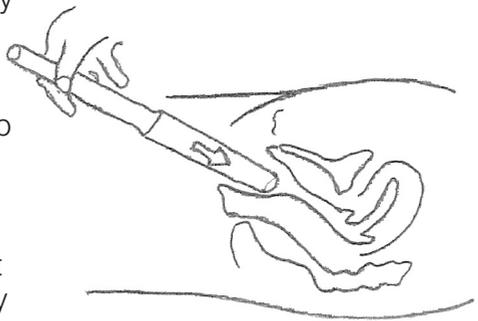
For most women, vaginal examinations will be a necessary part of your regular follow up assessments by your doctor. Using a range of dilators going gradually up in size can help keep the vagina open and elastic enough to assist your doctor to monitor your recovery.

Dilators also make it easier for you to start or continue sexual relations after pelvic radiation treatment.

You should start using the dilator three to four weeks after treatment has finished, or when discomfort from treatment has settled. Dilators work best at preventing adhesions when used at least three times a week for 5-15 minutes each time. You need to discuss with your oncologist about discontinuing dilator use.

Using the dilator

- Ensure you have a private and comfortable place to relax. Wash hands and dilator with a mild soap using warm water ensuring that all soap film, is removed from the dilator.
- The dilator comes in a range of sizes but it is recommended that you start with the second smallest, assessing comfort level. If this is too uncomfortable use the smallest size until manageable and then increase to the size that is recommended.
- Apply sufficient amounts of lubricant to the entire dilator section that will be inserted into the vaginal opening i.e. KY jelly.
- Without forcing, gently and slowly insert the dilator into the vagina, as far as it is comfortable. If experiencing difficulty, gently turning the dilator can assist with insertion. There are various positions in which to use the dilator, including lying on your back with knees slightly apart or standing with a leg raised on the side of the bed or bath to aid insertion. Additionally dilators can be used in the shower or bath if preferred. Listening to music, slowing the breathing and relaxing the abdominal muscles can help.
- When the dilator is inserted as far as possible, gently and slowly move in circular motions for a minimum of five minutes (up to fifteen minutes if possible) as this movement aids in stretching the vaginal walls. If the dilator slips out gently reinsert.
- Once finished slowly and gently remove the dilator, rotating slowly can assist removal.
- Wash the dilator with mild soap in warm water ensuring that all the soap film is removed otherwise irritation to the vaginal area can occur during the next use. Ensure it is completely dry before storing.



Dilator use can cause a small amount of bleeding, discomfort or pain however this should not be severe. If you do have any concerns contact a member of your treatment team.

Sexual activity after radiation treatment

It is important to realise that radiation therapy to the pelvic area may impact on a woman's sex life. The vagina may feel dry, itchy or a burning sensation and sexual intercourse may be uncomfortable or undesirable.

Potential side effects:

- **Vaginal dryness** - pelvic radiation can cause changes in the vagina that lead to vaginal dryness which, if left untreated, can lead to tears in the lining, bleeding, ulceration and an increased risk of infection. Vaginal dryness can cause pain during sexual intercourse, extra lubrication may be beneficial.
- **Reduced vaginal flexibility and size** - scar tissue may lead to a feeling that the vagina is shorter or less flexible. The use of vaginal dilators will help maintain as much softness and flexibility in the vaginal tissue as possible.
- **Pain** - following radiation the vagina may feel tender and sensitive.
- **Loss of desire for sex** - loss of libido, may occur for any number of physical or psychological reasons.
- **Difficulty reaching orgasm** - this can occur if there has been nerve damage in this area.

Although it may be difficult or different at first, it is still possible to have a satisfying sex life after radiation treatment. If you are experiencing concerns, discuss this with a member of your treatment team or a counsellor may be helpful.

For a more detailed description on this topic please refer to:
<https://www.targetingcancer.com.au/wp-content/uploads/2015/10/Recovering-after-Pelvic-Radiation-Therapy-a-guide-for-women.pdf>

Early menopause and hormones

If your ovaries are surgically removed or treated with radiotherapy, you will no longer have periods and it will not be possible to become pregnant. If you have not been through menopause already, you may experience early menopause. Symptoms of menopause such as hot flushes, vaginal dryness and mood changes could be more sudden than they would be with a naturally occurring menopause.

Hormone replacement therapy (HRT) may be taken to control the symptoms of menopause. HRT is a combination of oestrogen and progesterone, which are hormones that are made by the ovaries before menopause.

The side effects of HRT due to radiation therapy, during your reproductive years are negligible. However, there will be side effects if taking HRT during the menopause phase. You will need to discuss the benefits and risks of taking HRT with your doctor.

“Your strongest resource is you”

Follow-up

At the completion of your treatment an appointment will be made for you to see your radiation oncologist. This interval will depend on the area that you are having treated and what side effects you may have experienced during treatment. Your radiation oncologist will see you at regular intervals continuing for several years. You may be requested to have further tests or scans done at the request of your radiation oncologist.

If you have any questions or concerns between the end of your radiotherapy treatment and this follow up appointment, you can contact your GP or one of the numbers on the following page.

Useful numbers

- Waikato Hospital switchboard 07 839 8899
- Blue machine ext: 98073
- Green machine ext: 98249
- Pink machine ext: 98221
- Yellow machine ext: 96191
- Gynae nurse specialist ext: 92241
- Oncology Outpatient reception 07 839 8604
- Nurses (including Lymphodema nurse) 07 839 8604
- The Cancer Society's Lions Lodge 07 834 2351
- Cancer Society 07 838 2027
- Wilson Parking 07 839 8901
- Look Good Feel Better 0800 865 432
- Sex Therapy NZ
www.sextherapy.co.nz
admin@sextherapy.co.nz

For further information go to Waikato DHB website:

<https://www.waikatodhb.health.nz/radiationoncology>

<https://www.healthnavigator.org.nz>

G1769HWF

05/18JB